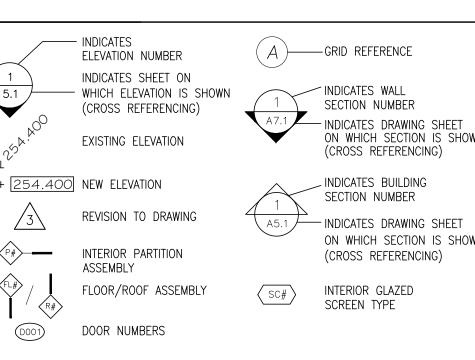
20	Seda		e Sc		DOI G 25	ymnas Erindale /		m Ad enue, H	amil
						ISSU	EC) FOR ⁻	TEN
							73		and the second
ABB	REVIATIONS					İ		All and a second	
A A/C A/PNL AB ABV AC	AIR CONDITIONING ACOUSTIC PANEL ANCHOR BOLT ABOVE ACOUSTIC	F (CONT.) FFE FFL FHE FIBER FIN	FINISH FLOOR ELEVATION FINISH FLOOR LINE FIRE EXTINGUISHER CABINET FIBERGLASS FINISH (ED)	P(CONT.) PERIM PL P/LAM PLAST PLF	PERIMETER PROPERTY LINE/PLATE PLASTIC LAMINATE PLASTER POUNDS PER LINEAL FOOT		1		
AC/ PNL ACC ACCD ACI	ACRYLIC PANEL ACCESS ACCESS DOOR (HINGED) AMERICAN CONCRETE INSTITUTE	FIRE SEP FL FLASH FLEX FLR	FIRE SEPARATION FLOOR FLASHING FLEXIBLE FLOORING	PLYWD PNL POS PR PREC/CONC	PLYWOOD PANEL POSITION PAIR PRECAST CONCRETE DRECAST CONCRETE	600	-	S. CARRIER	
ACM ACPL ACT AD ADD	ACOUSTIC MEMBRANE ACOUSTICAL PLASTER ACOUSTIC CEILING TILE AREA DRAIN ADDENDUM	FLUOR FOC FOF FOM	FLOURESCENT FACE OF CONCRETE FACE OF FINISH FACE OF MASONRY	PREFAB PREFIN PREFORM PRESS. TREAT. PRINT	PREFABRICATE (D) PREFINISHED PREFORMED PRESSURE TREATED PRINTER		30 %		
.DD .DH .DJ .DJUST .DO/M	ADDENDUM ADHESIVE ADJACENT ADJUSTABLE AUTOMATIC DOOR OPERATOR	FOS FRR FR FIRE RET FP	FACE OF STUDS/STEEL FIRE RESISTANCE RATED FRAME (D) (ING) FIRE RETARDANT FIREPLACE	PROF PROJ PSF PSI	PROFILE PROJECT/PROJECTING POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH	and a state of the	_		e (8%)
ADO/M ADO/P	- MOTION DETECTOR OPERATION AUTOMATIC DOOR OPERATOR	FT FTG FURR FUT	FIREPLACE FOOT FOOTING FURRED (ING) FUTURE	PT PTD PTN PTWD	POINT/PAINT PARTITION PRESSURE TREATED WOOD	LGAIner ZORE	Konstitus	and the second second	
FF GG LT	- PUSH PLATE OPERATION ABOVE FINISHED FLOOR AGGREGATE ALTERNATE	GA GALV GB	GAUGE GALVANIZED	PVC Q QT	POLYVINYL CHLORIDE OR COATING QUARRY TILE				
	ALUMINUM ACOUSTIC METAL PANEL ANCHOR, ANCHORAGE ANNUNCIATOR PANEL	GC GD GFT	GRAB BAR GENERAL CONTRACTOR GRADE (ING) GLASS FIBRE TILE	R R/S RA	ROD AND SHELF RETURN AIR				
NN/PNL NOD NSI	ANODIZED AMERICAN NATIONAL	GL GL BLK GND GR GRAN	GLASS (FLOAT) GLASS BLOCK GROUND GRANITE	RAD RAG RB RCP	RADIUS/RADIATOR RETURN AIR GRILLE RUBBER BASE REFLECTED CEILING PLAN			- ALL MARKEN	
P PPROX SBEST	STANDARDS INSTITUTE ACCESS PANEL (NON-HINGED) APPROXIMATE ASBESTOS	GWB GWB/AR	GRANULAR GYPSUM WALL BOARD GYPSUM WALL BOARD, ABUSE RESISTANT	RD REC RECP REF	ROOF DRAIN RECESSED RECEPTACLE REFERENCE				
SPH SSY STM	ASPHALT ASSEMBLY AMERICAN SOCIETY FOR TESTING AND MATERIALS	GWG GXT GYP H	GEORGIAN WIRED GLASS GYPSUM TEXTURE SPRAY GYPSUM	REFL REFRIG REG REM	REFLECTIVE/REFLECTED REFRIGERATOR REGISTER REMOVE		Self -		
UTO VB WI	AUTOMATIC AIR/VAPOUR BARRIER ARCHITECTURAL	П HARD HDBD HB HC	HARDENED HARDBOARD HOSE BIBB HOLLOW CORE	REQD RES RET REV	REQUIRED RESILIENT RETURN REVISION (S), REVISED	Carl Contractory Star			- Aller
WMAC	WOODWORK INSTITUTE ARCHITECTURAL WOODWORK MANUFACTURERS ASS. OF CANADA	HC HD HDR HDRY HDWRE	HOLLOW CORE HEAVY DUTY HEADER HAND DRYER HARDWARE	RFG RH RHP RI	ROOFING RIGHT HAND RADIANT HEAT PANEL RISER		a state		-
WP 6 /BD	ACOUSTIC WALL PANEL	HEX HH HM HNDRL	HARDWARE HEXAGONAL HANDHOLE HOLLOW METAL HAND RAIL	RAIL REINF RM RO	RAILING REINFORCE ROOM ROUGH OPENING				
/O /PL /S AS	BOTTOM OF BASE PLATE BOTH SIDES	HOR HOR HP HR HSKP	HORIZONTAL HYDRO POLE HOUR HOUSEKEEPING	ROW RT RUB RVS	RIGHT OF WAY RUBBER TILE RUBBER REVERSE (SIDE)		CONT	ACT LIST	
TUM _K _DG	BUILDING AUTOMATION SYSTEM BITUMINOUS BLACK BOARD BUILDING BLOCK	HSS HSS HT HTG HTR	HOUSEREEFING HOLOW STEEL SECTION HEIGHT HEATING HEATER	RWL S S	RAINWATÈR LEÁDER SOUTH		Client	Hamilton Wentworth District School Boa	
SLK SLKG SLW M N	BLOCKING BELOW BENCH MARK BULLNOSE	HVAC HWH HWT	HEATING/VENTILATION/ AIR CONDITIONING HOT WATER HEATER	SAN SC SCHED	SANITARY SOLID CORE SCHEDUAL		Cheft	20 Education Court Hamilton, Ontario L9A 0B9 T: 905-527-5092 x 2939	Project Supervisor Capital Projects
O RG RK RZ	BOARD BEARING BRICK	HYD I ID	HOT WATER TANK HYDRAULIC	SD SDH SEAL SEAT	SMOKE DAMPER/ SOAP DISH SEALANT SEATING	HWDSB		C: 289–339–2867 F: 905–521–2544	
ŠM̃T ™ ™N JLKHD	BRONZE BASEMENT BOTTOM BETWEEN BULKHEAD	IN INCL INSUL INT	INCH INCLUDE (D) (ION) INSULATE (D) (ION) INTERIOR	SECT SERV SG SH	SECTION SERVICES SINGLE GLASS		Architect	E: miampiet@hwdsb.on.ca	TS William Curran, OAA, MF
R SH CONC /	BUILT UP ROOF BUSHHAMMERED CONCRETE BOTH WAYS	INTERMED INV IRMA	INTERIMEDIATE INVERT INVERT INVERTED ROOF MEMBRANE ASSEMBLY	SH/C SH/HD SH/RD	SHOWER SHOWER CURTAIN SHOWER HEAD SHOWER ROD	CURRAN GACESA SLOTE	Architect	CGS CURRAN GACESA SLOTE ARCHITEC 118 James Street North, Suite 301 Hamilton, Ontario, L8R 2K7	LEED AP
V B ULK	COMPLETE WITH CABINET CAULKING CATCH BASIN	J JAN JB JT	JANITOR JUCTION BOX JOINT	SHEATH SHT SHV SIM	SHEATHING SHEET SHEET VNYL SIMILAR	CGS		T: 905–297–0863 E: bill.curran@cgsarch.ca	
B EM EM/BD EM/FIN EM/FIN	CEMENT CEMENT CEMENTITIOUS BOARD CEMENT FINISH CEMENT PLASTER	K ^{kg} KIT	KILOGRAM KITCHEN	SKYLT SM SND SNR	SKYLIGHT SQUARE METRES SANITARY NAPKIN DISPENSER		Mechanical	CoPa Engineering Ltd.	Costas Pashartis, P. En
EM/PLAS L/CENTL ER G GSB	CEMENT PLASTER CENTRE LINE CERAMIC CORNER GUARD CANADIAN GENERAL STANDARDS BOARD	ко ^{кРа} L	KNOCKOUT KILOPASCALS	SP SPEC SPGL SPKR	SPANDREL PANEL SPECIFICATION OR SPECIAL SPANDREL GLASS SPEAKER	CO PA ENGINEERING LTD.	Engineer	29 Rolling Acres Drive Kitchener, ON N2A 3W5	
H HALKBD	COAT HOOK CHALKBOARD CAST IRON	L LAB LAM/GL LAV	LITRE/LENGTH LABORATORY LAMINATED GLASS LAVATORY	SQ ST ST STL STC	SQUARE STAIR STAINLESS STEEL SOUND TRANSMISSION CLASS			T: 519-894-0022 F: 519-894-4548 E: copa.eng@sympatico.ca	
IRC J L LG	CIRCULAR/CIRCULATION CONSTRUCTION JOINT CLOSET CEILING CLEAD (ANCE)	LB LBL LC LD/GL	POUND (S) LABEL LIGHT CONTROL LEADED GLASS	STC STD STL STM STN	STANDARD STEEL STORM	FORTECH	Electrical	Fortech Engineering	Jordan Acri, P.Eng.
LR LR/CONC LR/GL LWG M	CLEAR (ANCE) COLOURED CONCRETE CLEAR GLASS CLEAR WIRED GLASS CENTIMETER (S) CONCRETE MASONARY UNIT	LH LIN LINO LKR	LEFT HAND LINEAR LINOLEUM LOCKER	STOR STR OR STRUCT SUSP	STATION STORAGE STRUCTURAL SUSPENDED		Engineer	420 Sheldon Drive, Suite 202 Cambridge, Ontario, N1T 2H9 T: 519-745-2900	
MU O OL OMBIN	CLEAR OUT COLUMN COMBINATION	LL LP LT	LIVE LOAD LOW PRESSURE LIGHT	SVT SYM SYN SYST	SOLID VINYL TILE SYMMETRY (ICAL) SYNTHETIC SYSTEM	420 Sheldon Dr., Suite 202 T 519-745-2900 Cambridge, ON F 519-745-2922 NIT 2H9 JAcri@FortechEng.com		F: 519-745-2922 E: jacri@fortecheng.com	
OMM OMP OMPT OMPOS ONC	COMMUNICATION COMPACTED COMPARTMENT COMPOSITION (COMPOSITE) CONCETE	LT STD LVB LVR LW LWC	LIGHT STANDARD LOUVRE BLIND LOUVRE LIGHTWEIGHT LIGHT CONCRETE	Т т&G т/0	TONGUE AND GROOVE	JAcri@FortechEng.com	Structural	Ailmar Engineering	Samuel Somo, P.Eng.
ONNECT ONSTR ONT ONTR	CONNECTION CONSTRUCTION CONTINUOUS OR CONTINUE CONTRACT (OR)	M m	METRE (S)	TB TBD TD TEL TEMP	TOWEL BAR TO BE DETERMINED TOWEL DISPENSER TELEPHONE TEMPERED	AILMAR ENGINEERING		94 Curran Road, Ancaster, Ontario L9K 0H4 T: 905-966-4797	
ORR PBD PR PT	CORRUGATED CUPBOARD COPPER CARPET	MANUF MARB MAS MATL MAX	MANUFATURER (ER) MARBLE MASONRY MATERIAL MAYUMUM	TEMP TERR TEXT FIN THK	TEMPERED TERRAZZO TEXTURED FINISH THICK (NESS)	STRUCTURAL ENGINEERS		E: ssomo@ailmar.com	
PT-T R RCI	CARPET TILE CHROMINUM (PLATED) CONTRACTOR REMOVED, CONTRACTOR INSTALLED	MAX MBR MBRB MCL ME	MAXIMUM MEMBER MEMBRANE METAL UNDER CEILING MATCH EAST	THRESH TI/GL TKB TOL	THRESHHOLD TINTED GLASS TACKBOARD TOLERANCE		Landscape	Shift Landscape Architecture	Michael
RS SA SCI	COURSE (S) CANADIAN STANDARDS ASSOCIATION CONTRACTOR SUPPLIED,	MECH MED MED CAB	MATCH EAST MECHANIC (AL) MEDIUM MEDICINE CABINET METICINE CEUINC	TPD TPH TRANS TRANS/MIR	TÖILET PÄPER DISPENCER TOILET PAPER HOLDER TRANSPARENT TRANSPARENT MIRROR	SHIFT	Architect	100 Crimea St. Unit C7 Guelph, Ontario, N1H 2Y5 T: 905-713-9326	Barker, OALA, CSLA
SMT F FJ	CONTRACTOR INSTALLED CASEMENT CERAMIC TILE CONTROL JOINT	MET GR CLC MET/LIN MET/PNL MEZZ	METAL GRID CEILING METAL LINEAR METAL PANEL MEZZANNE MANHOLE	TRD	(ONE WAY MIRROR) TREAD TOILET SEAT DISPENSER	landscape architecture		E: mbarker@shiftland.com	
TR TSK U	COUNTER COUNTERSUNK CUBIC	MH MHO MIN MIR	MANHOLE MAGNETIC HOLD OPEN MINIMUM MIRROR MISCELLANEOLIS	TSL TV TYP	TOP OF SLAB TELEVISION TYPICAL		Civil Engineer	MTE Consultants INC. 1016 Sutton Drive Unit A	John Goodwin,
) /F AMP CS	DRINKING FOUNTAIN DAMPER DIAPER CHANGE STATION	MISC MM MO MOD MOD-BIT	MISCELLANEOUS MILLIMETRE (S) MASONRY OPENING MODULAR BITUMEN	U U/C U/G	UNDERCUT UNDERGROUND	(D) MTE	giiiooi	Burlington, Ontario, L7L 6B8 T: 905–639–2552	C.E.T., CCEP
EC FIN EM EPRESS EPT	DECORATIVE FINISH DEMOLISH/DEMOLITION DEPRESSED DEPARTMENT	MOD-BIT MOULD MPa MTL MTO	MODULDING MOULDING MEGAPASCAL METAL MINISTRY OF TRANSPORTATION	U/N U/S UC/REF ULC	UNDERNEATH UNDERSIDE UNDERCOUNTER REFRIGERATOR UNDERWRITERS' LABORATORIES			E: jgoodwin@mte85.com	
ET H IA IAG	DETAIL DOUBLE HUNG DIAMETER DIAGONAL	N N	MINISTRY OF TRANSPORTATION ONTARIO NORTH	ULI	OF CANADA UNDERWRITERS' LABORATORIES INCORPORATED		•	·	
IM IV IV MP	DIMENSION DIVISION DEAD LOAD DEMOUNTEDABLE PARTITION	NAT NBC ND NIC	NATURAL NATIONAL BUILDING CODE NAPKIN DISPOSAL NOT IN CONTRACT	UNEX UNFIN UNO UR	UNEXCAVATED UNFINISHED UNLESS NOTED OTHERWISE URINAL	GRAPHIC SYMBOLS			
N PC R WG WR	DOWN DAMPERROOF COURSE DOOR DRAWING DRAWER	No. NOM NPS NR	NUMBER NOMINAL PIPE SIZE NOISE REDUCTION	UT V	UTILITY			INDICATES	
/PT	EAST EPOXY PAINT	NRC NTS O	NOISE REDUCTION NOISE REDUCTION COEFFICIENT NOT TO SCALE	V-JT VAP.BAR VB VCT	V-JOINT (ED) VAPOUR BARRIER VINYL BASE VINYL COMPOSITION TILE			ELEVATION NUMBER	- GRID REFERENCE
APT F HO IFS	EACH FACE ELECTRIC HOLD OPEN EXTERIOR INSULATED AND FINISH SYSTEM	OA OBC OC	OVERALL ONTARIO BUILDING CODE ON CENTRE (S)	VENT VERT VEST VF	VENTILATED VERTICAL VESTIBULE VINYL FABRIC	A8.1 INDICATES DRAWING SHEET ON WHICH DETAIL IS SHOWN (CROSS REFERENCING)		INDICATES SHEET ON WHICH ELEVATION IS SHOWN (CROSS REFERENCING)	INDICATES WALL SECTION NUMBER
L LEC LEV L PNL	ELEVATION (ABOVE DATUM) ELECTRICAL ELEVATOR ELECTRICAL PANELBOARD	OD OH OPG OPP	OUTSIDE DIAMETER OVERHEAD OPENING OPPOSITE	VNL VRT VT	VINYL FABRIC VINYL VINYL REINFORCED TILE VINYL TILE	(A3000) INDICATES SKETCH SHEET	× ,00	EXISTING ELEVATION	- INDICATES DRAWING SHEET ON WHICH SECTION IS SH
MERG NCL NT	EMERGENCY ENCLOSURE (URE) ENTRANCE	OPSS	ONTARIO PROVINCIAL STANDARD SPECIFICATION OWNER REMOVED,	W W W/	WEST WITH	ON WHICH DETAIL IS SHOWN	т ^{уу}		(CROSS REFERENCING)
EQUIP ESP ESTIM EXCAV	EQUAL EQUIPMENT EXPOSED SLAB PAINTED ESTIMATE EXCAVATE	OSCI	CONTRACTOR INSTALLED OWNER SUPPLIED, CONTRACTOR INSTALLED	W/O WA WB	WITHOUT WASHROOM ACCESSORY WHITEBOARD				INDICATES BUILDING SECTION NUMBER
XH XIST XPJT XPOS STRUC XT	EXHAUST EXISTING EXPANSION JOINT EXPOSED STRUCTURE EXTERIOR		OWNER SUPPLIED, OWNER INSTALLED OVEN ODEN WER STEEL JOISTS	WC WC/WR WD WDW	WATER CLOSET WHEELCHAIR WASHROOM WOOD (SOLID)/WIDE WINDOW	WINDOW TYPE	\sim	REVISION TO DRAWING	- INDICATES DRAWING SHEET ON WHICH SECTION IS SH
=	FIXED	owsj oz P par	OPEN WEB STEEL JOISTS OUNCE PARALLEL	WH WIN/C WKSP	WALL HUNG WINDOW COVERING WORKSHOP	(#) KEYNOTE		INTERIOR PARTITION ASSEMBLY	(CROSS REFERENCING)
/GL A D	FROSTED GLASS FIRE ALARM FLOOR DRAIN	PARK PTD PCF	PARKING PAINT (ED) POUNDS PER CUBIC FOOT	WM WP WPF WR	WIRE MESH WALL PROTECTION WATERPROOF WASHROOM	EXTERIOR WALL ASSEMBLY		FLOOR/ROOF ASSEMBLY	INTERIOR GLAZED SCREEN TYPE
FDTN FE	FOUNDATION FIRE EXTINGUISHER FIRE EXTINGUISHER CABINET	PED PEGBD PERF	PEDESTAL PEGBOARD PERFORATED	WWM	WELDED WIRE MESH BREVIATIONS LISTING	ROOM NUMBER	(D001)	DOOR NUMBERS	

ton, Ontario **)ER**



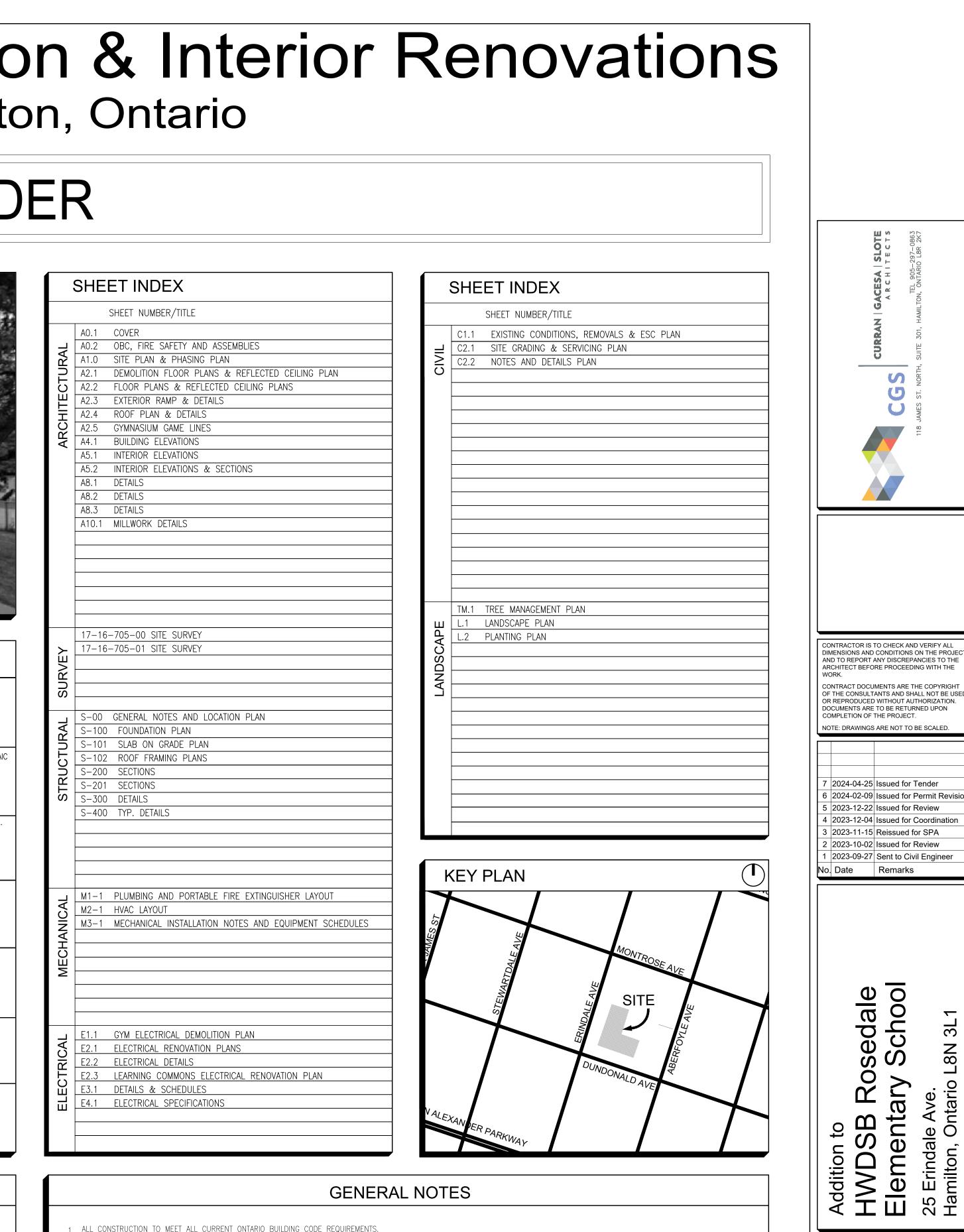
CONT	ACT LIST
	Hamilton Wentworth



SHEET INDEX

	SHEET NUMBER/TITLE				
ARCHITECTURAL	A0.1 COVER A0.2 OBC, FIRE SAFETY AND ASSEMBLIES A1.0 SITE PLAN & PHASING PLAN A2.1 DEMOLITION FLOOR PLANS & REFLECTED CEILI A2.2 FLOOR PLANS & REFLECTED CEILING PLANS A2.3 EXTERIOR RAMP & DETAILS A2.4 ROOF PLAN & DETAILS A2.5 GYMNASIUM GAME LINES A4.1 BUILDING ELEVATIONS A5.1 INTERIOR ELEVATIONS A5.2 INTERIOR ELEVATIONS A8.1 DETAILS A8.2 DETAILS A8.3 DETAILS A10.1 MILLWORK DETAILS				
SURVEY	17-16-705-00 SITE SURVEY 17-16-705-01 SITE SURVEY				
STRUCTURAL	S-00GENERAL NOTES AND LOCATION PLANS-100FOUNDATION PLANS-101SLAB ON GRADE PLANS-102ROOF FRAMING PLANSS-200SECTIONSS-201SECTIONSS-300DETAILSS-400TYP. DETAILS				
MECHANICAL	M1–1 PLUMBING AND PORTABLE FIRE EXTINGUISHER M2–1 HVAC LAYOUT M3–1 MECHANICAL INSTALLATION NOTES AND EQUIPM				
ELECTRICAL	E1.1GYM ELECTRICAL DEMOLITION PLANE2.1ELECTRICAL RENOVATION PLANSE2.2ELECTRICAL DETAILSE2.3LEARNING COMMONS ELECTRICAL RENOVATIONE3.1DETAILS & SCHEDULESE4.1ELECTRICAL SPECIFICATIONS				

- 1. ALL CONSTRUCTION TO MEET ALL CURRENT ONTARIO BUILDING CODE REQUIREMENTS.
- 2. ENSURE THAT ALL CONSTRUCTION, MATERIALS, METHODS OF INSTALLATION AND TEMPORARY FACILITIES COMPLY WITH REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION.
- 3. INSPECT SITE CONDITIONS PRIOR TO COMMENCING ON NEW WORK AND REPORT ANY DISCREPANCIES.
- 4. REPORT ALL CONTEMPLATED DEVIATIONS FROM THE DRAWINGS PRIOR TO MAKING CHANGES.
- 5. SITE VERIFY ALL DIMENSIONS AND MAKE MODIFICATIONS TO SUIT EXISTING SITE CONDITIONS.
- 7. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ANY AND ALL STRUCTURAL, MECHANICAL, ELECTRICAL, CIVIL AND LANDSCAPE DRAWINGS. COORDINATE STRUCTURAL, MECHANICAL, ELECTRICAL, CIVIL & LANDSCAPE WORK TO ENSURE THE PARTS OF THE WORK COME TOGETHER PROPERLY.
- 8. PROVIDE CUTTING, PATCHING, AND REMEDIAL WORK IN ORDER TO ENSURE PARTS OF THE WORK COME TOGETHER PROPERLY.
- 9 ARRANGE FOR INSPECTIONS REQUIRED BY LOCAL BUILDING, PLUMBING, HYDRO, GAS, ETC., AUTHORITIES DURING CONSTRUCTION AND FOR OCCUPANCY.
- 10. THE PLANS SHOWN HERE DO NOT REPRESENT THE FULL LIMIT OF THE SCOPE OF WORK. PROVIDE ALL WORK IN ORDER TO ENSURE PARTS OF THE WORK COME TOGETHER PROPERLY.



Dwg. Title:

Drwn:

Cover

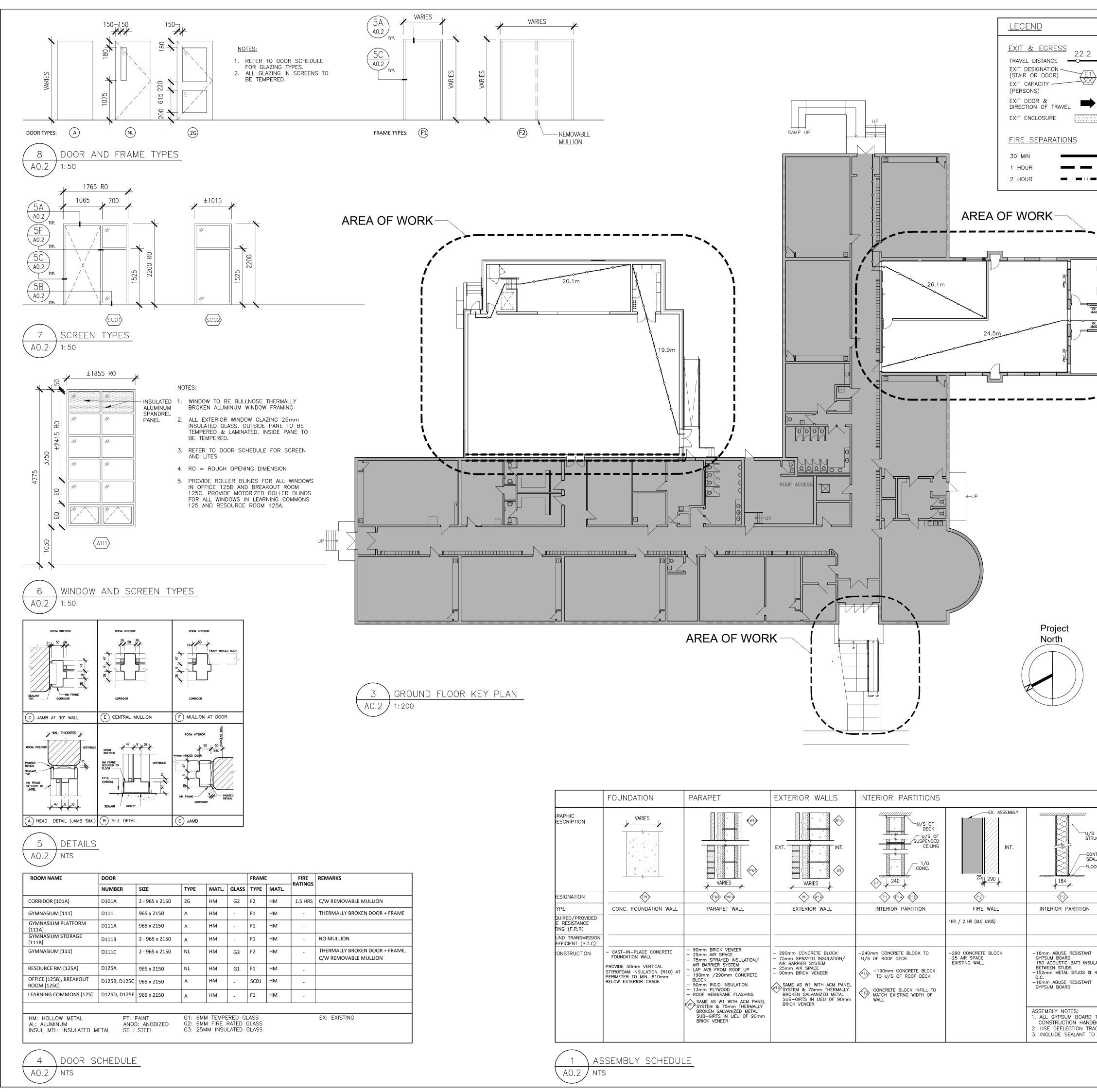
Proj. No.: 23011 Scale: As noted

Date: 01/31/24

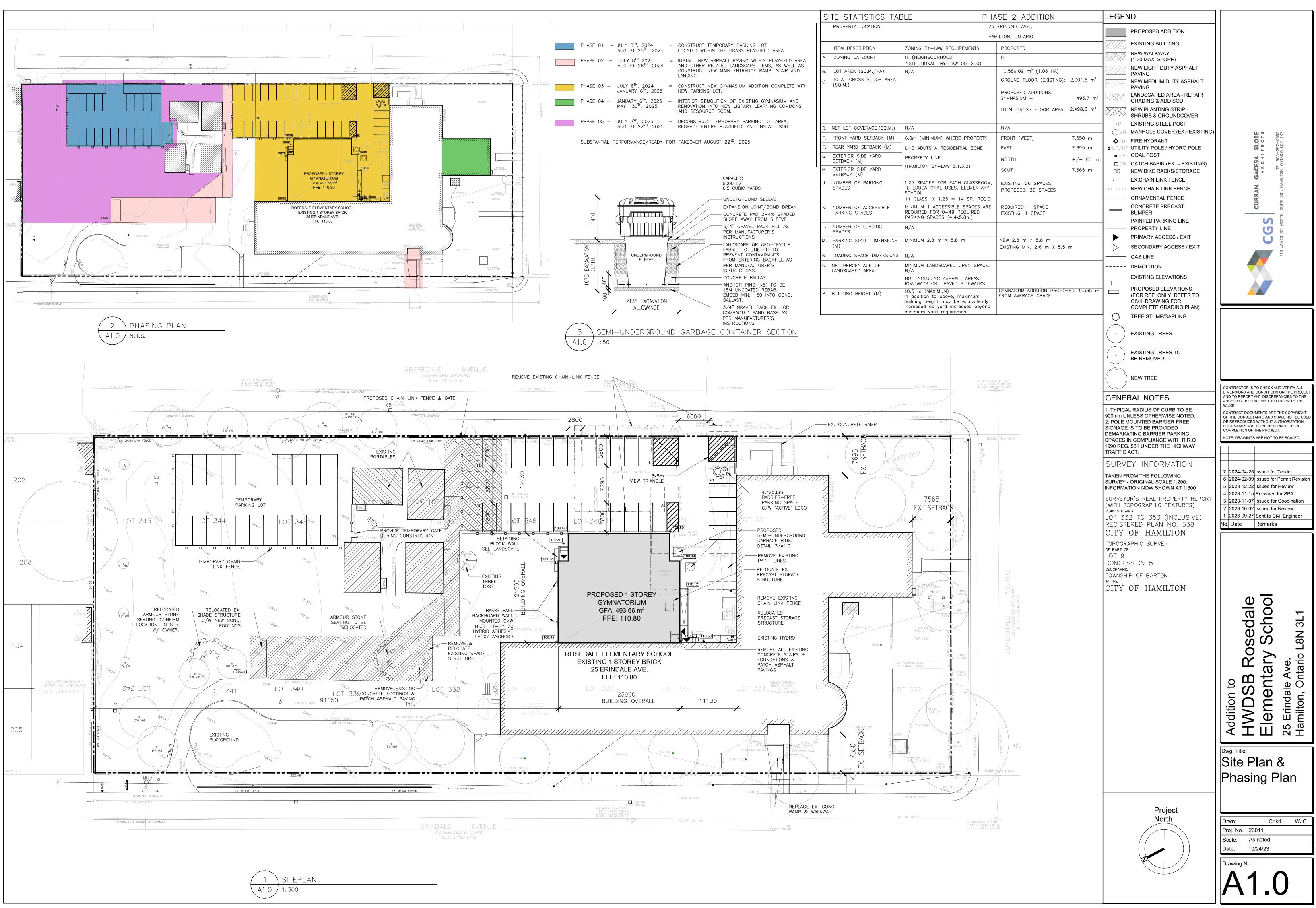
Drawing No.:

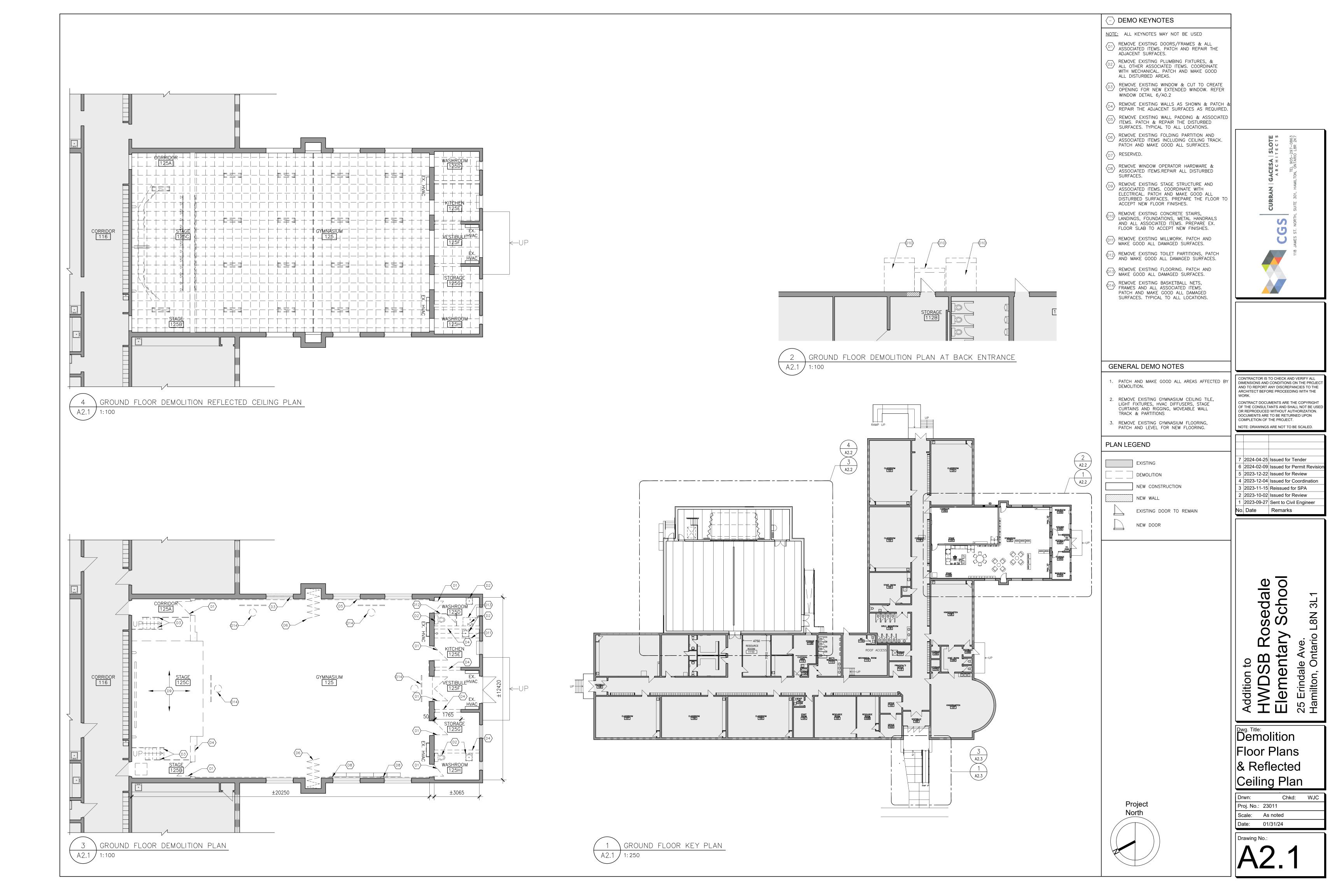
Chkd: WJC

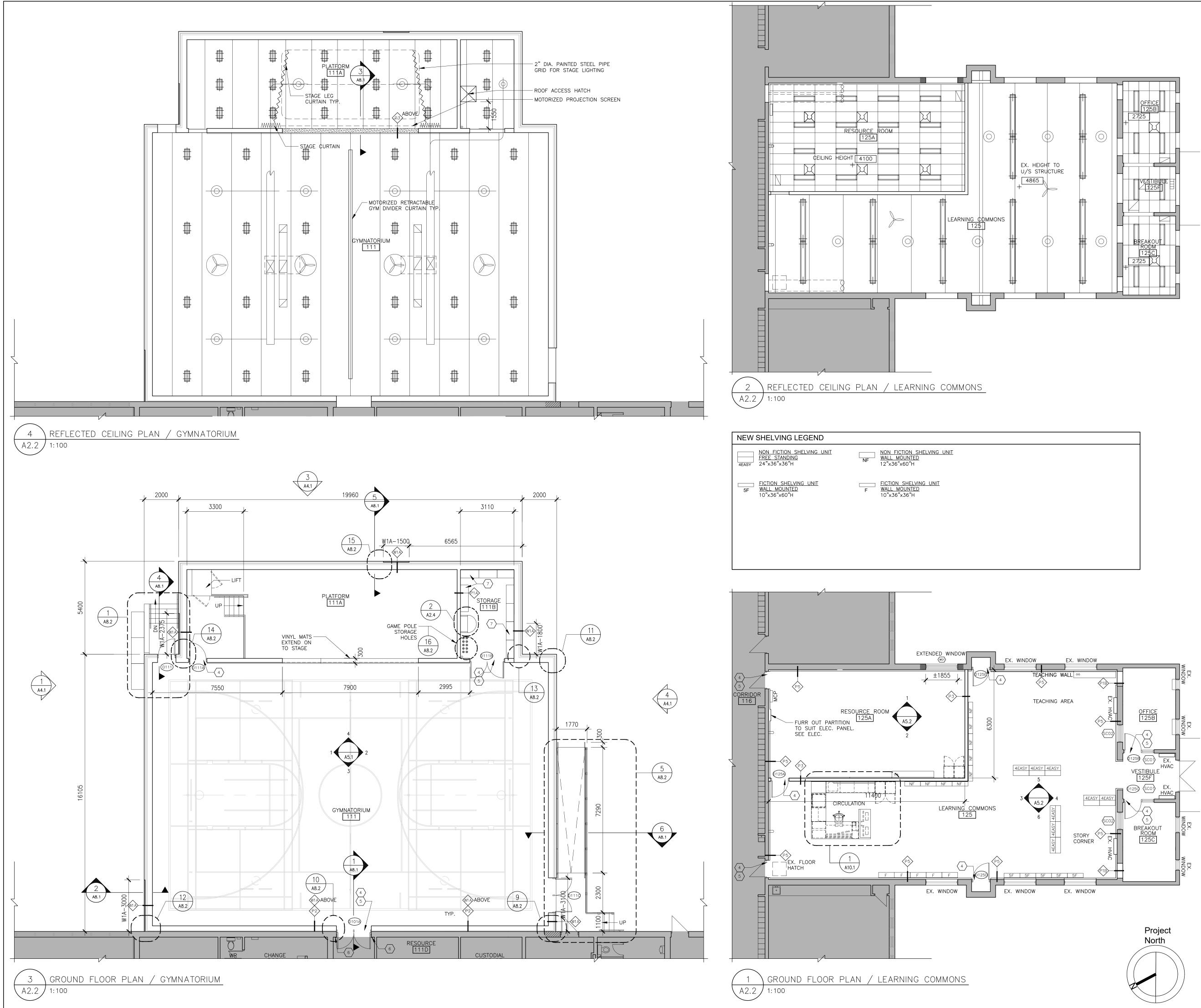
- 6. MAKE GOOD ALL AREAS DISTURBED OR DAMAGED DURING CONSTRUCTION WHETHER SHOWN ON DRAWINGS OR NOT.



			Firm Name: CGS CURRA 118 James Stre Hamilton, ON, Tel: 905-297-0	et North, Suit , L8R 2K7 9863 Fax: 905	5-297-0864					cosedale H lovations e Ave., H	& Addition amilton, On					
M		Item 1	Project Descrip	otion:		rt 3 or 9		art 11 to 11.4		ces are to	Reference Division B u or [C] for Part 9 1.1.2. [A]	Division C				
•			Major Occupar Building Area Gross Area	$\frac{\text{ncy}(s)}{(m_2)} \begin{array}{c} \text{A-2 I} \\ \text{Im}_2 \\ \text{Im}_$	Change of Use Elementary School Existing 2004.6 sr Ground Floor (Exis Addition (Gymnas	n New 493			3.1.2.1.(1) 1.4.1.2. [A 1.4.1.2. [A]	_	9.10.2 1.4.1.2. [A 1.4.1.2. [A	_				
		6 7	Number of Sto Number of Stra Building Class Existing Buildi	reys Ab eets/Fire Fight ification ing - Group A	Total ove grade 1 ter Access 1 , Division 2	Belo	2498.26sm ow grade <u>0</u>		1.4.1.2. [A] & 3.2.2.10 & 3 3.2.2.2083	.2.5.	1.4.1.2[A] 9.10.20. 9.10.2.	& 9.10.4	[101 1	C1 (N	7
			Proposed Addi Sprinkler Syste		ium) - 3.2.2.25. G	entire b selected selected baseme	ouilding d compartme d floor areas entin lieu	nts	3.2.2.2083 3.2.1.5. 3.2.2.17. INDEX		9.10.82. INDEX			A SLOT	снитест El 905-297-086	ONTARIO LBR 2K
			Standpipe requ Fire Alarm req Water Service/ High Building	uired /Supply is Ado	equate	X not req Yes X X Yes X Yes Yes Yes] No] No] No		3.2.9. 3.2.4. 3.2.5.7. 3.2.6.		N/A 9.10.18. N/A N/A			CURRAN GACES	<	301, HAMILTON
		13	Construction F Actual Constru Mezzanine(s) A	Restrictions action Area m ²	Combustible permitted Combustible N/A design of building	Non-co required X Non-co	ombustible d	X Both	3.2.2.2083 3.2.1.1.(3)(8 3.1.17.		9.10.4.1. 9.9.1.3.			G		ST. NORTH, SUITE
	UP L		Exi Ne To No new occup allowable occ	isting Occupa w Building A tal pant load creat upancy for Gy sium 352 m2		Addition Cal D.B.C Table 3. Xixed seats @ (85 20 - 85 20 culation of M 1.17.1: 0.75m2/perso 1.85m2/perso	205 - 205 Iaximum n 469							Ü	118 JAMES
			Rec Tot	1: mentary Scho quire: 4 fixture al of 8 fixture	ol: 30 Males per fi es for Males and 4 s. Staff :	fixtures for Fe	205 ales per fixtu	persons	3.7.4.2.(1) 3.7.4.3.(14) 3.7.4.3.I							
			Barrier - Free 1	EXISTI Design	Single/Kindergarto Universal : Male Washrooms Female Washroom NG Washroom Fi:	en : 2 fi 1 fi : 9 fi ns : 9 fi xtures : 24 f	ixtures; ixtures; ixtures; xtures; ixtures;		3.8.		9.5.2.					
		<u>18</u> 19	Hazardous Sub Required Fire Resistance Rating (FRR)	Ho Floors Mezzanii Roof	N/A FRR of Supporting		Listed Des or Description Table 1 Table 1 Listed Desig	gn No. Or	3.3.1.2. & 3. 3.2.2.208 3.2.1.4.		9.10.1.3.(4) 9.10.8. 9.10.9.		DIMENSION AND TO RE ARCHITEC WORK. CONTRAC	NS AND CON EPORT ANY T BEFORE F T DOCUMEN	NDITIONS (DISCREPA PROCEEDII) VERIFY ALL DN THE PROJECT NOCIES TO THE NG WITH THE HE COPYRIGHT
		20	Spatial Separat	Floors: Roof Mezzanii			Description	1	3.2.3.1.B.		9.10.14.		OR REPRO DOCUMEN COMPLET		THOUT AUT BE RETUR PROJECT.	
			Wall North West East-S	Area of EBF (m ²) 206.7 142.6	L.D. L/H or (m) H/L 19.23 91.65 5.3	Permitted Max. % of Openings 100 % 100 % 35.75 %	Proposed % of Opening 0 % 0 % 3 %	s (Hours) n/a n/a 45min	Listed Design or Description n/a n/a n/a	Comb Const	Comb. Constr. Non Cladding	Constr.	6 2024-	04-25 Iss 02-09 Iss 12-22 Iss	ued for F	Permit Revisior
		21	East-N South Travel Distance	58.9 e: C MAT	8.4 0 max. 30 m	90 % 0 %	0 % 0 % actual: see	45min 1hrs plan	n/a n/a	3.4.2.4			3 2023- 2 2023-	11-15 Re 10-02 Iss 09-27 Se	issued fo ued for F	
		AO	.2 NTS											ale		<u> </u>
			R	DOF			FLOOR							Rosedale	>	le Ave. Ontario L8N 3L1
S OF UCTURE NTINUOUS ALANT OR	EX. ASSEMBLY	FL				₩==₩		4<					Addition to	HWDSB	Elementar	25 Erindale Ave. Hamilton, Ontari
	FURRING WA	BOARD	405 - 2	2-PLY MOD E	R1 F ASSEMBLY BIT ROOFING SYS	IOTED)	N/A N/A – SEALER	FLOOR S.O	.G.				Dwg. Tit OB Saf Ass	C, F	&	:S
LATION 405	O.C. —ABUSE RESISTAN		- E - 1 - T - F - S - 1 - N - S	BASE SHEET I 3mm GYPSU APERED INSU RIGID INSULAT SELF—ADHERE I 3mm FIBRE I 3mm FIBRE	ROOFING MEMBRA IM FIBRE COVER JLATION (MIN 2% TION (MIN=R30) ID ROOF VAPOUR BOARD UNDERLA NG TURE W/ OWSJ S	NE BOARD SLOPE) RETARDER Y	SLAB ON – VAPOUR – SCHEDU	N GRADE					Drwn: Proj. No	.: 2301	Chko 1	
BOOK, AND ACK FOR A	STALLED AS PER D IN COMPLIANC ALL GWB INTERIC NS & AT OPENIN	e with Dr par [:]	ALL APPLIC	ABLE CODE: /S STRUCTU	S.								Scale: Date: Drawing	As no 01/31 No.:		
													A	0	. 4	2

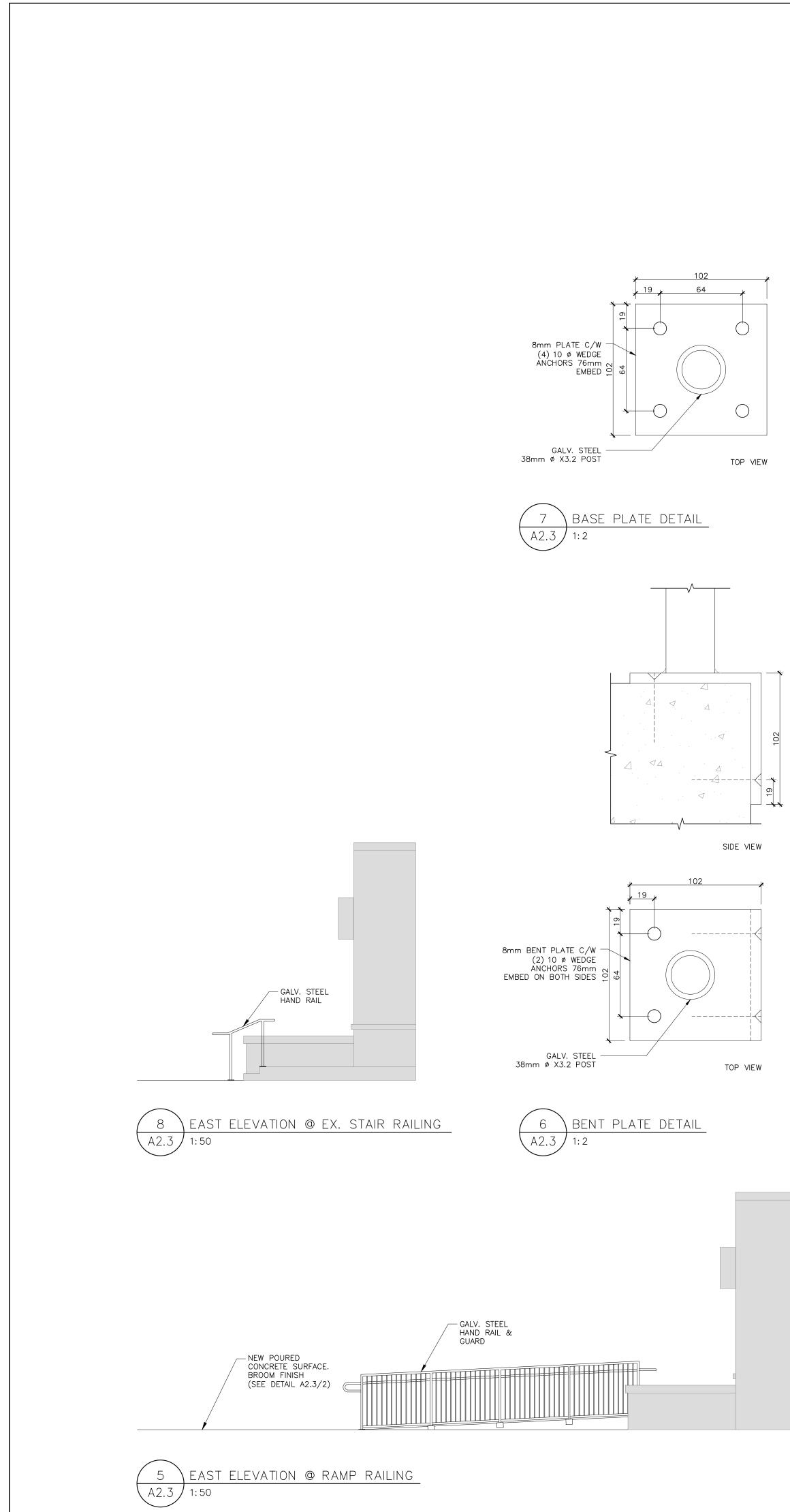


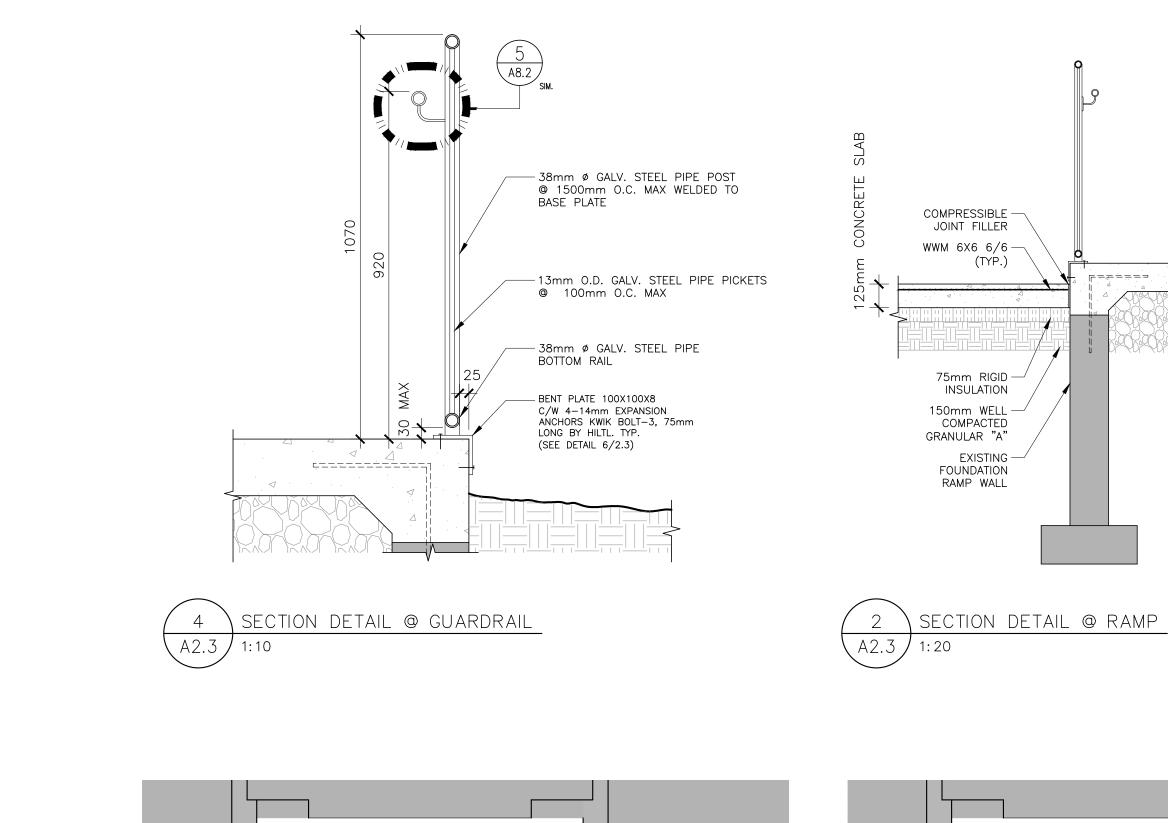


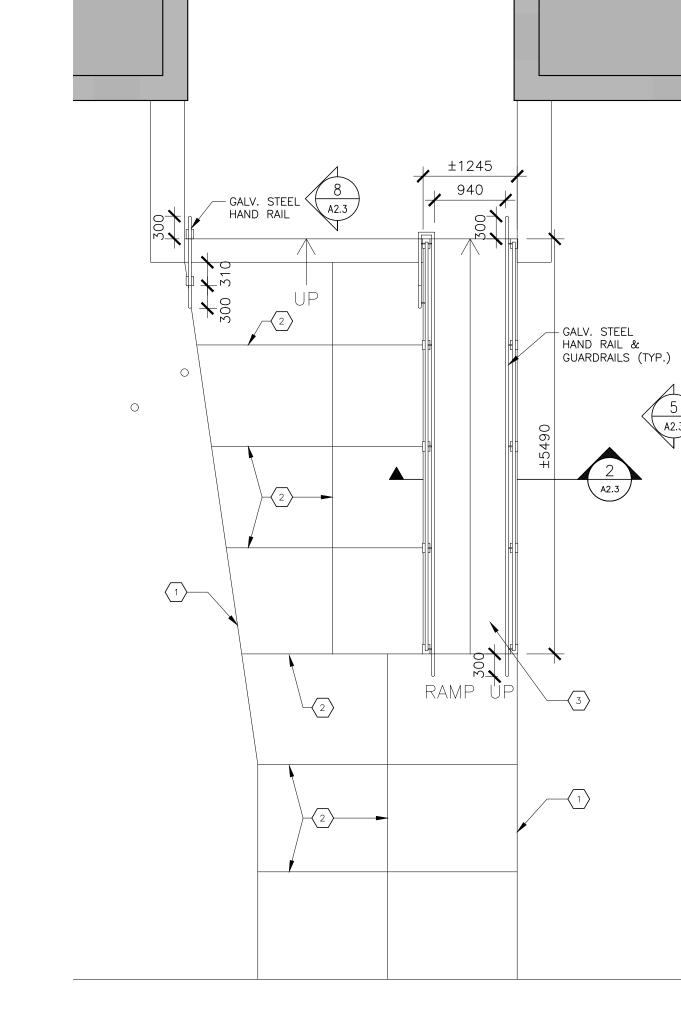


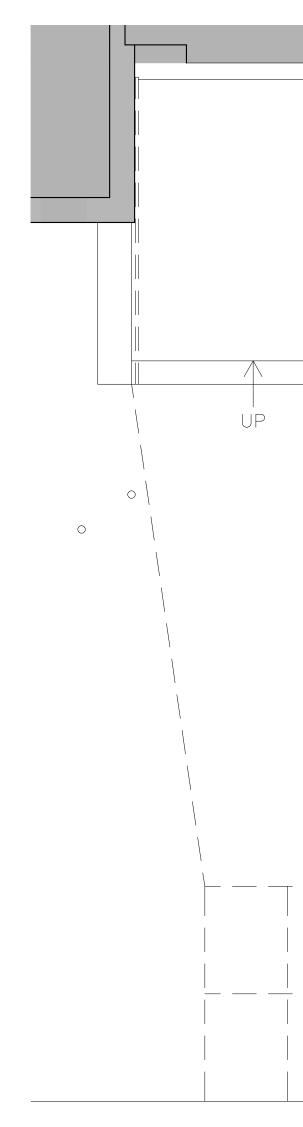
NOTE:ALL KEYNOTES MAY NOT BE USED1NEW CONCRETE SLAB BROOM FINISH. MAKE GOOD ALL DISTURBED SURFACE2CONTROL JOINT. PROVIDE COMPRESSIBLE FILLER STRIP BETWEEN SLAB & COLUMNS3NEW CONCRETE RAMP. COORDINATE WITH STRUCTURAL4SIGNAGE: DOOR FRAME TAG / TYPE 35SIGNAGE: ROOM I.D. / TYPE 6-156PROVIDE CONTINUOUS PAINTED 175X65X3 STEEL ANGLE TRIM AT JAMB AND HEADER.7METAL STORAGE SHELVING	
GENERAL PLAN NOTES 1. PATCH & MAKE GOOD AT ALL JUNCTION OF NEW & EXISTING WORK. 2. NEW DOORS AT NEW & EXISTING BUILDING TRANSITION TO BE CENTERED ON THE JUNCTION OF NEW AND EXISTING WALLS 3. ALL EXTERIOR WALLS TO BE INFORMADJACENT WILL UNLESS NOTED OTHERWISE 4. LOCATE DOOR FRAMES 50mm FROM ADJACENT WALL UNLESS NOTED OTHERWISE. 5. ROOF DRAINAGE FROM ADDITION TO TIE-IN WITH EXISTING EXISTING EXISTING EXISTING DEMOLITION NEW CONSTRUCTION	CGS 118 JAMES ST. NORTH, SUITE 301, HAMILTON, ONTARIO LBR 2K7
NEW WALL Image: State of the st	CONTRACTOR IS TO CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON THE PROJECT AND TO REPORT ANY DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK. CONTRACT DOCUMENTS ARE THE COPYRIGHT OF THE CONSULTANTS AND SHALL NOT BE USED OR REPRODUCED WITHOUT AUTHORIZATION. DOCUMENTS ARE TO BE RETURNED UPON COMPLETION OF THE PROJECT. NOTE: DRAWINGS ARE NOT TO BE SCALED. 7 2024-04-25 Issued for Tender 6 2024-02-09 Issued for Permit Revision 5 2023-12-22 Issued for Review 4 2023-12-04 Issued for SPA 2 2023-10-02 Issued for Review 1 2023-09-27 Sent to Civil Engineer No Date Remarks
EXHAUST/RETURN GRILLE USUPPLY REGISTER UPPLY DIFFUSER	Addition to HWDSB Rosedale Elementary School 25 Erindale Ave. Hamilton, Ontario L8N 3L1
	Dwg. Title: Floor Plans & Reflected Ceiling Plans Drwn: Chkd: WJC Proj. No.: 23011 Scale: As noted Date: 01/31/24 Drawing No.: A2222

 $\langle - \rangle$ PLAN KEYNOTES







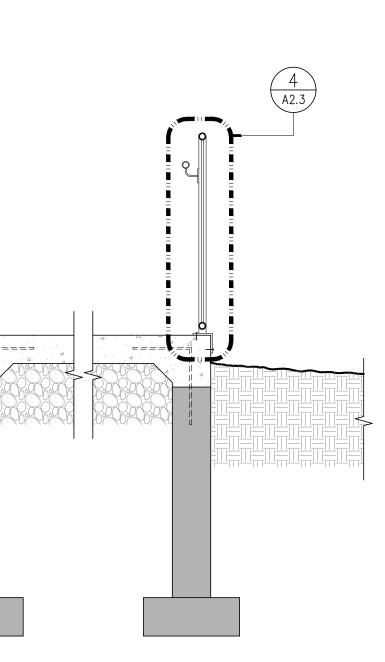


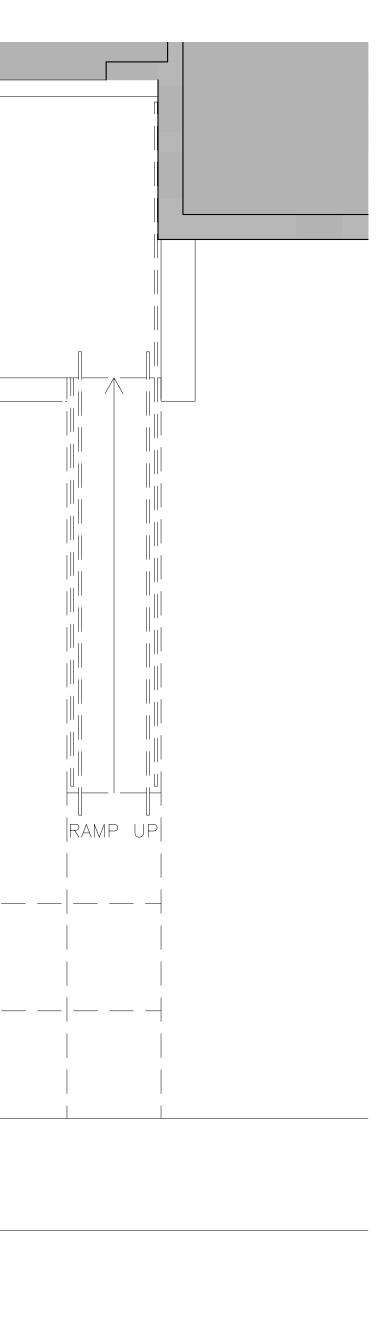
1<u>5</u> A2.3

A2.3





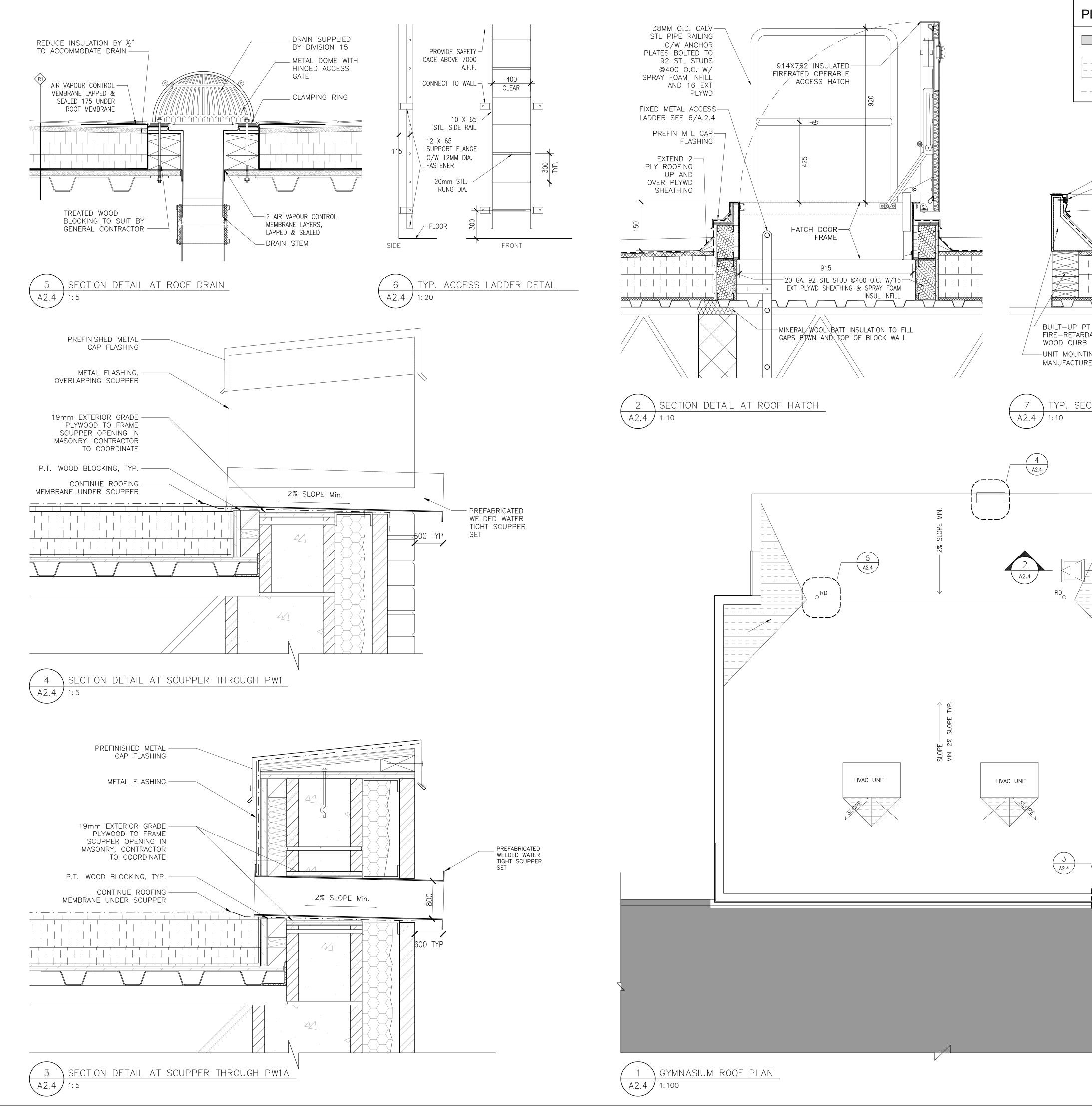




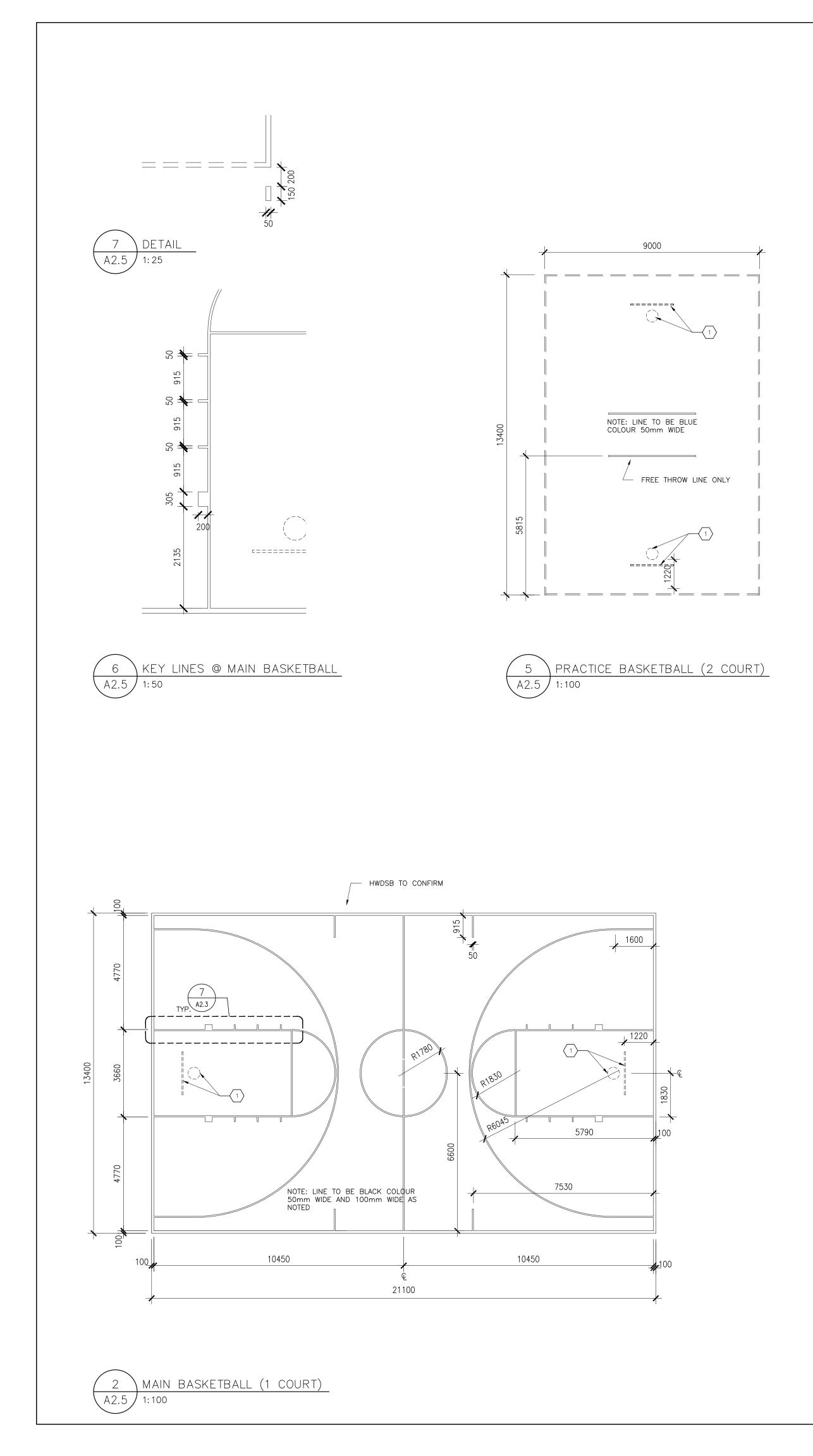
 NEW CONCRETE SLAB BROOM FINISH. MAKE GOOD ALL DISTURBED SURFACE CONTROL JOINT. PROVIDE COMPRESSIBLE FILLER STRIP BETWEEN SLAB & COLUMNS NEW CONCRETE RAMP. COORDINATE WITH STRUCTURAL SIGNAGE: DOOR FRAME TAG / TYPE 3 SIGNAGE: ROOM I.D. / TYPE 6–15 SIGNAGE: ROOM I.D. / TYPE 6–15 PROVIDE CONTINUOUS PAINTED 175X65X3 STEEL ANGLE TRIM AT JAMB AND HEADER. 	
GENERAL PLAN NOTES 1. PATCH & MAKE GOOD AT ALL JUNCTION OF NEW & EXISTING WORK. 2. NEW DOORS AT NEW & EXISTING BUILDING TRANSITION TO BE CENTERED ON THE JUNCTION OF NEW AND EXISTING WALLS 3. ALL EXTERIOR WALLS TO BE INFORMADIACENT WALL EXTERIOR WALLS TO BE INFORMADIACENT WALL UNLESS NOTED OTHERWISE. 4. LOCATE DOOR FRAMES 50mm FROM ADJACENT WALL UNLESS NOTED OTHERWISE. 5. ROOF DRAINAGE FROM ADDITION TO TIE-IN WITH EXISTING SCHOOL STORM DRAIN. PLAN LEGEND EXISTING EXISTING	CGS IIB JAMES ST. NORTH, SUITE 301, HAMILTON, ONTARIO LBR 2K7
NEW CONSTRUCTION NEW WALL EXISTING DOOR TO REMAIN NEW DOOR	CONTRACTOR IS TO CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON THE PROJECT AND TO REPORT ANY DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK. CONTRACT DOCUMENTS ARE THE COPYRIGHT OF THE CONSULTANTS AND SHALL NOT BE USED OR REPRODUCED WITHOUT AUTHORIZATION. DOCUMENTS ARE TO BE RETURNED UPON COMPLETION OF THE PROJECT.
	NOTE: DRAWINGS ARE NOT TO BE SCALED. 7 7 2024-04-25 8 1 6 2024-02-09 15 2023-12-22 15 15 2023-12-04 1ssued for Review 4 2023-12-04 1 2023-11-15 1 2023-10-02 1 2023-09-27 1 2023-09-27 1 2023-09-27 1 2023-09-27 1 2023-09-27 1 2023-09-27 1 2023-09-27 1 2023-09-27 1 2023-09-27 1 2023-09-27 1 2023-09-27 1 2023-09-27 2 1 1 1 1 1 1 1 1 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1
	Addition to HWDSB Rosedale Elementary School 25 Erindale Ave. Hamilton, Ontario L8N 3L1
Project North	Dwg. Title: Exterior Ramp & Details

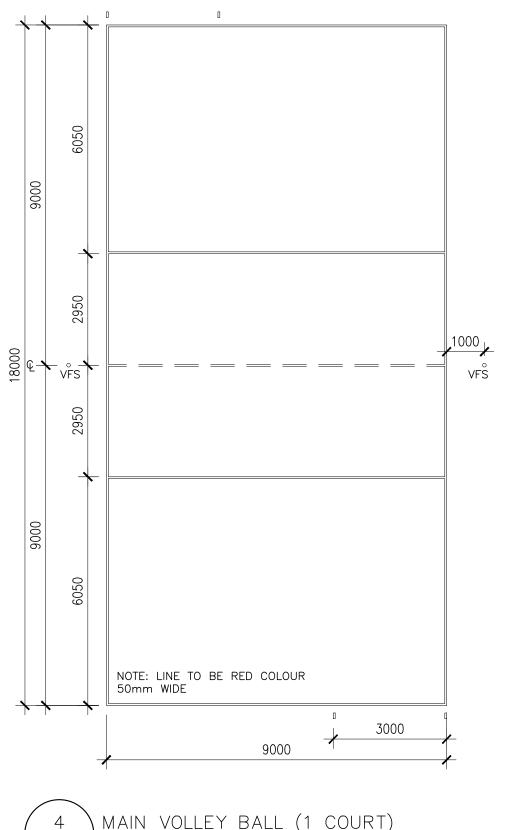
 $\overline{}$ PLAN KEYNOTES

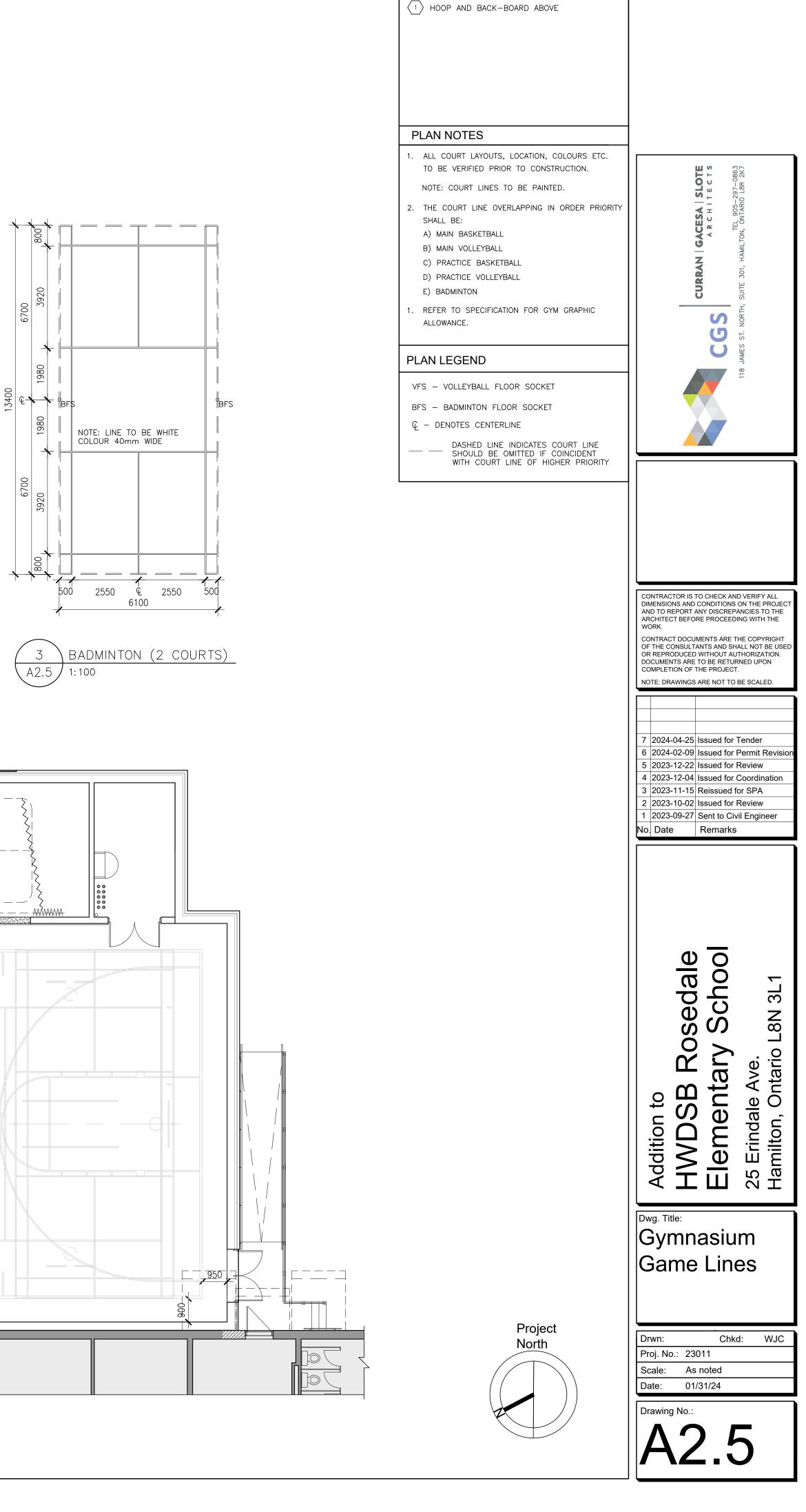
NOTE: ALL KEYNOTES MAY NOT BE USED



PLAN LEGEND		
PLAN LEGEND EXISTING SLOPED INSULATION ACM CLADDING	NOTE: ALL KEYNOTES MAY NOT BE USED 1 REMOVE EXISTING DOORS/FRAMES & ALL ASSOCIATED ITEMS. PATCH THE ADJACENT SURFACES. 2 REMOVE EXISTING PLUMBING FIXTURES, MILLWORK & ALL OTHER ASSOCIATED ITEMS. 3 REMOVE EXISTING WINDOW AND WALL BELOW & CREATE OPENING FOR NEW DROPPED WINDOW. 4 REMOVE EXISTING WALL AS SHOWN & PATCH & REPAIR THE ADJACENT SURFACES AS REQUIRED. 5 REMOVE EXISTING WALL PADDING & ASSOCIATED ITEMS. PATCH & REPAIR THE ADJACENT SURFACES AS REQUIRED. 6 REMOVE EXISTING FOLDING PARTITION AND ASSOCIATED ITEMS. PATCH AND MAKE GOOD ALL SURFACES. 7 EXISTING PIPES TO REMAIN. REMOVE ASBESTOS, AND RECOVER IN PVC	₩S KGG
HIGH-DOMED, CAPPED, GASKETED FASTENERS (APPROX. 450 O.C.) MIN. TWO FASTENERS PER SIDE REMOVABLE METAL COUNTERFLASHING PREFIN. METAL FLASHING	 AND RECOVER IN PVC REMOVE WINDOW CURTAIN OPERATOR & ASSOCIATED ITEMS. REMOVE ACT TILE, LIGHT FIXTURES & MILLWORK REMOVE EXISTING CONCRETE STAIRS, LANDINGS, METAL HANDRAILS AND ALL ASSOCIATED ITEMS. GENERAL DEMO NOTES PATCH AND MAKE GOOD ALL AREAS AFFECTED BY DEMOLITION. REMOVE EXISTING GYMNASIUM CEILING TILE, LIGHT FIXTURES, HVAC DIFFUSERS, STAGE CURTAINS AND RIGGING, MOVEABLE WALL TRACK & PARTITIONS REMOVE EXISTING GYMNASIUM FLOORING, PATCH AND LEVEL FOR NEW FLOORING. 	CGS 118 JAMES ST. NORTH, SUITE 301, HAMILTON, ONTARIO LBR 2K7
B TING CURB BY RER (SEE MECH DWGS)	PLAN LEGEND EXISTING DEMOLITION NEW CONSTRUCTION NEW WALL EXISTING DOOR TO REMAIN NEW DOOR	CONTRACTOR IS TO CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON THE PROJECT AND TO REPORT ANY DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
		CONTRACT DOCUMENTS ARE THE COPYRIGHT OF THE CONSULTANTS AND SHALL NOT BE USED OR REPRODUCED WITHOUT AUTHORIZATION. DOCUMENTS ARE TO BE RETURNED UPON COMPLETION OF THE PROJECT. NOTE: DRAWINGS ARE NOT TO BE SCALED. 7 2024-04-25 Issued for Tender 6 2024-02-09 Issued for Permit Revision 5 2023-12-22 Issued for Review 4 2023-12-04 Issued for Coordination 3 2023-11-15 Reissued for SPA 2 2023-09-27 Sent to Civil Engineer No. Date Remarks
		Addition to HWDSB Rosedale Elementary School 25 Erindale Ave. Hamilton, Ontario L8N 3L1
	Project North	Dwg. Title: Roof Plan & Details Drwn: Chkd: WJC Proj. No.: 23011 Scale: As noted Date: 01/31/24 Drawing No.: A24

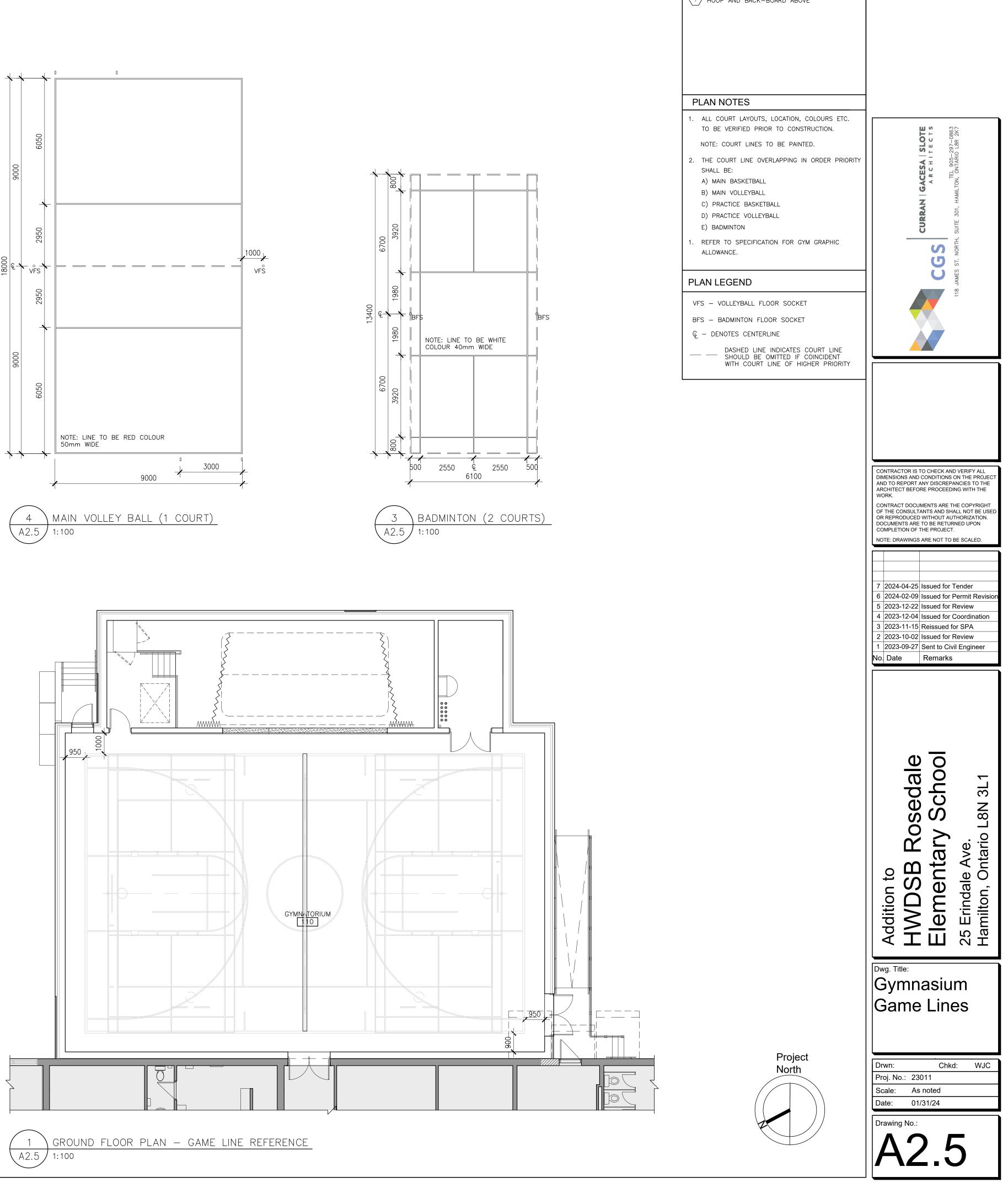




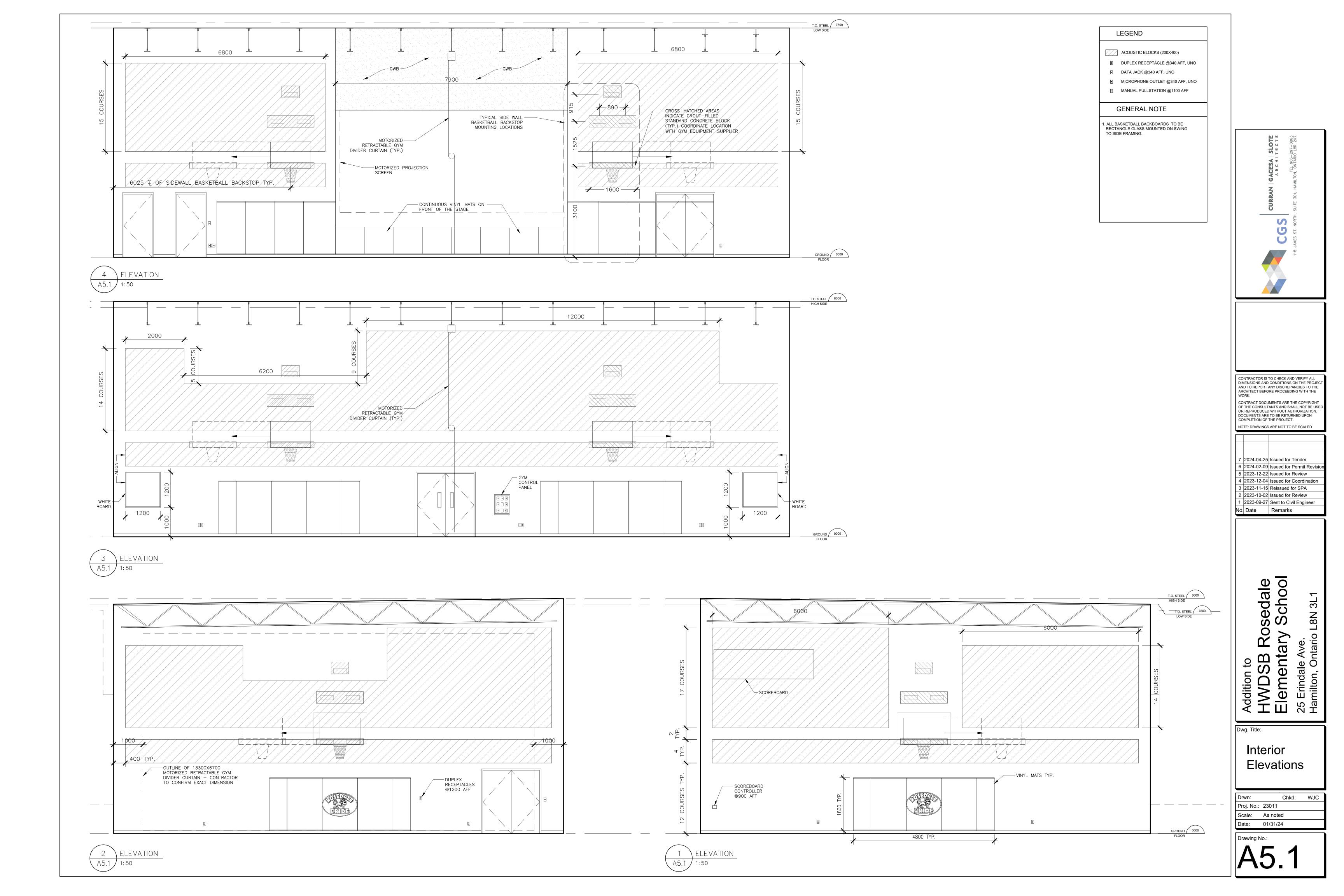


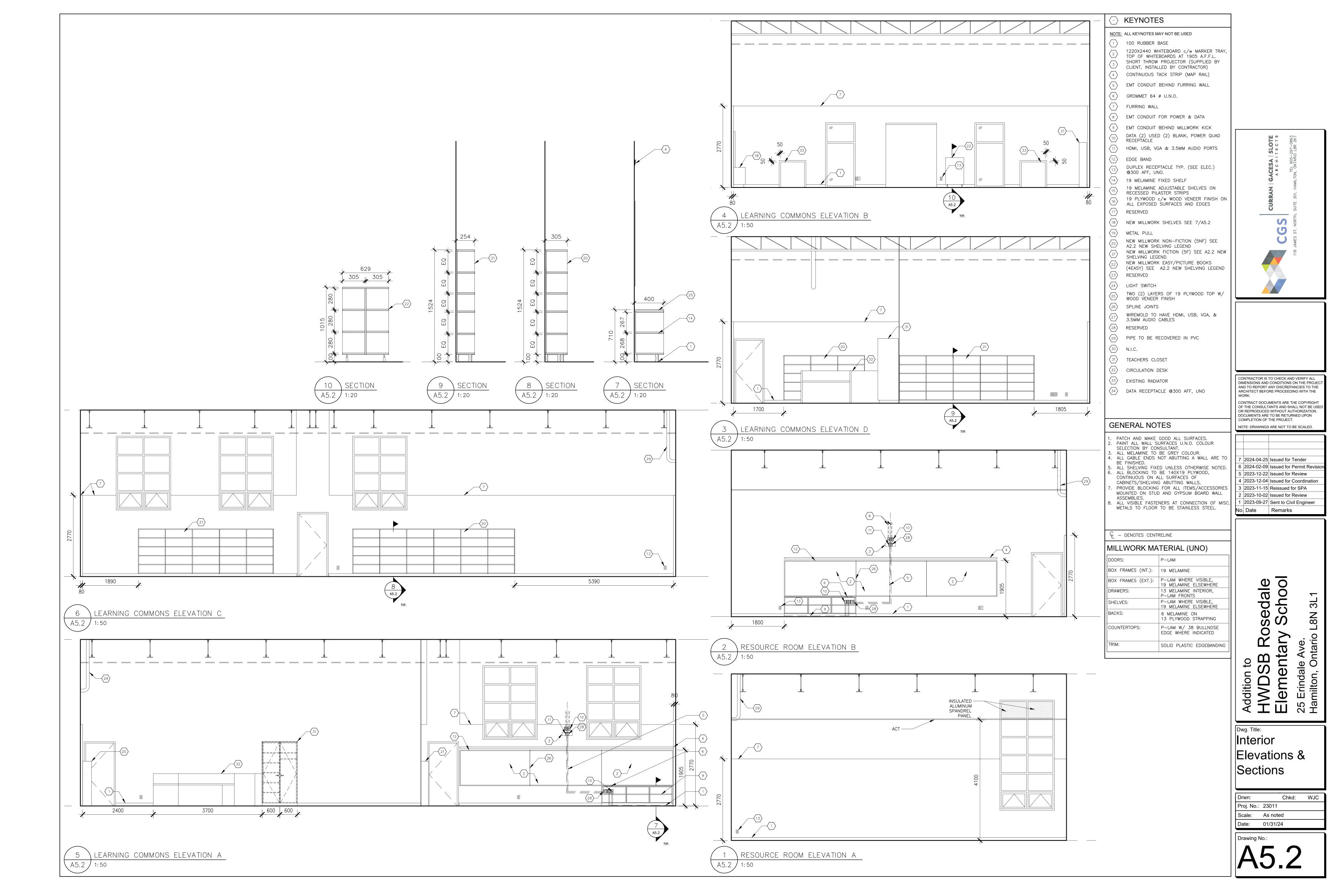
 $\overline{}$ - \rangle PLAN KEYNOTES

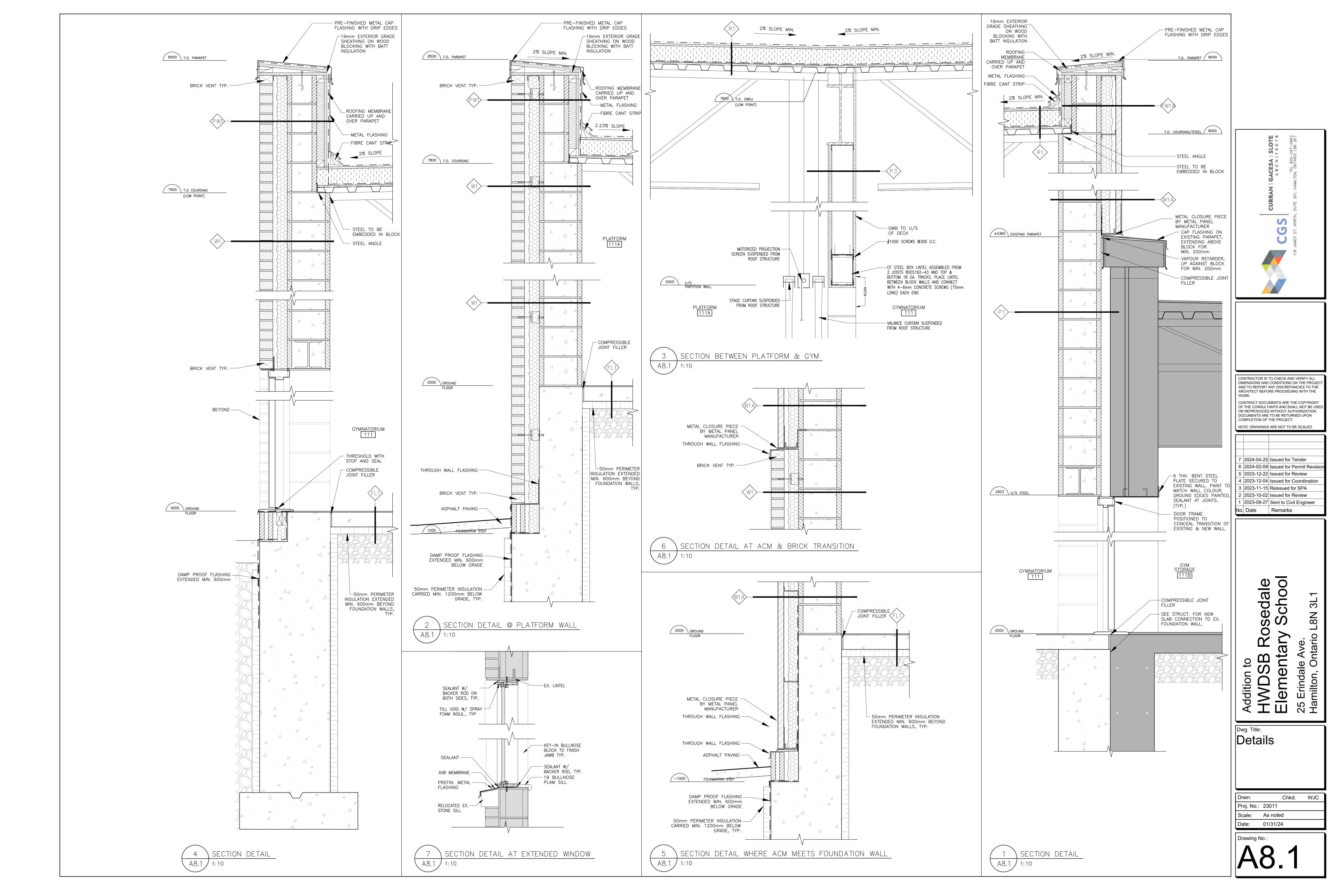
NOTE: ALL KEYNOTES MAY NOT BE USED

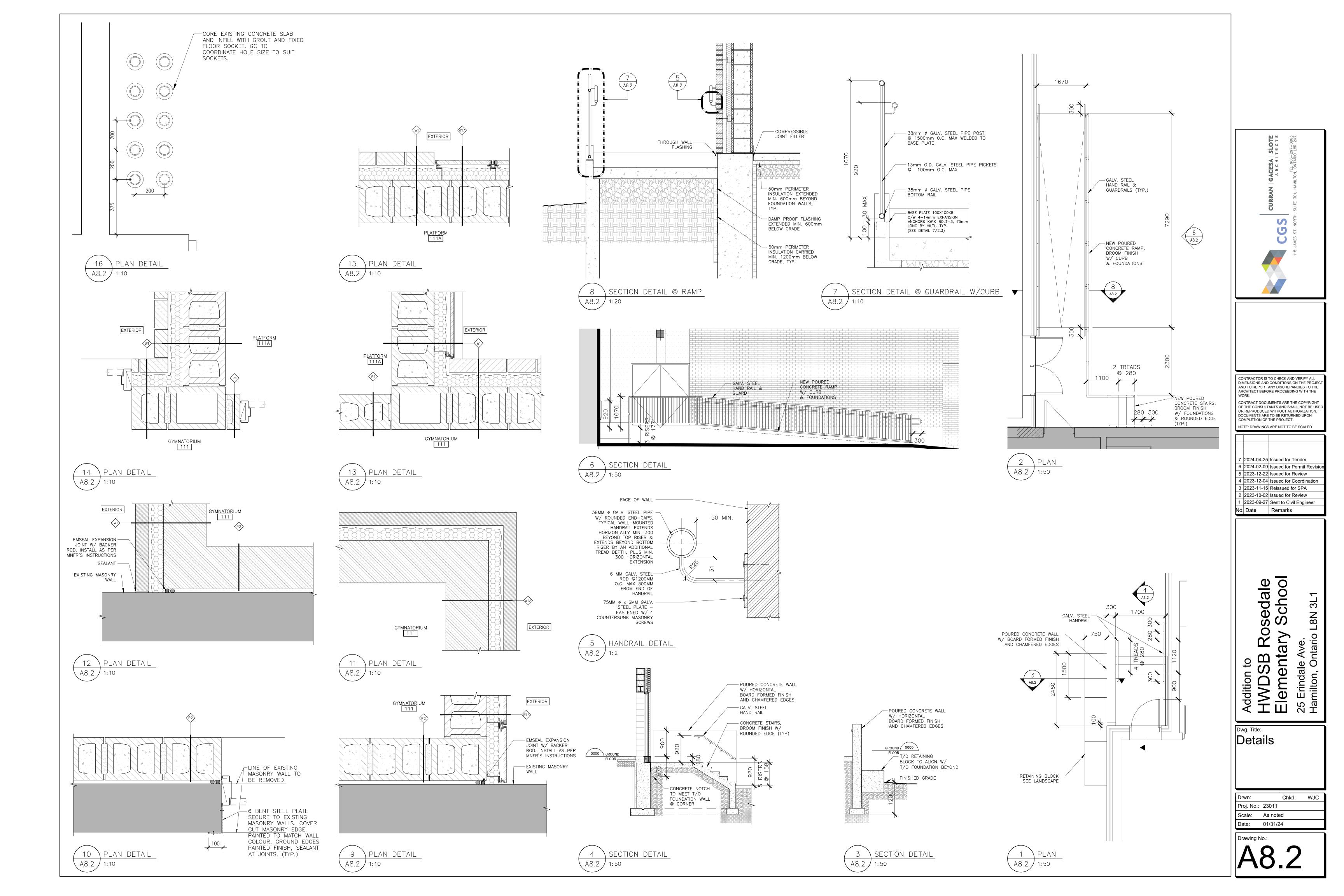


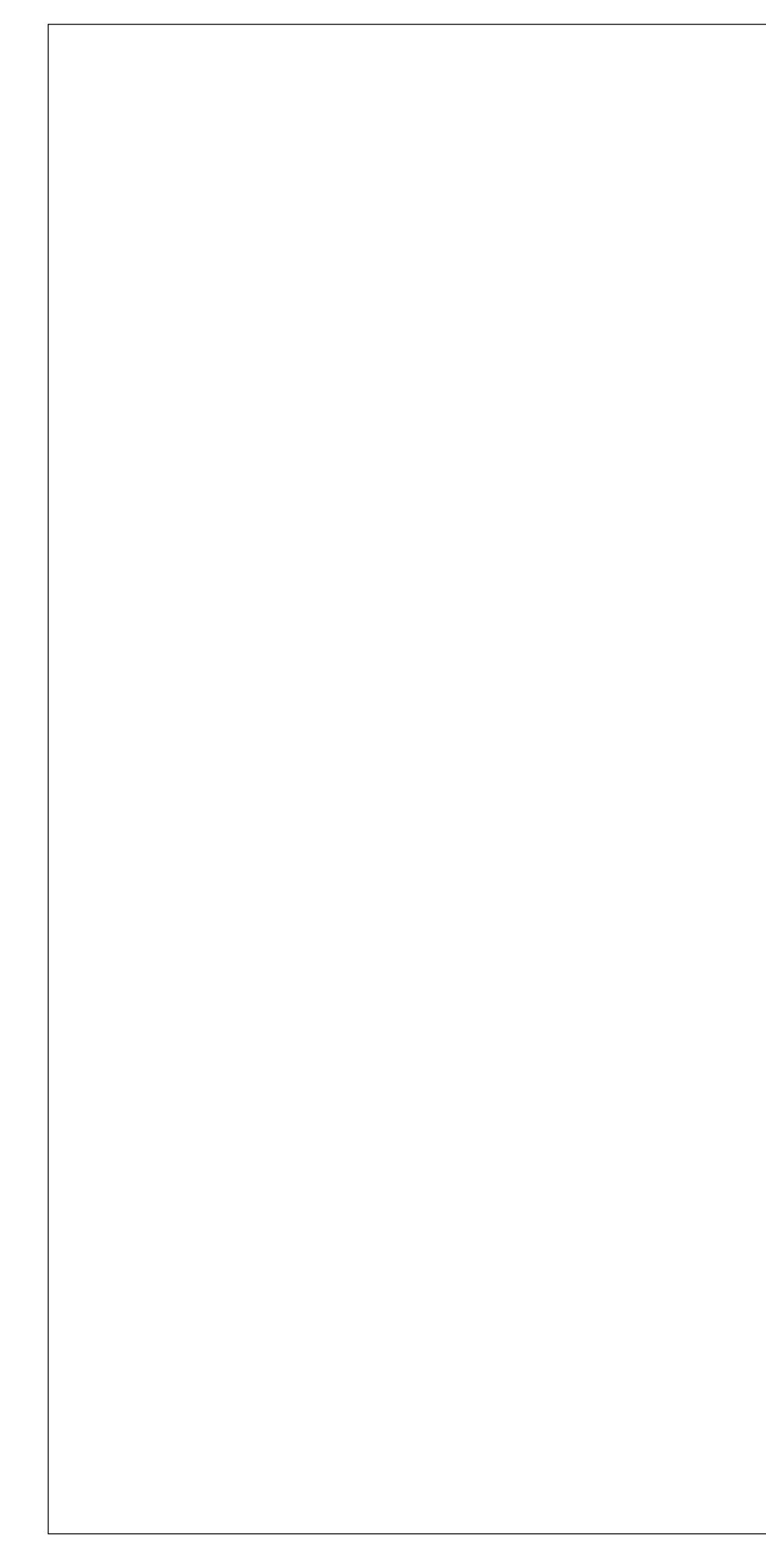


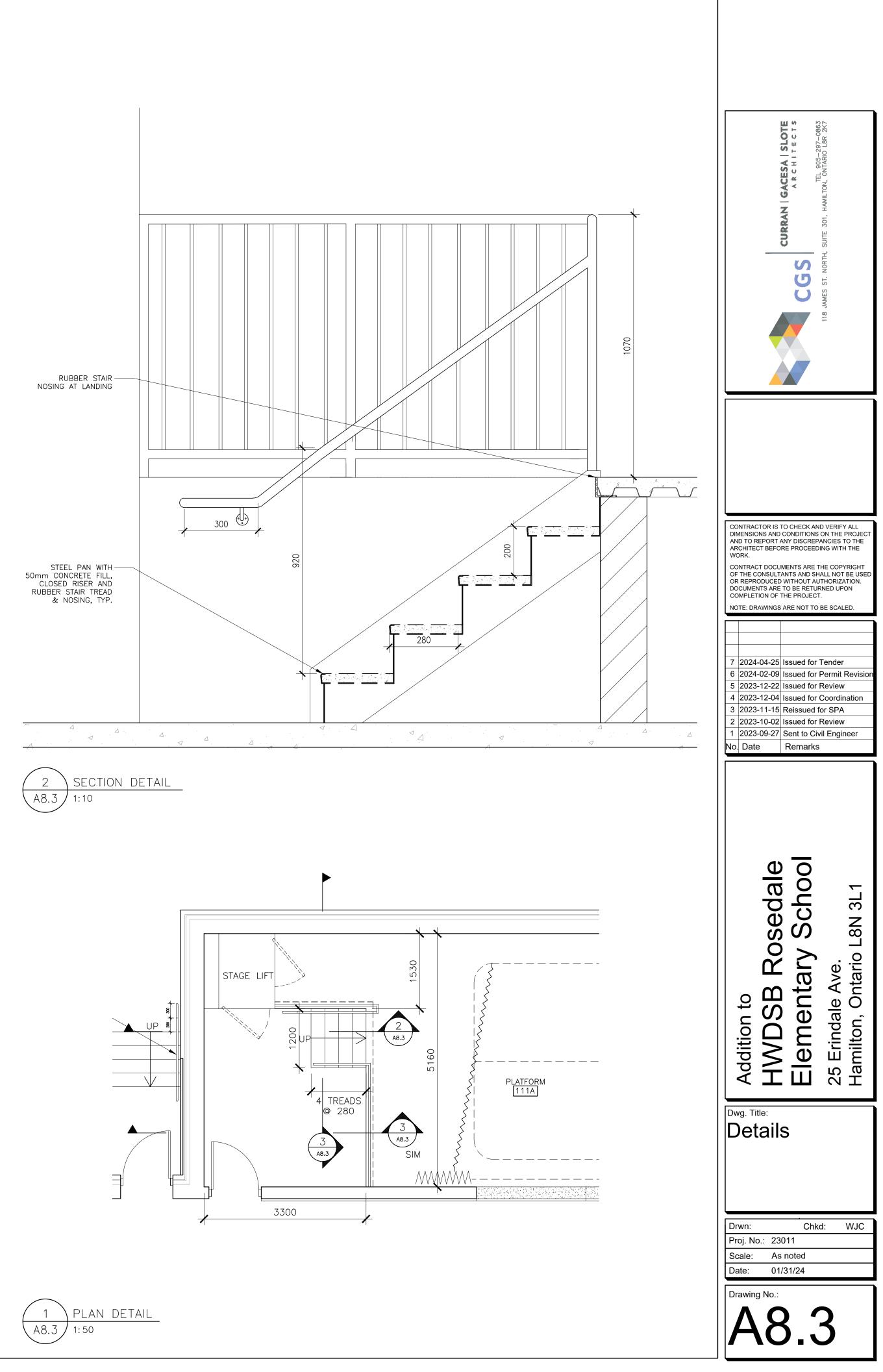


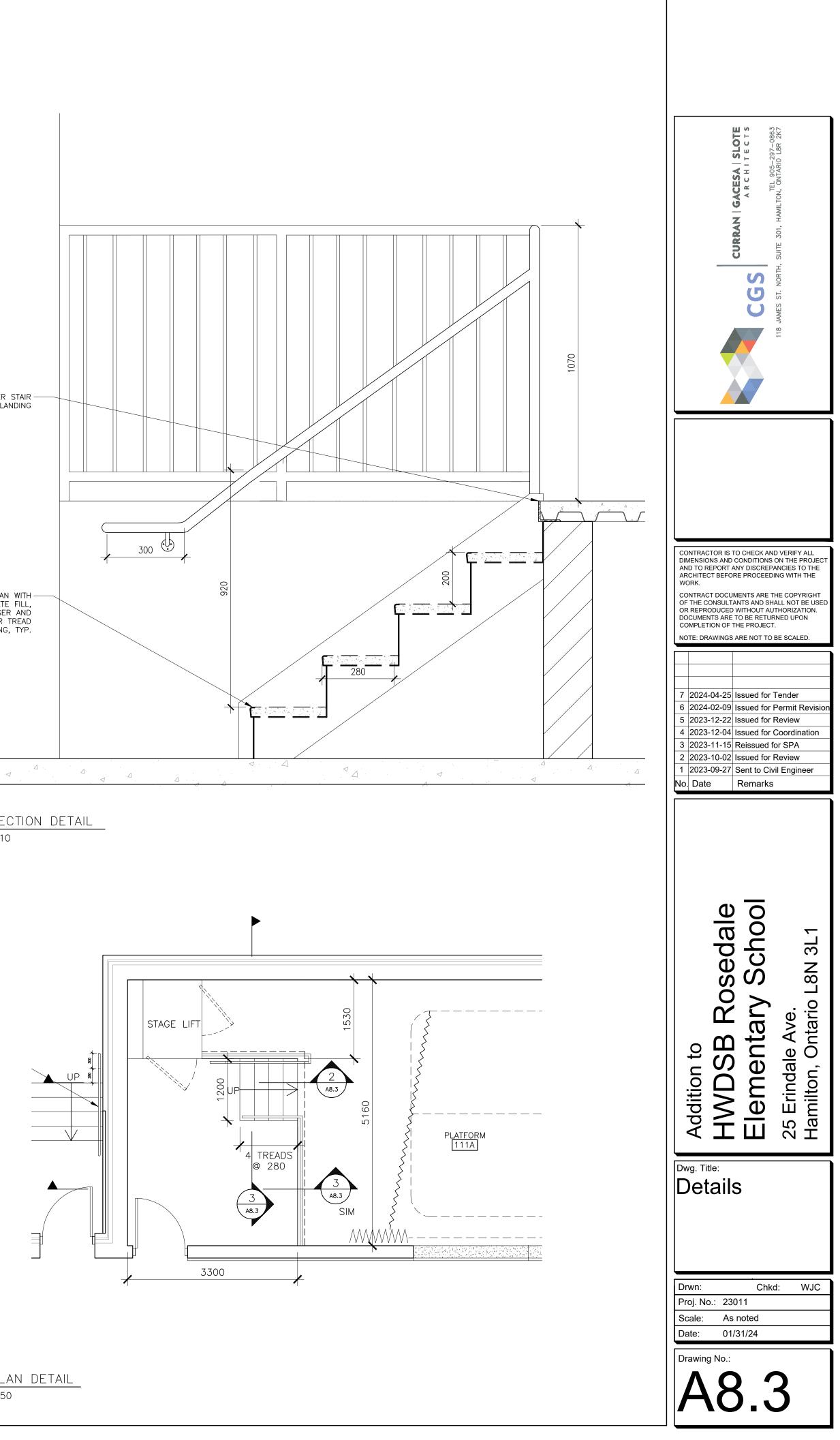




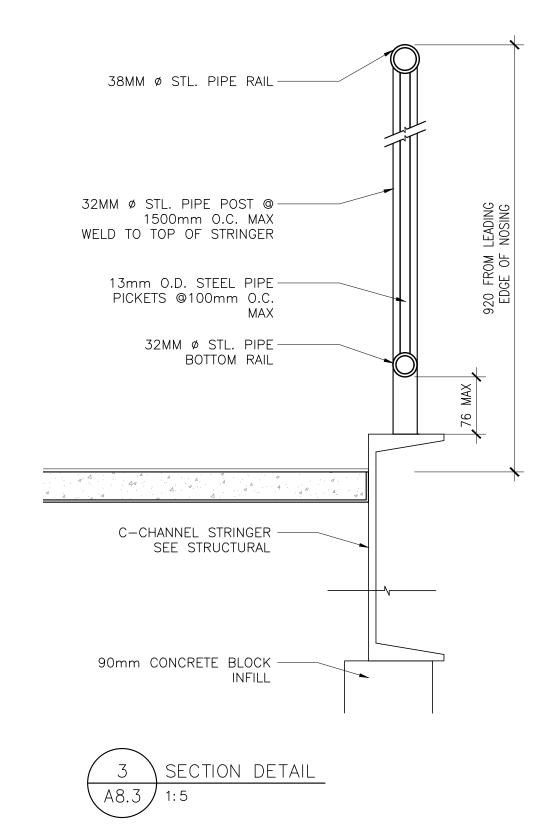


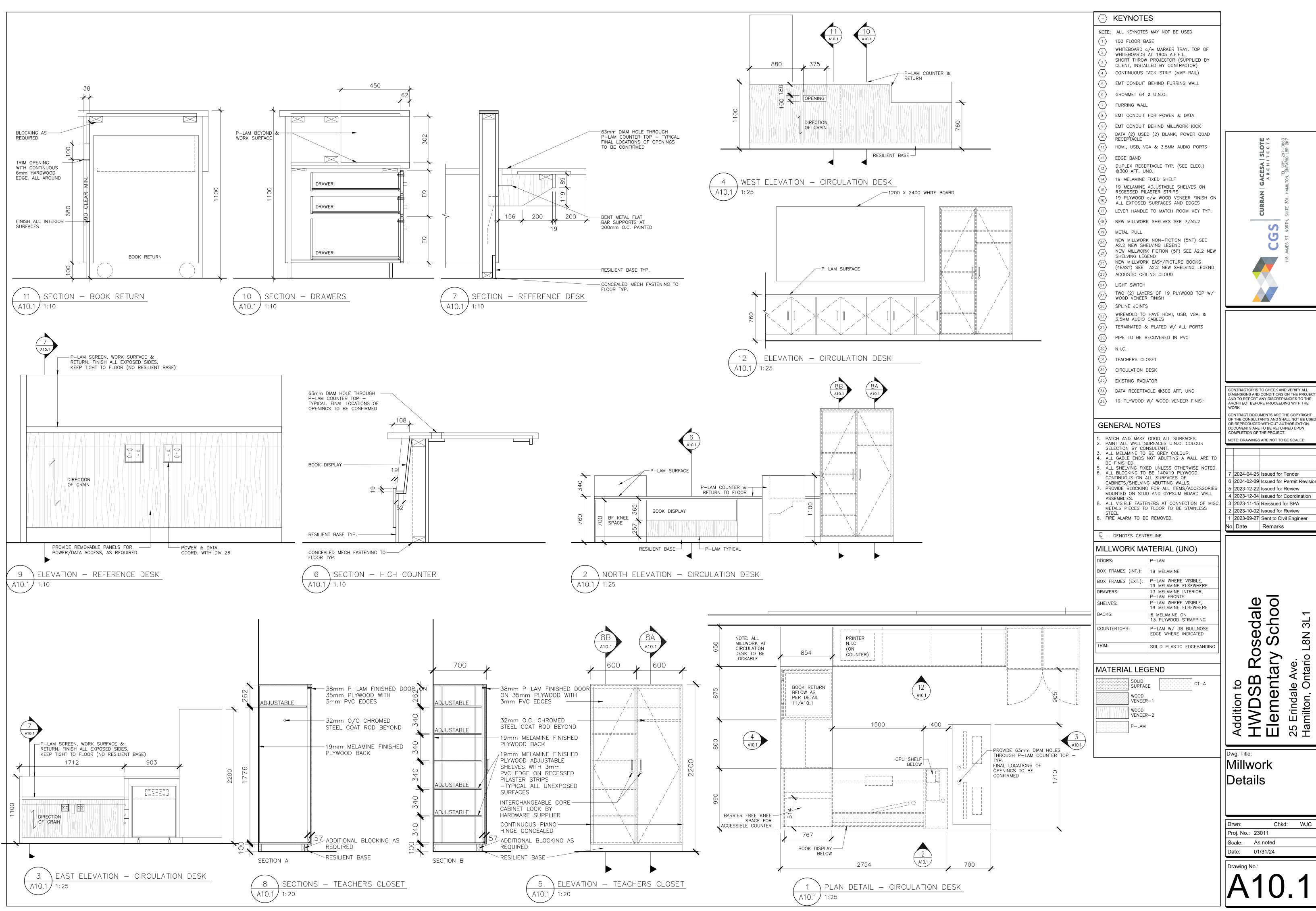


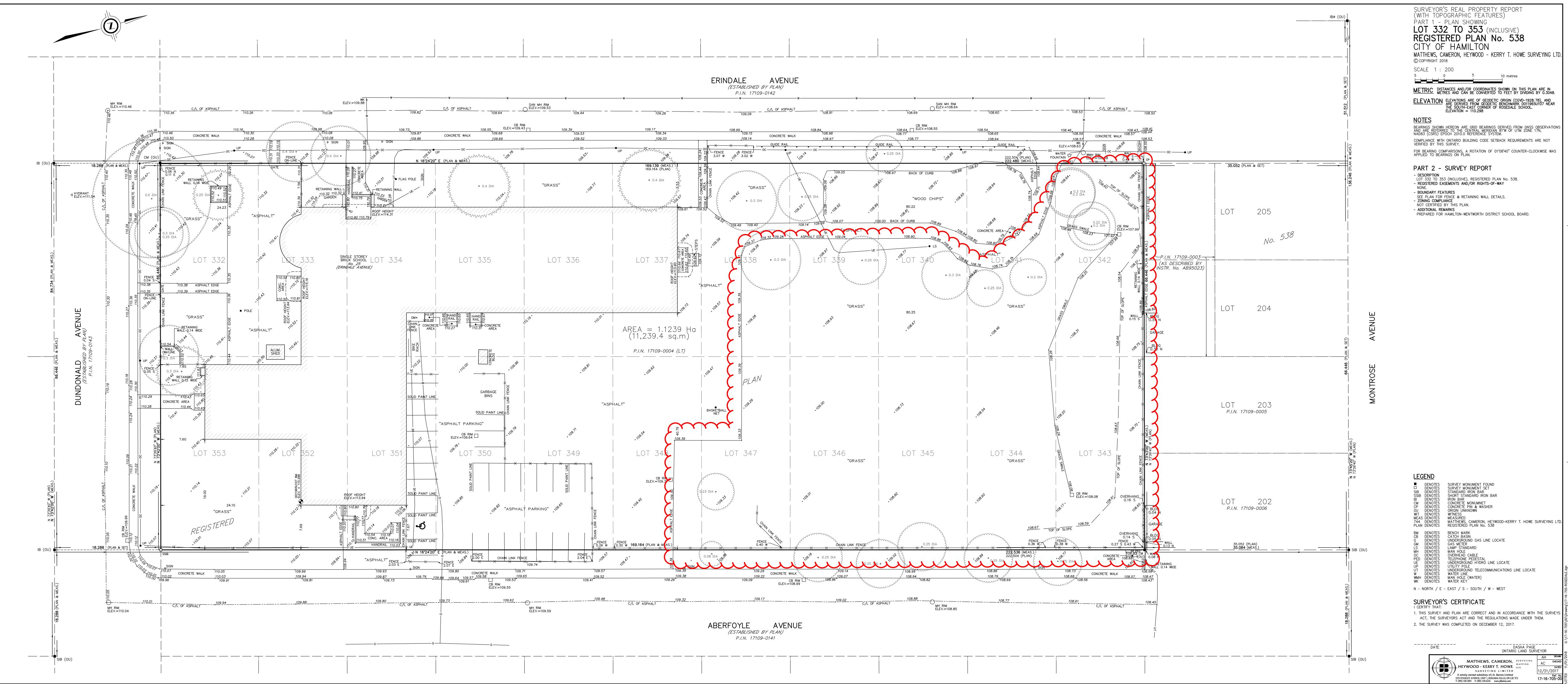


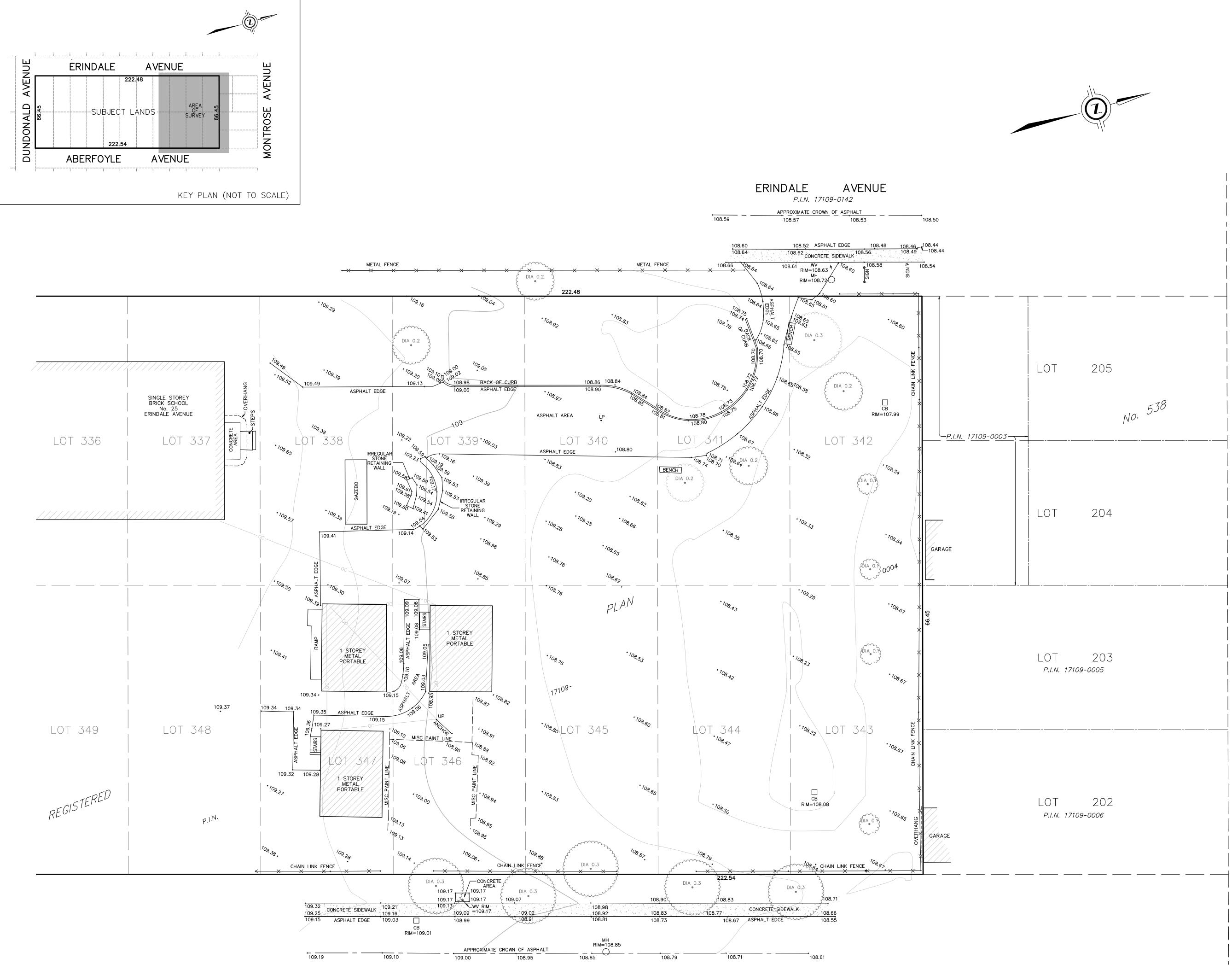












ABERFOYLE AVENUE P.I.N. 17109-0141

NOTE: THIS SKETCH IS NOT A LEGAL PLAN OF SURVEY TOPOGRAPHIC SKETCH OF

10 metres

25 ERINDALE AVENUE

CITY OF HAMILTON

SCALE 1 : 200

J.D. BARNES LIMITED © COPYRIGHT 2023

LEGAL DESCRIPTION

LOT 332 TO 353 (BOTH INCLUSIVE) REGISTERED PLAN No. 538

BOUNDARY INFORMATION HAS BEEN DERIVED FROM AVAILABLE RECORDS AND/OR FIELD MEASUREMENTS. THIS IS NOT A PLAN OF SURVEY.

METRIC DISTANCES AND/OR COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

<u>NOTES</u>

DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.999704.

ELEVATION NOTE

ELEVATIONS ARE OF GEODETIC ORIGIN (CGVD-1928:78), AND ARE DERIVED FROM GEODETIC BENCHMARK 0011965U107 NEAR THE SOUTH-EAST CORNER OF ROSEDALE SCHOOL. ELEVATION = 110.298

<u>LEGEND</u>

لبا

AVENU

ONTROSE

Σ

	СВ	DENOTES	CATCHBASIN
Ο	МН	DENOTES	MANHOLE
•	UP	DENOTES	UTILITY POLE
•	LP	DENOTES	LIGHT POST
-0-	WV	DENOTES	WATER VALVE
d S	SIGN	DENOTES	SIGNAL
DI	A	DENOTES	DIAMETER
М	SC	DENOTES	MISCELLANEOUS
—0	c——	DENOTES	OVERHEAD CABLE
X	—×—	DENOTES	FENCE
¢~~~•	، پرس	DENOTES	DECIDUOUS TREE

UPDATED TOPOGRAPHICAL INFORMATION

THE FIELD WORK SHOWN ON THIS SKETCH WAS COMPLETED ON JULY 20, 2023.

ANDREW HANDSPIKER ONTARIO LAND SURVEYOR

<u>CAUTION</u>

_<u>SEPTEMBER_5, 2023</u>_ DATE

(A) THIS IS NOT A PLAN OF SURVEY AND SHALL NOT BE USED EXCEPT FOR THE PURPOSE INDICATED IN THE TITLE BLOCK. (B) THIS SKETCH IS PROTECTED BY COPYRIGHT.

J.D.BARNES LIMITED J.D. BARNES LIMITED AND INFORMATION SPECIALISTS 4318 PORTAGE ROAD - UNIT 2, NIAGARA FALLS, ON L2E 6A4 T: (905) 358-3693 F: (905) 358-6224 www.jdbarnes.com							
DRAWN BY:	CHECKED BY:	REFERENCE NO .:					
AC/SC	AH		17-16-705-01				
FILE: G: \2017\17-16-705\01\Drawing?-16-705-01 TOPO SKETCH							
		PLOTTED:	AUGUST 31, 2023				

<u>GENERAL NOTES</u>

DRAWING NOTES AND INTERPRETATION:

- 1. READ THESE DRAWINGS IN CONJUNCTION WITH ALL RELATED ARCHITECTURAL, MECHANICAL, ELECTRICAL, CIVIL DRAWINGS AND CONTRACT DOCUMENTS.
- 2. THE DESIGN, DETAILING, CONSTRUCTION, AND SHORING SHALL CONFORM TO THE LATEST EDITIONS OF THE ONTARIO BUILDING CODE AND THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS.
- 3. DO NOT SCALE THE DRAWINGS.
- 4. ALL DESIGN LOADS INDICATED ARE UNFACTORED UNLESS NOTED OTHERWISE.
- 5. THE DESIGN AND CONSTRUCTION OF ALL WORK ON THIS PROJECT SHALL CONFORM TO THE CURRENT ONTARIO BUILDING CODE AND THE LATEST EDITIONS OF THE LISTED STANDARDS INCLUDING REVISIONS.
- 6. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND MEASUREMENTS AT THE SITE AND REPORT TO THE ENGINEER ANY DISCREPANCIES OR CONDITIONS WHICH MAY ADVERSELY AFFECT THE PROPER COMPLETION OF THE JOB BEFORE PROCEEDING WITH THE WORK.
- 7. DESIGN LIVE LOADS SHOWN ON THE DRAWINGS SHALL NOT BE EXCEEDED DURING CONSTRUCTION.
- 8. IN CASE OF CONFLICT BETWEEN CODES, REFERENCE STANDARDS, DRAWINGS AND OTHER CONTRACT DOCUMENTS, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN. ALL CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION AND DIRECTION PRIOR TO ORDERING OR PROVIDING ANY MATERIALS OR LABOR. THE CONTRACTOR SHALL BID THE MOST STRINGENT REQUIREMENTS.

FOUNDATIONS:

- . FOUNDATIONS HAVE BEEN DESIGNED FOR 150 kPa FOR (SLS) AND 225 kPa FOR (ULS) AS PER THE SOIL REPORT # 17HF044 PREPARED BY PETO MACCALLUM LTD. CONSULTING ENGINEERS. A SOIL ENGINEER SHALL VERIFY THE SOIL BEARING CAPACITIES UNDER THE FOOTINGS AND THE SUITABILITY OF THE SUBGRADE UNDER THE SLAB-ON-GRADE. IN ANY NON-CONFORMING CONDITIONS THE STRUCTURAL ENGINEER MUST BE IMMEDIATELY INFORMED.
- 2. FOUND ALL FOOTINGS ON STRATA CAPABLE OF SUPPORTING THE ABOVE NOTED DESIGN BEARING PRESSURES. EXTERIOR FOOTINGS AND FOOTING EXPOSED TO FROST SHALL BE FOUNDED AT A MINIMUM DEPTH OF 1200MM(4'-0'') BELOW FINISHED GRADE. REFER TO THE GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.
- 3. PROTECT SOIL ADJACENT AND BELOW ALL FOOTINGS FROM FREEZING.
- 4. PROTECT FOOTINGS, FOUNDATION WALLS, AND SLAB-ON-GRADE AGAINST FREEZING DURING CONSTRUCTION TIME.
- 5. DO NOT EXCEED A RISE OF 7 IN A RUN OF 10 IN THE LINE OF SLOPE BETWEEN ADJACENT EXCAVATIONS FOR FOOTINGS OR TRENCHES.
- 6. FOOTINGS STEPS SHALL BE A MAXIMUM OF 600MM(24") HIGH AND A MINIMUM OF 1200MM(4'-0") APART.
- 7. FOOTINGS AND PIERS SHALL BE CENTERED UNDER CENTROID OF COLUMNS UNLESS
- 8. DO NOT BACKFILL AGAINST WALLS BELOW GRADE UNTIL ALL LATERALLY SUPPORTING ELEMENTS ARE PROPERLY INSTALLED AND THE SLAB-ON-GRADE IS CAST AND CONCRETE ATTAINED ITS 28-DAY DESIGN COMPRESSIVE STRENGTH. FOR OTHER WALLS BELOW GRADE BACKFILL AND COMPACT SIMULTANEOUSLY ON BOTH SIDES OF THE WALL.

CAST-IN-PLACE-CONCRETE:

NOTED OTHERWISE.

FOLLOWING TABLE:

- 1. ALL CONCRETE SHALL BE DESIGNED TO COMPLY WITH THE LATEST EDITION OF CAN/CSA
- A23.3 2. THE CONSTRUCTION OF CONCRETE SHALL COMPLY WITH THE LATEST EDITION OF
- 3. THE 28-DAY CONCRETE COMPRESSIVE STRENGTH, I'C, SHALL BE AS INDICATED IN THE

	28–DAY STRENGTH (MPa)	EXPOSURE CLASSIFICATION	SLUMP AT DELIVERY (MM)	AIR ENTRAINMENT (%)
FOOTINGS & INTERIOR FOUNDATION WALLS	25	N	75(+/-) 25	_
INTERIOR SLAB ON GRADE	25	N	50(+/-) 25 (NOTE 1)	_
EXTERIOR FOUNDATION WALLS, WALLS, & COLUMNS	25	F-2	75(+/-) 25	5-8
EXTERIOR SLABS & SIDEWALKS	32	C-2	75(+/-) 25	5-8
MASONRY CELLS FILLING GROUT	15	-	PER CSA A179	_
NON-SHRINK BEARING GROUT	35	-	_	_
NOTES:				

1. THIS SLUMP IS BEFORE ADDITION OF SUPERPLASTICIZER. IF SUPERPLASTIZIER IS USED, SLUMP SHALL BE (150+/-25MM).

4. THE MINIMUM CONCRETE COVER IN (MM) TO THE REINFORCING BARS SHALL BE AS INDICATED IN THE FOLLOWING TABLE UNLESS AS NOTED IN SENTENCES 3.5 AND 3.6

	EXPOSURE CLASSES N, F1, AND F2	EXPOSURE CLASSES C1, AND C3
FOOTINGS	75 TO BOTTOM BARS AND 50 TO TOP BARS	75 TO BOTTOM BARS AND 60 TO TOP BARS
PIERS	50	60
GRADE BEAMS	50	60
WALLS	40 TO EXTERIOR SURFACE AND 20 TO INTERIOR SURFACE	60
SLABS	40 TO EXTERIOR SURFACE AND 25 TO INTERIOR SURFACE	60

5. THE MINIMUM CONCRETE COVER SHALL BE EQUAL TO THE REINFORCING BAR DIAMETER FOR EXPOSURE CLASS N, 1.5 TIMES THE BAR DIAMETER FOR CLASSES F1 AND F2, AND 2 TIMES THE BAR DIAMETER FOR CLASSES C1 AND C3.

6. IF CONCRETE IS CAST AGAINST EARTH, THE MINIMUM CONCRETE COVER SHALL BE 75MM.

. REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF CAN/CSA G30.18, GRADE 400W AND 400R, AND SHALL BE DEFORMED BAR UNLESS INDICATED OTHERWISE ON THE DRAWINGS.

- STRUCTURAL STEEL: 1. ALL STRUCTURAL STEEL SHALL BE DESIG S16 (LATEST EDITION).
- 2. ALL STRUCTURAL STEEL SAMPLES EXCEP
- 3. ALL SQUARE HSS SHALL CONFORM TO (
- 4. ALL ROUND HSS SHALL CONFORM TO ASTM A500 CLASS (C).

- 5. ALL WELDING SHALL CONFORM TO THE LATEST EDITIONS OF CSA W59 AND W47.1.
- 6. ALL STEEL SHALL BE SHOP PRIMED IN CONFORMANCE WITH CISC STANDARDS 1-73A AND 2-75, EXCEPT FOR INTERIOR STEEL THAT WILL BE SPRAYED WITH FIRE RESISTIVE MATERIAL.
- 7. DO NOT CUT OPENINGS IN THE STRUCTURAL STEEL WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER.
- 8. THE CONTRACTOR SHALL PROVIDE AND REMOVE AFTERWARDS PROPER TEMPORARY BRACING TO KEEP THE STRUCTURE TRUE AND PLUM DURING CONSTRUCTION.
- 9. UNLESS OTHERWISE NOTED ON THE DRAWINGS, ALL BOLTS SHALL BE A MINIMUM 3/4"DIAMETER AND CONFORM TO ASTM A325.
- 10. ALL CONNECTIONS SHALL BE DESIGNED BY THE FABRICATOR UNLESS OTHERWISE NOTED ON THE DRAWINGS. THE DESIGN OF SHEAR CONNECTIONS SHALL BE FOR THE GREATER OF: a) 50% OF THE FACTORED SHEAR CAPACITY OF THE BEAM, b) THE BEAM REACTION CALCULATED USING THE LOADS INDICATED ON THE DRAWINGS, AND c) THE REACTION INDICATED ON THE DRAWINGS.
- 11. ALL CONNECTIONS FOR THE BRACING MEMBERS SHALL BE DESIGNED FOR THE FULL TENSILE CAPACITY OF THE MEMBER UNLESS FORCES ARE INDICATED ON THE DRAWINGS.
- 12. OPEN WEB STEEL JOISTS SHALL BE FASTENED TO SUPPORTING MEMBERS FOR THE LOADS
- SHOWN ON THE DRAWINGS INCLUDING WIND UPLIFT.
- 13. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING LAYOUTS, SIZES, MATERIAL AND CONNECTION DETAILS. SHOP DRAWINGS SHALL BE STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER PRACTICING IN ONTARIO.
- 14. ALL STEEL EXPOSED TO THE WEATHER INCLUDING SHELF ANGLES AND THEIR SUPPORTING EMBEDDED PLATES SHALL BE HOT DIPPED GALVANIZED IN CONFORMANCE WITH CSA G164-M92.

MASONRY:

- 1. MASONRY DESIGN AND CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF: C.S.A. S304.1- DESIGN OF MASONRY STRUCTURES C.S.A. S371- MASONRY CONSTRUCTION FOR BUILDINGS C.S.A. A165 SERIES- CSA STANDARDS FOR CONCRETE MASONRY UNITS C.S.A. A179- MORTAR AND GROUT FOR UNIT MASONRY
- 2. ALL CONCRETE BLOCK SHALL HAVE A MINIMUM NET COMPRESSIVE STRENGTH OF 15 MPa.
- 3. UNLESS NOTES OTHERWIS,E MORTAR SHALL BE TYPE S.
- 4. UNLESS NOTES OTHERWISE, PROVIDE 600MM (24") OF GROUTED CELLS FOR THE THREE COURSES OF MASONRY UNDER BEARING PLATES FOR STEEL BEAMS.
- 5. PROVIDE LATERAL RESTRAINT AT THE TOP OF ALL NON-LOAD BEARING PARTITIONS.
- 6. PROVIDE CONTROL JOINTS EVERY 6M(20') AND AT ALL DISCONTINUITIES AND OPENINGS AND AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- 7. UNLESS NOTES OTHERWISE, PROVIDE 4.8MM(3/16") BAR DIAMETER GALVANIZED LADDER TYPE BED JOINT REINFORCING IN EVERY SECOND COURSE.
- 8. UNLESS NOTES OTHERWISE, PROVIDE A BOND BEAM AT THE TOP OF ALL REINFORCED WITH
- 2-15M CONTINUOUS REBARS. 9. UNLESS NOTES OTHERWISE, PROVIDE 1-15M EVERY FOURTH CELL VERTICAL REINFORCEMENT IN ALL WALLS.
- 10. PROVIDE REINFORCING DOWELS INTO CONCRETE FOOTINGS AND WALLS TO MATCH VERTICAL REINFORCING IN THE BLOCK WALLS. LAP SPLICE ALL REINFORCING AS FOLLOWING: 10M 600MM(24") 15M 750MM(30")
- 20M 950MM(38") 25M 1100MM(44")
- 11. PROVIDE ADDITIONAL REINFORCING TO MATCH WALL REINFORCING AT ALL CORNERS, OPENINGS AND IN THE GROUTED CELLS UNDER ALL BEARING PLATES AND LINTELS.
- 12. PROVIDE AND INSTALL LINTELS OVER ALL OPENINGS IN ACCORDANCE WITH THE TYPICAL LINTEL SCHEDULE OR AS SHOWN ON THE DRAWING.

STEEL LINTELS IN NON-LOAD BEARING WALLS:

WALL THICKNESS	SPAN (MM)	LINTEL SIZE (MM)	

WALL THICKNESS	SPAN (MM)	LINTEL SIZE (MM)	DETAILS
90 MM (3-1/2")	UP TO 1200 >1200 TO 1800 >1800 TO 2400 >2400 TO 3000	L90X90X6 L127X90X6 L127X90X8 L150X90X9.5	LLV LLV LLV
140 MM (5-1/2")	UP TO 1200 >1200 TO 1800 >1800 TO 2400	2-L64X64X6 2-L90X64X6 2-L90X64X8 W/100X10 PLATE	BACK TO BACK BACK TO BACK, BACK TO BACK, TO U/S OF HORI
190 MM (7-1/2")	UP TO 1200 >1200 TO 1800 >1800 TO 2400 >2400 TO 3000	2-L75X90X6 2-L90X90X6 2-L100X90X8 2-L150X90X8	ВАСК Т ВАСК, ВАСК ТО ВАСК ВАСК ТО ВАСК ВАСК ТО ВАСК
240 MM (9-1/2")	UP TO 1200 >1200 TO 1800 >1800 TO 2400 >2400 TO 3000	2-L75X100X6 2-L100X100X6 2-L100X100X9.5 2-L150X100X8	ВАСК Т ВАСК, ВАСК ТО ВАСК ВАСК ТО ВАСК ВАСК ТО ВАСК
290 MM (11-1/2")	UP TO 1200 >1200 TO 1800 >1800 TO 2400 >2400 TO 3000	3-L75X90X6 3-L90X90X6 3-L100X90X8 3-L127X90X8	INVERTED DOUBLE (HORIZONTAL
NOTES:			

STITCH WELD BACK TO BACK ANGLES USING 6MM WELD, 50 MM LONG SPACED AT 450MM MAX. OR CONNECT USING 16MM BOLTS AT 450 MM MAX. WITH THE FIRST BOLT LOCATED AT 75 MM FROM THE END OF THE LINTEL

ENSURE EVEN BEARING OF STEEL LINTELS BY PROVIDING STEEL PACKING AS REQUIRED. . FOR LARGER OPENINGS AND FOR OPENINGS IN LOAD BEARING WALLS, SEE PLANS FOR LINTEL SIZES.

		_
	STEEL DECK:	
ESIGNED IN COMPLIANCE WITH THE REQUIREMENTS OF CSA	1. THE MATERIAL, DESIGN, FABRICATION, HANDLING, AND STORAGE OF STEEL DECK SHALL CONFORM TO CAN/CSA-S136 AND THE CANADIAN SHEET STEEL BUILDING INSTITUTION (CSSBI) APPLICABLE STANDARD.	
CEPT FOR HSS SHALL CONFORM TO CSA G40.21.	2. WHERE POSSIBLE, PROVIDE CONTINUOUS DECK OVER A MINIMUM OF THREE SPANS.	
0 G40.21 OR ASTM A500 CLASS (C).	3. UNLESS NOTED OTHERWISE, FASTEN DECK TO STEEL SUPPORTS USING 19MM	

SIDES, AND BUTTON PUNCH SIDE LAPS EVERY 600mm (24").

5. REINFORCE OPENINGS IN STEEL DECK AS FOLLOWING:

A) DO NOT REINFORCE OPENING UP TO 150MM (6"),

DRAWINGS.

TWO UNCUT FLUTES,

APPROVED PAINT.

STRUCTURAL STEEL SUPPORTS.

SHALL BE REPLACED BY THE CONTRACTOR.

(3/4") DIA PUDDLE WELDS EVERY 2ND FLUTE AND EVERY 600mm (24") ALONG

4. UNLESS NOTED OTHERWISE, PROVIDE L75X75X6 ANGLES TO SUPPORT THE EDGES

OF DECK. FASTEN THE ANGLES TO THE SUPPORTING ELEMENTS AS SHOWN ON THE

B) OPENINGS UP TO 500MM (20"), WELD L75X75X6 TO UNDERSIDE OF DECK ON

ALL SIDES. EXTEND THE ANGLES PERPENDICULAR TO FLUTE FOR A LENGTH OF

C) OPINING LARGER THAN 500MM (20"), REFER TO PLANS FOR REINFORCING.

8. METAL DECK SHALL BE GALVANIZED STRUCTURAL STEEL SHEET FABRICATED AND

STORAGE, AND ERECTION. ANY PUNCTURED, DENTED OR WELD PERFORATED DECK

9. CONTRACTOR SHALL PROTECT STEEL DECKS FROM DAMAGE DURING SHIPPING,

6. PROVIDE A MINIMUM OVERLAP AND BEARING LENGTH OF 50mm (2") ON ALL

7. WELDED AREAS SHALL BE TOUCH-UP PAINTED BY THE CONTRACTOR WITH

ERECTED IN ACCORDANCE WITH CSSBI 10M-96 AND CAN3-S136.

TAILS

J BACK, LLV) BACK, LLV, PLATE WELDED OF HORIZONTAL LEGS

T BACK, (LLH) TO BACK TO BACK, LLV TO BACK, LLV

T BACK, (LLH) TO BACK TO BACK TO BACK, LLV

DOUBLE (T) WITH 90 LEGS

Leeeeeeeeⁿleeeeeeeⁿleeeeeeee

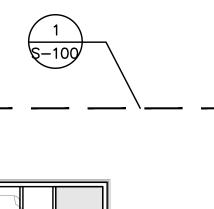
LOCATION PLAN

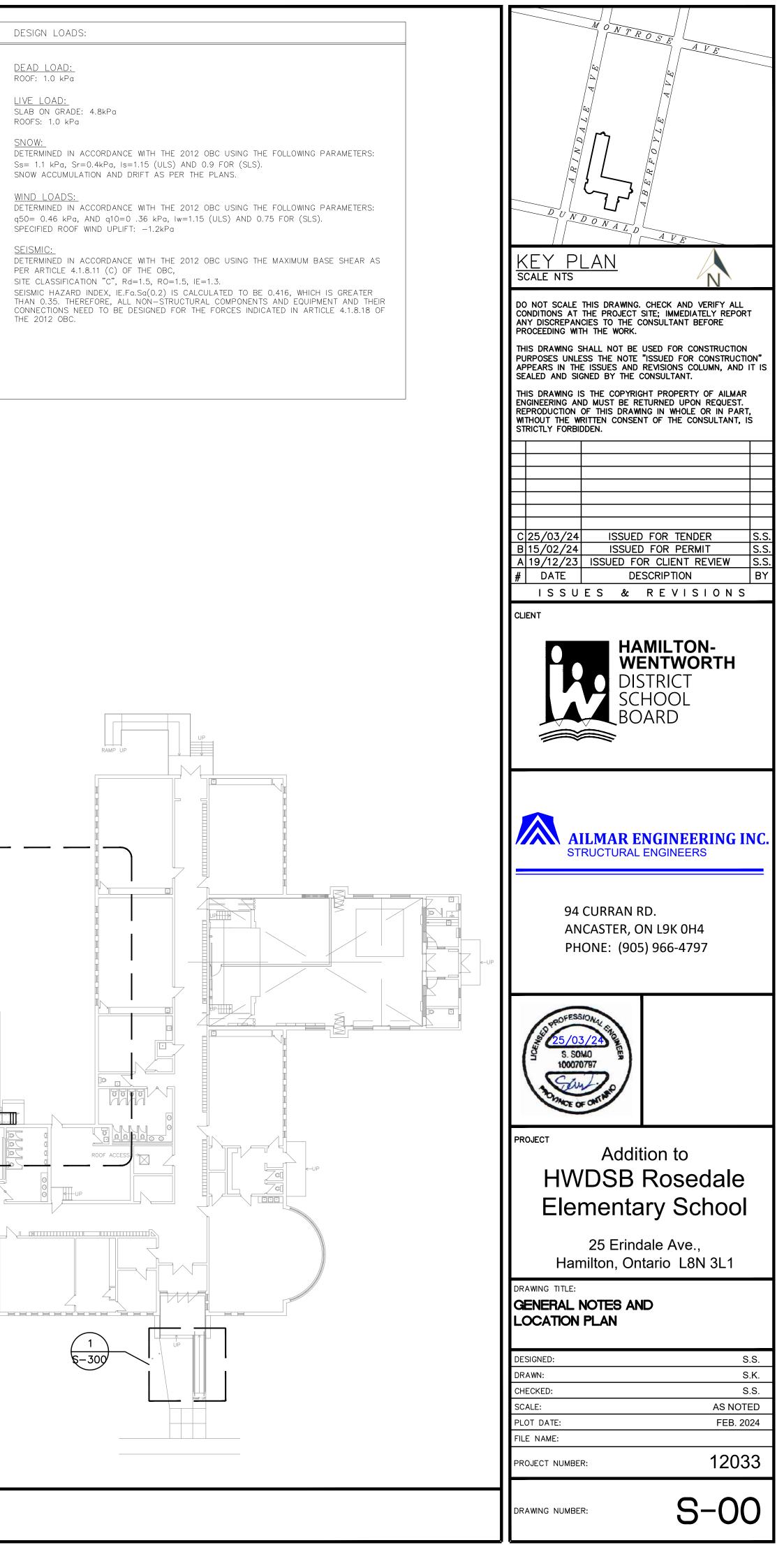
WIND LOADS:

THE 2012 OBC.



<u>SEISMIC:</u>



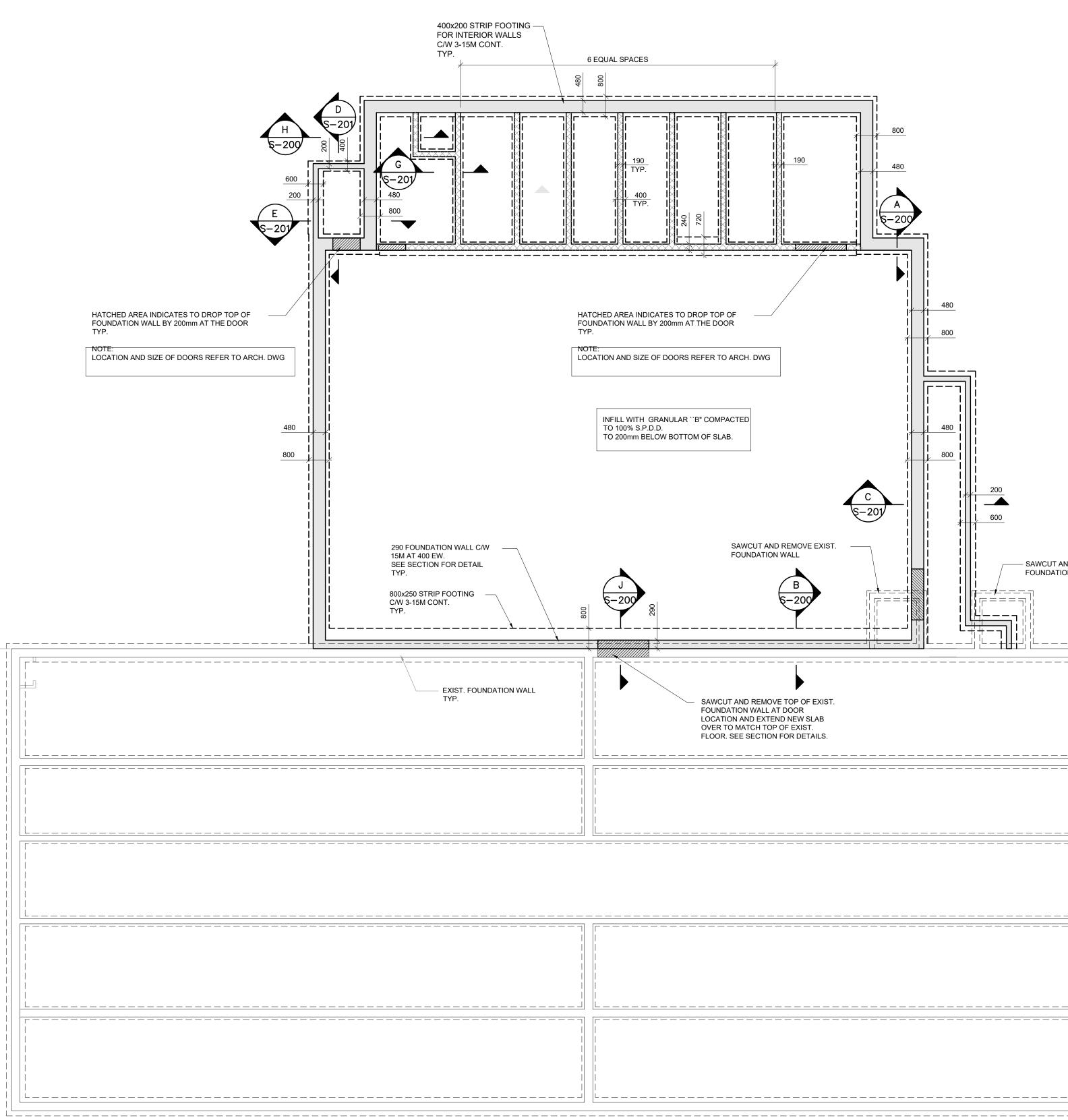


DESIGN LOADS:

LIVE LOAD:

HATCHED AREA INDICATES TO DROP TOP OF FOUNDATION WALL BY 200mm AT THE DOOR TYP. NOTE:

1 FOUNDATION PLAN SCALE: 1: 100

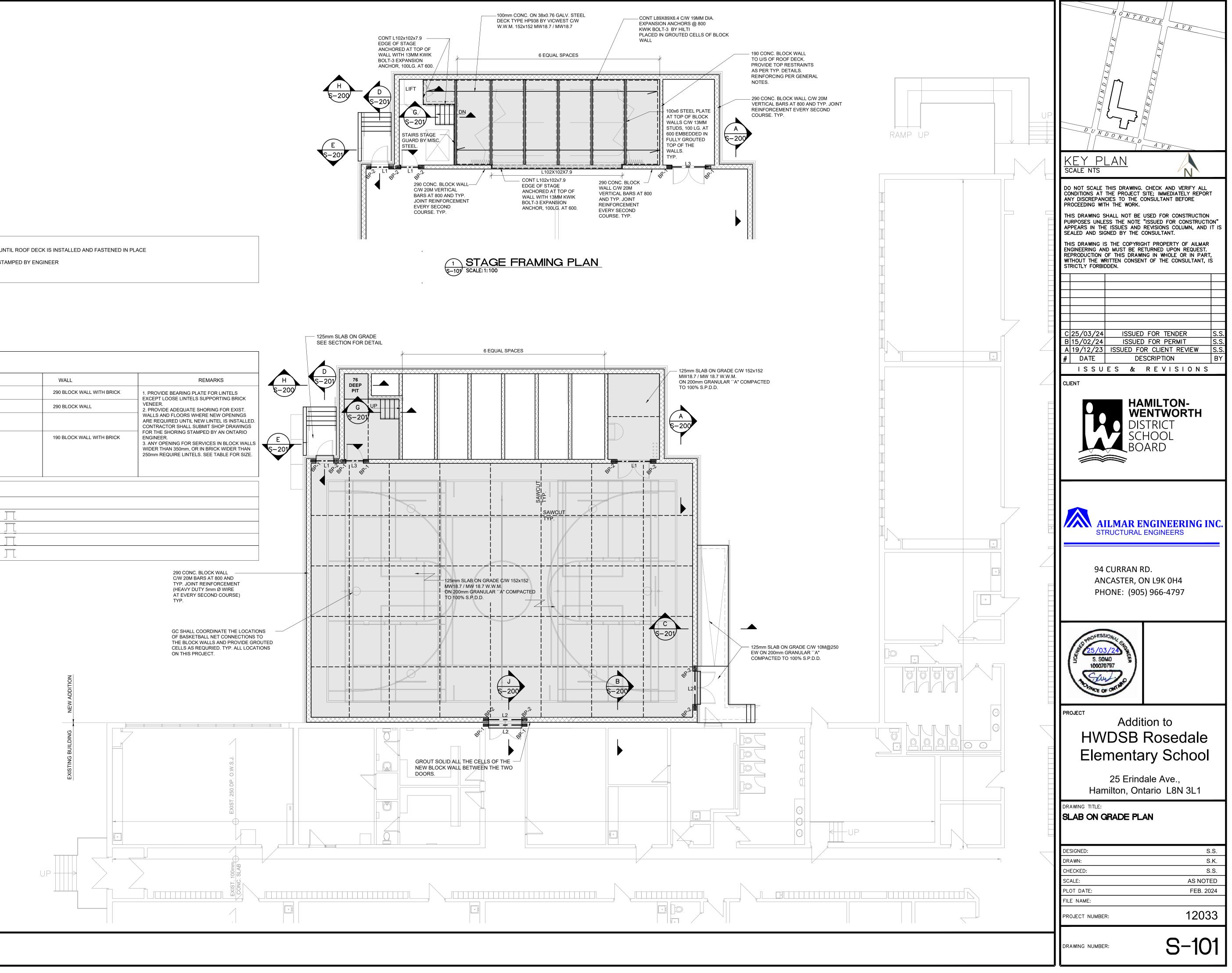


	$M \circ NTR \circ SE$ $A VE$
	MONTROSE AVE AVE
	C 25/03/24 ISSUED FOR TENDER S.S. B 15/02/24 ISSUED FOR PERMIT S.S. A 19/12/23 ISSUED FOR CLIENT REVIEW S.S. # DATE DESCRIPTION BY I S S U E S & R E V I S I O N S CLIENT HAMILTON-
ND REMOVE EXIST.	WENTWORTH DISTRICT SCHOOL BOARD
	94 CURRAN RD. ANCASTER, ON L9K 0H4 PHONE: (905) 966-4797
	PROJECT
	Addition to HWDSB Rosedale Elementary School 25 Erindale Ave., Hamilton, Ontario L8N 3L1
	DRAWING TITLE: FOUNDATION PLAN DESIGNED: S.S. DRAWN: S.K. CHECKED: S.S. SCALE: AS NOTED PLOT DATE: FEB. 2024 FILE NAME:
	PROJECT NUMBER: 12033 DRAWING NUMBER: S-100

NOTE: CONTRACTOR SHALL PROVIDE TEMPORARY LATERAL BRACES FOR WALLS UNTIL ROOF DECK IS INSTALLED AND FASTENED IN PLACE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR TEMPORARY BRACES STAMPED BY ENGINEER

				DEMARKO
MARK	SIZE		WALL	REMARKS
L1	W200x36 C/W 8mm BOTTOM PLATE TO MATCH WIDTH OF WALL AND 6mm STIFFENER PLATES AT 600	ABOVE	290 BLOCK WALL WITH BRICK	1. PROVIDE BEARING PLATE FOR LINTELS EXCEPT LOOSE LINTELS SUPPORTING BRICK
L2	W200x36 C/W 8mm BOTTOM PLATE TO MATCH WIDTH OF WALL ABOVE		290 BLOCK WALL	VENEER. 2. PROVIDE ADEQUATE SHORING FOR EXIST.
L3	L3 SEE TABLE ON S-00			WALLS AND FLOORS WHERE NEW OPENINGS ARE REQUIRED UNTIL NEW LINTEL IS INSTALLED. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS
L4	L4 W150 x 13		190 BLOCK WALL WITH BRICK	 FOR THE SHORING STAMPED BY AN ONTARIO ENGINEER. 3. ANY OPENING FOR SERVICES IN BLOCK WALLS WIDER THAN 350mm, OR IN BRICK WIDER THAN
				250mm REQUIRE LINTELS. SEE TABLE FOR SIZE.
В	EARING PLATE SCHEDULE			
MARK	SIZE			
BP-1	175x300x10 C/W 2-13mm DIA. ANCHORS 200LG			
	275x300x13 C/W 2-13mm DIA. ANCHORS 200LG			
BP-2	275X300X13 C/W 2-1311111 DIA. ANCHORS 200LG			

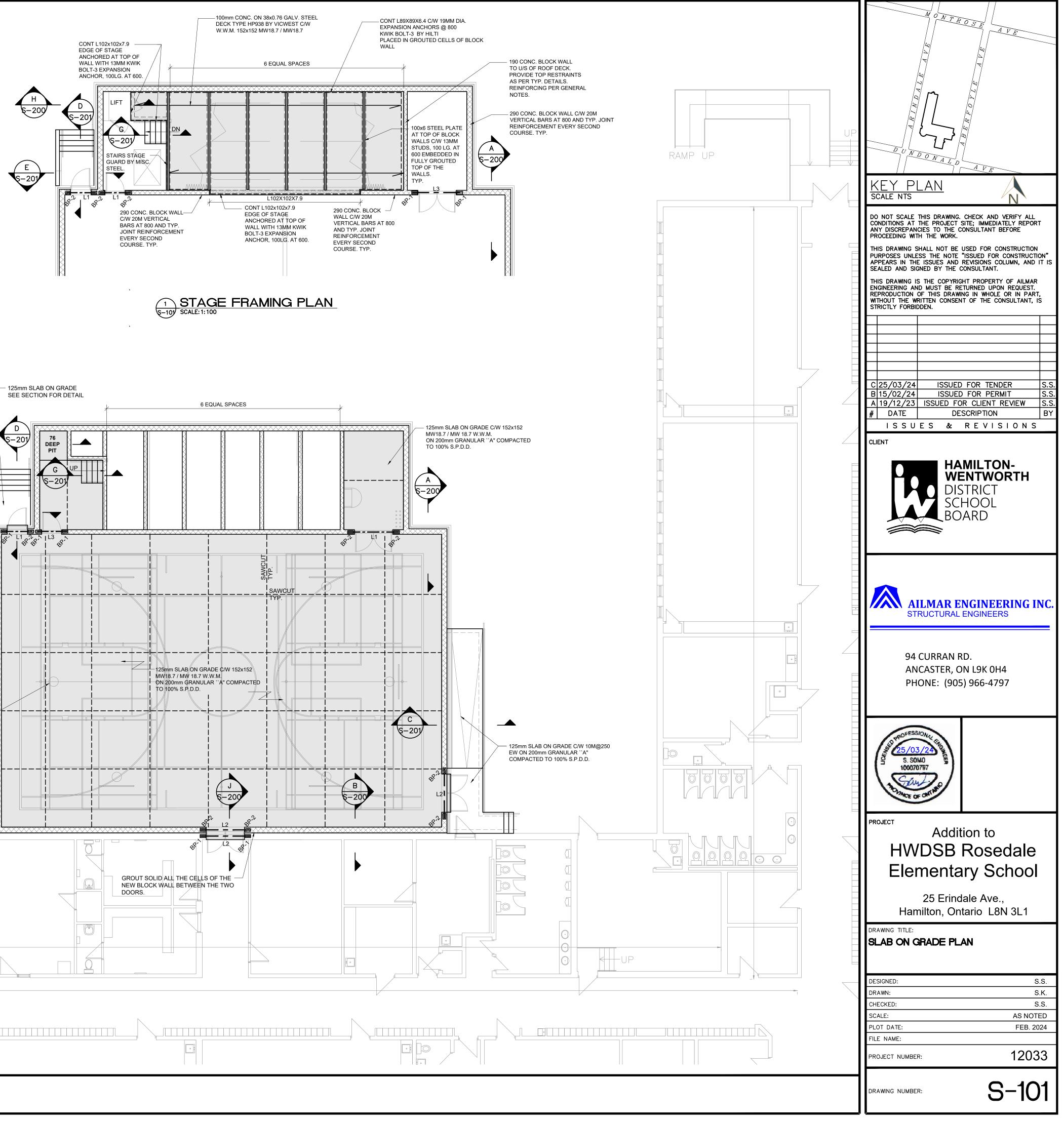
LINTEL SCHEDULE

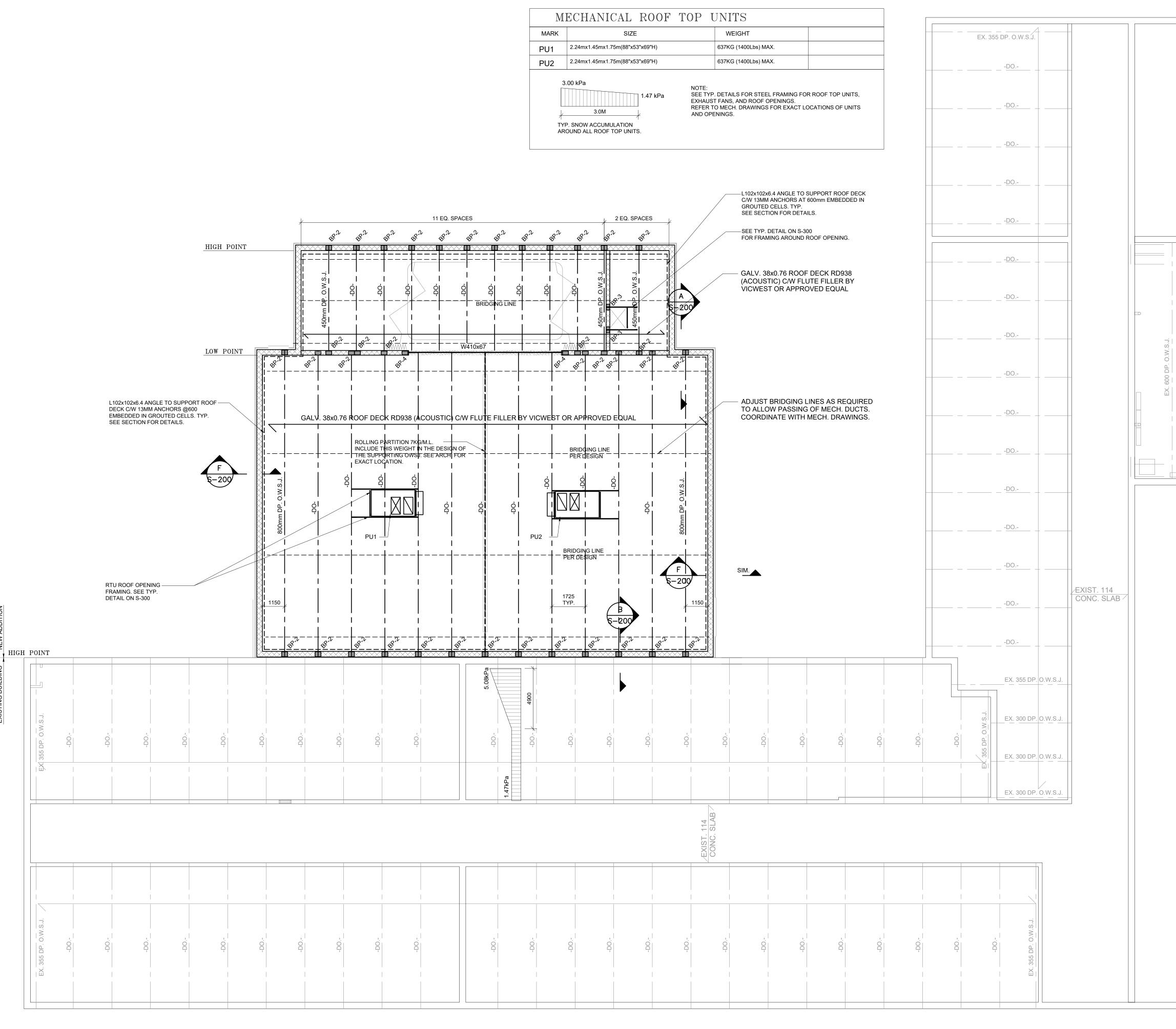


2 SLAB ON GRADE PLAN S-107 SCALE: 1: 100

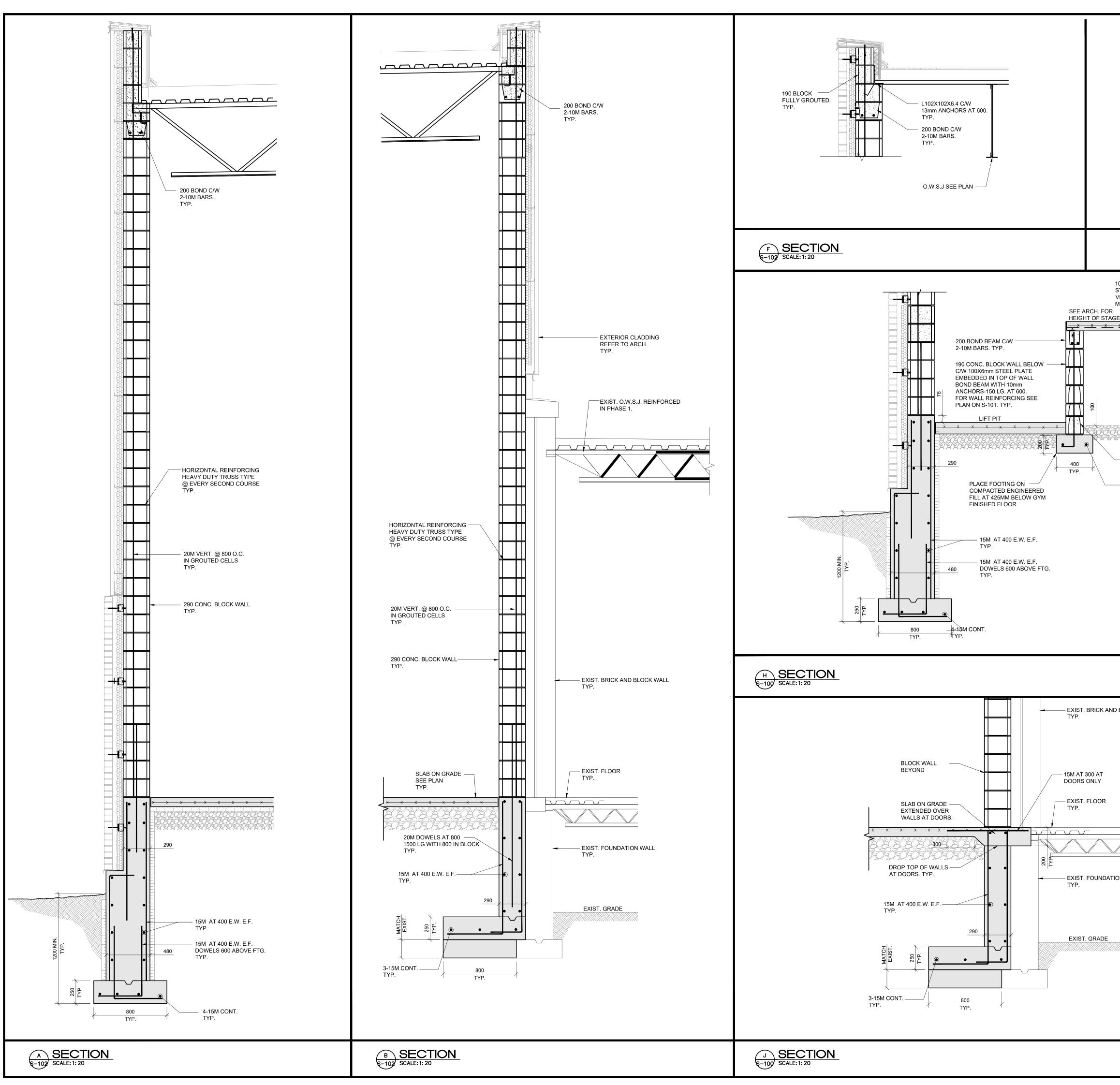
BP-4

300x240x16 C/W 2-16M ANCHORS 200LG

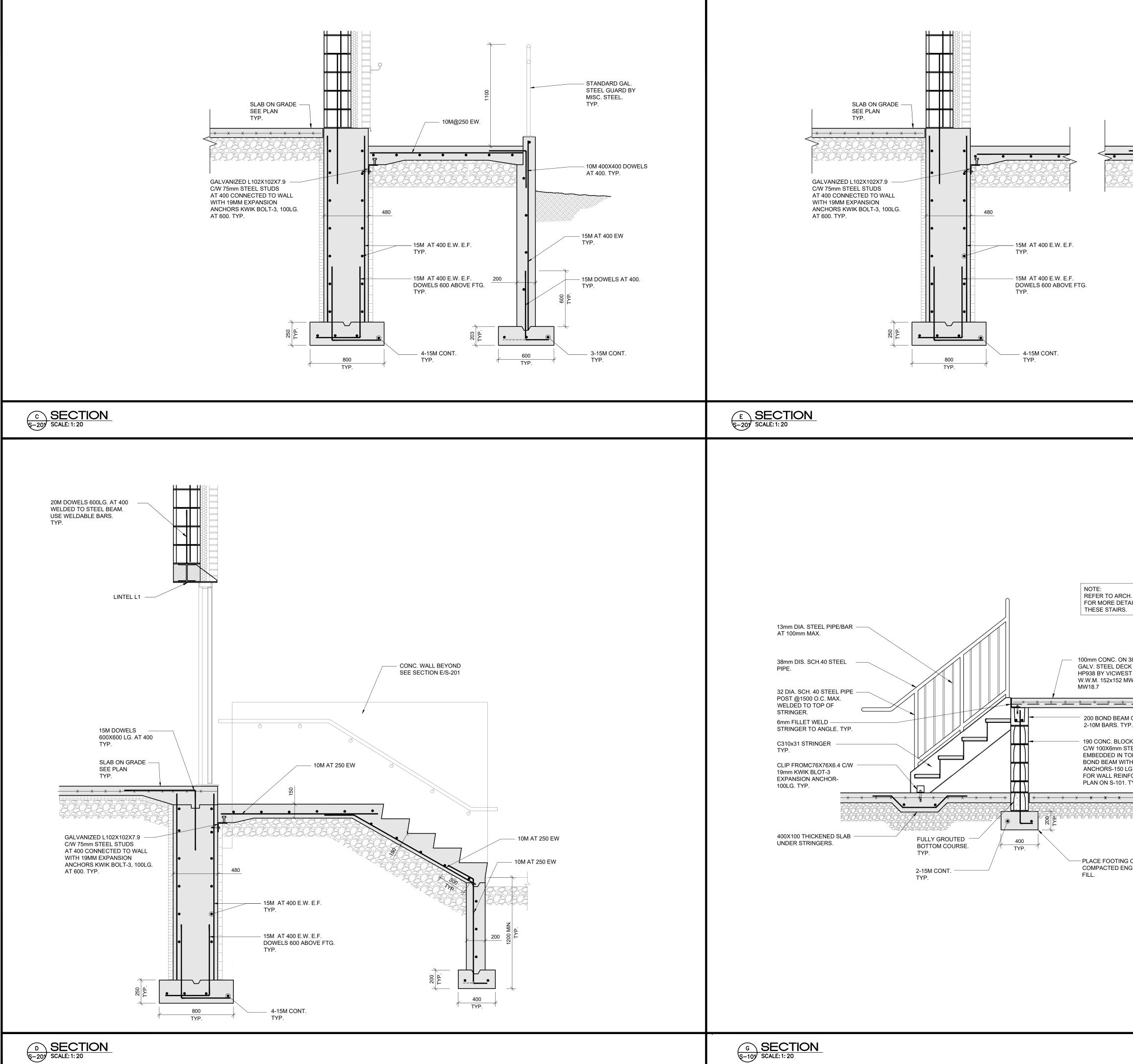




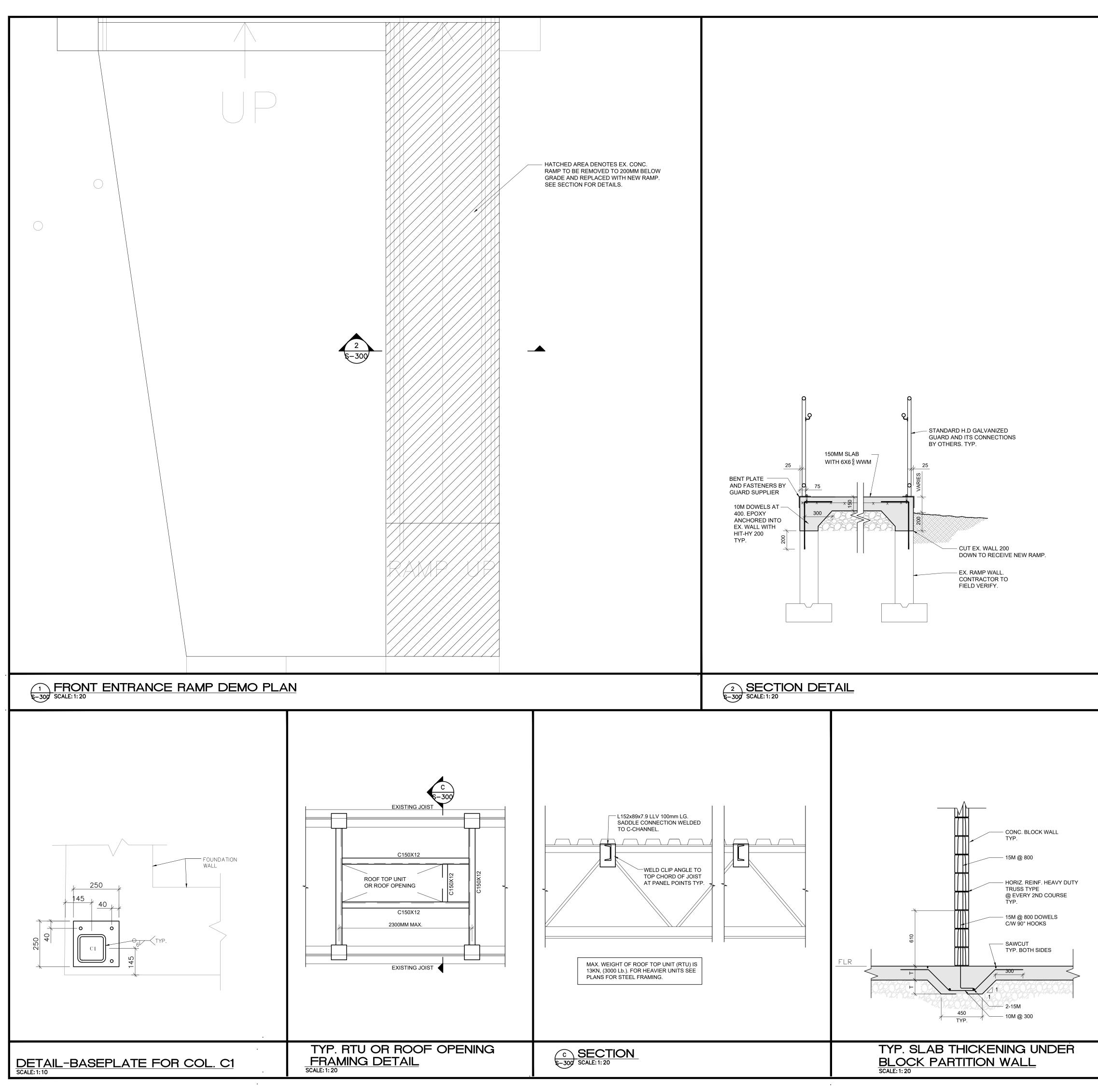
MONTROSE AVE AVE AVE AVE AVE AVE AVE AVE AVE MONTSCALE THIS DRAWING. CHECK AND VERIFY ALL DO NOT SCALE THIS DRAWING. CHECK AND VERIFY ALL
CONDITIONS AT THE PROJECT SITE; IMMEDIATELY REPORT ANY DISCREPANCIES TO THE CONSULTANT BEFORE PROCEEDING WITH THE WORK. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION
PURPOSES UNLESS THE NOTE "ISSUED FOR CONSTRUCTION" APPEARS IN THE ISSUES AND REVISIONS COLUMN, AND IT IS SEALED AND SIGNED BY THE CONSULTANT. THIS DRAWING IS THE COPYRIGHT PROPERTY OF AILMAR ENGINEERING AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF THIS DRAWING IN WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF THE CONSULTANT, IS STRICTLY FORBIDDEN.
C 25/03/24 ISSUED FOR TENDER S.S. B 15/02/24 ISSUED FOR PERMIT S.S. A 19/12/23 ISSUED FOR CLIENT REVIEW S.S. # DATE DESCRIPTION BY I S S U E S & R E V I S I O N S
CLIENT HAMILTON- WENTWORTH DISTRICT SCHOOL BOARD
94 CURRAN RD. ANCASTER, ON L9K 0H4 PHONE: (905) 966-4797
S. SOMO HOUTOTPT
Addition to HWDSB Rosedale Elementary School 25 Erindale Ave., Hamilton, Ontario L8N 3L1
DRAWING TITLE: ROOF FRAMING PLANS
DESIGNED: S.S. DRAWN: S.K. CHECKED: S.S. SCALE: AS NOTED PLOT DATE: FEB. 2024 FILE NAME: PROJECT NUMBER: 12033
drawing number: S-102



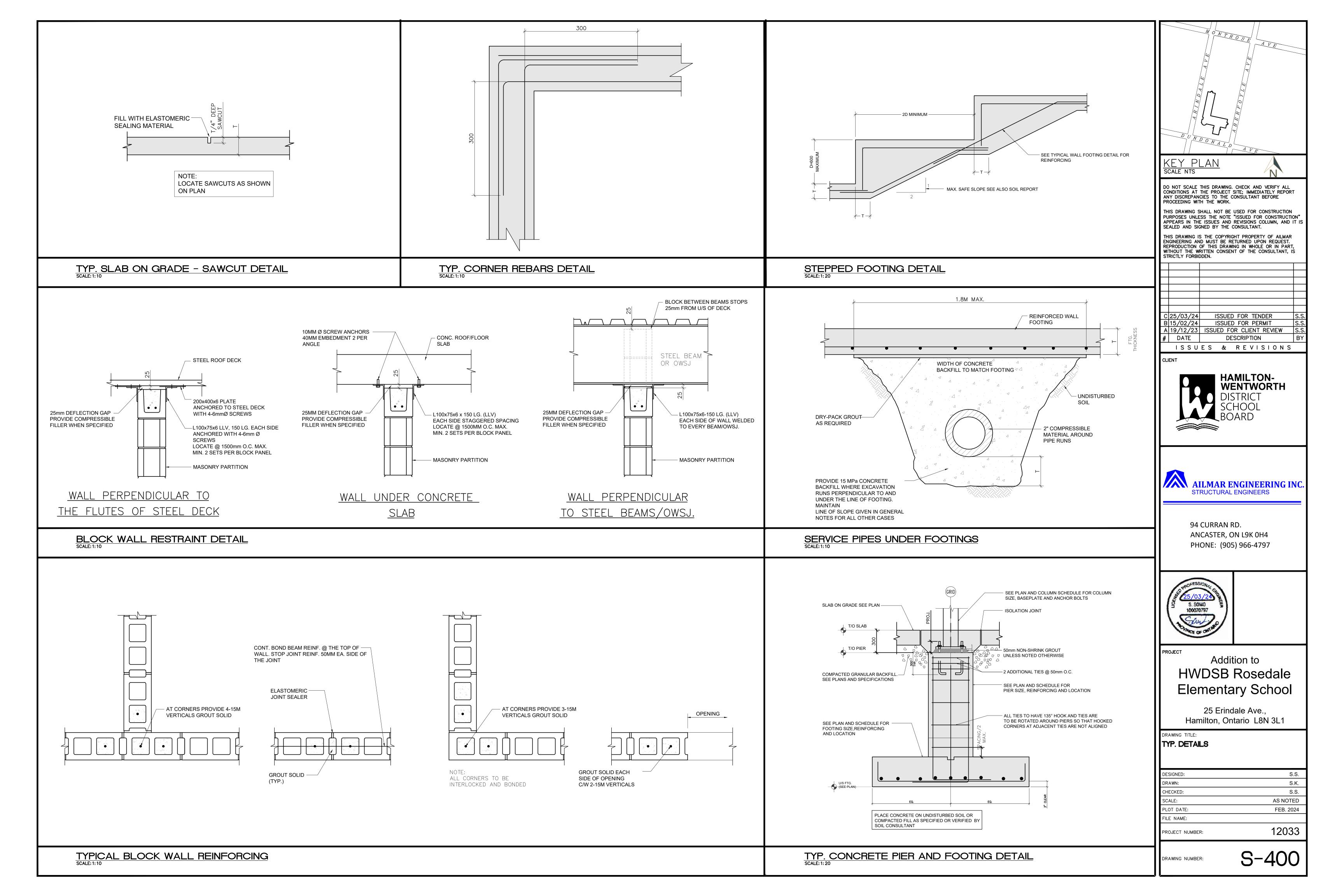
How concerns and a set of a construction of the c		Image: State of the project site; immediately report any discrepancies to the consultant before
PRUV GOUNDARY SSUED FOR PERMIT VS PRUV GOUNDARY SSUED FOR PERMIT VS PRUV GOUNDARY PRUV SUED FOR PERMIT VS PRUV SUED FOR PERMIT VS PRUV SUED FOR PERMIT VS PRUV SUED FOR PERMIT VS PRUV SUED FOR PERMIT VS PRUV SUED FOR PERMIT VS PRUV SUED FOR PERMIT VS PRUV SUED FOR PERMIT VS PRUV SUED FOR PERMIT VS PRUV SUED FOR PERMIT VS PRUV SUED FOR PERMIT VS PRUV SUED FOR PERMIT VS PRUV SUED FOR PERMIT VS PRUV SUED FOR PERMIT VS PRUV SUED FOR PERMIT VS PRUV SUED FOR PERMIT VS PRUV SUED FOR PERMIT VS PRUV SUED FOR PERMIT VS PRUV SUED FOR PERMIT VS PRUV SUED FOR PERMIT VS PRUV SUED FOR PERMIT VS PRUV SUED FOR PERMIT VS PRUV SUED FOR PERMIT VS <td< th=""><th>STEEL DECK TYPE HP938 BY VICWEST C/W W.W.M. 152x152 MW18.7 / MW18.7</th><th>THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION PURPOSES UNLESS THE NOTE "ISSUED FOR CONSTRUCTION" APPEARS IN THE ISSUES AND REVISIONS COLUMN, AND IT IS SEALED AND SIGNED BY THE CONSULTANT. THIS DRAWING IS THE COPYRIGHT PROPERTY OF AILMAR ENGINEERING AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF THIS DRAWING IN WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF THE CONSULTANT, IS</th></td<>	STEEL DECK TYPE HP938 BY VICWEST C/W W.W.M. 152x152 MW18.7 / MW18.7	THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION PURPOSES UNLESS THE NOTE "ISSUED FOR CONSTRUCTION" APPEARS IN THE ISSUES AND REVISIONS COLUMN, AND IT IS SEALED AND SIGNED BY THE CONSULTANT. THIS DRAWING IS THE COPYRIGHT PROPERTY OF AILMAR ENGINEERING AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF THIS DRAWING IN WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF THE CONSULTANT, IS
BORNALE COLUMN CERT MURRANCE OF MURRANCE STAGE TO TRUCK MALL Image: Stage of the		B15/02/24ISSUED FOR PERMITS.S.A19/12/23ISSUED FOR CLIENT REVIEWS.S.#DATEDESCRIPTIONBYISSVESKREVISI
STRUCTURAL ENGINEERS 94 CURRAN RD. ANCASTER, ON L9K 0H4 PHONE: (905) 966-4797 PHONE: (905) 966-4797 PROJECT Addition to HWDSB Rosedale Elementary School 25 Erindale Ave., Hamilton, Ontario L8N 3L1 DRAWNS TITLE: SECTIONS DESIGNED: \$8.8. DRAWN \$8.4. PHONE: \$8.8.	BOTTOM COURSE. TYP. - 2-15M CONT. TYP. - COMPACTED ENGINEERED FILL UNDER THE STAGE TO 100MM ABOVE STAGE	WENTWORTH DISTRICT SCHOOL
ON WALL PROJECT Addition to HWDSB Rosedale Elementary School 25 Erindale Ave., Hamilton, Ontario L8N 3L1 DRAMING TITLE: SECTIONS DESIGNED: S.S. BRAIN: S.K. CHECKED: S.S. SCALE: AS NOTED PLOT DATE: FEE. 2024 FILE NAME: FROJECT NUMBER: 12033		94 CURRAN RD. ANCASTER, ON L9K 0H4
Addition to HWDSB Rosedale Elementary School 25 Erindale Ave., Hamilton, Ontario L8N 3L1 DRAWING TITLE: SECTIONS DESIGNED: S.S. DRAWN: S.K. CHECKED: S.S. SCALE: AS NOTED PLOT DATE: FEB. 2024 FILE NAME: PROJECT NUMBER: 12033	D BLOCK WALL	100070797
SECTIONS DESIGNED: S.S. DRAWN: S.K. CHECKED: S.S. SCALE: AS NOTED PLOT DATE: FEB. 2024 FILE NAME: 12033		Addition to HWDSB Rosedale Elementary School 25 Erindale Ave.,
PLOT DATE: FEB. 2024 FILE NAME: PROJECT NUMBER: 12033		DRAWING TITLE: SECTIONS DESIGNED: S.S. DRAWN: S.K. CHECKED: S.S.
		PLOT DATE: FEB. 2024 FILE NAME: PROJECT NUMBER: 12033

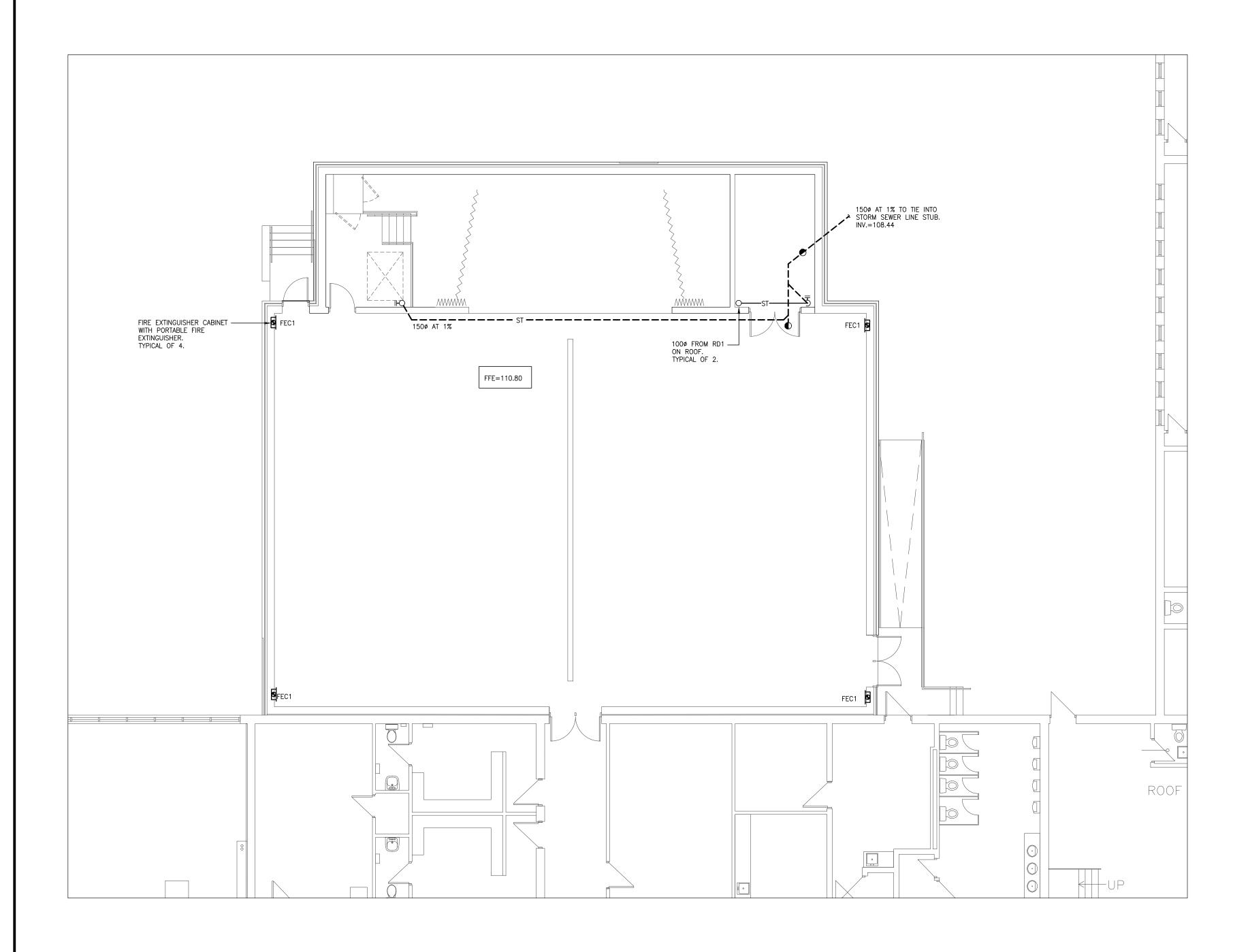


MONTROSE AVE
KEYPLAN SCALE NTS DO NOT SCALE THIS DRAWING. CHECK AND VERIFY ALL CONDITIONS AT THE PROJECT SITE; IMMEDIATELY REPORT ANY DISCREPANCIES TO THE CONSULTANT BEFORE PROCEEDING WITH THE WORK. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION PURPOSES UNLESS THE NOTE "ISSUED FOR CONSTRUCTION" APPEARS IN THE ISSUES AND REVISIONS COLUMN, AND IT IS SEALED AND SIGNED BY THE CONSULTANT. THIS DRAWING IS THE COPYRIGHT PROPERTY OF AILMAR ENGINEERING AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF THIS DRAWING IN WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF THE CONSULTANT, IS STRICTLY FORBIDDEN.
Image: Constraint of the second state of the second sta
<image/> <image/> <image/> <image/> <image/> <image/> <image/> <image/>
ANCASTER, ON L9K 0H4 PHONE: (905) 966-4797
HWDSB Rosedale Elementary School 25 Erindale Ave., Hamilton, Ontario L8N 3L1 DRAWING TITLE: SECTIONS
DESIGNED: S.S. DRAWN: S.K. CHECKED: S.S. SCALE: AS NOTED PLOT DATE: FEB. 2024 FILE NAME: PROJECT NUMBER: 12033 DRAWING NUMBER: S-201



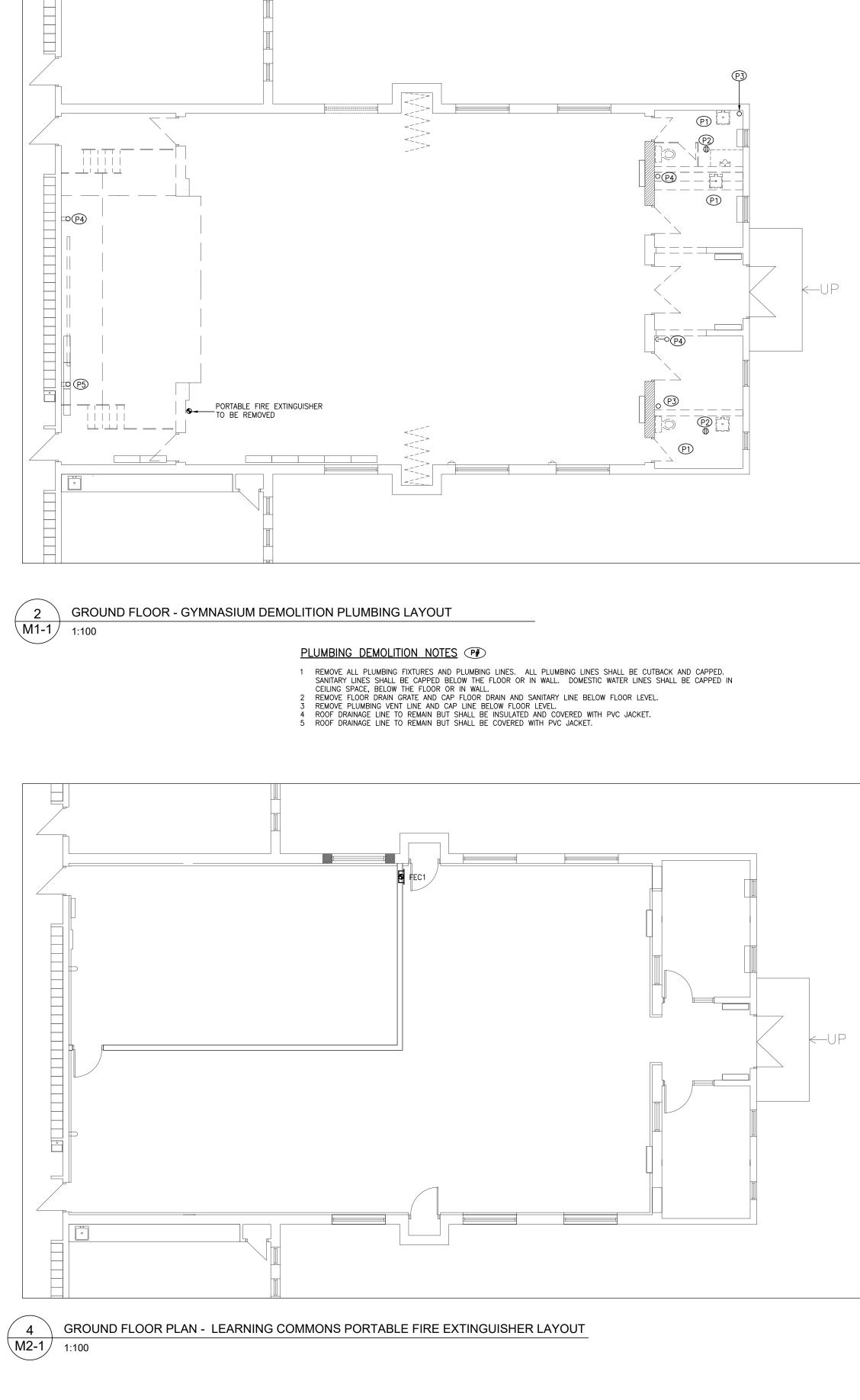
	MONTROSE AVE
	Image:
	ANY DISCREPANCIES TO THE CONSULTANT BEFORE PROCEEDING WITH THE WORK. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION PURPOSES UNLESS THE NOTE "ISSUED FOR CONSTRUCTION" APPEARS IN THE ISSUES AND REVISIONS COLUMN, AND IT IS
	SEALED AND SIGNED BY THE CONSULTANT. THIS DRAWING IS THE COPYRIGHT PROPERTY OF AILMAR ENGINEERING AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF THIS DRAWING IN WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF THE CONSULTANT, IS STRICTLY FORBIDDEN.
	C25/03/24ISSUED FOR TENDERS.SB15/02/24ISSUED FOR PERMITS.SA19/12/23ISSUED FOR CLIENT REVIEWS.S#DATEDESCRIPTIONBY
	ISSUES & REVISIONS CLIENT
	HAMILTON- WENTWORTH DISTRICT SCHOOL BOARD
	AILMAR ENGINEERING INC. STRUCTURAL ENGINEERS
	94 CURRAN RD. ANCASTER, ON L9K 0H4 PHONE: (905) 966-4797
	S. SOMO 100070797
50x5 FLAT BAR AT 600mm 0.C.	Addition to HWDSB Rosedale Elementary School
	25 Erindale Ave., Hamilton, Ontario L8N 3L1
50x5 FLAT BAR AT 600mm O.C.	DRAWING TITLE: DETAILS
	DESIGNED: S.S. DRAWN: S.K. CHECKED: S.S.
	SCALE:AS NOTEDPLOT DATE:FEB. 2024FILE NAME:12022
TYP. MASONRY TO COLUMN CONNECTION SCALE: 1:10	PROJECT NUMBER: 12033 DRAWING NUMBER: S-300



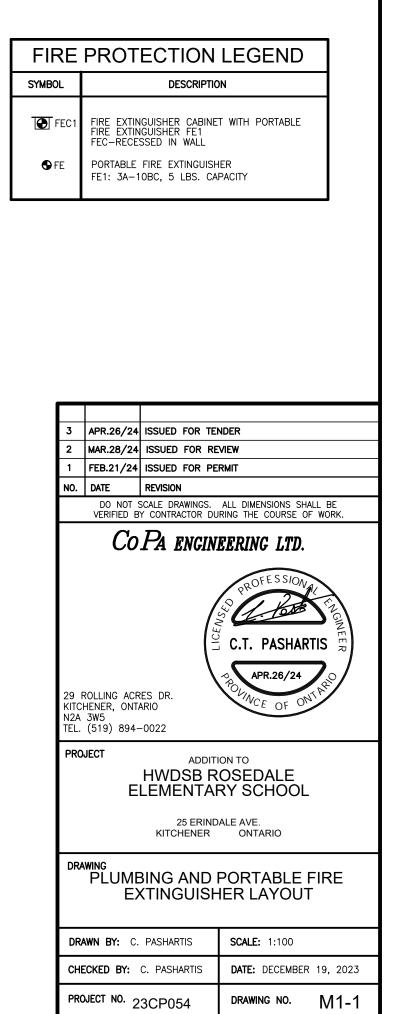


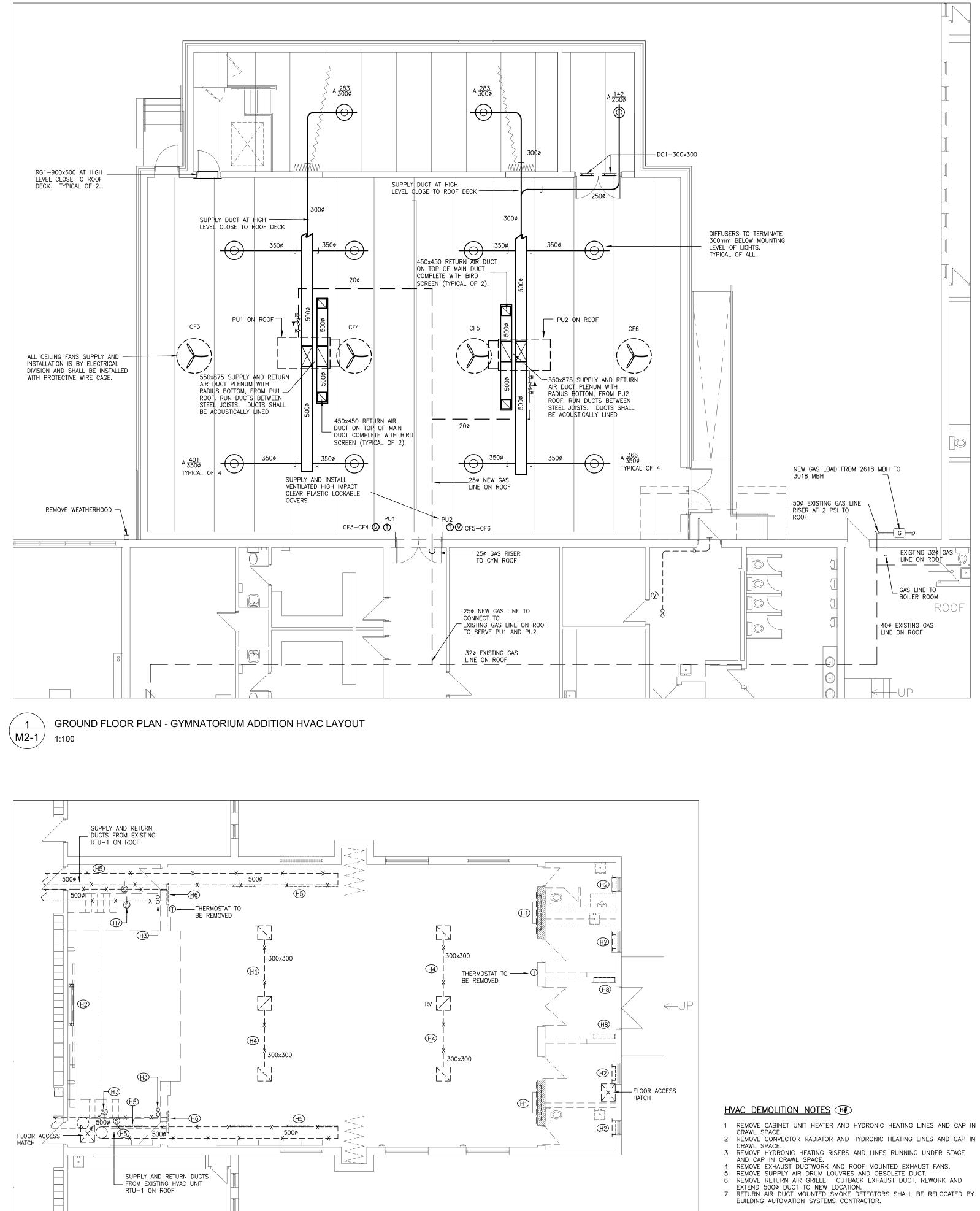
1 \ M1-1 1:500

GROUND FLOOR PLAN - GYMNATORIUM PLUMBING AND PORTABLE FIRE EXTINGUISHER LAYOUT



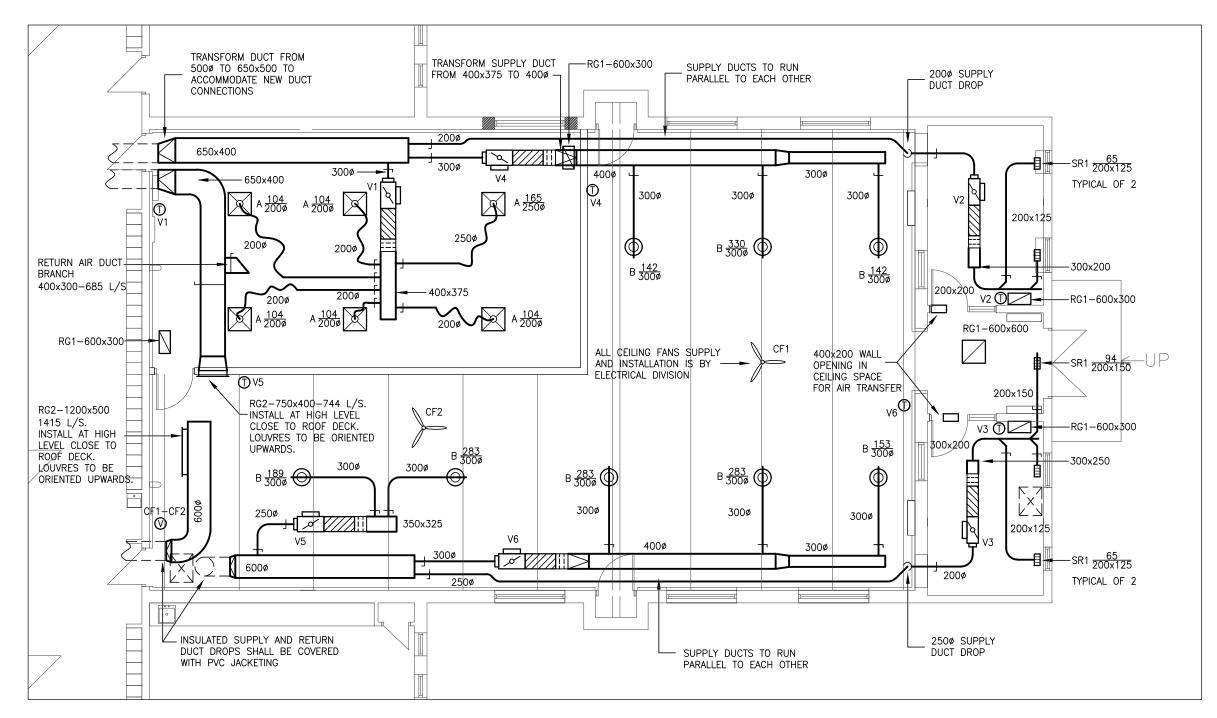
PLUMBING LEGEND				
SYMBOL	DESCRIPTION			
	NEW LINES EXISTING LINES (THIN LINE) EQUIPMENT TO BE REMOVED EQUIPMENT TO BE RELOCATED			
RV	EQUIPMENT TO BE REMOVED			
	CAPPED LINE PIPE RISE PIPE DROP SANITARY LINE BELOW GRADE SANITARY LINE ABOVE GRADE STORM LINE BELOW GRADE			
ST 	STORM LINE ABOVE GRADE COLD WATER CW HOT WATER HW HOT WATER RECIRCULATION HWR TEMPERED HOT WATER			
CD 	CONDENSATE LINE HEATING WATER SUPPLY			
	HEATING WATER RETURN			
⊕ FD ⊙ HD ⊕ RD	FLOOR DRAIN HUB DRAIN ROOF DRAIN			
¢Σ T ↔ (FLOOR CLEANOUT LINE CLEANOUT GATE VALVE BALL VALVE			
	BUTTERLFY VALVE GLOBE VALVE CHECK VALVE			
, ∎ BFP ↓	BACKFLOW PREVENTOR STRAINER			
	CIRCUIT BALANCING VALVE 2-WAY MOTORIZED CONTROL VALVE-24V			
R R R R R R R R R R R R R R R R R R R	MANUAL AIR VENT (MAV) AUTOMATIC AIR VENT (AAV)			
	THERMOMETER DRAIN VALVE WITH HOSE THREADED END T&P SAFETY RELIEF VALVE			
- () () ()	PUMP WATER METER			
	HOSE BIB			





2 **∖M2-1**∕

GROUND FLOOR - GYMNASIUM DEMOLITION HVAC LAYOUT 1:100





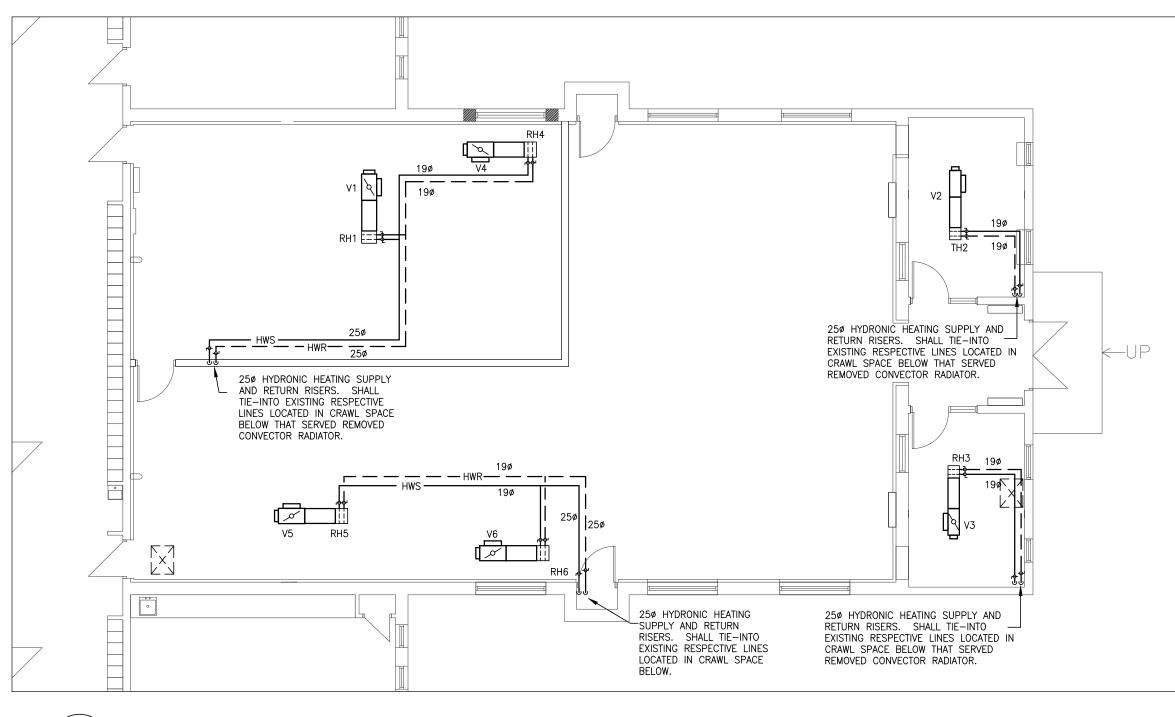
4

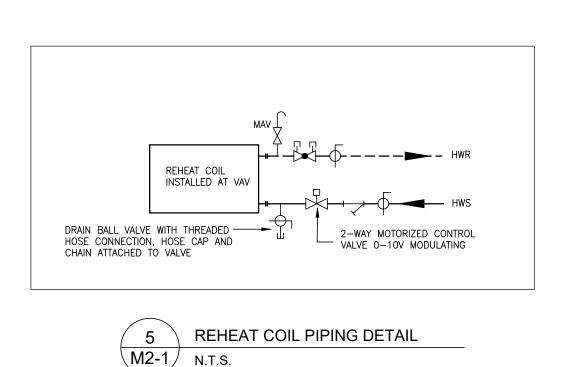
M2-1

1:100

1:100

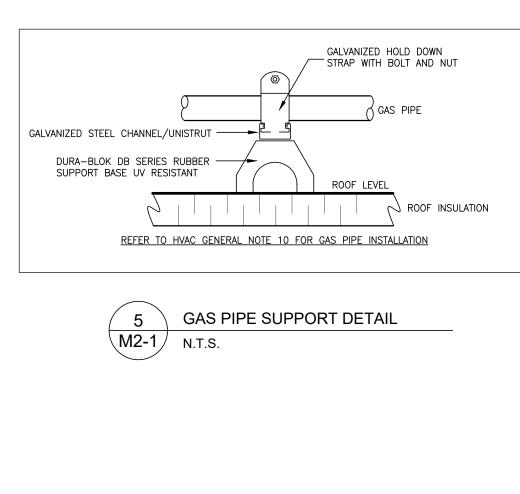
GROUND FLOOR PLAN - LEARNING COMMONS HVAC RENOVATION LAYOUT



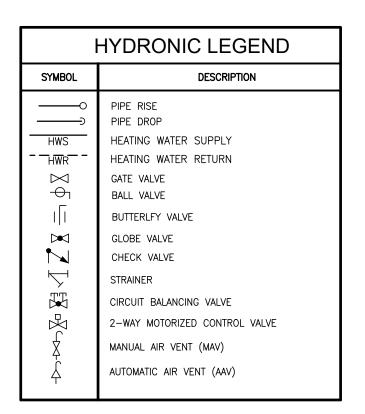


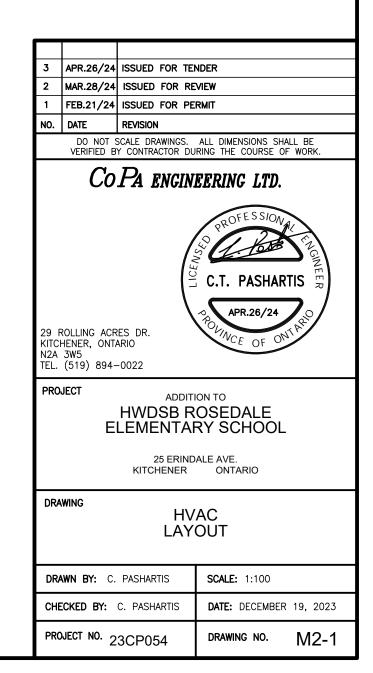
- 7 RETURN AIR DUCT MOUNTED SMOKE DETECTORS SHALL BE RELOCATED BY

GROUND FLOOR PLAN - LEARNING COMMONS REHEAT COILS HYDRONIC PIPING LAYOUT



HVAC LEGEND				
SYMBOL	DESCRIPTION			
	NEW EQUIPMENT EQUIPMENT TO REMAIN EQUIPMENT TO BE REMOVED EQUIPMENT TO BE RELOCATED EQUIPMENT TO BE REMOVED DUCTING TO BE CAPPED SUPPLY DUCT EXHAUST/RETURN DUCT			
\boxtimes	SUPPLY DIFFUSER			
	SUPPLY DIFFUSER WITH BLANK SIDE			
U	SUPPLY REGISTER (WALL/SIDE DUCT MOUNTED)			
	CEILING/FLOOR SUPPLY REGISTER			
\bigcirc	ROUND DIFFUSER			
	EXHAUST/RETURN GRILLE			
	DIFFUSER/GRILLE DATA: A-REF, 2-L/S, 3-MM FLEXIBLE DUCT VOLUME CONTROL DAMPER SPLITTER DAMPER FIRE DAMPER SMOKE FIRE DAMPER EXHAUST FAN THERMOSTAT THERMOSTAT COVER THERMOSTAT REVERSE ACTING 120V/1/60 REMOTE CONTROL PANEL VARIABLE SPEED CONTROLLER SENSOR ELECTRICAL ON/OFF SWITCH VARIABLE AIR VOLUME BOXES OPPOSED BLADE MOTORIZED DAMPER			
	ACOUSTIC LINING			
$\underline{\blacksquare}$	FLEXIBLE CONNECTION DOUBLE THICKNESS TURNING VALVES			
	DOUBLE THICKNESS TURNING VALVES			
	TRANSFER AIR ELBOW ACOUSTICALLY LINED			
	CEILING CIRCULATING FAN			
	GAS PRESSURE REGULATOR			
G	GAS PIPE			
₹	PLUG VALVE			
(c) 	GAS METER			
FFH	ELECTRIC FAN FORCED HEATER-BY MECHAN. DIV. ELECTRIC BASEBOARD HEATER-BY MECHAN. DIV.			





GENERAL NOTES: ANY COMBUSTIBLE MATERIALS INSTALLED IN THE CEILING SPACE USED AS A RETURN AIR PLENUM, SHALL HAVE A MAXIMUM FLAME SPREAD RATING OF 25 AND A MAXIMUM SMOKE DEVELOPED RATING OF 50. PLUMBING AND HVAC CONTRACTORS SHALL COORDINATE WITH ALL OTHER TRADES.

WHERE CEILING SPACE IS TO BE USED AS A RETURN AIR PLENUM, ALL WIRING FOR CONTROL, TELEPHONE, DATA, SECURITY, SPEAKER WIRE ETC., SHALL BE FT6, CMP, MPP OR PLENUM VERIFIED. THE SPECIFIED MANUFACTURERS MEANS THAT THE ITEM NAMED AND SPECIFIED, FORMS PART OF SPECIFICATION AND SETS STANDARD REGARDING PERFORMANCE, QUALITY OF MATERIAL AND WORKMANSHIP. ALTERNATE MANUFACTURERS WILL BE CONSIDERED AND ACCEPTED AS EQUAL PROVIDED THEY MEET THE STANDARD SPECIFIED.

MECHANICAL GENERAL REQUIREMENTS DESCRIPTION OF WORK

- THE MECHANICAL CONTRACTOR SHALL FURNISH ALL LABOUR, MATERIAL, TOOLS, EQUIPMENT, SUPERVISION AND OTHER SERVICES AS MAY BE REQUIRED TO EXECUTE THE WORK DESCRIBED IN THE CONTRACT DOCUMENTS. 2. SITE EXAMINATION BEFORE SUBMITTING TENDERS, CAREFULLY EXAMINE THE ARCHITECTURAL, STRUCTURAL, ELECTRICAL AND MECHANICAL DRAWINGS HAVING A BEARING ON THE WORK.
- 3. CODES AND STANDARDS
- THE INSTALLATION SHALL COMPLY WITH THE LATEST EDITIONS AND ALL AMENDMENTS OF THE FOLLOWING CODES AND STANDARDS. WHERE CONFLICTS IN REQUIREMENTS OCCUR, THE HIGHER STANDARDS WILL APPLY: ONTARIO BUILDING CODE, ONTARIO FIRE CODE, N.F.P.A., ASHRAE, NATURAL GAS INSTALLATION STANDARD CSA-B149.1 AND LOCAL CODES, STANDARDS AND BY-LAWS. REGULATIONS, PERMITS, FEES, CONNECTION CHARGES AND CERTIFICATES
- ALL MATERIALS AND WORKMANSHIP SHALL MEET ALL PROVINCIAL BUILDING, MUNICIPAL, N.F.P.A., AND FIRE MARSHALL REGULATIONS. CODES AND BYLAWS IN FORCE IN THE AREA OF THE PROJECT. EACH CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND PAY FOR ALL FEES AND CONNECTION CHARGES FOR ALL SERVICES PROVIDED BY THIS DIVISION COOPERATION OF TRADES
- READ SPECIFICATIONS AND DRAWINGS OF OTHER TRADES AND CONFORM WITH THEIR REQUIREMENTS BEFORE PROCEEDING WITH ANY WORK SPECIFIED IN THIS DIVISION RELATED TO OTHER TRADES. DRAWINGS
- CONTRACT DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF THE MECHANICAL SYSTEMS AND WORK INCLUDED IN THE CONTRACT. WHERE THE EXACT LOCATIONS OF FIXTURES AND EQUIPMENT ARE NOT DEFINITELY ESTABLISHED, THE CONTRACTOR SHALL OBTAIN THIS INFORMATION FROM THE OWNER AND ENGINEER. REMOVAL OF EXISTING EQUIPMENT
- EXAMINE THE EXISTING BUILDING AND INCLUDE IN TENDER PRICE ALL NECESSARY ALLOWANCES TO REMOVE EXISTING EQUIPMENT AS DETAILED ON DRAWINGS AND AS DIRECTED BY THE GENERAL CONTRACTOR. MATERIALS REMOVED BY THIS DIVISION SHALL BECOME CONTRACTOR'S PROPERTY AND BE REMOVED FROM WORK SITE, PROVIDED: THE ITEMS HAVE BEEN INSPECTED BY THE OWNER AND GENERAL CONTRACTOR AND RELEASED FOR REMOVAL. ITEMS HAVE NOT BEEN DESIGNATED FOR REUSE IN OTHER SECTIONS OF SPECIFICATIONS OR DRAWINGS.
- ALTERATION TO EXISTING PRIOR TO REMOVAL AND ALTERATION OF THE EXISTING SYSTEMS, THE CONTRACTOR SHALL IDENTIFY TO THE ENGINEER AT WHICH SECTIONS OF THE EXISTING MECHANICAL EQUIPMENT, PIPING AND DUCTWORK SHALL BE CUT BAC AND REMOVED. RELOCATE EXISTING MECHANICAL EQUIPMENT AND APPURTENANCES AS SPECIFICALLY INDICATED ON DRAWINGS OR SPECIFIED AND AS REQUIRED TO SUIT ALTERATION WORK. CLEAN RELOCATED EQUIPMENT AND INSTALL IN NEW LOCATION, IN A NEAT ORDERLY MANNER WITH SAME ATTENTION AS GIVEN TO NEW EQUIPMENT. WHERE EXISTING MATERIAL OR EQUIPMENT IS NO LONGER REQUIRED, SHALL BE CUT BACK AND MAKE GOOD TO SATISFACTION OF THE ENGINEER. WHEN EXISTING MATERIAL OR EQUIPMENT IS DISCONNECTED OR DISASSEMBLED TO FACILITATE RELOCATION, REINSTALL AS ORIGINAL, INCLUDING AUXILIARY WORK, INSULATION, ELECTRICAL WORK ETC. WHERE EXISTING MATERIAL OR EQUIPMENT IS DAMAGED, MAKE GOOD TO THE SATISFACTION OF ENGINEER. IF IT IS FOUND IN AN UNSUITABLE CONDITION, NOTIFY ENGINEER FOR INSTRUCTIONS. OBTAIN WRITTEN AUTHORIZATION FROM ENGINEER FOR ALTERATION WORK THAT IS NOT SPECIFICALLY CALLED FOR OR CLEARLY INDICATED ON DRAWINGS. PROTECTION OF OPENINGS
- PROTECT EQUIPMENT AND SYSTEMS OPENINGS FROM DIRT, DUST, AND OTHER FOREIGN MATERIALS THIS CONTRACTOR SHALL PROTECT FINISHED AND UNFINISHED WORK OF HIS OWN AND OTHER SUBCONTRACTORS FROM DAMAGE DUE TO CARRYING OUT HIS WORK. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONDIT OF ALL MATERIALS AND EQUIPMENT SUPPLIED UNDER THIS CONTRACT OR REMOVED FROM EXISTING BUILDING FOR REUSE AND SHALL PROVIDE ALL NECESSARY PROTECTION FOR SAME. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONDITION OF ALL MATERIALS AND EQUIPMENT SUPPLIED UNDER THIS CONTRACT OR REMOVED FROM EXISTING BUILDING FOR REUSE AND SHALL PROVIDE ALL NECESSARY PROTECTION FOR SAME. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONDITION OF ALL MATERIALS AND EQUIPMENT SUPPLIED UNDER THIS CONTRACT OR REMOVED FROM EXISTING BUILDING FOR REUSE AND SHALL PROVIDE ALL NECESSARY PROTECTION FOR SAME. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONDITION FOR SAME. FOR THE PROTECTION AND MAINTENANCE OF THE WORK OF THIS SECTION, UNTIL THE BUILDING HAS BEEN COMPLETED AND ACCEPTED. 10. CUTTING AND PATCHING
- RESPONSIBILITY FOR CUTTING OF OPENINGS TO WALLS, FLOORS, ROOF AND ANY OTHER SURFACES IN THE STRUCTURE SHALL BE COORDINATED WITH GENERAL CONTRACTOR. IN ADDITION, RESPONSIBILITY FOR THE PATCHING FINISHING OF THESE SURFACES AND ASSEMBLIES SHALL ALSO BE COORDINATED WITH GENERAL CONTRACTOR. WORK SHALL BE PERFORMED BY THE EXPERT TRADE WHO SPECIALIZE IN THEIR WORK. IN THE EVENT THE GENERAL CONTRACTOR WILL NOT BE RESPONSIBLE FOR THIS WORK, THIS SCOPE OF WORK SHALL BE INCLUDED UNDER THE MECHANICAL CONTRACTOR. BEFORE CUTTING OF OPENINGS IN THE STRUCTURE, THE CONTRACTOR SHALL IDENTIFY TO THE STRUCTURAL ENGINEER AND THE OWNER'S REPRESENTATIVE AT WHICH SECTIONS OF THE BUILDING STRUCTURE ARE TO BE CUT BACK. THE CUTTING, PATCHING AND FINISHING OF THE ASSEMBLIES RESTRICTED BY THE WORK OF THIS DIVISION SHALL BE PERFORMED BY THE AFFECTED/EXPERT TRADE. UNDER NO CIRCUMSTANCES SHALL ANY CUTTING OR BURNING OF THE STRUCTURAL PARTS OF THE BUILDING BE UNDERTAKEN WITHOUT THE WRITTEN AUTHORITY OF THE ENGINEER.
- 11. EXCAVATING, BACKFILLING, COMPACTING AND FLOOR CEMENTING RESPONSIBILITY FOR EXCAVATING, BACKFILLING AND COMPACTING FOR PLUMBING PIPES AND DRAINS PROVIDED BY THIS DIVISION SHALL BE COORDINATED WITH GENERAL CONTRACTOR. ALL BACKFILLING SHALL BE NEW CLEAN GRANULAR FILL BROUGHT IN SPECIFICALLY FOR THE PURPOSE OF BACKFILLING. ALL BACKFILLING SHALL BE COMPACTED AT INTERVALS OF NOT MORE THAN 6" LAYERS TO THE SATISFACTION OF THE ENGINEER. RESPONSIBILI FOR FLOOR CEMENTING SHALL BE COORDINATED WITH GENERAL CONTRACTOR. IN THE EVENT THE GENERAL CONTRACTOR WILL NOT BE RESPONSIBLE FOR THIS WORK, THIS SCOPE OF WORK SHALL BE INCLUDED UNDER THE MECHANICAL CONTRACTOR. 12 FOUIPMENT INSTALLATION
- ALL EQUIPMENT, FIXTURES, PIPES, INSULATION AND ASSOCIATED APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. SPACE FOR SERVICING. DISASSEMBLY AND REMOVAL OF EQUIPMENT AND COMPONENTS: PROVIDE AS RECOMMENDED BY MANUFACTURER OR AS INDICATED. CONTROL PANELS, ELECTRICAL PANELS AND WIRING TERMINATION POINTS PROVIDE MINIMUM 40" CLEARANCE. EQUIPMENT DRAINS: PIPE TO FLOOR DRAINS. 13. ROOF CONES AND FLASHING
- ROOF CONES FOR PIPES AND ROUND DUCTS PENETRATING ROOF SHALL BE SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR. IT IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO SEE THAT ACCEPTABLE FLASHING ARE INSTALLED WHERE NECESSARY FOR THE WORK OF HIS TRADE. COUNTER FLASHING IS BY ROOFING CONTRACTOR AT THE EXPENSE OF THE MECHANICAL CONTRACTOR. 14. SLEEVES
- THIS CONTRACTOR SHALL SUPPLY AND INSTALL SUITABLE SLEEVES FOR PIPING AND DUCTWORK PENETRATIONS TO THE BUILDING STRUCTURE. PIPE SLEEVES: INSTALL AT POINTS WHERE PIPES PASS THROUGH MASONRY, CONCRETE OR U.L.C. FIRE RATED ASSEMBLIES AND AS INDICATED. SCHEDULE 40 STEEL PIP
- SLEEVES WITH ANNULAR FIN CONTINUOUSLY WELDED AT MIDPOINT: SIZES: 1/4" CLEARANCE ALL AROUND, BETWEEN SLEEVE AND NON-INSULATED PIPE OR BETWEEN SLEEVE AND INSULATION. TERMINATE SLEEVES FLUSH WITH SURFACE OF CONCRETE AND MASONRY WALLS AND CONCRETE FLOORS ON GRADE IN FINISHED AREAS.
- FILL VOIDS AROUND PIPES WHERE SLEEVES PASS THROUGH WALLS, PROVIDE SPACE FOR FIRE STOPPING. WHERE PIPES PASS THROUGH FIRE RATED WALLS AND PARTITIONS, MAINTAIN FIRE RATING INTEGRITY. ENSURE NO CONTACT BETWEEN COPPER TUBE OR PIPE AND FERROUS SLEEVE.
- FILL FUTURE-USE SLEEVES WITH LIME PLASTER OR OTHER EASILY REMOVABLE FILLER. COAT EXPOSED EXTERIOR SURFACES OF FERROUS SLEEVES WITH HEAVY APPLICATION OF ZINC RICH PAINT
- PREPARATION FOR FIRE STOPPING FIRE STOPPING MATERIALS AND INSTALLATION WITHIN ANNULAR SPACE BETWEEN PIPES, DUCTS, INSULATION AND ADJACENT FIRE SEPARATION: TO THE APPROVAL OF THE ENGINEER. UNINSULATED UNHEATED PIPES NOT SUBJECT TO MOVEMENT: NO SPECIAL PREPARATION
- UNINSULATED HEATED PIPES SUBJECT TO MOVEMENT: WRAP WITH NON-COMBUSTIBLE SMOOTH MATERIAL TO PERMIT PIPE TO MOVE WITHOUT DAMAGING FIRE STOPPING INSULATED PIPES AND DUCTS: ENSURE INTEGRITY OF INSULATION AND VAPOUR BARRIER AT FIRE SEPARATION
- ESCUTCHEONS PROVIDE ON EXPOSED PIPES PASSING THROUGH WALLS, PARTITIONS, FLOORS AND CEILINGS ON FINISHED AREAS. CHROME OR NICKEL PLATED BRASS OR TYPE 302 STAINLESS STEEL, SPLIT PIECE TYPE WITH SET SCREWS
- OUTSIDE DIAMETER TO COVER OPENING OR SLEEVE INSIDE DIAMETER TO FIT AROUND FINISHED PIPE. SECURE TO PIPE OR FINISHED SURFACE BUT NOT INSULATION.

18.

- 17. TES INSULATE OR CONCEAL WORK ONLY AFTER TESTING AND APPROVAL BY ENGINEER. BEAR ALL COSTS IN CONNECTION WITH ALL TESTS, INCLUDING REPAIRING LEAKS RETESTING AND MAKING GOOD.
- PRIOR TO TESTS, ISOLATE ALL EQUIPMENT AND OTHER PARTS WHICH ARE NOT DESIGNED TO WITHSTAND TEST PRESSURES OR TEST MEDIUM. PROVIDE CERTIFICATES INDICATING RESULTS OF ALL TESTS INCLUDING TEST LOGS
- PLUMBING LINES SHALL BE TESTED IN ACCORDANCE WITH THE ONTARIO BUILDING CODE.
- NATURAL GAS LINES SHALL BE TESTED IN ACCORDANCE WITH STANDARD CSA-B149.1. HYDRONIC HEATING LINES SHALL BE TESTED AT 1.5 TIMES SYSTEM OPERATING PRESSURE OR 150 PSI MINIMUM, WHICHEVER IS GREATER FOR EIGHT HOURS. MAINTAIN TEST PRESSURE WITHOUT LOSS FOR 8 HOURS. PIPE FLUSHING AND CLEANING AFTER PRESSURE TESTS ARE COMPLETED AND APPROVED, PRIOR TO START-UP AND PLACING INTO OPERATION, FLUSH AND CLEAN OUT ALL PIPING SYSTEMS.
- FOR DOMESTIC WATER SYSTEM, CLEAN AS PER ONTARIO BUILDING CODE AND LOCAL REQUIREMENT ACCESS DOOR
- SUPPLY ACCESS DOORS TO CONCEALED MECHANICAL EQUIPMENT FOR OPERATING, INSPECTING, ADJUSTING AND SERVICING. ACCESS DOORS REQUIRED IN LISTED FIRE SEPARATION SHALL BEAR A ULC LABEL TO MATCH WALL CLASSIFICATION. 20. DIELECTRIC COUPLINGS
- PROVIDE WHERE PIPES OF DISSIMILAR METALS ARE JOINED. SHALL BE COMPATIBLE WITH AND TO SUIT PRESSURE RATING OF PIPING SYSTEM. PIPES NPS 2 AND UNDER SHALL BE WITH ISOLATING UNIONS. PIPES NPS 2 1/2 AND OVER SHALL BE ISOLATING FLANGES.
- DRAIN VALVES LOCATE AT LOW POINTS AND AT SECTION ISOLATING VALVES UNLESS OTHERWISE SPECIFIED.

PROVIDE FELT OR RUBBER GASKET TO PREVENT DISSIMILAR METALS CONTACT

- MINIMUM NPS 3/4 UNLESS OTHERWISE SPECIFIED: BRONZE, WITH HOSE END MALE THREAD. 22. EQUIPMENT SUPPORTS EQUIPMENT SUPPORTS NOT SUPPLIED BY EQUIPMENT MANUFACTURER SHALL BE FABRICATED FROM STRUCTURAL GRADE STEEL RESPONSIBILITY FOR ROOFING AND REINFORCING OF ROOF FOR MECHANICAL EQUIPMENT SUPPORT SHALL BE COORDINATED WITH GENERAL CONTRACTOR. IN THE EVENT THE GENERAL CONTRACTOR WILL NOT BE RESPONSIBLE THIS WORK, THIS SCOPE OF WORK SHALL BE INCLUDED UNDER THE MECHANICAL CONTRACTOR.
- 23. PIPE HANGERS AND SUPPORTS PROVIDE UPPER ATTACHMENTS, MIDDLE ATTACHMENT ROD. PIPE ATTACHMENT, RISER CLAMPS, SADDLES, SHIELDS AND OTHER DEVICES. RIGID, SWING OR ANY OTHER HANGER SYSTEM SHALL BE SUITABLE FOR THE APPLICATION AND TAKE INTO ACCOUNT ATTACHMENT IN AREAS MADE OF CONCRETE SLAB, STEEL BEAM, WOOD JOISTS AND STEEL JOISTS AND FOR EXPANSION OF PIPING. HANGER SPACING AND MIDDLE ATTACHMENT (ROD) DIAMETER AS PER REGULATORY AUTHORITIES AND MANUFACTURER'S RECOMMENDATIONS.
- INSTALL HANGER SO THAT ROD IS VERTICAL UNDER OPERATING CONDITIONS. ADJUST HANGERS TO EQUALIZE LOAD. SUPPORT FROM STRUCTURAL MEMBERS. WHERE STRUCTURAL BEARING DOES NOT EXIST OR INSERTS ARE N IN SUITABLE LOCATIONS, PROVIDE SUPPLEMENTARY STRUCTURAL STEEL MEMBERS. WHERE SUPPORTING COPPER PIPE, IT SHALL BE ISOLATED FROM ANY NON-COPPER HANGER WITH ELECTROLYTIC ACTION TAPE OR EQUIVALENT. 24. SHOP DRAWINGS AND PRODUCT DATA
- EQUIPMENT SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. SHOP DRAWINGS AND PRODUCT DATA SHALL SHOW:
- MOUNTING ARRANGEMENTS. OPERATING AND MAINTENANCE CLEARANCES. EG. ACCESS DOOR, SWING SPACES. TYPE, NAME, CATALOGUE NUMBERS, TECHNICAL PERFORMANCE DATA, WIRING DIAGRAMS ETC
- 25. PAINTING APPLY AT LEAST ONE COAT OF CORROSION RESISTANT PRIMER PAINT TO FERROUS SUPPORTS AND SITE FABRICATED WORK. PRIME AND TOUCH UP MARRED FINISHED PAINT WORK TO MATCH ORIGINAL.
- RESTORE TO NEW CONDITION, FINISHES WHICH HAVE BEEN DAMAGED TO EXTENSIVELY TO BE MERELY PRIMED AND TOUCHED UP. AT AREAS WHERE CUTTING AND PATCHING HAS TAKEN PLACE, PAINTING OF THESE AREAS SHALL BE UNDERTAKEN BY THE AFFECTED (EXPERT) TRADE AT THE EXPENSE OF THE MECHANICAL CONTRACTOR
- 26. IDENTIFICATION IDENTIFY AND LABEL EQUIPMENT AND PIPEWORK SERVICES ON COMPLETION OF THE PROJECT. DOMESTIC WATER LINES SHALL SHOW SERVICE AND DIRECTION OF FLOW.
- EQUIPMENT, PANELS AND CABINETS, SYSTEM NAMEPLATES SHALL BE 1/8"THICK LAMINATED PLASTIC WITH LETTERS AND NUMBERS MACHINE ENGRAVED INTO CORE. 27. ELECTRICAL WORK
- ALL WIRING AND CONDUIT FOR POWER AND CONTROL SHALL BE BY ELECTRICAL DIVISION, EXCEPT FOR WIRING, CONDUIT AND CONNECTIONS BELOW 50V WHICH ARE RELATED TO AUTOMATIC CONTROL SYSTEMS SHALL BE BY MECHANICAL CONTRACTOR. COORDINATE WITH ELECTRICAL CONTRACTOR FOR WRING AND TESTING OF ALL MECHANICAL EQUIPMENT.
- 28. CLEANING UPON COMPLETION AND IN PREPARATION FOR FINAL ACCEPTANCE, CONTRACTOR SHALL REMOVE PROTECTIVE COVERINGS, CLEAN AND REFURBISH ALL EQUIPMENT, FREE ALL OBSTRUCTIONS, REPLACE FILTERS, CLEAN STRAINERS AND LEAVE IN OPERATING CONDITION. ALL SURPLUS AND WASTE MATERIAL SHALL BE PROMPTLY REMOVED FROM THE PREMISES. 29. TRIAL USAGE
- OBTAIN WRITTEN PERMISSION FROM ENGINEER TO START AND TEST PERMANENT EQUIPMENT AND SYSTEMS TO ACCEPTANCE BY OWNER ENGINEER AND OWNER MAY USE EQUIPMENT AND SYSTEMS FOR TEST PURPOSES PRIOR TO ACCEPTANCE. SUPPLY LABOUR, MATERIAL AND INSTRUMENTS REQUIRED FOR TESTING. TESTING, ADJUSTING AND BALANCING (TAB
- THIS OPERATION SHALL BE UNDERTAKEN BY A CONTRACTOR WHOSE PRINCIPAL BUSINESS IS THAT OF TESTING, ADJUSTING AND BALANCING. THIS CONTRACTOR IS TO CONDUCT ACCEPTANCE TESTS TO DEMONSTRATE THAT THE EQUIPMENT AND SYSTEMS ACTUALLY MEET THE SPECIFIED REQUIREMENTS. TESTS MAY BE CONDUCTED AS SOON AS CONDITIONS PERMIT. SUBMIT TAB REPORT TO ENGINEER FOR REVIEW. THE BALANCING CONTRACTOR SHALL BE AFFILIATED WITH AABC OR NEBB
- THIS CONTRACTOR SHALL COORDINATE LOCATION AND INSTALLATION OF ALL "TAB" DEVICES, EQUIPMENT, ACCESSORIES, MEASUREMENT PORT AND FITTINGS. ALL NECESSARY TEST PORTS FOR HYDRONIC SYSTEM SHALL BE PROVIDED TO THE MECHANICAL CONTRACTOR FOR INSTALLATION. OPERATE SYSTEMS FOR LENGTH OF TIME REQUIRED FOR TAB. SUBMIT "TAB" REPORT TO ENGINEER FOR VERIFICATION. "TAB" SHALL BE CARRIED OUT FOR THE FOLLOWING SYSTEMS ALL AIRFLOWS INDICATED. HYDRONIC FLOWS FOR NEW HEATING EQUIPMEN
- 31. DEMONSTRATION. OPERATION AND MAINTENANCE INSTRUCTIONS SUPPLY TOOLS, EQUIPMENT AND PERSONNEL TO DEMONSTRATE AND INSTRUCT CLIENT'S REPRESENTATIVE DURING REGULAR WORK HOURS AND PRIOR TO ACCEPTANCE IN OPERATING, CONTROLLING, AND ADJUSTING OF ALL
- SYSTEMS AND EQUIPMENT. OPERATION AND MAINTENANCE MANUAL
- PROVIDE OPERATION AND MAINTENANCE DATA FOR INCORPORATION INTO MANUAL OPERATION AND MAINTENANCE MANUAL TO BE APPROVED BY AND FINAL COPIES DEPOSITED WITH ENGINEER BEFORE FINAL INSPECTION. 33. RECORD DRAWINGS
- SITE RECORDS ON ONE SET OF AUTOCAD MECHANICAL DRAWINGS, MARK ALL CHANGES AS WORK PROGRESSES AND AS CHANGES OCCUR.
- MAKE AVAILABLE FOR REFERENCE PURPOSES AND INSPECTION AT ALL TIMES. .2 AS-BUILT DRAWINGS: .1 IDENTIFY EACH DRAWING IN LOWER RIGHT HAND CORNER IN LETTERS AT LEAST 1/2" HIGH AS FOLLOWS: "AS BUILT DRAWINGS: THIS DRAWING HAS BEEN REVISED TO SHOW MECHANICAL SYSTEMS AS INSTALLED" (SIGNATURE OF CONTRACTOR) (DATE).
- SUBMIT TO ENGINEER FOR APPROVAL AND MAKE CORRECTIONS AS DIRECTED. SUBMIT COMPLETED REPRODUCIBLE AS-BUILT DRAWINGS WITH OPERATING AND MAINTENANCE MANUALS. 34. GUARANTEE
- PROVIDE A WRITTEN GUARANTEE TO COVER ALL MATERIALS AND INSTALLATION OF THE COMPLETE MECHANICAL SYSTEMS. THIS GUARANTEE SHALL EXTEND FOR A PERIOD OF ONE YEAR FROM THE DATE OF THE CERTIFICATE OF SUBSTANTIAL COMPLETION.
- SPECIFIC GUARANTEE OF MANUFACTURERS WHOSE WARRANTY NORMALLY EXTENDS OVER LONGER OR SHORTER PERIODS THAN ONE YEAR, SHALL IN NO WAY LIMIT THE GUARANTEE OF THE MECHANICAL WORK. ANY DEFECTS OCCURRING WITHIN THE GUARANTEE PERIOD SHALL BE REPAIRED/REPLACED AT NO COST TO THE OWNER. .4 WHERE PERMANENT EQUIPMENT IS USED TO PROVIDE TEMPORARY SERVICES, THE WARRANTY SHALL BE EXTENDED SO THAT THE WARRANTY PERIOD DOES NOT COMMENCE UNTIL THE CERTIFICATE OF SUBSTANTIAL COMPLETION IS ISSUED.

VAC	<u>PL</u>	UMBING GENERAL NOTES FOR INSTALLATION DOMESTIC WATER PIPING WITHIN THE BUILDING:
	2.	.1 ABOVE GROUND SHALL BE SEAMLESS COPPER WATER TUBE, TYPE L WITH SOLDERED JOINTS. GRAVITY SANITARY, STORM AND VENT PIPE AND FITTINGS:
RERS		.1 BELOW GRADE SHALL BE PVC-SDR35 (8 IN. AND LARGER), PVC-SDR28 (6 IN. AND SMALLER), ABS-DWV OR PVC-DWV WITH SOLVENT WELD FITTINGS. .2 ABOVE GROUND UP TO 2-1/2" DIA. SHALL BE PVC-DWV ULC APPROVED WITH SOLVENT WELD FITTINGS OR COPPER DWV WITH WROUGHT COPPER FITTINGS.
		 .3 ABOVE GROUND FOR 3" AND OVER SHALL BE PVC-DWV, ULC APPROVED WITH SOLVENT WELD FITTINGS OR CAST IRON WITH MECHANICAL JOINTS, NEOPRENE OR BUTYL RUBBER COMPRESSION GASKETS AND STAINLESS STEEL CLAMPS. .4 IN A RETURN AIR PLENUM USE FULLY CERTIFIED FIRE-RESISTANT PVC-DWV PIPE SUCH AS IPEX SYSTEM XFR 15–50. COORDINATE WITH ARCHITECTURAL AND HVAC DRAWINGS TO CLARIFY AREAS WITH RETURN
	-	AIR PLENUM. .5 COMBUSTIBLE PIPE SHALL NOT BE INSTALLED IN A VERTICAL SERVICE SHAFT.
	3. 4. 5.	EXTEND STORM LINE 1500MM BEYOND FACE OF EXTERIOR WALL AND CONNECT TO SITE SERVICES. REFER TO SITE SERVICES DRAWING FOR COORDINATION. WHERE PLASTIC PIPE CROSSES A FIRE SEPARATION IT SHALL BE FITTED WITH APPROVED FIRE STOP DEVICES. INSTALL PLUMBING VENT LINES AS PER OBC PART 7. DISTRIBUTION AND SIZING SHALL BE BY PLUMBING CONTRACTOR.
10	6. 7.	FOR ALL PIPE PENETRATIONS, VOIDS AROUND PIPES SHALL BE SEALED AND CAULKED TO KEEP REQUIRED INTEGRITY. INSTALL PIPE CLEANOUTS FOR DRAINAGE AND PLUMBING VENT LINES.
	8.	HOT WATER HEATING STEEL PIPING, VALVES AND FITTINGS. .1 SHALL BE STEEL PIPE TO ASTM A53, GRADE B, SCHEDULE 40. .2 PIPE JOINTS
		.1 NPS 2 AND UNDER: SCREWED FITTINGS WITH TEFLON TAPE. .2 NPS 2–1/2 AND OVER: WELDING FITTINGS AND FLANGES TO ANSI/ASME B16.5.
		.3 ROLL GROOVED MECHANICAL COUPLING TO CSA B242. .3 FITTINGS .1 SCREWED FITTINGS: MALLEABLE IRON., TO ANSI/ASME B16.3, CLASS 150.
		.2 PIPE FLANGES AND FLANGED FITTINGS: STEEL TO ANSI/ASME B16.5. .3 BUTT_WELDING FITTINGS: STEEL, TO ANSI/ASME B16.9.
		.4 UNIONS: MALLEABLE IRON, TO ASTM A47M AND ANSI/ASME B16.3. .5 FITTINGS FOR ROLLED GROOVED PIPING: MALLEABLE IRON TO ASTM A47M OR DUCTILE IRON TO ASTM A536
ВАСК	9.	PIPING INSULATION .1 PREFORMED SECTIONAL RIGID FIBREGLASS PIPE INSULATION WITH VAPOUR BARRIER JACKET AND FACING MATERIAL 0—850 DEG.F. SHALL HAVE A MAXIMUM FLAME SPREAD RATING OF 25 AND A MAXIMUM SMOKE DEVELOPED RATING OF 50.
EW		.1 APPLICATION: .1 DOMESTIC COLD AND HOT WATER, HOT WATER RECIRCULATION LINE SHALL BE INSULATED THROUGHOUT IN ALL LOCATIONS.
OF		.2 HYDRONIC HEATING SYSTEM PIPING SHALL BE INSULATED THROUGHOUT IN ALL LOCATIONS. .3 RAIN WATER LINES. .2 THICKNESS AND THERMAL CONDUCTIVITY AS PER FOLLOWING: RUNOUTS REFERS TO INDIVIDUAL PLUMBING FIXTURES
		OR TERMINAL UNITS NOT EXCEEDING 12FT. .1 DOMESTIC COLD AND HOT WATER AND HOT WATER RECIRCULATION LINES:
NDITION NSIBLE		INSULATION THERMAL CONDUCTIVITY 0.24–0.28 BTU.IN/(H.FT2'F) AT 100 DEG. F MEAN TEMP. RATING. NOMINAL PIPE DIAMETER UP TO 2 IN., INSULATION THICKNESS SHALL BE 1 IN. RUNOUTS UP TO 2 IN. NOMINAL PIPE SIZE, THICKNESS SHALL BE 1/2 IN. .2 HYDRONIC SYSTEM LINES:
		INSULATION THERMAL CONDUCTIVITY 0.25-0.29 BTU.IN/(H.FT2'F) AT 125 DEG. F MEAN TEMP. RATING. NOMINAL PIPE DIAMETER UP TO 4 IN., INSULATION THICKNESS FOR HEATING SYSTEM SHALL BE 1-1/2 IN.
G AND IERAL		.3 ALL HORIZONTAL RAIN WATER LINES AND ELBOW DROP TO THE STACK SHALL BE INSULATED WITH PREFORMED SECTIONAL FIBREGLASS PIPE INSULATION WITH VAPOUR BARRIER JACKET INSULATION, THERMAL CONDUCTIVITY SHALL BE 0.24-0.28 BTU.IN/H.FT2.F) AT 100 DEG. F MEAN TEMP. RATING, 1 THICKNESS. UNDERSIDE OF ROOF DRAIN BODY SHALL BE INSULATED
		WITH FLEXIBLE FIBREGLASS WITH VAPOUR BARRIER JACKET, OF SAME THERMAL CONDUCTIVITY BUT 2 IN. THICKNESS. .2 FASTENINGS: .1 SELF ADHESIVE ALUMINUM TAPE ULC LABELLED.
N	10	.2 LAP SEAL ADHESIVE, QUICK SETTING FOR JOINTS AND LAP SEALING OF VAPOUR BARRIERS. .3 LAGGING ADHESIVE FIRE RETARDANT COATING. ALL INSULATED EXPOSED PLUMBING PIPES AND HYDRONIC HEATING LINES RUNNING INSIDE THE BUILDING SHALL SHALL BE ENTIRELY INSTALLED WITH WHITE PVC JACKETING, UV-RESISTANT WITH MAXIMUM FLAME
BILITY	10.	SPREAD RATING OF 25 AND A MAXIMUM SMOKE DEVELOPED RATING OF 50.
	12.	INSTALL VALVED SUPPLIES AT ALL PLUMBING FIXTURES. FOR THE REWORKING OF EXISTING PLUMBING LINES, CUTTING BACK AND CAPPING OF THE LINES, THIS SHALL BE CARRIED OUT BY FREEZING EXISTING PLUMBING LINES. FOR THE REWORKING OF EXISTING HYDRONIC HEATING LINES. CUTTING BACK AND CAPPING THIS SHALL BE CARRIED OUT BY FREEZING EXISTING SUPPLY AND RETURN LINES.
		WATER TREATMENT SYSTEMS – CLOSED HOT WATER HEATING SYSTEM .1 THIS OPERATION SHALL BE UNDERTAKEN BY A CONTRACTOR WHOSE PRINCIPAL BUSINESS IS THAT OF CHEMICAL WATER TREATMENT SERVICES. THIS CONTRACTOR IS TO CONDUCT WATER TREATMENT, WATER
		ANALYSIS, SYSTEM STABILIZATION AND TREATMENT RECOMMENDATIONS. SYSTEM SHALL CONTROL SLUDGE, SCALE AND CORROSION AND TO BE COMPATIBLE WITH HYDRONIC SYSTEM MATERIALS. CONTRACTOR SHALL PROVIDE CERTIFICATE THAT THE SYSTEM HAS BEEN PROPERLY INSTALLED, CONNECTED, TESTED AND CHECKED. TESTS MAY BE CONDUCTED AS SOON AS CONDITIONS PERMIT. .2 CHEMICAL TREATMENT COMPANY SHALL EXAMINE EXISTING SYSTEM AND PROVIDE TREATMENT CHEMICALS TO MATCH EXISTING.
ŧΕ		.2 CHEMICAL TREATMENT COMPANY SHALL EXAMINE EXISTING STSTEM AND PROVIDE TREATMENT CHEMICALS TO MATCH EXISTING. .3 MECHANICAL CONTRACTOR SHALL OBTAIN PRICE RELATED TO THIS FROM THE CHEMICAL WATER TREATMENT CONTRACTOR AND INCLUDE IT IN THE BASE TENDER PRICE.
	<u>HV</u>	/AC GENERAL NOTES FOR INSTALLATION UNLESS OTHERWISE NOTED ALL DUCTWORK AND DUCTWORK ACCESSORIES SHALL BE GALVANIZED STEEL LOW PRESSURE. DUCTWORK CONSTRUCTION AND INSTALLATION SHALL BE AS PER THE REQUIREMENTS OF
	2.	
		.1 DUCTWORK EXPOSED TO THE EXTERIOR TO THE BUILDING SHALL BE WATERTIGHT AND DUCT SEALANT SHALL BE WATERPROOF. .2 EXHAUST DUCTWORK SERVING EXHAUST FANS SHALL BE SEALED AT TRANSVERSE JOINTS AND CONNECTIONS. .3 PLENUM AT LOUVRES SHALL BE WATERTIGHT. SLOPE DOWN BASE OF PLENUM AND DUCTS TOWARDS LOUVRE FOR DRAINING.
	3.	.4 FOR EXPOSED DUCTS, THE DUCT SEALANT SHALL BE APPLIED ON THE INSIDE OF THE DUCT JOINTS AND CONNECTIONS SUCH AS NOT TO BE VISIBLE ON THE OUTSIDE OF THE DUCT. FLEXIBLE DUCT LENGTH SHALL BE LIMITED TO 8FT. MAXIMUM AND SHALL BE FACTORY FABRICATED TO CAN/ULC S110 SHALL BE ALUMINUM FOIL REINFORCED FILM LAMINATE, PERMANENTLY BONDED TO A CORROSION RESISTANT COATED SPRING STEEL WIRE HELIX. WHERE IT IS REQUIRED TO BE INSULATED. IT SHALL BE INSULATED AS PER R-VALUE SPECIFIED BELOW.
	4.	
		FACING, DENSITY 0.75 PCF AND NOMINAL R-VALUE OF 6.7 H.FT2. F/BTU. .2 SUPPLY AIR DUCTS LOCATED INSIDE THE BUILDING ENVELOPE IN CEILING SPACES AND BULKHEADS NOT USED AS RETURN AIR PLENUM OR IN UNHEATED OR NOT AIRCONDITIONED SPACES SHALL BE INSULATED
		WITH 1-1/2 IN. THICKNESS OF FLEXIBLE DUCTWRAP INSULATION WITH REINFORCED FOIL/KRAFT VAPOUR BARRIER RETARDER FACING, DENSITY 0.75 PCF AND NOMINAL R-VALUE OF 5.0 H.FT2.F/BTU. .3 WHERE SUPPLY AND RETURN AIR DUCTS RUN INSIDE THE BUILDING AND ARE NOT PROTECTED BY AN INSULATED EXTERIOR WALL OR ROOF OR WHERE THE DUCTS ARE EXPOSED TO AN UNHEATED SPACE, THEY SHALL BE INSULATED WITH A FLEXIBLE DUCTRAP INSULATION WITH REINFORCED FOIL/KRAFT VAPOUR RETARDER FACING, DENSITY 0.75 PCF AND TO PROVIDE NOMINAL R-VALUE OF 12.0 H.FT2.F/BTU.
		.4 FASTENINGS: .1 SELF ADHESIVE ALUMINUM TAPE ULC LABELLED.
	5.	.2 LAP SEAL ADHESIVE, QUICK SETTING FOR JOINTS AND LAP SEALING OF VAPOUR BARRIERS. .3 CONTACT ADHESIVE QUICK SETTING. WHERE INDICATED ON DRAWINGS, INSULATED EXPOSED DUCTS RUNNING INSIDE THE BUILDING SHALL SHALL BE ENTIRELY INSTALLED WITH WHITE PVC JACKETING, UV-RESISTANT WITH MAXIMUM FLAME SPREAD RATING
	5. 6.	WHERE INDICATED ON THE DRAWINGS, INSOLATED EXPOSED DUCTS ROUNNING INSIDE THE BOILDING STALL SHALL BE ENTITED WITH WITH WITH WARNING, OV-RESISTANT WITH WARNING TRAVE SPREAD RATING OF 25 AND A MAXIMUM SMOKE DEVELOPED RATING OF 50. WHERE INDICATED ON THE DRAWINGS AND AS SPECIFIED BELOW, ACOUSTIC LINER FOR DUCTWORK SHALL BE 1" THICKNESS RIGID FIBREGLASS OF DENSITY 2.0 PCF. INSULATION SHALL HAVE A MAXIMUM FLAME
	7.	SPREAD RATING OF 25 AND A MAXIMUM SMOKE DEVELOPED RATING OF 50. DUCT SIZE DIMENSION INDICATED ON DRAWING IS THE INTERNAL DIMENSION OF THE ASSEMBLED DUCT WITH ACOUSTIC LINER. 1 ACOUSTICALLY LINE THE RECTUABGULAR SUPPLY AND RETURN DUCT DROPS FROM THE PACKAGED GAS FIRED HVAC ROOFTOP UNITS. WHERE DUCTS CROSS A FIRE SEPARATION, INSTALL FIRE DAMPERS TO SUIT APPLICATION. FIRE DAMPERS SHALL BE OF THE DYNAMIC CLOSURE TYPE WITH BLADE OUT OF AIRSTREAM, ULC LISTED AND FUSIBLE LINK
	,. 8.	WITH TEMPERATURE RATING TO SUIT APPLICATION. SHALL BE INSTALLED AS PER NFPA 90A WITH BREAKAWAY JOINTS, RETAINING ANGLES AND ACCESS DOOR ADJACENT TO FIRE DAMPER. FOR DUCT PENETRATIONS AT WALL, VOIDS AROUND DUCT SHALL BE SEALED AND CAULKED TO MAINTAIN REQUIRED INTEGRITY.
	9. 10	PACKAGED HVAC ROOFTOP UNITS SHALL BE INSTALLED WITH A CONDENSATE DRAIN P—TRAP AND TERMINATED ON ROOF. HEIGHT OF TRAP SHALL AS PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. NATURAL GAS PIPE INSTALLATION:
	10.	.1 ABOVE GROUND GAS PIPE SHALL BE BLACK STEEL SCHEDULE 40 AND INSTALLED AS PER THE REQUIREMENTS OF NATURAL GAS INSTALLATION CODE, CSA-B149.1, LOCAL UTILITY REQUIREMENTS AND TSSA REQUIREMENTS. INSTALL PLUG VALVES AT ALL GAS FIRED EQUIPMENT. INSTALL GAS PRESSURE REGULATORS AT GAS FIRED EQUIPMENT WHERE SHOWN. FOR ROOFTOP PIPE SUPPORTS SUPPLY AND INSTALL
		DURA-BLOK SERIES TYPE COMPLETE WITH RUBBER SUPPORT BASES UV RESISTANT WITH CHANNEL. CHANNELS SHALL BE GALVANIZED STEEL AND FITTINGS AND HARDWARE SHALL BE ELECTRO-PLATED STEEL. FINAL GAS PIPE SIZING, DISTRIBUTION AND CONNECTION TO VARIOUS GAS FIRED EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. MECHANICAL CONTRACTOR SHALL INCLUDE IN TENDER FOR SUPPLY AND CONNECTION OF GAS PIPE AND GAS VALVES TO EQUIPMENT.
		.4 INSTALL EXPANSION CONTROL LOOPS AND OFFSETS OR EXPANSION JOINTS WHERE APPLICABLE AND AS REQUIRED. .5 GAS PIPE EXTERIOR TO THE BUILDING SHALL BE PAINTED IN YELLOW PAINT AND INSIDE THE BUILDING SHALL BE IDENTIFIED WITH YELLOW BANDS
		.6 MECHANICAL CONTRACTOR SHALL INCLUDE IN TENDER PRICE TO CONTACT AND COORDINATE WITH LOCAL GAS UTILITY FOR REPLACEMENT OF GAS METER IF NECESSARY DUE TO INCREASE IN GAS CAPACITY AND FOR UPGRADING THE GAS PRESSURE.
	<u>BL</u> 1.	JILDING AUTOMATION CONTROLS (BAS) The building automation controls supply and installation shall be undertaken by the current hvac controls contractor responsible for the building automation controls.
E FOR	1. 2.	CONTACT JAKE RENDULIC AT SIEMENS CANADA LTD., email:jake.rendulic@siemens.com THE BUILDING AUTOMATION CONTROLS SUPPLY AND INSTALLATION SHALL BE INCLUDED IN THE BASE BID. CONFIRM CONTROLS COMPANY TO BE USED.
TION	3. 4.	FOR EXISTING GYMNASIUM GAS FIRED PACKAGED ROOFTOP HVAC UNIT RTU-1. RELOCATE DUCT SENSORS AND CONTROL COMPONENTS. REWORK EXISTING CONTROLS, ADD POINTS. ADD HEAT WHEEL STATUS AND CONVERT UNIT PROGRAMMING FOR VAV DUCT STATIC PRESSURE CONTROL. UPDATE GRAPHICS TO INCORPORATE NEW EQUIPMENT CONTROLS AND EXISTING EQUIPMENT REVISED CONTROLS TO BE VIEWED VIA THE BAS SYSTEM.
	5.	NEW EQUIPMENT ADDED: —NEW GYMNASIUM GAS FIRED PACKAGED HVAC ROOFTOP UNITS.
NOT		-variable air volume (vav) terminal units to serve resource room, breakout room and office. Vav terminals controls, actuators, sensors all other control components shall be by siemens. -ceiling circulation fans in learning commons and new gymnasium.
	6.	FOR GAS FIRED PACKAGED HVAC UNITS SERVING THE GYMNASIUM, SIEMENS SHALL PROVIDE "TEMPERATURE ROOM UNIT" FOR SENSING ROOM TEMPERATURE, CO2 AND HUMIDITY. SHALL INCORPORATE PLUG-IN PORT FOR INTERFACING AND COMMUNICATING WITH THE BAS SYSTEM. SHALL INCORPORATE A DIGITAL DISPLAY FOR ROOM TEMPERATURE AND DAY/NIGHT OPERATION STATUS ETC. SHALL ALSO HAVE KEYPAD FOR DIGITAL
		SETPOINT ADJUSTMENT AND OVERRIDE BUTTON. SHALL BE INSTALLED WITH A LOCKABLE THERMOSTAT GUARD. HIGH IMPACT PLASTIC CLEAR FINISH. OPERATION OF BOTH HVAC UNITS SHALL BE BASED ON ROOM
		AVERAGING TEMPERATURE, BOTH UNITS SHALL OPERATE IN THE SAME MODE TO SATISFY BOTH AREAS AT THE SAME TIME. ONE HVAC UNIT SHALL NOT OPERATE IN HEATING WHILE THE OTHER IS COOLING OR VICE VERSA.
		AVERAGING TEMPERATURE, BOTH UNITS SHALL OPERATE IN THE SAME MODE TO SATISFY BOTH AREAS AT THE SAME TIME. ONE HVAC UNIT SHALL NOT OPERATE IN HEATING WHILE THE OTHER IS COOLING OR VICE

SEQUENCE TO MAINTAIN THE ROOM TEMPERATURE AT SET -UNOCCUPIED: THE ROOFTOP HVAC UNIT IS CONTROLLED USING THE UNOCCUPIED SPACE TEMPERATURE SET POINT. THE UNIT SUPPLY FAN IS IN "AUTO" POSITION AND OFF WHEN THE SPACE TEMPERATURE IS BETWEEN THE HEATING AND COOLING UNOCCUPIED SET POINTS. THE CONTROLLER MAY RESET TO THE OCCUPIED MODE FOR A PREDETERMINED TIME PERIOD UPON A SIGNAL FROM THE CONTROL SYSTEM OR MANUALLY AT THE ROOM SENSOR. THE ECONOMIZER SHUTS DOWN DURING UNOCCUPIED MODE.

SEQUENCE OF OPERATION FOR VARIABLE AIR VOLUME TERMINALS (VAV) WITH REHEAT: THE VARIABLE VOLUME (VAV) TERMINAL UNIT IS CONTROLLED INDEPENDENT OF SYSTEM PRESSURE FLUCTUATIONS BY AN APPLICATION SPECIFIC DDC CONTROLLER USING ELECTRIC ACTUATION. THE SPACE SERVED BY THE VAV TERMINAL UNIT IS CONTROLLED IN COMFORT AND ECONOMY MODES AS FOLLOWS: COMFORT (OCCUPIED):THE VAV TERMINAL UNIT IS CONTROLLED WITHIN USER DEFINED MAXIMUM AND MINIMUM SUPPLY AIR VOLUME SETTINGS. THE DXR CONTROLLER MONITORS THE ROOM TEMPERATURE SENSOR (ROOM OPERATOR) AND AIR VELOCITY SENSOR AND MODULATES THE SUPPLY AIR DAMPER TO MAINTAIN ROOM AIR TEMPERATURE SET POINT. WHEN THE DAMPER REACHES ITS MINIMUM AIR FLOW SET POINT THE REHEAT COIL CONTROL VALVE MODULATES TO MAINTAIN THE ROOM TEMPERATURE SET POINT. ECONOMY (UNOCCUPIED): THE TERMINAL UNIT IS CONTROLLED USING THE ECONOMY SET POINT. THE DXR CONTROLLER RESETS TO THE COMFORT MODE FOR A PREDETERMINED TIME PERIOD UPON RECEIVING A SIGNAL FROM THE CONTROL SYSTEM OR MANUALLY FROM THE ROOM SENSOR. WHEN THE ROOM IS IN ECONOMY MODE, THE DXR CONTROLLER MODULATES THE SUPPLY TERMINAL UNIT'S DAMPER TO MAINTAIN THE UNITS SUPPLY AIR VOLUME AT MINIMUM AND THE REHEAT COIL CONTROL VALVE IF APPLICABLE WILL MODULATE TO MAINTAIN THE ROOM TEMPERATURE SET POINT.

8. SEQUENCE OF OPERATION FOR CEILING CIRCULATION FANS: ENABLE AND DISABLE OF CIRCULATION FANS WITH OVERRIDE. ALL FANS SHALL OPERATE AT THE SAME TIME.

-OCCUPIED: THE FANS ARE TURNED "ON" BY THE BAS SYSTEM. -UNOCCUPIED: THE FANS ARE TURNED "OFF" BY THE BAS SYSTEM

-FANS ARE TO BE CONTROLLED BY LOCAL STAND ALONE MANUAL CONTROL SWITCH TO CONTROL FANS IN GROUPS CAPABLE FOR VARIABLE SPEED AND REVERSING AIRFLOW. 9. FOR POINTS TO BE ADDED, CONTROLLED AND VIEWED VIA THE BAS SYSTEM REFER TO SCHEMATICS AND DESCRIPTION AS INDICATED ON DRG. M3-1. EXISTING GRAPHICS SHALL BE UPDATED. 10. ALL THERMOSTATS TO BE LOCKED OUT FROM ONSITE ADJUSTMENTS.

PORTABLE FIRE EXTINGUISHERS GENERAL NOTES FOR INSTALLATION 1. THE INSTALLATION SHALL COMPLY WITH THE LATEST EDITIONS AND AMENDMENT OF THE FOLLOWING CODES AND STANDARDS. WHERE CONFLICTS IN REQUIREMENTS OCCUR, THE HIGHER STANDARDS SHALL APPLY: ONTARIO BUILDING CODE, NFPA, ONTARIO FIRE CODE AND LOCAL CODES, STANDARDS AND BY-LAWS. 2. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND NFPA 10. INSTALL EXTINGUISHERS HAVING A GROSS WEIGHT OF 40 LBS OR LESS SO THAT THE TOP OF THE EXTINGUISHER IS NOT MORE THAN 43" ABOVE FINISHED FLOOR.

SEISMIC RESTRAINT FOR MECHANICAL SYSTEMS

PROVIDE SEISMIC RESTRAIN FOR NEW BUILDINGS SUCH AS THE GYMNASIUM AS NOTED BELOW: THE MECHANICAL CONTRACTOR SHALL RETAIN THE SERVICES OF A PROFESSIONAL ENGINEER WHOSE PRINCIPAL BUSINESS IS THAT OF SEISMIC RESTRAINT. THE SEISMIC RESTRAIN DESIGN CONSULTANT SHALL BE RESPONSIBLE FOR THE SUBMISSION OF A SIGNED AND SEALED LETTER OF ASSURANCE OF PROFESSIONAL DESIGN, COMMITMENT FOR FIELD REVIEW AND REPORTING OF SEISMIC RESTRAINT INSTALLATION AS REQUIRED

- BY THE ONTARIO BUILDING CODE (OBC) 4.1.8.18 (2) CAT. 6 TO 21 PROVIDE ALL LABOUR AND MATERIAL NECESSARY FOR THE SEISMIC RESTRAINT AND ANCHORAGE FOR ALL MECHANICAL EQUIPMENT. PIPING AND DUCTWORK IN ACCORDANCE WITH THE ONTARIO BUILDING CODE (OBC) 4.1.8.18 (2) CAT. 6 TO 21, THE GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING PIPING SYSTEMS AS PREPARED BY SMACNA AND ALL OTHER APPLICABLE REGULATIONS.
- EQUIPMENT MANUFACTURER SHALL BE RESPONSIBLE FOR ENSURING THAT THE EQUIPMENT HAS ADEQUATE STRENGTH FOR SEISMIC RESTRAINTS AND ANCHORAGE OF EQUIPMENT FRAMING. VIBRATION ISOLATORS SHALL BE PROVIDED IN SUCH A WAY THAT VIBRATION ISOLATION IS MAINTAINED TOGETHER WITH SEISMIC RESTRAINT. FOR SUSPENDED EQUIPMENT PROVIDE CABLE AND RIGID BRACES TO RESTRAIN EQUIPMENT AGAINST SEISMIC LOADS. FOR DEVICES/EQUIPMENT SUSPENDED IN ACOUSTIC CEILING PROVIDE INDEPENDENT SUPPORT FROM STRUCTURE USING CABLES, WIRES OR CHAINS. WHERE DRILLING OF THE STRUCTURE IS REQUIRED FOR ANCHORAGE, THE DRILLING SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER

PLUMBING FIXTURES AND EQUIPMENT SCHEDULE

RD1 ROOF DRAIN, WATTS RD-100BED, NON-CONTROL FLOW TYPE (FULL FLOW), EPOXY COATED WITH DEEP SUMP, FLASHING RING AND GRAVEL STOP, ADJUSTABLE DECK CLAMP POLYETHYLENE DOME STRAINER

HVAC EQUIPMENT SCHEDULE

- EXISTING PACKAGED HVAC UNIT WITH ENERGY RECOVERY, NATURAL GAS FIRED, 185 MBH COOLING CAPACITY, HEATING INPUT/OUTPUT CAPACITY 450/360 MBH MODULATING 12:1 TURNDOWN, DIRECT DRIVE MODULATING INDOOR FAN MOTOR. NOMINAL SUPPLY AIR 6670 CFM TO BE ADJUSTED TO 6025 CFM.
- PU1 AND PU2 PACKAGED ROOFTOP HVAC UNIT, DOWNFLOW CONFIGURATION, NATURAL GAS FIRED, ASHRAE 90.1 COMPLIANT, HIGH EFFICIENCY TRANE YHJ120, 10 TONS NOMINAL COOLING CAPACITY, EER 11.4, IEER 15.1 (FOR 2-PEED INDOOR FAN MOTOR), WITH ECM INDOOR FAN MOTOR, 2-STAGE COOLING, 2-STAGE HEATING INPUT CAPACITY 200/140 MBH AND 162/113.4 MBH HEATING OUTPUT CAPACITY. NOMINAL SUPPLY AIR 4000 CFM. COMPLETE WITH FOLLOWING ACCESSORIES: -ROOF CURB 18" HIGH
 - -ECONOMIZER WITH BAROMETRIC RELIEF FOR 1100 CFM FRESH AIR. ECONOMIZER WILL BE CONTROLLED BY THE BUILDING AUTOMATION SYSTEM -INDOOR VANE AXIAL FAN, DIRECT DRIVE ECM MOTOR. E.S.P. 0.5", INCLUDES DUCTWORK ONLY -LOUVERED HAIL GUARDS
 - -UNPOWERED CONVENIENCE OUTLET -2" MERV 13 FILTERS -HINGED ACCESS PANELS
 - -TERMINAL STRIP/BLOCK WITH NOT BACNET. SHALL COME COMPLETE WITH A THERMOSTAT INTERFACE BOARD (RTRM BOARD). SHALL BE ABLE TO INTERFACE WITH BUILDING AUTOMATION CONTROLS FOR SUPPLY FAN COMMAND AND STATUS
 - COOLING STAGE 1 AND 2 COMMAND AND STATUS HEATING STAGE 1 AND 2 COMMAND AND STATUS SUPPLY AND RETURN AIR TEMPERATURE
 - ROOM TEMPERATURE RETURN AIR CO2 (AIR QUALITY)
 - ECONOMIZER CONTROL (BASED ON CO2 AND OUTSIDE TEMPERATURE) RETURN AIR HUMIDITY
- FILTER STATUS ELECTRICAL DATA: 575V/3/60, 54 MCA, 70 MAX. CIRCUIT BREAKER.
- PHYSICAL SIZE: 88"L x 53"W x 69"H INCLUDING ROOF CURB. PHYSICAL WEIGHT: 1400 LBS. OTHER ACCEPTABLE MANUFACTURERS: DAIKIN, AAON AND ENG AIR. NO OTHER MANUFACTURERS ARE ACCEPTABLE.

VARIABLE AIR VOLUME TERMINALS (VAV) E.H. PRICE SDVQ5000 SINGLE DUCT QUITE TYPE, COMPLETE WITH VELOCITY PRESSURE SENSOR, DISCHARGE ATTENUATOR 36" LENGTH, AND HYDRONIC REHEAT COIL WITH BOTTOM ACCESS DOOR. REFER TO VAV EQUIPMENT SCHEDULE TABLE FOR SIZES AND

- DIFFUSERS, GRILLES AND REGISTERS BY E.H. PRICE UNLESS OTHERWISE INDICATED. COLOUR TO BE FINALIZED ON SITE WITH ARCHITECT. REF. A: SQUARE CONE SUPPLY DIFFUSER, 24"x24"/SCD/3C, FOR T-BAR MOUNT. COMPLETE WITH VOLUME CONTROLLER.
- REF. B: ROUND CONE SUPPLY DIFFUSER, RCDA FULLY ADJUSTABLE. SHALL BE SUPPLIED AND INSTALLED WITH A SAFETY STEEL CHAIN. REF. SR1: SUPPLY REGISTER DOUBLE DEFLECTION, 520D/F/S/A, COMPLETE WITH VOLUME DAMPER
- REF. RG1: RETURN GRILLE, EGG CRATE TYPE, 80 CORE ONLY. PLASTIC TYPE ARE NOT ACCEPTABLE. REF. RG2: RETURN GRILLE, 96/L/A
- REF. DG1: DOOR GRILLE, STG1/BF

'CAPACITIES.

V1 TO V6

CF1 TO CF6

- CEILING FANS TO BE SUPPLIED AND INSTALLED BY ELECTRICAL DIVISION. SHALL BE OF THE REVERSING AIRFLOW AND VARIABLE SPEED CONTROL SWITCH TO CONTROL FANS IN GROUPS AS INDICATED ON DRAWINGS. SHALL BE COMPLETE WITH WIRE GAGES WHERE INDICATED ON DRAWINGS PORTABLE FIRE EXTINGUISHERS AND CABINETS SCHEDULE
- FEC1 PORTABLE FIRE EXTINGUISHER CABINET, NATIONAL FIRE EQUIPMENT MODEL 102F, FULLY RECESSED WITH 1/4" RETURN FRAME, COLD ROLLED STEEL CABINET WITH STAINLESS STEEL CONCEALED LATCH AND REINFORCED PIANO HINGES. CABINET PRIMED FOR FIELD PAINTING. DOOR FITTED WITH 1/4" THICK LEXAN POLYCARBONATE SUITABLE FOR GYMNASIUM. LOCATE EXTINGUISHER CABINETS AS INDICATED ON DRAWINGS.

E.H. PRICE VARIABLE AIR VOLUME UNITS (V) WITH UVDONIC DELEAT COILS (DU

TIDRONIC REPEAT COILS (RP)									
VAV	VAV	SIZE (IN.)	RANGE CFM	ZONE	DESIGN CFM	REHEAT	COIL	HEAT	FLOW
UNIT	SIZE	INLET/OUTLET	MIN-MAX	CFM	MIN-MAX	COIL	TYPE	CAP. MBH	GPM
V1	12	12"ø/16"x15"	0-2100	1450	500-1450	RH1	1-ROW	24.0	1.0
V2	6	6"ø/12"x8"	0-450	275	100-275	RH2	1-ROW	9.0	1.0
٧3	8	8"ø/12"x10"	0-800	475	175-475	RH3	1-ROW	12.9	1.0
V4	12	12"ø/16"x15"	0-2100	1300	450-1300	RH4	1-ROW	23.0	1.0
V5	10	10"ø/14"x12.5"	0-1350	1000	350-1000	RH5	1-ROW	16.5	0.5
V6	12	12"ø/16"x15"	0-2100	1525	550-1525	RH6	1-ROW	23.9	1.0

- 1. AIR BALANCING OF VARIABLE AIR VOLUME UNITS SHALL BE SET FOR MINIMUM DESIGN AIRFLOW AND ZONE AIRFLOW. ZONE AIRFLOW IS BASED WHEN ALL ZONE DAMPERS IN THE SYSTEM ARE FULLY OPEN .. 2. ALL 120V WIRING SHALL BE BY THE ELECTRICAL CONTRACTOR AND ALL 24V WIRING BY THE MECHANICAL CONTRACTOR.
- 3. CONTROL SYSTEM SHALL BE OF THE PRESSURE INDEPENDENT TYPE.

AIR TEMPERATURE OF 55 DEG. F

4. LOCATION OF ZONE THERMOSTATS SHALL BE FINALIZED ON SITE IN COORDINATION WITH THE CLIENT. . WIRING INSTALLATION AND START-UP AND CALIBRATION OF CONTROL SYSTEM SHALL BE BY SIEMENS. 6. HEATING COIL CAPACITIES ARE BASED ON ENTERING WATER TEMPERATURE OF 180 DEG. F AND ENTERING

HWDSB SETPOINTS

- OCCUPIED HEATING 21 OCCUPIED COOLING 24
- UNOCCUPIED HEATING 18°C UNOCCUPIED COOLING 28°C
- STANDBY HEATING 20°C 3. STANDBY COOLING 28°C

VARIABLE AIR VOLUME TERMINALS V1 TO V6 . OVERRIDE ENABLE FOR SCHEDULE (M-F 6AM-10PM)

- 3. ZONE TEMP SENSOR (AI) 4. ZONE SETPOINTS (SOFTWARE POINTS)
- 5. ENABLE (DO) 6. STATUS (DI)
- 7. REHEAT VALVE (0-10vdc) COMMAND/MODULATION 8. DAMPER COMMAND/MODULATION
- 9. AIR VOLUME/VELOCITY SENSOR SETPOINT (SOFTWARE POINTS) 10. MINIMUM AND MAXIMUM FLOW RATES (SOFTWARE POINTS)
- 11. SUPPLY AIR TEMPERATURE SETPOINT (SOFTWARE POINTS) 12. RTU-1 DISCHARGE AIR (SOFTWARE POINT)

HVAC PACKAGED ROOFTOP UNITS PU1 AND PU2

- ZONE/ROOM TEMP SENSOR (AI) . ZONE SETPOINTS (SOFTWARE POINTS)
- . SUPPLY FAN ENABLE/COMMAND (AO OR DO) FOR VARIABLE SPEED MOTOR 4 SUPPLY FAN STATUS
- 5. POINTS MONITORED FOR: SUPPLY AIR TEMP.(DAT), RETURN AIR TEMP.(RAT), DAMPER COMMAND AND POSITION FOR MIXED AIR TEMP.(MAT), RETURN AIR HUMIDITY(RAH), RETURN AIR CARBON DIOXIDE (RACO2), DISCHARGE AIR STATIC PRESSURE (DAP)
- ECONOMIZER CONTROL (BASED ON CO2 AND OUTSIDE TEMPERATURE)
- 7. FILTER STATUS 8. HEATING STAGE 1 AND 2, COMMAND AND STATUS 9. COOLING STAGE 1 AND 2, COMMAND AND STATUS

CEILING CIRCULATION FANS CF1 TO CF6 OVERRIDE ENABLE FOR SCHEDULE (M-F 6AM-10PM)

2. ENABLE (DO)

EXISTING PACKAGED HVAC UNIT RTU-1 ADD HEAT WHEEL STATUS

TEMPERATURE SCHEDULE AND SETPOINTS FOR VARIOUS HVAC EQUIPMENT

M3-1/	N.T.S.

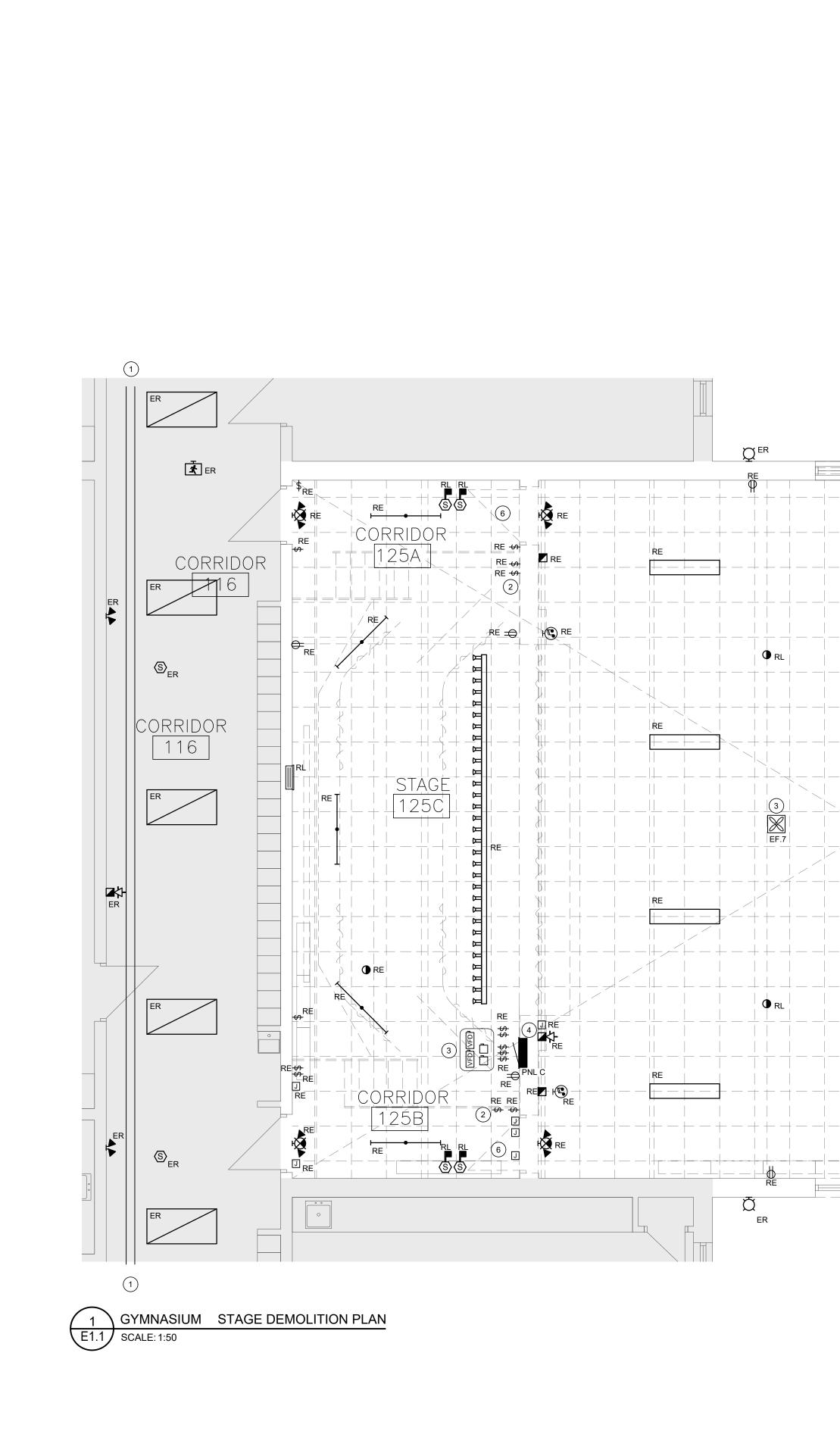
3	APR.26/24	ISSUED FOR TEN	NDER							
2	MAR.28/24	ISSUED FOR RE	VIEW							
1	FEB.21/24	ISSUED FOR PE	RMIT							
NO.	DATE	REVISION								
			ALL DIMENSIONS SHALL BE RING THE COURSE OF WORK.							
	Со	P_{A} encini	EERING LTD.							
		1 ICE 412	C.T. PASHARTIS							
29 ROLLING ACRES DR. KITCHENER, ONTARIO N2A 3W5 TEL. (519) 894-0022										
PRO	PROJECT ADDITION TO HWDSB ROSEDALE ELEMENTARY SCHOOL 25 ERINDALE AVE. KITCHENER ONTARIO									
			TALLATION NOTES							
DRA	AWN BY: C.	PASHARTIS	SCALE: AS NOTED							

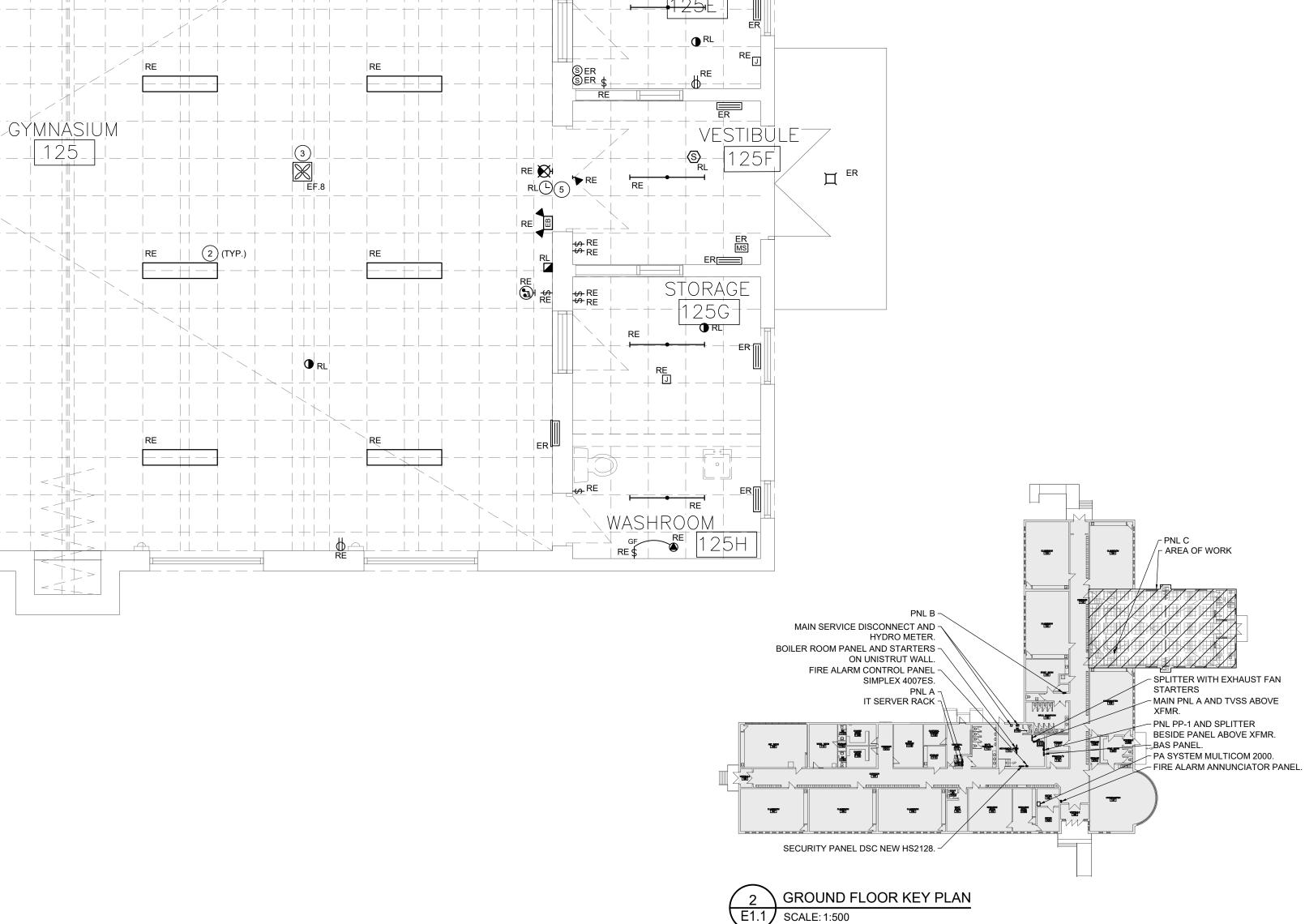
DATE: DECEMBER 19, 2023

DRAWING NO. M3-1

CHECKED BY: C. PASHARTIS

PROJECT NO. 23CP054





TIL WASHROOM

S R

KIICHE

RE 🛃

RE

_ _ _ _ _ _ _

DEMOLITION NOTES

- GENERAL A. ALL DEVICES NOTED FOR REMOVAL ARE TO BE SAFELY DISCONNECTED WITH ALL WIRING, CONDUIT, AND CONTROLS REMOVED AND TAKEN BACK TO SOURCE. RELABEL BREAKERS ACCORDINGLY.
- B. TURN OVER ALL LAMPS FROM FIXTURES TO BE REMOVED TO SCHOOL. C. EXISTING LIGHTING, AND RECEPTACLE CIRCUITS ARE TO BE REUSED FOR CONNECTION TO NEW LIGHT FIXTURES, CONTROLS, AND RECEPTACLES.
- SPECIFIC 1. EXISTING CABLE TRAY IN CORRIDOR TO REMAIN. REWORK CABLES AS REQUIRED IN
- AREAS OF DEMOLITION. 2. REMOVE EXISTING LIGHTS AND SWITCHES IN GYM COMPLETE WITH EXISTING LIGHTING CIRCUIT AND CONTROLS BACK TO SOURCE PANEL.
- 3. EXHAUST FAN EF.7 AND EF.8 ARE TO BE REMOVED C/W VARIABLE FREQUENCY DRIVES, DISCONNECT SWITCHES FOR SYSTEM, AND ASSOCIATED WIRING UP TO
- SOURCE PANEL. COORDINATE WITH MECHANICAL TRADE. RELABEL ALL BREAKERS ON PANEL DIRECTORIES AS SPARE. CONTRACTOR IS TO REMOVE EXISTING PANEL 'C', AND PULL BACK EXISTING FEEDER TO A SUITABLY SIZED JUNCTION BOX IN CEILING SPACE OR CRAWL SPACE IF FED FROM BELOW FOR EXTENSION TO NEW PANEL 'C' LOCATION. PULL BACK BRANCH CIRCUITS TO SUITABLY SIZED JUNCTION BOX IN CEILING SPACE FOR EXTENSION TO
- NEW PANEL 'C' LOCATION. REFER TO RENOVATION PLANS FOR NEW LOCATION. ELECTRICAL CONTRACTOR IS TO MAINTAIN EXISTING CLOCK CIRCUIT, CONTROL WIRING, AND CONDUITS FOR EXTENSION TO NEW LOCATION AS INDICATED ON
- RESOURCE ROOM RENOVATION DRAWINGS. 6. ELECTRICAL CONTRACTOR IS TO REMOVE ELECTRICAL CONNECTIONS TO FAN COIL LOCATED AT HIGH LEVEL. COORDINATE WITH MECHANICAL CONTRACTOR.

NOTE TO CONTRACTORS:

DO NOT SCALE DRAWINGS.

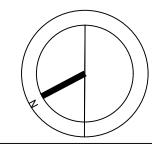
CONTRACTORS MUST CHECK AND VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS. ALL CONDUIT RUNS AND EQUIPMENT LOCATIONS ARE TO BE COORDINATED WITH STRUCTURAL ELEMENTS AND MECHANICAL EQUIPMENT.

THE DRAWINGS ARE TO BE READ AND DESIGNED IN CONJUNCTION WITH THE SPECIFICATIONS.

ALL DRAWINGS REMAIN THE PROPERTY OF THE ENGINEER AND SHALL NOT BE REPRODUCED, REUSED, OR MODIFIED WITHOUT THE ENGINEER'S WRITTEN PERMISSION.

		1
03	28 MAR 2024	FOR TENDER
02	13 MAR 2024	FOR PERMIT REVISION
01	19 DEC 2023	FOR REVIEW
NO.	DATE	REVISION





Pro ect North

FORTECH ENGINEERING

202–420 Sheldon Dr. P 519–745–2900 Cambridge, ON N1T 2H9 JAcri@FortechEng.com

PROJECT # 10014

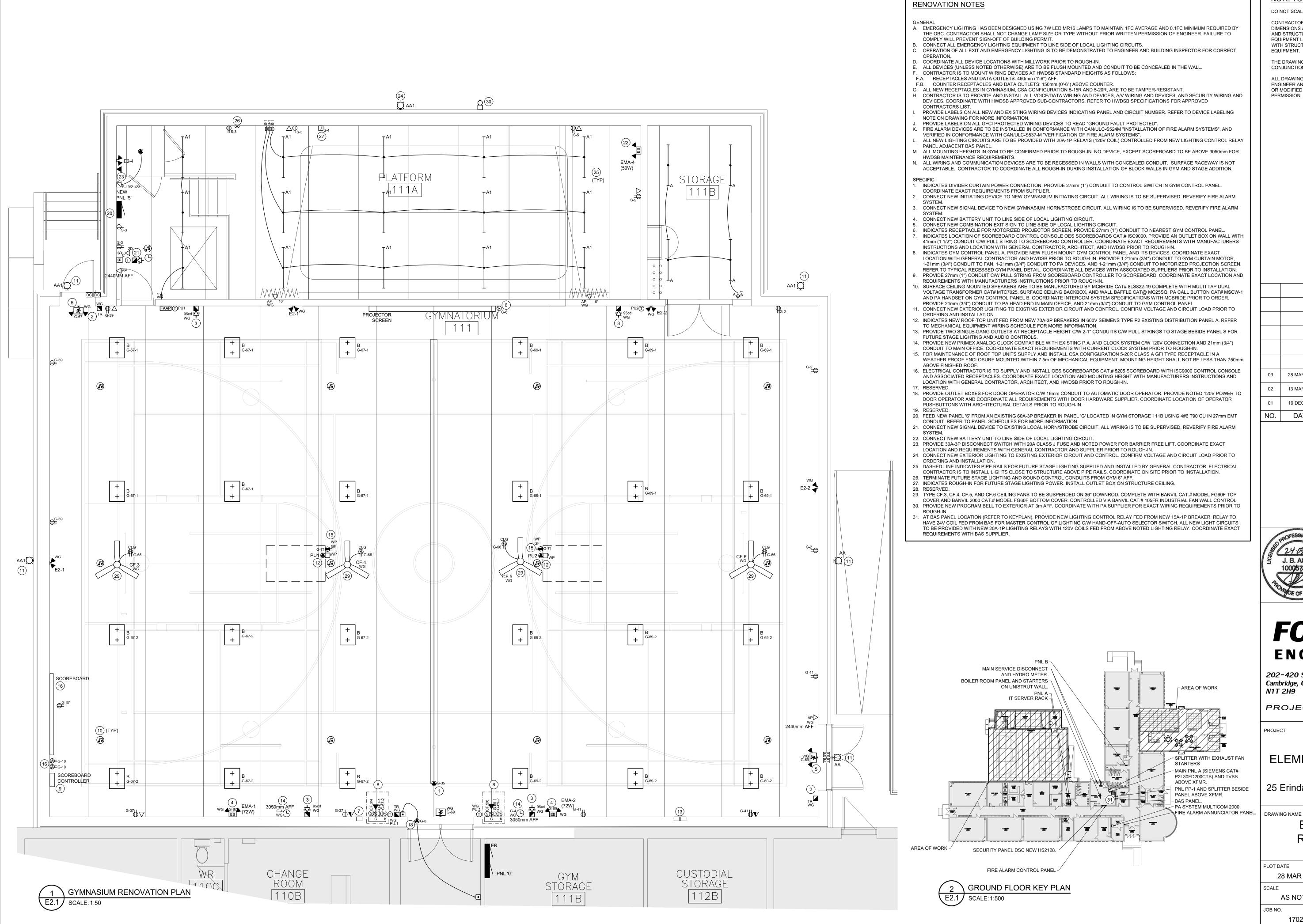
PROJECT

ROSEDALE ELEMENTARY SCHOOL - PHASE 2

25 Erindale Ave., Hamilton, ON

DRAWING NAME **GYM ELECTRICAL** DEMOLITION PLAN

PLOT DATE	DRAWN BY
28 MAR 2024	N.Drummond
SCALE	CHECKED BY
AS NOTED	J. Acri
JOB NO.	DWG NO.
17024	E1.1



03	28 MAR 2024	FOR TENDER
02	13 MAR 2024	FOR PERMIT REVISION
01	19 DEC 2023	FOR REVIEW
NO.	DATE	REVISION

NOTE TO CONTRACTORS:

CONTRACTORS MUST CHECK AND VERIFY ALL

DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL

EQUIPMENT LOCATIONS ARE TO BE COORDINATED

THE DRAWINGS ARE TO BE READ AND DESIGNED IN

ENGINEER AND SHALL NOT BE REPRODUCED, REUSED,

WITH STRUCTURAL ELEMENTS AND MECHANICAL

ALL DRAWINGS REMAIN THE PROPERTY OF THE

OR MODIFIED WITHOUT THE ENGINEER'S WRITTEN

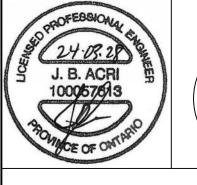
CONJUNCTION WITH THE SPECIFICATIONS.

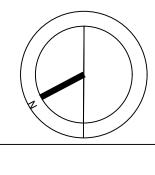
AND STRUCTURAL DRAWINGS. ALL CONDUIT RUNS AND

DO NOT SCALE DRAWINGS.

EQUIPMENT

PERMISSION





Pro ect North

FORTECH ENGINEERING

202-420 Sheldon Dr. P 519-745-2900 Cambridge, ON JAcri@FortechEng.com N1T 2H9

PROJECT # 10014

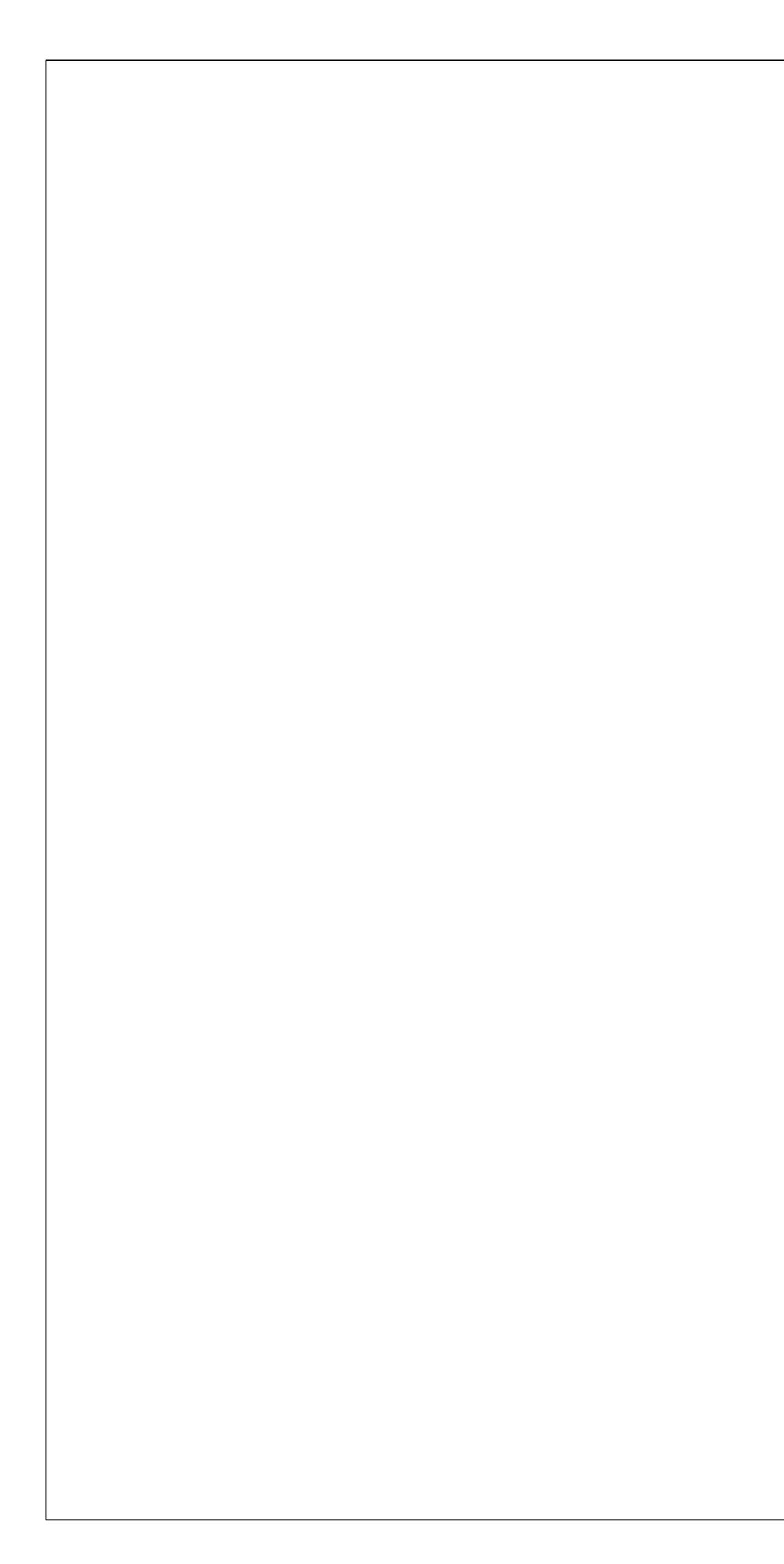
PROJECT

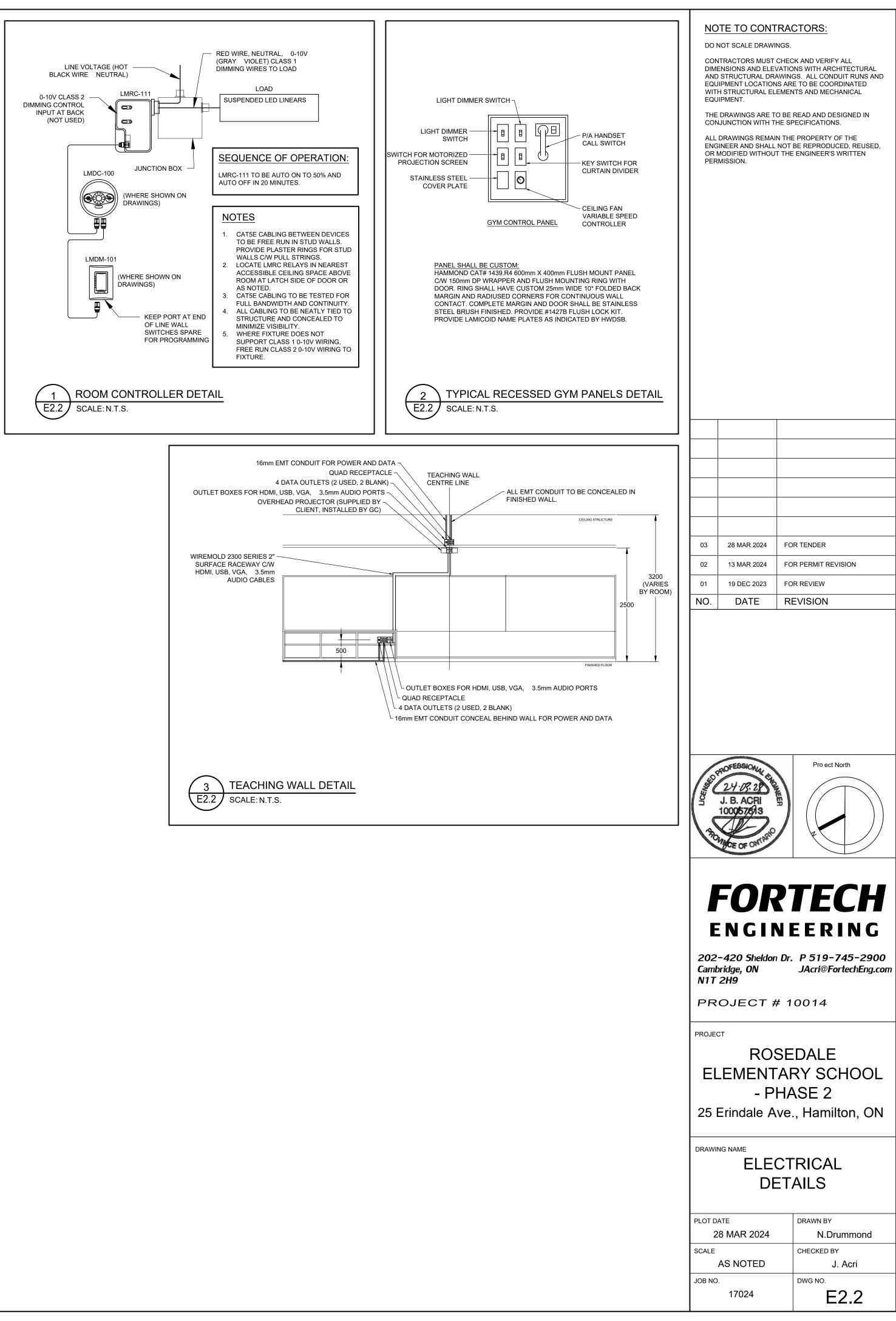
ROSEDALE **ELEMENTARY SCHOOL** - PHASE 2

25 Erindale Ave., Hamilton, ON

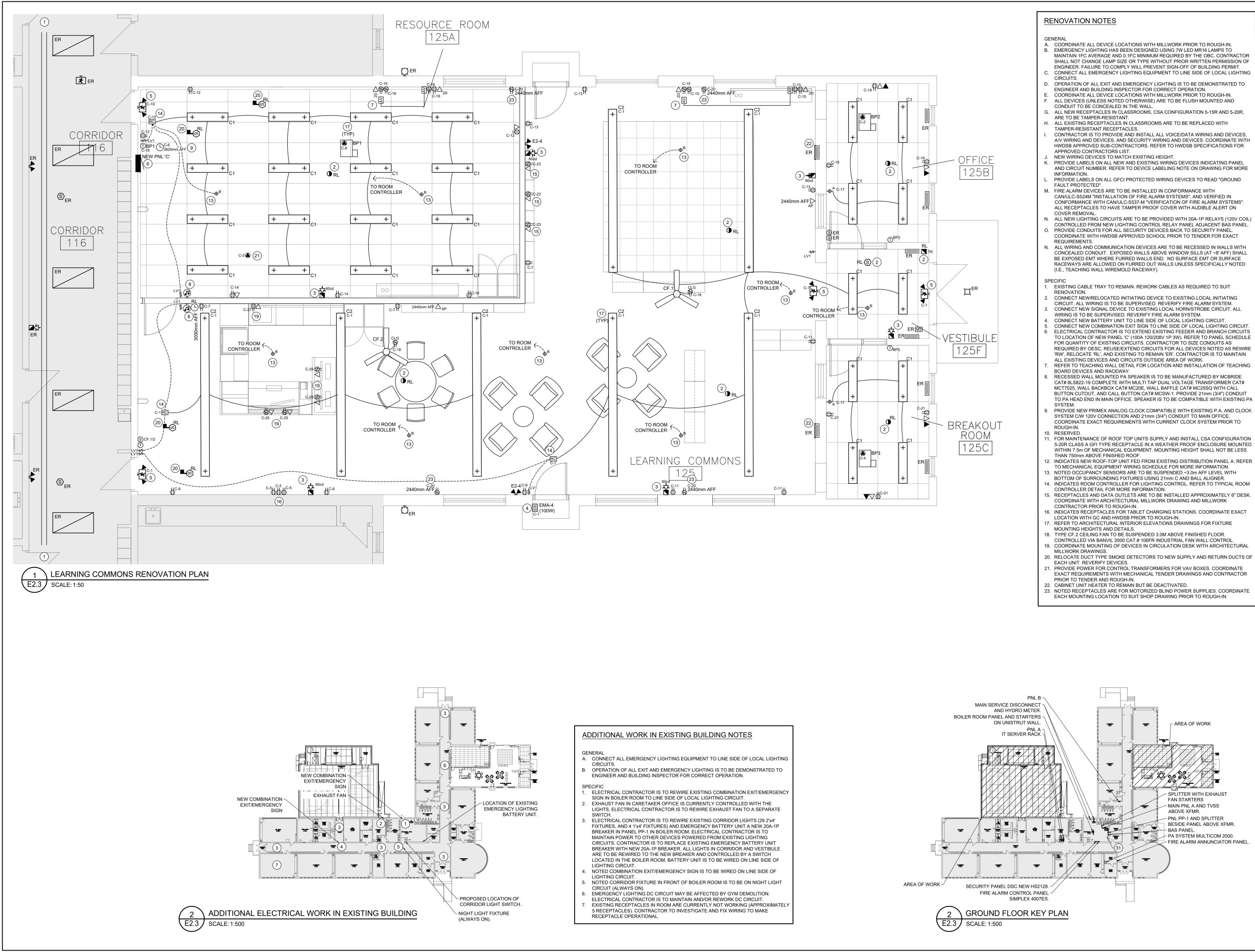
ELECTRICAL RENOVATION PLANS

PLOT DATE	DRAWN BY
28 MAR 2024	N.Drummond
SCALE	CHECKED BY
AS NOTED	J. Acri
JOB NO.	DWG NO.
17024	E2.1





WIREMOLD 2300 SERIES 2" - SURFACE RACEWAY C/W HDMI, USB, VGA, 3.5mm AUDIO CABLES	
3 TEACHING E2.2 SCALE: N.T.S	G WALL DET



- CONNECT NEW COMBINATION EXIT SIGN TO LINE SIDE OF LOCAL LIGHTING CIRCUIT. ELECTRICAL CONTRACTOR IS TO EXTEND EXISTING FEEDER AND BRANCH CIRCUITS TO LOCATION OF NEW PANEL 'C' (100A 120/208V 1P 3W). REFER TO PANEL SCHEDULE REQUIRED BY OESC. REUSE/EXTEND CIRCUITS FOR ALL DEVICES NOTED AS REWIRE 'RW', RELOCATE 'RL', AND EXISTING TO REMAIN 'ER'. CONTRACTOR IS TO MAINTAIN
- CAT# 8LS822-19 COMPLETE WITH MULTI TAP DUAL VOLTAGE TRANSFORMER CAT# BUTTON CUTOUT, AND CALL BUTTON CAT# MCSW-1. PROVIDE 21mm (3/4") CONDUIT
- PROVIDE NEW PRIMEX ANALOG CLOCK COMPATIBLE WITH EXISTING P.A. AND CLOCK
- . FOR MAINTENANCE OF ROOF TOP UNITS SUPPLY AND INSTALL CSA CONFIGURATION 5-20R CLASS A GFI TYPE RECEPTACLE IN A WEATHER PROOF ENCLOSURE MOUNTED WITHIN 7.5m OF MECHANICAL EQUIPMENT. MOUNTING HEIGHT SHALL NOT BE LESS

- INDICATES ROOM CONTROLLER FOR LIGHTING CONTROL. REFER TO TYPICAL ROOM
- INDICATES RECEPTACLES FOR TABLET CHARGING STATIONS. COORDINATE EXACT

- 0. RELOCATE DUCT TYPE SMOKE DETECTORS TO NEW SUPPLY AND RETURN DUCTS OF

- 23. NOTED RECEPTACLES ARE FOR MOTORIZED BLIND POWER SUPPLIES. COORDINATE

NOTE TO CONTRACTORS:

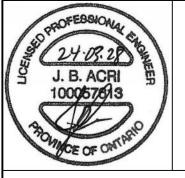
DO NOT SCALE DRAWINGS.

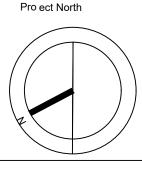
CONTRACTORS MUST CHECK AND VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS. ALL CONDUIT RUNS AND EQUIPMENT LOCATIONS ARE TO BE COORDINATED WITH STRUCTURAL ELEMENTS AND MECHANICAL EQUIPMENT

THE DRAWINGS ARE TO BE READ AND DESIGNED IN CONJUNCTION WITH THE SPECIFICATIONS.

ALL DRAWINGS REMAIN THE PROPERTY OF THE ENGINEER AND SHALL NOT BE REPRODUCED, REUSED, OR MODIFIED WITHOUT THE ENGINEER'S WRITTEN PERMISSION

		1
03	28 MAR 2024	FOR TENDER
02	13 MAR 2024	FOR PERMIT REVISION
01	19 DEC 2023	FOR REVIEW
NO.	DATE	REVISION





FORTECH ENGINEERING

202-420 Sheldon Dr. P 519-745-2900 Cambridge, ON JAcri@FortechEng.com N1T 2H9

PROJECT # 10014

PROJECT

ROSEDALE **ELEMENTARY SCHOOL** - PHASE 2

25 Erindale Ave., Hamilton, ON

DRAWING NAME LEARNING COMMONS ELECTRICAL **RENOVATION PLAN**

PLOT DATE	DRAWN BY
28 MAR 2024	N.Drummond
SCALE	CHECKED BY
AS NOTED	J. Acri
JOB NO.	DWG NO.
17024	E2.3

	MECHANICAL EQUIPMENT DESCRIPTION					STARTER/DISCONNECT						CONTROLS									ADDITIONAL INFO	
ТҮРЕ		VOLTAGE/ PHASE	SIZE	моср	FEEDER	MANUAL	COMBINATION	VFD STARTER 2-SPEED HAND/OFF/AUTO	ON/OFF SWITCH		DISC SWITCH WP DISC SWITCH	WIRING BY	I HEKMUS I AI RA THERMOSTAT	INTERMATIC ET2100 INTERMATIC ET2700	FIRE ALARM	SPEED CONTROLLER START/STOP PR	MR SWITCH	OCC SENSOR CONTROL PANEL	DUAL VOLTAGE RELAY	EMS/BAS WIRING BY	INTERLOCK	E - ELECTRICAL M - MECHANICAL O - OTHERS ALL ROUGH-IN BY ELECTRICAL CONTRACTOR
U1	PACKAGED ROOF TOP UNIT	600V/3	54 MCA	70A-3P							E	EN	N							М		
PU2	PACKAGED ROOF TOP UNIT	600V/3	54 MCA	70A-3P	#8 CU						E	ΕN	И	_	+					M		
BP1	BY-PASS AIR TERMINAL UNIT	120V/1	FHP	15A-1P	#12 CU						E	ΕN	И							E		PROVIDE 120V POWER FOR 120V/24V AND ELECTRONIC WALL THERMOSTAT. COORDINATE POWER AND CONTROLS REQUIREMENTS WITH MECHANICAL CONTRACTOR.
BP2	BY-PASS AIR TERMINAL UNIT	120V/1	FHP	15A-1P	#12 CU						E	ΕN	N							E		PROVIDE 120V POWER FOR 120V/24V AND ELECTRONIC WALL THERMOSTAT. COORDINATE POWER AND CONTROLS REQUIREMENTS WITH MECHANICAL CONTRACTOR.
3P3	BY-PASS AIR TERMINAL UNIT	120V/1	FHP	15A-1P	#12 CU						E	EN	и							E		PROVIDE 120V POWER FOR 120V/24V AND ELECTRONIC WALL THERMOSTAT. COORDINATE POWER AND CONTROLS REQUIREMENTS WITH MECHANICAL CONTRACTOR.

CATION: GYM STORAGE 111		VOLTAG	E: 120/208V	kAIC RATING:	10kA									
PPLY FROM: PP-1		PHASES	: 3	MAINS TYPE:	MLO									
DUNTING: SURFACE		WIRES:	4	MAINS RATING:	225A									
ENCLOSURE: TYPE 2				MCB RATING:	-									
	TRIP POLES A	B C POLES		DESCRIPTION	•	СКТ	скт	CIRCUIT DESCRIPTION	TRIP	POLES	AB	C POLES T		
1 ART, WORK, CHANGE ROOM LIGHTING	15A 1*	1	15A GYM REC	EPTACLES		2	43	SPARE	15A	1		_ 2 1	5A SPARE	
3 STORAGE CUSTODIAL ROOM LIGHTING	15A 1*	1	15A GYM CLC	OCK		4	45	SPARE	15A	1			DA SPARE	
5 ART ROOM 109 REC.	1	15A GYM MO	TORIZED PROJECTOR	SCREEN	6	47	47 SPARE		1		2			
7 ART ROOM 109 TEACHING WALL REC.	C. 15A 1 1 15A AUTO DOOR OPERATOR					8	49) SPARE	15A	1		2 1	5A SPARE	
9 ART ROOM 109 O/C GF REC.	15A 1	1	15A SCOREB	OARD CONTROLLER R	ECEPTACLES	10	51	I SPARE	15A	1				
1 WORK ROOM 110 REC.	15A 1	1	15A SPARE			12	53	SPARE	15A	1		2 2	0A SPARE	
WORK ROOM 110 REC.	15A 1	1	15A SPARE				55	SPARE	15A	1		2 2	0A SPARE	
5 CHANGE ROOM 110B	15A 1	1	15A SPARE	5A SPARE				SPARE	15A	1			UA SPARE	
7 CHANGE ROOM 110D	15A 1	1	15A SPARE	SPARE) SPARE	15A	1		1 1	5A SPARE	
9 GYM CUSTODIAL STORAGE REC.	15A 1	1	15A SPARE			20	61	I SPARE	15A	1		1 1	5A SPARE	
1 CUSTODIAL AREA REC.	15A 1	1	15A SPARE			22	63	SPARE	15A	1		1 1	5A SPARE	
23 CUSTODIAL AREA REC.	15A 1	1	15A SPARE			24	65	SPARE	15A	1		1** 1	5A GYM FANS	
5 CUSTODIAL AREA REC.	15A 1	1	15A SPARE			26	67	GYM LIGHTS	20A	1*		1 1	5A SPARE	
7 STORAGE 111C FRIDGE	15A 1	1	15A SPARE			28	69	GYM LIGHTS	20A	1*		1 1	5A SPARE	
29 STORAGE 111C FRIDGE	15A 1	1	15A SPARE			30	71	ROOF MECH EQUIP MAINTENANCE RECEPTACLE	20A	1		1 1	5A SPARE	
31 WASHROOM 110C HAND DRYER	15A 1	1	15A SPARE			32	73	SPARE	20A	1				
33 WASHROOM 110E HAND DRYER	15A 1	1	15A SPARE			34	75	SPARE	20A	1		3 1	5A SPARE	
5 GYM DIVIDER CURTAIN	15A 1	1	15A SPARE			36	77	SPARE	20A	1				
7 GYM RECEPTACLES	15A 1	1	15A SPARE			38	79) SPARE	20A	1				
9 GYM RECEPTACLES	15A 1	1	15A SPARE			40	81	I SPARE	20A	1		3 6	0A PANELS	
41 GYM RECEPTACLES	15A 1	1	15A SPARE			42	83	SPARE	20A	1				

NE	EW PANE	L S SCHEDULE														NE	EW PANE	EL C		
LOC	TION:	GYMNASIUM STAGE						VOLTAC	GE: 12	20/2	08V	kAIC RATING: 10kA				LOCA	ATION:	RESC		
SUPF	LY FROM:	PANEL G						PHASES	3 : 3	: 3		MAINS TYPE:	MLO			SUPP	PLY FROM:	PP-1		
мои	NTING:	RECESSED					WIRES:	4	4		MAINS RATING:	60A			MOUN	NTING:	RECE			
ENCI	OSURE:	TYPE 1										MCB RATING:	-			ENCL	OSURE:	TYPE		
скт	CIRCUIT DI	TRIP	POLES	Α	в	С	POLES	TRI				СКТ		скт	CIRCUIT D	ESCRI				
1	STAGE LIG	HTS	15A	1*				1	20/	A	SPARE			2		1	LEARNING	COMN		
3	STAGE REG	CEPTACLES	15A	1				1	20/	A	STAGE LIG	HTING ROUGH-IN		4		3	CONTROL TRA			
5	STAGE REG	CEPTACLES	15A	1				1	20/	A	SPARE			6		5	TABLET CI	HARGI		
7	SPARE		15A	1				1	20/	A	SPARE			8		7	LEARNING	COMN		
9	SPARE		15A	1				1	20/	A	SPARE			10		9	LEARNING	COMN		
11	SPARE		15A	1				1	20/	A	SPARE			12		11	LEARNING	COMN		
13														14		13	LEARNING	COMM		
15														16		15	LEARNING	COMN		
17														18		17	OFFICE 12	258 ANI		
19														20		19	OFFICE 12	25B RE0		
21	LIFT POWE	R	30A	3										22		21	OFFICE 12	25C RE		
23														24		23	LEARNING	COMN		
-		DE LIGHTING RELAYS FOR CONTROL OF L	IGHTING	CIRCUIT	1. A	۱LL	E)	KIT AND I	EMER	GEN	NCY LIGHTI	NG DEVICES ARE TO	BE WIRED TO LINE S	IDE		25	CIRCULAT	ION DE		
OF R	ELAYS.															27	CIRCULAIC	ON DES		
																29	CIRCULAT	ION DE		
															ľ	31	SPARE			

YPE	MANUFACTURER & CATALOG NO.	DESCRIPTION	VOLTAGE	NOTES
A	WATTSTOPPER Cat# DSW-100-X	DUAL TECHNOLOGY WALL SWITCH SENSOR	120V	MANUAL ON, 15 MINUTE OFF.
В	WATTSTOPPER Cat# LMDC-100	LOW VOLTAGE DUAL TECHNOLOGY CEILING MOUNT SENSOR	24V	
RC	WATTSTOPPER Cat# LMRC-111	SINGLE RELAY ON/OFF/0-10V DIMMING ROOM CONTROLLER	120V	
LV1	WATTSTOPPER Cat# LMDM-101	1-BUTTON LOW VOLTAGE DIMMER SWITCH	24V	

	· · · · · · · · · · · · · · · · · · ·	[GF
TYPE	MANUFACTURER/MODEL/CAT#	WATTAGE	VOLTAGE/PHASE	DESCRIPTION	ER
CF.1	BANVIL CAT.# FP56R	0.55A	120V/1	56" DIAMETER CEILING FAN	RL
CF.2	BANVIL CAT.# FP56R	0.55A	120V/1	56" DIAMETER CEILING FAN	
CF.3	BANVIL CAT.# FP56R	0.55A	120V/1	56" DIAMETER CEILING FAN	RE
CF.4		0.55A		56" DIAMETER CEILING FAN	RW
					WG
CF.5	BANVIL CAT.# FP56R	0.55A	120V/1	56" DIAMETER CEILING FAN	TR
CF.6	BANVIL CAT.# FP56R	0.55A	120V/1	56" DIAMETER CEILING FAN	

LOCATION: RESOURCE ROOM 125A							VOLTA	GE:	120/208V	kAIC RATING:	10kA		
SUPF	PLY FROM:	PP-1							1	MAINS TYPE:	100A		
MOUNTING:		RECESSED				WIRES:		3	MAINS RATING:	MLO			
ENCI	OSURE:	TYPE 1								MCB RATING:	-		
СКТ	CIRCUIT DI	ESCRIPTION	TRIP	POLES	Α	в	POLES	TR		DESCRIPTION		СКТ	
1	LEARNING	LEARNING COMMONS LIGHTS						A	BY-PAS	S AIR TERMINAL UNIT B	P2		
3	CONTROL	TRANSFORMER	15A	1			1	15/	A BY-PAS	BY-PASS AIR TERMINAL UNIT BP3			
5	TABLET CH	ARGING STATION	15A	1			1	15/	A RESOUR	RESOURCE ROOM CLOCK			
7	LEARNING	COMMONS RECEPTACLES	15A	1			1	15/	A RESOUR	RESOURCE ROOM BY-PASS AIR TERMINAL UNIT			
9	LEARNING	COMMONS RECEPTACLES	15A	1			1	15/	A RESOUR	RCE ROOM LIGHTS		1	
11	LEARNING	COMMONS RECEPTACLES	15A	1			1	15/	A RESOUR	RCE ROOM RECEPTACI	ES	1	
13	LEARNING	LEARNING COMMONS RECEPTACLES					1	15/	A RESOUR	SOURCE ROOM RECEPTACLES			
15	LEARNING	LEARNING COMMONS TEACHING WALL					1	15/	A RESOUR	OURCE ROOM TEACHING WALL			
17	OFFICE 12	5B AND 125C LIGHTS	15A	1*			1**	15/	A LEARNII	NG COMMONS FANS		1	
19	OFFICE 12	OFFICE 125B RECEPTACLES					1	15/	A MOTOR	ZED BLINDS		2	
21	OFFICE 12	OFFICE 125C RECEPTACLES					1	15/	A SPARE			2	
23	LEARNING	LEARNING COMMONS STUDY DESK RECEP					1	15/	A SPARE			2	
25	CIRCULATI	CIRCULATION DESK RECS					1	20/	A SPARE			2	
27	CIRCULAIC	ON DESK PRINTER	15A	1			1	20/	A SPARE			2	
29	CIRCULATI	ON DESK RECS	15A	1			1	20/	A SPARE			3	
31	SPARE		15A	1			1	20/	A SPARE			3	
33	SPARE		15A	1			1	20/	A SPARE			3	
35	SPARE		15A	2			2	15/				3	
37						L						3	
39	SPARE		20A	2			2	20				4	
41			20/1					20/				4	

					LEGE	END				NOTE TO CONT	RACTORS:	
				SYMB	OL			DESCRIPTION	DO NOT SCALE DRAWINGS.			
				X [+				FIXTURE (AS PER SCHEDULE)	CONTRACTORS MUST CHECK AND VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL			
CAL CONTRACTOR X E X [JRE (AS PER SCHEDULE) (AS PER SCHEDULE)	AND STRUCTURAL DRAWINGS. ALL CONDUIT RUNS AND EQUIPMENT LOCATIONS ARE TO BE COORDINATED WITH STRUCTURAL ELEMENTS AND MECHANICAL			
X·					x				XTURE (AS PER SCHEDULE)	EQUIPMENT.		
					<u></u> Q				S PER SCHEDULE) URE (AS PER SCHEDULE)	CONJUNCTION WITH TH	D BE READ AND DESIGNED IN IE SPECIFICATIONS.	
					Ā				AS PER SCHEDULE)	ALL DRAWINGS REMAIN THE PROPERTY OF THE ENGINEER AND SHALL NOT BE REPRODUCED, REUSED,		
120V/24V AND ELECTRONIC WALL THERMOSTAT. COORDINATE POWER AND CONTROLS HANICAL CONTRACTOR.					₹ ₹				N (AS PER SCHEDULE) ENCY FIXTURE (AS PER SCHEDULE)	OR MODIFIED WITHOUT PERMISSION.	THE ENGINEER'S WRITTEN	
120V/24V AND ELECTRONIC WALL THERMOSTAT. COORDINATE POWER AND CONTROLS HANICAL CONTRACTOR.				Ż	V		ITED EXIT SIGN	· · · · · · · · · · · · · · · · · · ·				
120V/24V AND E IANICAL CONTR		NIC WALL THE	ERMOSTAT. COORDINATE POWER AND CO	NTROLS	√ ∑ •				ENCY FIXTURE ENT (AS PER SCHEDULE)			
				[JRE (AS PER SCHEDULE)			
					\$յ 		•		, LV_LOW VOLTAGE, C_PA CALLSWITCH, K_KEY) NG RELAY, LV_LOW VOLTAGE) DO NOT GANG DIMMER WITH OTHER DEVICES.			
					₽_ ₽,				SWITCH (AS PER SCHEDULE)			
					Φ _x	, Ο			NG MOUNTED (AS PER SCHEDULE)			
DLES A B C	POLES		T DESCRIPTION	скт	RC TC			CONTROLLER (A	S PER SCHEDULE) T2845C)			
1	2	15A SPARE		44 46	0	= 1		RECEPTACLE				
1	2	15A SPARE		48	 €				IOUNTED AT 1200mm (OR 180mm ABOVE COUNTER) IOUNTED AT 1200mm (OR 180mm ABOVE COUNTER)			
1	2	20A SPARE		50 52	۲							
1				54 56			INFLISED D	LET BOX	тсн			
	2	20A SPARE		58	Ľ 			SCONNECT SWI				
1	1	15A SPARE 15A SPARE		60 62	-	E			OORS (TYPE AS PER PANEL SCHEDULE)			
1	1	15A SPARE		64 66			RANSFORM		ERIES CAT.# XL-BW)			
1*	1	15A SPARE	NINO	68		⊐ s	PECIAL-PU	RPOSE ELECTRI	ICAL PANEL OR EQUIPMENT			
1*	1	15A SPARE		70 72	• • •				PUSH-TO-LOCK BUTTON			
1				74	V	V		•	C/W 1"C TO CEILING SPACE OR NEAREST CABLE MANAGEMENT STSTEM)			
1	3	15A SPARE		76 78	AV (7		RECESSED		((C/W CONDUITS AS NOTED TO CEILING SPACE)			
1	3	60A PANEL	s	80 82	Ē) P	A WALL SP A CEILING					
				84	 (5)) C		ALOG TO HWDSB				
L OF GYM FAN C	CIRCUIT	FROM BAS. IN	CLUDE SUPPLY AND INSTALL OF LOW VOL	TAGE	<u>ی</u> ا				ETECTOR (R RELAY BASE)			
								LLSTATION (R	RELAY BASE)	03 28 MAR 2024	FOR TENDER	
							OMBINATIO		BE SIGNAL DEVICE (75cd)	02 13 MAR 2024	FOR PERMIT REVISION	
		VOLTAGE	NOTES		FAAF	P F		ANNUNCIATOR		01 19 DEC 2023	FOR REVIEW	
SENSOR		120V	MANUAL ON, 15 MINUTE OFF.						EL TER (TYPE AS PER HEATER SCHEDULE)	NO. DATE	REVISION	
CEILING MOU	JNT	24V						HAUST FAN				
NG ROOM		120V			(D _F		HERMOST	AT (RA REVERS	SE ACTING)			
SWITCH		24V			S ES				NATE WITH SECURITY SUPPLIER)			
				 [DC				ATE WITH SECURITY SUPPLIER)			
							DINATE WITH SECURITY SUPPLIER)					
					ULT CIRCUIT INT	FERRUPTER						
LING FAN					ER RL		EXISTING TO					
LING FAN					RE		REMOVE EX					
LING FAN				-	RW WG		REWIRE EXI	STING DEVICE		PROFEBSIONAL		
				TR				: (STI CAT.#STI-1100)	24.08.20			
LING FAN										S J. B. ACRI		
LIGHTIN	IG FIX	TURE SCI	HEDULE									
FIXTURE			MANUFACTURER & CATALOG NO.		LA	MPS MP COLO		FINISH MOUNTING	FIXTURE DESCRIPTION	POMOE OF OWTHEN		
A	LITHON	IA CAT.# ZL1D	L48 5000LM FST MVOLT 35K 80CRI WH		42	OLTAGE/B/		HEIGHT WHITE	4' LED STRIP LIGHT C/W DROP LENS. SUSPEND TO MAINTAIN MAXIMUM HEADROOM.			
		2			35	00 K 0V		SUSPENDED CEILING				
A1	LITHON	IA CAT.# ZL1D	L48 7000LM FST MVOLT 35K 80CRI WH		35	W 7,480 lm		WHITE SUSPENDED	4' LED STRIP LIGHT C/W DROP LENS. SUSPEND TO MAINTAIN MAXIMUM HEADROOM.		RTECH	
В	LITHON	IA CAT.# IBG-1	8000LM-SEF-AFL-GND-MVOLT-GZ10-35K-80)CRI-WGX-DWI	H 10	0V 5W 18,531		CEILING WHITE	2'X2' SUSPENDED LED HIGHBAY FIXTURE C/W FROSTED ACRYLIC LENS, 0-10V DIMMING			
					35 12	00 K 0V		SUSPENDED CEILING	DRIVER, WHITE FINISH, WIRE GUARD AND BUILT-IN MOTION SENSOR. SUSPENDED FLUSH TO UNDERSIDE OF ROOF JOISTS.	ENGIN	IEERING	
-			0CRI-35K-ID1000LMF-80/20-MIN10-ZT-120-SC	CT-F2/XX-C210	-CSA- 35	W 4,920 lm		WHITE SUSPENDED	4' SUSPENDED LINEAR LED LUMINAIRE C/W 80% UP/20% DOWN DISTRIBUTION, 0-10V DIMMING DRIVER, WHITE FINISH, AND DUST COVER.	202-420 5-11	Dr = D = 510 - 745 - 2000	
	DU				12	0V		2.4m AFF		Cambridge, ON	Dr. P 519-745-2900 JAcri@FortechEng.com	
	GRD-LS	IA CAT.# L-16FT-MSL4-i	80CRI-35K-ID1000LMF-80/20-MIN10-ZT-120-S	SCT-F2/XX-C21	0-CS 35	W 19,680 lr 600 K	m LED	WHITE SUSPENDED	16' SUSPENDED LINEAR LED LUMINAIRE C/W 80% UP/20% DOWN DISTRIBUTION, 0-10V DIMMING DRIVER, WHITE FINISH, DUST COVER, AND SUSPENSION CALBES TO SUIT	N1T 2H9		
	A-DU				12	0V			MOUNTING HEIGHT. REFER TO ARCHITECTURAL INTERIOR ELEVATION DRAWINGS FOR FIXTURE MOUNTING HEIGHTS AND DETAILS.	PROJECT #	± 10014	
AA	PHILIPS	GARDCO CA	Г.# 121-16L-1000-WW-G4-2-UNV-MGY		30	W, 5,313 In 00 K		MEDIUM GRAY WALL	WALL MOUNTED LED FIXTURE WITH TYPE 2 DISTRIBUTION. MOUNT FIXTURE TO MATCH EXISTING WALL FIXTURE HEIGHTS.	PROJECT		
					12	0V		MATCH EXISTING		ROS	SEDALE	
AA1 PHILIPS GARDCO CAT.# 121-16L-1000-WW-G4-4-UNV-MGY			30	W, 4,928 In 00 K	n LED	MEDIUM GRAY WALL	WALL MOUNTED LED FIXTURE WITH TYPE4 DISTRIBUTION. MOUNT FIXTURE TO MATCH EXISTING WALL FIXTURE HEIGHTS.	ELEMENT	ARY SCHOOL			
120V MATCH EXISTING						0V				- Pl	HASE 2	
COMBO STANPRO CAT # PRMS-1-050-0-2-S-W/H YY					2-7	7W LED MF	R16	WHITE	SELF-POWERED STEEL RUNNING MAN SIGN WITH TWIN LED MR16 HEADS, AUTOTEST,	25 Erindale A	ve., Hamilton, ON	
COMBO STANPRO CAT.# PRMS-1-050-0-2-S-WH-XX			GF	REEN/ N/A 0V/12V		WALL/CEILING 2.4m AFF	AND FACES, CHEVRONS, AND MOUNTING AS SHOWN ON DRAWINGS.		,			
EXIT	STANPF	RO CAT.# RMS	E-IB1			REEN/ N/A		WHITE WALL	SELF-POWERED STEEL RUNNING MAN SIGN WITH AUTOTEST AND FACES, CHEVRONS, AND MOUNTING AS SHOWN ON DRAWINGS.	DRAWING NAME		
EMA	STANP		12-MR16-2N-WH-XX		12	0V/347V 7W LED MF		2.4m AFF WHITE	EMERGENCY BATTERY UNIT WITH TWIN LED MR16 HEADS, AUTOTEST, AND CAPACITY	DETAILS	SCHEDULES	
					N//			WALL 2.4m AFF	AS SHOWN ON DRAWINGS.			
E2	STANPF	RO CAT.# N2-0	6-12V-7W-LJ-WH-XX		N//			WHITE WALL	LED MR16 TWIN HEAD REMOTE EMERGENCY FIXTURE. CONFIRM VOLTAGE PRIOR TO ORDERING.			
E1	STANP	RO CAT.# N1-0	6-12V-7W-LJ-WH-XX		12			2.4m AFF WHITE	LED MR16 SINGLE HEAD REMOTE EMERGENCY FIXTURE. CONFIRM VOLTAGE PRIOR TO	PLOT DATE	DRAWN BY	
					N// 12	A		WALL 2.4m AFF	ORDERING.	28 MAR 2024	N.Drummond	
	-				I					SCALE	CHECKED BY	
											J. Acri	
										јов no. 17024	E3.1	

ELECTF	RICAL SPECIFICATION
1 GENERA	L REQUIREMENTS
	THESE DRAWINGS AND SPECIFICATIONS ARE TO BE READ IN CONJUNCTION WITH THE BOOK SPECIFICATION
1.2.	AND ARE CONSIDERED TO FORM A PART OF THIS BOOK SPECIFICATION. INTENT: THESE DRAWINGS AND SPECIFICATIONS FORM AN INTENT-BASED DESIGN. THE CONTRACTOR IS TO
1.2.	COORDINATE WITH THE DESIGN TEAM AND ALL TRADES TO PROVIDE A COMPLETE AND HIGH-QUALITY
1.3.	INSTALLATION, FREE OF DEFECTS IN MATERIALS AND WORKMANSHIP. CODES: COMPLY WITH LATEST EDITIONS OF ONTARIO ELECTRICAL SAFETY CODE, ONTARIO BUILDING CODE,
	RELATED ACTS, RULES AND REGULATIONS.
1.4.	THE CONTRACTOR SHALL MAINTAIN LIABILITY INSURANCE THROUGHOUT THE DURATION OF CONTRACT AND WARRANTY PERIOD.
1.5.	QUALITY ASSURANCE: ALL ELECTRICAL WORK TO BE CARRIED OUT BY QUALIFIED, LICENSED ELECTRICIANS
	WHO HOLD VALID MASTER ELECTRICIAN CONTRACTOR LICENSE OR APPRENTICES IN ACCORDANCE WITH AUTHORITIES HAVING JURISDICTION.
1.6.	SHOP DRAWINGS: SUBMIT SHOP DRAWINGS AND PRODUCT DATA, INDICATING DETAILS OF CONSTRUCTION, DIMENSIONS, CAPACITIES, WEIGHTS, AND ALL ELECTRICAL PERFORMANCE CHARACTERISTICS OF EQUIPMENT
	AND MATERIALS FOR THE FOLLOWING: INTERIOR LIGHTING, LAMPS, BALLASTS, EXIT AND EMERGENCY
	LIGHTING, FIRE ALARM COMPONENTS, LIGHTING CONTROLS, WIRING DEVICES AND COVER PLATES, COMMUNICATION CABLING AND COMPONENTS, DISTRIBUTION EQUIPMENT AND PANELBOARDS (INCLUDING
	FUSES, BREAKERS, AND GROUND FAULT EQUIPMENT).
	1.6.1. SUBMISSION TO CONSIST OF ONE DIGITAL COPY OF DRAWINGS AND PRODUCT DATA TO ENGINEER VIA GENERAL CONTRACTOR - PDF DOCUMENT FORMAT TO FORTECH EMAIL ADDRESS IN DRAWING
	TITLEBLOCK.
	1.6.2. APPROVED SHOP DRAWINGS ARE TO BE PRINTED IN COLOUR AND INCLUDED IN OPERATION AND MAINTENANCE MANUALS.
	1.6.3. GENERAL CONTRACTOR IS TO REVIEW SHOP DRAWINGS TO UNDERSTAND INSTALLATION
	REQUIREMENTS OF OTHER TRADES. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO ENSURE GENERAL CONTRACTOR IS AWARE OF SPECIAL INSTALLATION AND COORDINATION INSTRUCTIONS.
	1.6.4. FINAL SIGN-OFF OF CONTRACT WILL NOT BE PROVIDED WITHOUT COMPLETE SHOP DRAWING
1.7.	SUBMITTAL, MAINTENANCE MANUALS, AND ALL CLOSE-OUT DOCUMENTS AND CERTIFICATES. PROGRESS DRAW: SUBMIT TO CONSULTANT A BREAKDOWN OF THE CONTRACT PROGRESS TO BE USED IN
1.7.	DETERMINING EXTENT OF WORK COMPLETED ON PROJECT. WORK TO BE SEPARATED BY LABOUR AND
18	MATERIAL FOR ALL COMPONENTS. SITE MEETINGS/INSPECTIONS: CONTRACTOR TO NOTIFY CONSULTANT A MINIMUM OF 48 HOUR'S NOTICE FOR
1.0.	INSPECTION; AS A MINIMUM; UPON PLACEMENT OF DUCTS IN DUCT BANK PRIOR TO CONCRETE ENCASEMENT;
19	AT 25% AND 60% OF COMPLETION OF WORK; UPON COMPLETION OF WORK, AFTER CLEANING IS CARRIED OUT. REJECTED WORK: REMOVE DEFECTIVE WORK, WHETHER RESULT OF POOR WORKMANSHIP, USE OF
	DEFECTIVE PRODUCTS OR DAMAGE, AND WHETHER INCORPORATED IN WORK OR NOT, WHICH HAS BEEN
	REJECTED BY CONSULTANT AS FAILING TO CONFORM TO CONTRACT DOCUMENTS. REPLACE AND RE-EXECUTE IN ACCORDANCE WITH CONTRACT DOCUMENTS.
	1.9.1. MAKE GOOD OTHER CONTRACTOR'S WORK DAMAGED BY SUCH REMOVALS OR REPLACEMENTS
	PROMPTLY. 1.9.2. IF IN OPINION OF CONSULTANT IT IS NOT EXPEDIENT TO CORRECT DEFECTIVE WORK OR WORK NOT
	PERFORMED IN ACCORDANCE WITH CONTRACT DOCUMENTS, OWNER WILL DEDUCT FROM
1.10.	CONTRACT PRICE VALUE AS DETERMINED BY CONSULTANT. PRODUCT REQUIREMENTS: EQUIPMENT AND MATERIALS SHALL BE NEW, NOT DAMAGED OR DEFECTIVE, AND
	OF BEST QUALITY FOR PURPOSES INTENDED. DEFECTIVE AND/OR IMPROPERLY INSTALLED PRODUCTS,
	WHETHER IDENTIFIED PRIOR TO COMPLETION OF WORK OR NOT, WILL BE REJECTED, REGARDLESS OF PREVIOUS INSPECTIONS. INSPECTION DOES NOT RELIEVE RESPONSIBILITY, BUT IS PRECAUTION AGAINST
	OVERSIGHT OR ERROR. REMOVE AND REPLACE DEFECTIVE PRODUCTS AT OWN EXPENSE AND BE RESPONSIBLE FOR DELAYS AND EXPENSES CAUSED BY REJECTION.
	1.10.1. ENSURE COOPERATION OF WORKER IN LAYING OUT OF WORK AND BE RESPONSIBLE FOR
	COORDINATION AND PLACEMENT OF DEVICES, CONTROLS, OPENINGS, SLEEVES, AND ACCESSORIES. 1.10.2. IN FINISHED AREAS CONCEAL PIPES, DUCTS, AND WIRING IN FLOORS, WALL, AND CEILINGS, UNLESS
	OTHERWISE NOTED.
	1.10.3. CONSIDER LOCATION OF FIXTURES, OUTLETS, AND MECHANICAL AND ELECTRICAL ITEMS INDICATED AS APPROXIMATE.
1.11.	PROVIDE CONSULTANT WITH SCHEDULE OF MATERIAL DELIVERY WITHIN 2 WEEKS AFTER AWARD OF
1.12.	CONTRACT. MANUFACTURER'S INSTRUCTIONS: UNLESS OTHERWISE NOTED IN SPECIFICATIONS, INSTALL OR ERECT
	PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. DO NOT RELY ON LABELS OR ENCLOSURES PROVIDED WITH PRODUCTS. OBTAIN WRITTEN INSTRUCTIONS DIRECTLY FROM
	MANUFACTURER. ENSURE QUALITY OF WORK IS OF HIGHEST STANDARD, EXECUTED BY WORKERS
	EXPERIENCED AND SKILLED IN RESPECTIVE DUTIES FOR WHICH THEY ARE EMPLOYED. PROVIDE COMMISSIONING OF SYSTEMS BY MANUFACTURER AND/OR THIRD-PARTY AGENT AS NOTED IN DRAWINGS.
1.13.	ALTERNATES/EQUALS: NO ALTERNATE PRODUCTS ARE ALLOWED WITHOUT THE WRITTEN CONSENT OF THE
	CONSULTANT 7 DAYS PRIOR TO TENDER CLOSE. EQUAL PRODUCTS TO THOSE SPECIFIED WILL BE ALLOWED UNLESS OTHERWISE NOTED.
	1.13.1. SHOULD ANY SUBSTITUTION BE MADE, THE CONTRACTOR SHALL BEAR ALL RESPONSIBILITY FOR THE
	INSTALLATION, COORDINATION AND OPERATION OF THE SYSTEM AS WELL AS ANY ENGINEERING AND REDESIGN COSTS WHICH MAY RESULT FROM SUCH SUBSTITUTIONS (I.E., CHANGES TO LIGHT
	FIXTURES).
1.14.	TEMPORARY POWER: ARRANGE FOR CONNECTION OF TEMPORARY CONSTRUCTION POWER WITH APPROPRIATE UTILITY COMPANY. PAY COSTS FOR INSTALLATION, MAINTENANCE AND REMOVAL.
1.15.	SUBMIT WRITTEN CERTIFICATE THAT WORK HAS BEEN COMPLETED AND INSPECTED FOR COMPLIANCE,
	DEFECTS HAVE BEEN CORRECTED, DEFICIENCIES HAVE BEEN COMPLETED, CERTIFICATES HAVE BEEN SUBMITTED.
1.16.	OPERATING INSTRUCTIONS: INSTRUCT CONSULTANT AND OWNER IN OPERATION, CARE AND MAINTENANCE
	OF ALL SYSTEMS, SYSTEM EQUIPMENT AND COMPONENTS. ARRANGE AND PAY FOR SERVICES OF MANUFACTURER'S FACTORY SERVICE ENGINEER TO SUPERVISE START-UP OF INSTALLATION, CHECK,
	ADJUST, BALANCE AND CALIBRATE COMPONENTS AND INSTRUCT OPERATING PERSONNEL OF SAME. PROVIDE
	THESE SERVICES FOR SUCH PERIOD, AND FOR AS MANY VISITS AS NECESSARY TO PUT EQUIPMENT IN OPERATION. AND ENSURE THAT OPERATING PERSONNEL ARE CONVERSANT WITH ASPECTS OF ITS CARE AND
	OPERATION.
1.17.	1.16.1. INCLUDE OPERATION INSTRUCTION IN MAINTENANCE MANUALS. AS-BUILT DRAWINGS: MAINTAIN ONE RECORD COPY OF CONTRACT DRAWINGS, SPECIFICATIONS, ADDENDA,
	CHANGE ORDERS AND OTHER MODIFICATIONS TO CONTRACT, SHOP DRAWINGS, FIELD TEST RECORD,
	INSPECTION CERTIFICATES, AND MANUFACTURER'S CERTIFICATES. MODIFY ALL DOCUMENTS TO REFLECT ACTUAL CONSTRUCTION.
1.18.	MAINTENANCE MANUALS: SUBMIT COMPLETE OPERATING AND MAINTENANCE MANUALS OF INSTALLED
	PRODUCTS; DETAILED INFORMATION OF INSTALLING CONTRACTOR, SUB-CONTRACTORS, AND DISTRIBUTOR(S); LIST OF SPARE PARTS; WARRANTY AND INSTALLATION CERTIFICATES; FINAL INSPECTIONS;
4.40	TEST REPORTS.
1.19.	DEMONSTRATION AND TRAINING: DEMONSTRATE START-UP, OPERATION, CONTROL, ADJUSTMENT, TROUBLE-SHOOTING, SERVICING, AND MAINTENANCE OF EQUIPMENT AND SYSTEMS TO OWNER'S PERSONNEL
	TWO WEEK'S PRIOR TO DATE OF FINAL INSPECTION. THIS INSTRUCTION IS TO BE BASED ON DATA INCLUDED
	IN THE OPERATIONS AND MAINTENANCE MANUALS (PREPARE AND INSERT ADDITIONAL DATA IN MANUALS WHEN NEED FOR ADDITIONAL DATA BECOMES APPARENT DURING INSTRUCTIONS). TRAINING MATERIAL TO
1 00	INCLUDE AS-BUILT DRAWINGS, OPERATION MANUALS, AND MAINTENANCE MANUALS.
1.20.	OBJECTIVE OF TRAINING IS TO PROVIDE: 1.20.1. SAFE, RELIABLE, COST-EFFECTIVE, ENERGY-EFFICIENT OPERATION OF SYSTEMS IN NORMAL AND
	EMERGENCY MODES UNDER ALL CONDITIONS. 1.20.2. EFFECTIVE ON-GOING INSPECTION AND MEASUREMENTS OF SYSTEM PERFORMANCE.
	1.20.3. PROPER PREVENTATIVE MAINTENANCE, DIAGNOSIS, AND TROUBLE-SHOOTING.
	1.20.4. ABILITY TO UPDATE DOCUMENTATION.

1.21. CLEANING: CLEAN FROM ALL FIXTURES AND EQUIPMENT DUST, DIRT, FINGER-PRINTS, PAINT, GREASE, CONSTRUCTION AND DEMOLITION DEBRIS. CLEAN AND TOUCH UP SURFACES OF SHOP-PAINTED EQUIPMENT SCRATCHED OR MARRED DURING SHIPMENT OR INSTALLATION, TO MATCH ORIGINAL FINISH. 1.22. WARRANTY: PROVIDE A ONE YEAR WARRANTY ON ALL LABOUR AND MATERIAL, STARTING FROM DATE OF SUBSTANTIAL COMPLETION OR AS NOTED/SUPERSEDED BY THE GENERAL CONTRACT DOCUMENTS. 1.23. PROVIDE COPIES OF ALL INSPECTION CERTIFICATION REPORTS FROM AUTHORITIES HAVING JURISDICTION,

INCLUDING ELECTRICAL SAFETY AUTHORITY, FIRE ALARM VERIFICATION, CAN/ULC S561 FIRE ALARM MONITORING CERTIFICATE AND EXIT/EMERGENCY LIGHTING TEST. 1.24. DO NOT SCALE DRAWINGS. ALL ELECTRICAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH ARCHITECTURAL, STRUCTURAL, AND MECHANICAL DRAWINGS. ANY DISCREPANCIES SHALL BE BROUGHT TO

ATTENTION OF ENGINEER PRIOR TO TENDER CLOSE. 1.25. COORDINATE WORK OF OTHER TRADES (HVAC, PLUMBING, SPRINKLER, STRUCTURAL). ENSURE THAT PROPER ARRANGEMENTS AND PROVISIONS ARE MADE FOR THIS WORK. COORDINATE ELECTRICAL REQUIREMENTS OF ALL OWNER-SUPPLIED EQUIPMENT PRIOR TO ROUGH-IN

1.26. SUPPLY AND INSTALL NON-PERMANENT CSA APPROVED FIRE STOPPING TO SEAL ALL PENETRATIONS, CAP ALL EMPTY SLEEVES AND AROUND CABLING AND DUCTS PASSING THROUGH SLEEVES. WALL. OR FLOORS. ALL FIRE STOPPING MUST MAINTAIN FIRE AND HEAT RATING OF FLOOR/WALL ASSEMBLY, AND MUST MEET APPLICABLE FEDERAL, PROVINCIAL, AND LOCAL BUILDING/FIRE CODES.

2. EQUIPMENT AND WIRING 2.1. MATERIALS AND EQUIPMENT: ALL ELECTRICAL PRODUCTS SHALL BE TESTED, CERTIFIED, AND LABELED IN ACCORDANCE WITH A CERTIFICATION PROGRAM ACCREDITED BY THE STANDARDS COUNCIL OF CANADA, CSA. WHERE A PRODUCT IS NOT SO LABELED, PROVIDE WRITTEN APPROVAL BY THE AUTHORITY HAVING JURISDICTION. WHERE CSA CERTIFIED MATERIAL AND/OR EQUIPMENT IS NOT AVAILABLE, OBTAIN SPECIAL

APPROVAL FROM AUTHORITY HAVING JURISDICTION. 2.2. MOTORS, ELECTRIC HEATING, CONTROLS AND DISTRIBUTION DEVICES AND EQUIPMENT TO OPERATE SATISFACTORILY AT 60HZ WITHIN NORMAL OPERATING LIMITS ESTABLISHED BY CAN3-C235 (PREFERRED VOLTAGE LEVELS FOR AC SYSTEMS, 0 TO 50,000V). EQUIPMENT TO OPERATE IN EXTREME OPERATING CONDITIONS ESTABLISHED IN ABOVE STANDARD AT 40 C AMBIENT WITHOUT DAMAGE TO EQUIPMENT.

2.3. VERIFY INSTALLATION AND COORDINATION RESPONSIBILITIES RELATED TO MOTORS, EQUIPMENT AND CONTROLS. CONTROL WIRING AND CONDUIT TO BE PROVIDED BY MECHANICAL CONTRACTOR UNLESS NOTED OTHERWISE. 2.4. WARNING SIGNS ARE TO BE INSTALLED IN ACCORDANCE WITH REQUIREMENTS OF AUTHORITY HAVING

JURISDICTION. 2.5. WIRING AND RACEWAYS 2.5.1. CONDUCTORS TO BE COPPER, MINIMUM SIZE: 12 AWG. 2.5.2. CONDUCTORS SIZED AS NOTED WITH 600V INSULATION IN ACCORDANCE WITH LATEST ELECTRICAL

2.5.3. ARMOURED CABLES (AC90) SHALL ONLY BE USED FOR FINAL CONNECTIONS TO LIGHT FIXTURES (IN CONCEALED SPACES) IN LÉNGTH NOT EXCEEDING 5', AND FOR RUNS CONCEALED IN STEEL PARTITIONS. PROVIDE SUFFICIENT JUNCTION BOXES AT CEILING TO MAINTAIN NEAT CEILING SPACE.

2.5.4. MINIMUM CONDUIT SIZE: ³/⁴ EMT OR OF TYPE APPROVED FOR INTENDED USE AND AREA INSTALLED. 2.5.5. INSTALL CONDUITS TO CONSERVE HEADROOM IN EXPOSED LOCATIONS AND CAUSE MINIMUM INTERFERENCE IN SPACES THROUGH WHICH THEY PASS

2.5.6. CONCEAL CONDUITS EXCEPT IN UNFINISHED AREAS. RUN PARALLEL OR PERPENDICULAR TO BUILDING LINES.

2.5.7. PROVIDE BOXES AND FITTINGS SUITABLE FOR INTENDED USE AND AREA INSTALLED. 2.5.8. ENSURE LUGS, TERMINALS, SCREWS USED FOR TERMINATION OF WIRING ARE SUITABLE FOR EITHER

COPPER OR ALUMINUM CONDUCTORS. 2.5.9. BOND AND GROUND AS REQUIRED TO LATEST EDITION OF ONTARIO ELECTRICAL SAFETY CODE 2.6. IDENTIFY ELECTRICAL EQUIPMENT WITH LAMICOID NAMEPLATES (3MM THICK PLASTIC ENGRAVING SHEET

MATTE WHITE FINISH FACE, BLACK CORE). WORDING ON NAMEPLATE TO BE APPROVED BY CONSULTANT PRIOR TO MANUFACTURE. 2.7. COLOUR CODE CONDUITS, BOXES, AND METALLIC SHEATHED CABLES. CODE WITH PLASTIC TAPE OR PAINT INSIDE BOXES IN AREAS WITH EXPOSED CEILINGS AND IN FINISHED AREAS; AT POINTS WHERE CONDUITS OR CABLES ENTERS WALL, CEILING, OR FLOOR, AND AT 15M INTERVALS: YELLOW FOR 600V; BLUE FOR 208V; RED

FOR FIRE ALARM, AND NONE FOR OTHERS. 2.8. CONFIRM FINISHES OF EQUIPMENT DURING SHOP DRAWING SUBMITTALS. 2.9. MOUNTING HEIGHTS: MOUNTING HEIGHT OF EQUIPMENT IS FROM FINISHED FLOOR TO CENTRELINE OF EQUIPMENT UNLESS SPECIFIED OR INDICATED OTHERWISE. CONFIRM ALL HEIGHTS WITH LOCAL INSPECTORS

PRIOR TO ROUGH-IN TO ENSURE THEY MEET LOCAL INTERPRETATION OF CODE. 2.9.1. LOCAL SWITCHES: 1100mm

2.9.2. WALL RECEPTACLES: 300mm OR MATCH EXISTING 2.9.3. WALL RECEPTACLES ABOVE TOP OF COUNTERS OR COUNTER SPLASH BACKS: 180mm

2.9.4. WALL RECEPTACLES IN MECHANICAL ROOMS: 1200mm 2.9.5. PANEL BOARDS: AS REQUIRED BY CODE

2.9.6. TELEPHONE AND DATA OUTLETS: 300mm OR MATCH EXISTING 2.9.7. OPERATOR PUSHBUTTONS: 1100mm (CONFIRMED WITH BUILDING INSPECTOR)

2.9.8. THERMOSTATS: 1200mm 2.9.9. MANUAL PULL STATIONS: 1200mm

2.9.10. FIRE ALARM HORNS AND BELLS: 2200mm 2.9.11. FIRE ALARM STROBES AND COMBINATION HORN/STROBES: 2000mm

REPORT AT END OF PROJECT.

2.10. LOCATE ADJACENT OUTLET BOXES WITH 6" APART UNLESS NOTED OTHERWISE (DO NOT SCALE DRAWINGS) COORDINATE WITH ENGINEER. OWNER MAY CHANGE LOCATION OF OUTLETS PRIOR TO INSTALLATION WITH NO CHANGE TO CONTRACT PRICE, PROVIDED DISTANCE DOES NOT EXCEED 10' FROM ORIGINAL LOCATION. 2.11. <u>MECHANICAL EQUIPMENT CONNECTIONS</u>: PROVIDE CONNECTIONS TO MECHANICAL EQUIPMENT AS PER

2.11.1. PROVIDE ¾" CONDUIT ROUGH-IN FOR MECHANICAL CONTROLS AS PER MECHANICAL EQUIPMENT SCHEDULE. 2.11.2. COORDINATE MECHANICAL POWER AND CONTROL WIRING REQUIREMENTS PRIOR TO ROUGH-IN.

2.12. HANGERS AND SUPPORTS: INSTALL FASTENING AND SUPPORTS AS REQUIRED FOR EACH TYPE OF EQUIPMENT, CABLES, AND CONDUITS, IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION RECOMMENDATIONS. 2.12.1 SECURE FOURMENT TO HOLLOW MASONRY. THE AND PLASTER SURFACES WITH LEAD ANCHORS

2.12.2. SECURE EQUIPMENT TO POURED CONCRETE WITH EXPANDABLE INSERTS 2.12.3. SECURE EQUIPMENT TO HOLLOW MASONRY WALLS OR SUSPENDED CEILINGS WITH TOGGLE BOLTS 2.12.4. FASTEN EXPOSED CONDUIT OR CABLES TO BUILDING CONSTRUCTION OR SUPPORT SYSTEM USING

STRAPS 2.12.5. FOR SURFACE MOUNTING OF TWO OR MORE CONDUITS USE UNISTRUT CHANNELS. 2.12.6. PROVIDE METAL BRACKETS, FRAMES, HANGERS, CLAMPS, AND RELATED TYPES OF SUPPORT

STRUCTURES WHERE INDICATED OR AS REQUIRED TO SUPPORT CONDUIT AND CABLE RUNS. 2 12 7 ENSURE ADEQUATE SUPPORT FOR RACEWAYS AND CABLES DROPPED VERTICALLY TO EQUIPMENT

WHERE THERE IS NO SUPPORT WALL 2.12.8. DO NO USE SUPPORTS OR EQUIPMENT INSTALLED FOR OTHER TRADES FOR CONDUIT OR CABLE

SUPPORT EXCEPT WITH PERMISSION OF OTHER TRADES AND APPROVAL OF ENGINEER. 2.13. WIRING DEVICES: INSTALL SWITCHES, RECEPTACLES, WIRING DEVICE, AND COVERS FLUSH AND LEVEL WITH BUILDING LINES. ENSURE THAT OUTLET BOXES ARE CLEAN PRIOR TO INSTALLING DEVICES. 2.13.1. SWITCHES, RECEPTACLES, AND WIRING DEVICES TO BE SPECIFICATION GRADE, DECORA STYLE (RECEPTACLES TO BE TAMPER-RESISTANT). DEVICE COLOUR TO BE DETERMINED DURING SHOP

DRAWING REVIEW. 2.13.2. COVER PLATES TO BE BRUSH STAINLESS STEEL. 2.14. LOAD BALANCING: MEASURE PHASE CURRENT TO PANELBOARD WITH NORMAL LOADS (LIGHTING) OPERATING AT TIME OF ACCEPTANCE; ADJUST BRANCH CIRCUIT CONNECTIONS AS REQUIRED TO OBTAIN BEST BALANCE OF CURRENT BETWEEN PHASES AND RECORD CHANGES. MEASURE PHASE VOLTAGES AT LOADS AND ADJUST TRANSFORMER TAPS TO WITHIN 2% OF RATED VOLTAGE OF EQUIPMENT. PROVIDE LOAD BALANCE

2.15. PANELBOARDS: MAINS, NUMBER OF CIRCUITS, AND NUMBER AND SIZE OF BRANCH CIRCUIT BREAKERS WITHSTAND CURRENT, AS INDICTED ON PANEL SCHEDULES. PANELBOARDS MUST BE SHIPPED WITH HINGED AND LOCKABLE DOORS. BREAKERS ARE TO BE BOLT-ON THERMAL AND MAGNETIC TRIPPING EXCEPT AS INDICATED OTHERWISE. PROVIDE LOCK-ON DEVICES FOR FIRE ALARM, EMERGENCY, STAIRWAY, AND EXIT CIRCUITS. REFER TO SINGLE-LINE DIAGRAM AND RELATED NOTES FOR ADDITIONAL EQUIPMENT REQUIREMENTS.

3.1. FIXTURE TYPES TO BE AS PER LIGHTING FIXTURES SCHEDULE ON DRAWINGS. FIXTURES TO BE DLC LISTED OR ENERGY STAR CERTIFIED. THE FOLLOWING CRITERIA SHOULD BE MET: 311 80 CRI

3.1.2. 70% LUMEN OUTPUT AT 50,000 HOURS 3.1.3. MINIMUM EFFICACY OF 110 LUMENS PER WATT 3.1.4. DIMMABLE

3 1 5 MINIMUM 5 YEAR WARRANTY

3. LIGHTING

OWNER.

TRAPF7F

4. FIRE ALARM SYSTEM

6. SECURITY SYSTEM

3.2. LOCATE AND INSTALL LUMINAIRES AS INDICATED WITH A SEPARATE NEUTRAL FOR EACH LIGHTING CIRCUIT, REFERRING TO DRAWINGS FOR SPECIAL WIRING INSTRUCTIONS. 3.3. WIRE TO LIGHTING CONTROLS AS INDICATED ON DRAWINGS AND MANUFACTURER'S INSTRUCTIONS. 3.4. EQUAL PRODUCT IS ALLOWED. ALTERNATE PRODUCTS WILL NOT BE ALLOWED WITHOUT THE FULL WRITTEN CONSENT OF THE CONSULTANT PRIOR TO TENDER CLOSE. ANY ALTERNATE PRODUCTS THAT ARE TO BE ALLOWED BY THE CONSULTANT WILL NEED TO BE MADE AVAILABLE TO ALL BIDDERS FOR COMPETITIVE PRICING. CONTRACTOR TO CARRY ALL COSTS FOR REVIEW OF ALTERNATE LIGHTING PACKAGES AND PHOTOMETRIC CALCULATIONS. DELAYS RESULTING FROM ANY ALTERNATES OR UNAPPROVED EQUALS WILL NOT BE ACCEPTED AND TEMPORARY LIGHTING WILL NEED TO BE SUPPLIED AT NO ADDITIONAL COSTS TO

3.5. LAMPS TO BE 80 CRI, BULB SHAPE, WATTAGE, AND COLOUR TEMPERATURE AS INDICATED. APPROVED MANUFACTURERS ARE: PHILIPS, OSRAM-SYLVANIA, AND GE. 3.6. BALLAST TO BE SYSTEM MATCHED TO APPROVED LAMPS WITH TYPE, WATTAGE, AND BALLAST FACTOR AS INDICATED. ALL T8 LAMPS AND BALLASTS ARE TO HAVE 60-MONTH SYSTEM WARRANTIES. THD IS TO BE A MAXIMUM OF 10%.

3.7. PROVIDE A MINIMUM OF 10% SPARE LAMPS FOR EACH TYPE, WITH A MINIMUM OF 4 LAMPS FOR EACH TYPE. 3.8. CONFIRM COMPATIBILITY AND INTERFACE WITH OTHER MATERIALS WITH LUMINAIRE AND CEILING SYSTEM. REPORT DISCREPANCIES TO THE ENGINEER AND DEFER ORDERING UNTIL CLARIFIED. 3.9. COORDINATE WITH WORK SPECIFIED IN DIVISION 23 TO AVOID CONFLICTS BETWEEN LUMINAIRES, SUPPORTS AND FITTINGS, AND MECHANICAL EQUIPMENT. DO NOT SUSPEND FIXTURES FROM MECHANICAL EQUIPMENT. PIPES, OR DUCTS. WHERE FIXTURES ARE LOCATED BELOW DUCTS, SUSPEND FIXTURE FROM UNISTRUT

3.10. INSTALL RECESSED FIXTURES TO PERMIT REMOVAL FROM BELOW, TO GAIN ACCESS TO OUTLET OR PRE-WIRED FIXTURE BOX. CONNECT RECESSED FIXTURES TO BOXES WITH FLEXIBLE CONDUIT AND

APPROVED FIXTURE WIRE. 3.11. SUPPLY RECESSED FIXTURES COMPLETE WITH TRIM TYPE REQUIRED FOR CEILING SYSTEM INSTALLED. BEFORE ORDERING, CONFIRM THE CEILING CONSTRUCTION DETAILS AND ARCHITECTURAL FINISH FOR EACH 3.12. PROVIDE EMERGENCY LIGHTING EQUIPMENT BY ONE MANUFACTURER. AIM ALL INTEGRAL AND REMOTE HEAD TO PROVIDE 1 FC AVERAGE ILLUMINATE ACROSS PATH OF EGRESS. LAMP TYPES AND WATTAGE ARE NOT TO CHANGE WITH WRITTEN PERMISSION OF ENGINEER.

3.13. PROVIDE SWITCHES, PHOTOELECTRIC CONTROLS, TIMERS, AND RELAYS FOR LIGHTING CIRCUITS AND LUMINAIRES AS INDICATED ON DRAWINGS 3.14. PROVIDE ADEQUATE SUPPORTS FOR LUMINAIRES. USE CHAIN OR RODS FOR SUSPENDED LUMINAIRES. DO NOT SUPPORT LUMINAIRES OVER 5KG IN WEIGHT FROM OUTLET BOXES. 3.15. COORDINATE LUMINAIRE INSTALLATION WITH ARCHITECTURAL DETAILS, REFLECTED CEILING PLANS AND MECHANICAL EQUIPMENT. INSTALL ACCURATELY IN LINE AND LEVEL, TO PRESENT A NEAT APPEARANCE AND AVOID CONFLICTS. 3.16. COORDINATE REQUIRED CONTROL WIRING FOR DIMMING DRIVERS/BALLASTS (I.E., GREY/PURPLE WIRED FOR

0-10VDC BALLASTS). PROVIDE REMOTE SHUT-OFF RELAY WHERE REQUIRED BY MANUFACTURER TO TURN OFF DIMMING CIRCUIT.

4.1. NEW FIRE ALARM DEVICES ARE TO BE FROM SAME MANUFACTURER OF INSTALLED FIRE ALARM SYSTEM AND NEW/REWORKED DEVICES ARE TO BE INSTALLED, TESTED, AND VERIFIED BY THE MANUFACTURER'S FORCES IN ACCORDING WITH CAN/ULC S524 AND CAN/ULC S537. 4.2. SIGNALING DEVICES SHALL BE SEMI-FLUSH MOUNTED HORNS (C/W STROBE IN CORRIDORS).

5. PUBLIC ADDRESS SYSTEM 5.1. FOR ADDITIONS, THE EXISTING PA SYSTEM SHALL BE EXTENDED TO ACCOMMODATE THE ADDITION. 5.2. ELECTRICAL CONTRACTOR IS TO PROVIDE COMPLETE ROUGH-IN, POWER, AND RACEWAY SYSTEM TO SUPPORT THE PA SYSTEM COMPONENTS. 5.3. ELECTRICAL CONTRACTOR IS TO HIRE HWDSB APPROVED CONTRACTORS FOR THE INSTALLATION AND TESTING OF PUBLIC ADDRESS SYSTEM. REFER TO LATEST REVISION OF HAMILTON WENTWORTH DISTRICT SCHOOL BOARD (HWDSB) COMMUNICATION/IT SPECIFICATIONS 16950-0, 16950-1, 16950-2, and 16951 FOR COMPLETE SPECIFICATIONS AND APPROVED CONTRACTORS.

6.1. SECURITY DEVICES, WIRING, AND ASSOCIATED EQUIPMENT/PROGRAMMING IS TO BE SUPPLIED AND INSTALLED UNDER THIS CONTRACT. 6.2. ELECTRICAL CONTRACTOR IS TO PROVIDE COMPLETE ROUGH-IN, POWER, AND RACEWAY SYSTEM TO SUPPORT THE SECURITY SYSTEM COMPONENTS. 6.3. ELECTRICAL CONTRACTOR IS TO HIRE A CAN/ULC APPROVED SECURITY INSTALLER FOR THE INSTALLATION AND TESTING ALL SECURITY DEVICES.

7 COMMUNICATION CABLING

7.1. REFER TO LATEST REVISION OF HAMILTON WENTWORTH DISTRICT SCHOOL BOARD (HWDSB) COMMUNICATION/IT SPECIFICATIONS 16950-0 16950-1 16950-2 and 16951 FOR COMPLETE SPECIFICATIONS AND APPROVED CONTRACTORS 7.2. AS PER HWDSB SPECIFICATIONS, ALL STRUCTURED CABLING COMPONENTS ARE TO BE COMMSCOPE.

7.3. ELECTRICAL CONTRACTOR IS TO PROVIDE COMPLETE ROUGH-IN, POWER, AND RACEWAY SYSTEM TO SUPPORT THE COMMUNICATION SYSTEM COMPONENTS. 7.4. ELECTRICAL CONTRACTOR IS TO HIRE HWDSB APPROVED CONTRACTORS FOR THE INSTALLATION AND TESTING OF COMMUNICATION/IT SYSTEM.

8. SEISMIC RESTRAINT FOR ELECTRICAL SYSTEMS

8.1. THE ELECTRICAL CONTRACTOR SHALL RETAIN THE SERVICES OF A PROFESSIONAL ENGINEER SPECIALIZING IN THE DESIGN OF SEISMIC RESTRAINT SYSTEMS. THIS CONSULTANT SHALL BE RESPONSIBLE FOR THE PROVIDING A SIGNED AND SEALED PROFESSIONAL ASSURANCE LETTER C/W COMMITMENT FOR FIELD REVIEW AND REPORTING OF SEISMIC RESTRAINT INSTALLATION AS REQUIRED BY THE ONTARIO BUILDING CODE 4.1.8.18 (2) CAT. 6 TO 21. 8.2. PROVIDE ALL LABOUR AND MATERIAL NECESSARY FOR THE SEISMIC RESTRAINT AND ANCHORAGE FOR ALL ELECTRICAL EQUIPMENT AND CONDUITS/WIRING IN ACCORDANCE WITH THE ONTARIO BUILDING CODE 4.1.8.18

(2) CAT. 6 TO 21. 8.3. EQUIPMENT MANUFACTURERS SHALL BE RESPONSIBLE FOR ENSURING THAT ALL EQUIPMENT HAS ADEQUATE STRENGTH FOR SEISMIC RESTRAINTS AND ANCHORAGE OF FOUIPMENT FRAMING, VIBRATION ISOLATORS SHALL BE PROVIDED IN SUCH A WAY THAT VIBRATION ISOLATION IS MAINTAIN TOGETHER WITH SEISMIC RESTRAINTS. FOR SUSPENDED EQUIPMENT PROVIDE CABLE AND RIGID BRACES TO RESTRAIN EQUIPMENT AGAINST SEISMIC LOADS. ALL ANCHORAGE AND SUPPORTS ARE TO RECEIVE THE APPROVAL OF THE STRUCTURAL ENGINEER.

NOTE TO CONTRACTORS:

DO NOT SCALE DRAWINGS.

CONTRACTORS MUST CHECK AND VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS. ALL CONDUIT RUNS AND EQUIPMENT LOCATIONS ARE TO BE COORDINATED WITH STRUCTURAL ELEMENTS AND MECHANICAL EQUIPMENT

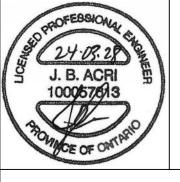
THE DRAWINGS ARE TO BE READ AND DESIGNED IN CONJUNCTION WITH THE SPECIFICATIONS.

ALL DRAWINGS REMAIN THE PROPERTY OF THE ENGINEER AND SHALL NOT BE REPRODUCED, REUSED, OR MODIFIED WITHOUT THE ENGINEER'S WRITTEN PERMISSION

01	19 DEC 2023	FOR REVIEW
NO.	DATE	REVISION
		1

03 28 MAR 2024 FOR TENDER

02 | 13 MAR 2024 | FOR PERMIT REVISION





202-420 Sheldon Dr. P 519-745-2900 Cambridge, ON JAcri@FortechEng.com N1T 2H9

PROJECT # 10014

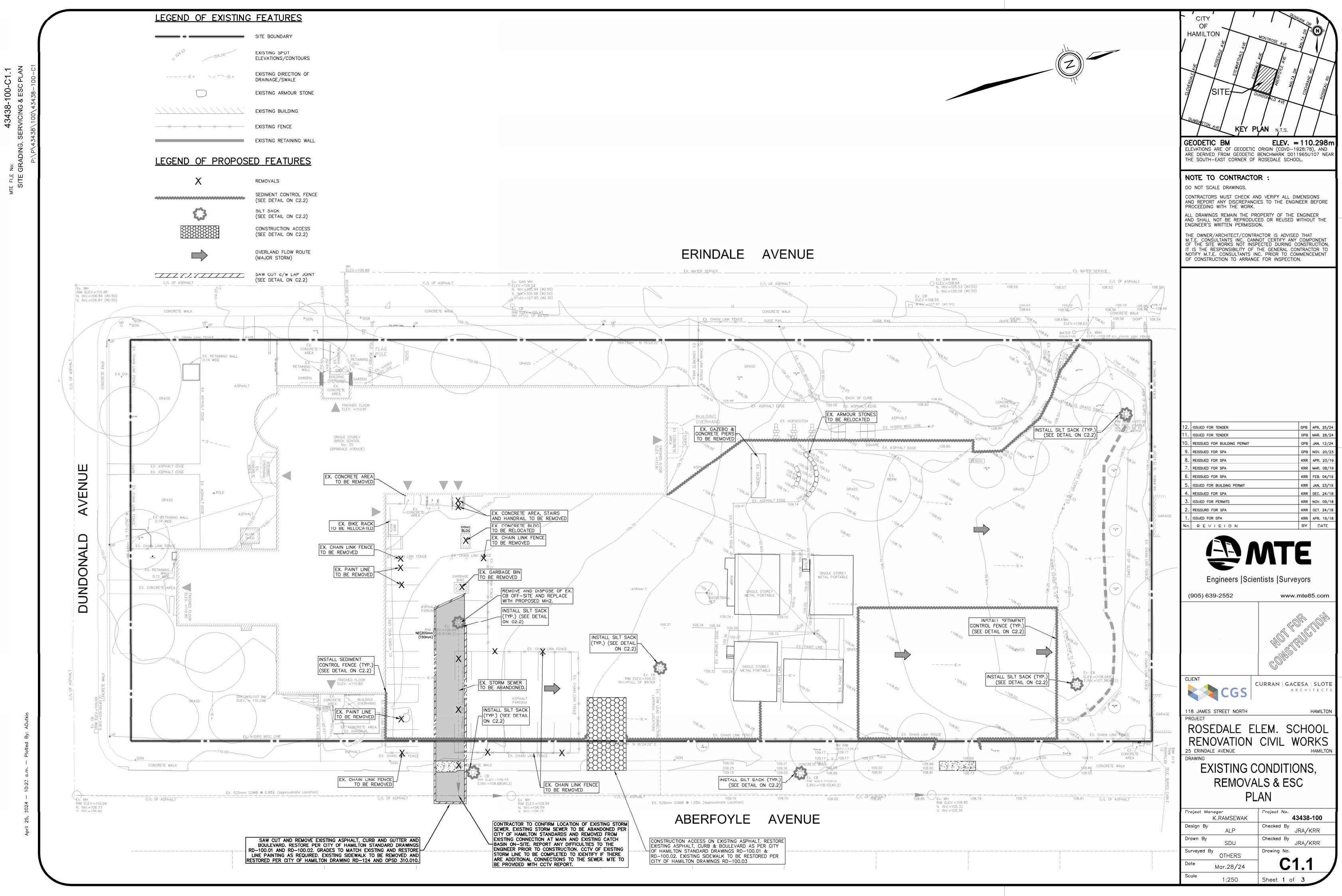
PROJECT

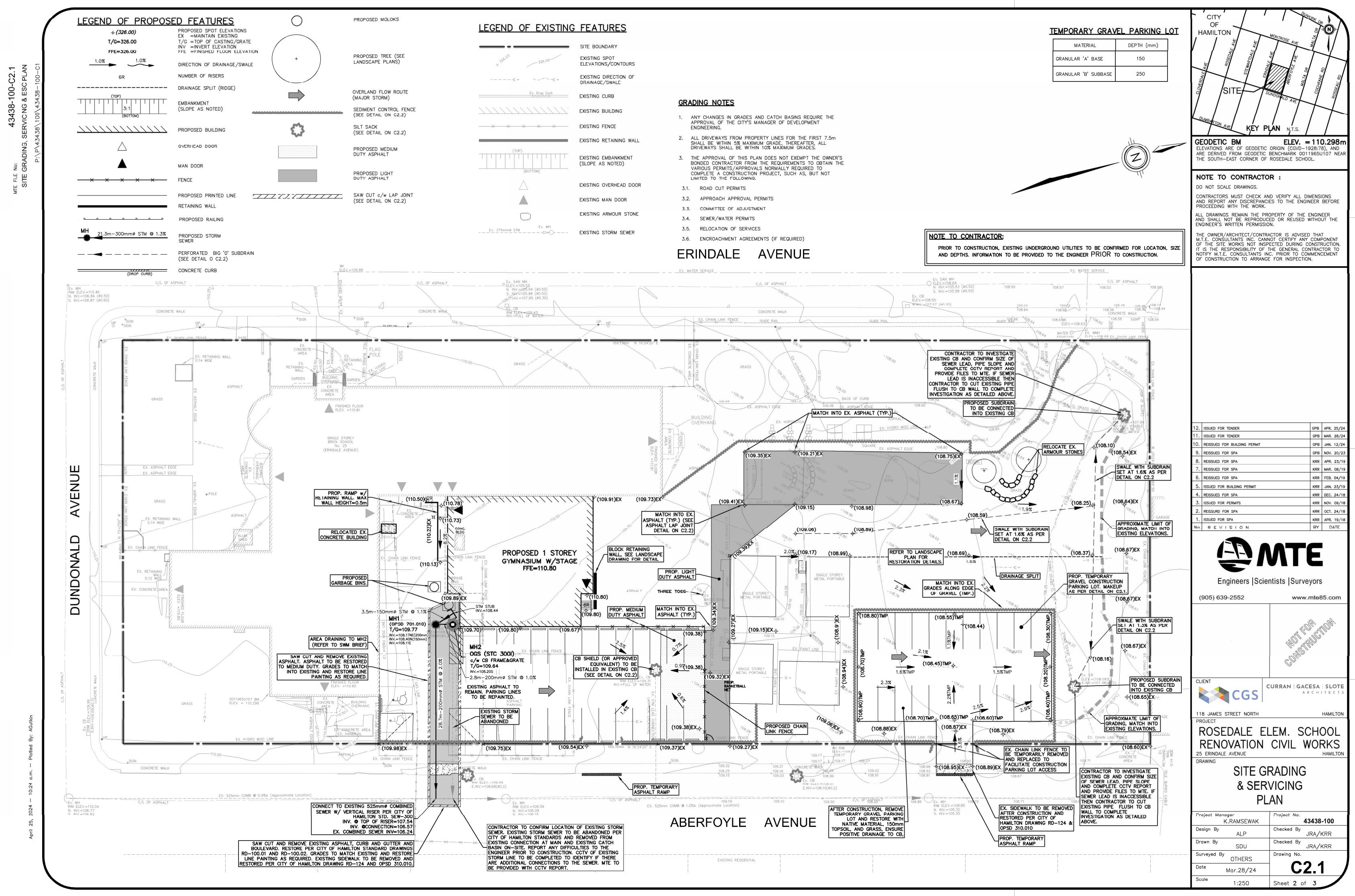
ROSEDALE **ELEMENTARY SCHOOL** - PHASE 2

25 Erindale Ave., Hamilton, ON

DRAWING NAME ELECTRICAL SPECIFICATIONS

PLOT DATE	DRAWN BY
28 MAR 2024	N.Drummond
SCALE	CHECKED BY
AS NOTED	J. Acri
JOB NO.	DWG NO.
17024	E4.1





CONSTRUCTION NOTES AND SPECIFICATIONS

- GENERAL
- 1.1. THIS PLAN IS NOT FOR CONSTRUCTION UNTIL SIGNED AND SEALED BY ENGINEER AND APPROVED BY THE CITY OF HAMILTON.
- 1.2. THIS PLAN IS TO BE USED FOR GRADING AND SERVICING ONLY; ANY OTHER INFORMATION SHOWN IS FOR ILLUSTRATION PURPOSES ONLY. THIS PLAN MUST NOT BE USED TO SITE THE PROPOSED BUILDING.
- 1.3. NO CHANGES ARE TO BE MADE WITHOUT THE APPROVAL OF THE DESIGN ENCINEER.
- 1.4. THIS PLAN IS NOT TO BE REPRODUCED IN WHOLE OR IN PART 2. STORM SEWERS WITHOUT THE PERMISSION OF MTE CONSULTANTS INC.
- 1.5. THE APPROVAL OF THIS PLAN DOES NOT EXEMPT THE OWNER'S BONDED CONTRACTOR FROM THE REQUIREMENTS TO OBTAIN THE VARIOUS PERMITS NORMALLY REQUIRED TO COMPLETE A CONSTRUCTION PROJECT, SUCH AS, BUT NOT LIMITED TO THE FOLLOWING
- 1.5.1. ROAD CUT PERMIT
- 1.5.2. APPROACH APPROVAL PERMITS
- 1.5.3. COMMITTEE OF ADJUSTMENT
- 1.5.4. SEWER PERMITS
- 1.5.5. RELOCATION OF SERVICES
- 1.5.6. ENCROACHMENT AGREEMENTS
- 1.6. PRIOR TO CONSTRUCTION, THE CONTRACTOR MUST: 1.6.1. CHECK AND VERIEY ALL EXISTING CONDITIONS, LOCATIONS
- AND ELEVATIONS WHICH INCLUDES BUT IS NOT LIMITED TO BENCHMARK ELEVATIONS, EXISTING SERVICE THF CONNECTIONS AND EXISTING INVERTS. REPORT ALL DISCREPANCIES TO THE ENGINEER PRIOR TO PROCEEDING.
- 1.6.2. OBTAIN ALL UTILITY LOCATES AND REQUIRED PERMITS AND LICENSES. 1.6.3. VERIFY THAT THE FINISHED FLOOR ELEVATIONS AND BASEMENT FLOOR ELEVATIONS (WHICH MAY APPEAR ON THIS
- PLAN) COMPLY WITH THE FINAL ARCHITECTURAL DRAWINGS. 1.6.4. CONFIRM ALL DRAWINGS USED FOR CONSTRUCTION ARE OF THE MOST RECENT REVISION.
- 1.7. THE CONTRACTOR SHALL ASSUME ALL LIABILITY FOR ANY DAMAGE TO EXISTING WORKS.
- 1.8. ALL WORKS ON A MUNICIPAL RIGHT-OF-WAY WILL BE INSTALLED BY CITY OF HAMILTON'S BONDED CONTRACTOR UPON APPLICATION BY THE GENERAL CONTRACTOR AT THE GENERAL CONTRACTOR'S EXPENSE. UNDER THE ROAD CUT PERMIT, THE CONTRACTOR IS TO MAKE CONNECTION TO THE SERVICES AND MAKE AND MAINTAIN THE TEMPORARY REPAIR OVER THE CUT, WITH PERMANENT REPAIR BEING MADE BY THE CITY OF HAMILTON'S BONDED CONTRACTOR AT THE GENERAL CONTRACTOR'S COST. THE CONTRACTOR IS RESPONSIBLE FOR RESTORATION OF ALL BOULEVARD AREAS.
- 1.9. CONSTRUCTION OF SEWERS, WATERMAINS AND RELATED APPURTENANCES SHALL BE UNDERTAKEN IN ACCORDANCE WITH THE CITY OF HAMILTON CONSTRUCTION AND MATERIALS SPECIFICATIONS MANUAL (LATEST EDITION), THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD). AND MINISTRY OF THE ENVIRONMENT GUIDELINES (LATEST EDITION). THE CITY DRAWINGS SHALL TAKE PRECEDENT OVER THE OPSD DRAWINGS.
- 1.10. ALL SEWERS ARE TO BE INSTALLED WITH A MINIMUM COVER OF 2.20m AT THE PROPERTY LINE BELOW THE FINAL ROAD GRADE OR AT SUCH HIGHER ELEVATION ONLY AS MAY BE NECESSITATED BY THE ELEVATION OF THE MAIN SEWER. ON PRIVATE PROPERTY THE MINIMUM COVER IS TO BE NO LESS THAN 1.2m.
- 1.11. INFORMATION REGARDING ANY EXISTING SERVICES AND/OR UTILITIES SHOWN ON THE APPROVED SET OF CONSTRUCTION DRAWINGS IS FURNISHED AS THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL INTERPRET THIS INFORMATION AS HE SEES FIT WITH THE UNDERSTANDING THAT THE OWNER AND HIS AGENTS DISCLAIM ALL RESPONSIBILITY FOR ITS ACCURACY AND/OR SUFFICIENCY.
- 1.12. NO BLASTING WILL BE PERMITTED.
- 1.13. ALTERNATIVE MATERIALS WILL NOT BE ALLOWED UNLESS FIRST APPROVED IN WRITING BY THE CONSULTANT AND THE CITY OF HAMILTON.
- 1.14. APPROVED FILL, FREE OF DELETERIOUS AND ORGANIC MATERIAL AND BOULDERS SHALL BE COMPACTED TO A DRY DENSITY NOT LESS THAN 95% OF THE STANDARD PROCTOR DENSITY. AFTER COMPACTION, SOIL DENSITY TESTS SHALL BE CONDUCTED TO ENSURE ADEQUATE COMPACTION AND STABILITY OF THE FILL AND TEST RESULTS SHALL BE SUBMITTED TO THE ENGINEER.
- 1.15. CONTRACTOR IS RESPONSIBLE FOR CONTACTING ENGINEER 44 HRS PRIOR TO COMMENCING WORK TO ARRANGE FOR INSPECTION. ENGINEER TO DETERMINE DEGREE OF INSPECTION AND TESTING REQUIRED FOR CERTIFICATION OF UNDERGROUND SERVICE INSTALLATION AS MANDATED BY ONTARIO BUILDING CODE DIVISION C, PART 1, SECTION 1.2.2, GENERAL REVIEW. FAILURE TO NOTIFY ENGINEER WILL RESULT IN EXTENSIVE POST CONSTRUCTION INSPECTION AT CONTRACTORS EXPENSE.
- 1.16. PLAN TO BE READ IN CONJUNCTION WITH SWM BRIEF AND DRAWING C1.1 PREPARED BY MTE CONSULTANTS INC.
- 1.17. SITE PLAN INFORMATION TAKEN FROM PLAN PREPARED BY ARCHITECTS INC., DATED OCTOBER 11, 2023. CGS
- 1.18. EXISTING TOPOGRAPHIC AND LEGAL INFORMATION TAKEN FROM PLAN PREPARED BY MATTHEWS, CAMERON, HEYWOOD-KERRY T. HOWE, DATED AUGUST 13, 2018. MTE ASSUMES THAT ALL TOPOGRAPHICAL INFORMATION IS AN ACCURATE REPRESENTATION OF CURRENT CONDITIONS.
- 1.19. RETAINING WALLS TO BE DESIGNED BY OTHERS. FOR WALLS EXCEEDING 1.0m IN HEIGHT, SHOP DRAWINGS MUST BE SUBMITTED FOR REVIEW AND APPROVAL AND BUILDING PERMI MUST BE OBTAINED. WALLS OVER 0.6m IN HEIGHT REQUIRE GUARDS. HIGH SIDE OF RETAINING WALLS TO BE BACKFILLED WITH FREE DRAINING MATERIAL.
- 1.20. SITE SERVICING CONTRACTOR TO TERMINATE ALL SERVICES 1.0 METRES FROM FOUNDATION WALL.
- 1.21. FILTER FABRIC TO BE TERRAFIX 200R OR APPROVED EQUIVALENT.
- 1.22. MAXIMUM GRASSED SLOPE TO BE 3:1. SLOPES GREATER THAN 3:1 TO BE LANDSCAPED WITH LOW MAINTENANCE GROUND COVER
- 1.23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC AND SAFETY MEASURES DURING THE CONSTRUCTION PERIOD INCLUDING THE SUPPLY, INSTALLATION AND REMOVAL OF ALL NECESSARY SIGNALS, DELINEATORS, MARKERS, AND BARRIERS. ALL SIGNS. ETC. SHALL CONFORM TO THE STANDARDS OF THE CITY OF HAMILTON AND THE MTO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- 1.24. THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND, WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

- 1.25. FOLLOWING COMPLETION OF PROPOSED WORKS AND PRIOR TO OCCUPANCY INSPECTION, ALL STORM AND SANITARY SEWERS ARE TO BE FLUSHED, AND ALL CATCHBASIN AND CATCHBASIN MANHOLE SUMPS ARE TO BE CLEANED OF DEBRIS AND SILT.
- 1.26. APPROVAL OF THIS DRAWING IS FOR MATERIAL ACCEPTABILITY AND COMPLIANCE WITH MUNICIPAL AND PROVINCIAL SPECIFICATIONS AND STANDARDS ONLY. APPROVAL AND INSPECTION BY THE CITY OF THE WORKS DOES NOT CERTIFY THE LINE AND GRADE OF THE WORKS AND IT IS THE OWNER'S RESPONSIBILITY TO HAVE THEIR ENGINEER CERTIFY THIS ACCORDINCLY.
- 2.1. PIPE BEDDING FOR RIGID PIPE TO BE CLASS "B" AS PER OPSD 802.030. PIPE BEDDING FOR FLEXIBLE PIPE TO BE AS PER OPSD 802.010. BEDDING MATERIAL AND COVER MATERIAL TO BE GRAN. "A". TRENCH BACKFILL TO BE NATIVE MATERIAL REPLACED IN 300mm LIFTS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY
- 2.2. STORM SEWERS, 150mm AND SMALLER, SHALL BE POLYVINYL CHLORIDE (PVC) PIPE SDR28 ASTM-D3034 WITH INTEGRAL BELL AND SPIGOT UTILIZING FLEXIBLE ELASTOMERIC SEALS.
- 2.3. STORM SEWERS 200mm TO 375mm SHALL BE POLYVINYL CHLORIDE (PVC) PIPE SDR35 ASTM-D3034 WITH INTEGRAL BELL AND SPIGOT UTILIZING FLEXIBLE ELASTOMERIC SEALS.
- 2.6. MANIIOLES AND MANIIOLE CATCHDASINS TO DE 1200 DIAMETER PRECAST WITH ALUMINIUM STEPS AT 300mm CENTRES AS PER OPSD 701.010 UNLESS OTHERWISE SPECIFIED. (NO
- 2.13. CATCHBASINS TO HAVE A MINIMUM 600mm DEEP SUMP. WHEN THE STRUCTURE INCLUDES THE INSTALLATION OF A SNOUT (OR APPROVED EQUIVALENT) THE SUMP DEPTH TO BE MIN 2.5 TIMES THE OUTLET PIPE DIAMETER SIZE.
- 2.14. MANHOLE AND CATCHBASIN, FRAMES, GRATES, CASTINGS AND LIDS TO BE QUALITY GREY IRON ASTM A48 CLASS 30B.
- 2.15. STORM MANHOLE LIDS TO BE PER OPSD 401.010 TYPE 'B' CATCHBASIN AND CATCHBASIN MANHOLE GRATES TO BE PER OPSD 400.100.
- 2.16. STORM SEWERS AND SERVICES TO HAVE MINIMUM 1.2m COVER TO TOP OF PIPE.
- 2.17. PROPOSED SINGLE CATCH BASINS ARE TO BE AS OPSD 705.010 MODIFIED WITH A GOSS TRAP AS PER SEW-304.
- 2.18. MINIMUM HORIZONTAL SEPARATION BETWEEN WATER SERVICES/MAINS AND SEWER DRAINS AND MUNICIPAL SEWER MAINS SHALL BE 2.5M MEASURED FROM THE CLOSEST PIPE EDGE TO CLOSEST PIPE EDGE. VERTICAL SEPARATION WHERE WATER SERVICE/MAIN PASSES OVER A SEWER DRAIN OR MUNICIPAL SEWER MAIN MUST BE A MINIMUM OF 0.15M UNLESS GREATER SEPARATION IS REQUIRED TO PROVIDE FOR PROPER BEDDING AND STRUCTURAL SUPPORT. WATER SERVICES/MAINS PASSING UNDER SEWER DRAINS OR MUNICIPAL SEWER MAINS MUST HAVE A SEPARATION OF 0.5M BETWEEN THE INVERT OF THE SEWER MAIN/DRAIN AND THE CROWN OF THE WATERSERVICE/MAIN.
- GRADING NOTES
- 3.1. ANY CHANGES IN GRADES AND CATCH BASINS REQUIRE THE APPROVAL OF THE DIRECTOR OF DEVELOPMENT ENGINEERING, PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT.
- 3.2. FILTER FABRIC TO BE TERRAFIX 270R OR APPROVED EQUAL.
- 3.3. MAXIMUM GRASSED SLOPE TO BE 3:1. SLOPES GREATER THAN 3:1 TO BE LANDSCAPED WITH LOW MAINTENANCE CROUND COVER.
- 3.4. MINIMUM ASPHALT GRADE TO BE 1.0%, MINIMUM GUTTERLINE GRADE TO BE 0.5%.
- 3.5. CONTRACTOR TO MATCH EXISTING GRADES AT PROPERTY LINE UNLESS OTHERWISE NOTED.
- 3.6. ALL DRIVEWAYS FROM PROPERTY LINES FOR THE FIRST 7.5m SHALL BE WITHIN 5% MAX. GRADE, THEREAFTER, ALL DRIVEWAYS SHALL BE WITHIN 10% MAXIMUM GRADES.
- 3.7. PRIOR TO REMOVING ANY EXCESS SOILS FROM THE SITE, CONTRACTOR TO CONTACT THE ARCHITECT FOR DIRECTION ON CREATING EARTHEN BERMS ON-SITE.
- 3.8. ALL LANDSCAPED AREAS ARE TO HAVE A MINIMUM 2.0% SLOPE. 4. RESTORATIONS
- 4.1. ALL RESTORATIONS TO CONFORM TO HAMILTON FORM 300.30.
- 4.2. RESTORATIONS OF ROAD OVER UTILITY CUTS IN HAMILTON TO BE AS PER STANDARD DRAWINGS RD-100.01 AND RD-100.02, WITH GRANULAR "A" BEDDING THE CONTRACTOR MUST BE BONDED WITH THE CITY OF HAMILTON AND MAKE AND MAINTAIN THE TEMPORARY ROAD REPAIR OVER THE CUT, WITH PERMANENT REPAIR BEING MADE BY THE CITY CONTRACTOR AT THE OWNER/OWNER'S CONTRACTOR COST.
- 4.3. ALL BOULEVARDS TO BE RESTORED WITH #1 NURSERY SOD ON A MINIMUM 100mm OF SELECT TOPSOIL.
- 4.4. CONTRACTOR SHALL CO-ORDINATE THE REMOVAL AND REINSTALLATION OF EXISTING PARKING METERS AND/OR STREET SIGNS WITH THE CITY OF HAMILTON TRAFFIC DEPARTMENT.
- 4.5. ALL FENCES AFFECTED BY CONSTRUCTION SHALL BE REMOVED, TEMPORARILY RELOCATED AND/OR STOCKPILED IF APPROVED BY THE ENGINEER, AND REINSTATED UPON COMPLETION OF CONSTRUCTION
- 5. EROSION AND SEDIMENT CONTROL
- 5.1. CONTRACTOR TO INSTALL EROSION CONTROL MEASURES AS SHOWN PRIOR TO CONSTRUCTION AND MAINTAIN IN GOOD CONDITION UNTIL CONSTRUCTION IS COMPLETED AND VEGETATIVE COVER IS ESTABLISHED. BUT PRIOR TO FENCE BECOMING OVERGROWN. ENGINEER'S REPRESENTATIVE TO DETERMINE IF VEGETATION HAS REACHED THE CRITICAL POINT AND WILL THEN INSTRUCT CONTRACTOR TO REMOVE FENCE.
- 5.2. ALL EROSION AND SEDIMENT CONTROL MEASURES (TEMPORARY SEDIMENT CONTROL FENCES, STORM SEWER BULKHEADS, ROCK CHECK DAMS, WORK LIMIT FENCES, SEDIMENT BASINS, ETC.) MUST BE INSTALLED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- 5.3. TEMPORARY VEHICLE TRACKING CONTROLS TO BE CONSTRUCTED AS PER REQUIREMENTS IN "EROSION & SEDIMENT CONTROL GUIDELINE FOR URBAN CONSTRUCTION" DATED DECEMBER 2006, AT ALL ACCESS POINTS. CONTRACTOR SHALL MAINTAIN THESE AS REQUIRED AND AS DIRECTED BY THE CITY ENCINEER. MUD MATS TO BE PROVIDED ON-SITE AT ALL LOCATIONS WHERE CONSTRUCTION VEHICLES EXIT THE SITE. CONTRACTOR TO ENSURE ALL VEHICLES LEAVE THE SITE VIA THE MUD MAT AND THAT THE MAT IS MAINTAINED IN A MANNER TO MAXIMIZE EFFECTIVENESS AT ALL TIMES.
- 5.4. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF ALL MUD AND DEBRIS THAT ARE TRACKED ONTO THE ROADWAYS FROM VEHICLES ENTERING OR LEAVING THE CONSTRUCTION SITE. THE GENERAL CONTRACTOR SHALL, UPON VERBAL AND/OR WRITTEN REQUEST BY THE CITY. IMMEDIATELY PROCEED WITH CLEAN-UP OPERATIONS AT THEIR EXPENSE. SHOULD THE GENERAL CONTRACTOR FAIL TO MAINTAIN THE ROAD AS DIRECTED, THE CITY WILL HAVE THE CLEANING CARRIED OUT, AND LAY CHARGES.
- 5.5. OVERLAND SHEET FLOW EROSION PROTECTION SHALL BE AS PER OPSD 219.130. IF EXCESSIVE SEDIMENT BUILDUP/BLOCKAGE OCCURS (VISUAL INSPECTION) THEN REPLACEMENT OF THE FILTER CLOTH IS REQUIRED.

100-TAIL 438-40 DE ₽

NA N

-C2

