

CONCRETE MIX SCHEDULE

EXPOSURE	ELEMENT	MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS (MP ¹)	EXPOSURE CLASSIFICATION	NOTES
GENERAL NON-EXPOSED CONCRETE (i.e. NOT EXPOSED TO CHLORIDES NOR FREEZE AND THAW)	FOOTINGS	25	N	
	COLUMNS	25	N	
	SHEAR WALLS	25	N	
	OTHER WALLS (NOT IDENTIFIED AS SHEAR WALLS)	25	N	
	SLAB ON GRADE	25	N	
	LEAN MIX	5	N	
	TOPPING	25	N	
EXTERIOR EXPOSED CONCRETE EXCLUDING PARKING (i.e. EXPOSED TO FREEZE AND THAW BUT NOT CHLORIDES)	FOUNDATION/RETAINING WALLS	25	F-2	
	COLUMNS	25	F-2	
	SHEAR WALLS	25	F-2	
	OTHER WALLS (NOT IDENTIFIED AS SHEAR WALLS)	25	F-2	
GROUT	MASONRY FILL/BOND BEAMS	15 (FINE GROUT)		CONFORM TO REQUIREMENTS OF CSA A173

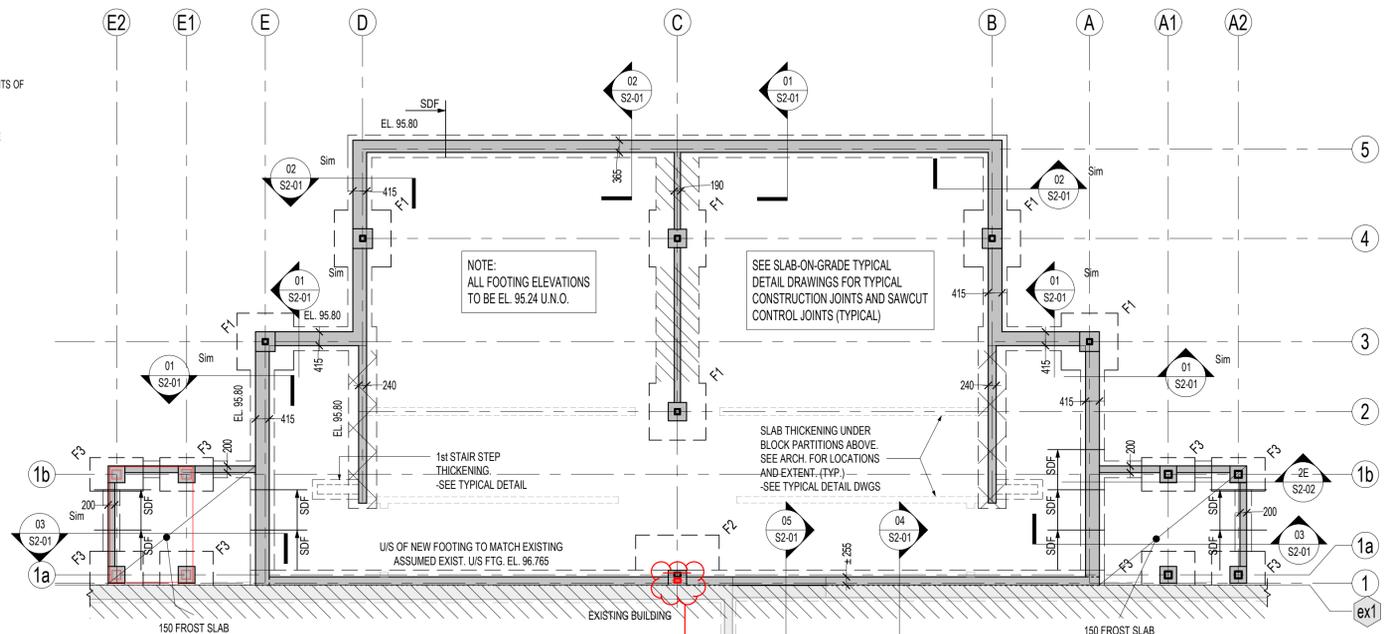
1) STRENGTH SPECIFIED AT 28 DAYS U.N.O. IN DRAWINGS AND SCHEDULES.
2) REINFORCED WITH SYNTHETIC FIBERS ADDED AT BATCHING PLANT - SEE SPECIFICATIONS

LOWER ELEVATIONS AT UNDERSIDE OF COLUMN AND WALL FOOTINGS, WHERE REQUIRED, BUT LIMITED TO SUIT STORM / SANITARY, WATER / FIRE LINES AND ELECTRICAL DUCT BANKS. THE MAXIMUM SLOPE FROM THE PIPE EXCAVATION TO THE UNDERSIDE OF ADJACENT FOOTING ELEVATIONS SHALL NOT EXCEED 7 VERTICAL TO 10 HORIZONTAL.

WHERE MECHANICAL SERVICE PIPES PASS THROUGH LOAD BEARING FOUNDATION WALLS, PROVIDE STEEL SLEEVES (MIN. 500) LARGER THAN PIPE (TYPICAL)

DESIGN CRITERIA NOTES

- GENERAL**
 - THE PROJECT HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2012 OBC (O. REG. 33212 AS AMENDED) INCLUDING CLAUSES 4.1.6 (1), 4.1.6 (4), 4.1.7 AND 4.1.8.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR WHO IS SUPPLYING AND INSTALLING EQUIPMENT, THAT ALL ELEMENTS OF STRUCTURES LISTED IN TABLE 4.1.8.18 OF THE OBC 2012 ARE DESIGNED IN ACCORDANCE WITH CLAUSE 4.1.8.18.
 - BUILDING IMPORTANCE CATEGORY (SNOW, WIND, AND EARTHQUAKE) IS HIGH.
 - STIFF ELEMENTS NOT PART OF SFRS SHALL BE SEPARATED FROM THE STRUCTURE AS PER OBC CLAUSE 4.1.8.3 (6a). EXAMPLES INCLUDE, BUT NOT LIMITED TO MASONRY PARTITIONS, BRICK VENEER, PRECAST CLADDING ETC. IT IS THE RESPONSIBILITY OF THE SUBCONTRACTOR TO PROVIDE SHOP DRAWINGS, STAMPED, SIGNED AND DATED BY A PROFESSIONAL ENGINEER DEMONSTRATING COMPLIANCE. PROVIDE MINIMUM 15mm SEPARATION UNLESS NOTED OTHERWISE.
 - MISCELLANEOUS METAL, PRECAST AND STAIR FABRICATORS SHALL:
 - PROVIDE SHOP DRAWINGS TO THE ARCHITECT PRIOR TO FABRICATION; STAMPED, SIGNED AND DATED BY A PROFESSIONAL ENGINEER.
 - DESIGN ALL GUARDS TO MEET LATERAL LOADS DESCRIBED IN OBC 4.1.5.14.
 - DESIGN ALL HANDRAILS TO MEET LOADS DESCRIBED IN OBC 3.4.6.5 (12).
 - DESIGN ALL STAIRS TO SUPPORT A MINIMUM LIVE LOAD OF 4.8kPa.
 - ARCHITECTURAL PRECAST FABRICATOR SHALL:
 - PROVIDE SHOP DRAWINGS TO THE ARCHITECT PRIOR TO FABRICATION, STAMPED, SIGNED AND DATED BY A PROFESSIONAL ENGINEER.
 - WHERE PRECAST IS USED AS A GUARD DESIGN THE PRECAST AND CONNECTIONS TO MEET LATERAL LOADS DESCRIBED IN OBC 4.1.5.14.
- LATERAL LOADS ON STRUCTURE**
 - WIND**
 - $q(150) = 0.47 \text{ kPa}$
 - $C_e = 0.7 (h/12)^{0.3}$
 - $C_g = 2.0$
 - $C_p = \text{AS PER FIGURE 1-15 OF USER'S GUIDE - NBC 2010 STRUCTURAL COMMENTARIES (PART 4 OF DIVISION B)}$
 - SNOW**
 - $S_s = 1.2$
 - $S_r = 0.4$
 - EARTHQUAKE**
 - $S_a(0.2) = 0.219$
 - $S_a(0.5) = 0.116$
 - $S_a(1.0) = 0.080$
 - $S_a(2.0) = 0.0290$
 - SFRS CONSISTS OF CONVENTIONAL MASONRY SHEAR WALLS. METHOD OF ANALYSIS - STATIC.
- FOUNDATION WALLS**
 - WALLS RETAINING EARTH ARE DESIGNED TO SAFELY WITHSTAND HORIZONTAL EARTH PRESSURE
 - $P = K(W \cdot h + q)$
 - $K = 0.45$
 - $W = 22 \text{ kN/m}^3$
 - $q = 12 \text{ kPa}$
 - $h = \text{DEPTH IN METRES}$
 - THE WALLS HAVE BEEN DESIGNED ASSUMING FREE DRAINING BACKFILL OR THE USE OF A DRAINAGE CORE TO PREVENT THE BUILD-UP OF HYDROSTATIC PRESSURE.



FOUNDATION PLAN
1:100

- ALL FOOTINGS SHALL BE FOUNDED ON UNDISTURBED NATIVE SILT TILL/CLAYEY SILT TILL STRATUM CAPABLE OF SUSTAINING 150kPa (SL) AND 225kPa (ULS).
- REFER TO SOILS REPORT NO. G4665-A DATED AUGUST 22, 2022, PREPARED BY FORWARD ENGINEERING & ASSOCIATES INC.
- SOIL AT THE UNDERSIDE OF THE FOOTINGS IS TO BE INSPECTED AND APPROVED BY A REPRESENTATIVE OF A SOILS CONSULTANT BEFORE PLACING CONCRETE.
- UNDERSIDE OF WALL FOOTINGS TO BE AT ELEVATIONS AS NOTED.
- SLAB - ON - GRADE TO BE 100 mm THICK REINFORCED SYNTHETIC FIBRES (SEE SPECIFICATION)
- TOP OF SLAB - ON - GRADE TO BE AT FINISHED FLOOR DATUM ELEVATION, 96.0m EXCEPT AS CROSSED AND NOTED. TOS = TOP OF SLAB.
- CENTRELINES OF COLUMNS, CAPS AND FOOTINGS ARE COINCIDENT UNLESS OTHERWISE NOTED.
- PROVIDE SLAB DEPRESSIONS, OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS, AS REQUIRED BY THE ARCHITECTURAL AND MECHANICAL DRAWINGS AND SPECIFICATIONS.
- SDF = STEP DOWN FOOTING.
- UNLESS OTHERWISE NOTED, ALL WALL FOOTINGS TO BE 300 mm DEEP WITH 150 mm PROJECTIONS EACH SIDE.
- FILL REQUIRED ON BOTH SIDES OF FOUNDATION WALLS SHALL BE PLACED AND COMPACTED SIMULTANEOUSLY ON BOTH SIDES TO EQUALIZE SOIL PRESSURE.
- THE PROJECT SUPERINTENDENT MUST NOTIFY THIS OFFICE 24 HOURS PRIOR TO PLACING STRUCTURAL CONCRETE, INCLUDING STRIP FOOTINGS.
- SEE ALSO TYPICAL NOTES AND DETAILS.
- SEE COLUMN SCHEDULE FOR COLUMNS, AND COLUMN FOOTINGS.
- CONCRETE STRENGTHS - SEE CONCRETE SCHEDULE.
- REFER TO SITE PREPARATION NOTES ON THIS DRAWING.

SITE PREPARATION NOTES FOR SLAB-ON-GRADE (WITHIN BUILDING ENVELOPE)

- THE AREA WITHIN THE BUILDING SHALL BE STRIPPED OF THE UPPER LAYER SOIL, FILL, ORGANICALLY CONTAMINATED MATERIAL AND RUBBLE AND TO A MINIMUM OF 200mm (8") BELOW THE UNDERSIDE OF THE SLAB ON GRADE.
- THE EXPOSED SUB-GRADE SHALL BE EXAMINED AND APPROVED BY THE SOIL CONSULTANT.
- THE ENTIRE AREA SHALL BE PROOF ROLLED WITH A HEAVY COMPACTOR TO A MINIMUM OF 95% STANDARD PROCTOR MAX. DRY DENSITY AND TO THE APPROVAL OF THE SOIL CONSULTANT.
- ANY LOOSE OR SOFT SPOTS ENCOUNTERED SHALL BE SUB-EXCAVATED AND BACKFILLED WITH COMPACTED APPROVED MATERIAL.
- FILL REQUIRED TO RAISE THE GRADES SHALL BE COMPRISED OF APPROVED GRANULAR 'B' TYPE 1 CONFORMING TO OPSS 1010, PLACED IN SUCCESSIVE LOOSE 200mm (8") LAYERS EACH COMPACTED TO AT LEAST 95% OF ITS STANDARD PROCTOR MAXIMUM DRY DENSITY.
- THE LAYER IMMEDIATELY BELOW THE SLAB-ON-GRADE SHALL BE 150mm (6") OF 19mm CLEAR STONE COMPACTED TO MIN. 98% STANDARD PROCTOR MAX. DRY DENSITY.
- ALL PROCEDURES, EQUIPMENT AND MATERIALS SHALL BE APPROVED BY THE SOIL CONSULTANT WHO SHALL CONDUCT SUFFICIENT TESTS TO ENSURE THAT THE SPECIFIED MATERIALS AND DENSITIES ARE ACHIEVED.
- THE CONTRACTOR SHALL CO-ORDINATE WITH THE SOIL CONSULTANT AND ARRANGE A SUITABLE PROGRAM FOR SAMPLING AND INSPECTIONS, ETC. AND NOTIFY THE ARCHITECT ACCORDINGLY.
- EXISTING ON-SITE MATERIAL MAY BE USED WITHIN THE BUILDING AREA FOR BACKFILLING IN TRENCHES AGAINST FOUNDATION WALLS OR UNDER SLABS-ON-GRADE, PROVIDED THE EXCAVATED MATERIAL DOES NOT BECOME WET. THE EXCAVATED MATERIALS WILL BE SENSITIVE TO MOISTURE CONTENT, AND THE USE OF GRANULAR 'B' IS PREFERRED.
- REFER TO THE SPECIFICATION AND THE SOIL REPORT FOR PREPARATION OF AREAS OUTSIDE THE BUILDING ENVELOPE.

STEEL COLUMN SCHEDULE															
TO P/C ROOF (HP)															
TO SECOND FLOOR															
TO GROUND FLOOR															
US B. PL. -350 (U.N.O.)															
BASE PLATE SIZE	325x20x325	350x20x350	350x20x350	350x20x350	350x20x350	325x20x325	350x20x350	325x20x325	325x20x325	325x20x325	325x20x325	350x20x350	350x20x350		
ANCHOR RODS	(4)-AR1	(4)-AR2	(4)-AR2	(4)-AR2	(4)-AR2	(4)-AR1	(4)-AR2	(4)-AR1	(4)-AR1	(4)-AR1	(4)-AR1	(4)-AR2	(4)-AR2		
PIER SIZE	500x500	500x500	500x500	500x500	500x500	590x590	550x450	550x550	590x590	590x590	500x500	500x500	500x500		
VERTICAL REINF. TIES	10@15V 10@300T	8-20V 10@300T	8-20V 10@300T	8-20V 10@300T	8-20V 10@300T	10-15V 10@300T	8-15V 10@300T	8-15V 10@300T	10-15V 10@300T	10-15V 10@300T	8-20V 10@300T	8-20V 10@300T	8-20V 10@300T		
FACTORED LOADING (kN)	50	50	50	50	50	300	450	550	300	300	50				
Column Locations	A-3	A1-1a	A1-1b	A2-1a	A2-1b	B-4	C-1a	C-2	C-4	D-4	E-3	E1-1a	E1-1b	E2-1a	E2-1b
		M	M	M	M							M	M	M	M

STEEL COLUMN SCHEDULE NOTES:

- FOR GRADE OF STRUCTURAL STEEL SEE GENERAL NOTES AND SPECIFICATION.
- LOADS FOR COLUMNS REPRESENT THE FACTORED LOAD IN KILOWEIGHTS APPLIED AT THE BASE OF THE COLUMN AND DO NOT INCLUDE THE WEIGHT OF THE FOUNDATION.
- BASE PLATE AND / OR CAP PLATE DIMENSION GIVEN LAST TO BE PARALLEL WITH COLUMN WEB.
- REFER ALSO TO TYPICAL NOTES AND DETAIL DRAWINGS.
- REFER TO STEEL COLUMN / ANCHOR ROD SCHEDULE AND TYPICAL COLUMN BASE DETAILS FOR ANCHOR RODS AND FOR COLUMN BASE PLATE SIZES.
- FOR ALL COLUMNS ABUTTING MASONRY, PROVIDE ADJUSTABLE MASONRY ANCHORS AS PER TYPICAL DETAIL. SEE TYPICAL DETAIL DRAWINGS.

FOOTING SCHEDULE				
FOOTING NUMBER	FOOTING LENGTH	FOOTING WIDTH	FOOTING THICKNESS	FOOTING REINF. B.E.W./H.E.E. U.N.O.
F1	1700	1700	300	6-15M
F2	1500	2500	400	7-20M
F3	1000	1600	350	6-20M T&B TR. & 4-20M T&B LG.

FOOTING PROJECTION SCHEDULE

FOOTINGS SHOWN THUS ON PLAN INDICATE 300mm FOOTING PROJECTION:- REINF. W/ 15@300B TRANS. & 3-15B LONG.



FOOTINGS SHOWN THUS ON PLAN INDICATE 500mm FOOTING PROJECTION:- REINF. W/ 15@250B TRANS. & 4-15B LONG.



NOTE: TRANS. REINF. HOOKED EACH END

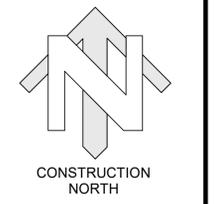
DRAWING LIST

Sheet Number	Sheet Name
S1-01	FOUNDATION PLAN
S1-02	SECOND FLOOR / LOW ROOF FRAMING PLAN
S1-03	ROOF FRAMING PLAN AND ROOF SECTIONS
S2-01	FOUNDATION SECTIONS
S2-02	SECOND FLOOR SECTIONS
S3-01	GENERAL NOTES
S3-02	TYPICAL DETAILS
S3-03	TYPICAL DETAILS
S3-04	TYPICAL DETAILS
S3-05	TYPICAL DETAILS
S3-06	TYPICAL DETAILS AN GENERAL NOTES

NOTE: EXISTING CONDITIONS AS SHOWN ON THE STRUCTURAL DRAWINGS ARE BASED UPON INFORMATION AVAILABLE AT THE TIME THAT DRAWINGS WERE PREPARED AND ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE. ANY VARIATIONS ARE TO BE REPORTED AND INSTRUCTIONS RECEIVED BEFORE PROCEEDING.

NO.	DATE	ISSUED FOR	REVISION
6	JULY/20/2024	ISSUED FOR CONSTRUCTION	
5	MARCH/20/24	ISSUED FOR TENDER	
4	MARCH/20/24	ISSUED FOR PERMIT	
3	JANU/20/23	ISSUED FOR 90% CLIENT REVIEW	
2	DEC/09/2022	ISSUED FOR 90% CLIENT REVIEW	
1	OCT/10/2022	ISSUED FOR CLIENT REVIEW	

THE CONTRACTOR SHALL CHECK ALL DIMENSIONS WITH THE LATEST ISSUE OF ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH WORK.

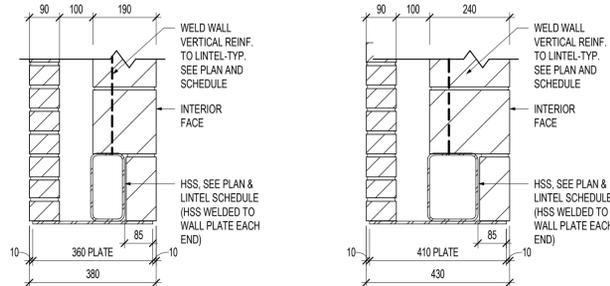


ÉEC SAINT-MICHEL
Classrooms Addition

29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
FOUNDATION PLAN

PROJECT NO: 20220316	SCALE: As indicated
DRAWN: AE	DRAWING NO. / REV. S1-01 / 6
CHECKED: JG	DATE: JULY 2024

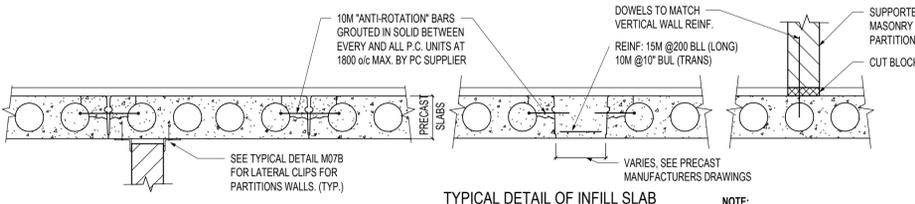


LINTEL SCHEDULE			
REFER TO LINTEL NOTES A07 ON TYPICAL DETAIL DRAWINGS SEE ALSO SPECIFICATION			
MARK	MATERIAL	TYPE	REMARKS
L1	HSS 203x102x6.4 + 360x8mm BOTTOM PLATE	WP1 E.E. ** SEE DL1/S1-02	LENGTHS MAY VARY
L2	HSS 203x152x6.4 + 410x8mm BOTTOM PLATE	WP2 E.E. ** SEE DL2/S1-02	
L3	HSS 203x152x7.9 + 410x8mm TOP PLATE	WP2 ONE END ** OTHER END CONNECT TO COL. CENTRE HSS WITH BLOCK	
L4	(2)-L 102x102x6.4 + LOOSE L89x89x6.4		

T1 = 10kN M TORSION CONNECTION
ALL EXTERIOR LINTELS SUPPORTING FACE BRICK TO BE GALVANIZED
** WELDED TO LINTEL EACH END.

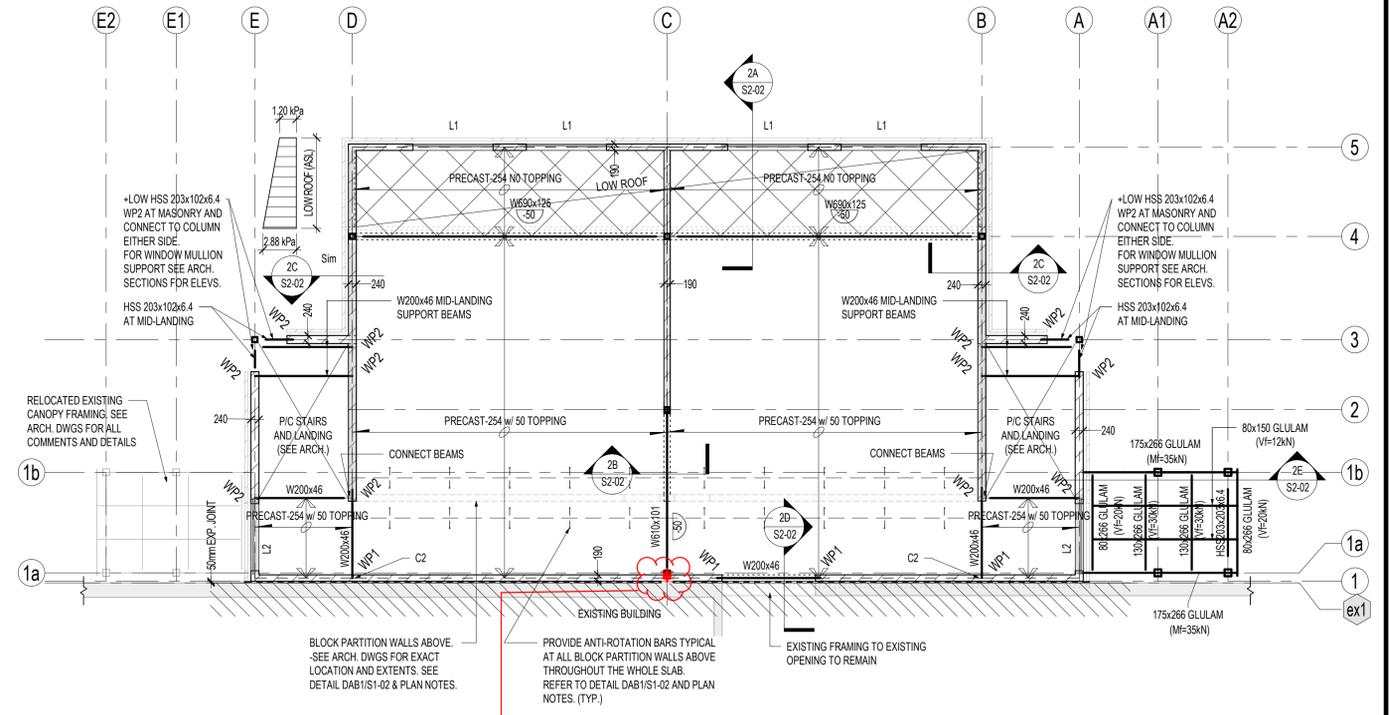
WALL PLATE SCHEDULE (LAST DIMENSION PARALLEL TO WEB)		
MARK	MATERIAL	REMARKS
WP1	180x15x180	(2)130 A.BOLTS x 150 LG. JL
WP2	200x15x200	(2)130 A.BOLTS x 150 LG. JL

NOTE: BOTTOM PLATES TO TERMINATE 10mm CLEAR OF SUPPORTING MASONRY-VERIFY WITH ARCH.

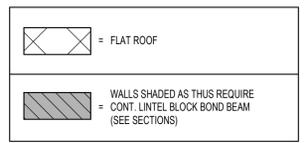


DAB1
S1-02 NTS

NOTE:
1. PARTITIONS ARE TO BE CONSTRUCTED PRIOR TO INSTALLATION OF TOPPING.
2. SEE ALSO FLOOR LOADING SCHEDULE.
3. IF BLOCK PARTITIONS ARE INSTALLED AFTER TOPPING IS POURED, GENERAL CONTRACTOR TO NOTE AND COORDINATE THE AFFECT OF POST PARTITION ERECTION ON THE CAMBER OF THE CORESLABS. IN ADDITION, DOWELS MUST BE PROVIDED FROM CORESLAB INTO WALL ABOVE MIN. 10M@1200 U.N.O. IN NOTES SCHEDULES, TYPICAL DETAILS ETC.



SECOND FLOOR / LOW ROOF FRAMING PLAN
1:100



SECOND FLOOR LOADING SCHEDULE		
LOADING	SUPERIMPOSED DEAD LOAD (kPa)	LIVE LOAD (kPa)
CLASSROOM *	1.54	2.40
CORRIDOR / STAIRS *	1.8	4.80
LOW ROOF AREA *	1.06	1.56 + ASL

* AS NOTED ON SCHEDULE
HOLLOWCORE SLABS SHALL BE DESIGNED TO RESIST THE UNIFORM LOADING ABOVE AND IN ADDITION SHALL SUPPORT MASONRY PARTITION LOADS.
(CO-ORDINATE WITH ARCHITECTURAL DRAWINGS)
140 PARTITION, 6.7kN/m AND 190 PARTITIONS, 8.5kN/m

SECOND FLOOR / LOW ROOF FRAMING PLAN
1:100

- TOP OF PRECAST SLAB TO BE 50mm BELOW FINISHED FLOOR DATUM, ELEVATION 4000mm, EXCEPT AS CROSSED AND NOTED. T.O.S = TOP OF SLAB.
- TOPS OF STEEL BEAMS TO BE AT UNDERSIDE OF PRECAST SLABS - 254mm, EXCEPT AS SHOWN THUS ON Δ PLAN.
- REFER TO LOADING SCHEDULE ON THIS DRAWING.
- HOLLOWCORE SLABS SHALL BE DESIGNED TO SUPPORT THE SPECIFIED DEAD AND LIVE LOADS AND IN ADDITION SHALL SUPPORT MASONRY PARTITION LOADS. (CO-ORDINATE WITH ARCHITECTURAL DRAWINGS AND LOADING SCHEDULE).
- HOLLOWCORE SLABS SHALL HAVE A FIRE RATING OF 2 HOURS.
- SUBMIT DETAILS FOR ALL OPENINGS, OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS, TO THE STRUCTURAL CONSULTANT FOR REVIEW.
- LOCATIONS OF MECHANICAL EQUIPMENT AND MECHANICAL EQUIPMENT LOADS ARE TO BE CONFIRMED BY THE MECHANICAL CONTRACTOR BEFORE PROCEEDING.
- AN INDEPENDENT INSPECTION AND TESTING COMPANY IS TO INSPECT STRUCTURAL STEEL IN THE SHOP AND IN THE FIELD FOR WELDING, CONNECTIONS, BOLT TORQUES, AND GENERAL CONFORMANCE WITH THE STRUCTURAL DRAWINGS AND SPECIFICATIONS.
- NON - LOAD BEARING PARTITIONS SHALL BE A MINIMUM OF 25mm CLEAR OF STRUCTURE.
- WALL PLATES (WP) SHALL HAVE LAST DIMENSION PARALLEL TO BEAM OR JOIST WEB. SEE WALL PLATES SCHEDULE.
- SEE LINTEL SCHEDULE ON THIS DRAWING.
- THE PROJECT SUPERINTENDENT MUST CONTACT THIS OFFICE 24 HOURS PRIOR TO PLACING STRUCTURAL CONCRETE FOR A REVIEW OF PREPARATIONS.
- SEE TYPICAL NOTES, TYPICAL DETAILS, COLUMN SCHEDULE AND ALL OTHER DRAWINGS.
- PROVIDE A MAXIMUM 50mm BONDED, NON - COMPOSITE, TOPPING SLAB ON PRECAST HOLLOWCORE SLABS, UNLESS OTHERWISE NOTED. TOP SURFACE IS TO BE FLAT (SEE SPECIFICATION FOR PREPARATION).
- PARTITIONS ABOVE PRECAST HOLLOWCORE SLABS ARE TO BE CONSTRUCTED BEFORE TOPPING IS PLACED.
- FOR CONCRETE BASE AT LOCKERS. SEE ARCHITECTURAL DRAWINGS.
- PROVIDE 100mm HOUSE KEEPING PADS IN MECHANICAL ROOM (SEE MECHANICAL DRAWINGS FOR SIZE AND LOCATION).
- REIN: 10m@300 EACH WAY.
- PROVIDE MIN 100x100 CURBS AROUND ALL OPENINGS AND AT DOORS IN MECHANICAL ROOM FLOOR. REIN: 10M@300 DOWELS FROM BASE SLAB + 1-10M CONT. (REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS).
- REFER TO ARCHITECTURAL DRAWINGS FOR FIRE PROOFING OF BEAMS AND COLUMNS.
- REFER TO CONCRETE MIX SCHEDULE ON S1-01.
- IF ANY ASPECT OF THE PRECAST HOLLOWCORE SLAB CONSTRUCTION, PROPOSED BY THE CONTRACTOR FOR USE ON THIS PROJECT, VARIES FROM THAT SHOWN ON THE TENDER DRAWINGS AND THE VARIATION REQUIRES THE RE-DESIGN OF THE BASE BUILDING ELEMENTS AND/OR THE REVISION TO OR ADDITION OF MATERIALS TO ACCOMMODATE SUCH VARIANCE AND THE OWNER, THE ARCHITECT AND THE STRUCTURAL CONSULTANT ARE IN AGREEMENT WITH THE PROPOSED VARIATION, THEN THE CONTRACTOR REQUESTING THE VARIATION SHALL PAY FOR ALL EXTRA COSTS, INCLUDING RE-DESIGN, ASSOCIATED WITH THE CHANGE.

MASONRY CORE FILL SCHEDULE
M20

MASONRY CORE FILL SCHEDULE			
TYPE	SIZE	REINF.	REMARKS
C1	1 x 400	2-15 VERT. CONT.	
C2	1 x 600	3-15 VERT. CONT.	
C3	1 x 800	4-15 VERT. CONT.	
C4	1 x 400 x 400	4-15 VERT. CONT.	

1 DENOTES THE WALL THICKNESS

- MASONRY CORE FILLS NOTES:**
- PROVIDE CORE FILLS AS NOTED ON PLAN AND PROVIDE REINFORCEMENT AS SHOWN IN SCHEDULE.
 - CORE FILLS EXTEND FULL HEIGHT OF WALL, FLOOR TO FLOOR UNLESS NOTED.
 - INSTALL ALL REINFORCEMENT FULL HEIGHT BETWEEN FLOORS AND GROUT CORE SOLID FULL HEIGHT BETWEEN FLOORS UNLESS NOTED.
 - WHERE CORE FILL CONTIGUES TO NEXT FLOOR ABOVE, EXTEND INDICATED VERTICAL REINFORCEMENT TO PROVIDE SPECIFIED CLASS "B" TENSION LAP SPICE WITH REINFORCEMENT OF CORE ABOVE, WHERE MASONRY WALLS START ON TOP OF STEEL BEAMS, PROVIDE WELDABLE REINFORCING DOWELS TO MATCH REINFORCING NOTED IN THIS SCHEDULE, OR EQUIVALENT DDL DEFORMED BAR ANCHORS.
 - PROVIDE 15M DOWELS IN FOUNDATION WALLS FOR ALL WALL REINFORCEMENT UNLESS NOTED OTHERWISE.
 - REFER TO M04 FOR LAP LENGTHS FOR VERTICAL BARS AND DOWELS.
 - REFER TO CORE FILLS SCHEDULE FOR DETAILS AND REINFORCEMENT.
 - PROVIDE CORE FILL C1 AT EACH SIDE OF OPENINGS UNLESS NOTED ON PLANS AND/OR SECTIONS.
 - PROVIDE C1 AT UNSUPPORTED ENDS OF WALLS UN.
 - PROVIDE C1 AT EACH SIDE OF CONTROL JOINTS UN.
 - PROVIDE CORE FILL C4 AT ALL WALL CORNERS UN OTHERWISE IN PLANS AND/OR SECTIONS.
 - PROVIDE TIEWALL BLA CONTROL JOINT BY BLOCK-LOK OR EQUIVALENT FOR ALL VERTICAL CONTROL JOINTS IN EXTERIOR MASONRY WALLS EXCEEDING 1m IN HEIGHT.
 - 190mm MASONRY WALL REINFORCING - 15M@800 O.C.
240mm MASONRY WALL REINFORCING - 15M@800 O.C.
 - REINFORCE ALL MASONRY SILLS, INTERIOR AND EXTERIOR, AS PER THE REINFORCING INDICATED IN THIS SCHEDULE. GROUT TOP TWO COURSES OF ALL SILLS SOLID, FULLY GROUT ALL EXTERIOR SILLS.

MECHANICAL LINTEL SCHEDULE

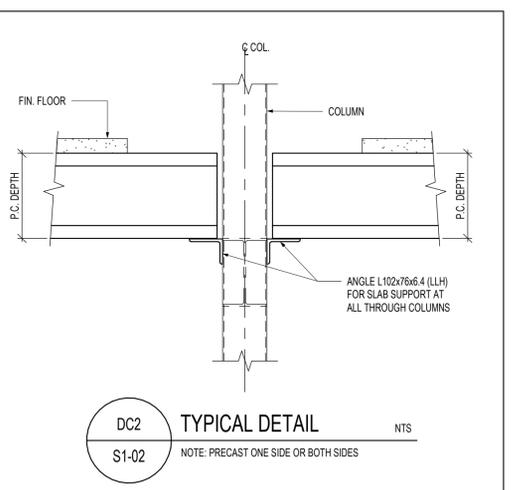
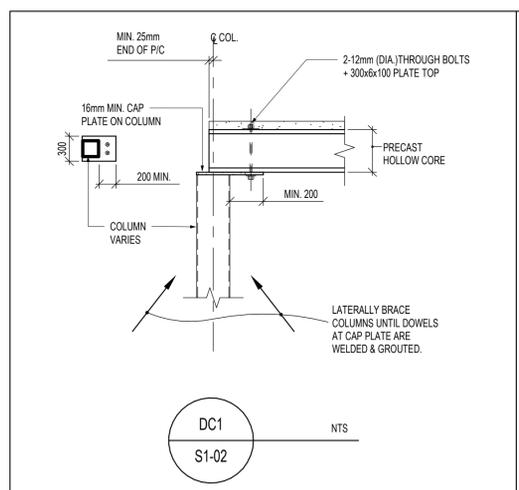
LINTELS IN LOAD BEARING WALLS OVER MECHANICAL DUCTS ETC.					
MARK	WALL THICKNESS	CLEAR SPAN	MATERIAL	TYPE	NOTES
ML1	190	200-550	175x8 PLATE	---	CAVITY WALLS EXTERIOR WALLS GALVANIZED UNLESS NOTED
ML2	190	550-1220	24-90x90x6	JL	
ML3	240	200-550	225x8 PLATE	---	
ML4	240	550-1220	24-100x100x8	JL	
ML5	290	200-550	275x8 PLATE	---	
ML6	290	550-1220	34-90x90x6	JL	
ML7	190 + 90	200-550	175x8 PLATE + 80x8 PLATE	---	
ML8	190 + 90	550-1220	24-90x90x6 + 14-90x90x6	JL	
ML9	240 + 90	200-550	225x8 PLATE + 80x8 PLATE	---	
ML10	240 + 90	550-1220	24-100x100x8 + 14-90x90x6	JL	
ML11	290 + 90	200-550	275x8 PLATE + 80x8 PLATE	---	
ML12	290 + 90	550-1220	34-90x90x6 + 14-90x90x6	JL	

- FOR LINTELS MARKED ML ON DRAWINGS.
- FOR SPANS LESS THAN 200mm - NO LINTEL REQUIRED.
- FOR SPANS GREATER THAN 120mm, SEE PLANS AND MAIN LINTEL SCHEDULE.

WHILE EVERY EFFORT HAS BEEN MADE TO SHOW ALL LINTELS WHICH OCCUR IN LOAD BEARING MASONRY WALLS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE CORRECT SIZES AND QUANTITY OF LINTELS ARE PROVIDED.

LINTELS IN NON-LOAD BEARING WALLS AND PARTITIONS ARE GENERALLY NOT SHOWN ON THE DRAWINGS. ALL SUCH LINTELS SHALL BE PROVIDED AS REQUIRED AND SHALL CONFORM TO THE NOTES & TYPICAL DETAILS ON THE STRUCTURAL DRAWINGS.

PROVIDE MECHANICAL LINTELS IN ACCORDANCE WITH TYPICAL DETAILS AND NOTES FOR ALL DUCTS AND PIPES PASSING THROUGH MASONRY WALLS.



TYPICAL AT TOPS OF ALL EXTERIOR COLUMNS SUPPORTING PRECAST

FOR PRECAST SLAB SUPPORT AT ALL "THROUGH COLUMNS"

NOTE: EXISTING CONDITIONS AS SHOWN ON THE STRUCTURAL DRAWINGS ARE BASED UPON INFORMATION AVAILABLE AT THE TIME THAT DRAWINGS WERE PREPARED AND ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE. ANY VARIATIONS ARE TO BE REPORTED AND INSTRUCTIONS RECEIVED BEFORE PROCEEDING.

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6	JULY 23/2024	ISSUED FOR CONSTRUCTION	
5	MARCH 20/2024	ISSUED FOR TENDER	
4	JAN 31/2023	ISSUED FOR PERMIT	
3	DEC 09/2022	ISSUED FOR 90% CLIENT REVIEW	
2	OCT 17/2022	ISSUED 90% FOR CLIENT REVIEW	
1		ISSUED FOR CLIENT REVIEW	

THE CONTRACTOR SHALL CHECK ALL DIMENSIONS WITH THE LATEST ISSUE OF ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH WORK.



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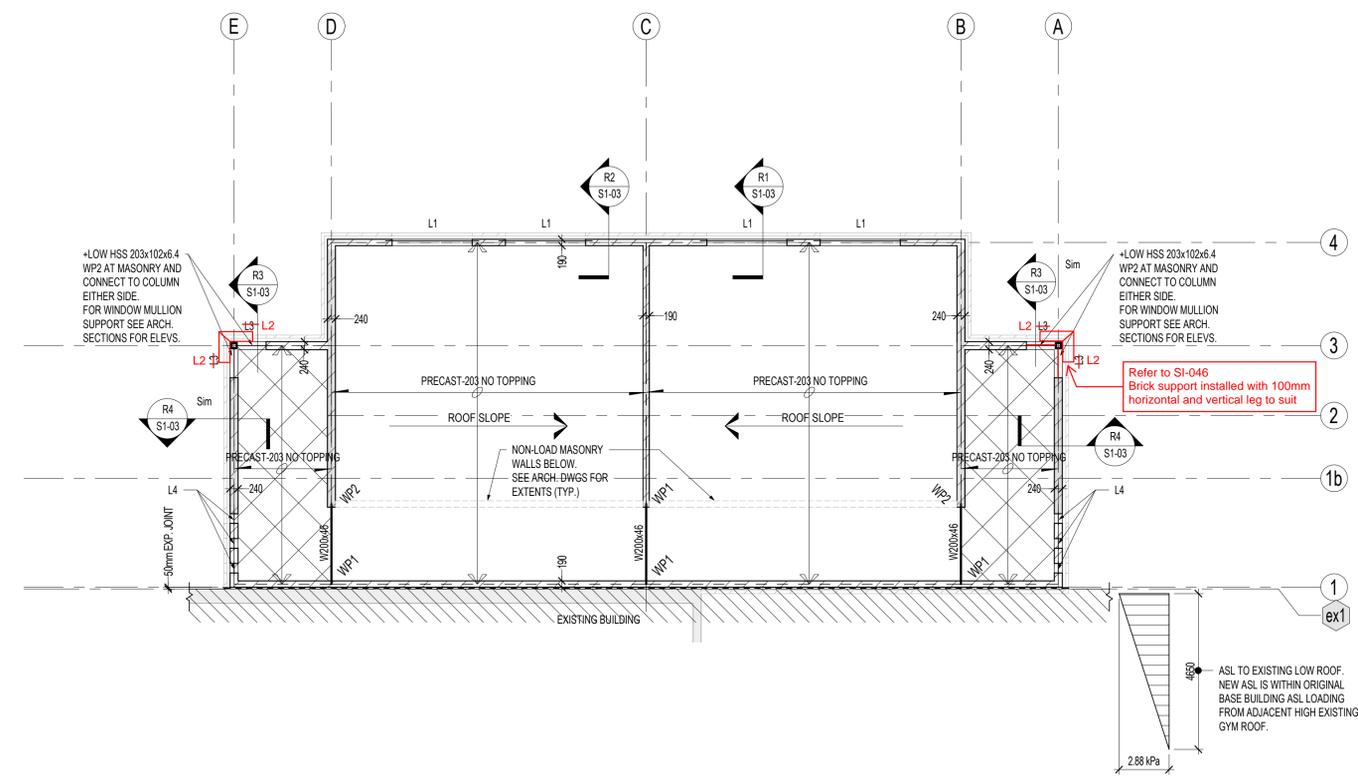
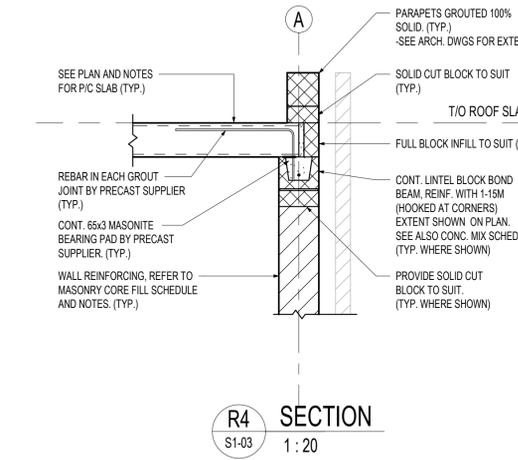
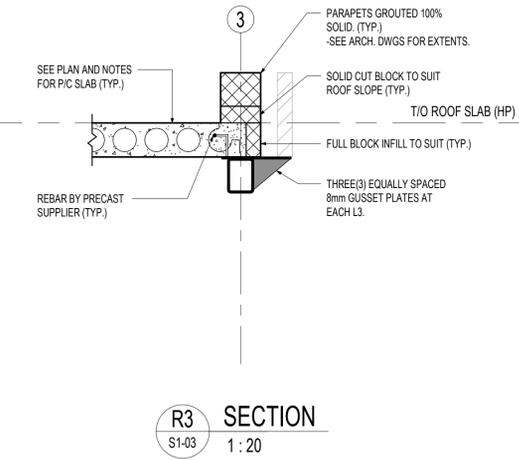
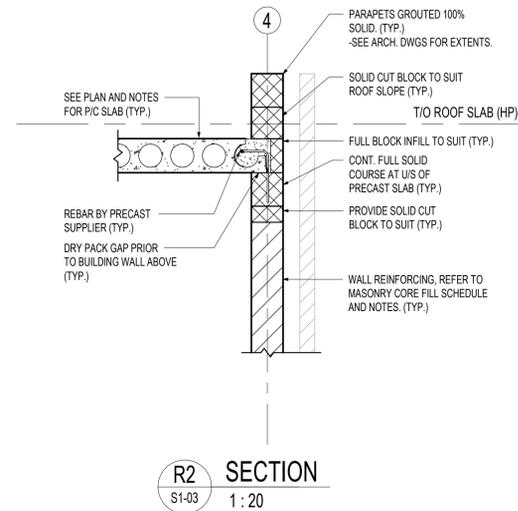
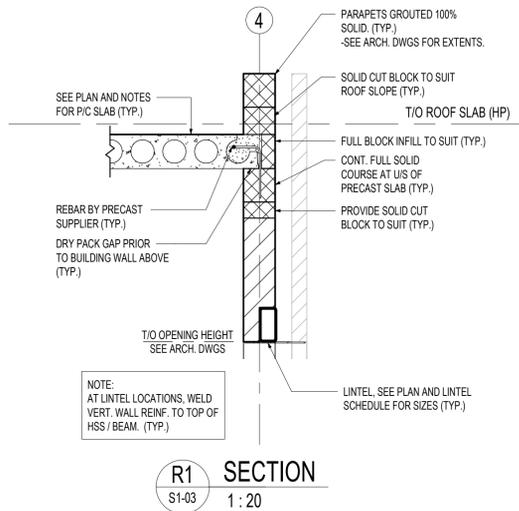
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ÉEC SAINT-MICHEL
Classrooms Addition

29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
SECOND FLOOR / LOW ROOF FRAMING PLAN

PROJECT NO: 20220316	SCALE: As Indicated
DRAWN: AE	DRAWING NO. / REV. S1-02 / 6
CHECKED: JG	DATE: JULY 2024



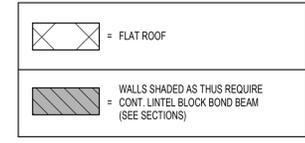
ROOF LOADING SCHEDULE		
LOADING	SUPERIMPOSED DEAD LOAD (kPa)	SNOW LOAD (kPa)
GENERAL ROOF	1.42	1.56

IN ADDITION TO UNIFORM LOADING SHOWN, REFER TO ROOF PLAN FOR ADDITIONAL LOADING FOR ACCUMULATED SNOW LOADS (ASL) AS SHOWN, AND FOR POINT LOADS OF BRACINGS AND MECHANICAL EQUIPMENT.

NOTE: ROOFING ASPHALT AND GRAVEL.
RIGID INSULATION = 0.42 kPa HAS BEEN INCLUDED

ROOF FRAMING PLAN
1:100

- TOP OF CONCRETE SLABS AND STEEL DECK IS TO BE SLOPED TO DRAIN AS SHOWN ON ARCHITECTURAL DRAWINGS.
- TOPS OF STEEL BEAMS TO BE AT UNDERSIDE OF PRECAST SLABS EXCEPT AS NOTED. (SLOPE AS REQUIRED.)
- PRECAST SLABS TO BE DESIGNED TO SUPPORT SPECIFIED DEAD AND SNOW LOADS.
- PRECAST SLABS SHALL HAVE A FIRE RATING OF 2-HOURS.
- LOCATION OF MECHANICAL EQUIPMENT AND MECHANICAL EQUIPMENT LOADS ARE TO BE CONFIRMED BY MECHANICAL CONTRACTOR. REFER TO MECHANICAL DRAWINGS. MECHANICAL EQUIPMENT AND PIPING MUST BE HUNG FROM OWSJ PANEL POINTS AND HANGER SPACING SHALL NOT EXCEED 3.0 m.
- SUBMIT DETAILS FOR ALL OPENINGS OTHER THAN THOSE SHOWN ON STRUCTURAL DRAWINGS TO STRUCTURAL CONSULTANT FOR REVIEW.
- AN INDEPENDENT INSPECTION AND TESTING COMPANY IS TO INSPECT STRUCTURAL STEEL AND STEEL DECK IN THE SHOP AND IN THE FIELD FOR WELDING, CONNECTIONS, BOLT TORQUES AND GENERAL CONFORMANCE WITH THE STRUCTURAL DRAWINGS AND SPECIFICATIONS.
- NON-LOAD BEARING PARTITIONS SHALL BE A MINIMUM OF 25 mm CLEAR OF STRUCTURE.
- WALL PLATES (WP) SHALL HAVE LAST DIMENSION PARALLEL TO BEAM OR JOIST WEB. SEE SCHEDULE ON DRAWINGS.
- SEE LINTEL SCHEDULE AND WALL PLATE SCHEDULE ON S1-02.
- SEE TYPICAL NOTES, TYPICAL DETAILS, COLUMN AND FOOTING SCHEDULE AND ALL OTHER DRAWINGS.
- SEE SPECIFICATION FOR GRADE OF STRUCTURAL STEEL AND STEEL DECK.



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2	OCT/2022	ISSUED 90% FOR CLIENT REVIEW	
1	OCT/2022	ISSUED FOR CLIENT REVIEW	

THE CONTRACTOR SHALL CHECK ALL DIMENSIONS WITH THE LATEST ISSUE OF ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH WORK.

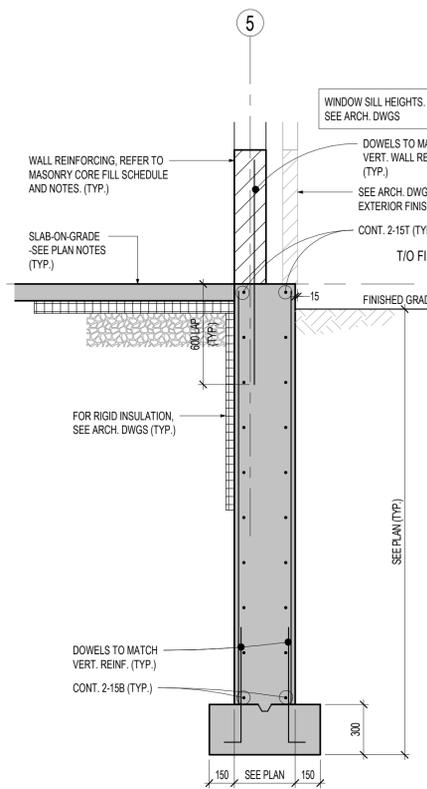


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Classrooms Addition

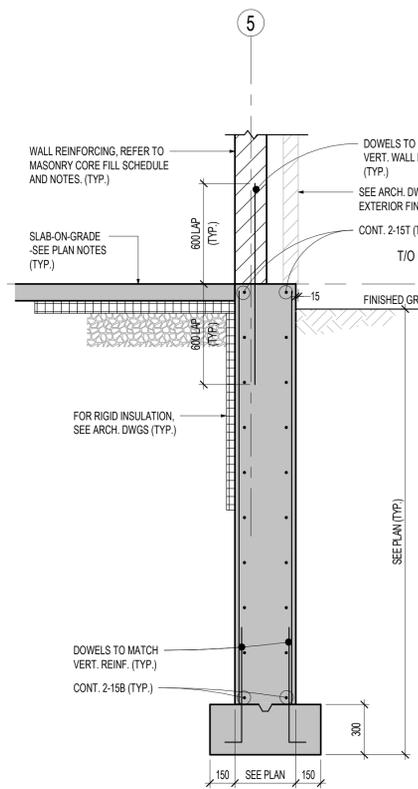
29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
ROOF FRAMING PLAN AND ROOF SECTIONS

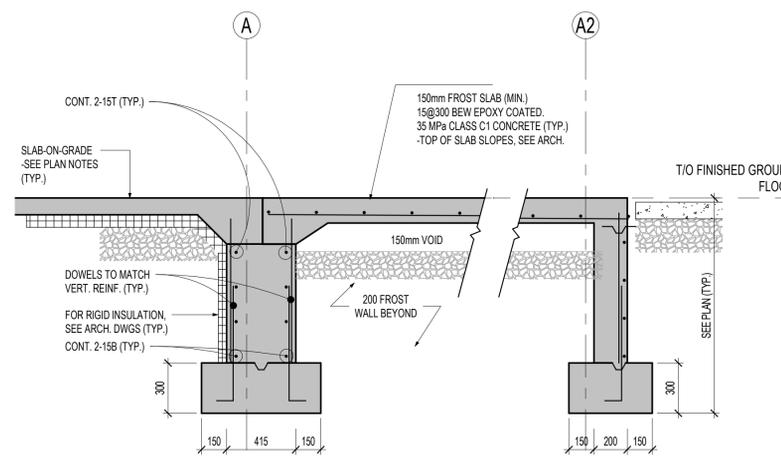
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DRAWN: AE	DRAWING NO. REV.
CHECKED: JG	S1-03 6
DATE: JULY 2024	



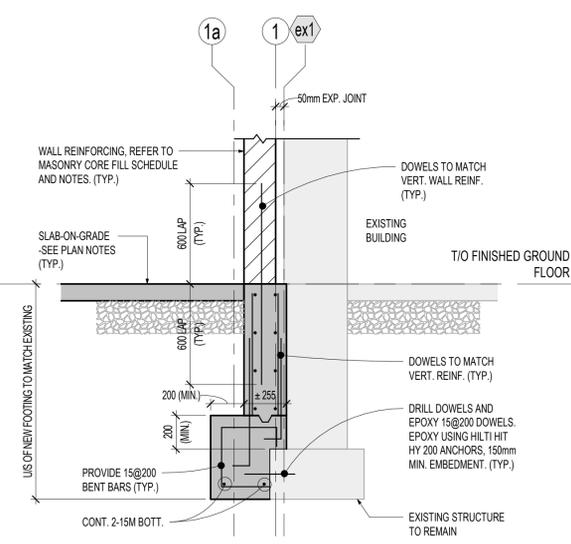
01 SECTION
S2-01 1:20



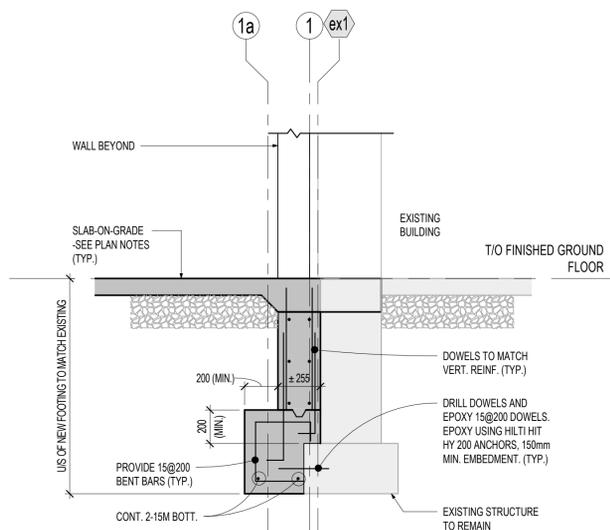
02 SECTION
S2-01 1:20



03 SECTION
S2-01 1:20



04 SECTION
S2-01 1:20



05 SECTION
S2-01 1:20

Refer to SI-04, wall reinforcement layout followed →

NOTE:
TYPICAL FOUNDATION WALL REINFORCING (UNLESS NOTED OTHERWISE ON SECTIONS OR SHEAR WALL ELEVATIONS)
10M @460 VEF
10M @320 HEF

FOR 190mm/200mm WALLS:
10M @320 VERT. CENTRE OF WALL
10M @200 HORIZ. CENTRE OF WALL

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3	DEC 09/2022	ISSUED FOR 90% CLIENT REVIEW
2	OCT 12/2022	ISSUED FOR 60% CLIENT REVIEW
1		ISSUED

THE CONTRACTOR SHALL CHECK ALL DIMENSIONS WITH THE LATEST ISSUE OF ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH WORK.

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29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
FOUNDATION SECTIONS

PROJECT NO: 20220316	SCALE: As indicated
DRAWN: AE	DRAWING NO. / REV: S2-01 / 6
CHECKED: JG	DATE: JULY 2024

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STANDARD ABBREVIATIONS	A01	GENERAL NOTES	A02	CAST-IN-PLACE CONCRETE NOTES	A03.1	CAST-IN-PLACE CONCRETE NOTES	A03.2
<p>@ -At ADJ -Adjustable AFB -Asphalt Impregnated Fibre Board ALT -Allamale ARCH -Architectural A, ROD(A, R) -Anchor Rod ASL -Accumulated Snow Loading</p> <p>B (BOT) -Bottom BEW -Bottom Each Way BLOS -Building BL -Bottom Lower Layer BM -Beam BM/L -Bottom Middle Layer BNT -Base Nominal Thickness B.O.F. -Bottom of Footing BP -Baseplate BSMT -Basement BUL -Bottom Upper Layer</p> <p>C -Standard Channel CA -Camber Above CANT -Cantilever C/C (c/c) -Centre to Centre CJ -Control Joint CL -Centaline COL -Column COMP -Compressible CONC -Concrete CONST -Construction CONST JT (CJT) -Construction Joint CONT (CONTIN) -Continuous CW -Complete With</p> <p>D FR -Douglas Fir DET -Detail DIAG -Diagonal Ø (DIA) -Diameter DM -Dimension DJ -Double Joist DL -Dead Load DO -Ditto DWG -Drawing DWL -Down DTL -Double Tee</p> <p>E-W -East-West EA -Each EE -Each End EF -Each Face ELECT -Electrical ELEV (EL) -Elevator EQ -Equal ES -Each Side EW -Each Way EXIST -Existing EXP JT -Expansion Joint EXT -Exterior</p> <p>FDN -Foundation FF -Far Face FIN -Finished FL -Floor FMC -Full Moment Connection FT -Foot / Feet FTG -Footing</p> <p>GA -Gauge GALV -Galvanized GEN -General</p> <p>H (HOR) -Horizontal HEF -Horizontal Each Face HIF -Horizontal Inside Face HO -Horizontal Outside Face HSS -Horizontally Slotted Connection HSSC -Hollow Structural Section</p> <p>IF -Inside Face INT -Interior INVT -Invert JV -Joint</p> <p>kg -Kilogram kN/m -Kilo Newton Metres kN/m² -Kilo Newton per Square Metre kN/m³ -Kilo Newton per Metre kPa -Kilo Pascals</p> <p>L -Angle LB -Pounds LG -Long LL -Line Load / Lower Layer LLH -Long Leg Horizontal LLV -Long Leg Vertical LSSJ -Long Span Steel Joists LVL -Laminated Veneer Lumber</p> <p>m -Metre MAX -Maximum MEDH -Mechanical MEZZ -Mezzanine MIN -Minimum MISC -Miscellaneous ML -Middle Layer MLL -Middle Lower Layer mm -Millimetre MS -Metal MOM (M) -Moment MPa -Mega Pascals MUL -Middle Upper Layer</p> <p>N-S -North-South NE -Near Face NIC -Not in Contact No. (#) -Number NTS -Not to Scale</p> <p>O/S -Open Web Steel Joist</p> <p>Pa -Pascal PC -Precast PL -Plate PFL -Pounds per Lineal Foot PREL -Preliminary PROJ -Projection PSF -Pounds per Square Foot PSI -Pounds per Square Inch PT -Parallel Strand Lumber PTL -Pressure Treated</p> <p>R -Reaction RAD -Radius REF -Reference REIN^F -Reinforcing REQD -Required REV -Revision/Revised Rt -Factored Vertical Reaction RW -Reinforced With</p> <p>S -Standard Beam SDF -Step Down Footing SDL -Superimposed Dead Load SECT -Section SL -Slab SO -Square SOG -Slope on Grade S.P.F. -Spruce/Pine/Fir SPEC -Specifications ST -Steel STD -Standard STR -Straight STRUCT -Structural</p> <p>T -Top TEMP -Temperature TI -Factored Tension Force TJ -Tie Joist TLL -Top Lower Layer TLM -Top Lower Torsional Moment TML -Top Middle Layer TOP -Top of Deck T.O.F. -Top of Footing TOS, T/S -Top of Slab TOST -Top of Steel TSF -Tons per Square Foot TUL -Top Upper Layer TYP -Typical</p> <p>UL -Upper Layer UN -Unless Noted UN.O -Unless Noted Otherwise US -Upside USD -Underside of Deck</p> <p>V (VERT) -Vertical VPF -Vertically Braced Framing VEF -Vertical Each Face VIF -Vertical Inside Face VOF -Vertical Outside Face VSC -Vertically Slotted Connection</p> <p>W -Wide Flange Beam WLF -Welded Wide Flange Beam WWF (WWM) -Welded Wire Fabric Mesh</p>	<p>1. GENERAL 1.1. DESIGN AND CONSTRUCTION IS TO CONFORM TO THE REQUIREMENTS OF THE 2012 ONTARIO BUILDING CODE, AND ANY APPLICABLE REQUIREMENTS OR BY-LAW OF THE AUTHORITY HAVING JURISDICTION. REFER ALSO TO TYPICAL DETAILS, NOTES UNDER PLANS AND SCHEDULES ON THE STRUCTURAL DRAWINGS, AND TO THE SPECIFICATION, ALL CODES, MANUALS, STANDARDS AND SPECIFICATIONS REFERRED TO SHALL BE THE SPECIFIC EDITION REFERENCED IN APPLICABLE BUILDING CODE INCLUDING ALL REVISIONS AND ADDENDA. ALL DIMENSIONS, OTHER THAN PURELY STRUCTURAL DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS MUST BE CHECKED AGAINST THE ARCHITECTURAL DRAWINGS AND ANY INCONSISTENCIES REPORTED TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK. STRUCTURAL DRAWINGS MUST NOT BE SCALED. 1.2. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS AND SIZES OF OPENINGS, TRENCHES, PITS, Sumps, EQUIPMENT, SLEEVES, DEPRESSIONS, GROOVES AND CHAMFERS NOT INDICATED ON THE STRUCTURAL DRAWINGS. UNLESS SPECIFICALLY NOTED OTHERWISE, THE ABOVE ITEMS WHERE SHOWN ON THE STRUCTURAL DRAWINGS ARE INDICATED ONLY APPROXIMATELY AS TO SIZE AND LOCATION. 1.3. UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS, NO PROVISION HAS BEEN MADE IN THE DESIGN FOR CONDITIONS OCCURRING DURING CONSTRUCTION. THE CONTRACTOR IS TO PROVIDE ALL NECESSARY BRACING AND SHORING REQUIRED FOR STRESSES AND INSTABILITY OCCURRING FROM ANY CAUSE DURING CONSTRUCTION. THE CONTRACTOR SHALL ACCEPT FULL RESPONSIBILITY FOR ALL SUCH MEASURES. IT SHALL ALSO BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL NECESSARY BRACING, SHORING, SHEET PILING OR OTHER TEMPORARY SUPPORTS OF SAFEGUARD ALL EXISTING OR ADJACENT STRUCTURES AFFECTED BY THIS WORK. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR CONSULTANTS REVIEW.</p> <p>2. SHOP DRAWINGS, PLACING DRAWINGS AND BAR LISTS 2.1. FOR ALL STRUCTURAL COMPONENTS SHOWN ON THE STRUCTURAL DRAWINGS, SUBMIT COPIES OF SHOP DRAWINGS AS DIRECTED FOR REVIEW BY THE STRUCTURAL CONSULTANT SHOP DRAWINGS TO SHOW COMPLETE INFORMATION FOR THE FABRICATION AND ERECTION OF THE STRUCTURAL COMPONENTS. 2.2. REVIEW OF SHOP DRAWINGS BY THE STRUCTURAL CONSULTANT IS ONLY TO ASSESS THAT THE SUBMITTED SHOP DRAWINGS REFLECT THE INTENT OF THE STRUCTURAL DESIGN. 2.3. REVIEW BY THE STRUCTURAL CONSULTANT SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR SEEING THAT THE WORK IS COMPLETE, ACCURATE AND IN CONFORMITY WITH THE STRUCTURAL DRAWINGS AND SPECIFICATIONS.</p> <p>3. INSPECTION AND TESTING 3.1. A SOLS CONSULTANT AND AN INDEPENDENT INSPECTION AND TESTING COMPANY ARE TO BE ENGAGED TO CARRY OUT THE FOLLOWING SERVICES 3.1.1. BEARING SOIL - REFER TO NOTES ON STRUCTURAL DRAWINGS AND ALSO TO THE SOIL REPORT. 3.1.2. FILL UNDER SLAB ON GRADE - CONFORM THAT FILL MATERIAL USED IS SATISFACTORY AND THAT THE REQUIRED DEGREE OF COMPACTION HAS BEEN ATTAINED. 3.1.3. CAST-IN-PLACE AND PRECAST CONCRETE - ROUTINE INSPECTION OF MATERIALS, INCLUDING SLUMP, CYLINDER AND AIR ENTRAINMENT TESTS AND REINFORCING ROD TESTS WHEN REQUIRED OR DIRECTED IN ACCORDANCE WITH CSA STANDARD A23.2. 3.1.4. THE PROJECT SUPERINTENDENT IS TO ADVISE THE STRUCTURAL CONSULTANT A MINIMUM OF 24 HOURS IN ADVANCE OF A CONCRETE POUR FOR A REVIEW OF PREPARATIONS. 3.1.5. STRUCTURAL STEEL AND OWSJ - ROUTINE SHOP AND FIELD INSPECTION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS CSA S16. 3.1.6. STEEL DECK - SEE STEEL DECK NOTES. 3.1.7. MASONRY - WHEN REQUIRED OR DIRECTED, CONCRETE BLOCKS SHALL BE TESTED IN ACCORDANCE WITH ASTM C140 BRICKS IN ACCORDANCE WITH CAN/CSA A82 AND MORTAR AND/OR GROUT IN ACCORDANCE WITH CSA A179. 3.2. ALL INSPECTION AND TESTING SERVICES ARE TO BE PERFORMED BY COMPANIES CERTIFIED BY THE CANADIAN STANDARDS ASSOCIATION AND FOR WELDING, INSPECTORS ARE TO BE CERTIFIED BY THE CANADIAN WELDING BUREAU.</p> <p>4. FOUNDATIONS 4.1. REFER TO NOTES UNDER FOUNDATION PLANS, ALL EXTERIOR FOOTINGS OR OTHER FOOTINGS EXPOSED TO FREEZING IN THE FINISHED BUILDING SHALL BE FOUND AT A MINIMUM OF 1200mm (4'-0") BELOW FINISHED GRADE, UNLESS OTHERWISE NOTED. FOOTINGS EXPOSED TO FROST ACTION DURING CONSTRUCTION SHALL BE PROTECTED BY A MINIMUM OF 1200mm (4'-0") OF EARTH OR ITS EQUIVALENT SUFFICIENT TO PREVENT FREEZING. 4.2. THE LINE OF SLOPE BETWEEN ADJACENT EXCAVATIONS FOR FOOTINGS OR ALONG STEPPED FOOTINGS SHALL NOT EXCEED A RISE OF 7 IN A RUN OF 10, MAXIMUM STEP APPROX. 600mm (2'-0"). 4.3. PIER DEPTHS AND FOOTING ELEVATIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE BASED UPON INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THE STRUCTURAL DRAWINGS. 4.4. IF ACTUAL JOB SITE OR SOIL CONDITIONS VARY FROM THOSE ASSUMED, THEN WRITTEN DIRECTIONS MUST BE OBTAINED FROM THE STRUCTURAL CONSULTANT BEFORE PROCEEDING WITH THE WORK. 4.5. KEEP EXCAVATIONS CONTINUOUSLY DRY BEFORE CONCRETE IS PLACED. IF THE SOIL IS SOFTENED BY WATER, THE EXCAVATION SHALL BE EXTENDED BELOW THE SOFTENED MATERIAL AND THE BOTTOM OF THE FOOTINGS LOWERED TO SUIT.</p> <p>5. BACKFILLING AND COMPACTION 5.1. SLABS ON-GRADE AND ALL STRUCTURAL ELEMENTS FRAMING INTO WALLS WHICH RETAIN EARTH MUST BE IN PLACE BEFORE BACKFILLING. 5.2. AT FOUNDATION WALLS WITH GRADE BOTH SIDES, UNLESS ADEQUATELY SHORED, BACKFILL AND COMPACT EACH SIDE OF WALL SIMULTANEOUSLY. 5.3. UNDER SLAB ON-GRADE, REMOVE SOFT SPOTS, ORGANIC AND FOREIGN MATTER IN THE SUB-GRADE, (WHERE SUB-GRADE CONSISTS OF COMPACTED FILL, REFER TO SPECIFIC NOTES ON THE DRAWINGS). 5.4. BACKFILL UNDER SLAB ON-GRADE, IN FOOTING EXCAVATIONS AND IN TRENCHES ONLY WITH APPROVED MATERIAL, UNLESS SPECIFICALLY NOTED OTHERWISE. BACKFILLING SHALL BE CARRIED OUT IN MAXIMUM OF 200mm (8") THICK LIFTS OF LOOSE FILL EACH COMPACTED TO A MINIMUM OF 96% STANDARD PROCTOR MAXIMUM DRY DENSITY. 5.5. UNLESS OTHERWISE NOTED IN GEOTECHNICAL REPORT, PROVIDE IMMEDIATELY UNDER SLABS ON-GRADE A MINIMUM OF 200mm (8") OF COMPACTED (MTC) GRANULAR B² MATERIAL, COMPACTION TO ACHIEVE A MINIMUM OF 98% STANDARD PROCTOR MAXIMUM DRY DENSITY.</p>	<p>1. GENERAL 1.1. PROVIDE ALL LABOUR, MATERIALS, TOOLS AND EQUIPMENT REQUIRED TO CARRY OUT THE WORK. 1.2. REFER ALSO TO GENERAL NOTES, NOTES UNDER PLANS AND SCHEDULES, TYPICAL DETAILS AND SPECIFICATION. 2. PRODUCTS 2.1. PORTLAND CEMENT, WATER AND AGGREGATES SHALL CONFORM TO CSA STANDARD A23.1. 2.2. PROVIDE AN APPROVED WATER REDUCING ADDITIVE IN ALL CONCRETE. PROVIDE AN APPROVED AIR ENTRAINING ADDITIVE IN ALL CONCRETE WHICH WILL BE EXPOSED TO A FREEZE/THAW CYCLE AND/OR THE ACTION OF DE-ICING SALT. ADMIXTURES SHALL CONFORM TO CSA STANDARD A23.1. 2.3. FORMWORK SHALL CONFORM TO CSA STANDARD A23.1 AND CSA STANDARD S269.1 AND FALSEWORK SHALL CONFORM TO CSA S269.1. 2.4. IF SO INSTRUCTED, THE DESIGNS FOR THE FORMWORK SHALL BE SUBMITTED FOR REVIEW BEFORE CONSTRUCTION. FORMWORK DRAWINGS AND DESIGN SHALL BEAR THE STAMP OF A LICENSED PROFESSIONAL ENGINEER. 2.5. PROVIDE SLAB AND BEAM FORMS WITH AN UPWARD CAMBER AS INDICATED ON PLANS THUS WHERE CAMBERS ARE NOT NOTED ON PLANS, CAMBER SLABS AND BEAMS FOR SPAN/50 AT INTERIOR BAYS, AND CANTILEVER LENGTH/250 AT CANTILEVER. CAMBER BOTH NOTED ON THE UNDERSIDE AND TOP OF CONCRETE IN A PARABOLIC PROFILE, WHILE MAINTAINING THE INDICATED STRUCTURAL THICKNESS OF MEMBERS. 2.6. PROVIDE STANDARD ADJUSTABLE MASONRY ANCHOR SLOTS FOR ALL MASONRY FACING OR ABUTTING CONCRETE FACES. 2.7. PROVIDE AND/OR INSTAL STANDARD ADJUSTABLE INSERTS AND ALL OTHER CAST-IN INSERTS AS REQUIRED BY THE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATION. 2.8. REINFORCING STEEL UNLESS SPECIFICALLY NOTED, SHALL BE DEFINED BARS CONFORMING TO CAN/CSA - G30.18M GRADE 400 (S8000 PSI). WELDED WIRE FABRIC TO BE SUPPLIED IN FLAT SHEETS ONLY, UNLESS APPROVED OTHERWISE. 2.9. REINFORCING SHALL BE DETAILED, BENT, PLACED AND SUPPORTED TO CONFORM TO A23.1 DETAILING MANUAL AND THE MANUAL OF STANDARD PRACTICE PUBLISHED BY THE INSTITUTE OF CANADA. 2.10. DRY-PAK GROUT TO BE 1 PART PORTLAND CEMENT TO 1 1/2 PARTS SAND TO 2 PARTS OF 8 mm PEA GRAVEL WITH ONLY SUFFICIENT WATER TO DAMPEN MIXTURE. COMPRESSIVE STRENGTH 50MPa AT 28 DAYS. 2.11. NON-SHRINK GROUT TO BE AN APPROVED PRE-MIXED PROPRIETARY PRODUCT. 2.12. PROVIDE APPROVED EXTRUDED PVC WATERSTOPS OF SIZE AND STYLE INDICATED, WITH PRE-WELDED CORNERS AND INTERSECTIONS. SEE ALSO TYPICAL DETAILS. 2.13. CURING AND SEALING COMPOUNDS WHERE APPROVED FOR USE TO CONFORM TO ASTM STANDARD C309. GENERALLY ALL CONCRETE SURFACES ARE TO BE SEALED UNLESS NOTED OTHERWISE. COMPOUNDS ARE TO BE COMPATIBLE WITH APPLIED FINISHES. 2.15. SHEAR REINFORCEMENT AT SLAB CONNECTION AS SHOWN ON DRAWINGS AND DETAILS, SHALL BE STURDIALSB AS MANUFACTURED BY DECON®. THE COMPLETE AND FINISHED STURDIALSB SHALL BE ICC ES EVALUATED AND WELDING SHALL TAKE PLACE IN A ICC ES APPROVED AND AUDITED FACILITY. STURDIALSB SHALL CONFORM TO THE LATEST UPDATE OF ASTM A1044. 3. EXECUTION 3.1. MINIMUM COMPRESSIVE STRENGTH FOR CONCRETE @ 28 DAYS SHALL BE AS NOTED ON THE DRAWINGS (20MPa MINIMUM). 3.2. SLUMP AT THE POINT OF DISCHARGE SHALL BE CONSISTENT AT 80 mm ±30mm (3" ± 1 1/8") UNLESS NOTED OTHERWISE. GREATER SLUMPS ARE NOT ACCEPTABLE. 3.3. CONCRETE MIXING, TRANSPORTATION, HANDLING AND PLACING SHALL CONFORM TO CSA STANDARD A23.1. 3.4. CONSTRUCTION JOINTS FOR WALLS ARE BASED UPON VERTICAL JOINTS AT A MAXIMUM SPACING OF 1000mm (3'-0") UNLESS CONTROL JOINTS ARE PROVIDED AS PER DETAIL C7W2. TOTAL LENGTH OF FOUR TO BE DISCUSSED WITH ENGINEER PRIOR TO PROCEEDING. 3.5. CONSTRUCTION JOINTS FOR WALLS, SLABS, AND BEAMS NOT SHOWN ON THE DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL CONSULTANT BEFORE CONSTRUCTION. GENERALLY JOINTS IN SLABS SHALL BE AT RIGHT ANGLES TO THE SPANS, AT MID-SPAN IF POSSIBLE AND CLEAR OF SUPPORTS AND POINT LOADS. 3.6. INSERTS, FRAME-OUTS, SLEEVES, BRACKETS, CONDUITS AND FASTENING DEVICES, SHALL BE INSTALLED AS REQUIRED BY THE DRAWINGS AND SPECIFICATIONS IN A MANNER THAT SHALL NOT REDUCE THE STRUCTURAL STRENGTH OF THE SYSTEM. BE SO INSTALLED THAT THE SHALL NOT REQUIRE THE CUTTING, BENDING, OR DISPLACEMENT OF THE REINFORCING OTHER THAN AS SHOWN ON THE TYPICAL DETAILS. 3.7. ELECTRICAL CONDUIT SHALL NOT PASS THROUGH A COLUMN, SHALL NOT BE LARGER IN OUTSIDE DIAMETER THAN 1/3 SLAB THICKNESS OR WALL OR BEAM IN WHICH IT IS EMBEDDED, SHALL NOT BE SPACED CLOSER THAN 3 DIAMETERS ON CENTRE UNLESS APPROVED AND HAVE A MINIMUM CONCRETE COVER OF 25 mm (1") AND UNLESS SPECIFICALLY PERMITTED OTHERWISE, SHALL NOT RUN HORIZONTALLY IN A CONCRETE WALL. 3.8. MASONRY AND DRIVEN FASTENERS REQUIRED IN THE CONCRETE AFTER THE CONCRETE IS PLACED SHALL BE APPROVED BY THE STRUCTURAL CONSULTANT BEFORE PROCEEDING. 3.9. FINISHING, REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR REQUIRED FINISH TO EXPOSED CONCRETE. ALL HONEYCOMBING SHALL BE CUT OUT AND FILLED. FLOOR FINISHES SHALL BE AS REQUIRED BY THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS AND SHALL CONFORM TO CSA STANDARD A23.1. 3.10. TOLERANCES FOR PLACING STRUCTURAL CONCRETE, REINFORCING STEEL, CAST-IN HARDWARE AND FOR FLOOR AND ROOF FINISHES SHALL BE AS SPECIFIED IN CSA STANDARD A23.1. 3.11. MINIMUM REINFORCING FOR ANY CONCRETE WALL TO BE AS SHOWN ON TYPICAL DETAIL FOR CONCRETE WALLS. 3.12. MINIMUM REINFORCING FOR ANY SUSPENDED SLAB SHALL BE TEMPERATURE BARS BOTTOM EACH WAY PLUS 10M @ 400 (16#) DOWELS 600x600 (2'-0" x 2'-0") TOP AROUND PERIMETER. REFER TO TYPICAL DETAIL OF ONE WAY SLABS. 3.13. PERFORM SURVEYS OF SLABS AS INDICATED IN SPECIFICATIONS.</p>	<p>3.14. GENERAL REQUIREMENTS FOR CUTTING AND DRILLING INTO CONCRETE (A) DO NOT DRILL INTO CORE THROUGH, SAW-CUT OR CHIP THE CONCRETE STRUCTURE WITHOUT WRITTEN AUTHORIZATION BY THE STRUCTURAL CONSULTANT. (B) UNLESS NOTED OTHERWISE, PRIOR TO CUTTING, CORING OR DRILLING INTO THE CONCRETE STRUCTURE, LOCATE EXISTING CONCRETE REINFORCEMENT AND EMBEDDED SERVICES AT THAT LOCATION USING SUITABLE SCANNING DEVICE (I.E. X-RAYS, GROUND PENETRATION RADAR (GPR), LOCAL CHIPPING OF SLAB - ONLY WHERE APPROVED BY THE STRUCTURAL CONSULTANT, ETC.) AS AUTHORIZED BY PROPERTY MANAGER IF APPLICABLE. (C) GPR SCANNING MUST BE DONE BY TRAINED TECHNICIANS WITH AT LEAST 5 YEARS OF EXPERIENCE AS SUCH. (D) GPR SCANNING DEVICES MUST BE CAPABLE OF ACCURATELY LOCATING REBAR IN A CONCRETE SLAB TO A MINIMUM DEPTH OF 300 mm, THIN A HORIZONTAL TOLERANCE OF ± 25 mm AND A VERTICAL (DEPTH) TOLERANCE OF THE LARGER OF ± 25 mm OR ± 15% OF THE REBAR DEPTH. (E) AFTER ALL THE EXISTING REINFORCEMENT AND SERVICES HAVE BEEN LOCATED, NOTIFY THE STRUCTURAL CONSULTANT, WHO WILL REVIEW AND APPROVE THE PROPOSED LOCATION OF OPENINGS, CORES OR DRILLED HOLES. MAKE ANY NECESSARY ADJUSTMENTS TO THE HOLE LOCATIONS AS DIRECTED BY THE STRUCTURAL CONSULTANT. (F) THE REVIEW BY THE STRUCTURAL CONSULTANT IS LIMITED ONLY TO THE LOCATION OF THE PROPOSED CORES OR DRILLED HOLES THROUGH THE EXISTING STRUCTURE AND IT IS BASED ON THE ASSUMPTION THAT THE X-RAY OR SCAN RESULTS LOCATING SLAB REINFORCEMENT AND EMBEDDED SERVICES ARE COMPLETE AND ACCURATE. STEPHENSON ENGINEERING LTD. TAKES NO RESPONSIBILITY FOR THE ACCURACY OF THE X-RAY OR SCAN RESULTS. (G) CORE DRILL NEW HOLES FOR PIPES TO A DIAMETER NOT LARGER THAN THE OUTSIDE PIPE DIAMETER PLUS 25MM. DO NOT CUT EXISTING REINFORCEMENT OR SERVICES WITHOUT PRIOR APPROVAL OF THE CONSULTANT. (H) WHERE RECTANGULAR OPENINGS ARE TO BE CUT, PRE-DRILL THE CORNERS USING A 100 MM DIAMETER CORE DRILL OR DRILL A SERIES OF HOLES TO PREVENT OVER CUTTING OF THE CORNERS.</p> <p>4. QUALITY CONTROL 4.1. FOR INSPECTION AND TESTING, SEE GENERAL NOTES AND/OR SPECIFICATION.</p>				

STRUCTURAL STEEL NOTES	A04A	LOAD BEARING MASONRY NOTES	A06	LOAD BEARING MASONRY NOTES	A06	ALTERATIONS AND / OR CONNECTIONS TO EXISTING STRUCTURE	A15
<p>1. GENERAL 1.1. STRUCTURAL STEEL DESIGN DETAILS AND CONNECTIONS SHALL CONFORM TO CSA STANDARD S16 AND SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER EXPERIENCED IN THIS TYPE OF WORK. 1.2. REFER ALSO TO GENERAL NOTES, NOTES UNDER PLANS AND TO THE SPECIFICATION. 1.3. WELDING SHALL CONFORM TO CSA STANDARD W59 AND BE PERFORMED BY A FABRICATOR CERTIFIED TO CSA W47.1. 1.4. BEAM CONNECTIONS SHALL BE DESIGNED FOR A MINIMUM OF FACTORED VERTICAL SHEAR FORCE OF 50% OF THE BEAM SHEAR CAPACITY, UNLESS OTHERWISE NOTED, AND IN NO CASE BE LESS THAN THE LOADS SHOWN ON OR IMPLIED BY THE DRAWINGS, WHERE BOLTED CONNECTIONS ARE UTILIZED, A MINIMUM OF TWO BOLTS PER CONNECTION SHALL BE USED. 1.5. MEMBER CONNECTIONS SHALL BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER FOR FORCES AND MOMENTS INDICATED, SHOP DRAWINGS (AND CALCULATIONS) BEARING THE STAMP AND SIGNATURE OF THE REGISTERED PROFESSIONAL ENGINEER RESPONSIBLE FOR THE DESIGN SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION AND ERECTION.</p> <p>2. PRODUCTS 2.1. STRUCTURAL STEEL SECTIONS SHALL CONFORM TO CSA G40.20/G40.21 2.1.1. S SHAPES, PLATES AND RODS - GRADE 300 W 2.1.2. HSS SECTIONS - GRADE 300W (CLASS UN) 2.1.3. WWF SHAPES, WT SHAPES AND W SHAPES, CHANNELS, ANGLES - GRADE 350W 2.2. BOLTS FOR CONNECTIONS TO CONFORM TO ASTM F1552/S1552M, GRADE A325, UNLESS NOTED. 2.3. ANCHOR RODS FOR BASE PLATES, BEARING PLATES AND WELD PLATES TO CONFORM TO ASTM F1554, GRADE 36, UNLESS NOTED. 2.4. NUTS AND WASHERS TO CONFORM TO ASTM A563 AND ASTM F436. 2.5. SHEAR STUDS WHERE REQUIRED TO CONFORM TO ASTM A108, WELDING TO CONFORM TO CSA W59. 2.6. WELDING MATERIALS TO CONFORM TO CSA W48. 2.7. SURFACE PREPARATION AND PRIMER PAINT FOR STRUCTURAL STEEL MEMBERS INSIDE VAPOUR BARRIER TO CONFORM TO CISC/CPMA 17/8a OR CISC/CPMA 2.75 (IF EXPOSED TO WIND, UNLESS NOTED ON DRAWINGS OR SPECIFICATIONS. 2.8. HOT DIP GALVANIZING WITH A MINIMUM ZINC COATING OF 600g/m² UNLESS OTHERWISE SPECIFIED.</p> <p>3. EXECUTION 3.1. FABRICATION, HANDLING AND ERECTION TO CONFORM TO CAN/CSA - S16. 3.2. PROVIDE A MINIMUM OF 2-12 mm (1/2") DIAMETER BY 250 (10") LONG WALL ANCHORS FOR ALL BEAM AND JOIST WALL PLATES ON MASONRY, OR AN APPROVED EQUAL, UNLESS OTHERWISE NOTED. BEAMS AND JOIST SHOES TO BE WELDED TO BEARING PLATES. 3.3. PROVIDE ADJUSTABLE ANCHORS TO ALL STEEL TO BE BUILT INTO, ABUTTED BY, OR FACED WITH MASONRY (REFER ALSO TO TYPICAL DETAILS IF SHOWN). SPACING OF ANCHORS TO BE: FOR VERTICAL SPACING _____ 600 (24") MAX. CENTRES. FOR HORIZONTAL SPACING _____ 10 TIMES WALL THICKNESS (MAX. 2000 (8'-8") CENTRES). (* NOTE, USE BACK-UP WITH THE THICKNESS ONLY, FOR CAVITY WALLS). 3.4. WHERE STEEL PROVIDES LATERAL BRACING ONLY TO MASONRY (I.E. DOES NOT SUPPORT MASONRY) ANCHORS SHALL PERMIT DIFFERENTIAL VERTICAL MOVEMENT BETWEEN STRUCTURAL MEMBERS AND MASONRY. 3.5. PROVIDE 1.78X76X6 4MM ANGLE SEATS FOR ALL STEEL DECK AT LOCATIONS WHERE THE CONNECTION TO SUPPORTING FRAMING IS INTERRUPTED (E.G. AT COLUMNS). 3.6. CLEAN, PREPARE SURFACES AND SHOP PRIME STRUCTURAL STEEL WITH ONE COAT OF SPECIFIED PRIMER PAINT IN ACCORDANCE WITH CAN/CSA - S16, EXCEPT WHERE MEMBERS ARE TO BE ENCASED IN CONCRETE, OR TO RECEIVE SPRAY APPLIED FIRE PROOFING. FIELD "TOUCH-UP" BOLTS, WELDS, BURNED OR SCRAPED SURFACES AFTER ERECTION. 3.7. PROVIDE ALL NECESSARY TEMPORARY BRACING TO KEEP STRUCTURE SAFE AND PLUMB. BRACING SHOWN ON STRUCTURAL DRAWINGS IS PERMANENT FOR FINISHED BUILDING ONLY. 3.8. CO-ORDINATE WITH MECHANICAL AND ELECTRICAL CONSULTANTS AND SUB-TRADES WHOSE WORK MAY AFFECT DETAILING, FABRICATION AND ERECTION OF THE STEEL STRUCTURE. 3.9. TOLERANCES: VARIATION FROM PLUMB AND LEVEL, EXTERIOR COLLARS AND COLUMNS AT ELEVATOR SHAFTS, AND SPANDREL BEAMS INCLUDING ANGLES 1:1000 MAX. ±25 mm (1 1/8") IN 10'-0" MAX. 1") OTHER PIECES _____ 1:500 (1/4" IN 10'-0") 3.10. NO HOLES OTHER THAN THOSE SHOWN ON SHOP DRAWINGS SHALL BE MADE IN ANY STEEL MEMBER WITHOUT WRITTEN PERMISSION OF THE STRUCTURAL CONSULTANT.</p> <p>4. QUALITY CONTROL 4.1. AN INDEPENDENT INSPECTION AND TESTING COMPANY IS TO INSPECT STRUCTURAL STEEL AND STEEL DECK IN THE SHOP AND IN THE FIELD FOR WELDING, CONNECTIONS, BOLT TORQUES, AND GENERAL CONFORMANCE WITH THE STRUCTURAL DRAWINGS AND SPECIFICATIONS. 4.2. SEE SPECIFICATIONS FOR ADDITIONAL INSPECTION AND TESTING REQUIREMENTS.</p>	<p>1. GENERAL 1.1. UNLESS OTHERWISE NOTED OR SHOWN ON THE DRAWINGS, THE FOLLOWING INDICATES THE MINIMUM REQUIREMENTS APPLICABLE TO STRUCTURAL LOAD BEARING MASONRY. 1.2. REFER ALSO TO ARCHITECTURAL DRAWINGS AND / OR THE SPECIFICATION FOR REQUIREMENTS OTHER THAN STRUCTURAL, AND FOR NON-LOAD BEARING WALLS AND PARTITIONS. 1.3. MASONRY CONSTRUCTION TO CONFORM TO CSA STANDARD S304.1.</p> <p>2. PRODUCTS 2.1. CONCRETE BLOCKS TO BE MODULAR UNITS AS SHOWN ON THE ARCHITECTURAL DRAWINGS AND /OR SPECIFICATION, AND UNLESS OTHERWISE NOTED SHALL BE: 2.1.1. FOR BEARINGS, AND EXTERIOR EXPOSED WALLS USE NORMAL WEIGHT LOAD BEARING UNITS. STANDARD HOLLOW _____ TYPE H / 15 / A / M. 75% SOLID _____ TYPE S / 15 / A / M. 100% SOLID _____ TYPE SS / 15 / A / M. 2.1.2. FOR INTERIOR ABOVE GRADE WALLS USE EITHER: 2.1.2.1. LIGHTWEIGHT LOAD BEARING BLOCKS. STANDARD HOLLOW _____ TYPE H / 15 / C / M. 75% AND 100% SOLID _____ TYPE S / 15 / C / M. 2.1.2.2. ULTRA LIGHT (OR EQUIVALENT) BLOCKS. STANDARD HOLLOW _____ TYPE H / 15 / D / M. (REFER TO ARCHITECTURAL DRAWINGS AND SCHEDULES FOR LOCATIONS AND TYPES). 2.2. CLAY BRICKS: TO CONFORM TO ONE OR MORE OF CSA STANDARDS A82 (SERIES) SEE ARCHITECTURAL DRAWINGS AND / OR SPECIFICATIONS FOR TYPES AND STYLES OF BRICKS REQUIRED, UNLESS OTHERWISE NOTED, THE MINIMUM COMPRESSIVE STRENGTH (BRICK FLATWISE) GROSS AREA SHALL BE 20 MPa. 2.3. MORTAR: TO CONFORM TO CSA A179. FOR LAYING ALL LOAD BEARING CONCRETE BLOCKS _____ USE TYPE "S" MORTAR UNLESS NOTED. FOR LAYING ALL CLAY BRICKS _____ USE TYPE "N" MORTAR UNLESS NOTED. 2.4. MASONRY GROUT: TO CONFORM TO CSA A179. THE SLUMP SHALL BE 200mm TO 250mm (8" TO 10") AND THE MINIMUM 28 DAY COMPRESSIVE STRENGTH FOR "FINE" GROUT SHALL BE 5MPa. 2.5. MASONRY CONNECTORS (ANCHORS, FASTENERS AND TIES): SHALL CONFORM TO CSA A307, AND BE INSTALLED TO COMPLY WITH CSA A371. SPACING, STRENGTH AND GALVANIZING OF STRIP TIES, DOWEL ANCHORS, BAR ANCHORS, ROD ANCHORS, STRAP ANCHORS, WALL AND PARTITION ANCHORS SHALL COMPLY WITH CSA A370. 2.6. HORIZONTAL JOINT REINFORCEMENT FOR ALL MASONRY WALLS: THE FOLLOWING ARE MINIMUM REQUIREMENTS: 2.6.1. CONFORM TO CSA STANDARDS A370 AND A371. 2.6.2. REINFORCEMENT SHALL BE AN APPROVED CONTINUOUS "LADDER" TYPE, PREFABRICATED WITH 3.6mm DIAMETER (9 GAUGE) LONGITUDINAL AND CROSS WIRES. 2.6.3. SPACING - PROVIDE REINFORCING IN THE TOP COURSE IMMEDIATELY BELOW FLOOR AND ROOF BEARING LEVELS AND THE FIRST TWO COURSES ABOVE AND BELOW EVERY WALL OPENING. THE REINFORCING SHALL EXTEND 600mm (24") BEYOND SUCH OPENINGS. FOR THE REMAINDER OF WALLS, THE VERTICAL SPACING SHALL NOT EXCEED 400mm (16"). 2.6.4. SHALL BE A MIN. OF 150mm (6") FOR KNURLED WIRE AND 300mm (12") FOR PLAIN WIRE. LAPS SHALL BE STAGGERED A MINIMUM OF 750mm (30") FROM COURSE TO COURSE. REINFORCING SHALL NOT PASS THROUGH A VERTICAL CONTROL JOINT UNLESS OTHERWISE SHOWN. 2.6.5. CORROSION RESISTANT: JOINT REINFORCING FOR ALL WALLS IN CONTACT WITH SOIL, EXTERIOR WALLS AND WALLS IN A MOST ENVIRONMENT SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION TO ASTM A153,458 g/m²metre (1.5 sq. oz. bob). 2.6.6. COMPOSITE AND CAVITY WALLS: WHERE COURSING OF WYTHES DO NOT ALIGN OF WHERE IT IS DESIRABLE AND PERMITTED TO BUILD ONE WYTHE BEFORE THE OTHER, REINFORCING SHALL BE AN APPROVED ADJUSTABLE TYPE WITH A BOX OR EYE SECTION WHICH EXTENDS INTO THE COLLAR JOINT OR CAVITY AND RESTRAINS THE TRANSVERSE MOVEMENT OF THE TWO WYTHES. FOR CAVITY WALLS WITH RIGID INSULATION, EXTENSION SHALL BE DESIGNED TO HOLD THE INSULATION IN PLACE BY USE OF PLASTIC WEDGES OR APPROVED EQUAL. GALVANIZED HOOK STYLE "BOX TIES" OR "PIN-TIES" SHALL EXTEND INTO THE FACE WYTHE TO COMPLETE THE ASSEMBLY. 2.6.7. PROVIDE ALL PREFABRICATED CORNER AND TEE SECTIONS. 2.7. COMPOSITE WALLS - SHALL HAVE THE VERTICAL COLLAR JOINTS BETWEEN WYTHES COMPLETELY FILLED WITH MORTAR OR GROUT. 2.8. BOND BEAMS - MADE FROM LINTEL BLOCKS, OR HALF WEB BLOCKS, WHERE SHOWN ON STRUCTURAL DRAWINGS SHALL CONFORM TO CSA A371. 2.9. GROUTING - BY FILLING HOLES OF HOLLOW UNITS AND REINFORCED HOLLOW UNITS SHALL CONFORM TO CSA A179 (MORTAR IS NOT ACCEPTABLE). 2.10. EXPANSION AND CONTROL JOINTS: SHALL BE PROVIDED. SEE ARCHITECTURAL DRAWINGS AND OR SPECIFICATION FOR DETAILS.</p>	<p>3. EXECUTION 3.1. BEARING ON MASONRY: 3.1.1. MINIMUM BEARING ON MASONRY UNLESS OTHERWISE NOTED - BEAMS (STEEL, CONC., WOOD) _____ 200mm (8") NOMINAL LINTELS (STEEL, CONC., WOOD) _____ 150mm (6") NOMINAL JOISTS (STEEL, WOOD) _____ 100mm (4") NOMINAL SLABS (CAST-IN-PLACE, PRECAST) _____ 100mm (4") NOMINAL STEEL DECKING (ON WELD PLATE) _____ 100mm (4") NOMINAL 3.1.2. MASONRY BEARINGS SHALL BE OF SOLID BLOCKS (OR GROUTED SOLID) OR BRICKS LAID IN MORTAR. ALL JOINTS ARE TO BE FULLY FILLED WITH TYPE "S" MORTAR. 3.1.3. MIN. SIZE OF SOLID BEARINGS AT BEAMS AND LINTELS UNLESS NOTED SHALL BE EQUAL TO THE BEARING / WALL PLATE (WP) LENGTH AND FOR A DEPTH EQUAL TO THE BEARING / WALL PLATE (WP) LENGTH, AND IN NO CASE LESS THAN 400x1200 DEEP (16" x 8"), SYMMETRICAL UNDER BEARING POINT. 3.1.4. PROVIDE A MINIMUM OF ONE CONTINUOUS COURSE 200mm (8") OF SOLID OR GROUTED VOID BLOCKS OR BRICKS LAID IN MORTAR AT THE TOP COURSE IMMEDIATELY BELOW ALL FLOOR AND ROOF BEARING LEVELS. 3.2. TOLERANCES: UNLESS OTHERWISE NOTED ON THE ARCHITECTURAL DRAWINGS AND / OR SPECIFICATION, SHALL CONFORM TO CSA A371. 3.3. COLD WEATHER CONSTRUCTION - REQUIREMENTS AND PROTECTION SHALL CONFORM TO CSA A371 AND UNDER NO CIRCUMSTANCES SHALL MASONRY CONSTRUCTION BE PERMITTED WHEN THE AIR TEMPERATURE FALLS BELOW -12°C. 4. QUALITY CONTROL 4.1. WHEN REQUESTED SAMPLING AND TESTING SHALL CONFORM TO CSA STANDARDS S304.1 AND ASTM C140. REFER ALSO TO GENERAL NOTES.</p>	<p>ALTERATIONS AND/OR CONNECTIONS TO EXISTING STRUCTURE 1. COORDINATE PROPOSED SCHEDULE OF WORK WITH ALL THE SUBTRADES, CONSULTANTS AND OWNER. 2. SUBMIT PROPOSED SEQUENCE OF WORK TO CONSULTANT FOR REVIEW PRIOR TO START OF WORK. 3. INSPECT THE EXISTING BUILDING AND BECOME THOROUGHLY FAMILIAR WITH THE EXISTING CONDITIONS. NOTE DETAILS SHOWN ARE BASED ON INFORMATION FROM EXISTING BUILDING DRAWINGS ONLY. 4. CHECK ALL DRAWINGS AGAINST ACTUAL SITE CONDITIONS PRIOR TO FABRICATING ANY STRUCTURAL STEEL. REPORT DISCREPANCIES TO THE CONSULTANT BEFORE PROCEEDING WITH THE WORK. 5. PRIOR TO FABRICATION OF STRUCTURAL STEEL, OPEN UP ALL AREAS TO ALLOW THE INSTALLATION OF THE NEW STRUCTURAL WORK, AS WELL AS THE CONNECTION OF NEW WORK TO THE EXISTING WORK. TAKE ANY AND ALL NECESSARY FIELD MEASUREMENTS. MODIFY INSTALLATION METHODS AND METHODS OF CONNECTING TO SUIT SITE CONDITIONS FOUND AND TO THE APPROVAL OF THE CONSULTANT. CARRY OUT LOCAL REPAIRS TO THE EXISTING WORK AS NECESSARY AND AS DIRECTED BY THE CONSULTANT. 6. SHORE EXISTING WORK AS REQUIRED UNTIL ALL NEW WORK HAS BEEN COMPLETED AND REVIEWED BY THE CONSULTANT. 7. SHORE FLOORS AS REQUIRED TO SUPPORT CRANES, HOSTS AND OTHER CONSTRUCTION EQUIPMENT. 8. CONFORM TO ALL THE APPLICABLE CODES AND BYLAWS CONCERNING SAFETY, NOISE AND VIBRATIONS. 9. DO NOT CUT CONCRETE REINFORCEMENT UNLESS REVIEWED AND APPROVED BY THE CONSULTANT. 10. PERFORM CONCRETE SCANS (SEE NOTE #10 BELOW) AND MODIFY THE LAYOUT OF NEW THROUGH BOLTS, DRILLED ANCHORS AND OTHER ANCHORING DEVICES AS REQUIRED TO AVOID DAMAGING EXISTING CONCRETE REINFORCEMENT. 11. UNLESS NOTED OTHERWISE, ALL DOWELS ARE TO BE EPOXIED INTO THE EXISTING STRUCTURE USING HILTI HIT-RE-500 SYSTEM ADHESIVE SYSTEM, OR APPROVED ALTERNATIVE. 12. CUTTING OPENINGS AND HOLES IN EXISTING STRUCTURES: (A) PRIOR TO CUTTING AND CORING ANY OPENINGS IN EXISTING BUILDING, PROVIDE THE CONSULTANT WITH A SLEEVING DRAWINGS INDICATING THE SIZE AND LOCATION OF THE PROPOSED NEW OPENINGS RELATIVE TO THE EXISTING GRID LINES. EXISTING OPENINGS IN THE VICINITY OF THE NEW OPENING MUST ALSO BE SHOWN. (B) UNLESS SPECIFICALLY NOTED OTHERWISE, LOCATE EXISTING REINFORCEMENT AND ANY EMBEDDED SERVICES BY AN APPROPRIATE CONCRETE SCANNING METHOD (SEE NOTE #13). (C) AFTER ALL THE EXISTING REINFORCEMENT AND SERVICES HAVE BEEN LOCATED, NOTIFY THE CONSULTANT WHO WILL REVIEW AND APPROVE THE PROPOSED OPENING/ HOLE LOCATIONS PRIOR TO CUTTING/DRILLING. MAKE ANY NECESSARY ADJUSTMENTS TO THE HOLE LOCATIONS AS DIRECTED BY THE CONSULTANT. (D) CORE DRILL NEW HOLES FOR PIPES TO A DIAMETER NOT LARGER THAN THE OUTSIDE PIPE DIAMETER PLUS 25MM. DO NOT CUT EXISTING REINFORCEMENT OR SERVICES WITHOUT PRIOR APPROVAL OF THE CONSULTANT. (E) WHERE RECTANGULAR OPENINGS ARE TO BE CUT, PRE-DRILL THE CORNERS USING A 100 MM DIAMETER CORE DRILL OR DRILL A SERIES OF HOLES TO PREVENT OVER CUTTING OF THE CORNERS. (F) IN ANY AREAS WHERE THE CONSULTANT PERMITS THE CUTTING OF EXISTING REINFORCEMENT, THE CONTRACTOR SHALL EXAMINE THE CORE/OPENING AFTER DRILLING/CUTTING TO DETERMINE THE SIZE, COVER AND ORIENTATION OF ANY REINFORCEMENT THAT WAS CUT. THE CONTRACTOR IS TO MARK THIS INFORMATION ON THE SLEEVING DRAWING AND FORWARD A COPY OF IT TO THE CONSULTANT FOR HIS RECORDS.</p> <p>13. CONCRETE SCANS (A) LOCATE EXISTING CONCRETE REINFORCEMENT USING SUITABLE SCANNING DEVICE AS AUTHORIZED BY PROPERTY MANAGER (I.E. X-RAYS, GROUND PENETRATION RADAR (GPR), LOCAL CHIPPING OF SLAB - ONLY WHERE APPROVED BY THE STRUCTURAL CONSULTANT, ETC.) (B) GPR SCANNING MUST BE DONE BY TRAINED TECHNICIANS WITH AT LEAST 5 YEARS OF EXPERIENCE AS SUCH. (C) GPR SCANNING DEVICES MUST BE CAPABLE OF ACCURATELY LOCATING REBAR IN A CONCRETE SLAB TO A MINIMUM DEPTH OF 300 mm, WITHIN A HORIZONTAL TOLERANCE OF ± 25 mm AND A VERTICAL (DEPTH) TOLERANCE OF THE LARGER OF ± 25 mm OR ± 15% OF THE REBAR DEPTH. (D) THE REVIEW OF REBAR SCANS OR X-RAYS BY THE STRUCTURAL CONSULTANT IS LIMITED TO THE LOCATION OF THE PROPOSED CORES OR DRILLED HOLES THROUGH THE EXISTING STRUCTURE ONLY, BASED ON THE ASSUMPTION THAT THE X-RAY OR SCAN RESULTS ARE ACCURATE. STEPHENSON ENGINEERING LTD. TAKES NO RESPONSIBILITY FOR THE ACCURACY OF THE X-RAY OR SCAN RESULTS.</p>				

NO.	DATE	ISSUED FOR	REVISION
6	JULY/2024	ISSUED FOR CONSTRUCTION	
5	MARCH/2024	ISSUED FOR TENDER	
4	JANU/2024	ISSUED FOR CLIENT REVIEW	
3	DEC/2023	ISSUED FOR 90% CLIENT REVIEW	
2	OCT/21/2023	ISSUED FOR 60% CLIENT REVIEW	
1	OCT/21/2023	ISSUED FOR CLIENT REVIEW	

THE CONTRACTOR SHALL CHECK ALL DIMENSIONS WITH THE LATEST ISSUE OF ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH WORK.



TYPICAL CONCRETE COVER TABLE

VERTICAL ELEMENTS	PROJECT SPECIFIC COMMENTS	BAR SIZE	CONCRETE EXPOSURE							
			NO CHLORIDES WITH FREEZE THAW			NO CHLORIDES OR FREEZE THAW				
			COVER TO ALL FACES (mm)		COVER TO ALL FACES (mm)		COVER TO ALL FACES (mm)			
		FIRE RATING (7)		FIRE RATING (7)		FIRE RATING (7)				
		< 2 HR		4 HR		< 2 HR		4 HR		
WALLS	ANY WALLS EXPOSED TO FIRE ON ONE SIDE ONLY (FOUNDATION, ELEVATOR AND STAIRS, DEMISING WALLS, FIRE SEPARATION WALLS)	0 ≤ 25M								
ELEMENTS EXPOSED TO EARTH		PROJECT SPECIFIC COMMENTS	BAR SIZE	COVER (mm)						
PERMANENTLY EXPOSED TO SOIL			ALL SIZES	GREATER OF 60mm OR 2d				GREATER OF 40mm OR 1.5d		
CAST AGAINST AND PERMANENTLY EXPOSED TO SOIL			ALL SIZES	75						

TABLE NOTES

- CONCRETE COVER SHALL BE MEASURED FROM THE DEEPEST POINT OF TEXTURED CONCRETE SURFACE TO THE NEAREST DEFORMATION OF REINFORCEMENT. REINFORCEMENT INCLUDES TIES, STIRRUPS AND MAIN BARS.
- FOR FIRE RATING INFORMATION, REFER TO ARCHITECTURAL DRAWINGS.
- ALL LOAD BEARING ELEMENTS (WALLS AND COLUMNS) IMMEDIATELY BELOW A FLOOR ASSEMBLY MUST HAVE A FIRE-RESISTANCE RATING NOT LESS THAN THAT FOR THE SUPPORTED ASSEMBLY.

COMPRESSION-TENSION DEVELOPMENT AND LAP LENGTHS $F_y = 400 \text{ MPa}$ C02A

NOTES

- STANDARD ABBREVIATIONS ON PLANS AND SCHEDULES SHOULD BE AS FOLLOWS
- CLS - COMPRESSION LAP SPlice
- CDL - COMPRESSION DEVELOPMENT LENGTH
- HEL - HOOK EMBEDMENT LENGTH

COMPRESSION LAP SPlice AND DEVELOPMENT LENGTHS ($F_y = 400 \text{ MPa}$)

CLS: COMPRESSION LAP SPlice LENGTH (mm)

UNCOATED BLACK BAR									
	10M	15M	20M	25M	30M	35M	45M	55M	
20MPa	300	440	590	730	880	1030			NOT PERMITTED

CDL: COMPRESSION DEVELOPMENT LENGTH (mm)

UNCOATED BLACK BAR									
f'_c	10M	15M	20M	25M	30M	35M	45M	55M	
20MPa	250	340	420	540	640	770	940	1210	
25MPa	220	310	370	460	570	690	840	1080	
30MPa	200	280	340	440	530	630	770	990	
35MPa	200	280	340	440	530	630	770	990	
40MPa	200	280	340	440	530	630	770	990	
> 40 MPa	SEE MINIMUM VALUES FOR $f'_c = 40 \text{ MPa}$								

NOTES

- IF BUNDLED BARS ARE USED THE VALUES IN THE TABLES MUST BE INCREASED:
 - MULTIPLY BY 1.1 (TWO BAR BUNDLES)
 - MULTIPLY BY 1.2 (THREE BAR BUNDLES)
 - MULTIPLY BY 1.33 (FOUR BAR BUNDLES)
- FOR EMBEDMENTS ENCLOSED IN SPIRALS, MULTIPLY BY 0.75, BUT NOT LESS THAN 200mm.

HEL: MINIMUM TENSION EMBEDMENT LENGTH WITH STANDARD HOOK (mm)

UNCOATED BLACK BAR									
f'_c	10M	15M	20M	25M	30M	35M	45M	55M	
20MPa	220	340	450	560	670	780	1010	1230	
25MPa	200	300	400	500	600	700	900	1100	
30MPa	180	270	370	460	550	640	830	1010	
35MPa	170	250	340	420	510	590	770	930	
40MPa	160	240	320	400	470	550	720	870	
45MPa	150	220	300	370	450	520	680	820	
50MPa	150	210	280	350	420	490	640	780	
55MPa	150	200	270	340	400	470	610	750	

NOTES

- FOR EPOXY COATED BARS THE VALUES IN THE TABLES MUST BE INCREASED:
 - MULTIPLY BY 1.2 (WHEN CLEAR COVER GREATER THAN 3X BAR DIAMETER AND CLEAR SPACING GREATER THAN 6X BAR DIAMETER)
 - MULTIPLY BY 1.5 (WHEN COVER OR SPACING ARE LESS THAN ABOVE)
- VALUES PROVIDED ARE BASED ON NORMAL WEIGHT CONCRETE AND MUST BE INCREASED FOR LIGHTWEIGHT CONCRETES:
 - MULTIPLY BY 1.2 (FOR SEMI-LOW DENSITY CONCRETE)
 - MULTIPLY BY 1.3 (FOR LOW-DENSITY CONCRETE)
- FOR 35M AND SMALLER BARS MULTIPLY THE VALUES IN THE TABLE BY 0.7 (BUT NOT LESS THAN 150mm) WHERE THE SIDE COVER (NORMAL TO THE PLANE OF THE HOOK) IS AT LEAST 60mm, AND FOR 30" HOOKS WHERE COVER ON THE BAR EXTENSION BEYOND THE HOOK IS AT LEAST 50mm.
- FOR 35M AND SMALLER BARS MULTIPLY THE VALUES IN THE TABLE BY 0.8 (BUT NOT LESS THAN 150mm) WHERE THE HOOK IS ENCLOSED WITHIN AT LEAST THREE(3) TIES OR STIRRUPS SPACED ALONG A LENGTH EQUAL TO THE INSIDE DIAMETER OF THE HOOK AT A SPACING NOT MORE THAN 3 TIMES THE BAR DIAMETER.

TENSION DEVELOPMENT AND LAP SPlice LENGTHS $F_y = 400 \text{ MPa}$ C02B

NOTES

- STANDARD ABBREVIATIONS ON PLANS AND SCHEDULES SHOULD BE AS FOLLOWS
- TLS - TENSION LAP SPlice
- TDL - TENSION DEVELOPMENT LENGTH

TENSION LAP SPlice AND DEVELOPMENT LENGTHS ($F_y = 400 \text{ MPa}$)

TLS: TENSION LAP SPlice LENGTH (CLASS B) (mm)

f'_c	UNCOATED BLACK BAR											
	10M		15M		20M		25M		30M		35M	
	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom
20MPa	550	420	820	630	1090	840	1710	1310	2050	1570	2390	1840
25MPa	490	380	740	570	960	750	1530	1170	1830	1410	2130	1640
30MPa	450	350	670	520	890	690	1390	1070	1670	1290	1950	1500
35MPa	420	320	620	480	830	640	1290	990	1550	1190	1800	1390
40MPa	390	300	580	450	770	600	1210	930	1450	1110	1690	1300
45MPa	370	300	550	420	730	560	1140	880	1370	1050	1590	1230
50MPa	350	300	520	400	690	530	1080	830	1300	1000	1510	1160
55MPa	330	300	500	380	660	510	1030	790	1240	950	1440	1110
60MPa	320	300	480	370	630	490	990	760	1180	910	1380	1060
64MPa	310	300	460	360	610	470	960	740	1150	880	1340	1030

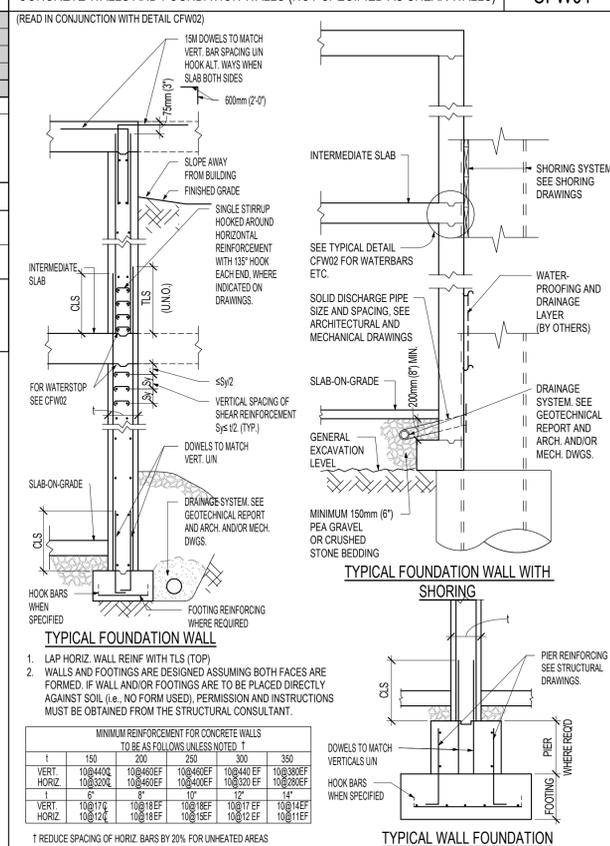
TDL: TENSION DEVELOPMENT LENGTH (mm) CLASS "A" LAP SPlice

f'_c	UNCOATED BLACK BAR											
	10M		15M		20M		25M		30M		35M	
	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom
20MPa	420	330	630	490	840	650	1310	1010	1570	1210	1840	1410
25MPa	380	300	570	440	750	580	1170	900	1410	1080	1640	1260
30MPa	350	300	520	400	690	530	1070	830	1290	990	1500	1160
35MPa	320	300	480	370	640	490	990	770	1190	920	1390	1070
40MPa	300	300	450	350	600	460	930	720	1110	860	1300	1000
45MPa	300	300	420	330	560	430	880	680	1050	810	1230	940
50MPa	300	300	400	310	530	410	830	640	1000	770	1160	900
55MPa	300	300	380	300	510	390	790	610	950	730	1110	850
60MPa	300	300	370	300	490	380	760	590	910	700	1060	820
64MPa	300	300	360	300	470	360	740	570	880	680	1030	790

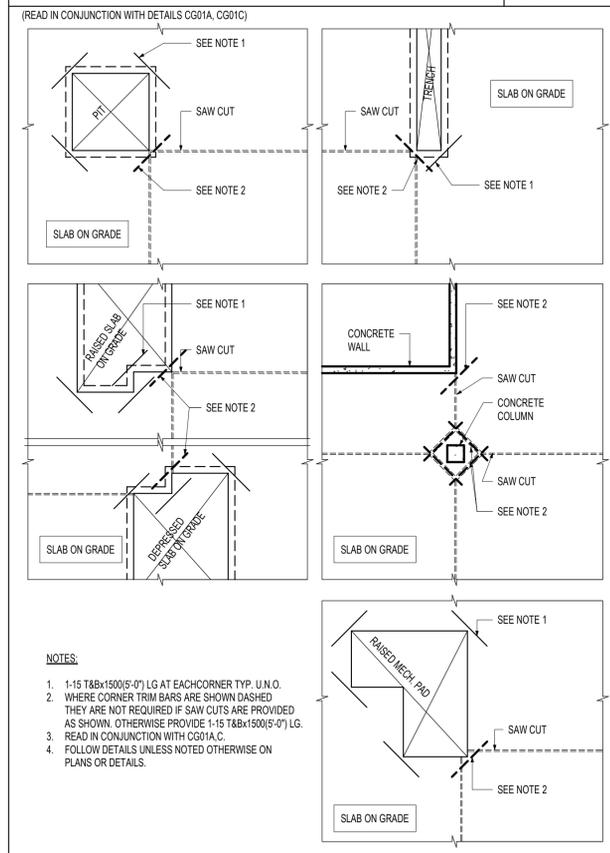
NOTES

- FOR EPOXY COATED BARS THE VALUES IN THE TABLES MUST BE INCREASED:
 - MULTIPLY BY 1.2 (WHEN CLEAR COVER GREATER THAN 3X BAR DIAMETER AND CLEAR SPACING GREATER THAN 6X BAR DIAMETER)
 - MULTIPLY BY 1.5 (WHEN COVER OR SPACING ARE LESS THAN ABOVE)
- VALUES PROVIDED ARE BASED ON NORMAL WEIGHT CONCRETE AND MUST BE INCREASED FOR LIGHTWEIGHT CONCRETES:
 - MULTIPLY BY 1.2 (FOR SEMI-LOW DENSITY CONCRETE)
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- IF BUNDLED BARS ARE USED THE VALUES IN THE TABLES MUST BE INCREASED:
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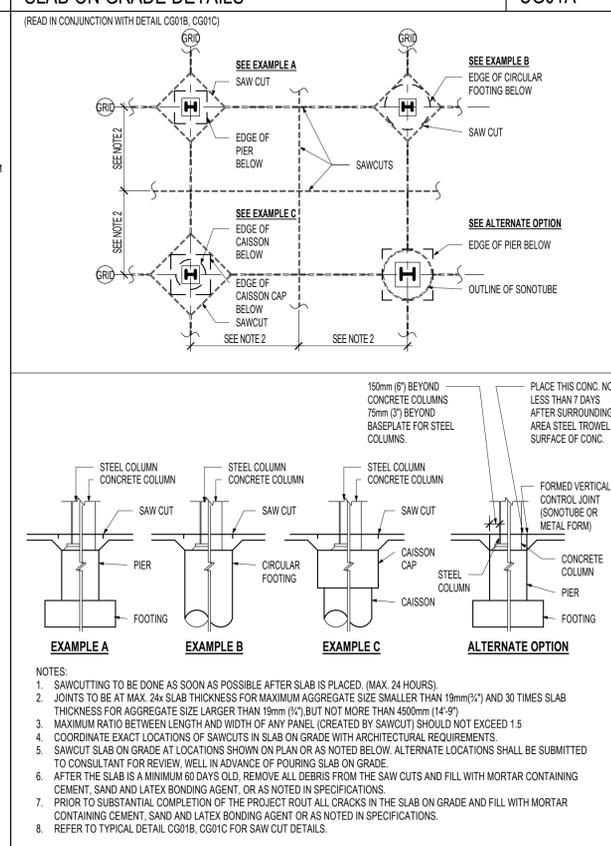
CONCRETE WALLS AND FOUNDATION WALLS (NOT SPECIFIED AS SHEAR WALLS) CFW01



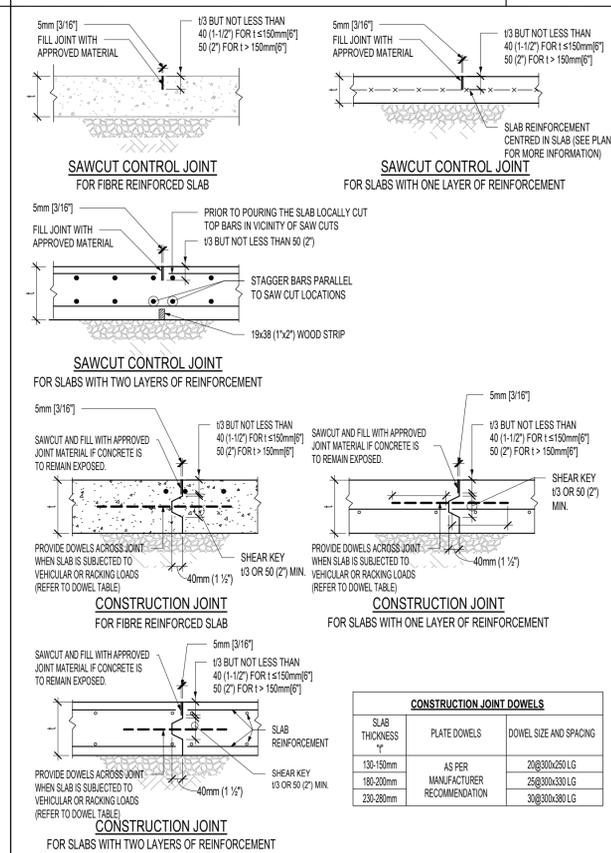
SLAB ON GRADE DETAILS CG01B



SLAB ON GRADE DETAILS CG01A



SLAB ON GRADE DETAILS CG01C



NO.	DATE	ISSUED FOR	REVISION
6	JULY 23/2024	ISSUED FOR CONSTRUCTION	
5	MARCH 2024	ISSUED FOR TENDER	
4	JAN 31/2023	ISSUED FOR PERMIT	
3	DEC 09/2022	ISSUED FOR 90% CLIENT REVIEW	
2	OCT 17/2022	ISSUED FOR 60% CLIENT REVIEW	
1	OCT 10/2022	ISSUED FOR CLIENT REVIEW	

THE CONTRACTOR SHALL CHECK ALL DIMENSIONS WITH THE LATEST ISSUE OF ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH WORK.

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RITESTART LIMITED
 May 2025

PROFESSIONAL ENGINEER
 24-07-23
J. C. GASDIA
 100169574
 PROVINCE OF ONTARIO

MonAvenir
 CONSEIL SCOLAIRE CATHOLIQUE

ÉÉC SAINT-MICHEL
 Classrooms Addition

29 MEADOWVALE ROAD,
 SCARBOROUGH, ONTARIO
 M1C 1R7

DRAWING TITLE:
TYPICAL DETAILS

PROJECT NO:
20220316

SCALE:
 1:1

DRAWN:
 AE

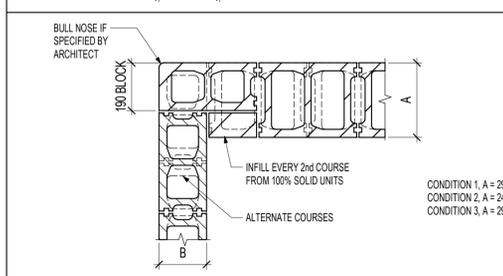
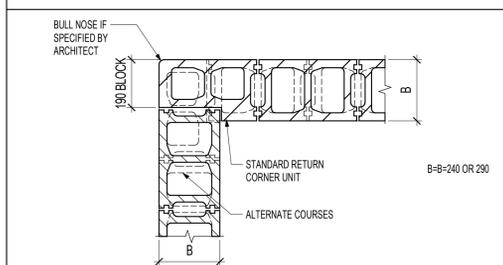
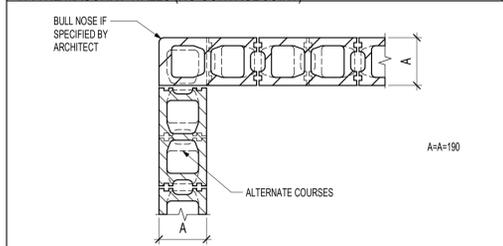
CHECKED:
 JG

DATE:
 JULY 2024

DRAWING NO. REV.
S3-02 6

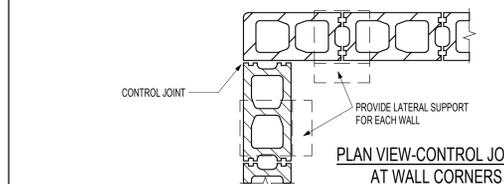
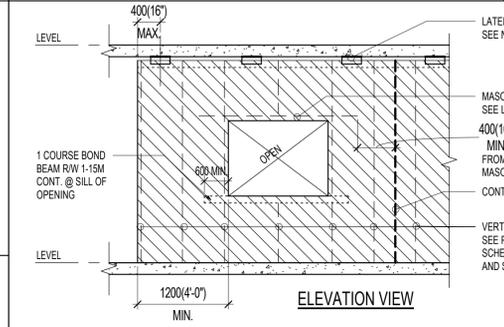
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TYPICAL DETAIL OF CONSTRUCTED CORNERS IN SINGLE WYTHE MASONRY WALLS (NO CONTROL JOINT) **M06**



NOTE:
1. PROVIDE PREFABRICATED CORNERS FOR HORIZONTAL JOINT REINFORCING (TYPICAL)
2. REFER TO TYPICAL LOAD BEARING MASONRY NOTES AND TO THE SPECIFICATION FOR MASONRY MATERIALS AND FOR HORIZONTAL JOINT REINFORCING

TYPICAL MASONRY WALL REINFORCING SCHEDULE NOTES AND DETAIL **M07**



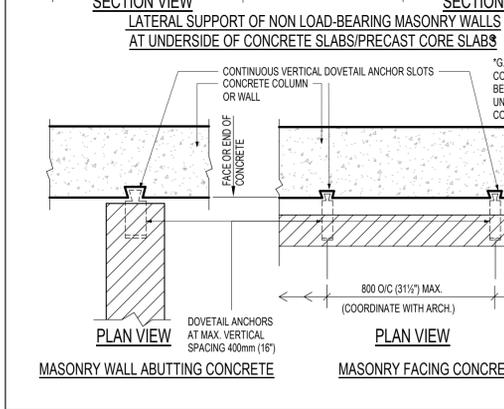
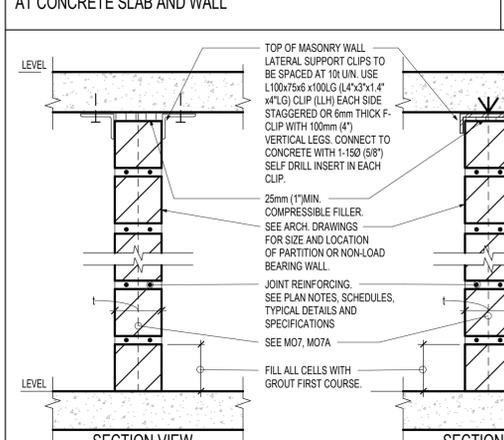
- NOTES:**
- ADD 390 DEEP HORIZONTAL BOND BEAM R/W 1-15 T&B AT EACH FLOOR AND ROOF LEVEL.
 - PROVIDE VERTICAL REINFORCEMENT AS NOTED ABOVE AND ADD 1-15M AT END OR CORNER OF WALL. SIDES OF DOOR AND WINDOW OPENINGS, AND CONTROL AND EXPANSION JOINTS. VERTICAL REINFORCEMENT TO BE FULL HEIGHT OF WALL AND ALL CELLS WITH VERTICAL REINFORCEMENT TO BE FILLED SOLID WITH GROUT.
 - REFER TO M14 FOR TYPICAL LATERAL SUPPORT DETAIL AT PARTITIONS FOR STEEL STRUCTURES AND M07B FOR TYPICAL LATERAL SUPPORT DETAIL AT PARTITIONS FOR CONCRETE STRUCTURES.
 - REFER TO TYPICAL DETAIL M07B FOR CONNECTION OF MASONRY WALL ABUTTING CONCRETE OR MASONRY WALL FACING CONCRETE.
 - PROVIDE DOWELS. SIZE AND SPACING TO MATCH VERTICAL WALL REINFORCEMENT. REFER TO M04 FOR REQUIRED LAP LENGTHS.
 - COMPLETELY FILL REINFORCED CELLS WITH GROUT.

NON LOAD-BEARING MASONRY PARTITION REINFORCING SCHEDULE 1 FaSa(0.2)<0.35 **M07A**

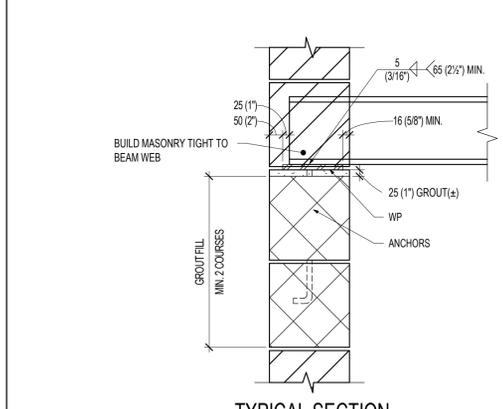
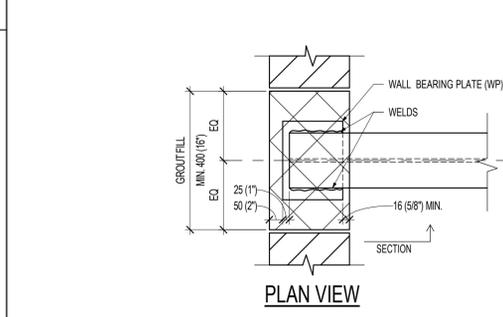
INTERIOR PARTITIONS IN BASEMENT (DIFFERENTIAL PRESSURE 0.25kPa)				INTERIOR PARTITIONS ABOVE GRADE (DIFFERENTIAL PRESSURE 0.5kPa)			
BLOCK	MAXIMUM HEIGHT	VERTICAL REINFORCING	HORIZONTAL REINFORCEMENT	BLOCK	MAXIMUM HEIGHT	VERTICAL REINFORCING	HORIZONTAL REINFORCEMENT
140	3000 (10'-0")	UNREINFORCED	9 GA @ 400mm (1'-4") o/c MAX. LADDER TYPE	140	NA	UNREINFORCED	9 GA @ 400mm (1'-4") o/c MAX. LADDER TYPE
190	4000 (14'-8")	UNREINFORCED	9 GA @ 400mm (1'-4") o/c MAX. LADDER TYPE	190	3000 (10'-0")	UNREINFORCED	9 GA @ 400mm (1'-4") o/c MAX. LADDER TYPE
240	5800 (19'-4")	UNREINFORCED	9 GA @ 400mm (1'-4") o/c MAX. LADDER TYPE	240	3800 (12'-8")	UNREINFORCED	9 GA @ 400mm (1'-4") o/c MAX. LADDER TYPE

NOTES:
-MINIMUM 600MM WIDE PIER BETWEEN ADJACENT OPENINGS. PIER MUST BE CONTINUOUS FROM BASE OF PARTITION TO LATERAL SUPPORT POINT AT TOP OF PARTITION.
-AVERAGE OPENING SIZE ON EITHER SIDE OF PIER LIMITED TO 1400mm FOR REINFORCED PARTITIONS
-FOR UNREINFORCED PARTITIONS, MAX. OPENING WIDTH MUST NOT EXCEED PIER LENGTH.
-REINFORCING SCHEDULE APPLIES FOR PARTITIONS WALLS UP TO 100m ABOVE GRADE
-PARTITION WALL REINFORCING DOES NOT APPLY FOR SHAFTS WHERE PRESSURES EXCEED NOTED DIFFERENTIAL PRESSURES NOTED ABOVE.
-IF ANY OF THESE CONDITIONS ARE NOT MET, CONTRACTOR TO PROVIDE ENGINEER STAMPED SHOP DRAWINGS OF REINFORCING FOR CONSULTANT REVIEW
-REFER TO TD M07B FOR LATERAL SUPPORT DETAILS FOR CONCRETE CONSTRUCTION, M14 FOR STEEL CONSTRUCTION. LATERAL SUPPORTS TO BE SPACED AT 10' UNLESS NOTED OTHERWISE. ALLOWABLE PARTITION HEIGHTS ARE BASED ON 15MPa NORMAL DENSITY BLOCK w/ TYPE 'S' MORTAR.

DETAILS OF NON LOAD-BEARING MASONRY WALLS AT CONCRETE SLAB AND WALL **M07B**

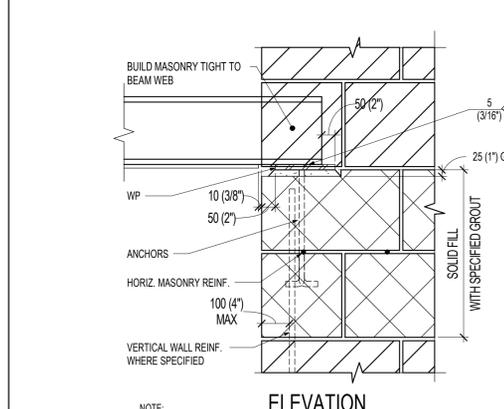
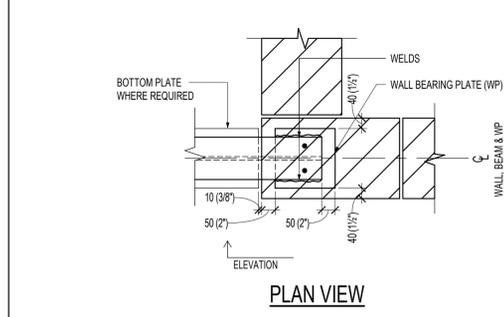


TYPICAL STEEL BEAM BEARING ON MASONRY WALL (PERPENDICULAR) **M08**



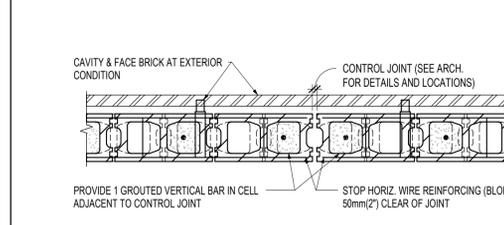
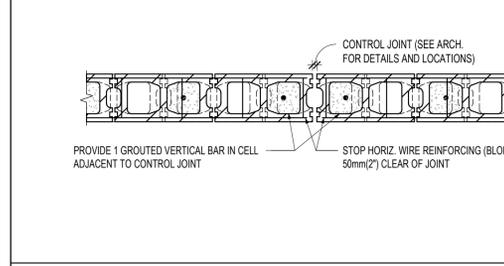
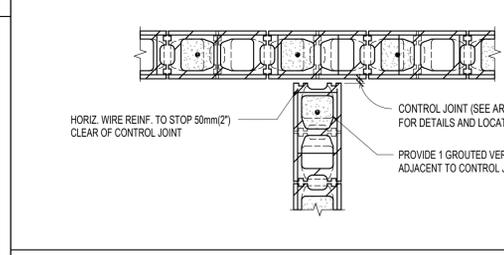
NOTE:
REFER TO TYPICAL DETAILS, TYPICAL NOTES, SPECIFICATION PLANS AND SCHEDULES FOR:
• WP SIZE AND SIZE/NUMBER OF ANCHORS
• VERTICAL WALL REINFORCING
• GROUT MIX AND EXTENT OF GROUT

TYPICAL STEEL BEAM BEARING ON END OR CORNER OF MASONRY WALL (MINIMUM REQUIREMENTS) **M09**



NOTE:
REFER TO TYPICAL DETAILS, TYPICAL NOTES, SPECIFICATION PLANS AND SCHEDULES FOR:
• WP SIZE AND SIZE/NUMBER OF ANCHORS
• VERTICAL WALL REINFORCING
• GROUT MIX AND EXTENT OF GROUT

TYPICAL DETAIL AT CONTROL JOINT IN REINFORCED MASONRY WALL **M10**



NOTE:
1. AT MASONRY LINTEL BOND BEAM STOP HORIZ. BARS 50mm (2") CLEAR OF CONTROL JOINT. UNLESS OTHERWISE NOTED.
2. SEE PLANS AND TYPICAL NOTES FOR VERTICAL REINFORCING AND GROUT

NO.	DATE	ISSUED FOR	REVISION
1	02/17/2022	ISSUED FOR CLIENT REVIEW	
2	02/17/2022	ISSUED FOR CLIENT REVIEW	
3	DEC/09/2021	ISSUED FOR 90% CLIENT REVIEW	
4	JAN/31/2023	ISSUED FOR PERMIT	
5	MARCH/2024	ISSUED FOR TENDER	
6	JULY/2024	ISSUED FOR CONSTRUCTION	

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May 2025

PROFESSIONAL ENGINEER
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100169574
PROVINCE OF ONTARIO

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CONSEIL SCOLAIRE CATHOLIQUE

ÉEC SAINT-MICHEL
Classrooms Addition

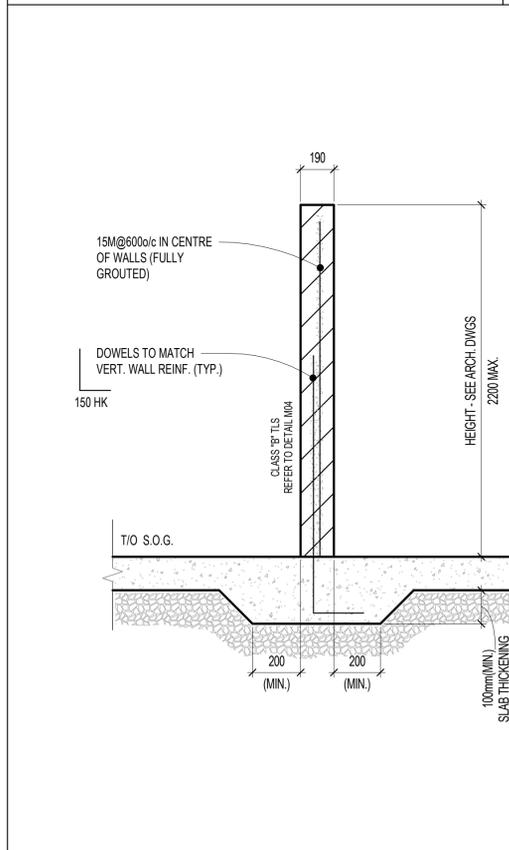
29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
TYPICAL DETAILS

PROJECT NO: 20220316	SCALE: 1:1
DRAWN: AE	DRAWING NO.: S3-04
CHECKED: JG	REV: 6
DATE: JULY 2024	

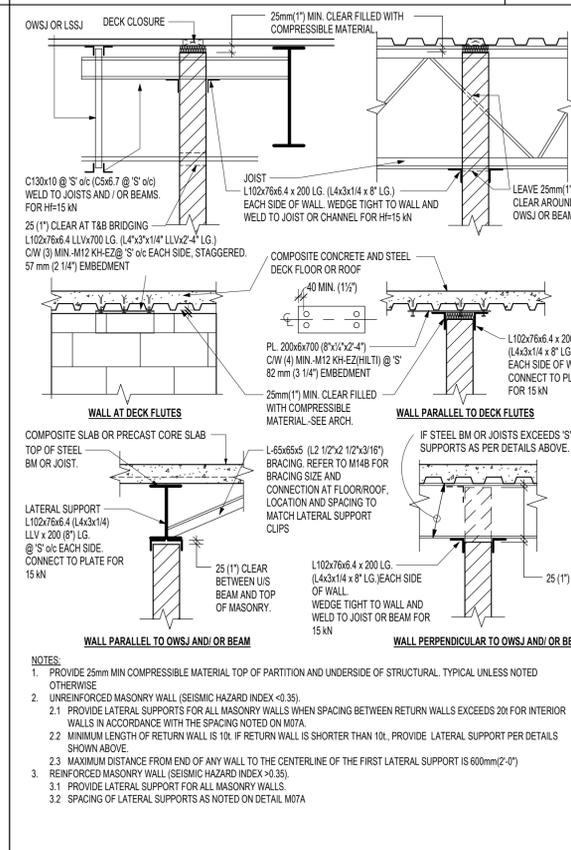
TYPICAL LOW BLOCK PARTITION WALL SUPPORT DETAIL

M12



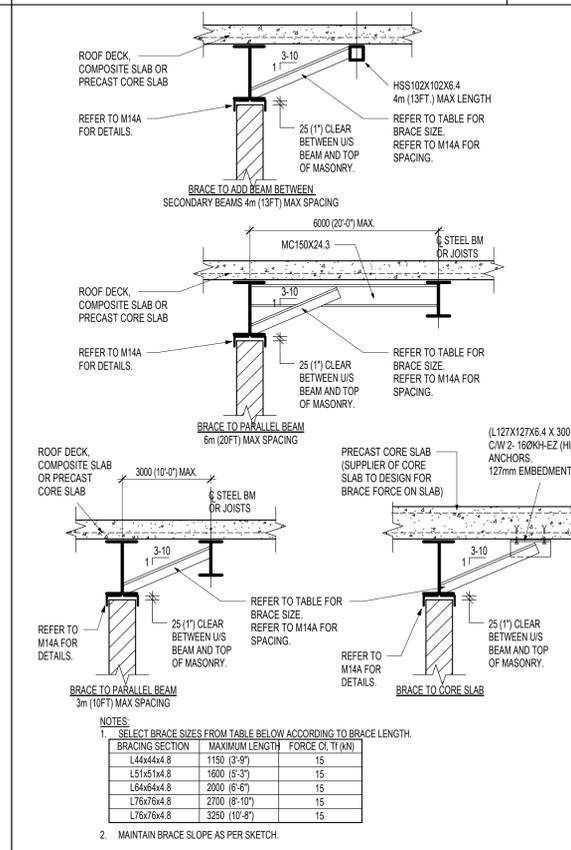
TYPICAL LATERAL SUPPORT AT PARTITIONS

M14A



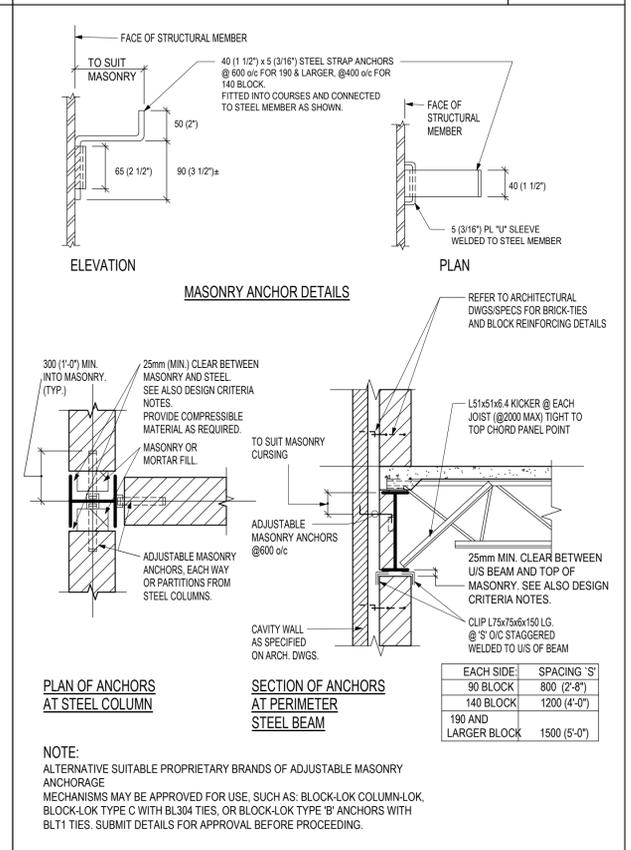
TYPICAL BRACE SUPPORTING PARTITIONS

M14B



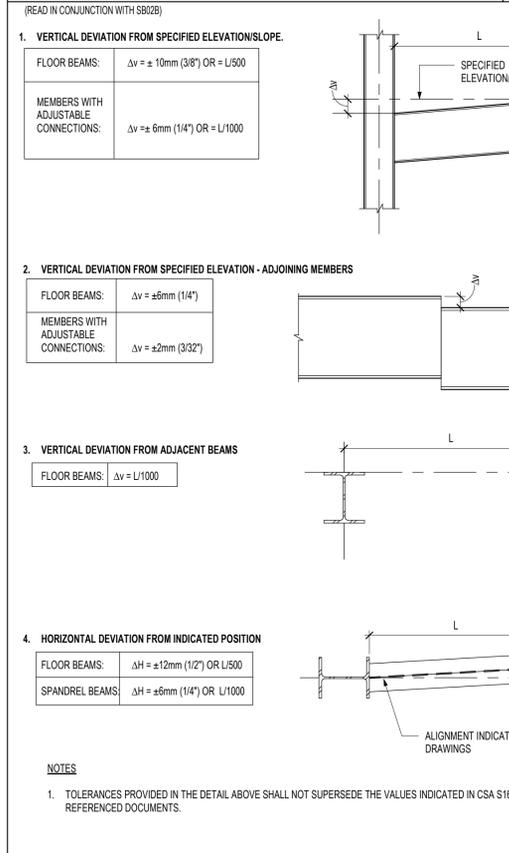
ADJUSTABLE MASONRY ANCHORS TO STRUCTURAL STEEL

M15



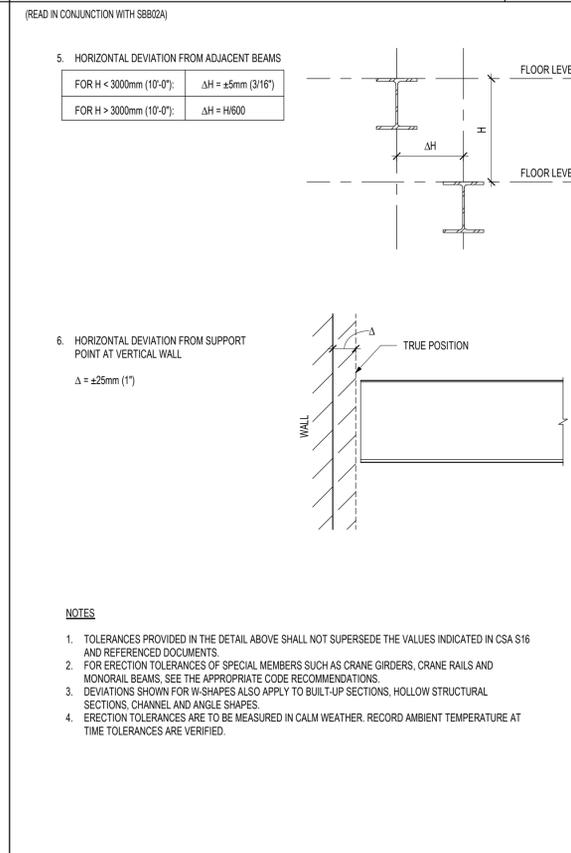
ERECTION TOLERANCES FOR STEEL BEAMS

SB02A



ERECTION TOLERANCES FOR STEEL BEAMS

SB02B



NO.	DATE	ISSUED FOR	REVISION
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ÉEC SAINT-MICHEL
Classrooms Addition
29 MEADOWVALE ROAD,
SCARBOROUGH, ONTARIO
M1C 1R7

DRAWING TITLE:
TYPICAL DETAILS

PROJECT NO: 20220316	SCALE: 1:1
DRAWN: AE	DRAWING NO. / REV: S3-05 / 6
CHECKED: JG	DATE: JULY 2024

STEEL DECK NOTES	A05	TOLERANCES ON ANCHOR ROD PLACEMENT	SAB01	ANCHOR ROD DETAILS	SAB02	STEEL GRAVITY COLUMN BASE DETAIL	SC02
<p>1. GENERAL</p> <p>1.1. DESIGN, FABRICATION, HANDLING AND ERECTION SHALL CONFORM TO THE FOLLOWING STANDARDS:</p> <p>1.1.a. CSA-S136</p> <p>1.1.b. CSSBI 10M STANDARD FOR STEEL ROOF DECK.</p> <p>1.1.c. CSSBI 12M STANDARD FOR COMPOSITE STEEL DECK.</p> <p>1.1.d. ASTM A653 SPECIFICATIONS FOR STEEL SHEET, ZINC COATED (GALVANIZED) OR ZINC-IRON ALLOY COATED (GALVANNEAL) BY THE HOT DIP PROCESS.</p> <p>1.1.e. WELDING SHALL CONFORM TO CSA STANDARD W59 AND BE PERFORMED BY A FABRICATOR CERTIFIED TO CSA STANDARD W47.1.</p> <p>1.2. THE STEEL DECK SHALL BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER. SHOP DRAWINGS AND CALCULATIONS BEARING THE STAMP AND SIGNATURE OF THE PROFESSIONAL ENGINEER RESPONSIBLE FOR THE DESIGN SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION AND ERECTION.</p> <p>1.3. NO HANGERS OR BRACKETS SHALL BE HUNG DIRECTLY FROM THE FLOOR OR ROOF DECK. ALL POINT LOADS MUST BE APPLIED DIRECTLY TO STRUCTURAL STEEL FRAMING UNLESS OTHERWISE SHOWN OR APPROVED BY THE STRUCTURAL CONSULTANT.</p> <p>1.4. WHEREVER STRUCTURAL FRAMING PERMITS, STEEL DECK SHALL BE DESIGNED AND FABRICATED TO SPAN CONTINUOUSLY OVER AT LEAST 4 SUPPORTS (3 SPANS). PROVIDE AN ADEQUATE INCREASE IN THICKNESS OF METAL TO COMPENSATE FOR CONTINUITY WHEREVER FEWER SUPPORTS MAY OCCUR. END LAPS TO BE 50mm (2") MIN. AND BE LOCATED OVER SUPPORTS.</p> <p>1.5. ROOF DECK SHALL BE FORMED WITH INTEGRAL RIBS IN ORDER TO SAFELY SUPPORT THE LOADS GIVEN ON THE DRAWINGS OVER THE SPANS REQUIRED. DECK THICKNESS GIVEN ON DRAWINGS IS MINIMUM ASSUMED ALLOWABLE THICKNESS AND MUST BE DESIGNED BY THE DECK SUPPLIER.</p> <p>1.5.a. DEFLECTION OF ROOF DECK UNDER LIVE OR SNOW LOAD ONLY SHALL NOT EXCEED 1/300TH OF SPAN.</p> <p>1.6. FLOOR DECK SHALL BE FORMED WITH INTEGRAL RIBS AND EMBOSMENTS FOR COMPOSITE ACTION WITH CONCRETE SLAB IN ORDER TO SAFELY SUPPORT THE LOADS GIVEN ON THE DRAWINGS OVER THE SPANS REQUIRED. IN ADDITION, THE DECK SHALL SAFELY SUPPORT ALL CONSTRUCTION LOADS WITH NO SHORING UNITS. CONCRETE IS SET. DECK THICKNESS GIVEN ON DRAWINGS IS MINIMUM ALLOWED.</p> <p>1.6.a. DEFLECTION OF COMPOSITE FLOOR UNDER LIVE LOAD ONLY SHALL NOT EXCEED 1/600TH OF SPAN.</p> <p>1.7. DESIGN AND DETAIL ON SHOP DRAWINGS ALL CONNECTIONS TO SUPPORTING MEMBERS FOR ALL COMBINATIONS OF DIAPHRAGM SHEAR AND UPLIFT FORCES ACTING ON THE ROOF DECK.</p> <p>2. PRODUCTS</p> <p>2.1. UNLESS OTHERWISE NOTED ROOF DECK AND / OR COMPOSITE DECK SHALL BE FORMED OF METALLIC COATED SHEET STEEL CONFORMING TO ASTM A653M. STRUCTURAL QUALITY GRADE '230' WITH A 275Z ZINC COATING (GALVANNEAL).</p> <p>2.2. UNLESS OTHERWISE NOTED DECK SHALL BE SINGLE FLUTED ELEMENT WITH INTEGRAL RIBS OF DEPTH AND MIN. BASE NOMINAL THICKNESS (BNT) AS NOTED ON THE DRAWINGS. DECK SHALL HAVE INTERLOCKING SIDE JOINTS BETWEEN PANELS. (MIN. BNT: 0.76mm (0.30").</p> <p>2.3. COVER PLATES, CELL CLOSURES, FLASHINGS AND REINFORCING STIFFENERS FOR UNSUPPORTED EDGES TO BE SUPPLIED OF SIMILAR MATERIAL AND ZINC COATING TO THAT FOR DECK. UNLESS NOTED.</p> <p>2.4. PRIMER PAINT TO BE ZINC RICH, READY MIX TO CAN, CGSB-1.181 FOR FIELD 'TOUCH-UP' OF WELD BURNS AFTER DECK IS INSTALLED.</p> <p>2.5. UNLESS OTHERWISE SHOWN FOR OPENINGS THROUGH ROOF DECK FROM 150mm TO 400mm (6" TO 16") ACROSS THE FLUTES THE DECK SUPPLIER SHALL PROVIDE NOT LESS THAN A 51x51x16 ANGLE (2"x 1/4" L) REINFORCEMENT TO FRAME ACROSS EACH SIDE OF THE OPENING PERPENDICULAR TO THE FLUTES. WELDED TO AT LEAST TWO FLUTES EACH SIDE OF THE OPENING.</p> <p>2.6. FOR ROOF OPENINGS OVER 450mm (18") ACROSS THE FLUTES AND FOR AREAS OF CONCENTRATED LOAD, REINFORCE IN ACCORDANCE WITH STRUCTURAL FRAMING DETAILS SHOWN ON PLANS OR TYPICAL DETAILS.</p> <p>3. EXECUTION</p> <p>3.1. SUPPLY AND PLACE STEEL PACKING AS REQUIRED TO PRODUCE AN EVEN BEARING PRESSURE AT SUPPORTS.</p> <p>3.2. FOR STEEL ROOF DECK, UNLESS OTHERWISE DETERMINED DURING THE DIAPHRAGM AND UPLIFT CONNECTION DESIGN OR SPECIFIED OTHERWISE IN THE SPECIFICATIONS OR ENGINEERING DRAWINGS, THE MINIMUM ATTACHMENT OF THE DECK TO THE BEARING SURFACES AND THE MINIMUM SIDE LAP CONNECTIONS BETWEEN DECK UNITS SHALL BE:</p> <p>3.2.A. FOR 30mm DEEP DECK PROFILES, CONNECT THE FIRST, THIRD, FIFTH AND SEVENTH LOW CORRUGATIONS (8/4 CONFIGURATION), AND EACH SUPPORT PARALLEL TO FLUTE DIRECTION AT 300mm (12") MAXIMUM CENTERS. CONNECTIONS SHALL BE MADE USING EITHER AN ARC SPOT WELD WITH 20mm (3/4") NOMINAL TOP DIAMETER, OR MECHANICALLY FASTENED USING HILTI POWDER ACTUATED FASTENERS (X-HSN24, HILTI X-ENP19, OR EQUIVALENT).</p> <p>3.2.B. FOR 75mm DEEP DECK PROFILES, CONNECT THE FIRST, THIRD AND FIFTH LOW CORRUGATIONS (2/3 CONFIGURATION), AND EACH SUPPORT PARALLEL TO FLUTE DIRECTION AT 300mm (12") MAXIMUM CENTERS. CONNECTIONS SHALL BE MADE USING EITHER AN ARC SPOT WELD WITH 20mm (3/4") NOMINAL TOP DIAMETER, OR MECHANICALLY FASTENED USING HILTI POWDER ACTUATED FASTENERS (X-HSN24, HILTI X-ENP19, OR EQUIVALENT).</p> <p>3.2.C. FOR ROOF DECKS, SIDE LAPS OF ADJACENT NESTABLE UNITS SHALL BE CRIMPED TOGETHER AT 900mm (36") CENTERS, OR FASTENED WITH HILTI M HW SCREWS (SLO1, SLO2, OR EQUIVALENT).</p> <p>3.3. FOR STEEL FLOOR DECK, UNLESS OTHERWISE DETERMINED DURING THE DIAPHRAGM CONNECTION DESIGN OR SPECIFIED OTHERWISE IN THE SPECIFICATIONS OR ENGINEERING DRAWINGS, THE MINIMUM ATTACHMENT OF THE DECK TO THE BEARING SURFACES AND THE MINIMUM SIDE LAP CONNECTIONS BETWEEN DECK UNITS SHALL BE:</p> <p>3.3.A. SIDE LAPS OF ADJACENT FLOOR UNITS SHALL BE CRIMPED TOGETHER AT 600mm (24") MAXIMUM ON CENTRE, BUT NOT EXCEEDING THE SPACING REQUIRED FOR THE APPLICABLE ULC FIRE RATED ASSEMBLY.</p> <p>3.3.B. DECK SUPPORTS PARALLEL AND PERPENDICULAR TO FLUTES SHALL BE WELDED WITH 20mm (3/4") WELDS AT 300mm (12") MAXIMUM SPACING, BUT NOT EXCEEDING THE SPACING REQUIRED FOR THE APPLICABLE ULC FIRE RATED ASSEMBLY.</p> <p>3.3.C. THE REQUIRED PUDDLE WELDS AT SUPPORTS MAY BE SUBSTITUTED WITH POWDER ACTUATED FASTENERS THAT PROVIDE EQUIVALENT DIAPHRAGM SHEAR CAPACITY PER METRE.</p> <p>3.4. INSTALL ALL POWDER ACTUATED AND SCREW FASTENERS ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.</p> <p>3.5. WELD STUD SHEAR CONNECTORS THROUGH DECK WHERE REQUIRED BY DRAWINGS.</p> <p>3.6. 'TOUCH-UP' GALVANIZED OR GALVANNEAL SURFACES WITH SPECIFIED PRIMER AT WELDS AND SCRAPES, ETC., BOTH UPPER AND LOWER SURFACES.</p> <p>3.7. DO NOT SUSPEND CEILING OR MECHANICAL/ELECTRICAL SERVICES FROM US OF STEEL DECK.</p> <p>4. QUALITY CONTROL</p> <p>4.1. AN INDEPENDENT INSPECTION AND TESTING COMPANY IS TO BE ENGAGED TO CARRY OUT AND REPORT ON THE FOLLOWING INSPECTION SERVICES:</p> <p>4.1.a. SECTION PROFILE, GAUGE AND STEEL GRADE.</p> <p>4.1.b. ZINC COATING.</p> <p>4.1.c. WELDED JOINTS.</p> <p>4.1.d. BEARINGS.</p> <p>4.1.e. SIDE LAP CONNECTIONS.</p> <p>4.1.f. TOUCH-UP PRIMER.</p> <p>4.1.g. FIELD CUTTING AND/OR ALTERATIONS.</p> <p>4.2. REFER ALSO TO THE GENERAL NOTES, SPECIFICATIONS, AND TERMS OF REFERENCE FOR ADDITIONAL INFORMATION.</p>		<p>n = TOTAL NUMBER OF COLUMNS</p>					

TOLERANCES ON ANCHOR ROD PLACEMENT	SAB01	ANCHOR ROD DETAILS	SAB02	STEEL GRAVITY COLUMN BASE DETAIL	SC02
<p>1.0. INSTALLATION OF ANCHOR RODS EMBEDDED ITEMS</p> <p>1.1. COMPLY WITH THE REQUIREMENTS OF CISC CODE OF STANDARD PRACTICE FOR STRUCTURAL STEEL (CURRENT EDITION) AND AS FOLLOWS.</p> <p>1.2. ANCHOR RODS AND FOUNDATION RODS SHALL BE SET IN ACCORDANCE WITH THE ERECTION DIAGRAMS. THEY MUST NOT VARY FROM THE DIMENSIONS SHOWN ON THE ERECTION DIAGRAMS BY MORE THAN THE FOLLOWING:</p> <p>(a) 3mm CENTRE TO CENTRE OF ANY TWO RODS WITHIN AN ANCHOR ROD GROUP.</p> <p>(b) 6mm CENTRE TO CENTRE OF ADJACENT ANCHOR GROUPS.</p> <p>(c) MAXIMUM ACCUMULATION OF 6mm PER 30 000mm ALONG THE ESTABLISHED COLUMN LINE OF MULTIPLE ANCHOR GROUPS, BUT NOT TO EXCEED A TOTAL OF 25mm. THE ESTABLISHED COLUMN LINE IS THE ACTUAL FIELD LINE MOST REPRESENTATIVE OF THE CENTRES OF THE AS-BUILT ANCHOR ROD GROUPS ALONG LINE OF COLUMNS.</p> <p>(d) 6mm FROM THE CENTRE OF ANY ANCHOR GROUP TO THE ESTABLISHED COLUMN LINE THROUGH THAT GROUP.</p> <p>1.3. THE TOLERANCES ABOVE ALSO APPLY TO OFFSET DIMENSIONS, SHOWN ON THE CONSTRUCTION DRAWINGS, MEASURED PARALLEL AND PERPENDICULAR TO THE NEAREST ESTABLISHED COLUMN LINE FOR INDIVIDUAL COLUMNS SHOWN ON THE DRAWINGS TO BE OFFSET FROM ESTABLISHED COLUMN LINES.</p>					

ANCHOR ROD DETAILS	SAB02	STEEL GRAVITY COLUMN BASE DETAIL	SC02																																							
<table border="1"> <thead> <tr> <th>ANCHOR MARK</th> <th>TYPE</th> <th>DIA (Ø)</th> <th>EMBED (E)</th> <th>HOOK (H)</th> <th>GRADE (KSI)</th> <th>H (IN)</th> <th>GROUT THICKNESS (G)</th> <th>ANCHOR PLATE WIDTH (B)</th> <th>THICK (t)</th> <th>PROJ. (MIN)</th> <th>SHEAR WASHER WIDTH (b)</th> <th>THICK (tw)</th> </tr> </thead> <tbody> <tr> <td>AR1</td> <td>AR</td> <td>3/4"</td> <td>300</td> <td>75</td> <td>36</td> <td>N/A</td> <td>50</td> <td>N/A</td> <td>N/A</td> <td>100</td> <td>N/A</td> <td>N/A</td> </tr> <tr> <td>AR2</td> <td>ARP</td> <td>3/4"</td> <td>600</td> <td>N/A</td> <td>36</td> <td>N/A</td> <td>50</td> <td>100</td> <td>8</td> <td>100</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p>NOTES:</p> <p>1. DESIGN CONNECTION OF SHEAR WASHER TO BASE PLATE FOR H NOTED IN TABLE IN EACH PLAN DIRECTION. IF NO FORCE NOTED, CONNECT FOR FULL SHEAR CAPACITY OF ANCHOR ROD.</p>	ANCHOR MARK	TYPE	DIA (Ø)	EMBED (E)	HOOK (H)	GRADE (KSI)	H (IN)	GROUT THICKNESS (G)	ANCHOR PLATE WIDTH (B)	THICK (t)	PROJ. (MIN)	SHEAR WASHER WIDTH (b)	THICK (tw)	AR1	AR	3/4"	300	75	36	N/A	50	N/A	N/A	100	N/A	N/A	AR2	ARP	3/4"	600	N/A	36	N/A	50	100	8	100	N/A	N/A			
ANCHOR MARK	TYPE	DIA (Ø)	EMBED (E)	HOOK (H)	GRADE (KSI)	H (IN)	GROUT THICKNESS (G)	ANCHOR PLATE WIDTH (B)	THICK (t)	PROJ. (MIN)	SHEAR WASHER WIDTH (b)	THICK (tw)																														
AR1	AR	3/4"	300	75	36	N/A	50	N/A	N/A	100	N/A	N/A																														
AR2	ARP	3/4"	600	N/A	36	N/A	50	100	8	100	N/A	N/A																														

STEEL GRAVITY COLUMN BASE DETAIL	SC02	STEEL MOMENT COLUMN BASE DETAIL	SC04
<p>(READ IN CONJUNCTION WITH ANCHOR ROD SCHEDULE IN TYPICAL DETAIL SAB02)</p> <p>NOTES:</p> <p>1. FOOTINGS SHALL BE PLACED ON UNDISTURBED SOIL WITH A MINIMUM BEARING CAPACITY AS NOTED ON THE DRAWINGS.</p> <p>2. GROUT UNDER BASE PLATES SHALL BE AN APPROVED PROPRIETARY BRAND PRE-MIXED, NON-METALLIC, NON-SHRINK GROUT UNLESS OTHERWISE APPROVED.</p> <p>3. LEVELING PLATES ARE NOT PERMITTED.</p> <p>4. REFER TO COLUMN SCHEDULE/FOUNDATION PLAN FOR BASE PLATES, ANCHOR ROD, PIER, FOOTING DIMENSIONS AND REINFORCEMENT.</p> <p>5. REFER TO A04, SAB02 FOR ANCHOR ROD GRADE.</p> <p>6. REFER ALSO TO GENERAL NOTES, STEEL NOTES AND CAST-IN-PLACE CONCRETE NOTES.</p> <p>7. REFER TO SPLICE AND DEVELOPMENT TABLES IN C02A, C02B, C03A AND C03B.</p> <p>8. REFER TO SAB02 FOR ALL ITEMS MARKED WITH *</p>		<p>(NOTED AS IN COLUMN SCHEDULE)</p> <p>NOTES:</p> <p>1. FOUNDATION DESIGN MOMENT M NOTED IN COLUMN SCHEDULE.</p> <p>2. GROUT UNDER BASE PLATES SHALL BE AN APPROVED PROPRIETARY BRAND PRE-MIXED, NON-METALLIC, NON-SHRINK GROUT UNLESS OTHERWISE APPROVED.</p> <p>3. LEVELING PLATES ARE NOT PERMITTED.</p> <p>4. REFER TO COLUMN SCHEDULE/FOUNDATION PLAN FOR BASE PLATES, ANCHOR ROD, PIER, FOOTING DIMENSIONS AND REINFORCEMENT.</p> <p>5. REFER TO E04, SAB02 FOR ANCHOR ROD GRADE.</p> <p>6. REFER ALSO TO GENERAL NOTES, STEEL NOTES AND CAST-IN-PLACE CONCRETE NOTES.</p> <p>7. REFER TO SPLICE AND DEVELOPMENT TABLES IN C02A, C02B, C03A AND C03B.</p> <p>8. THIS DETAIL APPLIES FOR CONVENTIONAL CONSTRUCTION ONLY (R6-1.5).</p> <p>9. REFER TO SAB02 FOR ALL ITEMS MARKED WITH *</p>	

NO.	DATE	ISSUED FOR	REVISION
6	JULY/23/2024	ISSUED FOR CONSTRUCTION	
5	MARCH/2024	ISSUED FOR TENDER	
4	JAN/2023	ISSUED FOR PERMIT	
3	DEC/09/2022	ISSUED FOR 90% CLIENT REVIEW	
2	OCT/17/2022	ISSUED 90% FOR CLIENT REVIEW	
1	OCT/10/2022	ISSUED FOR CLIENT REVIEW	

THE CONTRACTOR SHALL CHECK ALL DIMENSIONS WITH THE LATEST ISSUE OF ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH WORK.

RITESTART
CONTRACT AS-BUILT COPY
RITESTART LIMITED
 May 2025

LICENSED PROFESSIONAL ENGINEER
 24-07-23
J. C. GASDIA
 100169574
 PROVINCE OF ONTARIO

MonAvenir
 CONSEIL SCOLAIRE CATHOLIQUE

ÉÉC SAINT-MICHEL
 Classrooms Addition

29 MEADOWVALE ROAD,
 SCARBOROUGH, ONTARIO
 M1C 1R7

DRAWING TITLE:
TYPICAL DETAILS AN GENERAL NOTES

PROJECT NO: 20220316	SCALE: 1:1
DRAWN: AE	DRAWING NO. REV. S3-06 6
CHECKED: JG	DATE: JULY 2024