FORESTSIDE TOWNHOUSES

TORONTO, ONTARIO

Project Number : #19066

Issued for : ISSUED FOR PROGRESSIVE CONSTRUCTION # 2

Issued date : JUNE 15, 2021

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LIST OF STRUCTURAL DRAWINGS

Drawing Index		ISSUED FOR TENDER AUG. 02, 2019	ISSUED FOR TENDER ADDENDUM # 1 AUG. 28, 2019	ISSUED FOR TENDER ADDENDUM # 2 SEPT. 12, 2019	ISSUED FOR TENDER ADDENDUM # 3 JAN. 31, 2020	ISSUED FOR TENDER ADDENDUM # 4 MAY 07, 2020	ISSUED FOR PERMIT SEPT. 28, 2020	ISSUED FOR TENDER ADDENDUM # 5 JAN. 06, 2021	ISSUED FOR TENDER ADDENDUM # 6 FEB. 22, 2021	ISSUED FOR PERMIT BUILDINGS A, B, C, D MAR. 03, 2021	ISSUED FOR PROGRESSIVE CONSTRUCTION MAR. 25, 2021	ISSUED FOR PERMIT BUILDINGS A, B, C, D MAR. 25, 2021	ISSUED FOR SITE INSTRUCTION # 1 APR. 09, 2021	ISSUED FOR SITE INSTRUCTION # 2 APR. 21, 2021	ISSUED FOR SITE INSTRUCTION # 3 MAY 07, 2021	ISSUED FOR SITE INSTRUCTION # 4 MAY 18, 2021	ISSUED FOR SITE INSTRUCTION # 5 MAY 26, 2021	ISSUED FOR PROGRESSIVE CONSTRUCTION # 2 JUN. 15, 2021			
GENERAL NOTES AND TYPICAL DETAILS																					
S-001	GENERAL NOTES AND TYPICAL DETAILS	X					X			X	X	X						X			
S-002	TYPICAL DETAILS	X					X			X	X	X						X			
S-003	TYPICAL DETAILS	X					X			X	X	X						X			
S-004	TYPICAL DETAILS	X					X			X	X	X						X			
PLANS																					
S-101A	P1 LEVEL UNDERGROUND FRAMING PLAN	X		X	X	X	X	X	X	X	X	X	X	X	X		X				
S-101B	P1 LEVEL UNDERGROUND FRAMING PLAN	X		X	X	X		X	X	X	X	X	X	X	X		X				
S-102A	1ST FLOOR BUILDING D FRAMING PLAN	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X				
S-102B	1ST FLOOR BUILDING A, B, & C FRAMING PLAN	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X				
S-103A	2ND FLOOR BUILDING D FRAMING PLAN	X	X		X	X	X	X	X	X	X			X	X	X	X				
S-103B	2ND FLOOR BUILDING A, B, & C FRAMING PLAN	X	X		X	X	X	X	X	X	X				X	X	X				
S-104A	3RD FLOOR BUILDING D FRAMING PLAN	X	X		X	X	X		X	X	X			X	X		X				
S-104B	3RD FLOOR BUILDING A, B, & C FRAMING PLAN	X	X		X	X		X	X	X	X				X		X				
S-105A	4TH FLOOR BUILDING D FRAMING PLAN	X	X		X		X	X	X	X	X			X	X		X				
S-105B	4TH FLOOR BUILDING A, B, & C FRAMING PLAN	X	X		X		X		X	X	X				X		X				
S-106A	ROOF BUILDING D FRAMING PLAN	X	X		X		X		X	X	X			X	X		X				
S-106B	ROOF BUILDING A, B, & C FRAMING PLAN	X	X		X		X		X	X	X				X		X				
SECTIONS																					
S-201	FOUNDATION SECTIONS	X		X		X	X		X	X	X				X		X				
S-251	FLOOR SECTIONS	X	X	X	X		X			X	X						X				
SCHEDULES																					
S-301	FOOTING SCHEDULES	X	X			X	X		X	X	X	X					X				

GENERAL NOTES

106 COLUMN AND WALL SCHEDULE NOTES :

1. COLUMN SIZE GIVEN FIRST IN THE SCHEDULE IS IN THE EAST–WEST DIRECTION.
2. COLUMN LOADS ARE GIVEN IN SPECIFIED KILONEWTONS.
3. CONCRETE STRENGTH AT 28 DAYS SHALL BE AS SPECIFIED IN SCHEDULE.
4. MINIMUM YIELD STRESS FOR REINFORCING STEEL SHALL BE 400 MPa.
5. PROVIDE TENSION LAP SPLICE (CLASS 'B') FOR ALL VERTICAL BARS MARKED THUS "▲" IN SCHEDULE.
6. PROVIDE COLUMN TIES IN WALLS THAT HAVE VERTICAL REINFORCING STEEL OF SIZE 20 OR GREATER.
7. UNLESS OTHERWISE NOTED IN SCHEDULE, PROVIDE REINFORCING & DOWELS AS PER TABLE 2 FOR ALL WALLS.
8. H.E.F. – DENOTES HORIZONTAL EACH FACE
   V.E.F. – DENOTES VERTICAL EACH FACE
   V.E.E. – DENOTES VERTICAL EACH END
   V.N.E. – DENOTES VERTICAL NORTH END
   V.S.E. – DENOTES VERTICAL SOUTH END
9. REFER TO MECHANICAL DWGS. FOR MECHANICAL WALL OPENINGS.
10. REFER TO ARCHITECTURAL DRAWINGS FOR WALL LENGTHS.
11. REFER TO TYPICAL DETAILS ON DRAWINGS S–002 TO S–00X.
12. REFER TO GENERAL NOTES ON DRAWING S–001.
13. UNLESS NOTED OTHERWISE, PROVIDE COLUMN OR WALL DOWELS TO MATCH VERTICAL REINFORCING GIVEN IN SCHEDULE. PROVIDE LAP SPLICES AND DEVELOPMENT LENGTHS AS PER TABLE 3.
14. CONCRETE EXPOSED TO VEHICULAR TRAFFIC SHALL HAVE 6% TO 8% ENTRAINED AIR AND SHALL BE PROPORTIONED FOR C–1 EXPOSURE CONDITIONS.

TABLE 2
SHEAR WALL REINFORCING

WALL THICKNES	DIRECTION	WALL EXPOSED OR ENCLOSED BOTH SIDES	WALL EXPOSED ONE SIDE	
			EXPOSED SIDE	ENCLOSED SIDE
150mm	HORIZ.	10 @ 270 (1 LAYER)	10 @ 270 (1 LAYER)	
	VERT.	10 @ 270 (1 LAYER)	10 @ 270 (1 LAYER)	
200mm	HORIZ.	10 @ 400 EA. FACE	10 @ 300	10 @ 450
	VERT.	10 @ 400 EA. FACE	10 @ 300	10 @ 450
250mm	HORIZ.	10 @ 320 EA. FACE	10 @ 240	10 @ 450
	VERT.	10 @ 320 EA. FACE	10 @ 240	10 @ 450
300mm	HORIZ.	10 @ 270 EA. FACE	10 @ 200	10 @ 400
	VERT.	10 @ 270 EA. FACE	10 @ 200	10 @ 400
350mm	HORIZ.	15 @ 450 EA. FACE	15 @ 340	15 @ 450
	VERT.	15 @ 450 EA. FACE	15 @ 340	15 @ 450
400mm	HORIZ.	15 @ 400 EA. FACE	15 @ 300	15 @ 450
	VERT.	15 @ 400 EA. FACE	15 @ 300	15 @ 450
450mm	HORIZ.	15 @ 350 EA. FACE	15 @ 260	15 @ 450
	VERT.	15 @ 350 EA. FACE	15 @ 260	15 @ 450

NOTE: SIZE AND SPACING OF DOWELS TO BE SAME AS VERTICAL REINF. IN WALL

TABLE 3
COLUMN, WALL & FOOTING DOWELS SCHEDULE

LAP SPLICE LENGTHS IN COLUMN & WALLS AND DEVELOPMENT LENGTHS IN CAPS & FOOTINGS

DATA		BAR SIZE	10	15	20	25	30	35	
600 MIN. 20 MPa N.W. CONCRETE	TENSION	LAP SPLICE	550	820	1090	1700	2040	2390	
		DEVELOPMENT LENGTH	420	630	840	1310	1570	1840	
	COMPRESSION	LAP SPLICE	300	440	590	730	880	1030	
		DEVELOPMENT LENGTH	220	320	430	540	640	750	
500 MIN. 25 MPa N.W. CONCRETE	TENSION	LAP SPLICE	490	740	980	1530	1830	2130	
		DEVELOPMENT LENGTH	380	570	750	1170	1410	1640	
	COMPRESSION	LAP SPLICE	300	440	590	730	880	1030	
		DEVELOPMENT LENGTH	200	290	390	480	580	680	
450 MIN. 30 MPa N.W. CONCRETE	TENSION	LAP SPLICE	450	670	890	1360	1670	1950	
		DEVELOPMENT LENGTH	350	520	690	1070	1290	1500	
	COMPRESSION	LAP SPLICE	300	440	590	730	880	1030	
		DEVELOPMENT LENGTH	200	280	350	440	530	630	
400 MIN. 35 MPa N.W. CONCRETE	TENSION	LAP SPLICE	420	620	830	1290	1550	1800	
		DEVELOPMENT LENGTH	320	480	640	990	1190	1390	
	COMPRESSION	LAP SPLICE	300	440	590	730	880	1030	
		DEVELOPMENT LENGTH	200	280	350	440	530	630	
350 MIN. 40 MPa N.W. CONCRETE	TENSION	LAP SPLICE	390	580	770	1210	1450	1690	
		DEVELOPMENT LENGTH	300	450	600	930	1110	1300	
	COMPRESSION	LAP SPLICE	300	440	590	730	880	1030	
		DEVELOPMENT LENGTH	200	280	350	440	530	630	
300 MIN. 50 MPa N.W. CONCRETE	TENSION	LAP SPLICE	390	550	730	1150	1370	1590	
		DEVELOPMENT LENGTH	300	420	560	880	1050	1230	
	COMPRESSION	LAP SPLICE	300	440	590	730	880	1030	
		DEVELOPMENT LENGTH	200	280	350	440	530	630	
300 MIN. 60 MPa N.W. CONCRETE	TENSION	LAP SPLICE	390	520	690	1080	1300	1510	
		DEVELOPMENT LENGTH	300	400	530	830	1000	1160	
	COMPRESSION	LAP SPLICE	300	440	590	730	880	1030	
		DEVELOPMENT LENGTH	200	280	350	440	530	630	
300 MIN. 70 MPa N.W. CONCRETE	TENSION	LAP SPLICE	390	500	660	1030	1240	1440	
		DEVELOPMENT LENGTH	300	380	510	790	950	1110	
	COMPRESSION	LAP SPLICE	300	440	590	730	880	1030	
		DEVELOPMENT LENGTH	200	280	350	440	530	630	
300 MIN. 80 MPa N.W. CONCRETE	TENSION	LAP SPLICE	390	480	630	990	1180	1380	
		DEVELOPMENT LENGTH	300	370	490	760	910	1060	
	COMPRESSION	LAP SPLICE	300	440	590	730	880	1030	
		DEVELOPMENT LENGTH	200	280	350	440	530	630	
300 MIN. 90 MPa N.W. CONCRETE	TENSION	LAP SPLICE	390	460	610	960	1150	1340	
		DEVELOPMENT LENGTH	300	360	470	740	880	1030	
	COMPRESSION	LAP SPLICE	300	440	590	730	880	1030	
		DEVELOPMENT LENGTH	200	280	350	440	530	630	
300 MIN. 100 MPa N.W. CONCRETE	TENSION	LAP SPLICE	390	460	610	960	1150	1340	
		DEVELOPMENT LENGTH	300	360	470	740	880	1030	
	COMPRESSION	LAP SPLICE	300	440	590	730	880	1030	
		DEVELOPMENT LENGTH	200	280	350	440	530	630	

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WALL THICKNES	DIRECTION	WALL EXPOSED OR ENCLOSED BOTH SIDES	WALL EXPOSED ONE SIDE	
			EXPOSED SIDE	ENCLOSED SIDE
150mm	HORIZ.	10 @ 330 (1 LAYER)	10 @ 330 (1 LAYER)	
	VERT.	10 @ 450 (1 LAYER)	10 @ 450 (1 LAYER)	
180–200 mm	HORIZ.	10 @ 450 EA. FACE	10 @ 420	10 @ 450
	VERT.	10 @ 450 EA. FACE	10 @ 450	10 @ 450
250mm	HORIZ.	10 @ 400 EA. FACE	10 @ 330	10 @ 450
	VERT.	10 @ 450 EA. FACE	10 @ 450	10 @ 450
300mm	HORIZ.	10 @ 330 EA. FACE	10 @ 250	10 @ 450
	VERT.	10 @ 440 EA. FACE	10 @ 400	10 @ 450
350mm	HORIZ.	10 @ 280 EA. FACE	10 @ 210	10 @ 430
	VERT.	10 @ 380 EA. FACE	10 @ 300	10 @ 450
400mm	HORIZ.	10 @ 250 EA. FACE	15 @ 380	10 @ 370
	VERT.	10 @ 330 EA. FACE	10 @ 250	10 @ 450

NOTE: SIZE AND SPACING OF DOWELS SHALL BE THE SAME AS VERTICAL REINFORCING IN WALL

GENERAL

1. ALL DIMENSIONS SHOWN ON STRUCTURAL DRAWINGS SHALL BE VERIFIED WITH ARCHITECTURAL DRAWINGS AND ANY INCONSISTENCIES SHALL BE REPORTED TO ARCHITECT BEFORE PROCEEDING WITH THE WORK.
2. READ STRUCTURAL DRAWINGS IN CONJUNCTION WITH SPECIFICATIONS AND ALL RELATED CONTRACT DOCUMENTS, WHICH SHALL BE THE MOST CURRENT DOCUMENTS, STANDARDS AND CODES ISSUED AT THE TIME OF THE CONTRACT.
3. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR SIZES AND LOCATIONS OF SLEEVES NOT SHOWN ON THE STRUCTURAL DRAWINGS, AND OBTAIN THE CONSULTANT'S APPROVAL BEFORE INSTALLING SLEEVES AND OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
4. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR DETAILS RELATED TO TRENCHES, SUMP PITS, HOUSEKEEPING PADS, BASES, CURBS AND THE LIKE, NOT DELINEATED ON THE STRUCTURAL DRAWINGS.
5. ALL TRADES SHALL WORK IN CONFORMANCE WITH THE SAFETY REGULATIONS OF THE ONTARIO MINISTRY OF LABOUR AND THE WORKER'S SAFETY INSURANCE BOARD.
6. THE STRUCTURAL DESIGN LOADS SHOWN ON THE DRAWINGS SHALL NOT BE EXCEEDED DURING CONSTRUCTION.

FOUNDATIONS

1. CAISSONS SHALL BE CARRIED DOWN TO, AND BEAR ON NATURAL UNDISTURBED SOUND BEARING MATERIAL, AS DESCRIBED IN THE SOIL REPORT, WITH A MINIMUM SAFE BEARING CAPACITY AS INDICATED ON FOUNDATION PLANS.
   FOOTINGS SHALL BEAR ON NATURAL UNDISTURBED SOIL, AS DESCRIBED IN THE SOIL REPORT, WITH A MINIMUM SAFE BEARING CAPACITY AS INDICATED ON FOUNDATION PLANS.
2. EXTERIOR FOOTINGS SHALL BE FOUNDED AT A MINIMUM OF 1200mm BELOW FINISHED GRADE. FOOTINGS EXPOSED TO FREEZING DURING CONSTRUCTION SHALL BE PROTECTED BY 1200mm OF SOIL OR ITS EQUIVALENT.
3. NEW FOOTINGS WHICH ARE ADJACENT TO EXISTING FOOTINGS SHALL BE FOUNDED AT THE SAME ELEVATION AS THE EXISTING FOOTINGS UNLESS OTHERWISE SHOWN OR NOTED.
4. 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 IN A STEPPED FOOTING SHALL BE 600mm.
5. CAP DEPTHS GIVEN IN FOOTING SCHEDULE, ARE BASED ON ASSUMED SOIL DESIGN CONDITIONS. IF THE ACTUAL SOIL CONDITIONS ARE FOUND TO BE AT VARIANCE WITH THOSE ASSUMED, FOOTING BASE ELEVATION SHALL BE ADJUSTED AND THE DEPTH OF THE CAPS SHALL BE MODIFIED IN ACCORDANCE WITH THE FOLLOWING LIMITING CRITERIA:
   A) MINIMUM DEPTH OF CAP UNDER A CONCRETE COLUMN SHALL BE THE GREATER OF:
      (a) TWICE THE GREATEST HORIZONTAL PROJECTION OF THE CAP BEYOND THE COLUMN FACE, OR
      (b) HALF THE LENGTH OF THE COLUMN DOWELS, PLUS 75mm, MINUS THE DEPTH OF THE FOOTING BASE.
   B) MINIMUM DEPTH OF CAP UNDER A STRUCTURAL STEEL COLUMN SHALL BE TWICE THE GREATEST HORIZONTAL PROJECTION OF THE CAP BEYOND THE EDGE OF THE COLUMN BASE PLATE.
   C) MAXIMUM DEPTH OF CAP SHALL BE 3 TIMES ITS LEAST LATERAL DIMENSION UNLESS REINFORCED.
6. WHERE THERE IS GRADE ON BOTH SIDES OF A FOUNDATION WALL, THE BACKFILLING AGAINST THE WALL SHALL BE CARRIED OUT SO THAT THE DIFFERENTIAL IN THE DEPTH OF THE BACKFILL ON OPPOSITE SIDES OF THE WALL IS NEVER MORE THAN 450mm.
7. DO NOT PLACE BACKFILL AGAINST WALLS, OTHER THAN CANTILEVERED RETAINING WALLS, UNTIL THE WALLS AND THE FLOOR SLABS, AT THE TOP AND BOTTOM OF THE WALLS HAVE DEVELOPED THEIR FULL SPECIFIED CONCRETE DESIGN STRENGTHS.
8. WHERE A SLAB–ON–GRADE IS EMPLOYED TO RESTRAIN THE TOP OF A WALL, SUBJECTED TO LATERAL EARTH PRESSURES, THE WALL SHALL BE ADEQUATELY TEMPORARILY BRACED UNTIL THE CONCRETE IN THE SLAB–ON–GRADE HAS DEVELOPED ITS FULL SPECIFIED CONCRETE DESIGN STRENGTH.
9. SLABS ON EARTH SHALL BE CAST IN ALTERNATE STRIPS NOT EXCEEDING 4500mm IN WIDTH BETWEEN KEYED CONSTRUCTION JOINTS. THE CAST STRIPS SHALL BE SAW–CUT INTO PANELS NOT EXCEEDING 4500mm IN LENGTH.
10. THE MAXIMUM LENGTH OF A WALL CASTING SHALL BE 18000mm BETWEEN KEYED CONSTRUCTION JOINTS. CHASES FOR SLABS AND POCKETS FOR BEAMS SHALL BE PROVIDED IN ALL CAST–IN–SITU CONCRETE WALLS.
11. CRUSHED STONE BASES BELOW SLABS–ON–GRADE SHALL BE COMPACTED TO THE DEGREE RECOMMENDED IN THE SOIL REPORT FOR THIS PROJECT.
12. CONTRACTOR SHALL CONTROL SURFACE AND GROUND WATER DURING CONSTRUCTION TO ENABLE FOUNDATIONS TO BE CONSTRUCTED ON DRY SOIL AND/OR ROCK.
13. NO FOUNDATIONS SHALL BE CAST ON FROZEN MATERIAL OR IN WATER.

MATERIALS

CONCRETE

1. CONCRETE AND CONCRETE WORK SHALL CONFORM TO CSA–A23.1–09/A23.2–09, CAN/CSA–S413–07 AND TO THE DESIGN PROPERTIES FOR STRENGTH AND EXPOSURE CLASSIFICATION PRESENTED IN THE NOTES FOR THE RELEVANT PLANS AND SCHEDULES.
2. REINFORCING STEEL SHALL CONFORM TO CAN/CSA–G30.18–M92 (R2007), AND SHALL HAVE A YIELD STRENGTH OF 400 MPa, UNLESS OTHERWISE NOTED.
3. WELDED WIRE FABRIC SHALL BE SUPPLIED IN FLAT SHEETS ONLY AND SHALL HAVE A MINIMUM YIELD STRENGTH OF 385 MPa.

STRUCTURAL STEEL

1. STRUCTURAL STEEL WIDE FLANGE AND WELDED WIDE FLANGE SHAPES SHALL CONFORM TO CAN/CSA–G40.20/G40.21–04, GRADE 350W, UNLESS OTHERWISE NOTED.
   STRUCTURAL STEEL ANGLES AND CHANNELS SHALL CONFORM TO CAN/CSA–G40.20/G40.21–04, GRADE 300W.
   STRUCTURAL STEEL HOLLOW TUBES SHALL CONFORM TO CAN/CSA–G40.20/G40.21–04, GRADE 350W, CLASS H.
2. STRUCTURAL BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325M.
3. SECONDARY BOLTS IN GIRTS, LIGHT ANGLE FRAMES AND ANCHOR BOLTS SHALL CONFORM TO ASTM A307, UNLESS OTHERWISE NOTED.
4. CONCRETE EMBEDDED SHEAR STUDS SHALL BE MANUFACTURED OF LOW CARBON STEEL, GRADE 300W, AND SHALL BE WELDED IN CONFORMANCE WITH AWS D1.1/D1.1M–2004, CSA–W59–03 AND W186–M 1990 (R2007). CONCRETE EMBEDDED STUD RAILS SHALL BE MANUFACTURED OF LOW CARBON STEEL, GRADE 300W, AND SHALL SUSTAIN THE FULL YIELD STRENGTH OF THE STUDS.

MASONRY

1. CONCRETE MASONRY BLOCK UNITS SHALL CONFORM TO CSA–A165–04, WITH A COMPRESSIVE STRENGTH OF 15 MPa, BASED ON NET AREA, UNLESS OTHERWISE NOTED.
2. MORTAR SHALL CONFORM TO CSA–A179–04, TYPE 'N' TYPICALLY AND TYPE 'S' BELOW GRADE, UNLESS OTHERWISE NOTED.
3. NON–SHRINK GROUT SHALL CONFORM TO CSA–A23.1–09/A23.2–09, AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 35 MPa AT 28 DAYS.
4. MASONRY GROUT SHALL CONFORM TO CSA–A179–04, AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 20 MPa AT 28 DAYS, AND A MAXIMUM SLUMP OF 250mm, UNLESS OTHERWISE NOTED.

EXECUTION

CONCRETE

1. REINFORCING SHALL BE SECURELY HELD IN PLACE DURING THE CASTING AND COMPACTING OF THE CONCRETE. IF REQUIRED, ADDITIONAL SUPPORT BARS AND/OR STIRRUPS SHALL BE PLACED BY THE CONTRACTOR TO PROVIDE SUPPORT FOR ALL BARS. ALL TOP BARS IN SLABS SHALL BE SUPPORTED ON CONTINUOUS HIGH CHAIRS.
2. CONTINUOUS REINFORCING BARS SHALL BE LAPPED AT SPLICES AND CORNERS IN CONFORMANCE WITH CSA–A23.3–04, AND THE TYPICAL DETAILS, UNLESS OTHERWISE NOTED. LAP CONTINUOUS TOP BARS AT CENTER BETWEEN SUPPORTS AND CONTINUOUS BOTTOM BARS AT SUPPORTS. WHERE REQUIRED, TERMINATE CONTINUOUS BARS AT NON–CONTINUOUS ENDS WITH STANDARD HOOKS.
3. PROVIDE DOWELS TO WALLS AND COLUMNS WHICH SHALL BE THE SAME IN NUMBER, SIZE AND SPACING, AS THE VERTICAL REINFORCING STEEL IN THE WALLS OR COLUMNS ABOVE, UNLESS OTHERWISE NOTED.
4. ALL DOWELS SHALL HAVE A MINIMUM EMBEDMENT LENGTH EQUAL TO THE STRAIGHT TENSION EMBEDMENT LENGTH FOR THE SIZE OF THE BAR. DOWELS FROM WALLS TO SLABS SHALL HAVE A MINIMUM EMBEDMENT LENGTH OF 600mm INTO THE WALLS AND SLABS UNLESS OTHERWISE INDICATED.
5. CONCRETE BEAMS AND SPANDRELS SHALL BE CAST MONOLITHICALLY WITH SLABS UNLESS OTHERWISE DELINEATED HORIZONTAL CONSTRUCTION JOINTS SHALL NOT BE MADE IN BEAMS OR SPANDRELS UNLESS APPROVED BY THE CONSULTANT. VERTICAL CONSTRUCTION JOINTS MAY BE MADE ONLY AT THE MID–SPANS OF BEAMS, SPANDRELS AND SLABS, WHICH SHALL BE REVIEWED AND APPROVED BY THE CONSULTANT.
6. THE LOCATION AND DETAILS OF CONSTRUCTION JOINTS REQUIRED, BUT NOT SHOWN, SHALL BE SUBMITTED TO THE CONSULTANT FOR APPROVAL.
7. NO OPENINGS SHALL BE FORMED IN THE COLUMN STRIPS OF FLAT PLATE OR FLAT SLAB CONSTRUCTION WITHOUT THE CONSULTANT'S APPROVAL.
8. NO SLEEVES SHALL BE PLACED IN BEAMS OR THROUGH COLUMNS WITHOUT THE CONSULTANT'S APPROVAL.
9. MINIMUM CONCRETE COVER TO REINFORCING BARS IN A NON–CORROSIVE SITUATION SHALL BE 75mm FOR CONCRETE CAST AGAINST AND EXPOSED TO SOIL.
10. MINIMUM CONCRETE COVER TO REINFORCING BARS IN A NON–CORROSIVE SITUATION FOR CONCRETE CAST ON OR WITHIN FORMWORK SHALL BE AS FOLLOWS IN mm:

ELEMENT	REINFORCING BAR DIAMETER (mm)	NOT EXPOSED TO EARTH OR WEATHER (COVER mm)	EXPOSED TO EARTH OR WEATHER (COVER mm)
SLABS AND WALLS	20 AND SMALLER	25	30
	25	25	40
	30	30	45
	35	35	55
	45	45	70
	55	55	85
COLUMNS (AXIAL REINFORCEMENT)	35 AND SMALLER	50	55
	45	50	70
	55	55	85
BEAMS, GIRDERS AND PILES (PRINCIPAL REINFORCEMENT)	35 AND SMALLER	40	55
	45	45	70
	55	55	85
TIES, STIRRUPS AND SPIRALS	–	30	40
N.B. MINIMUM CONCRETE COVER TO PRINCIPAL REINFORCING IN SHEAR WALL = 40mm			

11. MINIMUM CONCRETE COVER TO REINFORCING BARS FOR A 3 HOURS FIRE RATING SHALL BE 35mm FOR BOTTOM BARS IN SLAB, 65mm FOR MAIN AXIAL REINFORCING IN COLUMNS, 35mm FOR WALLS AND 40mm IN BEAMS FOR 35M AND SMALLER, AND 45mm AND 55mm FOR 45M AND 55M BARS RESPECTIVELY.
12. MINIMUM CONCRETE COVER TO REINFORCING BARS FOR CONCRETE EXPOSED TO DE–ICING CHEMICALS, ON PARKING GARAGE SLABS, RAMPS AND TRUCK DOCKS, SHALL BE 40mm, IN GARAGE WALLS AND TOP REINFORCING BARS IN SLABS, AND 30mm FOR BOTTOM REINFORCING BARS.
13. UNLESS OTHERWISE SPECIFIED ON CAMBER DRAWINGS OF FRAMING LEVELS, CAMBER ALL SLAB AND BEAM FORMS 5mm FOR EACH 3000mm OF SPAN. THE CAMBER SHALL BE CHECKED AND ADJUSTED BEFORE THE INITIAL SET OF CONCRETE. CAMBER SHALL BE 12mm FOR EACH 2000mm OF CANTILEVER SPAN. THE FULL THICKNESS OF SLABS AND BEAMS SHALL BE MAINTAINED THROUGHOUT. IN PARKING LEVELS, CAMBER SHALL BE INCREASED AS MAY BE REQUIRED TO ENSURE A MINIMUM NOMINAL SLOPE OF 2 PERCENT TO DRAINS AFTER ALL LONG TERM DEFLECTIONS OCCUR.
14. UNLESS SPECIFIED OTHERWISE, RESHORING SHALL BE INSTALLED FOR A MINIMUM OF 3 FLOORS BELOW THE LATEST SLAB CASTING.
15. LAP SPLICES FOR REINFORCING STEEL SHALL CONFORM TO CSA–A23.3–04, TAKING INTO ACCOUNT THE CONCRETE STRENGTH, GRADE OF STEEL, TOP OR BOTTOM BARS AND COATINGS ON STEEL, IF ANY.
16. ELECTRICAL CONDUITS AND MECHANICAL PIPES ARE NOT PERMITTED IN CONCRETE COLUMNS UNLESS PREVIOUSLY APPROVED BY THE STRUCTURAL CONSULTANT.
17. ONLY VERTICAL CONDUITS OR PIPE ARE PERMITTED IN CONCRETE WALLS.
18. WHERE CONDUITS DISPLACE MORE THAN 5% OF THE CROSS SECTIONAL AREA OF THE SLAB, CONCRETE WITH 10mm AGGREGATE (PEA GRAVEL) SHALL BE USED AND THE CONSULTANT SHALL BE NOTIFIED. IF THE CONGESTION IS DEEMED TO BE SIGNIFICANT THE CONSULTANT RESERVES THE RIGHT TO INCREASE THE CONCRETE STRENGTH.
19. MAXIMUM OUTSIDE DIAMETER OF EMBEDDED PIPES AND CONDUITS SHALL BE 50mm. CONDUITS SHALL BE SPACED A MINIMUM OF 3 DIAMETERS APART.

EXECUTION CONT'D.

STRUCTURAL STEEL

1. STRUCTURAL STEEL WORK SHALL CONFORM TO CAN/CSA–S16–09.
2. STRUCTURAL STEEL BEAMS SHALL HAVE A MINIMUM BEARING LENGTH OF 200mm ON MASONRY OR CONCRETE, UNLESS OTHERWISE NOTED.
3. STEEL BEARING PLATES SHALL BE CENTERED UNDER THE BEAM WEBS, UNLESS NOTED OTHERWISE.
4. BEAM BEARING PLATES DIMENSION GIVEN FIRST IS PARALLEL TO THE SPAN OF THE BEAM.
5. WHERE MOMENT CONNECTIONS ARE INDICATED, THE CONNECTION SHALL DEVELOP THE FULL FLEXURAL CAPACITY OF THE SMALLER CONNECTED MEMBER.
6. MEMBER SPLICES SHALL DEVELOP THE FULL FLEXURAL AND SHEAR CAPACITY OF THE MEMBER. MEMBERS SHALL NOT BE SPLICED AT POINTS OF MAXIMUM STRESS. SPLICES SHALL BE MADE ONLY WITH THE APPROVAL OF THE CONSULTANT.
7. INSTALL FITTED, WELDED STIFFENER PLATES AT EACH SIDE OF BEAM WEB AT LOCATIONS OF CONCENTRATED LOADS, SUCH AS A SUPPORT FOR A COLUMN ABOVE, OR OVER A COLUMN, UNLESS OTHERWISE SHOWN.
8. COLUMNS SHALL BE CONNECTED TO BASE PLATES FOR THE GREATER OF THE FOLLOWING, PLUS OTHER FORCES SHOWN, UNLESS OTHERWISE NOTED.
   a. 5 PERCENT OF THE VERTICAL COLUMN LOAD APPLIED HORIZONTALLY.
   b. THE RESULTANT OF BRACING FORCES.
9. FABRICATE CAMBRES TO PURLINS, BEAMS, GIRDERS AND TRUSSES, AS SHOWN ON THE FRAMING PLANS. NOTED CAMBERS ARE FOR THE ERECTED CONFIGURATION BEFORE STEEL DECK IS INSTALLED.
10. INSTALL WELDED L–75x75x6 BRACKET, AT 45 DEGREES TO THE BEAM AXIS, WHERE BEAMS CONNECT AT COLUMNS, TO SUPPORT STEEL DECK, WHERE THE COLUMN CONTINUES ABOVE THE LEVEL OF THE DECK.
11. INSTALL AND MAINTAIN TEMPORARY BRACING UNTIL THE ENTIRE STRUCTURAL STEEL FRAME IS COMPLETED, INCLUDING FLOOR AND ROOF DECKS AND ALL ELEMENTS WHICH ARE PART OF THE LATERAL LOAD RESISTING SYSTEM.
12. ALL STRUCTURAL STEEL EXPOSED TO THE ELEMENTS SHALL BE HOT–DIPPED GALVANIZED UNLESS OTHERWISE NOTED. WHERE GALVANIZED COATING HAS BEEN COMPROMISED, TOUCH–UP WITH ZINC RICH PRIMER AS APPROVED BY THE CONSULTANT.

MASONRY

1. MASONRY CONSTRUCTION SHALL CONFORM TO CSA–A371–04.
2. BELOW BEARING PLATES OF CONCRETE AND STEEL BEAMS, JOISTS AND TRUSSES, PROVIDE SOLID MASONRY BEARING PADS OF ONE HUNDRED PERCENT SOLID MASONRY UNITS, LAID IN TYPE 'S' MORTAR. THE BEARING PAD LENGTH SHALL BE EQUAL TO TWICE THE LENGTH OF THE BEARING PLATE AND SHALL EXTEND DOWN BELOW THE BEARING PLATE, TO A DEPTH EQUAL TO THE LENGTH OF THE BEARING PLATE.
3. CONCRETE SLABS BEARING ON MASONRY SHALL HAVE A MINIMUM BEARING OF 200mm AND THE BEARING COURSES SHALL BE OF ONE HUNDRED PERCENT SOLID MASONRY UNITS LAID IN TYPE 'S' MORTAR EXTENDING DOWN TO A DEPTH OF 200mm BELOW THE UNDERSIDE OF THE SLAB.
4. AT THE BEARING ENDS OF STEEL, CONCRETE OR REINFORCED CONCRETE BLOCK LINTELS, PROVIDE 200mm LONG BY 200mm DEEP BEARING PADS OF ONE HUNDRED PERCENT SOLID MASONRY UNITS LAID IN TYPE 'S' MORTAR.
5. WHERE STEEL BEAMS FRAME INTO MASONRY WALLS, AND STEEL COLUMNS ARE EMBEDDED IN MASONRY WALLS, CONSTRUCT THE MASONRY UNITS SO AS TO TIGHTLY FILL THE SPACES BETWEEN THE FLANGES AND TO BE IN FULL CONTACT WITH BOTH SIDES OF THE WEBS.
6. OVER ALL OPENINGS AND RECESSES IN MASONRY WALLS, UNLESS OTHERWISE NOTED, PROVIDE 200mm DEEP LINTEL OR 200mm DEEP REINFORCED CONCRETE BLOCK LINTELS OF 20 MPa CONCRETE FOR CONCRETE BLOCK WALLS REINFORCED AS FOLLOWS:
   a. FOR CLEAR SPANS UP TO 1200mm USE 1–10M, HOOKED EACH END, TOP AND BOTTOM, FOR EACH 90mm OF WALL THICKNESS OR PORTION THEREOF.
   b. FOR CLEAR SPANS BETWEEN 1200mm AND 1800mm USE 1–15M, HOOKED EACH END, TOP AND BOTTOM, FOR EACH 90mm OF WALL THICKNESS OR PORTION THEREOF.

   FOR BRICK WALLS, USE ONE L–90x90x8 FOR CLEAR SPANS UP TO 1200mm FOR EACH 90mm OF WALL THICKNESS, AND FOR CLEAR SPANS BETWEEN 1200mm AND 1800mm, USE ONE L–125x90x8 (LLV) FOR EACH 90mm OF WALL THICKNESS.
7. REFER TO LINTEL SCHEDULES FOR FURTHER DETAILS.
8. WALL THICKNESS CHANGES SHALL INCORPORATE 100% SOLID MASONRY UNITS FOR A HEIGHT OF 200mm BELOW THE REDUCTION IN WALL THICKNESS.

LOADS

1. LIVE SERVICE LOADS ARE AS FOLLOWS, UNLESS OTHERWISE NOTED ON PLANS :

LIVING QUARTERS, UPPER FLOOR CORRIDORS	1.9 kPa
ENTRANCE HALLS, GROUND FLOOR CORRIDORS, EXITS, STAIRS, STORAGE AREAS, RECREATION AREAS	4.8 kPa
BALCONIES, SUNROOMS & LOCKER ROOMS	4.8 kPa
GARAGES FOR PASSENGER VEHICLES	2.4 kPa
LOADING DOCKS AND RAMPS FOR BULK LIFT VEHICLES	14.0 kPa
MECHANICAL ROOMS	7.2 kPa
RETAIL AREAS	4.8 kPa
SIDEWALKS AND DRIVEWAYS OVER AREAWAYS AND BASEMENTS	12.0 kPa

2. SUPERIMPOSED DEAD LOAD INCLUDES MINIMUM 1.0 kPa (PARTITION ALLOWANCE), OR AS SPECIFICALLY NOTED ON DRAWINGS.

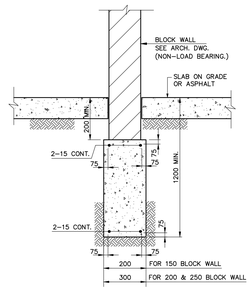
TRANSIENT LOADS ON STRUCTURAL FRAME - BUILDING A

1. THE STRUCTURE HAS BEEN DESIGNED TO RESIST WIND PRESSURE AND LIVE LOAD DUE TO EARTHQUAKE IN ACCORDANCE WITH ONTARIO BUILDING CODE 2012, AND THE REFERENCED CLIMATIC INFORMATION FOR BRAMPTON, ONTARIO.
2. LIVE LOADS DUE TO SNOW AND RAIN.
   Ss = 1.3 kPa
   Sr = 0.4 kPa
3. LIVE LOADS DUE TO WIND FOR BRAMPTON, ONTARIO.
   IMPORTANCE FACTOR Iw = 1.0
   HOURLY WIND PRESSURES: (1/10) = 0.34 kPa
   (1/50) = 0.44 kPa
   N–S, Vw = 755 kN, Mw = 5488 kN.m
   E–W, Vw = 147 kN, Mw = 1070 kN.m
4. LIVE LOADS DUE TO EARTHQUAKE FOR BRAMPTON, ONTARIO.
   IMPORTANCE FACTOR Iₑ = 1.0
   Sa(0.2) = 0.168, Sa(0.5) = 0.096, Sa(1.0) = 0.052, Sa(2.0) = 0.026
   SITE CLASS = C, Fa = 1.0, Fv = 1.0
   IeFaSa(0.2) = 0.168
   TYPE OF IRREGULARITIES = 7
   METHOD OF ANALYSIS = STATIC
   B = N/A Ta = 0.340 Mv = 1.0 J = 1.0
   TYPE OF SFRS. = SHEAR WALLS Rd = 1.5 Ro = 1.3
   N–S, Vx = 2212 kN, Mx = 21043 kN.m
   E–W, Vx = 2212 kN, Mx = 21043 kN.m

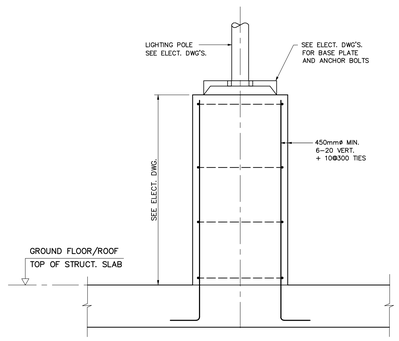
TRANSIENT LOADS ON STRUCTURAL FRAME - BUILDING B

1. THE

207 TYPICAL BLOCK WALL FOOTING UNHEATED AREA



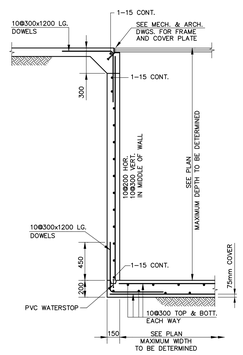
208 TYPICAL LIGHTING POLE BASE DETAIL



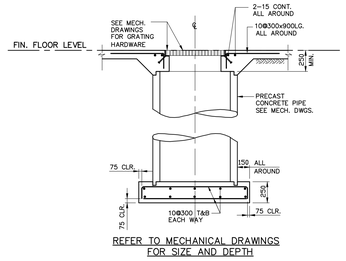
POLE SUPPORTED ON STRUCTURAL SLAB

SEE ELECT. DRAWINGS FOR LOCATIONS

210 TYPICAL SUMP PIT DETAIL

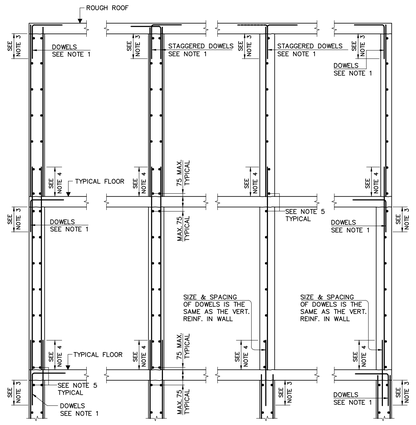


211 TYPICAL PRECAST MECHANICAL PIT



REFER TO MECHANICAL DRAWINGS FOR SIZE AND DEPTH

300 TYPICAL DETAILS FOR CONCRETE SHEAR WALLS

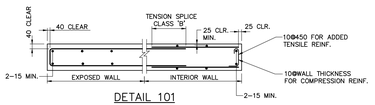


WALLS WITH 2 LAYERS OF REINF. WALLS WITH 1 LAYER OF REINF.

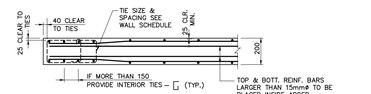
NOTES:

1. PROVIDE DOWELS OF EQUAL AREA TO THE ADJACENT SLAB MIN.TEMP. REINF. BUT NOT LESS THAN 10@300 OR VERT. WALL REINF. HORIZONTAL LEG OF DOWELS TO BE EQUAL TO THE TENSION DEVELOPMENT LENGTH, UNLESS OTHERWISE NOTED.
2. FOR SHEAR WALL SIZE & REINF. SEE WALL SCHEDULE.
3. PROVIDE TENSION DEVELOPMENT LENGTH.
4. PROVIDE COMPRESSION LAP SPLICE LENGTH.
5. AT TOP AND BOTTOM OF EACH STOREY ADD 2-15 FOR 2 LAYERS AND 1-15 FOR 1 LAYER UNLESS OTHERWISE NOTED.

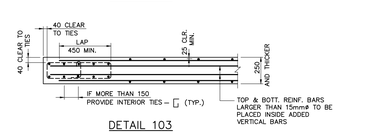
301 DETAILS FOR ADDED VERTICAL REINFORCING IN SHEAR WALLS



DETAIL 101

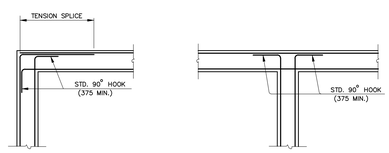


DETAIL 102

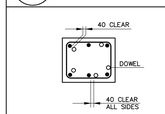


DETAIL 103

302 TYPICAL DETAILS OF CONT. WALL REINF.



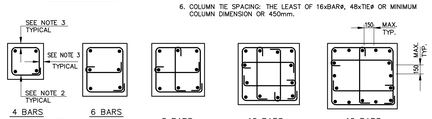
401 TYPICAL CONCRETE COLUMN TIES



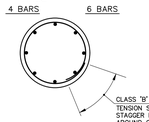
SECTION FOR DOWEL LAP SPLICES

COLUMN TIE NOTES

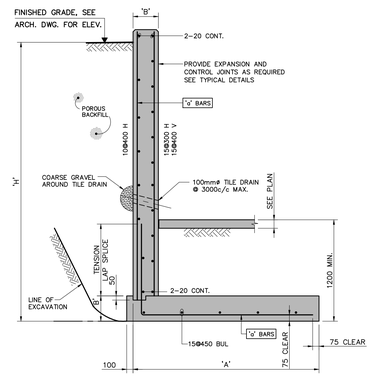
1. VERTICAL REINF. BARS SHALL BE EQUALLY SPACED AROUND THE PERIMETER OF COLUMNS.
2. ALTERNATE POSITION OF HOOKS IN PLACING SUCCESSIVE SETS OF TIES.
3. MINIMUM COVER TO TIES = 40mm TYPICALLY. (SEE GENERAL NOTES)
4. ELIMINATION OF TIE FOR CENTRE BARS IN GROUPS OF 3, LIMITS CLEAR SPACING TO 150mm MAX. UNLESS OTHERWISE SPECIFIED, BARS SHALL BE SO GROUPED.
5. PROVIDE 10M TIES FOR REINF. UP TO 30M BARS; 15M TIES FOR 35M BARS OR LARGER.
6. COLUMN TIE SPACING: THE LEAST OF 16xBAR⌀, 48xTIE⌀ OR MINIMUM COLUMN DIMENSION OR 450mm.



TYPICAL COLUMN TIES



305 TYPICAL RETAINING WALL DETAILS



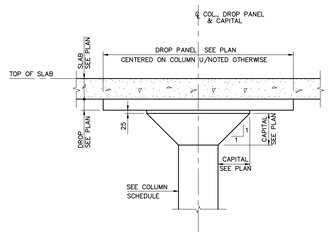
TYPICAL RETAINING WALL SECTION

RETAINING WALL NOTES :

1. CONCRETE STRENGTH AT 28 DAYS SHALL BE 35 MPa. EXPOSURE CLASS 'C1' CONTAINING 7% ±1% ENTRAINED AIR.
2. MINIMUM YIELD STRESS FOR REINFORCING STEEL SHALL BE 400 MPa.
3. MINIMUM DESIGNED SOIL BEARING CAPACITY IS 150 kN PER SQUARE METER. FOOTING SHALL BEAR ON UNDISTURBED SOIL (AT THE ELEVATION SHOWN ON SECTION) CAPABLE OF SAFELY SUSTAINING 150 kPa. IF THE ALLOWABLE BEARING CAPACITY AT THE FOUNDING ELEVATION IS LESS THAN THE SPECIFIED BEARING CAPACITY, PROVIDE DEEPER EXCAVATION AND BACKFILL TO ELEVATION SHOWN WITH ENGINEERED COMPACTED FILL OR LEAN CONCRETE MIX ($f'c$ = 5 MPa) TO THE BOTTOM OF FOOTING.

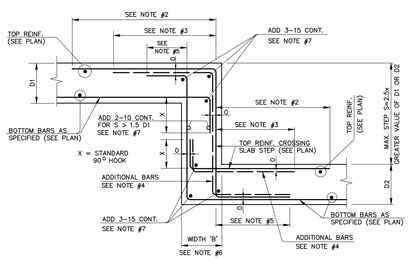
RETAINING WALL REINF. TABLE				
'H'	'A'	'B'	'a' BARS	REMARKS
1800	950	250	15Ø400	
2100	1200	250	15Ø400	
2400	1450	250	15Ø400	
2700	1650	250	15Ø350	
3000	1900	300	20Ø450	
3300	2200	300	20Ø350	
3600	2500	350	20Ø250	
3900	2750	400	20Ø300	
4200	2900	400	20Ø250	
4500	3100	400	20Ø300	
4800	3300	400	30Ø350	
5100	3500	400	30Ø300	
5400	3700	400	30Ø280	
5700	3900	400	30Ø250	

402 TYPICAL COLUMN CAPITAL DETAIL



NOTE: ALL CAPITALS SHALL BE CAST MONOLITHICALLY WITH SLAB

503 TYPICAL DETAILS OF STEPPED SLABS-CASE 1



STEPPED SLAB – MAXIMUM STEP $S=2.5 \times (D_1 \text{ or } D_2)$

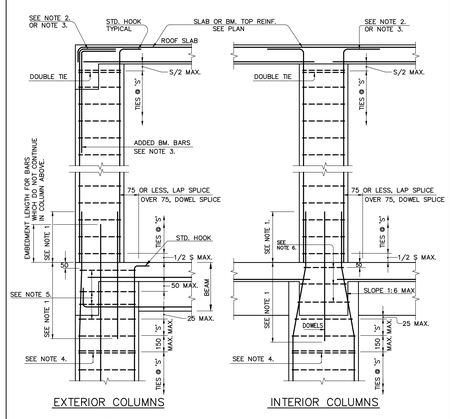
STEPPED SLAB NOTES:

1. FOR SPECIFIED CONTINUOUS TOP REINFORCING CROSSING THE SLAB STEP, PROVIDE TENSION SPLICE CLASS 'B' OR LENGTH INDICATED ON PLAN, WHICHEVER IS GREATER.
2. EXTEND SPECIFIED TOP REINFORCING, CROSSING THE SLAB STEP BY LENGTH INDICATED ON PLAN, OR BY LENGTH OF TENSION DEVELOPMENT LENGTH 'Id', WHICHEVER IS GREATER.
3. PROVIDE 'COMPRESSION LAP SPLICE' AS INDICATED.
4. PROVIDE ADDITIONAL BARS WHERE NO TOP REINFORCING IS SPECIFIED (SEE PLAN) CROSSING SLAB STEP. THE SIZE AND SPACING OF ADDITIONAL BARS SHALL BE AS FOLLOWS.

SLAB THICKNESS D_2	ADDITIONAL BARS
UP TO 230 mm	10 @ 400 mm
250 mm TO 300 mm	10 @ 360 mm
SLABS THICKER THAN 300 mm	AREA OF STEEL SHALL BE EQUAL TO 0.001 x CONC. CROSS SECTION AREA (PER METRE WIDTH)

5. PROVIDE FULL TENSION DEVELOPMENT LENGTH 'Id', MEASURED FROM ADDED T&B CONTINUOUS BARS AS INDICATED.
6. WIDTH OF SLAB STEP SHALL BE THE GREATER OF THE FOLLOWING VALUES: D1, D2, OR 300mm.
7. PROVIDE TENSION LAP SPLICE CLASS 'B' FOR ALL HORIZONTAL BARS IN STEPPED PORTION OF SLAB.

400 TYPICAL CONCRETE COLUMN DETAILS

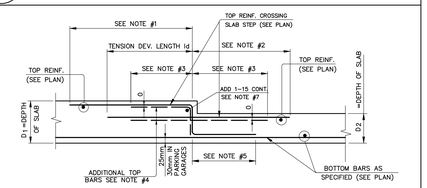


EXTERIOR COLUMNS INTERIOR COLUMNS

NOTES:

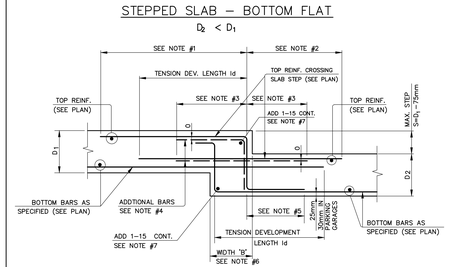
1. ALL COLUMN VERT. REINF. SHALL BE COMPRESSION LAP SPLICED EXCEPT WHERE SHOWN THUS ▲.IN THE COLUMN SCHEDULE, WHICH DENOTES TENSION LAP SPLICE.
2. COLUMN VERT. BARS SHALL BE TERMINATED WITH A FULL DEVELOPMENT COMPRESSION LENGTH INTO THE ROOF STRUCTURE UNLESS THE DEPTH OF STRUCTURE IS TOO SHALLOW TO ACCOMMODATE IT, IN WHICH CASE ADD ADDITIONAL DOWELS AS PER COLUMN SCHEDULE.
3. BARS NOTED THUS ▲ IN COLUMN SCHEDULE SHALL BE PROVIDED WITH CLASS 'B' TENSION SPLICE WITH TOP BARS OF MAIN FLOOR REINF.
4. PROVIDE DOUBLE STIRRUPS IN BOTTOM POSITION OF GOOSE-NECKED VERTICALS AS FOLLOWS: 2-10 FOR 30 VERTICALS AND SMALLER 2-15 FOR 35 & 45 VERTICALS
5. PROVIDE 10M TIES @ 300 FOR COLUMNS UP TO 750 WIDE (IN DIRECTION OF BEAMS) AND 15M TIES @ 300 FOR WIDER COLUMNS.
6. PROVIDE TIES, SAME AS PER NOTE 5, IF LESS THAN 4 BEAMS FRAME INTO COLUMN. NO ADDED TIES ARE REQUIRED WHEN COLUMN IS SUPPORTED BY BEAMS FROM 4 SIDES.

504 TYPICAL DETAILS OF STEPPED SLABS-CASE 2



STEPPED SLAB – BOTTOM FLAT

$D_2 < D_1$



STEPPED SLAB – MAXIMUM STEP S=D1 –75mm

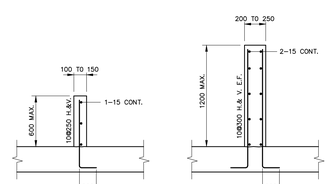
STEPPED SLAB NOTES:

1. EXTEND SPECIFIED TOP REINFORCING, CROSSING THE SLAB STEP, BY LENGTH INDICATED ON PLAN, OR BY LENGTH OF TENSION SPLICE CLASS 'B', WHICHEVER IS GREATER.
2. EXTEND SPECIFIED TOP REINFORCING, CROSSING THE SLAB STEP, BY LENGTH INDICATED ON PLAN, OR BY LENGTH OF TENSION DEVELOPMENT LENGTH 'Id', WHICHEVER IS GREATER.
3. PROVIDE COMPRESSION LAP SPLICE.
4. PROVIDE ADDITIONAL BARS WHERE NO TOP REINFORCING IS SPECIFIED (SEE PLAN) CROSSING SLAB STEP. THE SIZE AND SPACING OF ADDITIONAL BARS SHALL BE AS FOLLOWS.

SLAB THICKNESS D_2	ADDITIONAL TOP BARS
UP TO 230 mm	10 @ 400 mm
250 mm TO 300 mm	10 @ 360 mm
SLABS THICKER THAN 300 mm	AREA OF STEEL SHALL BE EQUAL TO 0.001 x CONC. CROSS SECTION AREA (PER METRE WIDTH)

5. PROVIDE FULL TENSION DEVELOPMENT LENGTH 'Id', MEASURED FROM ADDED CONTINUOUS BAR.
6. WIDTH OF SLAB STEP SHALL BE THE GREATER OF THE FOLLOWING VALUES: D1, D2, OR 300mm.
7. PROVIDE TENSION LAP SPLICE CLASS 'B' FOR ALL HORIZONTAL BARS IN STEP PORTION OF SLAB.

505 TYPICAL CONCRETE CURB DETAILS



NOTES

1. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS AND DIMENSIONS OF CURBS.
2. PROVIDE CONTROL JOINTS @ 4500 c/c. MAXIMUM AND EXPANSION JOINTS @ 9000 c/c. MAXIMUM UNLESS NOTED OTHERWISE. SEE TYPICAL DETAILS. SEE TYPICAL DETAILS FOR CONTROL AND EXPANSION JOINT DETAILS.

ISSUES

No.	DATE	DESCRIPTION
1.	2019-08-02	ISSUED FOR TENDER
2.	2020-09-28	ISSUED FOR PERMIT
3.	2021-03-03	ISSUED FOR PERMIT BUILDINGS A, B, C, D
4.	2021-03-25	ISSUED FOR PROGRESSIVE CONSTRUCTION
5.	2021-03-25	ISSUED FOR PERMIT BUILDINGS A, B, C, D
6.	2021-06-15	ISSUED FOR PROGRESSIVE CONSTRUCTION # 2

REVISIONS

No.	DATE	DESCRIPTION

CONTRACTOR MUST VERIFY ALL DIMENSIONS AND BE RESPONSIBLE FOR SAME REPORTING ANY DISCREPANCIES TO THE ARCHITECT BEFORE COMMENCING THE WORK.

PRINTS ARE NOT TO BE SCALED.

Jablonsky, Ast and Partners
CONSULTING ENGINEERS
1129 LESLIE STREET
DON MILLS, ON., M3C 2K5
TEL 416-447 7605
FAX 416-447 2771

Job Title

FORESTSIDE TOWNHOUSES
TORONTO, ONTARIO

Sheet Title

TYPICAL DETAILS

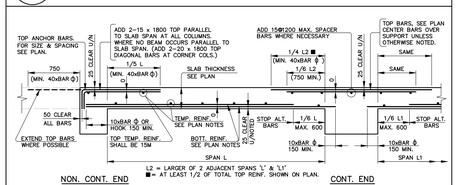
North

Seal

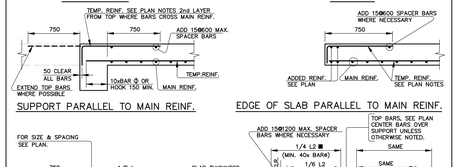
R.J. WATSON #19066 PROVINCE OF ONTARIO

Date Plotted	Date : Jun 14 2021
Drawn By: ND	Scale : N.T.S.
Checked By : JW	Revision Number:
Job No : 19066	Sheet No: S-002

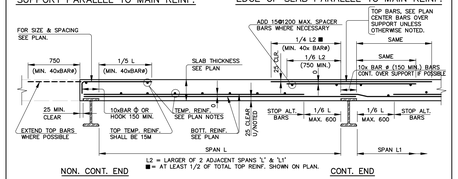
500 TYPICAL ONEWAY SLAB DETAILS



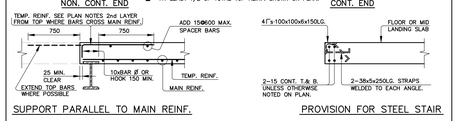
L2 = LARGER OF 2 ADJACENT SPANS 'L' & 'L1'
■ = AT LEAST 1/2 OF TOTAL TOP REINF. SHOWN ON PLAN.



SUPPORT PARALLEL TO MAIN REINF. | EDGE OF SLAB PARALLEL TO MAIN REINF.



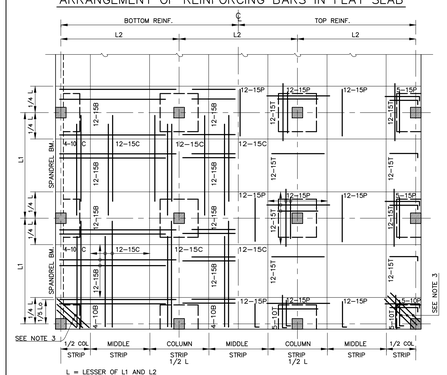
L2 = LARGER OF 2 ADJACENT SPANS 'L' & 'L1'
■ = AT LEAST 1/2 OF TOTAL TOP REINF. SHOWN ON PLAN.



SUPPORT PARALLEL TO MAIN REINF. | PROVISION FOR STEEL STAIR

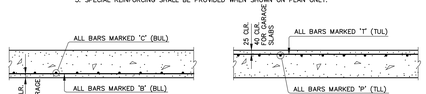
501 TYPICAL FLAT SLAB (PLAN)

ARRANGEMENT OF REINFORCING BARS IN FLAT SLAB



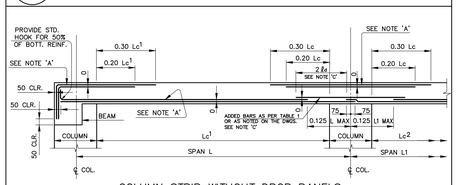
L = LESSER OF L1 AND L2
Lo = LARGER OF L1 AND L2

NOTES:
1. BARS MARKED 'T' & 'B' SHALL BE PLACED IN THE TOP UPPER LAYER AND BOTTOM LOWER LAYER RESPECTIVELY.
2. BARS MARKED 'P' & 'C' SHALL BE PLACED IN THE TOP LOWER LAYER AND BOTTOM UPPER LAYER RESPECTIVELY WHEN INTERSECTING WITH 'T' OR 'B' BARS. WHERE THERE IS NO INTERFERENCE, BARS MARKED 'P' SHALL BE PLACED IN THE TOP UPPER LAYER.
3. SPECIAL REINFORCING SHALL BE PROVIDED WHEN SHOWN ON PLAN ONLY.



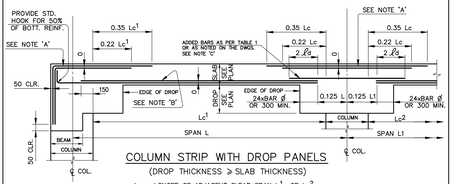
TYPICAL CONCRETE COVER ON BARS IN FLAT SLAB

502 TYPICAL FLAT PLATE & FLAT SLAB DETAILS



COLUMN STRIP WITHOUT DROP PANELS

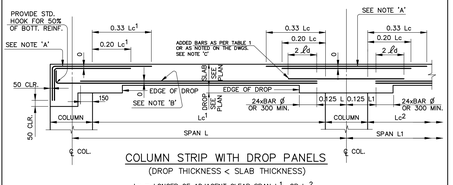
Lc = LONGER OF ADJACENT CLEAR SPAN L¢ OR Lc² .



COLUMN STRIP WITH DROP PANELS

(DROP THICKNESS ≥ SLAB THICKNESS)

Lc = LONGER OF ADJACENT CLEAR SPAN L¢ OR Lc² .



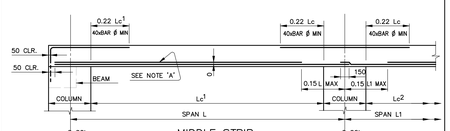
COLUMN STRIP WITH DROP PANELS

(DROP THICKNESS < SLAB THICKNESS)

Lc = LONGER OF ADJACENT CLEAR SPAN L¢ OR Lc² .

NOTE

1. OVER INTERIOR COLUMNS, AT LEAST 1/3 OF THE TOP BARS IN THE COLUMN STRIP SHALL BE PLACED IN A BAND WIDTH EQUAL TO THE WIDTH OF THE COLUMN PLUS 3 TIMES THE THE SLAB THICKNESS, CENTERED OVER THE COLUMN AND THE SPACING OF THESE BARS SHALL NOT EXCEED 1.5 TIMES THE SLAB THICKNESS OR 250 MIN.
2. OVER EXTERIOR COLUMNS ALL OF THE TOP BARS IN THE COLUMN STRIP SHALL BE PLACED IN A BAND WIDTH AS PER NOTE 1, CENTERED OVER THE COLUMN.



MIDDLE STRIP

Lc = LONGER OF ADJACENT CLEAR SPAN L¢ OR Lc² .

NOTE 'A': ALTERNATE LONG AND SHORT BARS, HALF OR MORE OF BARS IN EACH STRIP TO BE LONG BARS.

NOTE 'B': FOR BARS NOT TERMINATING IN DROP PANELS, USE LENGTHS SHOWN FOR PANELS WITHOUT DROPS.

NOTE 'C': PROVIDE OVERLAP OF ADDED REINF. AND MAIN BOTTOM REINF. BY 2x MINIMUM STRAIGHT TENSION DEVELOPMENT LENGTH. SEE TABLE 5 ON TD107.

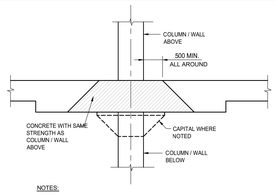
TABLE No. 1
FOR ADDED REINFORCEMENT AT COLUMNS

SLAB THICKNESS IN mm	ADDED REINFORCEMENT
160	2–15
180	2–20
200	2–20
220	2–20
240	2–20
260	3–20
280	3–20
300	2–25
320	2–25
340	4–20

TABLE No. 1A
FOR ADDED REINFORCEMENT AT COLUMNS

SLAB THICKNESS IN mm	ADDED REINFORCEMENT
160	2–20
180	2–20
200	2–20
220	2–20
240	2–25
260	2–25
280	2–25
300	4–20
320	4–20
340	4–20

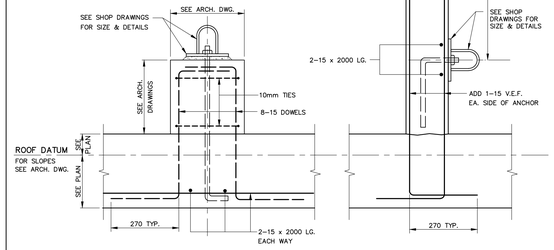
507 TYPICAL PUDDLING TRANSITION



NOTES:

1. FOR INTERIOR AND "EDGE" COLUMNS, WHERE THE CONCRETE STRENGTH IN THE COLUMN ABOVE IS GREATER THAN 1.4 TIMES THE CONCRETE STRENGTH IN THE FLOOR CONSTRUCTION, CONCRETE WITH STRENGTH SPECIFIED FOR COLUMN ABOVE SHALL BE PLACED IN THE SLAB AROUND THE COLUMN.
2. FOR WALL OR "CORNER" COLUMNS, WHERE THE CONCRETE STRENGTH IN THE COLUMN ABOVE IS GREATER THAN CONCRETE STRENGTH IN THE FLOOR CONSTRUCTION, CONCRETE WITH STRENGTH SPECIFIED FOR COLUMN ABOVE SHALL BE PLACED IN THE SLAB AROUND THE COLUMN OR WALLS .
3. THE HIGHER STRENGTH CONCRETE IN THE SLAB SHALL BE PLACED MONOLITHICALLY WITH THE REMAINDER OF THE SLAB CONCRETE AND SHALL BE WELL INTEGRATED TO PREVENT A COLD JOINT FROM FORMING.

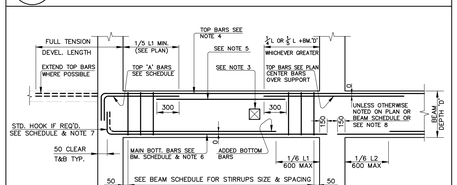
506 TYPICAL WINDOW WASHING ANCHOR DETAIL



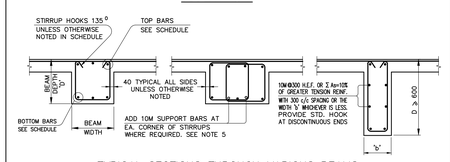
TYPICAL WINDOW WASHING ANCHOR DETAIL

FOR LOCATIONS REFER TO SHOP DRAWINGS.

600 TYPICAL BEAMS DETAILS



ELEVATION

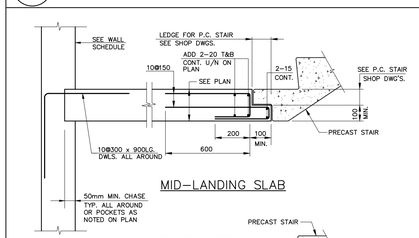


TYPICAL SECTIONS THROUGH VARIOUS BEAMS

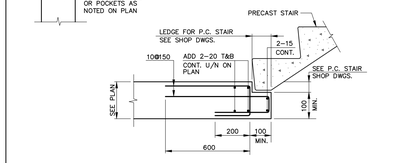
NOTES:

1. BEAMS SHALL BE CAST MONOLITHICALLY FOR THE TOTAL DEPTH OF THE BEAMS.
2. L=LARGER OF ADJACENT SPANS L1 OR L2.
3. OPENINGS THROUGH BEAMS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL AND ADDED REINF. DETAILS.
4. TOP CONT. BARS TO BE SPLICED WITH STD. COMPRESSION LAP SPLICES. IN SPANDREL BEAMS, TOP CONT. BARS TO BE SPLICED WITH TENSION SPLICE CLASS 'B' AT CENTRE OF SPAN, UNLESS OTHERWISE NOTED IN BEAM SCHEDULE.
5. PROVIDE 10M BARS AT EACH CORNER OF EACH STIRRUP WHERE REQUIRED.
6. MAIN BOTTOM BARS OF SPANDREL BEAMS SHALL BE EXTENDED FOR FULL DEVELOPMENT LENGTH INTO SUPPORTS.
7. UNLESS OTHERWISE NOTED IN BM. SCHEDULE PROVIDE STD. HOOK FOR 50% OF BOTT. BARS (MIN. 2 BARS) AT NON-CONTINUOUS ENDS OF BEAMS.
8. PROVIDE BASIC TENSION LAP SPLICES CLASS 'B' FOR BOTT. BARS INDICATED THUS ■ IN BEAM SCHEDULE.
9. FOR TENSION FLANGES PLACE A PORTION OF THE LONGITUDINAL REINFORCING, (SEE BEAM SCHEDULE) IN THE ADJACENT SLAB FLANGE, IN A WIDTH EQUAL TO THE LEAST OF 1/20 OF THE BEAM SPAN, 6 TIMES THE SLAB THICKNESS FOR SPANDREL BEAMS, 12 TIMES THE SLAB THICKNESS FOR OTHER BEAMS OR 1/2 THE CLEAR DISTANCE TO THE NEXT BEAM.
10. WHEN LONGITUDINAL REINFORCING IS PLACED IN TWO OR MORE LAYERS, THE BARS IN THE UPPER LAYERS SHALL BE PLACED DIRECTLY ABOVE THE BARS IN THE LOWER LAYER WITH THE CLEAR DISTANCE BETWEEN THE LAYERS BEING NOT LESS THAN 1.4 TIMES THE LARGER BAR'S DIAMETER NOR 1.4 TIMES THE NOMINAL MAXIMUM SIZE OF THE COARSE AGGREGATE.

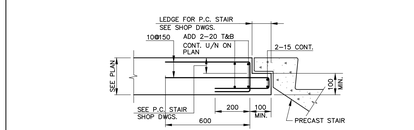
702 TYPICAL PRECAST STAIRS DETAILS



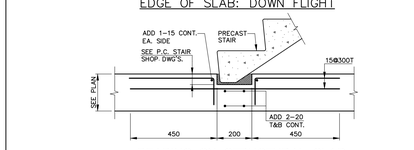
MID-LANDING SLAB



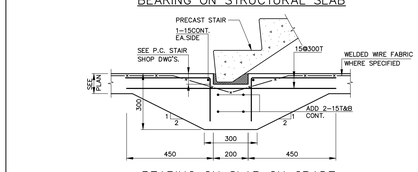
EDGE OF SLAB: UP FLIGHT



EDGE OF SLAB: DOWN FLIGHT

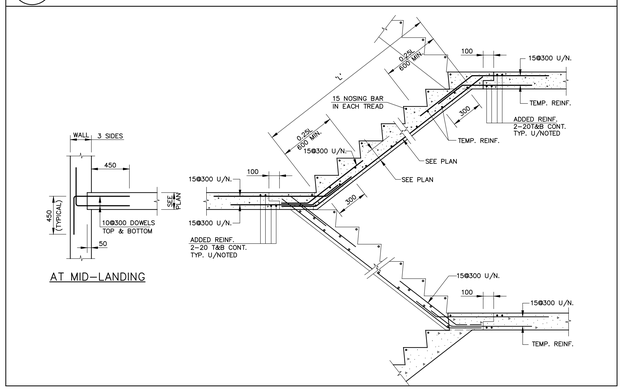


BEARING ON STRUCTURAL SLAB



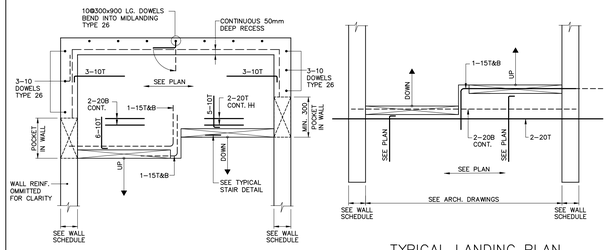
BEARING ON SLAB ON GRADE

700 TYPICAL CONCRETE STAIRS DETAILS



AT MID-LANDING

701 TYPICAL LANDING PLANS FOR PRECAST STAIRS



TYPICAL MID-LANDING PLAN

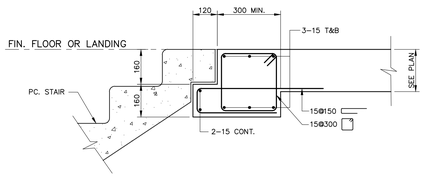
HH – DENOTES BARS HOOKED EACH END.

SEE PRECAST STAIR SHOP DRAWINGS FOR ADDITIONAL REINF. AT LEDGES

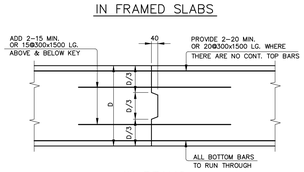
TYPICAL LANDING PLAN AT FLOOR LEVEL

SEE PRECAST STAIR SHOP DRAWINGS FOR ADDITIONAL REINF. AT LEDGES

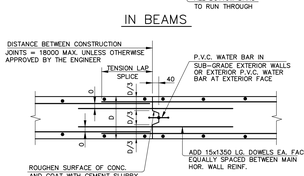
703 TYPICAL EDGE OF SLAB DETAIL FOR PRECAST STAIR 16 RISES & MORE



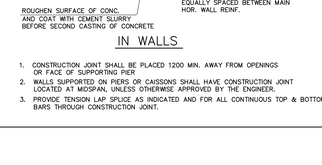
800 TYPICAL CONSTRUCTION JOINTS DETAILS



IN FRAMED SLABS



IN BEAMS



IN WALLS

1. CONSTRUCTION JOINT SHALL BE PLACED 1200 MIN. AWAY FROM OPENINGS OR FACE OF SUPPORTING PIER
2. WALLS SUPPORTED ON PIERS OR CAISSONS SHALL HAVE CONSTRUCTION JOINT LOCATED AT MIDSPAN, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
3. PROVIDE TENSION LAP SPLICE AS INDICATED AND FOR ALL CONTINUOUS TOP & BOTTOM BARS THROUGH CONSTRUCTION JOINT.

ISSUES

No.	DATE	DESCRIPTION
1.	2019-08-02	ISSUED FOR TENDER
2.	2020-09-28	ISSUED FOR PERMIT
3.	2021-03-03	ISSUED FOR PERMIT BUILDINGS A, B, C, D
4.	2021-03-25	ISSUED FOR PROGRESSIVE CONSTRUCTION
5.	2021-03-25	ISSUED FOR PERMIT BUILDINGS A, B, C, D
6.	2021-06-15	ISSUED FOR PROGRESSIVE CONSTRUCTION # 2

REVISIONS

No.	DATE	DESCRIPTION

CONTRACTOR MUST VERIFY ALL DIMENSIONS AND BE RESPONSIBLE FOR SAME REPORTING ANY DISCREPANCIES TO THE ARCHITECT BEFORE COMMENCING THE WORK.

PRINTS ARE NOT TO BE SCALED.

Jablonsky, Ast and Partners
CONSULTING ENGINEERS
1129 LESLIE STREET
DON MILLS, ON., M3C 2K5
TEL. 416-447 7400
FAX 416-447 2771

Job Title
FORESTSIDE TOWNHOUSES
TORONTO, ONTARIO

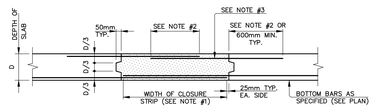
Sheet Title
TYPICAL DETAILS

North

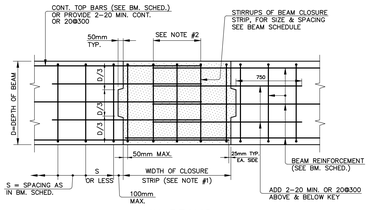
Seal
CONSTRUCTION TO BE CARRIED OUT IN ACCORDANCE WITH THE ONTARIO BUILDING CODE
R.J. WATSON
#19066
PROVINCE OF ONTARIO

Date Plotted:	Date: Jun 14 2021
Drawn By: ND	Scale: N.T.S.
Checked By: JW	Revision Number:
Job No: 19066	Sheet No: S-003

801 TYPICAL CLOSURE STRIPS DETAILS



IN SLABS



IN BEAMS

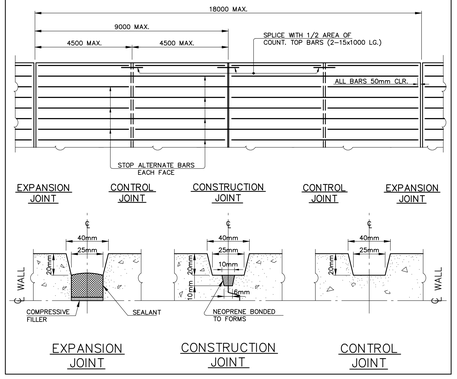
CLOSURE STRIP NOTES:

1. WIDTH OF CLOSOURE STRIP SHALL BE EQUAL TO THE LENGTH OF BASIC TENSION LAP SPLICE CLASS 'B' OF THE LARGEST (DIA.) BAR CROSSING THE CLOSURE STRIP PLUS 50mm.
2. PROVIDE COMPRESSION LAP SPLICE WHERE INDICATED.
3. ADDITIONAL TOP BARS OF SLAB CLOSURE SHALL BE AS FOLLOWS.

SLAB THICKNESS:	ADDITONAL TOP BARS
UP TO 230mm	10m@240mm
250mm TO 300mm	15m@360mm
SLABS THICKER THAN 300mm	AREA OF STEEL SHALL BE EQUAL TO 0.0020 x CONCRETE CROSS SECTION AREA PER METRE WIDTH.

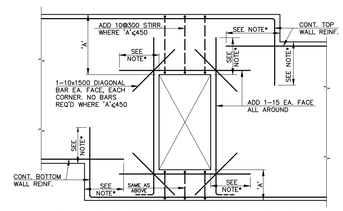
4. CLOSURE STRIP SHALL BE CAST 21 DAYS (MIN.) AFTER THE LATER ADJACENT SLAB IS CAST, UNLESS SPECIFIED OTHERWISE ON THE DRAWING.
5. AFTER CASTING, THE CLOSURE STRIP FORMWORK SHALL NOT BE REMOVED FOR A PERIOD OF 7 DAYS (MIN.) RESHORE IMMEDIATELY AFTER REMOVAL FOR A FURTHER 7 DAYS (MIN.) COLD WEATHER REQUIREMENTS FOR CONCRETE PROTECTION SHALL BE PROVIDED AS REQUIRED.

804 TYPICAL JOINTS IN PARAPET WALLS



EXPANSION JOINT | CONSTRUCTION JOINT | CONTROL JOINT

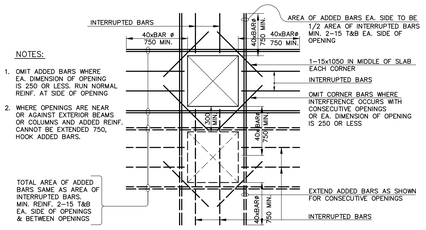
1000 TYPICAL DETAILS OF OPENINGS IN WALLS & SLABS



NOTE* DENOTES TENSION ANCHORAGE BUT NOT LESS THAN 750

TYPICAL DETAIL OF OPENING IN WALL

UNLESS OTHERWISE SHOWN ON WALL ELEVATIONS



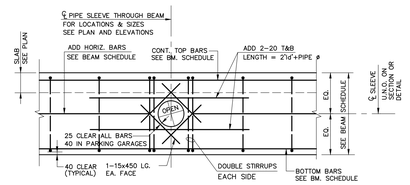
NOTES:

1. OMIT ADDED BARS WHERE EA. DIMENSION OF OPENING IS 250 OR LESS. RUN NORMAL REINF. AT SIDE OF OPENING
2. WHERE OPENINGS ARE NEAR OR AGAINST EXTERIOR BEAMS OR COLUMNS AND ADDED REINF. CANNOT BE EXTENDED 750, HOOK ADDED BARS.

TYPICAL DETAIL OF OPENING IN SLAB

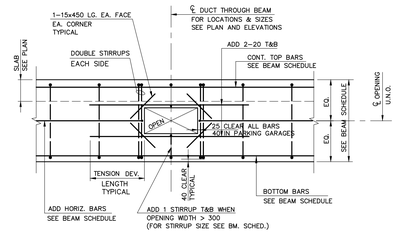
UNLESS OTHERWISE SHOWN ON PLAN.

1001 TYPICAL DETAILS OF OPENINGS THROUGH BEAMS



SLEEVE THROUGH BEAMS

(FOR PIPE SIZE LARGER THAN 100ø)

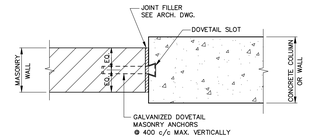


OPENING THROUGH BEAMS

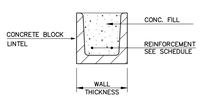
NOTES:

1) OPENINGS THROUGH BEAMS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL AND ADDED REINF. SHALL BE PROVIDED UNLESS OTHERWISE NOTED ON SPECIFIED DETAILS.
2) ALL PIPE SLEEVES SHALL BE FORMED EMPLOYING SCHEDULE 40 STEEL PIPE.

1101 TYPICAL ANCHORAGE OF MASONRY WALLS TO VERTICAL CONCRETE SUPPORT



1102 LINTEL SCHEDULE



MAXIMUM CLEAR SPAN	BLOCK LINTEL	MAXIMUM CLEAR SPAN	STEEL LINTEL FOR EXTERIOR WALL
2000	FOR INTERIOR WALL: 190, 1-15 CONT., 90 OR 140	1800	90 BRICK, 90 MIN., L-102x102x8
2400	FOR INTERIOR WALL: 190, 2-15 CONT., ≥ 190	2000	90 BRICK, 90 MIN., L-102x102x8 + L-51x51x4.8, 20 MAX.
2400	FOR EXTERIOR & CAVITY WALL: 190, 2-15 CONT., 2-15 CONT., ≥ 190	2400	90 BRICK, 90 MIN., L-152x102x8 (LLV) + L-51x51x4.8, 20 MAX.
3000	FOR EXTERIOR & CAVITY WALL: 390, 4-15 CONT., 10@400 STIRRUPS, 2-20 CONT., ≥ 190	3000	90 BRICK, 90 MIN., L-152x102x10 (LLV) + L-51x51x4.8, 20 MAX.
3600	FOR EXTERIOR & CAVITY WALL: 390, 4-15 CONT., 10@400 STIRRUPS, 2-25 CONT., ≥ 190	3600	90 BRICK, 90 MIN., L-203x102x13 (LLV) + L-51x51x4.8, 20 MAX.

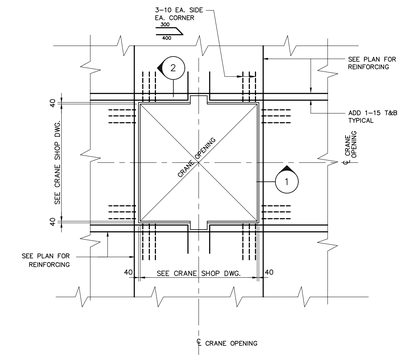
NOTES:

1. MINIMUM END BEARING FOR LINTELS SHALL BE 200mm.
2. CONCRETE FILL SHALL BE f'c = 25MPa.
3. PROVIDE TEMPORARY SHORING TO SUPPORT MASONRY OVER OPENINGS UNTIL CONCRETE HAS DEVELOPED FULL STRENGTH.

NOTES:

1. MINIMUM END BEARING FOR LINTELS SHALL BE 150mm.
2. ALL ANGLES SHALL BE HOT-DIPPED GALVANIZED.
3. STRUCTURAL STEEL SHALL CONFORM TO CAN/CSA G40.21-04, 300W.

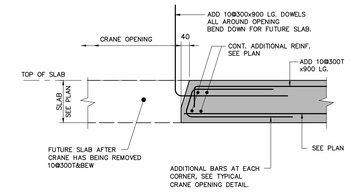
1004 SUGGESTED CRANE OPENING DETAILS



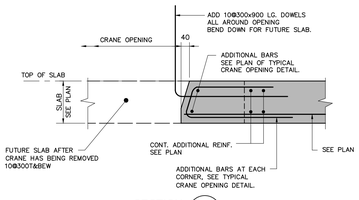
TYPICAL CRANE OPENING DETAIL ALL LEVELS

NOTE:

FOR EXACT DIMENSIONS AND ADDITIONAL DETAILS SEE CRANE SHOP DRAWINGS.



SECTION 1



SECTION 2

1103 TYPICAL STEEL LINTELS IN NON-LOAD BEARING MASONRY WALLS

MAX. CLEAR SPAN	200 (SEE ARCH. DWG.)	250 (SEE ARCH. DWG.)	300 (SEE ARCH. DWG.)	315 (SEE ARCH. DWG.)	365 (SEE ARCH. DWG.)
1200	2L⁹ – 90x90x8	① L-90x90x8 ② L-125x90x8 (LLH)	3L⁹ – 90x90x8	① L-100x100x8 ② L-100x100x8 ③ L-90x90x8	① L-100x100x8 ② L-150x100x8 (LLH) ③ L-90x90x8
1800	2L⁹ – 100x90x8 (LLV)	① L-100x90x8 (LLV) ② L-125x125x8	3L⁹ – 100x90x8 (LLV)	① L-100x100x8 ② L-100x100x8 ③ L-100x90x8 (LLV)	① L-100x100x8 ② L-150x100x8 (LLH) ③ L-100x100x8
2400	2L⁹ – 125x90x8 (LLV)	① L-125x90x8 (LLV) ② L-125x125x10	3L⁹ – 125x90x8 (LLV)	① L-125x90x8 (LLV) ② L-125x90x8 (LLV) ③ L-125x90x8 (LLV)	① L-125x90x8 (LLV) ② L-150x100x8 (LLH) ③ L-125x90x8 (LLV)
3000	2L⁹ – 125x100x10 (LLV)	① L-150x100x10 (LLV) ② L-150x150x10	3L⁹ – 150x100x10 (LLV)	① L-150x100x10 (LLV) ② L-150x100x10 (LLV) ③ L-150x100x10 (LLV)	① L-150x100x10 (LLV) ② L-150x100x10 (LLH) ③ L-150x100x10 (LLV)

NOTES:

1. FOR 150 WALL USE ② OF 250 WALL ABOVE.
2. MIN. END BEARING FOR LINTELS SHALL BE 150mm.
3. BACK TO BACK ANGLES SHALL BE BOLTED OR WELDED TOGETHER WHEN CLEAR SPAN EXCEEDS 1800mm.
4. ALL ANGLES SHALL BE HOT-DIPPED GALVANIZED IF EXPOSED TO WEATHER.
5. PROVIDE L-90x90x10 WELDED TO STEEL COLUMN OR BOLTED TO CONCRETE COLUMN OR WALL TO SUPPORT LINTEL WHERE OPENING ABUTS COLUMN OR WALL.
6. STRUCTURAL STEEL SHALL CONFORM TO CAN/CSA G40.21-04, 300W.

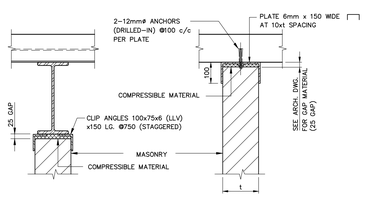
1104 STEEL LINTELS FOR NON-LOAD BEARING WALLS OF HOLLOW CONCRETE BLOCK (ANY AGGREGATE)

STEEL ANGLES CLEAR SPAN MAX.	90	140	190	240	290
1200	2L⁹ – 51x38x4.8L.L.V.	2L⁹ – 64x64x6.4	2L⁹ – 89x76x6.4L.L.V.	1L – 102x76x6.4L.L.H. 1L – 127x76x6.4L.L.H.	3L⁹ – 89x76x6.4L.L.H.
1600	2L⁹ – 51x38x4.8(L.L.V.)	2L⁹ – 64x64x6.4	2L⁹ – 89x76x6.4L.L.V.	1L – 102x76x6.4L.L.H. 1L – 127x76x6.4L.L.H.	3L⁹ – 89x76x6.4L.L.H.
2000		2L⁹ – 89x64x6.4L.L.V.	2L⁹ – 89x89x6.4	1L – 102x89x7.9L.L.H. 1L – 127x76x7.9L.L.H.	3L⁹ – 89x76x6.4L.L.H.
2400		2L⁹ – 89x64x9.5L.L.V.	2L⁹ – 127x89x6.4L.L.V.	1L – 152x102x7.9L.L.V. 1L – 127x127x7.9	3L⁹ – 127x89x6.4L.L.V.

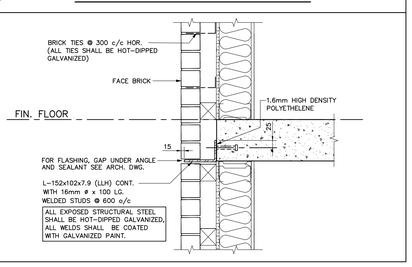
NOTES:

1. STRUCTURAL STEEL MATERIALS SHALL BE CAN/CSA G40.21-04 300W.
2. MINIMUM BEARING LENGTH FOR LINTELS SHALL BE 150mm.
3. CONNECT ANGLES AT 600 mm c/c BY WELDING OR BOLTING FOR ANGLES WITH A TOTAL LENGTH OF 1800mm OR MORE.
4. PROVIDE L-90x90x10 WELDED TO STEEL COLUMN OR BOLTED TO CONCRETE COLUMN OR WALL TO SUPPORT LINTEL WHERE OPENING ABUTS COLUMN OR WALL.
5. ALL ANGLES SHALL BE HOT-DIPPED GALVANIZED IF EXPOSED TO WEATHER.

1106 TYPICAL LATERAL SUPPORT FOR NON-LOAD BEARING WALL



1107 TYPICAL SHELF ANGLE DETAIL



ISSUES

No.	DATE	DESCRIPTION
1.	2019-08-02	ISSUED FOR TENDER
2.	2020-09-28	ISSUED FOR PERMIT
3.	2021-03-03	ISSUED FOR PERMIT BUILDINGS A, B, C, D
4.	2021-03-25	ISSUED FOR PROGRESSIVE CONSTRUCTION
5.	2021-03-25	ISSUED FOR PERMIT BUILDINGS A, B, C, D
6.	2021-06-15	ISSUED FOR PROGRESSIVE CONSTRUCTION # 2

REVISIONS

No.	DATE	DESCRIPTION

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PRINTS ARE NOT TO BE SCALED.

Jablonsky, Ast and Partners
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Job Title: FORESTSIDE TOWNHOUSES
TORONTO, ONTARIO

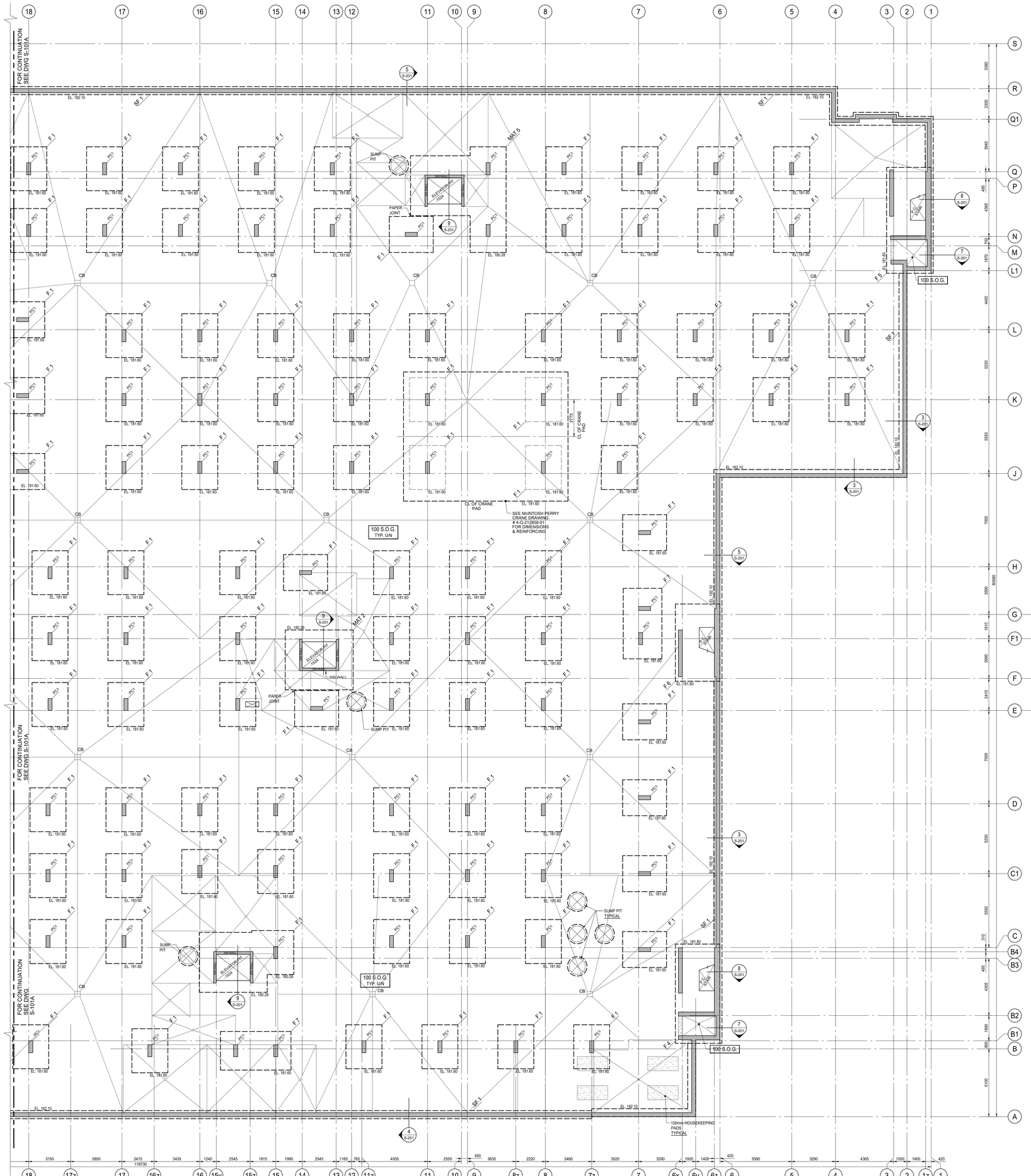
Sheet Title: TYPICAL DETAILS

North

Seal: CONSULTING ENGINEER R.J. WATSON #19066 PROVINCE OF ONTARIO

Date Plotted	Date: Jun 14 2021
Drawn By: ND	Scale: N.T.S.
Checked By: JW	Revision Number:
Job No: 19066	Sheet No: S-004

FOR CONTINUATION SEE DWG S-101B
100 S.O.G. TYP. U/N
250 S.O.G. 15@300 TAB E.W. PROVIDE DOWELS INTO WALLS
100 S.O.G.
MAT 3
MAT 4
MAT 7
MAT 1
SF-1
SF-2
S.D.F.
EL. 181.60
EL. 181.87
EL. 182.10
EL. 182.18
EL. 182.10
EL. 183.00
EL. 181.78
EL. 181.82
EL. 181.97
EL. 181.95
EL. 181.98
EL. 182.07
EL. 182.10
EL. 182.18
HSS 152x152x8.0
SEE McINTOSH PERRY CRANE DRAWING # 4-G-212858-02 FOR DIMENSIONS & REINFORCING
CL OF CRANE PAD
2200
300
PAPER JOINT
SUMP PIT TYPICAL
300 WALL
SHEAR WALL
UNDERMINED
P.C. STAIR
ELEVATOR PIT
MECH. OPENING
SUMP PIT
CB
F 1
F 2
F 3
F 7
SCI
PC1
2505
1400
1600
4100
1600
4100
1600
4250
1450
5550
5850
2700
2400
1030
2400
3170
5250
4240
4000
1997
2388
2035
21056
5115
4825
6180
6180
6180



P1 LEVEL PART PLAN
SCALE 1:100

P1 LEVEL FOUNDATION PLAN
SCALE 1:100

1. FOR GENERAL NOTES, SEE DRAWING S-101A.

15@800V FOR NON-LOAD BEARING BLOCK WALLS & DOWEL INTO SLAB ON GRADE

COLUMN PC1 = 300x900
10-20V
+10@300 TIES

WALLS = 200 THICK
10@400H&V E.F.
+ ADD 2-20H TOP

300 THICK
10@270H&V E.F.
+ ADD 2-20H TOP

ISSUES

No.	DATE	DESCRIPTION
1.	2019-08-02	ISSUED FOR TENDER
2.	2019-09-12	ISSUED FOR TENDER ADDENDUM # 2
3.	2020-01-31	ISSUED FOR TENDER ADDENDUM # 3
4.	2020-05-07	ISSUED FOR TENDER ADDENDUM # 4
5.	2020-09-28	ISSUED FOR PERMIT
6.		----
7.	2021-02-22	ISSUED FOR TENDER ADDENDUM # 6
8.	2021-03-03	ISSUED FOR PERMIT BUILDINGS A, B, C, D
9.	2021-03-25	ISSUED FOR PROGRESSIVE CONSTRUCTION
10.	2021-03-25	ISSUED FOR PERMIT BUILDINGS A, B, C, D
11.	2021-04-08	ISSUED FOR SITE INSTRUCTION # 1
12.	2021-05-07	ISSUED FOR SITE INSTRUCTION # 3
13.	2021-05-18	ISSUED FOR SITE INSTRUCTION # 4
15.	2021-06-15	ISSUED FOR PROGRESSIVE CONSTRUCTION # 2

REVISIONS

No.	DATE	DESCRIPTION

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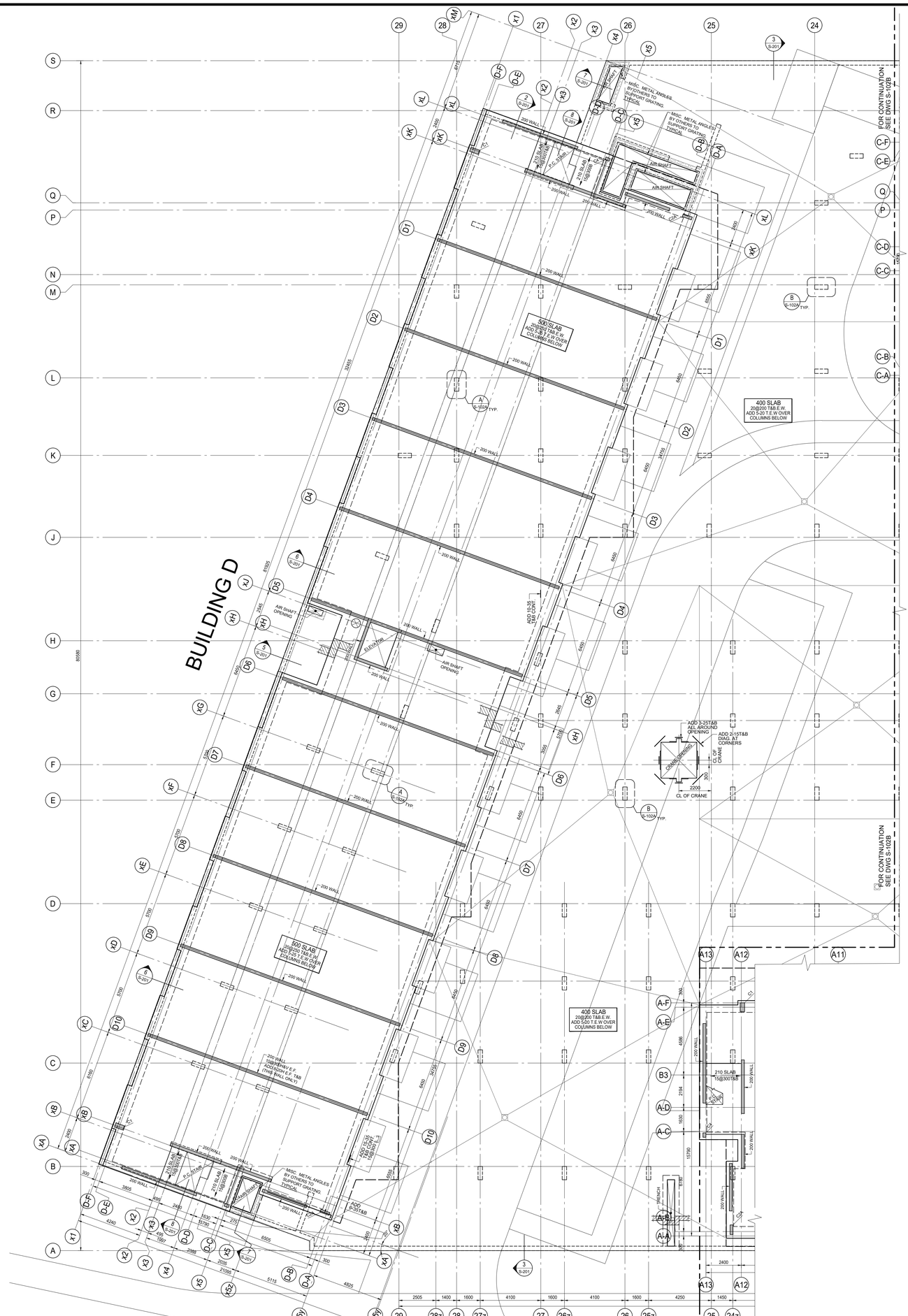
Job Title
FORESTSIDE TOWNHOUSES
TORONTO, ONTARIO

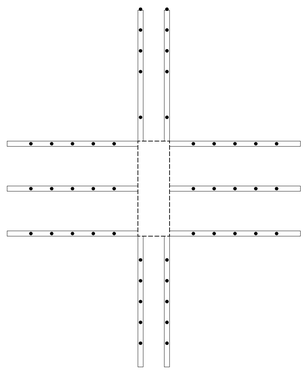
Sheet Title
P1 UNDERGROUND
EAST SIDE

North

Seal
CONSULTING ENGINEERS ONTARIO
R.J. WATSON
#19066
PROVINCE OF ONTARIO

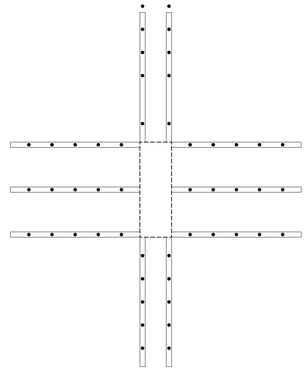
Date Plotted	Date : Jun 14 2021
Drawn By: ND	Scale : 1 : 100
Checked By : JW	Revision Number:
Job No : 19066	Sheet No: S-101B





PROVIDE 10 RAILS (1238x25.4x4.8mm)
c/w. 5-16mmØx445mm LG. STUDS @197mm c/c.
FIRST STUD AT 225mm FROM FACE OF COLUMN.

DETAIL A
SCALE 1:20
S-102A



PROVIDE 10 RAILS (1238x25.4x4.8mm)
c/w. 5-16mmØx343mm LG. STUDS @219mm c/c.
FIRST STUD AT 175mm FROM FACE OF COLUMN.

DETAIL B
SCALE 1:20
S-102A

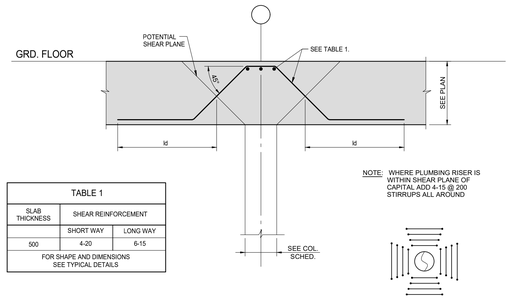


TABLE 1		
SLAB THICKNESS	SHEAR REINFORCEMENT	
	SHORT WAY	LONG WAY
500	4-20	5-15
FOR SHAPE AND DIMENSIONS SEE TYPICAL DETAILS		

NOTE: WHERE PLUMBING RISER IS WITHIN SHEAR PLANE OF CAPITAL ADD 4-15 @ 200 STIRRUPS ALL AROUND

TYPICAL DETAIL OF PICK-UP SLAB AT COLUMN

SCALE 1:20

GROUND FLOOR FRAMING PLAN

SCALE 1:100

1. TOP OF ROUGH SLAB IS 0.0mm BELOW FINISHED FLOOR (DATUM EL. XXX.XXX) EXCEPT AS CROSSED AND NOTED ON PLAN.
2. CONCRETE STRENGTH AT 28 DAYS SHALL BE AS FOLLOWS:
   FOR WALLS AND COLUMNS ..... 30 MPa
   FOR PICK-UP SLABS AND BEAMS ..... 35 MPa
   FOR SLABS ..... 35 MPa
   FOR LIVE LOADS SEE TABLE 'X' ON THIS DRAWING.
3. CONCRETE EXPOSED TO DE-ICING CHEMICALS SHALL BE EXPOSURE CLASS 'C-1' WITH 6% TO 8% ENTRAINED AIR AND CORROSION INHIBITOR AT A MINIMUM RATE OF 10.0 LITERS PER CUBIC METER.
4. PORTIONS OF THE GARAGE ROOF SLAB ACCESSIBLE TO HEAVY TRUCK LOADING AND FIRE ROUTE HAVE BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS ON THE ONTARIO BUILDING CODE AND THE HIGHWAY BRIDGE DESIGN CODE, INCLUDING POINT LOAD AND LOAD FACTORS, FOR THE FULL ANTICIPATED ROUTE OF TRAVEL.
5. MINIMUM CONCRETE COVER SHALL BE 40mm FOR ALL TOP BARS AND 30mm FOR BOTTOM BARS IN ALL VEHICULAR AREAS.
6. MINIMUM YIELD STRESS FOR REINFORCING STEEL SHALL BE 400 MPa.
7. TEMPERATURE REINFORCING:
   200 SLAB IS 10@250
   210 SLAB IS 10@230
   400 SLAB IS 15@250
   500 SLAB IS 20@300
9. NO OPENINGS LARGER THAN 300x300 ARE ALLOWED IN SLAB OTHER THAN THOSE SHOWN ON STRUCTURAL DRAWINGS.
10. SEE GENERAL NOTES ON DRAWING S-001.
11. SEE TYPICAL DETAILS DETAILS ON S-000 SERIES DRAWINGS.
12. SEE COLUMN & WALL SCHEDULE ON THIS DRAWING.
13. COORDINATE BEAM DEPTHS AT DOORS WITH ARCHITECTURAL DRAWINGS.
14. REFER TO ARCHITECTURAL DRAWINGS FOR SLAB ELEVATIONS, SLOPES, STEPS IN SLAB AND SLAB DEPRESSIONS.
15. SEE ARCHITECTURAL DRAWINGS FOR EXACT SIZE, LOCATION AND EXTENT OF CURBS. SEE TYPICAL DETAILS FOR REINFORCING.
16. CENTER LINE OF DROP AND BEAM IS THE CENTER LINE OF COLUMN OR SHEAR WALL UNLESS OTHERWISE NOTED ON PLAN.
17. GRATING OVER AIR SHAFTS AND SUPPORT FRAME SHALL BE DESIGNED FOR HEAVY TRUCK LOADING (14kPa) AND ASSOCIATED POINT LOADS IN ACCORDANCE WITH THE CANADIAN HIGHWAY BRIDGE DESIGN CODE. SHOP DRAWINGS SHALL CLEARLY INDICATE LOADING AND BE STAMPED AND SEALED BY PROFESSIONAL ENGINEER.
18. BPL1 - 150x10x150 DENOTES ELEVATOR DIVIDER BEAM BASE PLATE WITH 2x19mmØ NELSON STUD x 150LG., EACH END.

COLUMN = C1
300x600
6-20V
+10@300 TIES

C2A
200x650
6-20V
+10@300 TIES

C2B
200x500
6-20V
+10@300 TIES

C3
250x800
8-20V
+10@300 TIES

C4
200x300
4-20V
+10@300 TIES

WALLS = 200 THICK
10@400H&V E.F.
+ ADD 2-20H TOP

300 THICK
10@270H&V E.F.
+ ADD 2-20H TOP

ISSUES

No.	DATE	DESCRIPTION
1.	2019-08-02	ISSUED FOR TENDER
2.	2019-08-28	ISSUED FOR TENDER ADDENDUM # 1
3.	2019-09-12	ISSUED FOR TENDER ADDENDUM # 2
4.	2020-01-31	ISSUED FOR TENDER ADDENDUM # 3
5.	2020-05-07	ISSUED FOR TENDER ADDENDUM # 4
6.	2020-09-28	ISSUED FOR PERMIT
7.	2021-01-08	ISSUED FOR TENDER ADDENDUM # 5
8.	2021-02-22	ISSUED FOR TENDER ADDENDUM # 6
9.	2021-03-03	ISSUED FOR PERMIT BUILDINGS A, B, C, D
10.	2021-03-25	ISSUED FOR PROGRESSIVE CONSTRUCTION
11.	2021-03-25	ISSUED FOR PERMIT BUILDINGS A, B, C, D
12.	2021-04-21	ISSUED FOR SITE INSTRUCTION # 2
13.	2021-05-07	ISSUED FOR SITE INSTRUCTION # 3
14.	2021-05-18	ISSUED FOR SITE INSTRUCTION # 4
15.	2021-05-28	ISSUED FOR SITE INSTRUCTION # 5
16.	2021-06-15	ISSUED FOR PROGRESSIVE CONSTRUCTION # 2

No.	DATE	DESCRIPTION

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CONSULTING ENGINEERS
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TEL 416-447 7605
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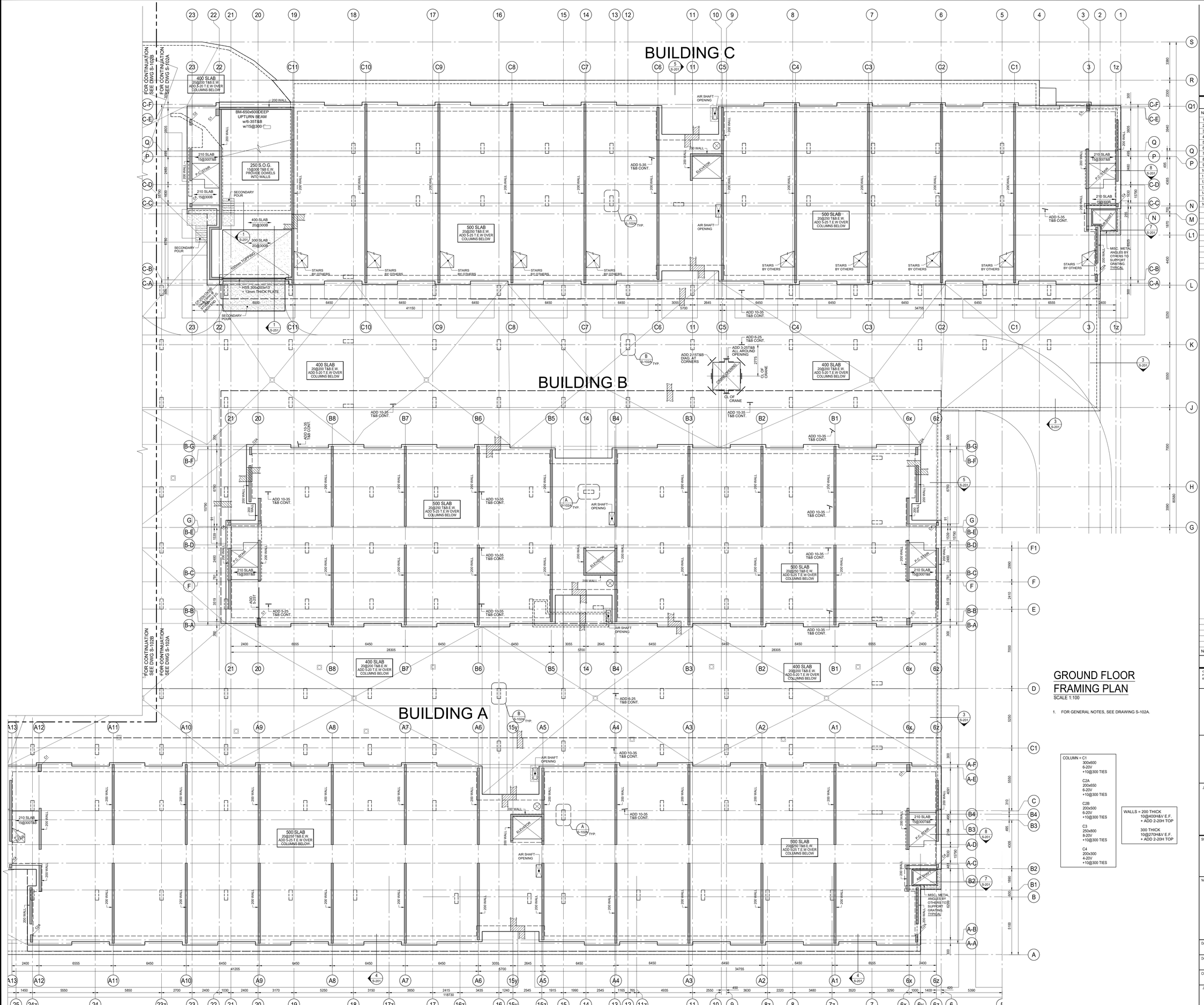
Job Title
FORESTSIDE TOWNHOUSES
TORONTO, ONTARIO

Sheet Title
1ST FLOOR
BUILDING D

North

Seal
CONSULTING ENGINEER
R.J. WATSON
#19066
PROVINCE OF ONTARIO

Date Plotted	Date : Jun 14 2021
Drawn By: ND	Scale : 1 : 100
Checked By : JW	Revision Number:
Job No : 19066	Sheet No: S-102A



GROUND FLOOR FRAMING PLAN

SCALE 1:100

1. FOR GENERAL NOTES, SEE DRAWING S-102A.

COLUMN = C1
300x600
6-20V
+10@300 TIES

C2A
200x650
6-20V
+10@300 TIES

C2B
200x500
6-20V
+10@300 TIES

C3
250x800
8-20V
+10@300 TIES

C4
200x300
4-20V
+10@300 TIES

WALLS = 200 THICK
10@400H&V E.F.
+ ADD 2-20H TOP

300 THICK
10@270H&V E.F.
+ ADD 2-20H TOP

ISSUES

No.	DATE	DESCRIPTION
1.	2019-08-02	ISSUED FOR TENDER
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3.	2019-09-12	ISSUED FOR TENDER ADDENDUM # 2
4.	2020-01-31	ISSUED FOR TENDER ADDENDUM # 3
5.	2020-05-07	ISSUED FOR TENDER ADDENDUM # 4
6.	2020-09-28	ISSUED FOR PERMIT
7.	2021-01-08	ISSUED FOR TENDER ADDENDUM # 5
8.	2021-02-22	ISSUED FOR TENDER ADDENDUM # 6
9.	2021-03-03	ISSUED FOR PERMIT BUILDINGS A, B, C, D
10.	2021-03-25	ISSUED FOR PROGRESSIVE CONSTRUCTION
11.	2021-03-25	ISSUED FOR PERMIT BUILDINGS A, B, C, D
12.	2021-04-21	ISSUED FOR SITE INSTRUCTION # 2
13.	2021-05-07	ISSUED FOR SITE INSTRUCTION # 3
14.	2021-05-18	ISSUED FOR SITE INSTRUCTION # 4
15.	2021-05-28	ISSUED FOR SITE INSTRUCTION # 5
16.	2021-06-15	ISSUED FOR PROGRESSIVE CONSTRUCTION # 2

REVISIONS

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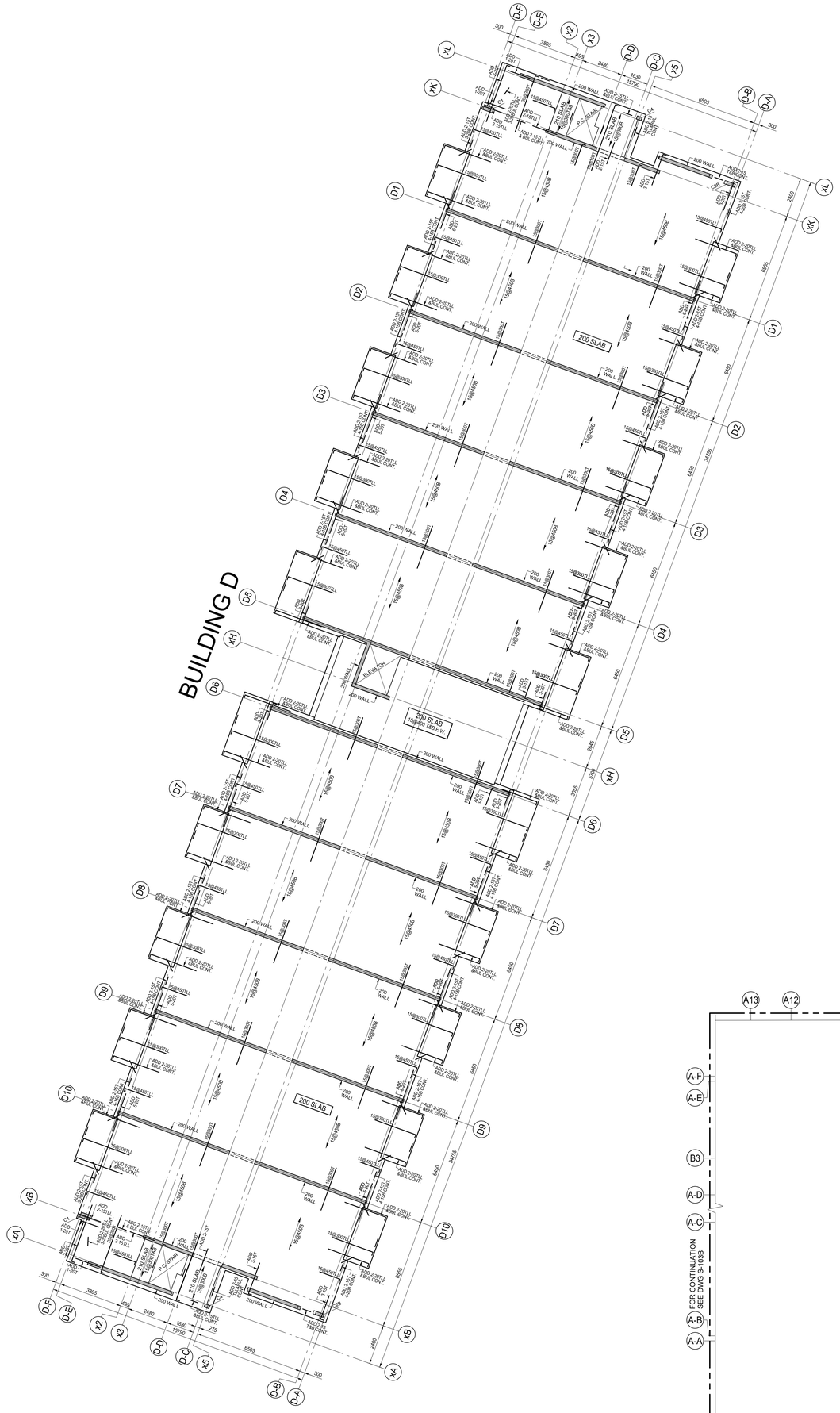
Job Title
FORESTSIDE TOWNHOUSES
TORONTO, ONTARIO

Sheet Title
1ST FLOOR
BUILDINGS A, B, & C

North

Seal
CONSTANTINOS LOIZOU 100161809 PROVINCE OF ONTARIO
R.J. WATSON
#19066

Date Plotted	Date : Jun 14 2021
Drawn By: ND	Scale : 1 : 100
Checked By : JW	Revision Number:
Job No : 19066	Sheet No: S-102B



COLUMN = C1
300x600
6-20V
+10@300 TIES

C2A
200x650
6-20V
+10@300 TIES

C2B
200x500
6-20V
+10@300 TIES

C3
250x800
8-20V
+10@300 TIES

C4
200x300
4-20V
+10@300 TIES

WALLS = 200 THICK
10@400H&V E.F.
+ ADD 2-20H TOP

300 THICK
10@270H&V E.F.
+ ADD 2-20H TOP

2ND FLOOR FRAMING PLAN

SCALE 1:100

1. TOP OF ROUGH SLAB IS 0.0mm BELOW FINISHED FLOOR (DATUM EL. XXX.XXX) EXCEPT AS CROSSED AND NOTED ON PLAN.
2. CONCRETE STRENGTH AT 28 DAYS SHALL BE AS FOLLOWS:

   FOR WALLS AND COLUMNS ..... 25 MPa
   FOR SLABS ..... 25 MPa
3. CONCRETE STRENGTH EXPOSED TO WEATHER SHALL BE MIN 30 MPa WITH 6% TO 8% ENTRAINED AIR.
4. MINIMUM YIELD STRESS FOR REINFORCING STEEL SHALL BE 400 MPa.
5. TEMPERATURE REINFORCING:
   200 SLAB IS 15@450
   210 SLAB IS 10@230
6. NO OPENINGS LARGER THAN 300mm x 300mm ARE ALLOWED IN SLAB OTHER THAN THOSE SHOWN ON STRUCTURAL DRAWINGS.
7. SEE GENERAL NOTES ON DRAWING S-001.
8. SEE TYPICAL DETAILS DETAILS ON S-000 SERIES DRAWINGS.
9. SEE COLUMN & WALL SCHEDULE ON THIS DRAWING.
10. COORDINATE HEADER BEAM DEPTH AT DOOR OPENINGS WITH ARCHITECTURAL DRAWINGS.
11. EXTEND TEMPERATURE REINFORCING TO END OF BALCONIES / OVERHANGS.
12. TOP BARS TERMINATING AT EDGE OF SLAB TO HAVE 180 HOOK.
13. REFER TO ARCHITECTURAL DRAWINGS FOR SLAB ELEVATIONS, SLOPES AND STEPS IN SLAB AND SLAB DEPRESSIONS.
14. SEE ARCHITECTURAL DRAWINGS FOR EXACT SIZE, LOCATION AND EXTENT OF CURBS. SEE TYPICAL DETAILS FOR REINFORCING.
15. BPL1 - 150x10x150 DENOTES ELEVATOR DIVIDER BEAM BASE PLATE WITH 2x19mmØ NELSON STUD x 150LG., EACH END.

ISSUES

No.	DATE	DESCRIPTION
1.	2019-08-02	ISSUED FOR TENDER
2.	2019-08-28	ISSUED FOR TENDER ADDENDUM # 1
3.	2020-01-31	ISSUED FOR TENDER ADDENDUM # 3
4.	2020-05-07	ISSUED FOR TENDER ADDENDUM # 4
5.	2020-09-28	ISSUED FOR PERMIT
6.	2021-01-08	ISSUED FOR TENDER ADDENDUM # 5
7.	2021-02-22	ISSUED FOR TENDER ADDENDUM # 6
8.	2021-03-03	ISSUED FOR PERMIT BUILDINGS A, B, C, D
9.	2021-03-25	ISSUED FOR PROGRESSIVE CONSTRUCTION
10.	2021-03-25	ISSUED FOR PERMIT BUILDINGS A, B, C, D
11.	2021-05-07	ISSUED FOR SITE INSTRUCTION # 3
12.	2021-05-18	ISSUED FOR SITE INSTRUCTION # 4
13.	2021-05-28	ISSUED FOR SITE INSTRUCTION # 5
14.	2021-06-15	ISSUED FOR PROGRESSIVE CONSTRUCTION # 2

No.	DATE	DESCRIPTION

REVISIONS

CONTRACTOR MUST VERIFY ALL DIMENSIONS AND BE RESPONSIBLE FOR SAME REPORTING ANY DISCREPANCIES TO THE ARCHITECT BEFORE COMMENCING THE WORK.

PRINTS ARE NOT TO BE SCALED.

Jablonsky, Ast and Partners
CONSULTING ENGINEERS
1129 LESLIE STREET
DON MILLS, ON., M3C 2K5
TEL 416-447 7405
FAX 416-447 2771

Job Title
FORESTSIDE TOWNHOUSES
TORONTO, ONTARIO

Sheet Title
2ND FLOOR
BUILDING D

North

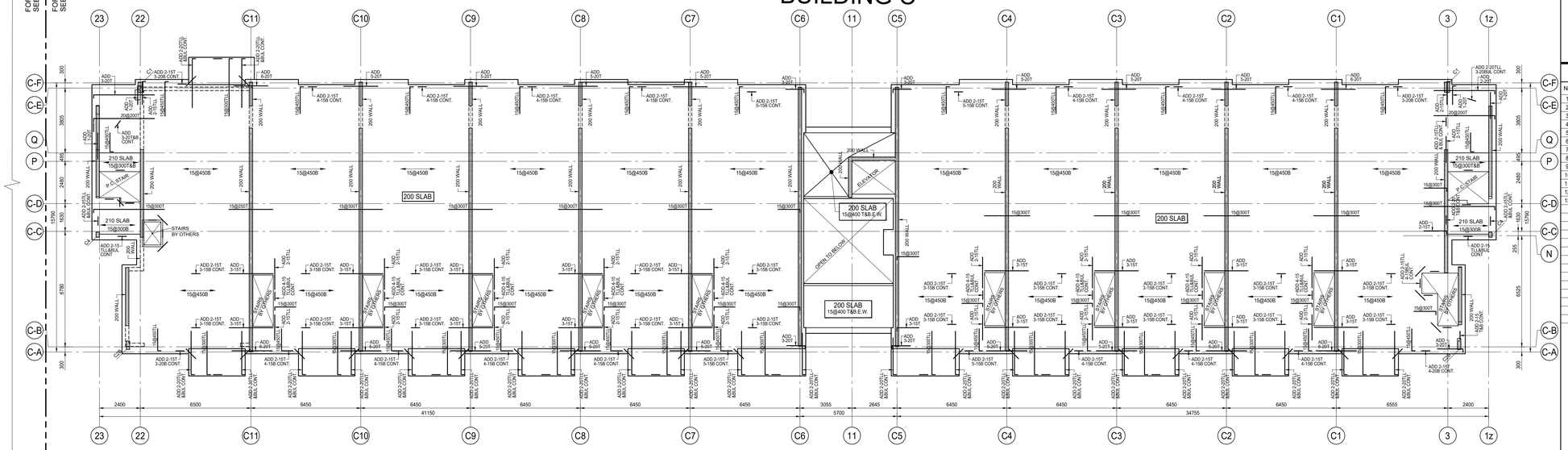
Seal
R.J. WATSON #19066 PROVINCE OF ONTARIO

Date Plotted:	Date: Jun 14 2021
Drawn By: ND	Scale: 1 : 100
Checked By: JW	Revison Number:
Job No: 19066	Sheet No: S-103A

FOR CONTINUATION SEE DWG S-102B

FOR CONTINUATION SEE DWG S-103A

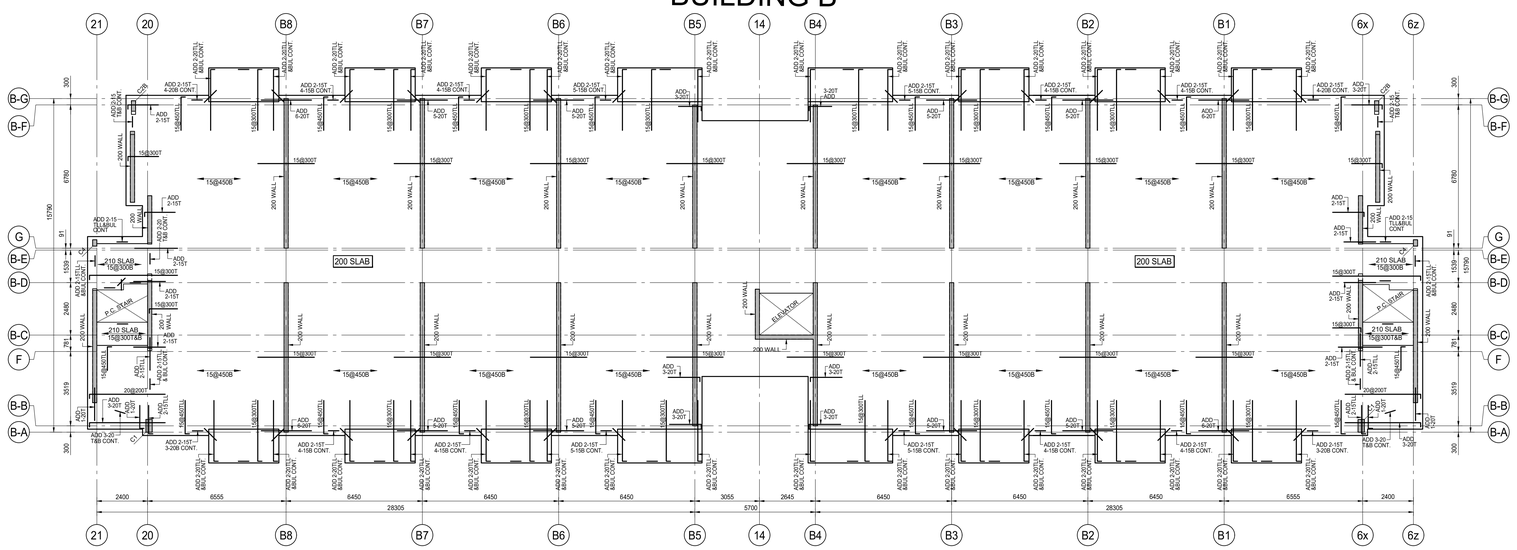
BUILDING C



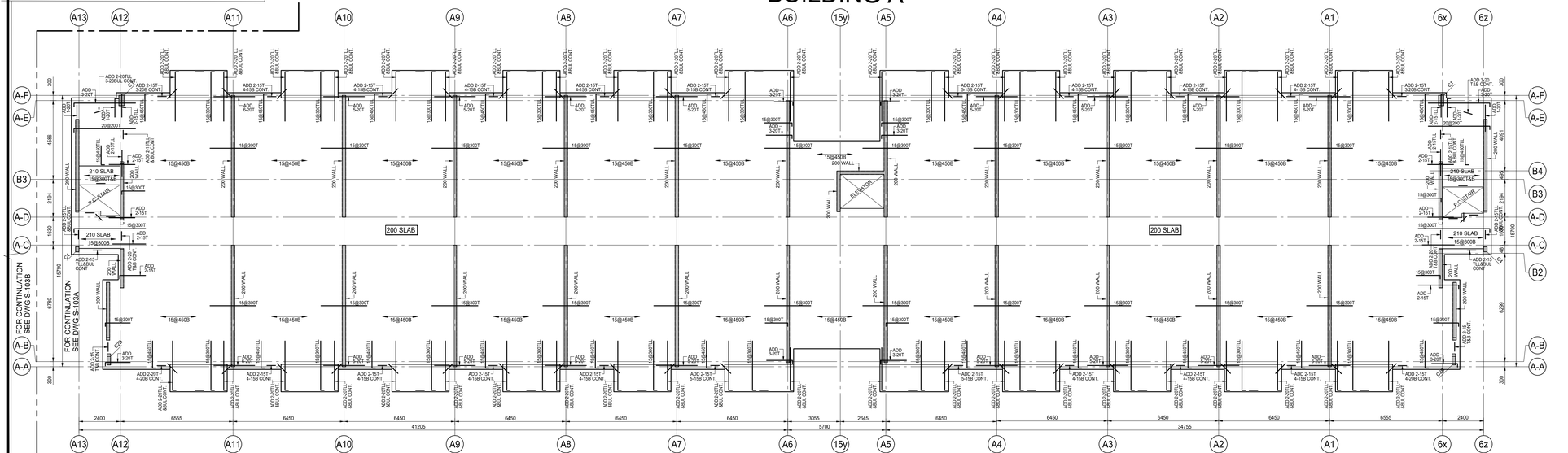
FOR CONTINUATION SEE DWG S-102B

FOR CONTINUATION SEE DWG S-103A

BUILDING B



BUILDING A



2ND FLOOR FRAMING PLAN

SCALE 1:100

1. FOR GENERAL NOTES, SEE DRAWING S-103A.

COLUMN = C1
300x600
6-20V
+10@300 TIES

C2A
200x650
8-20V
+10@300 TIES

C2B
200x500
6-20V
+10@300 TIES

C3
250x800
8-20V
+10@300 TIES

C4
200x300
4-20V
+10@300 TIES

WALLS = 200 THICK
10@400H&V E.F.
+ ADD 2-20H TOP

300 THICK
10@270H&V E.F.
+ ADD 2-20H TOP

ISSUES

No.	DATE	DESCRIPTION
1.	2019-08-02	ISSUED FOR TENDER
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4.	2020-05-07	ISSUED FOR TENDER ADDENDUM # 4
5.	2020-09-28	ISSUED FOR PERMIT
6.	2021-01-08	ISSUED FOR TENDER ADDENDUM # 5
7.	2021-02-22	ISSUED FOR TENDER ADDENDUM # 6
8.	2021-03-03	ISSUED FOR PERMIT BUILDINGS A, B, C, D
9.	2021-03-25	ISSUED FOR PROGRESSIVE CONSTRUCTION
10.	2021-03-25	ISSUED FOR PERMIT BUILDINGS A, B, C, D
11.	2021-05-18	ISSUED FOR SITE INSTRUCTION # 4
12.	2021-05-28	ISSUED FOR SITE INSTRUCTION # 5
13.	2021-06-15	ISSUED FOR PROGRESSIVE CONSTRUCTION # 2

REVISIONS

No.	DATE	DESCRIPTION

CONTRACTOR MUST VERIFY ALL DIMENSIONS AND BE RESPONSIBLE FOR SAME REPORTING ANY DISCREPANCIES TO THE ARCHITECT BEFORE COMMENCING THE WORK.

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Jablonsky, Ast and Partners
CONSULTING ENGINEERS
1129 LESLIE STREET
DON MILLS, ON., M3C 3K5
TEL. 416-447 7405
FAX 416-447 2771

Job Title

FORESTSIDE TOWNHOUSES
TORONTO, ONTARIO

Sheet Title

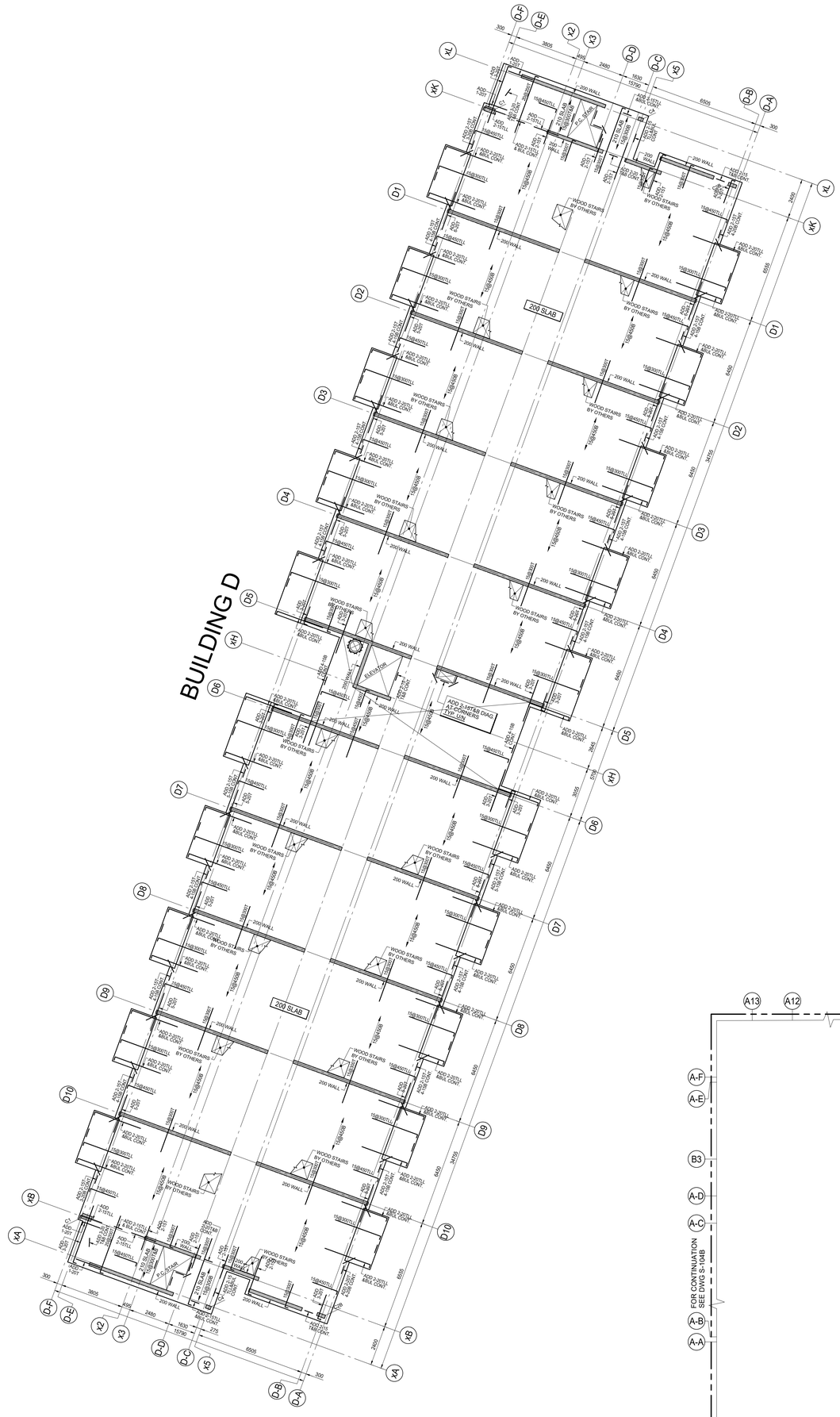
2ND FLOOR
BUILDINGS A, B, & C

North

Seal

R.J. WATSON #19066 PROVINCE OF ONTARIO

Date Plotted	Date : Jun 14 2021
Drawn By: ND	Scale : 1 : 100
Checked By : JW	Revision Number:
Job No : 19066	Sheet No: S-103B



3RD FLOOR FRAMING PLAN

SCALE 1:100

1. TOP OF ROUGH SLAB IS 0.0mm BELOW FINISHED FLOOR (DATUM EL. XXX.XXX) EXCEPT AS CROSSED AND NOTED ON PLAN.
2. CONCRETE STRENGTH AT 28 DAYS SHALL BE AS FOLLOWS:
   FOR WALLS AND COLUMNS ..... 25 MPa
   FOR SLABS ..... 25 MPa
3. CONCRETE STRENGTH EXPOSED TO WEATHER SHALL BE MIN 30 MPa WITH 6% TO 8% ENTRAINED AIR.
4. MINIMUM YIELD STRESS FOR REINFORCING STEEL SHALL BE 400 MPa.
5. TEMPERATURE REINFORCING:
   200 SLAB IS 15@450
   210 SLAB IS 10@230
6. NO OPENINGS LARGER THAN 300mm x 300mm ARE ALLOWED IN SLAB OTHER THAN THOSE SHOWN ON STRUCTURAL DRAWINGS.
7. SEE GENERAL NOTES ON DRAWING S-001.
8. SEE TYPICAL DETAILS DETAILS ON S-000 SERIES DRAWINGS.
9. SEE COLUMN & WALL SCHEDULE ON THIS DRAWING.
10. COORDINATE HEADER BEAM DEPTH AT DOOR OPENINGS WITH ARCHITECTURAL DRAWINGS.
11. EXTEND TEMPERATURE REINFORCING TO END OF BALCONIES / OVERHANGS.
12. TOP BARS TERMINATING AT EDGE OF SLAB TO HAVE 180 HOOK.
13. REFER TO ARCHITECTURAL DRAWINGS FOR SLAB ELEVATIONS, SLOPES AND STEPS IN SLAB AND SLAB DEPRESSIONS.
14. SEE ARCHITECTURAL DRAWINGS FOR EXACT SIZE, LOCATION AND EXTENT OF CURBS. SEE TYPICAL DETAILS FOR REINFORCING.
15. BPL1 - 150x10x150 DENOTES ELEVATOR DIVIDER BEAM BASE PLATE WITH 2x19mmØ NELSON STUD x 150LG., EACH END.

COLUMN = C1
300x600
6-20V
+10@300 TIES

C2A
200x650
6-20V
+10@300 TIES

C2B
200x500
6-20V
+10@300 TIES

C3
250x800
8-20V
+10@300 TIES

C4
200x300
4-20V
+10@300 TIES

WALLS = 200 THICK
10@400H&V E.F.
+ ADD 2-20H TOP

300 THICK
10@270H&V E.F.
+ ADD 2-20H TOP

ISSUES

No.	DATE	DESCRIPTION
1.	2019-08-02	ISSUED FOR TENDER
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4.	2020-05-07	ISSUED FOR TENDER ADDENDUM # 4
5.	2020-09-28	ISSUED FOR PERMIT
6.	2021-02-22	ISSUED FOR TENDER ADDENDUM # 6
7.	2021-03-03	ISSUED FOR PERMIT BUILDINGS A, B, C, D
8.	2021-03-25	ISSUED FOR PROGRESSIVE CONSTRUCTION
9.	2021-03-25	ISSUED FOR PERMIT BUILDINGS A, B, C, D
10.	2021-05-07	ISSUED FOR SITE INSTRUCTION # 3
11.	2021-05-18	ISSUED FOR SITE INSTRUCTION # 4
12.	2021-06-15	ISSUED FOR PROGRESSIVE CONSTRUCTION # 2

No.	DATE	DESCRIPTION

REVISIONS

CONTRACTOR MUST VERIFY ALL DIMENSIONS AND BE RESPONSIBLE FOR SAME REPORTING ANY DISCREPANCIES TO THE ARCHITECT BEFORE COMMENCING THE WORK.

PRINTS ARE NOT TO BE SCALED.

Jablonsky, Ast and Partners
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Job Title

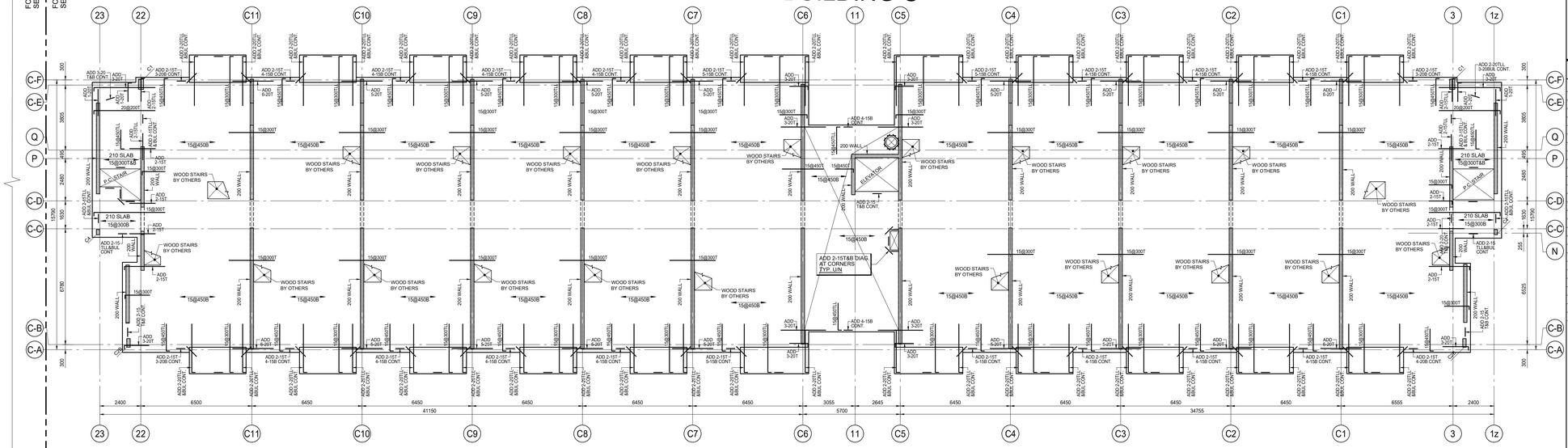
FORESTSIDE TOWNHOUSES
TORONTO, ONTARIO

Sheet Title

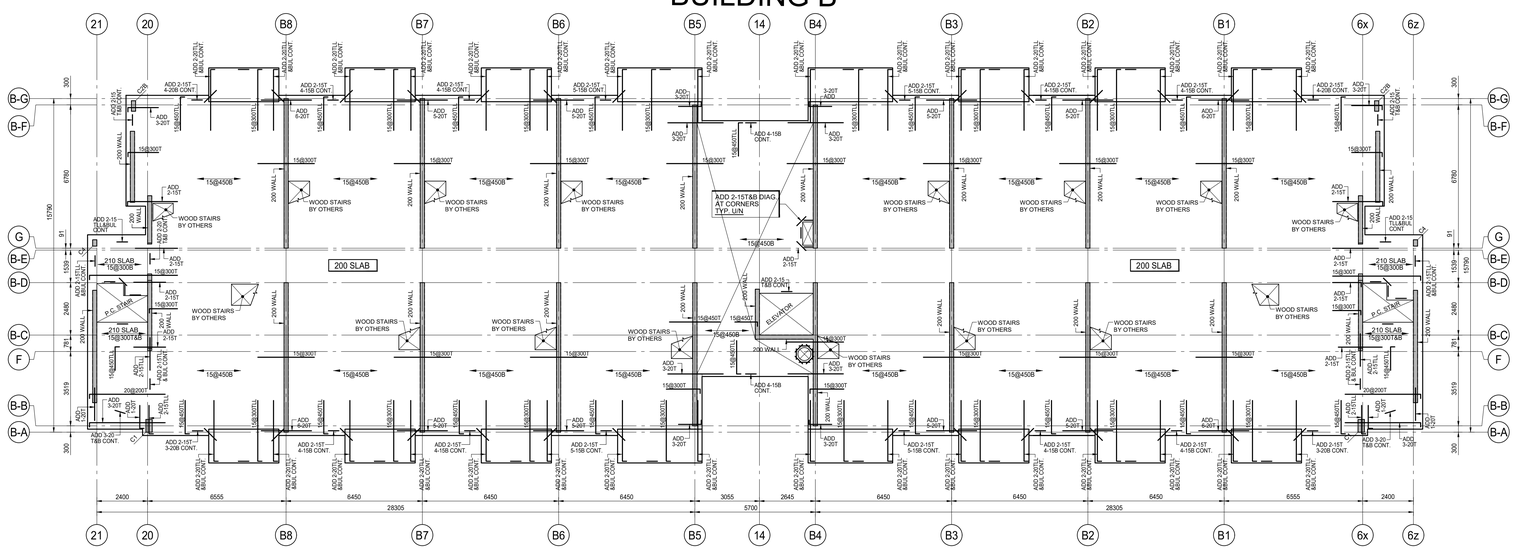
3RD FLOOR
BUILDING D

North	Seal
Date Plotted	Date : Jun 14 2021
Drawn By: ND	Scale : 1 : 100
Checked By : JW	Revision Number:
Job No : 19066	Sheet No: S-104A

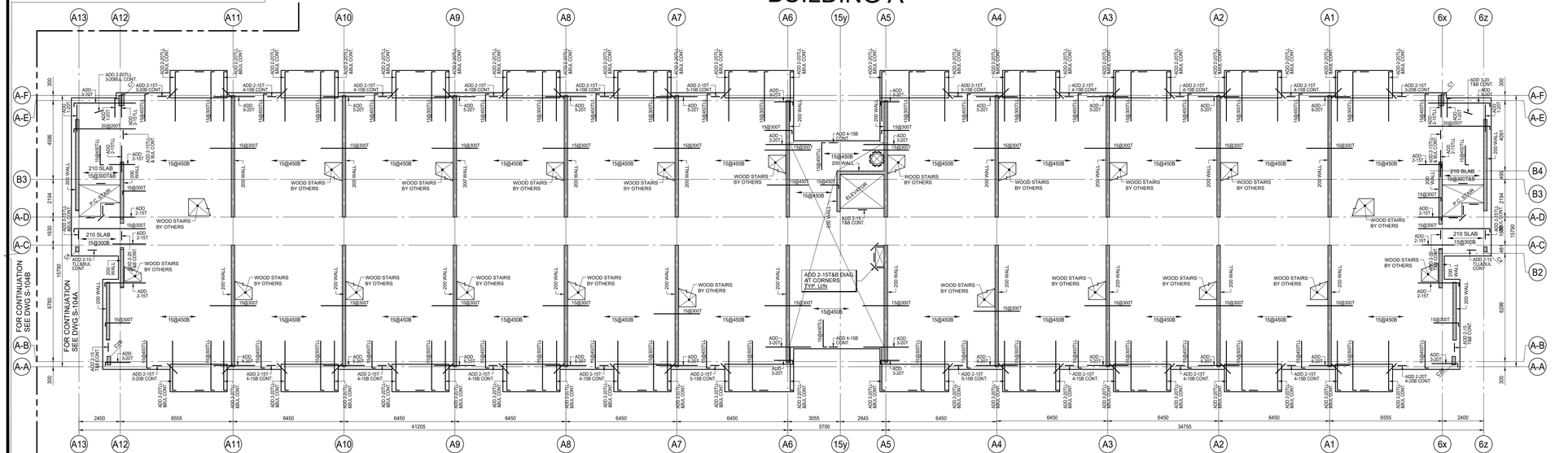
BUILDING C



BUILDING B



BUILDING A



3RD FLOOR FRAMING PLAN

SCALE 1:100

1. FOR GENERAL NOTES, SEE DRAWING S-104A.

COLUMN = C1
300x600
6-20V
+10@300 TIES

C2A
200x650
6-20V
+10@300 TIES

C2B
200x500
6-20V
+10@300 TIES

C3
250x800
8-20V
+10@300 TIES

C4
200x300
4-20V
+10@300 TIES

WALLS = 200 THICK
10@400H&V E.F.
+ ADD 2-20H TOP

300 THICK
10@270H&V E.F.
+ ADD 2-20H TOP

ISSUES

No.	DATE	DESCRIPTION
1.	2019-08-02	ISSUED FOR TENDER
2.	2019-08-28	ISSUED FOR TENDER ADDENDUM # 1
3.	2020-01-31	ISSUED FOR TENDER ADDENDUM # 3
4.	2020-05-07	ISSUED FOR TENDER ADDENDUM # 4
5.	2020-09-28	ISSUED FOR PERMIT
6.	2021-02-22	ISSUED FOR TENDER ADDENDUM # 6
7.	2021-03-03	ISSUED FOR PERMIT BUILDINGS A, B, C, D
8.	2021-03-25	ISSUED FOR PROGRESSIVE CONSTRUCTION
9.	2021-03-25	ISSUED FOR PERMIT BUILDINGS A, B, C, D
10.	2021-05-18	ISSUED FOR SITE INSTRUCTION # 4
11.	2021-06-15	ISSUED FOR PROGRESSIVE CONSTRUCTION # 2

No. DATE DESCRIPTION

REVISIONS

CONTRACTOR MUST VERIFY ALL DIMENSIONS AND BE RESPONSIBLE FOR SAME REPORTING ANY DISCREPANCIES TO THE ARCHITECT BEFORE COMMENCING THE WORK.

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Jablonsky, Ast and Partners
CONSULTING ENGINEERS
1129 LESLIE STREET
DON MILLS, ON., M3C 3K5
TEL 416-447 7405
FAX 416-447 2771

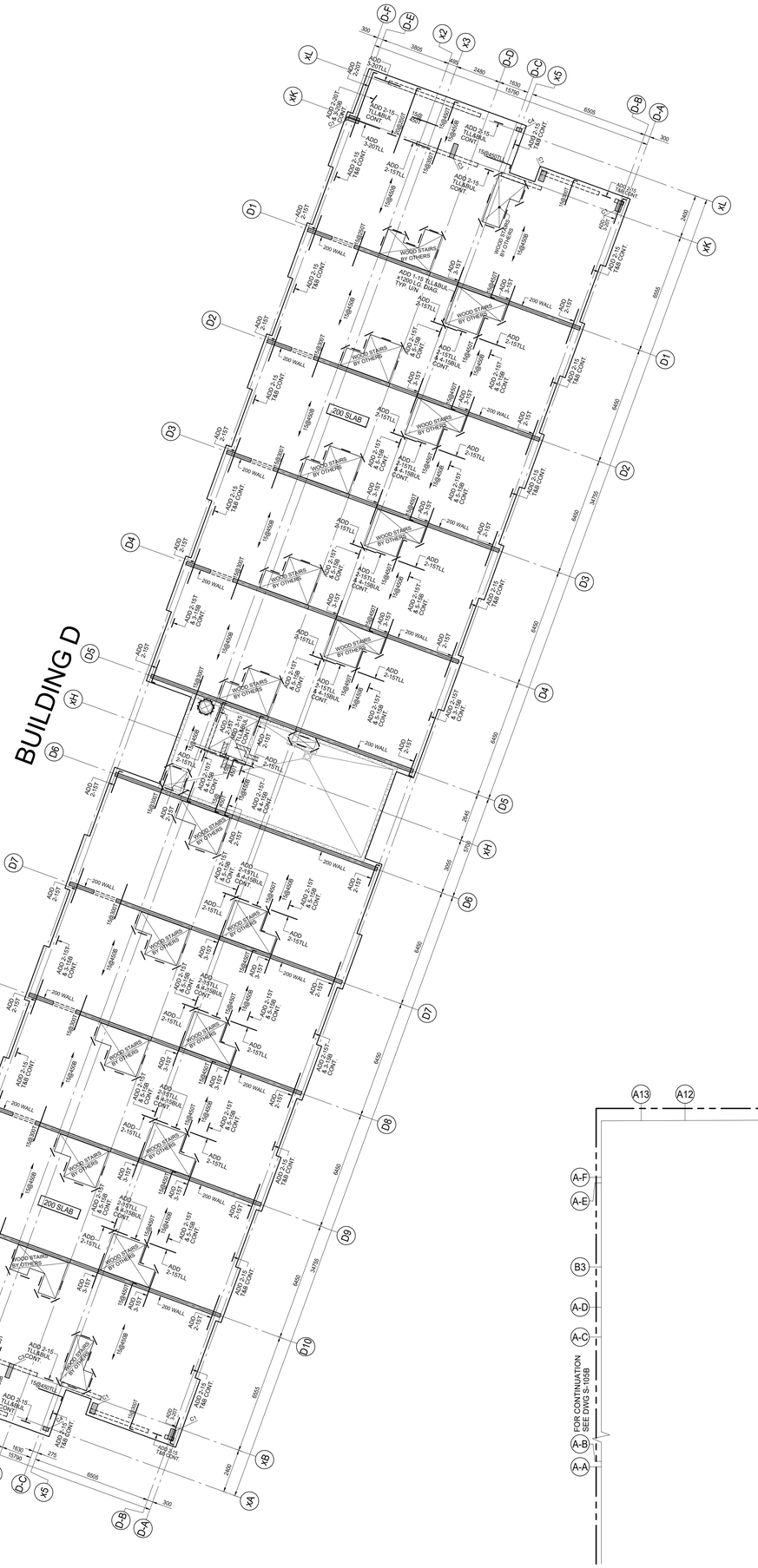
Job Title
FORESTSIDE TOWNHOUSES
TORONTO, ONTARIO

Sheet Title
3RD FLOOR
BUILDINGS A, B, & C

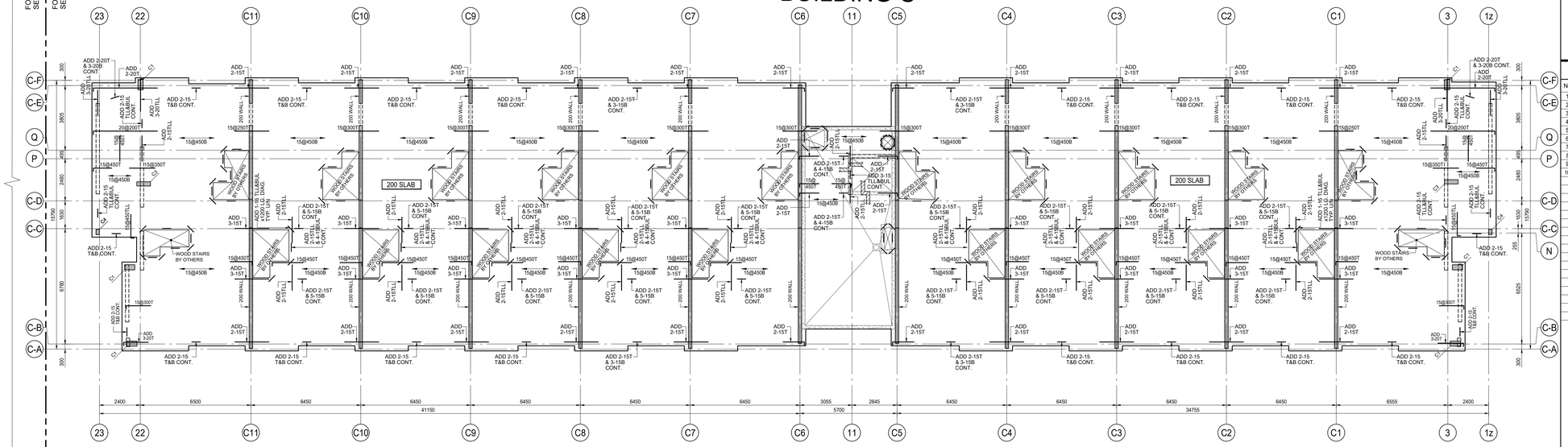
North

Seal
CONSULTING ENGINEERS ONTARIO
R.J. WATSON
#19066
PROVINCE OF ONTARIO

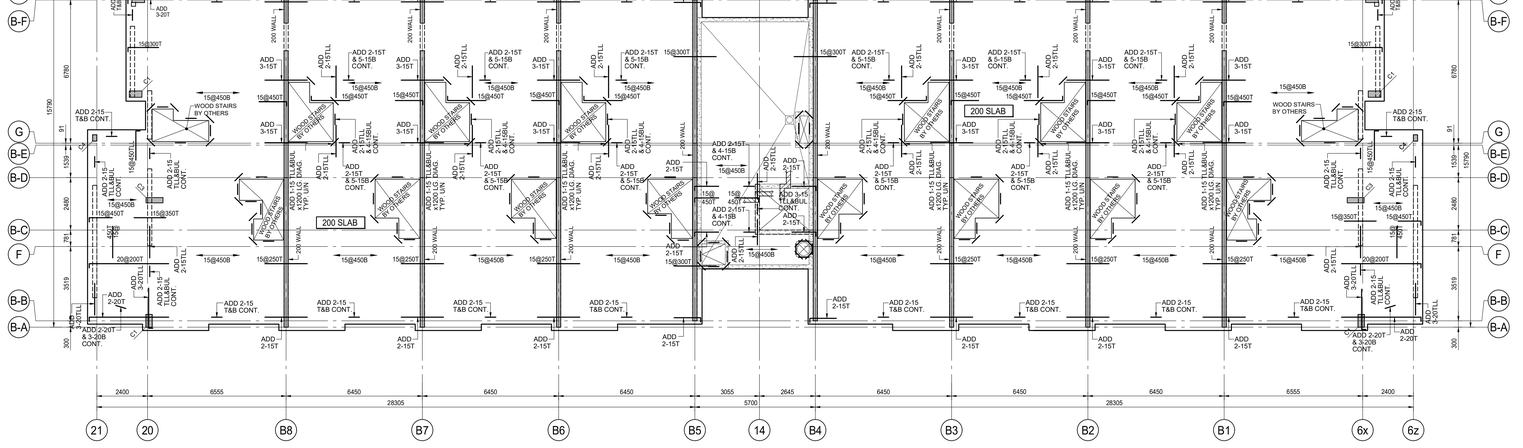
Date Plotted	Date : Jun 14 2021
Drawn By: ND	Scale : 1 : 100
Checked By : JW	Revision Number:
Job No : 19066	Sheet No: S-104B

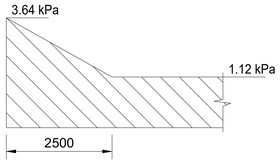

BUILDING D
200 SLAB
WOOD STAIRS BY OTHERS
ADD 2-15 TILE/BRK CONT.
ADD 2-10 TILE CONT.
ADD 2-10 TILE/BRK CONT.
ADD 2-15 TILE CONT.
ADD 2-10 TILE/BRK CONT.
ADD 2-10 TILE CONT.
ADD 2-15 TILE/BRK CONT.
ADD 2-15 TILE

BUILDING C



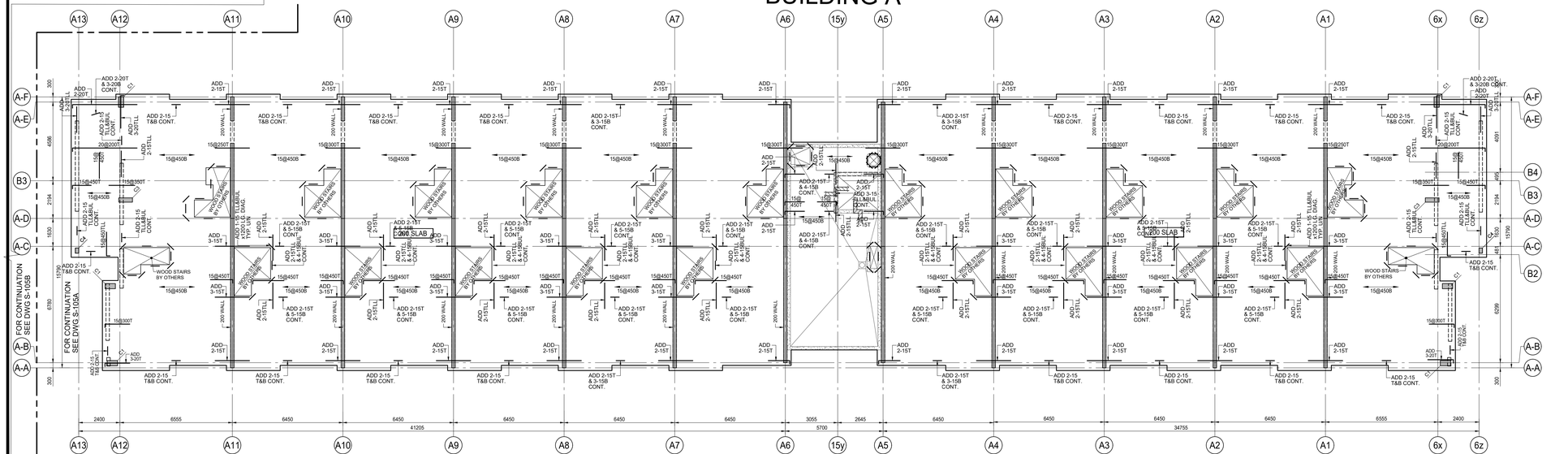
BUILDING B





TYPICAL ROOF SNOW ACCUMULATION DIAGRAM

BUILDING A



COLUMN = C1
300x500
6-20V
+10@300 TIES

C2A
200x650
6-20V
+10@300 TIES

C2B
200x500
6-20V
+10@300 TIES

C3
250x800
8-20V
+10@300 TIES

C4
200x300
4-20V
+10@300 TIES

WALLS = 200 THICK
10@400H&V E.F.
+ ADD 2-20H TOP

300 THICK
10@270H&V E.F.
+ ADD 2-20H TOP

4TH FLOOR FRAMING PLAN

SCALE 1:100

1. FOR GENERAL NOTES, SEE DRAWING S-105A.

ISSUES

No.	DATE	DESCRIPTION
1.	2019-08-02	ISSUED FOR TENDER
2.	2019-08-28	ISSUED FOR TENDER ADDENDUM # 1
3.	2020-01-31	ISSUED FOR TENDER ADDENDUM # 3
4.	2020-09-28	ISSUED FOR PERMIT
5.	2021-02-22	ISSUED FOR TENDER ADDENDUM # 6
6.	2021-03-03	ISSUED FOR PERMIT BUILDINGS A, B, C, D
7.	2021-03-25	ISSUED FOR PROGRESSIVE CONSTRUCTION
8.	2021-03-25	ISSUED FOR PERMIT BUILDINGS A, B, C, D
9.	2021-05-18	ISSUED FOR SITE INSTRUCTION # 4
10.	2021-06-15	ISSUED FOR PROGRESSIVE CONSTRUCTION # 2

No.	DATE	DESCRIPTION

REVISIONS

CONTRACTOR MUST VERIFY ALL DIMENSIONS AND BE RESPONSIBLE FOR SAME REPORTING ANY DISCREPANCIES TO THE ARCHITECT BEFORE COMMENCING THE WORK.

PRINTS ARE NOT TO BE SCALED.

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CONSULTING ENGINEERS
1129 LESLIE STREET
DON MILLS, ON., M3C 2K5
TEL 416.447.7405
FAX 416.447.2771

Job Title

FORESTSIDE TOWNHOUSES
TORONTO, ONTARIO

Sheet Title

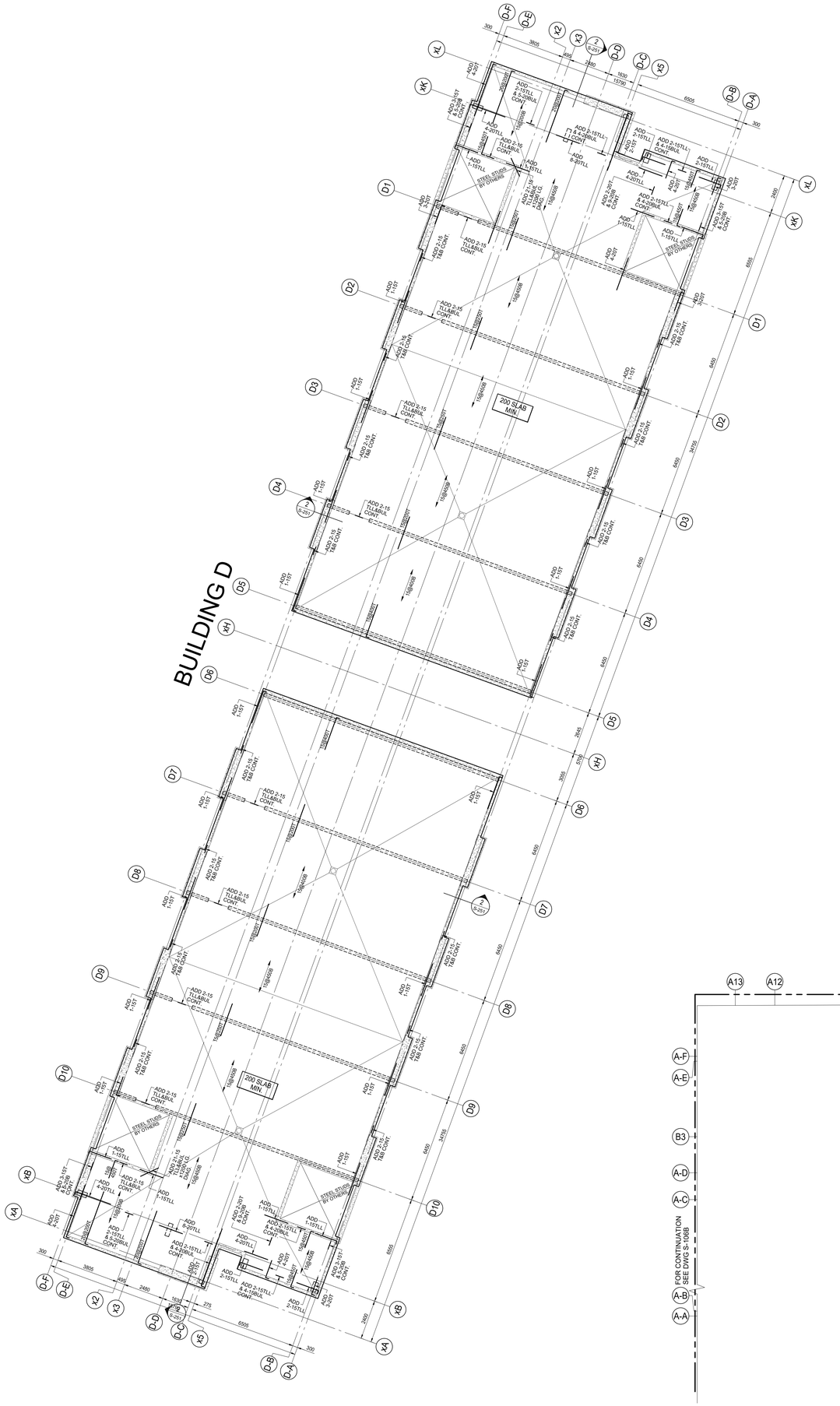
4TH FLOOR
BUILDINGS A, B, & C

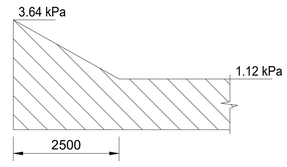
North

Seal

R.J. WATSON
#19066
PROVINCE OF ONTARIO

Date Plotted	Date : Jun 14 2021
Drawn By: ND	Scale : 1 : 100
Checked By : JW	Revision Number:
Job No : 19066	Sheet No: S-105B





TYPICAL ROOF SNOW ACCUMULATION DIAGRAM

ROOF FRAMING PLAN

SCALE 1:100

1. TOP OF ROUGH SLAB IS 0.0mm BELOW FINISHED FLOOR (DATUM EL. XXX.XXX) EXCEPT AS CROSSED AND NOTED ON PLAN.
2. CONCRETE STRENGTH AT 28 DAYS SHALL BE AS FOLLOWS:

   FOR WALLS AND COLUMNS ..... 25 MPa
   FOR SLABS ..... 25 MPa
3. CONCRETE STRENGTH EXPOSED TO WEATHER SHALL BE MIN 30 MPa WITH 6% TO 8% ENTRAINED AIR.
4. MINIMUM YIELD STRESS FOR REINFORCING STEEL SHALL BE 400 MPa.
5. TEMPERATURE REINFORCING:
   200 SLAB IS 15@450
   300 SLAB IS 15@330
6. NO OPENINGS LARGER THAN 300mm x 300mm ARE ALLOWED IN SLAB OTHER THAN THOSE SHOWN ON DRAWINGS.
7. SEE GENERAL NOTES ON DRAWING S-001.
8. SEE TYPICAL DETAILS ON S-000 SERIES DRAWINGS.
9. SEE COLUMN & WALL SCHEDULE ON THIS DRAWING.
10. REFER TO ARCHITECTURAL DRAWINGS FOR SLAB ELEVATIONS AND SLOPES OF SLAB.
11. SEE ARCHITECTURAL DRAWINGS FOR EXACT SIZE, LOCATION AND EXTENT OF CURBS. SEE TYPICAL DETAILS FOR REINFORCEMENT.

COLUMN = C1
300x600
6-20V
+10@300 TIES

C2A
200x650
6-20V
+10@300 TIES

C2B
200x500
6-20V
+10@300 TIES

C3
250x800
8-20V
+10@300 TIES

C4
200x300
4-20V
+10@300 TIES

WALLS = 200 THICK
10@400H&V E.F.
+ ADD 2-20H TOP

300 THICK
10@270H&V E.F.
+ ADD 2-20H TOP

ISSUES

No.	DATE	DESCRIPTION
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4.	2020-09-28	ISSUED FOR PERMIT
5.	2021-02-22	ISSUED FOR TENDER ADDENDUM # 6
6.	2021-03-03	ISSUED FOR PERMIT BUILDINGS A, B, C, D
7.	2021-03-25	ISSUED FOR PROGRESSIVE CONSTRUCTION
8.	2021-03-25	ISSUED FOR PERMIT BUILDINGS A, B, C, D
9.	2021-05-07	ISSUED FOR SITE INSTRUCTION # 3
10.	2021-05-18	ISSUED FOR SITE INSTRUCTION # 4
11.	2021-06-15	ISSUED FOR PROGRESSIVE CONSTRUCTION # 2

No.	DATE	DESCRIPTION

REVISIONS

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CONSULTING ENGINEERS
1129 LESLIE STREET
DON MILLS, ON., M3C 2K5
TEL 416-447 7405
FAX 416-447 2771

Job Title
FORESTSIDE TOWNHOUSES
TORONTO, ONTARIO

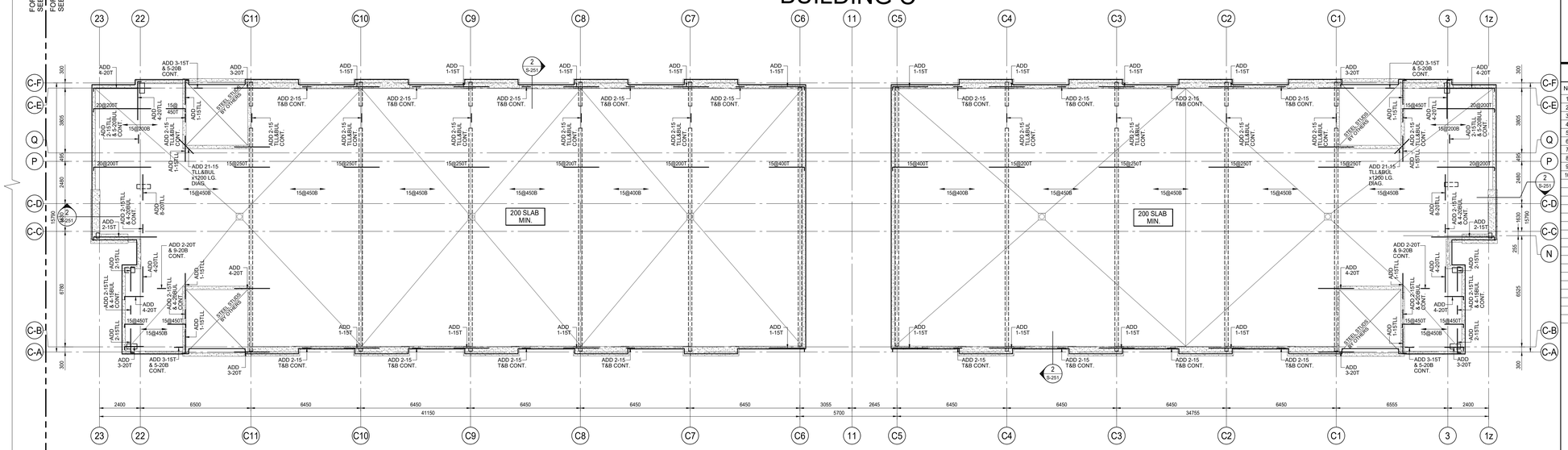
Sheet Title
ROOF
BUILDING D

North

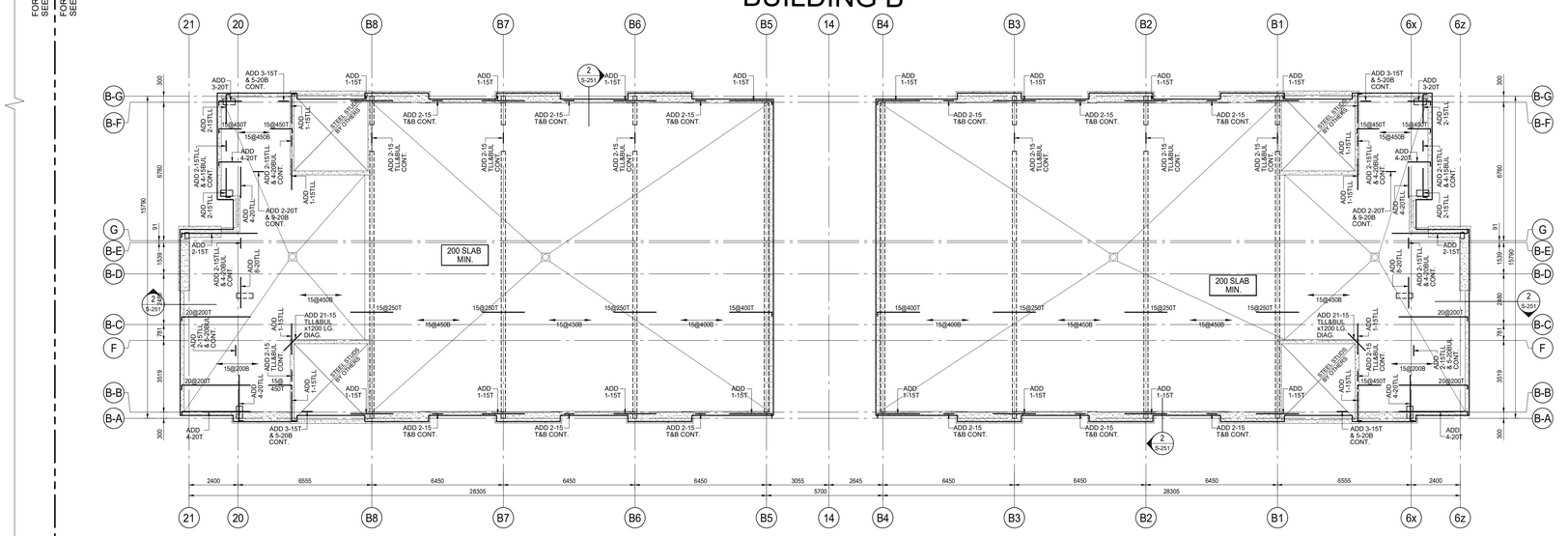
Seal
R.J. WATSON
#190066
PROVINCE OF ONTARIO

Date Plotted	Date : Jun 14 2021
Drawn By: ND	Scale : 1 : 100
Checked By : JW	Revision Number:
Job No : 19066	Sheet No: S-106A

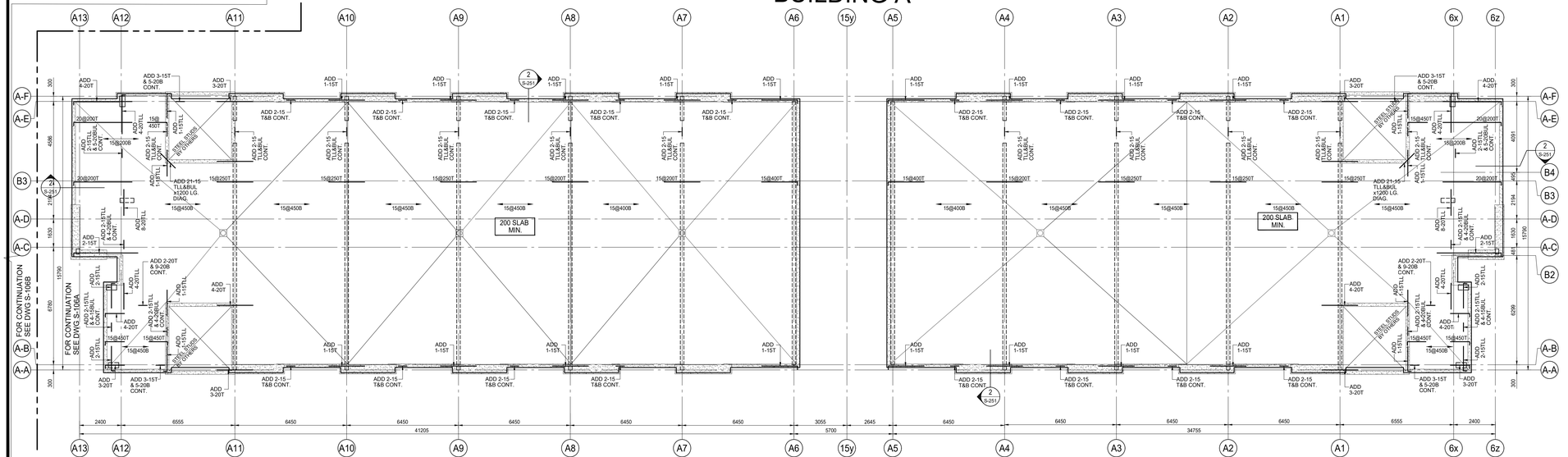
BUILDING C

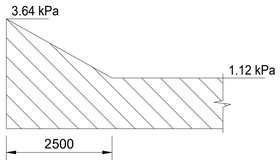


BUILDING B



BUILDING A





TYPICAL ROOF SNOW ACCUMULATION DIAGRAM

ROOF FRAMING PLAN

SCALE 1:100

1. FOR GENERAL NOTES, SEE DRAWING S-106A.

COLUMN = C1
300x600
6-20V
+10@300 TIES

C2A
200x650
6-20V
+10@300 TIES

C2B
200x500
6-20V
+10@300 TIES

C3
250x800
8-20V
+10@300 TIES

C4
200x300
4-20V
+10@300 TIES

WALLS = 200 THICK
10@400H&V E.F.
+ ADD 2-20H TOP

300 THICK
10@270H&V E.F.
+ ADD 2-20H TOP

ISSUES

No.	DATE	DESCRIPTION
1.	2019-08-02	ISSUED FOR TENDER
2.	2019-08-28	ISSUED FOR TENDER ADDENDUM # 1
3.	2020-01-31	ISSUED FOR TENDER ADDENDUM # 3
4.	2020-09-28	ISSUED FOR PERMIT
5.	2021-02-22	ISSUED FOR TENDER ADDENDUM # 6
6.	2021-03-03	ISSUED FOR PERMIT BUILDINGS A, B, C, D
7.	2021-03-25	ISSUED FOR PROGRESSIVE CONSTRUCTION
8.	2021-03-25	ISSUED FOR PERMIT BUILDINGS A, B, C, D
9.	2021-05-18	ISSUED FOR SITE INSTRUCTION # 4
10.	2021-06-15	ISSUED FOR PROGRESSIVE CONSTRUCTION # 2

REVISIONS

No.	DATE	DESCRIPTION

CONTRACTOR MUST VERIFY ALL DIMENSIONS AND BE RESPONSIBLE FOR SAME REPORTING ANY DISCREPANCIES TO THE ARCHITECT BEFORE COMMENCING THE WORK.

PRINTS ARE NOT TO BE SCALED.

Jablonsky, Ast and Partners
CONSULTING ENGINEERS
1129 LESLIE STREET
DON MILLS, ON., M3C 3K5
TEL. 416-447 7405
FAX 416-447 2771

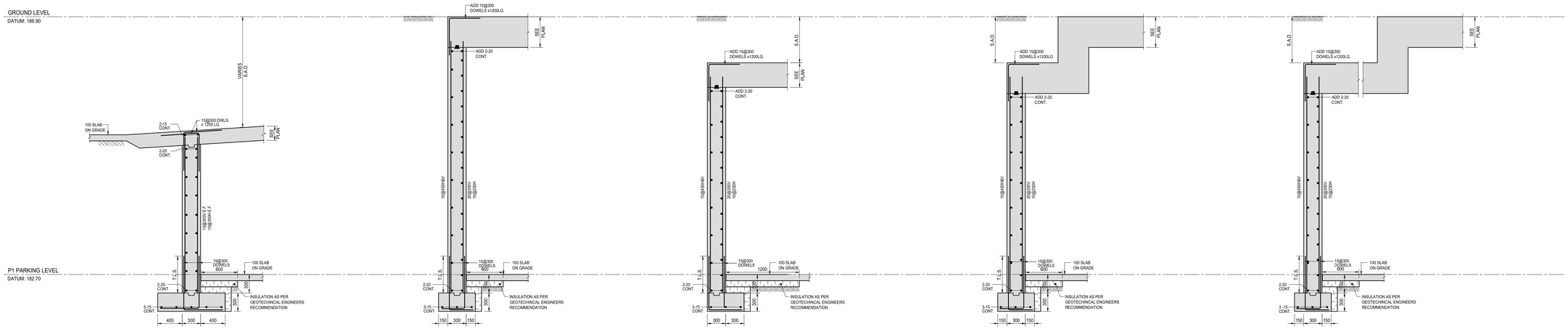
Job Title
FORESTSIDE TOWNHOUSES
TORONTO, ONTARIO

Sheet Title
ROOF
BUILDINGS A, B, & C

North

Seal
CONSULTING ENGINEER PROVINCE OF ONTARIO
R.J. WATSON
#19066

Date Plotted	Date : Jun 14 2021
Drawn By: ND	Scale : 1 : 100
Checked By : JW	Revision Number:
Job No : 19066	Sheet No: S-106B



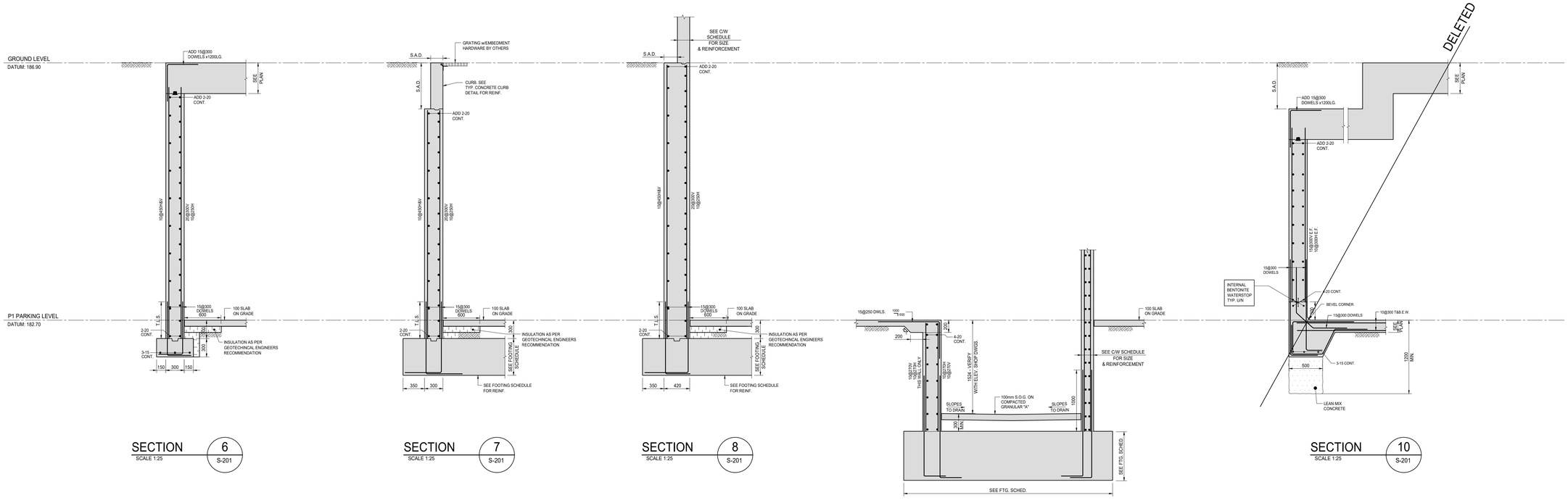
SECTION 1 — S-201 — SCALE 1:25

SECTION 2 — S-201 — SCALE 1:25

SECTION 3 — S-201 — SCALE 1:25

SECTION 4 — S-201 — SCALE 1:25

SECTION 5 — S-201 — SCALE 1:25



SECTION 6 — S-201 — SCALE 1:25

SECTION 7 — S-201 — SCALE 1:25

SECTION 8 — S-201 — SCALE 1:25

SECTION 9 — S-201 — SCALE 1:25

SECTION 10 — S-201 — SCALE 1:25

ISSUES

No.	DATE	DESCRIPTION
1.	2019-08-02	ISSUED FOR TENDER
2.	2019-09-12	ISSUED FOR TENDER ADDENDUM # 2
3.	2020-05-07	ISSUED FOR TENDER ADDENDUM # 4
4.	2020-09-28	ISSUED FOR PERMIT
5.	2021-02-22	ISSUED FOR TENDER ADDENDUM # 6
6.	2021-03-03	ISSUED FOR PERMIT BUILDINGS A, B, C, D
7.	2021-03-25	ISSUED FOR PROGRESSIVE CONSTRUCTION
8.	2021-03-25	ISSUED FOR PERMIT BUILDINGS A, B, C, D
9.	2021-05-18	ISSUED FOR SITE INSTRUCTION # 4
10.	2021-06-15	ISSUED FOR PROGRESSIVE CONSTRUCTION # 2

No. | DATE | DESCRIPTION

REVISIONS

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TEL 416-447 7405
FAX 416-447 2771

Job Title

FORESTSIDE TOWNHOUSES
TORONTO, ONTARIO

Sheet Title

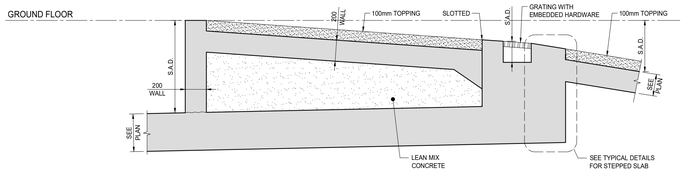
FOUNDATION SECTIONS

North

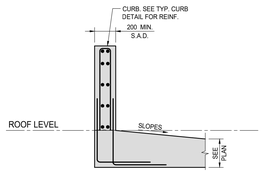
Seal

R.J. WATSON
#19066
PROVINCE OF ONTARIO

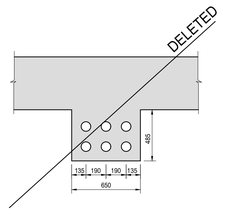
Date Plotted	Date : Jun 14 2021
Drawn By: ND	Scale : 1 : 25
Checked By : JW	Revision Number:
Job No : 19066	Sheet No: S-201



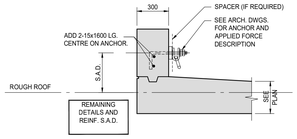
SECTION 1
SCALE 1:20 — S-251



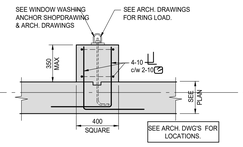
SECTION 2
SCALE 1:20 — S-251



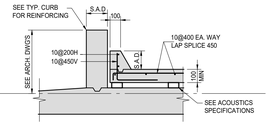
SECTION 3
SCALE 1:20 — S-251



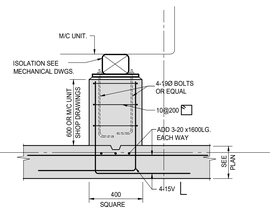
PARAPET MOUNTED WINDOW WASHING ANCHOR DETAIL
SCALE 1:20



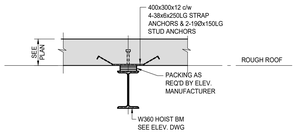
TYP. WINDOW WASHING ANCHOR SUPPORT PIER
SCALE 1:20
(OPTIONAL)



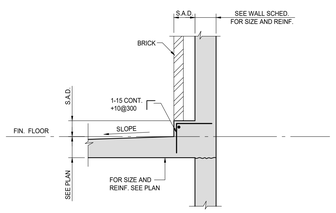
TYPICAL DETAIL OF FLOATING SLAB REINF.
SCALE 1:20
REFER TO ARCH. AND MECH. DWG. FOR LOCATION



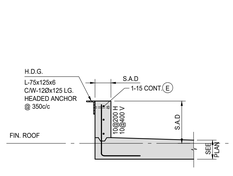
COOLING TOWER SUPPORT PIER
SCALE 1:20
SEE ARCHITECTURAL DWG'S FOR LOCATIONS.



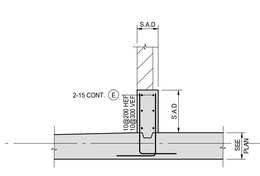
HOIST BEAM SECTION
SCALE 1:20
SEE ARCHITECTURAL DWG'S FOR LOCATIONS.



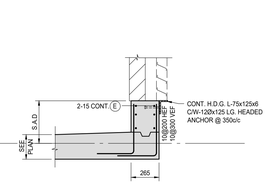
TYPICAL DETAIL BETWEEN ELEV. SHAFT AND STAIR WELL



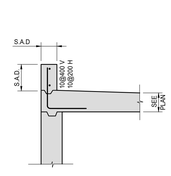
TYPICAL ROOF PARAPET
SCALE 1:20



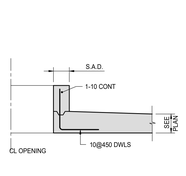
TYPICAL CURB AROUND M/C PENTHOUSE
SCALE 1:20



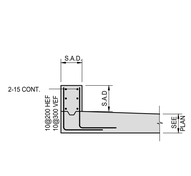
TYPICAL CURB AT COOLING TOWER LOUVER
SCALE 1:20



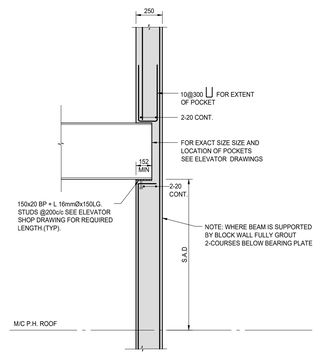
TYPICAL CURB AROUND P.H. ROOF
SCALE 1:20



TYPICAL CURB AROUND M/C OPENINGS
SCALE 1:20



TYPICAL CURB ON TERRACE
SCALE 1:20



TYPICAL POCKETS FOR ELEVATOR ABOVE MECH.PH FLR
SCALE 1:20

ISSUES

No.	DATE	DESCRIPTION
1.	2019-08-02	ISSUED FOR TENDER
2.	2019-08-28	ISSUED FOR TENDER ADDENDUM # 1
3.	2019-09-12	ISSUED FOR TENDER ADDENDUM # 2
4.	2020-01-31	ISSUED FOR TENDER ADDENDUM # 3
5.	2020-09-28	ISSUED FOR PERMIT
6.	2021-03-03	ISSUED FOR PERMIT BUILDINGS A, B, C, D
7.	2021-03-25	ISSUED FOR PROGRESSIVE CONSTRUCTION
8.	2021-03-25	ISSUED FOR PERMIT BUILDINGS A, B, C, D
9.	2021-06-15	ISSUED FOR PROGRESSIVE CONSTRUCTION # 2

No.	DATE	DESCRIPTION

REVISIONS

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FAX 416-447 2771

Job Title
FORESTSIDE TOWNHOUSES
TORONTO, ONTARIO

Sheet Title
FLOOR SECTIONS

North

Seal
CONSULTING ENGINEERS ONTARIO
R.J. WATSON
#19066
PROVINCE OF ONTARIO

Date Plotted	Date : Jun 14 2021
Drawn By: ND	Scale : 1 : 20
Checked By : JW	Revision Number:
Job No : 19066	Sheet No: S-251

FOOTING SCHEDULE

FTG. MARK	BASE		CAP		REINFORCING		CAP REINF.	REMARKS
	WIDTH	DEPTH	WIDTH	DEPTH	BOTTOM EACH WAY	TOP EACH WAY		
F 1	3300 x 2700	600			13-20 L.W. 10-25 S.W.			
F 2	3800 x 3200	600			12-15 L.W. 15-15 S.W.			
F 3	6300 x 3350	600			13-15 L.W. 24-15 S.W.			
F 4	7450 x 3350	300			13-15 L.W. 28-15 S.W.			
F 5	7950 x 3350	300			13-15 L.W. 30-15 S.W.			
F 6	5800 x 3350	300			13-15 L.W. 22-15 S.W.			
F 7	5300 x 2900	600			9-25 L.W. 16-25 S.W.			
SF 1	600	300			3-15 L.W. 15@250 S.W.			
SF 2	1300	300			5-15 L.W. 15@250 S.W.			
SF 3	1100	300			5-15 L.W. 15@250 S.W.			
SF 4					D E L E T E D			
SF 5					D E L E T E D			
MAT 1	SEE PLAN	600			25@300 B.E.W.	25@300 T.E.W.		
MAT 2	SEE PLAN	600			25@300 B.E.W.	25@300 T.E.W.		
MAT 3	SEE PLAN	300			20@300 B.E.W.	20@300 T.E.W.		
MAT 4	SEE PLAN	300			20@300 B.E.W.	20@300 T.E.W.		
MAT 5	SEE PLAN	600			25@300 B.E.W.	25@300 T.E.W.		
MAT 6	SEE PLAN	600			25@300 B.E.W.	25@300 T.E.W.		
MAT 7	SEE PLAN	600			25@300 B.E.W.	25@300 T.E.W.		

NOTE:
1. FOOTING DIMENSION GIVEN FIRST IS IN LONG DIRECTION.
2. THE LONGEST DIMENSION OF THE FOOTING IS PARALLEL TO THE LONGEST DIMENSION OF THE COLUMN UNLESS NOTED ON PLAN.
3. L.W. DENOTES LONG WAY
4. S.W. DENOTES SHORT WAY
5. ALL BOTTOM BARS TO BE HOOKED

ISSUES

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1.	2019-08-02	ISSUED FOR TENDER
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4.	2020-05-07	ISSUED FOR TENDER ADDENDUM # 4
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REVISIONS

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Job Title
FORESTSIDE TOWNHOUSES
TORONTO, ONTARIO

Sheet Title
FOOTING SCHEDULE

North

Seal
CONSULTING ENGINEERS PROFESSIONAL ENGINEERS
R.J. WATSON
#19066
PROVINCE OF ONTARIO

Date Plotted	Date : Jun 14 2021
Drawn By: ND	Scale : 1 : 100
Checked By : JW	Revision Number:
Job No : 19066	Sheet No: S-301