UNIVERSITY OF TORONTO
DENTISTRY BUILDING - CLINIC 2 RENOVATION

ENTUITIVE

DRAWING LIST

DRAWING No.	DRAWING TITLE
S0000	COVER SHEET
S0001	GENERAL NOTES
S0002	GENERAL NOTES
S0010	TYPICAL DETAILS
S0011	TYPICAL AND PROJECT DETAILS
S2000	FRAMING PLANS - PATIENT LOBBY AND PARKING GARAGE
S2001	FRAMING PLAN - LEVEL 1
S2002	FRAMING PLAN - LEVEL 2
S2003	FRAMING PLAN - LEVEL 3
S2004	FRAMING PLAN - ROOF
S2010	ENLARGED FRAMING PLANS
S4000	SECTIONS AND DETAILS
S4001	SECTIONS AND DETAILS

ENTUITIVE

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LICENSED PROFESSIONAL ENGINEER
D. FOX
100126335
2026-05-29
PROVINCE OF ONTARIO

REVISIONS

#	DATE:	REVISION:	BY:
6	2026-05-29	ISSUED FOR TENDER	
5	2026-01-09	ISSUED FOR 100% CD	
4	2025-12-05	ISSUED FOR BUILDING PERMIT	
3	2025-09-26	ISSUED FOR 80% CD	
2	2025-08-22	ISSUED FOR 50% CONSTRUCTION DOCUMENTS	
1	2025-05-30	ISSUED FOR 100% DESIGN DEVELOPMENT	

UNIVERSITY OF TORONTO
DENTISTRY BUILDING -CLINIC 2 RENOVATION
EN021-01853

124 EDWARD STREET
TORONTO, ON, M5G 1G6

COVER SHEET

SCALE:
DRAWN BY: CH
REVIEWED BY: DF
JOB NUMBER: EN021-01853
PLOT DATE: 2026-05-29

DRAWING NUMBER:
S0000

2026-05-29 1:17:55 PM Autodesk Docs://24082_UofT_DC2_R24/24082_UofT DC 2_ENT_MAIN_R24.rvt

A. GENERAL

1. WHERE DOCUMENTS ARE REFERENCED IN THE GENERAL AND DESIGN NOTES, THEY SHALL BE THE LATEST EDITIONS OR REVISION, UNLESS NOTED OTHERWISE.
2. READ STRUCTURAL DOCUMENTS IN CONJUNCTION WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND ALL OTHER CONTRACT DOCUMENTS.
3. BEFORE PROCEEDING WITH THE WORK, CHECK ALL DIMENSIONS SHOWN ON THE STRUCTURAL DOCUMENTS WITH SITE CONDITIONS AND THOSE SHOWN ON ARCHITECTURAL, MECHANICAL AND ELECTRICAL DOCUMENTS AND REPORT DISCREPANCIES TO THE CONSULTANT.
4. PROVIDE LABOUR, MATERIALS, PLANT AND EQUIPMENT TO COMPLETE ALL STRUCTURAL WORK INDICATED ON THE CONTRACT DOCUMENTS.
5. CARRY OUT CONSTRUCTION OPERATIONS, INCLUDING THE INSTALLATION OF TEMPORARY GUYING AND SHORING REQUIRED, ENSURING THAT THE EXISTING STRUCTURE OR MEMBERS ALREADY ERECTED ARE NOT LOADED IN EXCESS OF THEIR SAFE LOAD CARRYING CAPACITY.

B. REFERENCE STANDARDS/CODES AND ACTS

1. CONFORM WITH THE 2024 ONTARIO BUILDING CODE, AND ANY APPLICABLE ACTS OF ANY AUTHORITY HAVING JURISDICATION, AND THE FOLLOWING:
   1. CAN/CSA A23.1 — CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION.
   2. CAN/CSA A23.2 — METHODS OF TEST FOR CONCRETE.
   3. CAN/CSA A23.3 — DESIGN OF CONCRETE STRUCTURES.
   4. CSSBI 10M — STEEL ROOF DECK.
   5. CSSBI 12M — COMPOSITE STEEL DECK.
   6. CAN/CSA-S16 — DESIGN OF STEEL STRUCTURES.
   7. RSIC 1996 — REINFORCING STEEL INSTITUTE OF CANADA (RSIC), MANUAL OF STANDARD PRACTICE.
   8. CAN/CSA G40.20/G40.21 — STRUCTURAL QUALITY STEEL.
   9. CAN3-A371 — MASONRY CONSTRUCTION FOR BUILDINGS.
2. ALL STANDARDS AND PUBLICATIONS REFERENCED BY THE STANDARDS NOTED ABOVE ARE TO APPLY.
3. WHERE THERE ARE DIFFERENCES BETWEEN THE DOCUMENTS AND THE STANDARDS, CODES AND ACTS, THE MOST STRINGENT SHALL GOVERN.

C. QUALIFICATIONS

1. ANY ORGANIZATION UNDERTAKING TO WELD UNDER THIS CONTRACT SHALL BE CERTIFIED BY THE CANADIAN WELDING BUREAU UNDER REQUIREMENTS OF DIVISION 1 OR DIVISION 2.1 OF W47.1.

D. SUBMITTALS

1. SHOP DRAWINGS
   1. SUBMIT FOR REVIEW BY THE CONSULTANT, DETAILED SHOP DRAWINGS FOR ALL TEMPORARY AND PERMANENT STRUCTURAL WORK INCLUDING, BUT NOT LIMITED TO: CONCRETE FORMWORK; REINFORCING STEEL; STRUCTURAL STEEL, INCLUDING JOISTS, STEEL DECK, AND TEMPORARY SHORING; LIGHTWEIGHT STEEL; AND PROPRIETARY WOOD PRODUCTS, INCLUDING JOISTS AND BEAMS.
   2. THE SCALE OF THE DRAWINGS SHALL BE SUCH THAT THE DETAILS OF THE STRUCTURAL WORK ARE CLEARLY SHOWN, AND IN NO CASE SMALLER THAN 1:50.
   3. THE STRUCTURAL DRAWINGS SHALL NOT BE REPRODUCED, IN WHOLE OR IN PART, FOR USE AS SHOP DRAWINGS.
   4. EACH DRAWING SUBMITTED FOR CONCRETE FORMWORK; STRUCTURAL STEEL, INCLUDING JOISTS, STEEL DECK, AND TEMPORARY SHORING; AND PROPRIETARY WOOD PRODUCTS; INCLUDING JOISTS AND BEAMS. SHALL BEAR THE SEAL AND SIGNATURE OF A QUALIFIED PROFESSIONAL ENGINEER LICENSED BY THE AUTHORITY HAVING JURISDICTION.
   5. CONTRACTOR SHALL ALLOW FOR A 5 WORKING DAY TURN AROUND TIME FOR STRUCTURAL CONSULTANT TO REVIEW THE SHOP DRAWINGS.
   6. CALCULATIONS: SUBMIT CALCULATIONS, BEARING THE SEAL AND SIGNATURE OF PROFESSIONAL ENGINEER LICENSED BY THE AUTHORITY HAVING JURISDICTION, FOR STRUCTURAL WORK, IF REQUESTED BY THE CONSULTANT.
2. MILL TEST REPORTS: MAKE AVAILABLE TO THE CONSULTANT COPIES OF ALL MILL TEST REPORTS COVERING CHEMICAL AND PHYSICAL PROPERTIES OF MATERIALS USED.
3. CONCRETE MIX DESIGNS: SUBMIT ALL CONCRETE MIX DESIGNS FOR REVIEW. DESCRIBE IN DETAIL ON THE MIX DESIGN SUMMARY THE LOCATION(S) WHERE EACH MIX IS TO BE PLACED IN THE STRUCTURE.
4. AS-BUILT DRAWINGS: MARK ON A COMPLETE SET OF REPRODUCIBLE AS-BUILT DRAWINGS ANY CHANGES, ADDITIONS, OR DELETIONS THAT OCCUR DURING CONSTRUCTION AS A RESULT OF THE CONTRACTOR'S WORK, CHANGE OF ORDERS OR FOR ANY OTHER REASON.

E. MATERIALS

1. PROVIDE ONLY NEW STRUCTURAL MATERIALS IN ACCORDANCE WITH THE REFERENCE STANDARDS AND THE FOLLOWING, UNLESS OTHERWISE NOTED.
   1. CONCRETE: CONFORM TO THE REQUIREMENTS OF CSA-A23.1 AND THE FOLLOWING:
      1. EXPOSED TO FREEZE-THAW & CHLORIDES (EXPOSURE CLASS C-1): f'c = 35 MPa.
      2. EXPOSED TO FREEZE-THAW (EXPOSURE CLASS F-1): f'c = 30 MPa.
      3. NOT EXPOSED: f'c = 25 MPa.
   2. REINFORCEMENT: CONFORM TO CSA G30 SERIES, FY = 400 MPa FOR ALL REINFORCEMENT. ALL REINFORCEMENT IS TO BE BLACK EXCEPT WHERE THE SUFFIX C IS USED TO DESIGNATE EPOXY COATED REINFORCEMENT.
   3. WELDED WIRE FABRIC: CONFORM TO CSA G30 SERIES, GRADE 386, IN FLAT SHEETS.
   4. STRUCTURAL STEEL:
      1. STRUCTURAL WIDE FLANGE AND WELDED WIDE FLANGE SHAPES (W, WWF) TO CONFORM TO CAN/CSA-G40.20/G40.21 GRADE 350W.
      2. ANGLES AND CHANNELS (L, C) TO CONFORM TO CAN/CSA-G40.20/G40.21 GRADE 300W.
      3. HOLLOW STRUCTURAL SECTIONS (HSS) TO CONFORM TO ASTM A500 GRADE C.
   5. SHOP PAINT/PRIMER:
      1. ENSURE THAT THE SHOP PRIMER OR PAINT IS COMPATIBLE WITH SPRAY FIREPROOFING AND/OR THE TOP COAT PAINT SYSTEM SPECIFIED, WHERE APPLICABLE.
      2. SHOP PAINT: TO CISC/CPMA 1-73A OR SSPC PAINT 15.
      3. SHOP PRIMER: TO CISC/CPMA STANDARD 2-75.
   6. INORGANIC ZINC-RICH PRIMER: CATHA-COAT 304V AS SUPPLIED BY DEVOE COATING COMPANY (2 TO 4 MILS DRY FILM THICKNESS) OR CARBOZINC 11 AS SUPPLIED BY CARBOLINE COMPANY (2 TO 3 MILS DRY FILM THICKNESS) OR ZINC CLAD II AS SUPPLIED BY SHERWIN-WILLAMS COMPANY (2 TO 4 MILS DRY FILM THICKNESS), OR APPROVED EQUIVALENT.
   7. ORGANIC ZINC-RICH PRIMER: CATHA-COAT 302HA AS SUPPLIED BY DEVOE COATING COMPANY (3 TO 4 MILS DRY FILM THICKNESS) OR ZINC GLAD 200 AS SUPPLIED BY SHERWIN-WILLAMS COMPANY (3 TO 5 MILS DRY FILM THICKNESS), OR APPROVED EQUIVALENT.
   8. EPOXY PAINT: DEVRAN 224HS AS SUPPLIED BY DEVOE COATING COMPANY (4 TO 6 MILS DRY FILM THICKNESS) OR MACROPOXY 646 FAST CURE EXPOXY AS SUPPLIED BY SHERWIN-WILLIAMS COMPANY (4 TO 6 MILS DRY FILM THICKNESS) OR APPROVED EQUIVALENT.
   9. ZINC-RICH TOUCH-UP PAINT: GALVAFROID AS SUPPLIED BY W. R. MEADOWS LIMITED OR ZINC CLAD 5 AS SUPPLED BY SHERWIN-WILLIAMS COMPANY) OR APPROVED EQUIVALENT.
   10. HOT DIP GALVANIZING: CONFORM TO CSA G164, MINIMUM ZINC COATING OF 600 g/m^2.
   11. STRUCTURAL BOLTS SHALL CONFORM TO ASTM F3125 (GRADES A325, F1852, A490 AND F2280), NUTS SHALL CONFORM TO ASTM A563, WASHERS SHALL CONFORM TO ASTM F436.
   12. WELDED STUD SHEAR CONNECTORS: HEADED STUDS SHALL BE MANUFACTURED BY NELSON (OR APPROVED EQUIVALENT) AND SHALL BE MADE FROM ASTM A-108 COLD ROLLED, DEFORMED WIRE MEETING THE MECHANICAL PROPERTIES OF ASTM A-496 AND SHALL BE WELDED PER THE MANUFACTURER'S RECOMMENDATIONS. STUDS SHALL BE 19 mm IN DIAMETER AND SHALL HAVE A LENGTH (AFTER WELDING) OF 75 mm WHEN 38 mm DECK IS SPECIFIED AND 115 mm WHEN 76 mm DECK IS SPECIFIED.
   13. ANCHOR RODS: GRADE A307 OR 300W THREADED ROD CONFORMING TO CSA G40.21-M.
   14. CONCRETE ANCHORS: HEADED STUDS MADE FROM ASTM A-108 COLD ROLLED DEFORMED WIRE MEETING ASTM A-496.
   15. STEEL DECK: CONFORM TO ASTM A653M GRADE A OR B, MINIMUM STEEL CORE THICKNESS OF 0.76 mm. ACTUAL STEEL CORE THICKNESS IS TO BE DETERMINED BY THE SUPPLIER'S ENGINEER AND SHALL SATISFY ALL REQUIRED DESIGN CRITERIA. PROTECTIVE COATING- WIPE COATED STEEL DESIGNATION ZF075.
   16. NON-SHRINK GROUT: PREMIXED COMPOSITION OF NON METALLIC AGGREGATE, CEMENT, WATER REDUCING AND PLASTICIZING AGENTS, OF FLOWABLE CONSISTENCY AND CAPABLE OF ACHIEVING A COMPRESSIVE STRENGTH AT 28 DAYS OF AT LEAST 35 MPa
   17. BLOCK: CONFORM TO CAN3-A165 SERIES, MINIMUM COMPRESSIVE STRENGTH = 15.0 MPa (MIN.) BASED ON NET AREA.
   18. MORTAR: CONFORM TO CSA A179 TYPE S FOR LOADBEARING WALLS UNLESS NOTED.
   19. MASONRY GROUT: CONFORM TO CSA A179, 15 MPa MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS, 250 mm SLUMP, MAXIMUM AGGREGATE SIZE 10 mm.

F. EXECUTION

1. FOUNDATIONS
   1. FOUND ALL FOOTINGS (AND UNDERPINNING) ON SOIL CAPABLE OF SUSTAINING AN UNFACTORED BEARING STRESS OF 25 kN/m^2.
   2. DO NOT EXCEED A RISE OF 7 IN A RUN OF 10 IN THE LINE OF SLOPE BETWEEN ADJACENT FOOTING EXCAVATIONS OR ALONG STEPPED FOOTINGS. FOR STEPPED FOOTINGS, USE STEPS NOT EXCEEDING 600 mm IN HEIGHT AND 1200 mm (MIN.) IN LENGTH.
   3. SOIL BEARING CAPACITY SPECIFIED MUST BE VERIFIED IN WRITING BY THE SOIL ENGINEER PRIOR TO THE PLACING OF FOOTINGS AND ANY NON-CONFORMANCE WITH THE SPECIFIED MINIMUM CAPACITIES MUST BE IMMEDIATELY REPORTED TO THE STRUCTURAL ENGINEERS.
   4. PLACE 150 mm CLEAR CRUSHED STONE OVER THE SUB-BASE, COMPACTED TO 100% SPMDD, WITH A MAXIMUM SURFACE VARIATION OF ± 10 mm.
   5. BELOW SLABS ON GRADE BACKFILL USING NATIVE MATERIALS OR ENGINEERED FILL APPROVED BY THE GEOTECHNICAL CONSULTANT AND COMPACT IN MAX 150 mm LIFTS TO 98% SPMDD.
   6. FOUND NEW FOOTINGS WHICH ARE LOCATED ADJACENT TO EXISTING FOOTINGS, AT THE SAME ELEVATION AS THE EXISTING FOOTINGS, UNLESS NOTED OTHERWISE.
   7. REFER TO TYPICAL DETAIL CF2 FOR MASONRY WALL BEARING DETAILS AT SLAB-ON-GRADE.
2. SLAB-ON-GRADE
   1. PLACE SLAB-ON-GRADE INCLUDING ON MATERIAL CAPABLE OF SUSTAINING A MINIMUM SLS BEARING PRESSURE OF 25 kPa WITHOUT SETTLEMENT.
3. CONCRETE
   1. THE CONTRACTOR SHALL ENSURE THAT REINFORCING STEEL IS ADEQUATELY BRACED AGAINST MOVEMENT DURING CONCRETE PLACING.
   2. FABRICATE REINFORCEMENT IN ACCORDANCE WITH CAN/CSA A23.1 AND THE RSIC MANUAL OF STANDARD PRACTICE.
   3. PERFORM FORMING OPERATIONS AND PLACE HARDWARE SO THAT FINISHED CONCRETE WILL BE WITHIN THE TOLERANCES SET OUT IN CAN/CSA-A23.1.
   4. SAW-CUT SLABS ON GRADE AS SHOWN WITH A MAXIMUM LENGTH BETWEEN SAW-CUTS OF 4500 mm. ARRANGE PANELS AS SHOWN OR TO THE CONSULTANT'S APPROVAL.
   5. AFTER A PERIOD OF AT LEAST 28 DAYS, FILL SAW-CUTS WITH MORTAR CONTAINING CEMENT, SAND AND LATEX BONDING AGENT. ENSURE THAT JOINTS TO BE FILLED ARE CLEAN, DRY AND FREE OF FOREIGN MATTER.
   6. FOLLOW MANUFACTURER'S INSTRUCTIONS REGARDING INSTALLATION PROCEDURES AND MINIMUM EMBEDMENT OF ANCHORS.
   7. GROUT BENEATH PLATES BEARING ON CONCRETE WITH AN APPROVED NON-SHRINK FLOWABLE GROUT. CONFORM TO THE MANUFACTURER'S DIRECTIONS FOR MIXING AND PLACING GROUT. COMPLETELY FILL VOIDS BENEATH STEEL BASES ON CONCRETE WITH AN APPROVED NON-SHRINK 36 MPa GROUT.
   8. ALL DOWELS SHALL HAVE MINIMUM EMBEDMENT EQUIVALENT TO THE STRAIGHT TENSION EMBEDMENT LENGTH OR 600 mm, WHICHEVER IS GREATER, UNLESS NOTED OTHERWISE.
   9. PROVIDE DOWELS TO WALLS AND COLUMNS SIMILAR IN NUMBER, SIZE, AND SPACING TO THE VERTICAL STEEL IN THE WALL OR COLUMN ABOVE UNLESS NOTED OTHERWISE.
   10. REINFORCEMENT IDENTIFIED AS 'CONTINUOUS' SHALL TERMINATE WITH STANDARD END HOOKS AND SHALL BE LAPPED WITH CLASS 'B' TENSION LAP SPLICES.
   11. REINFORCEMENT LENGTHS NOTED IN TYPICAL DETAILS ARE MINIMUM LENGTHS UNLESS NOTED OTHERWISE.
   12. MINIMUM TEMPERATURE REINFORCEMENT FOR CONCRETE SLABS:

SLAB THICKNESS	MINIMUM REINFORCEMENT	SLAB THICKNESS	MINIMUM REINFORCEMENT
150	10@325	250	15@375
175	10@275	275	15@350
200	15@500	300	15@325
225	15@450	---	---

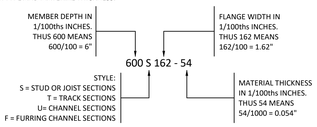
   A. FOR SLAB THICKNESSES NOT COVERED BY THE TABLE, PROVIDE TEMPERATURE REINFORCEMENT EQUAL TO 0.002 TIMES THE GROSS CROSS-SECTIONAL AREA OF THE SLAB. MAXIMUM SPACING OF REINFORCEMENT IS TO BE 3 TIMES SLAB THICKNESS OR 500 mm.
   13. CONSTRUCTION JOINTS:
      1. HORIZONTAL CONSTRUCTION JOINTS SHALL NOT BE MADE IN BEAMS, UNLESS SHOWN OR APPROVED BY THE CONSULTANT.
      2. HORIZONTAL CONSTRUCTION JOINTS IN WALLS SHALL BE ONLY MADE WHERE SHOWN ON THE DRAWINGS.
      3. VERTICAL CONSTRUCTION JOINTS MAY BE MADE ONLY AT MIDSPAN OF BEAMS AND SLABS UNLESS NOTED OTHERWISE.
      4. SUBMIT PROPOSED LOCATION OF ALL CONSTRUCTION JOINTS FOR REVIEW BY THE CONSULTANT.
   14. OPENINGS, SLEEVES, EMBEDDED DUCTS:
      1. NO SLEEVES SHALL BE PLACED VERTICALLY OR HORIZONTALLY THROUGH BEAMS UNLESS REVIEWED AND APPROVED BY THE CONSULTANT.
      2. NO OPENINGS SHALL BE MADE IN FLAT PLATE OR FLAT SLAB UNLESS REVIEWED AND APPROVED BY THE CONSULTANT.
   15. LAP SPLICES FOR WELDED WIRE FABRIC (WWF) SHALL BE:
      1. 152X152 WWF 500 mm
      2. 102X102 WWF 350 mm
      3. 51X51 WWF 250 mm
   15. PROVIDE CAMBER TO SLABS AND BEAMS AS NOTED ON PLANS AND/OR DETAILS. CAMBER BOTH UNDERSIDE AND TOP OF CONCRETE TO MAINTAIN THE SLAB AND BEAM DEPTHS SHOWN ON THE DRAWINGS.
   16. WHERE CONCRETE SLABS ARE CAST ON STEEL DECK, SCREED SLAB TO SUIT BEAM CAMBERS AND MAINTAIN MINIMUM SLAB THICKNESSES SPECIFIED.
   17. CONCRETE COVER:
      1. COVER SHALL BE MEASURED FROM THE DEEPEST POINT TEXTURED CONCRETE SURFACE (OR REGLET/REVEAL) TO THE NEAREST DEFORMATION OF REINFORCEMENT. REINFORCEMENT INCLUDES TIES / STIRRUPS AND MAIN REINFORCEMENT.
      2. ALL CONCRETE CAST AGAINST EARTH IS TO HAVE 75 mm COVER, UNLESS NOTED OTHERWISE.
      3. ALL CONCRETE EXPOSED TO EARTH, INCLUDING CONCRETE CAST AGAINST FORMS AND SUBSEQUENTLY EXPOSED TO EARTH, IS TO HAVE 50 mm COVER, UNLESS NOTED OTHERWISE.
   18. WHERE REINFORCEMENT IS NOT SPECIFICALLY IDENTIFIED ON THE DRAWINGS, PROVIDE 152 X 152 MW18.7 X MW18.7 WELDED WIRE FABRIC IN SLABS-ON-GRADE, OR WALKS AND 51 X 51 MW5.6 X MW5.6 TOPPINGS 60 mm IN THICKNESS OR GREATER.
   19. PLACING CONCRETE
      1. CONFORM TO REQUIREMENTS OF CSA A23.1. AND THE FOLLOWING:
         1. IMMEDIATELY BEFORE PLACING CONCRETE, CLEAN FORMS AND REINFORCEMENT OF FOREIGN MATTER.
         2. DO NOT USE CONCRETE MIXED MORE THAN TWO HOURS AFTER INTRODUCTION OF MIXING WATER.
         3. DURING HOT WEATHER CONDITIONS, DO NOT USE CONCRETE MIXED MORE THAN ONE HOUR AFTER INTRODUCTION OF MIXING WATER.
         4. ALLOW 24 HOURS MINIMUM AFTER PLACING CONCRETE IN COLUMNS, PIERS OR WALLS BEFORE PLACING CONCRETE IN BEAMS OR SLABS SUPPORTED THEREON.
      2. PLACE CONCRETE ON AND STEEL DECK FLOORS IN A MANNER THAT AVOIDS PILING UP OF CONCRETE. DO NOT DROP CONCRETE DIRECTLY FROM BUCKETS, BUT EMPLOY SUITABLE MEANS OF DISTRIBUTION. WET DOWN DECK DURING HOT WEATHER PRIOR TO CONCRETING.
         1. REMOVE CONCRETE SPILLED ONTO FORMS AROUND HOISTING EQUIPMENT BEFORE DEPOSITING CONCRETE IN THESE AREAS.
   20. CURING CONCRETE
      1. CURE ALL CONCRETE IN ACCORDANCE WITH CSA A23.1, THE CONCRETE SUPPLIERS REQUIREMENTS AND AS SPECIFIED HEREIN.
   21. PROTECTION
      1. CONFORM TO THE REQUIREMENTS OF CSA A23.1. PROTECT FRESHLY DEPOSITED CONCRETE FROM FREEZING, PREMATURE DRYING AND EXTREMES OF TEMPERATURE. MAINTAIN CONCRETE WITH MINIMAL MOISTURE LOSS AT A RELATIVELY CONSTANT TEMPERATURE FOR THE PERIOD OF TIME NECESSARY FOR THE HYDRATION OF THE CEMENT AND TO ACHIEVE THE SPECIFIED STRENGTH OF THE CONCRETE.
      2. PROVIDE SUFFICIENT INSULATION, AND HEAT AS NECESSARY, TO PREVENT FREEZING OF FROST SUSCEPTIBLE SOIL WHICH LIES AGAINST STRUCTURAL ELEMENTS; IN PARTICULAR PROTECT SOIL BENEATH FOOTINGS AND BEHIND FOUNDATION WALLS UNTIL THE BUILDING IS COMPLETED.
      3. CRACK REPAIR: PRIOR TO COMPLETION OF THE PROJECT AND IN ANY CASE NOT SOONER THAN 28 DAYS AFTER CONCRETE HAS BEEN PLACED, EXAMINE CONCRETE FLOOR SURFACES AND REPAIR ALL MAJOR CRACKS IN THEM. ROUT CRACKS OUT WITH MECHANICAL ROUTER TO 13 mm SQUARE APPROXIMATE CROSS SECTION. THEN CLEAN AND FILL CRACKS IN SAME MANNER AS SAW CUTS IN SLAB-ON-GRADE.
   22. THE USE OF SHOTCRETE TO CONSTRUCT ANY PART OF THE WORK SHALL BE AT THE SOLE DISCRETION OF THE CONSULTANT.
4. STRUCTURAL STEEL
   1. PROVIDE MINIMUM LENGTH OF BEARING OF 200 mm FOR ALL STEEL BEAMS BEARING ON MASONRY AND CONCRETE AND A MINIMUM 100 mm ON ALL STRUCTURAL STEEL, UNLESS NOTED OTHERWISE.
   2. CENTRE BEARING PLATES UNDER BEAMS UNLESS NOTED OTHERWISE.
   3. BEARING PLATE DIMENSION GIVEN FIRST INDICATES SIDE PARALLEL TO BEAM WEB.
   4. FORCES INDICATED ARE FACTORED UNLESS NOTED OTHERWISE.
   5. WHERE MOMENT CONNECTIONS ARE CALLED FOR BUT VALUES ARE NOT INDICATED, DESIGN CONNECTIONS FOR FULL MOMENT CAPACITY OF THE SMALLER MEMBER JOINED.
   6. PROVIDE WELDED STIFFENER PLATES ON BOTH SIDES OF THE WEB OF THE BEAMS AT POINTS OF CONCENTRATED LOAD INCLUDING BEAMS SUPPORTING COLUMNS OR RUNNING OVER TOP OF COLUMNS, UNLESS SHOWN BY DESIGN, THAT STIFFENERS ARE NOT REQUIRED.
   7. LENGTH FOR ANCHOR RODS, STRAP ANCHORS AND SIMILAR DEVICES IS GIVEN FOR THE STRAIGHT LENGTH WITHOUT HOOK. PROVIDE A 75 mm HOOK FOR ALL ANCHOR RODS AND A 50 mm HOOK FOR ALL STRAP ANCHORS. TYPICAL UNLESS NOTED OTHERWISE.
   8. [UNLESS OTHERWISE NOTED, THE FABRICATOR'S ENGINEER SHALL DESIGN AND BE SOLELY RESPONSIBLE FOR ALL CONNECTIONS BETWEEN ALL STEEL MEMBERS INCLUDING, BUT NOT LIMITED TO: COLUMNS, BEAMS, GIRDERS, TRUSSES AND BRACES, AND BETWEEN SUCH MEMBERS AS SPANDREL ANGLES AND BEAMS, HANGERS, STIFFENERS, ETC., AND THEIR SUPPORTING MEMBERS BE THEY STEEL OR CONCRETE.]
   9. PROVIDE ADEQUATE SUPPORT AND ENSURE ADEQUATE BEARING IS PROVIDE FOR STEEL DECK AT CONNECTIONS, COLUMNS OR OTHER IRREGULARITIES, OR AREAS WHERE DETAILING OF STRUCTURAL STEEL RESULTS IN LOSS OF SUPPORT FOR THE DECK.
   10. PROVIDE SLOTTED HOLES AND SLIP-CRITICAL BOLTED CONNECTIONS TO CONNECT NEW STEEL TO EXISTING WORK.
   11. DESIGN ALL BEAM CONNECTIONS FOR THE FACTORED VERTICAL SHEAR FORCE NOTED ON PLAN. WHERE NO FORCE IS INDICATED, DESIGN CONNECTIONS FOR A VERTICAL SHEAR FORCE OF 75 KN (50KN FOR C150 AND C100 SECTIONS). IN ADDITION, A MINIMUM OF TWO BOLTS ARE TO BE USED IN ALL BEAM CONNECTIONS.
   12. UNLESS OTHERWISE NOTED, THE FABRICATOR'S ENGINEER SHALL ALSO DESIGN AND BE RESPONSIBLE FOR SPECIFYING STIFFENERS, DOUBLER PLATES AND THE LIKE, REQUIRED TO MAINTAIN THE LOCAL STRENGTH AND STABILITY OF A MEMBER AND WHERE THESE STIFFENERS AND DOUBLER PLATES BECOME AN INTEGRAL PART OF THE CONNECTION OR WHERE THEY AFFECT THE CONNECTION OF OTHER STEEL FRAMING MEMBERS. TYPICAL EXAMPLES INCLUDE, BUT ARE NOT LIMITED TO: CRANKED SECTIONS, MOMENT CONNECTIONS BETWEEN COLUMNS AND BEAMS, CONNECTIONS TO HOLLOW STRUCTURAL SECTIONS, AND THE LIKE. WHERE CONNECTIONS ARE EXPOSED TO VIEW, THE DETAILING OF STIFFENERS, DOUBLE PLATES AND THE LIKE IS SUBJECT TO REVIEW BY THE ARCHITECT.
   13. UNLESS OTHERWISE NOTED, THE DESIGN OF ALL BEAMS AND GIRDERS IS BASED ON THE ASSUMPTION THAT FASTENER HOLES THROUGH FLANGES WILL NOT EXCEED 15% OF THE GROSS FLANGE AREA. IF THE AREA OF HOLES EXCEEDS 15%, THE MEMBER SIZE SHALL BE ALTERED OR REINFORCED ACCORDINGLY.
   14. PAINT ALL STRUCTURAL STEEL TO REQUIREMENTS OF CISC/CPMA 2-75. TOUCH UP ALL FIELD WELDS.
   15. ALL STRUCTURAL STEEL EXPOSED TO WEATHER SHALL BE GALVANIZED IN ACCORDANCE WITH CSA G164. TOUCH UP ALL WELDS AND DAMAGED GALVANIZING WITH ZINC-RICH PRIMER.
   16. ALL WELDS SHALL CONFORM TO CSA STANDARD W59.
   17. ALL WELDS EXPOSED TO VIEW SHALL BE GROUND SMOOTH.
   18. UNLESS A REINFORCED MASONRY OR CONCRETE LINTEL IS SHOWN, PROVIDE LOOSE STEEL LINTELS IN ACCORDANCE WITH REQUIREMENTS OF DOCUMENTS OVER DOORWAYS, OTHER OPENINGS AND RECESSES, INCLUDING THOSE FOR MECHANICAL OR ELECTRICAL SERVICES, IN MASONRY WALLS OR PARTITIONS.
   19. DO NOT SPLICE STRUCTURAL STEEL SECTIONS WITHOUT PRIOR APPROVAL OF THE CONSULTANT. ALL SPLICES SHALL DEVELOP THE FULL CAPACITY OF THE SECTION AND ARE TO BE TESTED BY NON DESTRUCTIVE METHODS, BY AN INDEPENDENT INSPECTION AND TESTING COMPANY, AT THE CONTRACTOR'S EXPENSE.
   20. SEE ARCHITECTURAL DRAWINGS FOR FIREPROOFING REQUIREMENTS. CONFIRM COMPATIBILITY OF FIREPROOFING MATERIAL WITH STEEL PAINT.
   21. CONNECTIONS:
      1. USE TYPES OF SHOP OR FIELD CONNECTIONS SHOWN ON THE DOCUMENTS, OR IN THE ABSENCE OF SUCH INFORMATION, USE THE MOST APPROPRIATE TYPE OF CONNECTIONS GIVEN THE APPLIED LOADS AND THE ARRANGEMENT OF MEMBERS.
      2. DESIGN CONNECTIONS TO SAFELY WITHSTAND THE COMBINED PRIMARY EFFECTS OF AXIAL FORCE, SHEAR, MOMENT AND TORQUE AND ANY SECONDARY EFFECTS DUE TO WELDING.
      3. SHEAR CONNECTIONS SHALL NOT BE LESS THAN ONE HALF THE DEPTH OF THE CONNECTED MEMBER.
      4. WHERE NO AXIAL FORCE IS SHOWN FOR BEAM TO COLUMN CONNECTIONS, CONNECT BEAMS FRAMING INTO COLUMNS SUCH THAT THE COMBINED CAPACITIES OF THE CONNECTION ARE ABLE TO RESIST A TOTAL HORIZONTAL FORCE OF 2% OF THE FACTORED AXIAL LOAD IN THE COLUMN, IN ANY DIRECTION.
      5. UNLESS NOTED OTHERWISE, THE DESIGN OF ALL BEAMS AND GIRDERS IS BASED ON THE ASSUMPTION THAT FASTENER HOLES THROUGH FLANGES WILL NOT EXCEED 15% OF THE GROSS FLANGE AREA. IF THE AREA OF HOLES EXCEEDS 15%, THE MEMBER SIZE SHALL BE ALTERED OR REINFORCED ACCORDINGLY.
      6. DESIGN BRACING MEMBER CONNECTIONS FOR FIELD ADJUSTABILITY TO ACCOMMODATE MAXIMUM CONSTRUCTION TOLERANCES AND TO ACHIEVE BRACING PRELOADS WHERE SPECIFIED.
      7. DESIGN CONNECTIONS FOR FASTENING TOGETHER DOUBLE ANGLES USED TO RESIST COMPRESSION, TENSION, OR BENDING IN SUCH A WAY THAT THE SLENDERNESS RATIO OF ANY COMPONENT, BASED ON ITS LEAST RADIUS OF GYRATION AND THE DISTANCE BETWEEN INTERCONNECTIONS, SHALL NOT EXCEED THAT OF THE BUILT-UP MEMBER. AS A MINIMUM, PROVIDE 2 BATONS OR SPACERS ALONG THE LENGTH OF ALL MEMBERS CONSISTING OF DOUBLE ANGLES.
      8. THE FOLLOWING TYPES OF CONNECTIONS ARE TO BE DESIGNED AS SLIP-CRITICAL CONNECTIONS:
         1. CONNECTIONS THAT UTILIZE OVERSIZED HOLES;
         2. CONNECTIONS THAT UTILIZE SLOTTED HOLES, EXCEPT THOSE WHERE THE APPLIED LOAD IS NORMAL TO THE LONG DIMENSION OF THE SLOTOR IN CASES WHERE THE CONNECTION IS INTENDED TO ALLOW FOR MOVEMENT AND IDENTIFIED AS A VERTICALLY OR HORIZONTALLY-SLOTTED CONNECTION (VSC/HSC)
         3. CONNECTIONS SUBJECT TO FATIGUE OR FREQUENT LOAD REVERSAL SUCH AS GANTRIES SUPPORTING VIBRATING EQUIPMENT, STRUCTURES SUPPORTING CRANES, EXTERNAL SCREENS/FLAG POLES SUBJECT TO WIND OSCILLATION, AND THE LIKE
         4. CONNECTIONS WHERE SLIPPAGE CANNOT BE TOLERATED, INCLUDING;
            A. CONNECTIONS WHERE WELDS AND BOLTS SHARE IN TRANSMITTING SHEAR FORCES AT A COMMON FAYING SURFACE.
            B. ALL MOMENT CONNECTIONS, EXCEPT THOSE WITH END PLATE TYPE CONNECTIONS. DESIGN SLIP-CRITICAL BOLTED MOMENT CONNECTIONS FOR 80% OF THE CONNECTION FORCES (MOMENT AND SHEAR) NOTED IN THE CONTRACT DOCUMENTS
      9. DESIGN AND PROVIDE END BEARING CONNECTIONS OF INCLINED MEMBERS SUCH THAT THE BEARING PLANE BETWEEN THE INCLINED MEMBERS AND THEIR SUPPORTING MEMBERS IS HORIZONTAL.
      9. BOLTS IN THE FOLLOWING TYPES OF CONNECTIONS ARE TO BE PRETENSIONED IN ACCORDANCE WITH THE REQUIREMENTS OF S16;
         1. SLIP-CRITICAL CONNECTIONS,
         2. CONNECTIONS GOVERNED BY SEISMIC REQUIREMENTS,
         3. CONNECTIONS WHERE BOLTS ARE SUBJECT TO TENSILE LOADS.
         4. CONNECTIONS USING OVERSIZED OR SLOTTED HOLES UNLESS SPECIFICALLY DESIGNED TO ACCOMMODATE MOVEMENT.
   22. UNLESS NOTED OTHERWISE ON THE DRAWINGS, PROVIDE A 10 mm CAP PLATE FOR ALL HOLLOW BUILT-UP MEMBERS. PROVIDE CONTINUOUS SEAL WELD AROUND CAP PLATE.
   23. SEAL ALL HOLLOW BUILT-UP MEMBERS EXPOSED TO WEATHER WITH CONTINUOUS SEAL WELDS, INCORPORATING STRUCTURAL WELDS WHERE SHOWN OR REQUIRED.
   24. WHERE MASONRY WALLS ARE SHOWN BUILT INTO THE STRUCTURAL STEEL COLUMNS AND BEAMS, PROVIDE AND INSTALL MASONRY. ANCHORS ON COLUMNS AT 600 mm ON CENTRES AND ANCHORS ON BEAMS AT 1500 mm ON CENTRES.
   25. SET OUT BEAMS TO BE CENTRED ON GRIDS AND EQUALLY SPACED BETWEEN, WITHIN EACH BAY AS SHOWN ON PLANS, UNLESS NOTED OTHERWISE OR DIMENSIONED ON PLANS OR SECTIONS.
5. STEEL DECK
   1. THE FLOOR STRUCTURE DESIGN IS BASED ON THE FOLLOWING COMPOSITE STEEL DECK PROFILES:
      1. 76 mm DECK - P-2432 COMPOSITE BY CANAM
      2. 38 mm DECK - P-3615 COMPOSITE BY CANAM
   2. DIFFERENT TYPES OF STEEL DECK, WITH SIMILAR PROPERTIES TO THOSE LISTED ABOVE, MAY BE ACCEPTABLE SUBJECT TO THE REVIEW BY THE CONSULTANT. IF A DIFFERENT TYPE OF DECK PROPOSED RESULTS IN A DIFFERENT FLUTE SPACING OR CONCRETE QUANTITIES THAN THAT ASSUMED IN THE DESIGN, THE CONTRACTOR SHALL IDENTIFY THE DIFFERENCES AT THE TIME OF TENDER.
   3. PROVIDE COMPOSITE STEEL DECK IN ALL ROOF AND FLOOR AREAS WHICH WILL RECEIVE A CONCRETE SLAB, UNLESS DECK IS NOTED TO BE DESIGNED AS FORMWORK ONLY.
   4. THE BUILDING DESIGN IS BASED ON THE ASSUMPTION THAT THE STEEL ROOF DECK BEHAVES AS A "SEMI-FLEXIBLE" DIAPHRAGM. DECK SUPPLIER TO DESIGN DECK AND CONNECTIONS TO ROOF STRUCTURE SUCH THAT THE RESULTING DIAPHRAGM SHEAR STIFFNESS FACTOR "G", IS THIN THE RAN

8. MASONRY

1. WHERE DOWELS, ANCHOR RODS, ETC. ARE SHOWN PROJECTING INTO MASONRY, BUILD THESE TIGHTLY INTO MASONRY VOIDS WITH MASONRY GROUT.
2. BENEATH STEEL AND CONCRETE BEAMS, JOISTS AND TRUSSES PROVIDE A MINIMUM DEPTH OF 400 mm 100% SOLID MASONRY UNITS PROJECTING A MINIMUM OF 200 mm BEYOND THE EDGES OF BEARING PLATES, UNLESS NOTED OTHERWISE.
3. BENEATH STEEL, CONCRETE OR REINFORCED MASONRY LINTELS, PROVIDE A MINIMUM DEPTH OF 200 mm 100% SOLID MASONRY UNITS PROJECT A MINIMUM LENGTH OF 200 mm BEYOND THE END OF THE LINTEL, UNLESS NOTED OTHERWISE.
4. BENEATH SLABS OR STEEL DECK, PROVIDE A MINIMUM DEPTH OF 200 mm OF 100% SOLID MASONRY UNITS.
5. WHERE A CHANGE IN THICKNESS OF MASONRY OCCURS, GROUT SOLID, OR USE SOLID UNITS FOR A HEIGHT OF 200 mm IN THE THICKER PORTION AT THE CHANGE.
6. BUILD MASONRY TIGHTLY INTO WEBS OF ALL WALL BEARING STEEL BEAMS AT THEIR POINTS OF BEARING.
7. BUILD MASONRY TIGHTLY INTO WEBS OF ALL STEEL COLUMNS, UNLESS NOTED OTHERWISE.
8. BUILD MASONRY TIGHTLY AROUND JOIST SHOES.
9. FULLY GROUT BLOCK CELLS AT PARAPETS.
10. MAINTAIN SUPPORT OF MASONRY LINTELS FOR A MINIMUM OF SEVEN DAYS OR UNTIL SUFFICIENT STRENGTH IS GAINED TO SAFELY SUPPORT LOADS IMPOSED.
11. PROVIDE LINTELS OVER ALL OPENINGS OR RECESSES IN MASONRY WALLS, INCLUDING THOSE FOR MECHANICAL OR ELECTRICAL SERVICES OR EQUIPMENT.
12. SEE TYPICAL DETAIL M1 FOR LINTEL SIZES FOR NON-LOAD BEARING MASONRY WALLS [AND VENEER].
13. REFER TO ARCHITECTURAL DRAWINGS FOR TYPES OF LINTELS TO BE PROVIDED.
14. REINFORCED MASONRY:
    1. CELLS TO BE REINFORCED SHALL BE KEPT CLEAN OF MORTAR DROPPINGS.
    2. GROUT FOR REINFORCED CELLS, BOND BEAMS, LINTELS AND CELLS CONTAINING DOWELS, ANCHOR BOLTS AND INSERTS SHALL CONFORM TO THE REQUIREMENTS OF SECTION E, MATERIALS.
    3. PROVIDE MINIMUM 2-15M VERTICALS FULL HEIGHT AT ALL WALL ENDS, CORNERS, INTERSECTIONS AND OPENINGS UNLESS NOTED OTHERWISE.
    4. PROVIDE 1-15M VERTICAL FULL HEIGHT EACH SIDE OF CONTROL JOINTS.
    5. PROVIDE DOWELS FROM FOUNDATIONS TO MATCH VERTICAL WALL REINFORCEMENT.
    6. PROVIDE CLASS 'B' TENSION LAP LENGTH FOR ALL VERTICAL REINFORCEMENT, INCLUDING DOWELS.
    7. PROVIDE A MINIMUM 300 mm LAP FOR WIRE LADDER OR MESH REINFORCEMENT.
    8. PROVIDE CLEANOUTS AT THE BASE OF THE WALL TO VERIFY PROPER PLACEMENT OF GROUT AND PLACE GROUT IN MAXIMUM 3000 mm LIFTS. IF NO CLEANOUTS ARE PROVIDED, LIMIT POUR HEIGHT TO 1500 mm.
    9. WHEN GROUTING IS STOPPED FOR A PERIOD OF HOUR OR LONGER EXCEPT AT THE TOP OF THE WALL, FORM A CONSTRUCTION JOINT BY STOPPING THE GROUT POUR A MINIMUM OF 25 mm BELOW THE UPPERMOST UNIT.
    10. EMBEDDED ITEMS ARE NOT TO INTERFERE WITH THE INTEGRITY OF THE MASONRY WALL OR LOCATION OF REINFORCEMENT. PROVIDE FULLY GROUTED LINTEL BEAMS FOR CONDUITS AND PIPES RUNNING HORIZONTALLY WITHIN WALL.
    11. PROVIDE ADEQUATE TEMPORARY BRACING TO MASONRY WALLS UNTIL PERMANENT HORIZONTAL STRUCTURES ARE INSTALLED AND CAN ADEQUATELY BRACE THE WALLS.
15. FILL ALL MASONRY PIERS LESS THAN 800 mm IN WITH SOLID WITH MASONRY GROUT.

11. LIGHTWEIGHT STRUCTURAL STEEL STUDS

1. LIGHTWEIGHT STEEL FRAMING INCLUDES AXIAL LOAD BEARING WALL STUDS, LATERAL LOAD BEARING WALL STUDS AND FLOOR JOISTS.
2. ALL COLD FORM STEEL STUDS, JOIST, CHANNEL BRIDGING, ANGLES, STRAPS, PLATES AND ASSOCIATED CONNECTION HARDWARE ARE TO BE SUPPLIED BY BAILEYS METAL PRODUCTS INC (UNLESS NOTED OTHERWISE) OR APPROVED EQUIVALENT.
3. ALL COLD FORM STEEL INSTALLATIONS TO BE ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
4. COLD FORM STEEL FRAMING TO FOLLOW THE FOUR PART UNIVERSAL DESIGNATOR SYSTEM WHICH INDENTIFIES DEPTH, FLANGE, WIDTH, MEMBER TYPE AND MATERIAL THICKNESS.



    1. MINIMUM THICKNESS NOTED IS EXCLUSIVE OF COATINGS AND REPRESENTS 95% OF THE DESIGN THICKNESS.
    2. ALL STRUCTURAL STEEL STUDS AND JOISTS TO BE MINIMUM 0.838 mm THICK UNLESS NOTED OTHERWISE.
    3. FOR MATERIAL THICKNESS 1.143 mm OR THINNER, MINIMUM YIELD STRENGTH TO BE 225 MPa. FOR MATERIAL THICKNESS 1.372 mm OR THICKER, MINIMUM YIELD STRENGTH TO BE 345 MPa.
5. STEEL STUDS SHALL HAVE A MINIMUM COATING OF Z180 GALVANIZING IN ACCORDANCE WITH ASTM-A653/A653M. OTHER COATINGS PROVIDING EQUAL OR BETTER CORROSION PROTECTION MAY BE USED.
6. MINIMUM THICKNESS FOR BRIDGING CHANNELS SHALL BE 1.087 mm, UNLESS NOTED OTHERWISE.
7. MINIMUM THICKNESS FOR CLIP ANGLES SHALL BE 1.367 mm UNLESS NOTED OTHERWISE.
8. CORING OR CUTTING OF COLD FORMED STEEL STUDS AND JOISTS ARE TO BE REVIEWED BY ENGINEER PRIOR TO CUTTING. CUTTING OF COLD FORM STEEL FRAMING MEMBERS SHALL BE BY SAW OR SHEAR. NOT TOUCH OR MANUAL CUTTING IS PERMITTED.
9. SPACE WALL STUDS AT 400 mm MAXIMUM UNLESS NOTED OTHERWISE. SPACE FLOOR JOISTS AT 400 mm MAXIMUM UNLESS NOTED OTHERWISE.
10. FOR STUD WALLS, TRACK SECTIONS TO MATCH STUD GAUGE THICKNESS UNLESS NOTED OTHERWISE.
11. FOR STUD WALLS, ANCHOR TOP AND BOTTOM TRACK TO THE STRUCTURE AT MAXIMUM SPACING OF 800 mm ON CENTRE UNLESS NOTED OTHERWISE.
12. STUD WALLS TO BE COMPLETE WITH CONTINUOUS CHANNEL BRIDGING TO BE INSTALLED PER MANUFACTURERS SPECIFICATIONS. MAXIMUM VERTICAL SPACING OF CHANNEL BRIDGING NOT TO BE EXCEED 1200 mm.
13. MAXIMUM FLEXURAL DEFLECTIONS UNDER SPECIFIED LIVE / WIND LOADS SHALL BE LIMITED TO THE FOLLOWING: FLOOR JOISTS / WALL STUDS, L/360 UNLESS NOTED OTHERWISE.
14. CONNECTIONS BETWEEN LIGHT STEEL FRAMING MEMBERS SHALL BE BY BOLTS, WELDING OR SHEET METAL SCREWS.
15. ALL SHEET METAL SCREWS TO BE PANHEAD SELF TAPPING, SELF DRILLING SHEET METAL SCREWS UNLESS NOTED OTHERWISE. SHEET METAL SCREWS SHALL HAVE A MINIMUM COATING THICKNESS OF 0.008 mm ZINC. OTHER COATINGS PROVIDING EQUAL OR BETTER CORROSION PROTECTION MAY BE USED.
16. PENETRATION OF SHEET METAL SCREWS BEYOND JOINED MATERIALS SHALL NOT BE LESS THAN 3 EXPOSED THREADS.
17. SHEET METAL SCREWS COVERED BY SHEATHING MATERIALS SHALL HAVE A LOW PROFILE HEADS.
18. INSTALL CONCRETE ANCHORS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
19. ENSURE THAT CONNECTED PARTS ARE IN CONTACT. PROVIDE CLAMPING BEFORE WELDING OR INSTALLING SCREWS AS REQUIRED.
20. ALLOW FOR APPROPRIATE END ECCENTRICITIES IN THE DESIGN OF AXIAL LOAD BEARING MEMBERS.
21. ALL COLD FORM STEEL INSTALLATIONS TO BE REVIEWED BY CONSULTANT PRIOR TO CLOSING IN STUDS FORM VIEW. PROVIDE CONSULTANT WITH MINIMUM 48 HOURS NOTICE TO SCHEDULE REVIEW.

12. POST-INSTALLED ANCHORS

1. EXCEPT WHERE INDICATED ON THE DRAWINGS, POST-INSTALLED ANCHORS SHALL CONSIST OF THE FOLLOWING ANCHOR TYPES AS PROVIDED BY HILTI (CANADA) CORPORATION.
    1. ANCHORAGE TO CONCRETE
        1. ADHESIVE ANCHORS FOR CONCRETE USE:
            1. HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HIT-Z ROD FOR FAST CURE APPLICATIONS.
            2. HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT SYSTEM FOR FAST CURE APPLICATIONS.
            3. HILTI HIT-RE 500-SD EPOXY ADHESIVE ANCHORING SYSTEM FOR SLOW CURE APPLICATIONS.
            4. HILTI HIT-RE 500 EPOXY ADHESIVE ANCHORING SYSTEM FOR SLOW CURE APPLICATIONS.
            5. STEEL ANCHOR ELEMENT SHALL BE HILTI HIS-N INTERNALLY THREADED INSERTS, HILTI HAS-E CONTINUOUSLY THREADED ROD, OR CONTINUOUSLY DEFORMED STEEL REBAR.
        2. MEDIUM DUTY MECHANICAL ANCHORS FOR CONCRETE USE:
            1. HILTI KWIK HUS EZ AND KWIK HUS EZ-I SCREW ANCHORS.
            2. HILTI KWIK BOLT-TZ EXPANSION ANCHORS.
            3. HILTI KWIK BOLT 3 EXPANSION ANCHORS.
        3. HEAVY DUTY MECHANICAL ANCHORS FOR CONCRETE USE:
            1. HILTI HDA UNDERCUT ANCHORS.
            2. HILTI HSL-3 EXPANSION ANCHORS.
    2. REBAR DOWELING INTO CONCRETE
        1. ADHESIVE ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
            1. HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT SYSTEM WITH CONTINUOUSLY DEFORMED REBAR.
            2. HILTI HIT-RE 500-SD EPOXY ADHESIVE ANCHORING SYSTEM WITH CONTINUOUSLY DEFORMED REBAR.
            3. HILTI HIT-RE 500 EPOXY ADHESIVE ANCHORING SYSTEM WITH CONTINUOUSLY DEFORMED REBAR.
    3. ANCHORAGE TO SOLID GROUTED MASONRY
        1. ADHESIVE ANCHORS USE:
            1. HILTI HIT-HY 270 MASONRY ADHESIVE ANCHORING SYSTEM.
            2. STEEL ANCHOR ELEMENT SHALL BE HILTI HAS-E CONTINUOUSLY THREADED ROD OR CONTINUOUSLY DEFORMED STEEL REBAR.
        2. MECHANICAL ANCHORS USE:
            1. HILTI KWIK HUS-EZ SCEW ANCHOR.
            2. HILTI KWIK BOLT-3 EXPANSION ANCHORS.
    4. ANCHORAGE TO HOLLOW / MULTI-WYTHE MASONRY
        1. ADHESIVE ANCHORS USE:
            1. HILTI HIT-HY 270 MASONRY ADHESIVE ANCHORING SYSTEM.
            2. STEEL ANCHOR ELEMENT SHALL BE HILTI HAS-E CONTINUOUSLY THREADED ROD OR CONTINUOUSLY DEFORMED STEEL REBAR.
            3. THE APPROPRIATE SIZE SCREEN TUBE SHALL BE USED PER ADHESIVE MANUFACTURER'S RECOMMENDATION.
2. ANCHOR CAPACITY USED IN DESIGN HAS BEEN BASED ON THE TECHNICAL DATA PUBLISHED BY HILTI. SUBSTITUTION REQUESTS FOR ALTERNATE ANCHORS MUST BE APPROVED IN WRITING BY THE CONSULTANT PRIOR TO USE. CONTRACTOR SHALL PROVIDE CALCULATIONS DEMONSTRATING THAT THE ALTERNATIVE ANCHOR IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES OF THE SPECIFIED PRODUCT. SUBSTITUTIONS WILL BE EVALUATED FOR COMPLIANCE WITH THE RELEVANT BUILDING CODE. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE TEMPERATURE AND INSTALLATION TEMPERATURE.
3. INSTALL ANCHORS PER THE MANUFACTURER WRITTEN INSTRUCTIONS.
4. OVERHEAD ADHESIVE ANCHORS MUST BE INSTALLED USING THE HILTI PROFI SYSTEM.
5. THE CONTRACTOR SHALL ARRANGE AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED. THE CONSULTANT MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS ARE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS.
6. ANCHOR CAPACITY IS DEPENDANT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN STRICT ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.
7. EXISTING REINFORCEMENT IN THE CONCRETE STRUCTURE MAY CONFLICT WITH SPECIFIC ANCHOR LOCATIONS. UNLESS NOTED ON THE DRAWINGS THAT THE BARS CAN BE CUT, THE CONTRACTOR SHALL REVIEW THE EXISTING STRUCTURAL DRAWINGS AND SHALL UNDERTAKE TO LOCATE THE POSITION OF THE EXISTING REINFORCEMENT AT THE LOCATIONS OF THE CONCRETE ANCHORS, BY HILTI FERROSCAN, HILTI PS 1000, GPR, X-RAY, CHIPPING OR OTHER MEANS.

13. ALTERATIONS AND/OR CONNECTIONS TO EXISTING STRUCTURE

1. PROPOSED SCHEDULE OF WORK TO BE COORDINATED WITH ALL SUBTRADES, THE CONSULTANT AND OWNER.
2. PROPOSED SEQUENCE OF WORK TO BE SUBMITTED TO THE CONSULTANT FOR REVIEW PRIOR TO START OF WORK.
3. INSPECT THE EXISTING BUILDING AND BECOME THOROUGHLY FAMILIAR WITH THE EXISTING CONDITIONS.
4. PRIOR TO PROCEEDING WITH THE WORK, DETERMINE THE EXACT FOUNDING ELEVATIONS OF EXISTING FOOTINGS ADJACENT TO THE NEW WORK. REPORT THESE FINDINGS TO THE CONSULTANT.
5. PRIOR TO FABRICATION OF STRUCTURAL STEEL, OPEN UP ALL AREAS WHERE CONNECTIONS ARE TO BE MADE TO EXISTING WORK AND TAKE FIELD MEASUREMENTS. MODIFY METHODS FOR CONNECTING TO SUIT SITE CONDITIONS FOUND AND TO THE APPROVAL OF THE CONSULTANT. CARRY OUT LOCAL REPAIRS TO THE EXISTING WORK AS NECESSARY AND AS DIRECTED BY THE CONSULTANT.
6. SHORE EXISTING WORK AS REQUIRED UNTIL ALL NEW WORK HAS BEEN COMPLETED AND REVIEWED BY THE CONSULTANT.
7. PROVIDE SLOTTED HOLES AND FRICTION TYPE BOLTED CONNECTIONS TO CONNECT NEW STEEL TO EXISTING WORK.
8. SHORE FLOORS AS REQUIRED TO SUPPORT CRANES, HOISTS AND OTHER CONSTRUCTION EQUIPMENT.
9. DO NOT CUT CONCRETE REINFORCEMENT UNLESS REVIEWED AND APPROVED BY THE CONSULTANT.
10. WHERE REQUIRED TO AVOID CUTTING EXISTING REINFORCEMENT, MODIFY THE LAYOUT OF NEW THROUGH BOLTS, EXPANSION ANCHORS AND OTHER ANCHORING DEVICES.
11. MAKE GOOD THE EXISTING WORK.

14. CUTTING AND CORING OF EXISTING STRUCTURE

1. PRIOR TO CUTTING AND CORING ANY OPENINGS IN THE EXISTING BUILDING, PROVIDE THE CONSULTANT WITH A SLEEVING DRAWING INDICATING THE SIZE AND LOCATION OF OPENING RELATIVE TO BUILDING GRID LINES. EXISTING OPENINGS IN THE VICINITY OF THE NEW OPENING MUST ALSO BE SHOWN.
2. ALL DIMENSIONS PROVIDED TO THE CONSULTANT ARE TO BE CONFIRMED WITH THE APPROPRIATE CONTRACTOR (MECHANICAL OR ELECTRICAL) PRIOR TO CUTTING/CORING.
3. ANY REVISIONS TO THE DIMENSIONS BY THE CONSULTANT MUST BE REVIEWED BY THE APPROPRIATE CONTRACTOR PRIOR TO CUTTING/CORING.
4. EXISTING REINFORCEMENT AND EMBEDDED SERVICES MUST BE LOCATED PRIOR TO CUTTING/CORING. THIS REINFORCEMENT IS TO BE LOCATED BY A POSITIVE MEANS, (I.E. X-RAYING, LOCAL CHIPPING OF SLAB- WHERE PERMITTED BY THE CONSULTANT-, USE OF COVER METER). EXISTING REINFORCEMENT SURVEYS TO BE SUBMITTED TO THE CONSULTANT PRIOR TO PREPARING STEEL SHOP DRAWINGS.
5. AFTER REINFORCEMENT AND EMBEDDED SERVICES HAS BEEN LOCATED IN THESE AREAS, NOTIFY CONSULTANT WHO WILL REVIEW AND APPROVE LOCATION PRIOR TO CUTTING/CORING. MAKE ANY NECESSARY ADJUSTMENTS TO THE HOLE LOCATION AS DIRECTED BY THE CONSULTANT.
6. FOR ANY OPENINGS WHICH ARE TO BE SAWCUT INTO THE EXISTING STRUCTURE, PRE-DRILL THE CORNERS USING A 100 mm DIAMETER CORE DRILL. DO NOT OVERCUT CORNERS OF OPENING.
7. ALL PRICES FOR CUTTING/CORING ARE TO INCLUDE ANY COSTS ASSOCIATED WITH X-RAYING, CHIPPING, ETC.
8. FOR ANY AREAS WHERE REINFORCEMENT IS CUT, THE CONTRACTOR IS TO INDICATE THE DIRECTION AND LAYER OF REINFORCEMENT ON THE AS-BUILT SLEEVING DRAWINGS.
9. FOR LARGE OPENINGS THROUGH A FLOOR AREA, ADDITIONAL REINFORCEMENT OF THE SLAB MAY BE REQUIRED. THE CONSULTANT WILL ISSUE ADDITIONAL DETAILS AS REQUIRED.

G. QUALITY CONTROL

1. GENERAL
    1. IMPLEMENT A SYSTEM OF QUALITY CONTROL TO ENSURE THAT THE MINIMUM STANDARDS SPECIFIED HEREIN ARE ATTAINED.
    2. BRING TO THE ATTENTION OF THE CONSULTANT ANY DEFECTS IN THE WORK OR DEPARTURES FROM THE CONTRACT DOCUMENTS, WHICH MAY OCCUR DURING CONSTRUCTION. THE CONSULTANT WILL DECIDE UPON CORRECTIVE ACTION AND GIVE RECOMMENDATIONS IN WRITING.
    3. THE CONSULTANT'S GENERAL REVIEW DURING CONSTRUCTION AND INSPECTION AND TESTING BY INDEPENDENT INSPECTION AND TESTING AGENCIES REPORTING TO THE CONSULTANT ARE BOTH UNDERTAKEN TO INFORM THE OWNER/CLIENT OF THE CONTRACTOR'S PERFORMANCE AND SHALL IN NO WAY AUGMENT THE CONTRACTOR'S QUALITY CONTROL OR RELIEVE THE CONTRACTOR OF CONTRACTUAL RESPONSIBILITY.
2. NOTIFICATION
    1. PRIOR TO COMMENCING SIGNIFICANT SEGMENTS OF THE WORK, GIVE THE CONSULTANT AND INDEPENDENT INSPECTION AND TESTING COMPANIES APPROPRIATE NOTIFICATION (MINIMUM 24 HOURS) SO AS TO AFFORD THEM REASONABLE OPPORTUNITY TO REVIEW THE WORK. FAILURE TO MEET THIS REQUIREMENT MAY BE CAUSE FOR THE CONSULTANT TO CLASSIFY THE WORK AS DEFECTIVE.
3. INSPECTION AND TESTING
    1. THE OWNER WILL APPOINT AN INDEPENDENT INSPECTION AND TESTING COMPANY TO MAKE INSPECTIONS OR PERFORM TESTS AS THE OWNER DIRECTS. THE INDEPENDENT INSPECTION AND TESTING COMPANIES SHALL BE RESPONSIBLE ONLY TO THE OWNER AND SHALL MAKE ONLY SUCH INSPECTIONS OR TESTS AS THE OWNER MAY DIRECT. AUTHORIZED INSPECTION AND TESTING SHALL BE PAID FOR BY THE OWNER.
4. DEFECTIVE MATERIALS AND WORK
    1. WHERE EVIDENCE EXISTS THAT DEFECTIVE WORK HAS OCCURRED OR THAT WORK HAS BEEN CARRIED OUT INCORPORATING DEFECTIVE MATERIALS, THE CONSULTANT MAY HAVE TESTS, INSPECTIONS OR SURVEYS PERFORMED, ANALYTICAL CALCULATIONS OF STRUCTURAL STRENGTH MADE, AND THE LIKE, IN ORDER TO HELP DETERMINE WHETHER THE WORK MUST BE CORRECTED OR REPLACED. TESTS, INSPECTIONS, SURVEYS, OR CALCULATIONS CARRIED OUT UNDER THESE CIRCUMSTANCES WILL BE MADE AT THE CONTRACTOR'S EXPENSE, REGARDLESS OF THEIR RESULTS, WHICH MAY BE SUCH THAT, IN THE CONSULTANT'S OPINION, THE WORK MAY BE ACCEPTABLE.
    2. ALL TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE BUILDING CODE, EXCEPT WHERE THIS WOULD, IN THE CONSULTANT'S OPINION, CAUSE UNDUE DELAY OR GIVE RESULTS NOT REPRESENTATIVE OF THE REJECTED MATERIAL IN PLACE. IN THIS CASE, THE TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH THE STANDARDS GIVEN BY THE CONSULTANT.
    3. MATERIALS OR WORK, WHICH FAIL TO MEET SPECIFIED REQUIREMENTS, MAY BE REJECTED BY THE CONSULTANT WHENEVER FOUND AT ANY TIME PRIOR TO FINAL ACCEPTANCE OF THE WORK REGARDLESS OF PREVIOUS INSPECTION. IF REJECTED, DEFECTIVE MATERIALS OR WORKMANSHIP SHALL BE PROMPTLY REMOVED AND REPLACED OR REPAIRED TO THE SATISFACTION OF THE CONSULTANT, AT NO EXPENSE TO THE OWNER.

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#	DATE:	REVISION:	BY:
6	2026-05-29	ISSUED FOR TENDER	
5	2026-01-09	ISSUED FOR 100% CD	
4	2025-12-05	ISSUED FOR BUILDING PERMIT	
3	2025-09-26	ISSUED FOR 80% CD	
2	2025-08-22	ISSUED FOR 50% CONSTRUCTION DOCUMENTS	
1	2025-05-30	ISSUED FOR 100% DESIGN DEVELOPMENT	

REVISIONS

UNIVERSITY OF TORONTO DENTISTRY BUILDING -CLINIC 2 RENOVATION

EN021-01853

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TORONTO, ON, M5G 1G6

GENERAL NOTES

SCALE:	1 : 1
DRAWN BY:	CH
REVIEWED BY:	DF
JOB NUMBER:	EN021-01853
PLOT DATE:	2026-05-29

DRAWING NUMBER:
S0002

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A, ABV	ABOVE	JT	JOINT
A. ROD	ANCHOR ROD		
AEC	ARCH EXPOSED CONCRETE	Ed	DEVELOPMENT LENGTH
AESS	ARCH EXPOSED STRUCTURAL STEEL		OF REINFORCEMENT
AHU	AIR HANDLING UNIT	LG	LONG
ALT	ALTERNATE	LL	LOWER LAYER
ARCH	ARCHITECTURAL	LLH	LONG LEG HORIZONTAL
ASL	ACCUMULATED SNOW LOAD	LLV	LONG LEG VERTICAL
		LO	LOWER OF TWO BEAMS
B, BOT	BOTTOM	LP	LOW POINT
BLL	BOTTOM LOWER LAYER	LSH	LONG SIDE HORIZONTAL
BM	BEAM	LSV	LONG SIDE VERTICAL
BML	BOTTOM MIDDLE LAYER		
BOF	BOTTOM (FOUNDING	MAX	MAXIMUM
	ELEVATION) OF FOOTING, m	MC	MOMENT CONNECTION
BPL	BASE (BEARING) PLATE	MECH	MECHANICAL
BUL	BOTTOM UPPER LAYER	MEZZ	MEZZANINE
		MIN	MINIMUM
C	EPOXY COATED	MJ	MOVEMENT JOINT
C/C	CENTRE TO CENTRE	ML	MIDDLE LAYER
C/W	CONNECT WITH	MOM	MOMENT
CA, CB	COLUMN ABOVE, BELOW		
CANT	CANTILEVER	N-S	NORTH-SOUTH
CJ	CONSTRUCTION JOINT	NIC	NOT IN CONTRACT
CLR	CLEAR	NF	NEAR FACE
CLS	COMPRESSION LAP SPLICE	No.	NUMBER
COL	COLUMN	NTS	NOT TO SCALE
CONC	CONCRETE		
CONT	CONTINUOUS	OF	OUTSIDE FACE
COS	CONFIRM ON SITE	OPEN	OPENING
CP	CAST-IN PLATE	OWSJ	OPEN WEB STEEL JOIST
CSS	CHANGE IN SPANNING SYSTEM		
		PA, PB	POST ABOVE, BELOW
DB	DIVIDER BEAM	PC	PRECAST
DET	DETAIL	PL	PLATE
DIA, Ø	DIAMETER	PROJ	PROJECTION
DIAG	DIAGONAL		
DIM	DIMENSION	R	RADIUS
DWG(S)	DRAWING(S)	R/W	REINFORCE WITH
DWL(S)	DOWEL(S)	RD	ROOF DRAIN
		REF	REFERENCE
E-W	EAST-WEST	REINF	REINFORCE, REINFORCEMENT
EA	EACH	REQ'D	REQUIRED
EE	EACH END	REV	REVISION, REVISED
EF	EACH FACE	RTU	ROOFTOP UNIT
EJ, EXP JT	EXPANSION JOINT		
EL	ELEVATION, m	SA	SHELF ANGLE
ELECT	ELECTRICAL	SDF	STEP DOWN FOOTING
ELEV	ELEVATOR	SL	SLAB
EQ	EQUAL	SOG	SLAB-ON-GRADE
ES	EACH SIDE	SPEC'S	SPECIFICATIONS
EW	EACH WAY	SQ	SQUARE
EX, EXIST	EXISTING	STD	STANDARD
EXT	EXTERIOR	STRUCT	STRUCTURAL
		SW	SELF WEIGHT
f'c	CONCRETE COMPRESSIVE STRENGTH	t, THK	THICKNESS
FDN	FOUNDATION	T	TOP
FF	FAR FACE	TD	TYPICAL DETAIL
FIN	FINISHED	TEMP	TEMPERATURE
FL	FLOOR	TJ	TIE JOIST
FMC	FULL MOMENT CONNECTION	TLL	TOP LOWER LAYER
FTG	FOOTING	TLS	TENSION LAP SPLICE
fy	YIELD STRENGTH FOR STEEL REINFORCEMENT	TML	TOP MIDDLE LAYER
		TOW	TOP OF WALL
Fy	YIELD STRENGTH FOR STRUCTURAL STEEL	TUL	TOP UPPER LAYER
		TYP	TYPICAL
GA	GAUGE	U/N, UNO	UNLESS NOTED OTHERWISE
GALV	GALVANIZED		
		U/S	UNDERSIDE
H, HORIZ	HORIZONTAL	UL	UPPER LAYER
HA, HB	HANGER ABOVE, BELOW		
HEF	HORIZONTAL EACH FACE	V, VERT	VERTICAL
HH	HOOKED EACH END	VBR	VERTICAL BRACING
HI	HIGHER OF TWO BEAMS	VEF	VERTICAL EACH FACE
HP	HIGH POINT	VSC	VERTICALLY SLOTTED CONNECTION
HSC	HORIZONTALLY SLOTTED CONNECTION		
		W/	WITH
IF	INSIDE FACE	WP	WORK POINT
INT	INTERIOR	WPA, WPB	WIND POST ABOVE, BELOW
IR	INTEGRITY REINFORCEMENT	WPL	WALL PLATE
		WWF	WELDED WIRE FABRIC

FORCES

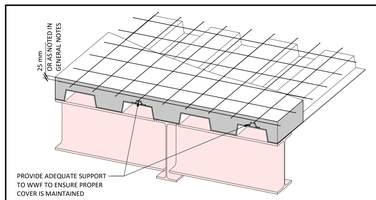
BR	FACTORED BEARING FORCE, kN
DL	DEAD LOAD
H	FACTORED END SHEAR FORCE ALONG X-X AXIS (Vx), kN
LL	LIVE LOAD
M, Mx	FACTORED BENDING MOMENT ABOUT X-X AXIS, kN·m
My	FACTORED BENDING MOMENT ABOUT Y-Y AXIS, kN·m
P+	FACTORED TENSION AXIAL FORCE, kN
P-	FACTORED COMPRESSION AXIAL FORCE, kN
Pf±	FACTORED TENSION / COMPRESSION (REVERSIBLE) FORCE, kN
PTF	FACTORED PASS THROUGH FORCE, kN
TM	FACTORED TORSIONAL MOMENT, kN·m
V	FACTORED END SHEAR FORCE ALONG Y-Y AXIS (Vy), kN
WD	UNFACTORED UNIFORMLY DISTRIBUTED DEAD LOAD ON STEEL DECK, PRECAST OR OWSJ's
WL	UNFACTORED UNIFORMLY DISTRIBUTED LIVE LOAD ON STEEL DECK, PRECAST OR OWSJ's

UNITS

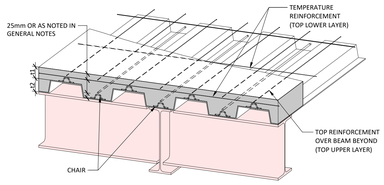
kg	KILOGRAM
m	METRE
Pa	PASCAL
kPa	KILOPASCAL
kN/m²	KILONEWTON PER SQUARE METRE (KILOPASCAL)
MPa	MEGAPASCAL
N	NEWTON
kN	KILONEWTON
kN·m	KILONEWTON METRE
kN/m	KILONEWTON PER METRE

@	AT	200 SLAB 200 SOG	SLAB CHANGE LOCATION
℄	CENTRE LINE		
L	SINGLE ANGLE	CSS CSS	CHANGE IN SPAN SYSTEM
⅃L	DOUBLE ANGLE		
±XX	BEAM ELEVATION FROM PLAN DATUM	BH-123 HW-123	BOREHOLE/MONITORING WELL
Δ	INDICATES VARIABLE CHANGE		
±	1. INDICATES BOTH POSITIVE AND NEGATIVE VALUE 2. INDICATES APPLICABLE TOLERANCE 3. INDICATES APPROXIMATED VALUE		CONTINUOUS REINFORCING BAR
≈	APPROXIMATELY EQUAL TO		CONNECTION PLATE
▼	VERTICAL CONTROL JOINT IN MASONRY/CONCRETE WALLS		MOMENT CONNECTION
			MOMENT CONNECTION AT CONNECTION PLATE
	WORK POINT		STEEL BEAM SPLICE. (SYMBOL IS NOT INDICATIVE OF SPLICE COMPOSITION)
			BEAM TO BEAM CONNECTION, EG. GERBER SYSTEM. (SYMBOL IS NOT INDICATIVE OF CONNECTION COMPOSITION)

G1 ABBREVIATIONS AND SYMBOLS



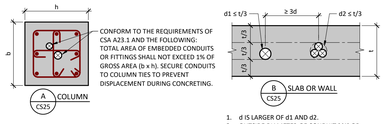
PLACEMENT OF WELDED WIRE FABRIC



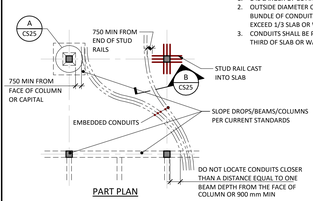
PLACEMENT OF REINFORCEMENT

NOTE(S):
1. REFER TO PLAN FOR SLAB REINFORCEMENT OR TYPICAL DETAIL CS7 WHERE NO REINFORCEMENT IS NOTED ON PLAN.
2. WHERE REINFORCEMENT IS SPECIFIED IN ONE DIRECTION ONLY, REFER TO TYPICAL DETAIL CS7 FOR TEMPERATURE REINFORCEMENT. EQUIVALENT SLAB THICKNESS FOR DETERMINING TEMPERATURE REINFORCEMENT IS THE THICKNESS OF THE COVER SLAB PLUS ONE HALF THE DEPTH OF THE STEEL DECK.
3. WHERE SPACING OF BOTTOM BARS IS NOT CONSISTENT WITH STEEL DECK FLUTE SPACING, REVISE BAR SIZE/SPACING TO ENSURE AREA OF REINFORCEMENT PER FOOT WIDTH IS EQUAL TO OR GREATER THAN THAT SPECIFIED.

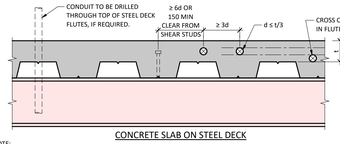
CS8 PLACEMENT OF REINFORCEMENT IN SLABS ON STEEL DECK



1. d IS LARGER OF d1 AND d2.
2. OUTSIDE DIAMETER OF CONDUIT (d1) OR BUNDLE OF CONDUITS (d2) SHALL NOT EXCEED 1/3 SLAB OR WALL THICKNESS.
3. CONDUITS SHALL BE PLACED IN MIDDLE THIRD OF SLAB OR WALL.



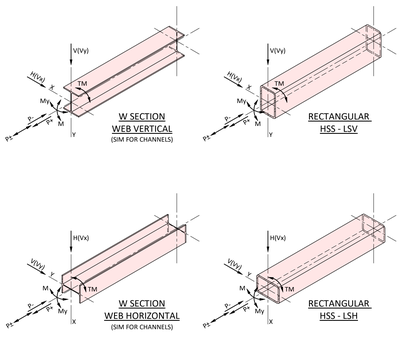
PART PLAN



CONCRETE SLAB ON STEEL DECK

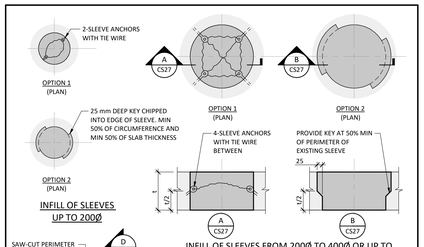
NOTE:
1. DO NOT BUNDLE CONDUITS IN CONCRETE SLABS ON STEEL DECK.

CS25 EMBEDDED CONDUITS



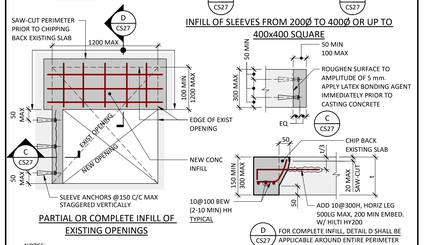
NOTE(S):
1. THE CONDITION FOR WIDE FLANGE BEAMS IS THE SAME FOR CHANNELS.

G3 STEEL MEMBER FORCE NOTATIONS AND DIRECTIONS



INFILL OF SLEEVES UP TO 200Ø

INFILL OF SLEEVES FROM 200Ø TO 400Ø OR UP TO 400x400 SQUARE



PARTIAL OR COMPLETE INFILL OF EXISTING OPENINGS

NOTES:
1. SLEEVE ANCHORS: 8 mmØ TIE WIRE ANCHORS BY PHILLIPS RED HEAD (TW-1614) OR EQUIVALENT APPROVED BY THE CONSULTANT.
2. TIE WIRE: 1.5 mmØ TIE WIRE, MUST BE SECURELY FASTENED TO THE SLEEVE ANCHORS.

CS27 INFILL OF EXISTING SLEEVES AND SMALL OPENINGS IN CONCRETE SLABS

PRE-CAST CONCRETE LINTELS

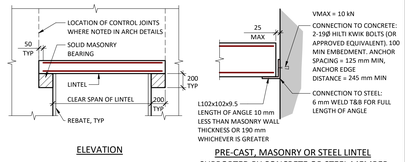
CLEAR SPAN	WALL THICKNESS										NOTES
	90		140		190		240		290		
	H	R/W	H	R/W	H	R/W	H	R/W	H	R/W	a. PROVIDE REINF LISTED BOTH TOP AND BOTTOM
UP TO 1200	190	1-10	190	2-10	190	2-10	190	2-10	190	2-10	VARIES H SECTION
> 1200 TO 1800	190	1-10	190	2-10	190	2-10	190	2-10	190	2-10	
> 1800 TO 2400	N/A	N/A	190	2-10	190	2-10	190	2-15	190	2-15	
> 2400 TO 3000	N/A	N/A	390	2-10	390	2-10	390	2-10	390	2-10	

MASONRY LINTELS

CLEAR SPAN	TOP AND BOTTOM REINFORCEMENT										NOTES
	90		140		190		240		290		
	H	R/W	H	R/W	H	R/W	H	R/W	H	R/W	i. PROVIDE REINF LISTED BOTH TOP AND BOTTOM. ii. PROVIDE LINTEL BLOCK (2-190 H OR 1-390 H). iii. GROUT IS TO BE CONTINUOUS ALONG SPAN OF LINTEL
UP TO 1200	N/A	N/A	390	1-10	390	1-10	390	1-10	390	1-15	H SECTION
> 1200 TO 1800	N/A	N/A	390	1-10	390	1-10	390	1-10	390	1-15	
> 1800 TO 2400	N/A	N/A	390	1-10	390	1-10	390	1-10	N/A	N/A	
> 2400 TO 3000	N/A	N/A	390	1-10	390	1-15	390	1-15	N/A	N/A	

STEEL LINTELS

CLEAR SPAN	WALL THICKNESS					NOTES
	90 VENEER	140	190	240	290	
UP TO 1200	L102x76x6.4	2 L64x64x6.4	2 L89x76x6.4	L102x76x6.4 & L127x76x6.4	3 L89x76x6.4	SAWCUT WEB OF BLOCK, AS NECESSARY 25 102 90 VENEER LINTEL
> 1200 TO 1800	L102x76x6.4	2 L64x64x6.4	2 L89x89x6.4	L102x76x6.4 & L127x76x6.4	3 L89x89x6.4	
> 1800 TO 2400	L102x102x6.4	2 L89x64x6.4	2 L89x89x6.4	L102x102x7.9 & L127x76x7.9	3 L89x89x6.4	
> 2400 TO 3000	L152x102x7.9	N/A	2 L127x89x6.4	L102x102x7.9 & L127x127x7.9	3 L127x89x6.4	
DETAIL	102 LEGS HORIZ	64 LEGS HORIZ	89 LEGS HORIZ	102 & 127 LEGS HORIZ	89 LEGS HORIZ	

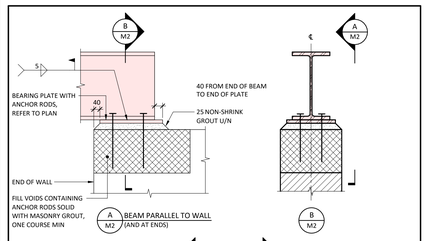


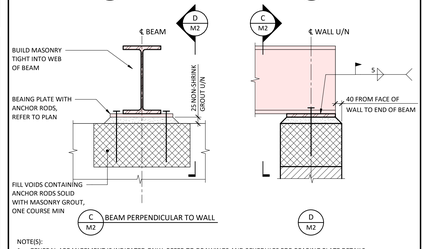
ELEVATION

PRE-CAST, MASONRY OR STEEL LINTEL SUPPORTED BY CONCRETE OR STEEL MEMBER

NOTES:
1. REFER TO ARCHITECTURAL DRAWINGS FOR THICKNESS AND EXTENT OF NON-LOAD BEARING MASONRY WALLS.
2. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION AND TYPE OF LINTELS REQUIRED.
3. INCLUDE REBATES ADJACENT TO OPENING WHEN DETERMINING CLEAR SPAN OF LINTELS.
4. BOLT DOUBLE ANGLES BACK-TO-BACK USING 16Ø BOLTS @450 C/C OR PROVIDE 6x50 LONG WELDS @450 C/C TOP AND BOTTOM. DISTANCE FROM END OF LINTEL TO FIRST BOLT OR WELD SHOULD NOT EXCEED 100 mm.
5. 90 VENEER MUST BE SOLID BRICK OR BLOCK FOR SINGLE ANGLE LINTEL.
6. INTERIOR PRECAST CONCRETE LINTELS TO HAVE MINIMUM f'c OF 25 MPa, EXTERIOR PRECAST CONCRETE LINTELS TO HAVE A MINIMUM f'c OF 30 MPa WITH EXPOSURE CLASS F-1.

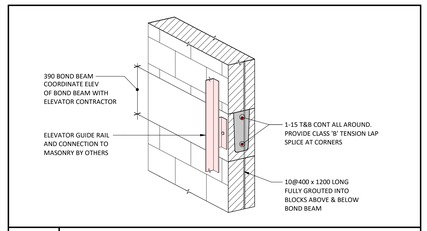
M1 LINTELS FOR NON-LOAD BEARING MASONRY WALLS



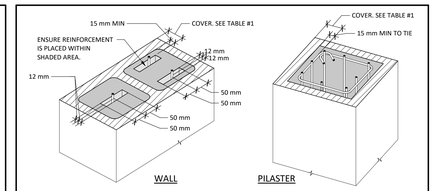


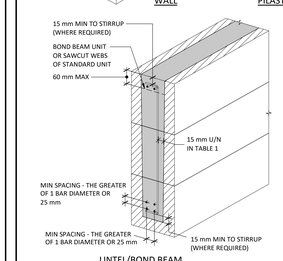
NOTE(S):
1. GENERAL ARRANGEMENT IS INDICATED ONLY, REFER TO DRAWINGS AND SCHEDULES FOR BEARING PLATE DETAILS

M2 BEAM BEARING ON MASONRY WALL



M5 ELEVATOR GUIDE RAIL CONNECTION TO MASONRY WALL



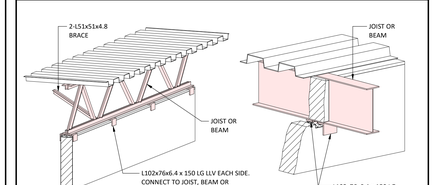


LINTEL/BOND BEAM

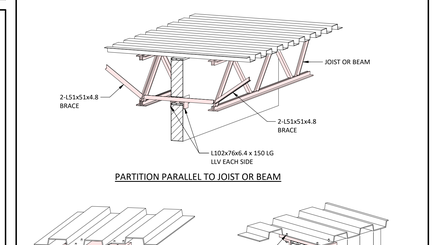
TABLE 1: COVER	
EXPOSURE	COVER
MASONRY EXPOSED TO WEATHER	50 mm
MASONRY IN CONTACT WITH SOIL	75 mm

NOTE:
1. REINFORCEMENT TO BE SUPPORTED TO PREVENT DISPLACEMENT DURING PLACEMENT OF MASONRY GROUT. AS A MINIMUM PROVIDE WIRE POSITIONERS OR SIMILAR DEVICES AT THE TOP AND BOTTOM, ENDS AND AT INTERVALS NOT EXCEEDING 200 BAR DIAMETERS.

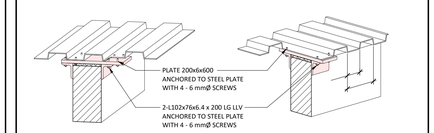
M6 REINFORCEMENT PLACEMENT IN MASONRY ELEMENTS



PARTITION PARALLEL TO JOIST OR BEAM PARTITION PERPENDICULAR TO JOIST OR BEAM



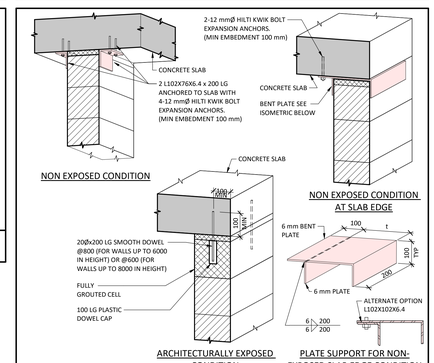
PARTITION PARALLEL TO JOIST OR BEAM



PARTITION PARALLEL TO STEEL DECK PARTITION PERPENDICULAR TO STEEL DECK

NOTES:
1. PROVIDE 25 mm MIN COMPRESSIBLE MATERIAL BETWEEN TOP OF MASONRY PARTITION AND UNDERSIDE OF STRUCTURE. TYPICAL UNLESS NOTED OTHERWISE.
2. UNREINFORCED MASONRY WALL (SEISMIC CATEGORIES SC1 AND SC2):
   A. PROVIDE LATERAL SUPPORTS FOR ALL MASONRY WALLS WHEN SPACING BETWEEN RETURN WALLS EXCEEDS 20t FOR EXTERIOR WALLS AND 36t FOR INTERIOR WALLS. (t = THICKNESS OF MASONRY WALL REQUIRING LATERAL SUPPORT).
   B. MINIMUM LENGTH OF RETURN WALL IS 10t. IF RETURN WALL IS SHORTER THAN 10t, PROVIDE LATERAL SUPPORT PER DETAILS SHOWN ABOVE.
   C. MAXIMUM SPACING OF LATERAL SUPPORTS IS 1500 C/C.
   D. SPACING OF BRACES NOT TO EXCEED 1500 C/C FOR EXTERNAL WALL AND 3000 C/C FOR INTERNAL PARTITIONS.
   E. MAXIMUM DISTANCE FROM END OF ANY WALL TO THE CENTRELINE OF THE FIRST LATERAL SUPPORT IS 600 mm.
3. REINFORCED MASONRY WALL (SEISMIC CATEGORIES SC3 AND SC4):
   A. PROVIDE LATERAL SUPPORT FOR ALL MASONRY WALLS.
   B. SPACING AND LOCATION OF LATERAL SUPPORTS TO MATCH VERTICAL REINFORCEMENT IN THE WALL.

M7 LATERAL SUPPORT AT TOP OF MASONRY PARTITIONS (STEEL CONSTRUCTION)



ARCHITECTURALLY EXPOSED CONDITION PLATE SUPPORT FOR NON-EXPOSED SLAB EDGE CONDITION

NOTE(S):
1. PROVIDE 25 mm MIN NON COMBUSTIBLE COMPRESSIBLE MATERIAL BETWEEN TOP OF MASONRY PARTITION AND UNDERSIDE OF STRUCTURE. TYPICAL UNLESS NOTED OTHERWISE.
2. FOR AN UNREINFORCED MASONRY WALL (SEISMIC CATEGORIES SC1 AND SC2):
   A. PROVIDE LATERAL SUPPORTS FOR ALL MASONRY WALLS WHEN SPACING BETWEEN RETURN WALLS EXCEEDS 20t FOR EXTERIOR WALLS AND 36t FOR INTERIOR WALLS. (t = THICKNESS OF MASONRY WALL REQUIRING LATERAL SUPPORT).
   B. MINIMUM LENGTH OF RETURN WALL IS 10t. IF RETURN WALL IS SHORTER THAN 10t, PROVIDE LATERAL SUPPORTS PER DETAILS SHOWN ABOVE.
   C. MAXIMUM SPACING OF LATERAL SUPPORTS IS 1500 mm C/C.
   D. MAXIMUM DISTANCE FROM END OF ANY WALL OR CONTROL JOINT TO THE CENTRELINE OF THE FIRST LATERAL SUPPORT IS 600 mm.
3. FOR A REINFORCED MASONRY WALL (SEISMIC CATEGORIES SC3 AND SC4):
   A. PROVIDE LATERAL SUPPORT FOR ALL MASONRY WALLS.
   B. SPACING & LOCATION OF LATERAL SUPPORTS TO MATCH SPACING AND LOCATION OF VERTICAL WALL REINFORCEMENT.

M8 LATERAL SUPPORT AT TOP OF MASONRY PARTITIONS (CONCRETE CONSTRUCTION)

TYPICAL DETAIL LIST

DETAIL No.	DETAIL TITLE	DRAWING No.
CONCRETE SLABS		
CS8	PLACEMENT OF REINFORCEMENT IN SLABS ON STEEL DECK	S0010
CS25	EMBEDDED CONDUITS	S0010
CS27	INFILL OF EXISTING SLEEVES AND OPENINGS	S0010
GENERAL		
G1	ABBREVIATIONS AND SYMBOLS	S0010
G3	STEEL MEMBER FORCE NOTATIONS AND DIRECTIONS	S0010
MASONRY		
M1	LINTELS FOR NON-LOAD BEARING MASONRY WALLS	S0010
M2	BEAM BEARING ON MASONRY WALL	S0010
M5	ELEVATOR GUIDE RAIL CONNECTION TO MASONRY WALL	S0010
M6	REINFORCEMENT PLACEMENT IN MASONRY ELEMENTS	S0010
M7	LATERAL SUPPORT AT TOP OF MASONRY PARTITIONS (STEEL CONSTRUCTION)	S0010
M8	LATERAL SUPPORT AT TOP OF MASONRY PARTITIONS (CONCRETE CONSTRUCTION)	S0010
PROJECT DETAILS		
PD1	STEEL LINTELS FOR EXISTING MASONRY WALLS	S0011
PD2	SAWCUT OF OPENING IN EXISTING SLAB OR WALL	S0011
PD3	SLAB-ON-GRADE TRENCH REPLACEMENT	S0011
PD4A	INFILL OF EXISTING SLAB OPENINGS - FORMED SLAB	S0011
PD4B	INFILL OF EXISTING SLAB OPENINGS - SLAB ON DECK	S0011
PD5	SOUTH BULKHEAD WALL SUPPORT	S0011
STRUCTURAL STEEL BEAMS		
SB1	STEEL FRAMING NOMENCLATURE	S0011
SB2	ERECTION TOLERANCES FOR STRUCTURAL STEEL BEAMS	S0011
SB6	HOIST BEAM DETAIL	S0011

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PROJECT NORTH TRUE NORTH

LICENSED PROFESSIONAL ENGINEER
D. FOX
100035535
2026-05-29
PROVINCE OF ONTARIO

#	DATE:	REVISION:	BY:
6	2026-05-29	ISSUED FOR TENDER	
5	2026-01-09	ISSUED FOR 100% CD	
4	2025-12-05	ISSUED FOR BUILDING PERMIT	
3	2025-09-26	ISSUED FOR 80% CD	
2	2025-08-22	ISSUED FOR 50% CONSTRUCTION DOCUMENTS	
1	2025-05-30	ISSUED FOR 100% DESIGN DEVELOPMENT	

REVISIONS

UNIVERSITY OF TORONTO DENTISTRY BUILDING -CLINIC 2 RENOVATION
EN021-01853

124 EDWARD STREET
TORONTO, ON, M5G 1G6

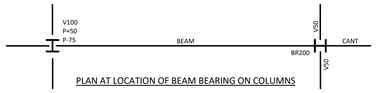
TYPICAL DETAILS

SCALE:	As indicated
DRAWN BY:	CH
REVIEWED BY:	DF
JOB NUMBER:	EN021-01853
PLOT DATE:	2026-05-29

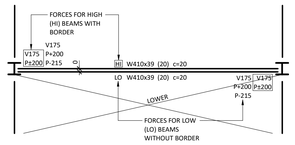
DRAWING NUMBER:
S0010

2026-05-28 1:17:58 PM Autodesk Docs://04082_UofT_DC-2_E04264882_UofT DC-2_ENT_MAIN_R24.rvt

TYPICAL PLAN



PLAN AT LOCATION OF BEAM BEARING ON COLUMNS



PLAN AT LOCATION OF ELEVATION CHANGE

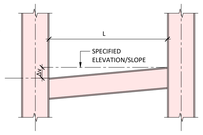
NOTES:
1. REFER TO TYPICAL DETAIL G1 FOR ABBREVIATIONS.
2. REFER TO TYPICAL DETAIL G3 FOR CONNECTION FORCE DIRECTION ANNOTATIONS.
3. REFER TO TYPICAL DETAIL DK3 FOR PLACEMENT OF STUD SHEAR CONNECTORS WHERE SPECIFIED.
4. REFER TO PLANS AND/OR ELEVATIONS FOR COMPLETE BEAM CONNECTION FORCES INFORMATION.

SB1 — STEEL FRAMING NOMENCLATURE

1. VERTICAL DEVIATION FROM SPECIFIED ELEVATION/SLOPE.

   FLOOR BEAMS: $\Delta v = \pm$ 10mm OR = L/500

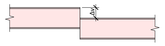
   MEMBERS WITH ADJUSTABLE CONNECTIONS: $\Delta v = \pm$ 6mm OR = L/1000



2. VERTICAL DEVIATION FROM SPECIFIED ELEVATION - ADJOINING MEMBERS.

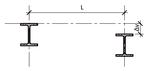
   FLOOR BEAMS: $\Delta v = \pm$ 6mm

   MEMBERS WITH ADJUSTABLE CONNECTIONS: $\Delta v = \pm$ 2mm



3. VERTICAL DEVIATION FROM ADJACENT BEAMS.

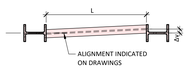
   FLOOR BEAMS: $\Delta v = L/1000$



4. HORIZONTAL DEVIATION FROM INDICATED POSITION.

   FLOOR BEAMS: $\Delta H = L/500 = \pm$ 12mm

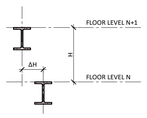
   SPANDREL BEAMS: $\Delta H = L/1000 = \pm$ 6mm



5. HORIZONTAL DEVIATION FROM ADJACENT BEAMS.

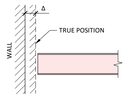
   FOR H < 3000mm: $\Delta H = \pm$ 5mm

   FOR H > 3000mm: $\Delta H = H/600$



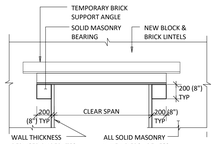
6. HORIZONTAL DEVIATION FROM SUPPORT POINT AT VERTICAL WALL.

   $\Delta = \pm$ 25mm

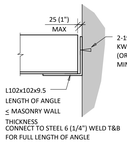


NOTES:
1. FOR ERECTION TOLERANCES OF SPECIAL MEMBERS SUCH AS CRANE GIRDERS, CRANE RAILS AND MONORAIL BEAMS, SEE THE APPROPRIATE CODE RECOMMENDATIONS.
2. DEVIATIONS SHOWN FOR W-SHAPES ALSO APPLY TO BUILT UP SECTIONS, HOLLOW STRUCTURAL SECTIONS, CHANNEL AND ANGLE SHAPES.
3. ERECTION TOLERANCES ARE TO BE MEASURED IN CALM WEATHER. RECORD AMBIENT TEMPERATURE AT TIME TOLERANCES ARE VERIFIED.

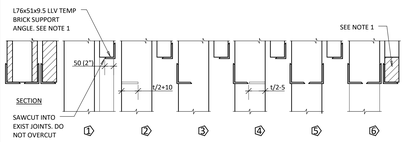
SB2 — ERECTION TOLERANCES FOR STRUCTURAL STEEL BEAMS



ELEVATION



LINTEL SUPPORTED BY CONCRETE OR STEEL MEMBER

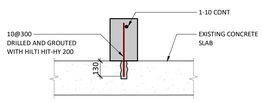


SEQUENCE OF INSTALLATION

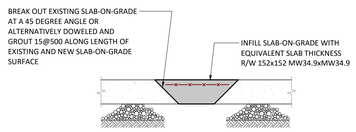
WALL THICKNESS	CLEAR SPAN				DETAIL
	UP TO 1200 UP TO (4'-0)	1200 TO 1800 (4'-0) TO (6'-0)	1800 TO 1200 (6'-0) TO (8'-0)	2400 TO 3000 (8'-0) TO (10'-0)	
90 (4")	1 L89x89x6.4	1 L102x89x7.9	1 L102x89x7.9	1 L102x89x9.5	LLV - LOOSE LINTEL FOR BRICK VENEER
140 (5 1/2")	2 L89x64x6.4	2 L89x64x7.9	2 L89x64x9.5	2 L89x64x13	LLV
190 (7 1/2")	2 L127x89x7.9	2 L127x89x9.5	2 L127x89x13	2 L127x89x13	LLV
240 (9 1/2")	1 L102x76x7.9 + 1 L127x76x7.9	1 L102x76x9.5 + 1 L127x76x9.5	1 L102x76x11 + 1 L127x76x11	1 L102x76x13 + 1 L127x76x13	102 & 127 LEGS HORZ
290 (11 1/2")	2 L127x127x7.9	2 L127x127x9.5	2 L127x127x11	2 L127x127x13	

NOTES:
1. INSTALL TEMP BRICK SUPPORT ANGLE AND REMOVE BRICK BELOW AS REQ'D TO ALLOW FOR INSTALLATION OF NEW LINTELS. INSTALLNEW LOOSE LINTEL AND INFILL BRICK COURSES PRIOR TO REMOVING TEMPORARY BRICK SUPPORT ANGLE.
2. PROVIDE STEEL PACKING PLATES TO ENSURE EVEN BEARING.
3. GALVANIZE LINTELS IN EXTERIOR WALLS OR EXPOSED TO WEATHER.
4. REFER TO ARCHITECTURAL DRAWINGS AND EXISTING BASE BUILDING DRAWINGS FOR EXTENT OF EXISTING NON-LOAD BEARING MASONRY WALLS. SITE CONFIRM ALL MASONRY THICKNESS.
5. REFER TO MECHANICAL AND ELECTRICAL DOCUMENTS FOR LOCATIONS OF NEW PENETRATIONS REQUIRING OPENINGS IN EXISTING MASONRY WALLS. REFER TO ARCHITECTURAL AND EXISTING BASE BUILDING DRAWINGS FOR WALL TYPES.

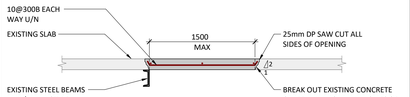
PD1 — STEEL LINTELS FOR EXISTING MASONRY WALLS



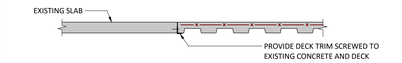
PD2 — CONCRETE CURB



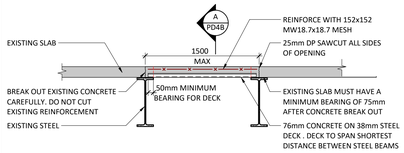
PD3 — SLAB-ON-GRADE TRENCH REPLACEMENT



PD4A — INFILL OF EXISTING SLAB OPENINGS - FORMED SLAB

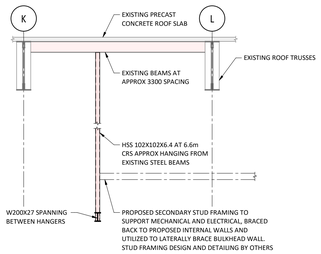


SECTION-A
SECTION PARALLEL TO SPAN



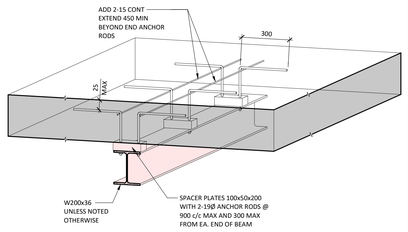
SECTION PERPENDICULAR TO SPAN

PD4B — INFILL OF EXISTING SLAB OPENINGS - SLAB ON DECK

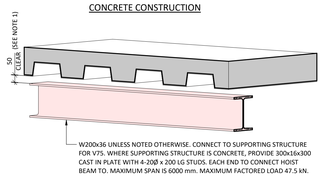


SECTION THROUGH PROPOSED BULKHEAD SUPPORT STEEL

PD5 — SOUTH BULKHEAD WALL SUPPORT



CONCRETE CONSTRUCTION



STEEL CONSTRUCTION

NOTES:
1. COORDINATE CLEARANCE REQUIRED WITH ELEVATOR CONTRACTOR.

SB6 — HOIST BEAM DETAIL

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1	2025-06-30	ISSUED FOR 100% DESIGN DEVELOPMENT	

REVISIONS

UNIVERSITY OF TORONTO DENTISTRY BUILDING -CLINIC 2 RENOVATION

EN021-01853

124 EDWARD STREET
TORONTO, ON, M5G 1G6

TYPICAL AND PROJECT DETAILS

SCALE:	As indicated
DRAWN BY:	CH
REVIEWED BY:	DF
JOB NUMBER:	EN021-01853
PLOT DATE:	2026-05-29

DRAWING NUMBER:
S0011

2026-05-28 1:17:58 PM Autodesk Docs://24492_UoT_DC2_EN024492_UoT DC2_ENT_MAIN_R24.rvt

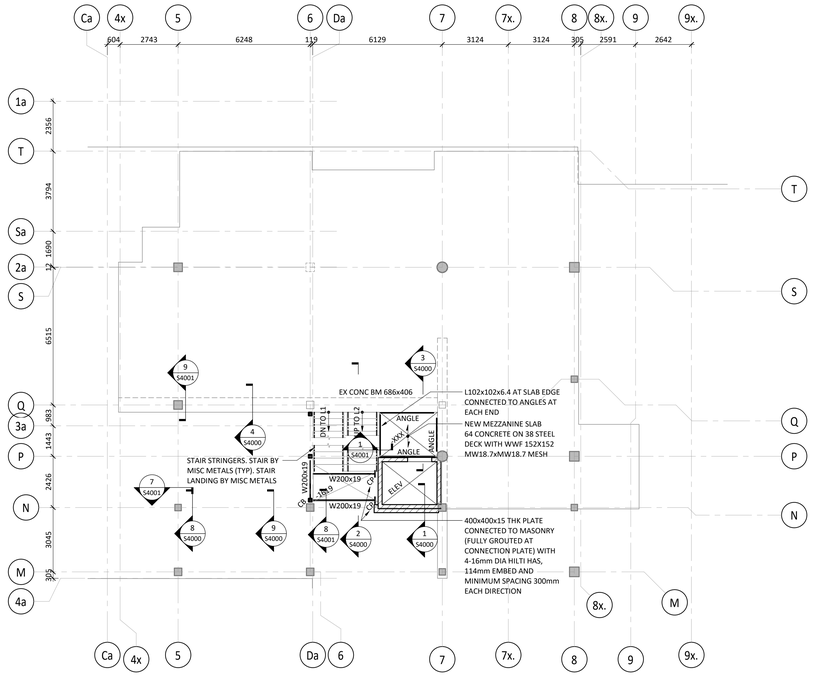
FRAMING PLAN - PATIENT LOBBY

1 : 100

1. PLAN DATUM (FINISHED FLOOR ELEVATION) IS AT GEODETIC ELEVATION **97.098m**.
2. TOP OF STRUCTURAL SLAB IS [± 0.00] FROM PLAN DATUM EXCEPT AS CROSSED AND NOTED.
3. ELEVATIONS FOR AREAS CROSSED AND NOTED ARE TO BE READ FROM THE PLAN DATUM.
4. TOPS OF STEEL BEAMS ARE AT UNDERSIDE OF STEEL DECK EXCEPT AS NOTED THUS (±XX) ELEVATIONS FOR TOPS OF NOTED STEEL BEAMS ARE TO BE READ FROM PLAN DATUM.
5. FLOOR LOADING

SUPERIMPOSED DEAD LOADS

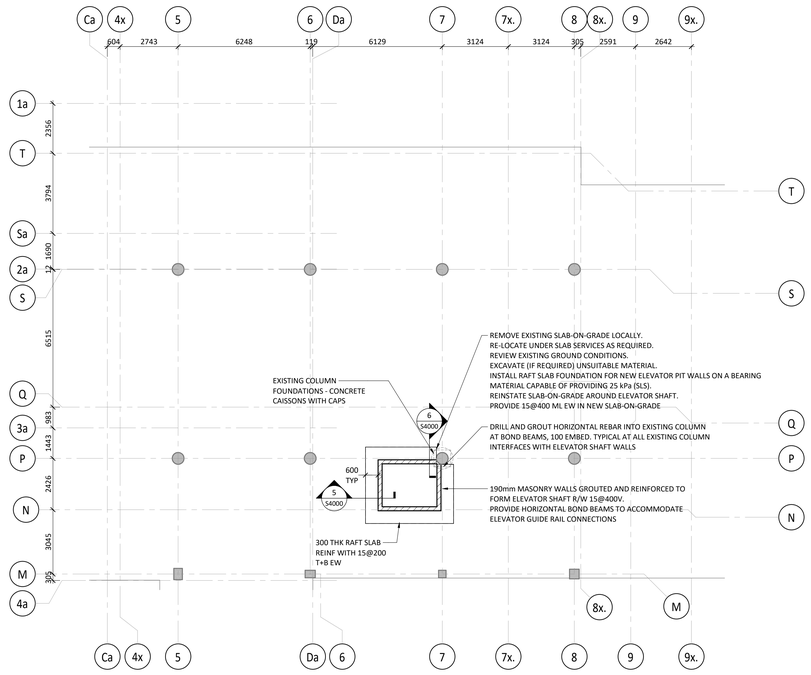
FLOOR FINISHES	1.2 kPa
CEILING AND SERVICES	0.5 kPa
LIVE LOAD	4.8kPa



FRAMING PLAN - PARKING GARAGE

1 : 100

1. PLAN DATUM (FINISHED FLOOR ELEVATION) IS AT GEODETIC ELEVATION **90.922m**.
2. TOP OF STRUCTURAL SLAB IS [± 0.00] FROM PLAN DATUM EXCEPT AS CROSSED AND NOTED.
3. ELEVATIONS FOR AREAS CROSSED AND NOTED ARE TO BE READ FROM THE PLAN DATUM.
4. TOPS OF STEEL BEAMS ARE AT UNDERSIDE OF STEEL DECK EXCEPT AS NOTED THUS (±XX) ELEVATIONS FOR TOPS OF NOTED STEEL BEAMS ARE TO BE READ FROM PLAN DATUM.



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EN021-01853

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FRAMING PLANS - PATIENT LOBBY AND PARKING GARAGE

SCALE:	1 : 100
DRAWN BY:	CH
REVIEWED BY:	DF
JOB NUMBER:	EN021-01853
PLOT DATE:	2026-05-29

DRAWING NUMBER:

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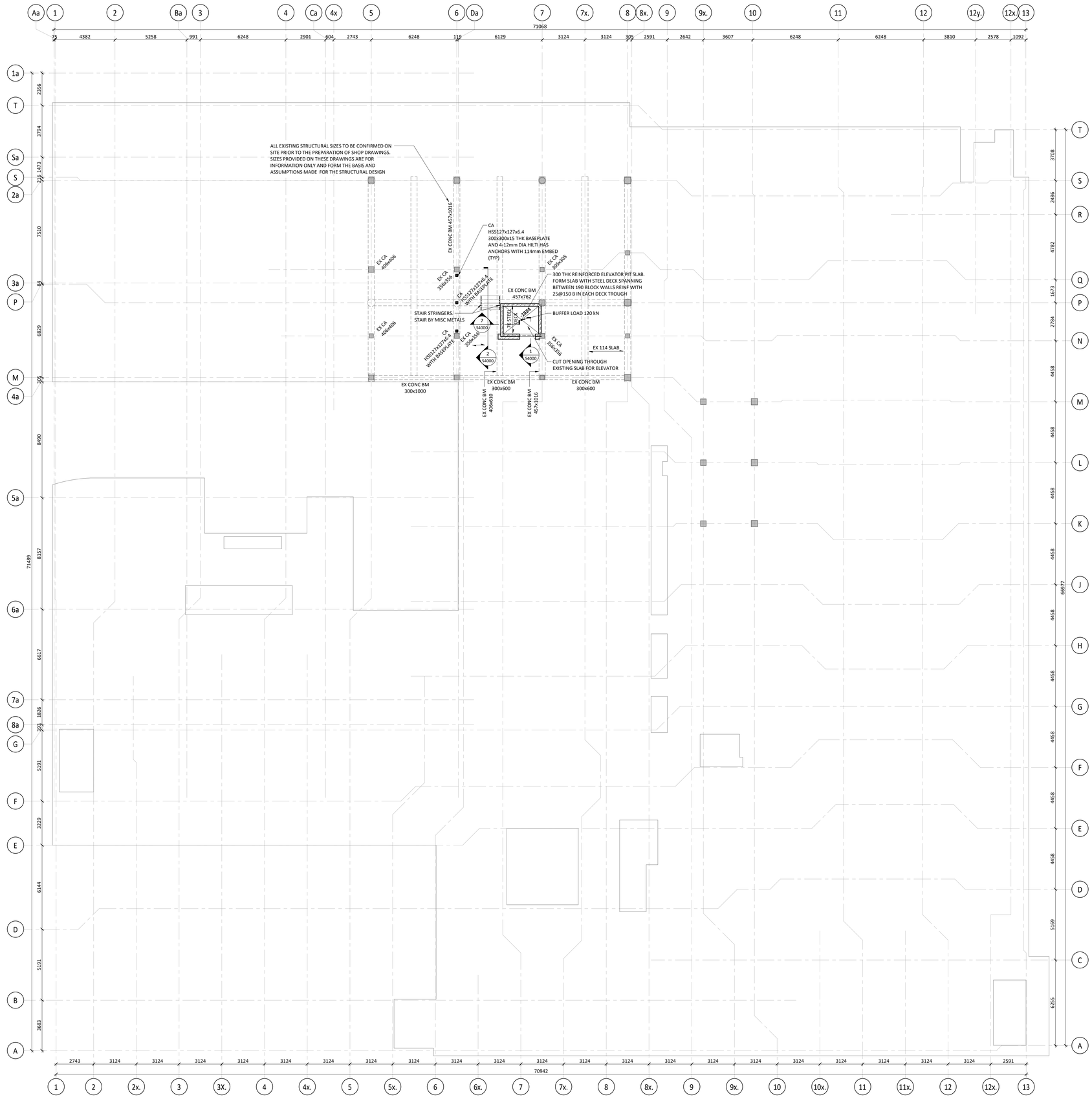

FRAMING PLAN - LEVEL 1

1 : 100

1. PLAN DATUM (FINISHED FLOOR ELEVATION) IS AT GEODETIC ELEVATION **94.580m**.
2. TOP OF STRUCTURAL SLAB IS [± 0.00] FROM PLAN DATUM EXCEPT AS CROSSED AND NOTED.
3. ELEVATIONS FOR AREAS CROSSED AND NOTED ARE TO BE READ FROM THE PLAN DATUM.
4. TOPS OF STEEL BEAMS ARE AT UNDERSIDE OF STEEL DECK EXCEPT AS NOTED THUS (-xx) ELEVATIONS FOR TOPS OF NOTED STEEL BEAMS ARE TO BE READ FROM PLAN DATUM.

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PROJECT NORTH
TRUE NORTH

LICENSED PROFESSIONAL ENGINEER
D. FOX
100105335
2026-05-29
PROVINCE OF ONTARIO

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DENTISTRY BUILDING -CLINIC 2 RENOVATION
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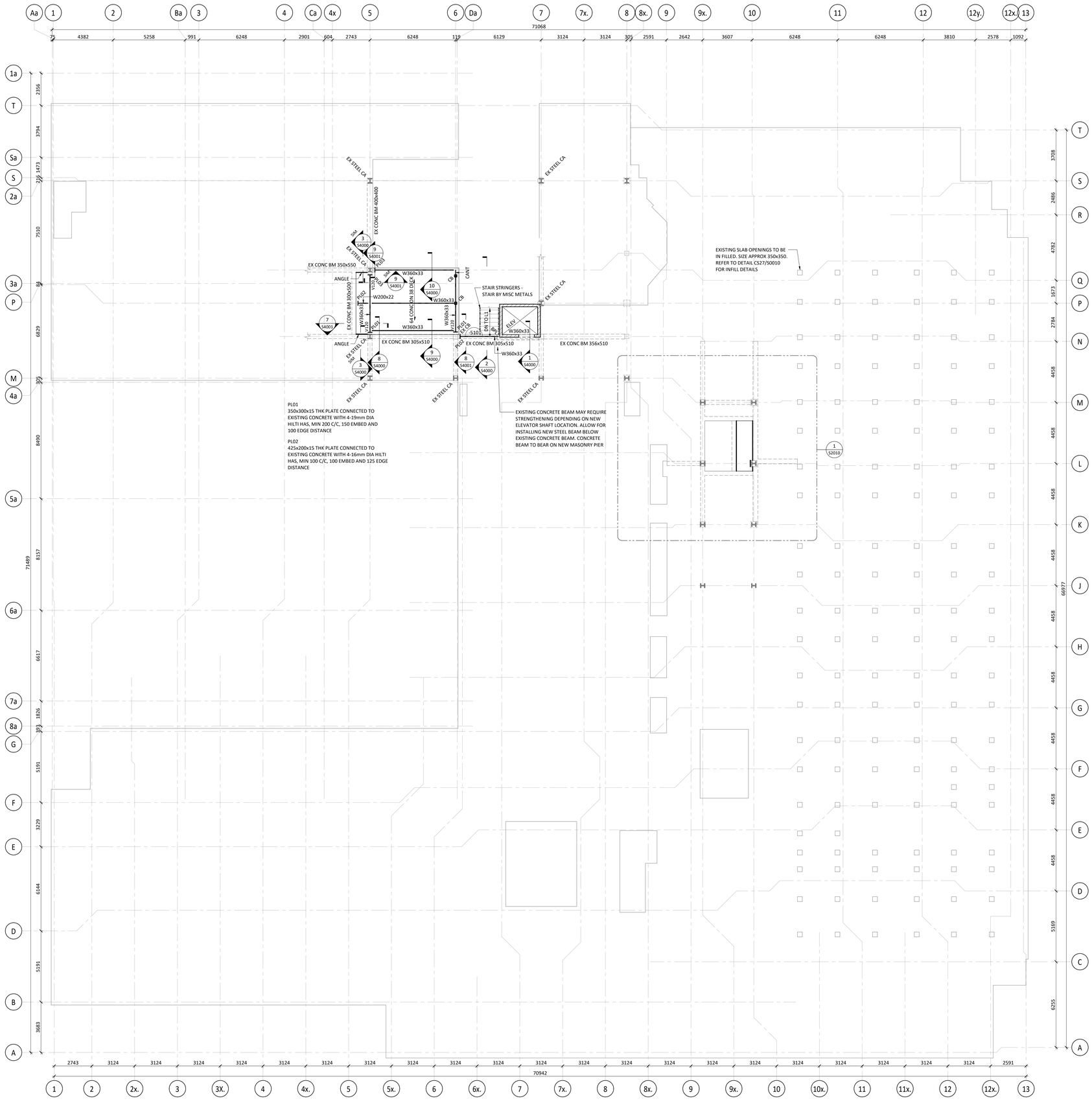
FRAMING PLAN - LEVEL 1

SCALE:	1 : 100
DRAWN BY:	CH
REVIEWED BY:	DF
JOB NUMBER:	EN021-01853
PLOT DATE:	2026-05-29

DRAWING NUMBER:
S2001



FRAMING PLAN - LEVEL 2

1 : 100

1. PLAN DATUM (FINISHED FLOOR ELEVATION) IS AT GEODETIC ELEVATION **99.619m**.
2. TOP OF STRUCTURAL SLAB IS [± 0.00] FROM PLAN DATUM EXCEPT AS CROSSED AND NOTED.
3. ELEVATIONS FOR AREAS CROSSED AND NOTED ARE TO BE READ FROM THE PLAN DATUM.
4. FOR SLOPING ROOFS HIGH AND LOW POINTS ARE NOTED AND ARE TO BE READ FROM PLAN DATUM.
5. TOPS OF STEEL BEAMS ARE AT UNDERSIDE OF STEEL DECK EXCEPT AS NOTED THUS /-xxx\ ELEVATIONS FOR TOPS OF NOTED STEEL BEAMS ARE TO BE READ FROM PLAN DATUM.
6. FLOOR LOADING

   SUPERIMPOSED DEAD LOADS

FLOOR FINISHES	1.2 kPa
CEILING AND SERVICES	0.5 kPa
LIVE LOAD	4.8kPa

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PROJECT NORTH / TRUE NORTH

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DENTISTRY BUILDING -CLINIC 2 RENOVATION
EN021-01853

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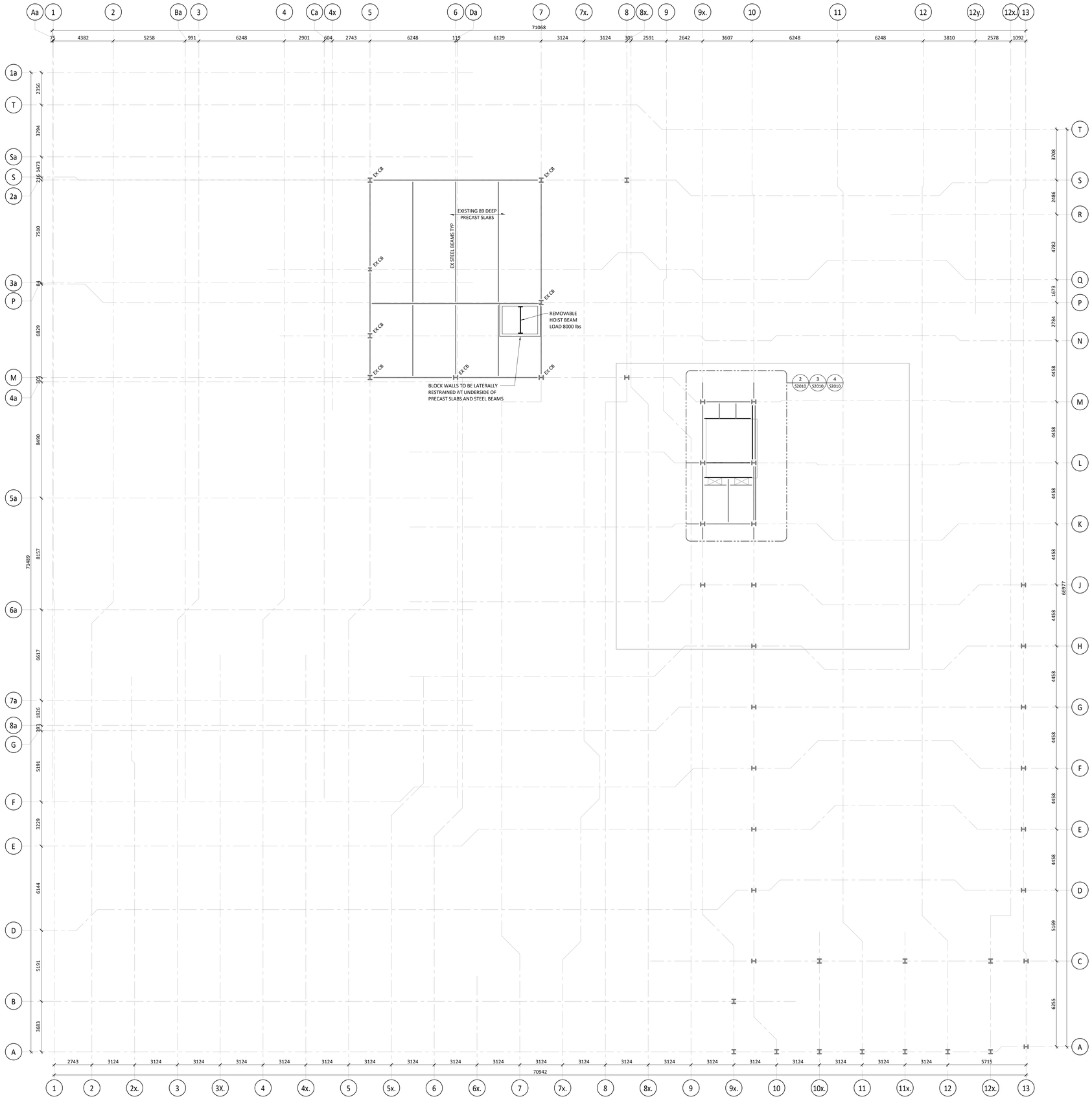
FRAMING PLAN - LEVEL 2

SCALE:	1 : 100
DRAWN BY:	CH
REVIEWED BY:	DF
JOB NUMBER:	EN021-01853
PLOT DATE:	2026-05-29

DRAWING NUMBER:
S2002



FRAMING PLAN - LEVEL 3

1 : 100

1. PLAN DATUM (FINISHED FLOOR ELEVATION) IS AT GEODETIC ELEVATION **103.708m**.
2. TOP OF STRUCTURAL SLAB IS [± 0.00] FROM PLAN DATUM EXCEPT AS CROSSED AND NOTED.
3. ELEVATIONS FOR AREAS CROSSED AND NOTED ARE TO BE READ FROM THE PLAN DATUM.
4. FOR SLOPING ROOFS HIGH AND LOW POINTS ARE NOTED AND ARE TO BE READ FROM PLAN DATUM.
5. TOPS OF STEEL BEAMS ARE AT UNDERSIDE OF CONCRETE SLAB EXCEPT AS NOTED THUS ⟨sXX⟩ ELEVATIONS FOR TOPS OF NOTED STEEL BEAMS ARE TO BE READ FROM PLAN DATUM.
6. ALL STEEL ELEMENTS INCLUDING THEIR CONNECTIONS, OUTSIDE OF BUILDING VAPOUR BARRIER ARE TO BE GALVANIZED.

2026-05-28 1:18:01 PM Autodesk Docs://24082_UofT_DC_2_B242/A082_UofT DC2_ENT_MAIN_R24.rvt

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PROJECT NORTH
TRUE NORTH

LICENSED PROFESSIONAL ENGINEER
D. FOX
100028533
2026-05-29
PROVINCE OF ONTARIO

#	DATE:	REVISION:	BY:
6	2026-05-29	ISSUED FOR TENDER	
5	2026-01-09	ISSUED FOR 100% CD	
4	2025-12-05	ISSUED FOR BUILDING PERMIT	
3	2025-09-26	ISSUED FOR 80% CD	
2	2025-08-22	ISSUED FOR 50% CONSTRUCTION DOCUMENTS	
1	2025-05-30	ISSUED FOR 100% DESIGN DEVELOPMENT	

REVISIONS

UNIVERSITY OF TORONTO DENTISTRY BUILDING -CLINIC 2 RENOVATION

EN021-01853

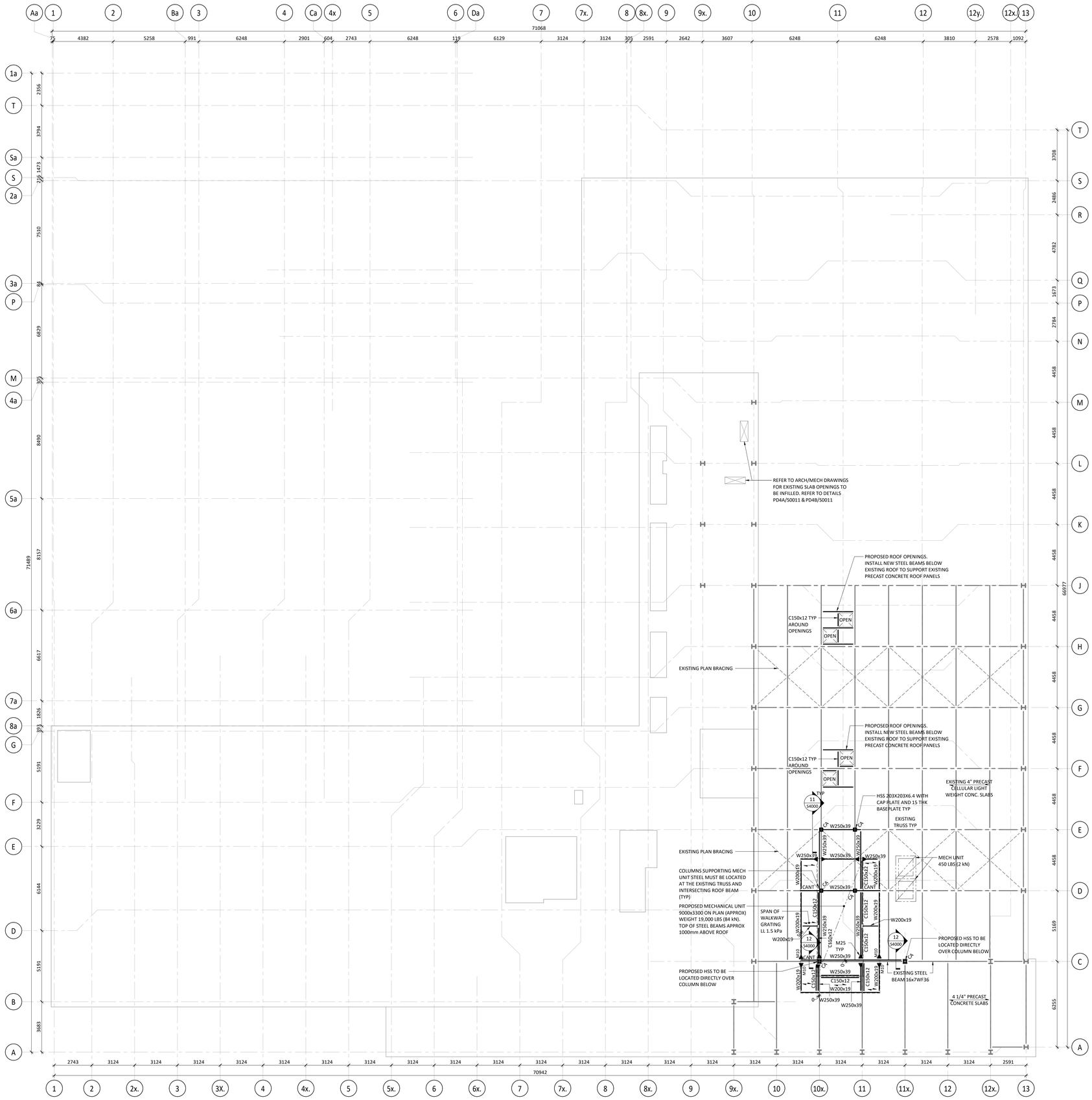
124 EDWARD STREET
TORONTO, ON, M5G 1G6

FRAMING PLAN - LEVEL 3

SCALE:	1 : 100
DRAWN BY:	CH
REVIEWED BY:	DF
JOB NUMBER:	EN021-01853
PLOT DATE:	2026-05-29

DRAWING NUMBER:

S2003


REFER TO ARCH/MECH DRAWINGS FOR EXISTING SLAB OPENINGS TO BE INFILLED. REFER TO DETAILS PD4A/S0011 & PD4B/S0011
PROPOSED ROOF OPENINGS. INSTALL NEW STEEL BEAMS BELOW EXISTING ROOF TO SUPPORT EXISTING PRECAST CONCRETE ROOF PANELS
C150x12 TYP AROUND OPENINGS
OPEN
EXISTING PLAN BRACING
HSS 203X203X6.4 WITH CAP PLATE AND 15 THK BASEPLATE TYP
EXISTING TRUSS TYP
EXISTING 4" PRECAST CELLULAR LIGHT WEIGHT CONC. SLABS
MECH UNIT 450 LBS (2 kN)
COLUMNS SUPPORTING MECH UNIT STEEL MUST BE LOCATED AT THE EXISTING TRUSS AND INTERSECTING ROOF BEAM (TYP)
PROPOSED MECHANICAL UNIT 9000x3300 ON PLAN (APPROX) WEIGHT 19,000 LBS (84 kN). TOP OF STEEL BEAMS APPROX 1000mm ABOVE ROOF
SPAN OF WALKWAY GRATING LL 1.5 kPa
PROPOSED HSS TO BE LOCATED DIRECTLY OVER COLUMN BELOW
EXISTING STEEL BEAM 16x7WF36
4 1/4" PRECAST CONCRETE SLABS
W250x39
W200x19
C150x12
M25 TYP
CANT
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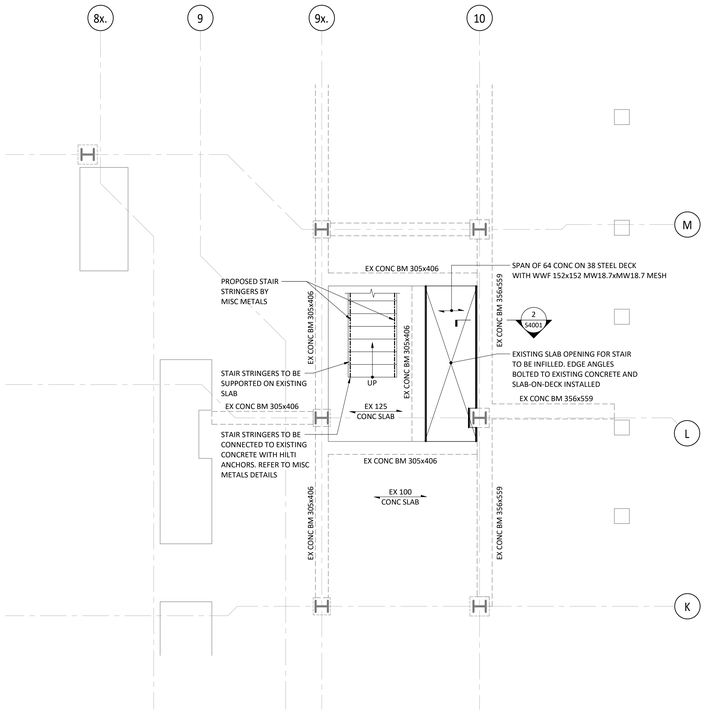
51691

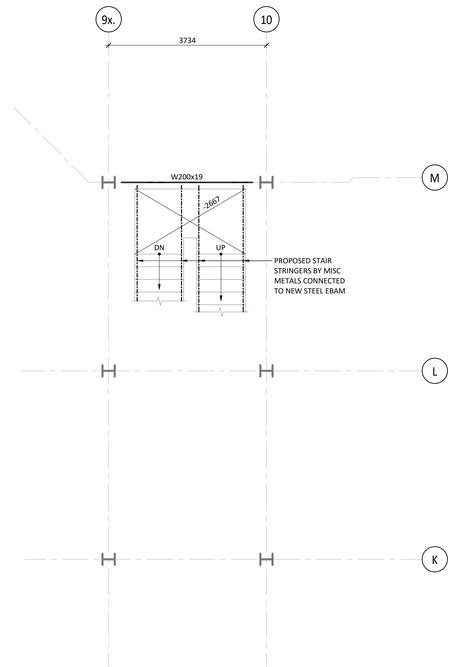


1 S2010 ENLARGED FRAMING PLAN - LEVEL 2 - STAIR

1 : 50

NOTES:

1. PLAN DATUM (FINISHED FLOOR ELEVATION) IS AT GEODETIC ELEVATION **99.619m**.



2 S2010 ENLARGED FRAMING PLAN - LEVEL 3 - STAIR MID-LANDING

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NOTES:

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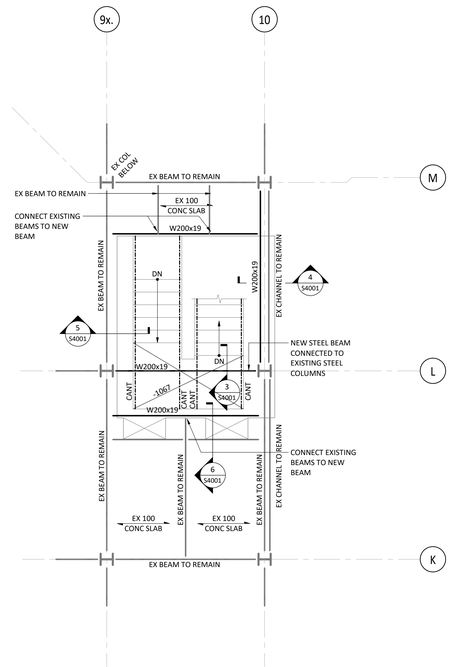

3 S2010 ENLARGED FRAMING PLAN - LEVEL 3 - STAIR

1 : 50

NOTES:

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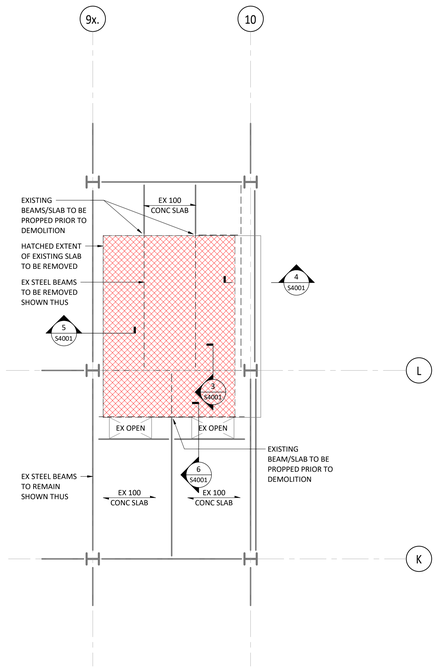

4 S2010 ENLARGED FRAMING PLAN - LEVEL 3 - STAIR DEMOLITION

1 : 50

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PROJECT NORTH

TRUE NORTH

LICENSED PROFESSIONAL ENGINEER
G. FOX
100126335
2026-05-29
PROVINCE OF ONTARIO

#	DATE:	REVISION:	BY:
6	2026-05-29	ISSUED FOR TENDER	
5	2026-01-09	ISSUED FOR 100% CD	
4	2025-12-05	ISSUED FOR BUILDING PERMIT	

REVISIONS

UNIVERSITY OF TORONTO
DENTISTRY BUILDING -CLINIC 2 RENOVATION
EN021-01853

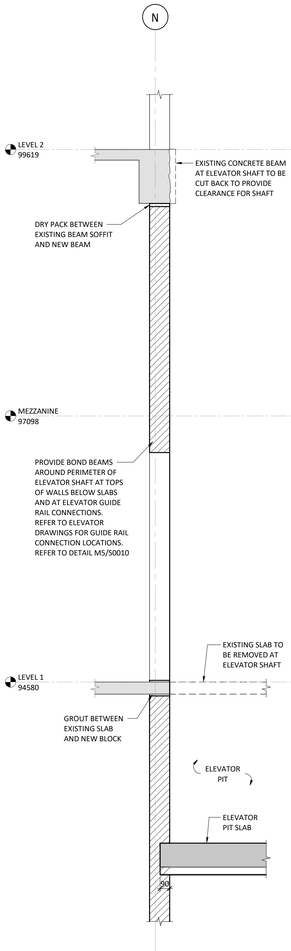
124 EDWARD STREET
TORONTO, ON, M5G 1G6

ENLARGED FRAMING PLANS

SCALE:	1 : 50
DRAWN BY:	CH
REVIEWED BY:	DF
JOB NUMBER:	EN021-01853
PLOT DATE:	2026-05-29

DRAWING NUMBER:

S2010



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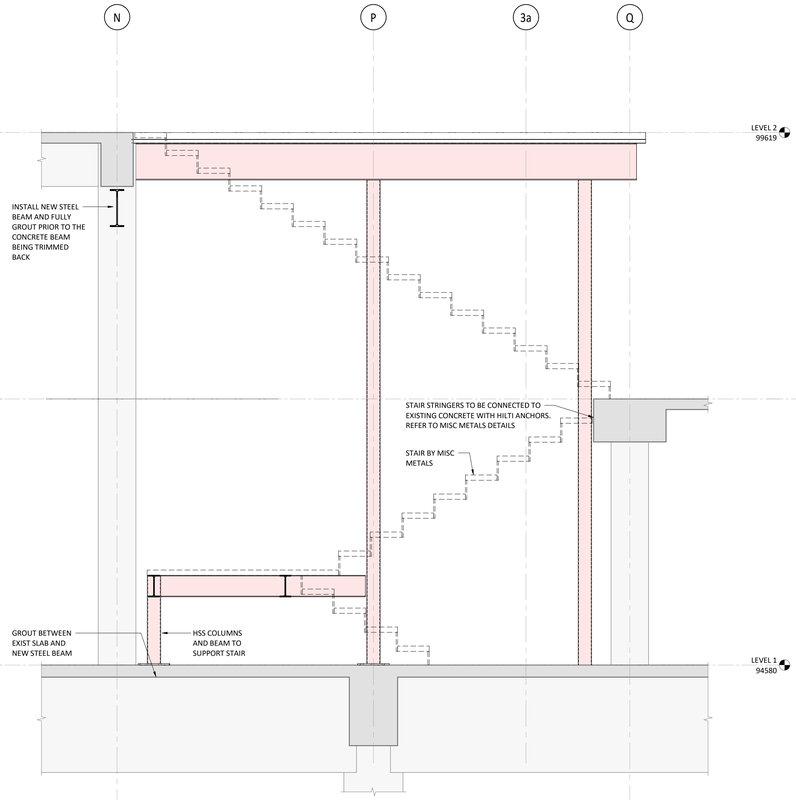

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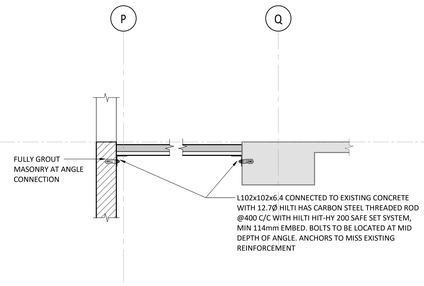

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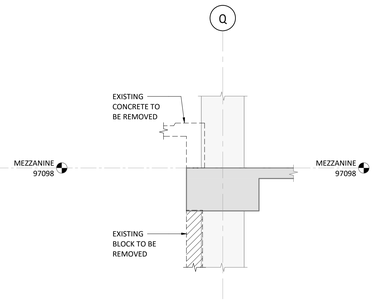

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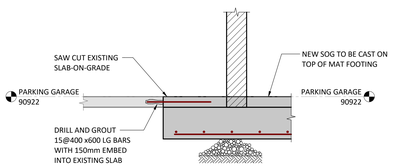

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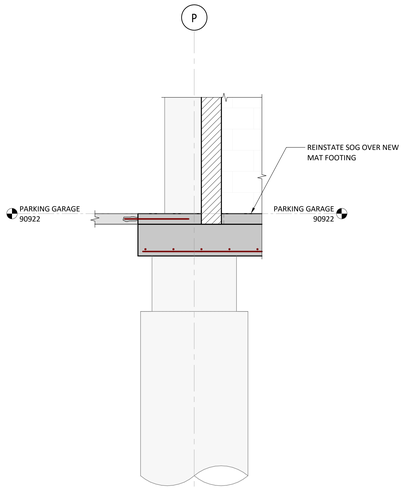

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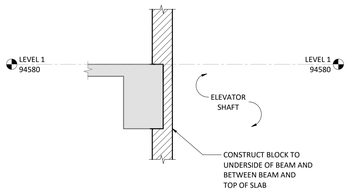

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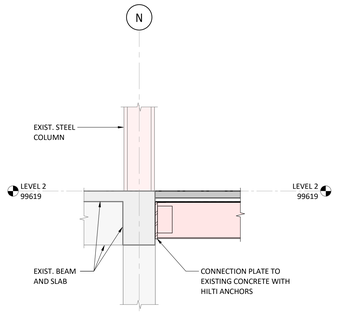

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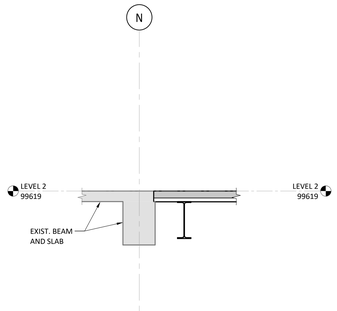

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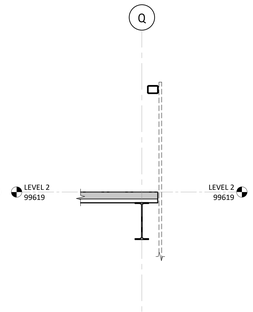

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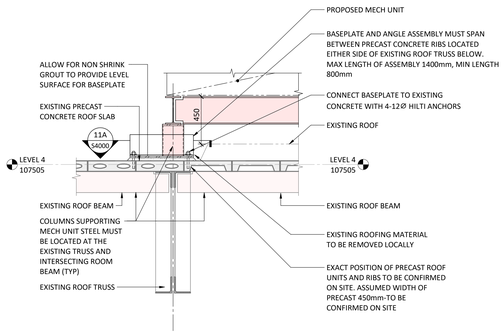

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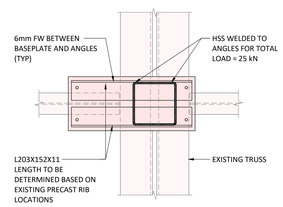

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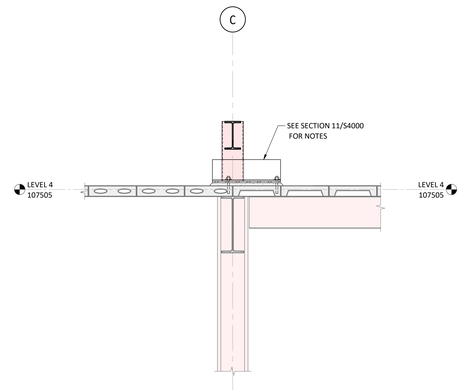

12
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LICENSED PROFESSIONAL ENGINEER
D. FOX
100028333
2026-05-29
PROVINCE OF ONTARIO

#	DATE:	REVISION:	BY:
6	2026-05-29	ISSUED FOR TENDER	
5	2026-01-09	ISSUED FOR 100% CD	
4	2025-12-05	ISSUED FOR BUILDING PERMIT	
3	2025-09-26	ISSUED FOR 80% CD	
2	2025-08-22	ISSUED FOR 50% CONSTRUCTION DOCUMENTS	
1	2025-05-30	ISSUED FOR 100% DESIGN DEVELOPMENT	

REVISIONS

UNIVERSITY OF TORONTO DENTISTRY BUILDING -CLINIC 2 RENOVATION

EN021-01853

124 EDWARD STREET
TORONTO, ON, M5G 1G6

SECTIONS AND DETAILS

SCALE:	As indicated
DRAWN BY:	CH
REVIEWED BY:	DF
JOB NUMBER:	EN021-01853
PLOT DATE:	2026-05-29

DRAWING NUMBER:
S4000

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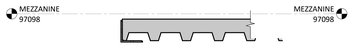

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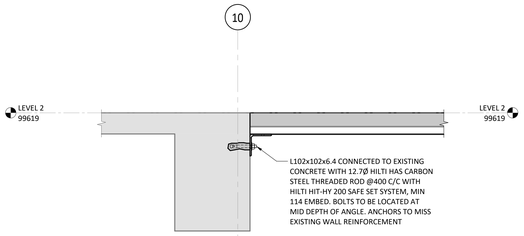

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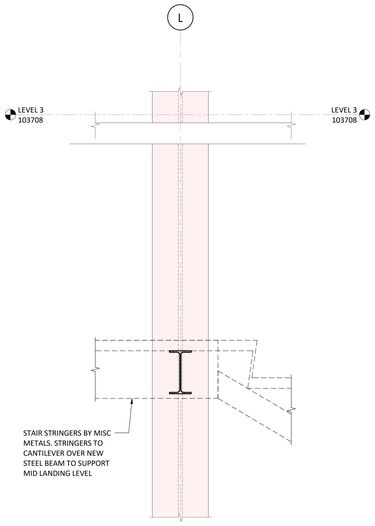

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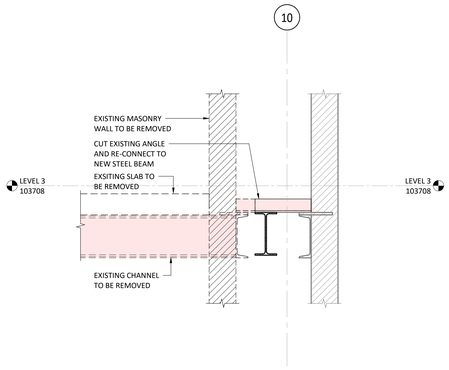

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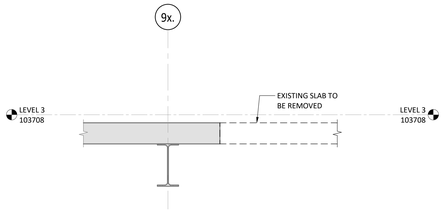

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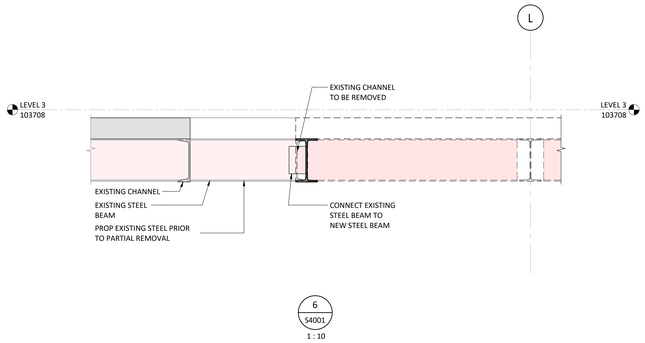

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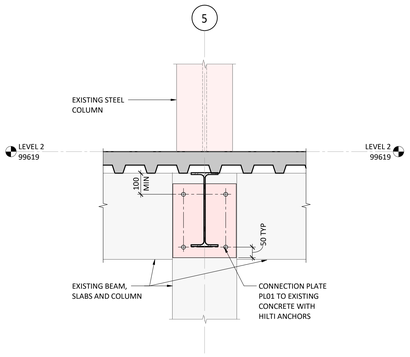

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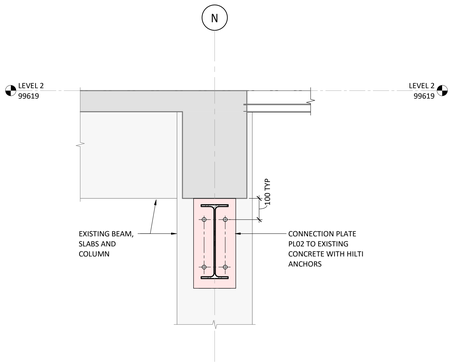

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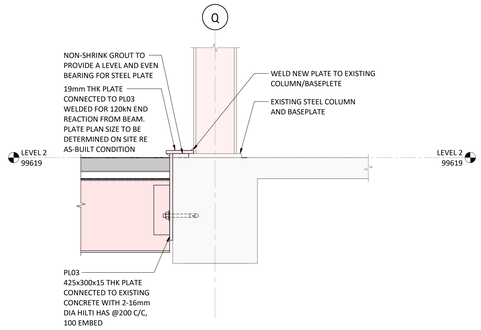

9
S4001
1 : 10

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REVISIONS

UNIVERSITY OF TORONTO DENTISTRY BUILDING -CLINIC 2 RENOVATION

EN021-01853

124 EDWARD STREET
TORONTO, ON, M5G 1G6

SECTIONS AND DETAILS

SCALE:	1 : 10
DRAWN BY:	CH
REVIEWED BY:	DF
JOB NUMBER:	EN021-01853
PLOT DATE:	2026-05-29

DRAWING NUMBER:
S4001

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