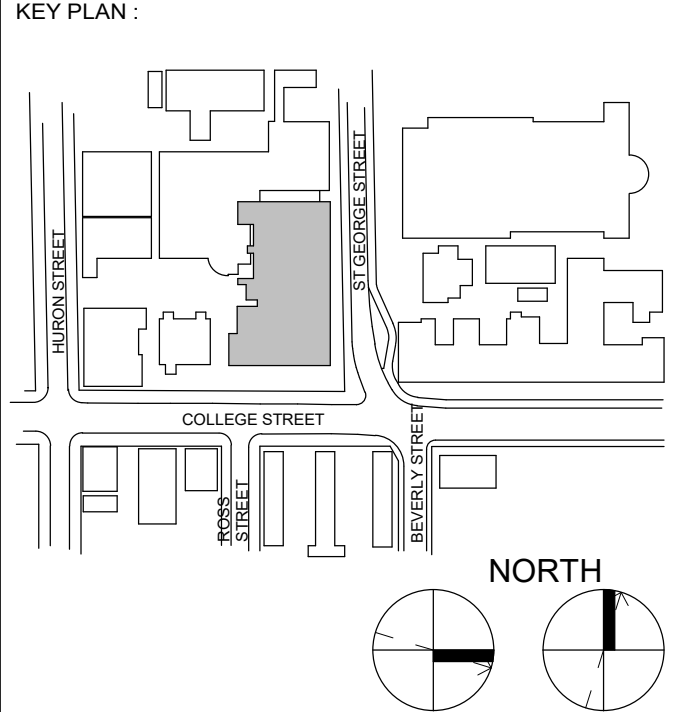


UNIVERSITY OF TORONTO HEALTH & WELLNESS CENTRE AT KOFFLER RENOVATION

ENTUITIVE

DRAWING LIST		
DRAWING No.		DRAWING TITLE
S000	COVER SHEET	
S001	GENERAL NOTES	
S002	GENERAL NOTES	
S003	DESIGN NOTES	
S010	TYPICAL DETAILS	
S011	TYPICAL DETAILS	
S012	TYPICAL DETAILS	
S013	TYPICAL DETAILS	
S014	TYPICAL DETAILS	
S015	TYPICAL DETAILS & PROJECT DETAILS	
S200	FRAMING PLAN - FOUNDATION	
S201	FRAMING PLAN - LEVEL 01	
S202	FRAMING PLAN - LEVEL 02	
S203	FRAMING PLAN - LEVEL 03	
S204	FRAMING - LEVEL 04 - ROOF	
S300	SCHEDULES	
S400	SECTIONS AND DETAILS	
S401	SECTIONS AND DETAILS	
S500	SHEAR WALL NOTES, DETAILS AND KEY PLANS	
S550	SHEAR WALL ELEVATIONS	
S700	EAST ENTRANCE LANDSCAPING	
S701	ELEVATOR DETAILS	



REVISION		
NO.	DATE	DESCRIPTION
1	2024-10-04	PROGRESS ISSUANCE
2	2024-11-01	PROGRESS ISSUANCE
3	2024-11-15	BUILDING PERMIT
4	2025-01-31	ISSUED FOR BID
6	2025-04-30	ISSUED FOR CONSTRUCTION

THIS DRAWING IS "ISSUED FOR CONSTRUCTION" AND IS CONSIDERED COMPLEMENTARY TO THE CONTRACT DOCUMENTS. TO THE BEST OF OUR KNOWLEDGE IT IS AN ACCURATE REPRESENTATION OF DOCUMENTED REVISIONS. IN THE CASE OF ANY DISCREPANCY, OMISSION OR CONFLICT BETWEEN THIS "ISSUED FOR CONSTRUCTION" DOCUMENT AND THE CONTRACT DOCUMENTS, THE CONTRACTOR IS TO PROMPTLY BRING IT TO THE ATTENTION OF THE CONSULTANT.

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IN ASSOCIATION WITH:	
SEAL:	



PROJECT:
UNIVERSITY OF TORONTO HEALTH & WELLNESS CENTRE AT KOFFLER RENOVATION

214 College Street
Toronto, ON, M5T 3A1

SHEET CONTENTS:
COVER SHEET

PROJECT NUMBER:
EN023-00965
DRAWING SCALE:

DRAWN BY: CH
CHECKED BY: CF
DATE: 2024-07-16

SHEET NO.: **S000**
REV: **6**

3D VIEWS ARE PROVIDED TO AID CLARITY AND MAY NOT BE COMPLETE. REFER TO PLANS, SECTIONS AND SPECIFICATIONS

A. GENERAL

- THE STRUCTURE IS TO BE BUILT IN ACCORDANCE WITH THE REQUIREMENTS OF THE ONTARIO BUILDING CODE 2012 (OBC), AND ANY APPLICABLE REQUIREMENTS OR BY LAWS OF THE AUTHORITY HAVING JURISDICTION.
- ALL DIMENSIONS IN THE STRUCTURAL DRAWING SET ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
- WHERE DOCUMENTS ARE REFERENCED IN THE GENERAL AND DESIGN NOTES, THEY SHALL BE THE LATEST EDITIONS OR REVISION, UNLESS NOTED OTHERWISE.
- READ STRUCTURAL DRAWINGS AND SPECIFICATIONS IN CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS.
- THE TERM CONTRACTOR IS DEFINED TO INCLUDE ANY OF THE FOLLOWING: GENERAL CONTRACTOR, SUB-CONTRACTOR, CONSTRUCTION MANAGER.
- BEFORE PROCEEDING WITH THE WORK, CHECK THE DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS AGAINST ALL OTHER DRAWINGS AND VERIFY ALL DIMENSIONS WITH THE ACTUAL DIMENSIONS OF THE EXISTING STRUCTURE. REPORT DISCREPANCIES TO THE CONSULTANT. DO NOT SCALE THE DRAWINGS.
- REFER TO THE ARCHITECTURAL AND OTHER DRAWINGS FOR LOCATIONS AND SIZES OF PITS, BASES, HOUSEKEEPING PADS, SLUMPS, TRENCHES, DEPRESSIONS, GROOVES, CURBS, CHAMFERS, SLOPES, OPENINGS AND SLEEVES NOT SHOWN ON THE STRUCTURAL DRAWINGS. OBTAIN THE CONSULTANT'S PRIOR APPROVAL BEFORE INSTALLING OPENINGS, SLEEVES, ETC., WHICH ARE NOT SHOWN ON STRUCTURAL DRAWINGS.
- INFORMATION ABOUT THE EXISTING BUILDING STRUCTURE IS TRANSFERRED FROM AVAILABLE EXISTING BUILDING DRAWINGS. THE CONSULTANT IS NOT RESPONSIBLE FOR DISCREPANCIES BETWEEN INDICATED EXISTING BUILDING INFORMATION AND ACTUAL CONDITIONS ON SITE.
- THE STRUCTURE HAS BEEN DESIGNED FOR THE LOADS SHOWN. ENSURE THEY ARE NOT EXCEEDED DURING CONSTRUCTION.
- THE STRUCTURAL DETAILS SHALL GOVERN THE WORK. IF DETAILS DIFFER ON OTHER DRAWINGS, THE MOST STRINGENT SHALL GOVERN. IN SOME TYPICAL DETAILS, PORTIONS OF THE STRUCTURE HAVE BEEN CUT BACK OR REMOVED FOR CLARITY PURPOSES ONLY. REFER TO PLANS AND SECTIONS FOR ACTUAL CONDITIONS.
- THE STRUCTURAL PLANS SHOW FRAMING BELOW THE FLOOR LEVEL IDENTIFIED ON THE PLAN OR DRAWING TITLE. AS SUCH CONCRETE WALLS, COLUMNS, CONCRETE BEAMS, DROP PANELS AND THE LIKE WHICH ARE BELOW THE SLAB ARE SHOWN DOTTED ON PLAN. WALLS, COLUMNS OR CONCRETE BEAMS THAT EXTEND ABOVE THE TOP OF THE SLAB ARE SHOWN AS CONTINUOUS OR SOLID LINES. STEEL BEAMS BELOW THE SLAB ARE SHOWN SOLID ON PLAN, TYPICALLY.
- PERFORMANCE ITEMS

- A. THE CONTRACTOR SHALL EMPLOY OR OBTAIN A PROFESSIONAL ENGINEER, LICENSED IN THE PROVINCE WHERE THE PROJECT IS LOCATED TO DESIGN AND DETAIL PERFORMANCE ITEMS AS PART OF THE BASE BUILDING STRUCTURE AND OTHER COMPONENTS INDICATED IN THE CONTRACT DOCUMENTS INCLUDING BUT NOT LIMITED TO:

- STRUCTURAL STEEL CONNECTIONS
- STEEL ROOF DECK
- STEEL FLOOR DECK
- STEEL COMPOSITE DECK
- CURTAIN WALL, CLADDING, GLAZING, ROOFING AND THE LIKE; INCLUDING THE DETERMINATION OF WIND LOADS FOR THE DESIGN OF THESE ELEMENTS

13. CONTRACT ADMINISTRATION BY ENTUITIVE

- A. ENTUITIVE HAS BEEN RETAINED TO PROVIDE CONTRACT ADMINISTRATION SERVICES FOR THE PROJECT. THESE SERVICES INCLUDE FIELD REVIEW, REVIEW OF SHOP DRAWINGS, ATTENDANCE AT SITE MEETINGS DURING THE CONSTRUCTION OF THE STRUCTURAL WORK, RESPONSE TO SITE GENERATED QUESTIONS, CLARIFICATIONS, RFIS, AS WELL AS ADDITIONAL ACTIVITIES ASSOCIATED WITH THE ADMINISTRATION OF THE CONSTRUCTION CONTRACT.

B. FIELD REVIEW:

- ENTUITIVE WILL CARRY OUT PERIODIC FIELD REVIEWS OF THE WORK SHOWN ON THE STRUCTURAL CONTRACT DOCUMENTS ONLY. THESE REVIEWS WILL BE PERFORMED ON BEHALF OF THE OWNER TO DETERMINE WHETHER THE CONSTRUCTION IS BEING CARRIED OUT IN GENERAL CONFORMITY WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ENSURING THAT THE WORK IS COMPLETED IN CONFORMANCE WITH THE CONTRACT DOCUMENTS AND ALL APPLICABLE CODES, STANDARDS AND ACTS.
- THE CONTRACTOR IS NOT TO CONSTRUCT THESE REVIEWS AS BEING PART OF OR IN LIEU OF THEIR OWN FIELD REVIEW OF THE WORK BEING CARRIED OUT ON SITE.
- THE EXTENT AND NATURE OF THE WORK REVIEWED ON SITE IS AT THE SOLE DISCRETION OF ENTUITIVE'S SITE REPRESENTATIVE. THE WORK WILL BE REVIEWED ON A SAMPLING BASIS.
- THE CONTRACTOR IS TO PROVIDE A MINIMUM OF 24 HOURS ADVANCE NOTICE WHEN A PARTICULAR ASPECT OF THE WORK IS READY FOR REVIEW. THE WORK TO BE REVIEWED SHALL BE GENERALLY COMPLETE. PRIOR TO ENTUITIVE'S SITE REPRESENTATIVE VISITING THE SITE.
- WHEN DEFICIENCIES ARE NOTED ON SITE REVIEW REPORTS, THE CONTRACTOR IS TO ADDRESS THE DEFICIENCIES AND PROMPTLY RESPOND TO ENTUITIVE IN WRITING. THE RESPONSE IS TO INCLUDE A DESCRIPTION OF ACTIONS TAKEN TO REMEDIATE THE DEFICIENCIES, WITH APPROPRIATE SUPPORTING DOCUMENTATION AS DETERMINED BY ENTUITIVE.

C. SHOP DRAWING REVIEW:

- ENTUITIVE'S REVIEW OF SHOP DRAWINGS IS CARRIED OUT ON A RANDOM SAMPLING BASIS. AS SUCH, NOT ALL SHOP DRAWINGS ARE REVIEWED NOR IS ALL OF THE INFORMATION ON ANY PARTICULAR SHOP DRAWING REVIEWED BY ENTUITIVE.
- REVIEW OF SHOP DRAWINGS IS ONLY FOR GENERAL CONFORMITY WITH THE CONTRACT DOCUMENTS. THE REVIEW OF SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF ANY OF THEIR CONTRACTUAL RESPONSIBILITIES, NOR DOES IT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITIES TO ENSURE THE SHOP DRAWINGS ARE COMPLETE, COORDINATED WITH THE WORK OF ALL OTHER TRADES AND PREPARED BY THE CONTRACTOR. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ENSURING THAT INFORMATION SHOWN ON THE SHOP DRAWINGS INCLUDING BUT NOT LIMITED TO, MEMBER SIZES, QUANTITIES, DIMENSIONS, EXISTING SITE CONDITIONS, FABRICATION PROCESSES, MEANS AND METHODS OF CONSTRUCTION AND THE LIKE ARE CORRECT, CONSISTENT WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND ARE COORDINATED WITH THE WORK OF ALL OTHER TRADES.
- ALL SHOP DRAWINGS ARE TO BE REVIEWED BY THE CONTRACTOR PRIOR TO BEING SUBMITTED TO ENTUITIVE. THE CONTRACTOR'S REVIEWED STAMP SHALL BE AFFIXED TO ALL SHOP DRAWINGS SUBMITTED TO ENTUITIVE FOR REVIEW.
- SHOP DRAWINGS ARE TO BE SEALED AND SIGNED BY A PROFESSIONAL ENGINEER AS REQUIRED BY THE CONTRACT DOCUMENTS. ANY SHOP DRAWINGS SUBMITTED WITHOUT THE PROFESSIONAL ENGINEER'S SEAL AND SIGNATURE (WHERE REQUIRED) WILL BE RETURNED "UNREVIEWED" AND MARKED FOR RESUBMISSION.
- COMMENTS MADE ON SHOP DRAWINGS ARE NOT TO BE CONSTRUED AS INSTRUCTIONS OR AUTHORIZED CHANGES TO THE CONTRACT DOCUMENTS. IF THE CONTRACTOR BELIEVES THAT COMMENTS MADE ON THE SHOP DRAWINGS WILL RESULT IN CHANGES TO THE CONTRACT, THEY ARE TO NOTIFY THE CONSULTANT OF THIS PRIOR TO UNDERTAKING THE WORK.
- SHOP DRAWINGS WILL BE PROCESSED WITHIN THE TIME FRAMES NOTED IN THE CONTRACT DOCUMENTS UNLESS OTHER ARRANGEMENTS ARE MADE IN ADVANCE OF THE SUBMISSION OF THE SHOP DRAWINGS.

D. RESPONSE TO RFIS:

- RFIS WILL BE PROCESSED IN A TIMELY MANNER, PROVIDED THE TIME FRAMES IDENTIFIED ARE REASONABLE AND CONSISTENT WITH THE URGENCY OF THE REQUIRED RESPONSE.
- THE EXTENT OF ANY PARTICULAR RFI SHALL BE LIMITED TO A PARTICULAR AREA OF THE WORK OR A CONSISTENT ISSUE AFFECTING DIFFERENT AREAS OF THE WORK. ANY PARTICULAR RFI SHALL NOT INCLUDE TWO OR MORE UNRELATED ITEMS.

14. TEMPORARY WORKS

- A. TEMPORARY WORKS ARE INSTALLATIONS REQUIRED TO PROVIDE ACCESS, PROTECTION, SUPPORT OR SERVICES FOR WORKERS, EQUIPMENT AND MATERIALS DURING THE CONSTRUCTION, RENOVATION, RETROFIT, OR DEMOLITION OF PERMANENT WORKS. TEMPORARY WORKS ARE ALSO REQUIRED TO PROVIDE TEMPORARY SUPPORT FOR ANY PART OF THE EXISTING OR PERMANENT WORKS UNTIL THE PERMANENT WORKS HAVE ACHIEVED A STATE OF COMPLETION ALLOWING THE TEMPORARY WORKS TO BE REMOVED. SOME TYPICAL EXAMPLES OF THIS INCLUDE BUT ARE NOT LIMITED TO:

- FORMWORK OR FALSEWORK FOR STRUCTURES.
- SHORING AND TEMPORARY BRACING FOR NEW AND/OR EXISTING STRUCTURAL ELEMENTS INCLUDING THEIR CONNECTIONS TO EXISTING STRUCTURE WHERE REQUIRED.
- FOUNDATIONS REQUIRED TO SUPPORT SHORING.
- SHORING FOR EXCAVATIONS AND TRENCHES.
- TEMPORARY UNDERPINNING.
- CRANES, CRANE TIE-INS, AND CRANE FOUNDATIONS.
- HOISTS.
- RESHORES FOR MULTI-STORY CONCRETE STRUCTURES.

- REVIEW OF BASE BUILDING CAPACITY TO SUPPORT TEMPORARY LOADS FROM MATERIALS AND EQUIPMENT (LIFTS, CONCRETE TRUCKS, CRANES, HOISTS, EXCAVATORS, ETC...)

- B. THE CONTRACTOR SHALL EMPLOY A PROFESSIONAL ENGINEER, LICENSED IN THE PROVINCE WHERE THE PROJECT IS LOCATED, TO DESIGN AND DETAIL ALL TEMPORARY WORKS ITEMS (THE "TEMPORARY WORKS ENGINEER"). THE DESIGN SHALL INCLUDE FULL RESOLUTION OF ANY AND ALL LOADS APPLIED ONTO THE BASE BUILDING STRUCTURE, CONSIDERING THE TEMPORARY CONDITION OF THE STRUCTURE, AND SHALL INCLUDE REVIEW OF THE EXISTING STRUCTURES CAPACITY TO SUPPORT THESE LOADS. WHERE NECESSARY, ADDITIONAL SHORING, REINFORCEMENT, AND/OR TEMPORARY FOUNDATIONS MAY BE REQUIRED. THESE ELEMENTS ARE TO BE DESIGNED BY THE TEMPORARY WORKS ENGINEER AND PROVIDED BY THE CONTRACTOR.

- C. THE CONTRACTOR SHALL SUBMIT FOR REVIEW BY THE CONSULTANT, DRAWINGS, SPECIFICATIONS, AND CALCULATIONS DEFINING THE TEMPORARY WORKS INCLUDING:

- THE DURATION FOR WHICH THE TEMPORARY WORKS ARE INTENDED TO REMAIN AND THE MEASURES REQUIRED SHOULD IT APPEAR THIS DURATION MAY BE EXCEEDED.
- ALL LIVE, DEAD, WIND AND SEISMIC LOADS FOR WHICH THE TEMPORARY WORKS WERE DESIGNED.
- THE LIVE, DEAD, WIND AND SEISMIC LOAD REACTIONS ON THE BASE BUILDING STRUCTURE.
- CALCULATIONS THAT SHOW THE BASE BUILDING STRUCTURE OR ADDED TEMPORARY WORKS ELEMENTS CAN SAFELY RESIST THE APPLIED LOADS INCLUDING SUPPORTING COLUMNS AND FOUNDATIONS.
- ANY REQUIRED STAGING OF THE CONSTRUCTION, MODIFICATIONS REQUIRED DURING CONSTRUCTION, AND SPECIAL PRECAUTIONS REQUIRED DURING ERECTION AND DISMANTLING.
- SPECIAL TOLERANCES AND CLEARANCES.
- NECESSARY INSPECTION, TESTING, MONITORING AND PROCEDURES.
- ALL RELEVANT STANDARDS OR CODES TO WHICH THE TEMPORARY WORKS HAVE BEEN DESIGNED AND THE REQUIREMENTS WITH WHICH THE CONTRACTOR OR TEMPORARY WORKS MUST COMPLY DURING CONSTRUCTION.
- ALL DRAWINGS ARE TO BEAR THE SEAL OF THE PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE WHERE THE PROJECT IS LOCATED, RESPONSIBLE FOR THE DESIGN OF THE TEMPORARY WORKS.
- THE TEMPORARY WORK MUST BE COORDINATED SUCH THAT IT DOES NOT IMPED THE CONSTRUCTION OF THE PERMANENT WORK. THE TEMPORARY WORK MUST HAVE NO ADVERSE EFFECTS ON THE PERMANENT WORK AS IT IS DESIGNED.

- THE TEMPORARY WORKS CONTRACTOR MUST REVIEW CHANGES MADE TO THE PERMANENT WORK AND ADAPT TEMPORARY WORKS ACCORDINGLY.

- THE TEMPORARY WORKS ENGINEER SHALL PERFORM FIELD REVIEWS TO VERIFY THAT TEMPORARY WORKS ARE CONSTRUCTED IN GENERAL CONFORMANCE WITH THE DESIGN.

- TEMPORARY WORKS SHALL NOT BE REMOVED WITHOUT WRITTEN APPROVAL FROM THE TEMPORARY WORKS ENGINEER.

B. OPENINGS THROUGH THE STRUCTURE

- PLACEMENT AND DETAILING OF REINFORCEMENT AROUND SLEEVES, FORMED OPENINGS AND THE LIKE ARE TO CONFORM TO THE REQUIREMENTS NOTED ON THE STRUCTURAL CONTRACT DOCUMENTS. PROVIDE COORDINATED SLEEVING/LIFT DRAWINGS IN ACCORDANCE WITH SPECIFICATION REQUIREMENTS.
- REFER TO TYPICAL DETAIL FOR MINIMUM SPACING OF SLEEVES. IF THESE SPACING REQUIREMENTS CAN NOT BE MAINTAINED, REINFORCE AROUND SLEEVES AS PER DETAILS FOR FORMED OPENINGS IN TYPICAL DETAIL.

C. SERVICES CAST INTO THE STRUCTURE

- PLACE CONDUITS IN ACCORDANCE WITH TYPICAL DETAILS. CONTRACTOR TO SUBMIT CONDUIT LAYOUT PLANS IN ADVANCE OF PLACING CONDUITS ON SITE. FINAL LAYOUT OF CONDUITS IS SUBJECT TO REVIEW AND ACCEPTANCE BY THE CONSULTANT.
- FOR IN-SLAB DUCTS RUNNING IN THE PLANE OF SLAB, COORDINATE LAYOUT WITH MECHANICAL DOCUMENTS AND THE FOLLOWING:
 - CENTRE DUCTS IN THE MIDDLE OF SLAB.
 - MAXIMUM WIDTH OF DUCTS IS 300 mm
 - MAXIMUM OUTSIDE TO OUTSIDE DEPTH OF DUCTS NOT GREATER THAN 40 mm IN 165 mm SLAB AND 50 mm IN 175 mm SLAB.
 - ENSURE A MINIMUM OF 65 mm CONCRETE IS PROVIDED ABOVE AND BELOW DUCTS.
 - MINIMUM 600 mm CLEAR SPACING BETWEEN DUCTS, UNLESS NOTED OTHERWISE ON STRUCTURAL DRAWINGS.
 - MINIMUM 900 mm CLEAR SPACING TO FACE OF WALLS AND COLUMNS, UNDO ON STRUCTURAL DRAWINGS.
 - PLACE MINIMUM 152x152 MW9.1x1MW9.1 x 1000 mm WIDE OVER AND UNDER DUCTS.
- PIPES ARE NOT PERMITTED TO BE CAST INTO THE STRUCTURAL SLAB, UNLESS APPROVED IN WRITING BY THE STRUCTURAL CONSULTANT.
- CONCENTRATIONS OF CONDUITS THAT DO NOT CONFORM TO THE TYPICAL DETAILS ARE SUBJECT TO REVIEW BY THE CONSULTANT. THE CONSULTANT RESERVES THE RIGHT, AT NO EXTRA COST TO THE OWNER, TO INCREASE THE THICKNESS OF THE SLAB IN THESE AREAS AND/OR INCREASE THE CONCRETE STRENGTH AS REQUIRED. IN ADDITION, CONCRETE WITH A 10 mm MAXIMUM AGGREGATE SIZE (PEA GRAVE) SHALL BE USED TO ACHIEVE CONSOLIDATION.

D. SEQUENCE OF CONSTRUCTION

WHERE PROPOSED CONSTRUCTION SEQUENCING / PHASING REQUIREMENTS ARE INDICATED OR IMPLIED IN THE CONTRACT DOCUMENTS, COORDINATE CONSTRUCTION OF THE BUILDING STRUCTURE TO SUIT SEQUENCING / PHASING REQUIREMENTS AND PROVIDE ALL NECESSARY CONNECTIONS AND TEMPORARY SUPPORTS AS REQUIRED TO SAFELY CONSTRUCT THE STRUCTURE.

- UNLESS NOTED OTHERWISE, THE FINAL CONSTRUCTION SEQUENCING OR PHASING REQUIREMENTS ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE DETERMINED AS AN INTEGRAL PART OF THEIR OVERALL CONSTRUCTION MEANS AND METHODS.
- MAINTAIN ERECTION BRACING UNTIL COMPLETION OF ENTIRE STRUCTURE INCLUDING ROOF DECKS AND OTHER ELEMENTS WHICH ARE PART OF THE LATERAL LOAD RESISTING SYSTEM, OR UNTIL SUCH TIME AS THE ENGINEER OF RECORD FOR THE TEMPORARY WORKS / ERECTION CONFIRMS IN WRITING, THAT THE ERECTION BRACING MAY BE REMOVED.
- WHERE THE SCOPE OF THE STRUCTURAL WORK IS DELINEATED INTO PHASES ON THE DRAWINGS, THE SCOPE OF THE INITIAL PHASE(S) SHALL INCLUDE THE SUPPLY AND INSTALLATION OF ALL WORK SHOWN CAST OR SET INTO THIS INITIAL WORK AS WELL AS ALL DOWELS AND THE LIKE THAT MAY PROJECT OUT OF THIS WORK, UNLESS NOTED OTHERWISE.

E. ALTERATIONS AND/OR CONNECTIONS TO EXISTING STRUCTURE

- INSPECT THE EXISTING BUILDING AND BECOME THOROUGHLY FAMILIAR WITH THE EXISTING CONDITIONS. DETAILS SHOWN ARE BASED ON INFORMATION AVAILABLE FROM EXISTING BUILDING DRAWINGS AND SITE INVESTIGATION REPORTS ONLY.
- CHECK ALL DRAWINGS AGAINST ACTUAL CONDITIONS ON SITE PRIOR TO FABRICATING ANY STRUCTURAL STEEL. REPORT DISCREPANCIES TO THE CONSULTANT BEFORE PROCEEDING WITH THE WORK.
- PRIOR TO FABRICATION OF ANY WORK, OPEN UP ALL AREAS TO ALLOW THE INSTALLATION OF THE NEW STRUCTURAL WORK, AS WELL AS THE CONNECTION OF NEW WORK TO THE EXISTING WORK. TAKE ANY AND ALL NECESSARY FIELD MEASUREMENTS. MODIFY INSTALLATION METHODS AND METHODS FOR CONNECTING TO THE EXISTING STRUCTURE 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.
- PROPOSED SCHEDULE OF WORK AND SEQUENCE TO BE COORDINATED WITH ALL SUBTRADES, THE CONSULTANT AND OWNER. SUBMIT SCHEDULE / SEQUENCE TO THE CONSULTANT FOR REVIEW PRIOR TO START OF WORK.
- SHORE EXISTING WORK AS REQUIRED UNTIL ALL NEW WORK HAS BEEN COMPLETED.
- DO NOT CUT CONCRETE REINFORCEMENT UNLESS REVIEWED AND APPROVED BY THE CONSULTANT.
- OPENINGS AND HOLES IN EXISTING STRUCTURES:
 - PRIOR TO CUTTING AND CORING ANY OPENINGS IN THE EXISTING STRUCTURE, PROVIDE THE CONSULTANT WITH A SLEEVING DRAWING INDICATING THE SIZE AND EXACT LOCATION OF ALL PROPOSED OPENINGS RELATIVE TO THE BUILDING GRID LINES. EXISTING OPENINGS IN THE VICINITY OF ANY NEW OPENING MUST ALSO BE SHOWN.
 - LOCATE EXISTING REINFORCEMENT AND ALL EMBEDDED SERVICES (I.E. X-RAYING, LOCAL CHIPPING OF SLAB - WHERE APPROVED BY THE CONSULTANT, COVER METER AND THE LIKE) PRIOR TO CUTTING THE NEW OPENING.
 - AFTER EXISTING REINFORCEMENT AND SERVICES HAVE BEEN LOCATED, NOTIFY CONSULTANT WHO WILL REVIEW AND APPROVE OF THE PROPOSED OPENING LOCATION PRIOR TO CUTTING/DRLING. MAKE ANY NECESSARY ADJUSTMENTS TO THE HOLE LOCATION AS DIRECTED BY THE CONSULTANT.
 - CONTRACTOR SHALL CONSOLIDATE AS LARGE A PROPORTION OF CORES FOR REVIEW BY THE CONSULTANT FOR EACH SUBMITTAL PACKAGE PROVIDED (SLEEVING DRAWINGS, PHOTOGRAPHS, AND REINFORCING SCAN INFORMATION) AS IS REASONABLY PRACTICABLE. THE CONSULTANT WILL COMPLETE A PAPER STUDY OF EACH PACKAGE AND DETERMINE THE REQUIREMENT FOR ON SITE REVIEW. THE REQUIREMENT FOR ON SITE REVIEW SHALL BE AT THE SOLE DISCRETION OF THE CONSULTANT.
 - CORE DRILL NEW HOLES FOR PIPES TO A DIAMETER NOT LARGER THAN THE OUTSIDE PIPE DIAMETER PLUS 25 mm. DO NOT CUT EXISTING REINFORCEMENT OR SERVICES WITHOUT PRIOR APPROVAL OF THE CONSULTANT.
 - WHERE OPENINGS ARE TO BE SAWCUT, PRE-DRILL THE CORNERS USING A 100 mm Ø CORE DRILL. DO NOT OVER CUT THE CORNERS.
 - IN ANY AREAS WHERE THE CONSULTANT PERMITS THE CUTTING OF EXISTING REINFORCEMENT, THE CONTRACTOR IS TO EXAMINE THE CORE/OPENING AFTER DRILLING/CUTTING TO DETERMINE THE SIZE, COVER AND ORIENTATION OF ANY REINFORCEMENT THAT WAS CUT. THE CONTRACTOR IS TO MARK THIS INFORMATION ON THE SLEEVING DRAWING AND FORWARD A COPY OF IT TO THE CONSULTANT FOR THEIR RECORDS.
 - MODIFY THE LAYOUT OF NEW THROUGH BOLTS, EXPANSION ANCHORS AND OTHER ANCHORING DEVICES REQUIRED TO AVOID EXISTING CONCRETE REINFORCEMENT.
- SHORE FLOORS AS REQUIRED TO SUPPORT CRANES, HOISTS AND OTHER CONSTRUCTION EQUIPMENT.

F. FUTURE PROVISIONS

- THE STRUCTURE HAS NOT BEEN DESIGNED FOR ANY FUTURE PROVISIONS OR EXTENSIONS

G. MATERIALS

- CONCRETE: CONFORM TO THE REQUIREMENTS OF CSA-A23.1 S413 AND THE REQUIREMENTS IDENTIFIED IN TABLES 1-1, 1-2 AND 1-3.
- CONCRETE MIX DESIGNS AND CONCRETING PRACTICES SHALL BE BASED ON A SERVICE LIFE OF 100 YEARS IN CONFORMANCE WITH CSA S478, GUIDELINE ON DURABILITY IN BUILDINGS.
- REINFORCEMENT:
 - CONFORM TO CSA G30 SERIES, fy = 400 MPa for ALL REINFORCEMENT EXCEPT THAT fy = 450 MPa for WELDED WIRE FABRIC EQUAL TO OR GREATER THAN MW7.7 (Ø=3.1mm) AND fy=386 MPa for WELDED WIRE FABRIC LESS THAN MW7.7 (Ø3.1mm).
 - ALL REINFORCEMENT IS TO BE BLACK EXCEPT WHERE THE SUFFIX C IS USED TO DESIGNATE EPOXY COATED REINFORCEMENT.
 - PROVIDE WELDED WIRE FABRIC IN FLAT SHEETS ONLY.
- REINFORCEMENT BAR COUPLERS:
 - SHALL BE LENTON-TYPE AS MANUFACTURED BY ERICO OR APPROVED ALTERNATE.
 - MECHANICAL TENSILE COUPLERS SHALL BE LENTON STANDARD COUPLER A2, LENTON TRANSITION COUPLER A2, OR LENTON POSITION COUPLER P9.
 - MECHANICAL COMPRESSION COUPLERS SHALL BE LENTON SPEED SLEEVE.
 - COUPLERS TO SPlice NEW REINFORCEMENT TO EXISTING REINFORCEMENT SHALL BE LENTON LOCK B-SERIES OR S-SERIES.
 - COUPLERS TO SPICE BARS TO STRUCTURAL STEEL ELEMENTS SHALL LENTON WELDABLE COUPLER C2/C3.
- REINFORCEMENT BAR END ANCHORS: SHALL BE LENTON TERMINATOR D6 OR D16 OR APPROVED ALTERNATE.
- STRUCTURAL STEEL:
 - STRUCTURAL WIDE FLANGE SHAPES TO CONFORM TO CAN/CSA-G40.21 GRADE 350W OR ASTM A992/A992M GRADE 50 (345MPa).
 - STRUCTURAL WELDED WIDE FLANGE SHAPES TO CONFORM TO CAN/CSA-G40.20/G40.21 GRADE 350W.
 - ANGLES, PLATES AND CHANNELS TO CONFORM TO CAN/CSA-G40.20/G40.21 GRADE 300W.
 - HOLLOW STRUCTURAL SECTIONS TO CONFORM TO ASTM A500 GRADE C.
- ANCHOR RODS: CONFORM TO 300W THREADED ROD CONFORMING TO CSA G40.21-M.
- STRUCTURAL BOLTS SHALL CONFORM TO ASTM F3125 (GRADES A325, F1882, A490 AND F2280). NUTS SHALL CONFORM TO ASTM A563, WASHERS SHALL CONFORM TO ASTM F436M.
- WELDED STUD SHEAR CONNECTORS:
 - HEADED STUDS SHALL BE MANUFACTURED BY NELSON (OR APPROVED ALTERNATIVE).
 - STUDS SHALL BE MADE FROM MILD STEEL CONFORMING TO ASTM A108 GRADE 1010 THROUGH 1020.
 - HEADED STUDS SHALL BE WELDED PER MANUFACTURER'S RECOMMENDATIONS.
 - MECHANICAL PROPERTIES OF HEADED STUDS SHALL BE IN ACCORDANCE WITH AWS D1.1.

- STUDS SHALL BE 19 mm Ø 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.

- WHERE SLAB THICKNESS EXCEEDS 100 mm ON 76 mm DECK, LENGTH OF STUDS, AFTER WELDING, IS TO BE 150 mm THROUGHOUT.

- DEFORMED BAR ANCHORS: SHALL BE NELSON, FLUX FILLED DEFORMED BAR ANCHORS, TYPE D21, OR APPROVED ALTERNATIVE.

- STEEL DECK : CONFORM TO ASTM A653M GRADE A OR B.

- CONCRETE MASONRY UNITS: CONFORM TO CAN3-A165 SERIES, 15 MPa MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS.

- MORTAR: CONFORM TO CSA A179 TYPE "S" FOR LOAD BEARING WALLS.

- MASONRY GROUT: CONFORM TO CSA A179, 15 MPa MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS, 250 mm SLUMP, MAXIMUM AGGREGATE SIZE 10 mm.

- NON-SHRINK GROUT: 35 MPa MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS.

- RIGID INSULATION (FOR USE WITH FOUNDATIONS AND THE LIKE): EXTRUDED POLYSTYRENE WITH A MINIMUM COMPRESSIVE STRENGTH OF 0.24 MPa, UNLESS NOTED OTHERWISE.

H. FOUNDATIONS

- A COPY OF THE GEOTECHNICAL INVESTIGATION REPORT BY EXP SERVICES INC. DATED 2020/11/05 IS AVAILABLE FROM THE CONSULTANT. THIS INFORMATION IS AVAILABLE SOLELY AS A GUIDE. NO RESPONSIBILITY IS ACCEPTED BY THE OWNER OR THE CONSULTANT FOR ITS CORRECTNESS, NOR SHALL ITS ACCURACY AFFECT THE DESIGN OF THIS CONTRACT.
- FOUND ALL FOOTINGS AND UNDERPINNING ON NATURALLY CONSOLIDATED UNDISTURBED SOIL CAPABLE OF SAFELY SUSTAINING AN ULTIMATE LIMIT STATE (ULS) BEARING PRESSURE OF 600kPa AND A SERVICEABILITY LIMIT STATE (SLS) BEARING PRESSURE OF 400kPa. IF THESE CONDITIONS DO NOT PREVAL AT THE FOUNDING ELEVATIONS SHOWN, ADVISE THE CONSULTANT BEFORE PROCEEDING WITH THE WORK.
- FOUNDING ELEVATION OF FOOTINGS ARE NOTED ON THE FOUNDATION PLAN. THESE ELEVATIONS HAVE BEEN DETERMINED BASED ON RECOMMENDATIONS INCLUDED IN THE GEOTECHNICAL REPORT. FOUNDING ELEVATIONS ARE SUBJECT TO CONFIRMATION BY THE GEOTECHNICAL ENGINEER DURING CONSTRUCTION. FOUND FOOTINGS SUSCEPTIBLE TO FROST DAMAGE A MINIMUM OF 1200mm BELOW FINISHED GRADE UNLESS NOTED OTHERWISE.
- PROVIDE TEMPORARY FROST PROTECTION, DURING CONSTRUCTION, FOR ALL FOUNDATIONS WHICH ARE NOT FOUNDED A MINIMUM OF 1200mm BELOW GRADE.
- FOUND NEW FOOTINGS WHICH ARE LOCATED ADJACENT TO EXISTING FOOTINGS, AT THE SAME ELEVATION AS THE EXISTING FOOTINGS, UNLESS NOTED OTHERWISE.
- INSULATION IS SHOWN WHERE REQUIRED FOR PROTECTION OF THE FOUNDATIONS FROM DAMAGE DUE TO FROST ACTION ONLY. REFER TO ARCHITECTURAL DRAWINGS FOR FOUNDATION INSULATION NOT SHOWN ON THE STRUCTURAL DRAWINGS.
- THE LINE OF SLOPE BETWEEN ADJACENT FOOTINGS OR EXCAVATIONS OR ALONG STEPPED FOOTINGS SHALL NOT EXCEED A RISE OF 7 IN A RUN OF 10 UNLESS NOTED OTHERWISE.
- DO NOT PLACE BACKFILL AGAINST WALLS RETAINING EARTH (OTHER THAN CANTILEVER RETAINING WALLS) UNTIL THE WALLS AND THE FLOOR CONSTRUCTION AT TOP AND BOTTOM OF THE WALLS HAVE BEEN CAST AND ATTAINED 100% OF THEIR DESIGN STRENGTH.
- WHERE THE SLAB-ON-GRADE IS USED TO TIE THE TOP OF A WALL RETAINING EARTH, THAT WALL SHALL BE ADEQUATELY BRACED UNTIL THE SLAB HAS BEEN CAST AND ATTAINED 100% OF ITS DESIGN STRENGTH.
- CARRY OUT BACKFILLING AGAINST FOUNDATION WALLS WHERE THERE IS GRADE ON BOTH SIDES IN SUCH A MANNER THAT THE LEVEL OF BACKFILLING ON ONE SIDE OF THE WALL IS NEVER MORE THAN 600 mm DIFFERENT FROM THE LEVEL ON THE OTHER SIDE OF THE WALL.
- DO NOT COMPACT CLOSER THAN 1800 mm FROM WALLS WITH HEAVY EQUIPMENT. USE LIGHT HAND CONTROLLED EQUIPMENT WITHIN 1800 mm FROM WALLS.
- THE NEW ELEVATOR PIT SUBSTRUCTURE HAS BEEN DESIGNED AS TANKED CONSTRUCTION FOR SUBSURFACE HYDROSTATIC PRESSURE. FOR WATER-TIGHT PERFORMANCE OF THE TANKED CONSTRUCTION, EXTERNAL WATER-PROOFING SHALL BE REQUIRED. REFER TO ARCHITECTURAL DRAWINGS FOR WATER-PROOFING DETAILS.
- REFER TO TYPICAL DETAIL FOR MASONRY WALL BEARING DETAILS AT SLAB-ON-GRADE.

I. SLAB-ON-GRADE

- PLACE SLAB-ON-GRADE ON MATERIAL CAPABLE OF SUSTAINING A MINIMUM SLS BEARING PRESSURE OF 25 kPa WITHOUT SETTLEMENT.

J. CONCRETE AND REINFORCEMENT

- ALL DOWELS SHALL HAVE MINIMUM EMBEDMENT EQUIVALENT TO THE STRAIGHT TENSION EMBEDMENT LENGTH OR 600 mm, WHICHEVER IS GREATER, UNLESS NOTED OTHERWISE.
- PROVIDE DOWELS TO WALLS, COLUMNS AND PILASTERS SIMILAR IN NUMBER, SIZE, AND SPACING TO THE VERTICAL STEEL IN THE WALL, COLUMN OR PILASTER ABOVE UNLESS NOTED OTHERWISE.
- REINFORCEMENT IDENTIFIED AS "CONTINUOUS" SHALL TERMINATE WITH STANDARD END HOOKS AND SHALL BE LAPPED WITH CLASS "B" TENSION LAP SPLICES.
- REINFORCEMENT USED IN A MECHANICAL COUPLER OR END ANCHOR IS TO BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE COUPLER MANUFACTURER'S REQUIREMENTS.
- REINFORCEMENT LENGTHS NOTED IN TYPICAL DETAILS ARE MINIMUM LENGTHS UNLESS NOTED OTHERWISE.
- TABLE A INDICATES MINIMUM REINFORCEMENT FOR CONCRETE SLABS.
- CONSTRUCTION JOINTS:
 - HORIZONTAL CONSTRUCTION JOINTS SHALL NOT BE MADE IN BEAMS, UNLESS SHOWN OR APPROVED BY THE CONSULTANT.
 - HORIZONTAL CONSTRUCTION JOINTS IN WALLS SHALL ONLY BE MADE WHERE SHOWN ON THE DRAWINGS.
 - VERTICAL CONSTRUCTION JOINTS MAY BE MADE ONLY AT MIDSPAN OF BEAMS AND SLABS UNLESS NOTED OTHERWISE.
 - SUBMIT PROPOSED LOCATION OF ALL CONSTRUCTION JOINTS FOR REVIEW BY THE CONSULTANT.
- OPENINGS, SLEEVES, EMBEDDED DUCTS:
 - NO SLEEVES SHALL BE PLACED VERTICALLY OR HORIZONTALLY THROUGH BEAMS UNLESS REVIEWED AND APPROVED BY THE CONSULTANT.
 - NO OPENINGS SHALL BE MADE IN FLAT PLATE OR FLAT SLAB COLUMN STRIPS EXCEPT AS SHOWN ON TYPICAL DETAIL AND PLANS OR UNLESS REVIEWED AND APPROVED BY THE CONSULTANT.
- LAP SPLICES FOR WELDED WIRE FABRIC (WWF) SHALL BE:
 - 152 X 152 WWF 500 mm
 - 102 X 102 WWF 350 mm
 - 51 X 51 WWF 250 mm
- 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 DEPTH SHOWN ON THE DRAWINGS.
- WHERE CONCRETE SLABS ARE CAST ON STEEL DECK, SCREED SLAB TO SUIT BEAM CAMBERS AND MAINTAIN MINIMUM SLAB THICKNESSES SPECIFIED.
- CONCRETE COVER:
 - TABLES 2-1 TO 2-3 INDICATE THE MINIMUM CONCRETE COVER TO REINFORCEMENT.
 - COVER SHALL BE MEASURED FROM THE DEEPEST POINT OF TEXTURED CONCRETE SURFACE (OR REGLET/REVEAL) TO THE NEAREST DEFORMATION OF THE REINFORCEMENT. REINFORCEMENT INCLUDES TIES / STIRRUPS AND MAIN REINFORCEMENT.
 - ALL CONCRETE CAST AGAINST EARTH IS TO HAVE 75 mm COVER, UNLESS NOTED OTHERWISE.
 - ALL CONCRETE EXPOSED TO EARTH, INCLUDING CONCRETE CAST AGAINST FORMS AND SUBSEQUENTLY EXPOSED TO EARTH, IS TO HAVE 50 mm COVER, UNLESS NOTED OTHERWISE.
- THE USE OF SHOTCRETE TO CONSTRUCT ANY PART OF THE WORK SHALL BE AT THE SOLE DISCRETION OF THE CONSULTANT.

K. STRUCTURAL STEEL

- PROVIDE MINIMUM LENGTH OF BEARING OF 200 mm FOR ALL STEEL BEAMS BEARING ON MASONRY AND CONCRETE AND A MINIMUM OF 100 mm ON STRUCTURAL STEEL, UNLESS NOTED OTHERWISE.
- CENTRE BEARING PLATES UNDER BEAMS UNLESS NOTED OTHERWISE.
- BEARING PLATE DIMENSION GIVEN FIRST INDICATES SIDE PARALLEL TO BEAM WEB.
- ALL WELDS EXPOSED TO VIEW SHALL BE GROUND SMOOTH. REFER ALSO TO SPECIFICATIONS.
- REFER TO ABBREVIATIONS USED FOR THE CONNECTION FORCES SHOWN ON THE DRAWINGS. FORCES INDICATED ARE FACTORED UNLESS NOTED OTHERWISE.
- WHERE MOMENT CONNECTIONS ARE CALLED FOR BUT VALUES ARE NOT INDICATED, DESIGN CONNECTIONS FOR FULL MOMENT CAPACITY OF THE SMALLER MEMBER JOINED.
- SPLICES SHALL BE DESIGNED TO DEVELOP THE FULL CROSS SECTIONAL CAPACITY OF THE MEMBER AT THE POINT OF THE SPLICE. MEMBERS SHALL NOT BE SPLICED AT POINTS OF MAXIMUM STRESS. NO SPLICES SHALL BE MADE UNLESS SHOWN ON THE DRAWINGS OR REVIEWED AND APPROVED BY THE CONSULTANT.
- PROVIDE WELDED STIFFENER PLATES ON BOTH SIDES OF THE WEB OF 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.
- SHAPE AND SIZE GUSSET PLATES TO CLEAR ARCHITECTURAL FINISHES, MECHANICAL AND ELECTRICAL SERVICES, ELEVATOR SHAFTS AND THE LIKE.
- EMBEDMENT LENGTH FOR ANCHOR RODS, STRAP ANCHORS AND SIMILAR DEVICES IS GIVEN FOR THE STRAIGHT EMBEDMENT LENGTH WITHOUT HOOK. PROVIDE 75 mm HOOK FOR ALL ANCHOR RODS UNLESS NOTED OTHERWISE. PROVIDE 50 mm HOOK FOR STRAP ANCHORS UNLESS NOTED OTHERWISE.
- PROVIDE ADEQUATE SUPPORT AND ENSURE ADEQUATE BEARING IS PROVIDED FOR STEEL DECK AT CONNECTIONS, COLUMNS OR OTHER IRREGULARITIES, OR AREAS WHERE DETAILING OF STRUCTURAL STEEL RESULTS IN LOSS OF SUPPORT FOR THE DECK.
- WELD REINFORCING BAR COUPLERS AS PER THE MANUFACTURER'S INSTRUCTIONS. WELD COUPLER TO RESIST A TENSION FORCE EQUAL TO THE ULTIMATE TENSILE STRENGTH OF ITS DESIGNATED REINFORCING BAR.

13. DESIGN TYPICAL SHEAR CONNECTIONS, UNLESS NOTED OTHERWISE, AS FOLLOWS:

- TYPICAL BEAM TO BEAM (INTERIOR CONDITION) CONNECTIONS - SINGLE ANGLE HEADER, DOUBLE ANGLE HEADER, SHEAR TAB OR END PLATE CONNECTIONS.
- TYPICAL BEAM TO SPANDREL BEAM CONNECTIONS - DOUBLE ANGLE HEADER, SHEAR TAB OR END PLATE CONNECTIONS.
- TYPICAL BEAM TO COLUMN CONNECTIONS - DOUBLE ANGLE HEADER, SHEAR TAB OR END PLATE CONNECTIONS.
- TYPICAL SPANDREL BEAM TO COLUMN CONNECTIONS - DOUBLE ANGLE HEADER, SHEAR TAB OR END PLATE CONNECTIONS.
- ALL OTHER CONDITIONS - DOUBLE ANGLE HEADER, SHEAR TAB OR END PLATE CONNECTIONS.

NOTE: THE ADDITION OF OTHER CONNECTION FORCES (I.E. AXIAL FORCES AND PASS THROUGH FORCES) MAY RESULT IN DIFFERENT CONNECTIONS TO THOSE NOTED ABOVE.

- DESIGN ALL BEAM CONNECTIONS FOR THE FACTORED VERTICAL SHEAR FORCE NOTED ON PLAN. WHERE NO FORCE IS INDICATED, DESIGN THE CONNECTION FOR A VERTICAL SHEAR FORCE OF 75 kN (50 kN FOR C150 AND C100 SECTIONS). IN ADDITION, A MINIMUM OF TWO BOLTS ARE TO BE USED IN ALL BEAM CONNECTIONS.

- PROVIDE CAMBER TO BEAMS, GIRDERS AND TRUSSES AS SHOWN ON THE PLANS. CAMBERS SHOWN ARE FOR ERECTED IN-PLACE CONDITION OF MEMBERS BEFORE INSTALLATION OF STEEL DECK.

- 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.

L. STEEL DECK

- THE FLOOR STRUCTURE DESIGN IS BASED ON THE FOLLOWING COMPOSITE STEEL DECK PROFILES:
 - 76 mm DECK - P-2432 COMPOSITE BY CANAM
 - 38 mm DECK - P-3615 COMPOSITE BY CANAM
- THE ROOF STRUCTURE DESIGN IS BASED ON THE FOLLOWING STEEL DECK PROFILES:
 - 76 mm DECK - P-2436 BY CANAM
 - 38 mm DECK - P-3615 BY CANAM
- DIFFERENT TYPES OF STEEL DECK, WITH SIMILAR PROPERTIES TO THOSE LISTED ABOVE, MAY BE ACCEPTABLE SUBJECT TO REVIEW BY THE CONSULTANT. IF A DIFFERENT TYPE OF DECK PROPOSED RESULTS IN A DIFFERENT FLUTE SPACING OR CONCRETE QUANTITIES THAN THE PROFILE ASSUMED IN THE DESIGN, THE CONTRACTOR SHALL IDENTIFY THE DIFFERENCES AT THE TIME OF TENDER.
- PROVIDE COMPOSITE STEEL DECK IN ALL ROOF OR FLOOR AREAS WHICH WILL RECEIVE A CONCRETE SLAB, UNLESS DECK IS NOTED TO BE DESIGNED AS FORMWORK ONLY.
- 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 IN THE RANGE OF 2.5-17.5 kN/mm.

M. MASONRY

- WHERE DOWELS, ANCHOR RODS, ETC., ARE SHOWN PROJECTING INTO MASONRY, BUILD THESE TIGHTLY INTO MASONRY VOIDS WITH MASONRY GROUT.
- 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.
- BENEATH STEEL, CONCRETE OR REINFORCED MASONRY UNITELS, PROVIDE A MINIMUM DEPTH OF 200 mm 100% SOLID MASONRY UNITS PROJECTING A MINIMUM LENGTH OF 200 mm BEYOND THE END OF THE LINTEL, UNLESS NOTED OTHERWISE.
- BENEATH SLABS OR STEEL DECK, PROVIDE A MINIMUM DEPTH OF 200 mm OF 100% SOLID MASONRY UNITS.
- 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.
- BUILD MASONRY TIGHTLY INTO WEBS OF ALL WALL BEARING STEEL BEAMS AT THEIR POINTS OF BEARING.
- FULLY GROUT BLOCK CELLS AT PARAPETS.
- MAINTAIN SUPPORT OF MASONRY UNITELS FOR A MINIMUM OF SEVEN DAYS OR UNTIL SUFFICIENT STRENGTH IS GAINED TO SAFELY SUPPORT LOADS IMPOSED.
- FOR INTERIOR NON-LOAD BEARING MASONRY PARTITION WALLS PROVIDE THE MINIMUM REINFORCEMENT NOTED IN TABLE 3.
- REINFORCED MASONRY:
 - CELLS TO BE REINFORCED SHALL BE KEPT CLEAN OF MORTAR DROPPINGS.
 - GROUT FOR REINFORCED CELLS, BOND BEAMS, UNITELS AND CELLS CONTAINING DOWELS, ANCHOR RODS AND INSERTS SHALL CONFORM TO THE REQUIREMENTS OF SECTION E, MATERIALS.
 - PROVIDE MINIMUM 2-15M VERTICALS FULL HEIGHT AT ALL WALL ENDS, CORNERS, INTERSECTIONS AND OPENINGS UNLESS NOTED OTHERWISE.
 - PROVIDE 1-15M VERTICAL FULL HEIGHT EACH SIDE OF CONTROL JOINTS.
 - PROVIDE DOWELS FROM FOUNDATIONS TO MATCH VERTICAL WALL REINFORCEMENT.
 - PROVIDE CLASS "B" TENSION LAP LENGTH FOR ALL VERTICAL REINFORCEMENT, INCLUDING DOWELS.
 - PROVIDE A MINIMUM 300 mm LAP FOR WIRE LADDER OR MESH REINFORCEMENT.
 - 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.
 - 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.
 - 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.
 - PROVIDE ADEQUATE TEMPORARY BRACING TO MASONRY WALLS UNTIL PERMANENT HORIZONTAL STRUCTURES ARE INSTALLED AND CAN ADEQUATELY BRACE THE WALLS.
- FILL ALL MASONRY PIERS LESS THAN 800 mm IN WIDTH SOLID WITH MASONRY GROUT.

N. UNITELS

- PROVIDE UNITELS OVER ALL OPENINGS OR RECESSES IN MASONRY WALLS, INCLUDING THOSE FOR MECHANICAL OR ELECTRICAL SERVICES OR EQUIPMENT.
- SEE TYPICAL DETAILS FOR LINTEL SIZES FOR NON-LOAD BEARING MASONRY WALLS AND VENER.
- REFER TO ARCHITECTURAL DRAWINGS FOR TYPES OF UNITELS TO

O. 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.

A. ANCHORAGE TO CONCRETE

a. 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 V3 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT SYSTEM WITH HAS-E THREADED ROD.
4. HILTI HIT-RE 500 V3 SAFE SET SYSTEM WITH HILTI ROUGHENING TOOL (TE-YRT) WITH HAS-E THREADED ROD FOR DIAMOND CORED HOLES.
5. STEEL ANCHOR ELEMENT SHALL BE HILTI HIS-N INTERNALLY THREADED INSERTS, HILTI HAS-E CONTINUOUSLY THREADED ROD, OR CONTINUOUSLY DEFORMED STEEL REBAR.

b. MEDIUM DUTY MECHANICAL ANCHORS FOR CONCRETE USE:

1. HILTI KWIK HUS E2 AND KWIK HUS E2-1 SCREW ANCHORS.
2. HILTI KWIK BOLT-TZ EXPANSION ANCHORS.
3. HILTI KWIK BOLT-3 EXPANSION ANCHORS.

c. HEAVY DUTY MECHANICAL ANCHORS FOR CONCRETE USE:

1. HILTI HDA UNDERCUT ANCHORS.
2. HILTI HSL-3 EXPANSION ANCHORS.

B. REBAR DOWELING INTO CONCRETE

a. 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 V3 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT WITH CONTINUOUSLY DEFORMED REBAR.
3. HILTI HIT-RE 500 V3 SAFE SET SYSTEM WITH HILTI ROUGHENING TOOL (TE-YRT) WITH CONTINUOUSLY DEFORMED REBAR IN DIAMOND CORED HOLES.

C. ANCHORAGE TO SOLID GROUTED MASONRY

a. 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.

b. MECHANICAL ANCHORS USE:

1. HILTI KWIK HUS-E2 SCREW ANCHORS.
2. HILTI KWIK BOLT-3 EXPANSION ANCHORS.

D. ANCHORAGE TO HOLLOW / MULTI-WYTHE MASONRY

a. 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 SHALL BE BASED ON THE TECHNICAL DATA PUBLISHED BY HILTI OR SUCH OTHER METHOD AS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE. CONTRACTOR SHALL PROVIDE CALCULATIONS DEMONSTRATING THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES OF THE SPECIFIED PRODUCT. SUBSTITUTIONS WILL BE EVALUATED FOR COMPLIANCE WITH THE RELEVANT BUILDING CODE FOR SEISMIC USES, LOAD RESISTANCE, INSTALLATION CATEGORY, AND AVAILABILITY OF COMPREHENSIVE INSTALLATION INSTRUCTIONS. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE TEMPERATURE AND INSTALLATION TEMPERATURE. SUBSTITUTION SUBMITTALS SHALL INCLUDE THE TEST RESULTS FROM ACI 308.2 TESTING FOR MECHANICAL ANCHORS OR ACI 308.4 TESTING FOR ADHESIVE ANCHORS.

3. INSTALL ANCHORS PER THE MANUFACTURER WRITTEN INSTRUCTIONS.

4. INSTALL ANCHORS IN NEW CONCRETE STRUCTURES AFTER CONCRETE HAS ATTAINED ITS 28 DAY SPECIFIED STRENGTH.

5. OVERHEAD ADHESIVE ANCHORS MUST BE INSTALLED USING THE HILTI PROFI SYSTEM.

6. THE CONTRACTOR SHALL ARRANGE AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ON-SITE 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.

7. 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.

8. 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. DO NOT CUT OR DAMAGE EXISTING REINFORCEMENT WHEN INSTALLING ANCHORS.

TABLE 1-1: PERFORMANCE REQUIREMENTS FOR CONCRETE ELEMENTS EXPOSED TO CHLORIDES WITH/WITHOUT FREEZING AND THAWING				
STRUCTURAL ELEMENTS		EXPOSURE CLASS	MIN COMPRESSIVE ¹ STRENGTH F _c (MPa)	COMMENTS
FOOTINGS AND PIERS		C-1	35	
RAFT/MAT		C-1	35	
SLAB-ON-GRADE		C-2	32	
SLAB-ON-GRADE		C-4	32	
FOUNDATION WALLS/ RETAINING WALLS ²		C-1	35	
SHEAR WALLS		C-1	35/ SEE SCHEDULE ³	
COLUMNS		C-1	35/ SEE SCHEDULE ³	
SLABS, RAMPS AND BEAMS		C-1	35	
TOPPINGS		C-2	32	
SIDEWALKS, CURBS		C-2	32	

- TABLE 1-1 NOTES:
1. REFER TO THE CONCRETE AND REINFORCEMENT SECTION OF THE GENERAL NOTES FOR FURTHER INFORMATION.
 2. REFER TO LEGEND SHOWN BELOW TABLE 1-3.

TABLE 1-2: PERFORMANCE REQUIREMENTS FOR CONCRETE ELEMENTS EXPOSED TO FREEZING AND THAWING (BUT NOT EXPOSED TO CHLORIDES)				
STRUCTURAL ELEMENTS		EXPOSURE CLASS	MIN COMPRESSIVE ¹ STRENGTH F _c (MPa)	COMMENTS
RAFT/MAT		F-1	30	
FOUNDATION WALLS/ RETAINING WALLS ²		F-2	30	
SHEAR WALLS		F-2	30/ SEE SCHEDULE ³	
COLUMNS		F-2	30/ SEE SCHEDULE ³	
SLABS, RAMPS AND BEAMS		F-1	30	
TOPPINGS		F-1	32	
STAIRS		F-1	30	

- TABLE 1-2 NOTES:
1. REFER TO THE CONCRETE AND REINFORCEMENT SECTION OF THE GENERAL NOTES FOR FURTHER INFORMATION.
 2. REFER TO LEGEND SHOWN BELOW TABLE 1-3.

TABLE 1-3: PERFORMANCE REQUIREMENTS FOR CONCRETE ELEMENTS NOT EXPOSED TO CHLORIDES NOR FREEZING AND THAWING				
STRUCTURAL ELEMENTS		EXPOSURE CLASS	MIN COMPRESSIVE ¹ STRENGTH F _c (MPa)	COMMENTS
FOOTINGS AND PIERS		N	25	
UNDERPINNING		N	25	
RAFT/MAT		N	25	
SLAB-ON-GRADE		N	25	
SHEAR WALLS		N	30/ SEE SCHEDULE ³	
WALLS		N	25	
COLUMNS		N	30/ SEE SCHEDULE ³	
SLABS, RAMPS AND BEAMS		N	30	
CONCRETE ON STEEL DECK		N	25	
HOUSEKEEPING PADS		N	25	
FLOATING SLABS		N	25	
TOPPINGS		N	30	
SKIM SLABS		N	20	
UNSHRINKABLE FILL		N	MAX 0.40	
LEAN-MIX CONCRETE		N	8	
PITS/TRENCHES		N	25	
STAIRS		N	30	

- TABLE 1-3 NOTES:
1. REFER TO THE CONCRETE AND REINFORCEMENT SECTION OF THE GENERAL NOTES FOR FURTHER INFORMATION.
 2. LEGEND FOR TABLES 1-1, 1-2 AND 1-3:
 - a. SEE SCHEDULES AND FLOOR PLANS FOR AREAS/ELEMENTS WITH DIFFERENT CONCRETE STRENGTHS.
 - b. MAXIMUM AGGREGATE SIZE IS 20 mm.
 - c. MINIMUM COMPRESSIVE STRENGTHS ARE AT 28 DAYS UNLESS NOTED OTHERWISE.
 - d. MAXIMUM AGGREGATE SIZE IS 10 mm.
 - e. WHERE WALLS ARE INTEGRAL WITH COLUMNS CAST WALLS AND COLUMNS WITH CONCRETE OF THE HIGHER SPECIFIED STRENGTH.

TABLE 2-1: MINIMUM CONCRETE COVER FOR CONCRETE ELEMENTS EXPOSED TO CHLORIDES WITH/WITHOUT FREEZING AND THAWING					
ELEMENTS		COMMENTS	BAR SIZE	TOP COVER	BOTTOM COVER
				NORMAL/SEVERE	NORMAL/SEVERE
				FIRE RATING	
				≤ 4	≤ 2 3 4
WALLS	FOUNDATION WALLS, SHEAR WALLS AND MISC. WALLS		Ø ≤ 25M	60	
			30M	60	
			35M	70	
			45M	90	
COLUMNS	COLUMNS		Ø ≤ 30M	60	
			35M	70	
			45M	90	
			55M	110	
SLABS AND BEAMS (UNPROTECTED)	SLABS AND BEAMS		Ø ≤ 25M	60	
			30M	70	
			35M	70	
			45M	90	

- TABLE 2-1 NOTES:
1. REFER TO THE CONCRETE AND REINFORCEMENT SECTION OF THE GENERAL NOTES FOR FURTHER CONCRETE COVER REQUIREMENTS.
 2. REFER TO LEGEND SHOWN BELOW TABLE 2-3.

TABLE 2-2: MINIMUM CONCRETE COVER FOR CONCRETE ELEMENTS EXPOSED TO FREEZING AND THAWING (BUT NOT EXPOSED CHLORIDES)					
ELEMENTS		COMMENTS	BAR SIZE	FIRE RATING	
				≤ 3	4
WALLS	FOUNDATION WALLS, SHEAR WALLS ¹ , RETAINING WALLS AND MISC. WALLS		Ø ≤ 25M	40	
			30M	45	
			35M	55	
			45M	70	
COLUMNS	COLUMNS		Ø ≤ 30M	45	55 ¹
			35M	55	
			45M	70	70 ¹
			55M	85	85 ¹
SLABS AND BEAMS	SLABS AND BEAMS		Ø ≤ 25M	40	
			30M	45	
			35M	55	
			45M	70	

- TABLE 2-2 NOTES:
1. REFER TO THE CONCRETE AND REINFORCEMENT SECTION OF THE GENERAL NOTES FOR FURTHER CONCRETE COVER REQUIREMENTS.
 2. REFER TO LEGEND SHOWN BELOW TABLE 2-3.

TABLE 2-3: MINIMUM CONCRETE COVER FOR CONCRETE ELEMENTS NOT EXPOSED TO CHLORIDES NOR FREEZING AND THAWING						
ELEMENTS		COMMENTS	BAR SIZE	FIRE RATING		
				≤ 2	3	4
WALLS	FOUNDATION WALLS, SHEAR WALLS ¹ , RETAINING WALLS AND MISC. WALLS		Ø ≤ 25M	25		
			30M	30		
			35M	35		
			45M	45		
COLUMNS	COLUMNS		Ø ≤ 35M	40	55 ¹	
			45M	45		
			55M	55		
			Ø ≤ 25M	25	35	40
SLABS AND BEAMS	SLABS	30M	30			
		35M	35			
		45M	45			
	BEAMS	Ø ≤ 30M	30	40		
		35M	35			
		45M	45			

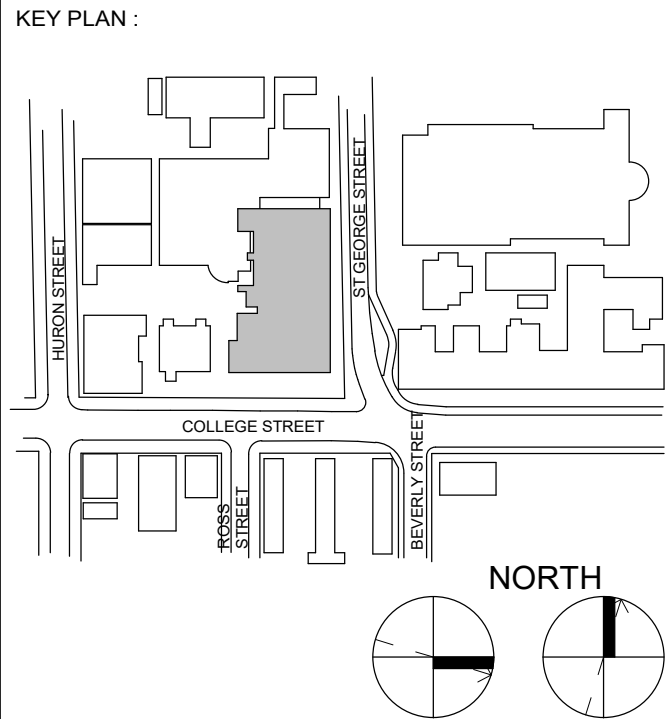
- TABLE 2-3 NOTES:
1. REFER TO THE CONCRETE AND REINFORCEMENT SECTION OF THE GENERAL NOTES FOR FURTHER CONCRETE COVER REQUIREMENTS.
 2. LEGEND FOR TABLES 2-1, 2-2 AND 2-3:
 - a. PROVIDE COVER FOR MINIMUM 2 HOURS FIRE RATING UNLESS NOTED OTHERWISE.
 - b. THE COVER FOR A BUNDLE OF BARS SHALL BE THE SAME AS THAT FOR A SINGLE BAR WITH AN EQUIVALENT AREA.
 - c. FOR COLUMN COVERS (TO MAIN REINFORCEMENT) EXCEEDING 63 mm WITH 4 HOUR FIRE RATING PROVIDE WIRE MESH USING 1.57 mm Ø @ 100 mm EA WAY.
 - d. CONCRETE WALLS EXPOSED TO FIRE ON BOTH SIDES SIMULTANEOUSLY SHALL HAVE THE MINIMUM COVER REQUIREMENTS FOR COLUMNS.

TABLE 3: INTERIOR NON-LOAD BEARING MASONRY PARTITION WALL MINIMUM REINFORCEMENT			
SEISMIC HAZARD INDEX	WALL THICKNESS	VERTICAL REINFORCEMENT	HORIZONTAL REINFORCEMENT
I _e Fa Sa (0.2) < 0.35	140	NO MANDATED MINIMUM	STANDARD 3.6 mm LADDER TYPE EVERY THIRD BED JOINT
	190	NO MANDATED MINIMUM	STANDARD 3.6 mm LADDER TYPE EVERY THIRD BED JOINT
	240	NO MANDATED MINIMUM	STANDARD 3.6 mm LADDER TYPE EVERY THIRD BED JOINT
	290	NO MANDATED MINIMUM	STANDARD 3.6 mm LADDER TYPE EVERY THIRD BED JOINT

- TABLE 3 NOTES:
CONDITIONS WHERE THIS DETAIL IS APPLICABLE:
- a. "PIN-PIN" WALLS. LATERAL SUPPORT IS REQUIRED AT THE TOP OF ALL MASONRY PARTITION WALLS, REFER TO MASONRY LATERAL SUPPORT TYPICAL DETAILS.
 - b. MASONRY WALL PIERS ONLY WHEN THEIR LENGTH EXCEEDS 800 mm. PIERS MUST BE CONTINUOUS TO TOP OF WALL.
 - c. INTERIOR PARTITIONS ONLY WITH A MAXIMUM HEIGHT OF 4000 mm.
 - d. DOES NOT APPLY TO MASONRY PARAPETS.

TABLE 4: 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	---	---

- TABLE 4 NOTE:
1. 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.



REVISION		
NO.	DATE	DESCRIPTION
1	2024-10-04	PROGRESS ISSUANCE
2	2024-11-01	PROGRESS ISSUANCE
3	2024-11-15	BUILDING PERMIT
4	2025-01-31	ISSUED FOR BID
5	2025-04-30	ISSUED FOR CONSTRUCTION

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IN ASSOCIATION WITH:

SEAL :	
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PROJECT :
UNIVERSITY OF TORONTO HEALTH & WELLNESS CENTRE AT KOFFLER RENOVATION

214 College Street
Toronto, ON, M5T 3A1

SHEET CONTENTS :
GENERAL NOTES

PROJECT NUMBER: EN023-00965			
DRAWING SCALE: 1 : 1			
DRAWN BY: Author	CHECKED BY : Checker	DATE: 2024-07-16	REV:
SHEET NO.:	S002		6

A. GENERAL

- THE STRUCTURE OUTLINED HEREIN HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE BUILDING CODE IDENTIFIED IN THE STRUCTURAL GENERAL NOTES.
- ALL REINFORCED CONCRETE AND PRESTRESSED CONCRETE ELEMENTS HAVE BEEN DESIGNED IN ACCORDANCE WITH CSA A23.3, DESIGN OF CONCRETE STRUCTURES.
- ALL STRUCTURAL STEEL ELEMENTS HAVE BEEN DESIGNED IN ACCORDANCE WITH CSA-S16, DESIGN OF STEEL STRUCTURES.
 - THE STRUCTURAL STEEL DESIGN IS BASED ON "SIMPLE" CONSTRUCTION.
 - THE STEEL STRUCTURE HAS BEEN DESIGNED TO PROVIDE DUCTILE RESPONSE UNDER SEISMIC LOADING. REFER TO THE LATERAL LOAD RESISTING SYSTEM DESIGN NOTES FOR FURTHER INFORMATION.
 - ALL CONNECTIONS ARE ASSUMED TO BE BEARING TYPE CONNECTIONS, UNLESS NOTED OTHERWISE. THE BOLTS SHALL BE BROUGHT TO A SNUG-TIGHT CONDITION AS DEFINED IN CSA-S16.
- ALL STRUCTURAL MASONRY ELEMENTS HAVE BEEN DESIGNED IN ACCORDANCE WITH CSA-S304, MASONRY DESIGN FOR BUILDINGS BASED ON ENGINEERING ANALYSIS.

B. LATERAL LOAD RESISTING SYSTEM

- THE LATERAL WIND AND EARTHQUAKE LOADS APPLIED TO THE STRUCTURE ARE RESISTED BY THE FOLLOWING:
 - THE NEW ELEVATOR SHAFT IS Laterally SELF-SUPPORTING AND CONSISTS OF CONCRETE SHEAR WALLS
- THE NEW STRUCTURAL ELEMENTS HAS BEEN DESIGNED TO RESIST LATERAL WIND AND EARTHQUAKE LOADS IN ACCORDANCE WITH THE BUILDING CODE IDENTIFIED IN THE STRUCTURAL GENERAL NOTES.
- THE DESIGN PARAMETERS FOR WIND AND EARTHQUAKE ARE AS NOTED BELOW:
 - WIND LOADS

THE WIND LOADS HAVE BEEN CALCULATED IN ACCORDANCE WITH STATIC PROCEDURE AS OUTLINED IN BUILDING CODE IDENTIFIED IN THE STRUCTURAL GENERAL NOTES.
 - HOURLY WIND PRESSURES FOR TORONTO, ONTARIO:
q10 = 0.34 kPa
q50 = 0.44 kPa
 - WIND IMPORTANCE FACTOR
CATEGORY - NORMAL
iw = 1.0 (ULS)
iw = 0.75 (SLS)
 - EXPOSURE FACTORS BASED ON ROUGH TERRAIN
Ce = 0.763
 - EXTERNAL PRESSURE AND GUST COEFFICIENT (LOW BUILDING)
Cpe, BASED ON FIGURE 4.1.7.6 -A OF THE BUILDING CODE WHICH VARIES BASED ON BUILDING SURFACE LOCATION.
 - INTERNAL PRESSURE COEFFICIENT, Cpi: NON-UNIFORMLY DISTRIBUTED OPENINGS OF WHICH NONE IS SIGNIFICANT OR SIGNIFICANT OPENINGS THAT ARE WIND-RESISTANT AND CLOSED DURING STORMS, Cpi = -0.45 TO +0.30
 - EARTHQUAKE LOADS

THE EARTHQUAKE LOADS HAVE BEEN CALCULATED IN ACCORDANCE WITH THE EQUIVALENT STATIC FORCE PROCEDURE.
 - EARTHQUAKE IMPORTANCE FACTOR
CATEGORY - NORMAL
Ie = 1.0 (ULS)
 - SEISMIC HAZARD PARAMETERS FOR TORONTO, ONTARIO:
Sa(0.2) = 0.249, Sa(0.5) = 0.126, Sa(1.0) = 0.063, Sa(2.0) = 0.029, Sa(5.0) = 0.0071, Sa(10.0) = 0.0028, PGA = 0.160, PGV = 0.099
 - SITE CLASSIFICATION FOR SEISMIC SITE RESPONSE:
CLASS = C
 - ACCELERATION AND VELOCITY BASED SITE COEFFICIENTS:
Fa = 1.0, Fv = 1.0
 - TYPE OF SEISMIC FORCE RESISTING SYSTEM (SFRS):
Rd = 1.0, Ro = 1.0
 - FUNDAMENTAL LATERAL PERIOD USED FOR CALCULATIONS (NEW ELEVATOR SHAFT):
Ta = 0.287 SEC

- DESIGN FACTORED BASE SHEAR (NEW ELEVATOR SHAFT):

MAXIMUM WIND
NORTH / SOUTH DIRECTION = 40 kN
EAST / WEST DIRECTION = 25 kN

MAXIMUM EARTHQUAKE
NORTH / SOUTH DIRECTION = 90 kN
EAST / WEST DIRECTION = 90 kN
- DESIGN FACTORED OVERTURNING MOMENTS (NEW ELEVATOR SHAFT):

MAXIMUM WIND
NORTH / SOUTH DIRECTION = 575 kNm
EAST / WEST DIRECTION = 250 kNm

MAXIMUM EARTHQUAKE
NORTH / SOUTH DIRECTION = 1080 kNm
EAST / WEST DIRECTION = 1080 kNm

C. LOADS ON FOUNDATION / RETAINING WALLS

- THE NEW ELEVATOR PIT FOUNDATION WALLS HAVE BEEN DESIGNED AS A PART OF THE TANKED CONSTRUCTION FOR SUBSURFACE HYDROSTATIC PRESSURE WITH WATER SURFACE AT EL 150.700 m.
- THE NEW ELEVATOR PIT FOUNDATION WALLS HAVE BEEN DESIGNED FOR A HORIZONTAL PRESSURE 'P' (kPa) AT ANY DEPTH 'h' (m) GIVEN BY THE EXPRESSION:

 $P = Ps + Pw + Pe$
 Ps (HORIZONTAL SOIL PRESSURE) = $K (\gamma h - h_{w0}) + (\gamma' * h_{w0}) + q$
 Pw (HORIZONTAL WATER PRESSURE) = $\gamma_w * h_w$
 h_w = DEPTH BELOW GROUND WATER LEVEL IN METRES

WHERE THE
SOIL PRESSURE COEFFICIENT, $K = 0.5$
UNIT WEIGHT OF SOIL, $\gamma = 18 \text{ kN/m}^3$
SUBMERGED UNIT WEIGHT OF SOIL, $\gamma' = \gamma - \gamma_w$
SURCHARGE, $q = 4.8 \text{ kPa}$
UNIT WEIGHT OF WATER, $\gamma_w = 9.8 \text{ kN/m}^3$
EARTHQUAKE SOIL PRESSURE, $Pe = 0 \text{ kPa}$

D. LIVE LOADS ON FLOORS

- SEE NOTES ON KEY PLANS. ALL LOADS GIVEN ARE UNFACTORED LOADS UNLESS NOTED OTHERWISE.
- LIVE LOADS ON ALL STRUCTURAL ELEMENTS HAVE BEEN REDUCED AS PERMITTED BY CODE.

E. LIVE LOADS ON ROOFS

- THE ROOF AREAS HAVE BEEN DESIGNED TO RESIST LIVE SNOW, RAIN AND WIND LOADS IN ACCORDANCE WITH THE BUILDING CODE IDENTIFIED IN THE STRUCTURAL GENERAL NOTES. THE DESIGN PARAMETERS FOR THESE LOADS ARE AS NOTED BELOW.
- SNOW LOAD:

THE SNOW LOADS BELOW HAVE BEEN CALCULATED IN ACCORDANCE WITH THE BUILDING CODE IDENTIFIED IN THE STRUCTURAL GENERAL NOTES.
 - SNOW IMPORTANCE FACTOR
CATEGORY - NORMAL
Is = 1.0 (ULS)
Is = 0.9 (SLS)
 - GROUND SNOW LOAD (1 IN 50 YEAR)
Ss = 0.9 kPa
 - BASIC ROOF SNOW LOAD FACTOR
Cb = 0.8
 - WIND EXPOSURE FACTOR
Cw = 1.0
 - SLOPE FACTOR
Cs = 1.0
 - SHAPE FACTOR
Ca = 1.0
 - ASSOCIATED RAIN LOAD (1 IN 50 YEAR)
Sr = 0.4 kPa
 - SPECIFIED SNOW LOAD
S = Is(Ss(CbCwCsCa) + Sr) = 1.12 kPa
 - DISTRIBUTION OF SNOW LOAD WITH ACTUAL VALUES ADJACENT TO HIGHER WALLS, ROOFS AND MECHANICAL UNITS IS SHOWN ON THE LOADING PLANS.

- RAIN LOAD
 - THE DESIGN OF THE ROOF STRUCTURE IS BASED ON THE ASSUMPTION THAT THE FLOW CONTROL ROOF DRAINS SATISFY ALL REQUIREMENTS OF THE NATIONAL PLUMBING CODE OF CANADA.
 - THE TOTAL LOAD ASSOCIATED WITH THE 24 HOUR RAINFALL, IN ACCORDANCE WITH THE BUILDING CODE IDENTIFIED IN THE STRUCTURAL GENERAL NOTES IS EQUIVALENT TO 97mm OF WATER OVER THE ENTIRE ROOF AREA.
 - THE ACTUAL DISTRIBUTION OF THIS LOAD HAS BEEN ADJUSTED TO ACCOUNT FOR THE ROOF SLOPES AND PROFILE.
- WIND LOAD - REFER TO THE LATERAL LOAD RESISTING SYSTEM SECTION OF THESE NOTES.
- THE ROOF AREAS HAVE BEEN DESIGNED FOR A MINIMUM LIVE LOAD OF 1.0 kPa AND NOT COMBINED WITH SNOW LOAD UNLESS NOTED OTHERWISE.

F. SUPERIMPOSED DEAD LOADS AND OTHER LOADS

- THE STRUCTURE HAS BEEN DESIGNED TO RESIST THE SUPERIMPOSED DEAD LOADS NOTED ON PLAN.
- THESE SUPERIMPOSED DEAD LOADS HAVE BEEN DETERMINED BASED ON THE MATERIALS SHOWN ON THE ARCHITECTURAL DRAWINGS AND INFORMATION PROVIDED BY THE OTHER DESIGN DISCIPLINES. IF THE CONTRACTOR PROPOSES TO SUBSTITUTE ANY SPECIFIED MATERIALS WITH MATERIALS OF HEAVIER CONSTRUCTION, THEY SHALL INFORM THE CONSULTANT WHO WILL ASSESS THE IMPACT OFTHE PROPOSED SUBSTITUTION PRIOR TO PROPOSED SUBSTITUTION BEING ACCEPTED.
- ASSUMED EQUIPMENT LOADS, PIPE SUPPORT REACTIONS AND THE LIKE HAVE BEEN OBTAINED FROM THE MEP CONSULTANTS. THE CONTRACTOR IS REQUIRED TO SUBMIT SUFFICIENT INFORMATION TO THE CONSULTANT SUCH THAT THESE ASSUMPTIONS CAN BE CONFIRMED.
- LOADS IMPOSED BY WINDOW WASHING, ELEVATORS AND OTHER SYSTEMS ARE ALSO NOTED. THIS INFORMATION IS TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO THE INSTALLATION OF THE VARIOUS SYSTEMS.
- IT HAS BEEN ASSUMED THAT:
CURTAIN WALL SPANNING VERTICALLY BETWEEN TWO ADJACENT LEVELS IS HUNG FROM THE UPPER LEVEL.

G. STRUCTURAL MOVEMENTS

- TYPICAL HORIZONTAL ELEMENTS (NOT SUPPORTING THE BUILDING ENCLOSURE) HAVE BEEN DESIGNED SO THAT THE THEORETICAL VERTICAL DEFLECTIONS WILL NOT EXCEED THE VALUES NOTED IN DESIGN NOTES TABLE 1 BELOW.
- ELEMENTS SUPPORTING THE BUILDING ENCLOSURE HAVE BEEN DESIGNED FOR A THEORETICAL VERTICAL DEFLECTION OF ONE HALF THE VALUES NOTED IN DESIGN NOTES TABLE 1, OR 19mm WHICH EVER IS LESS.
- INTERIOR NON LOAD BEARING WALLS AND PARTITIONS, INCLUDING MASONRY WALLS, DRYWALL PARTITIONS AND THE LIKE ARE TO BE DETAILED TO ACCOMMODATE A MINIMUM OF 25mm VERTICAL MOVEMENT AT THE TOP OF THE PARTITION, UNLESS NOTED OTHERWISE.
- THE STRUCTURE HAS BEEN DESIGNED TO LIMIT THE MAXIMUM INTERSTOREY DRIFT AT THE SERVICEABILITY LIMIT STATE (SLS) TO l/500, FOR WIND LOADS WHERE 'l' IS THE FLOOR TO FLOOR HEIGHT BETWEEN TWO ADJACENT FLOORS, AND TO 0.025 h0 FOR EARTHQUAKE LOADS, WHERE 'h0' IS THE HEIGHT OF THE STOREY.
- NON STRUCTURAL ELEMENTS SUCH AS THE BUILDING ENCLOSURE, MECHANICAL AND ELECTRICAL SERVICES AND SUPPORTS, AND THE LIKE, INCLUDING NON STRUCTURAL MOVEMENT JOINTS INCORPORATED WITHIN THESE ELEMENTS, MUST BE DESIGNED AND DETAILED TO ACCOMMODATE, AS A MINIMUM, THE ANTICIPATED MOVEMENTS NOTED ABOVE.
- REFER TO PLANS, TYPICAL DETAILS AND PROJECT SPECIFIC DETAILS FOR HORIZONTAL MOVEMENT JOINTS.

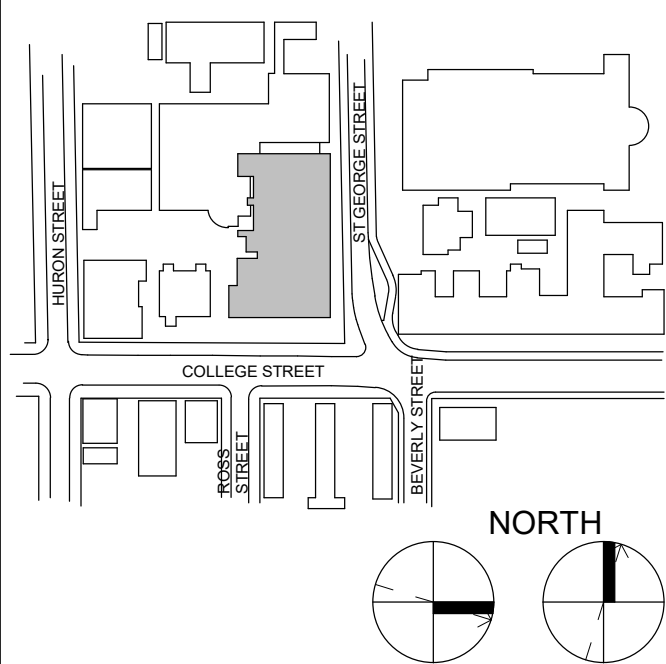
DESIGN NOTES TABLE 1: VERTICAL DEFLECTION LIMITATIONS		
TYPE OF MEMBER	DEFLECTION TO BE CONSIDERED	DEFLECTION LIMITATION
STRUCTURAL STEEL CONSTRUCTION		
SIMPLE SPAN MEMBERS OF FLOORS AND ROOFS SUPPORTING CONSTRUCTION AND FINISHES NOT SUSCEPTIBLE TO CRACKING	LIVE LOAD	L/300
SIMPLE SPAN MEMBERS OF FLOORS AND ROOFS SUPPORTING CONSTRUCTION AND FINISHES SUSCEPTIBLE TO CRACKING	LIVE LOAD	L/360
SIMPLE SPAN MEMBERS OF ALL FLOORS AND ROOFS	TOTAL LOAD	L/240

H. SEISMIC HAZARD INDEX AND SEISMIC DESIGN FOR NON-STRUCTURAL ELEMENTS

Ie*Sa(0.2) = 0.246 < 0.35

DESIGN FOR SEISMIC NOT REQUIRED FOR CATEGORIES 6 TO 21, TABLE 4.1.1.18.

KEY PLAN :



REVISION

NO.	DATE	DESCRIPTION
1	2024-09-04	PROGRESS ISSUANCE
2	2024-11-01	PROGRESS ISSUANCE
3	2024-11-15	BUILDING PERMIT
4	2025-01-31	ISSUED FOR BID
6	2025-04-30	ISSUED FOR CONSTRUCTION

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UNIVERSITY OF
TORONTO

PROJECT :
UNIVERSITY OF
TORONTO HEALTH &
WELLNESS CENTRE AT
KOFFLER RENOVATION

214 College Street
Toronto, ON, M5T 3A1

SHEET CONTENTS :
DESIGN NOTES

PROJECT NUMBER :
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1 : 1

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Author

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Checker

DATE
2024-07-16

SHEET NO.:

S003

REV :

6

**W SECTION
WEB VERTICAL
(SIm for Channels)**

**RECTANGULAR
HSS - LSV**

**W SECTION
WEB HORIZONTAL
(SIm for Channels)**

**RECTANGULAR
HSS - LSH**

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

G3

STEEL MEMBER FORCE NOTATIONS AND DIRECTIONS

Diagram illustrating the cross-section of a foundation wall and footing, showing various layers and materials:

- TOP SOIL AS REQUIRED
- MIN OF 300mm IMPERMEABLE CLAYEY SEAL OR ASPHALT SURFACING
- SLOPE
- INSULATION IF SPECIFIED ELSEWHERE
- AS REQUIRED BY GEOTECHNICAL CONSULTANT (600 MIN)
- FREE DRAINING GRANULAR MATERIAL
- ON SITE MATERIAL IF APPROVED
- FREE DRAINING NON FROT SUSCEPTIBLE GRANULAR MATERIAL
- C.S.A. FINE CONCRETE AGGREGATE FILTER: MIN 300mm TOP AND SIDES OF FEA GRAVEL (OR USE APPROVED POROUS GEOTEXTILE MEMBRANE)
- FEA GRAVEL MIN 150mm TOP AND SIDES OF DRAIN. PLACE 300mm BELOW DRAIN, IF DRAIN IS NOT ON FOOTING.
- FOOTING DRAIN

NOTES:

- REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION, WHERE INFORMATION DIFFERS FROM THAT SHOWN ABOVE, THE REQUIREMENTS OF THE GEOTECHNICAL REPORTS SHALL GOVERN.
- REFER TO ARCHITECTURAL DRAWINGS FOR INSULATION, WATERPROOFING AND THE LIKE.
- ALL FILL TO BE COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY, UNLESS OTHERWISE NOTED OR SHOWN.
- FOOTING DRAINS TO BE MIN 100mm DIAMETER LEADING TO POSITIVE SUMP. INVERT TO BE MIN 150mm BELOW UNDERSIDE OF FLOOR SLAB.

Diagram illustrating the cross-section of a retaining wall structure, showing various layers and components:

- TOP SOILS AS REQUIRED
- SLOPE
- AS REQUIRED BY GEOTECHNICAL CONSULTANT (800 MM)
- INSULATION IF SPECIFIED ELSEWHERE
- PLASTIC SCREEN
- DRAIN
- FINISHED GRADE
- MIN. OF 300mm IMPERMEABLE CLAYEY SEAL OR ASPHALT SURFACING
- ON SITE MATERIAL IF APPROVED
- FREE DRAINING NON PROST SUSCEPTIBLE GRANULAR MATERIAL
- 600mm IMPERMEABLE CLAYEY SEAL
- BACKFILL AS SPECIFIED
- ROOT PROTECTION

NOTES:

1. REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION. WHERE INFORMATION DIFFERS FROM THAT SHOWN ABOVE, THE REQUIREMENTS OF THE GEOTECHNICAL REPORTS SHALL GOVERN.
2. REFER TO ARCHITECTURAL DRAWINGS FOR INSULATION, AND THE LIME.
3. ALL FILL TO BE COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY, UNLESS OTHERWISE NOTED OR SHOWN.
4. PROVIDE 50mm Ø DRAIN HOLES AT 1200mm MAX C/C.
5. PROVIDE CONTROL JOINTS IN WALL AS PER TYPICAL DETAIL CW3. MAXIMUM SPACING OF CONTROL JOINTS IS TO BE 2400mm UNLESS OTHERWISE NOTED.

G5 BACKFILL AT RETAINING WALLS

The diagram illustrates a stepped down footing with the following details:

- TENSION DEVELOPMENT LENGTH, WORK AS REQUIRED:** Indicated by a dimension line at the top left.
- CLASS 'B' TENSION LAP:** Located on the top horizontal section of the footing.
- DEPTH OF STRIP FOOTING:** Indicated by a vertical dimension line on the right side.
- 600 MAX:** A vertical dimension indicating the maximum height of a step.
- SEE NOTE #2:** A callout pointing to the sloped section of the footing.
- FTG REINF:** Reinforcement bars extending into the footing.
- CLASS 'B' TENSION LAP:** Located on the bottom horizontal section of the footing.
- 1 MIN:** A horizontal dimension indicating the minimum length of the lap.
- 10°:** The required slope angle for the stepped section.
- 10°:** The required slope angle for the stepped section.

NOTES:

1. MAINTAIN MINIMUM SLOPE UNLESS NOTED OTHERWISE IN THE GEOTECHNICAL REPORT.
2. IF TOTAL 'STEPPING DOWN' EXCEEDS 1200 mm PROVIDE INTERMEDIATE HORIZONTAL SECTION OF A MINIMUM LENGTH OF 1200 mm.

CF1

STEPPED DOWN FOOTING

140 MASONRY WALL

- REFER TO PLAN TO SEE DOWELS
- 100B SOIL
- 5-10M CONT.
- 250
- 250
- 300
- 62
- FEET TO PEARL
- DOWELS SAME SIZE AND SPACING AS VERTICAL REINFORCEMENT WHERE MASONRY WALL IS REINFORCED. PROVIDE CLASS 8' TENSION LAP WITH VERTICAL WALL REINFORCEMENT

190 MASONRY WALL

- 15#(10)H (MIN 2 BAR)
- REFER TO PLAN TO SEE DOWELS
- DO WELLS SAME SIZE AND SPACING AS VERTICAL REINFORCEMENT WHERE MASONRY WALL IS REINFORCED. PROVIDE CLASS 8' TENSION LAP WITH VERTICAL WALL REINFORCEMENT
- 25 CONT LAP AT INTERSECTION OF FOOTINGS AND AT CORNERS
- UNDISTURBED SOIL
- 100 MIN
- 100 MIN
- 100 MIN
- 100 MIN
- 40 MIN
- 100B SOIL
- 5-10M CONT.
- 250
- 250
- 300
- 62
- FEET TO PEARL

240 AND THICKER MASONRY WALL

- REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION AND EXTENT OF MASONRY WALLS (ALTERNATIVE DETAIL)
- WHEN SLAB-ON-GRADE IS EXPOSED TO PROST (IN PERMANENT CONDITION), PROVIDE FOOTING SAME AS 240 mm MASONRY WALL TYPE, TYPICAL
- FOOT WALLS BEARING ON SLABS ON GRADE, MINIMUM S/S BEARING VALUE FOR SOIL IS 25 kPa; FOR WALLS BEARING ON STRIP FOOTINGS, MINIMUM S/S BEARING VALUE FOR SOIL IS 150 kPa;
- 140 mm OR THINNER MASONRY WALLS SHALL REST ON SLAB-ON-GRADE UNLESS NOTED OTHERWISE; IF WALL HEIGHT EXCEEDS 3.0 m PROVIDE THICKENED SLAB-ON-GRADE AS NOTED FOR 190 mm MASONRY WALL. MAXIMUM HEIGHT OF WALL ON THICKENED SLAB-ON-GRADE IS 0.5 m;
- 190 mm MASONRY WALLS SHALL REST ON A THICKENED SLAB-ON-GRADE, IF WALL HEIGHT EXCEEDS 4.5 m PROVIDE FOOTING AS NOTED FOR 240 mm MASONRY WALL. MAXIMUM HEIGHT OF WALL ON FOOTING IS 7.5 m.
- 240 mm AND THICKER MASONRY WALLS SHALL REST ON STRIP FOOTING, MAXIMUM HEIGHT OF WALL IS 7.5 m.
- IN LOCATIONS WHERE A NEW NON LOAD BEARING MASONRY WALL IS TO BE CONSTRUCTED ABOVE AN EXISTING CONCRETE SLAB-ON-GRADE, THE CONTRACTOR SHALL DEMOLISH THE EXISTING SLAB-ON-GRADE LOCALLY TO INABLE THE CONSTRUCTION OF THE ABOVE DETAILS AS REQUIRED. SAWCUT IN STRUCTURE IN STRAIGHT LINE AT EXTENT OF DEMOLITION AREA, REMOVE SLAB-ON-GRADE TO MATCH EXISTING WITH A MIN THICKNESS OF 125 mm R/W N7W152+152-MMW18.7MMX18.7 U/LN. THE FOREGOING SHALL NOT BE APPLICABLE IN AREAS WHERE STRUCTURAL SLAB-ON-GRADE IS PRESENT.

[illegible]

CF4

BACFILL AROUND SERVICES BEHIND STRIP FOOTINGS

REMOVE EXISTING FOOTING PROJECTION ONLY WHERE SPECIFICALLY SHOWN OR APPROVED BY THE GEOTECHNICAL ENGINEER

EXISTING WALL
EXISTING FOOTING

NOTE:
RAM WITH DRY-PACK GROUT NOT LESS THAN 24 HOURS AFTER UNDER PINNING IS PLACED.

UNDER PINNING

REFER TO PLAN AND SECTIONS FOR FOUNDING ELEVATION

SECTION

EXISTING WALL
EXISTING FOOTING

REFER TO NOTE #3

3 2 1 3 1 2 3

PART ELEVATION

EXISTING WALL

3 2 1 2 3

PART PLAN

NOTES

1. UNDERPINNING SHALL BE DONE IN 900 mm LONG SECTIONS MAX UNO.
2. NUMBERS ON ELEVATION INDICATE STAGES IN WHICH UNDERPINNING SHALL PROCEED, I.E. ALL SECTIONS #1 FOLLOWED BY ALL SECTIONS #2, ETC. UNDERPINNING SHALL ATTAIN 100% OF SPECIFIED STRENGTH AND RAM DRY PACK GROUT SHALL BE IN PLACE UNTIL IT ACHIEVES 100% OF ITS SPECIFIED STRENGTH BEFORE PROCEEDING WITH THE NEXT STAGE.
3. WHERE FOUNDING ELEVATION OF UNDERPINNING VARIES, MODIFY INSTALLATION SEQUENCE SUCH THAT ALL SECTIONS FOUNDING AT THE LOWEST ELEV ARE COMPLETED PRIOR TO PROCEEDING WITH ADJACENT SECTIONS.
4. PROVIDE NECESSARY SHORING, BRACING OR NEEDLING OF EXISTING WALL OR OTHER PARTS OF THE STRUCTURE AS REQUIRED TO CARRY OUT THIS WORK.
5. UNDERPINNING SHOWN IS BASED ON ASSUMED CONDITIONS. REPORT ANY VARIATION BETWEEN EXISTING SITE CONDITIONS AND ASSUMED CONDITIONS TO THE CONSULTANT BEFORE PROCEEDING WITH THE WORK.

CF14

UNDERPINNING DETAILS

[illegible]

25mm OR AS NOTED IN GENERAL NOTES

PROVIDE ADEQUATE SUPPORT TO WARD TO ENSURE BEAM COVER IS MAINTAINED THROUGHOUT SLAB

25mm OR AS NOTED IN GENERAL NOTES

CHAIR

TEMPERATURE REINFORCEMENT (TOP LOWER LAYER)

TOP REINFORCEMENT OVER BEAM BEYOND (TOP UPPER LAYER)

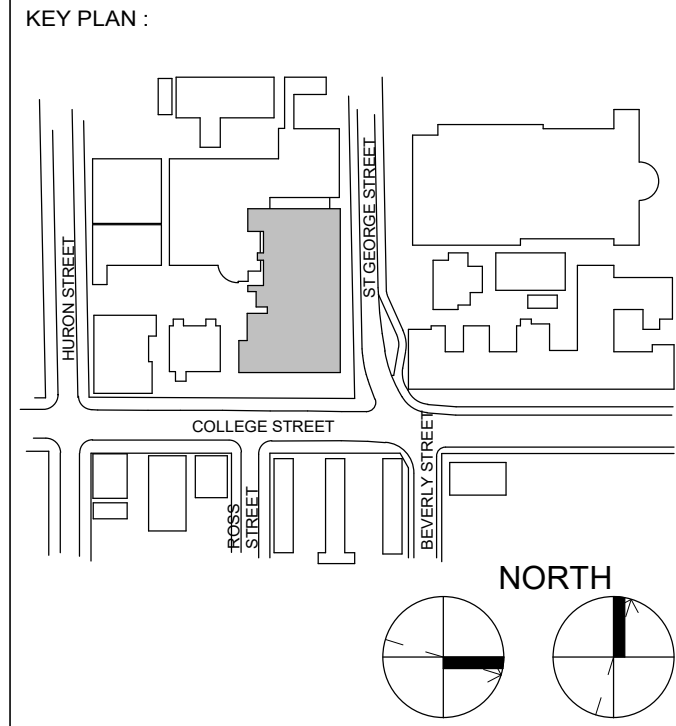
PLACEMENT OF REINFORCING BARS

NOTES:

- REFER TO PLAN FOR SLAB REINFORCEMENT OR TYPICAL DETAIL C37 WHERE NO REINFORCEMENT IS NOTED ON PLAN.
- WHERE REINFORCEMENT IS SPECIFIED IN ONE DIRECTION ONLY, REFER TO TYPICAL DETAIL C37 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.
- WHEN THICKNESS 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.

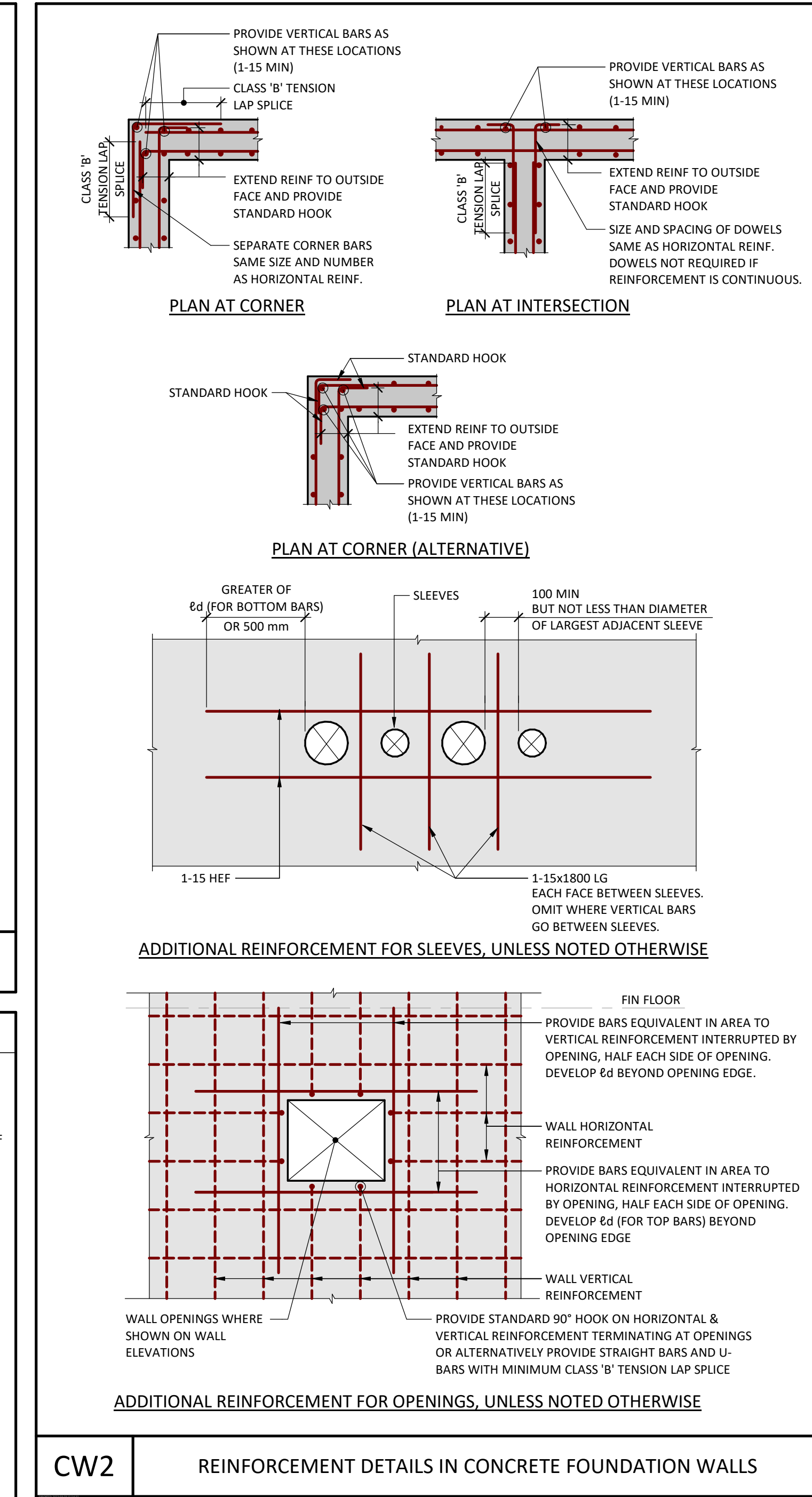
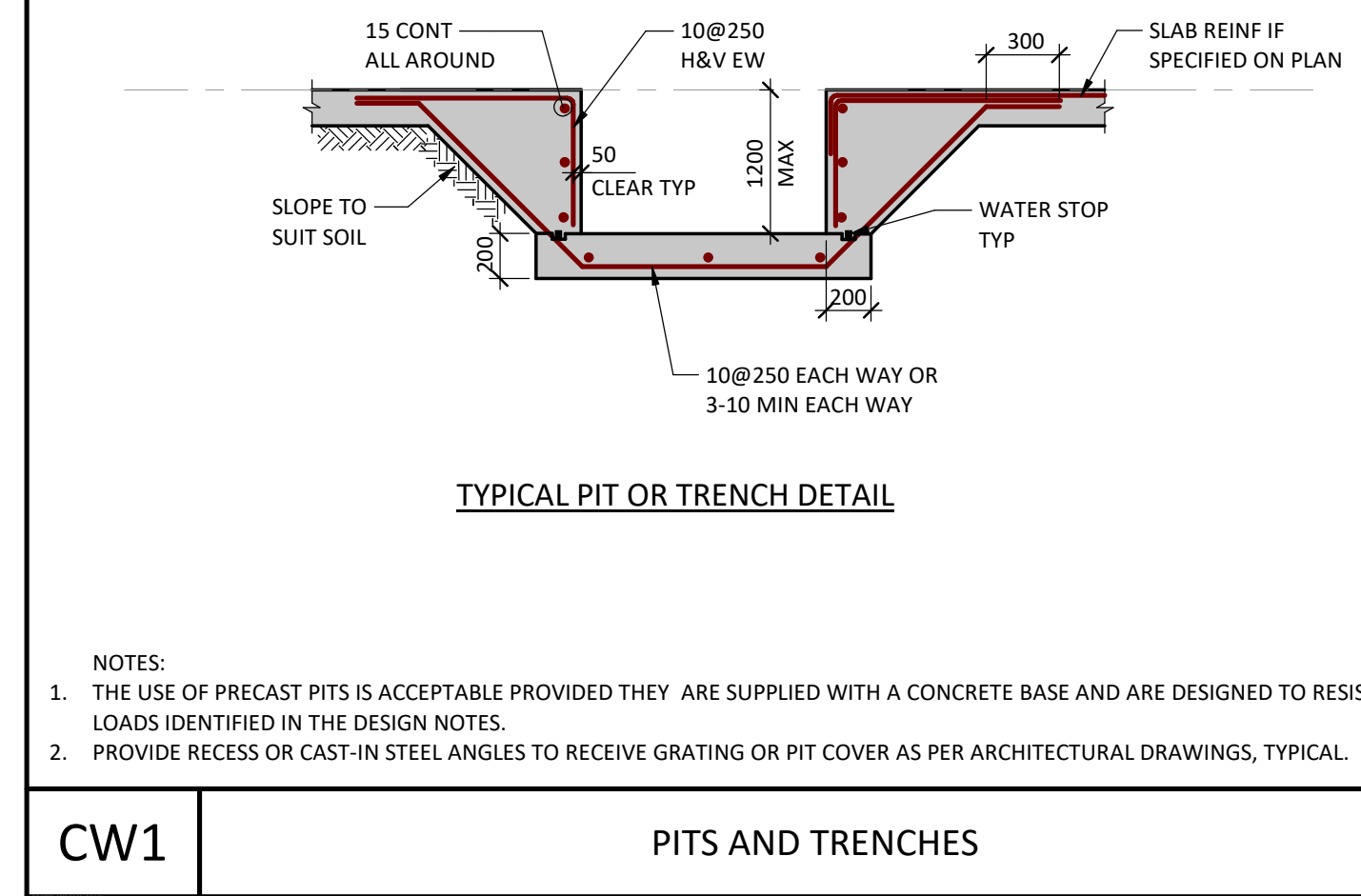
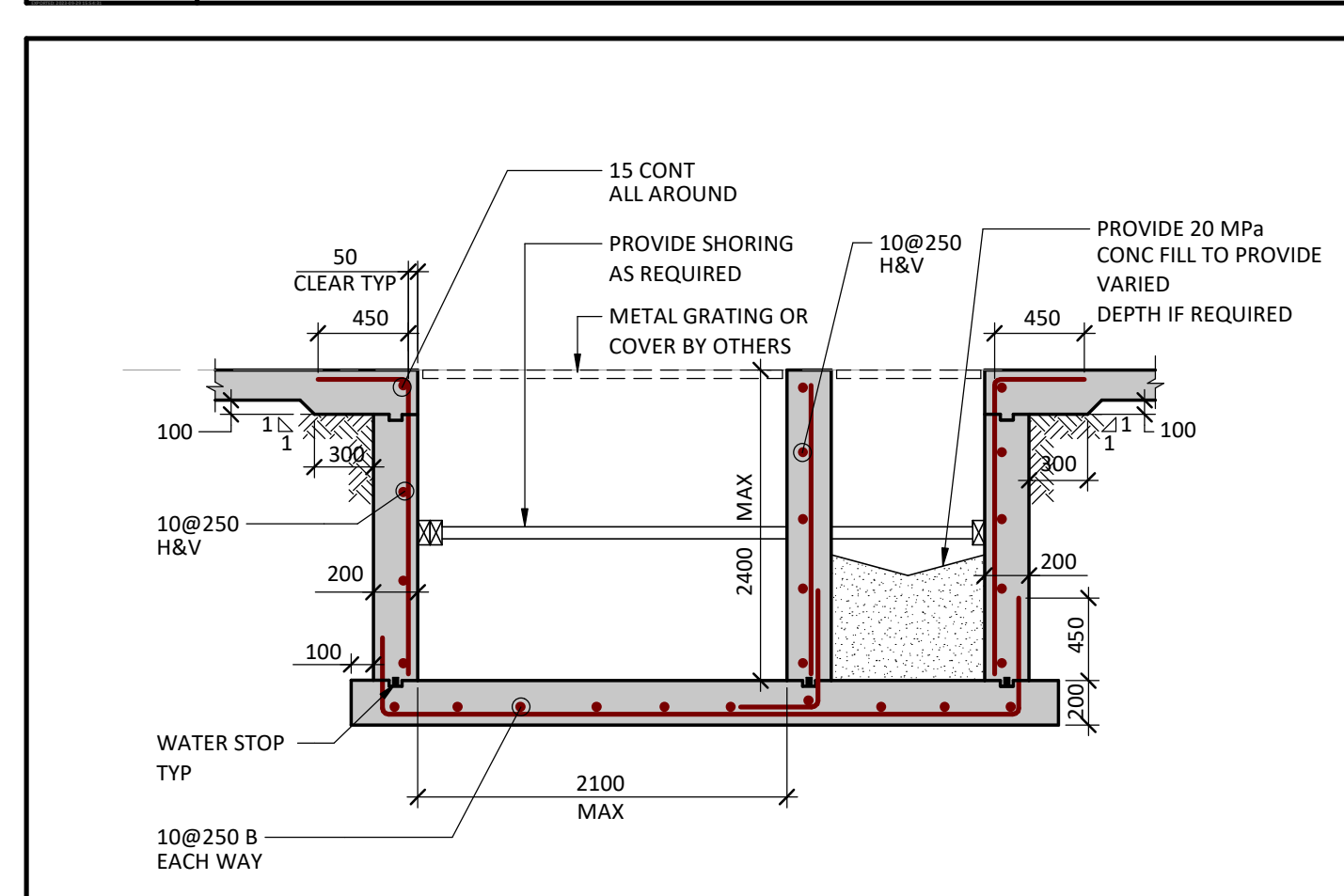
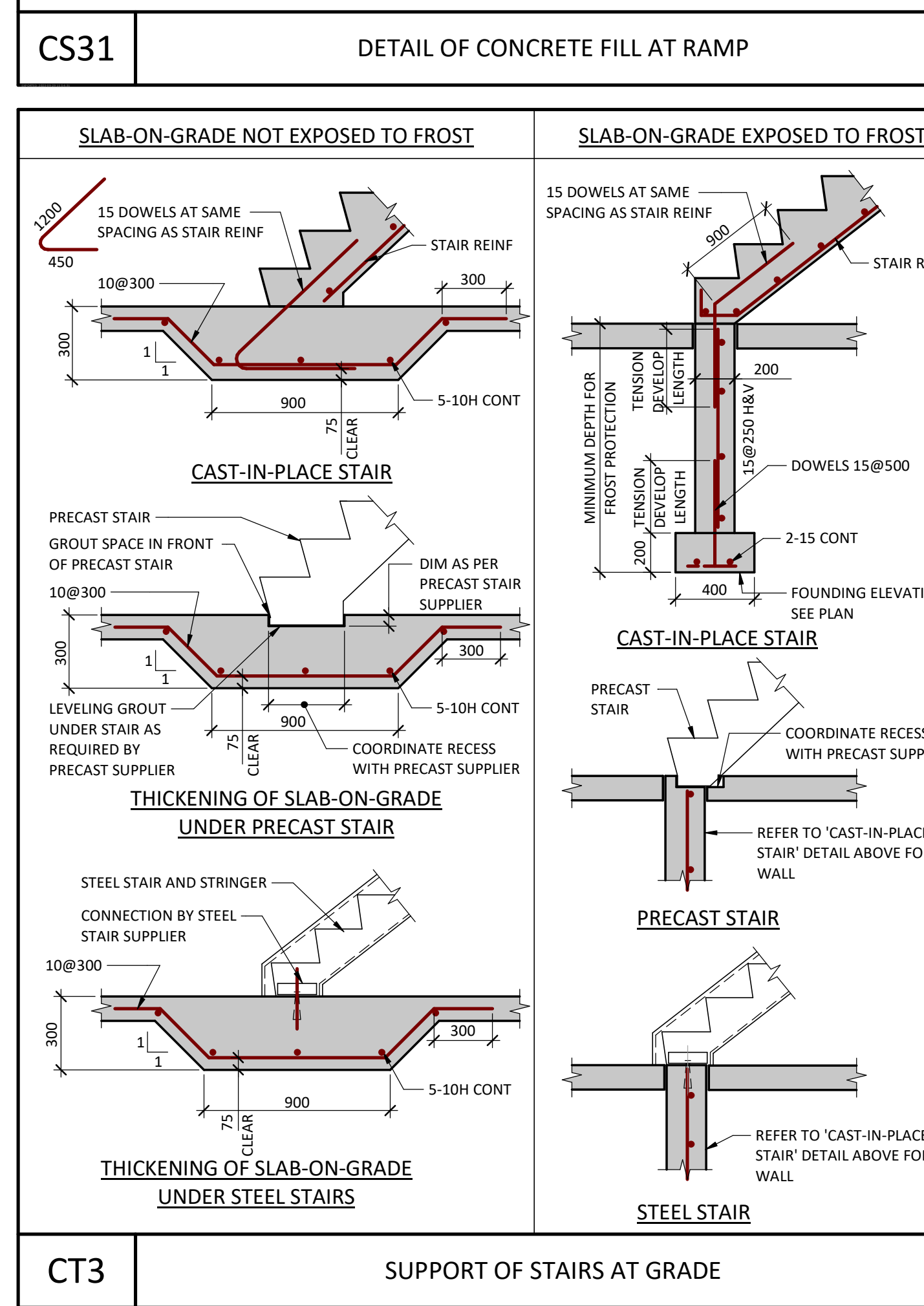
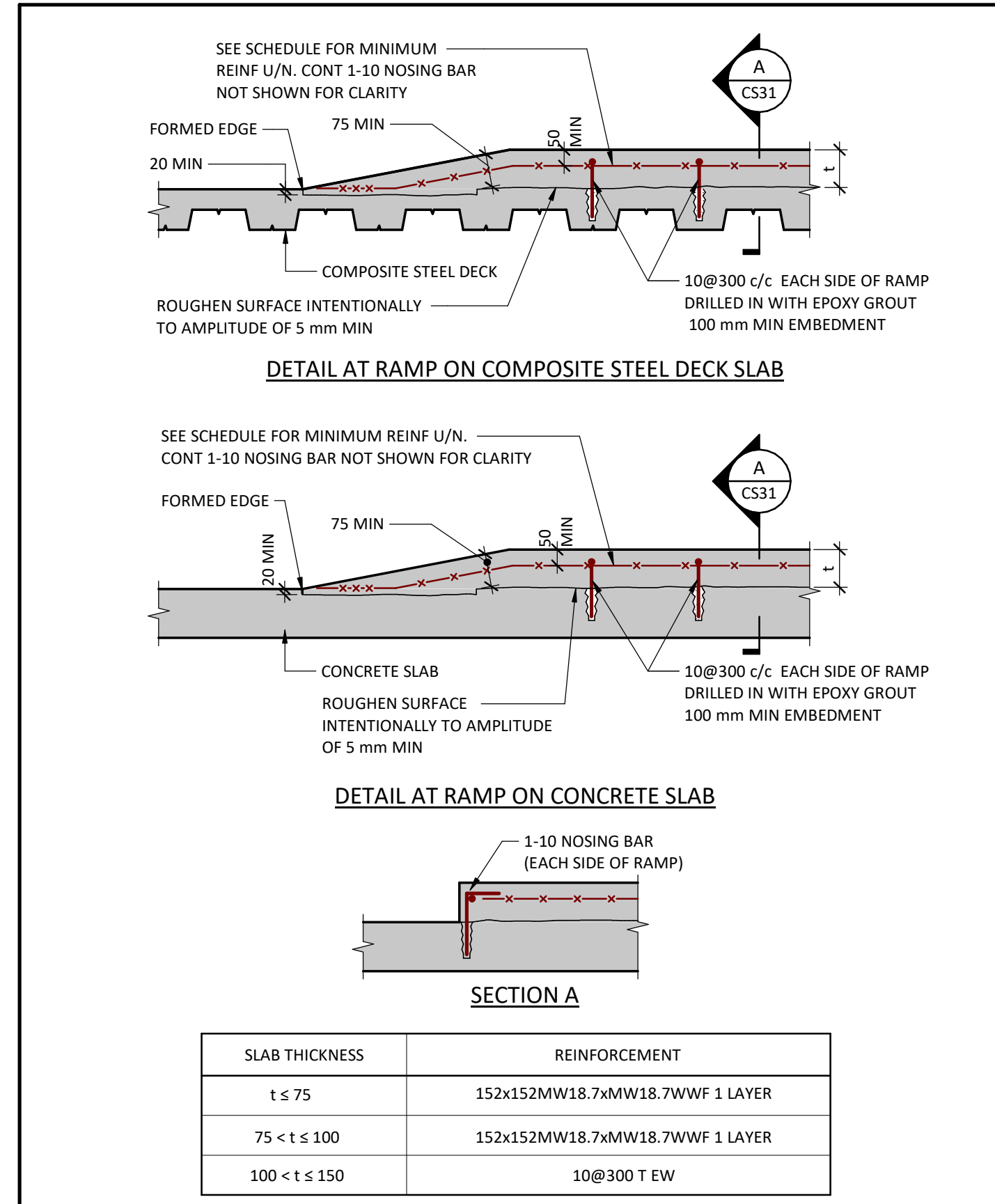
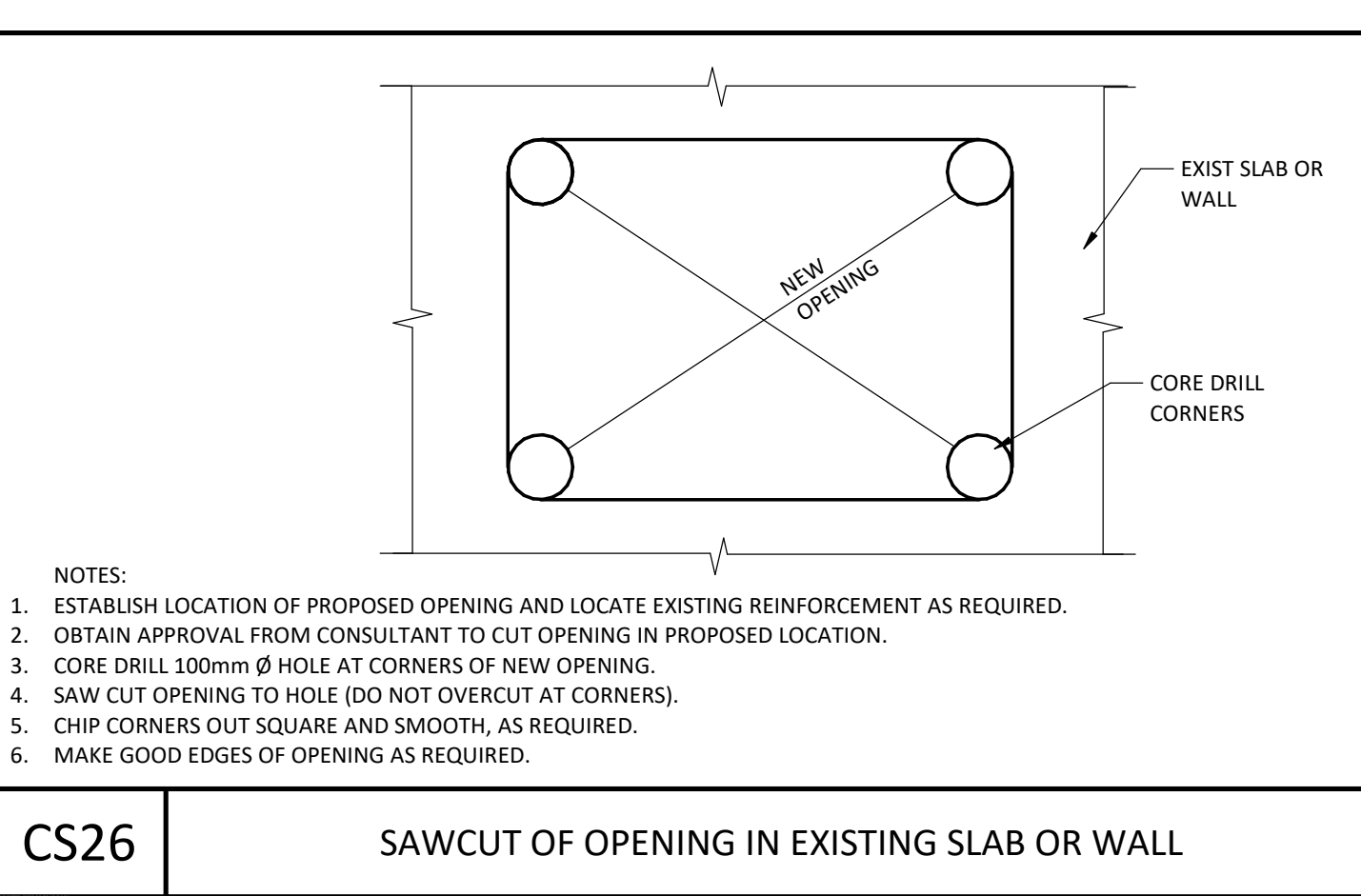
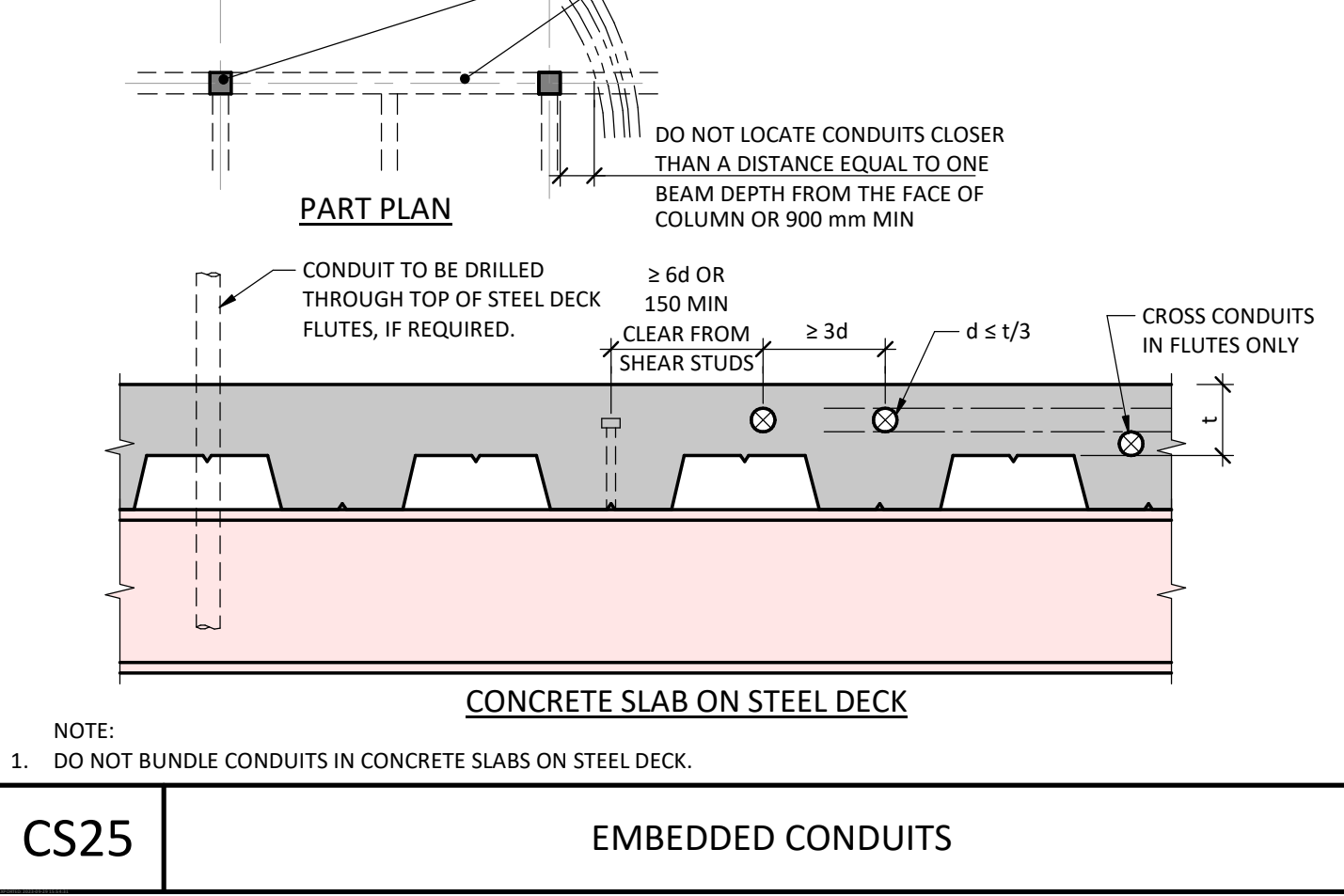
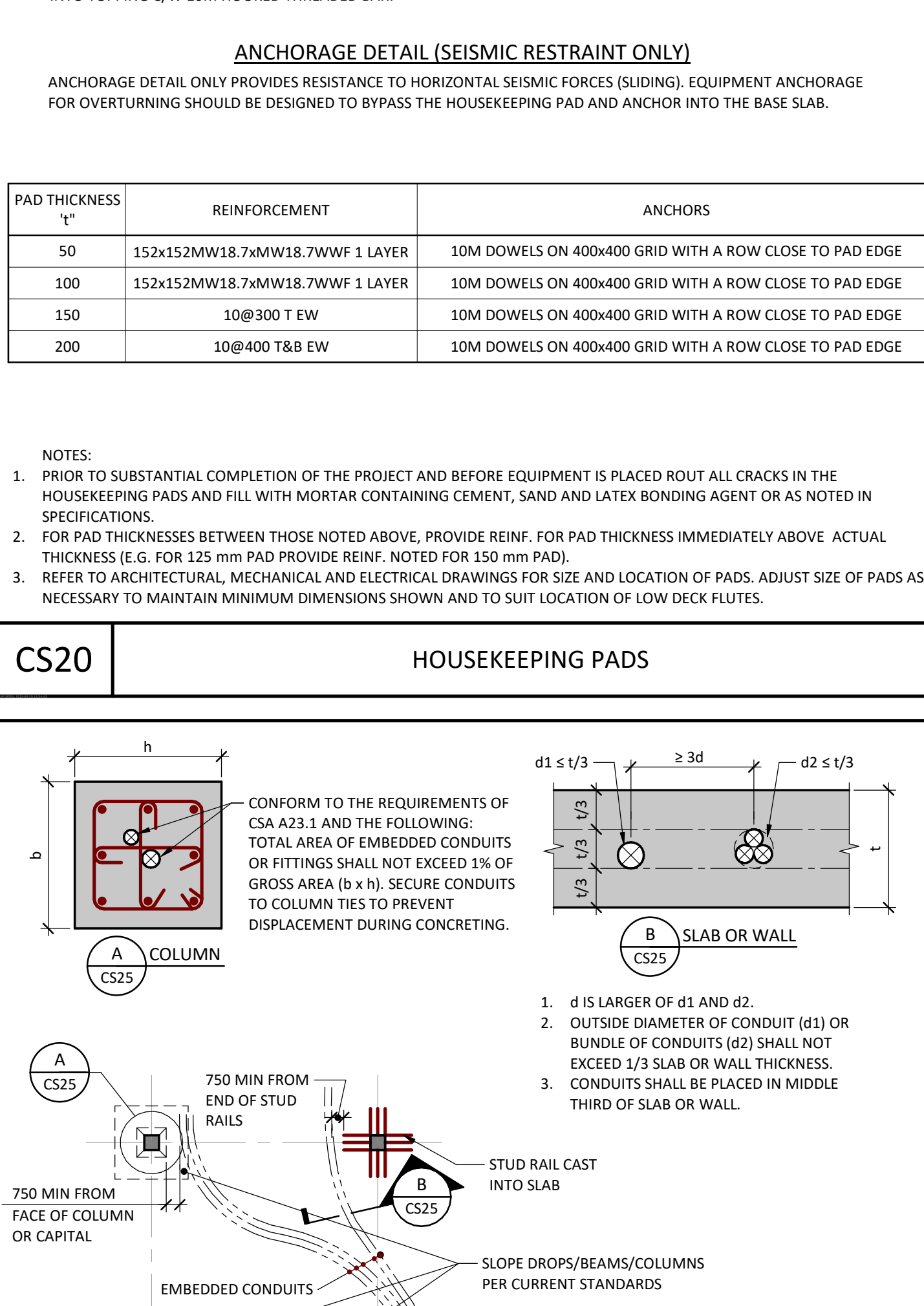
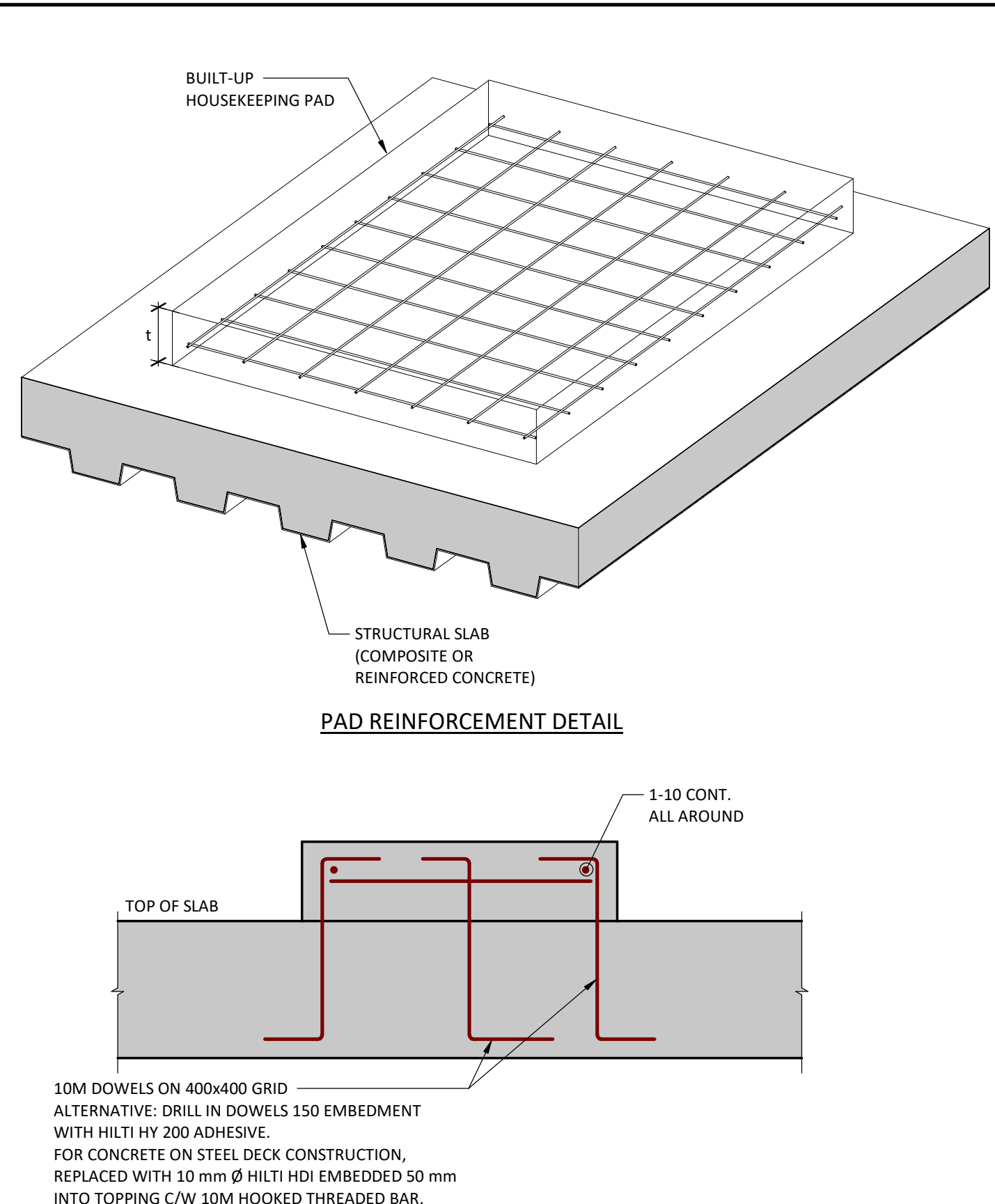
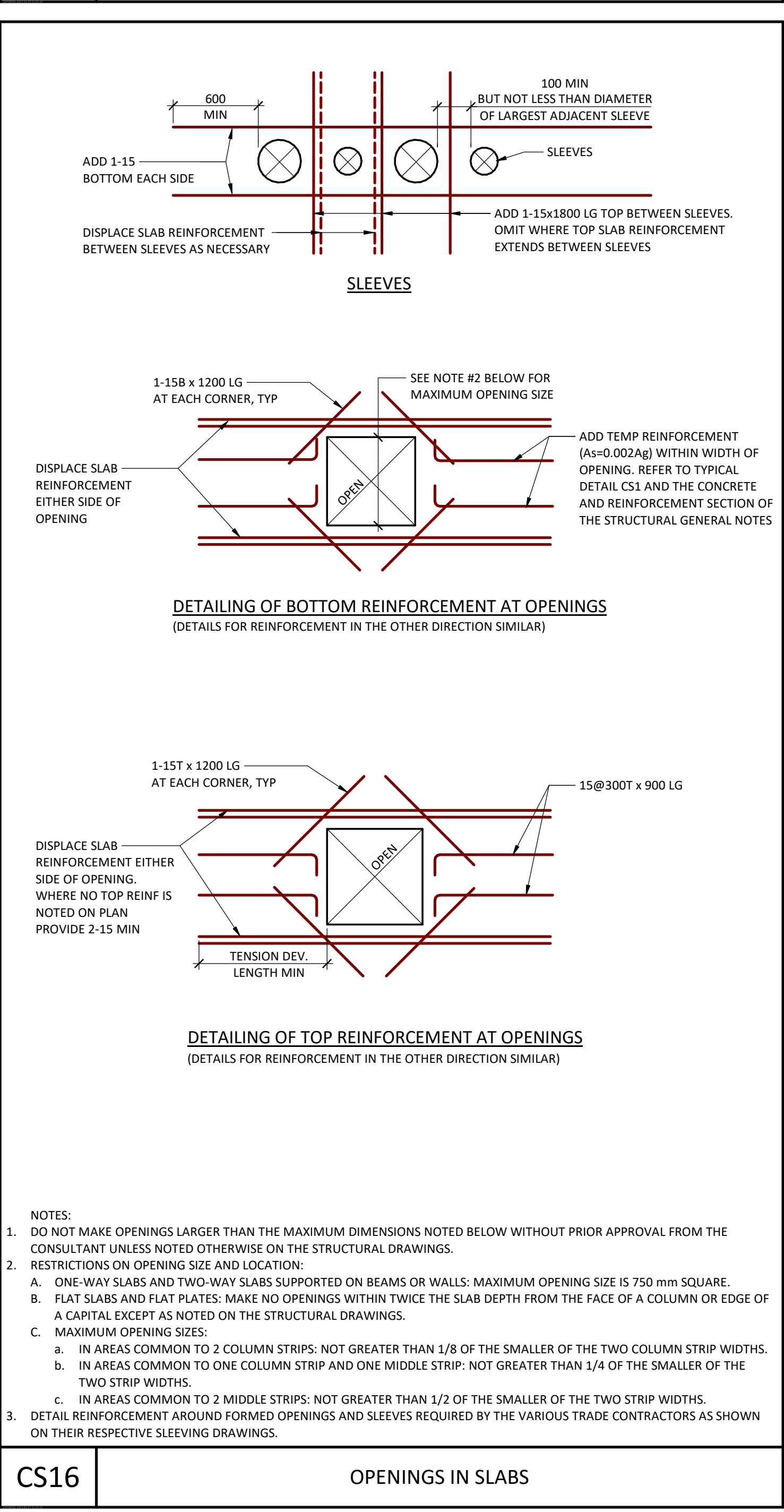
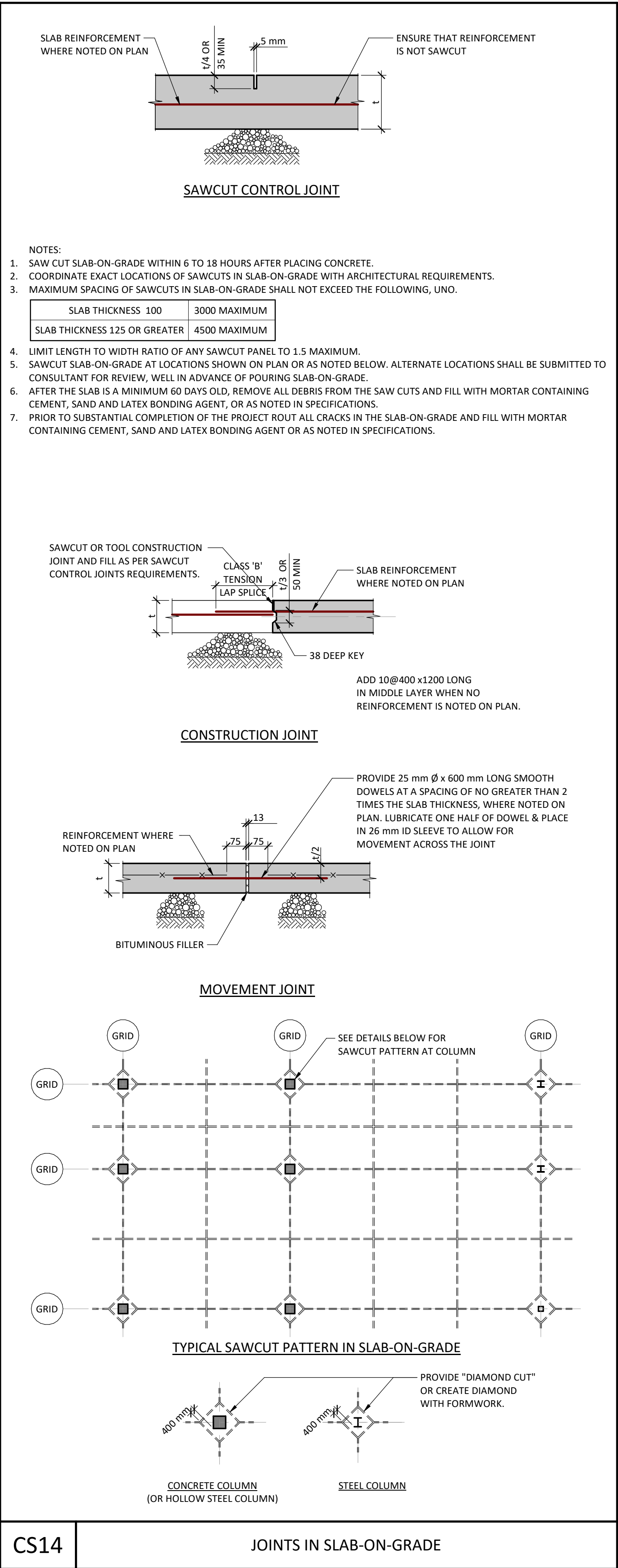
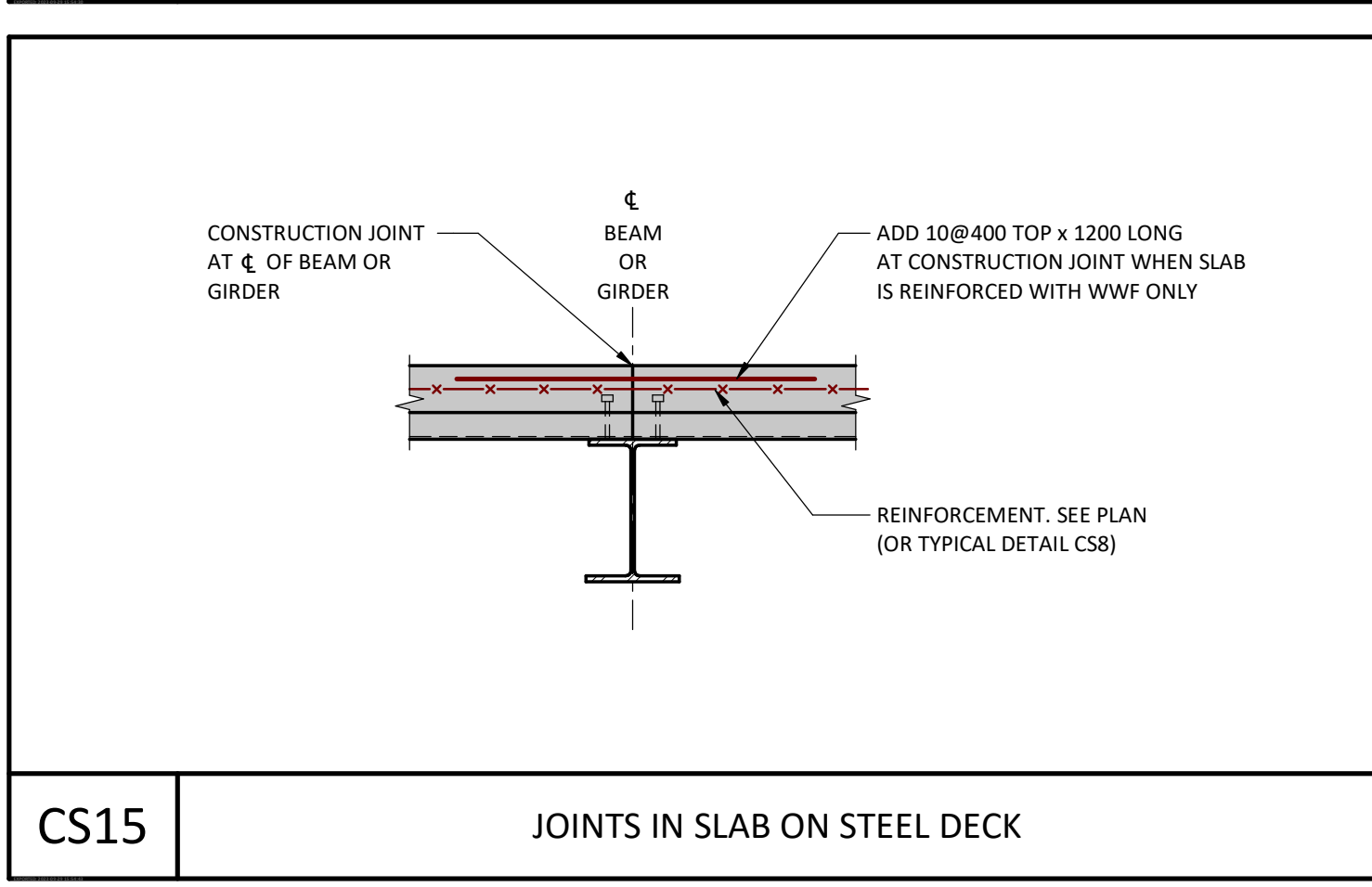
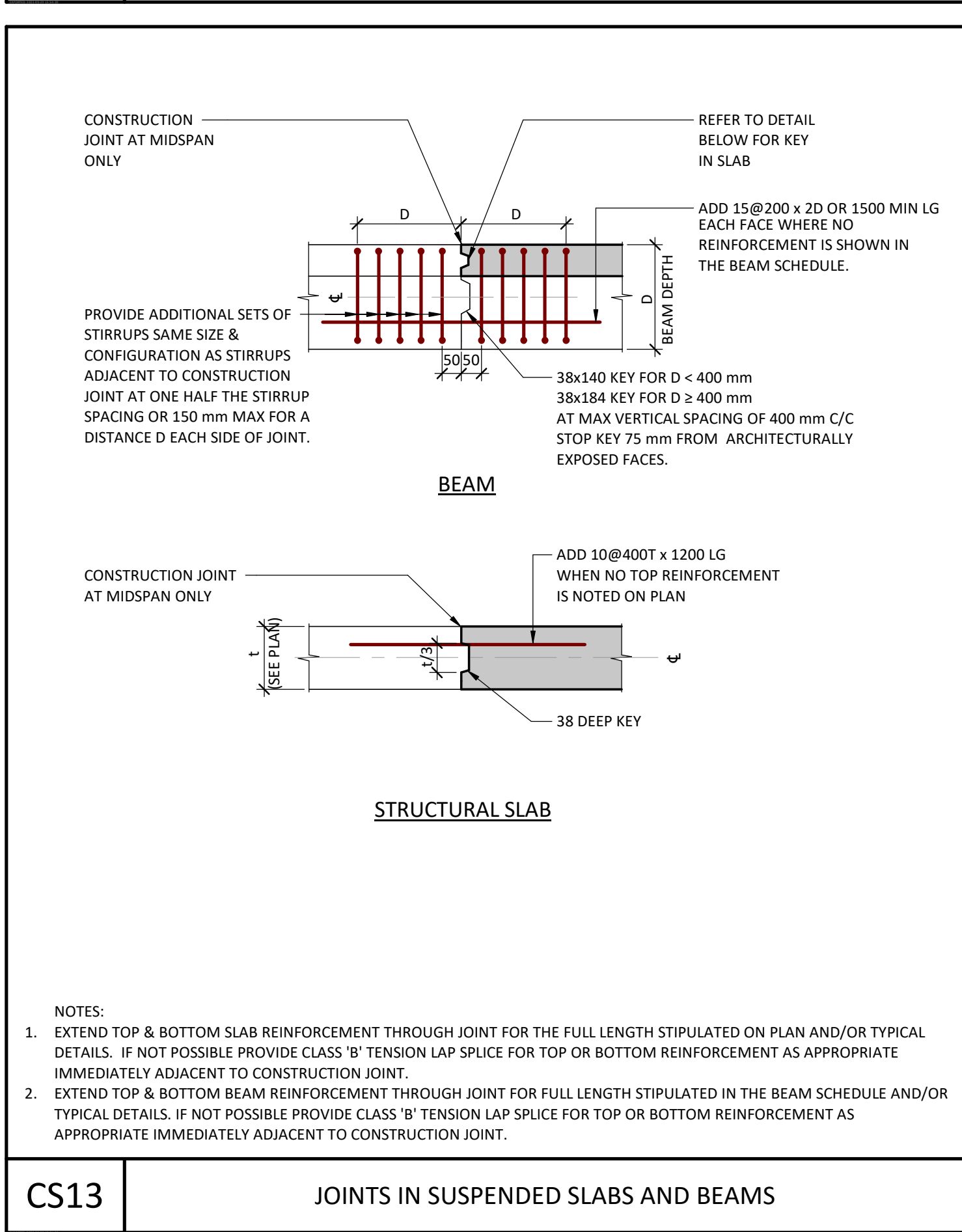
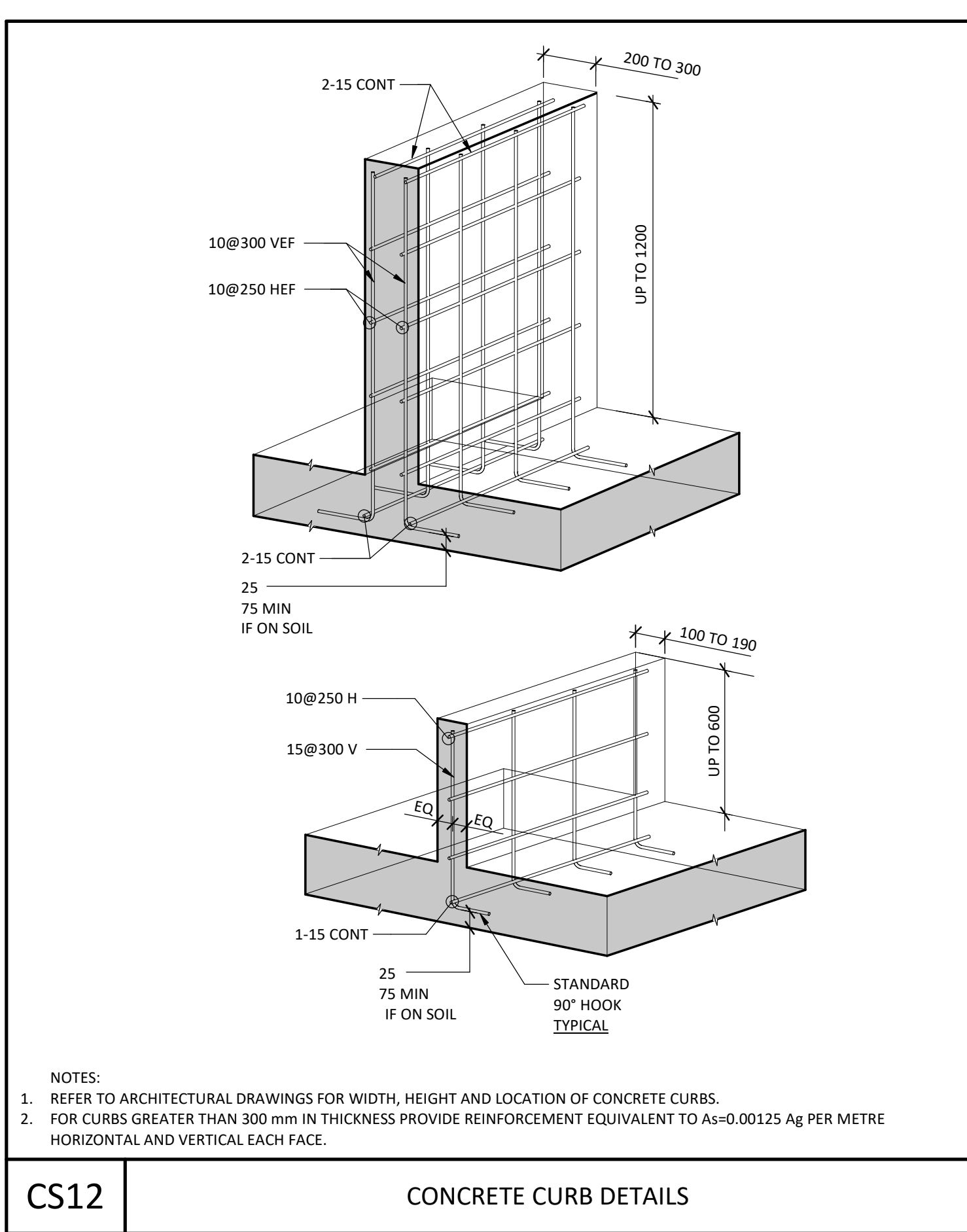
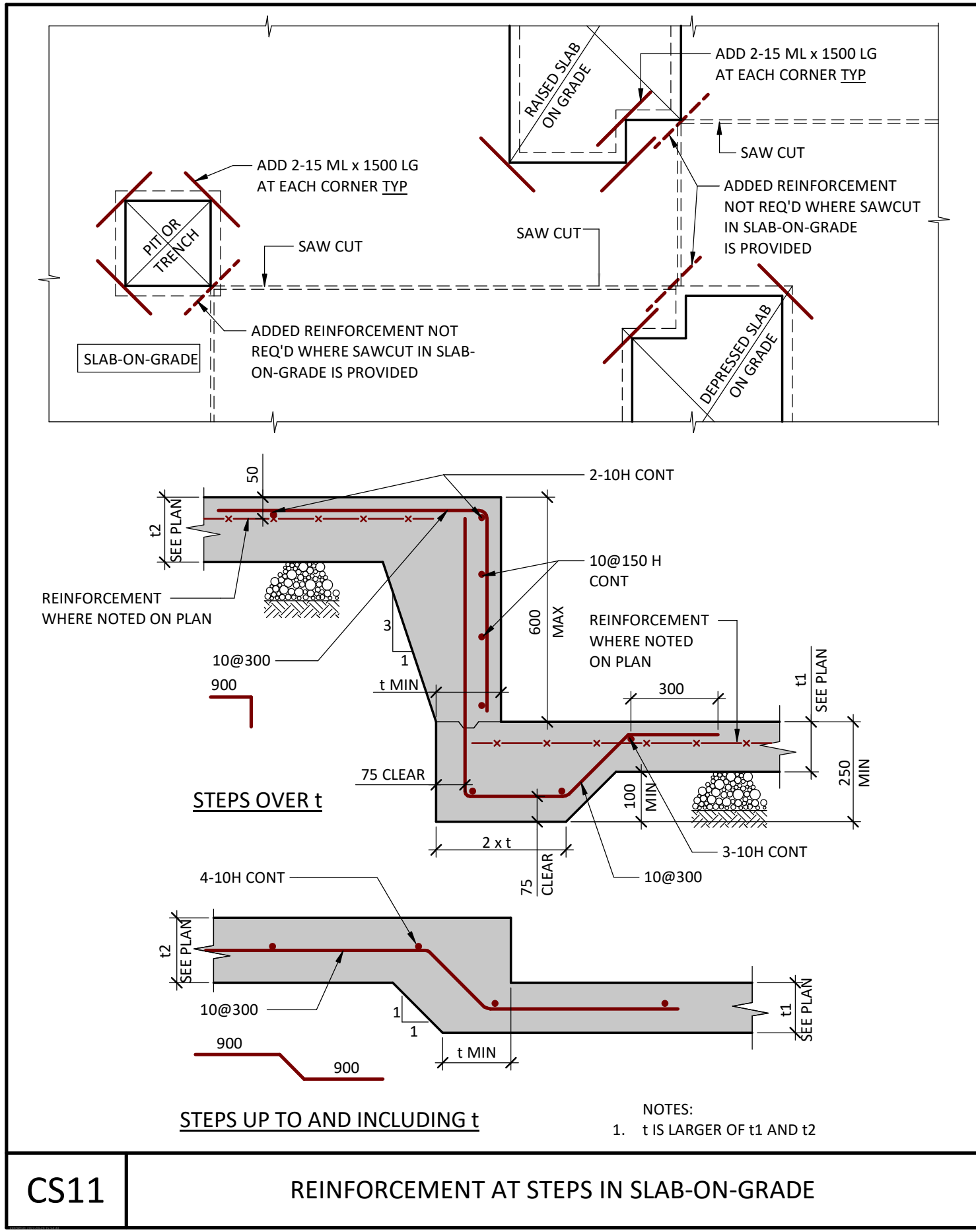
CS8	PLACEMENT OF REINFORCEMENT IN SLABS ON STEEL DECK
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TYPICAL DETAIL LIST		DRAWING NO.
DETAIL NO.	DETAIL TITLE	
CONCRETE FOOTINGS		
CF1	STEPPED DOWN FOOTING	S010
CF2	NON LOAD BEARING MASONRY WALL FOOTINGS	S010
CF3	ADJACENT FOOTINGS AND EXCAVATIONS	S010
CF4	BACKFILL AROUND SERVICES BENEATH STRIP FOOTINGS	S010
CF11	UNDERPINNING DETAILS	S010
CONCRETE SLABS		
C57	ADDITIONAL REINFORCEMENT IN SLABS ON STEEL DECK	S010
C58	PLACEMENT OF REINFORCEMENT IN SLABS ON STEEL DECK	S010
C511	REINFORCEMENT AT JOINTS IN SLAB ON-GRADE	S011
C512	CONCRETE CURB DETAILS	S011
C513	JOINTS IN SUSPENDED SLABS AND BEAMS	S011
C514	JOINTS IN SLAB ON-GRADE	S011
C515	JOINTS IN SLAB ON STEEL DECK	S011
C516	OPENINGS IN SLABS	S011
C520	DETAILS FOR HOUSEKEEPING PADS	S011
C525	EMBEDDED CONDUITS	S011
C526	SAWCUT OF OPENING IN EXISTING SLAB OR WALL	S011
C527	INFLU OF EXISTING SLEEVES AND OPENINGS	S015
C531	DETAIL OF CONCRETE FILL AT RAMPS	S011
CONCRETE STAIRS		
CT3	SUPPORT OF STAIRS AT GRADE	S011
CONCRETE WALLS		
CW1	PITS AND TRENCHES	S011
CW2	REINFORCEMENT DETAILS IN CONCRETE WALLS	S011
CW3	VERTICAL JOINTS IN CONCRETE WALLS	S011
CW6	WATERSTOP BETWEEN NEW AND EXISTING WALLS	S012
ERECTION TOLERANCES		
ET581	ERECTION TOLERANCES FOR STRUCTURAL STEEL BEAMS	S012
ET5C1	ERECTION TOLERANCES FOR STRUCTURAL STEEL COLUMNS	S012
GENERAL		
G1	ABBREVIATIONS AND SYMBOLS	S010
G2	STRUCTURE LEGEND	S010
G3	STEEL MEMBER FORCE NOTATIONS AND DIRECTIONS	S010
G4	BACKFILL AT FOUNDATION LOADS	S011
G5	BACKFILL AT RETAINING WALLS	S010
G6	ACCUMULATED SNOW LOAD	S701
MASONRY		
M1	LINTELS FOR NON-LOAD BEARING MASONRY WALLS	S015
M2	BEAM BEARING ON MASONRY WALL	S012
M6	REINFORCEMENT PLACEMENT IN MASONRY ELEMENTS	S012
M7	LATERAL SUPPORT AT TOP OF MASONRY PARTITIONS (STEEL CONSTRUCTION)	S013
M8	LATERAL SUPPORT AT TOP OF MASONRY PARTITIONS (CONCRETE CONSTRUCTION)	S013
M10	REINFORCEMENT DETAILS FOR MASONRY WALLS	S013
M11	MASONRY ANCHORS TO STEEL COLUMNS AND BEAMS	S013
M12	VERTICAL CONTROL JOINTS IN MASONRY WALLS	S013
M13	MASONRY SILL REINFORCEMENT (STEEL OR CONCRETE CONSTRUCTION)	S013
M15	OPENINGS THROUGH MASONRY WALLS	S013
M16	LAP SPICE AND TENSION EMBEDMENT LENGTH IN REINFORCED MASONRY WALLS	S013
STEEL DECK		
DK1	STEEL DECK AT ROOFS (MASONRY FRAMING)	S012
DK2	STEEL DECK AT ROOFS (STRUCTURAL STEEL FRAMING)	S012
DK3	PLACEMENT OF STUD SHEAR CONNECTORS FOR COMPOSITE BEAMS	S012
DK4	DETAILS ASSOCIATED WITH CONCRETE SLAB ON STEEL DECK	S012
DK5	CUT OR CORED OPENING IN CONCRETE SLAB ON STEEL DECK	S012
STRUCTURAL STEEL		
S1	STEEL FRAMING NOMENCLATURE	S013
S2	FRAMING OPENINGS IN STEEL FLOOR DECK AND ROOF DECK	S013
S3	DETAILS ASSOCIATED WITH CONCRETE SLAB ON STEEL DECK	S013
S4	ANCHORAGE FOR STEEL STAIR	S013
S7	HOIST BEAM DETAIL	S013
S9	TYPICAL STEEL COLUMN SPLICING (W SHAPES)	S013
S11	TYPICAL STEEL COLUMN SPLICING (HSS SHAPES)	S013
S12	STEEL COLUMN SPLIC ABOVE EXISTING ROOF	S014
S13	STEEL COLUMN BEARING ON STEEL BEAM	S014
S14	STEEL BEAM BEARING ON STEEL COLUMN	S014
S15	COLUMN BEARING ON BEAM BEARING ON COLUMN	S014
S16	MOMENT CONNECTIONS	S014
S17	RECTANGULAR AND CIRCULAR OPENINGS IN STEEL BEAMS	S014
S20	CHANGE IN SLAB ELEVATION DETAILS	S014
S21	CHANGE IN SLAB ELEVATION ALONG BEAM SPAN	S014
WINDOW WASHING		
WW2	ROOF ANCHOR TO STEEL STRUCTURE	S014
WW3	ROOF ANCHOR TO STEEL STRUCTURE	S014
WW4	ROOF ANCHOR TO STEEL STRUCTURE	S014
WW6	DAVIT ARM TO STEEL STRUCTURE	S014
WW7	DAVIT ARM TO STEEL STRUCTURE	S014



REVISION		
NO.	DATE	DESCRIPTION
1	2024-10-04	PROGRESS ISSUANCE
2	2024-11-01	PROGRESS ISSUANCE
3	2024-11-15	BUILDING PERMIT
4	2025-01-31	ISSUED FOR BID
6	2025-04-30	ISSUED FOR CONSTRUCTION

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KEY PLAN:

REVISION:

NO.	DATE	DESCRIPTION
1	2024-05-04	PROGRESS ISSUANCE
2	2024-11-01	PROGRESS ISSUANCE
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IN ASSOCIATION WITH:

UNIVERSITY OF TORONTO

PROJECT: UNIVERSITY OF TORONTO HEALTH & WELLNESS CENTRE AT KOFFLER RENOVATION

214 College Street
Toronto, ON, M5T 3A1

SHEET CONTENTS: TYPICAL DETAILS

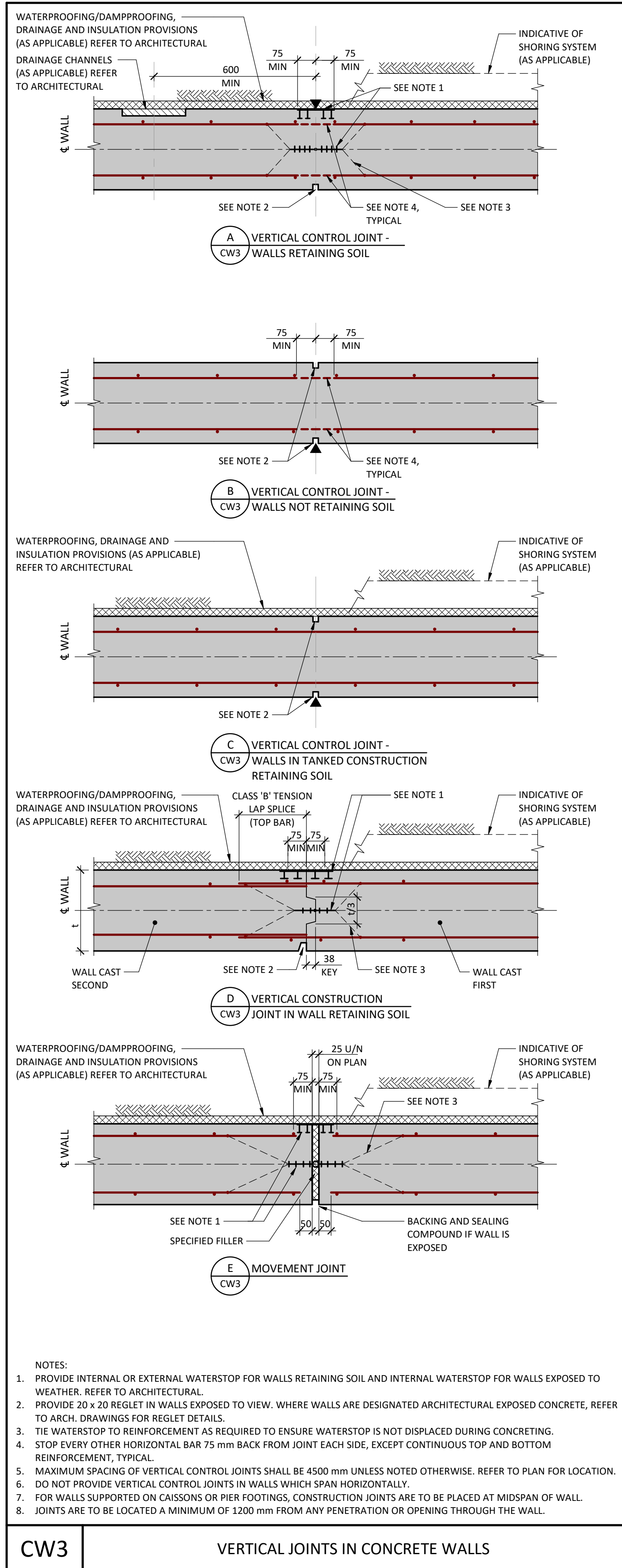
PROJECT NUMBER: EN023-00965

DRAWING SCALE: 1 : 1

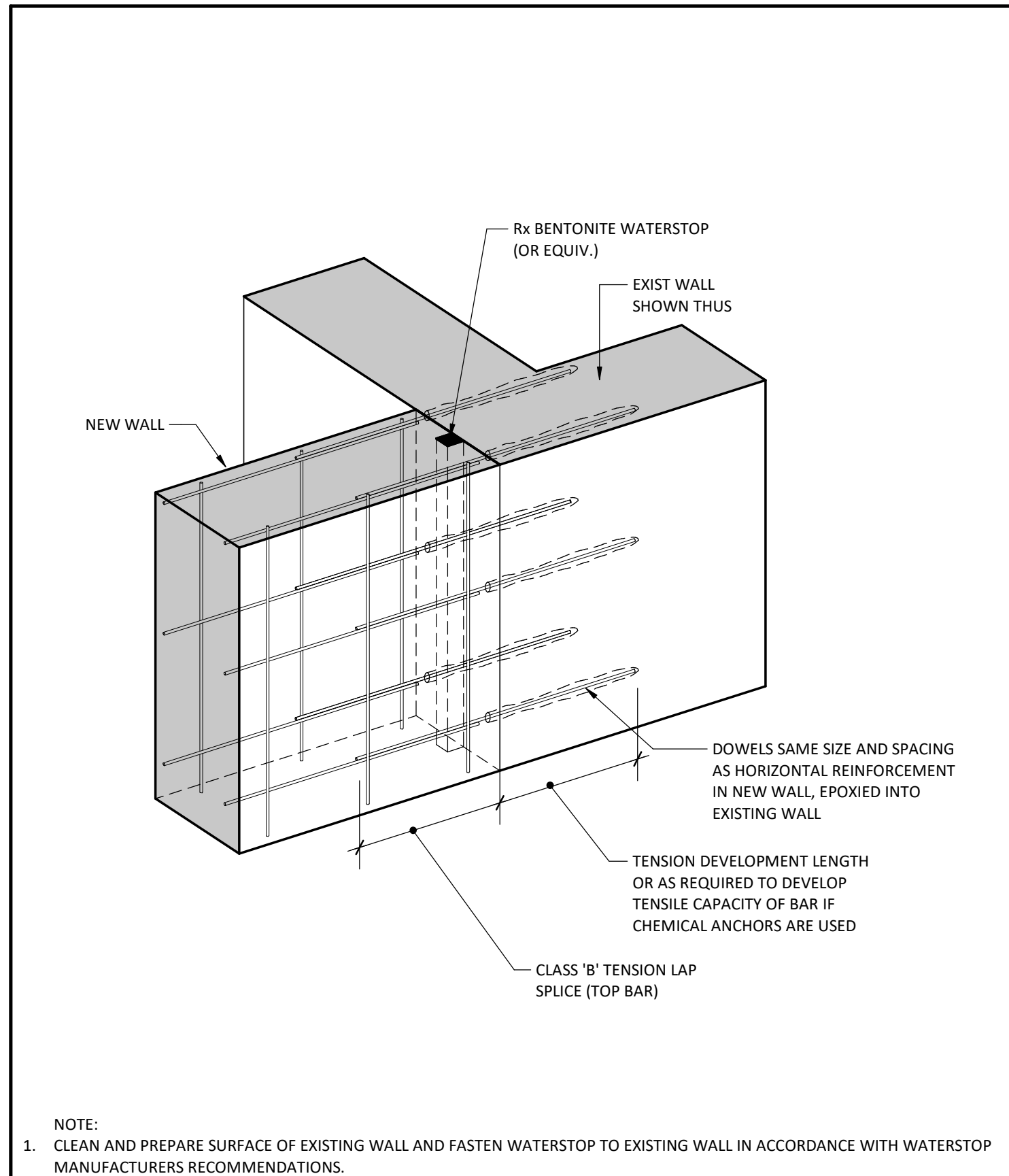
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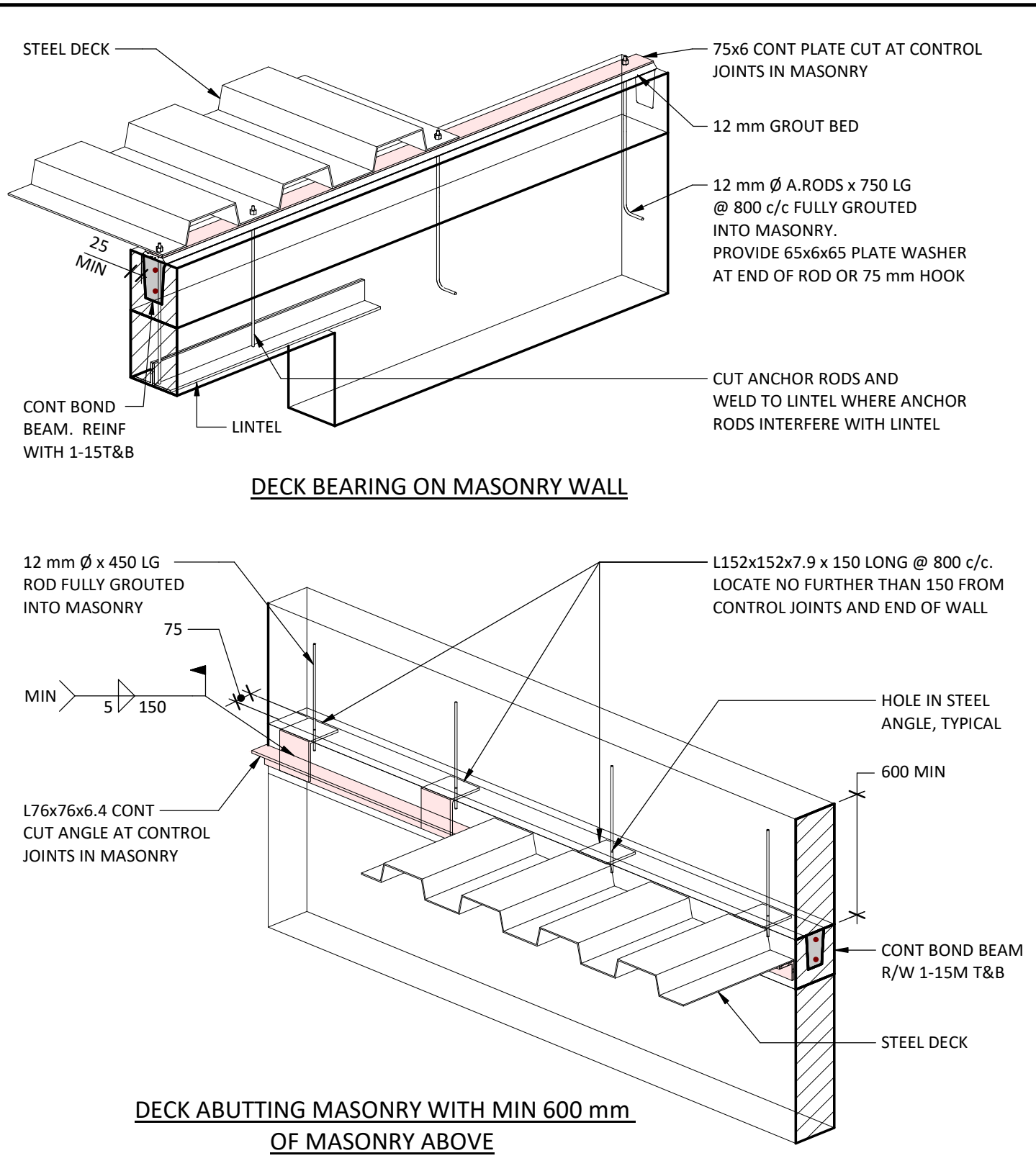
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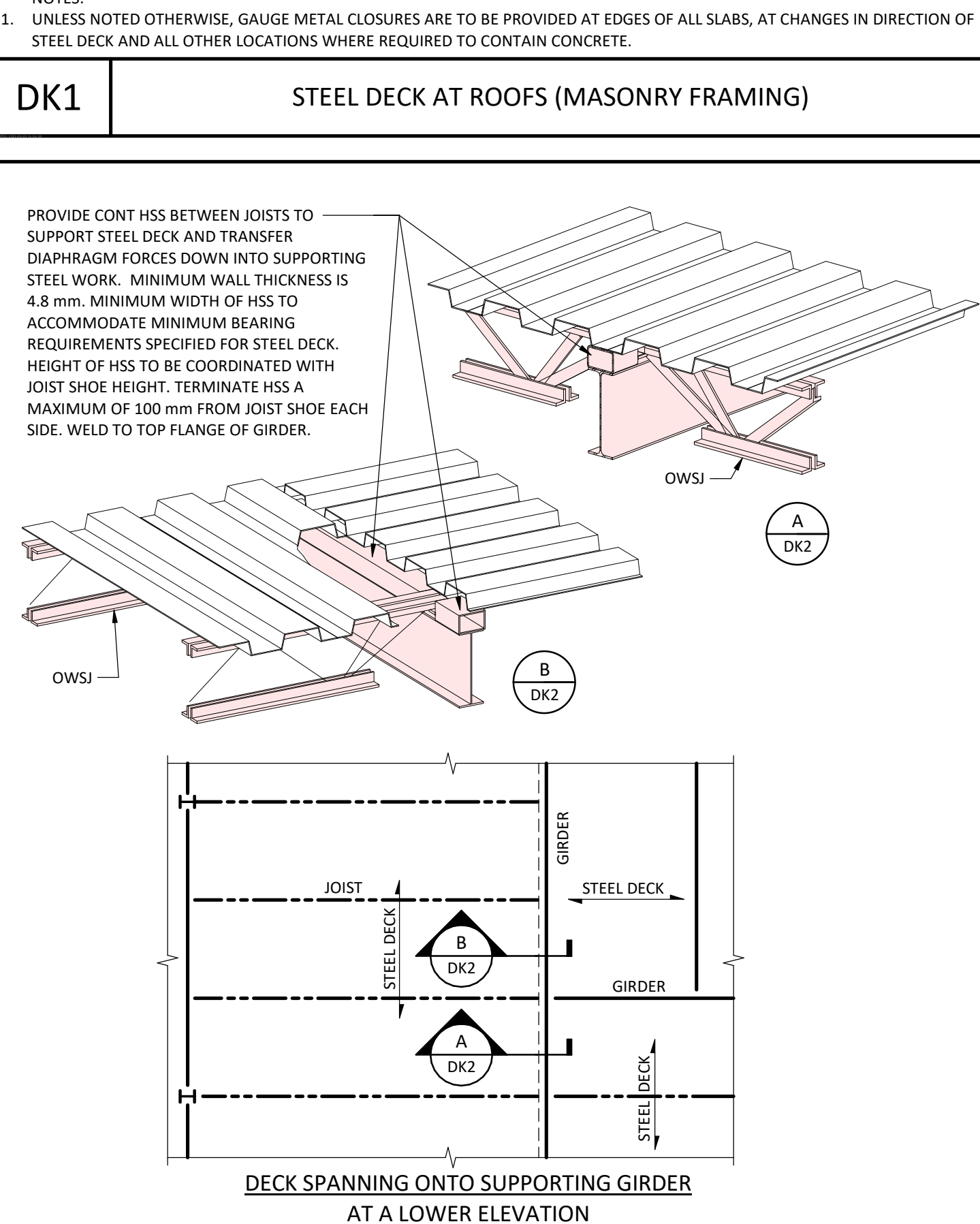
CW3 VERTICAL JOINTS IN CONCRETE WALLS

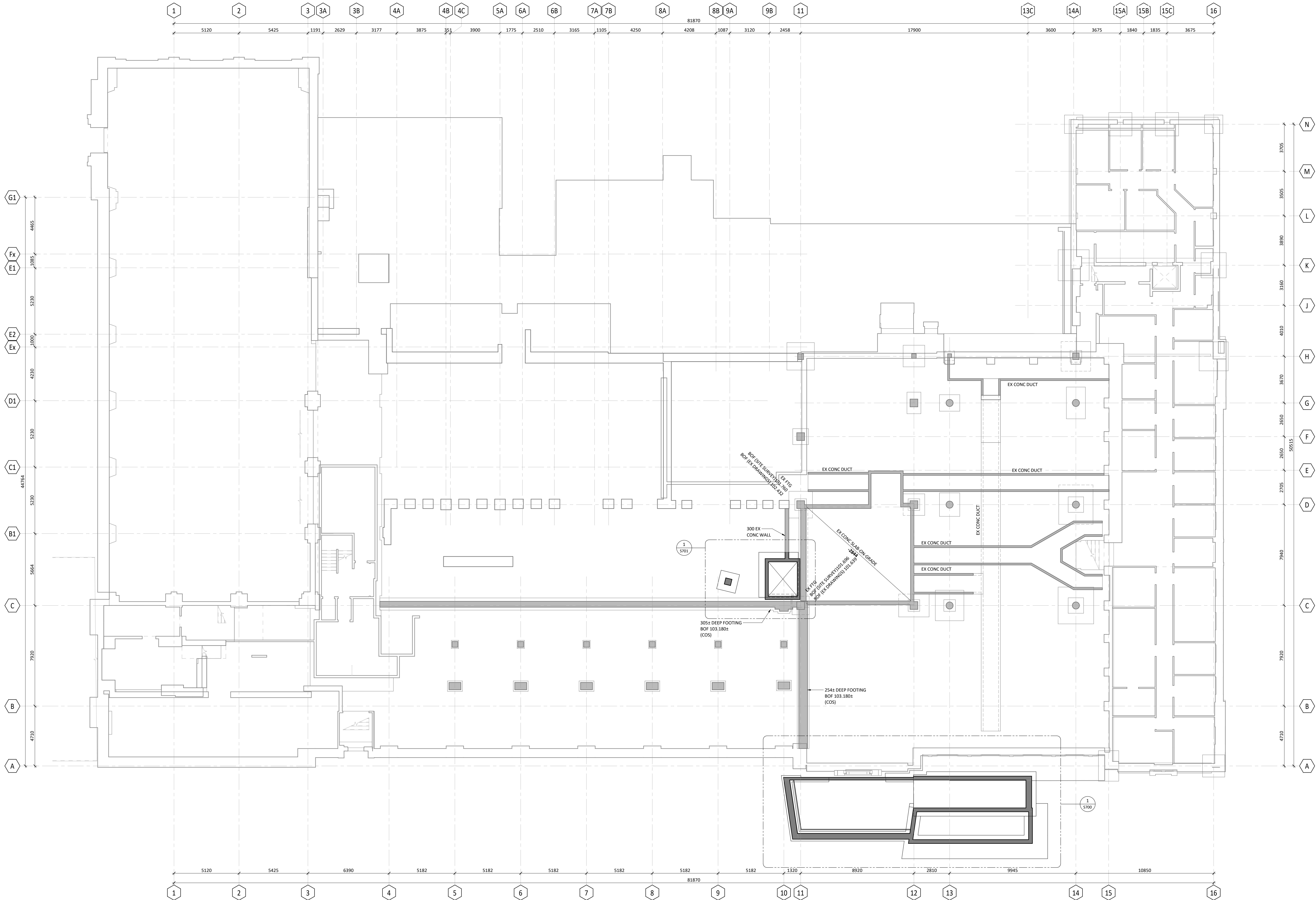


CW6 WATERSTOP BETWEEN NEW AND EXISTING WALLS



DK1 STEEL DECK AT ROOFS (MASONRY FRAMING)

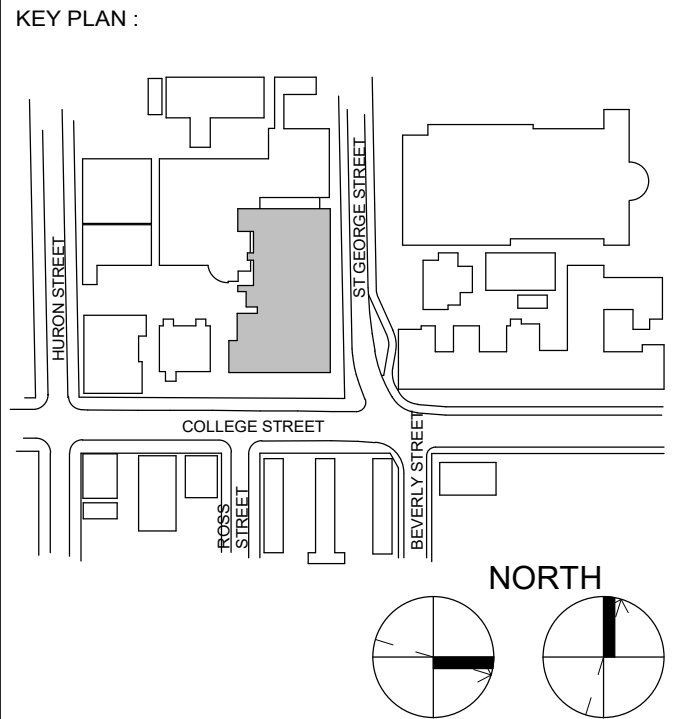




EXISTING FOUNDATION SCHEDULE					
COLUMN AT LEVEL 01	EXISTING SIZE FROM EXISTING DRAWINGS (mm)		FOOTING ON GRIDLINES	EXISTING SIZE FROM SITE SURVEY (mm)	
	CAP	FOOTING (WxLxD)		PIER	FOOTING (WxLxD)
	609x609	N/A	1524x1524x482	C & 11	400x400 1350x1450x450

LEVEL 01 / FOUNDATION PLAN NOTES

- FINISHED FLOOR IS AT GEODETIC ELEVATION 105700 EXCEPT AS CROSSED AND NOTED. ELEVATIONS FOR AREAS CROSSED AND NOTED ARE TO BE READ FROM FINISHED FLOOR ELEVATION.
- SEE ARCHITECTURAL DRAWINGS FOR SLOPES TO DRAINS.
- EXISTING FOOTING SIZES ARE TO BE VERIFIED ON SITE. DIFFERENCES BETWEEN EXISTING ELEMENTS ON SITE AND THE ASSUMED INDICATED IN THE CONTRACT DOCUMENTS SHALL BE COMMUNICATED IMMEDIATELY TO THE CONSULTANT.



REVISION		
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PROJECT:
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Toronto, ON, M5T 3A1

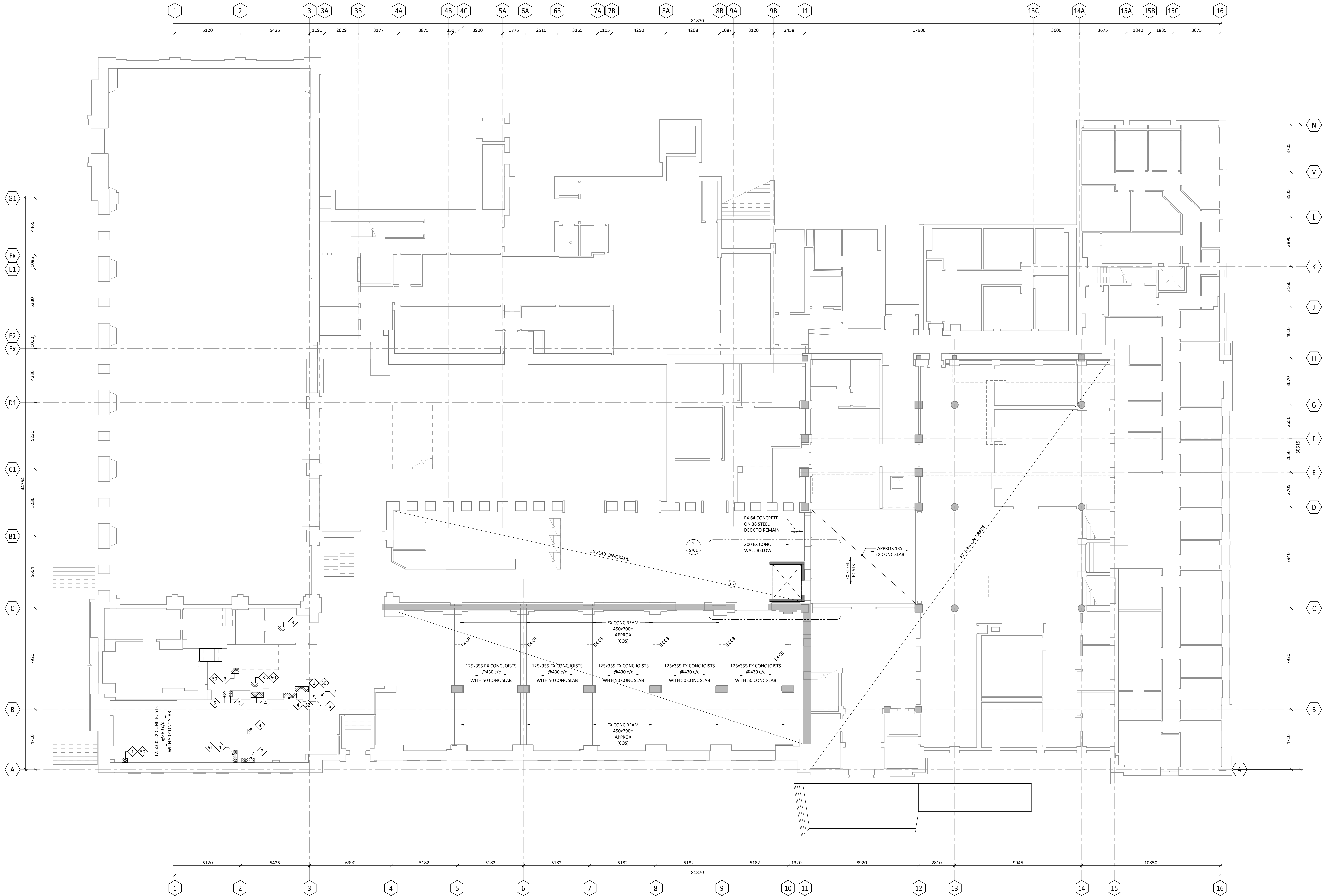
SHEET CONTENTS:
FRAMING PLAN - FOUNDATION

PROJECT NUMBER:
EN023-00965

DRAWING SCALE:
1 : 100

DRAWN BY: CH CHECKED BY: CF DATE: 2024-07-16

SHEET NO.: **S200** REV: **6**



FRAMING PLAN - LEVEL 01
1 : 100

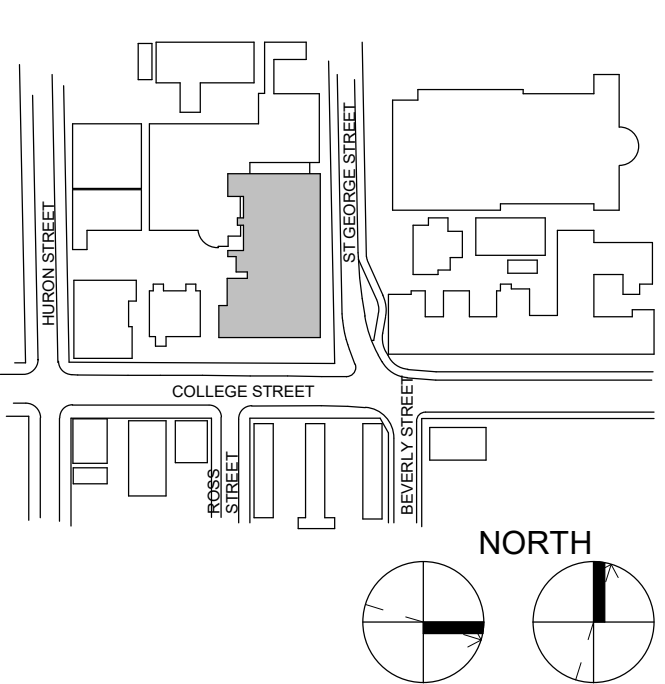
- NOTES:
- REFER TO S200 FOR PLAN NOTES.

KEYNOTE LEGEND	
MARK	DESCRIPTION
①	REPAIR EXISTING JOIST AS PER PROJECT DETAIL PD01
②	REPAIR EXISTING JOISTS AS PER PROJECT DETAIL PD02
③	REPAIR EXISTING JOIST/BEAM AS PER PROJECT DETAIL PD03
④	INSTALL LINTEL ABOVE OPENING IN EXISTING MASONRY WALL AS PER TYPICAL DETAIL M1
⑤	INFILL OPENING IN EXISTING MASONRY WALL TO MATCH EXISTING
⑥	INSTALL DRY PACK GROUT BELOW ALL U/S SURFACE AREA OF EXISTING BEARING PLATE
⑦	INSTALL STEEL STUD INFILL ABOVE EXISTING STEEL BEAM TO PROVIDE FULL BEARING FOR MASONRY WALL ABOVE SOUTH END OF STEEL BEAM.

KEYNOTE LEGEND	
MARK	DESCRIPTION
⑧	INSTALL DRY PACK GROUT ABOVE EXISTING STEEL CHANNEL TIGHT TO U/S OF ALL EXISTING CONCRETE JOISTS ABOVE CHANNEL
⑨	STEEL TRADE TO INVESTIGATE EXISTING STEEL CONNECTIONS AND SPLICES TO DETERMINED CAPACITIES AND PROVIDE VALUES TO CONSULTANT FOR REVIEW.
⑩	EXISTING STEEL JOIST REPAIR, REFER TO PROJECT DETAIL PD04
⑪	CONTRACTOR TO PROVIDE CLOSE ACCESS, FORM UNDERSIDE, FOR THE CONSULTANT TO REVIEW TO THE EXISTING STRUCTURAL STEEL AT PRE-EXISTING LEAK LOCATION. CONTRACTOR TO ADVISE CONSULTANT WHEN CLOSE ACCESS IS READY FOR COMPLETION OF FIELD REVIEW.

KEYNOTE LEGEND	
MARK	DESCRIPTION
⑫	CONTRACTOR TO PROVIDE CLOSE ACCESS, FROM UNDERSIDE, FOR THE CONSULTANT TO REVIEW THE LEVEL 03 STRUCTURE AROUND EXISTING VERTICAL MECHANICAL PENETRATIONS. CONTRACTOR TO ADVISE CONSULTANT WHEN CLOSE ACCESS IS READY FOR COMPLETION OF FIELD REVIEW.
⑬	REPAIR EXISTING CONCRETE SLAB AT PREVIOUS CORE LOCATIONS AS PER PROJECT DETAIL PD04
⑭	EXISTING MECHANICAL/ELECTRICAL SERVICES TO BE REMOVED/RELOCATED FROM CONCRETE JOIST GEOMETRY
⑮	EXISTING MECHANICAL/ELECTRICAL SERVICES TO REMAIN, RELOCATE WHERE POSSIBLE TO ALLOW FOR CONCRETE REPAIR.
⑯	EXISTING MECHANICAL/ELECTRICAL SERVICES TO BE REMOVED/RELOCATED TO ENABLE INSTALLATION OF NEW LINTEL

KEY PLAN:



REVISION		
NO.	DATE	DESCRIPTION
1	2024-09-04	PROGRESS ISSUANCE
2	2024-11-01	PROGRESS ISSUANCE
3	2024-11-15	BUILDING PERMIT
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PROJECT:
UNIVERSITY OF TORONTO HEALTH & WELLNESS CENTRE AT KOFFLER RENOVATION

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SHEET CONTENTS:
FRAMING PLAN - LEVEL 01

PROJECT NUMBER:
EN023-00965

DRAWING SCALE:

1 : 100

DRAWN BY:

Author

CHECKED BY:

Checker

DATE:

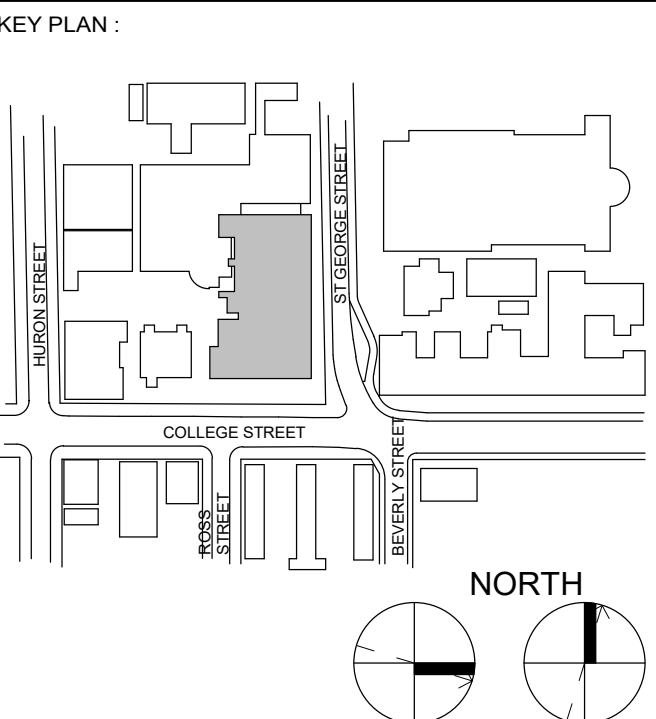
2024-07-16

SHEET NO.:

S201

REV:

6



REVISION		
NO.	DATE	DESCRIPTION
	2024-10-04	PROGRESS ISSUANCE
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LEVEL 02 PLAN NOTES

1. PLAN DATUM (FINISHED FLOOR ELEVATION) IS GEODETIC ELEVATION 112100.
2. TOP OF STRUCTURAL SLAB IS +44D 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. REFER TO LOADING DRAWINGS FOR DESIGN LOADS.
7. PROVIDE UPWARD CAMBERS TO STRUCTURAL MEMBERS AS SHOWN THUS ON PLAN $\epsilon=20$.
8. ALL STEEL ELEMENTS INCLUDING THEIR CONNECTIONS, OUTSIDE OF BUILDING VAPOUR BARRIER ARE TO BE GALVANIZED.

KEYNOTE LEGEND	
MARK	DESCRIPTION
①	REPAIR EXISTING JOIST AS PER PROJECT DETAIL PD01
②	REPAIR EXISTING JOISTS AS PER PROJECT DETAIL PD02
③	REPAIR EXISTING JOIST/BEAM AS PER PROJECT DETAIL PD03
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⑤	INSTALL OPENING IN EXISTING MASONRY WALL TO MATCH EXISTING
⑥	INSTALL DRY PACK GROUT BELOW ALL U/S SURFACE AREA OF EXISTING BEARING PLATE
⑦	INSTALL STEEL STUD INFLIB ABOVE EXISTING STEEL BEAM TO PROVIDE FULL BEARING FOR MASONRY WALL ABOVE SOUTH END OF STEEL BEAM.

KEYNOTE LEGEND	
MARK	DESCRIPTION
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⑩	EXISTING STEEL JOIST REPAIR, REFER TO PROJECT DETAIL PD04
⑪	CONTRACTOR TO PROVIDE CLOSE ACCESS, FORM UNDERSIDE, FOR THE CONSULTANT TO REVIEW TO THE EXISTING STRUCTURAL STEEL AT PRE-EXISTING LEAK LOCATION. CONTRACTOR TO ADVISE CONSULTANT WHEN CLOSE ACCESS IS READY FOR COMPLETION OF FIELD REVIEW.

KEYNOTE LEGEND	
MARK	DESCRIPTION
②	CONTRACTOR TO PROVIDE CLOSE ACCESS, FROM UNDERSIDE, FOR THE CONSULTANT TO REVIEW THE LEVELS OF STRUCTURE AROUND EXISTING VERTICAL MECHANICAL PENETRATIONS. CONTRACTOR TO ADVISE CONSULTANT WHEN CLOSE ACCESS IS READY FOR COMPLETION OF FIELD REVIEW.
③	REPAIR EXISTING CONCRETE SLAB AT PREVIOUS CORE LOCATIONS AS PER PROJECT DETAIL. PDRM EXISTING MECHANICAL/ELECTRICAL SERVICES TO BE REMOVED/RELOCATED FROM CONCRETE JOIST GEOMETRY
④	EXISTING MECHANICAL/ELECTRICAL SERVICES TO REMAIN, RELOCATE WHERE POSSIBLE TO ALLOW FOR CONCRETE REPAIR.
⑤	EXISTING MECHANICAL/ELECTRICAL SERVICES TO BE REMOVED/RELOCATED TO ENABLE INSTALLATION OF NEW LINTEL.

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UNIVERSITY OF
TORONTO

PROJECT:
UNIVERSITY OF
TORONTO HEALTH &
WELLNESS CENTRE AT
KOFFLER RENOVATION

214 College Street
Toronto, ON, M5T 3A1

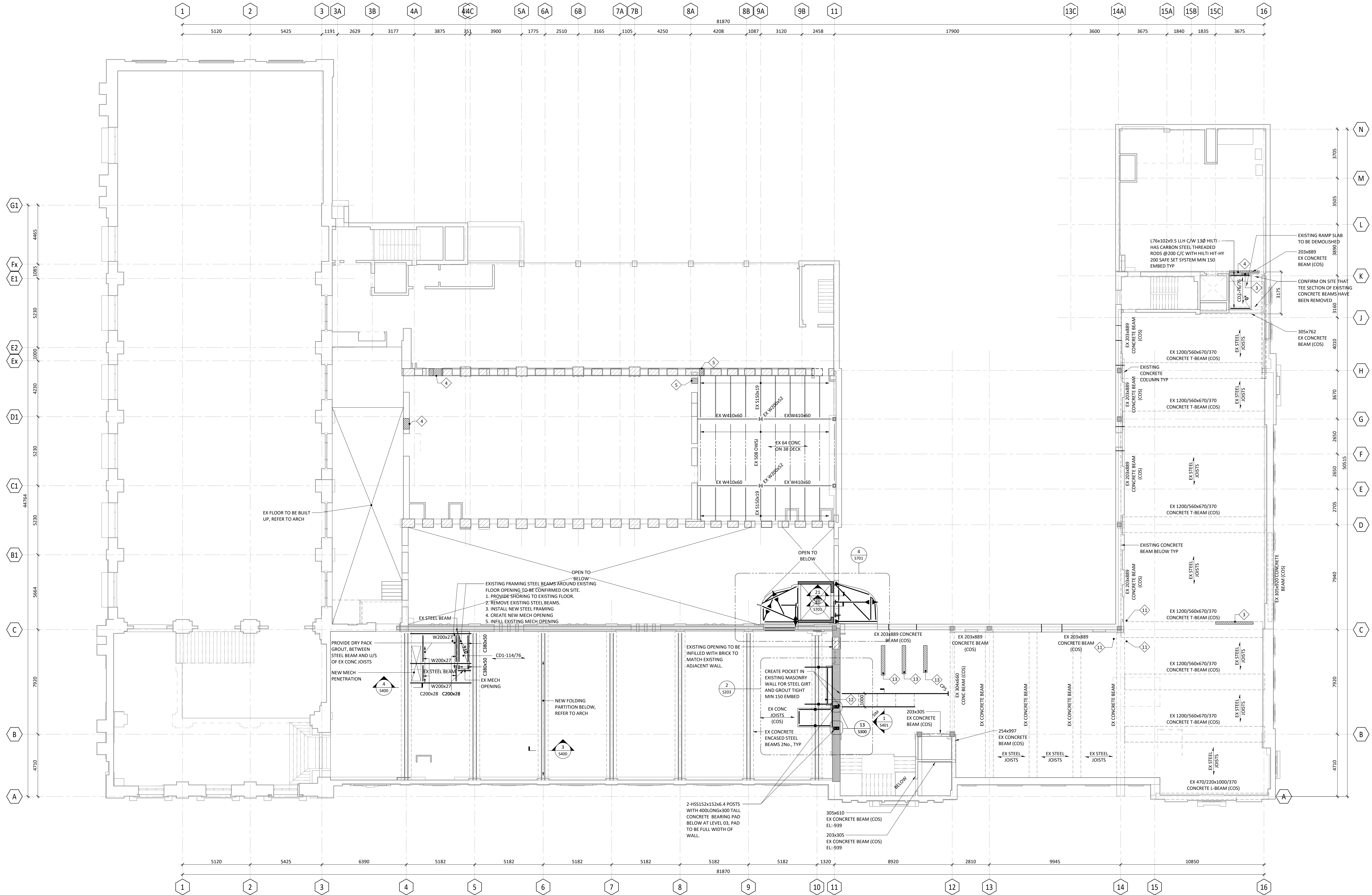
FRAMING PLAN - LEVEL 02

PROJECT NUMBER :
EN023-00965

1 : 100

DRAWN BY : Author	CHECKED BY : Checker	DATE: 2024-07-16
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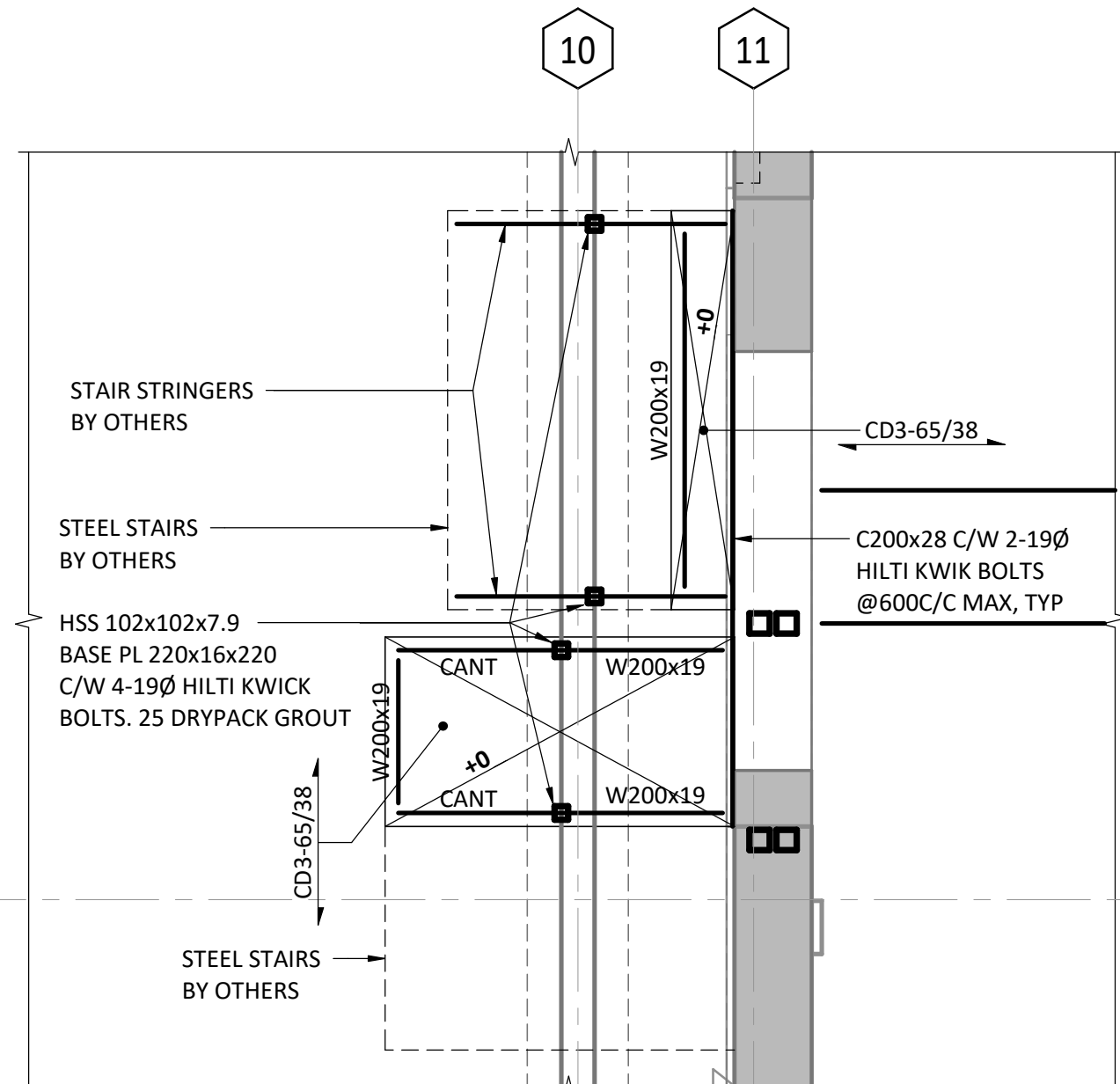
S202



MARK	KEYNOTE LEGEND
①	REPAIR EXISTING JOIST AS PER PROJECT DETAIL PD01
②	REPAIR EXISTING JOISTS AS PER PROJECT DETAIL PD02
③	REPAIR EXISTING JOIST/BEAM AS PER PROJECT DETAIL PD03
④	INSTALL LINTEL ABOVE OPENING IN EXISTING MASONRY WALL AS PER TYPICAL DETAIL M1
⑤	INFILL OPENING IN EXISTING MASONRY WALL TO MATCH EXISTING
⑥	INSTALL DRY PACK GROUT BELOW ALL U/S SURFACE AREA OF EXISTING BEARING PLATE
⑦	INSTALL STEEL STUD INFILL ABOVE EXISTING STEEL BEAM TO PROVIDE FULL BEARING FOR MASONRY WALL ABOVE SOUTH END OF STEEL BEAM.

MARK	KEYNOTE LEGEND
⑧	INSTALL DRY PACK GROUT ABOVE EXISTING STEEL CHANNEL TIGHT TO U/S OF ALL EXISTING CONCRETE JOISTS ABOVE CHANNEL
⑨	STEEL TRADE TO INVESTIGATE EXISTING STEEL CONNECTIONS AND SPICES TO DETERMINED CAPACITIES AND PROVIDE VALUES TO CONSULTANT FOR REVIEW.
⑩	EXISTING STEEL JOIST REPAIR, REFER TO PROJECT DETAIL PD04
⑪	CONTRACTOR TO PROVIDE CLOSE ACCESS, FORM UNDERSIDE, FOR THE CONSULTANT TO REVIEW TO THE EXISTING STRUCTURAL STEEL AT PRE-EXISTING LEAK LOCATION. CONTRACTOR TO ADVISE CONSULTANT WHEN CLOSE ACCESS IS READY FOR COMPLETION OF FIELD REVIEW.

MARK	KEYNOTE LEGEND
⑫	CONTRACTOR TO PROVIDE CLOSE ACCESS, FROM UNDERSIDE, FOR THE CONSULTANT TO REVIEW THE LEVEL 03 STRUCTURE AROUND EXISTING VERTICAL MECHANICAL PENETRATIONS. CONTRACTOR TO ADVISE CONSULTANT WHEN CLOSE ACCESS IS READY FOR COMPLETION OF FIELD REVIEW.
⑬	REPAIR EXISTING CONCRETE SLAB AT PREVIOUS CORE LOCATIONS AS PER PROJECT DETAIL PD04
⑭	EXISTING MECHANICAL/ELECTRICAL SERVICES TO BE REMOVED/RELOCATED FROM CONCRETE JOIST GEOMETRY
⑮	EXISTING MECHANICAL/ELECTRICAL SERVICES TO REMAIN, RELOCATE WHERE POSSIBLE TO ALLOW FOR CONCRETE REPAIR.
⑯	EXISTING MECHANICAL/ELECTRICAL SERVICES TO BE REMOVED/RELOCATED TO ENABLE INSTALLATION OF NEW LINTEL



1 FRAMING PLAN - LEVEL 03

1 : 100

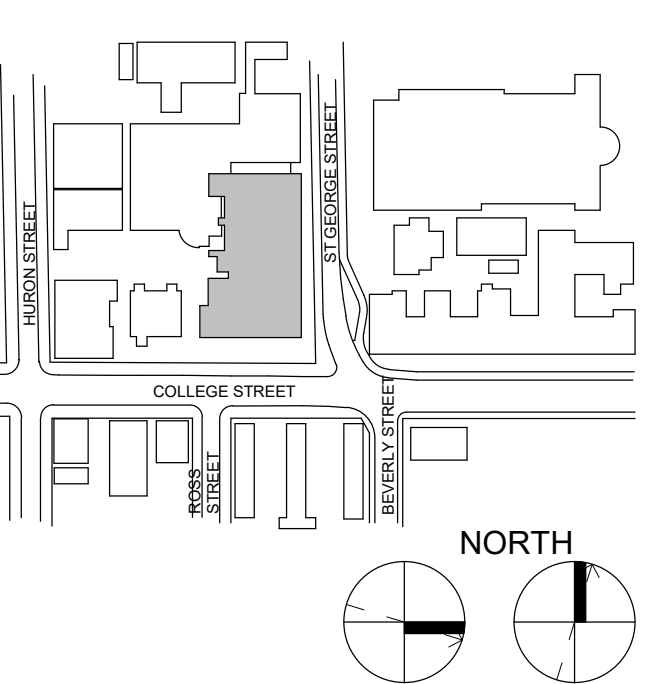
LEVEL 03 PLAN NOTES

- PLAN DATUM (FINISHED FLOOR ELEVATION) IS GEODETIC ELEVATION 115760.
- TOP OF STRUCTURAL SLAB IS ± 0.00 FROM PLAN DATUM EXCEPT AS CROSSED AND NOTED.
- ELEVATIONS FOR AREAS CROSSED AND NOTED ARE TO BE READ FROM THE PLAN DATUM.
- FOR SLOPING ROOFS HIGH AND LOW POINTS ARE NOTED AND ARE TO BE READ FROM PLAN DATUM.
- TOPS OF STEEL BEAMS ARE AT UNDERSIDE OF STEEL DECK EXCEPT AS NOTED THUS (\overline{xxx}). ELEVATIONS FOR TOPS OF NOTED STEEL BEAMS ARE TO BE READ FROM PLAN DATUM.
- REFER TO LOADING DRAWINGS FOR DESIGN LOADS.
- PROVIDE UPWARD CAMBERS TO STRUCTURAL MEMBERS AS SHOWN THUS ON PLAN c=20.
- ALL STEEL ELEMENTS INCLUDING THEIR CONNECTIONS, OUTSIDE OF BUILDING VAPOUR BARRIER ARE TO BE GALVANIZED.

2 LEVEL 03 ENLARGED PLAN

1 : 50

KEY PLAN :



REVISION

NO.	DATE	DESCRIPTION
1	2024-10-04	PROGRESS ISSUANCE
2	2024-11-01	PROGRESS ISSUANCE
3	2024-11-15	BUILDING PERMIT
4	2025-01-31	ISSUED FOR BID
5	2025-04-30	ISSUED FOR CONSTRUCTION

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SHEET CONTENTS:
FRAMING PLAN - LEVEL 03

PROJECT NUMBER:
EN023-00965

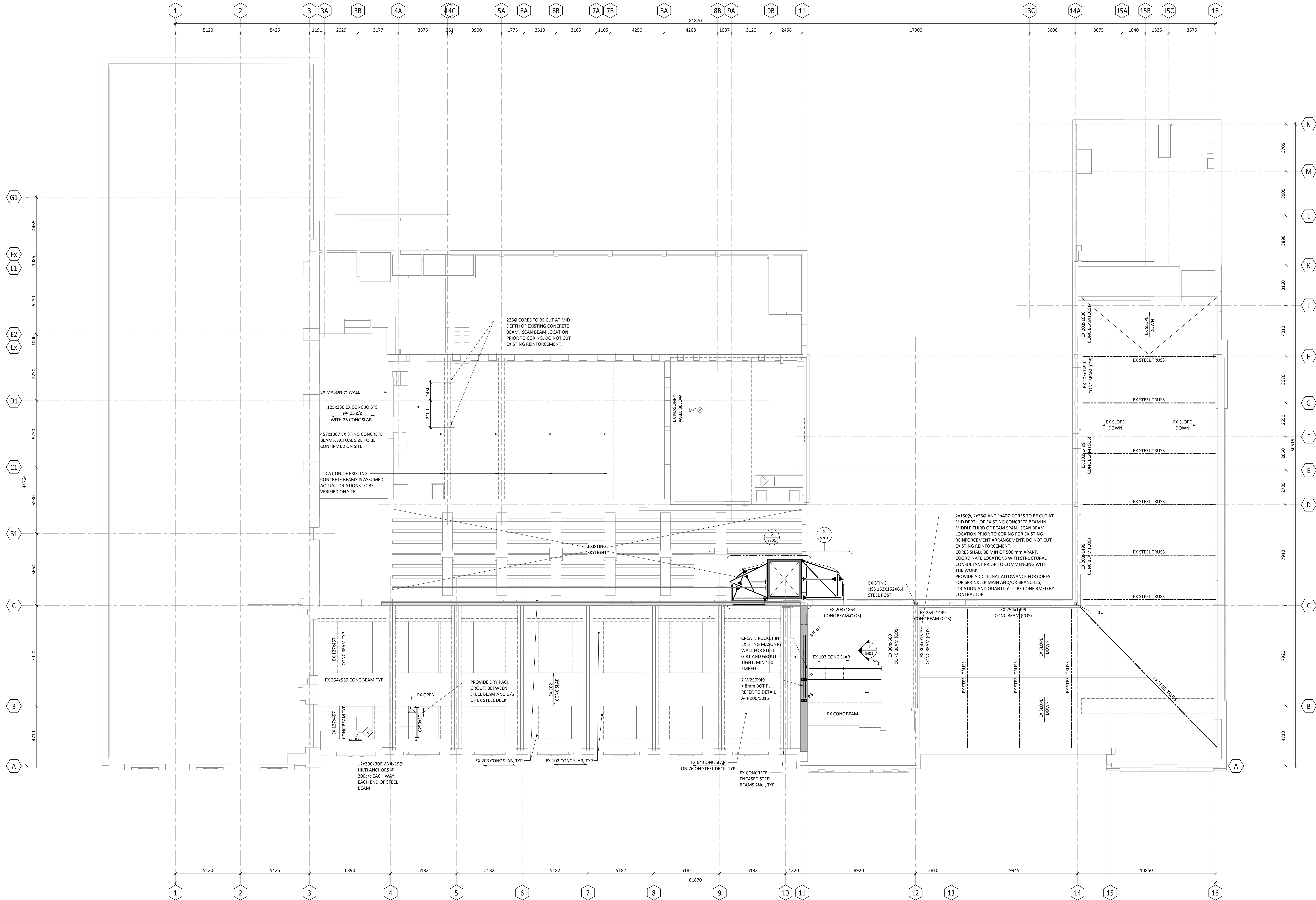
DRAWING SCALE:
As indicated

DRAWN BY: CHECKED BY: DATE: 2024-07-16

AUTHOR: Checker

SHEET NO.: **S203**

REV: **6**



FRAMING PLAN - LEVEL 04 - ROOF
1 : 100

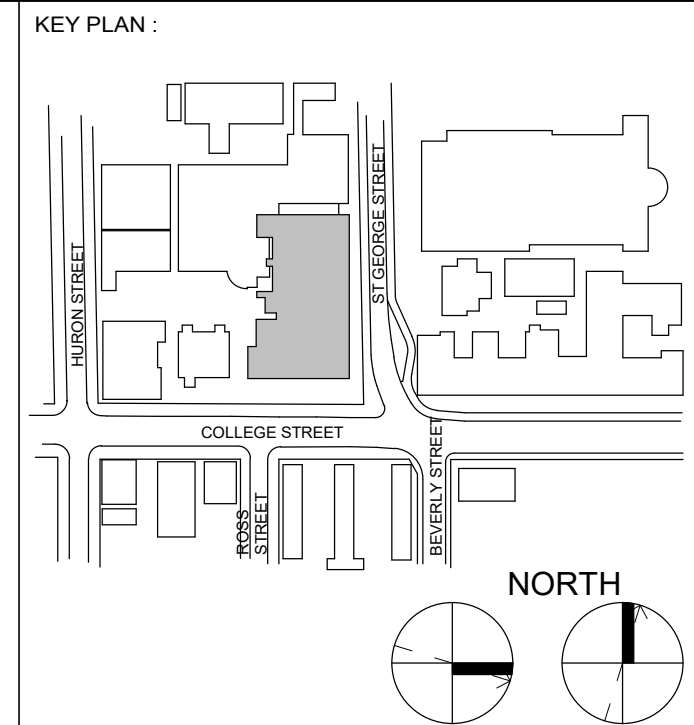
MARK	KEYNOTE LEGEND
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②	REPAIR EXISTING JOISTS AS PER PROJECT DETAIL PD02
③	REPAIR EXISTING JOIST/BEAM AS PER PROJECT DETAIL PD03
④	INSTALL LINTEL ABOVE OPENING IN EXISTING MASONRY WALL AS PER TYPICAL DETAIL M1
⑤	INFILL OPENING IN EXISTING MASONRY WALL TO MATCH EXISTING
⑥	INSTALL DRY PACK GROUT BELOW ALL U/S SURFACE AREA OF EXISTING BEARING PLATE
⑦	INSTALL STEEL STUD INFILL ABOVE EXISTING STEEL BEAM TO PROVIDE FULL BEARING FOR MASONRY WALL ABOVE SOUTH END OF STEEL BEAM.

MARK	KEYNOTE LEGEND
⑧	INSTALL DRY PACK GROUT ABOVE EXISTING STEEL CHANNEL TIGHT TO U/S OF ALL EXISTING CONCRETE JOISTS ABOVE CHANNEL
⑨	STEEL TRADE TO INVESTIGATE EXISTING STEEL CONNECTIONS AND SPLICES TO DETERMINED CAPACITIES AND PROVIDE VALUES TO CONSULTANT FOR REVIEW.
⑩	EXISTING STEEL JOIST REPAIR, REFER TO PROJECT DETAIL PD04
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MARK	KEYNOTE LEGEND
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⑬	REPAIR EXISTING CONCRETE SLAB AT PREVIOUS CORE LOCATIONS AS PER PROJECT DETAIL PD04
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⑮	EXISTING MECHANICAL/ELECTRICAL SERVICES TO REMAIN, RELOCATE WHERE POSSIBLE TO ALLOW FOR CONCRETE REPAIR.
⑯	EXISTING MECHANICAL/ELECTRICAL SERVICES TO BE REMOVED/RELOCATED TO ENABLE INSTALLATION OF NEW LINTEL

LEVEL 04 / ROOF PLAN NOTES

- PLAN DATUM (FINISHED FLOOR ELEVATION) IS GEODETIC ELEVATION 120935.
- TOP OF STRUCTURAL SLAB IS ± 0.00 FROM PLAN DATUM EXCEPT AS CROSSED AND NOTED.
- TOP OF ROOF DECK IS ± 0.00 FROM PLAN DATUM EXCEPT AS CROSSED AND NOTED.
- ELEVATIONS FOR AREAS CROSSED AND NOTED ARE TO BE READ FROM THE PLAN DATUM.
- FOR SLOPING ROOFS HIGH AND LOW POINTS ARE NOTED AND ARE TO BE READ FROM PLAN DATUM.
- TOPS OF STEEL BEAMS ARE AT UNDERSIDE OF STEEL DECK EXCEPT AS NOTED THUS (~~EX~~). ELEVATIONS FOR TOPS OF NOTED STEEL BEAMS ARE TO BE READ FROM PLAN DATUM.
- REFER TO LOADING DRAWINGS FOR DESIGN LOADS.
- PROVIDE UPWARD CAMBERS TO STRUCTURAL MEMBERS AS SHOWN THUS ON PLAN $c=20$.
- ALL STEEL ELEMENTS INCLUDING THEIR CONNECTIONS, OUTSIDE OF BUILDING VAPOUR BARRIER ARE TO BE GALVANIZED.



REVISION	
NO.	DATE
1	2024-09-04
2	2024-11-01
3	2024-11-15
4	2025-01-31
5	2025-04-30

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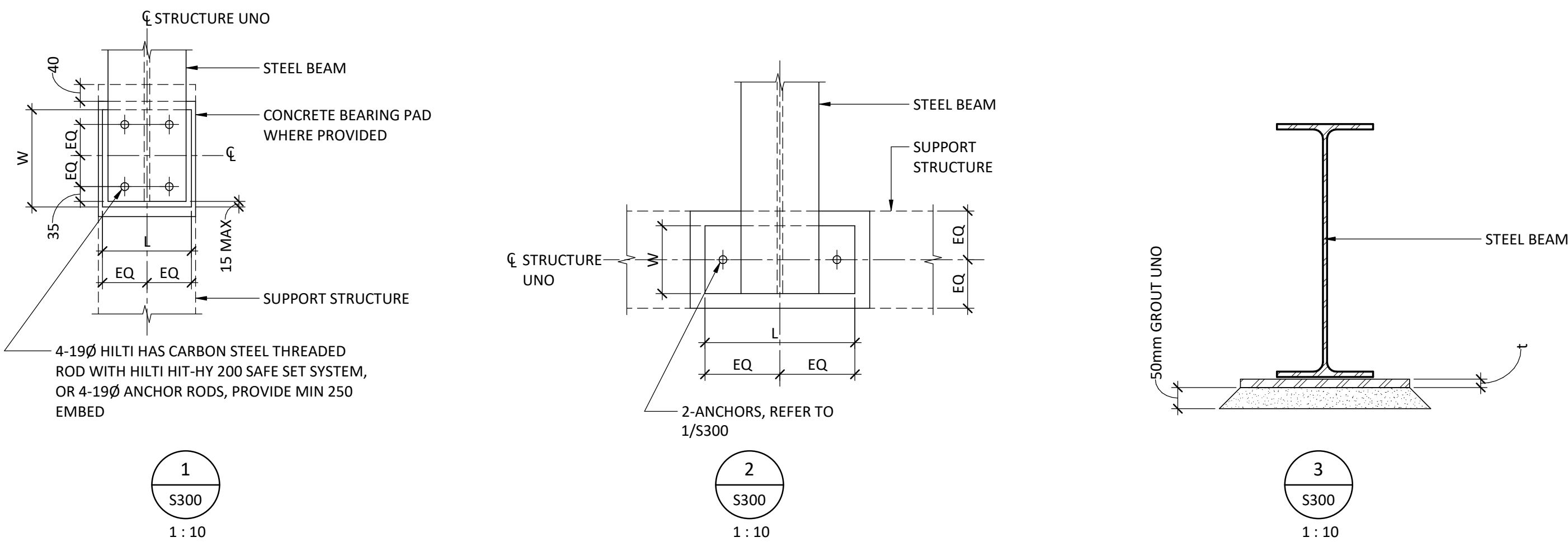
SHEET CONTENTS: FRAMING - LEVEL 04 - ROOF

PROJECT NUMBER: EN023-00965	DRAWING SCALE: 1 : 100
DRAWN BY: AUTHOR	CHECKED BY: Checker
SHEET NO: S204	REV: 6

BEARING PLATE SCHEDULE				
MARK	THICK (t)	PLATE SIZE (W) x LENGTH (L)	ANCHOR TYPE	REMARKS
BPL-01	16	200x270	REFER TO 1/S300	

STEEL BEAM BEARING PLATE NOTES:

- SEE 1/S300, 2/S300, 3/S300 FOR BEARING PLATE DETAILS.
- CONFIRM EXISTING WALL THICKNESS AND COORDINATE WITH CONSULTANT PRIOR TO FABRICATION.



CONNECTION PLATE SCHEDULE														
TYPICAL CAST-IN PLATES														
MARK	PLATE HEIGHT (mm)	PLATE WIDTH (mm)	PLATE THICKNESS (mm)	STUD DETAILS				Vf (kN)	Tf (kN)	Mf (kN)	REMARKS			
				ANCHOR Ø (mm)	EMBEDMENT LENGTH (mm)	# ROWS	# COLUMNS	Sx	Sy					
CP1	360	200	12	19	150	2	2	110	275					
CP2	360	200	12	19	150	2	2	110	275					
CP3	200	200	12	19	150	2	2	110	110					ADD PIN REIN PER 7/S300

TYPICAL CAST-IN PLATE NOTES:

- SEE DETAIL 7/S300 FOR TYPICAL CAST-IN PLATE DETAIL.
- BEAMS ARE TO BE CENTRED ON PLATE UNO.
- WHERE WALL OPENINGS ABOVE THE BEAM CONFLICT WITH CAST-IN PLATE PLACEMENT, SHIFT PLATE DOWN TO MAINTAIN MINIMUM DISTANCE BETWEEN EDGE OF CONCRETE AND FIRST ROW OF ANCHORS OF 75mm.
- FACTORED RESISTANCES ARE BASED ON $f_c = 30$ Mpa CRACKED CONCRETE WITH 75mm CONNECTION ECCENTRICITY.

MOMENT RESISTING CAST-IN PLATES														
MARK	PLATE HEIGHT (mm)	PLATE WIDTH (mm)	PLATE THICKNESS (mm)	ANCHOR Ø (mm)	EMBEDMENT LENGTH (mm)	# ROWS	# COLUMNS	Sx	Sy	Vf (kN)	Tf (kN)	Mf (kN)	REMARKS	
CP4	675	200	19	19	225	3	2	75	150	250	---	230	4-25M x1070LG BARS	

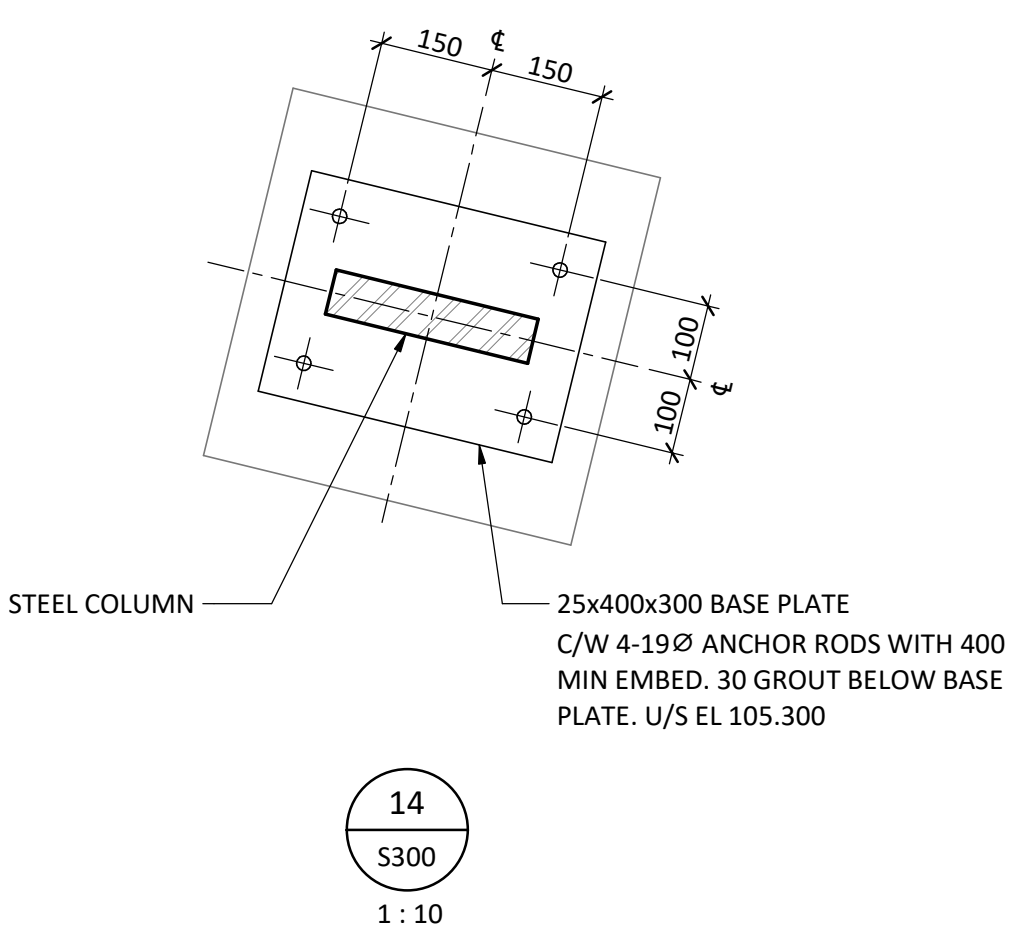
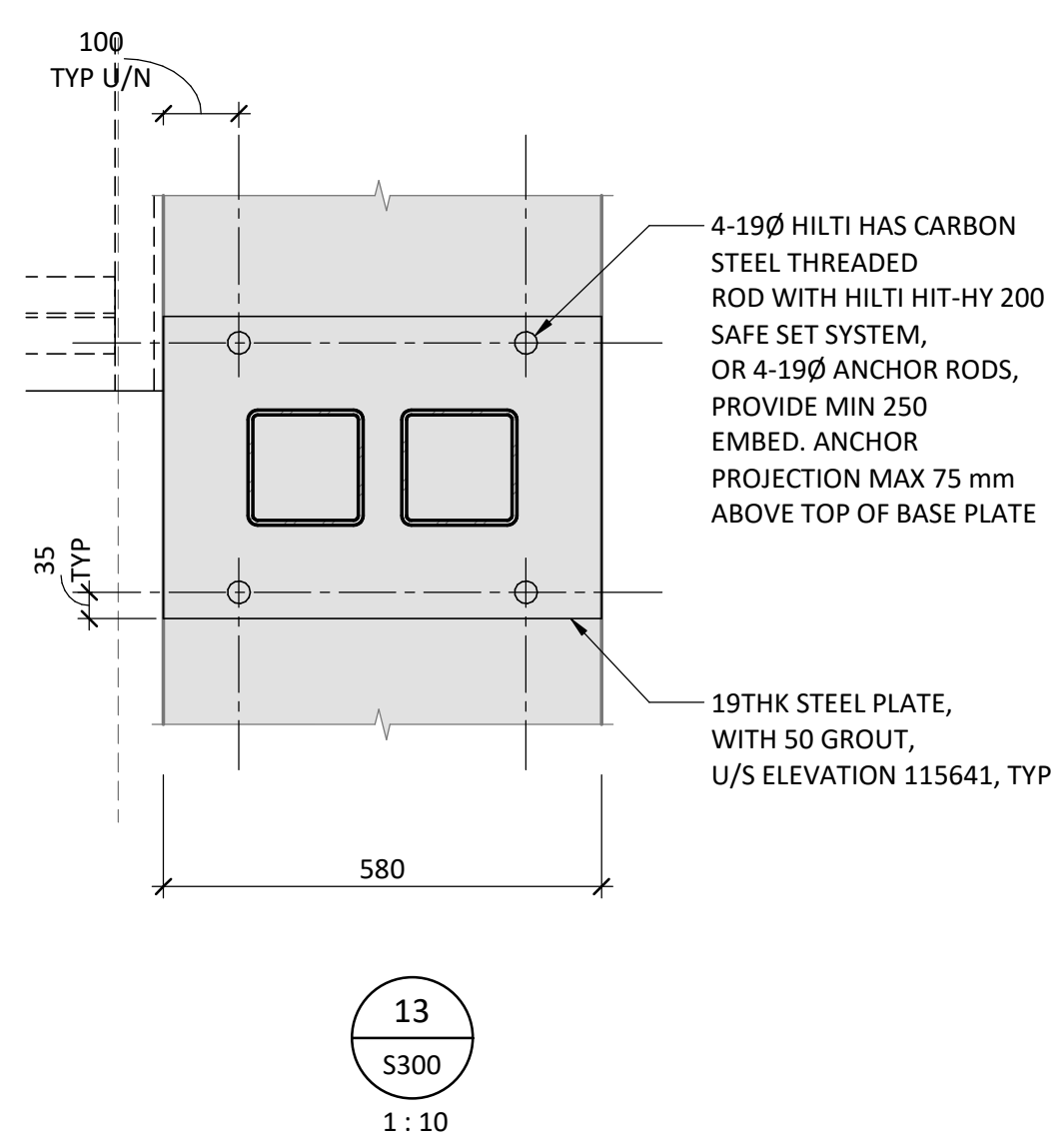
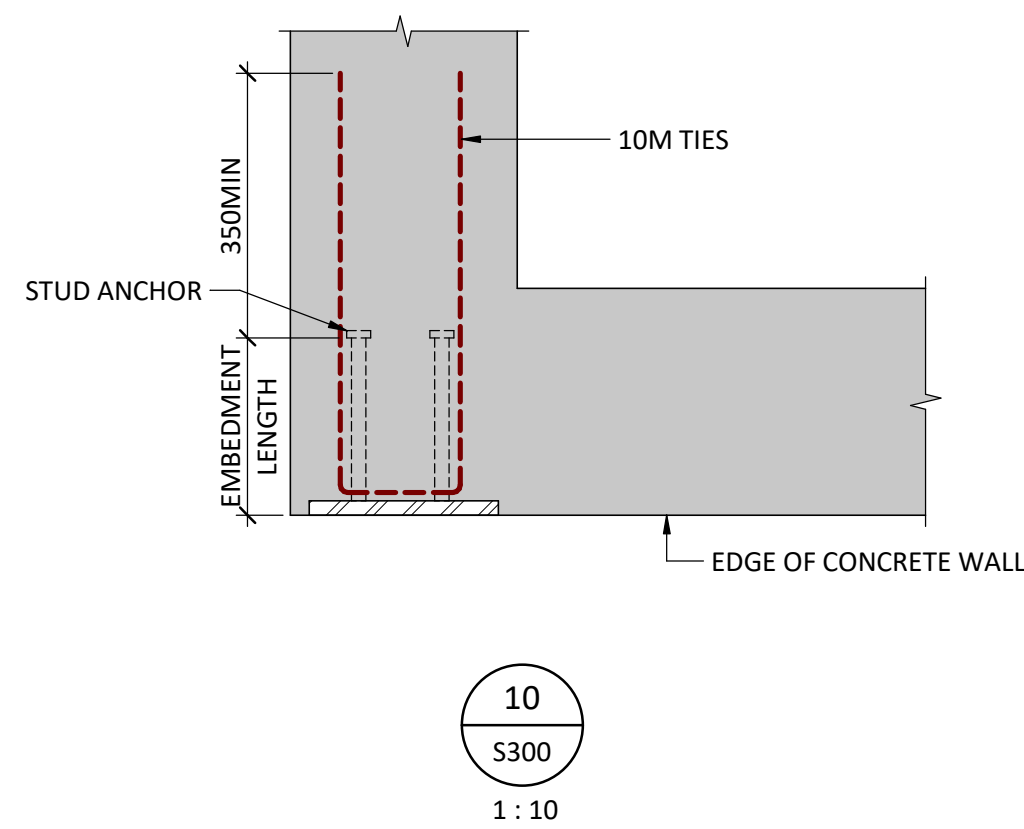
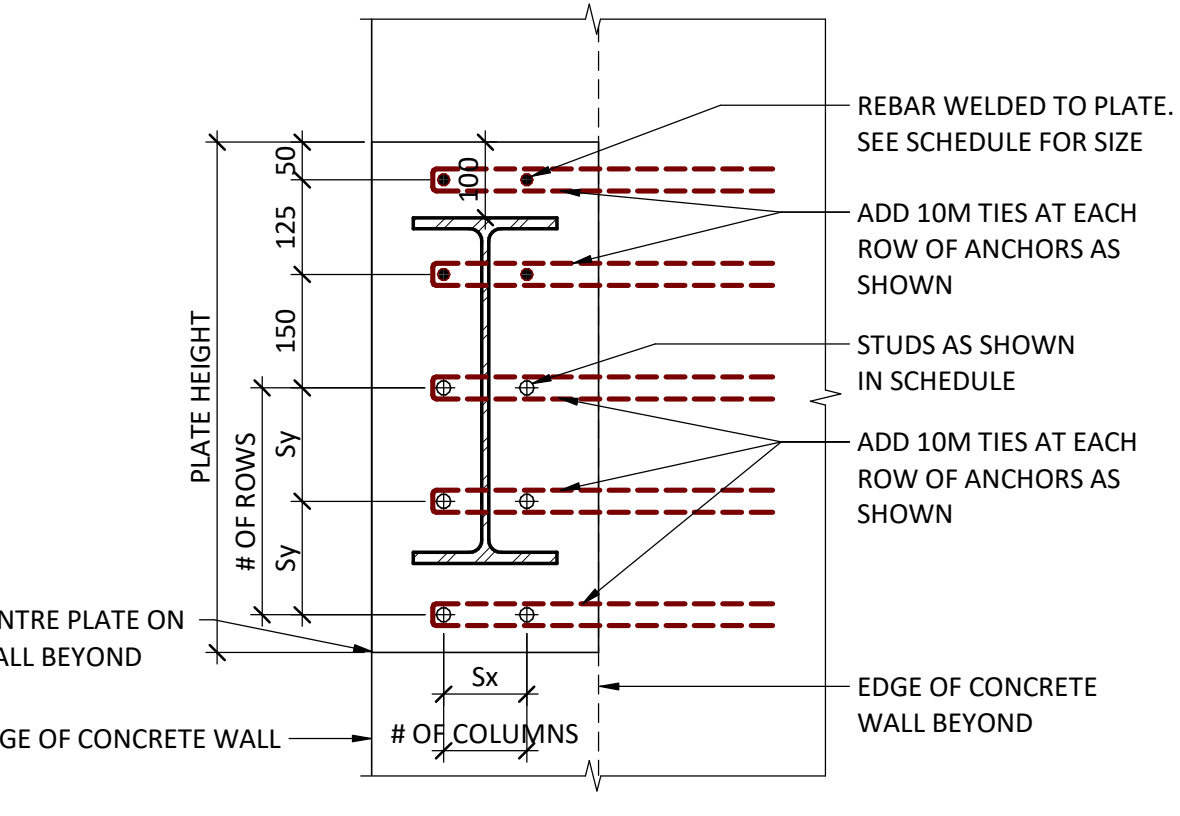
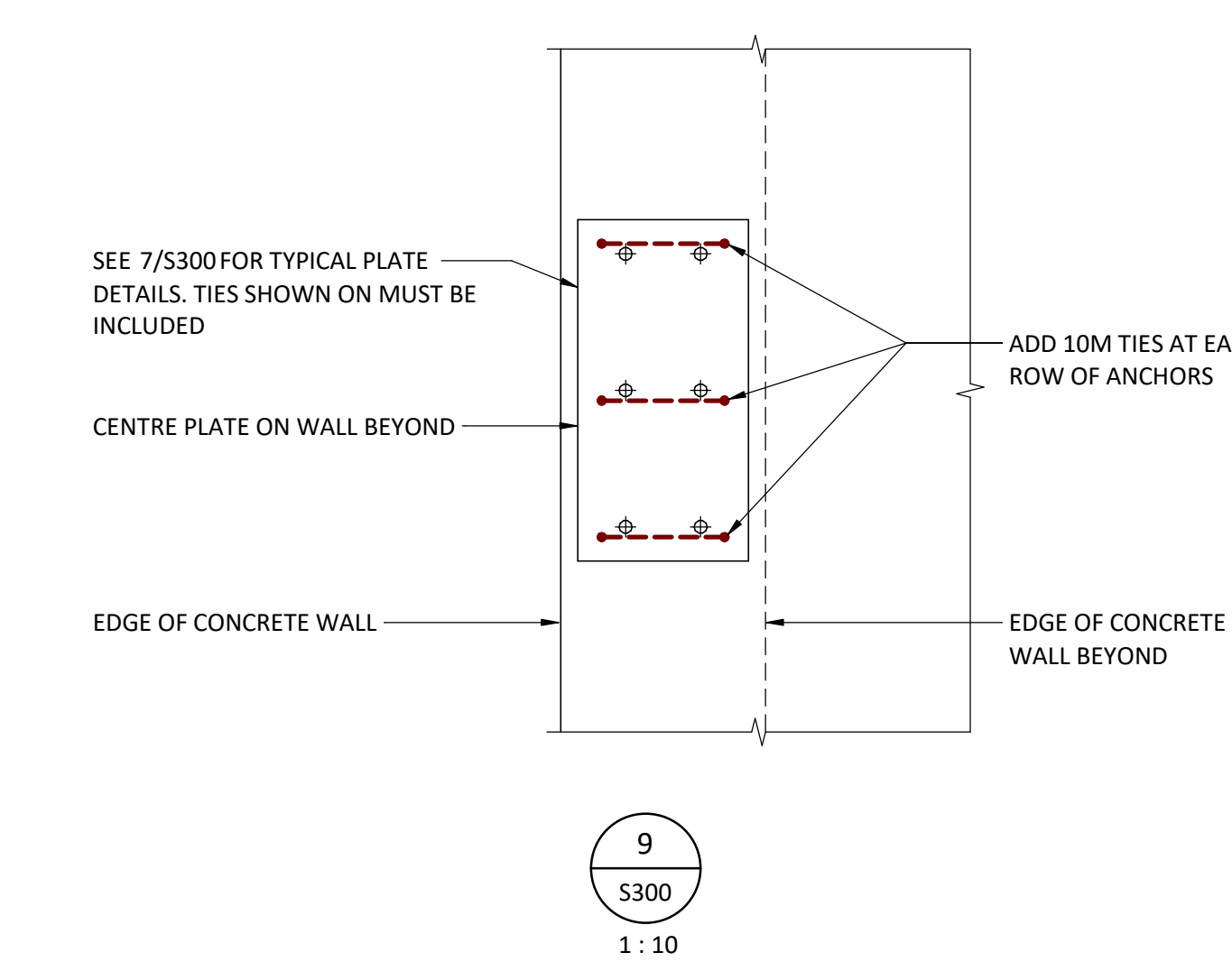
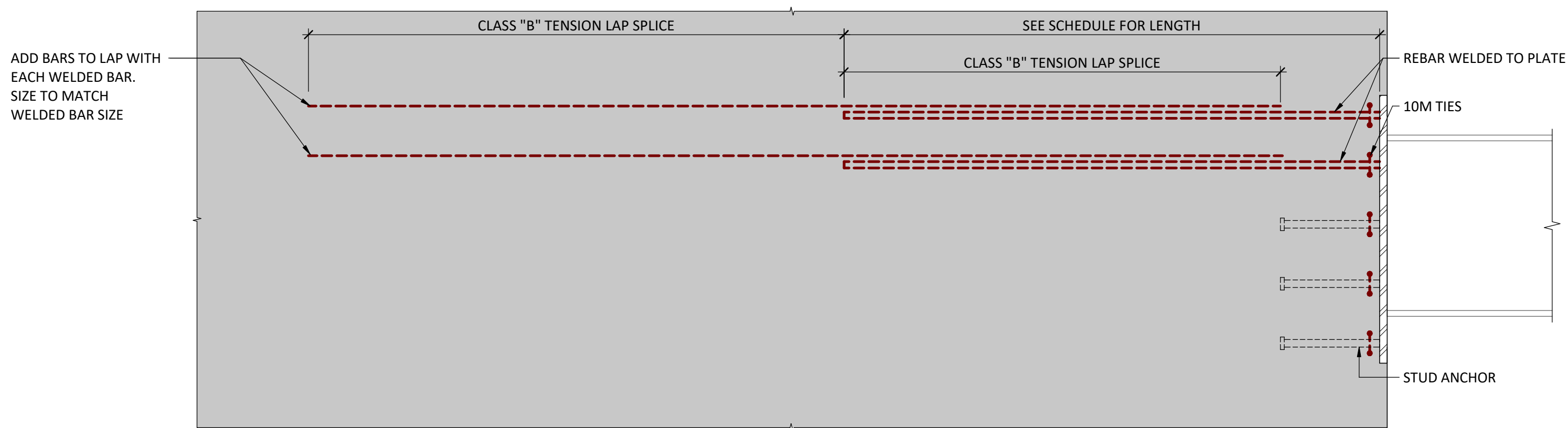
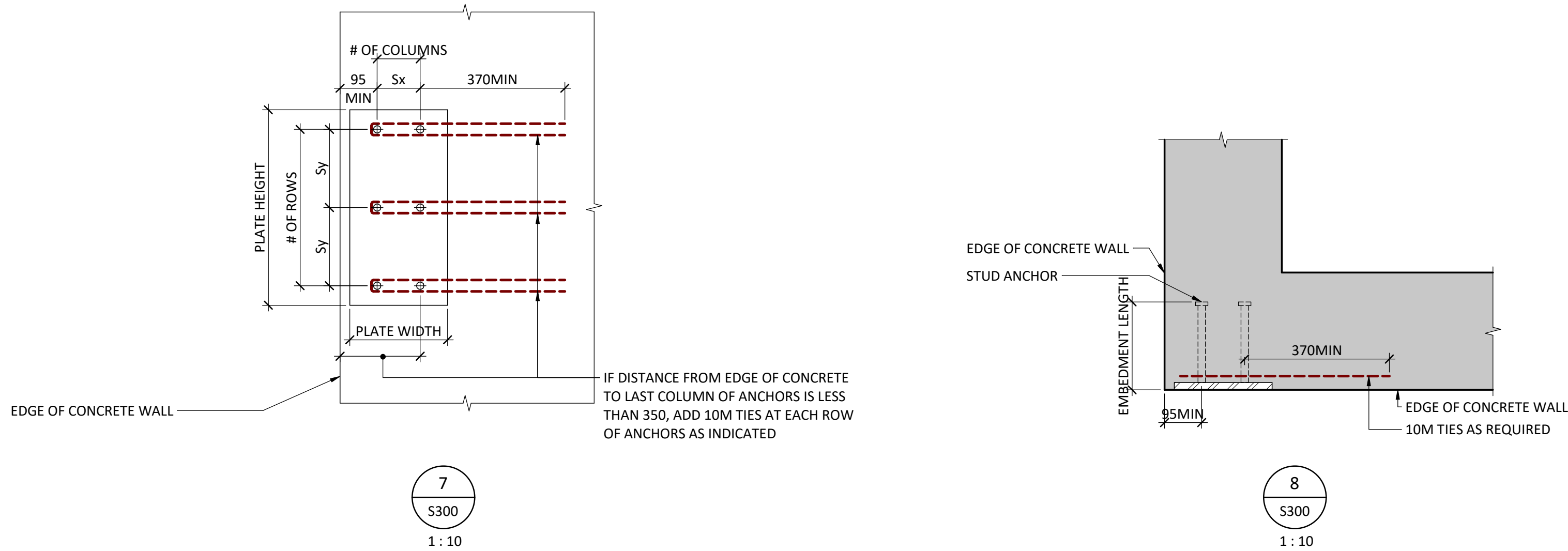
MOMENT RESISTING CAST-IN PLATE NOTES:

- SEE DETAIL 12/S300 FOR TYPICAL MOMENT RESISTING CAST-IN PLATE DETAIL.
- BEAMS TO BE CENTRED ON PLATE UNO.
- REINFORCING STEEL MUST BE WELDED TO PLATE FOR THE FULL CAPACITY OF THE BAR.
- FACTORED RESISTANCES ARE BASED ON $f_c = 30$ Mpa CRACKED CONCRETE.

POST INSTALLED CONNECTION PLATES SCHEDULE														
MARK	PLATE HEIGHT (mm)	PLATE WIDTH (mm)	PLATE THICKNESS (mm)	ANCHOR Ø (mm)	EMBEDMENT LENGTH (mm)	# ROWS	# COLUMNS	Sx	Sy	Vf (kN)	Tf (kN)	Mf (kN)	REMARKS	
CP5	275	200	16	19	150	2	2	110	225	---	---	---		

POST INSTALLED CONNECTION PLATE NOTES:

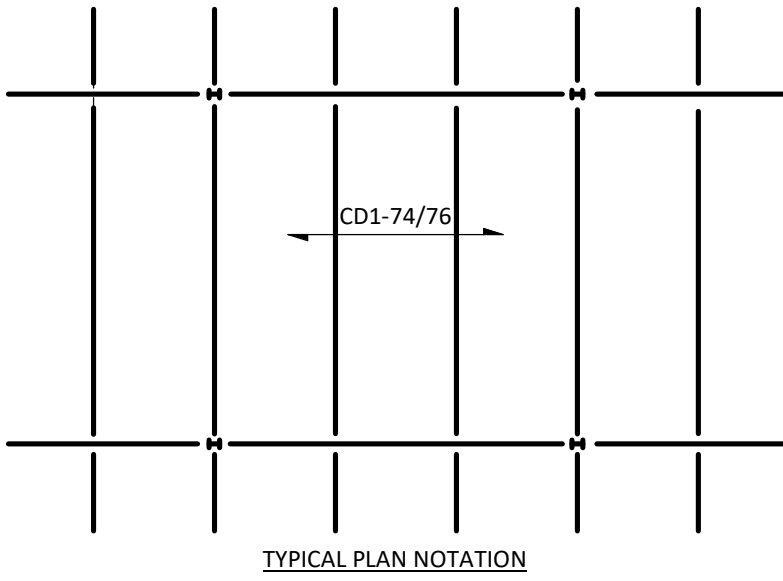
- BEAMS TO BE CENTRED ON PLATE UNO.
- ANCHORS TO BE HIT-HY 200 WITH HILTI SAFE SET SYSTEM UNO.
- FACTORED RESISTANCES ARE BASED ON $f_c = 30$ Mpa CRACKED CONCRETE.



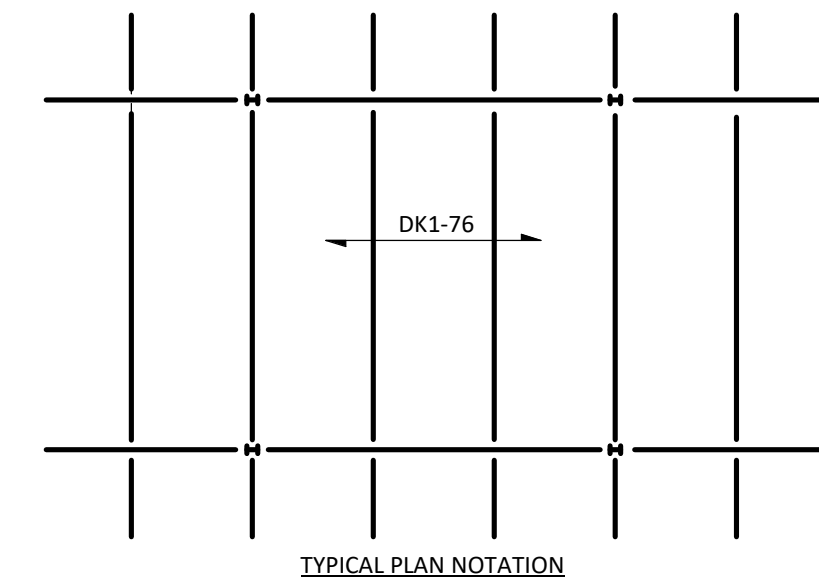
NOTES:			
1.	MARK DESIGNATION IS TO BE READ AS FOLLOWS:		
		CONCRETE ON STEEL DECK MARK	
		CONCRETE SLAB THICKNESS (MEASURED FROM TOP OF FLUTES TO TOP OF SLAB)	
		STEEL DECK DEPTH	
		DIRECTION OF SPAN	
2.	THE CONTRACTOR IS TO DETERMINE THE ACTUAL SELF WEIGHT OF THE CONCRETE SLAB AND DECK BASED ON THEIR PROPOSED STEEL DECK PROFILE. AN ASSUMED DEAD LOAD FOR THE SELF WEIGHT OF THE CONCRETE SLAB AND DECK IS NOTED.		
3.	REFER TO LOADING PLANS FOR DESIGN LOADS.		
4.	REFER TO TYPICAL DETAILS C57 AND C58 FOR PLACEMENT OF REINFORCEMENT IN CONCRETE SLABS ON STEEL DECK.		
5.	REFER TO FRAMING PLANS FOR ADDITIONAL REINFORCEMENT AT EDGE OF SLABS, OPENINGS, UNDER POINT LOADS AND THE LIKE.		
6.	THE "COMPOSITE" COLUMN IN THE BELOW SCHEDULE REFERS TO THE COMBINED ACTION BETWEEN THE DECK AND THE CONCRETE.		
7.	WHERE THE COMPOSITE REQUIREMENT FOR THE CONCRETE SLAB ON STEEL DECK TYPE IN THE BELOW SCHEDULE IS INDICATED AS "Y":		
	A. PROVIDE REINFORCEMENT AS INDICATED IN THE BELOW SCHEDULE AND REFER TO TYPICAL DETAIL C51 FOR DETAILING OF REINFORCEMENT AND REFER TO THE CONCRETE AND REINFORCEMENT SECTION OF THE STRUCTURAL GENERAL NOTES FOR MINIMUM TEMPERATURE REINFORCEMENT.		
	B. WHEN CALCULATING MINIMUM TEMPERATURE REINFORCEMENT USE A SLAB THICKNESS EQUIVALENT TO THE COVER SLAB THICKNESS PLUS ONE HALF THE DEPTH OF THE STEEL DECK.		
	C. REFER TO TYPICAL DETAIL C516 AND NOTES ON PLAN FOR ADDED REINFORCEMENT AROUND OPENINGS THROUGH SLAB.		
	D. DESIGN THE DECK AS FORMWORK ONLY.		

SLAB ON STEEL DECK SCHEDULE				
MARK	COMPOSITE BEHAVIOUR (SEE NOTE 6) (Y/N)	REINFORCEMENT	REMARKS	
CD1-114/76	Y	WWF 152x152 MW25.7xMMW25.7		
CD2-76/76	Y	WWF 152x152 MW25.7xMMW25.7		
CD3-65/38	Y	WWF 152x152 MW25.7xMMW25.7	LIGHTWEIGHT CONCRETE (1,800 kg/cub.m MAX)	

SCH1 CONCRETE SLABS ON STEEL DECK SCHEDULE

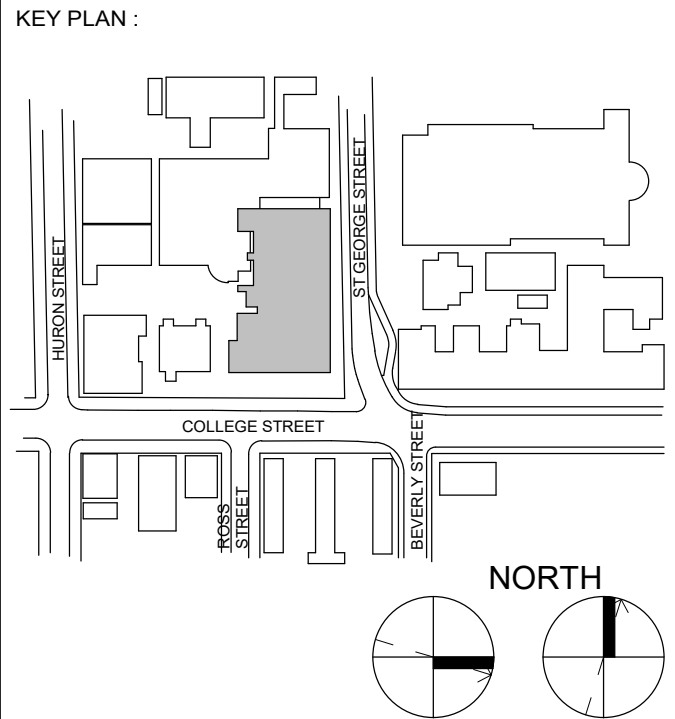


NOTES:	
1.	MARK DESIGNATION IS TO BE READ AS FOLLOWS:
	STEEL DECK MARK
	STEEL DECK DEPTH
	DIRECTION OF SPAN
2.	REFER TO LOADING PLANS FOR DESIGN LOADS.



ROOF DECK SCHEDULE	
DECK MARK	REMARKS
DK1-38	
DK2-76	

SCH2 STEEL DECK SCHEDULE



REVISION	
NO.	DATE
1	2024-10-04
2	2024-11-01
3	2024-11-15
4	2025-01-31
5	2025-04-30

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SHEET CONTENTS:
SCHEDULES

PROJECT NUMBER:

EN023-00965

DRAWING SCALE:

As indicated

DRAWN BY:

Author

CHECKED BY:

Checker

DATE:

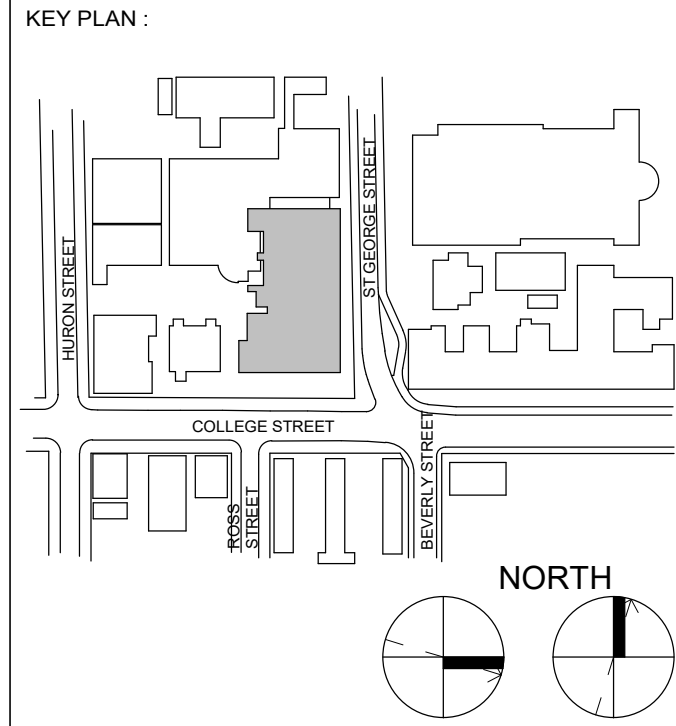
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SHEET NO.:

S300

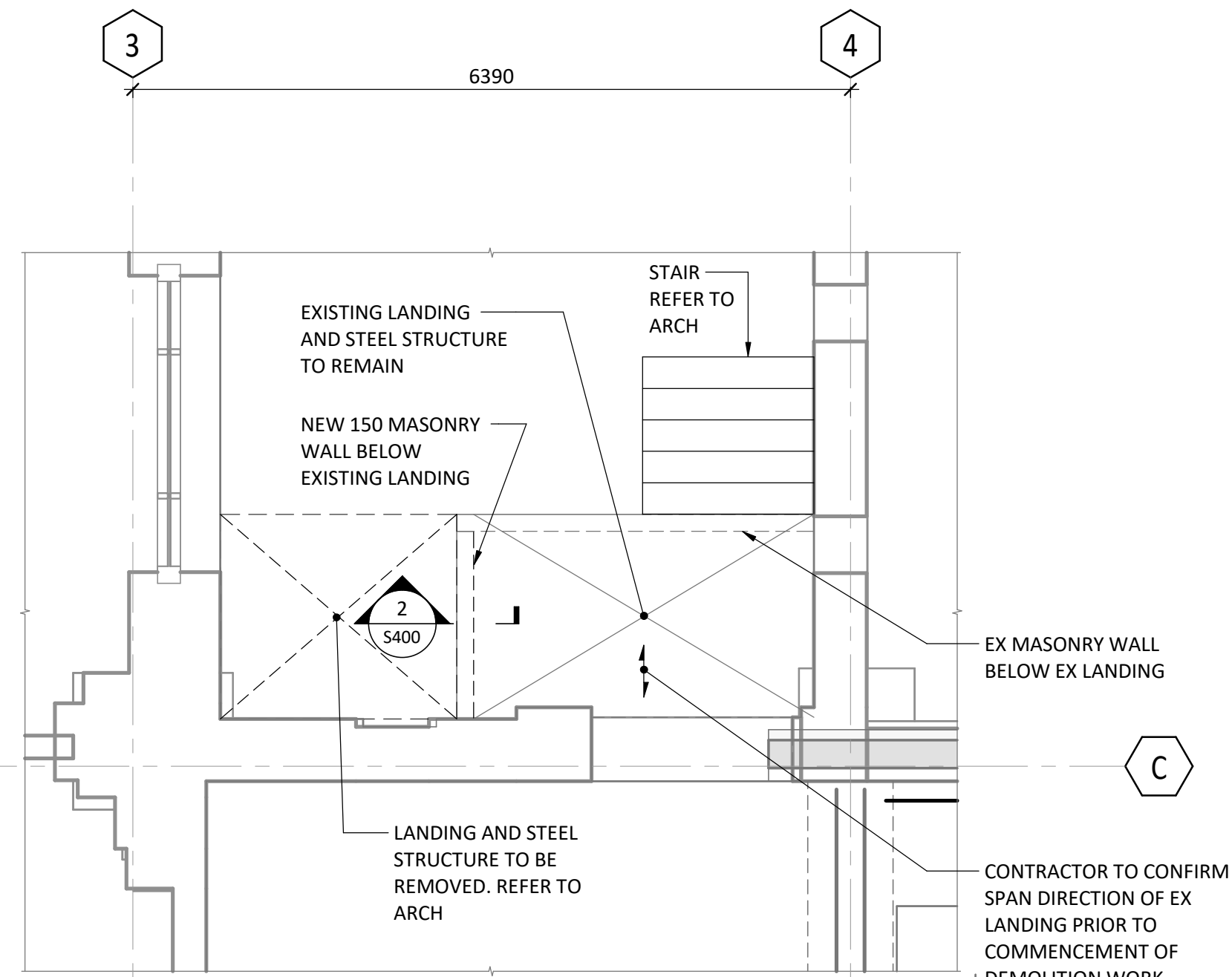
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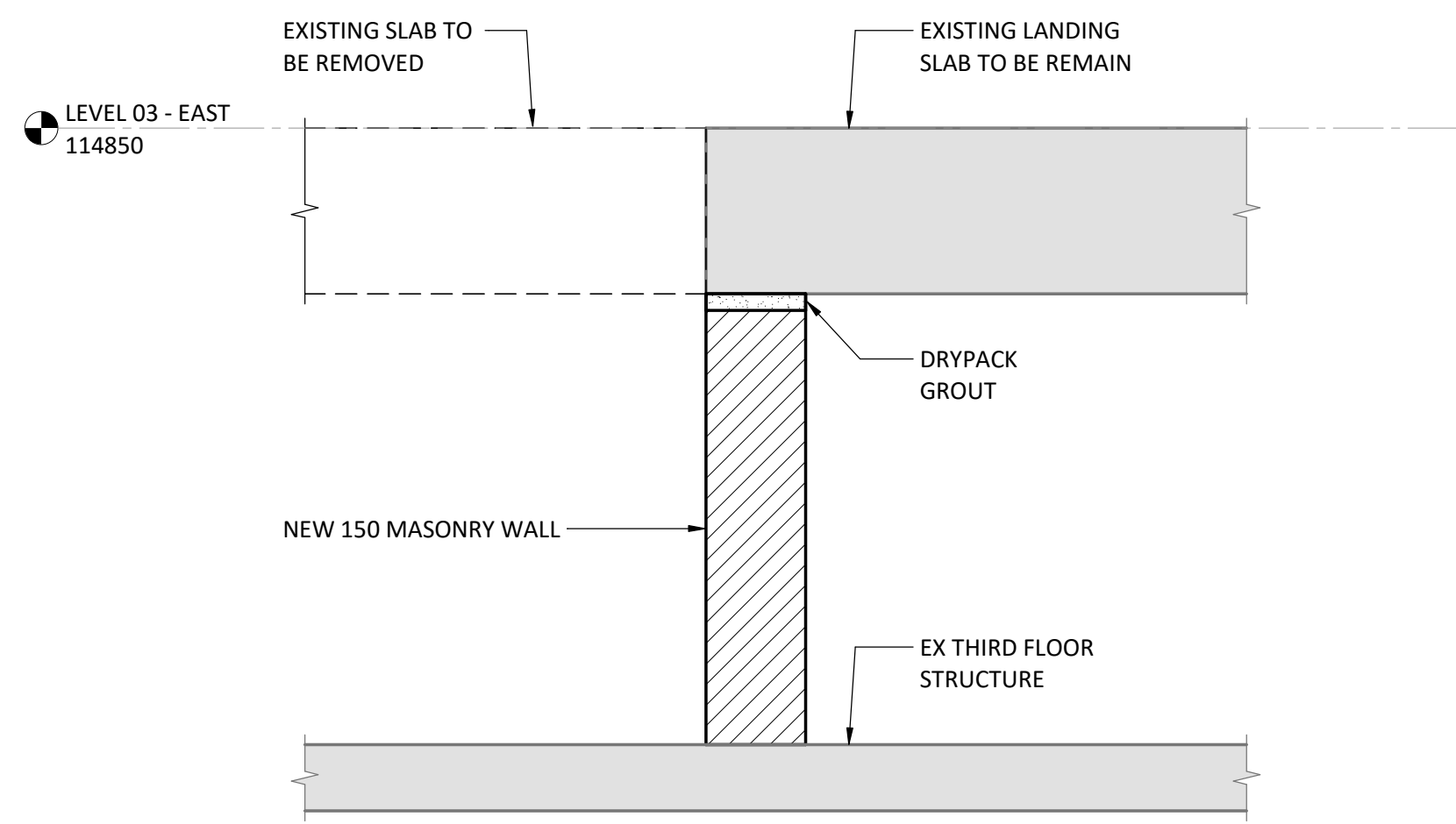


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NO.	DATE
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3	2024-11-15
4	2025-01-31
5	2025-03-21
6	2025-04-30

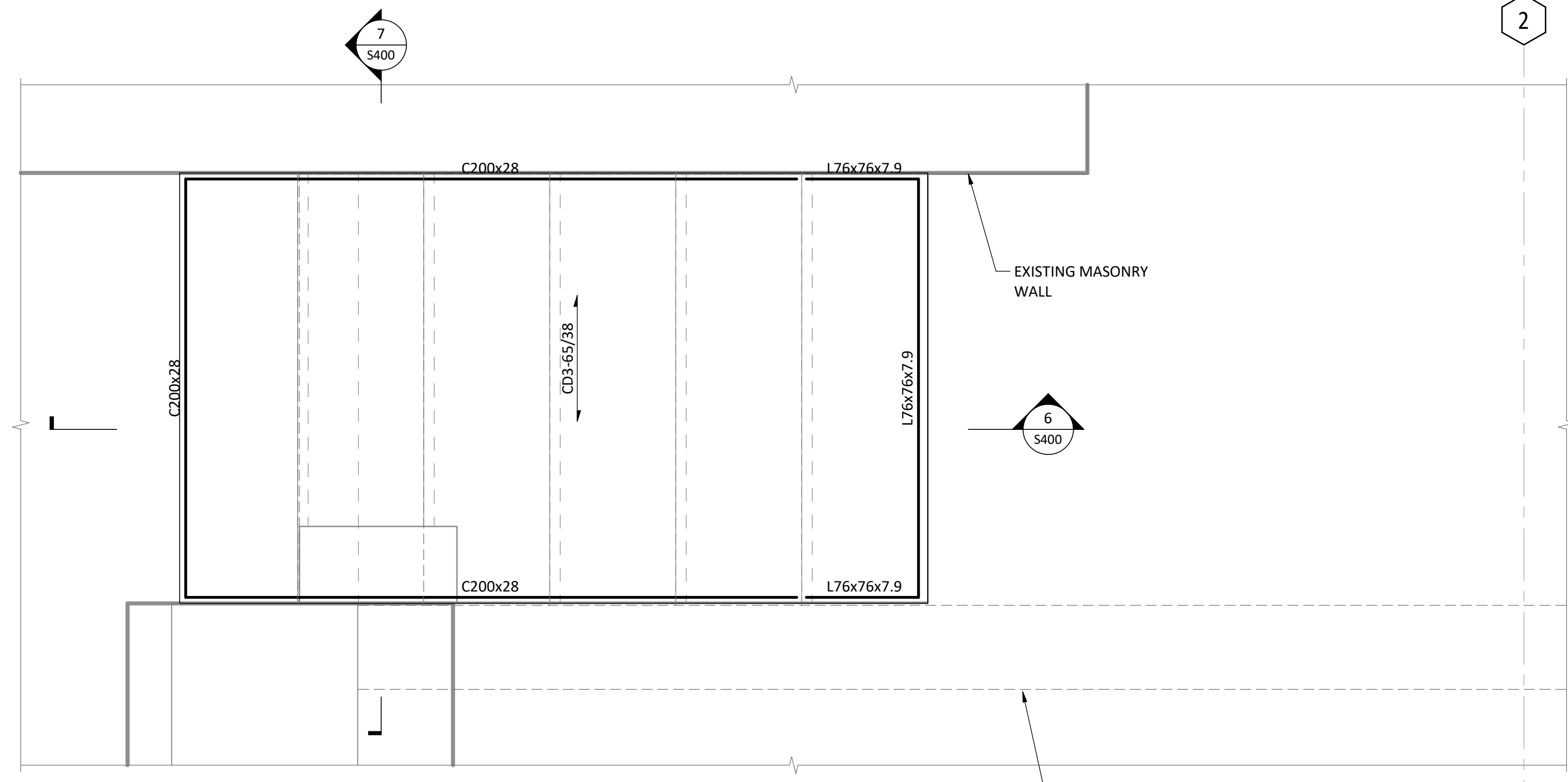
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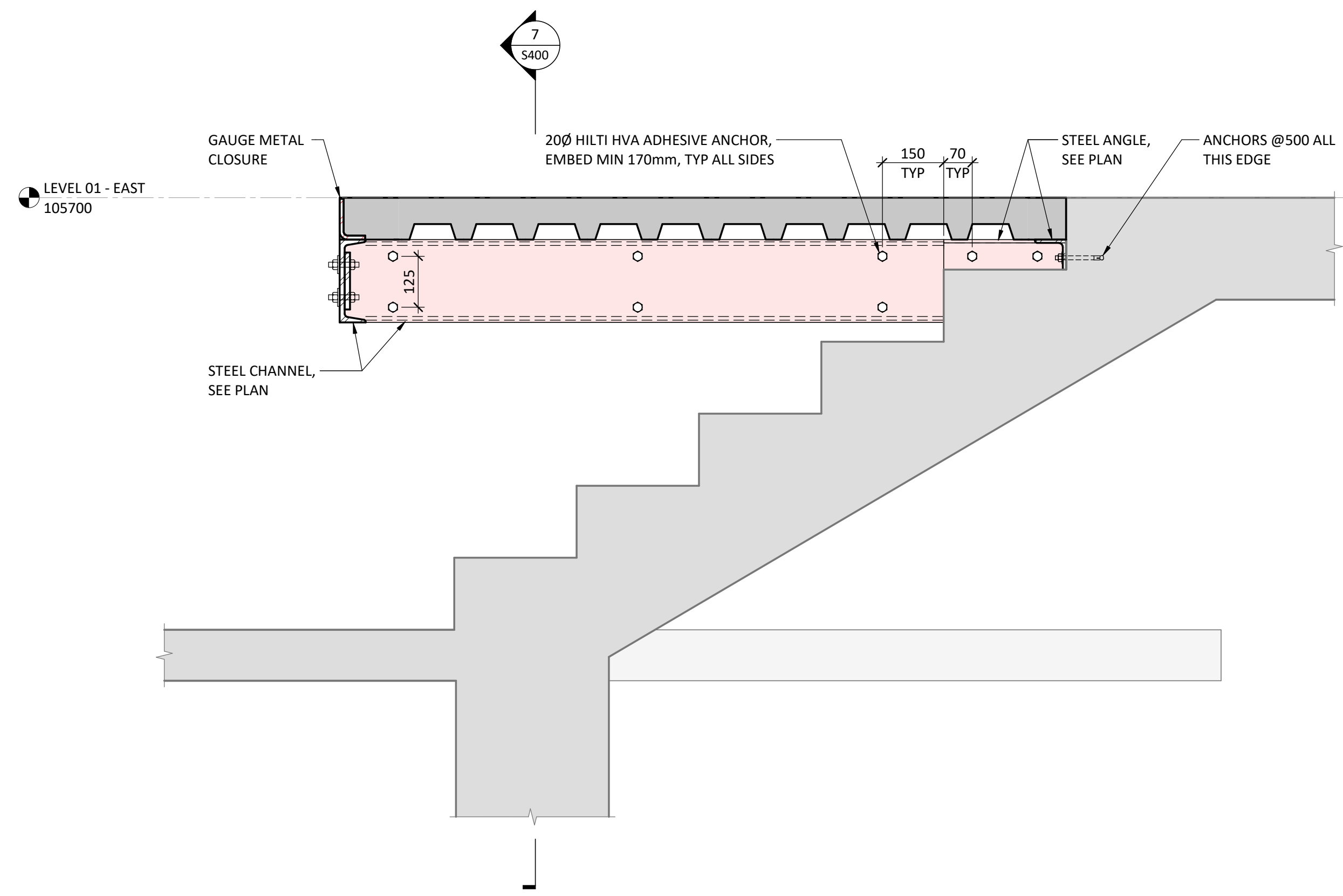
1 PLAN DETAIL - LEVEL 03
S400
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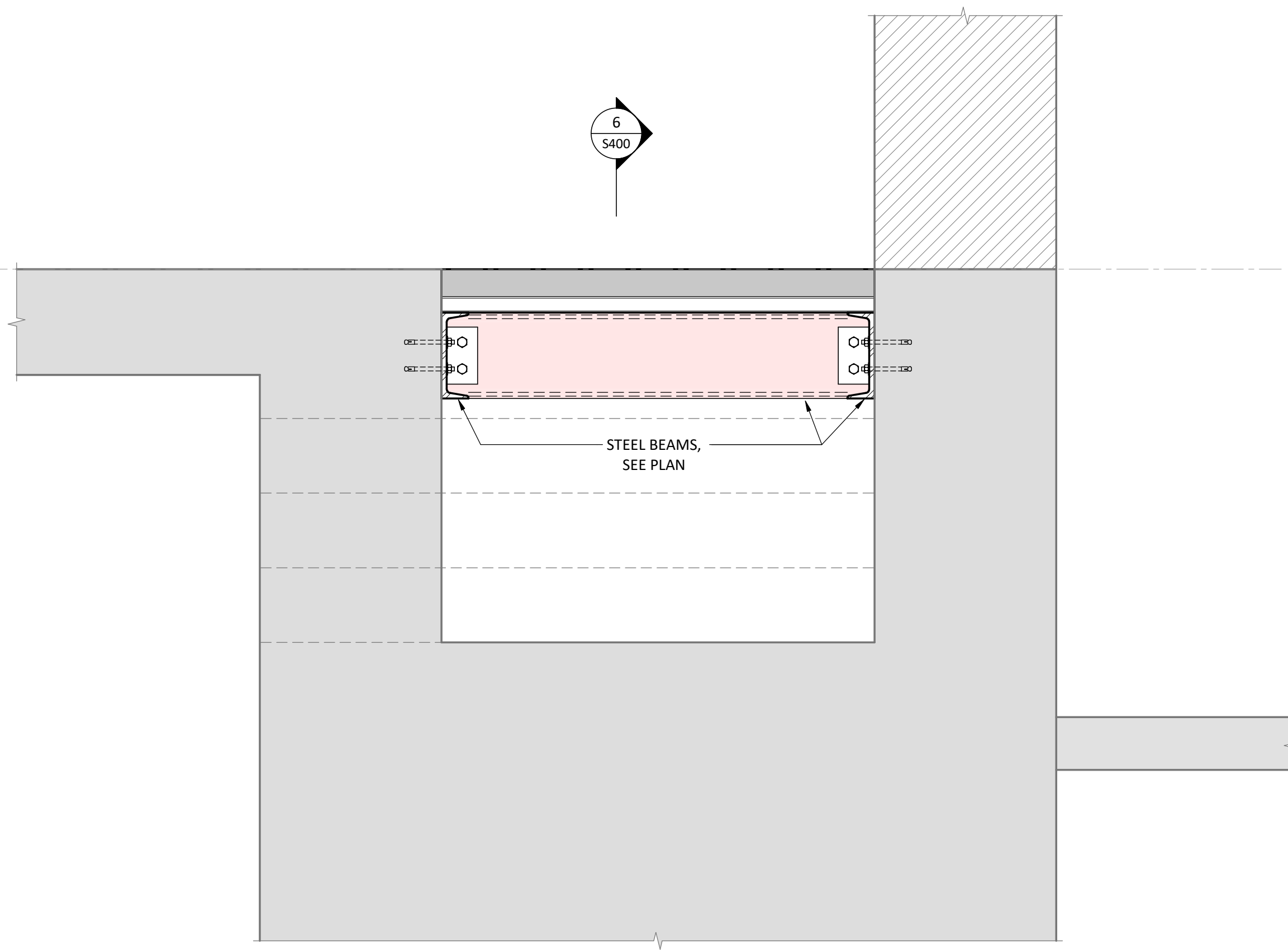
2 PLAN DETAIL - LEVEL 01
S400
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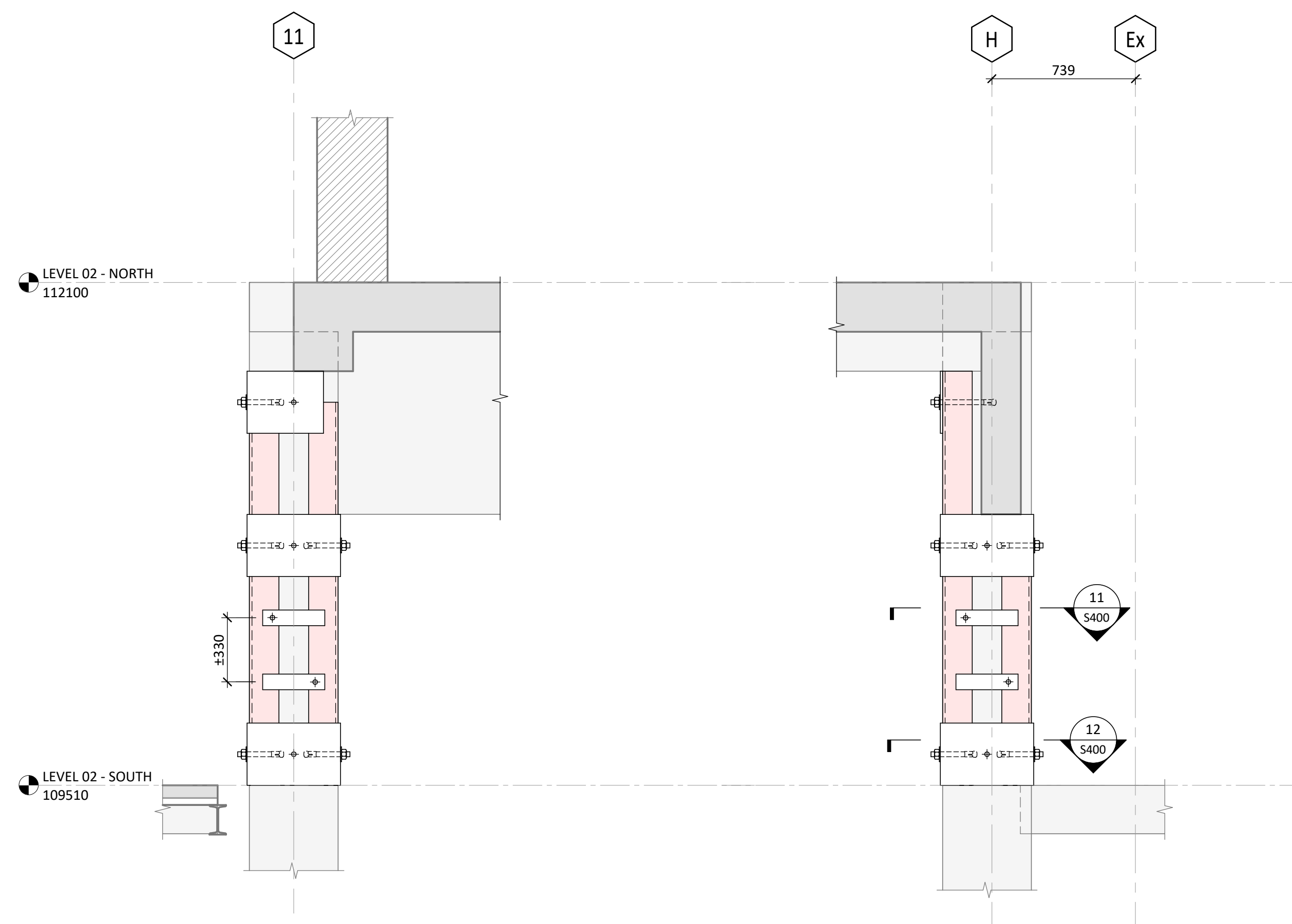
5 PLAN DETAIL - LEVEL 01
S400
1:10



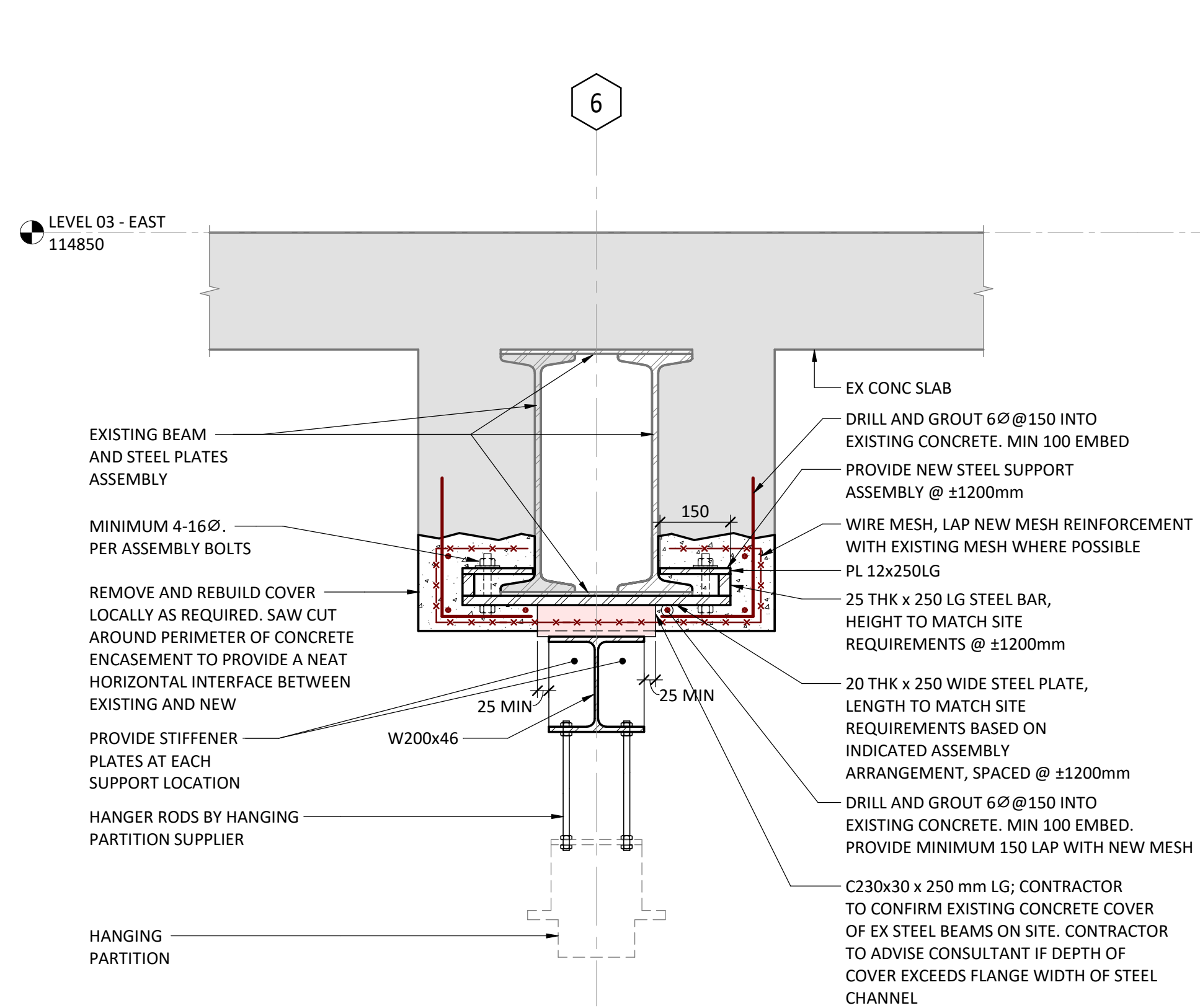
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S400
1:10



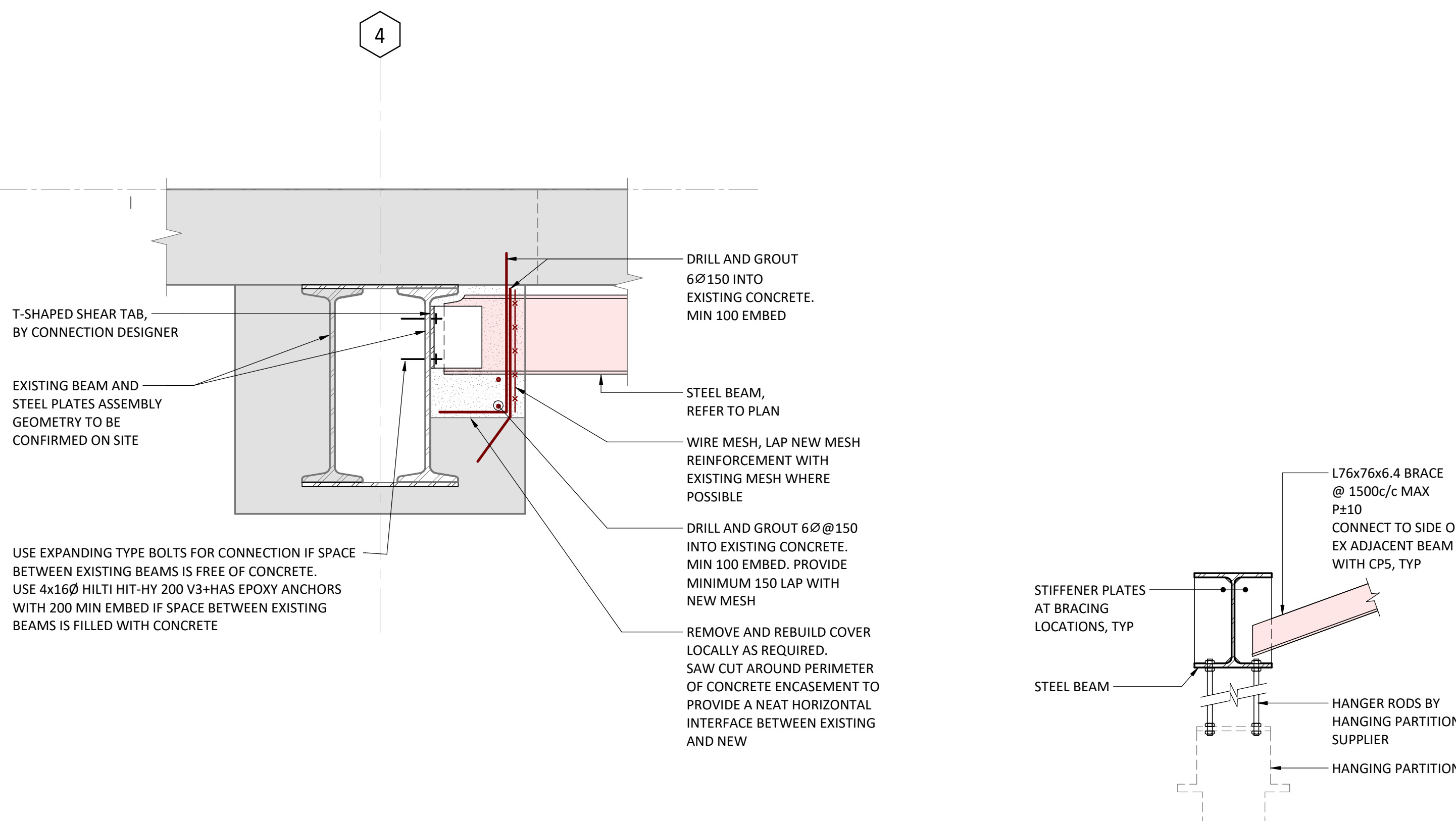
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S400
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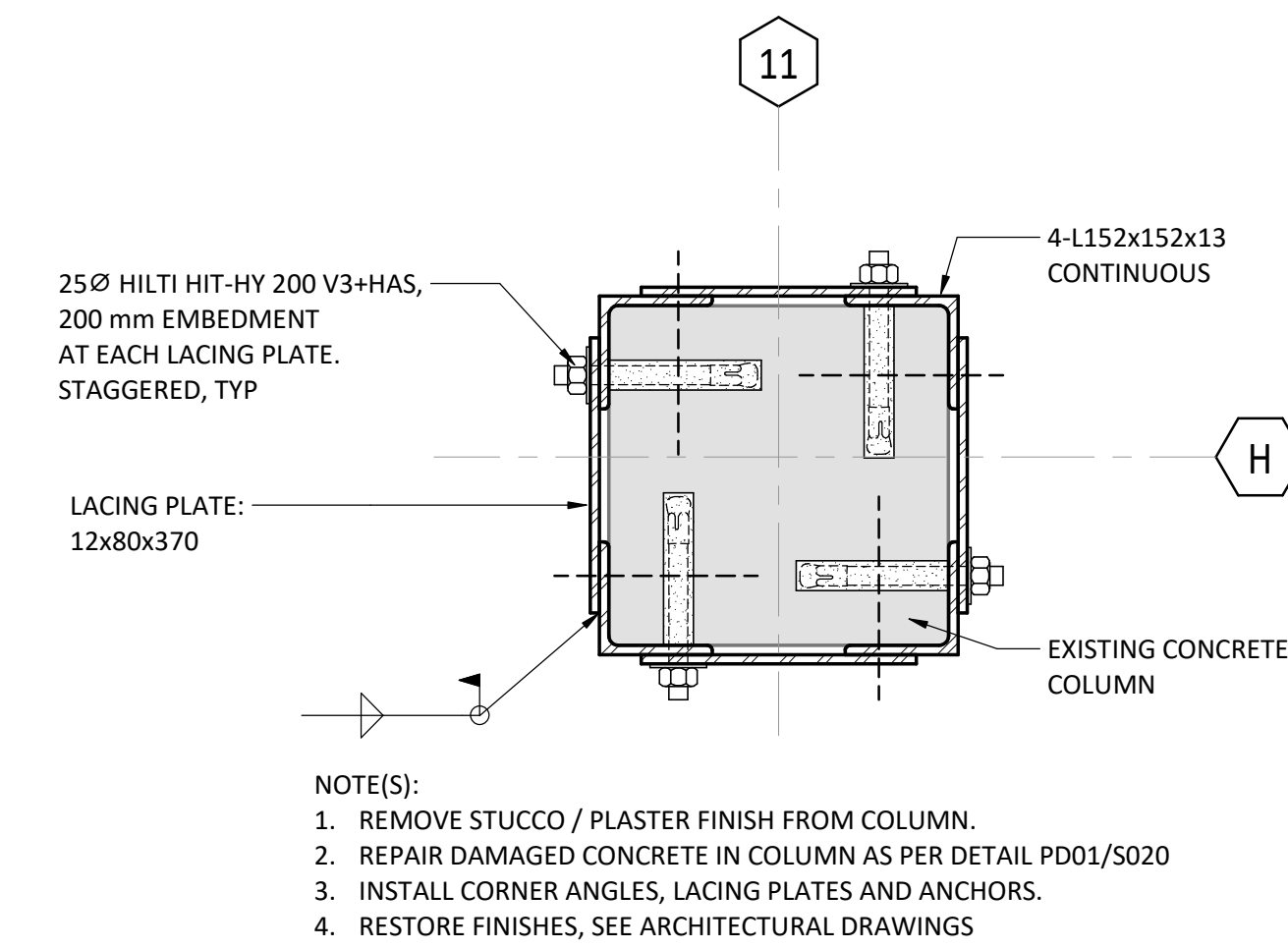
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S400
1:20



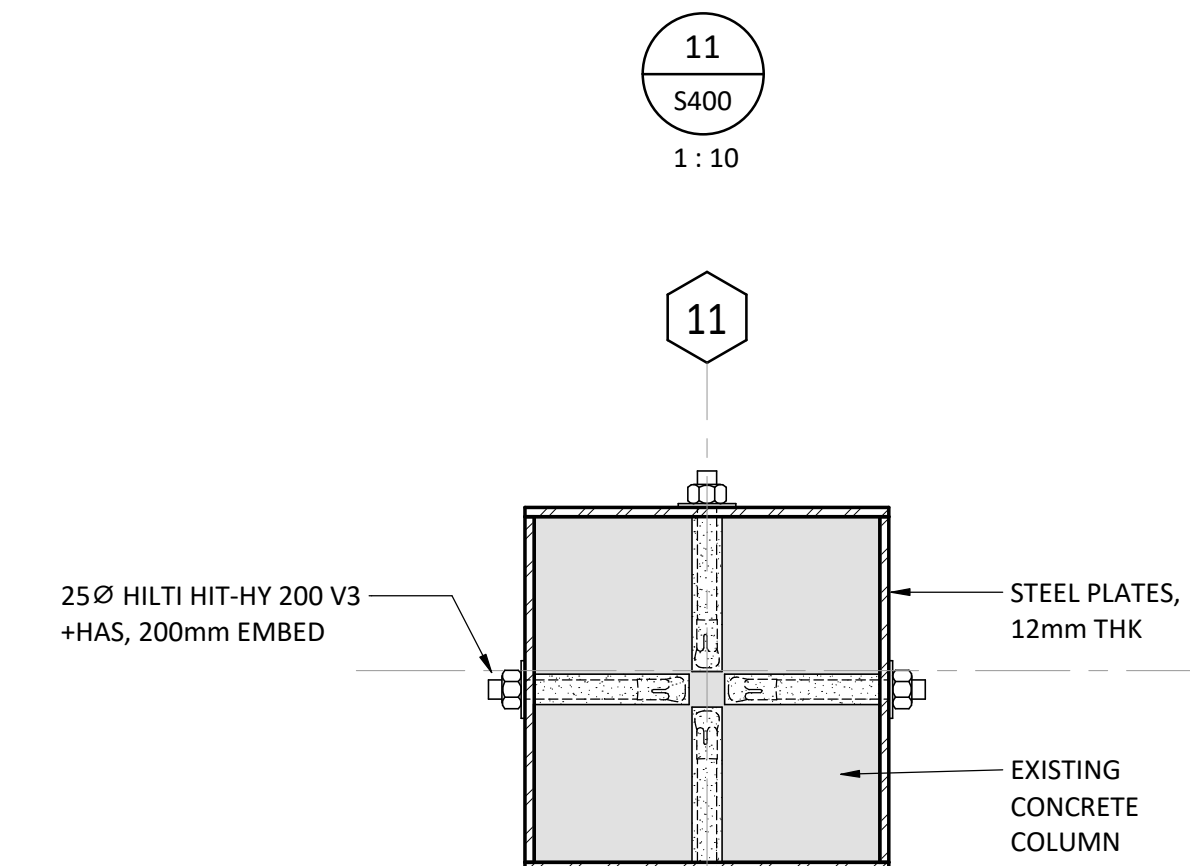
3 ELEVATION OF EXISTING COLUMN H-11
S400
1:10



4 ELEVATION OF EXISTING COLUMN H-11
S400
1:10



11 ELEVATION OF EXISTING COLUMN H-11
S400
1:10



12 ELEVATION OF EXISTING COLUMN H-11
S400
1:10

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SEAL:

OWNER:



PROJECT:
UNIVERSITY OF
TORONTO HEALTH &
WELLNESS CENTRE AT
KOFFLER RENOVATION

214 College Street
Toronto, ON, M5T 3A1

SHEET CONTENTS:
SECTIONS AND DETAILS

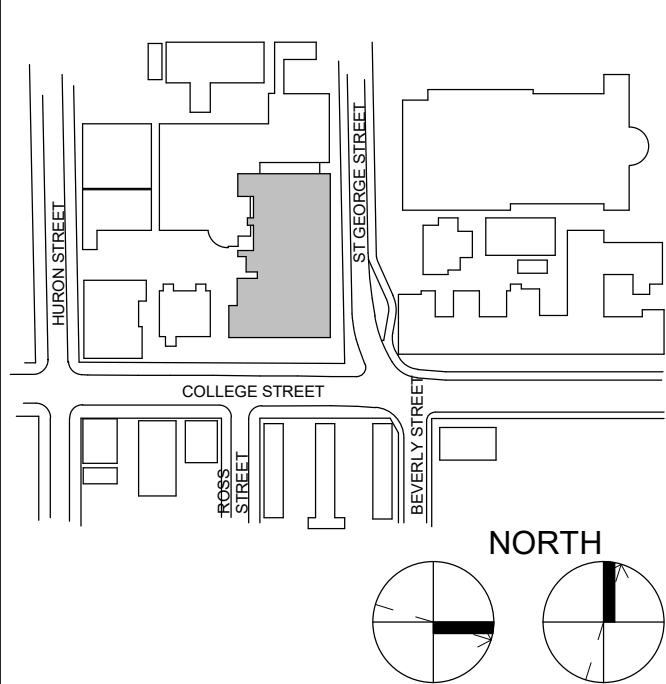
PROJECT NUMBER:
EN023-00965

DRAWING SCALE:
As indicated

DRAWN BY: CHECKED BY: DATE:
AUTHOR: Checker 2024-07-16

SHEET NO.: 6
S400

KEY PLAN :



REVISION		
NO.	DATE	DESCRIPTION
1	2024-11-01	PROGRESS ISSUANCE
2	2024-11-15	BUILDING PERMIT
3	2025-01-31	ISSUED FOR BID
4	2025-08-30	ISSUED FOR CONSTRUCTION

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PROJECT :
UNIVERSITY OF TORONTO HEALTH & WELLNESS CENTRE AT KOFFLER RENOVATION

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Toronto, ON, M5T 3A1

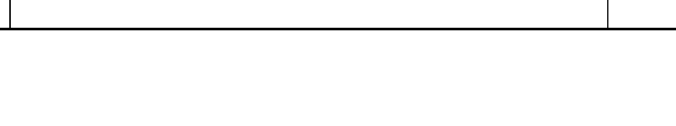
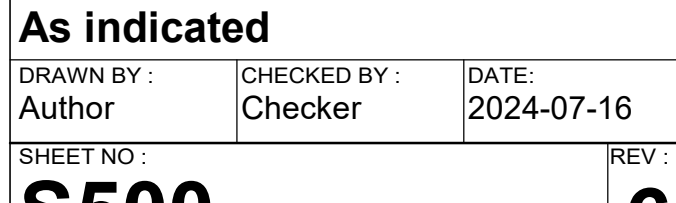
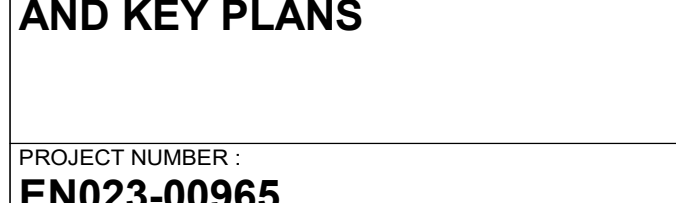
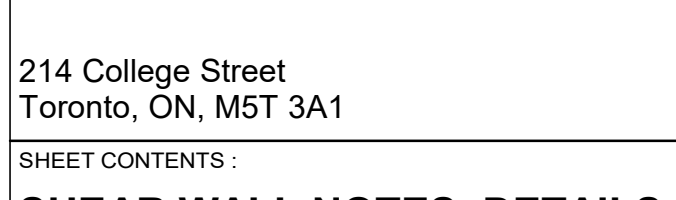
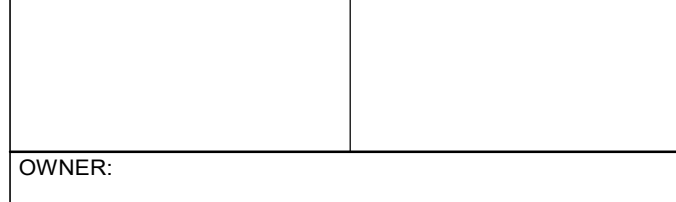
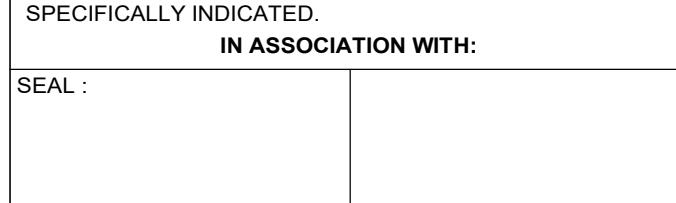
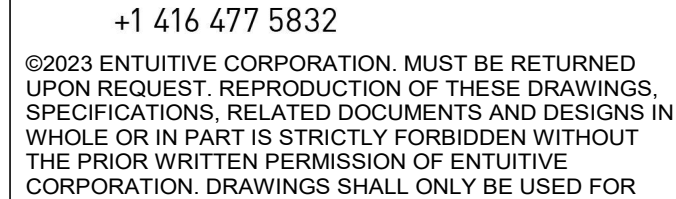
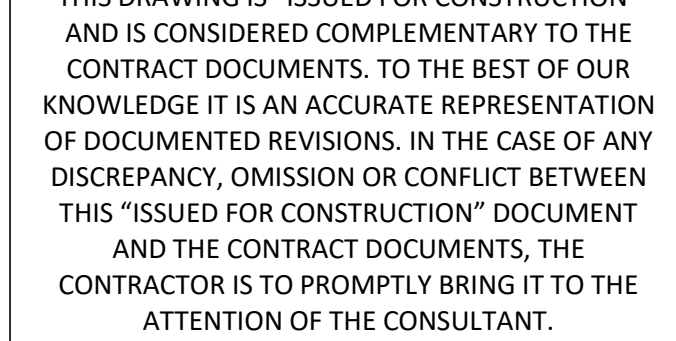
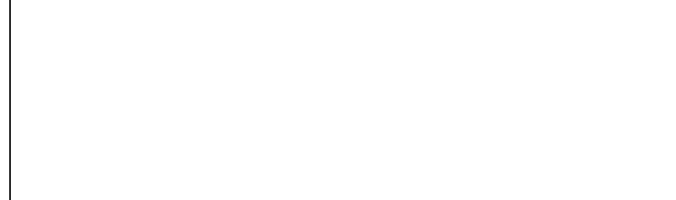
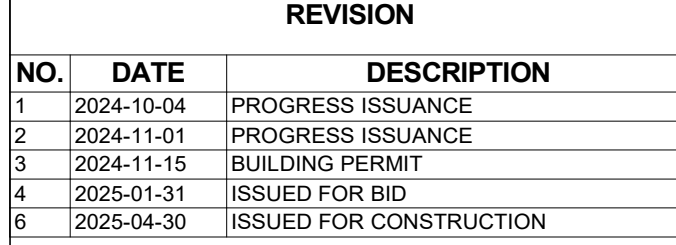
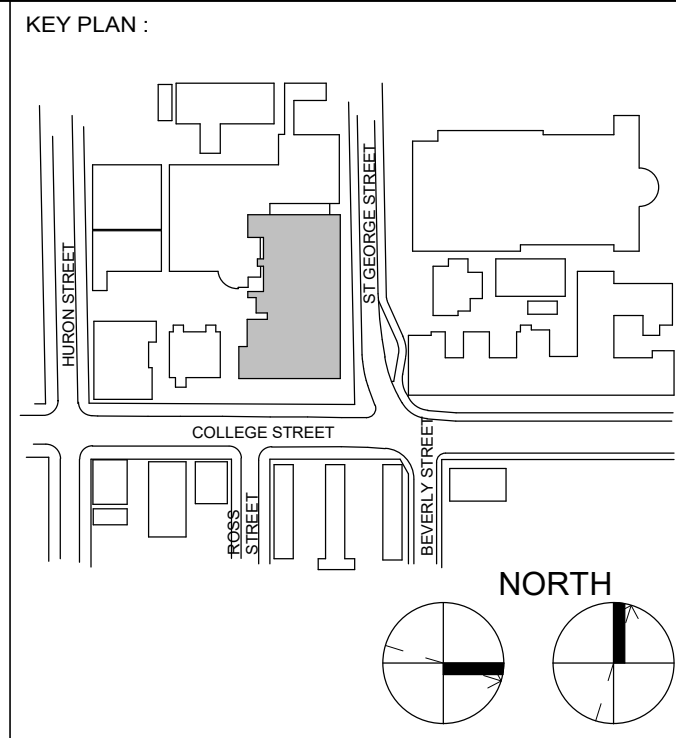
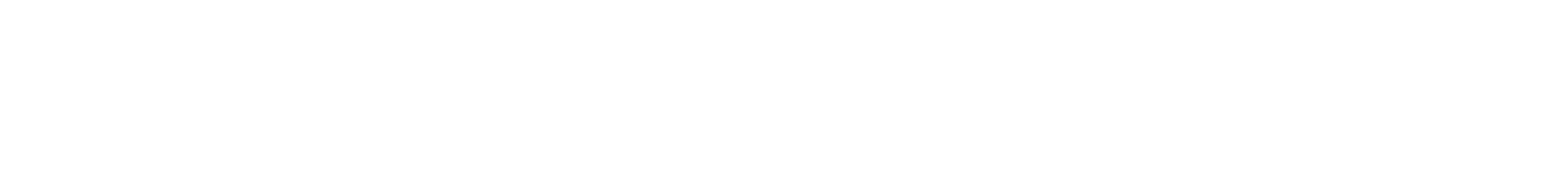
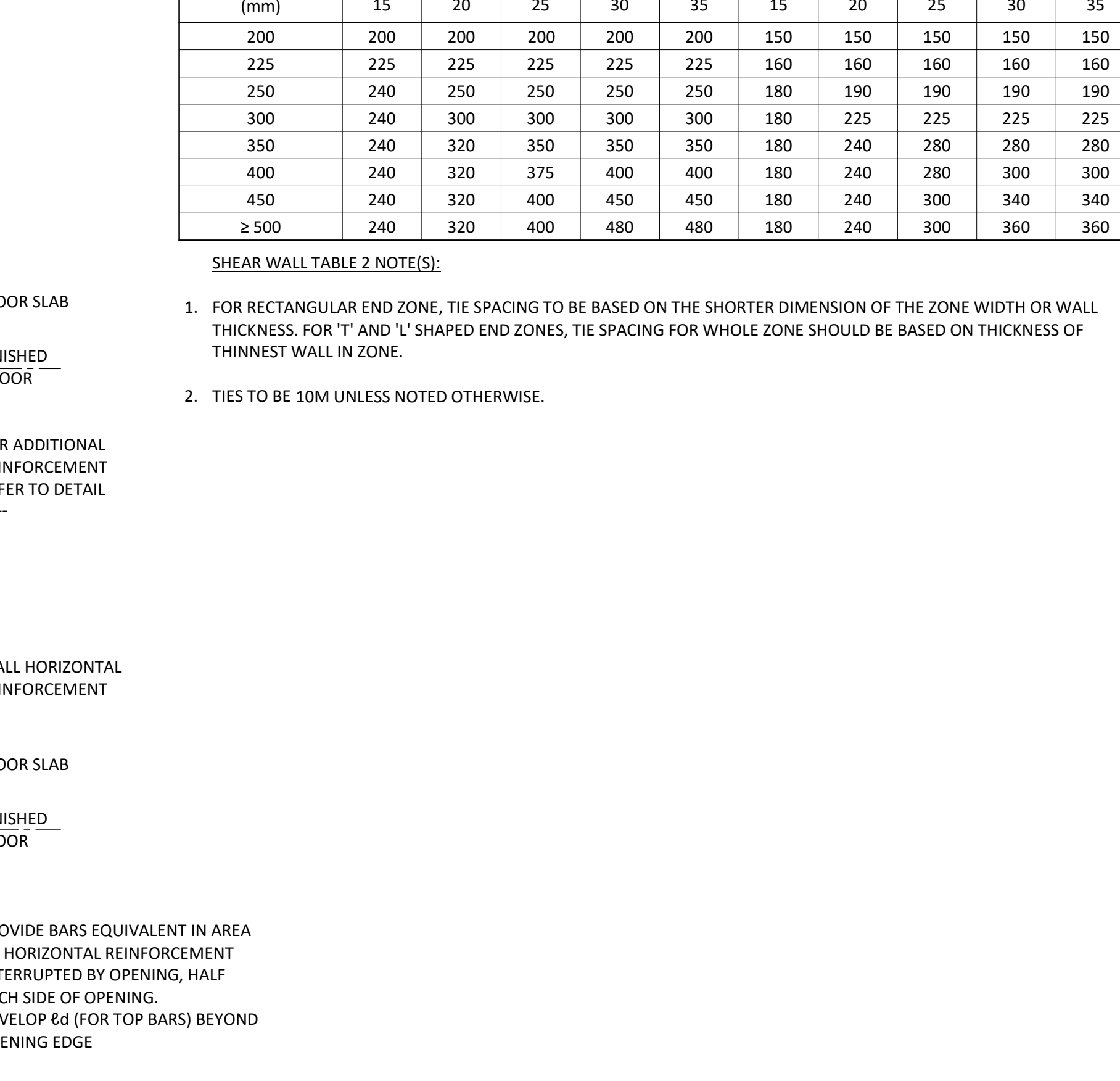
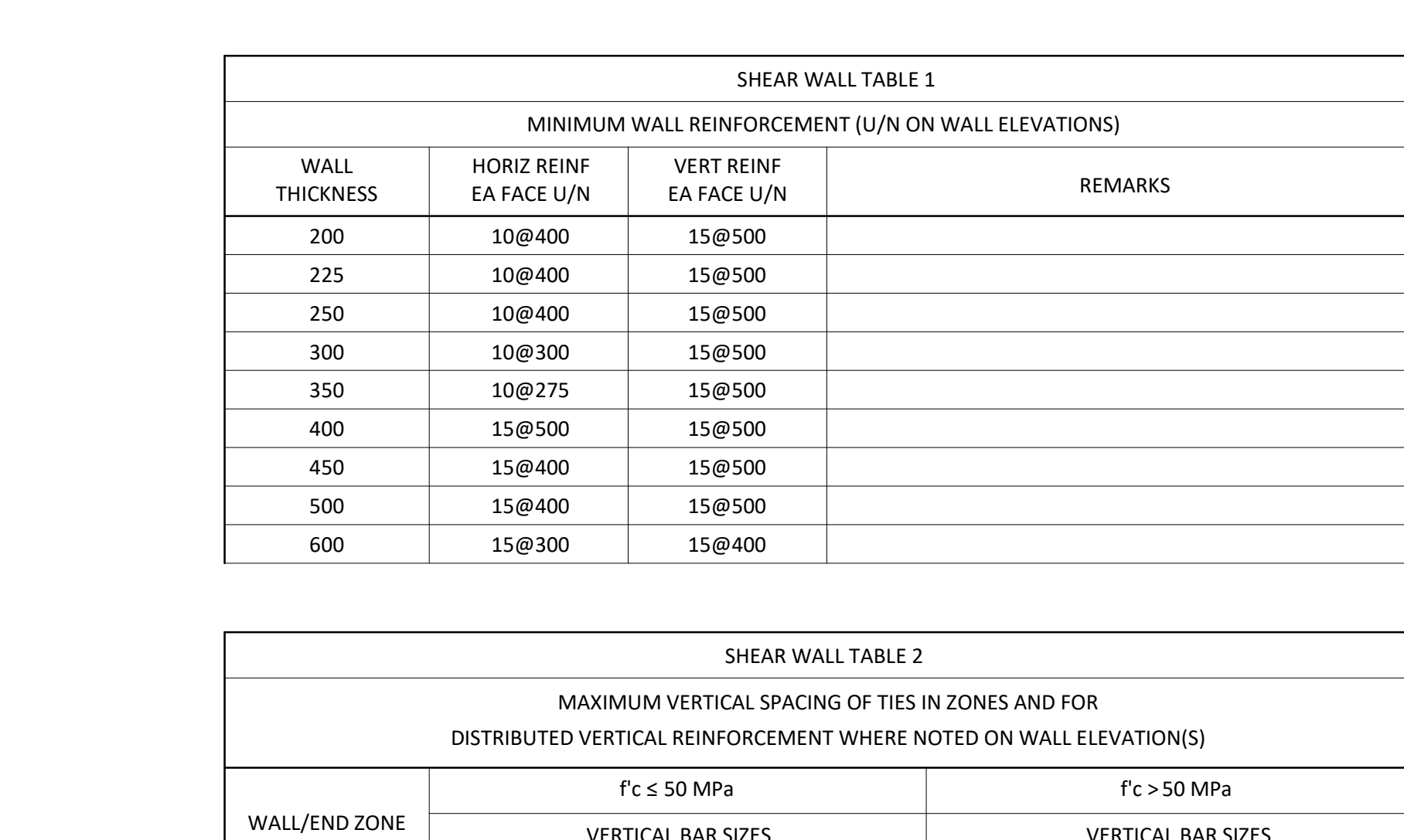
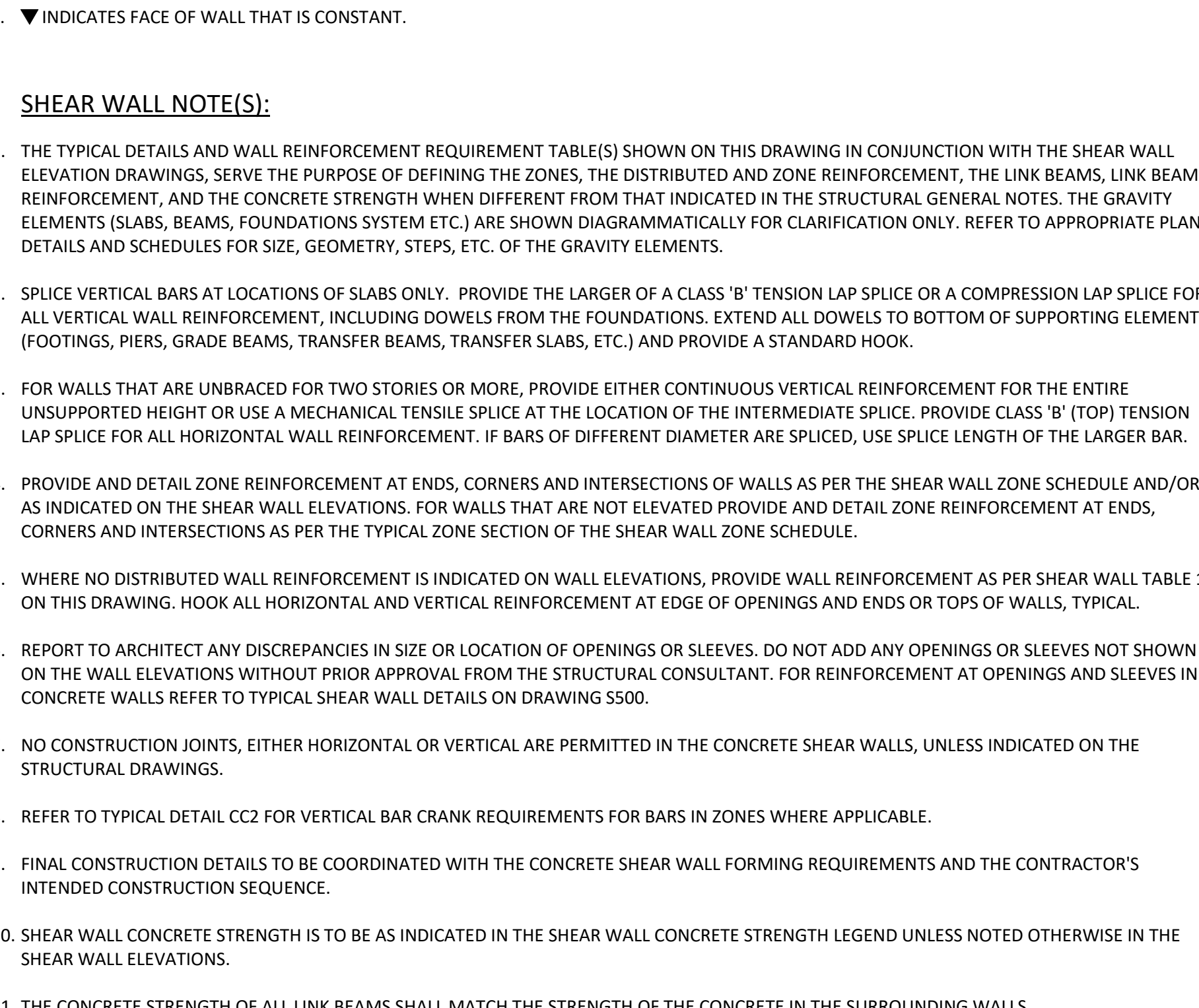
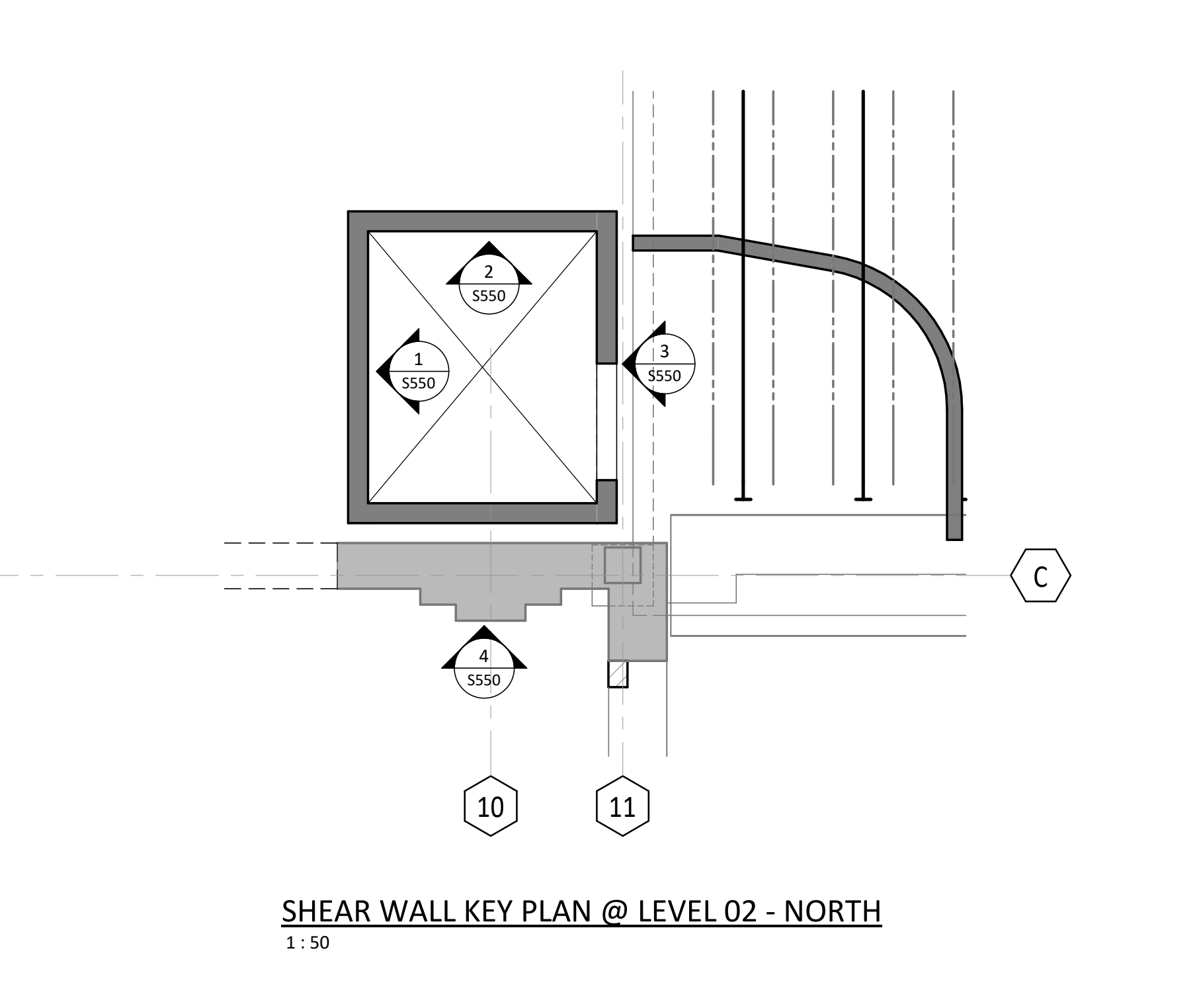
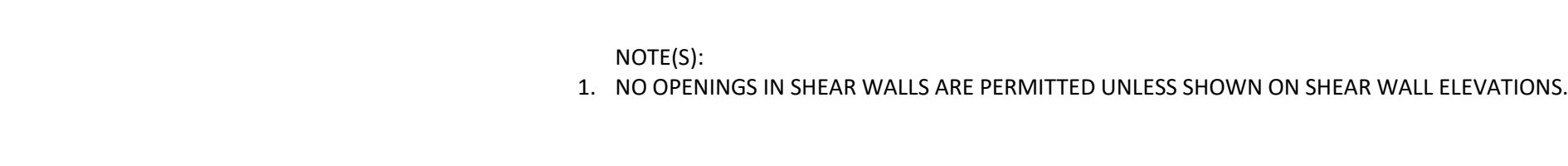
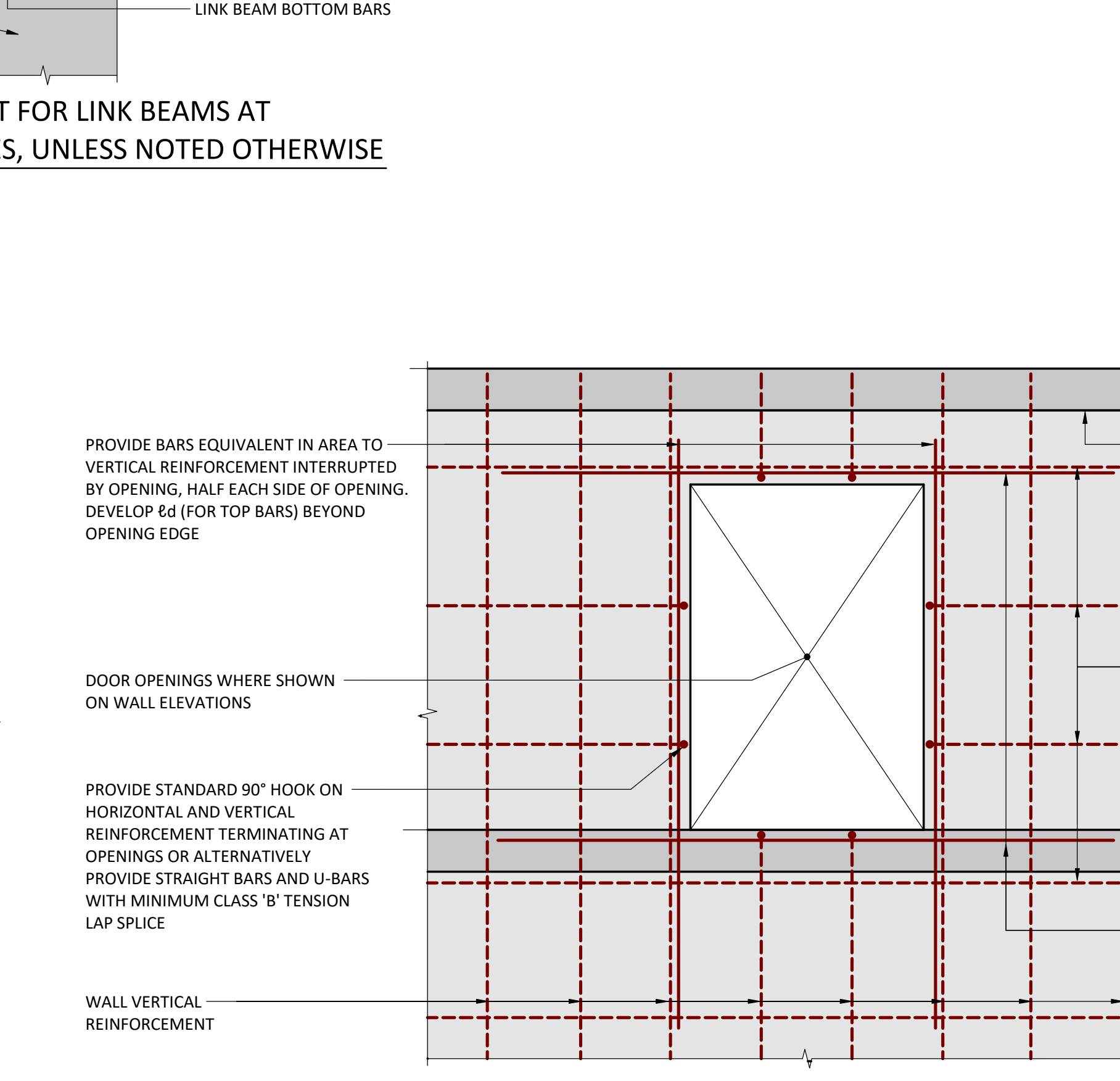
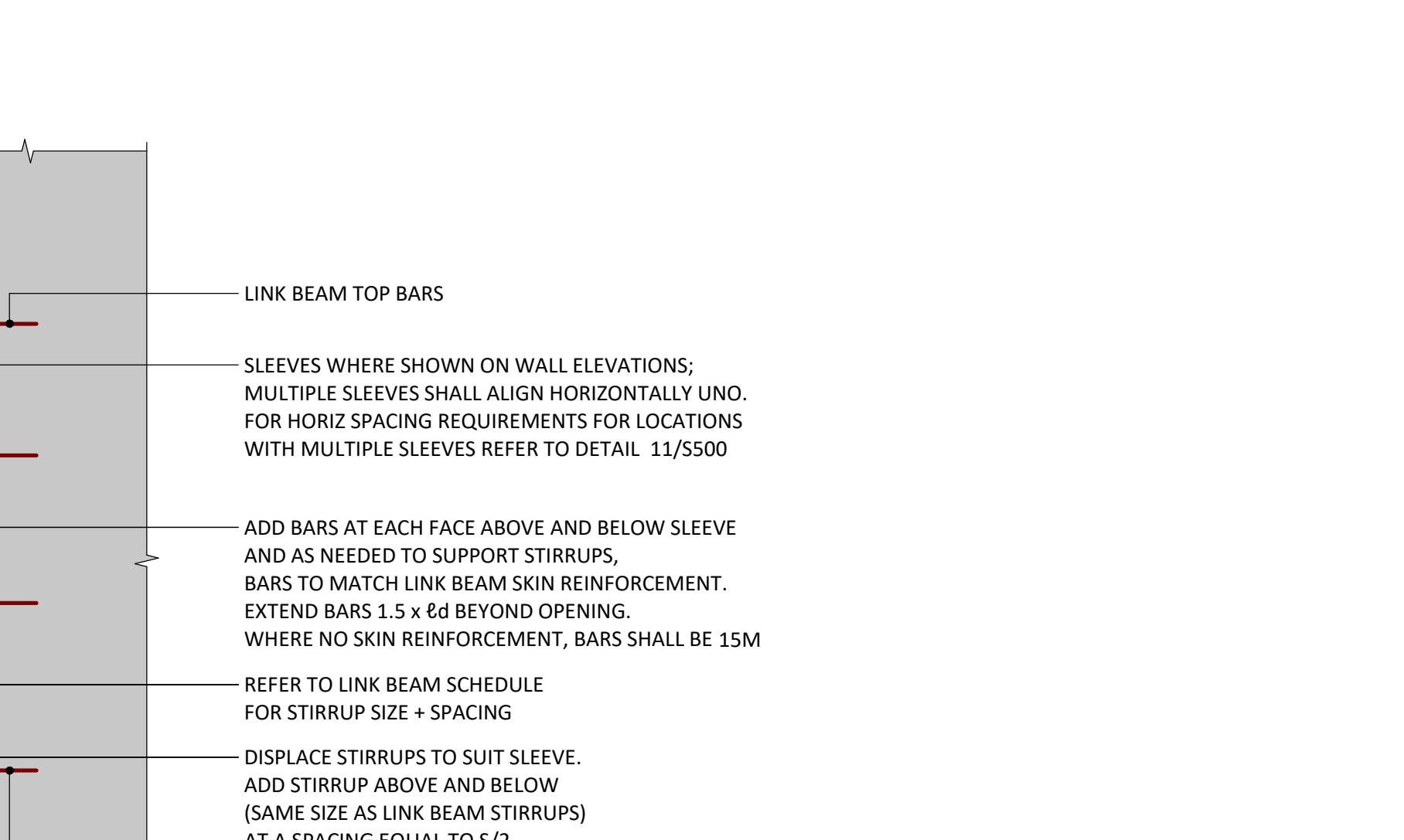
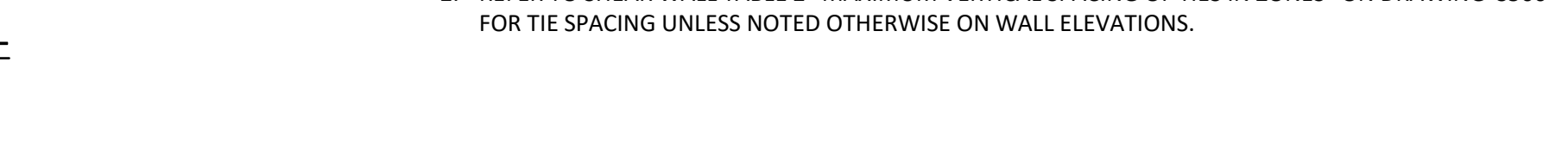
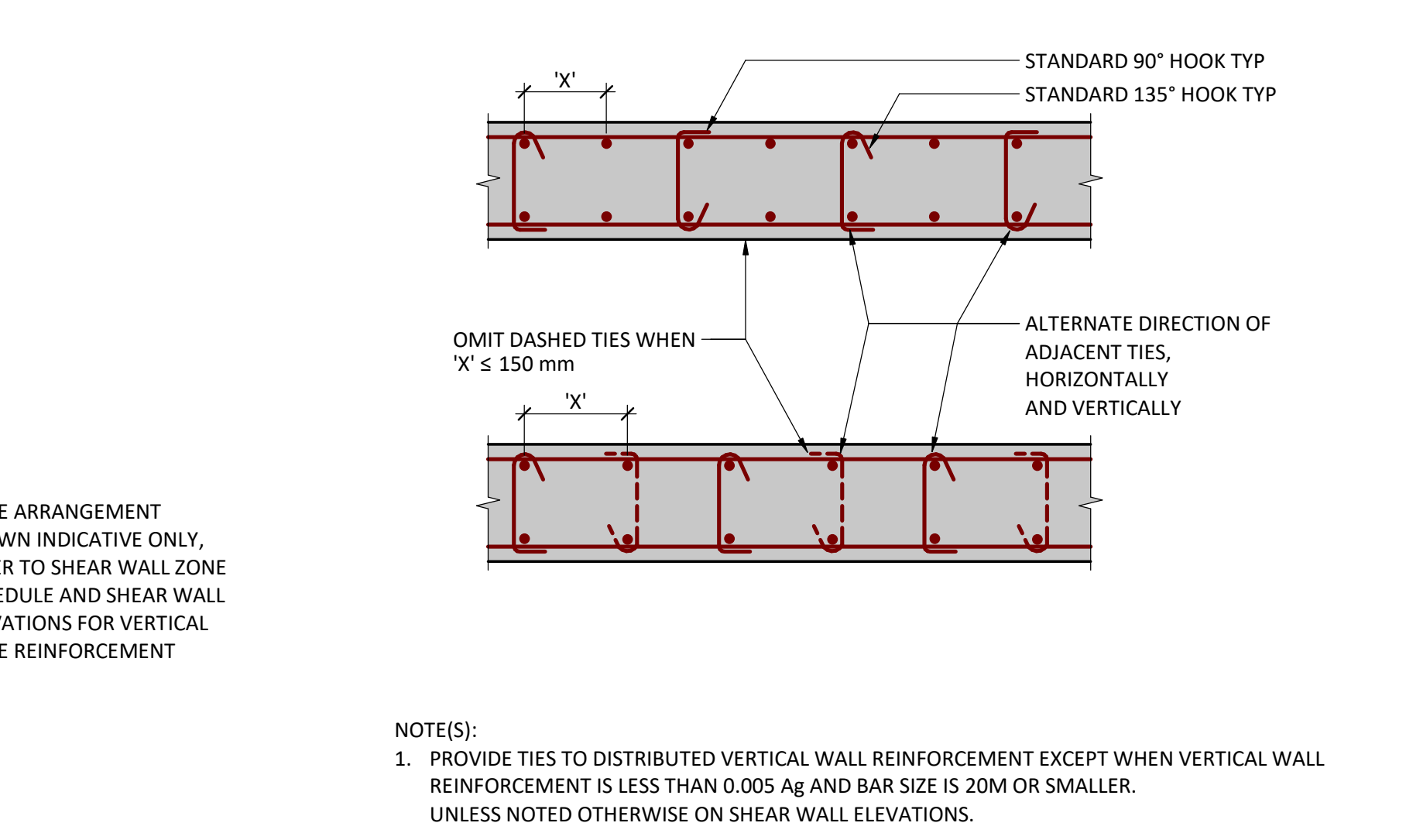
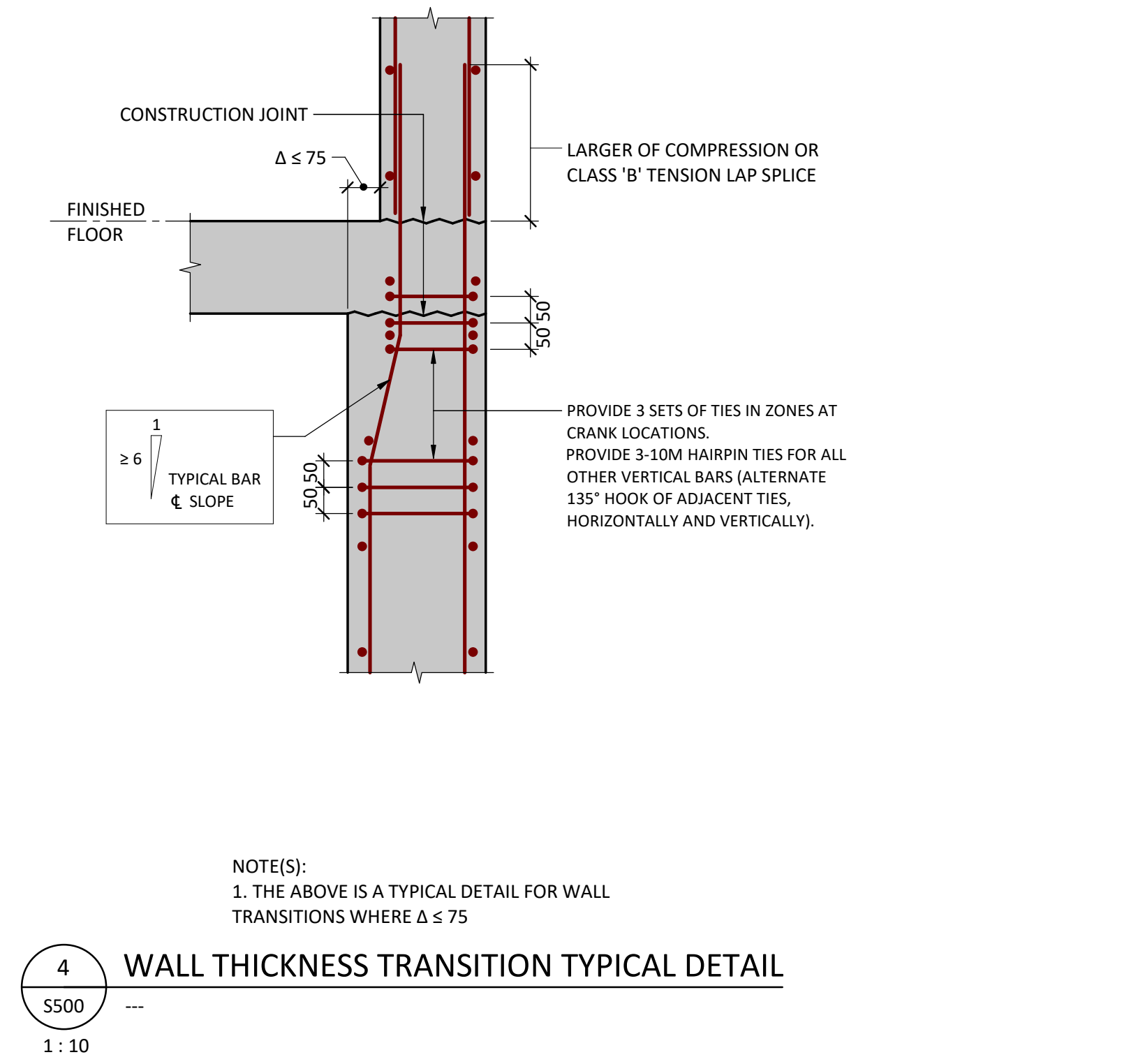
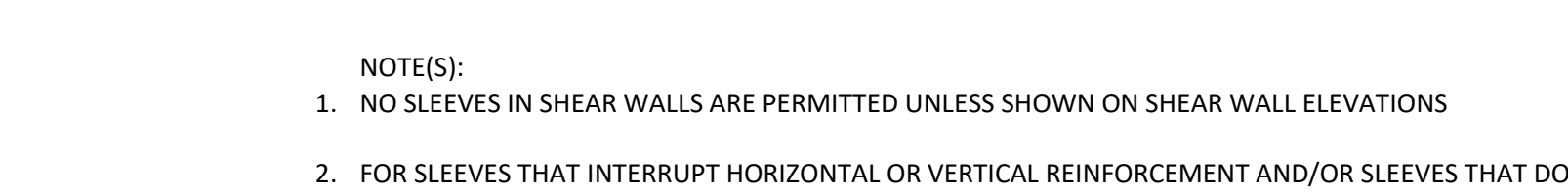
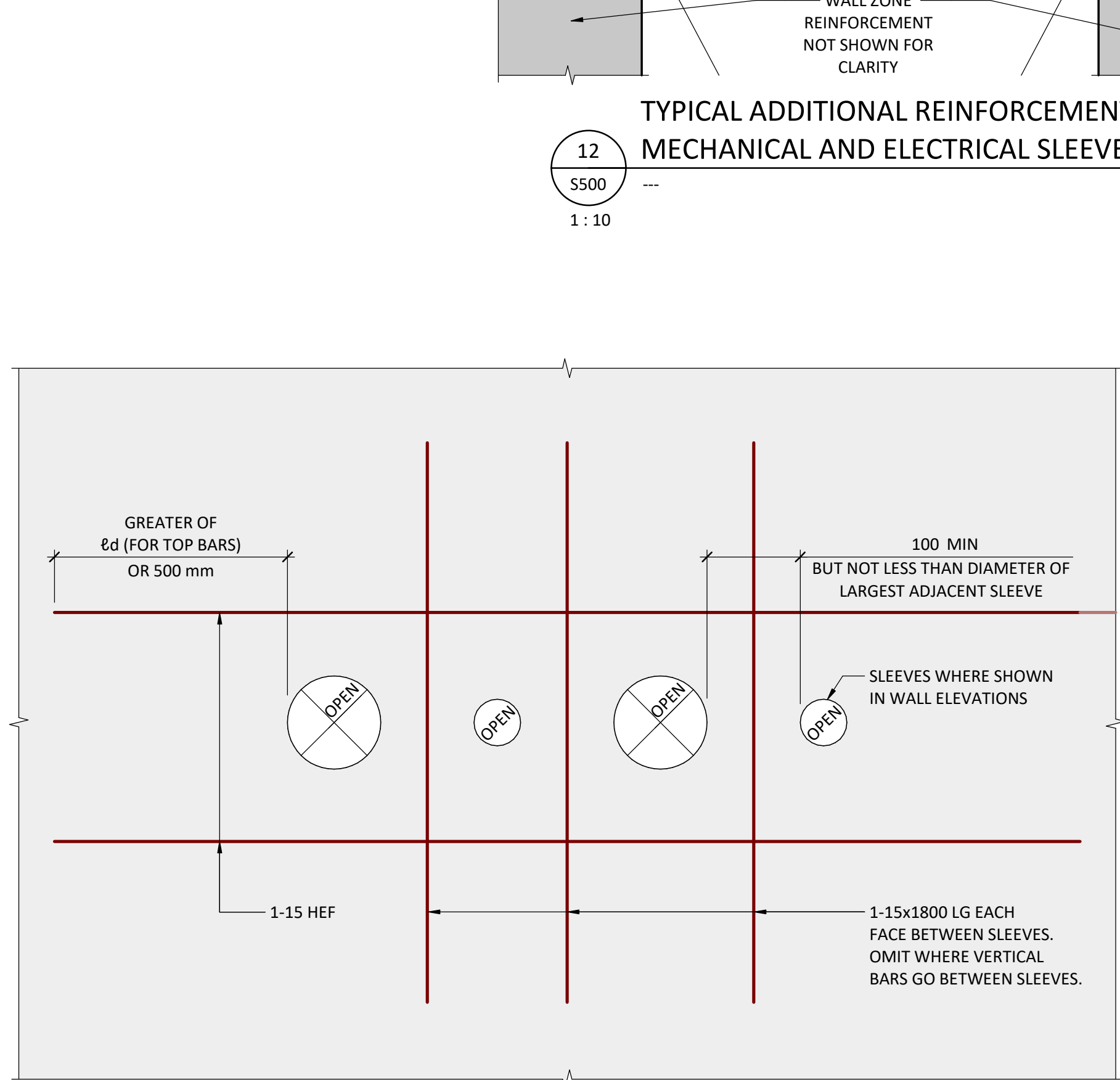
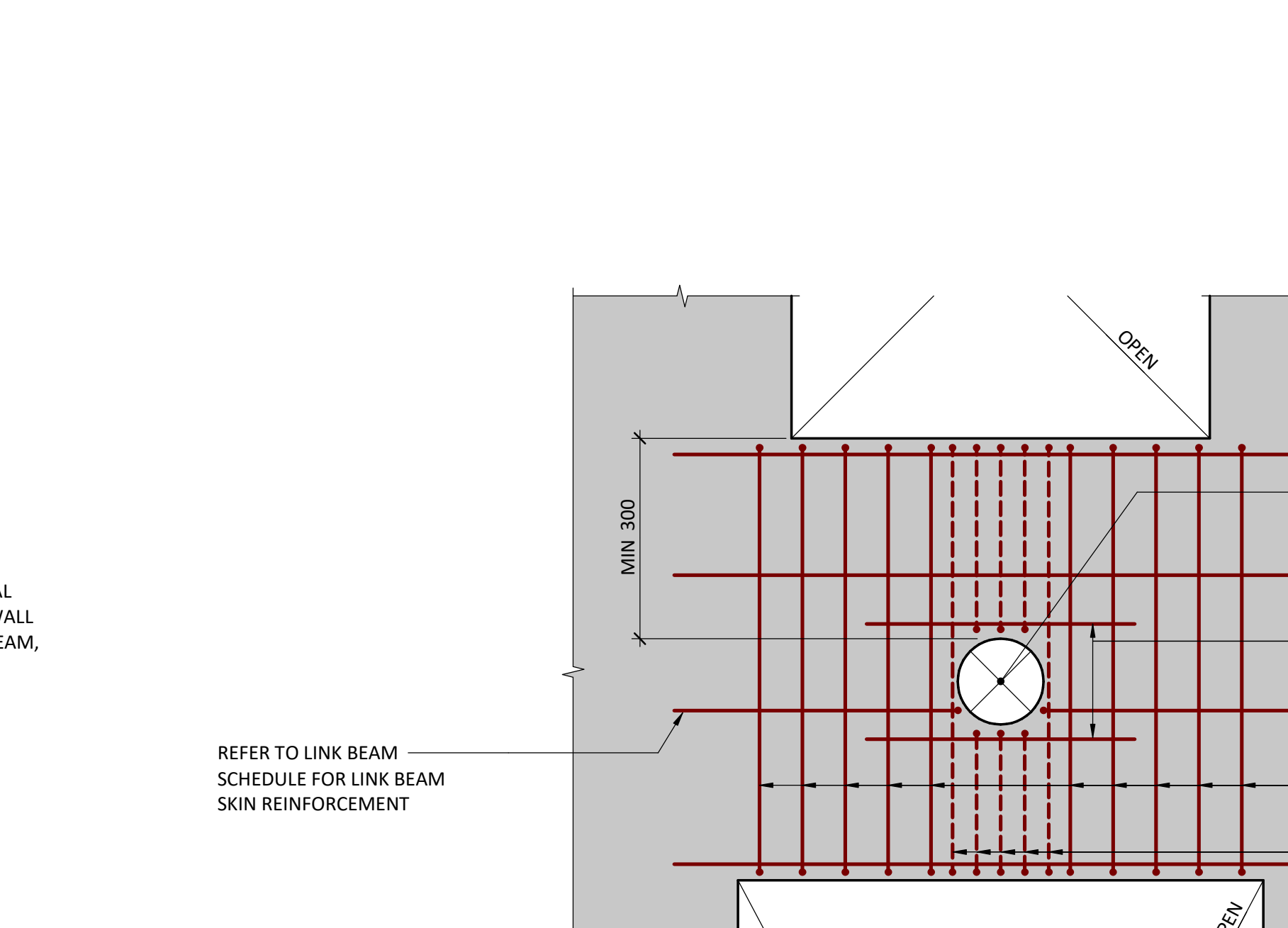
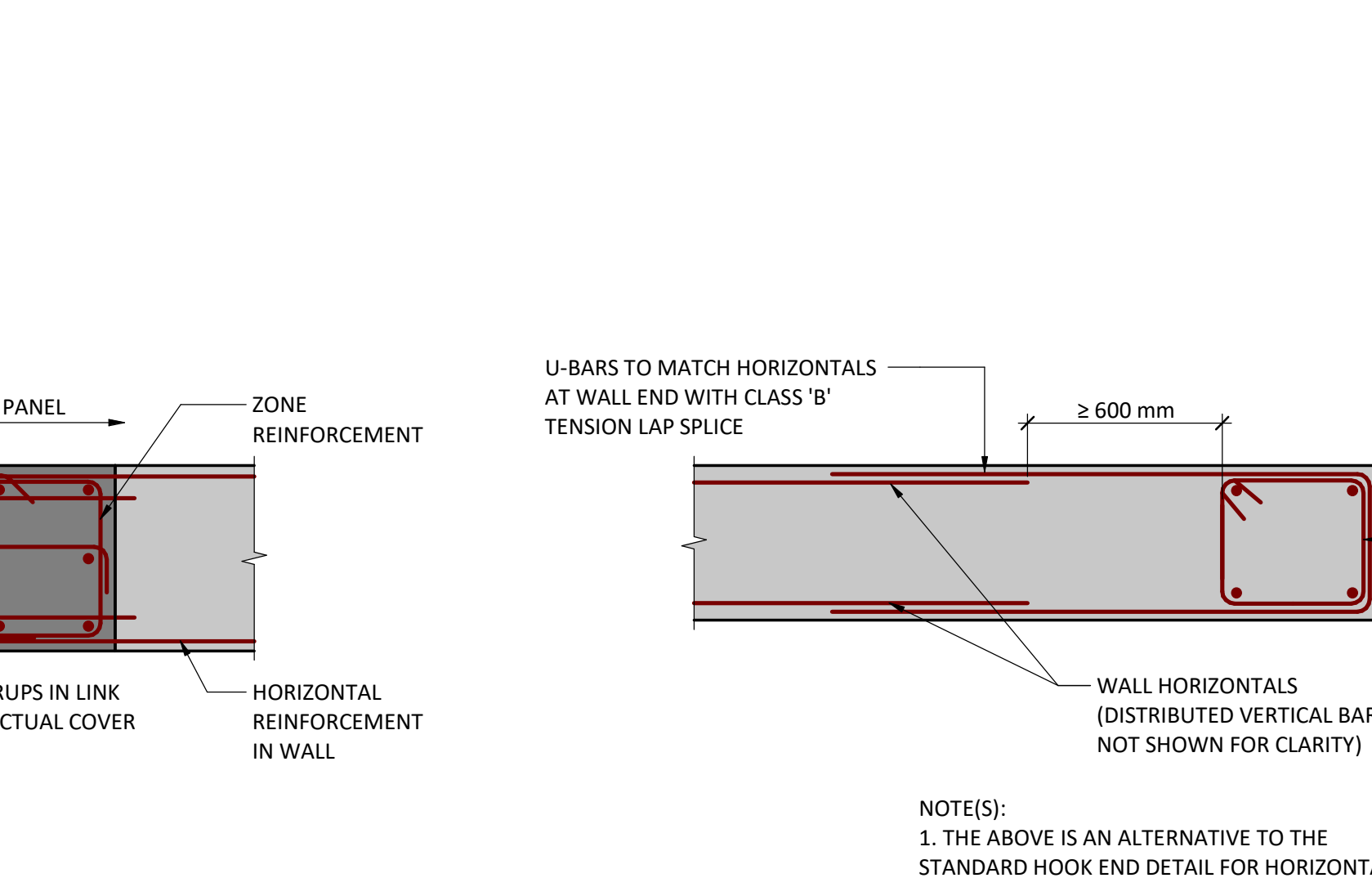
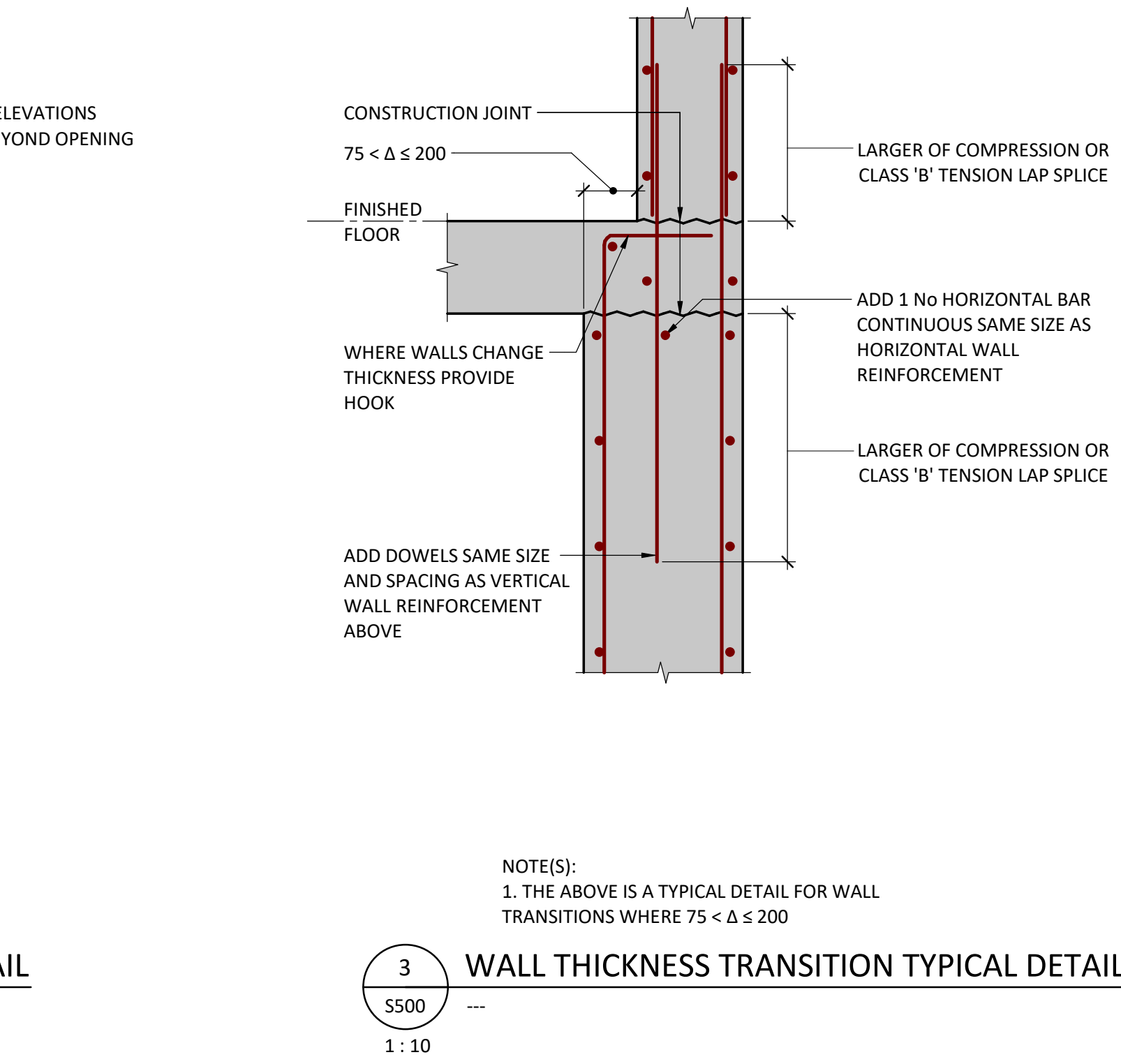
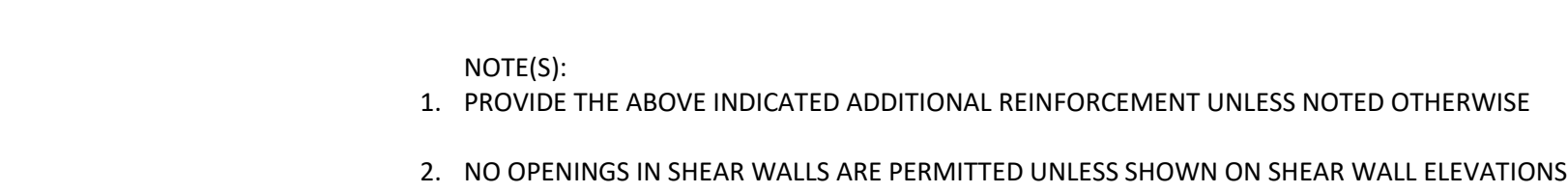
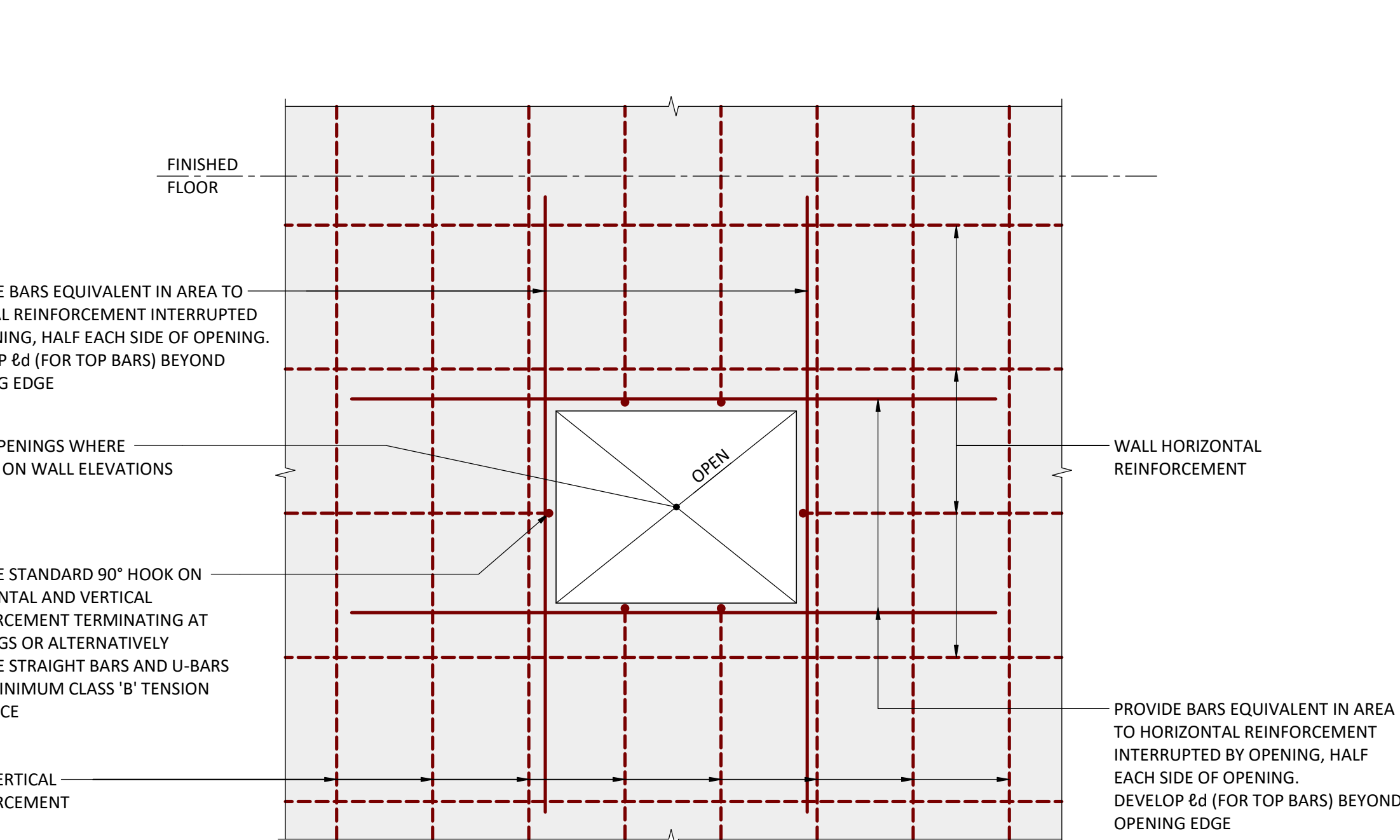
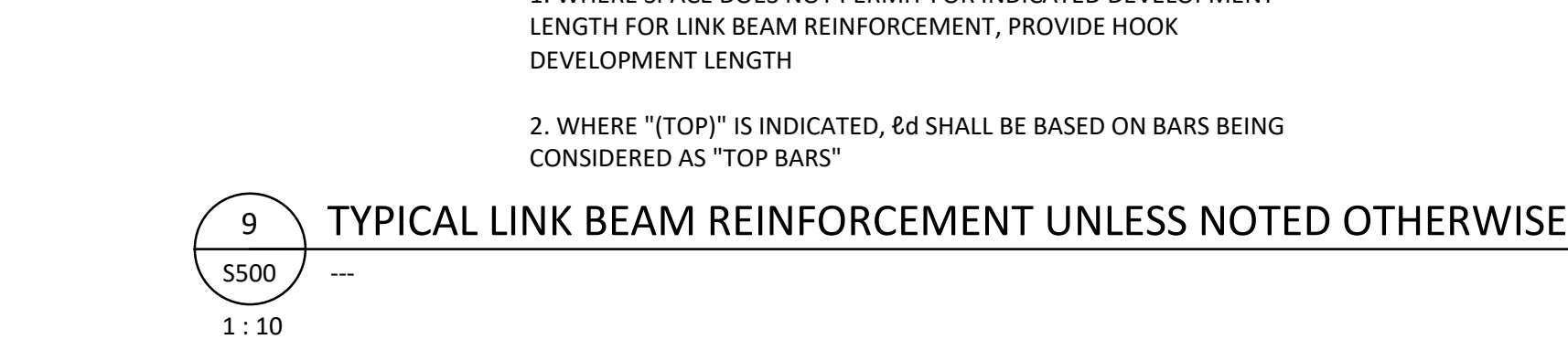
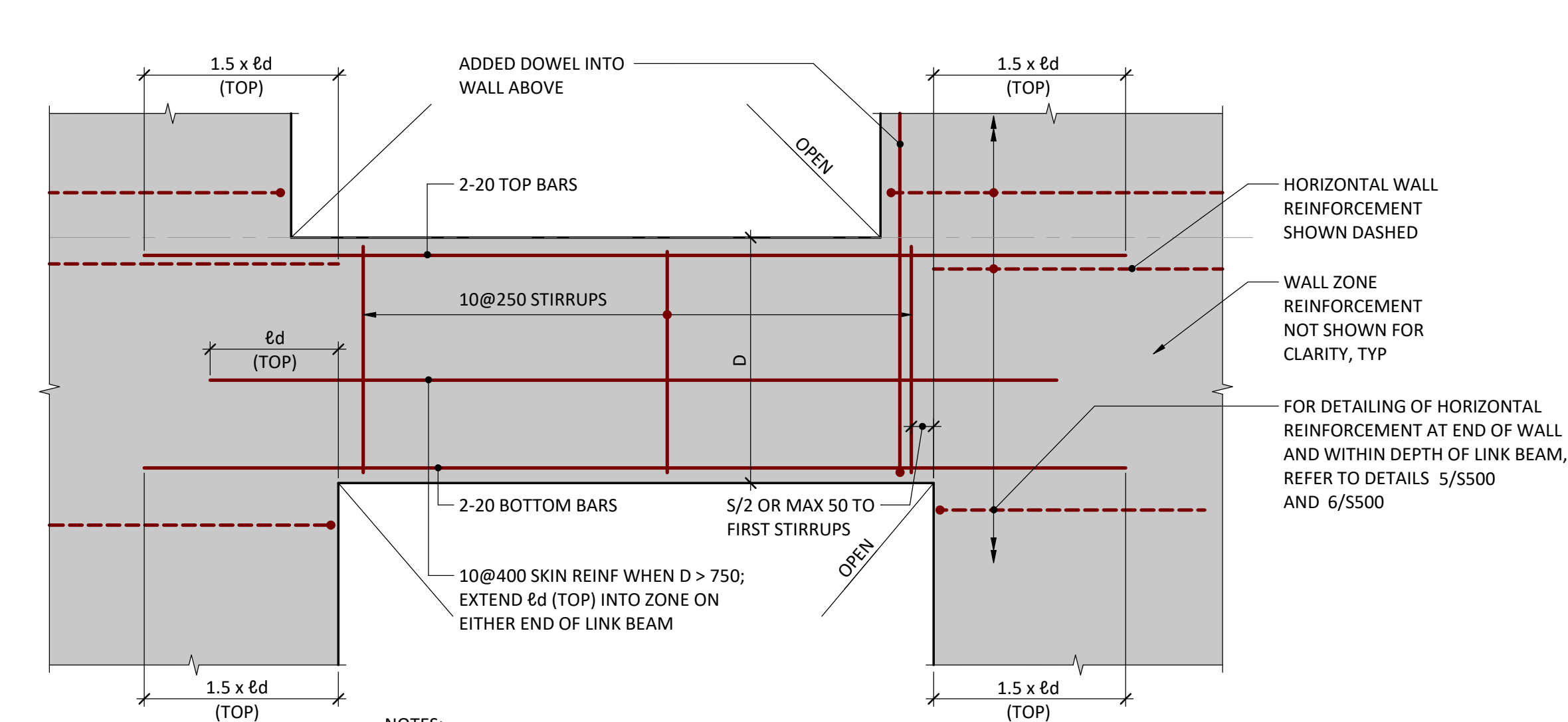
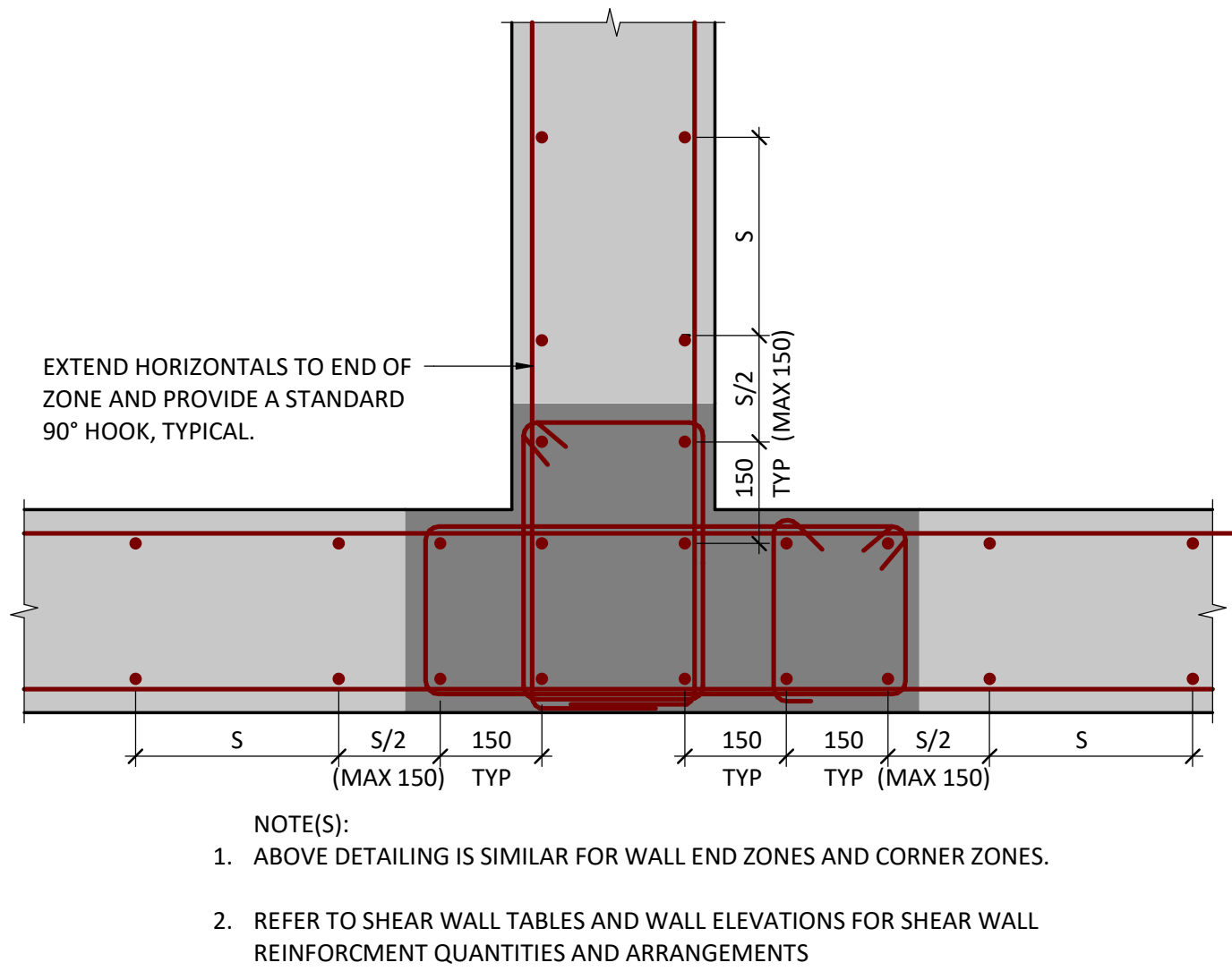
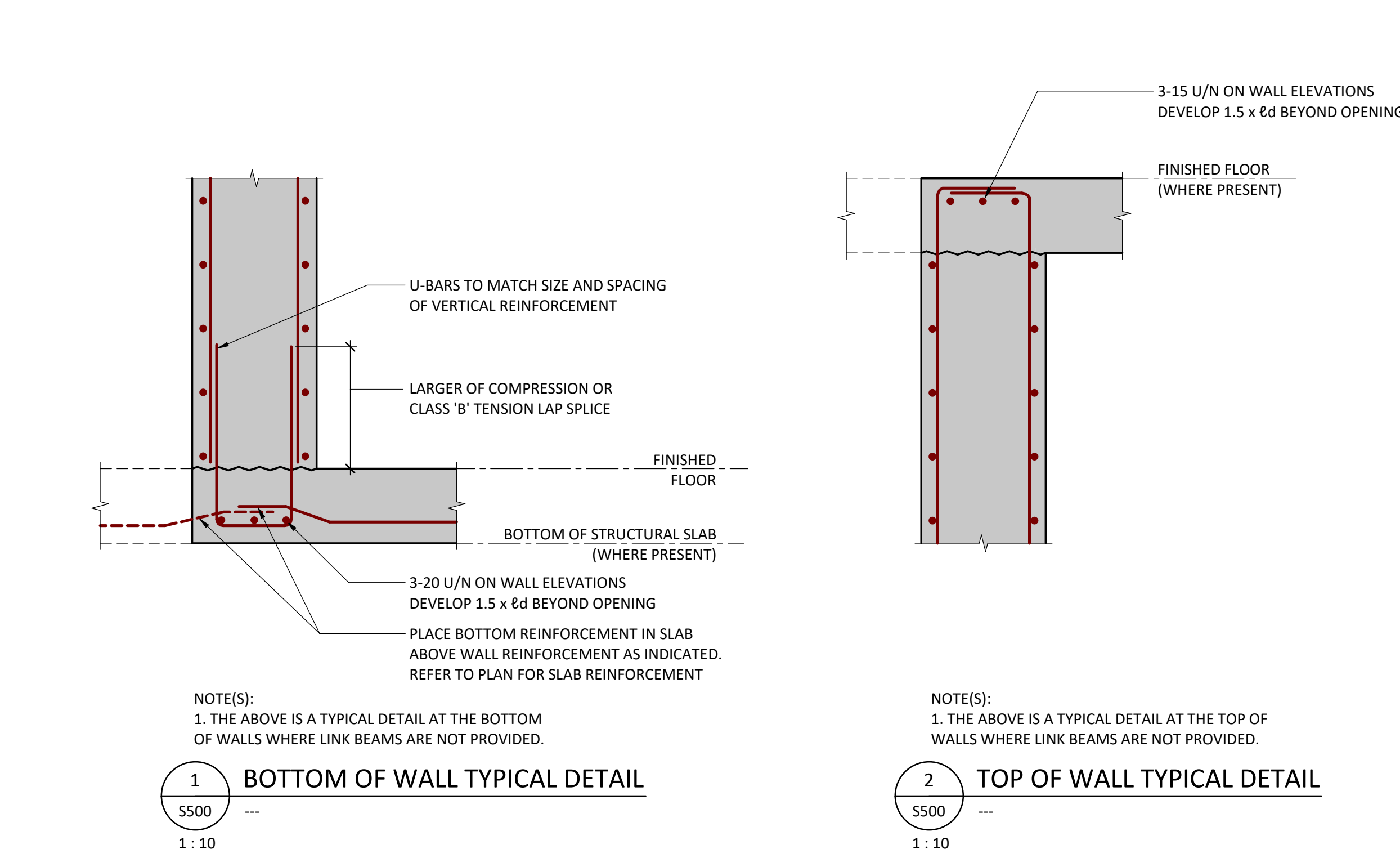
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SECTIONS AND DETAILS

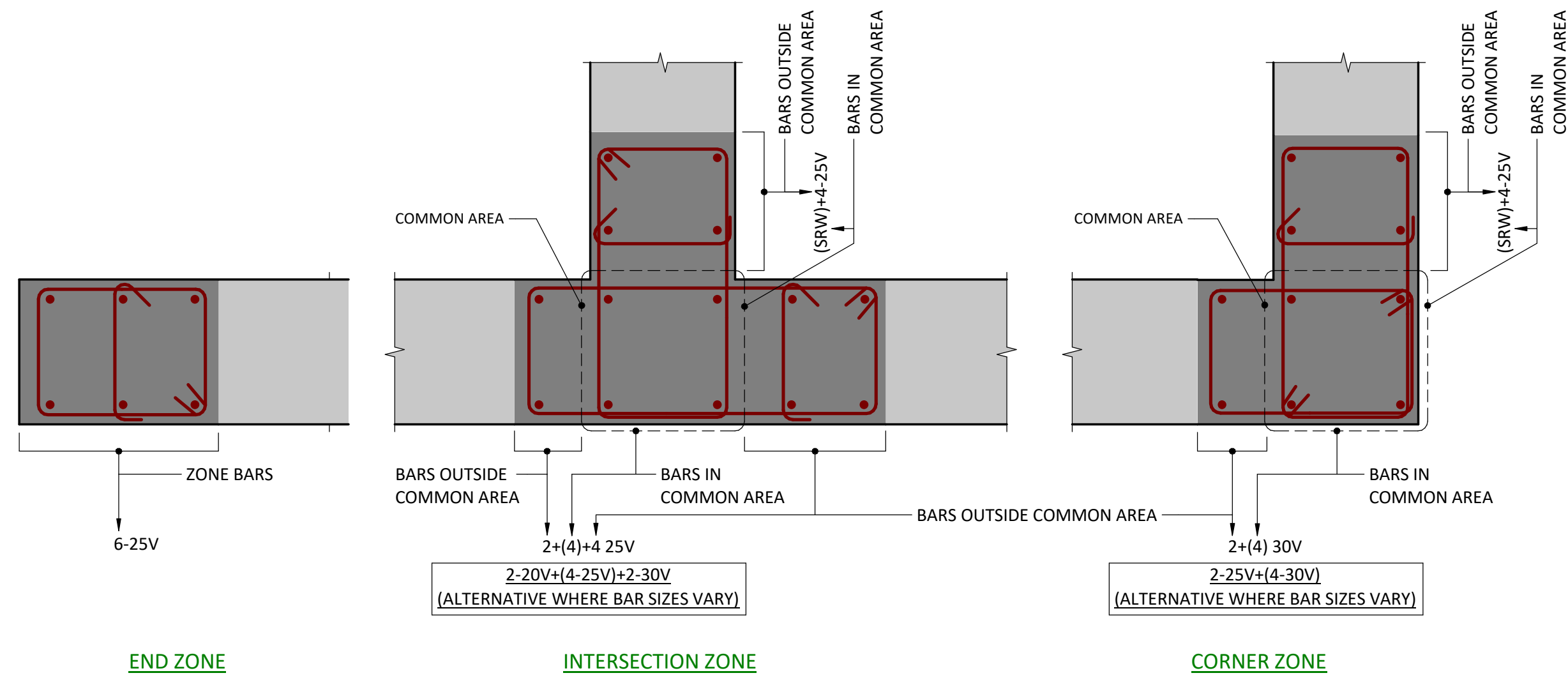
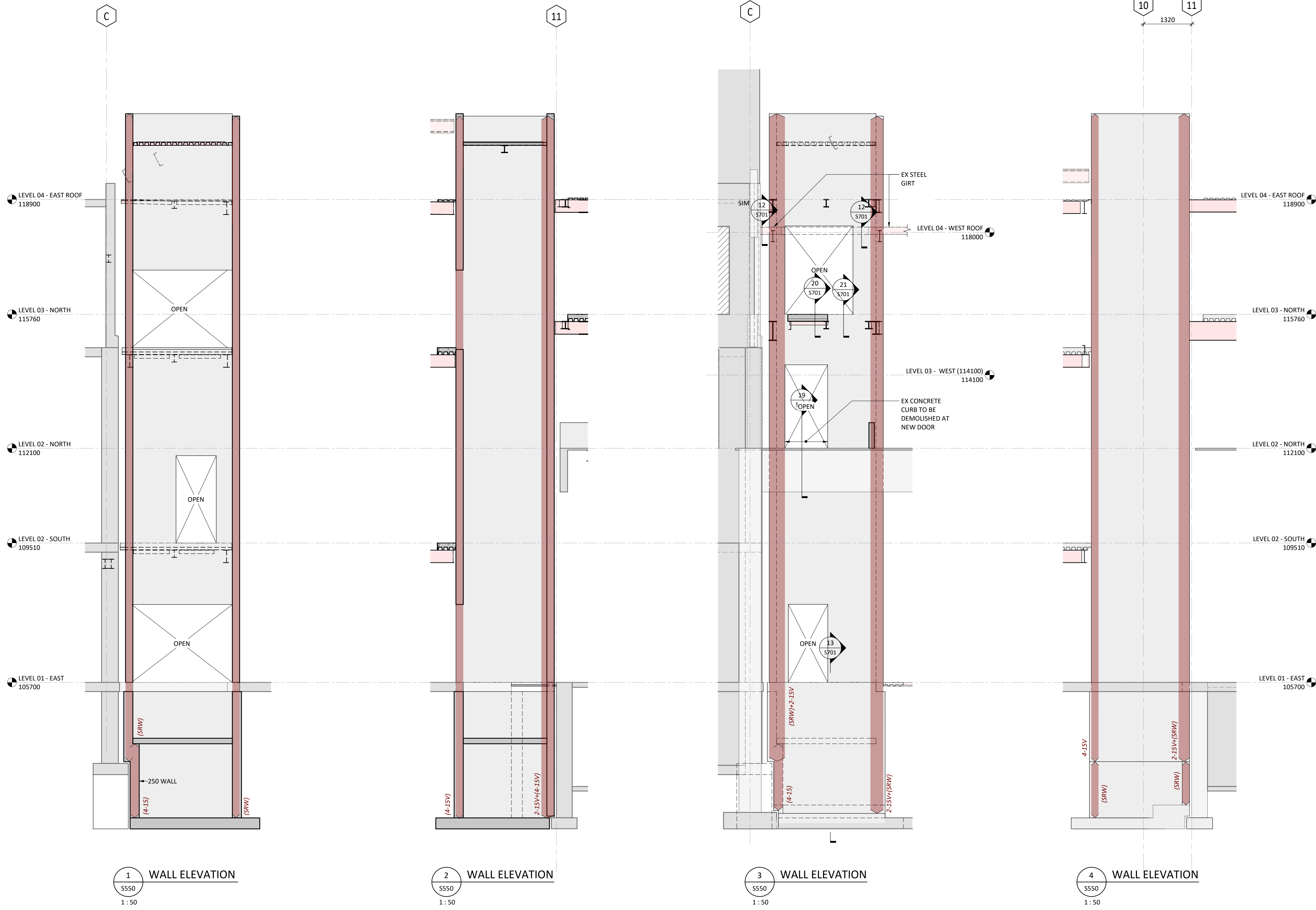
PROJECT NUMBER :
EN023-00965

DRAWING SCALE:
As indicated

DRAWN BY :	CHECKED BY :	DATE
Author	Checker	2024-07-16

SHEET NO.:	REV:
S401	6

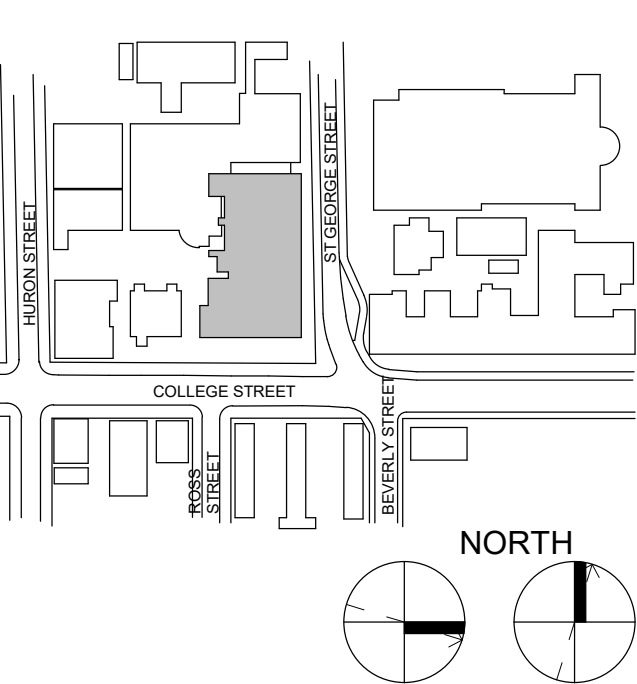




- NOTE(S):
1. THE ZONE REINFORCEMENT QUANTITIES INDICATED IN THE ABOVE LEGEND ARE FOR DEMONSTRATION PURPOSES ONLY. REFER TO SHEAR WALL ZONE REINFORCEMENT SCHEDULE AND WALL ELEVATIONS FOR ZONE BAR QUANTITIES.
 2. WALL REINFORCEMENT OUTSIDE OF ZONES NOT SHOWN FOR CLARITY.
 3. *SRW* DENOTES SEE RETURN WALL.

5 SHEAR WALL ZONE VERTICAL REINFORCEMENT CALLOUT LEGEND
S550
1:10

KEY PLAN :



REVISION

NO.	DATE	DESCRIPTION
1	2024-10-04	PROGRESS ISSUANCE
2	2024-11-01	PROGRESS ISSUANCE
3	2024-11-15	BUILDING PERMIT
4	2025-01-31	ISSUED FOR BID
5	2025-04-30	ISSUED FOR CONSTRUCTION

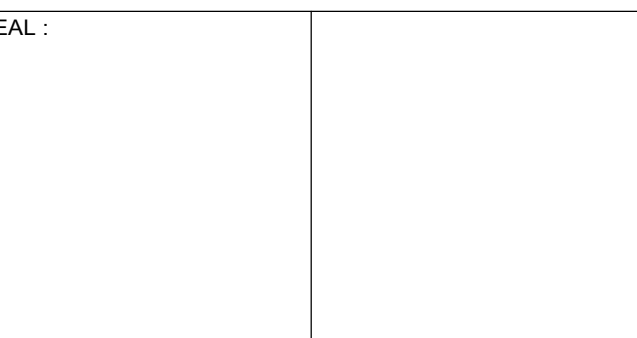
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PROJECT :
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SHEET CONTENTS :
SHEAR WALL ELEVATIONS

PROJECT NUMBER :
EN023-00965

DRAWING SCALE :
As indicated

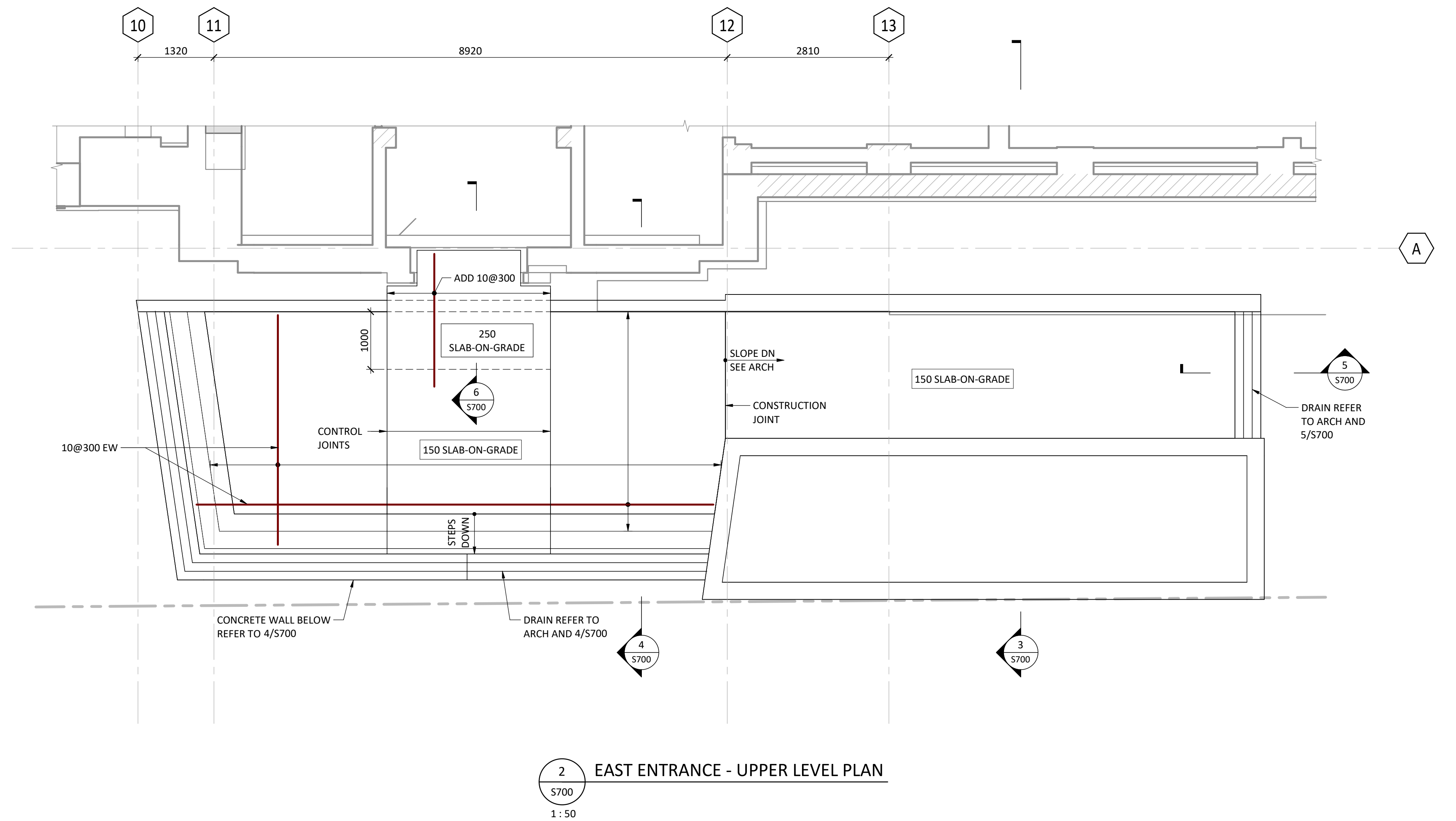
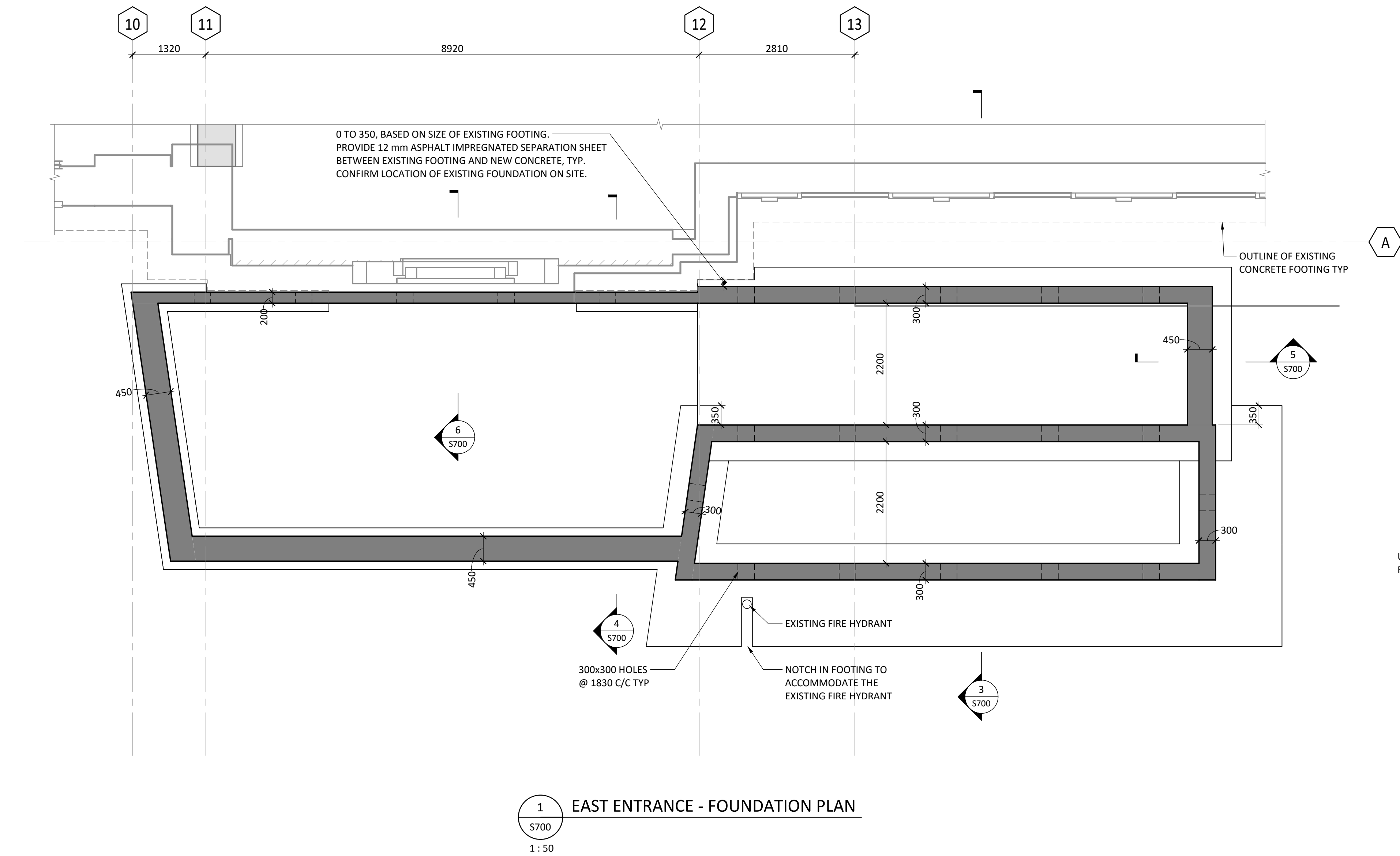
DRAWN BY :
Author

CHECKED BY :
Checkoff

DATE :
2024-07-16

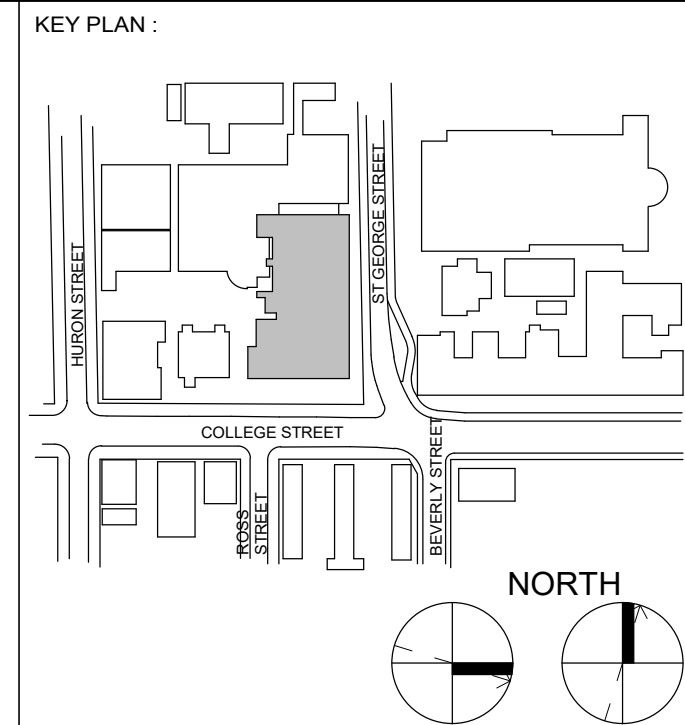
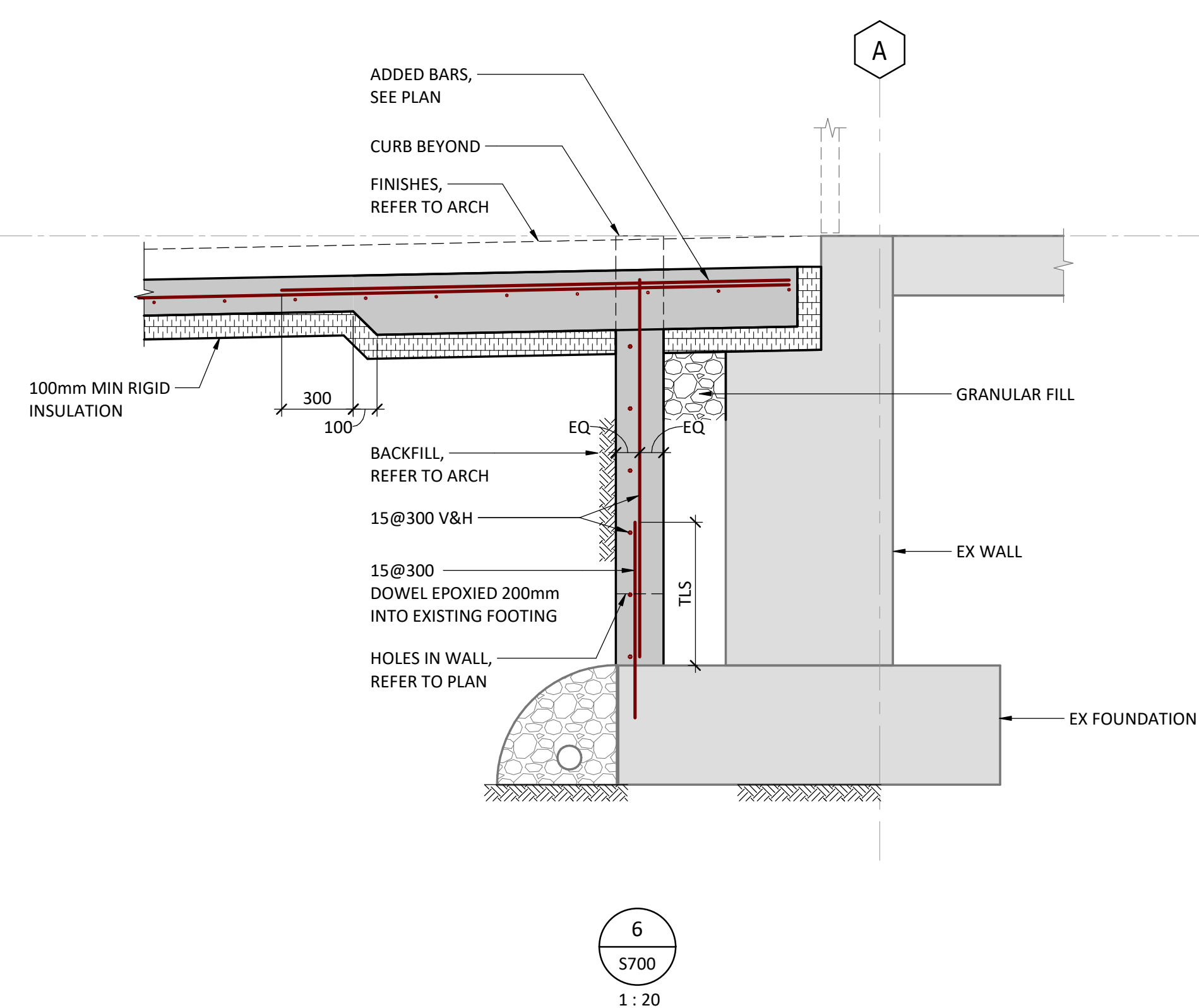
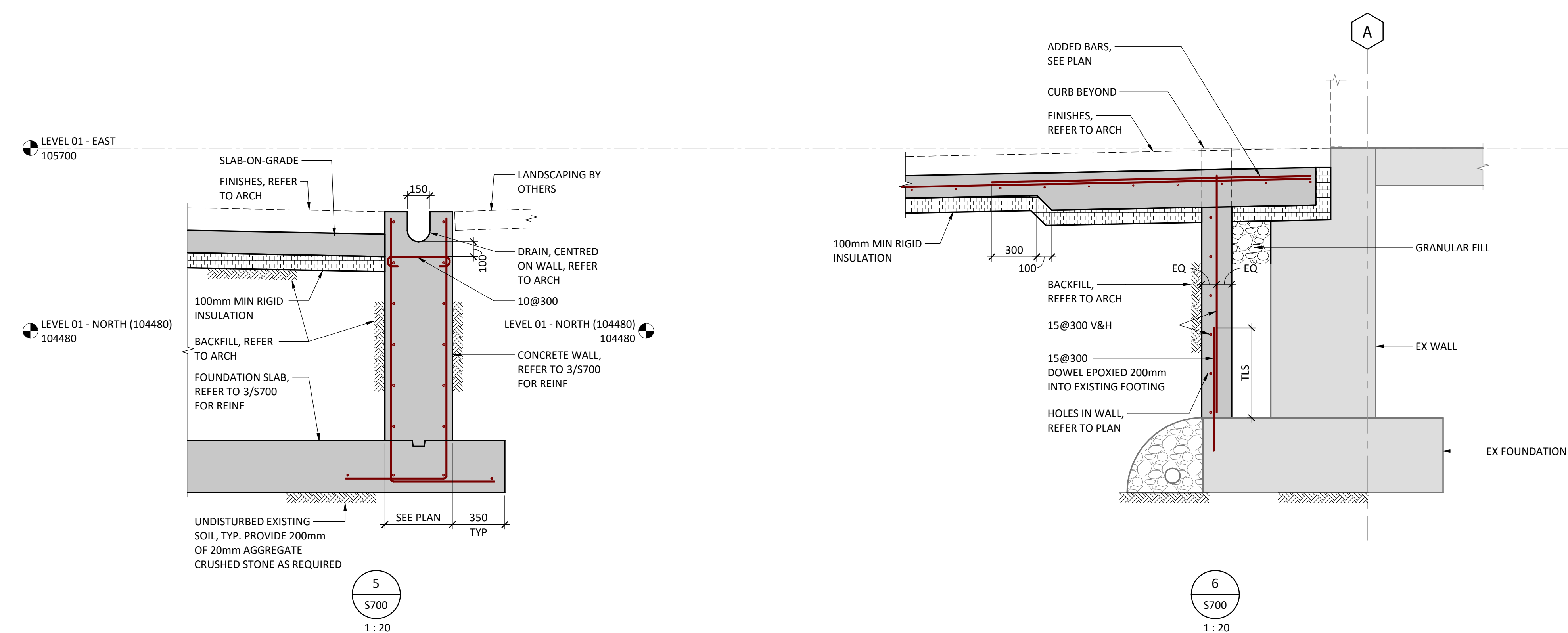
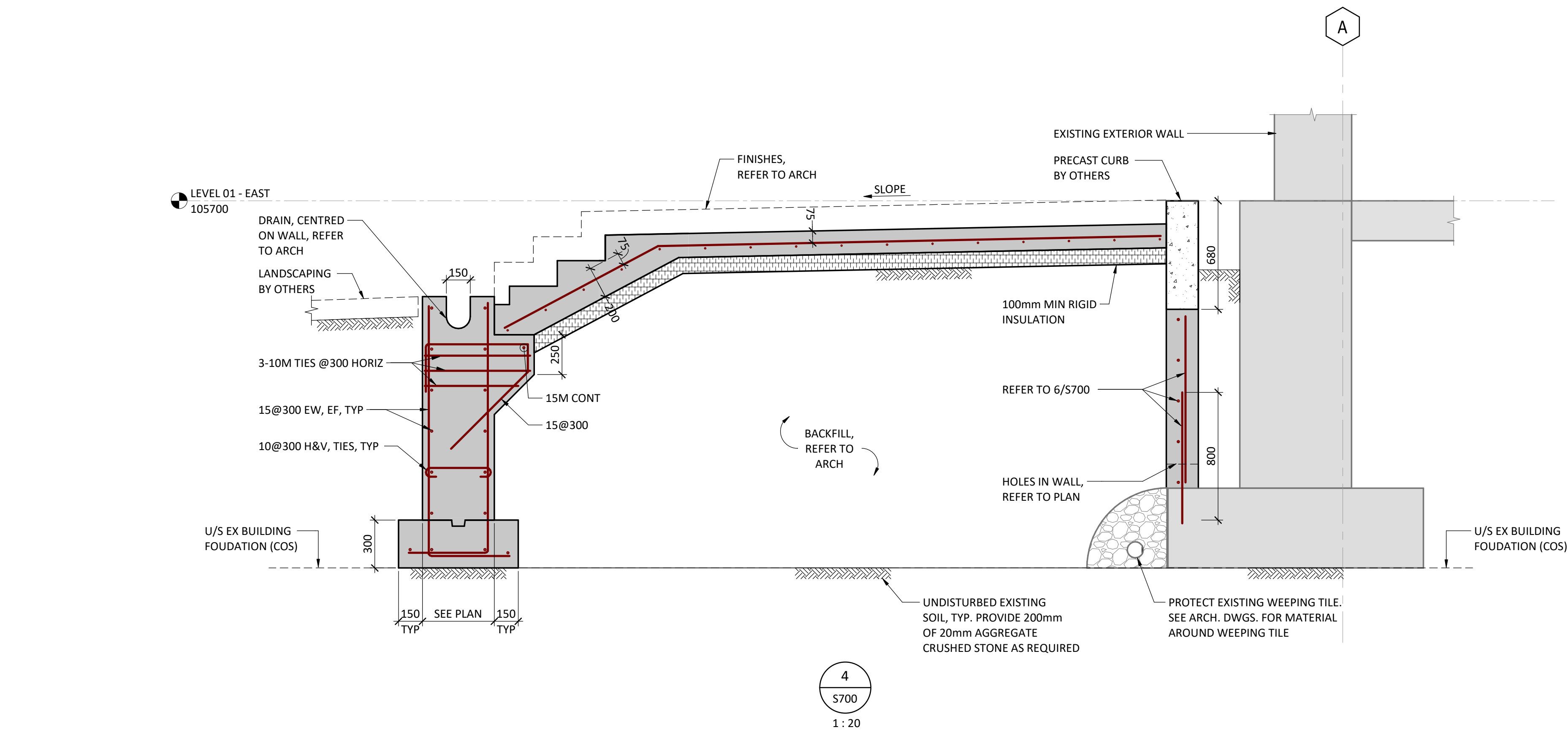
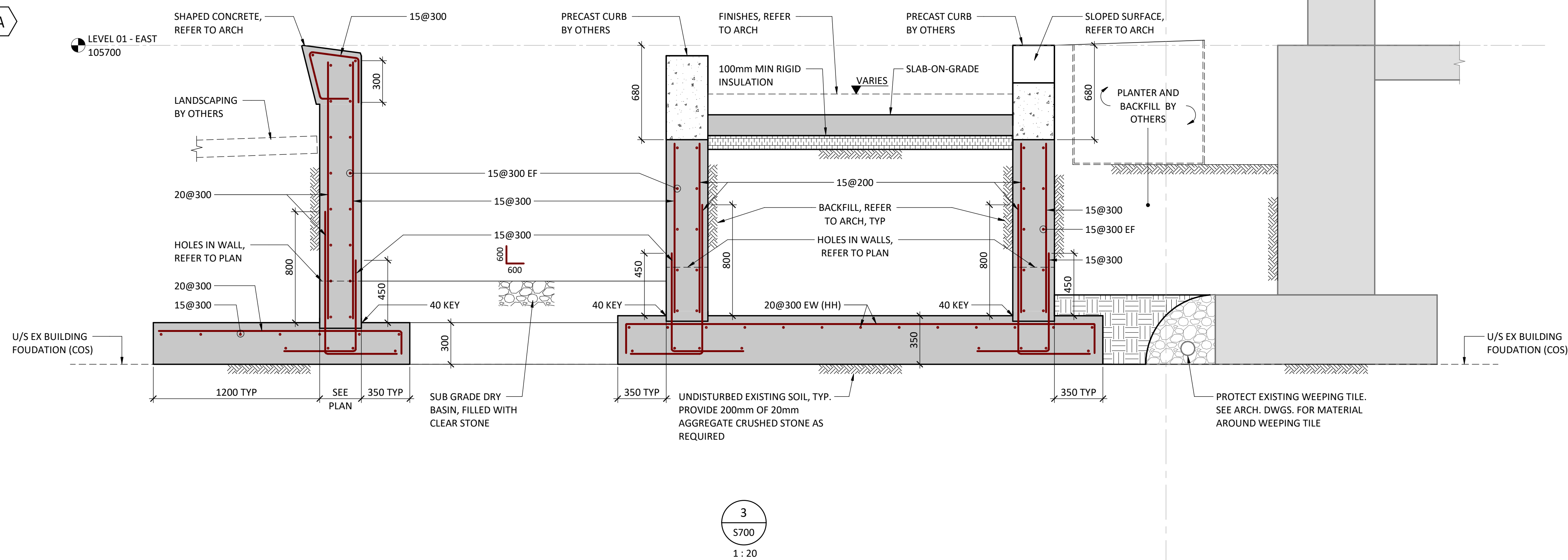
SHEET NO :
S550

REV :
6



NOTES:

- SEE ARCHITECTURAL DRAWINGS FOR:
 - SLOPES AND ELEVATIONS.
 - ARCHITECTURAL FINISHES AND FEATURES.
 - INSERTS FOR RAILING ETC.
 - FULL EXTENT AND LOCATION OF RIGID INSULATION.
- CONCRETE SHALL BE MINIMUM OF TYPE C-1, $f_c = 35 \text{ MPa}$
- BACKFILL SIMULTANEOUSLY ON EACH SIDE OF RETAINING WALLS, 150 mm LIFTS MAX



REVISION		
NO.	DATE	DESCRIPTION
1	2024-10-04	PROGRESS ISSUANCE
2	2024-11-01	PROGRESS ISSUANCE
3	2024-11-15	BUILDING PERMIT
4	2025-01-31	ISSUED FOR BID
5	2025-04-30	ISSUED FOR CONSTRUCTION

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SHEET CONTENTS:
EAST ENTRANCE LANDSCAPING

PROJECT NUMBER:

EN023-00965

DRAWING SCALE:

As indicated

DRAWN BY:

Author

CHECKED BY:

Checker

DATE:

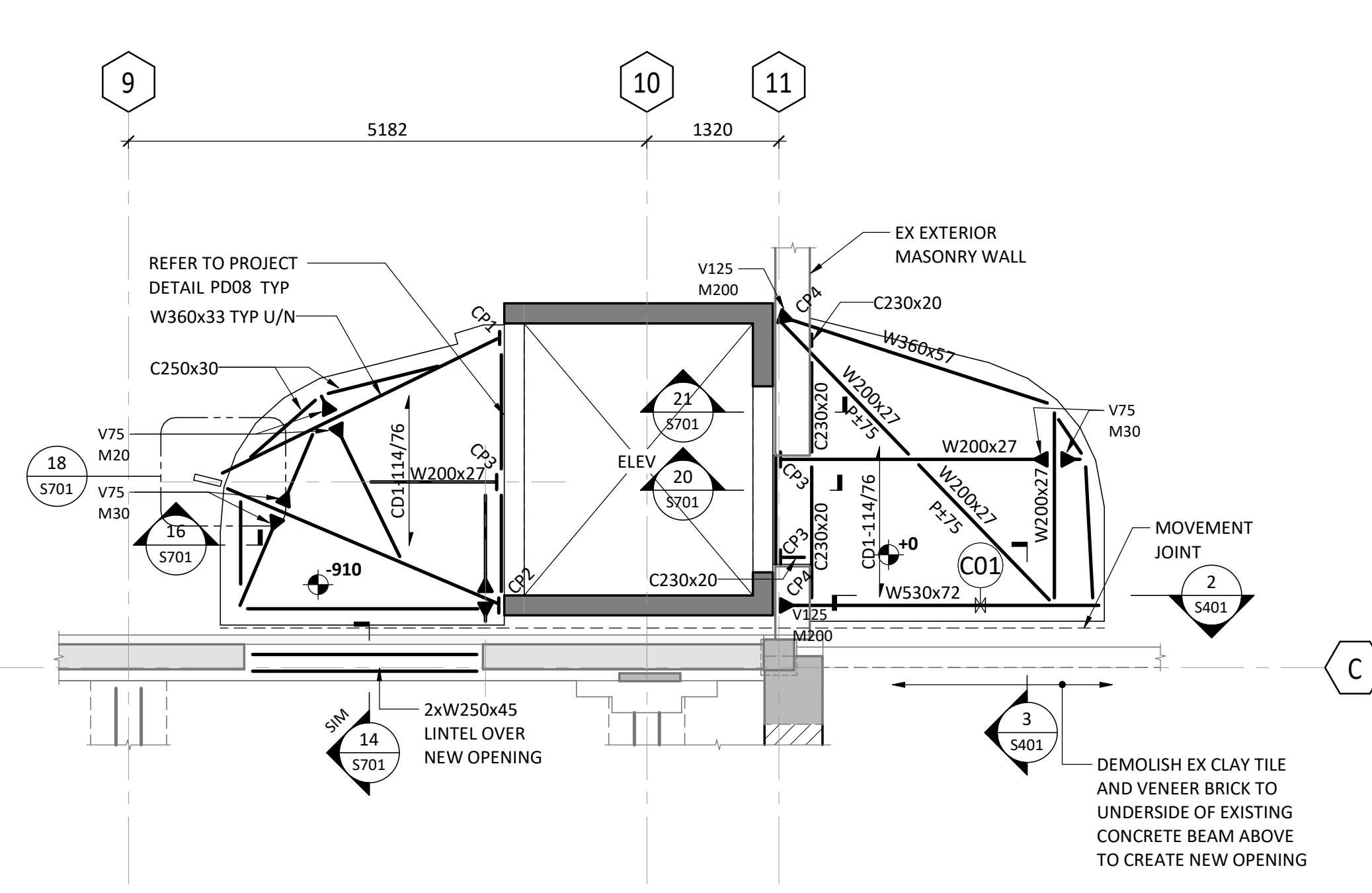
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SHEET NO.:

S700

REV:

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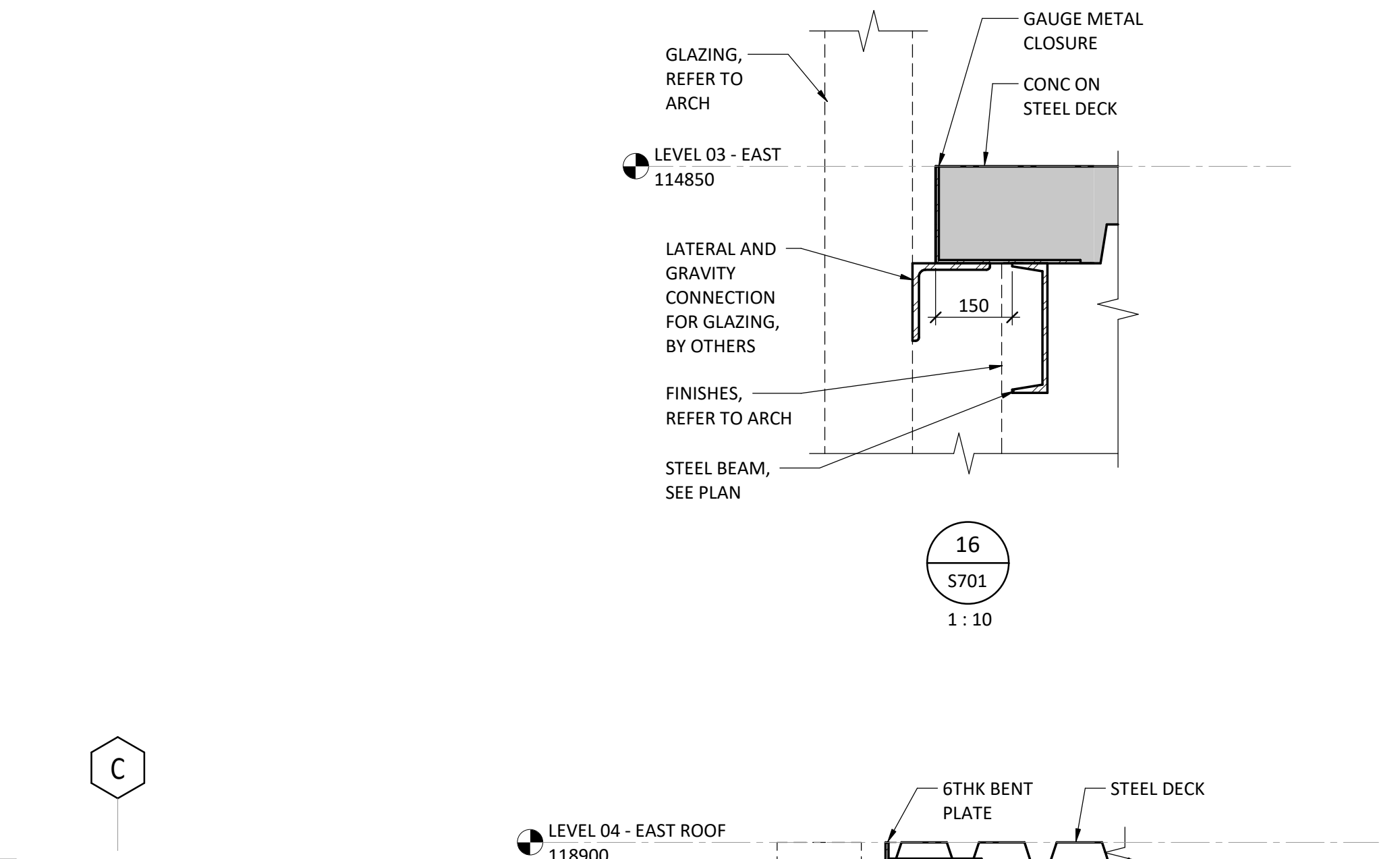


Site plan showing the proposed development (shaded area) and surrounding streets: Hudson Street, College Street, St. George Street, and Irving Street. A north arrow is provided for orientation.

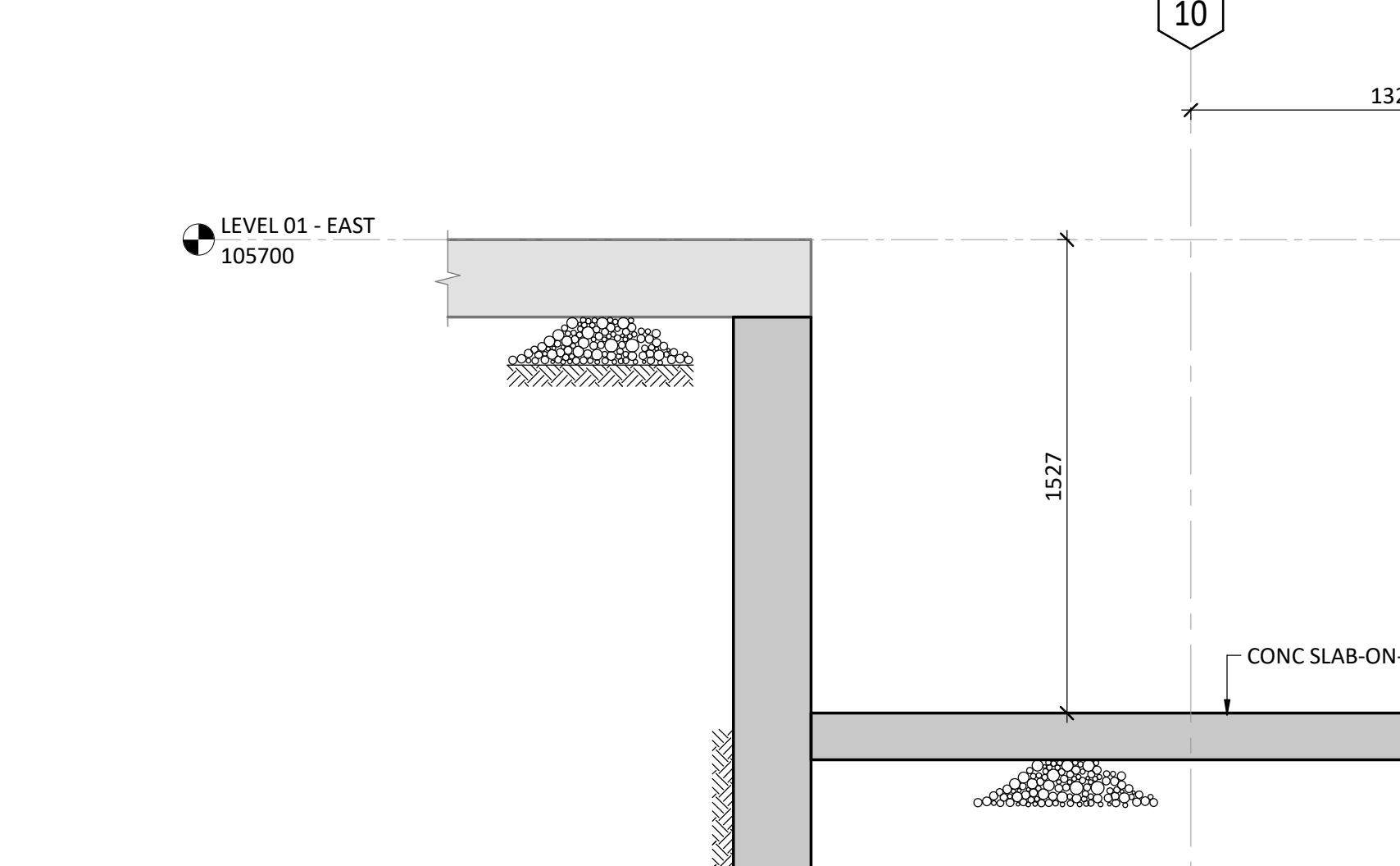
REVISION		
D.	DATE	DESCRIPTION
	2024-10-04	PROGRESS ISSUANCE
	2024-11-01	PROGRESS ISSUANCE
	2024-11-15	BUILDING PERMIT
	2025-01-31	ISSUED FOR BID
	2025-04-30	ISSUED FOR CONSTRUCTION

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THIS "ISSUED FOR CONSTRUCTION" DOCUMENT
AND THE CONTRACT DOCUMENTS, THE
CONTRACTOR IS TO PROMPTLY BRING IT TO THE
ATTENTION OF THE CONSULTANT.

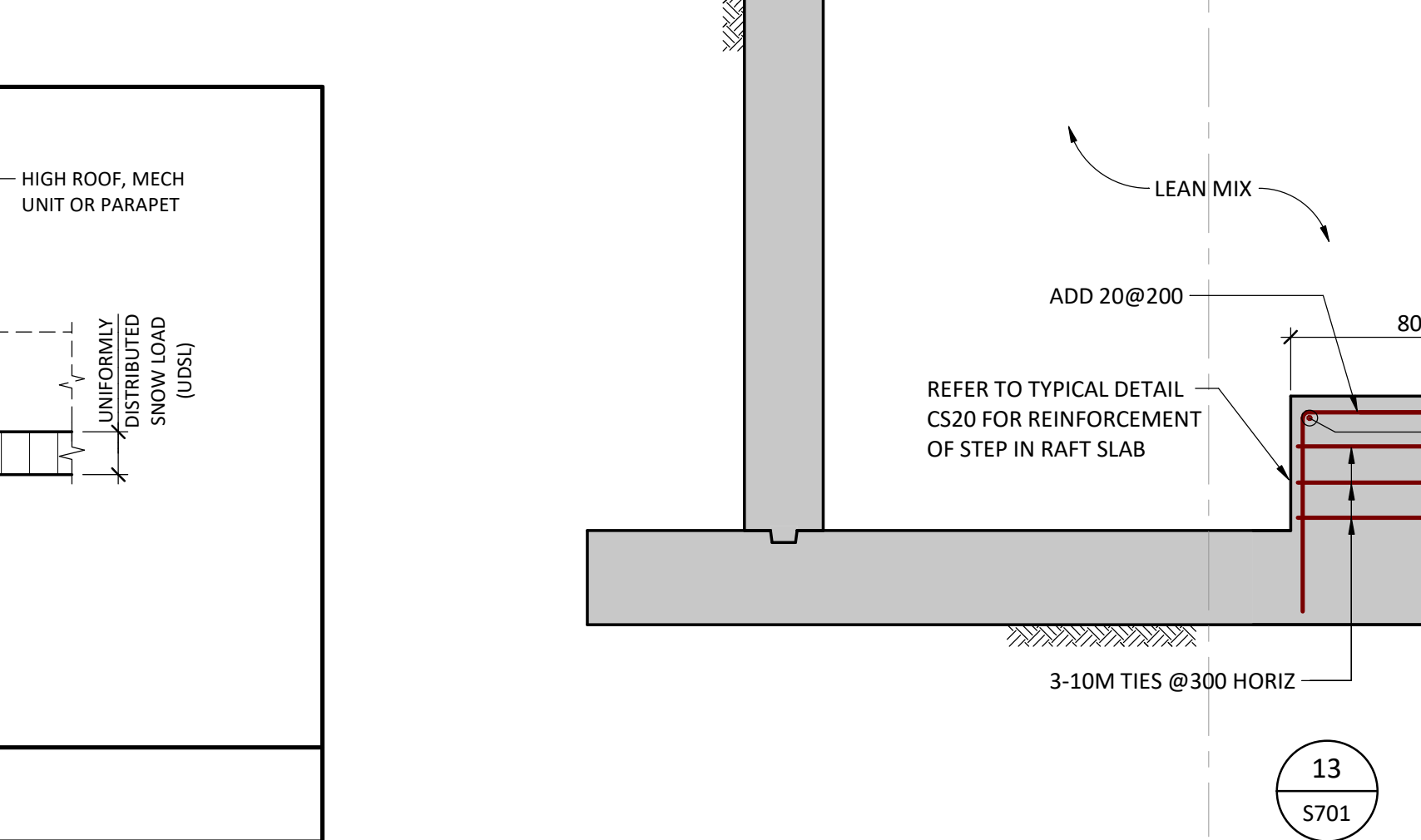
4 ELEVATOR PART FRAMING PLAN - LEVEL 03



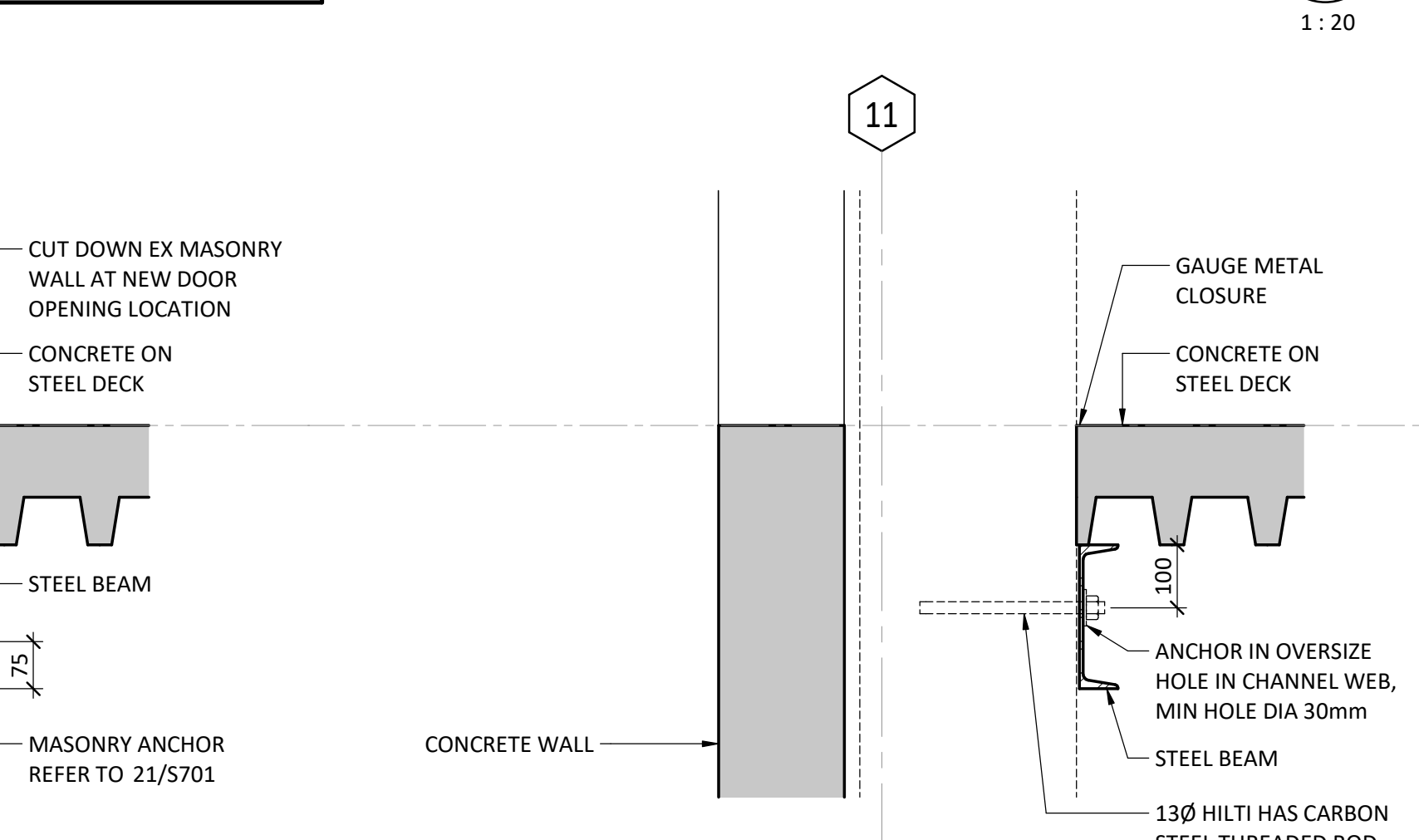
6 ELEVATOR PART FRAMING PLAN - OVER RUN



6 ELEVATOR PART FRAMING PLAN - OVER RUN



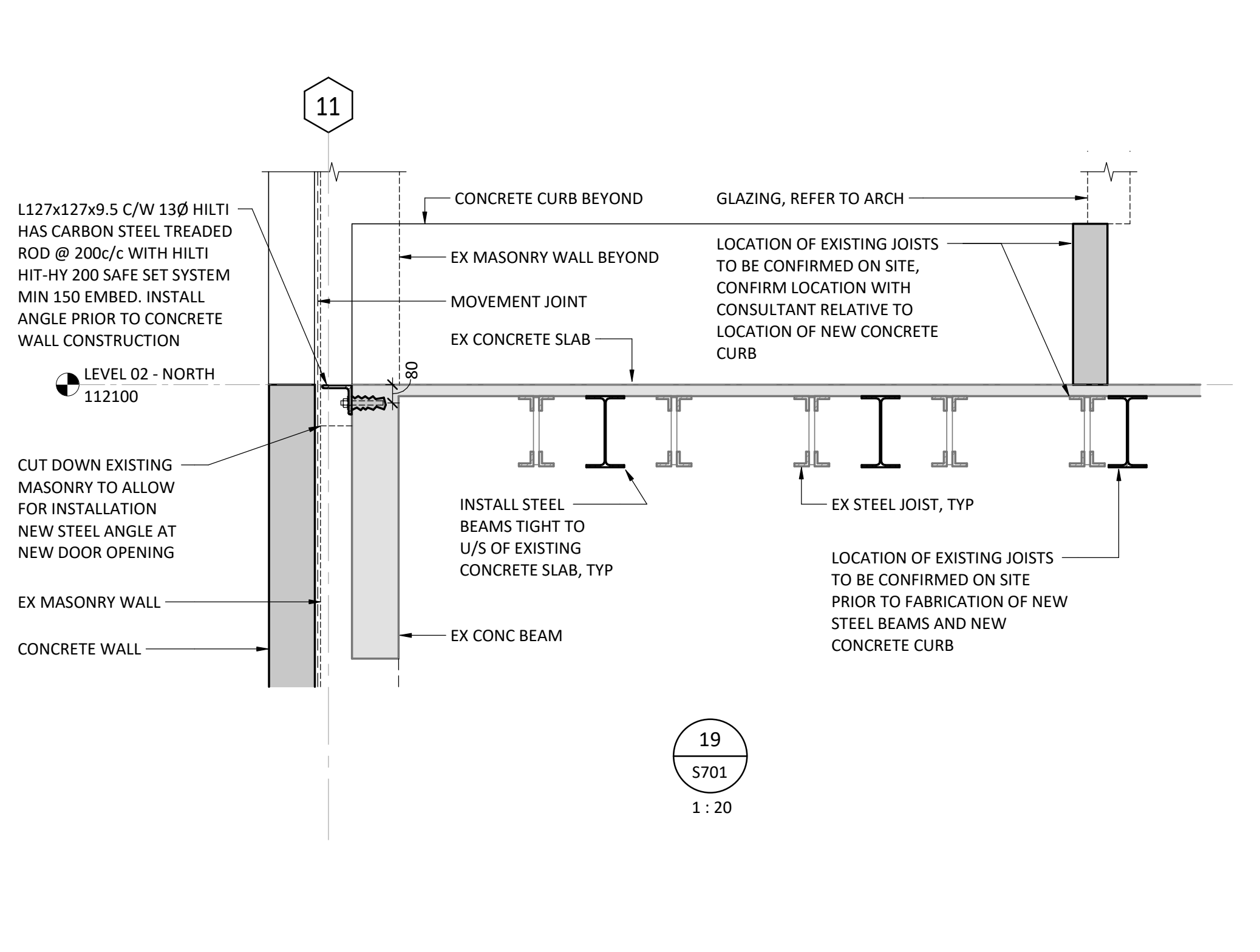
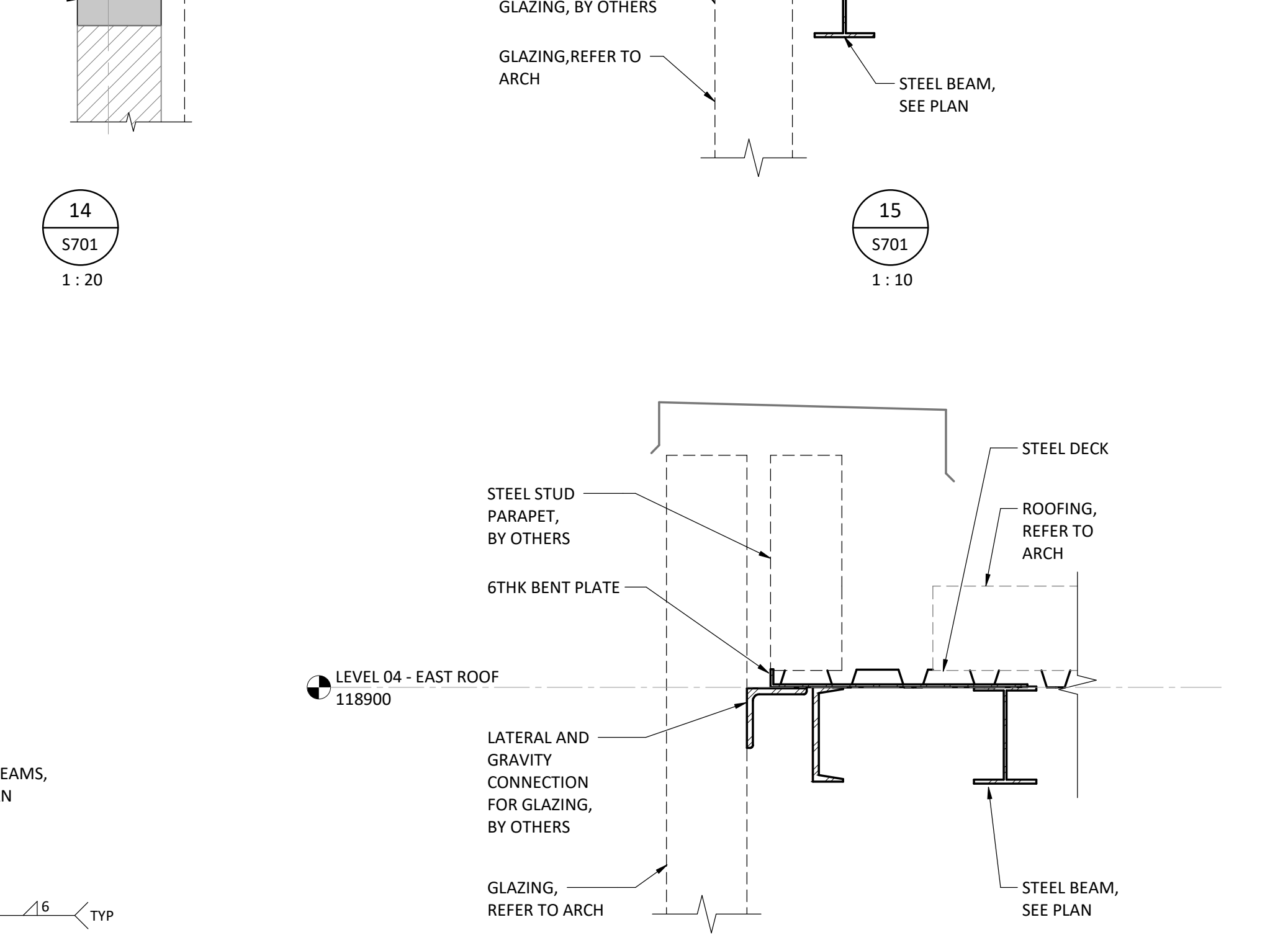
6 ELEVATOR PART FRAMING PLAN - OVER RUN



6 ELEVATOR PART FRAMING PLAN - OVER RUN



6 ELEVATOR PART FRAMING PLAN - OVER RUN



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SHEET CONTENTS:

ELEVATOR DETAILS

PROJECT NUMBER :
EN023-00965
DRAWINGS SCALE :

As indicated

DRAWN BY: Author	CHECKED BY: Checker	DATE: 2024-07-16
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SHEET NO: 0501 REV: 0

S701	6
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