

GENERAL NOTES

1. PERFORM ALL WORK TO THE REQUIREMENTS OF THE ONTARIO BUILDING CODE (2012). OBSERVE ALL LOCAL AND PROVINCIAL REGULATORY REQUIREMENTS AND EXECUTE ALL WORK TO THE REQUIREMENTS OF THE APPLICABLE CSA STANDARDS. ALL WORKMANSHIP TO BE REPRESENTATIVE OF THE HIGHEST INDUSTRY STANDARD.
2. STRUCTURAL DESIGN IN ACCORDANCE WITH THE ONTARIO BUILDING CODE 2012 AND THE USER'S GUIDE - NBC 2010 STRUCTURAL COMMENTARIES (PART 4 DIVISION B).
3. COMPLY WITH ALL REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT.
4. READ THESE DRAWINGS IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, COMMUNICATIONS / IT, AND CIVIL DRAWINGS. COORDINATE THE REQUIREMENTS OF THESE TRADES WITH THE STRUCTURAL WORK AND PROVIDE FOR OPENINGS, SLEEVES, DUCTS, ETC., IN THE CASE OF DISCREPANCIES, NOTIFY THE CONSULTANT IMMEDIATELY FOR CLARIFICATION.
5. IT IS THE INTENT OF THIS CONTRACT TO PROVIDE FINISHED WORK. ITEMS THAT ARE CLEARLY REQUIRED TO PROVIDE A FINISHED INSTALLATION ARE INCLUDED IN THE SCOPE WHETHER SPECIFICALLY NOTED OR NOT.
6. CONFIRM ALL DIMENSIONS, ELEVATIONS, GRADES AND EXISTING CONDITIONS PRIOR TO COMMENCING THE WORK AND REPORT ANY DISCREPANCIES TO THE CONSULTANT. EXISTING DIMENSIONS ARE BASED ON ORIGINAL DESIGN DRAWINGS AND ARE NOT WARRANTED FOR ACCURACY.
7. THESE DRAWINGS SHOW FINISHED STRUCTURES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR ANY TEMPORARY SUPPORT STRUCTURES REQUIRED TO COMPLETE THE WORK. THE CONTRACTOR IS TO PROVIDE SHOP DRAWINGS SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF ONTARIO, FOR ANY SUCH TEMPORARY SUPPORT STRUCTURES. EXTENTS OF SHORING DENOTED ON DRAWINGS IS CONCEPTUAL ONLY AND TO BE CONFIRMED BY CONTRACTOR TO SUIT THEIR PLANNED SEQUENCE OF WORK.
8. PROPRIETARY SYSTEMS ARE TO BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
9. INSTALL TEMPORARY HOARDING AND SHORING, AS REQUIRED, TO PROTECT WORKERS AND OCCUPANTS OF THE SITE. MAINTAIN EXITS AT ALL TIMES. RESTORE DAMAGED CONSTRUCTION TO THE SATISFACTION OF THE CONSULTANT.
10. DO NOT SCALE DRAWINGS. DRAWING UNITS ARE METRIC AND REFERENCE DIMENSIONS ARE IN MILLIMETERS, UNLESS NOTED OTHERWISE.
11. EXISTING REINFORCING IN WALLS AND SLABS TO BE LOCATED PRIOR TO CORING OR CUTTING ANY NEW OPENINGS. SEE STANDARD DETAILS. CONTRACTOR TO ADVISE ENGINEER ON RESULTS AND OBTAIN APPROVAL PRIOR TO COMMENCEMENT OF CORING. CORES TO BE LOCATED SUCH THAT THE NUMBER OF REINFORCING BARS CUT IS AT A MINIMUM.

COLD & HOT WEATHER WORK

12. PROTECT ALL EXCAVATIONS, TEMPORARY WORKS, EXISTING/NEW STRUCTURES FROM FROST ACTION DURING CONSTRUCTION.
13. PROVIDE TEMPORARY HEAT, INSULATION MATERIALS OR OTHER MEANS AS REQUIRED TO PROTECT CONCRETE FROM FREEZING.
14. PERFORM HOT AND COLD WEATHER CONCRETE WORK IN ACCORDANCE WITH CAN/CSA A23.1.
- DESIGN LOADS
15. ALL NEW STRUCTURES DESIGNED TO HIGH IMPORTANCE LEVEL, UNLESS NOTED OTHERWISE.
16. GRAVITY AND LIVE LOADS APPEAR ON PLAN DRAWINGS.

CONCRETE

17. PERFORM ALL CONCRETE WORK TO CAN/CSA A23.1, A23.2 AND A23.3 - LATEST EDITION.
18. CONCRETE COMPRESSIVE STRENGTHS & CLASS OF EXPOSURE:
- | | | |
|--|---------------------------|-----------|
| • UNSHRINKABLE CONCRETE FILL | f _{cr} = 7 MPa | CLASS N |
| • MUD SLABS / LEAN CONCRETE | f _{cr} = 0.5 MPa | CLASS N |
| • HOUSEKEEPING PADS | f _{cr} = 25 MPa | CLASS N |
| • FOOTINGS, INTERIOR PIERS, INTERIOR FOUNDATION WALLS: | f _{cr} = 35 MPa | CLASS N |
| • EXTERIOR FOUNDATION WALLS & PIERS: | f _{cr} = 35 MPa | CLASS F-2 |
| • SIDEWALKS AND CURBS | f _{cr} = 35 MPa | CLASS C-1 |
| • INTERIOR SLABS-ON-GRADE: | f _{cr} = 35 MPa | CLASS N |
19. CONTRACTOR TO NOTIFY CONSULTANT PRIOR TO CONCRETE PLACEMENT IN ACCORDANCE WITH CONTRACTORS QUALITY PLAN.
20. DOWELS, ANCHOR BOLTS, EMBEDDED PLATES, ETC., ARE TO BE IN PLACE AND ACCURATELY LOCATED PRIOR TO CASTING CONCRETE.
21. PREVIOUSLY PLACED CONCRETE AT CONSTRUCTION JOINTS OR WHERE NEW CONCRETE IS BEING PLACED AGAINST EXISTING TO BE WIRE BRUSHED, CLEANED AND MOISTENED IMMEDIATELY PRIOR TO PLACING FRESH CONCRETE. INTENTIONALLY ROUGHEN CONCRETE AT CONSTRUCTION JOINTS TO 5mm AMPLITUDE TO EXPOSE AGGREGATES AND PROVIDE INTERLOCK BETWEEN CONCRETE PLACEMENTS.
22. FORMWORK FOR CONCRETE TO CAN/CSA S269.1 - LATEST EDITION. DESIGN, FABRICATION, INSPECTION AND DISMANTLING OF FORMWORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL FORMWORK SHALL BE LEFT IN PLACE UNTIL THE CONCRETE HAS SUFFICIENT STRENGTH TO SUPPORT THE SELF WEIGHT OF THE CAST MEMBERS AND CONSTRUCTION LOADS.
23. ALL TEMPORARY STRUCTURAL SUPPORTS FOR CONCRETE FORMWORK TO BE DESIGNED AND INSPECTED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF ONTARIO.
24. A SMOOTH-FORM FINISH WILL BE REQUIRED FOR ALL SURFACES EXPOSED TO VIEW IN THE FINISHED STRUCTURE.
25. ALL EXPOSED CONCRETE EDGES TO HAVE FORMED 25mm CHAMFER UNLESS NOTED OTHERWISE.
26. CURE ALL CONCRETE IN ACCORDANCE WITH THE REQUIREMENTS OF CSA A23.1.
27. REMOVE ALL DEFECTIVE AND HONEYCOMBED CONCRETE DOWN TO SOUND CONCRETE TO CONSULTANT'S SATISFACTION. SUBMIT REPAIR PROCEDURE FOR REVIEW BY CONSULTANT.
28. CONFIRM LOCATION AND SIZE OF HOUSEKEEPING PADS WITH THE MECHANICAL AND ELECTRICAL DRAWINGS. ALL EQUIPMENT SHALL BE CONSTRUCTED TO TYPICAL DETAILS UNLESS NOTED OTHERWISE.

REINFORCING

29. ALL REINFORCING STEEL TO BE NEW, DEFORMED BARS CONFORMING TO CSA G30.18 GRADE 400. PROVIDE GRADE 400W WHERE WELDABLE REINFORCING STEEL IS REQUIRED.
30. CONCRETE CLEAR COVER TO PRIMARY REINFORCING:
- | | |
|---|-------|
| • CONCRETE DEPOSITED AGAINST AND PERMANENTLY EXPOSED TO EARTH OR ROCK | 75 mm |
| • LIQUID RETAINING STRUCTURES | 60 mm |
| • CONCRETE DEPOSITED IN FORMS AND EXPOSED TO EARTH OR ROCK | 50 mm |
| • PIERS | 50 mm |
| • EXTERIOR SLAB | 50 mm |
| • INTERIOR SLAB | 30 mm |
31. DETAIL, PLACE AND PROTECT REINFORCING STEEL IN ACCORDANCE WITH CAN/CSA A23.1.
32. LAP LENGTHS AND BAR DEVELOPMENT LENGTHS TO BE IN ACCORDANCE WITH CAN/CSA A23.3. TENSION LAP SPLICES TO BE CLASS 'B'.

33. PROVIDE HOOKED ENDS OR 1' CORNER BARS AT ALL END BEAMS, HORIZONTAL WALL AND FOOTING REINFORCING. UNLESS NOTED OTHERWISE, WALL FOOTING INTERSECTIONS, AND COLUMN FOOTING INTERSECTIONS. REFER TO STANDARD DETAILS.
34. ALL REINFORCING STEEL TO BE CHAIRED AND SECURELY TIED IN PLACE USING STANDARD TIES AND CHAIRS TO THE REQUIRED COVER FOR EXPOSED CONCRETE, CHAIRS AND BOLSTERS TO BE PLASTIC TIPPED OR STAINLESS STEEL.
35. STRAIGHTENING OR REBENDING OF REINFORCING BARS IS NOT PERMITTED.
36. WELDING OF REINFORCING SHALL NOT BE PERFORMED WITH PRIOR APPROVAL OF CONSULTANT. APPROVED WELDING SHALL CONFORM TO CSA W186 AND SHALL ONLY BE PERFORMED BY WELDERS CERTIFIED BY THE CWB.
37. DRILLED IN DOWELS TO BE SET IN HILTI HIT-HY 200 ADHESIVE ANCHORAGE SYSTEM (SAFE SET). REFER TO DRAWINGS FOR EMBEDMENT DEPTHS. PROVIDE MINIMUM 10x BAR DIAMETER EMBEDMENT WHERE NOT INDICATED ON DRAWINGS.
38. SUBMIT REINFORCEMENT SHOP DRAWINGS DETAILING ALL REINFORCEMENT IN ACCORDANCE WITH RSIC MANUAL OF STANDARD PRACTICE.

MASONRY

39. MASONRY WORK TO BE PERFORMED IN ACCORDANCE WITH CSA S304.1 LATEST EDITION AND CSA A371 "MASONRY CONSTRUCTION FOR BUILDINGS".
40. CONCRETE BLOCKS TO BE TYPE H/15/A/M UNLESS NOTED OTHERWISE AND TO CONFORM TO CSA A165 - LATEST EDITION.
41. MORTAR TO BE TYPE S, MIXED TO PROPORTION SPECIFICATIONS TO CSA A179-04.
42. GROUT TO BE FINE, MIXED TO PROPORTION SPECIFICATIONS TO CSA A179-04.
43. FILL ALL CELLS CONTAINING VERTICAL OR HORIZONTAL REINFORCING BARS AND CAST-IN OR DRILLED-IN ANCHORS WITH GROUT.
44. PROVIDE MASONRY LINTELS AS NOTED AND AS REQUIRED IN NEW CONSTRUCTION.
45. EXTEND ALL LINTEL REINFORCING AND SOLID GROUT FILL 200mm PAST EDGE OF OPENING ON BOTH SIDES, UNLESS NOTED OTHERWISE.
46. MASONRY CONTRACTOR TO BE RESPONSIBLE FOR SUPPLYING AND ERECTING ALL TEMPORARY WORKS AND SUPPORTS REQUIRED TO COMPLETE MASONRY WORK. MAINTAIN BRACING UNTIL GROUT/CONCRETE HAS ACHIEVED SPECIFIED STRENGTH INDICATED ON DRAWINGS.
47. REINFORCE MASONRY INFILL WITH A MINIMUM OF EXTRA HEAVY DUTY LADDER TYPE HOT-DIPPED GALVANIZED HORIZONTAL REINFORCEMENT AT 400 crs. (IN EVERY 2ND COURSE).

STRUCTURAL STEEL

48. STRUCTURAL STEEL DESIGN IN ACCORDANCE WITH CAN/CSA S16-09 - LIMIT STATES DESIGN OF STEEL STRUCTURES AND THE CANADIAN INSTITUTE OF STEEL CONSTRUCTION HANDBOOK OF STEEL.
49. ALL STRUCTURAL STEEL CONSTRUCTION AND MISCELLANEOUS METALS TO CONFORM TO:
- HOT ROLLED STRUCTURAL SECTIONS AND BARS TO: CAN/CSA-G40.20/G40.21 GRADE 350W
 - ANGLES AND PLATES TO: CAN/CSA-G40.20/G40.21 GRADE 300W
 - HOLLOW STRUCTURAL SECTIONS (HSS) TO: CAN/CSA-G40.20/G40.21 GRADE 350W, CLASS H
50. BOLTS IN STRUCTURAL STEEL CONNECTIONS TO A325 WITH SUITABLE NUTS AND WASHERS.
51. ANCHOR BOLTS TO ASTM F1554 GRADE 36 WITH HEADED STUD OR NUTS AND WASHERS. "J" BOLTS ARE NOT ACCEPTABLE.
52. STRUCTURAL STEEL CONNECTIONS TO BE DESIGNED BY STEEL FABRICATOR. PROVIDE A MINIMUM OF TWO A325 BOLTS PER BOLTED CONNECTION.
53. STRUCTURAL STEEL SHOP DRAWINGS TO BE SEALED AND SIGNED BY A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF ONTARIO IN THE EMPLOY OF THE STEEL FABRICATOR.
54. SHOP AND SITE INSPECTIONS TO ENSURE CONFORMANCE WITH THE PROJECT SPECIFICATIONS WILL BE CONDUCTED BY TESTING COMPANY APPOINTED BY THE CONTRACTOR.
55. THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY SHORING, BRACING AND SUPPORTS TO ADEQUATELY MAINTAIN THE PARTIALLY ERECTED STEEL IN PLACE DURING THE WORK. SUBMIT ERECTION DRAWINGS STAMPED AND SIGNED BY A QUALIFIED PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO INDICATING SEQUENCE OF ERECTION, ALL BRACING, AND LOADS.
56. ALL WELDING TO BE DONE BY QUALIFIED WELDERS FULLY APPROVED FOR STRUCTURAL WELDING BY THE CANADIAN WELDING BUREAU IN ACCORDANCE WITH CSA SPECIFICATION W47.1 - LATEST EDITION.
57. WELDING IN ACCORDANCE WITH CSA W59. ELECTRODES TO BE E49XX.
58. ALL WELDS TO BE CONTINUOUS UNLESS NOTED OTHERWISE. THE MINIMUM FILLET WELD UNLESS NOTED OTHERWISE IS 6mm.
59. IF EXISTING METAL DECK IS DAMAGED DURING DEMOLITION, CONTRACTOR TO PROVIDE PROPOSED REPAIR DETAIL TO BE SUBMITTED TO CONSULTANT FOR REVIEW PRIOR TO IMPLEMENTATION.

ARCHITECTURALLY EXPOSED STRUCTURAL STEEL

60. STRUCTURAL STEEL ELEMENTS OR CONNECTIONS INDICATED ON DRAWINGS TO BE ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS), ARE TO BE DETAILED, FABRICATED, INSTALLED AND FINISHED IN CONFORMANCE WITH EITHER THE REQUIREMENTS OF CISC-AESS CATEGORY 2 or 3 FEATURE ELEMENTS AS INDICATED ON THE DRAWINGS.
61. PRIOR TO BLAST CLEANING, ANY DEPOSITS OF GREASE OR OIL ARE TO BE REMOVED BY SOLVENT CLEANING IN ACCORDANCE WITH SSPC-SP 1.
62. ROUGH SURFACES ARE TO BE DEBURRED AND GROUND SMOOTH. SHARP EDGES RESULTING FROM FLAME CUTTING, GRINDING AND SHEARING ARE TO BE SOFTENED.
63. INTERMITTENT WELDS ARE TO BE MADE CONTINUOUS, EITHER WITH ADDITIONAL WELDING, CAULKING OR BODY FILLER. SEAMS OF HOLLOW STRUCTURAL SECTIONS SHALL BE ACCEPTABLE AS PRODUCED.
64. ALL BOLT HEADS IN CONNECTIONS SHALL BE ON THE SAME SIDE, AS SPECIFIED, AND CONSISTENT FROM ONE CONNECTION TO ANOTHER.
65. WELD SPLATTER, SLIVERS AND SURFACE DISCONTINUITIES ARE TO BE REMOVED. WELD PROJECTIONS UP TO 2 mm ARE ACCEPTABLE FOR BUT AND PLUG WELDED JOINTS.
66. MEMBERS MARKED WITH SPECIFIC NUMBERS DURING THE FABRICATION AND ERECTION PROCESSES ARE NOT TO BE VISIBLE.
67. ALL MILL MARKS ARE NOT TO BE VISIBLE IN THE FINISHED PRODUCT.
68. THE MATCHING OF ABUTTING CROSS-SECTIONS SHALL BE REQUIRED.
69. A CLEAR DISTANCE BETWEEN ABUTTING MEMBERS OF 3 mm IS REQUIRED.
70. HIDDEN BOLTS MAY BE CONSIDERED.

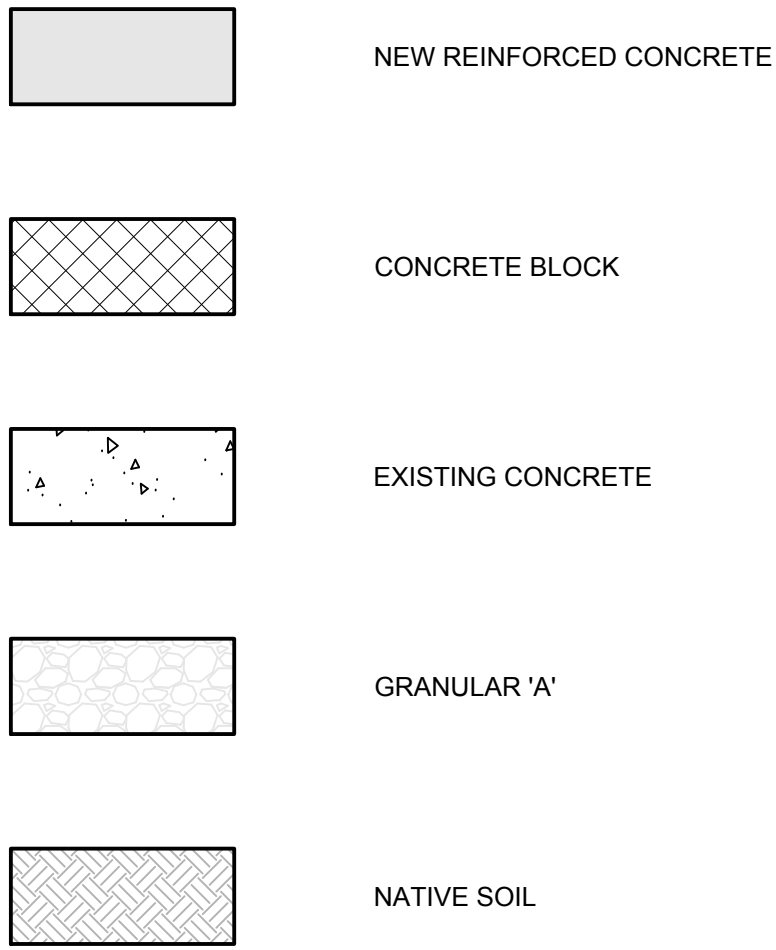
STRUCTURAL METAL STUD FRAMING

71. MATERIAL FOR COLD FORMED STEEL STUDS, BRACING, BRIDGING CHANNELS, AND CLIPS, ETC., SHALL MEET THE REQUIREMENTS OF CAN/CSA-S136-12.
72. DESIGN AND DETAIL MEMBERS AND CONNECTIONS IN ACCORDANCE WITH REQUIREMENTS OF CAN/CSA S136-16. SUBMIT SHOP SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF ONTARIO IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
73. ALL STUD TRACKS ARE TO BE SAME GAUGE AS STUDS, WITH A WIDTH TO MATCH STUD AND STANDARD LEGS, UNLESS NOTED OTHERWISE.
74. FASTENERS FROM STUDS OR TRACKS:
- TO STRUCTURAL STEEL: POWDER ACTUATED PINS (HILTI X-S13) 12.7 mm LONG @ 400 crs UNLESS INDICATED OTHERWISE.
 - TO CONCRETE: UNLESS INDICATED OTHERWISE PROVIDE POWDER ACTUATED PINS (HILTI XC) WITH MINIMUM EMBEDMENT OF 30 mm (1 1/4") INTO CONCRETE @ 400 crs. MINIMUM EDGE DISTANCE FOR PINS TO CONCRETE TO BE 3".
75. STEEL STUDS SHALL NOT BE NOTCHED UNLESS DETAIL IS PROVIDED.
76. TENSION STRAPS AND ACCESSORIES IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
77. METAL STUD WORK TO BE DONE IN ACCORDANCE WITH CSSBI S5, CSSBI S6 AND MANUFACTURERS SPECIFICATIONS.
78. ERECT METAL STUDS IN ACCORDANCE WITH NOTED CONTRACT DRAWINGS AND APPROVED SHOP DRAWINGS.
79. ERECT STUDS PLUMB, ALIGNED AND SECURED WITH (2) SCREWS MINIMUM.

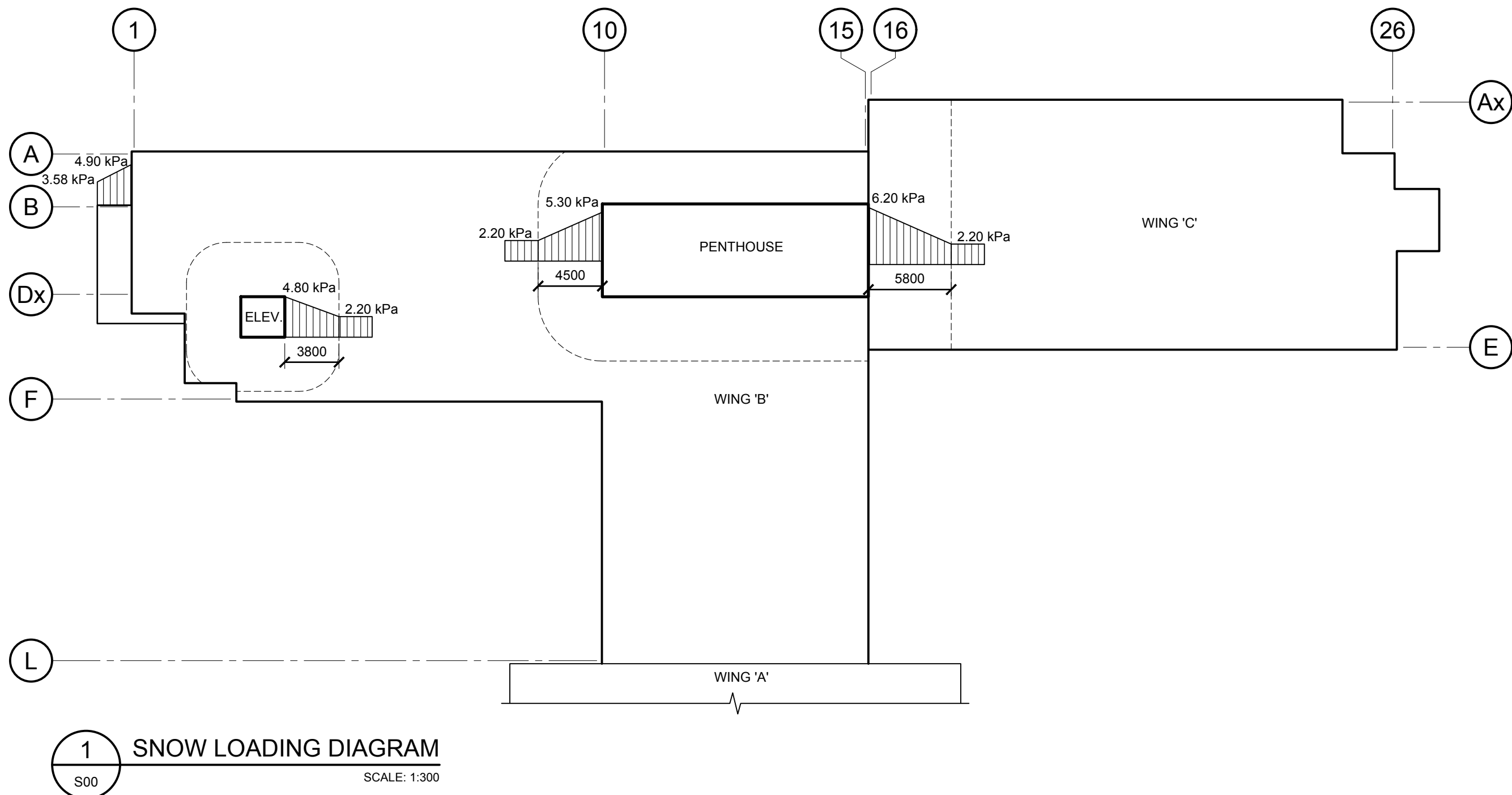
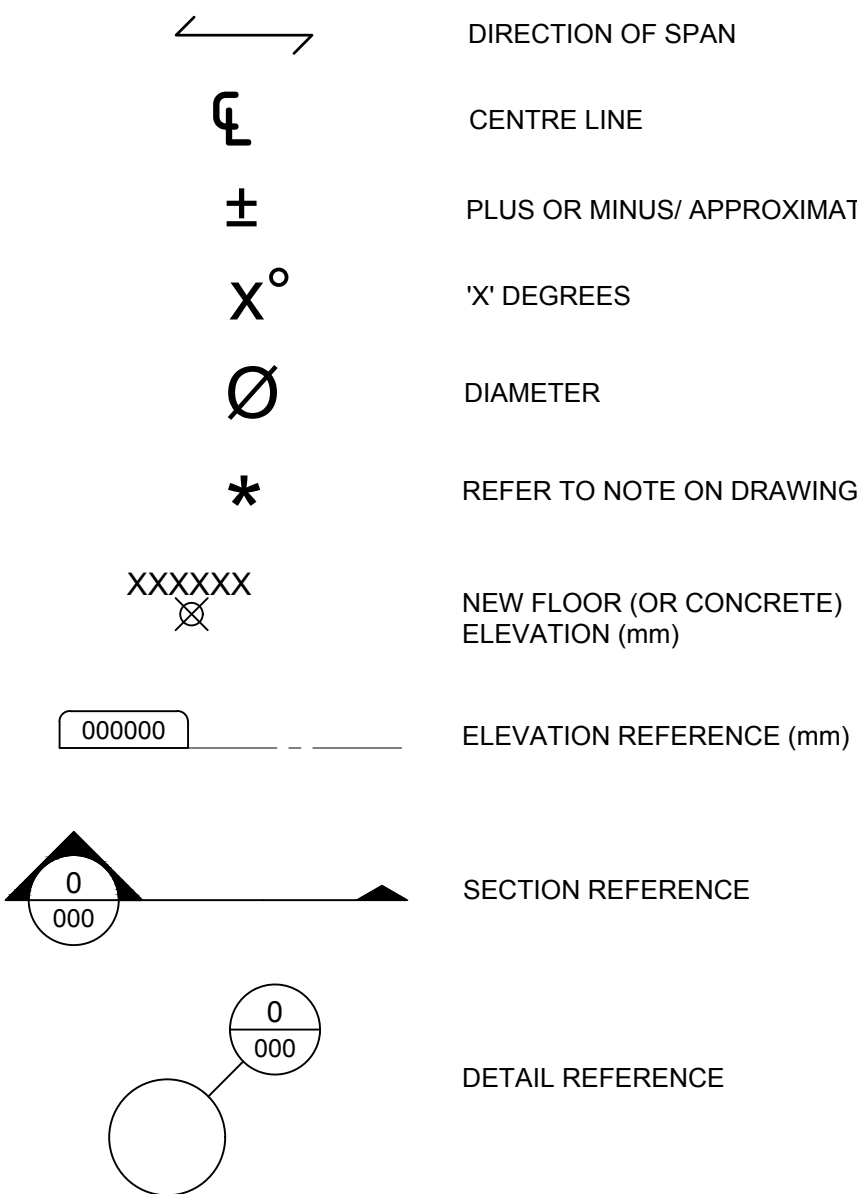
GEOTECHNICAL NOTES

80. REFER TO GEOTECHNICAL REPORT, BY CHUNG & VANDER DOELEN, NUMBER M181172 FOR FOOTING AND SUBGRADE INSPECTION AND RECOMMENDATIONS, DATED JULY 7, 2018.
81. THE STABILITY OF EXPOSED EXISTING FOOTING SOILS IS TO BE ASSESSED BY GEOTECHNICAL CONSULTANT DURING EXCAVATION AND CONSTRUCTION FOR ADEQUATE UNDERPINNING PRACTICES.
82. UNDERPINNING AT NEW ELEVATOR LOCATION TO BE COMPLETED IN STAGGERED 1.0m SECTIONS (FOUR (4) SECTIONS PER DAY ANTICIPATED SUBJECT TO CONFIRMATION BY CONTRACTOR RELATIVE TO PLANNED SEQUENCE OF WORK). GEOTECHNICAL CONSULTANT TO BE PRESENT.

LEGEND TO STRUCTURAL MATERIALS



SYMBOLS



ABBREVIATIONS

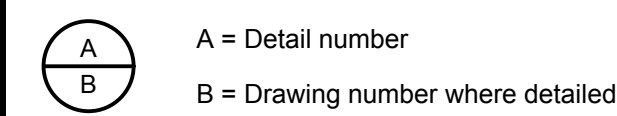
@	AT	N/A	NOT APPLICABLE
ADD'L	ADDITIONAL	NF	NEAR FACE
AFF	ABOVE FINISHED FLOOR	NIC	NOT IN CONTRACT
		NLB	NON LOAD BEARING
		NTS	NOT TO SCALE
BEW	BOTTOM EACH WAY	OD	OUTSIDE DIAMETER
BLK	BLOCK (CONCRETE)	OF	OUTSIDE FACE
BLDG	BUILDING	O/H	OVER HEAD
BOT	BOTTOM	OWSJ	OPEN WEB STEEL JOIST
BUL	BOTTOM UPPER LAYER		
Cf	FACTORED COMPRESSIVE FORCE	PL	PLATE
CL or f	CENTRE LINE	PROJ	PROJECTION
CANT	CANTILEVER	PT	PAINT/PAINTED
COL	COLUMN		
CONC	CONCRETE	RD	ROOF DRAIN
CONT.	CONTINUOUS	REINF	REINFORCING / REINFORCE
crs.	CENTRE TO CENTRE	REQ'D	REQUIRED
c/w	COMPLETE WITH	REV	REVISION or REVISED
		RF	FACTORED VERTICAL REACTION
DIAG	DIAGONAL	RO	ROUGH OPENING
DIA or Ø	DIAMETER	r/w	REINFORCED WITH
DWG(S)	DRAWING(S)		
		S/A	SELF ADHESIVE
EA	EACH	SCH	SCHEDULE
EF	EACH FACE	SDL	SUPERIMPOSED DEAD LOAD
ELEC	ELECTRICAL	SECT	SECTION
EL	ELEVATION	SPMOD	STANDARD PROCTOR MAXIMUM
EQ	EQUAL		DRY DENSITY
EW	EACH WAY	SS	STAINLESS STEEL
EX	EXISTING	STD	STANDARD
EXT	EXTERIOR	SQ	SQUARE
		FDN	TOP & BOTTOM
FF	FAR FACE	TF	FACTORED TENSION FORCE
FIN	FINISHED	TJ	TIE JOIST
FTG	FOOTING	TLL	TOP LOWER LAYER
		TO	TOP OF
GA	GAUGE	TOC	TOP OF CONCRETE
		TOS	TOP OF STEEL / TOP OF SLAB
HD	HEAVY DUTY	TRANS	TRANSVERSE
HG	HOT DIPPED GALVANIZED	TUL	TOP UPPER LAYER
HKP	HOUSE KEEPING PAD	TYP	TYPICAL
HORIZ	HORIZONTAL		
HP	HIGH POINT	UNO	UNLESS NOTED OTHERWISE
		u/s	UNDERSIDE
ID	INSIDE DIAMETER		
IF	INSIDE FACE	VCJ	VERTICAL CONTROL JOINT
INSUL	INSULATED	VERT	VERTICAL
INT	INTERIOR	VF	FACTORED VERTICAL SHEAR
		WP	WATERPROOF, WEATHERPROOF
LB	LOAD BEARING	WWF	WELDED WIDE FLANGE
LL	LIVE LOAD	WWM	WELDED WIRE MESH
LLV	LONG LEG VERTICAL		
LLH	LONG LEG HORIZONTAL		
LP	LOW POINT		
		MAX	MAXIMUM
MECH	MECHANICAL	MI	MIDDLE
		MID	MINIMUM
MIN	MINIMUM	MISC	MISCELLANEOUS

DO NOT SCALE DRAWINGS:

Contractors must check and verify all site conditions. Notify the Owner's Representative in writing before proceeding with the work if discrepancies are evident between the drawings and the site condition. No extras to the contract will be allowed if discrepancies were evident prior to start of work.

UNEXPECTED DISCOVERY OF ASBESTOS:

Where a friable material is discovered during construction, renovations and/or demolition, and it is suspected to contain asbestos, the Contractor must stop all work that may disturb the material. The Contractor shall advise the Owner of the discovery and await instructions from the owner.



1	ISSUED FOR CONVENIENCE	TA	APR 12, 2019
0	ISSUED FOR PERMIT & TENDER	TA	NOV 2, 2018
NO	ISSUED	BY	DATE

Orientation	
Seal	Seal

UNIVERSITY of GUELPH

Design, Engineering & Construction

Physical Resources

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Consultant www.jrichards.ca



Project BUILDING #046 RENOVATIONS

Drawing Title STRUCTURAL GENERAL NOTES

Project No. 504034

Location UNIVERSITY OF GUELPH BUILDING #46

Scale AS NOTED	Date APR 12, 2019
Drawn by BCW	Drawing No. S00
Checked By LS	
Approved By DAY/JRE	
JLR # 27915	
Cad File No. ----	

PIER SCHEDULE			
MARK	SIZE	REINFORCING	TOC ELEV
P1	400 x 400	(8) 15M VERTICAL & 10M TIES @ 200 CRS	328.717
P2	500 x 500	(8) 15M VERTICAL & 10M TIES @ 200 CRS	327.756
P3	550 x 400	(6) 15M VERTICAL & 10M U-BARS @ 200 CRS	327.470

NOTE:
1. REFER TO S30 FOR PIER PLAN DETAILS.

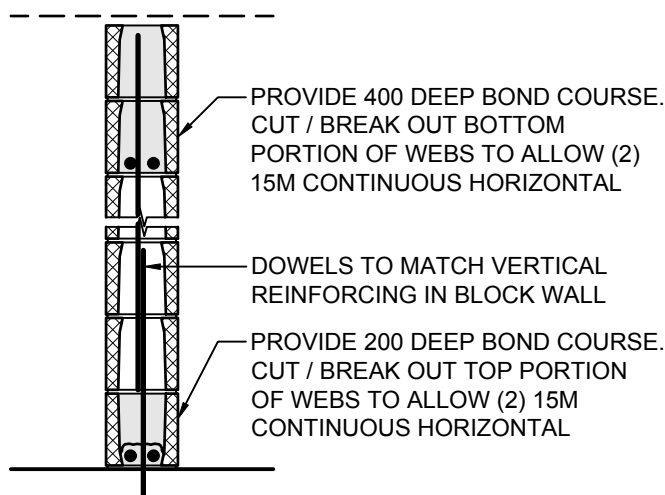
COLUMN SCHEDULE				
MARK	SIZE	BASE PLATE TYPE	U/S BASE PLATE ELEV	REMARKS
xC1	W200x46	EXISTING	EXISTING	-
xC2	W150x37	EXISTING	EXISTING	-
xC3	W150x22	EXISTING	EXISTING	-
xC4	W150x22	BP2	328.742	SEE NOTES 3 & 4
C5	W200x27	BP4	327.450	-
C6	W150x22	BP6	330.724	-
C7	W150x22	BP5	330.845	-
C8	HSS152x152x8.0	BP3	327.736	SEE NOTE 4
C9	HSS152x152x8.0	BP1	328.742	SEE NOTE 4
C10	HSS152x152x9.5	BP1	327.370	-
C11	HSS76x76x6.4	---	---	SEE S21 FOR DETAILS

NOTES:
1. REFER TO S30 FOR BASE PLATE DETAILS.
2. TOP OF COLUMN ELEVATIONS AS NOTED ON PLAN UNLESS NOTED (-XXX).
3. EXISTING COLUMN TO BE CUT. PROVIDE BASE PLATE AT ELEVATION NOTED. REFER TO S20 FOR DETAILS.
4. ARCHITECTURALLY EXPOSED STRUCTURAL SECTION (AESS), AS NOTED ON PLAN. REFER TO GENERAL NOTES AND SPECIFICATIONS FOR INFORMATION.

LINTEL SCHEDULE			
MARK	SIZE	TYPE	DETAIL
xL	EXISTING		-
L1	(2) L152x102x13 LLV		1 / S01
L2	(2) L127x89x7.9 LLV		2 / S01
L3	200 DEEP BLOCK BOND BEAM	-	3 / S01
L4	400 DEEP BLOCK BOND BEAM	-	4 / S01
L5	AS PER DETAIL		5 / S01

CONCRETE BLOCK WALL SCHEDULE				
MARK	SIZE	VERTICAL REINFORCING	HORIZONTAL REINFORCING	REMARKS
xW1	245 BLOCK	EXISTING	EXISTING	-
xW2	190 BLOCK	EXISTING	EXISTING	-
xW3	140 BLOCK	EXISTING	EXISTING	-
xW4	200 CONC.	EXISTING	EXISTING	-
xW5	150 CONC.	EXISTING	EXISTING	-
W6	245 BLOCK	SEE NOTE 2.	SEE NOTE 2.	SEE NOTE 1.
W7	245 BLOCK	-	SEE NOTE 2.	INFILL EX. OPENING
W8	190 BLOCK	-	SEE NOTE 2.	INFILL EX. OPENING

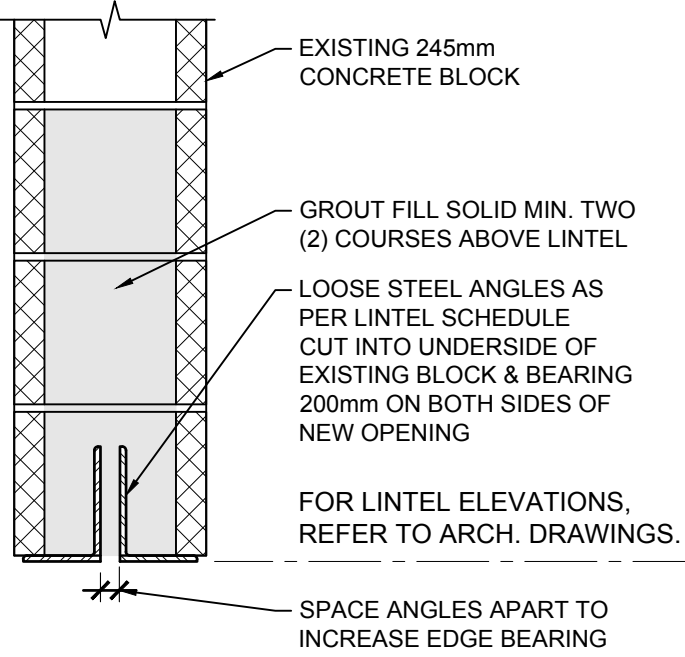
NOTES:
1. WALLS TO EXTEND TO U/S ROOF DECK OR STRUCTURE.
2. REFER TO DETAIL 12 FOR BLOCK REINFORCING AND BOND COURSING DETAILS.



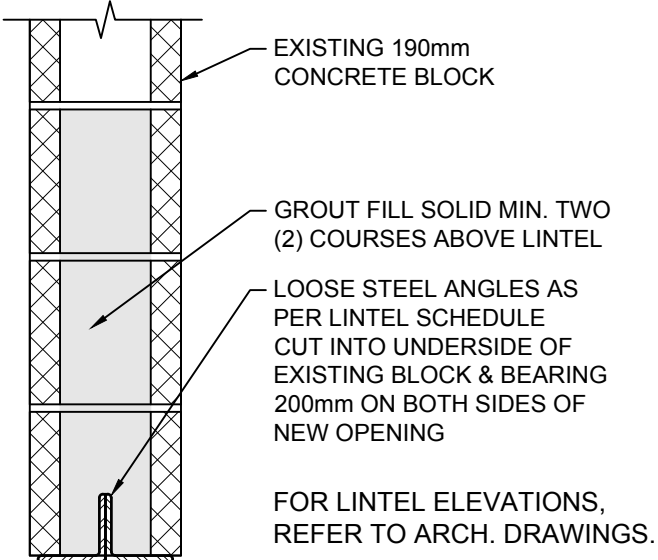
CONCRETE BLOCK REINFORCING SCHEDULE		
SIZE	VERTICAL REINFORCING	HORIZONTAL REINFORCING
140 NON-LOAD BEARING	15M @ 600 CRS. PROVIDE (1) 15M AT END CORES AND ON EACH SIDE OF OPENINGS	HEAVY DUTY LADDER TYPE @ 400 CRS.
190 NON-LOAD BEARING	15M @ 600 CRS. PROVIDE (1) 15M AT END CORES AND ON EACH SIDE OF OPENINGS	HEAVY DUTY LADDER TYPE @ 400 CRS.
245 NON-LOAD BEARING	20M @ 400 CRS. PROVIDE (1) 20M AT END CORES AND ON EACH SIDE OF OPENINGS	EXTRA HEAVY DUTY LADDER TYPE @ 400 CRS.
245 LOAD BEARING (AT ELEVATOR SHAFT)	20M @ 400 CRS. PROVIDE (1) 20M AT END CORES AND ON EACH SIDE OF OPENINGS. GROUT CORES SOLID AT ELEVATOR GUIDE RAIL SUPPORT LOCATIONS. PROVIDE BOND BEAM AT EACH FLOOR AS PER NOTE 2.	EXTRA HEAVY DUTY LADDER TYPE @ 200 CRS. PROVIDE 400 DEEP BOND BEAMS AT BASE AND TOP OF WALL r/w (2) 15M

NOTES:
1. PROVIDE FIVE (5) REINFORCED SOLID GROUTED CORES AT EACH CORNER, FIVE (5) CORES AT TEE INTERSECTIONS AND AT LEAST TWO (2) CORES AT FREE STANDING WALL.
2. PROVIDE DOUBLE BOND BEAM COURSE AT THE TOP OF ALL WALLS AND SINGLE BOND BEAM AT THE BOTTOM OF ALL WALLS MINIMUM. PROVIDE TRIPLE BOND BEAM AT THE TOP OF THE ELEVATOR SHAFT WALLS.
3. SPLICES IN CORES WITH MORE THAN ONE BAR TO BE STAGGERED.
4. CORES CONTAINING NELSON STUDS / ANCHORED ELEMENTS ARE TO BE GROUTED SOLID.

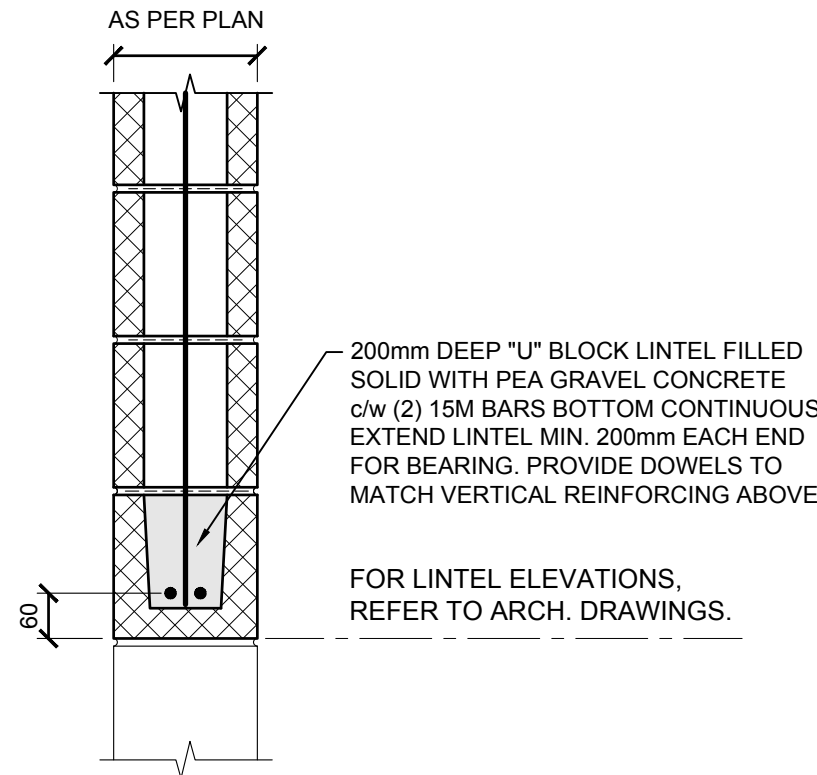
12 BLOCK REINFORCING DETAIL
SCALE: 1:20



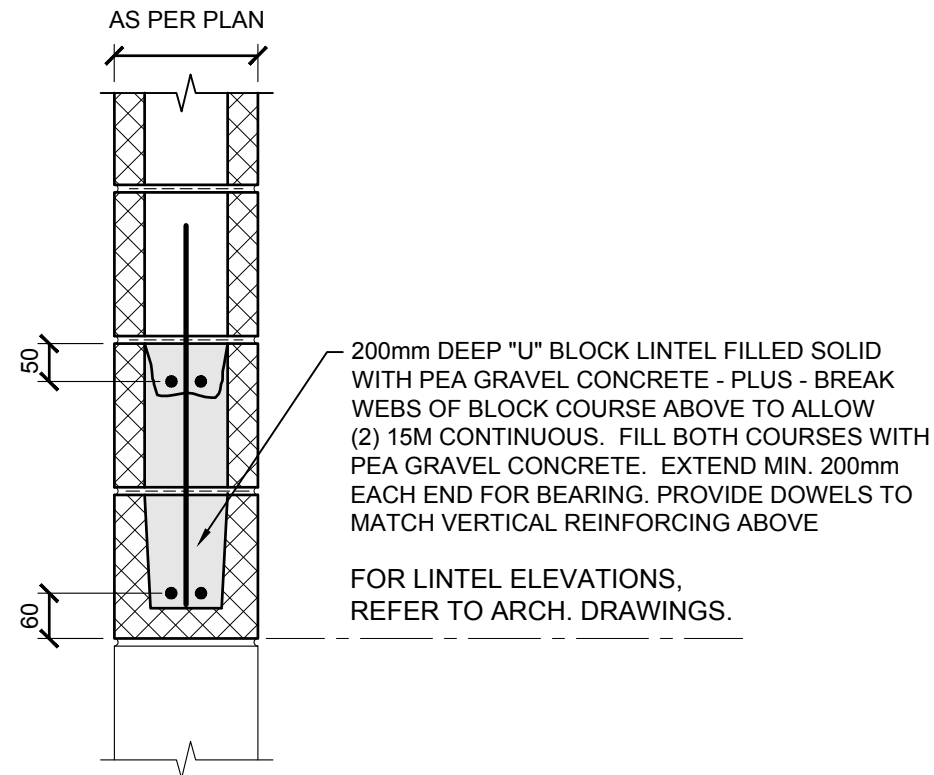
1 LINTEL 'L1' DETAIL
SCALE: 1:10



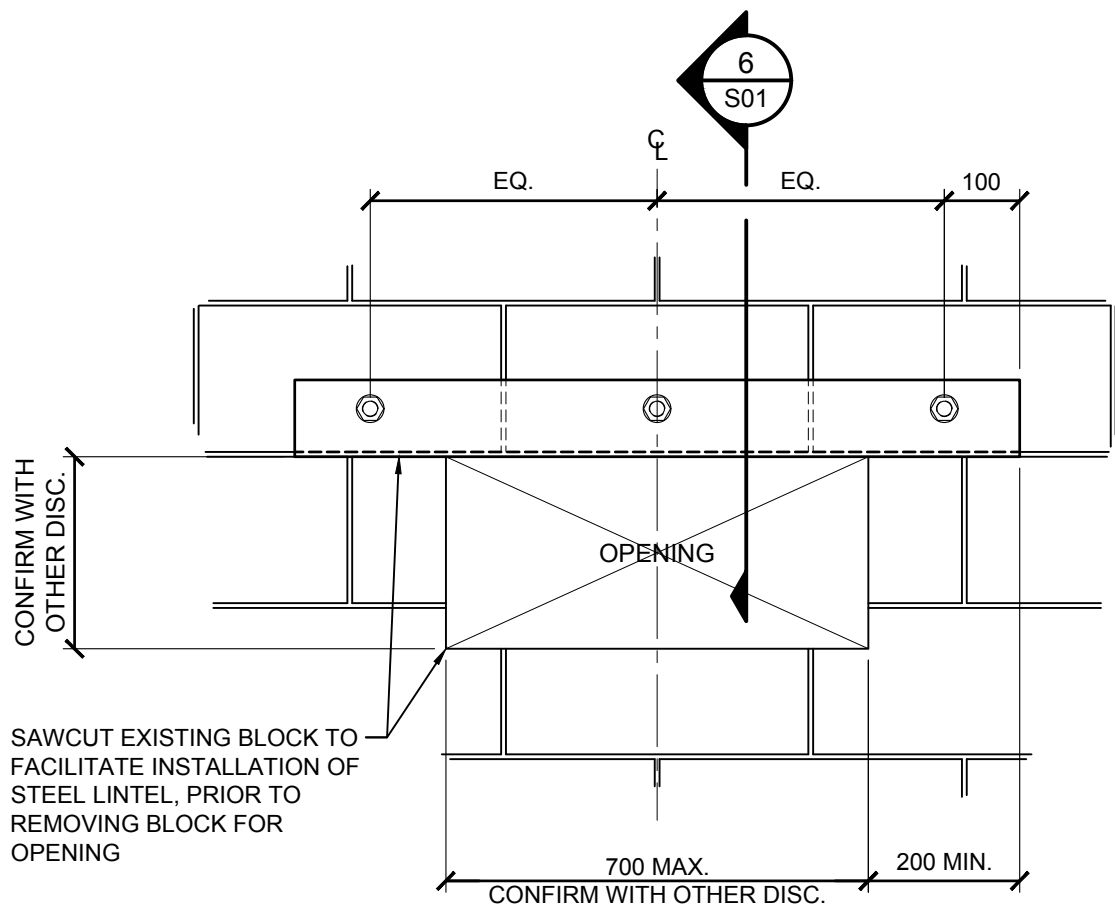
2 LINTEL 'L2' DETAIL
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3 LINTEL 'L3' DETAIL
SCALE: 1:10

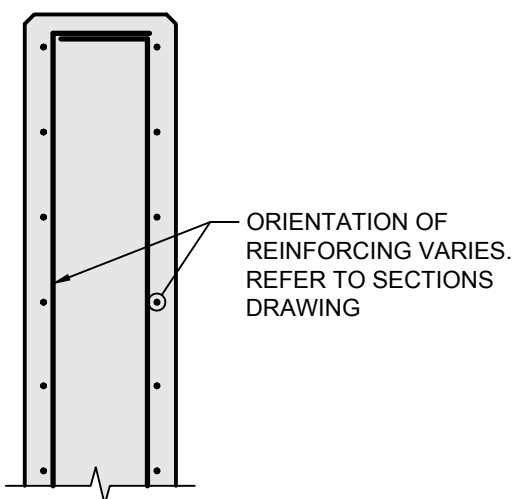


4 LINTEL 'L4' DETAIL
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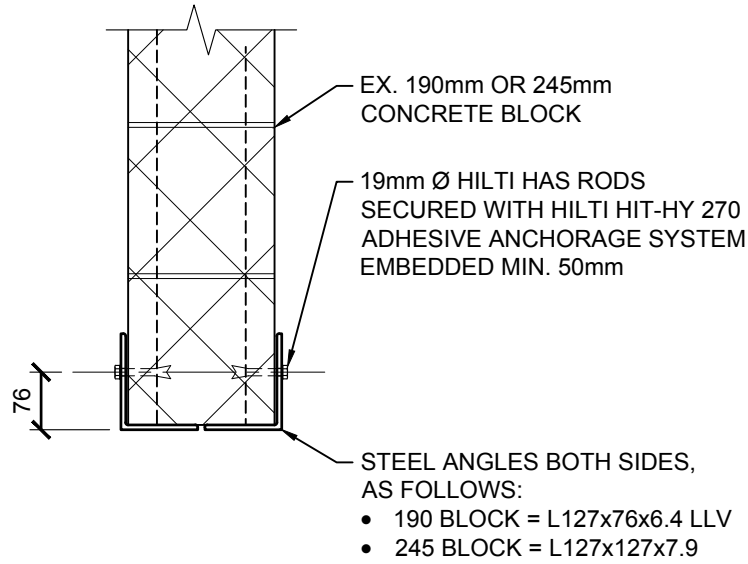


5 LINTEL 'L5' ELEVATION
SCALE: 1:10

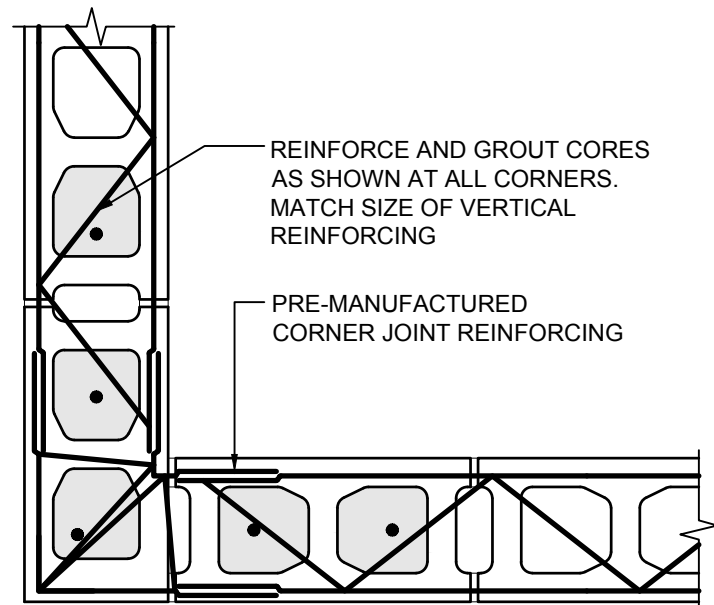
NOTE: REFER TO ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR LOCATIONS & CONFIRM ON SITE.



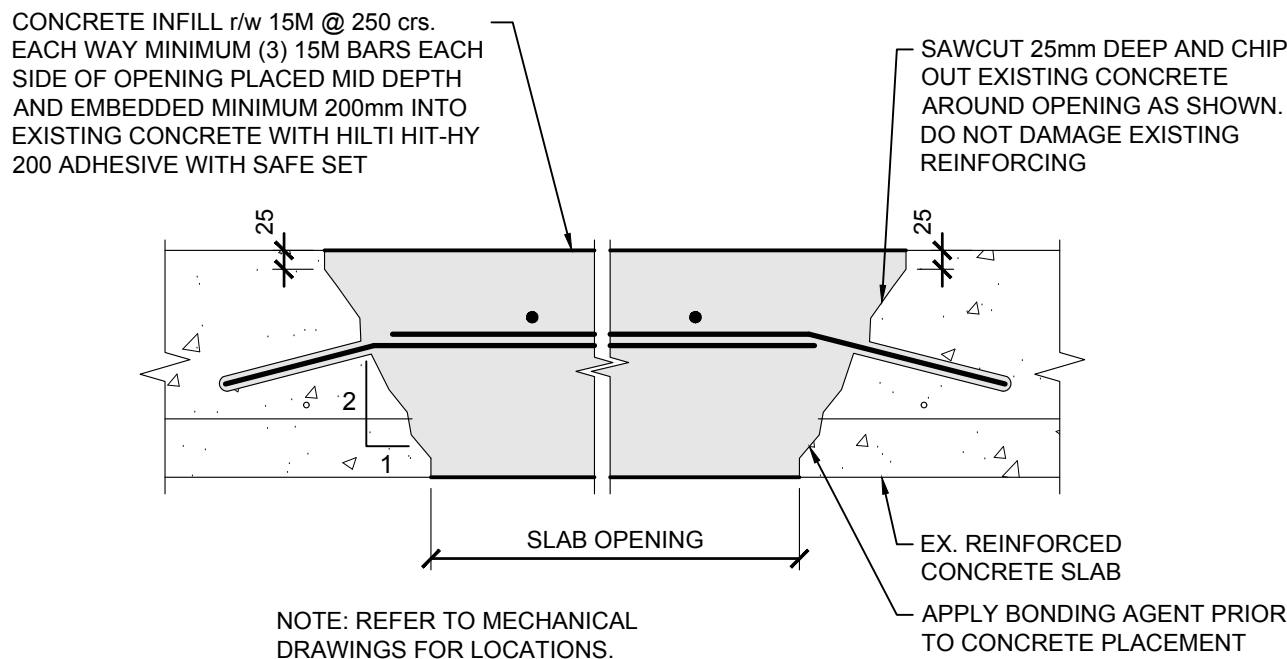
9 TYPICAL CONCRETE WALL-END REINFORCING
SCALE: 1:20



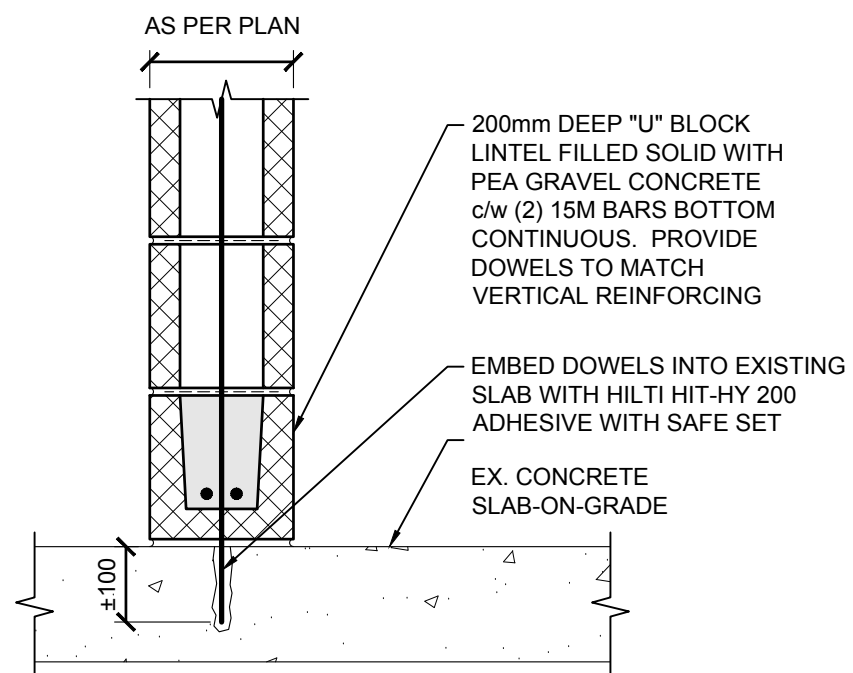
6 LINTEL 'L5' DETAIL
SCALE: 1:10



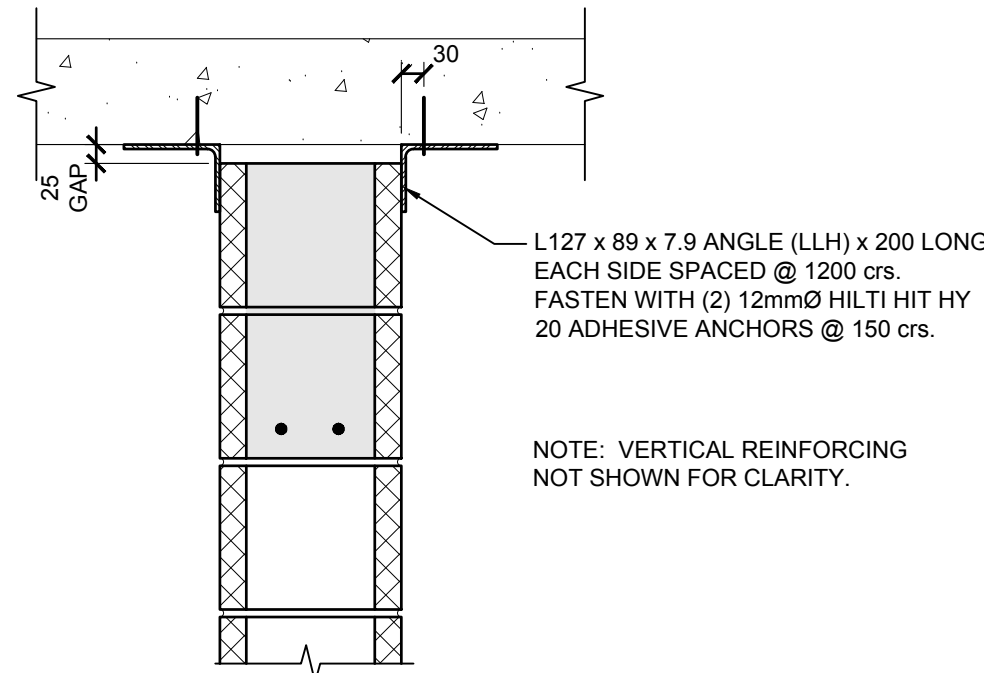
10 BLOCK WALL REINFORCING AT CORNERS
SCALE: 1:10



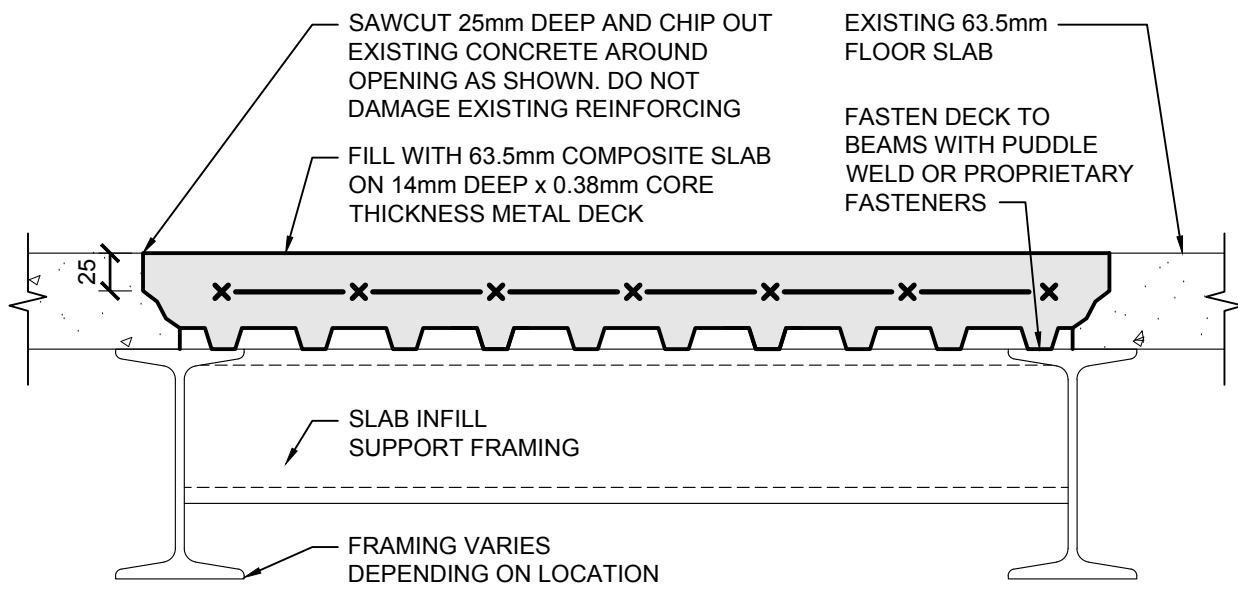
14 TYPICAL SLAB-ON-GRADE INFILL DETAIL
SCALE: 1:10



7 BLOCK WALL AT EX. SLAB DETAIL
SCALE: 1:10

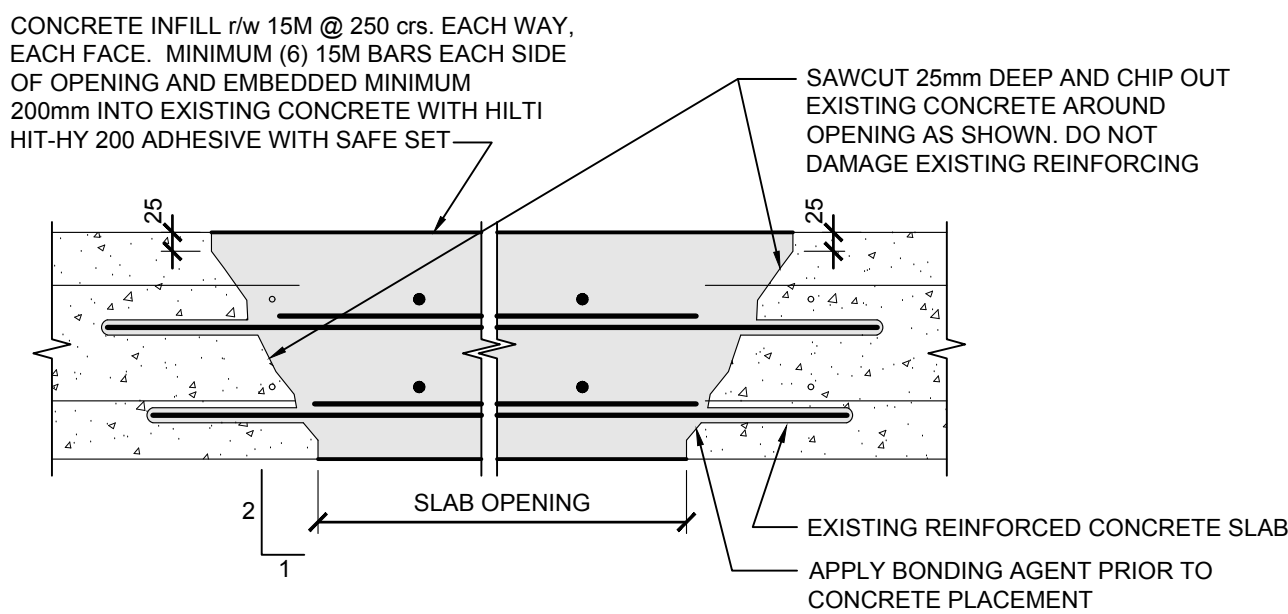


8 NON LOAD-BEARING LATERAL RESTRAINT AT UNDERSIDE OF SLAB
SCALE: 1:10



11 TYPICAL COMPOSITE SLAB INFILL DETAIL
SCALE: 1:5

NOTES:
1. METAL DECK ACCEPTABLE STANDARD: CANAM P-3012.
2. REINFORCE WITH WELDED WIRE FABRIC 152x152 MW13.3 MW13.3.
3. MESH TO BE CHAIRED ABOVE TOP FLUTE OF COMPOSITE DECK TO MAINTAIN AT MID-DEPTH OF CONCRETE THICKNESS ABOVE DECK.



15 TYPICAL SUSPENDED SLAB INFILL DETAIL
SCALE: 1:10

DO NOT SCALE DRAWINGS.

Contractors must check and verify all site conditions. Notify the Owner's Representative in writing before proceeding with the work if discrepancies are evident between the drawings and the site condition. No extras to the contract will be allowed if discrepancies were evident prior to start of work.

UNEXPECTED DISCOVERY OF ASBESTOS:

Where a friable material is discovered during construction, renovations and/or demolition, and it is suspected to contain asbestos, the Contractor must stop all work that may disturb the material. The Contractor shall advise the Owner of the discovery and await instructions from the owner.

A = Detail number
B = Drawing number where detailed

1	ISSUED FOR CONVENIENCE	TA	APR 12, 2019
0	ISSUED FOR PERMIT & TENDER	TA	NOV 2, 2018
NO.	ISSUED	BY	DATE

Orientation

Seal

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Design, Engineering & Construction
Physical Resources
Guelph, Ontario. N1G 2W1

Consultant www.jrichards.ca

J.L.Richards
ENGINEERS - ARCHITECTS - PLANNERS

Project
BUILDING #046 RENOVATIONS

Drawing Title
STRUCTURAL SCHEDULES AND STANDARD DETAILS

Project No.
504034

Location
UNIVERSITY OF GUELPH BUILDING #46

Scale
AS NOTED

Date
APR 12, 2019

Drawn by
BCW

Drawing No.

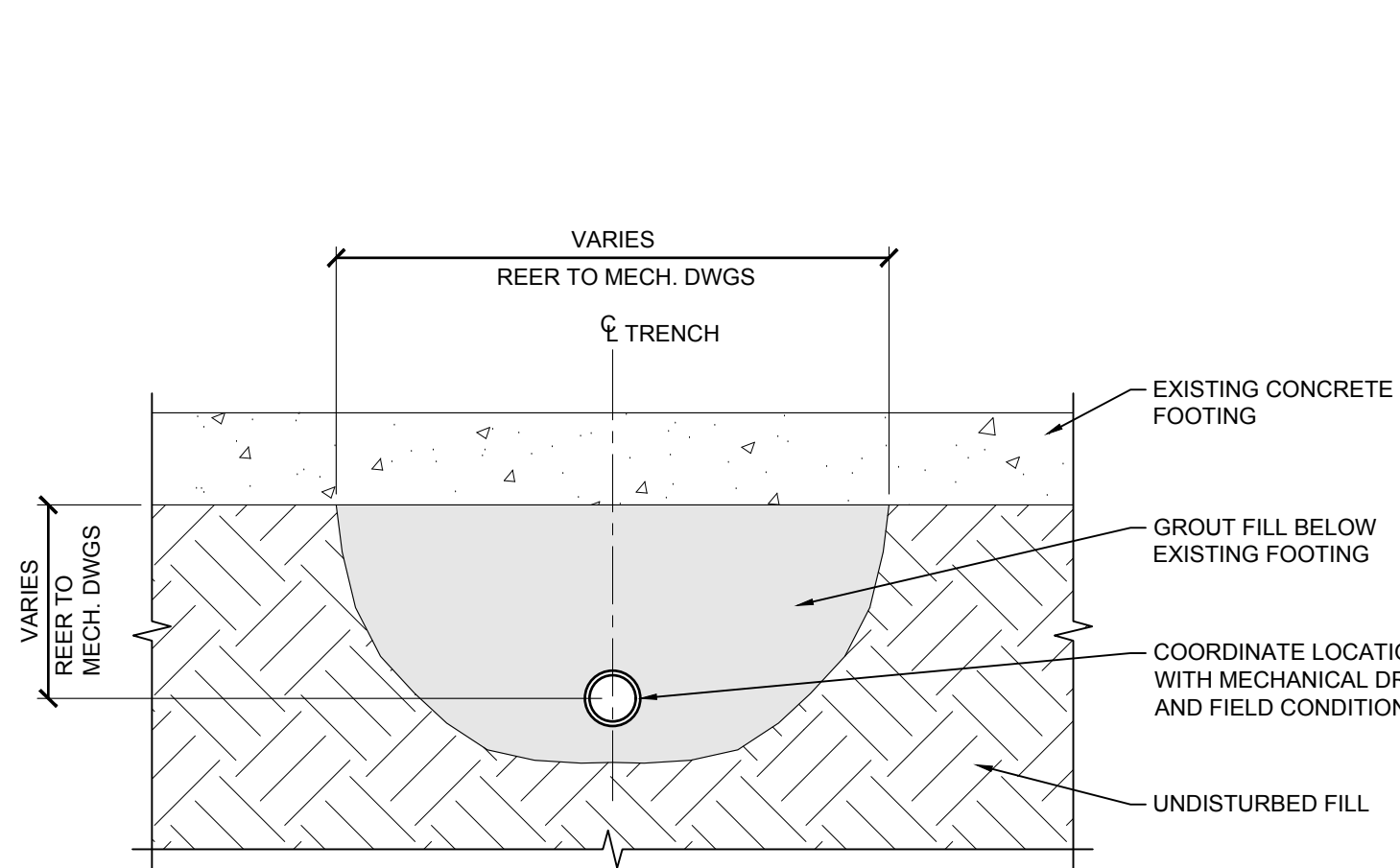
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Approved By
DAY/JRE

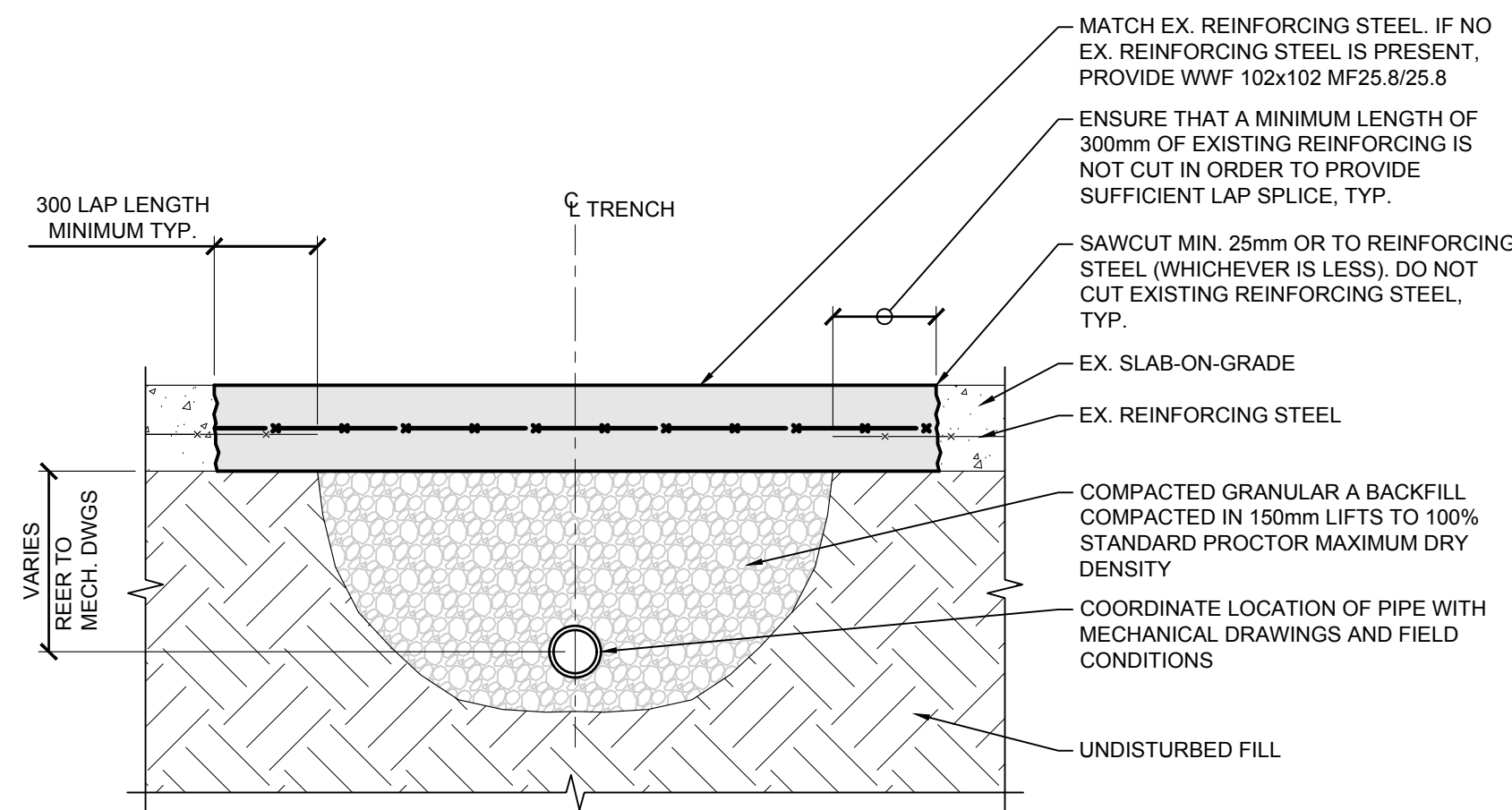
JLR #
27915

S01

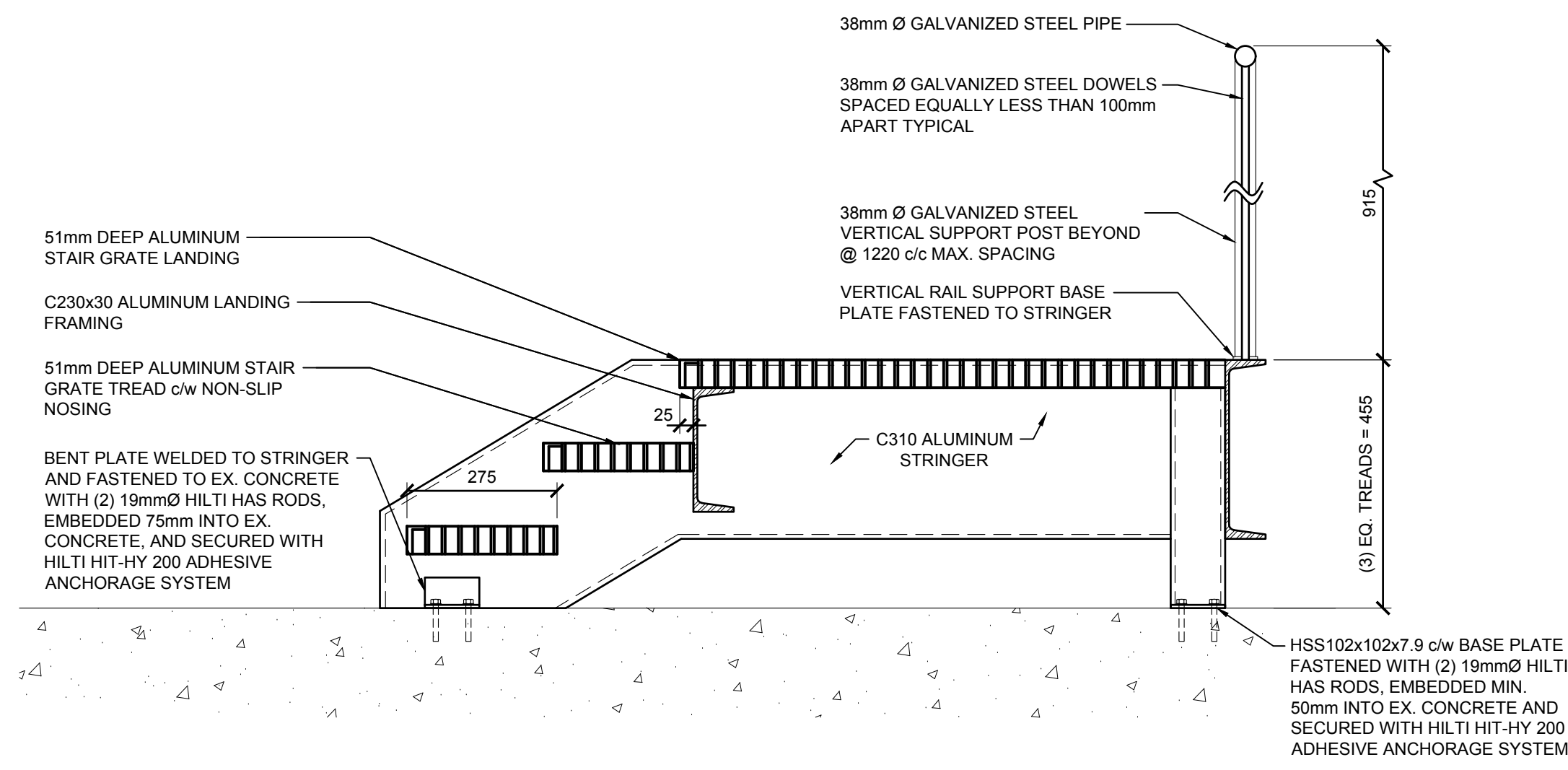
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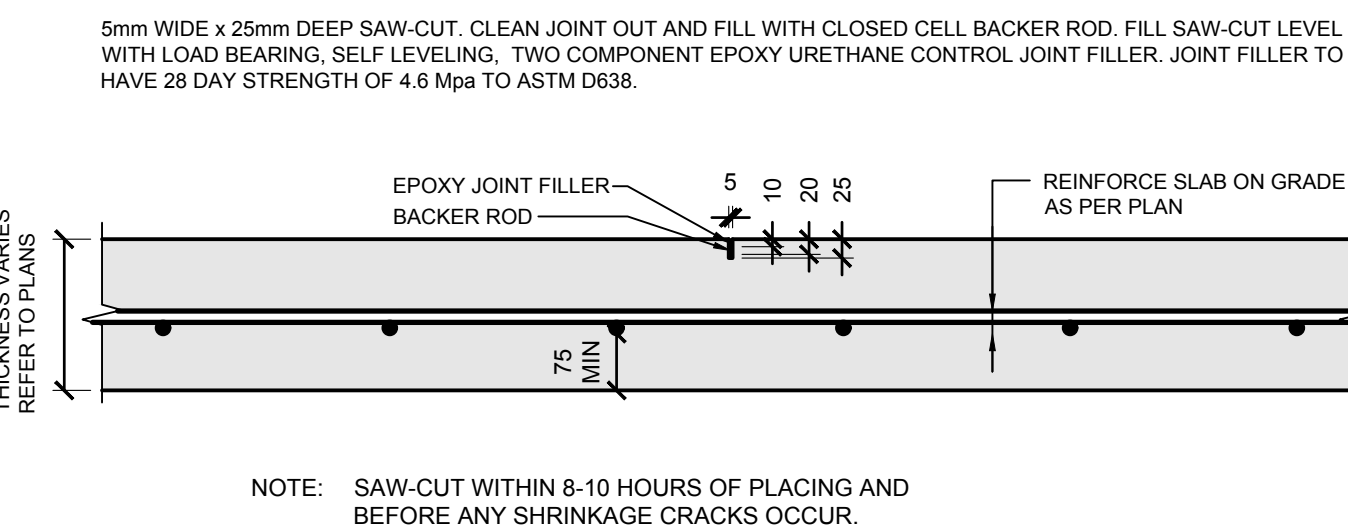
1 TRENCH DETAIL BELOW EXISTING FOOTING
S02 SCALE: 1:10



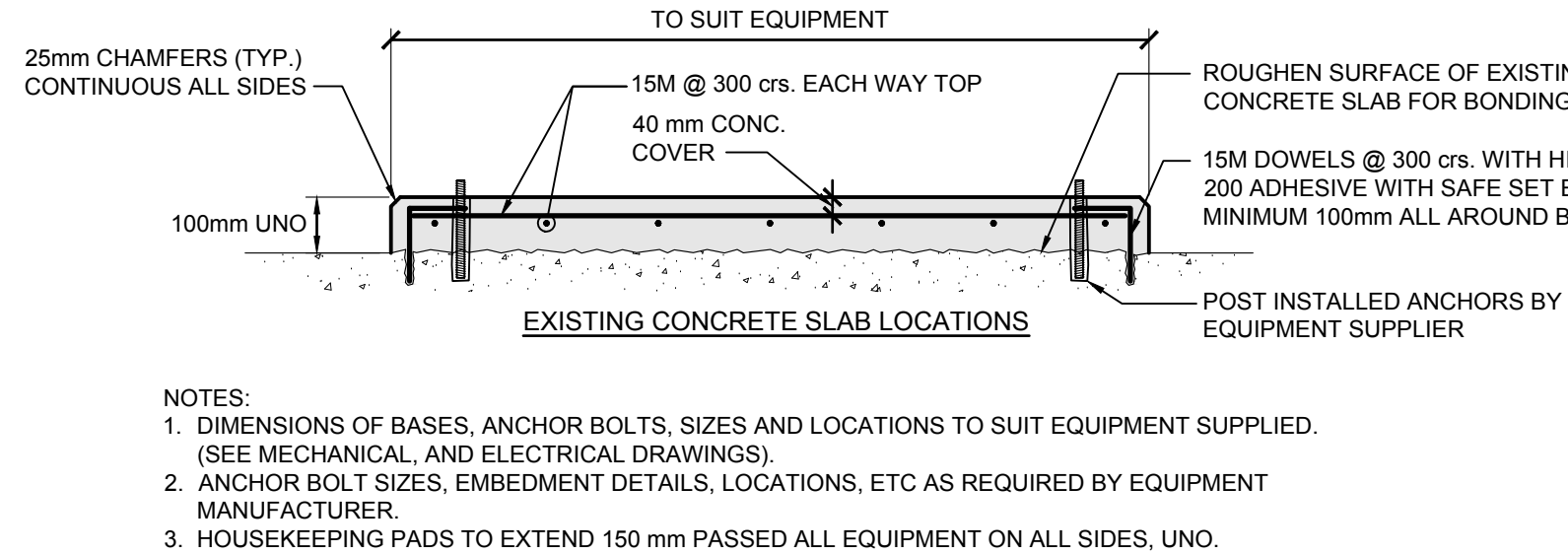
2 CONCRETE FLOOR REPAIR DETAIL AT TRENCH LOCATIONS
S02 SCALE: 1:10
NOTE: REFER TO MECHANICAL DRAWINGS FOR LOCATIONS & CONFIRM ON SITE.



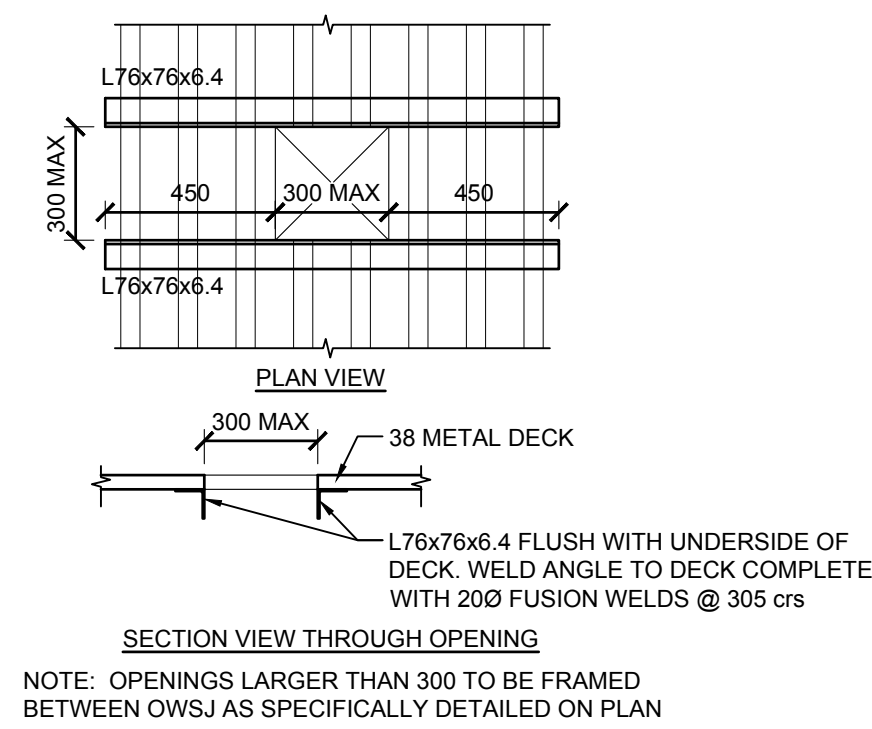
3 TYPICAL PLATFORM AND STAIR DETAIL
S02 SCALE: 1:10
NOTE: REFER TO ARCHITECTURAL DRAWINGS FOR SIZE & LOCATION.



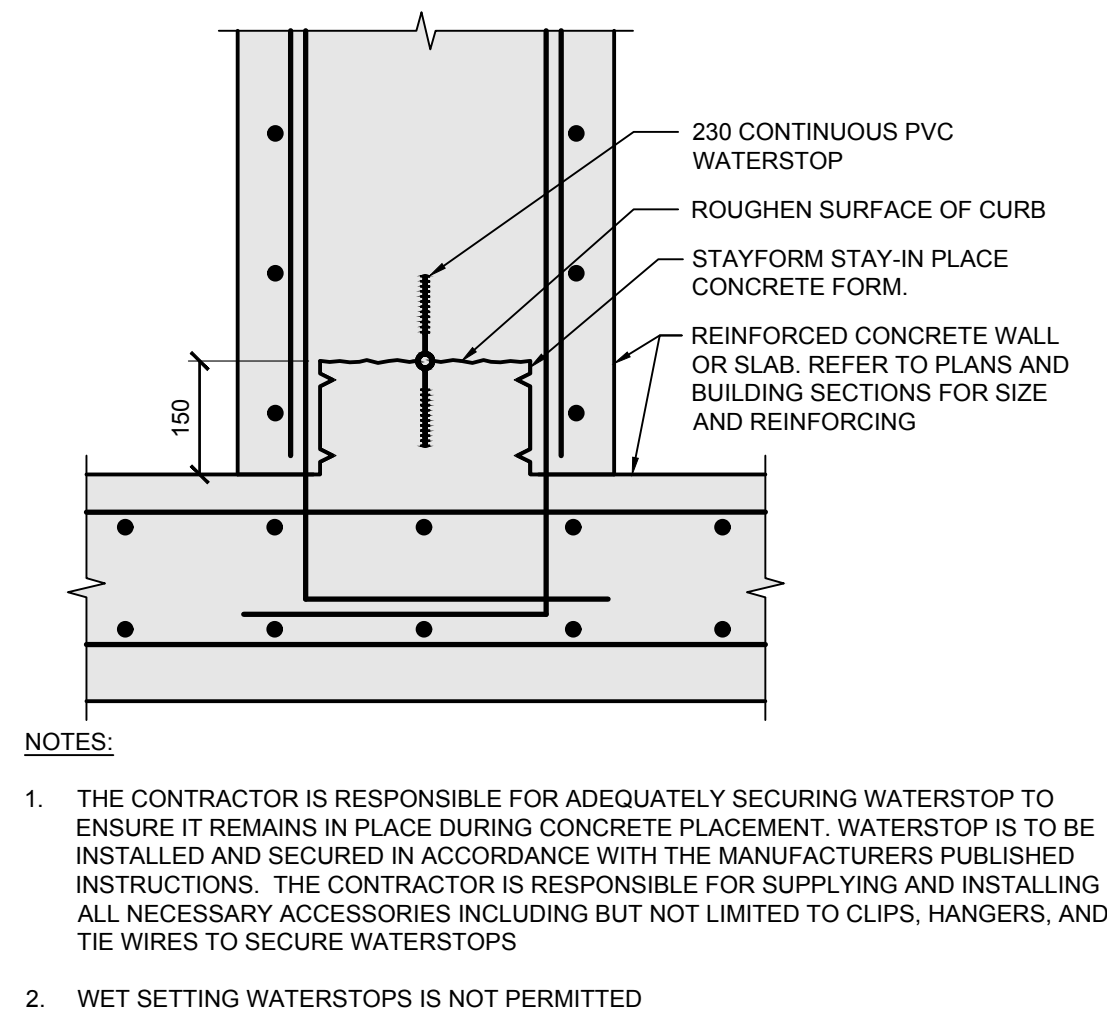
4 TYPICAL SAWCUT DETAIL
S02 SCALE: 1:10



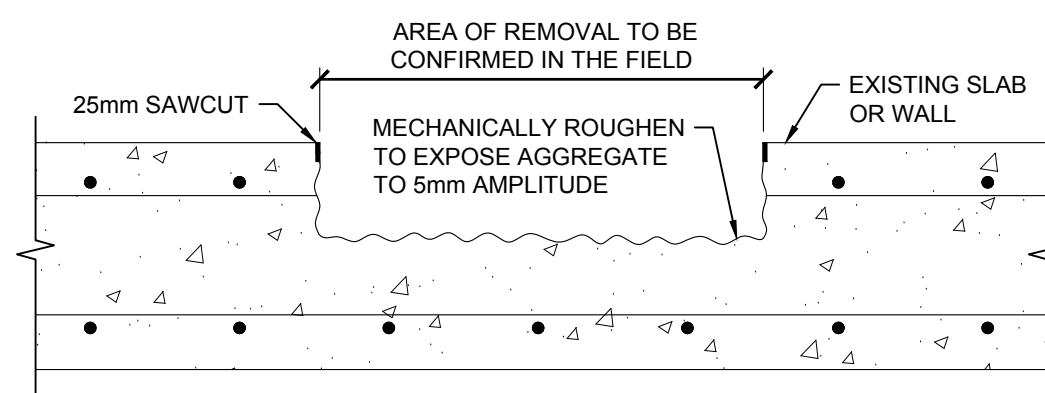
5 TYPICAL HOUSEKEEPING PAD DETAIL
S02 SCALE: 1:20
NOTES:
1. DIMENSIONS OF BASES, ANCHOR BOLTS, SIZES AND LOCATIONS TO SUIT EQUIPMENT SUPPLIED. (SEE MECHANICAL, AND ELECTRICAL DRAWINGS).
2. ANCHOR BOLT SIZES, EMBEDMENT DETAILS, LOCATIONS, ETC AS REQUIRED BY EQUIPMENT MANUFACTURER.
3. HOUSEKEEPING PADS TO EXTEND 150 mm PASSED ALL EQUIPMENT ON ALL SIDES, UNO.



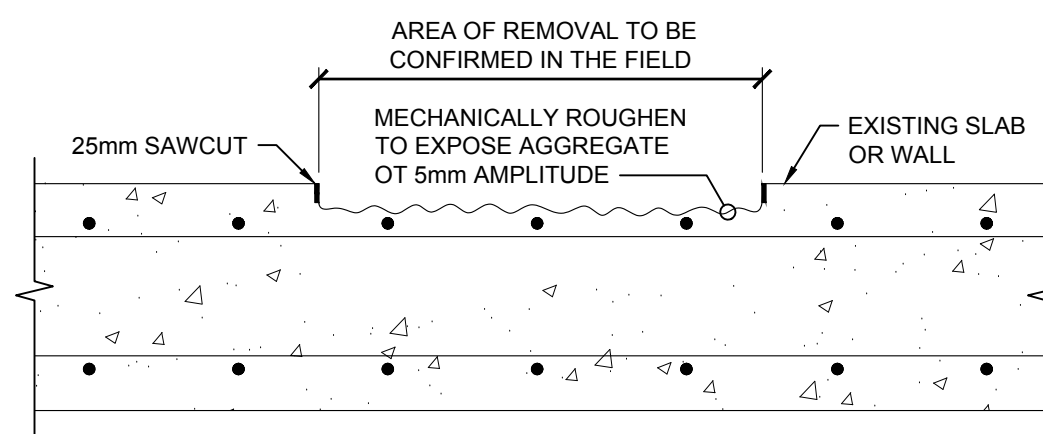
6 METAL DECK DETAIL FOR OPENINGS BETWEEN 150MM AND 300MM WIDE
S02 SCALE: 1:20



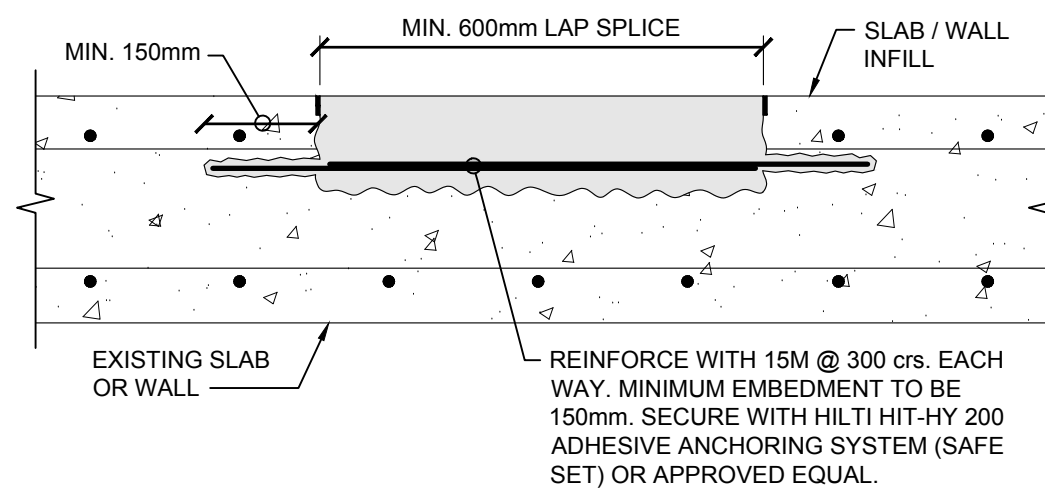
7 UPSTAND WATERSTOP DETAIL
S02 SCALE: 1:10
NOTES:
1. THE CONTRACTOR IS RESPONSIBLE FOR ADEQUATELY SECURING WATERSTOP TO ENSURE IT REMAINS IN PLACE DURING CONCRETE PLACEMENT. WATERSTOP IS TO BE INSTALLED AND SECURED IN ACCORDANCE WITH THE MANUFACTURERS PUBLISHED INSTRUCTIONS. THE CONTRACTOR IS RESPONSIBLE FOR SUPPLYING AND INSTALLING ALL NECESSARY ACCESSORIES INCLUDING BUT NOT LIMITED TO CLIPS, HANGERS, AND TIE WIRES TO SECURE WATERSTOPS
2. WET SETTING WATERSTOPS IS NOT PERMITTED



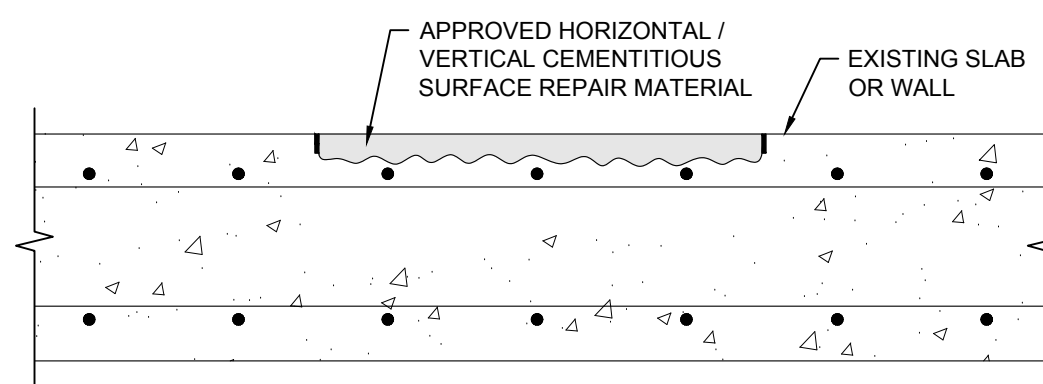
7 PARTIAL SLAB AND WALL CONCRETE REMOVAL DETAIL
S02 SCALE: 1:10



9 HORIZONTAL AND VERTICAL SURFACE CONCRETE REMOVAL DETAIL
S02 SCALE: 1:10



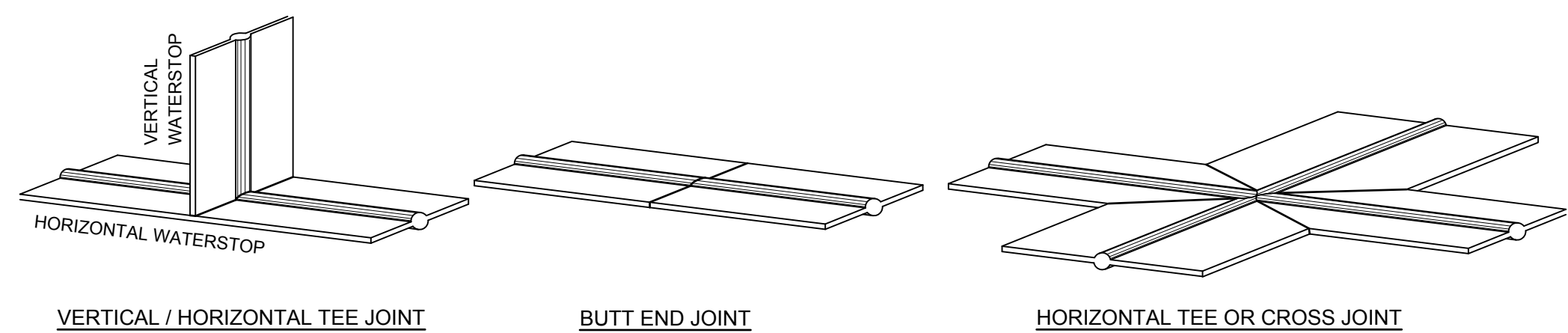
8 PARTIAL DEPTH SLAB AND WALL INFILL DETAIL
S02 SCALE: 1:10



10 HORIZONTAL AND VERTICAL SURFACE REPAIR DETAIL
S02 SCALE: 1:10

GENERAL CONCRETE REPAIR PROCEDURE:

1. CONFIRM LOCATION OF REPAIR AREA WITH CONSULTANT BEFORE PROCEEDING.
2. SAWCUT PERIMETER EDGE OF INTENDED SLAB REMOVAL.
3. REMOVE DETERIORATED/DAMAGED CONCRETE TO SOUND SUBSTRATE. GEOMETRY OF REMOVAL BOUNDARIES TO MINIMIZE EDGE LENGTH.
4. EXPOSE AND UNDERCUT CORRODED/DAMAGED REINFORCING STEEL. PROVIDE 25mm MINIMUM CLEARANCE UNDER BAR. IF UNCORRODED BARS ARE EXPOSED AND DISTURBED BY REMOVAL PROCESS THEN THE BAR SHALL BE FULLY EXPOSED AS IF IT WERE FOUND TO BE HEAVILY CORRODED.
5. REPLACE REINFORCING STEEL DAMAGED FROM CORROSION OR DURING CONCRETE REMOVAL PROCESS AS DIRECTED BY THE CONSULTANT.
6. ALL CORROSION AND OTHER BOND INHIBITING MATERIALS TO BE ABRASIVELY REMOVED FROM THE RETAINED REINFORCING STEEL. APPLY CORROSION INHIBITOR TO THE CLEANED REINFORCING STEEL.
7. SURFACE OF EXPOSED CONCRETE TO BE ABRASIVELY ROUGHENED TO CREATE AN UNEVEN SURFACE, EXPOSE AGGREGATE TO 5mm AMPLITUDE, ALL DEBRIS AND LOOSE MATERIAL IS TO BE CLEANED FROM SURFACE.
8. APPLY BONDING AGENT TO PREPARED SURFACE PRIOR TO PLACING NEW CONCRETE. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR APPLICATION.
9. CONCRETE REPAIR MATERIALS:
 - PARTIAL DEPTH REPAIRS: SELECT CONCRETE MIX TO SUIT PERFORMANCE / EXPOSURE REQUIREMENTS OF STRUCTURAL ELEMENT.
 - SURFACE REPAIRS: SELECT CEMENTITIOUS REPAIR MATERIALS THAT HAVE PERFORMANCE CHARACTERISTICS THAT MATCH INTENDED REPAIR LOCATION (eg. HORIZONTAL VS. VERTICAL / OVERHEAD), DEPTH OF REPAIR AND EXPOSURE CONDITIONS. SUBMIT PROPOSED SURFACE REPAIR MATERIALS TO CONSULTANT FOR REVIEW.



- NOTES:
1. JOIN WATERSTOPS TO FORM A CONTINUOUS UNBROKEN WATER SEAL IN ALL PARTS OF STRUCTURE AT ALL EXPANSION JOINTS AND AT CONSTRUCTION JOINTS WHERE INDICATED ON DRAWINGS.
 2. WATERSTOP AT SPLICE LOCATIONS AND INTERSECTIONS TO BE JOINED TOGETHER AS PER MANUFACTURERS PRINTED INSTRUCTIONS. ALL 'TEES' AND 'CROSSES' AND OTHER SPECIAL INTERSECTIONS WILL BE ACCURATELY ASSEMBLED.
 3. WELD AT SPLICE WILL PENETRATE FULL DEPTH OF THE WATERSTOP MATERIAL.
 4. ALLOW FOR INSPECTION OF ALL WATERSTOP INSTALLATIONS, CONNECTIONS AND SPLICES PRIOR TO CASTING CONCRETE.

11 TYPICAL WATERSTOP DETAILS
S02 SCALE: 1:20

DO NOT SCALE DRAWINGS:

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UNEXPECTED DISCOVERY OF ASBESTOS:

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A	A = Detail number
B	B = Drawing number where detailed

1	ISSUED FOR CONVENIENCE	TA	APR 12, 2019
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NO.	ISSUED	BY	DATE

Orientation

Seal

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J.L. Richards
ENGINEERS-ARCHITECTS-PLANNERS

Project
BUILDING #046
RENOVATIONS

Drawing Title
STRUCTURAL
STANDARD DETAILS

Project No.
504034

Location
UNIVERSITY OF GUELPH
BUILDING #46

Scale
AS NOTED

Date
APR 12, 2019

Drawn by
BCW

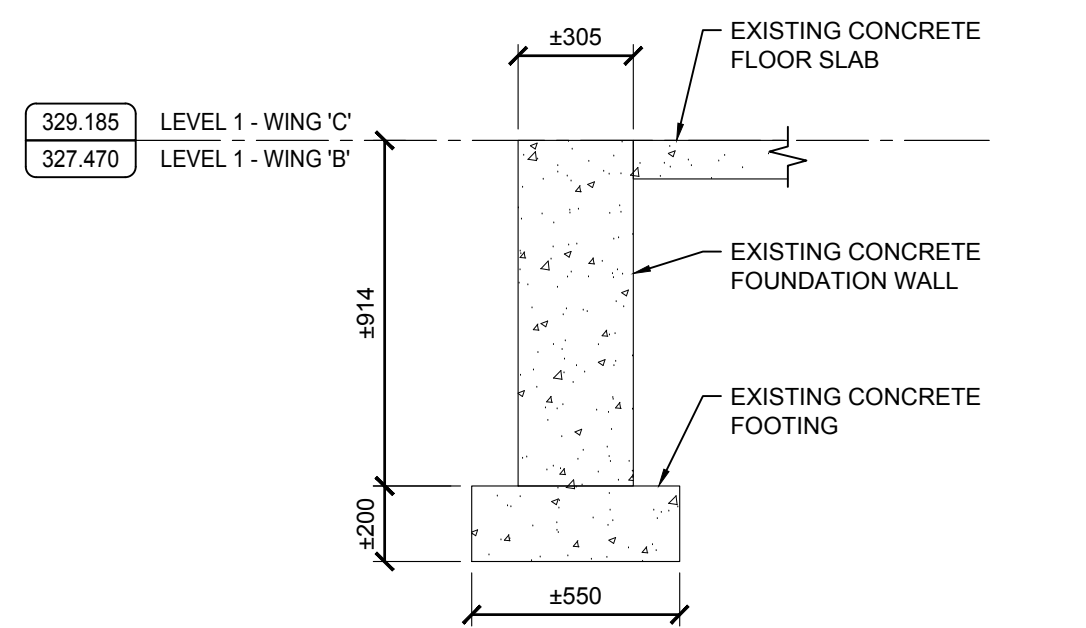
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Approved By
DAY/JRE

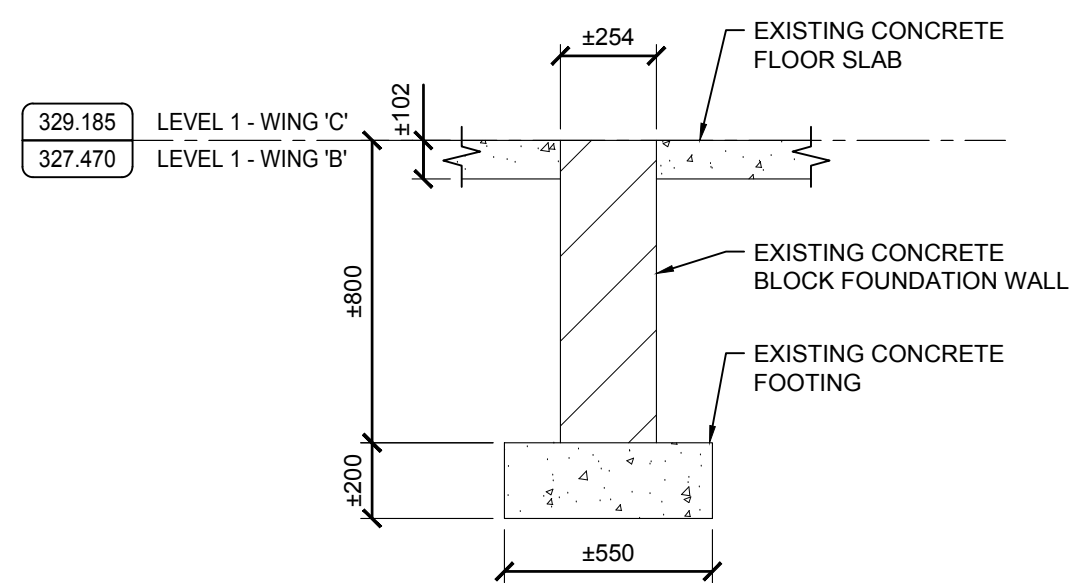
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S02

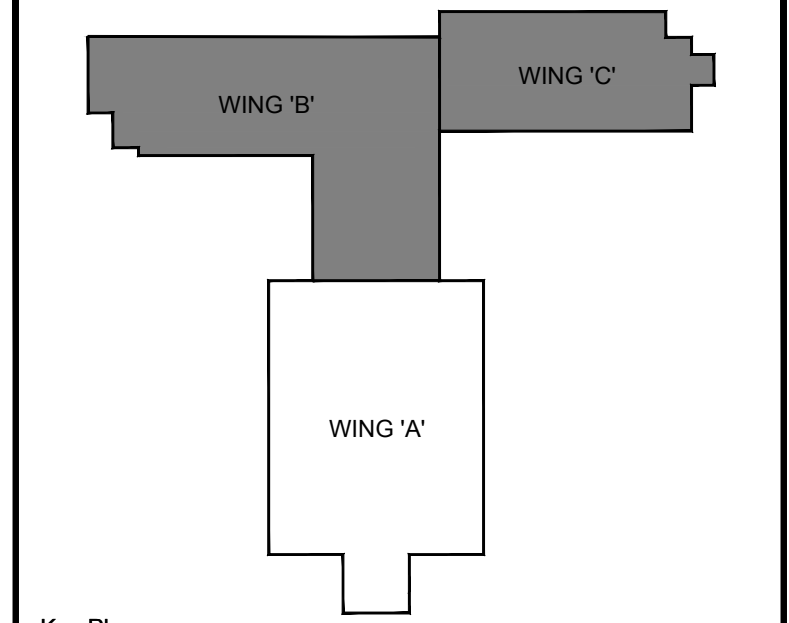


2 EXISTING EXTERIOR FOUNDATION SECTION
S10 SCALE: 1:20



3 EXISTING INTERIOR FOUNDATION SECTION
S10 SCALE: 1:20

- DRAWING NOTES:**
- SEE DRAWING S00 FOR GENERAL NOTES.
- LEGEND**
- EXISTING
 - EXISTING
 - DENOTES EXTENT OF FOUNDATION WALL REMOVAL
 - DENOTES AREA OF FLOOR SLAB REMOVAL



Key Plan

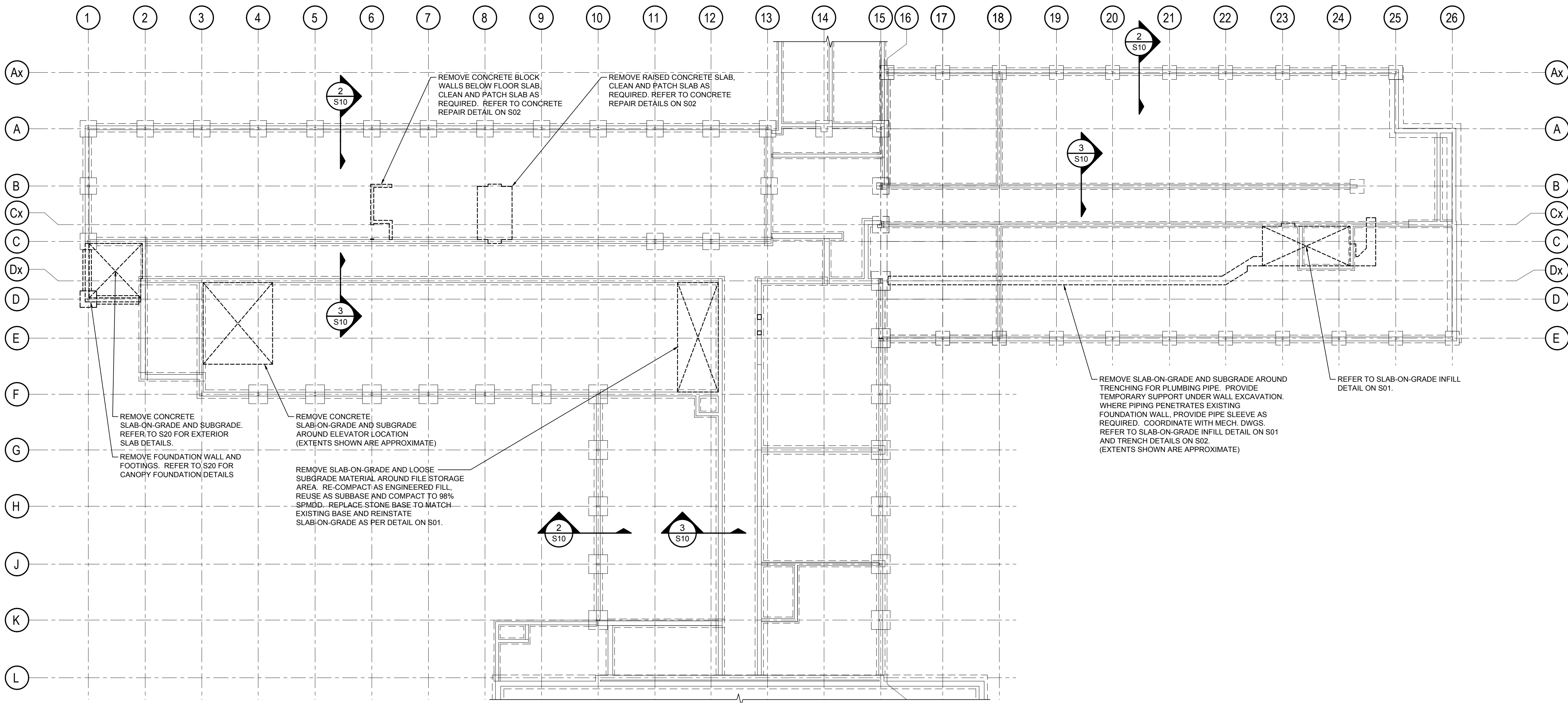
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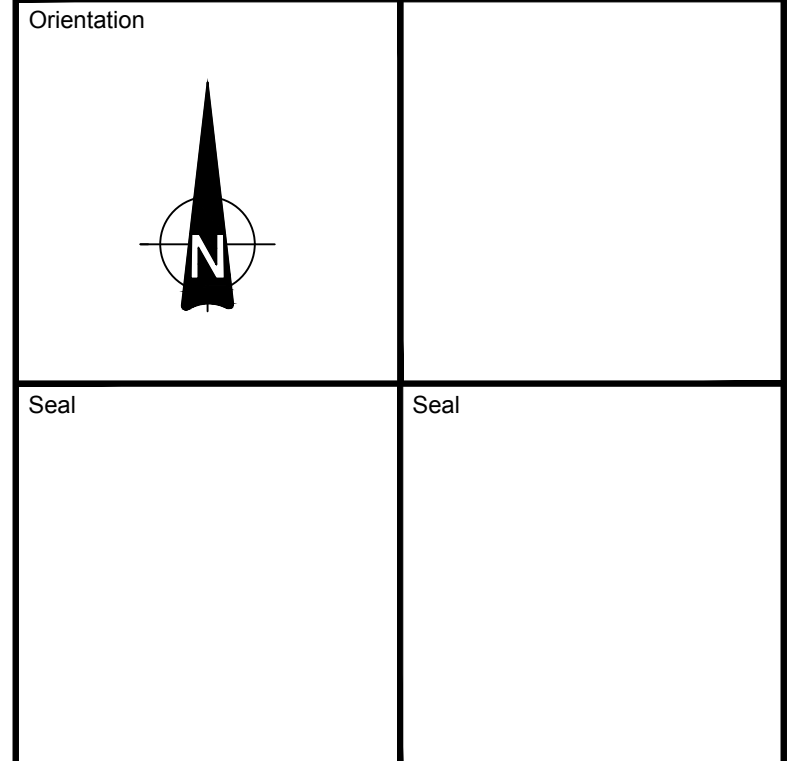
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A = Detail number
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1 EXISTING FOUNDATION PLAN
WING 'B' & 'C' LEVEL 1
S10 SCALE: 1:150

1	ISSUED FOR CONVENIENCE	TA	APR 12, 2019
0	ISSUED FOR PERMIT & TENDER	TA	NOV 2, 2018
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Project
BUILDING #046
RENOVATIONS

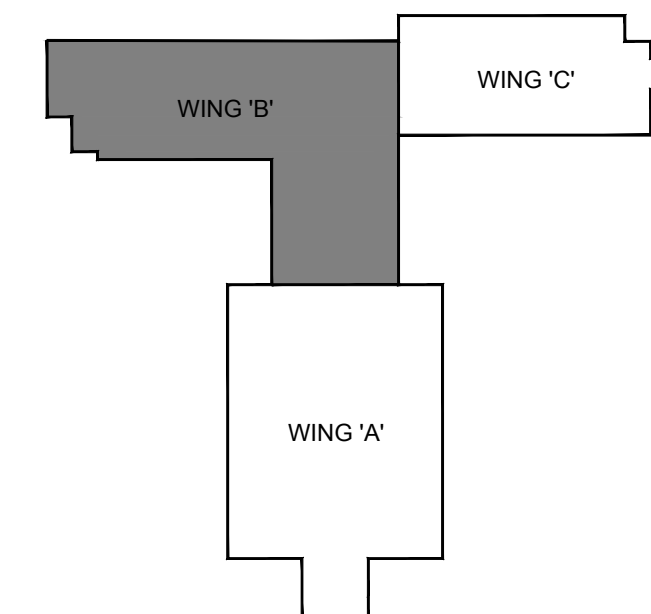
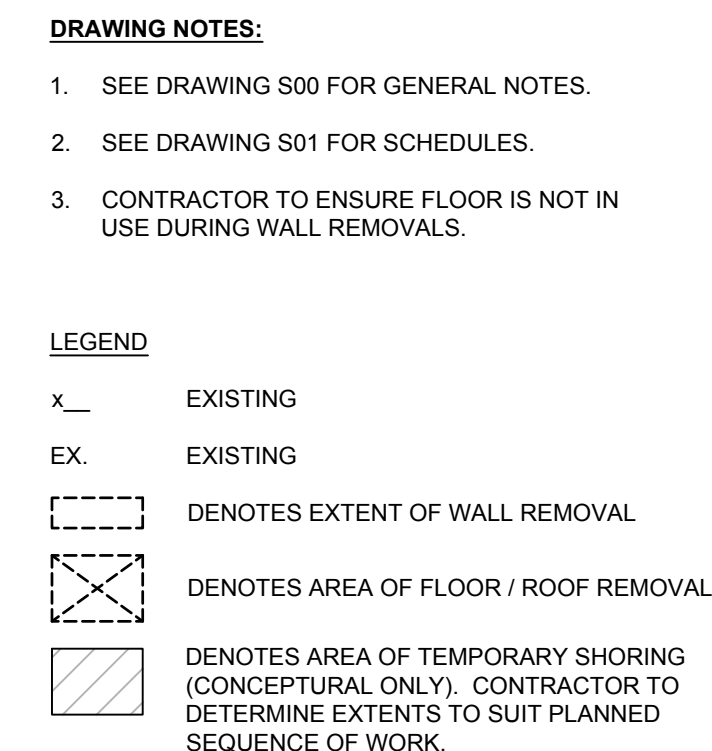
Drawing Title
STRUCTURAL
EXISTING FOUNDATION
PLAN WING B AND C LEVEL 1

Project No.
504034

Location
UNIVERSITY OF GUELPH
BUILDING #46

Scale 1:150	Date APR 12, 2019
Drawn by BCW	Drawing No.
Checked By LS	S10
Approved By DAY/JRE	
JLR # 27915	

Cad File No. ----




Key Plan

DO NOT SCALE DRAWINGS:

Contractors must check and verify all site conditions. Notify the Owner's Representative in writing before proceeding with the work if discrepancies are evident between the drawings and the site condition. No extras to the contract will be allowed if discrepancies were evident prior to start of work.

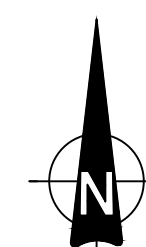
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Orientation	
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Seal	Seal
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Project
**BUILDING #046
RENOVATIONS**

Drawing Title

STRUCTURAL
EXISTING FRAMING PLAN
WING B LEVEL 2

Project No.

504034

Location
UNIVERSITY OF GUELPH
BUILDING #46

Scale 1:100	Date APR 12, 2019
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Drawn by	Drawing No.
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Checked By	LS
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Approved By
DAY/JRE

JLR #	27915
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EXISTING FRAMING PLAN
WING 'B' LEVEL 2

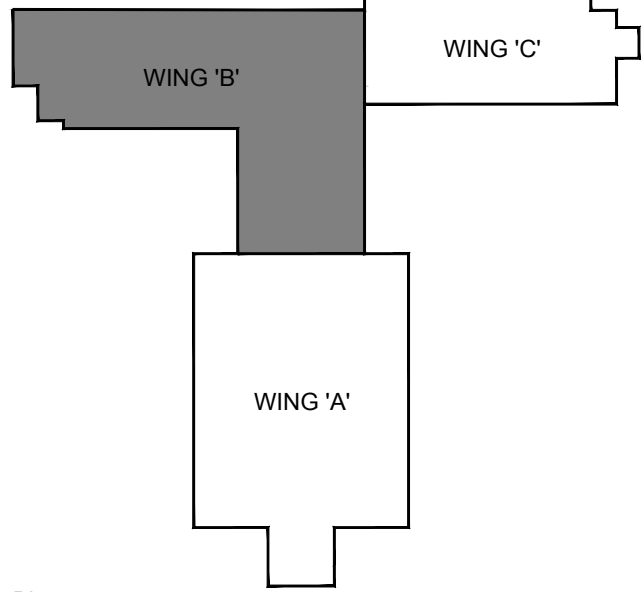
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NOTES:
1. TOP OF LEVEL 2 SLAB ELEVATION AT 330.900 UNLESS NOTED (-XXX)

S11

- DRAWING NOTES:**
- SEE DRAWING S00 FOR GENERAL NOTES.
 - SEE DRAWING S01 FOR SCHEDULES.
 - CONTRACTOR TO ENSURE FLOOR / ROOF IS NOT IN USE DURING WALL REMOVALS.

- LEGEND**
- x_ EXISTING
 - EX. EXISTING
 - - - DENOTES EXTENT OF WALL REMOVAL
 - ▢ DENOTES AREA OF FLOOR / ROOF REMOVAL
 - ▨ DENOTES AREA OF TEMPORARY SHORING (CONCEPTUAL ONLY). CONTRACTOR TO DETERMINE EXTENTS TO SUIT PLANNED SEQUENCE OF WORK.



Key Plan

DO NOT SCALE DRAWINGS:

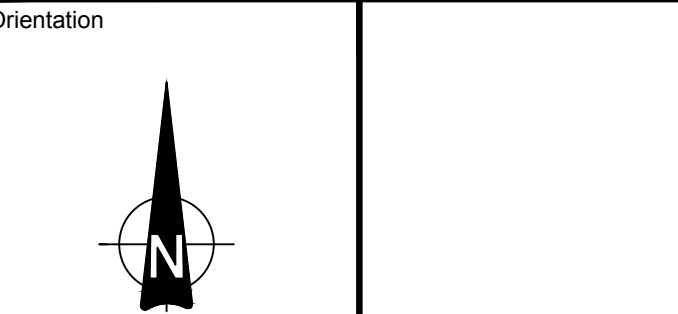
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NO.	ISSUED	BY	DATE



Seal

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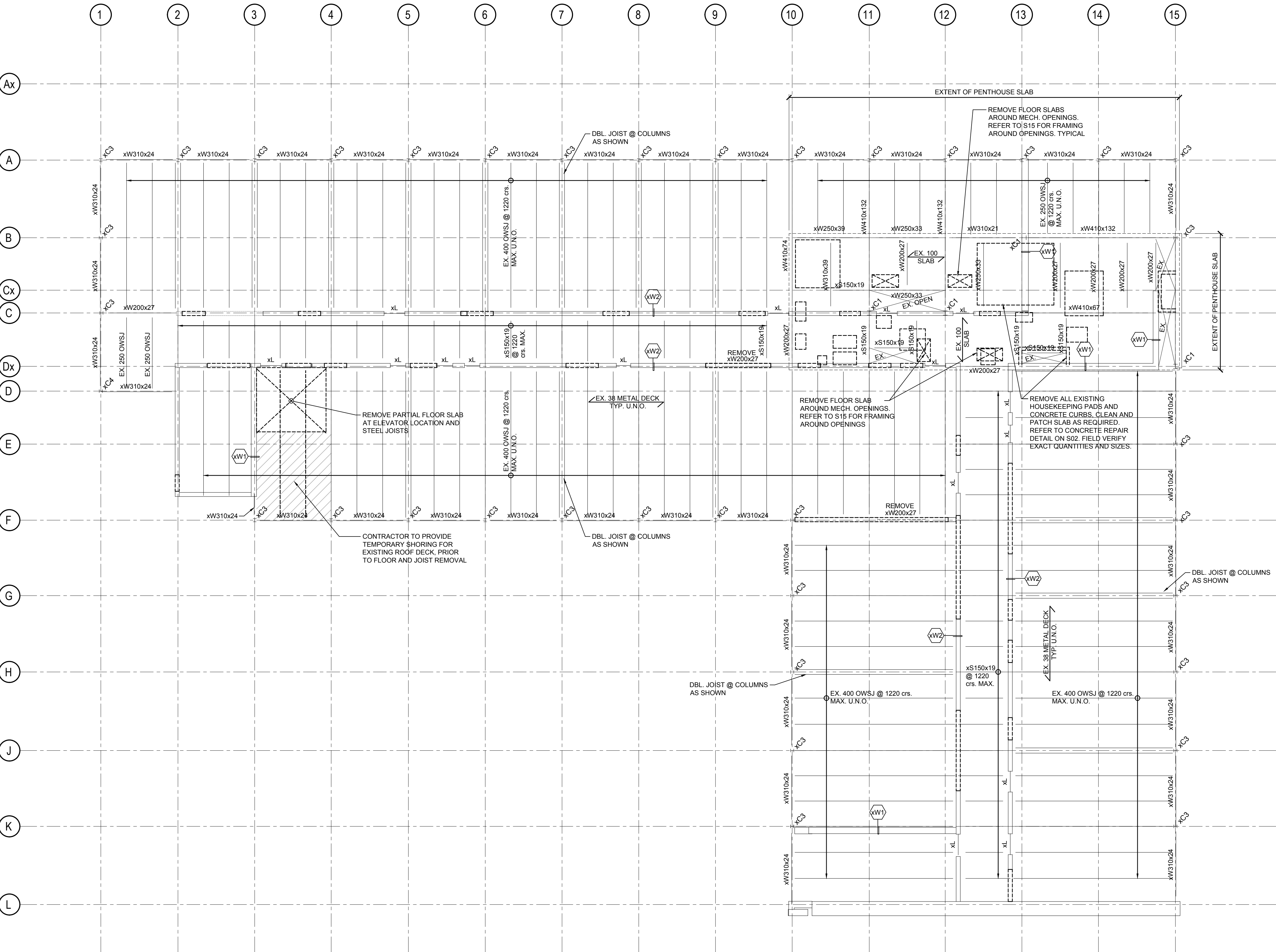
J.R. J.L.Richards
ENGINEERS - ARCHITECTS - PLANNERS

Project
**BUILDING #046
RENOVATIONS**

Drawing Title
**STRUCTURAL
EXISTING FRAMING PLAN
WING B ROOF**
Project No.
504034

Location
**UNIVERSITY OF GUELPH
BUILDING #46**

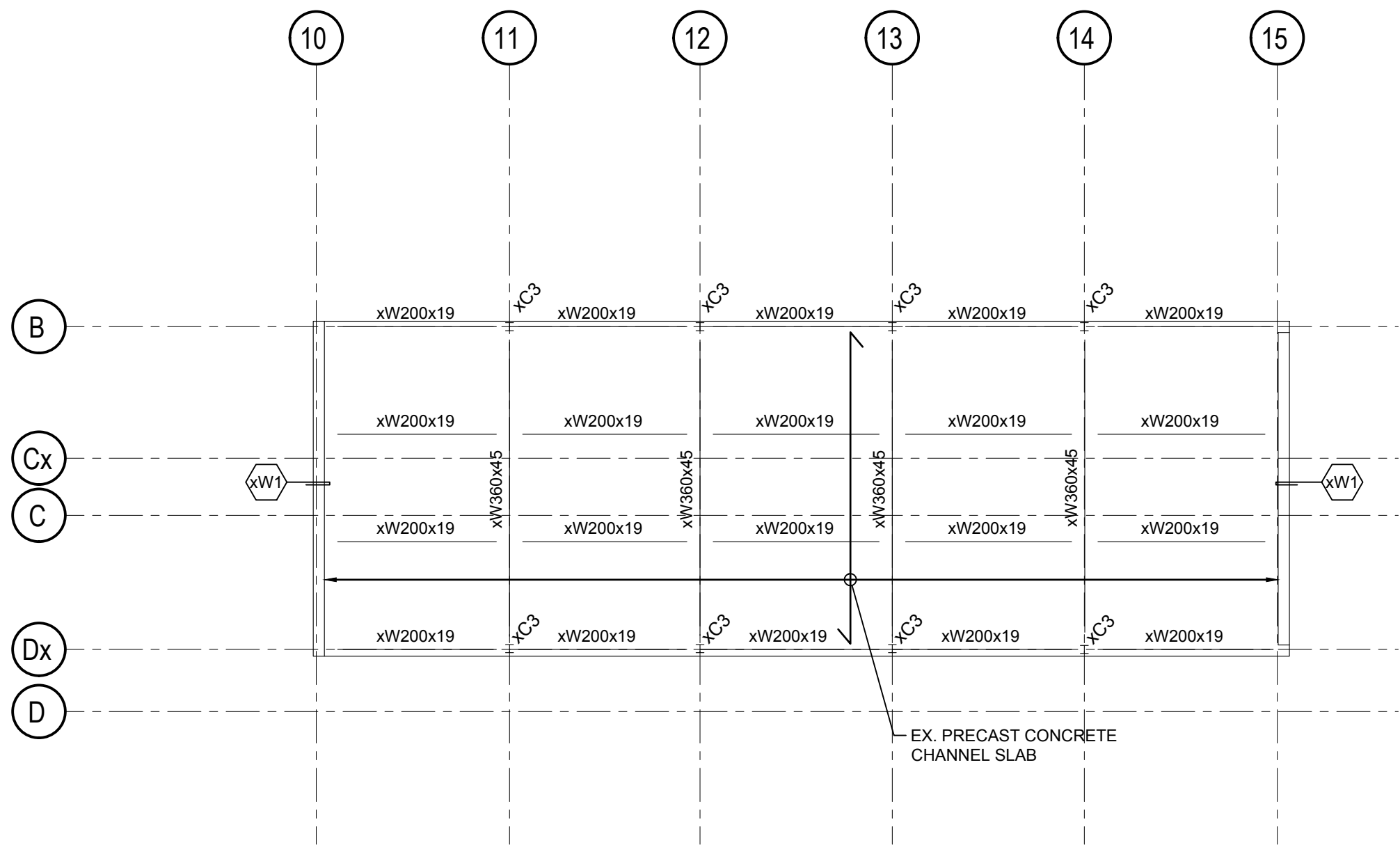
Scale 1:100	Date APR 12, 2019
Drawn by BCW	Drawing No. S12
Checked By LS	
Approved By DAY/JRE	
JLR # 27915	
Cad File No. ----	



**EXISTING FRAMING PLAN
WING 'B' ROOF**

SCALE: 1:100

- NOTES:
- TOP OF METAL DECK ELEVATION AT 334.330 UNLESS NOTED (-XXX).
 - TOP OF PENTHOUSE SLAB ELEVATION AT 334.380.
 - EXISTING 38mm (22 GAUGE) METAL ROOF DECK.

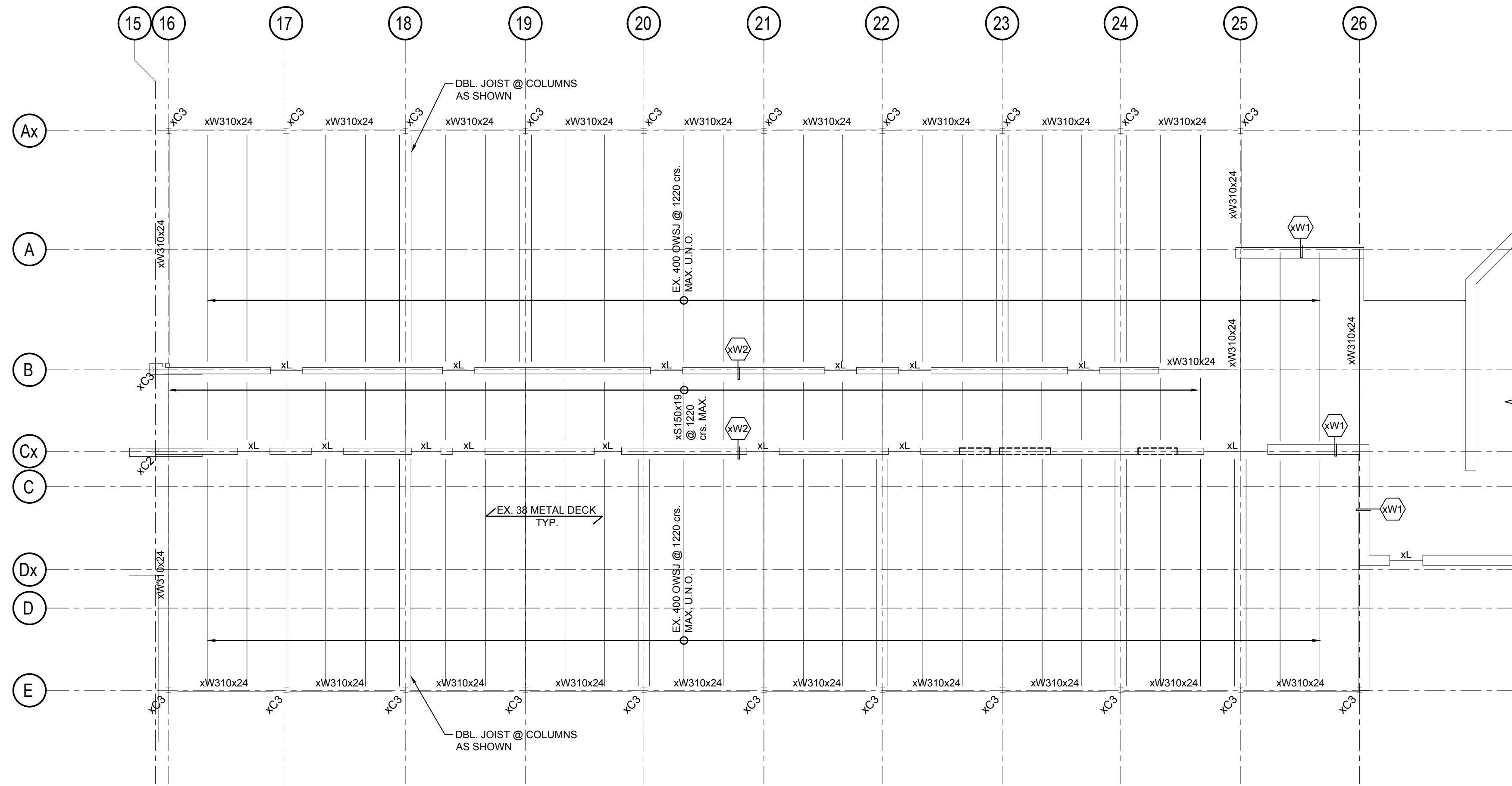


1
S13

EXISTING FRAMING PLAN
WING 'B' PENTHOUSE ROOF

SCALE: 1:100

NOTES:
1. TOP OF PRECAST SLAB ELEVATION AT 338.572.



2
S13

EXISTING FRAMING PLAN
WING 'C' ROOF

SCALE: 1:100

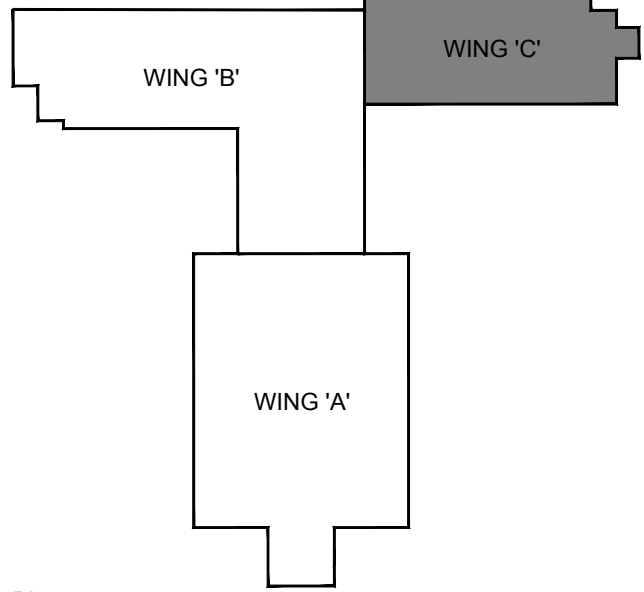
NOTES:
1. TOP OF METAL DECK ELEVATION AT 332.615 UNLESS NOTED (-XXX).
2. EXISTING 38mm (22 GAUGE) METAL ROOF DECK.

DRAWING NOTES:

- SEE DRAWING S00 FOR GENERAL NOTES.
- SEE DRAWING S01 FOR SCHEDULES.

LEGEND

- x_ EXISTING
- EX. EXISTING
- DENOTES EXTENT OF WALL REMOVAL
- DENOTES AREA OF FLOOR / ROOF REMOVAL
- DENOTES AREA OF TEMPORARY SHORING (CONCEPTUAL ONLY). CONTRACTOR TO DETERMINE EXTENTS TO SUIT PLANNED SEQUENCE OF WORK.



Key Plan

DO NOT SCALE DRAWINGS:

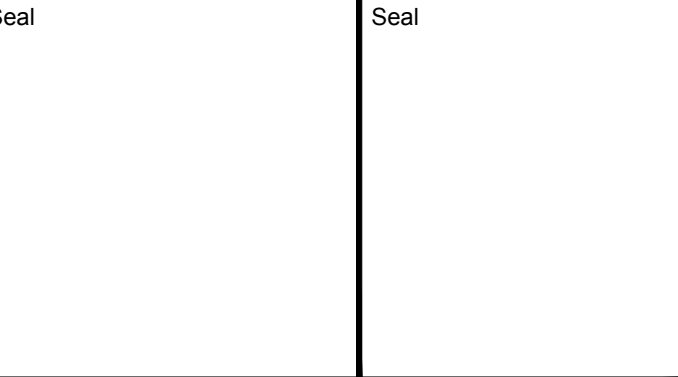
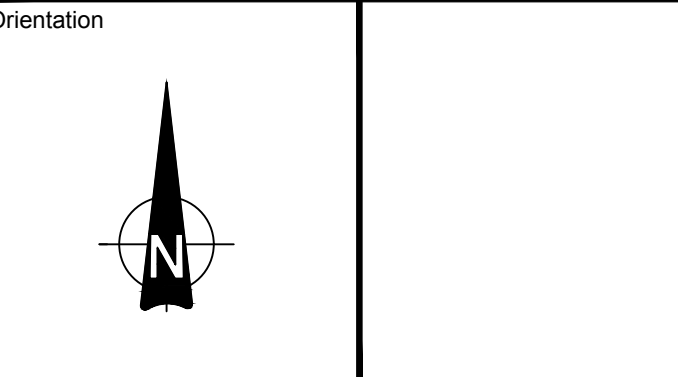
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UNEXPECTED DISCOVERY OF ASBESTOS:

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- A = Detail number
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1	ISSUED FOR CONVENIENCE	TA	APR 12, 2019
0	ISSUED FOR PERMIT & TENDER	TA	NOV 2, 2018
NO.	ISSUED	BY	DATE



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Guelph, Ontario. N1G 2W1

Consultant www.jrichards.ca

J.R. J.L.Richards
ENGINEERS-ARCHITECTS-PLANNERS

Project
BUILDING #046
RENOVATIONS

Drawing Title
STRUCTURAL
EXISTING FRAMING PLANS
WING B AND C ROOF
Project No.
504034

Location
UNIVERSITY OF GUELPH
BUILDING #46

Scale 1:100	Date APR 12, 2019
Drawn by BCW	Drawing No. S13
Checked By LS	
Approved By DAY/JRE	
JLR # 27915	
Cad File No. ----	

NOTES:
1. TOP OF LEVEL 2 SLAB ELEVATION AT 330.900 UNLESS NOTED (-XXX)

DRAWING NOTES:

WING 'B' LEVEL 2 - DESIGN LOADS:

DEAD LOAD ALLOWANCES:

CORRIDORS:


CONCRETE SLAB:	2.40 kPa (100 SLAB)
STRUCTURAL STEEL FRAMING:	0.25 kPa
ARCHITECTURAL FINISHES:	0.50 kPa
<u>MECHANICAL & ELECTRICAL:</u>	<u>0.25 kPa</u>
TOTAL:	3.40 kPa

CLASSROOMS / OFFICES:

CONCRETE SLAB:	1.50	kPa (63.5 SLAB)
STRUCTURAL STEEL FRAMING:	0.25	kPa
ARCHITECTURAL FINISHES:	0.50	kPa
MECHANICAL & ELECTRICAL:	0.25	kPa
<u>TOTAL:</u>	2.50	kPa

+ 1.0 kPa FOR PARTITIONS 3.50 kPa
(NOT INCLUDED IN LARGE / ASSEMBLY OCCUPANCY
SPACES)

LIVE LOAD ALLOWANCES:

CLASSROOMS / OFFICES:	2.40 kPa	
LARGE GROUP ROOMS:	4.80 kPa	
STORAGE / MECH. ROOMS:	7.20 kPa	

1. SEE DRAWING S00 FOR GENERAL NOTES.
2. SEE DRAWING S01 FOR TYPICAL DETAILS.

LEGEND

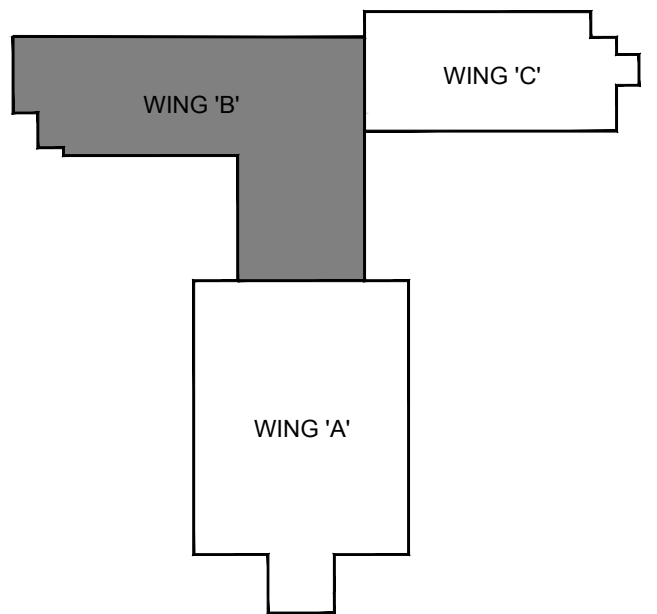
x__ EXISTING

EX. EXISTING

* DENOTES EXISTING OWSJ REQUIRED TO BE REINFORCED. REFER TO ELEVATION 1/S41 FOR TYPICAL FLOOR JOIST REINFORCING INFORMATION.

† DENOTES EXISTING COLUMN REQUIRED TO BE REINFORCED. REFER TO DETAIL 7/S72 FOR TYPICAL COLUMN REINFORCING INFORMATION.

APPROXIMATE EXTENT OF CONCRETE SLAB INFILL.
REFER TO DETAILS AS INDICATED ON PLAN.




Key Plan


DO NOT SCALE DRAWINGS:

Contractors must check and verify all site conditions. Notify the Owner's Representative in writing before proceeding with the work if discrepancies are evident between the drawings and the site condition. No extras to the contract will be allowed if discrepancies were evident prior to start of work.

UNEXPECTED DISCOVERY OF ASBESTOS:

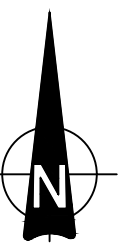
Where a friable material is discovered during construction, renovations and/or demolition, and it is suspected to contain asbestos, the Contractor must stop all work that may disturb the material. The Contractor shall advise the Owner of the discovery and await instructions from the owner.

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Orientation



Seal

Seal

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------------	-------------------



Project

BUILDING #046

RENOVATIONS

Drawing Title

**STRUCTURAL
ALTERED FRAMING PLAN
WING B LEVEL 2**

Project No.
504034

Location
UNIVERSITY OF GUELPH
BUILDING #46

Scale 1:100	Date APR 12, 2019
Drawn by BCW	Drawing No. S14
Checked By LS	
Approved By DAY/JRE	
JLR # 27915	

Cad File No. ----

DRAWING NOTES:

WING 'B' ROOF - DESIGN LOADS:

DEAD LOAD ALLOWANCES:

STRUCTURAL STEEL FRAMING: 0.25 kPa
ARCHITECTURAL FINISHES: 0.25 kPa
MECHANICAL & ELECTRICAL: 0.25 kPa
ROOFING MATERIALS: 1.15 kPa
TOTAL: 1.90 kPa

LIVE LOAD ALLOWANCES:

SNOW LOAD: 2.20 kPa + BUILT-UP
(SEE DIAGRAM ON S00)

- SEE DRAWING S00 FOR GENERAL NOTES.
- SEE DRAWING S01 FOR SCHEDULES AND TYPICAL DETAILS.

LEGEND

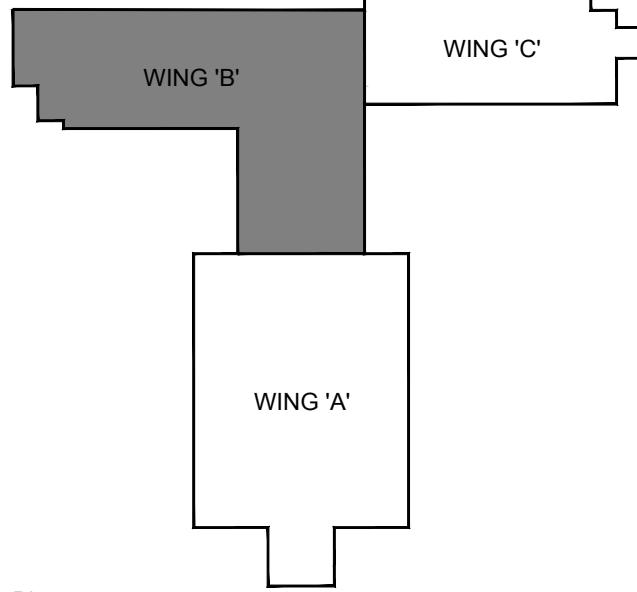
x_ EXISTING

* EXISTING

* DENOTES EXISTING OWSJ REQUIRED TO BE REINFORCED. REFER TO ELEVATION 1/S41 FOR TYPICAL ROOF JOIST REINFORCING INFORMATION.

† DENOTES EXISTING COLUMN REQUIRED TO BE REINFORCED. REFER TO DETAIL 7/S72 FOR TYPICAL COLUMN REINFORCING INFORMATION.

APPROXIMATE EXTENT OF CONCRETE SLAB INFILL. REFER TO DETAILS AS INDICATED ON PLAN.



Key Plan

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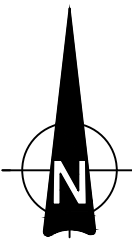
UNEXPECTED DISCOVERY OF ASBESTOS:

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Orientation



Seal

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J.L.Richards
ENGINEERS - ARCHITECTS - PLANNERS

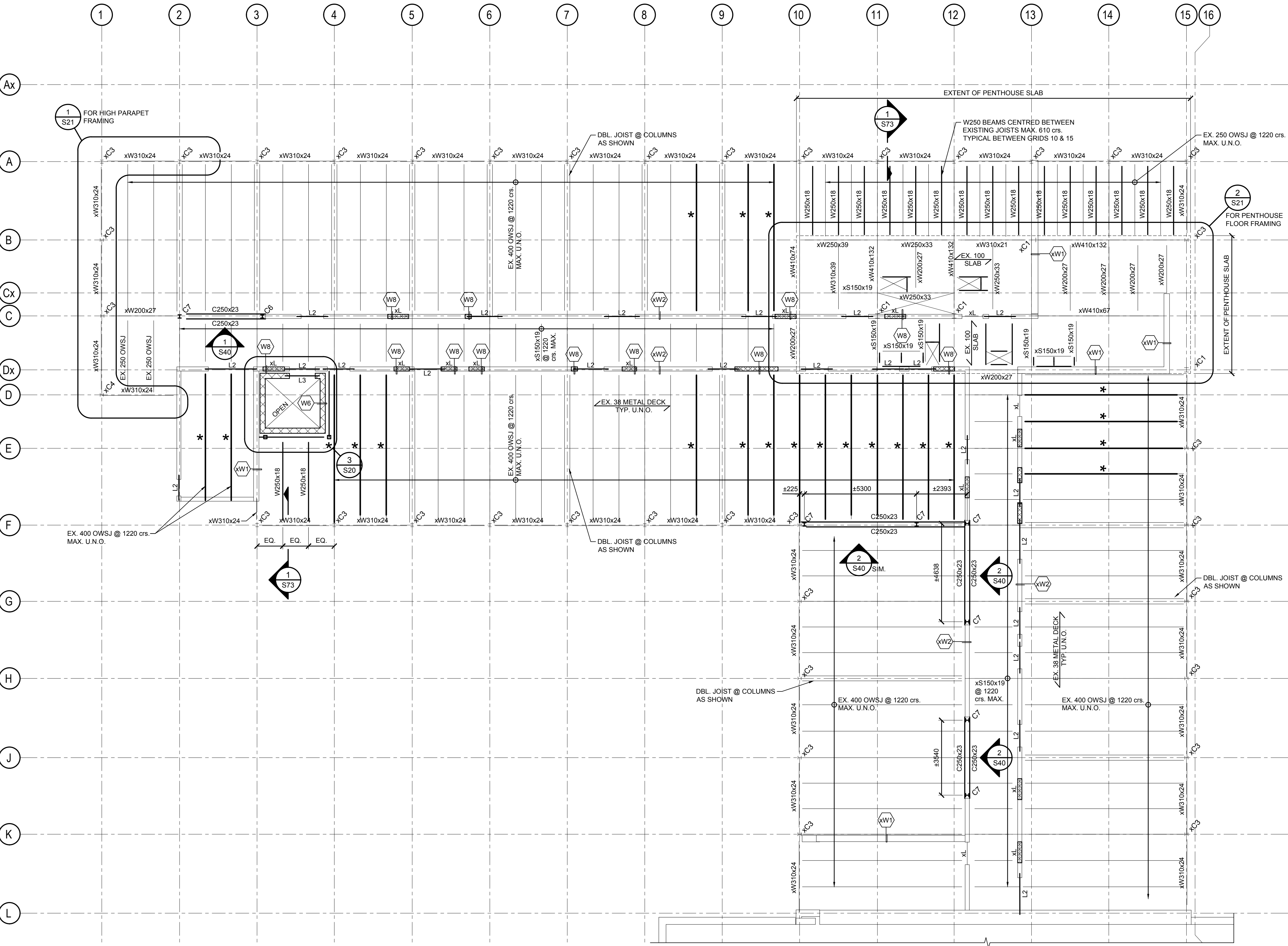
Project
**BUILDING #046
RENOVATIONS**

Drawing Title
**STRUCTURAL
ALTERED FRAMING PLAN
WING B ROOF**

Project No.
504034

Location
**UNIVERSITY OF GUELPH
BUILDING #46**

Scale 1:100	Date APR 12, 2019
Drawn by BCW	Drawing No. S15
Checked By LS	
Approved By DAY/JRE	
JLR # 27915	
Cad File No. ----	



DRAWING NOTES:

WING 'B' ROOF - DESIGN LOADS:

DEAD LOAD ALLOWANCES:

STRUCTURAL STEEL FRAMING:	0.25 kPa
ARCHITECTURAL FINISHES:	0.25 kPa
MECHANICAL & ELECTRICAL:	0.25 kPa
ROOFING MATERIALS:	1.15 kPa
TOTAL:	1.90 kPa

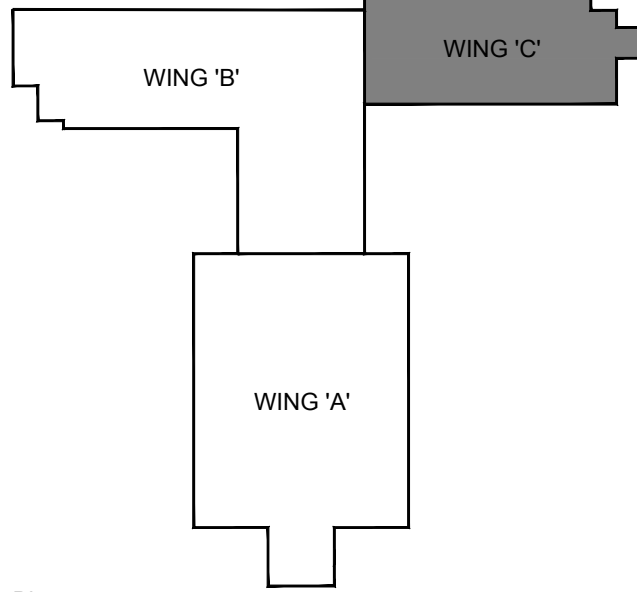
LIVE LOAD ALLOWANCES:

SNOW LOAD: 2.20 kPa + BUILT-UP
(SEE DIAGRAM ON S00)

- SEE DRAWING S00 FOR GENERAL NOTES.
- SEE DRAWING S01 FOR SCHEDULES AND TYPICAL DETAILS.

LEGEND

- x_ EXISTING
- EX. EXISTING
- ★ DENOTES EXISTING OWSJ REQUIRED TO BE REINFORCED. REFER TO ELEVATION 1/S41 FOR TYPICAL ROOF JOIST REINFORCING INFORMATION.



Key Plan

DO NOT SCALE DRAWINGS:

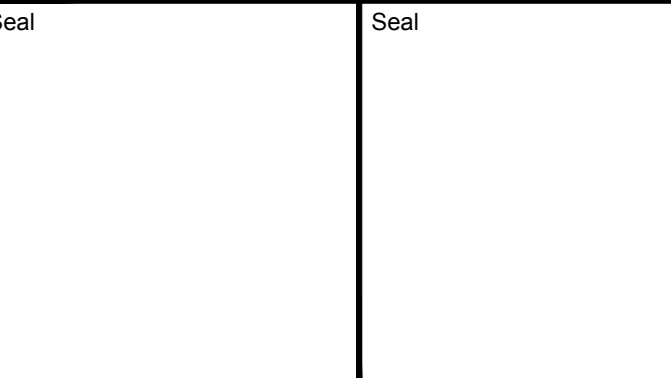
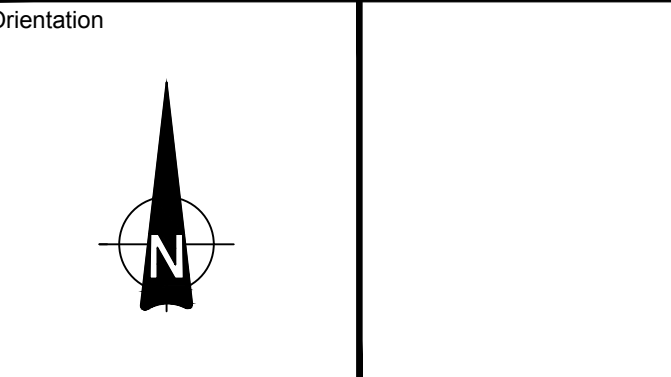
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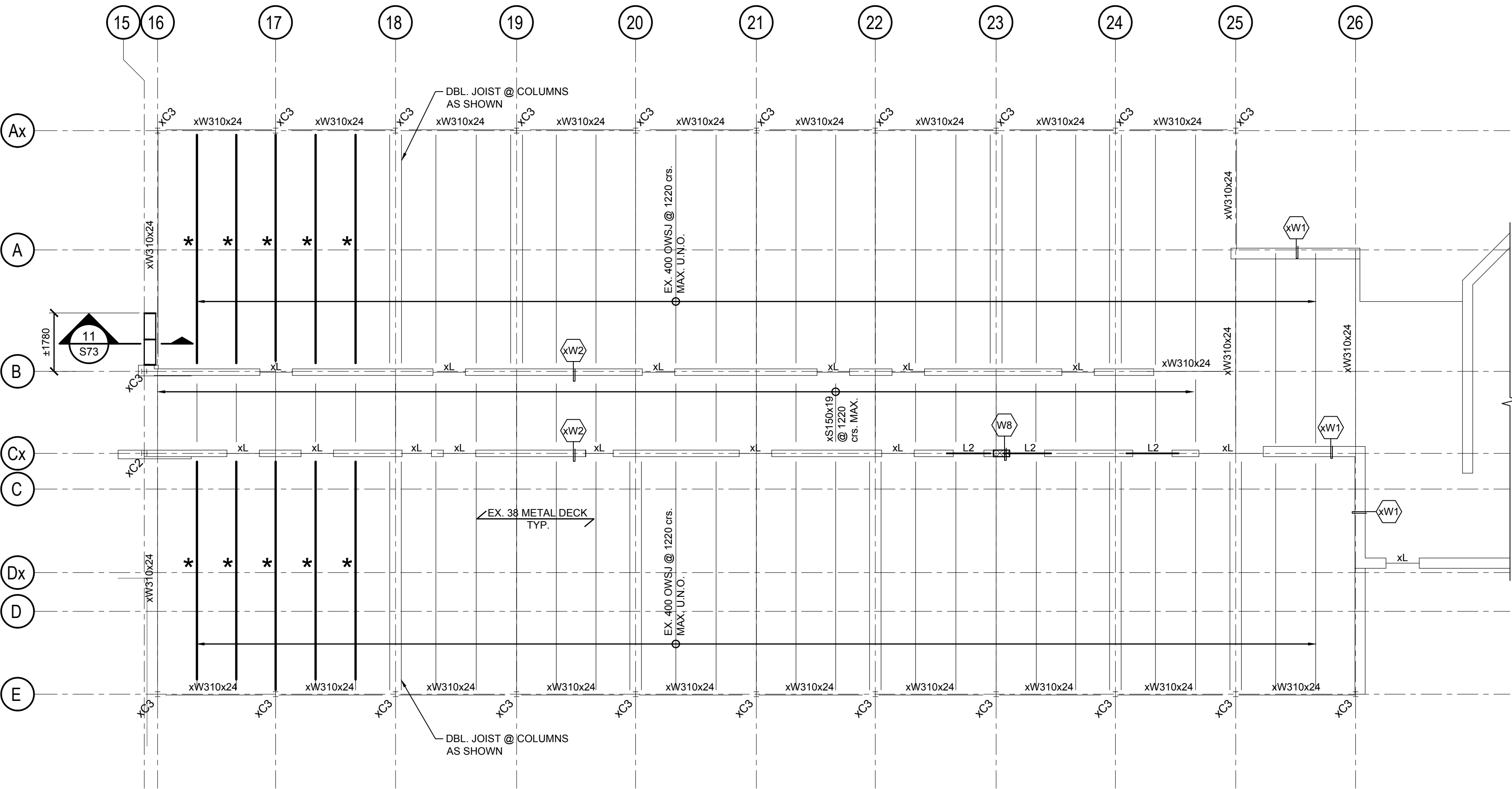


Project
**BUILDING #046
RENOVATIONS**

Drawing Title
**STRUCTURAL
ALTERED FRAMING PLAN
WING C ROOF**
Project No.
504034

Location
**UNIVERSITY OF GUELPH
BUILDING #46**

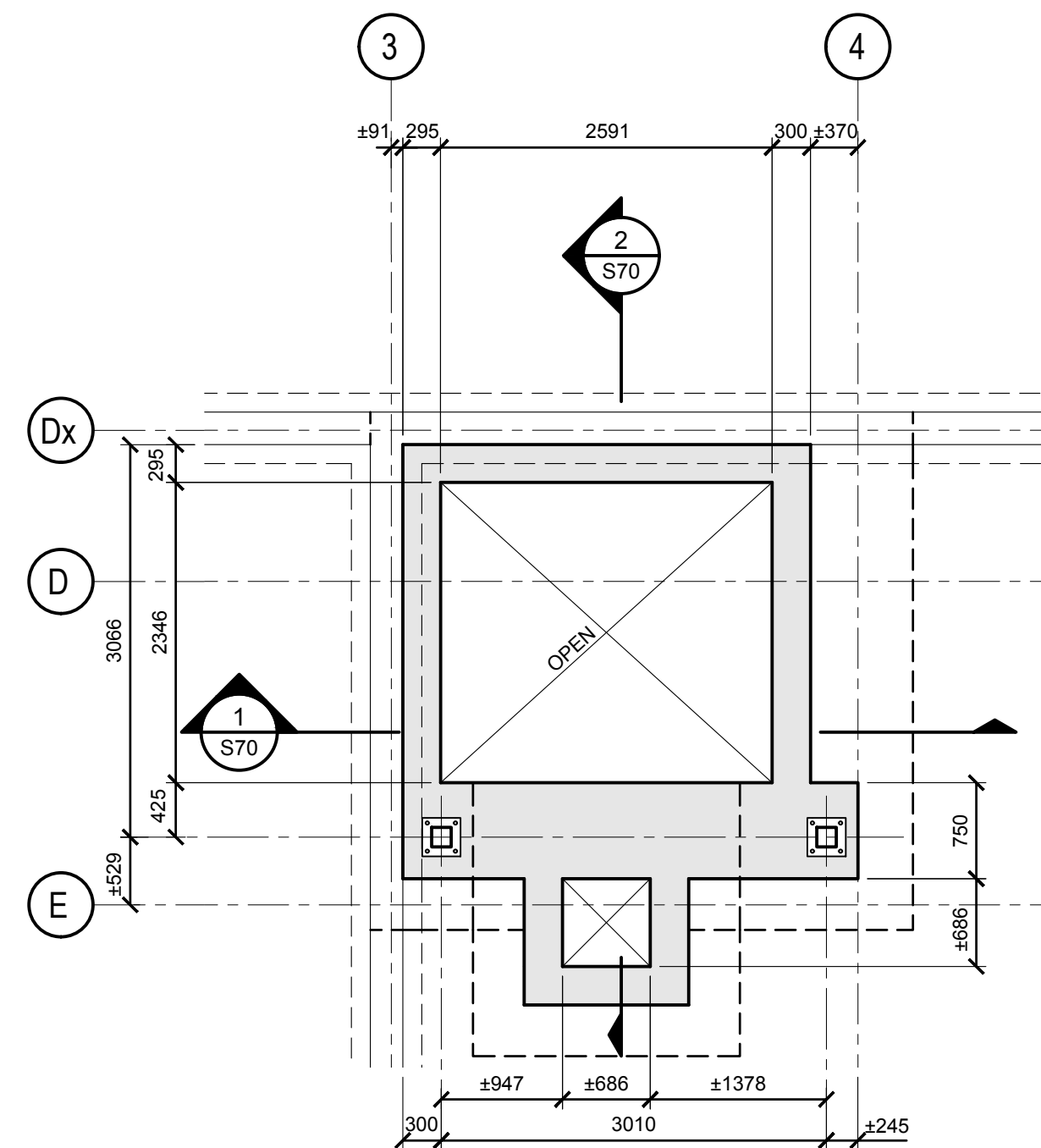
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Drawn by BCW	Drawing No. S16
Checked By LS	
Approved By DAY/JRE	
JLR # 27915	
Cad File No. ----	



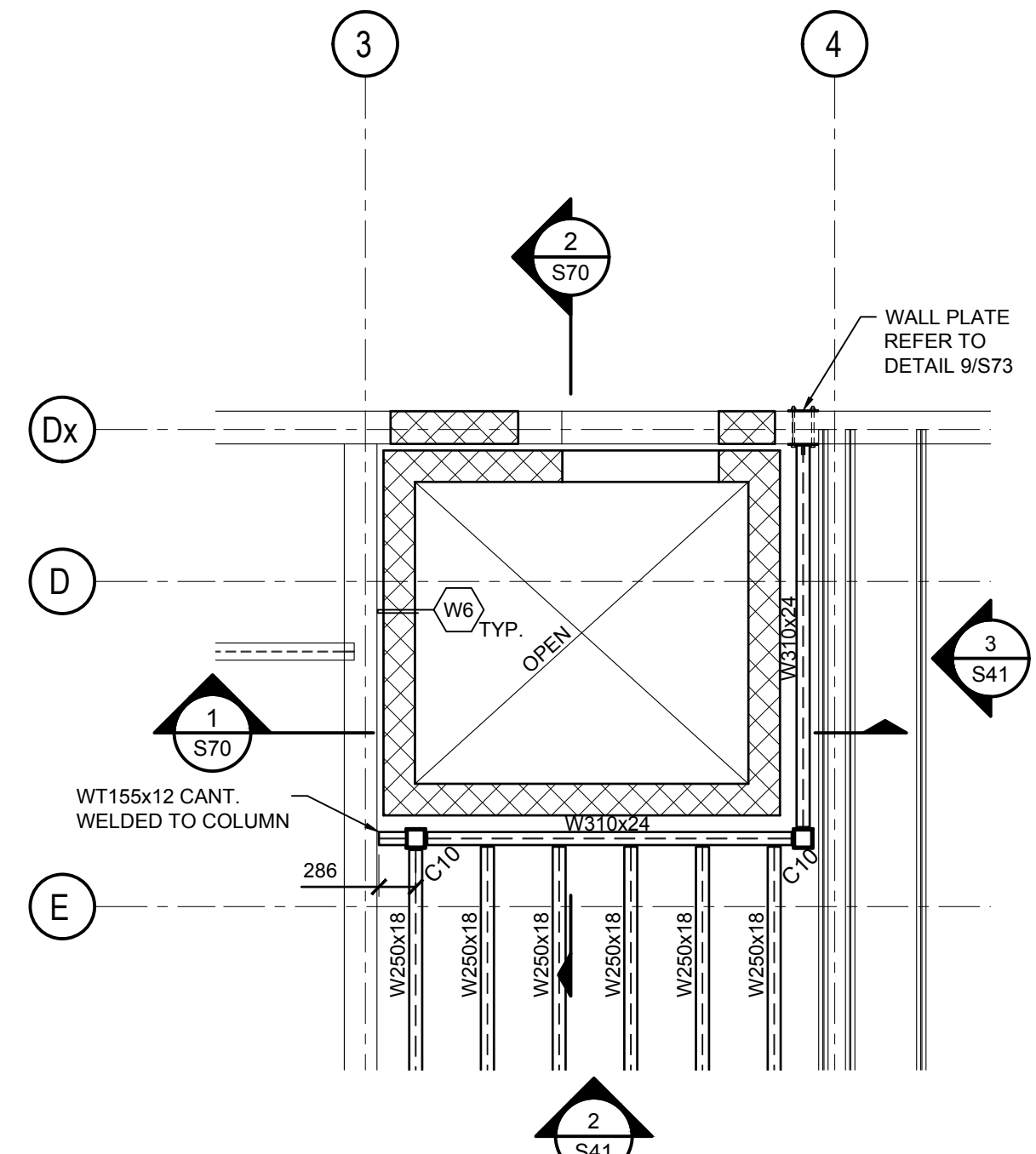
**ALTERED FRAMING PLAN
WING 'C' ROOF**

1
S16
SCALE: 1:100

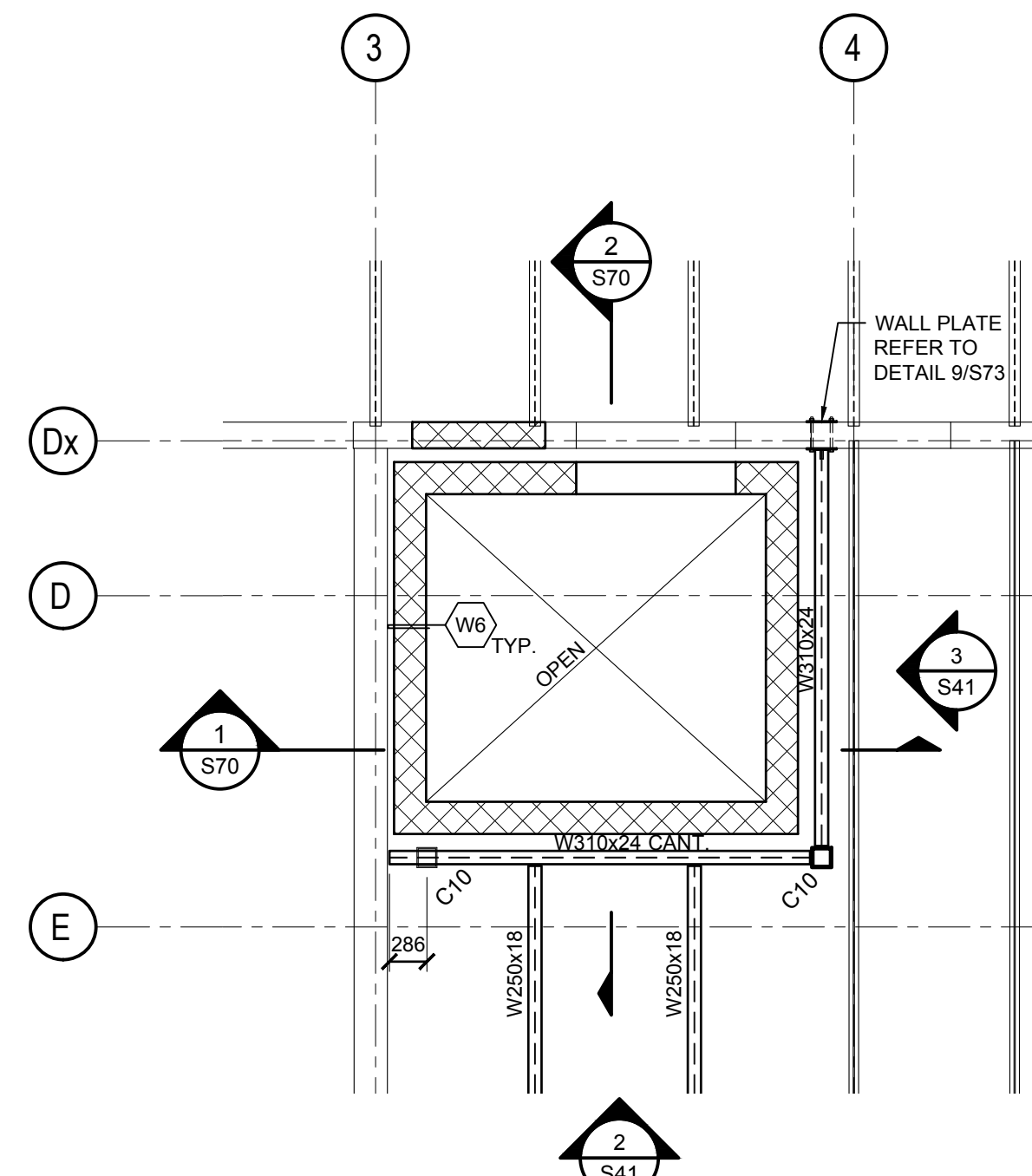
- NOTES:
- TOP OF METAL DECK ELEVATION AT 332.615 UNLESS NOTED (-XXX).
 - EXISTING 38mm (22 GAUGE) METAL ROOF DECK.



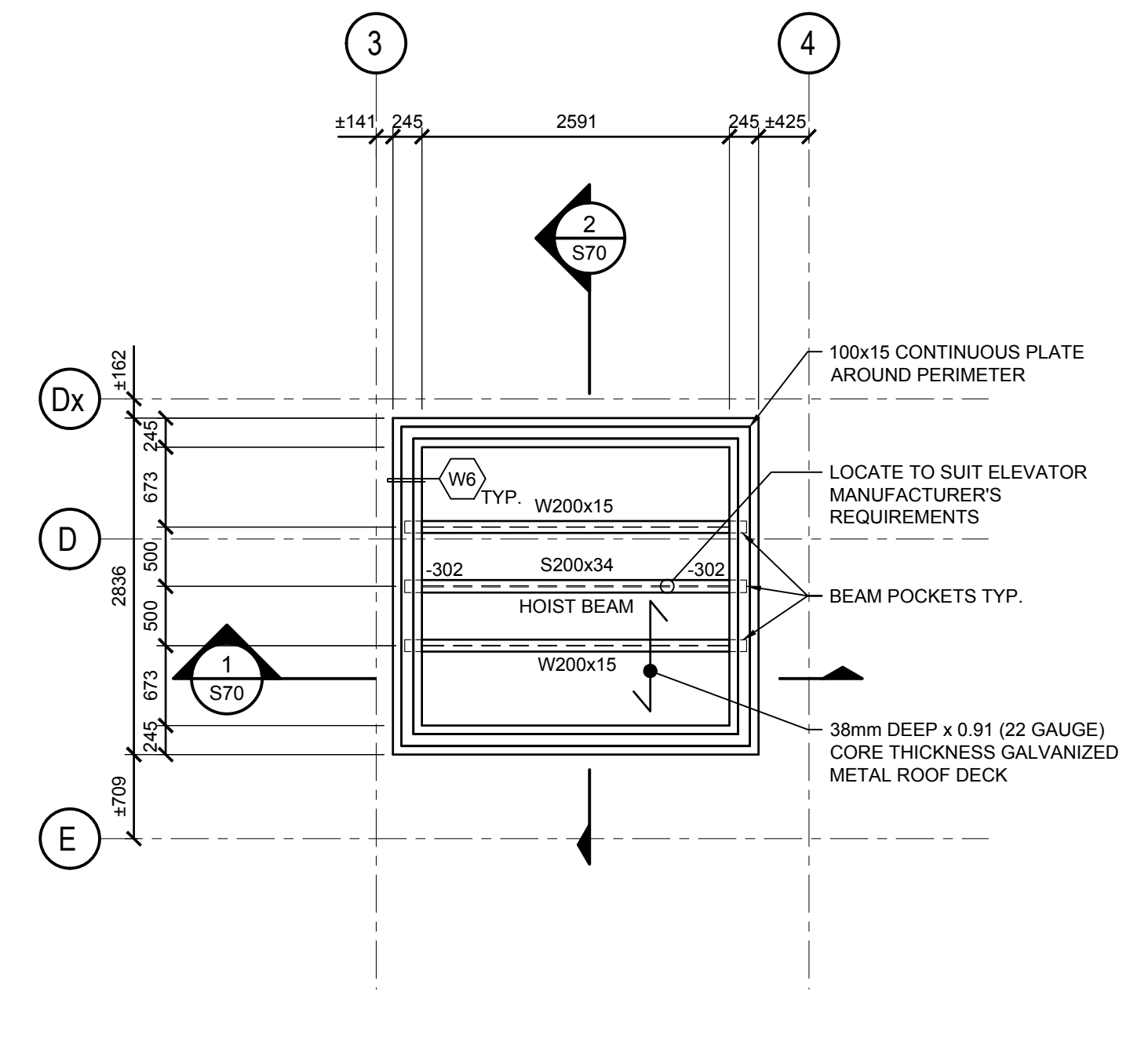
1 ELEVATOR FOUNDATION PLAN
SCALE: 1:50



2 ELEVATOR FRAMING PLAN AT LEVEL 2
SCALE: 1:50

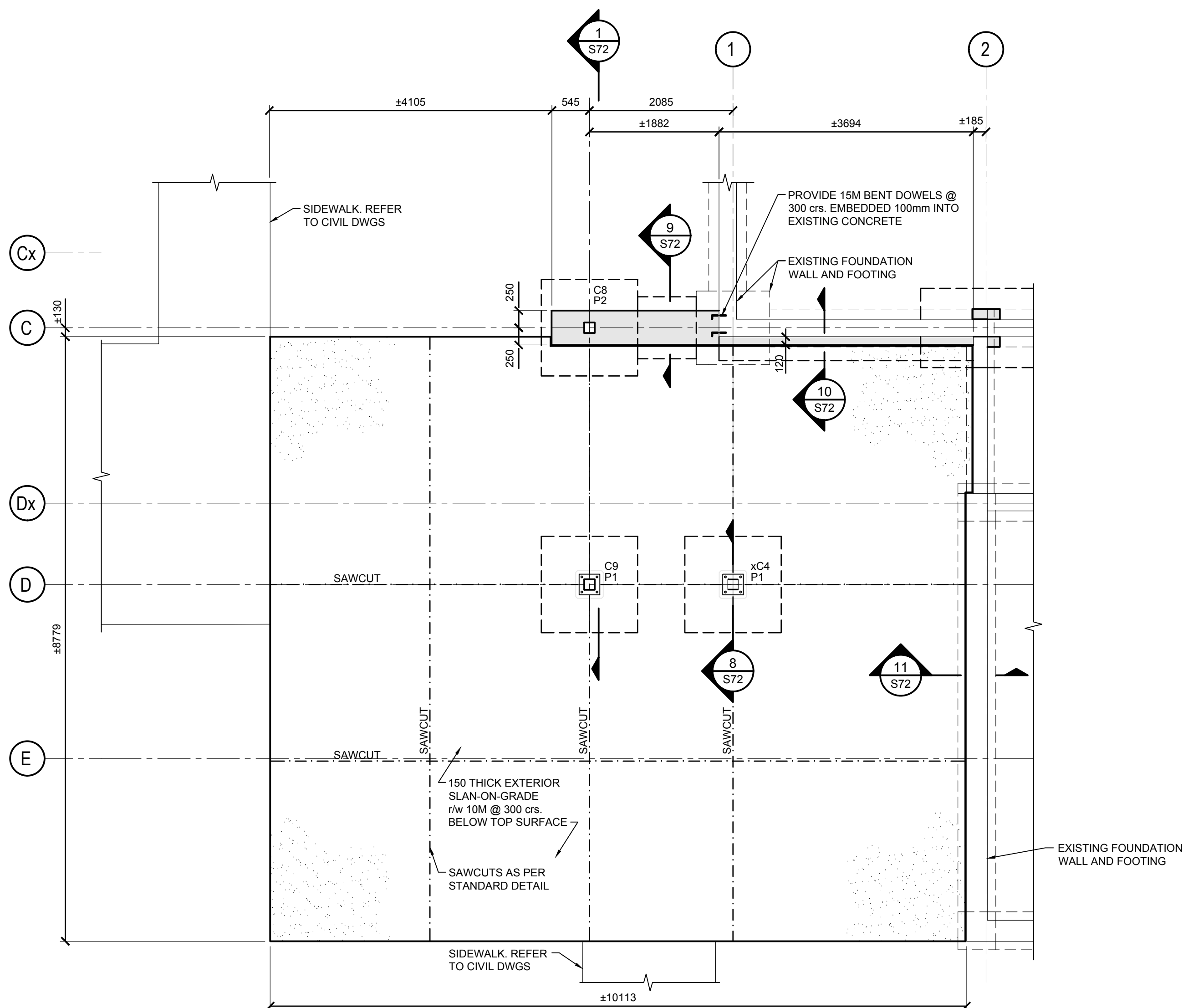


3 ELEVATOR FRAMING PLAN AT T.O. DECK
SCALE: 1:50

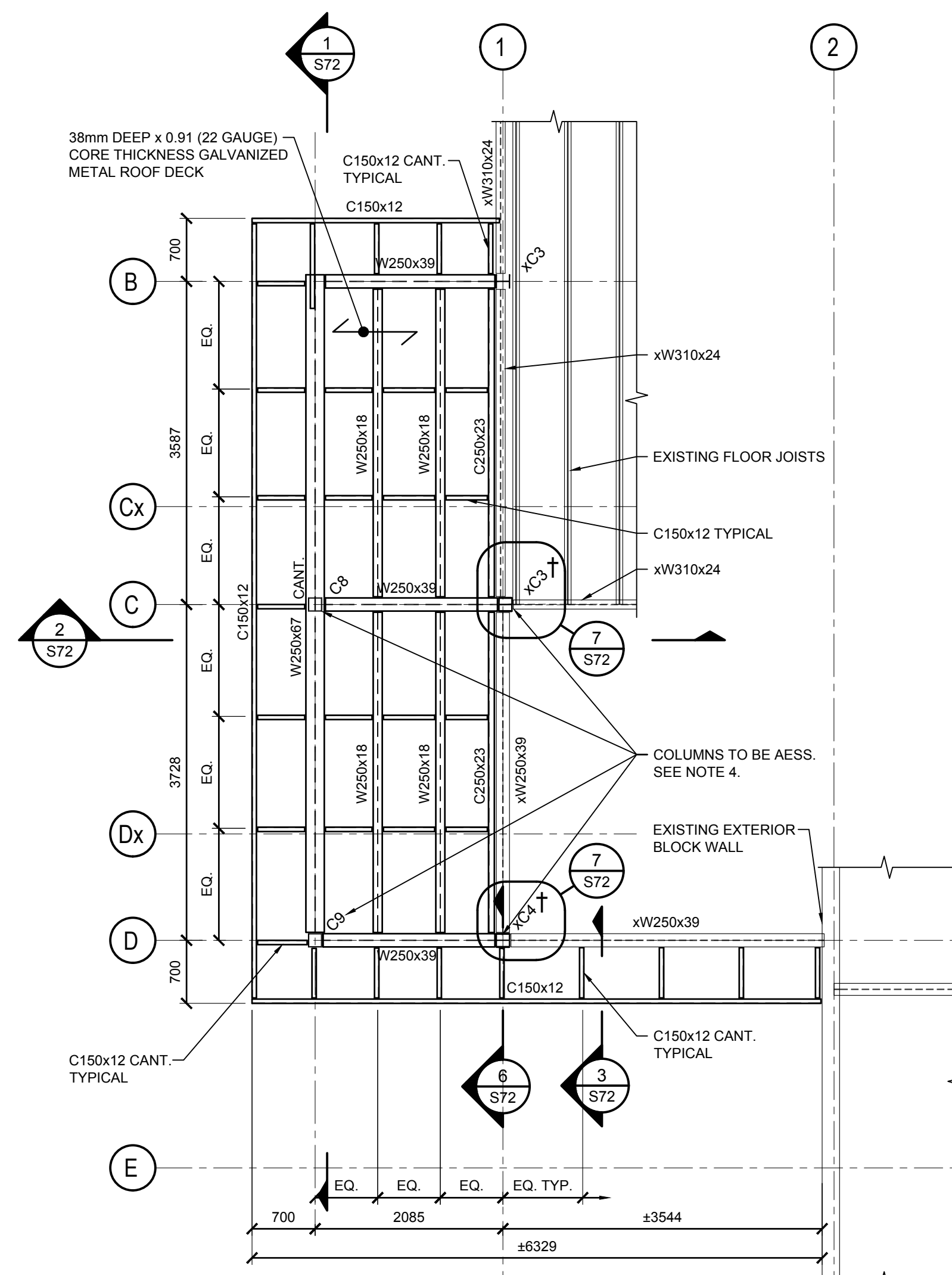


4 ELEVATOR PENTHOUSE FRAMING PLAN
SCALE: 1:50

- NOTES:
1. TOP OF STEEL ELEVATION AT 336.155 UNLESS NOTED THUS -XXX.
2. COORDINATE HOIST BEAM WITH ELEVATOR MANUFACTURER PRIOR TO FABRICATION.

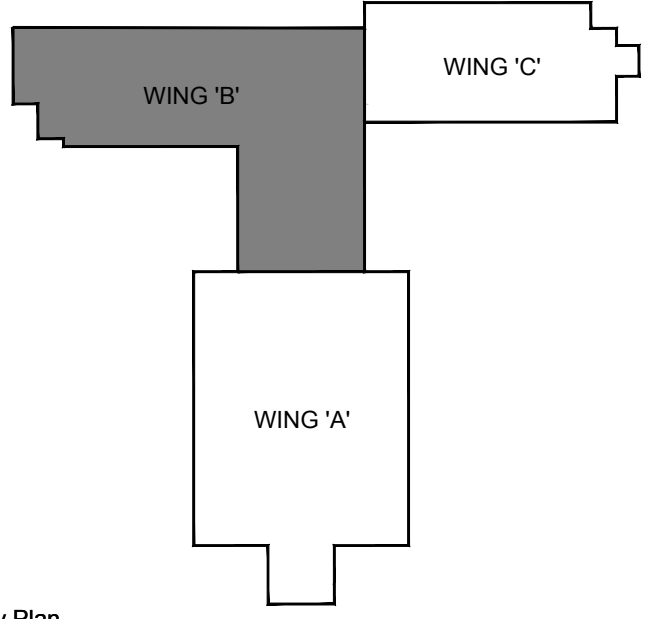


5 CANOPY FOUNDATION AND EXTERIOR SLAB PLAN
SCALE: 1:50



6 CANOPY FRAMING PLAN
SCALE: 1:50

- NOTES:
1. TOP OF LEVEL 2 - WING 'B' ELEVATION 330.900.
2. EXISTING STEEL BEAM ELEVATIONS VARY. REFER TO DETAILS NOTED ON PLAN.
3. TOP OF CANOPY STEEL ELEVATION AT 330.700.
4. EXISTING COLUMN REQUIRED TO BE REINFORCED AS NOTED THUS (†). REFER TO S14 FOR INFORMATION.
5. ARCHITECTURALLY EXPOSED STRUCTURAL SECTION (AESS), AS NOTED ON PLAN. REFER TO GENERAL NOTES AND SPECIFICATIONS FOR INFORMATION.



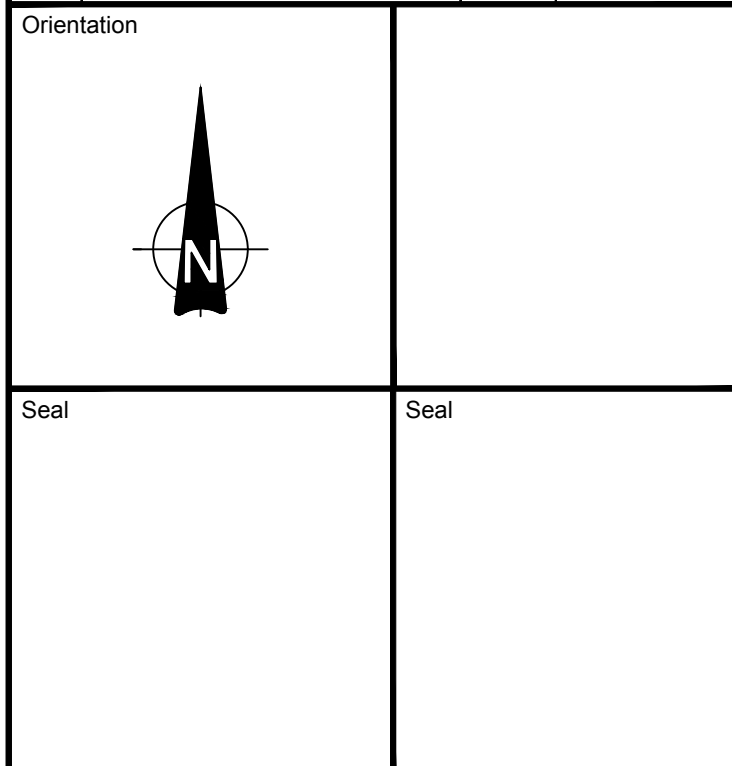
Key Plan
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0	ISSUED FOR PERMIT & TENDER	TA	NOV 2, 2018
NO.	ISSUED	BY	DATE



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Consultant
J.L.Richards
ENGINEERS-ARCHITECTS-PLANNERS

Project
BUILDING #046 RENOVATIONS
Drawing Title
STRUCTURAL ENLARGED FRAMING PLANS WING B
Project No.
504034

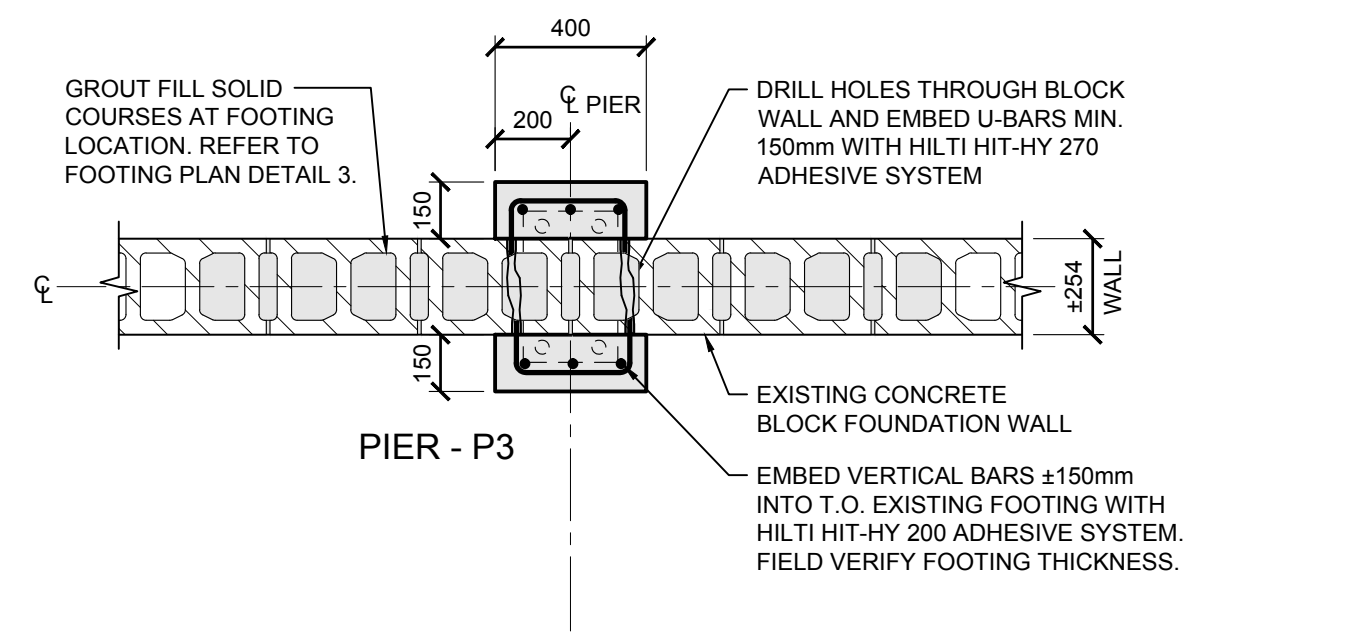
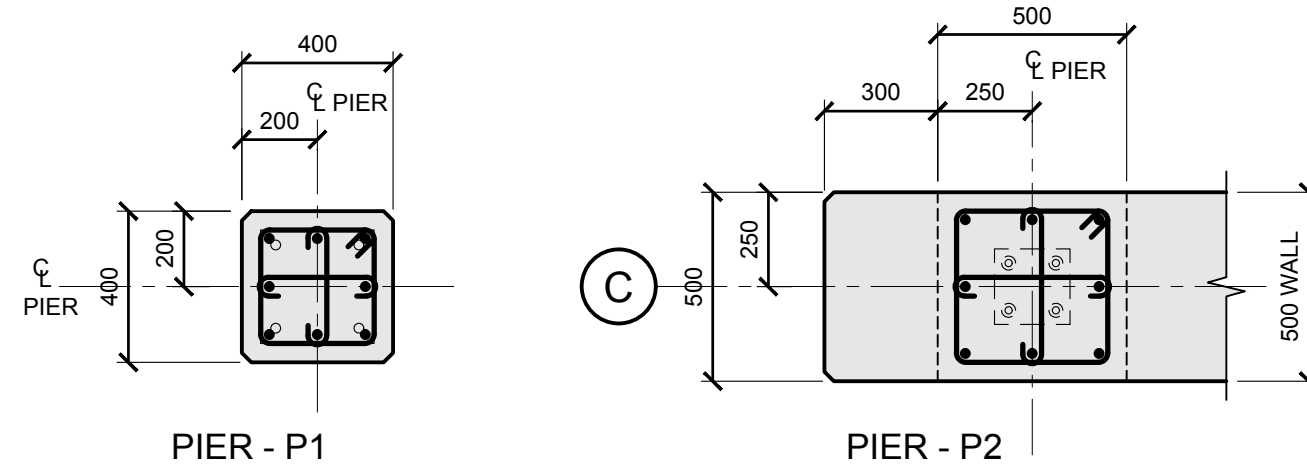
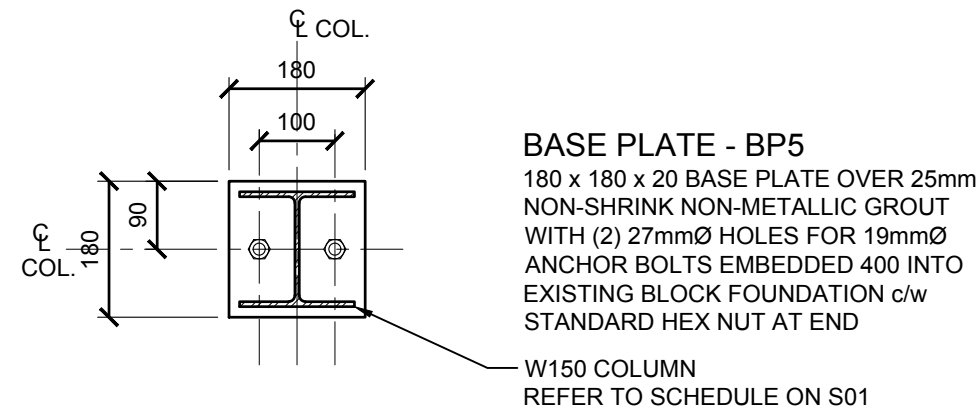
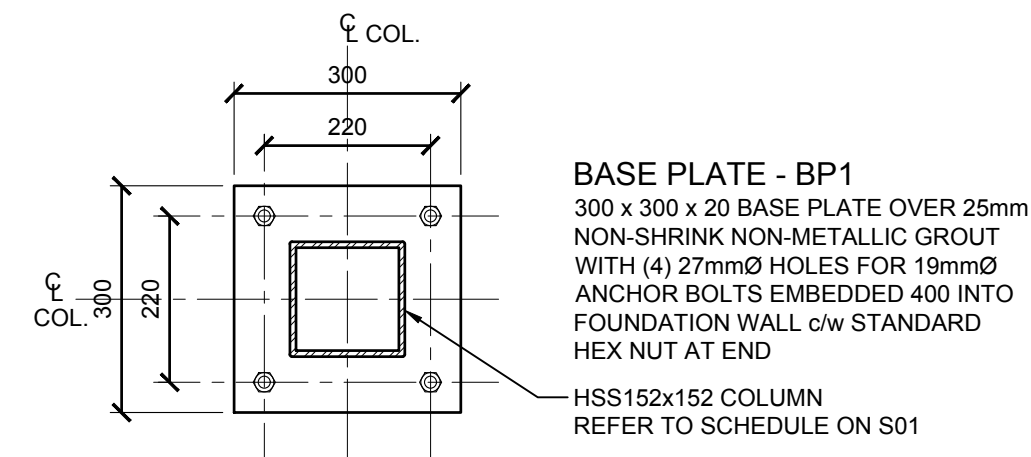
Location
UNIVERSITY OF GUELPH BUILDING #46

Scale AS NOTED	Date APR 12, 2019
Drawn by BCW	Drawing No.
Checked By LS	
Approved By DAY/JRE	
JLR # 27915	
Cad File No. -----	

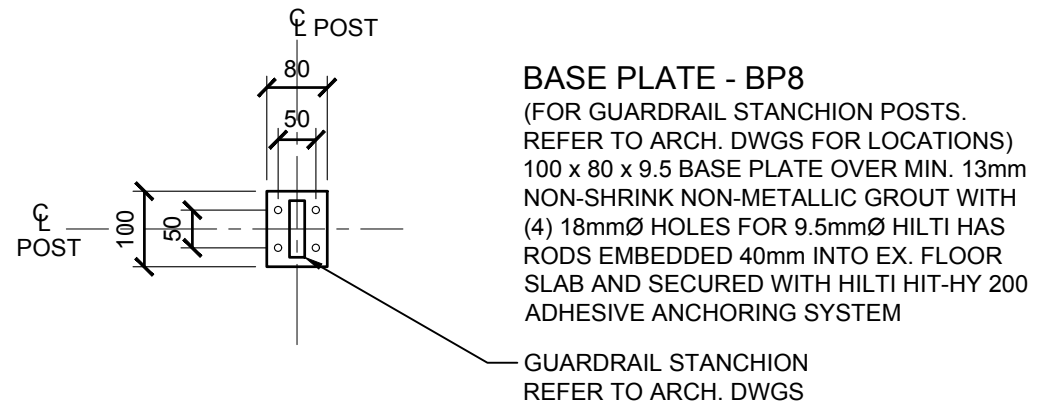
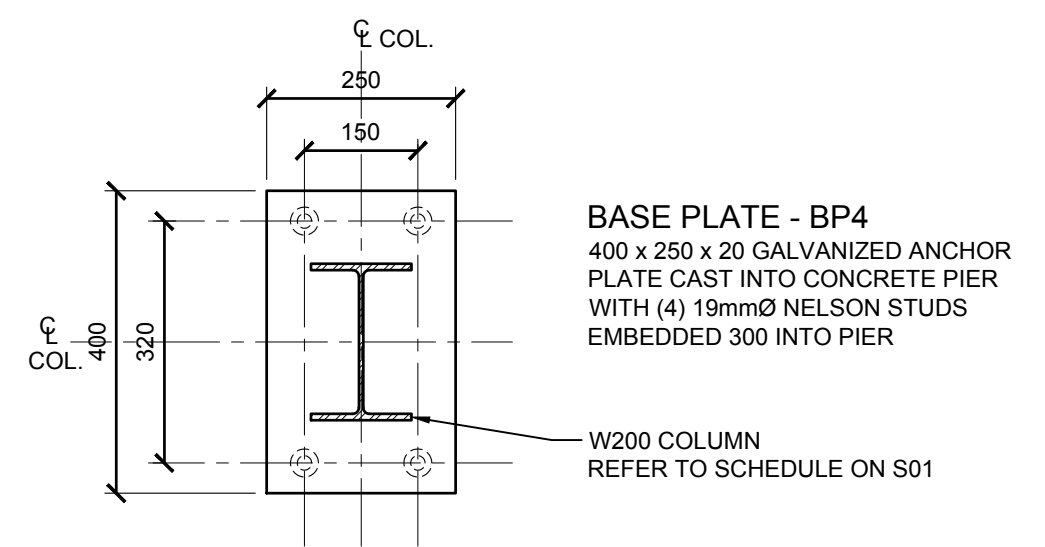
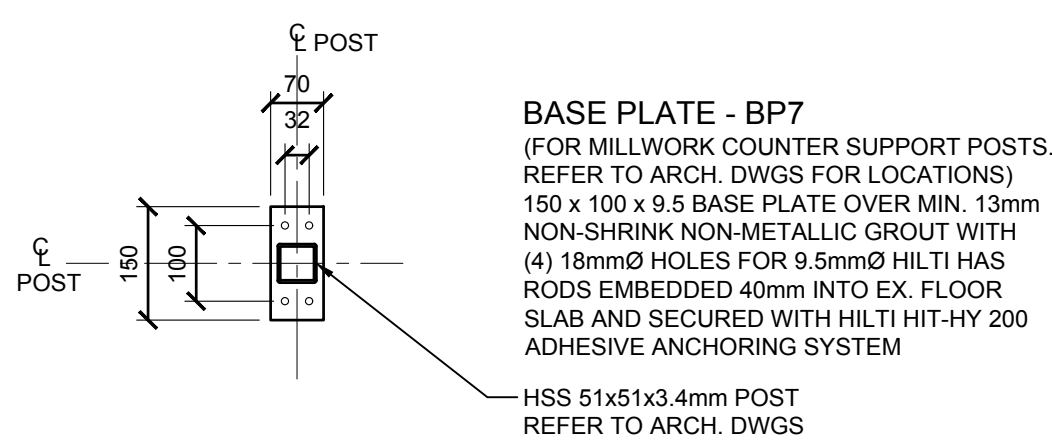
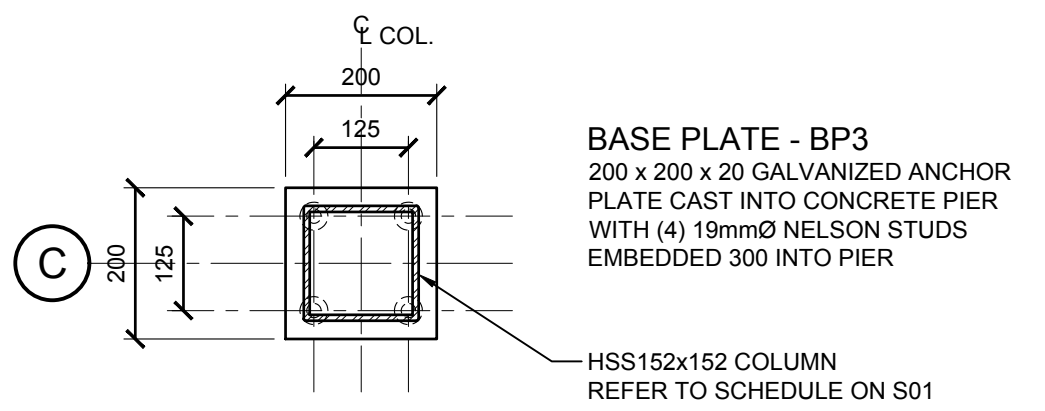
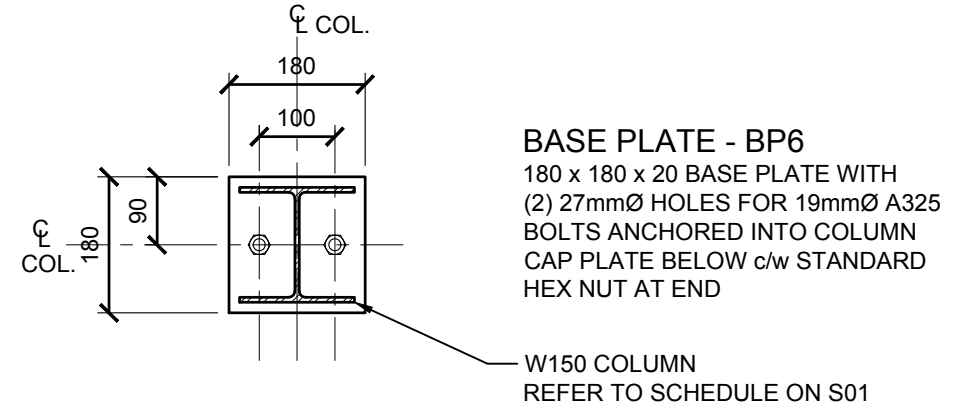
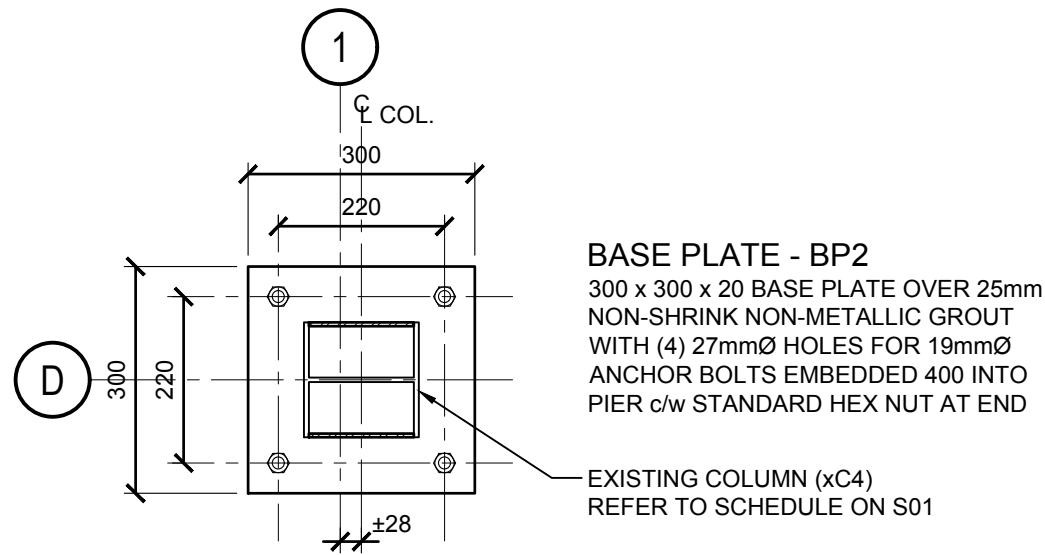
S20

Cad File No. ----

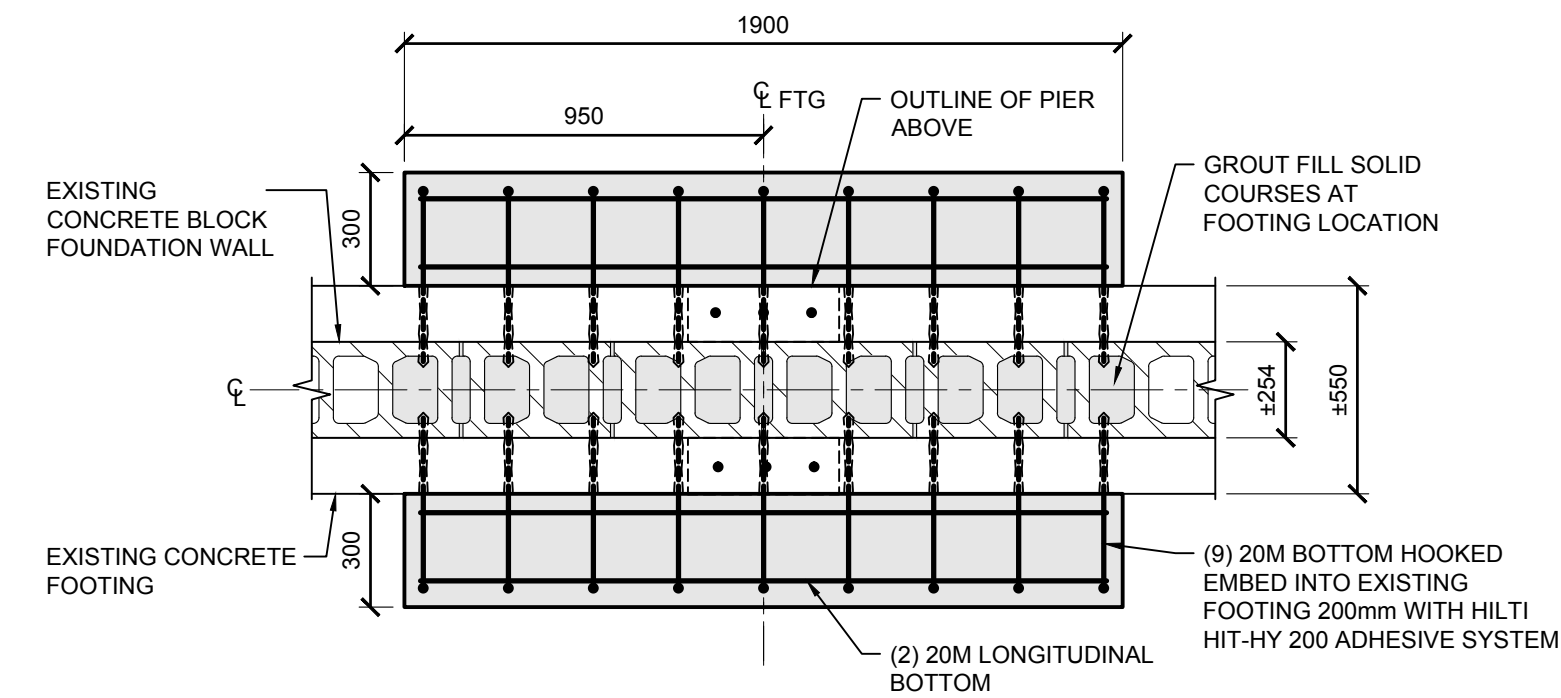
S21



2
S30
PIER PLAN DETAILS
SCALE: 1:20
NOTE: REFER TO SCHEDULE FOR REINFORCING.



1
S30
BASE PLATE DETAILS
SCALE: 1:10



3
S30
FOOTING PLAN DETAIL
SCALE: 1:20

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Orientation	
Seal	Seal

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Consultant www.jrichards.ca

J.R. J.L. Richards
ENGINEERS - ARCHITECTS - PLANNERS

Project
**BUILDING #046
RENOVATIONS**

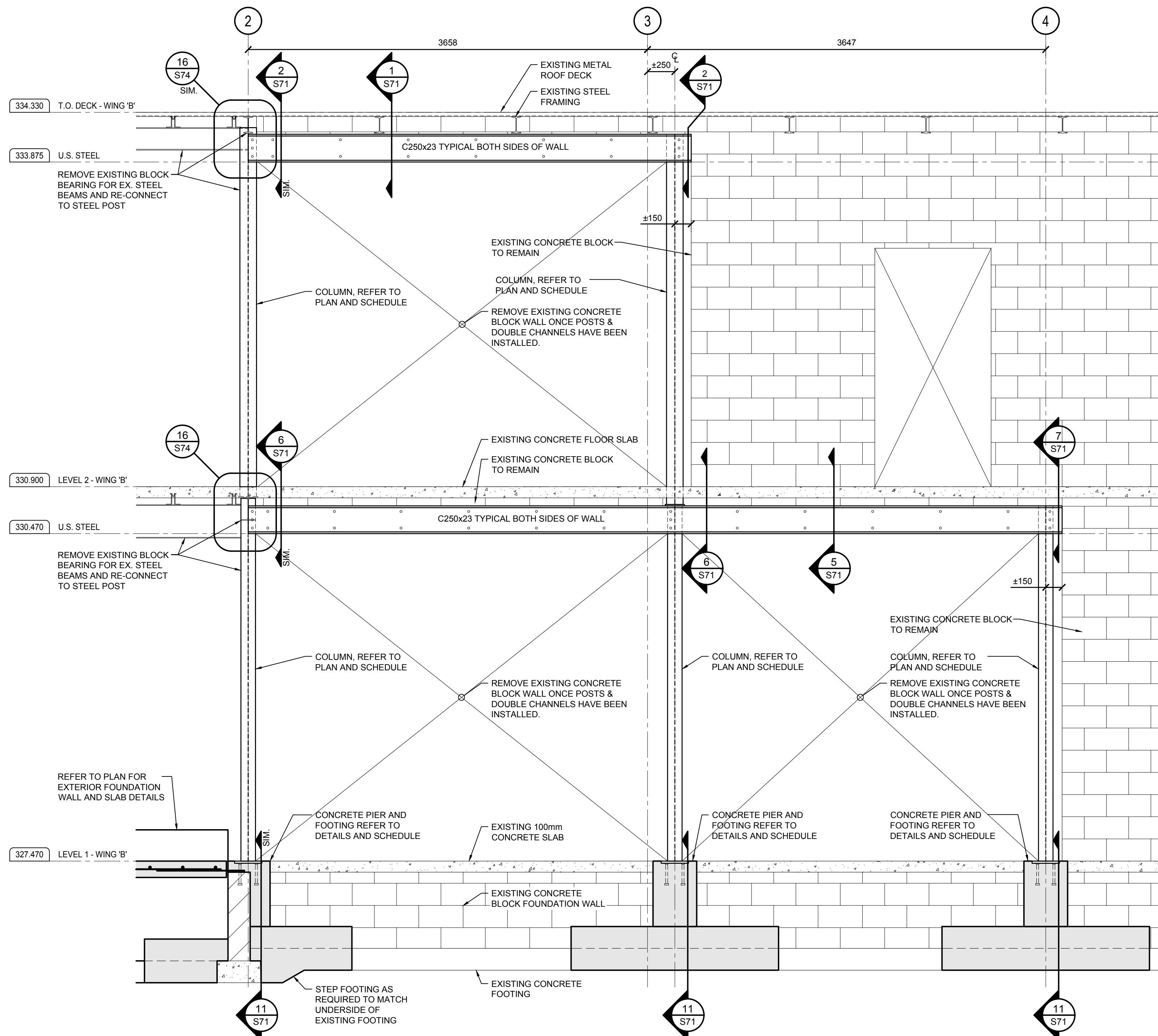
Drawing Title
**STRUCTURAL
PLAN DETAILS**

Project No.
504034

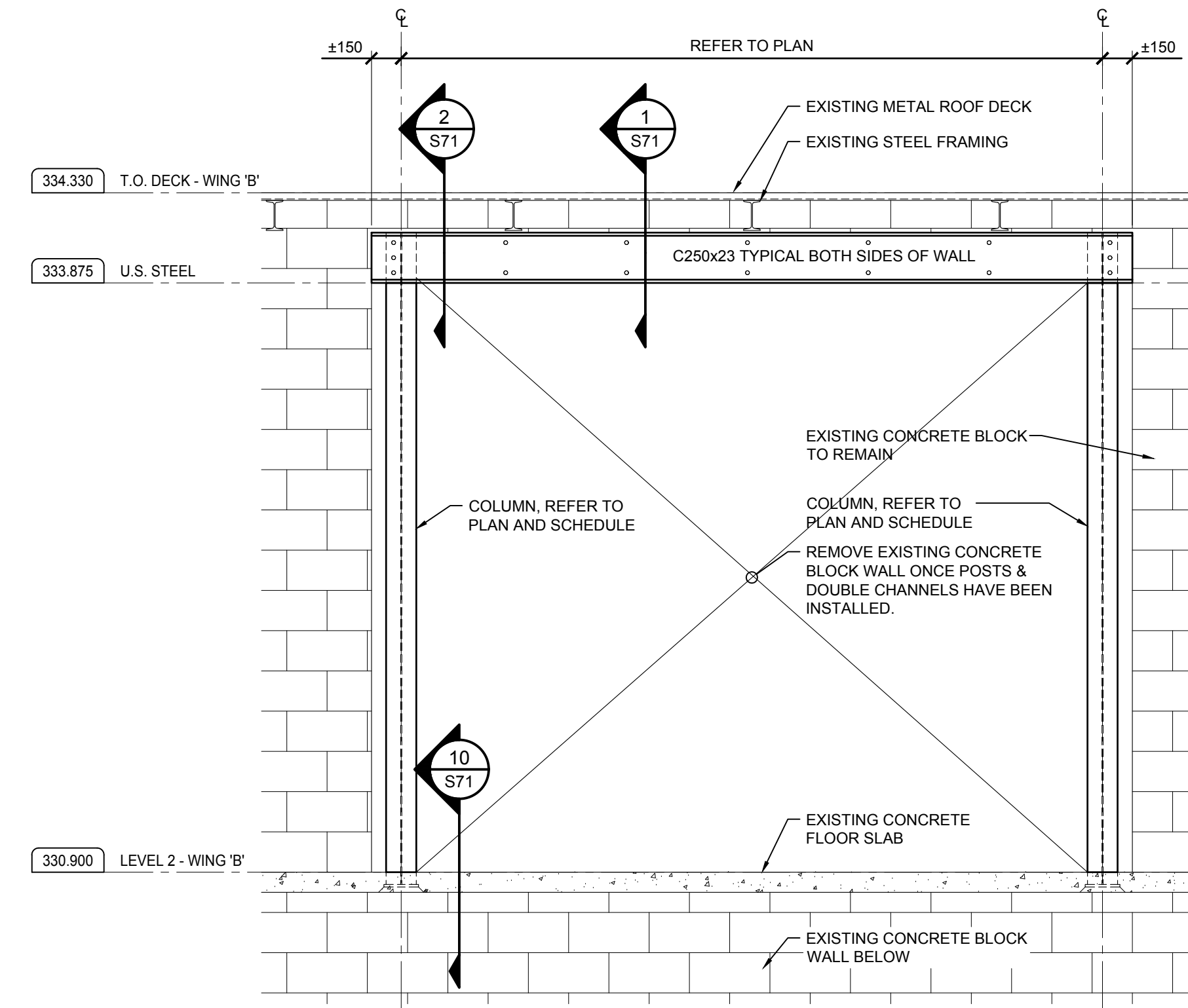
Location
**UNIVERSITY OF GUELPH
BUILDING #46**

Scale AS NOTED	Date APR 12, 2019
Drawn by BCW	Drawing No.
Checked By LS	
Approved By DAY/JRE	
JLR # 27915	
Cad File No. ----	

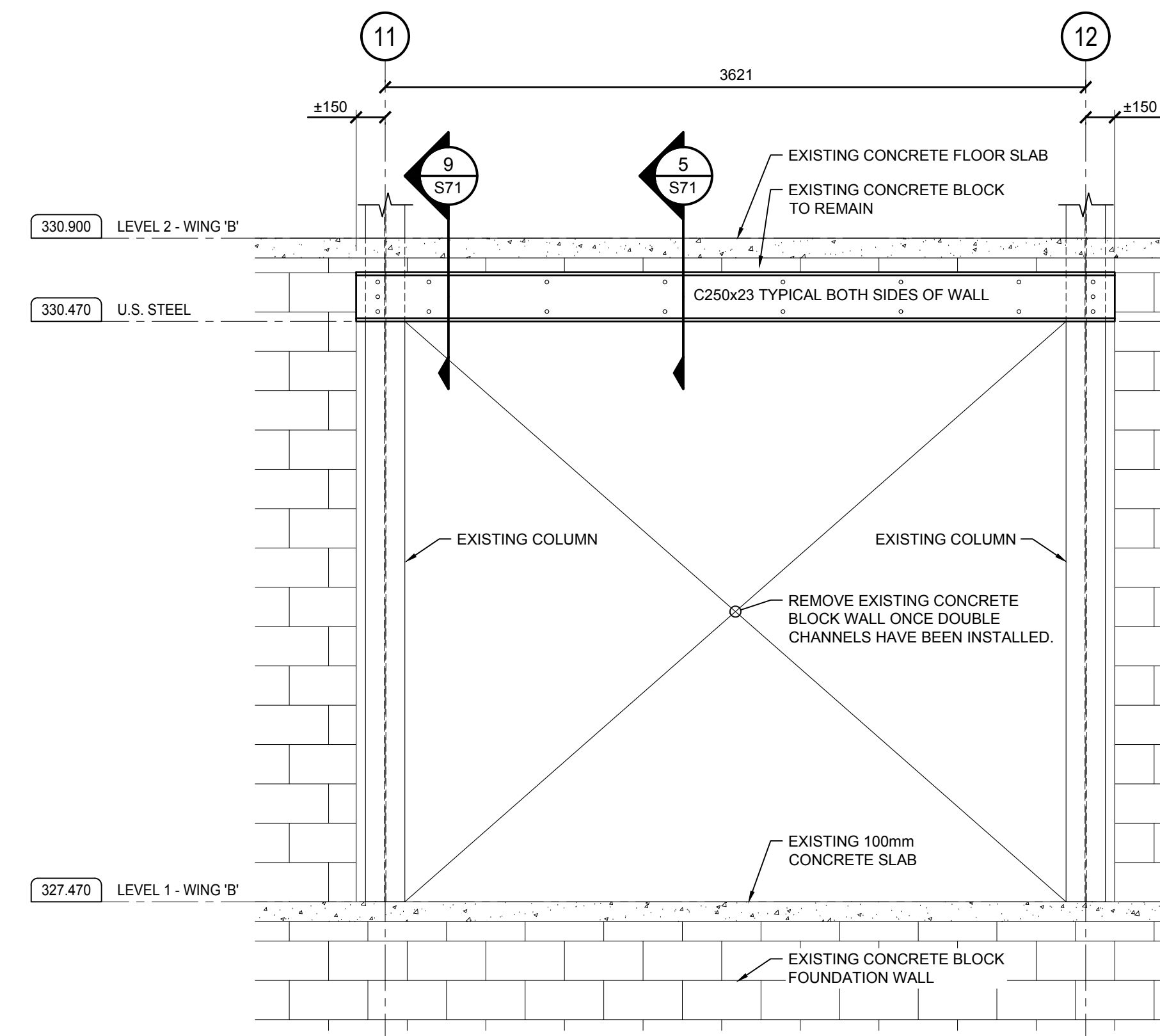
S30



1 FRAMING ELEVATION
S40
SCALE: 1:25



2 FRAMING ELEVATION
S40
SCALE: 1:25



3 FRAMING ELEVATION
S40
SCALE: 1:25

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Orientation	
Seal	Seal

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Guelph, Ontario. N1G 2W1

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J.L. Richards
ENGINEERS - ARCHITECTS - PLANNERS

Project
**BUILDING #046
RENOVATIONS**

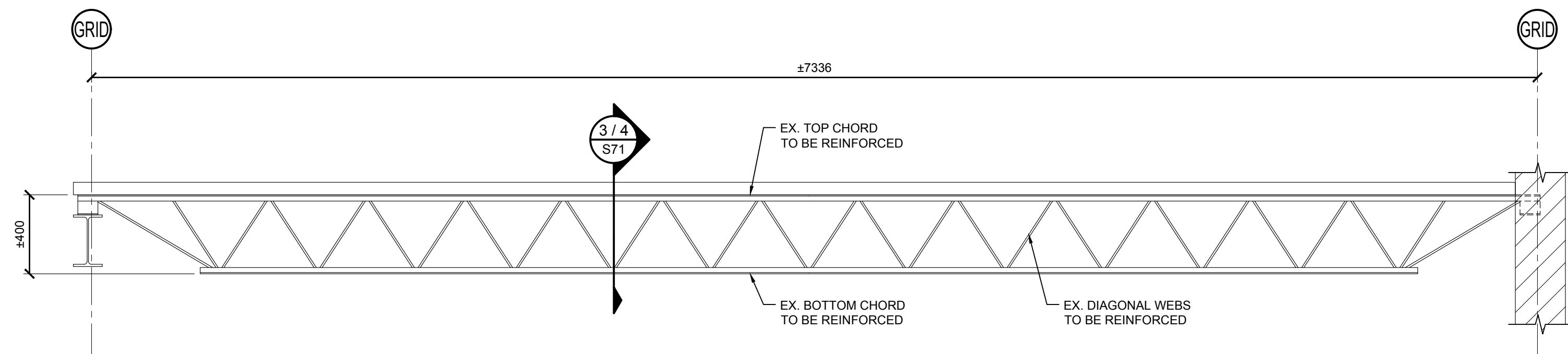
Drawing Title
**STRUCTURAL
FRAMING ELEVATIONS**

Project No.
504034

Location
**UNIVERSITY OF GUELPH
BUILDING #46**

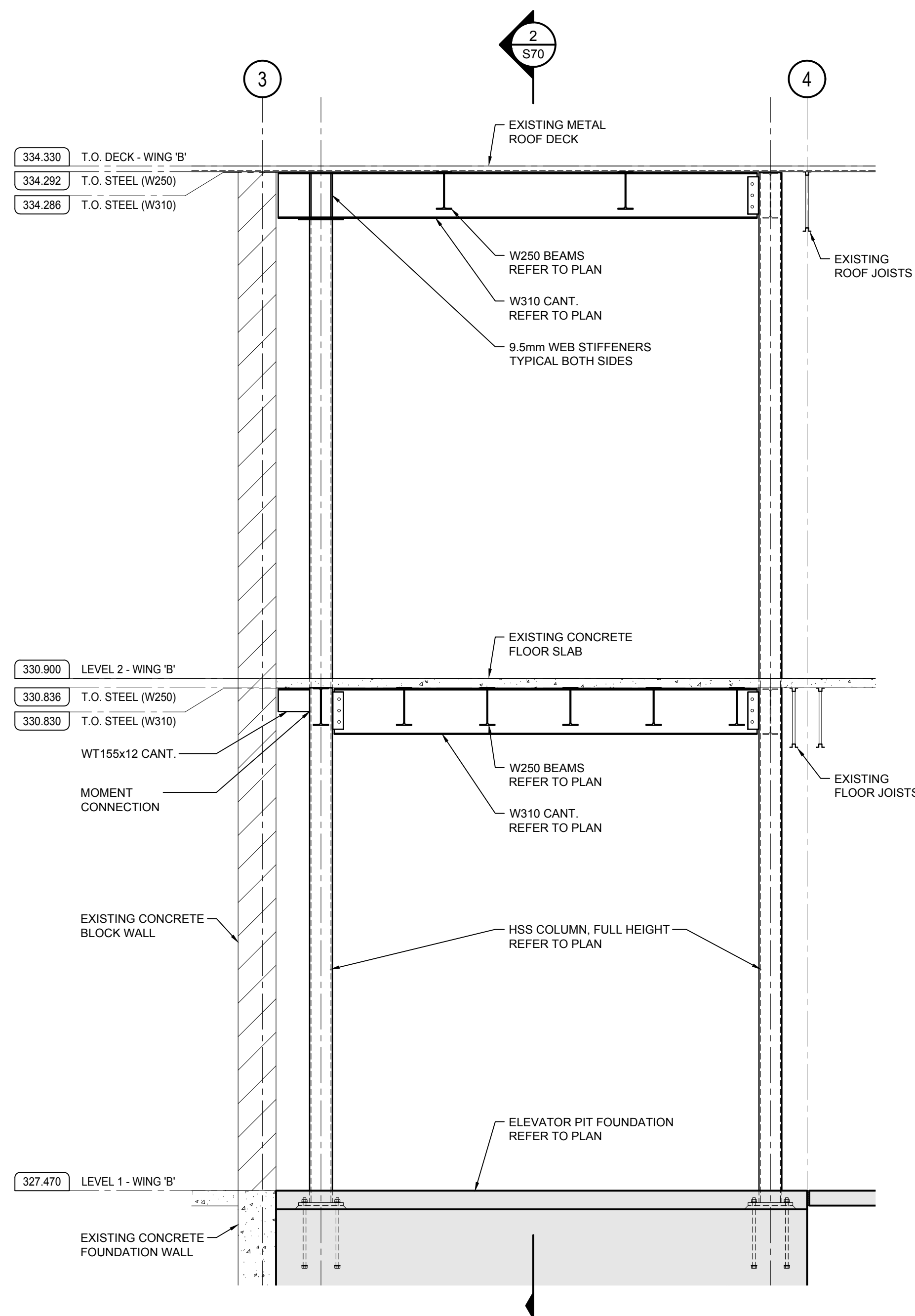
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Drawn by BCW	Drawing No.
Checked By LS	
Approved By DAY/JRE	
JLR # 27915	
Cad File No. -----	

S40

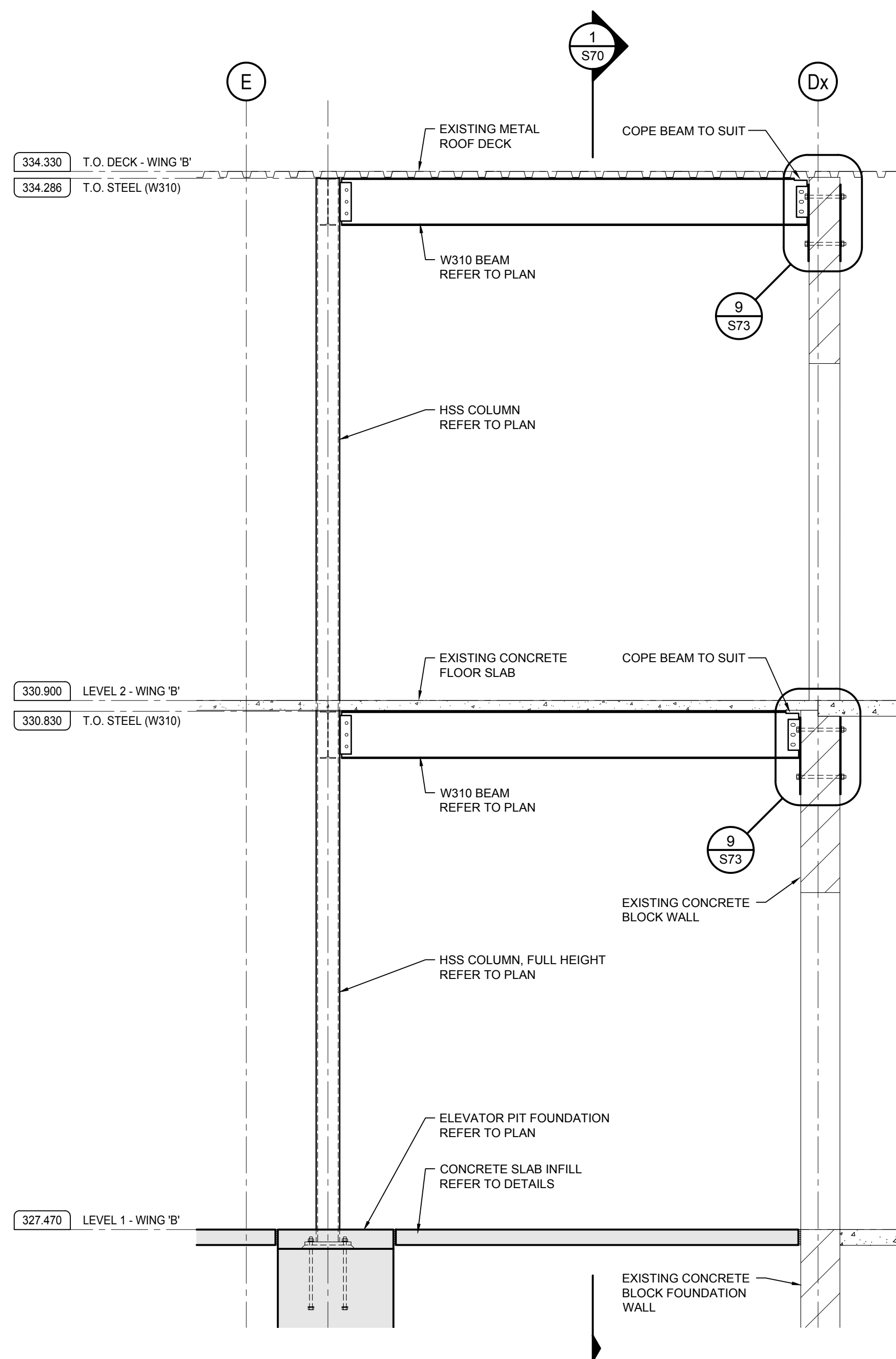


1 TYPICAL EXISTING 400 DEEP OWSJ ELEVATION
S41 SCALE: 1:20

NOTE: REFER TO FLOOR AND ROOF JOIST REINFORCING DETAILS ON S71.



2 FRAMING ELEVATION
S41 SCALE: 1:25



3 FRAMING ELEVATION
S41 SCALE: 1:25

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Orientation	
Seal	Seal

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Project
BUILDING #046 RENOVATIONS

Drawing Title
STRUCTURAL FRAMING ELEVATIONS

Project No.
504034

Location
UNIVERSITY OF GUELPH BUILDING #46

Scale
AS NOTED

Date
APR 12, 2019

Drawn by
BCW

Drawing No.

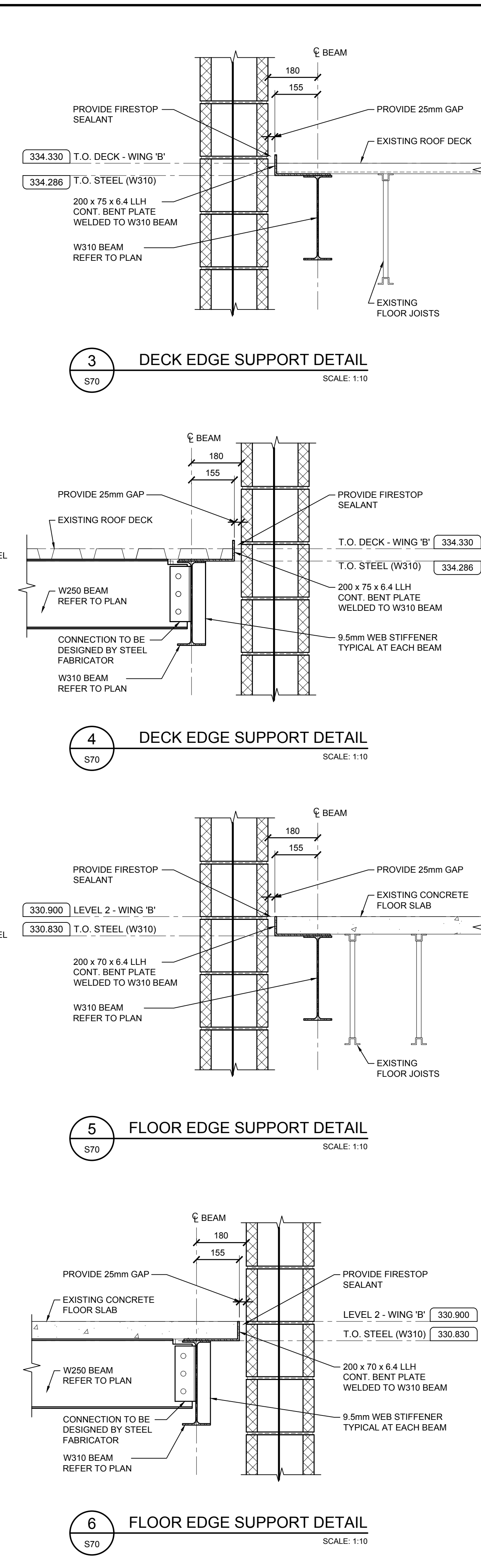
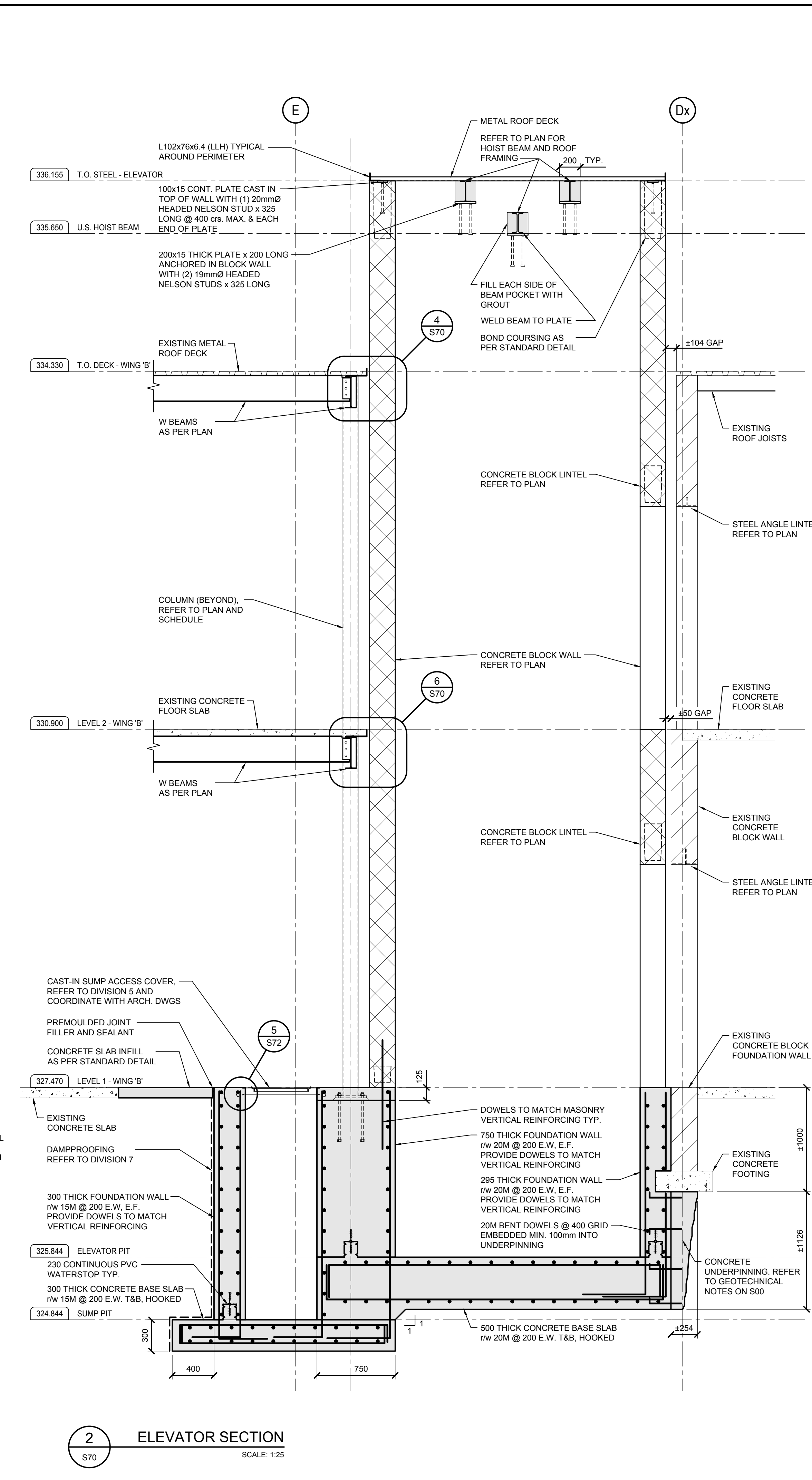
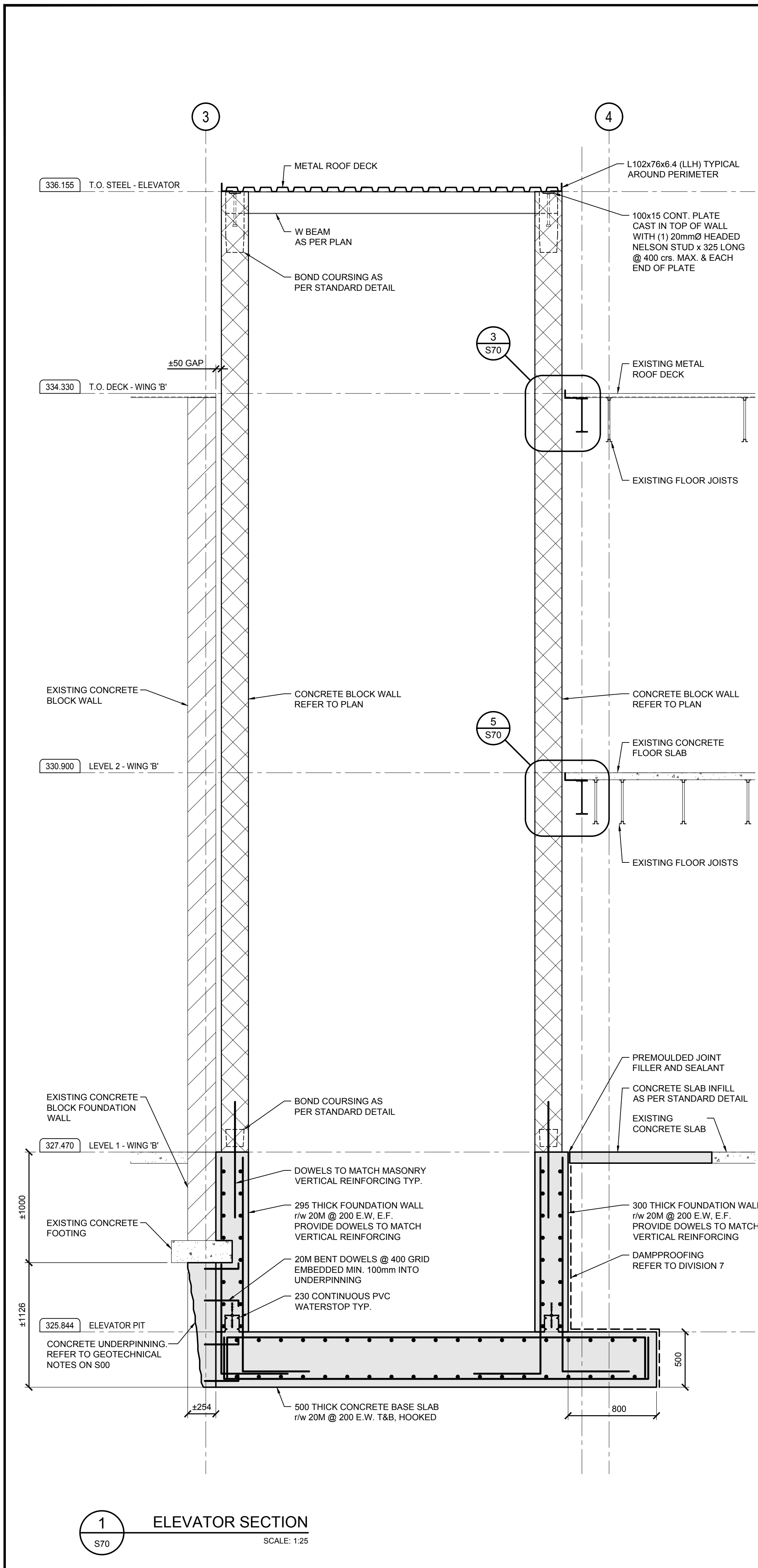
Checked By
LS

Approved By
DAY/JRE

JLR #
27915

S41

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NO.	ISSUED	BY	DATE

Orientation

Seal

Seal

UNIVERSITY OF GUELPH
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Consultant www.jrichards.ca

J.L.Richards
ENGINEERS - ARCHITECTS - PLANNERS

Project
BUILDING #046 RENOVATIONS

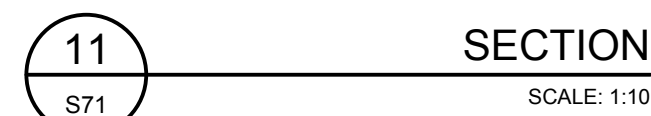
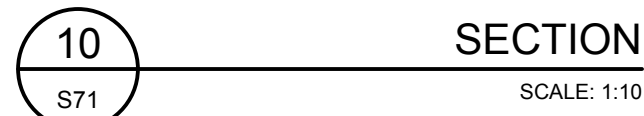
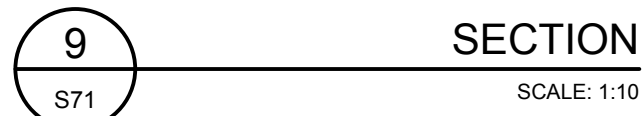
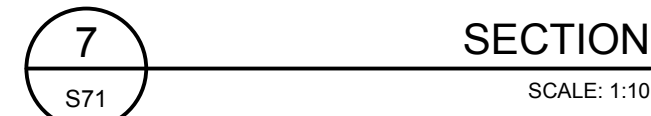
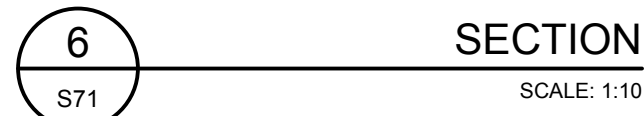
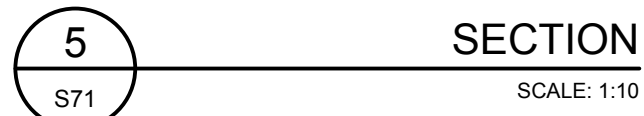
Drawing Title
STRUCTURAL SECTIONS AND DETAILS

Project No.
504034

Location
UNIVERSITY OF GUELPH BUILDING #46

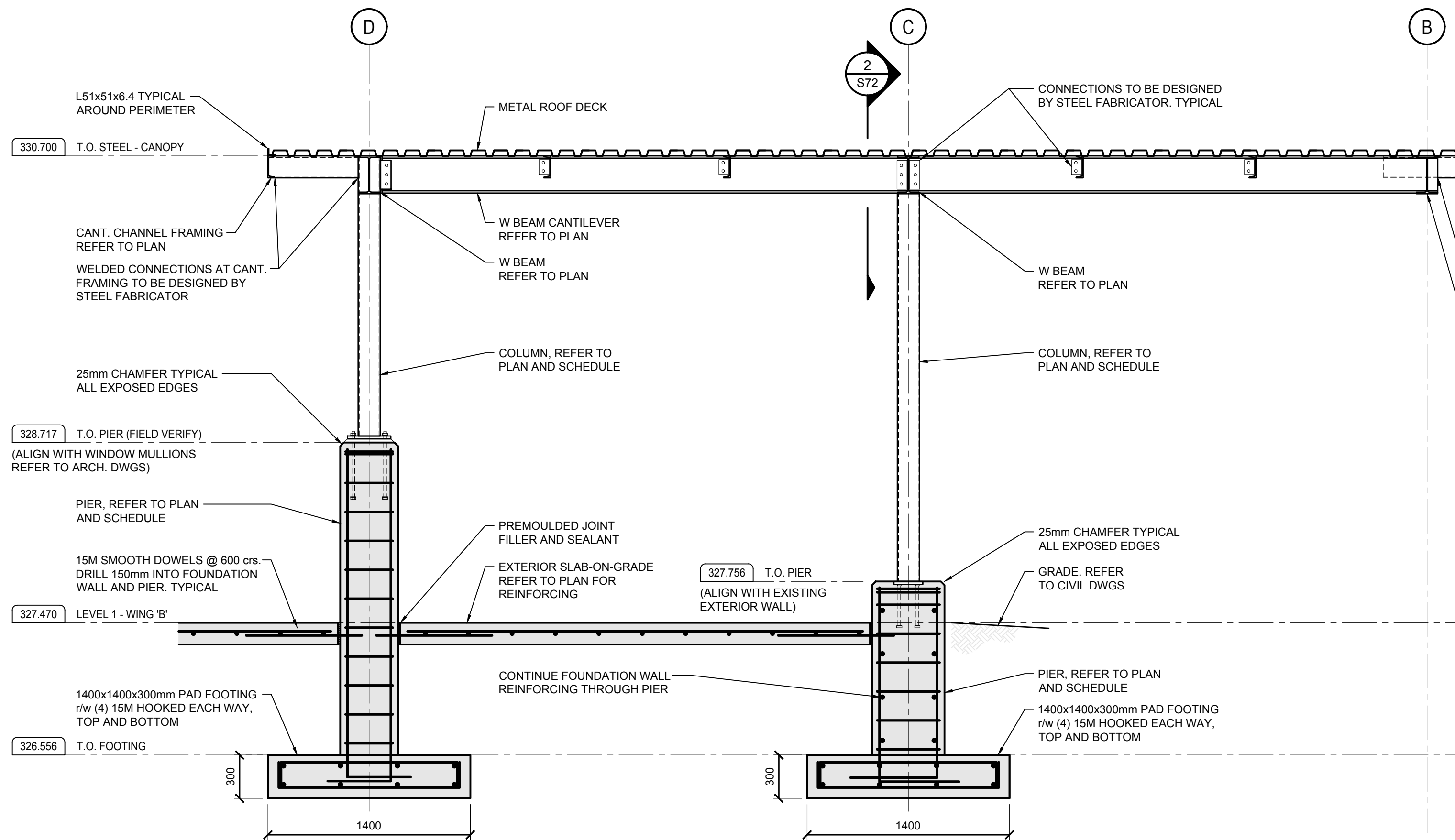
Scale AS NOTED	Date APR 12, 2019
Drawn by BCW	Drawing No.
Checked By LS	S70
Approved By DAY/JRE	
JLR # 27915	

Cad File No. -----

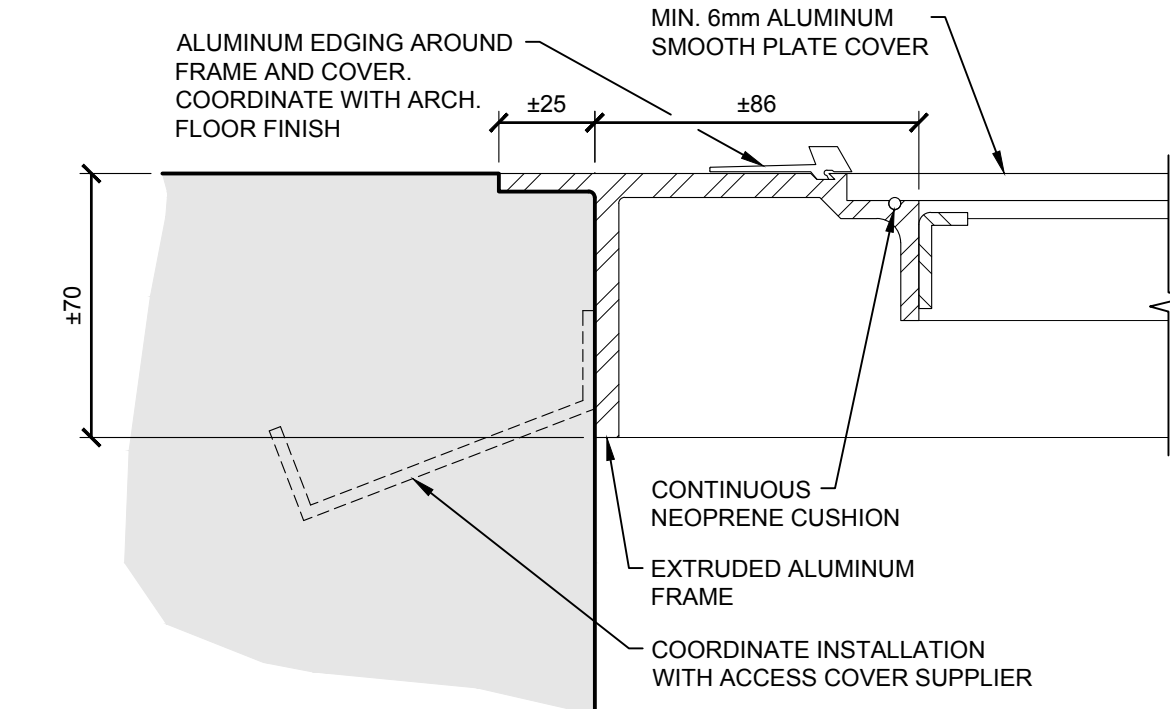


Cad File No. ----

S71

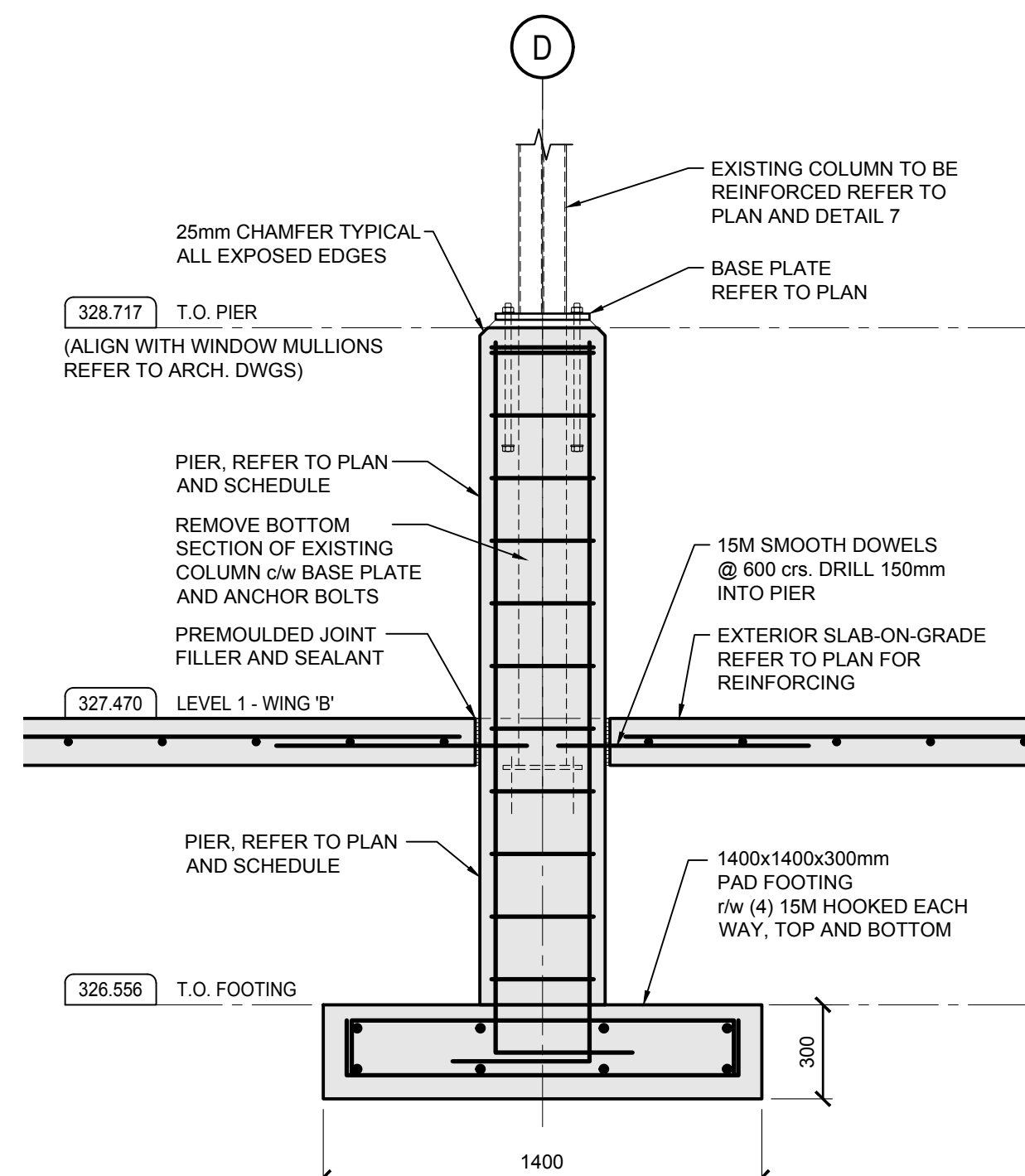


1 CANOPY SECTION
SCALE: 1:25

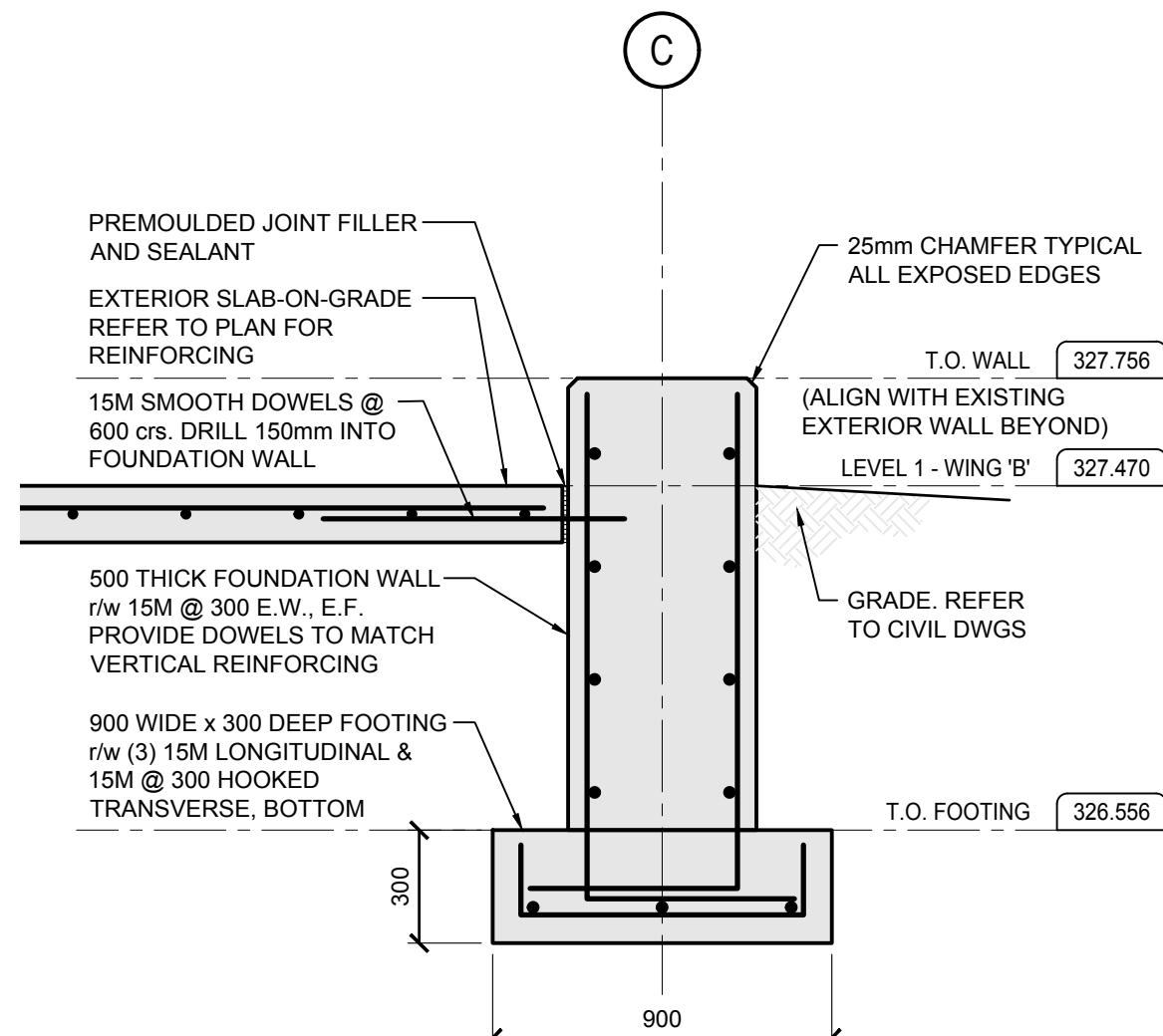


5 CAST-IN SUMP ACCESS COVER DETAIL
SCALE: 1:2

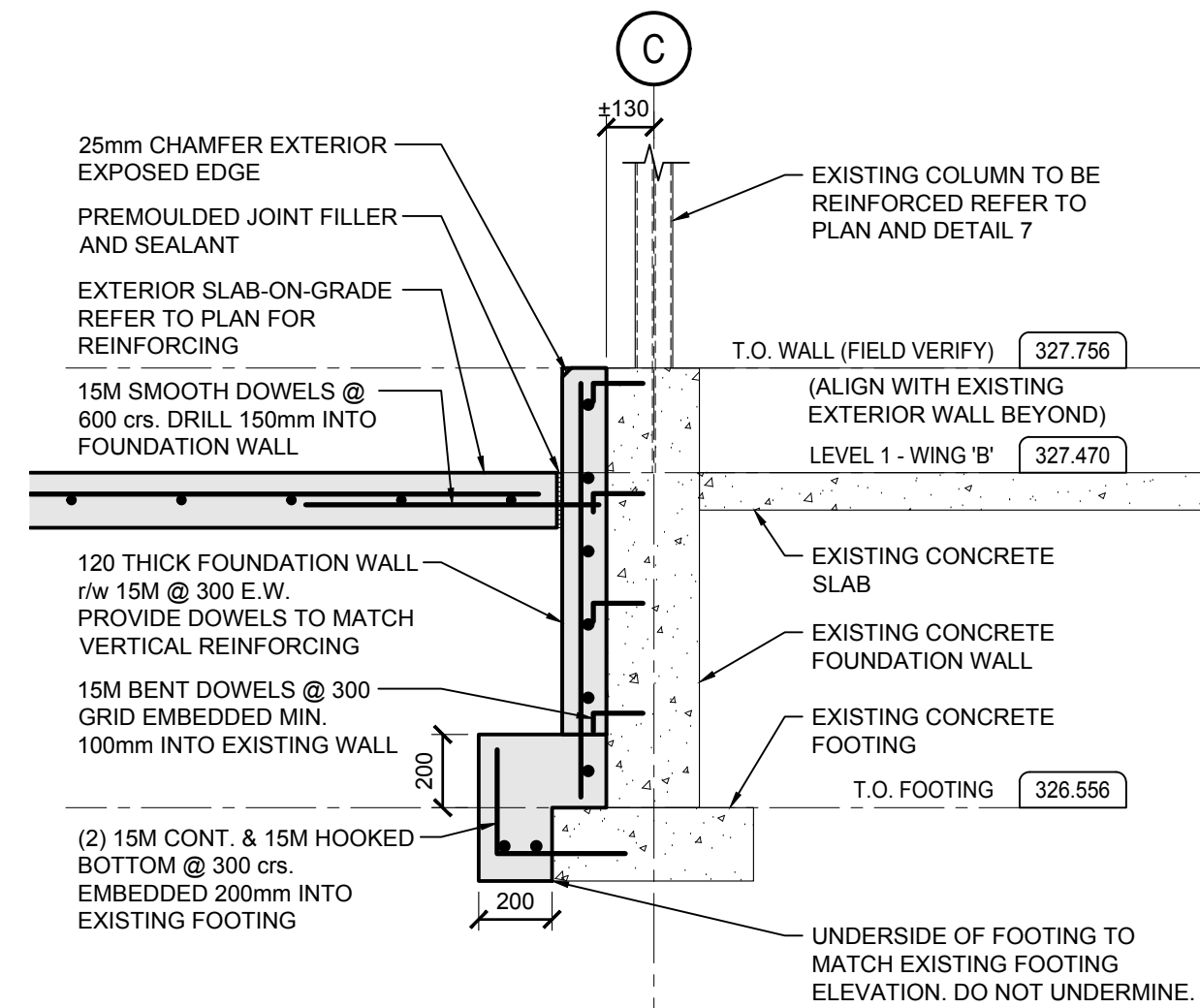
- NOTES:
1. REFER TO DIVISION 5 FOR ACCESS COVER STANDARD OF ACCEPTANCE.
 2. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR FLOOR FINISHES.
 3. DESIGN COVER FOR MIN. 4.8 kPa LIVE LOAD AND MAX. 3mm DEFLECTION



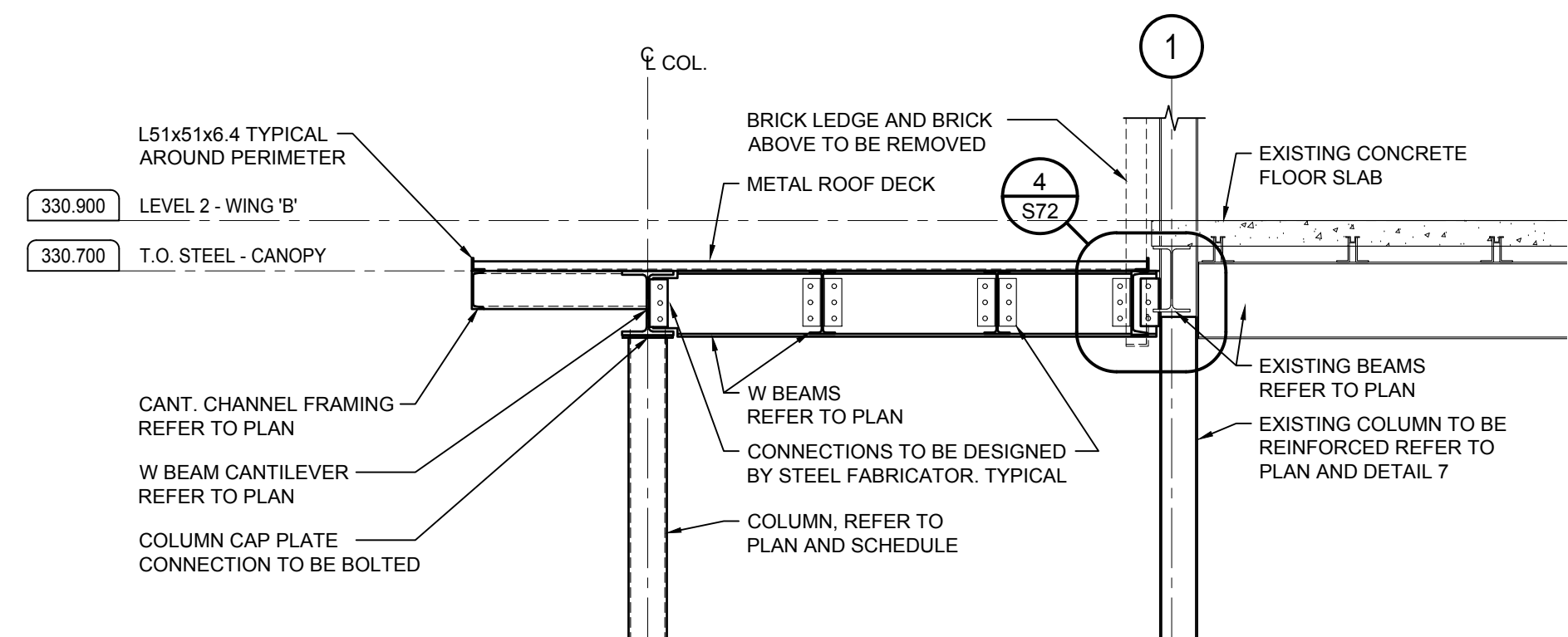
8 EXTERIOR PIER SECTION
SCALE: 1:20



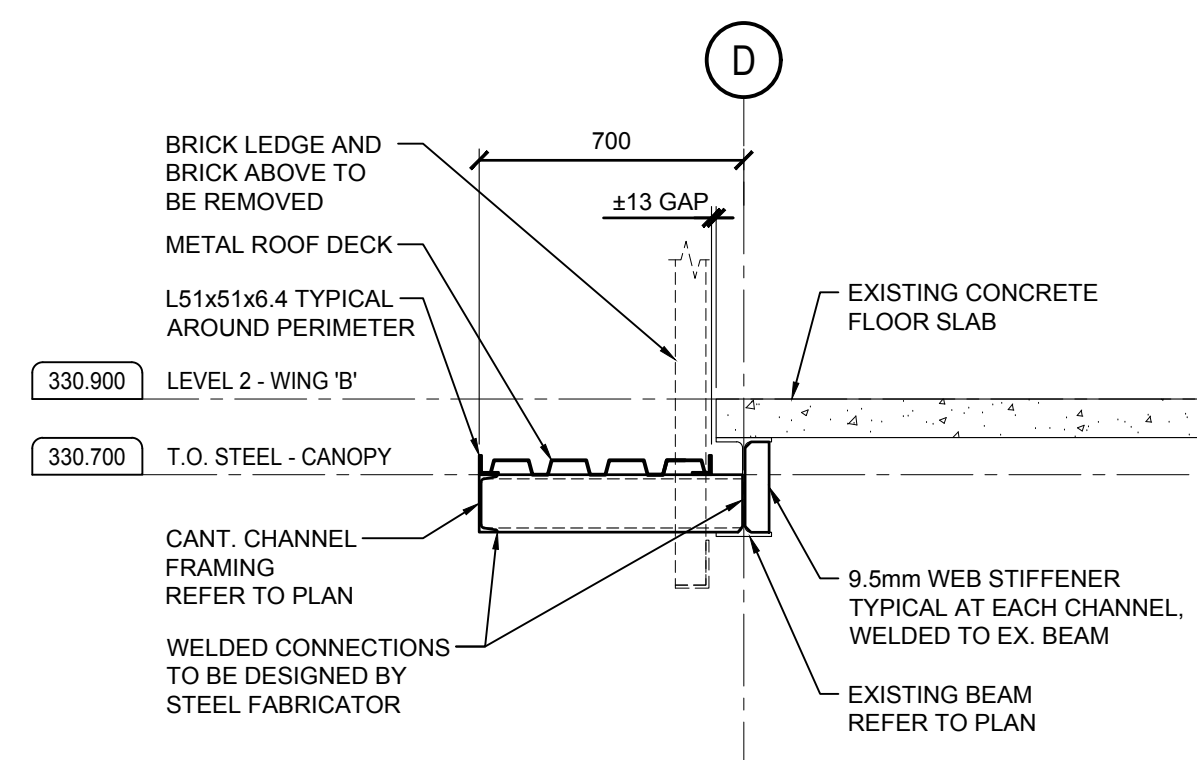
9 FOUNDATION WALL SECTION
SCALE: 1:20



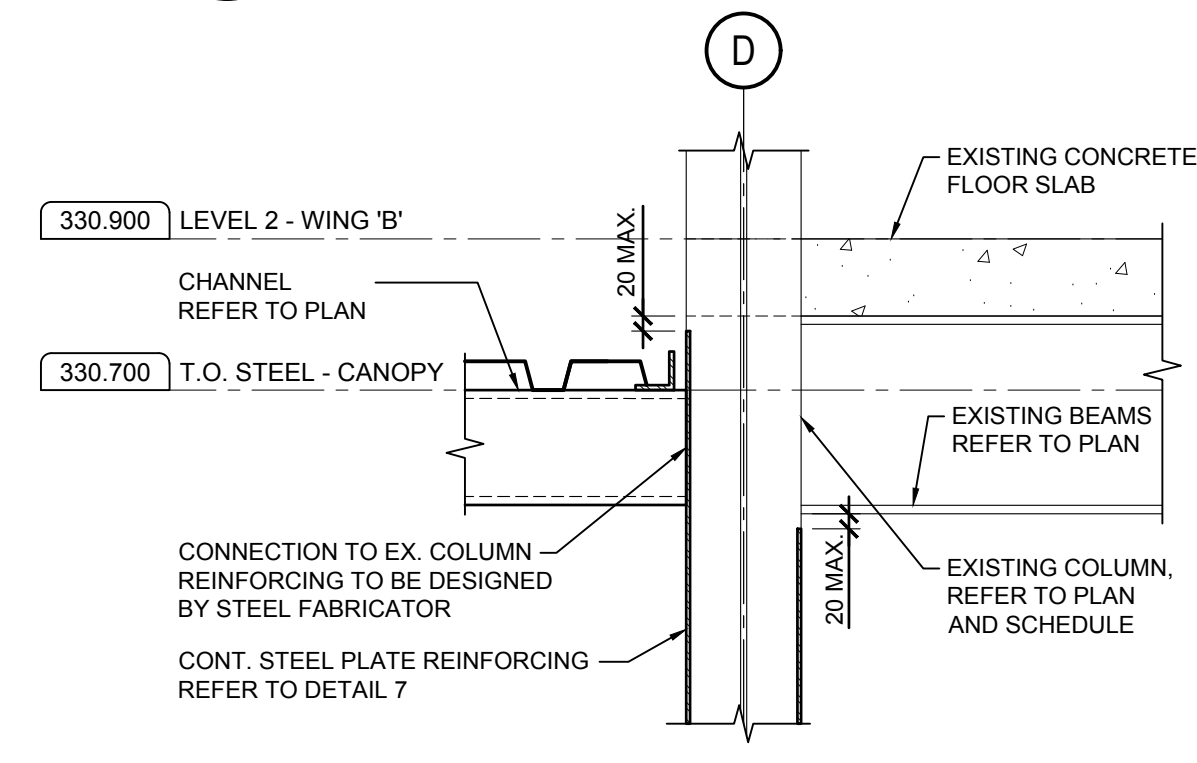
10 FOUNDATION WALL SECTION AT EXISTING
SCALE: 1:20



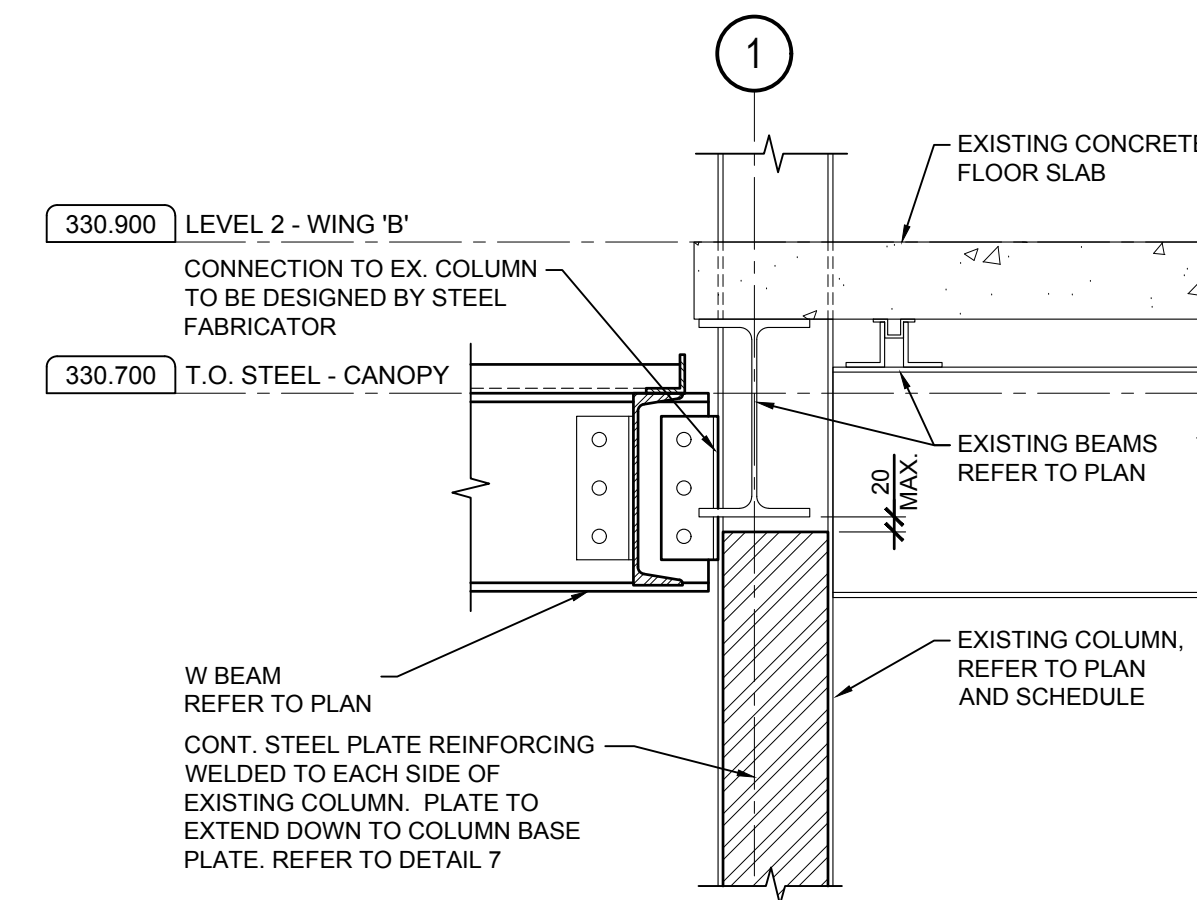
2 CANOPY SECTION
SCALE: 1:25



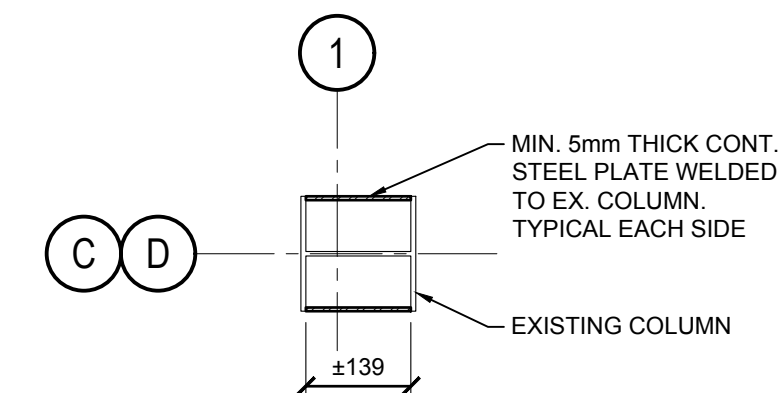
3 CANOPY SECTION
SCALE: 1:20



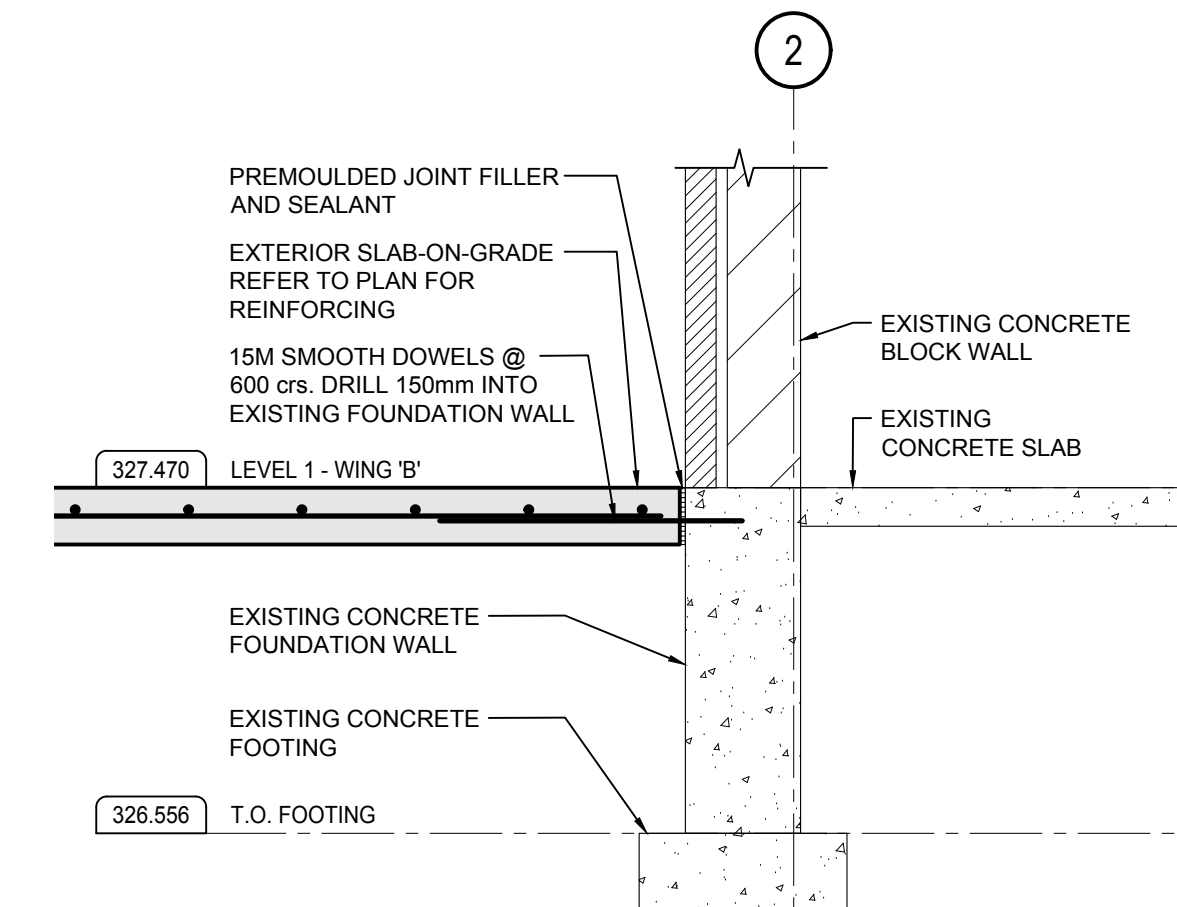
6 SECTION
SCALE: 1:10



4 BEAM CONNECTION DETAIL
SCALE: 1:10



7 EXISTING COLUMN REINFORCING DETAIL
SCALE: 1:10



11 SLAB-ON-GRADE SECTION AT EXISTING
SCALE: 1:20

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Orientation	
Seal	Seal

UNIVERSITY OF GUELPH
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Guelph, Ontario. N1G 2W1

Consultant: www.jrichards.ca

J.L.Richards
ENGINEERS - ARCHITECTS - PLANNERS

Project
BUILDING #046 RENOVATIONS

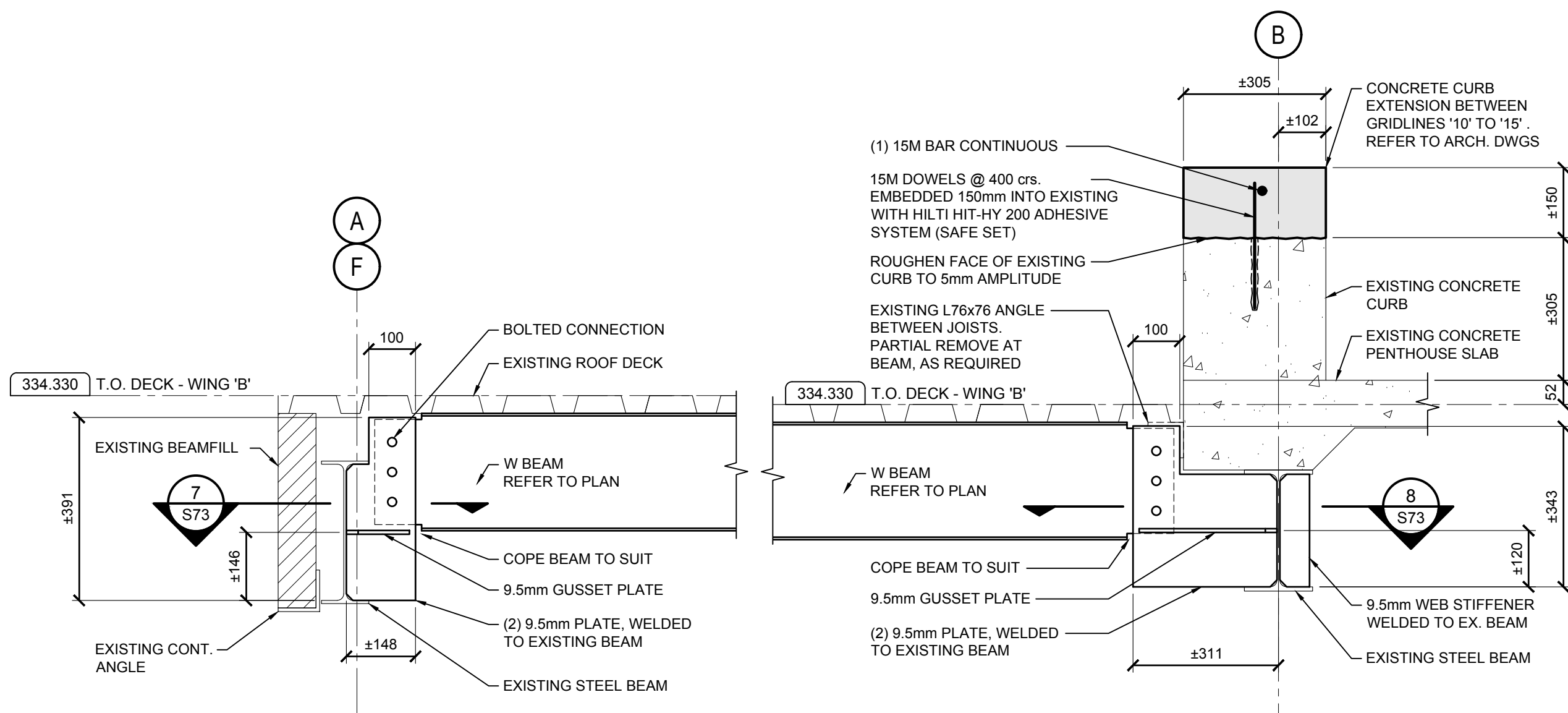
Drawing Title
STRUCTURAL SECTIONS AND DETAILS

Project No.
504034

Location
UNIVERSITY OF GUELPH BUILDING #46

Scale AS NOTED	Date APR 12, 2019
Drawn by BCW	Drawing No.
Checked By LS	
Approved By DAY/JRE	
JLR # 27915	
Cad File No. -----	

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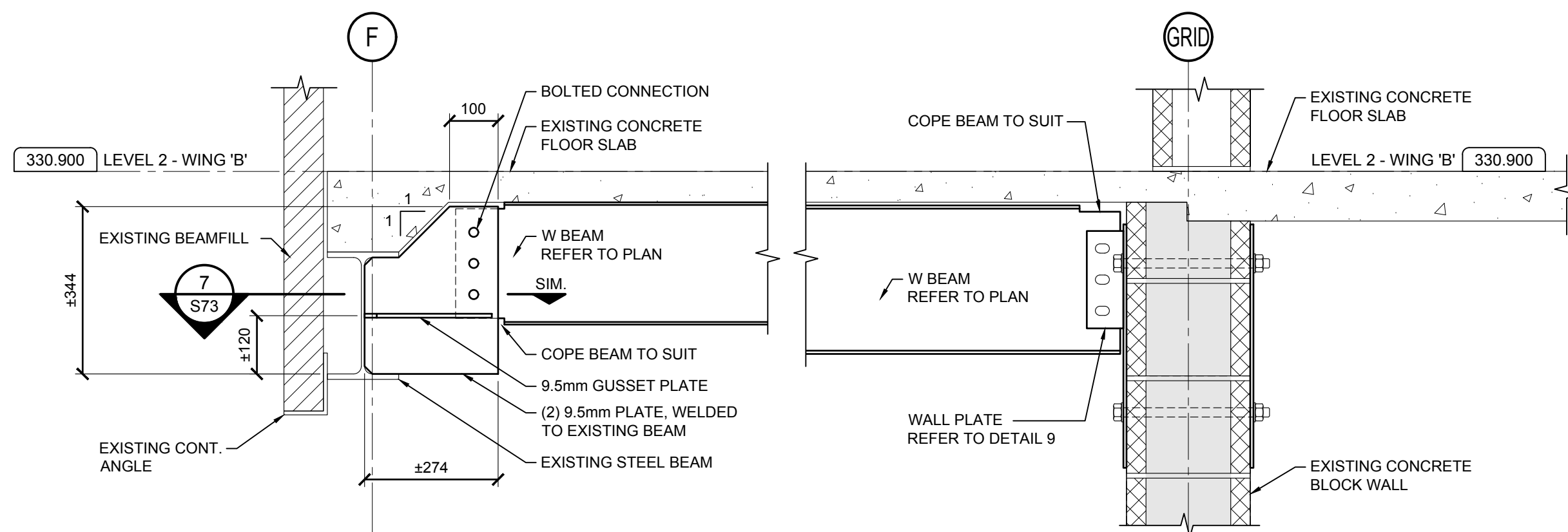


1 SECTION
SCALE: 1:10

2 SECTION
SCALE: 1:10

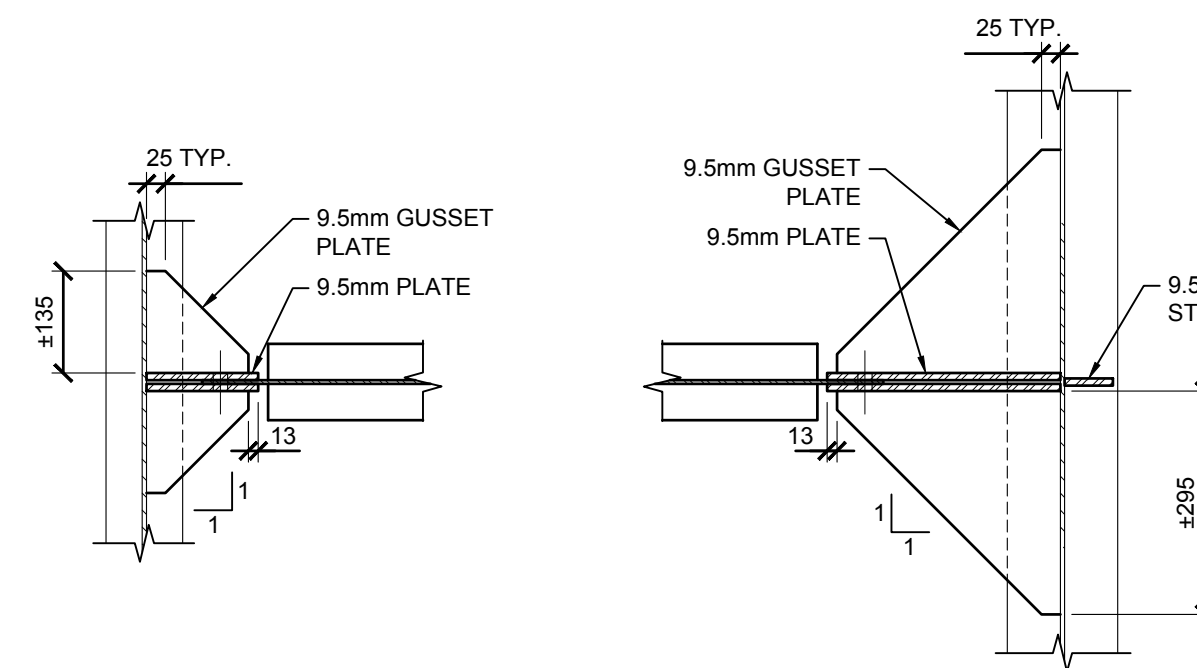
3 SECTION
SCALE: 1:10

4 HIGH PARAPET SECTION
SCALE: 1:10



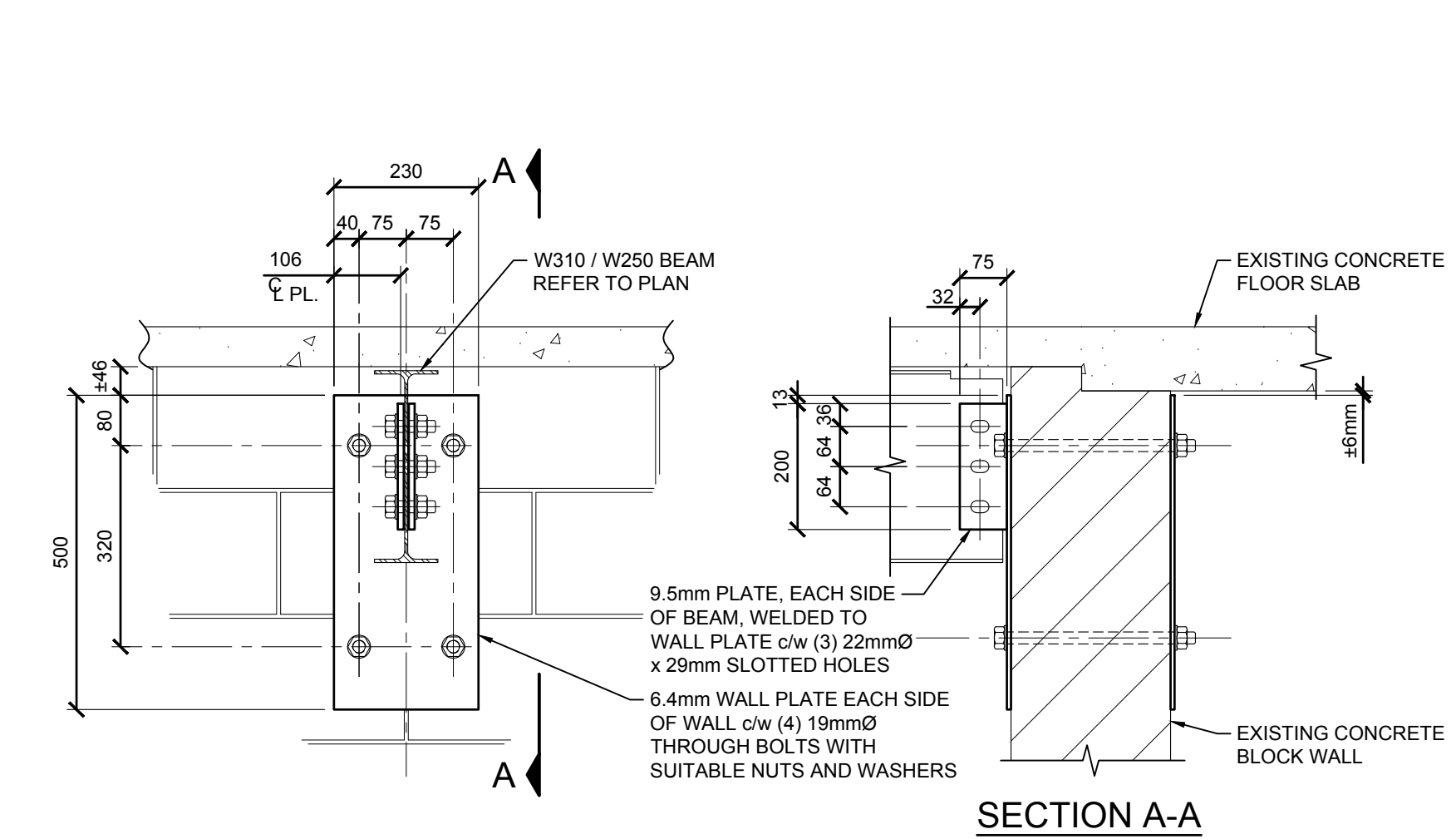
5 SECTION
SCALE: 1:10

6 SECTION
SCALE: 1:10

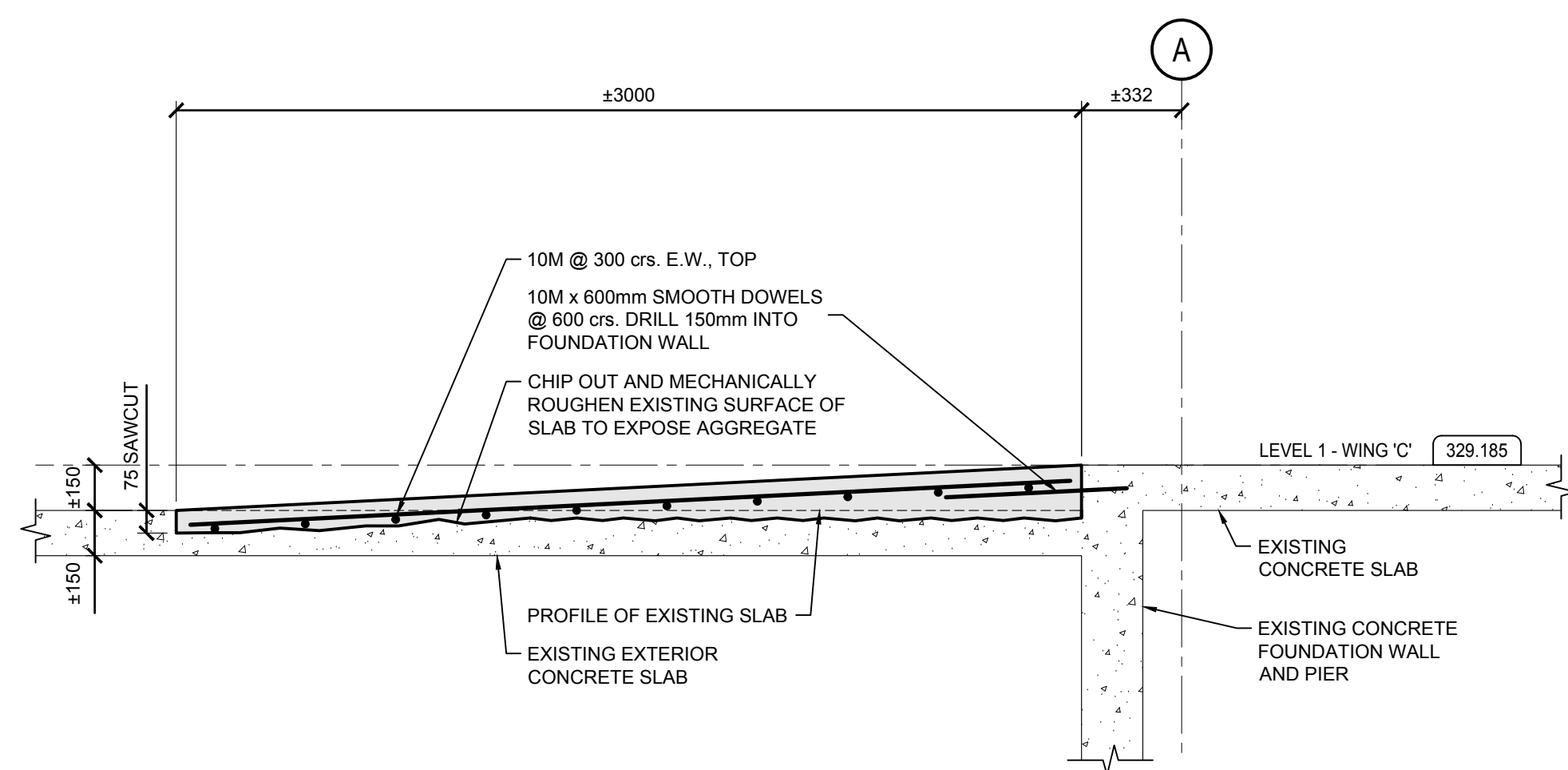


7 SECTION
SCALE: 1:10

8 SECTION
SCALE: 1:10

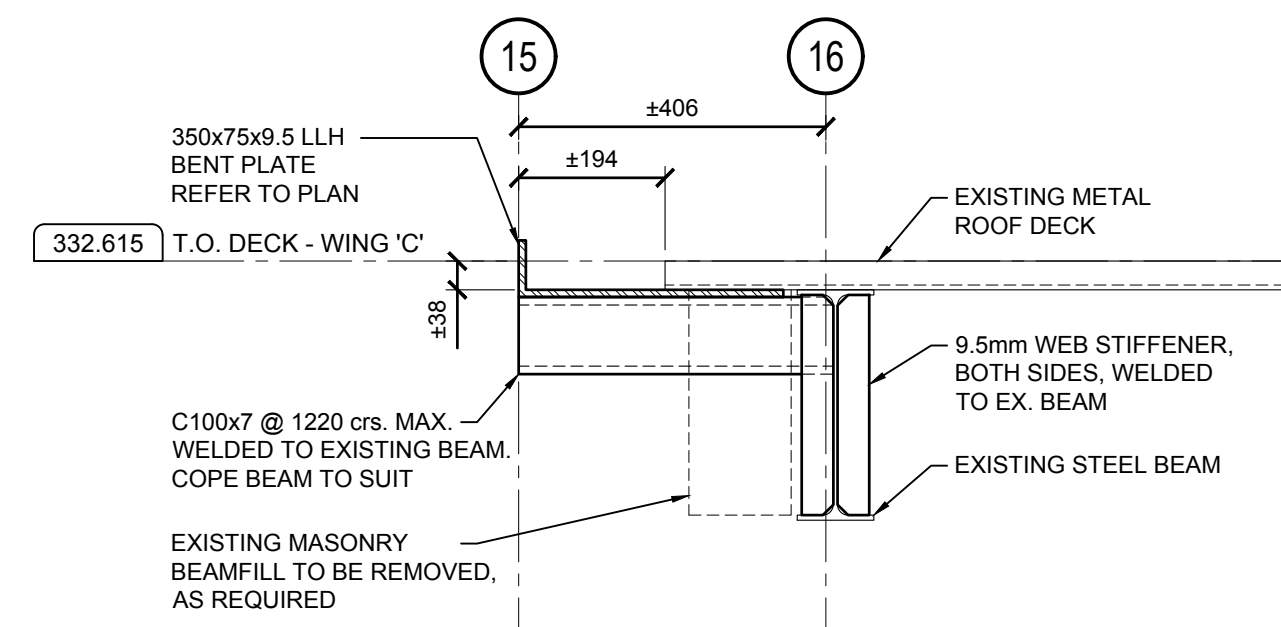


9 WALL PLATE DETAIL
SCALE: 1:10

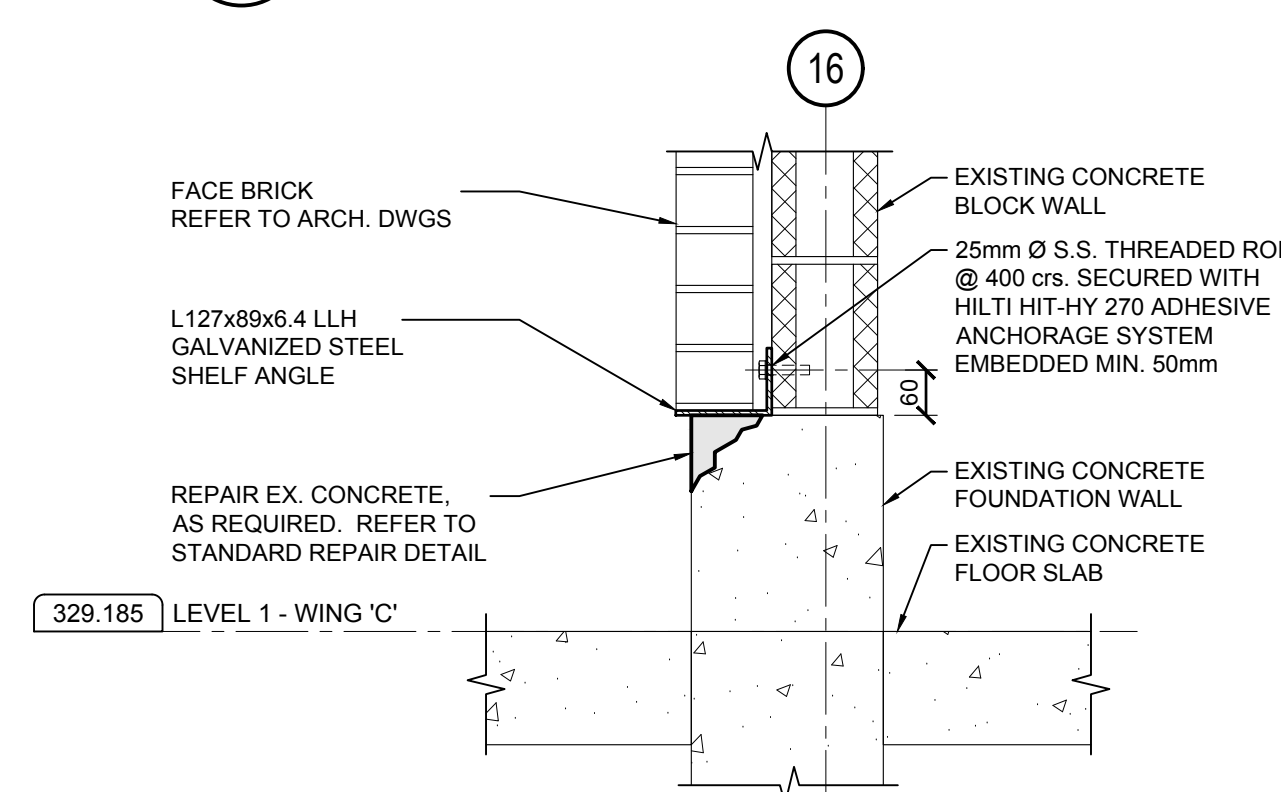


10 MODIFICATION TO EXISTING ENTRANCE STEP
SCALE: 1:20

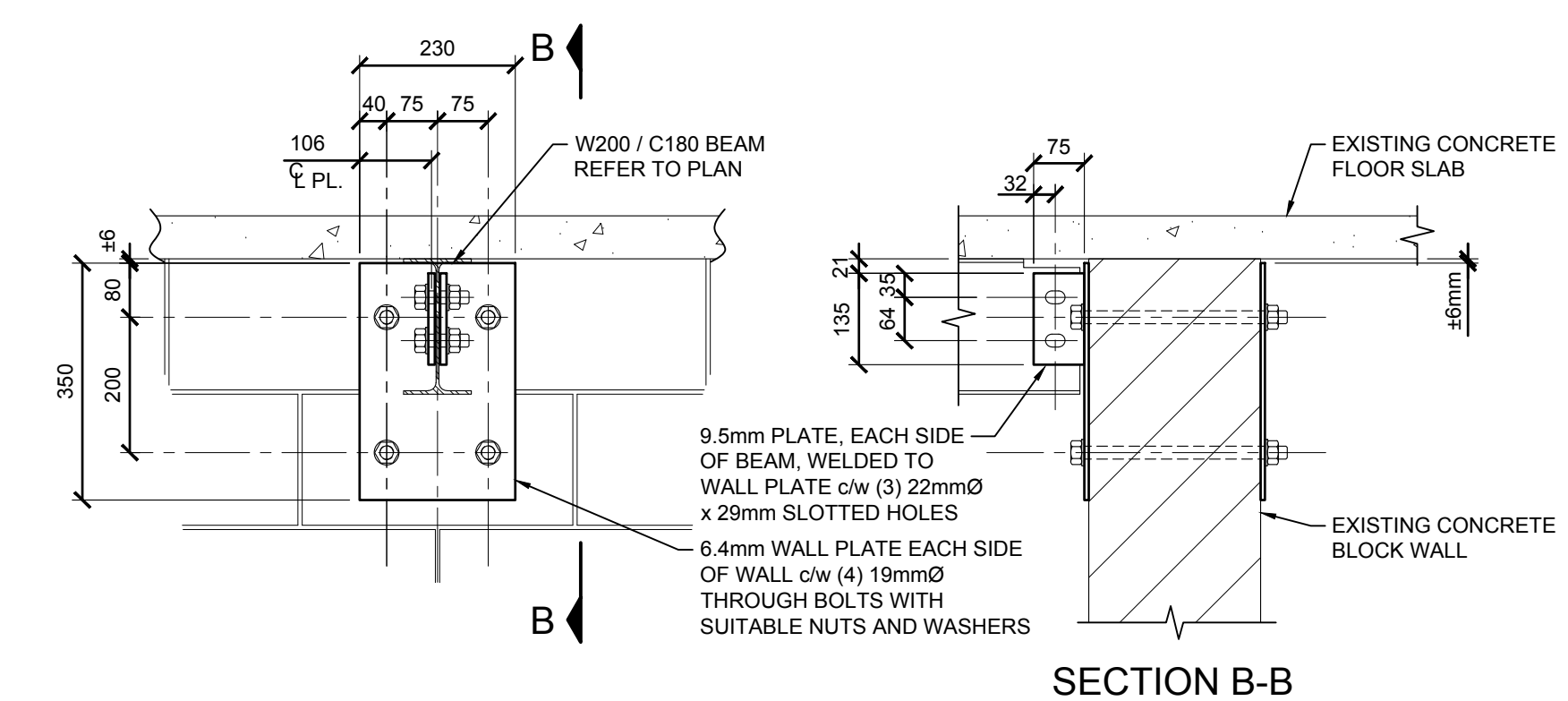
- NOTES:
1. SURFACE OF EXISTING SLAB TO BE MECHANICALLY ROUGHENED TO EXPOSE AGGREGATE TO 5mm AMPLITUDE.
 2. ALL DETERIORATED CONCRETE, DIRT, OIL, GREASE OR OTHER SURFACE BEFORE PLACING BONDING AGENT.
 3. APPLY BONDING AGENT PRIOR TO PLACEMENT OF NEW CONCRETE TOPPING.



11 SECTION
SCALE: 1:10



12 SHELF ANGLE SECTION
SCALE: 1:10



13 WALL PLATE DETAIL
SCALE: 1:10

- NOTE: GROUT EXISTING CONCRETE BLOCKS SOLID, THREE (3) COURSES DEEP AND 900mm ON EITHER SIDE OF CONNECTION POINT

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Orientation	
Seal	Seal

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Design, Engineering & Construction
Physical Resources
Guelph, Ontario. N1G 2W1

Consultant: **J.L. Richards** ENGINEERS-ARCHITECTS-PLANNERS

Project: **BUILDING #046 RENOVATIONS**

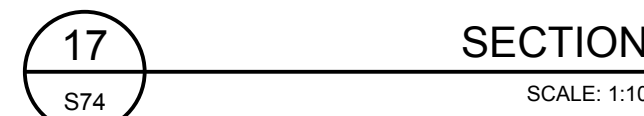
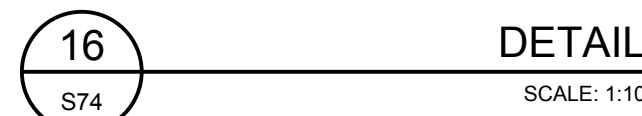
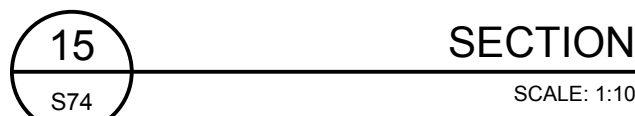
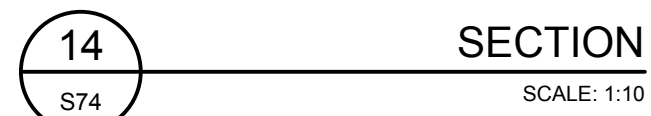
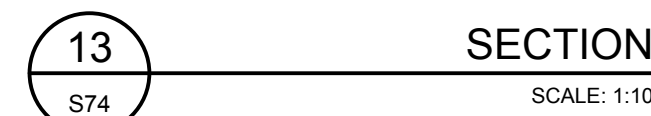
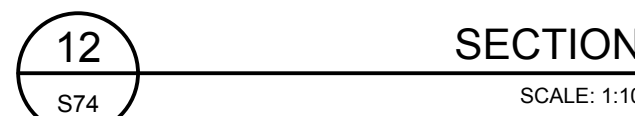
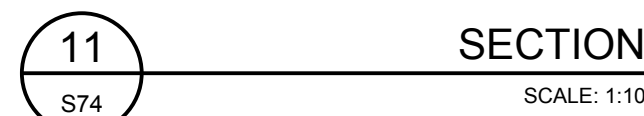
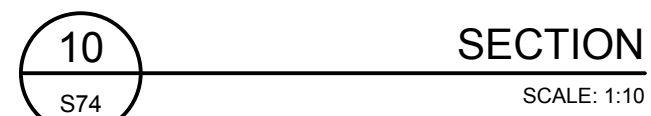
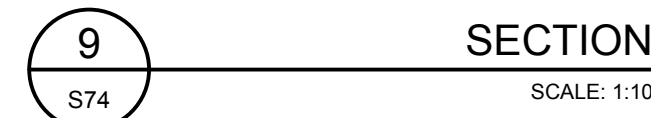
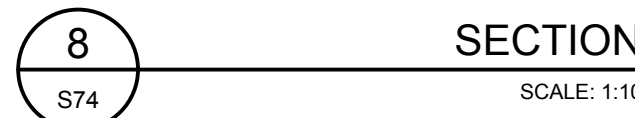
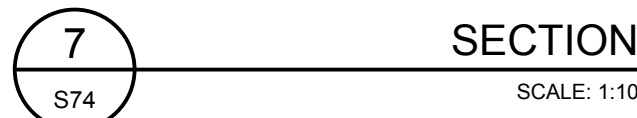
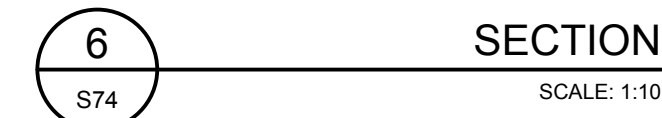
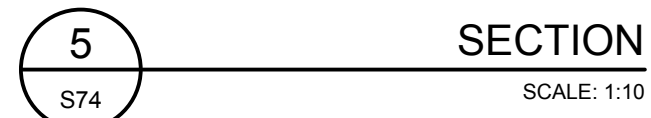
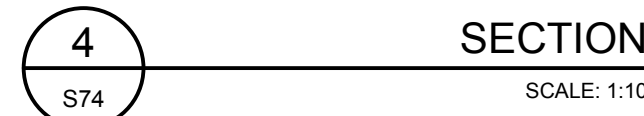
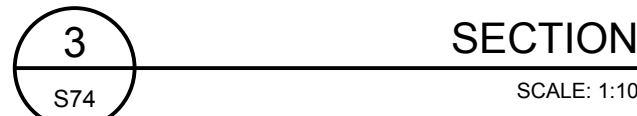
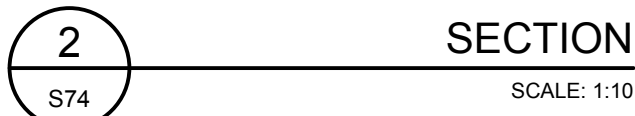
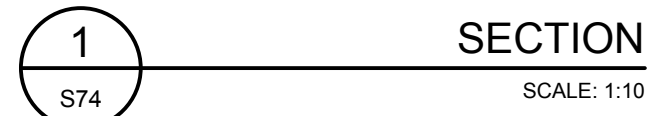
Drawing Title: **STRUCTURAL SECTIONS AND DETAILS**

Project No.: **504034**

Location: **UNIVERSITY OF GUELPH BUILDING #46**

Scale: AS NOTED	Date: APR 12, 2019
Drawn by: BCW	Drawing No.
Checked By: LS	
Approved By: DAY/JRE	
JLR # 27915	
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