

GENERAL NOTES

GENERAL

- 1.1 GENERAL NOTES AND TYPICAL STRUCTURAL DETAILS SHALL APPLY TO ALL DRAWINGS UNLESS OTHERWISE SHOWN OR NOTED.
- 1.2 FEATURES OF CONSTRUCTION SHOWN ARE TYPICAL AND SHALL APPLY GENERALLY THROUGHOUT FOR SIMILAR CONDITIONS. MODIFY TYPICAL DETAILS AS REQUIRED TO MEET SPECIAL CONDITIONS.
- 1.3 THE CONTRACTOR SHALL EXAMINE THE DRAWINGS AND SHALL NOTIFY THE ENGINEER / ARCHITECT OF ANY DISCREPANCIES HE MAY FIND BEFORE PROCEEDING WITH THE WORK, OR DURING CONSTRUCTION.
- 1.4 IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE SHORING AND BRACING FOR THE STRUCTURE FOR ALL LOADS THAT MAY BE IMPOSED DURING CONSTRUCTION.
- 1.5 ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE LATEST APPLICABLE STANDARD OR SPECIFICATIONS. ALL WORKS SHALL CONFORM WITH THE BEST PRACTICE PREVAILING IN THE VARIOUS TRADES.
- 1.6 ALL CONSTRUCTION AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION, EXAMINATION AND TESTING BY THE ENGINEER / ARCHITECT. THE ENGINEER / ARCHITECT SHALL HAVE THE RIGHT TO REJECT DEFECTIVE MATERIALS AND WORKMANSHIP OR REQUIRE ITS CORRECTION.
- 1.7 UNLESS SPECIFICALLY DETAILED ELSEWHERE, THE CONTRACTOR SHALL FOLLOW TYPICAL DETAILS AS SHOWN IN THESE DRAWINGS.
- 1.8 THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COORDINATION OF WORK AMONG THE VARIOUS TRADES AS NECESSARY TO AVOID CONFLICTS AND TO ENSURE THE INSTALLATION OF ALL WORKS WITHIN THE AVAILABLE SPACE.
- 1.9 DO NOT SCALE DRAWINGS AND CALLED-OUT DIMENSIONS. STANDARD CODE REQUIREMENTS SHALL GOVERN OVER UNSCALED DRAWINGS.
- 1.10 SPECIAL NOTES AND DIMENSIONS INDICATED ON THE STRUCTURAL DRAWING SHALL BE COORDINATED WITH THE ARCHITECTURAL DRAWINGS. ARCHITECTURAL DRAWINGS SHALL BE USED TO DEFINE DETAIL CONFIGURATION, ELEVATIONS, OPENING JOINTS, SLOPES, ETC.
- 1.11 MODIFICATION OF SECTION AND SIZES OF STRUCTURAL MEMBERS SHALL NOT BE ALLOWED UNLESS OTHERWISE APPROVED BY THE STRUCTURAL ENGINEER.
- 1.12 CONTRACTOR TO PROVIDE DYE PENETRANT/ULTRASONIC TESTING RESULT TO CLIENT. THESE TESTINGS SHALL BE CONDUCTED BY ACCREDITED AGENCY.
- 1.13 IN CASE STRUCTURAL MEMBERS SPECIFIED ARE NOT AVAILABLE, SUBMIT TO CLIENT ENGINEER AVAILABLE LIST OF MEMBERS FOR APPROVAL BEFORE PURCHASING.

DESIGN CRITERIA

- 1.1 LOADS

UNIT WEIGHT OF CONCRETE	24.00 KN/m ³
UNIT WEIGHT OF SOIL	18.00 KN/m ³
ROOFING (G Sheet and Purlins)	0.37 kPa
100mm CHB WALL	3.17 kPa
150mm CHB WALL	3.30 kPa
FLOOR FINISH	1.53 kPa
PARTITION LOAD	1.00 kPa
CEILING	0.25 kPa
INSULATION	0.08 kPa
WATERPROOFING	0.24 kPa
ELECTRICAL/MECHANICAL/PLUMBING	0.35 kPa
- 1.2 LIVE LOADS

ROOF	1.00 kPa
OFFICE	2.40 kPa
RESTROOM	2.40 kPa
EXIT FACILITIES	4.80 kPa
EVACUATION, BASIC FLOOR AREA	4.80 kPa
- 1.3 WIND LOAD

	320 kph
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- 1.4 SEISMIC LOADS

SEISMIC ZONE FACTOR, Z	0.40
NUMERICAL COEFFICIENT, R _{wx} & R _{wz}	8.50
IMPORTANCE FACTOR, I	1.50
SITE COEFFICIENT, S (S _d)	4.00
N _g	1.128
N _v	1.456
FUNDAMENTAL PERIOD OF VIBRATION, T	C (in) 3/4
C _f	0.0731
HEIGHT IN METERS, h	hn
2. DESIGN CODE AND REFERENCE

THE FOLLOWING REFERENCES SHALL GOVERN THE DESIGN FABRICATION & CONSTRUCTION OF THE PROJECT:

 - AMERICAN CONCRETE INSTITUTE ACI 318 - 95 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE
 - NATIONAL STRUCTURAL CODE OF THE PHILIPPINES (NSCP) VOLUME 1, PHILIPPINES 6th EDITION, 2010
 - ASSOCIATION OF STRUCTURAL ENGINEERS OF THE PHILIPPINES (ASEP) HANDBOOK OF STRUCTURAL STEEL SHAPES AND SECTIONS
 - FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) P-320/P-361

UBC 1997, STRUCTURAL ENGINEERING DESIGN PROVISION
STRUCTURAL DESIGN DATA AND SPECIFICATIONS A.B. CARILLO, 6th EDITION

MATERIALS

1. CONCRETE

UNLESS INDICATED OTHERWISE ON PLANS, THE CONCRETE CLASS AND STRENGTH SHALL BE AS FOLLOWS:

STRUCTURAL ELEMENTS	CLASS	28-DAY CYLINDER STRENGTH MPa (psi)	MAX. SLUMP MM (in)
SLAB, STAIR, CURBS AND SLAB ON GRADE	"A"	20.7 (3000)	75 (3")
CAST-IN-PLACE GIRDERS, BEAMS, FOOTINGS AND COLUMN	"AA"	27.6 (4000)	100 (4")
OTHER STRUCTURAL ELEMENTS	"A"	20.7 (3000)	100 (4")
FOR NON STRUCTURAL MEMBERS		17.2 (2500)	100 (4")
LEAN CONCRETE	-	10.0 (1450)	75 (3")

ITEMS	AGGREGATE SIZE
FOOTINGS	25 MM (1")
SLABS, BEAMS, COLUMNS, OTHERS.	19 MM (3/4")
CURBS AND MASS, CONCRETE/SLAB ON GRADE	25 MM (1")

1.1 INFORM ARCHITECT/ENGINEERS OF OTHER MISCELLANEOUS CONCRETE STRUCTURAL ELEMENTS NOT SHOWN ABOVE TO DETERMINE THEIR RESPECTIVE COMPRESSIVE STRENGTH.

2. REINFORCING STEEL

- a. REINFORCING STEEL SHALL CONFORM TO LATEST EDITION OF ASTM A615 GRADE 60, DEFORMED, FOR 16MM Dia. BARS AND LARGER WITH MINIMUM YIELD STRENGTH $f_y = 414 \text{ MPa}$ (60,000 PSI) AND ASTM A615 GRADE 40, DEFORMED, FOR 12MM Dia. BARS AND SMALLER WITH MINIMUM YIELD STRENGTH $f_y = 276 \text{ MPa}$ (40,000 PSI).
- b. ALL REINFORCING BARS SHALL BE DEFORMED BARS UNLESS OTHERWISE SPECIFIED IN DRAWINGS.
- c. ALL REINFORCING BARS SHALL BE CLEAN OF RUST, GREASE OR OTHER MATERIALS LIKELY TO IMPAIR BOND.
- d. ALL REINFORCING BARS SHALL ACCURATELY AND SECURELY PLACED BEFORE POURING OF CONCRETE OR APPLYING MORTAR OR GROUT.

3. STRUCTURAL STEEL BOLTS/WELDS

MATERIAL	SPECIFICATIONS
STEEL PLATES AND ROLLED SHAPES	ASTM A36
BOLTS	ASTM A325
WELDS	AWS D1.1 – 183, E70XX SERIES

CONSTRUCTION

1. SETTING OUT

THE SETTING OUT AND THE ELEVATIONS OF THE DIFFERENT COMPONENTS OF THE STRUCTURE SHALL BE APPROVED BY THE ENGINEER PRIOR TO THE START OF ANY CONSTRUCTION WORK.

2. REINFORCED CONCRETE

a. CONCRETE MIX AND PLACING

- (1) DESIGN OF CONCRETE MIX SHALL MEET THE DESIGN CONCRETE STRENGTH GIVEN UNDER ITEM 1 OF MATERIALS.
- (2) CONCRETE SHALL BE DEPOSITED, VIBRATED AND CURED IN ACCORDANCE WITH THE SPECIFICATIONS.
- (3) FOR CONCRETE DEPOSITED AGAINST THE GROUND, LEAN CONCRETE WITH A MINIMUM THICKNESS OF 50mm SHALL BE LAID FIRST BEFORE INSTALLING THE REINFORCEMENT. THE LEAN CONCRETE SHALL NOT BE CONSIDERED IN MEASURING THE STRUCTURAL DEPTH OF CONCRETE SECTION.
- (4) THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL THE POURING SEQUENCES FOR ALL CONCRETING WORK.
- (5) THE CONTRACTOR SHALL NOTIFY THE ENGINEER 48 HOURS PRIOR TO THE POURING OF ANY STRUCTURAL CONCRETE, SO AN INSPECTION CAN BE MADE ON ALL FORMS AND REINFORCING.
- (6) PREPARE AND SUBMIT CONCRETE MIX DESIGN INCLUDING AGGREGATES GRADATION, WATER AND CEMENT CONTENTS, AND CYLINDER STRENGTH TEST RESULT FOR REVIEW. CONCRETE MIX DESIGN SHALL BE TESTED AT 7, 14 AND 28 DAY CURING PERIOD. THE TEST SHALL FOLLOW THE REQUIREMENT OF ASTM.
- (7) USE OF ADMIXTURES IS PERMITTED TO PRODUCE PROPER SLUMP AND WORKABILITY BUT SUBJECT TO THE ENGINEER'S APPROVAL. ADDITION OF WATER TO CONCRETE AT JOB SITE IS NOT ALLOWED.

(8) FOR CONCRETE SLAB, ALL REINFORCEMENT SHALL BE 0.02m CLEAR MINIMUM FROM TOP AND BOTTOM OF SLAB. TEMPERATURE BARS SHALL BE GENERALLY PLACED NEAR THE FACE IN TENSION AND SHALL NOT BE LESS THAN 0.0018ft.

(9) FOR TWO OR MORE LAYERS OF REINFORCING BARS, USE SEPARATORS SPACED @ 0.90m O.C. AND IN NO CASE SHALL BE LESS THAN 2 SEPARATORS. CLEAR DISTANCE BETWEEN LAYERS SHOULD NOT BE LESS THAN 25mm OR BAR DIAMETER.

COMPONENT	MINIMUM CAMBER
R.C. BEAMS	6mm FOR EVERY 4.50M. SPAN
CANTILEVER R.C. BEAM	18mm FOR EVERY 3.00M. SPAN
R.C. SLABS	3mm FOR EVERY 3.00M. SHORTER SPAN

(10) COLUMN TIES SHALL BE PROTECTED BY A COVERING OF CONCRETE CAST MONOLITHICALLY WITH 0.05m THICK AND NOT LESS THAN 1/2 TIMES MAXIMUM SIZE OF COURSE AGGREGATES.

(11) LOCATION OF ALL CONSTRUCTION OR COLD JOINTS MUST BE APPROVED BY THE ENGINEER/ARCHITECT.

(12) PIPES OR DUCTS EXCEEDING ONE THIRD THE SLAB OR WALL THICKNESS SHALL NOT BE PLACED IN STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED. PIPES MAY PASS THROUGH STRUCTURAL CONCRETE IN SLEEVES BUT SHALL NOT BE EMBEDDED THEREIN.

(13) REINFORCING BARS, ANCHOR BOLTS, AND OTHER INSERTS SHALL BE SECURED IN PLACE BEFORE POURING CONCRETE. BAR PLACEMENT AND SUPPORTS SHALL BE IN ACCORDANCE WITH THE RECOMMENDED ACI PRACTICE.

(14) ALL INSERTS, ANCHOR BOLTS, ETC. TO BE EMBEDDED IN THE CONCRETE SHALL BE HOT DIP GALVANIZED UNLESS NOTED OTHERWISE.

(15) IN GENERAL, THE LATEST EDITION OF THE MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES, ACI 315-99, SHALL BE ADHERED TO, UNLESS SHOWN OTHERWISE.

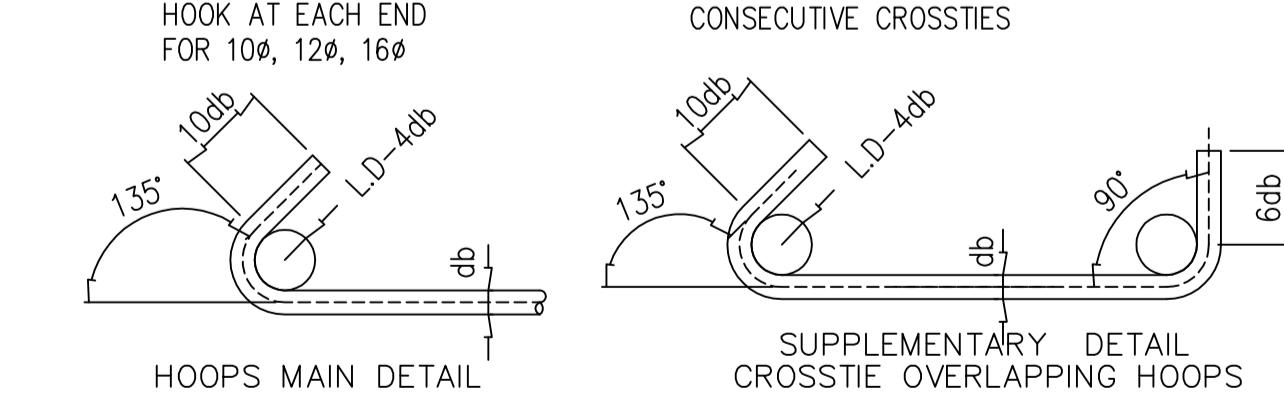
b. BAR BENDING, SPLICING AND PLACING

- (1) THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL ALL SHOP DRAWINGS INDICATING THE BENDING, CUTTING, SPLICING AND INSTALLATION OF ALL REINFORCING BARS.
- (2) BARS SHALL BE BENT COLD, BARS PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT UNLESS PERMITTED BY THE ENGINEER.
- (3) BAR SPLICING NOT INDICATED ON DRAWINGS SHALL BE SUBJECT TO THE APPROVAL OF ENGINEER.
- (4) WELDED SPLICES, IF APPROVED BY THE ENGINEER, SHALL DEVELOP IN TENSION AT LEAST 125% OF THE SPECIFIED YIELD STRENGTH OF THE BARS.
- (5) LAPPED SPLICES SHALL BE STAGGERED WHERE POSSIBLE.
- (6) IN GENERAL, BAR SPLICES SHALL BE MADE AT POINTS OF MINIMUM STRESS. SPLICES SHALL BE SECURELY WIRED TOGETHER STAGGER SPLICES AT LEAST 600MM. WHENEVER POSSIBLE IN BEAMS AND SLABS, SPLICE TOP BARS AT MID SPAN AND BOTTOM BARS NEAR SUPPORT. SPLICE OF REINFORCEMENT SHALL BE MADE ONLY AS REQUIRED OR PERMITTED ON DESIGN DRAWINGS OR AS ALLOWED BY THE ACI CODE OR AS AUTHORIZED BY THE ENGINEERS.
- (7) BARS NOTED AS CONTINUOUS SHALL HAVE A MINIMUM SPLICE LENGTH OF 42 BAR DIAMETER BUT NOT LESS THAN 60MM. UNLESS OTHERWISE NOTED.
- (8) REINFORCEMENTS SHALL BE SPLICED ONLY AS INDICATED ON THE DRAWINGS.
- (9) ANY WELDING TO BE PERFORMED MUST HAVE PRIOR WRITTEN APPROVAL OF THE ENGINEER.
- (10) WELDING OF REINFORCING STEEL IS NOT PERMITTED UNLESS OTHERWISE SHOWN ON THE DRAWING. WELDING OF REINFORCING STEEL SHALL CONFORM TO AWS D1.4-79 "AWS STRUCTURAL WELDING CODE" OF THE AMERICAN WELDING SOCIETY. REINFORCING STEEL WHICH IS WELDED SHALL CONFORM TO ASTM A 706. REINFORCING STEEL NOT CONFORMING TO ASTM A 706 MAY BE USED IF MATERIAL PROPERTIES OF THE REINFORCING STEEL CONFORM TO AWS D1.4-79.

(11) ANCHOR BOLTS, DOWELS AND OTHER EMBEDDED ITEMS ARE TO BE SECURELY TIED IN PLACE BEFORE CONCRETE IS POURED.

(12) TYPICAL HOOPS & SUPPLEMENTARY TIE DETAIL

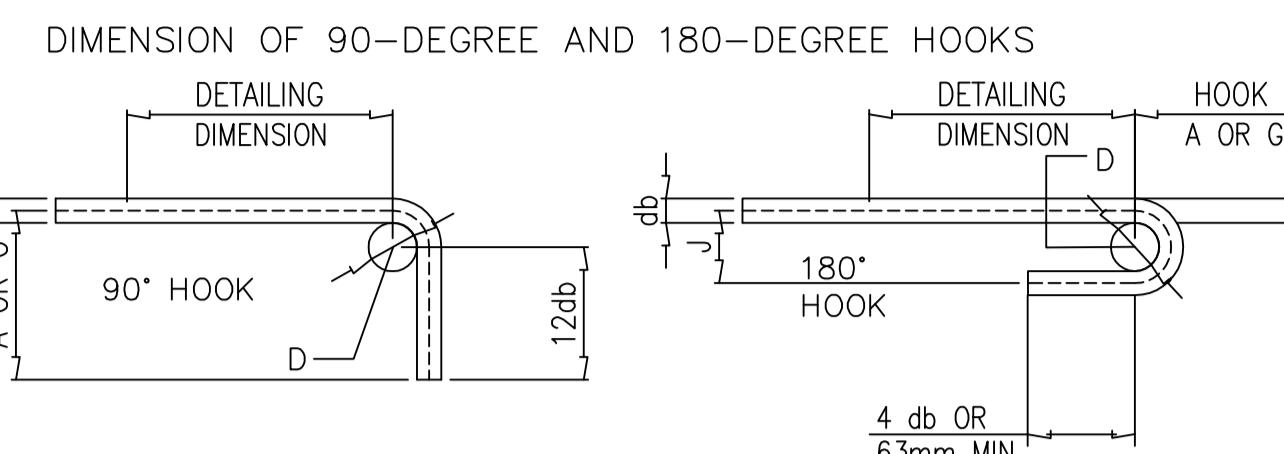
NOTES:
COLUMN HOOPS
HOOK AT EACH END
FOR 10^o, 12^o, 16^o



GENERAL NOTES

SCALE 1:125

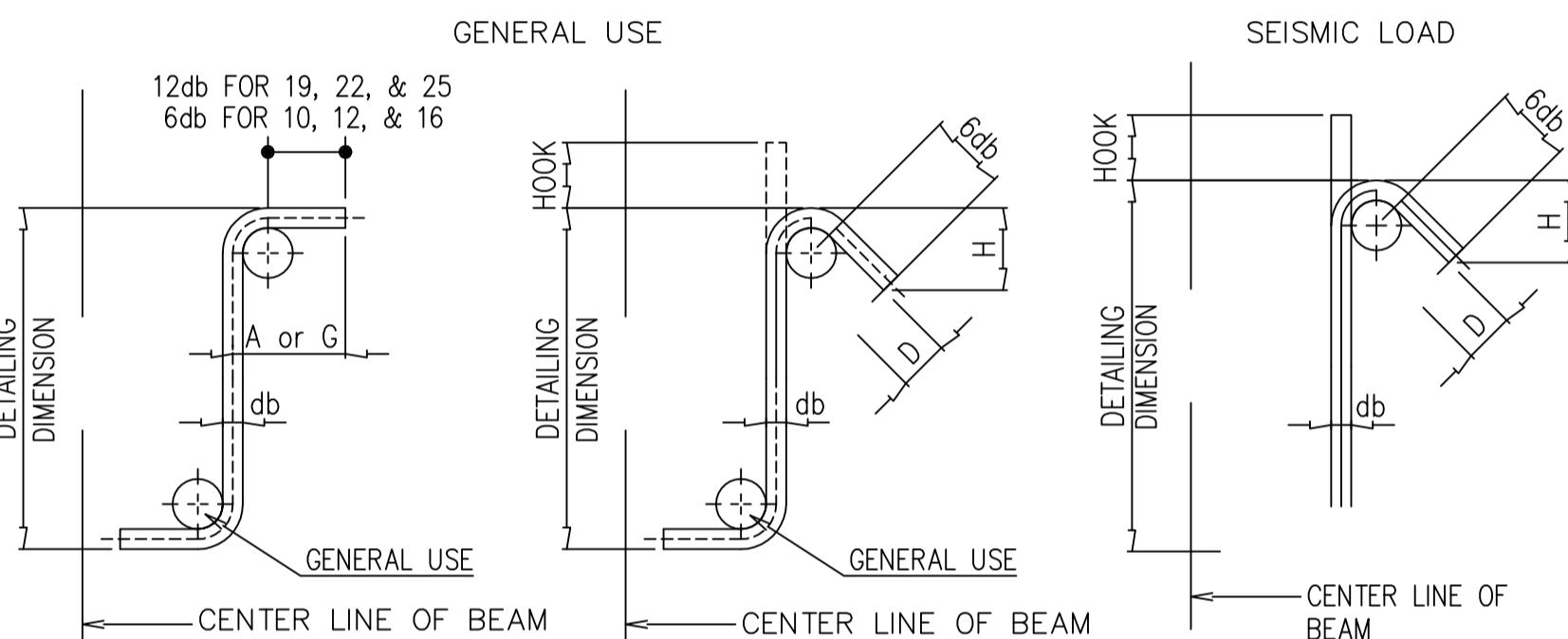
(13) TYPICAL STANDARD HOOK DETAIL



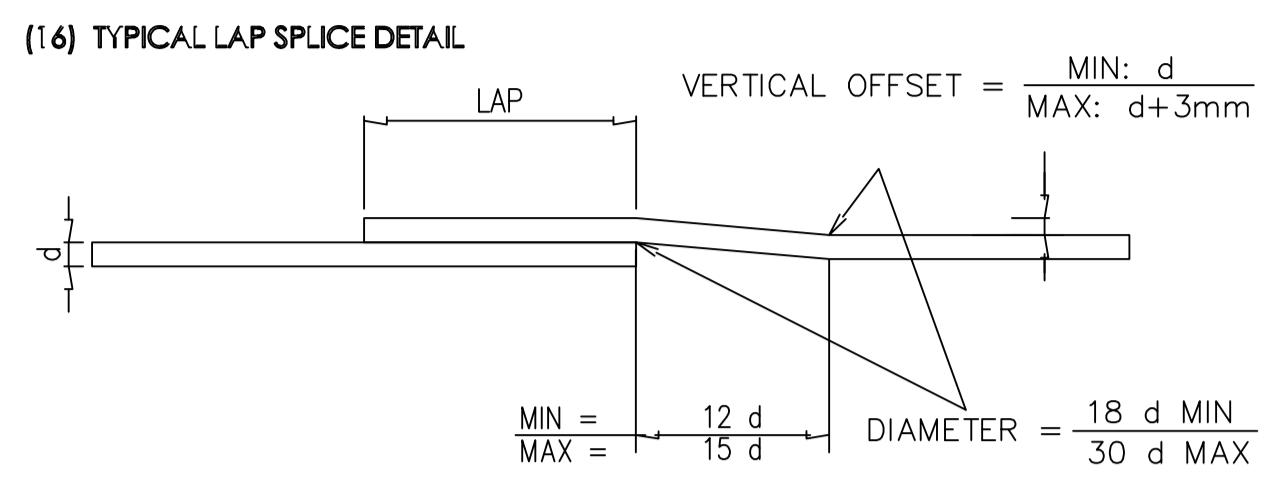
RECOMMENDED END HOOKS, ALL GRADES

BAR SIZE	FINISHED BEND DIAMETER, D IN. (mm.)	180 DEGREE HOOK		90 DEGREE HOOK	
		A OR G (mm.)	J (mm.)	A OR G (mm.)	J (mm.)
10mmØ	60	130	80	155	
12mmØ	80	155	105	205	
16mmØ	100	180	130	255	
20mmØ	115	205	155	305	
25mmØ	155	280	205	410	
28mmØ	245	285	300	485	
32mmØ	275	435	340	560	
36mmØ	305	485	375	610	

(14) TYPICAL STANDARD STIRRUPS AND TIE HOOK DETAIL



GENERAL NOTES



c. CONCRETE COVER TO REINFORCEMENT

CLEAR CONCRETE COVERING OVER REINFORCING BARS SHALL BE AS FOLLOWS:

COLUMN TO TIES	40mm
BEAM TO STIRRUPS	40mm
FOOTING	75mm

d. CONSTRUCTION JOINT

- (1) THE POSITION AND FORM OF ANY CONSTRUCTION JOINT SHALL BE AS SHOWN ON DRAWINGS OR AS AGREED WITH THE ENGINEER.
- (2) ALL SURFACES OF CONSTRUCTION JOINTS SHALL BE ROUGHENED TO 6MM AMPLITUDE.
- (3) ALL CONSTRUCTION JOINTS SHALL BE CLEANED TO REMOVE DUST, CHIPS, OR OTHER FOREIGN MATTERS PRIOR TO PLACING OF ADJACENT CONCRETE.

e. FALSEWORK

ALL FALSEWORK SHALL BE DESIGNED BY THE CONTRACTOR SUBJECT TO THE APPROVAL BY THE ENGINEER.

- (1) FORMS SHALL BE PROVIDED FOR ALL CONCRETE INDICATED UNLESS SPECIFIED OTHERWISE. FORMS SHALL BE SET TRUE TO LINE AND GRADE AND MAINTAINED SO AS TO ENSURE COMPETENT WORK WITHIN THE ALLOWABLE TOLERANCES SPECIFIED AND SHALL BE MORTAR TIGHT.
- (2) FORMS AND THEIR SUPPORTS SHALL BE DESIGNED SO AS NOT TO DAMAGE PREVIOUSLY PLACED STRUCTURE.
- (3) NO CONSTRUCTION LOAD SHALL BE SUPPORTED ON, NOR ANY SHORING REMOVED FROM ANY PART OF STRUCTURE UNDER CONSTRUCTION EXCEPT WHEN THAT PORTION OF THE STRUCTURE IN COMBINATION WITH THE REMAINING FORMING AND SHORING SYSTEM HAS SUFFICIENT STRENGTH TO SUPPORT SAFELY ITS WEIGHT AND ADDITIONAL IMPOSED LOAD.
- (4) FORMS SHALL BE REMOVED IN SUCH MANNER AS NOT TO IMPAIR SAFETY AND SERVICEABILITY OF THE STRUCTURE.
- (5) SHORING (TUKOD) FOR BEAMS/SLABS SHOULD BE REMOVED AFTER 14th DAY
- (6) SCHEDULE OF STRIPPING OF FORMS AND SHORES.

REMOVAL OF FORMS & SHORING		
STRUCTURAL COMPONENT	CLEAR SPAN BETWEEN SUPPORTS	MIN. TIME PERIOD (DAYS)
FOUNDATION	—	1
WALL, COLUMN, BEAMS GIRDER SIDES & SLAB ON GRADE	—	3
JOIST, BEAMS & GIRDER SOFFIT	UNDER 3.00 M. 3.00 M. to 6.00 M. OVER 6.00 M.	7 14 21
ONE-WAY FLOOR SLABS	UNDER 3.00 M. 3.00 M. to 6.00 M. OVER 6.00 M.	4 7 10

g. PROTECTION AND CURING OF CONCRETE

CONCRETE SURFACES SHALL BE PROTECTED FROM HARMFUL EFFECTS OF SUN, WIND AND RUNNING WATER AND SHALL BE KEPT DAMP FOR AT LEAST 7 DAYS.

3. STRUCTURAL STEEL

- (1) ALL STRUCTURAL MILL SECTIONS, AND BUILT-UP PLATE SECTIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AISC LATEST "SPECIFICATION FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
- (2) STEEL PLATES, SHAPES, BARS, AND METAL FABRICATIONS ARE ASTM A-36 UNLESS NOTED OTHERWISE.
- (3) SCHEDULE OF BOLTS/NUTS/WASHERS

(22) THE STEEL SUBCONTRACTOR SHALL DETERMINE THE ERECTION SEQUENCE FOR ALL STEEL WORKS. THE STEEL SUBCONTRACTORS SHALL ALSO COORDINATE WITH OTHER TRADES AND SITE CONDITIONS IN DETERMINING THE PROPER STEEL ERECTION SEQUENCE SO AS NOT TO DAMAGE WORK PERFORMED BY OTHER TRADES AND / OR PREVIOUSLY ERECTED STEEL MEMBERS.

(23) WORK POINTS, MEMBERS LENGTH AND/OR ERECTION SEQUENCE SHALL BE ADJUSTED BY THE STEEL SUBCONTRACTOR TO MINIMIZE THE EFFECT OF THE TEMPERATURE CHANGES AND DIFFERENTIAL TEMPERATURE EFFECTS. TEMPERATURE EFFECTS (SUCH AS EXPOSED TO STRONG SUN ON ONE SIDE OF THE BUILDING), MEETING AISC ACCEPTABLE MILL STANDARD AND ERECTION TOLERANCES.

(24) ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM - A36, $F_y=248 \text{ MPa}$ (36,000 PSI)

(25) FABRICATOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL BY THE ENGINEER AND THE OWNER PRIOR TO FABRICATION.

4. FOOTINGS

- (1) THE ASSUMED SOIL BEARING CAPACITY SHALL BE 100 kPa AT 1.5M FROM NATURAL GRADE LINE TO BOTTOM OF FOOTING.
- (2) FOOTING SHALL REST ON 100mm THK GRAVEL BASE COURSE COMPAKTED TO 95% MAXIMUM DENSITY.
- (3) BACKFILL SHALL BE PLACED IN 150mm LAYERS AND EACH LAYER SHALL BE COMPAKTED TO A MINIMUM OF 95% MAXIMUM DENSITY. SHALL BE FREE FROM DETERMINAL AMOUNTS OF ORGANIC MATERIAL & NO ROCK OR SIMILAR IRREDUCIBLE MATERIAL W/ A MAXIMUM DIMENSION GREATER THAN 300mm BE BURIED OR PLACED IN FILLS.
- (4) ALL EXCAVATIONS, BACKFILLING AND COMPAKITION SHALL BE INSPECTED AND APPROVED BY THE CONTRACTING OFFICER.
- (5) THE CONTRACTOR SHALL VERIFY THE ACTUAL SOIL CONDITION BEFORE CONSTRUCTION OR AFTER FOOTING EXCAVATION IS DONE, TO CHECK THE GEOTECHNICAL REPORTS RECOMMENDED BEARING CAPACITY, IF ANY.
- (6) NO FOOTING SHALL REST ON FILL.
- (7) MINIMUM CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE 75mm FOR CONCRETE DEPOSITED AGAINST THE GROUND.
- (8) CONTRACTOR TO PROVIDE FOR DE-WATERING OF EXCAVATIONS FROM EITHER SURFACE WATER, GROUND WATER OR SEEPAGE.
- (9) CONTRACTOR SHALL PROVIDE FOR DESIGN AND INSTALLATION OF ALL CRIBBING, SHEATHING AND SHORING REQUIRED TO SAFELY RETAIN THE EARTH BANKS.
- (10) ALL EXCAVATIONS SHALL BE PROPERLY BACKFILLED. DO NOT PLACE BACKFILL BEHIND RETAINING WALLS BEFORE WALLS HAVE ATTAINED FULL DESIGN STRENGTH. CONTRACTOR SHALL BRACE OR PROTECT ALL BUILDING AND PIT WALLS BELOW GRADE FROM LATERAL LOADS UNTIL ATTACHING FLOORS ARE COMPLETELY IN PLACE AND HAVE ATTAINED FULL STRENGTH. CONTRACTOR SHALL PROVIDE FOR DESIGN, PERMITS AND INSTALLATION OF SUCH BRACING.

(11) FOOTINGS SHALL BE PLACED AND ESTIMATED ACCORDING TO DEPTHS SHOWN ON DRAWINGS. SHOULD SOIL ENCOUNTERED AT THESE DEPTHS NOT BE APPROVED BY THE FOUNDATION ENGINEER, FOOTING ELEVATIONS WILL BE ALTERED AS REQUIRED.

(12) FOOTING BACKFILL AND UTILITY TRENCH BACKFILL WITHIN BUILDING AREA SHALL BE MECHANICALLY COMPAKTED IN LAYERS, IN ACCORDANCE WITH SOIL REPORT. FLOODING WILL NOT BE PERMITTED.

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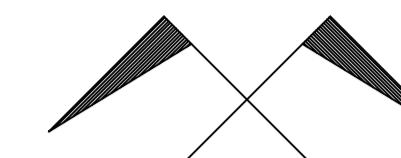
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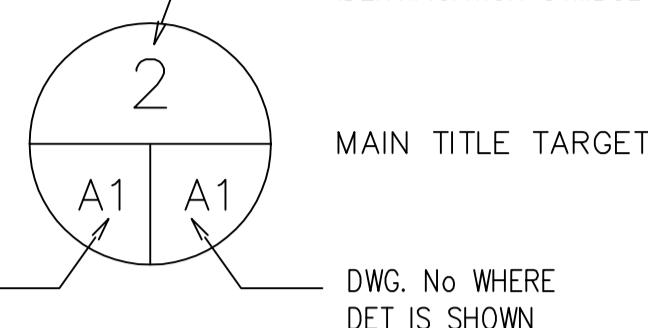
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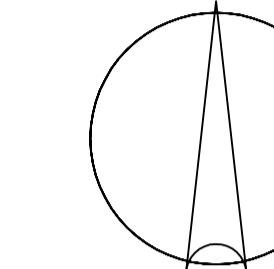
SYMBOLS



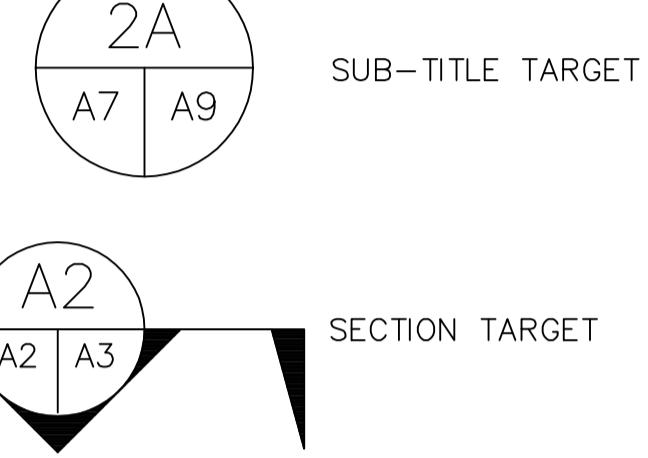
LINE OF SYMMETRY
OR SIMILARITY



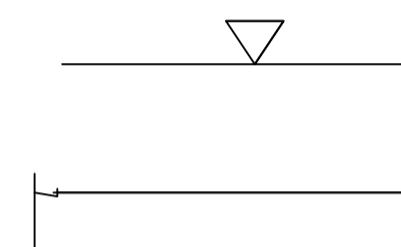
IDENTIFICATION SYMBOL
MAIN TITLE TARGET
DWG. No WHERE DET IS TAKEN
DWG. No WHERE DET IS SHOWN



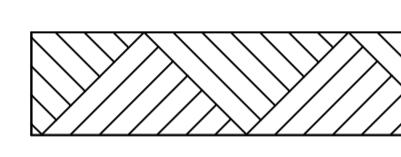
NORTH ARROW



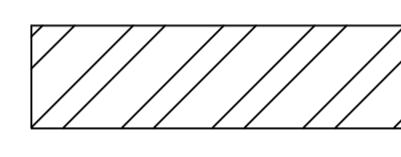
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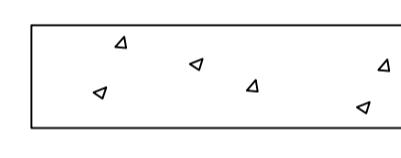
SECTION TARGET



SECTION IN EARTH



SECTION IN STRUCTURAL STEEL



SECTION IN CONCRETE



PLATE

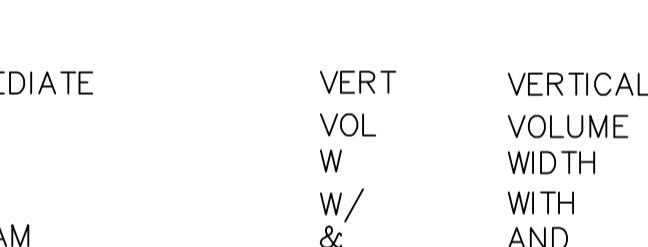


ANGLE SHAPE



O.C.

ON CENTER



DETAIL REFERENCE TARGET



BUNDLED BARS



DIAMETER



SQUARE



AT



AND



CENTERLINE

ABBREVIATIONS

ABT	ABOUT	INTERM	INTERMEDIATE	VERT	VOLUME
BB	BOTTOM BARS	JT	JT LENGTH	VOL	WIDTH
BOTT	BOTTOM	LG	LINE	W	WITH
BSMT	BASEMENT	LN	KILOGRAM	W/	&
CLR	CLEAR	kg	KILONEWTON	AND	AND
COL	COLUMN	kN	KILOPASCAL		
CONC	CONCRETE	kPa	METER		
CONST	CONSTRUCTION	m	MILLIMETER		
CONT	CONTINUOUS	mm	MAXIMUM		
CTR	CENTER	MAX	MINIMUM		
DET	DETAIL	MIN	MILLIMETER		
DIA	DIAMETER	MPa	METER		
DWG	DRAWING	N	MILLIGRAM		
EA	EACH	NEAR FACE	MEGAPASCAL		
EF	EACH FACE	NUMBER	NEWTON		
ELEV.	ELEVATION	O.C.	NEAR FACE		
ENGR	ENGINEER	ON CENTER	NUMBER		
EQ	EQUAL	QUANTITY	ON CENTER		
EW	EACH WAY	RADIUS	QUANTITY		
EXP	EXPANSION	RC	RADIUS		
EXT	EXTERIOR	REINF	REINFORCED CONCRETE		
EXIST	EXISTING	SDWK	REINFORCEMENT		
FF	FAR FACE	SP	SIDEWALK		
FFL	FLOOR LINE	SPCS	SLOPE		
FIN	FINISH	STD	SPACES		
FLR	FLOOR	STIR	STANDARD		
FTG	FOOTING	SYMM	STIRRUP		
GEN	GENERAL	TB	SYMMETRY		
GRND	GROUND	THK	TOP BARS		
HOR	HORIZONTAL	TYP	THICK		
INT	INTERIOR	VAR	TYPICAL		

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GENERAL NOTES
SCALE 1:125

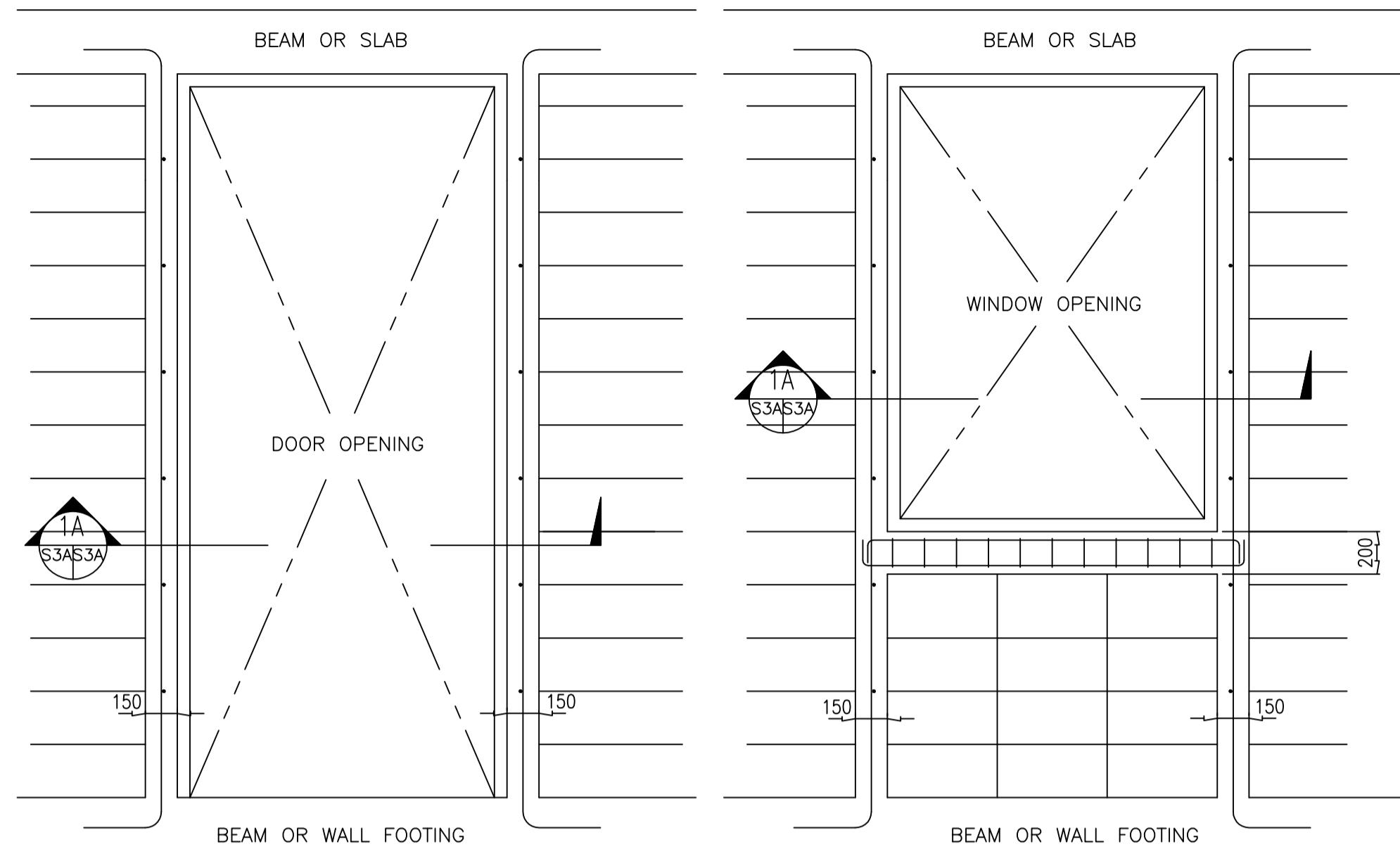


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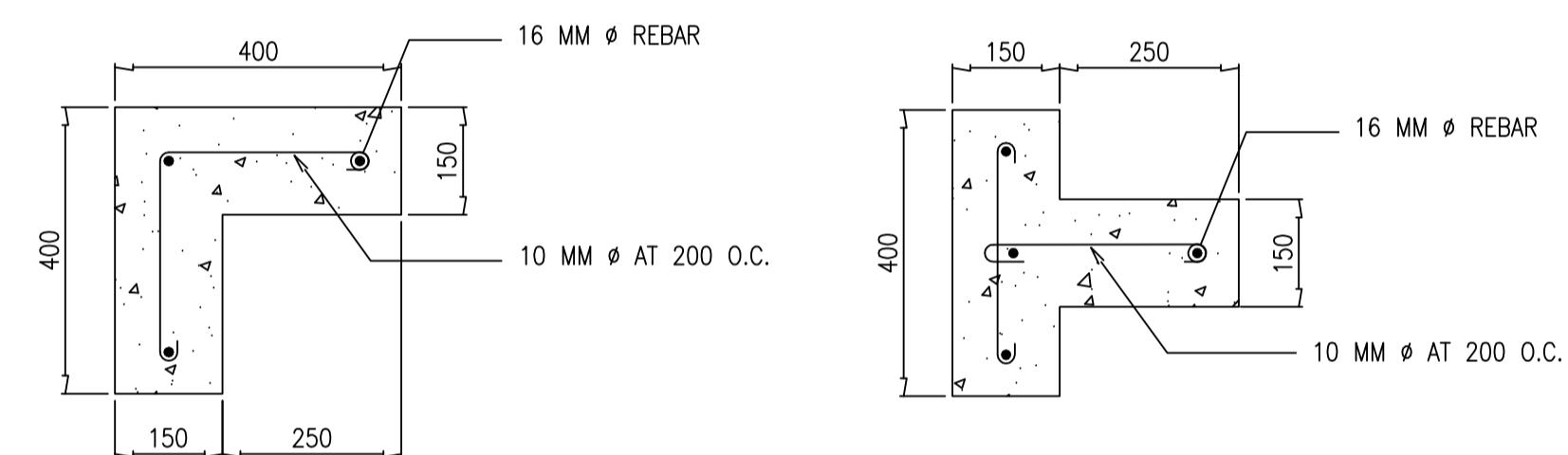


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GENERAL NOTES
EST 02
CHECKED A.Q.T DRAWN MAApelo FILENAME ZK1404-A-ST02
APPROVED RNF DATE 23SEP15 PROJ. NO. 2K1404A



1 TYPICAL DOOR AND WINDOW OPENING & LINTEL BEAM
S3A S3A SCALE 1:25

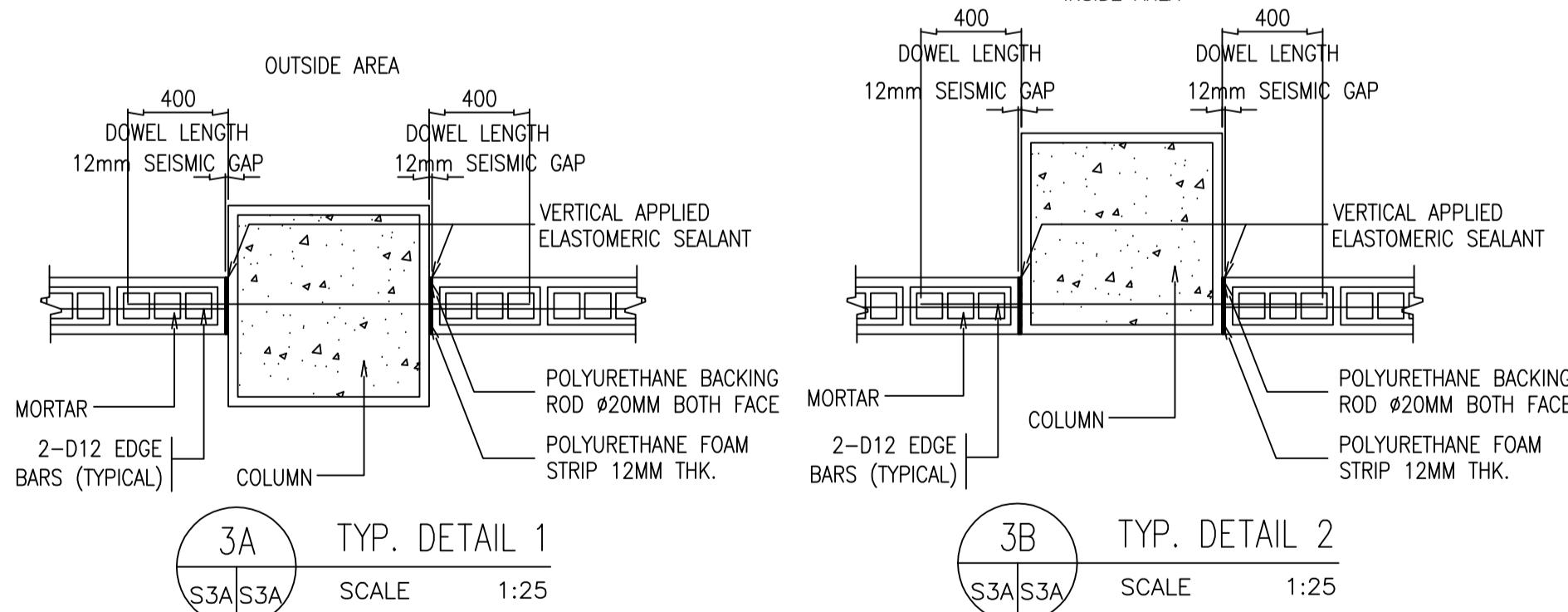


2A DETAIL @ MIDS PAN(TYP. @ EVERY 3M)
S3A S3A SCALE 1:10

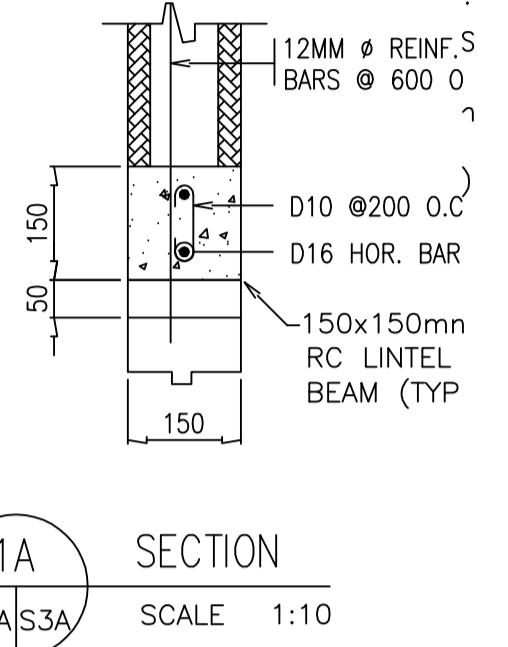
2B DETAIL @ CORNERS
S3A S3A SCALE 1:10

2C DETAIL @ INTERSECTIONS
S3A S3A SCALE 1:10

2 TYPICAL CHB WALL STIFFENER COLUMNS
S3A S3A SEE ABOVE



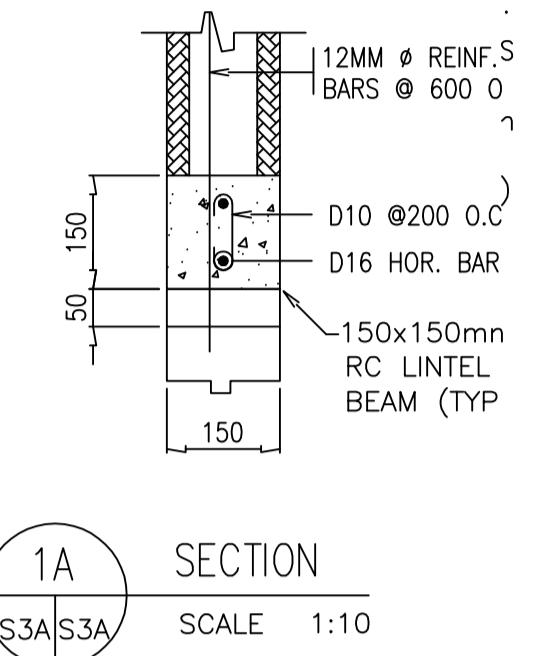
3 TYPICAL CHB WALL TO CONCRETE COLUMN CONNECTION DETAIL
S3A S3A SEE ABOVE



t (MM.)	VERTICAL REINFORCEMENT		HORIZONTAL REINFORCEMENT	GROUTED CELL	
	Ø	Avm	Ø	Ahm	
150	12	600 MM O.C.	10	600 MM O.C.	ALL
100	12	600 MM O.C.	10	600 MM O.C.	ALL

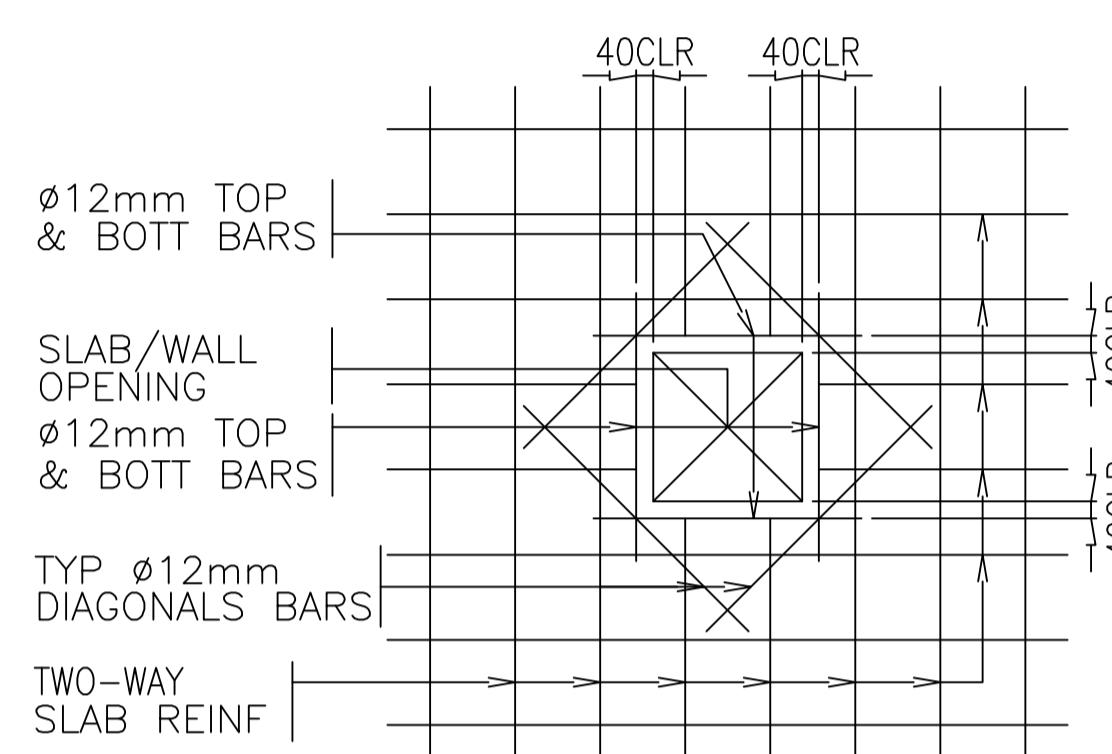
Avm = VERTICAL REINFORCEMENT SPACING
Ahm = HORIZONTAL REINFORCEMENT SPACING
t = THICKNESS OF MASONRY

- NOTES:
1. ALL EXTERIOR CONCRETE BLOCKS SHALL HAVE A MINIMUM STRENGTH OF 350 PSI (150MM THK)
 2. ALL INTERIOR CONCRETE BLOCKS SHALL HAVE A MINIMUM STRENGTH OF 350 PSI (100MM THK)
 3. PROVIDE STIFFENER COLUMNS AT EVERY THREE METERS (3.00 M.) O.C. WITH 2-16Ø VERTICAL BAR WITH 10Ø TIES @ 200MM O.C. AS INDICATED.
 4. PROVIDE STIFFENER BEAMS(200MM X 150 MM) AT EVERY THREE METERS (3.00 M.) O.C. WITH 2-16Ø HORIZONTAL BARS WITH 10Ø TIES AT 200MM O.C.
 5. ALL CHB CELLS CONTAINING REINFORCEMENT SHALL ONLY BE SOLIDLY FILLED WITH GROUT. ALSO ALL CHB CELLS BELOW FINISH GRADE LINE SHALL BE SOLIDLY FILLED WITH GROUT.
 6. UNLESS OTHERWISE NOTED, SOLID GROUT SHALL MEAN ALL CELLS (WITH OR WITHOUT REINFORCEMENT BE GROUTED.)
 7. SPECIAL FIELD INSPECTION IS REQUIRED.
 8. LAYING OF CONC. BLOCKS SHOULD BE 1200MM HIGH IN ONE DAY (1 DAY).



Avm = VERTICAL REINFORCEMENT SPACING
Ahm = HORIZONTAL REINFORCEMENT SPACING
t = THICKNESS OF MASONRY

4 TYPICAL CONCRETE HOLLOW BLOCK PLAN
S3A S3A SCALE 1:40



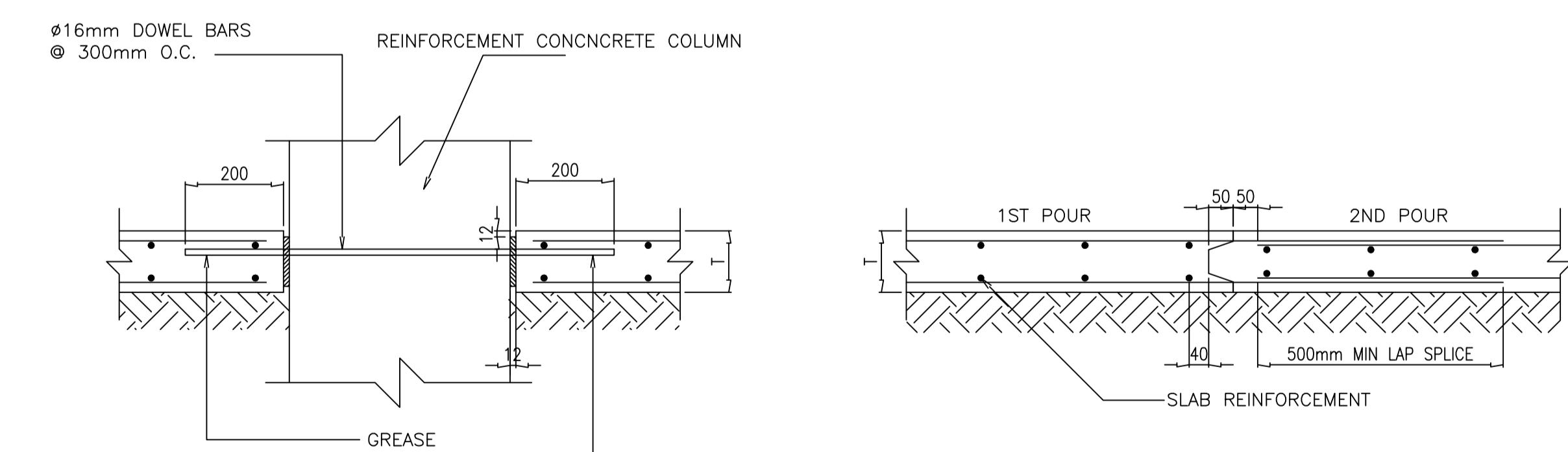
NOTES:
PROVIDE THESE ADDITIONAL BARS FOR ALL OPENINGS PLUS BARS PARALLEL TO SIDE OF OPENING EQUAL TO THE NUMBER OF TERMINATED BARS BY THE OPENING.

5A TYPICAL SLAB/WALL OPENING DETAIL
S3A S3A SCALE 1:25

NOTES:

1. ALL REINFORCEMENT SHALL BE 0.019M CLEAR MINIMUM FROM TOP AND BOTTOM SLAB.
2. FOR TWO-WAY SLAB ALONG THE LONGER SPAN AND SHALL BE PLACED BELOW THOSE ALONG THE LONGER SPAN AT CENTER AND OVER THE LONGER SPAN BARS NEAR THE SUPPORT UNLESS OTHERWISE INDICATED OR SHOWN IN DETAIL. THE SPACING OF THE BARS AT THE COLUMN STRIPS CAN BE APPROXIMATELY 1/6 OF THE MIDDLE STRIP IN NO CASE GREATER THAN 2 1/2 THE SLAB THICKNESS.
3. UNLESS OTHERWISE DETAILED IN CONDITIONING SLAB HAVING SAME REINFORCEMENT RUNNING IN ONE DIRECTION, REINFORCING SHALL BE BENT, EXTENDED OR CUT AS FOLLOWS.
4. TEMPERATURE BARS FOR SLAB SHALL BE GENERALLY PLACED NEAR THE TENSION FACE AND SHALL NOT BE LESS THAN 0.025 BT.
5. UNLESS OTHERWISE NOTED, ALL BEDDED SLAB SHALL BE REINFORCED WITH 10mm Ø BAR @ 0.25M.O.C. B.W. AT CENTER OF SLAB. CONSTRUCTION JOINT FOR SLAB SHALL NOT BE MORE THAN 3.0M APART.
6. PROVIDE EXTRA REINFORCEMENT AT CORNER SLAB (TWO ADJACEN DISCONTINUOUS EDGE) AS SHOWN ABOVE.
7. PROVIDE SUPPLEMENTARY SMALL UNFRAMED OPENING SLAB AS SHOWN BELOW.

5B TYPICAL EXTERIOR CORNER DETAIL
S3A S3A SCALE 1:35

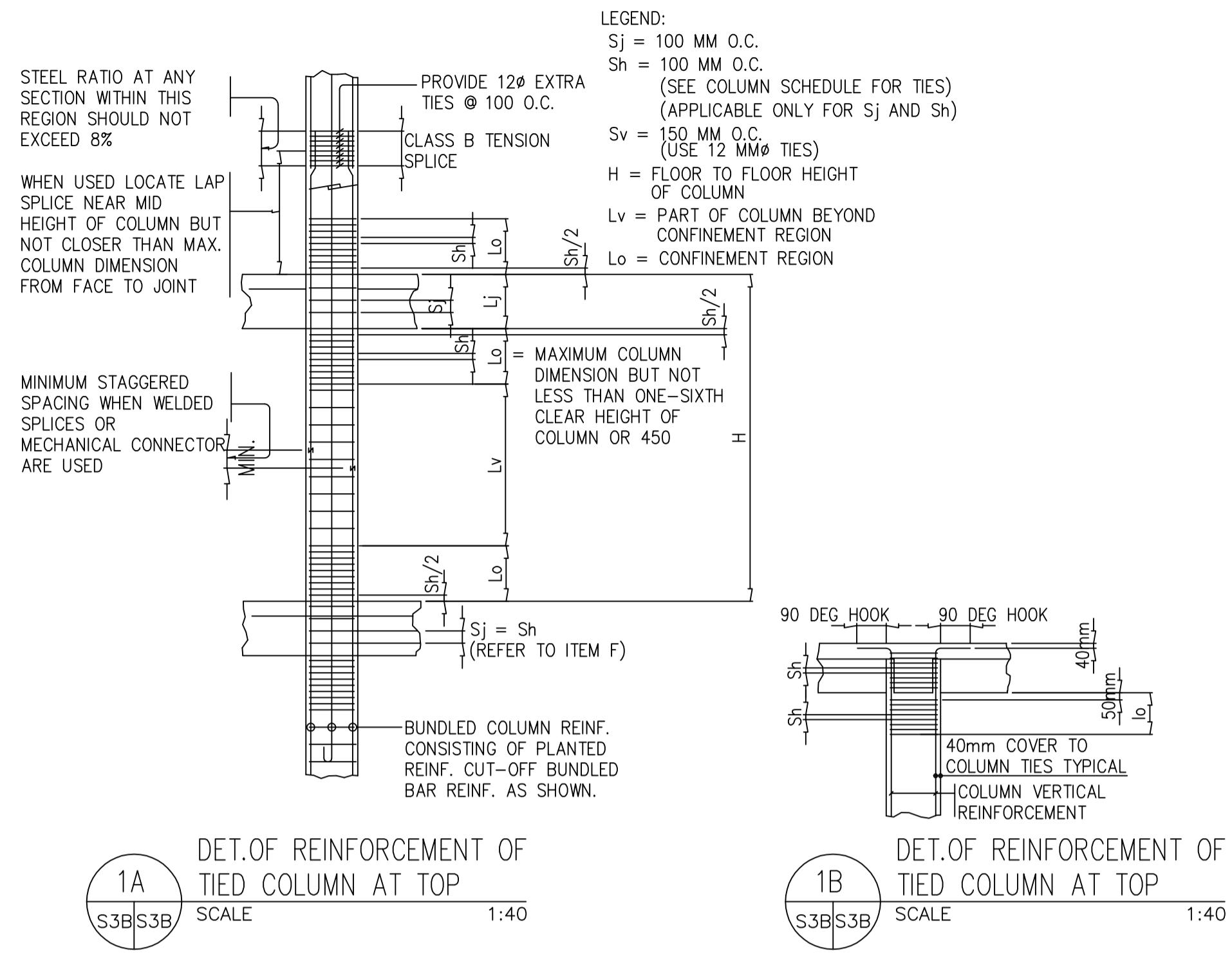


6A EXPANSION JOINT
S3A S3A SCALE 1:10

6B CONSTRUCTION JOINT
S3A S3A SCALE 1:10

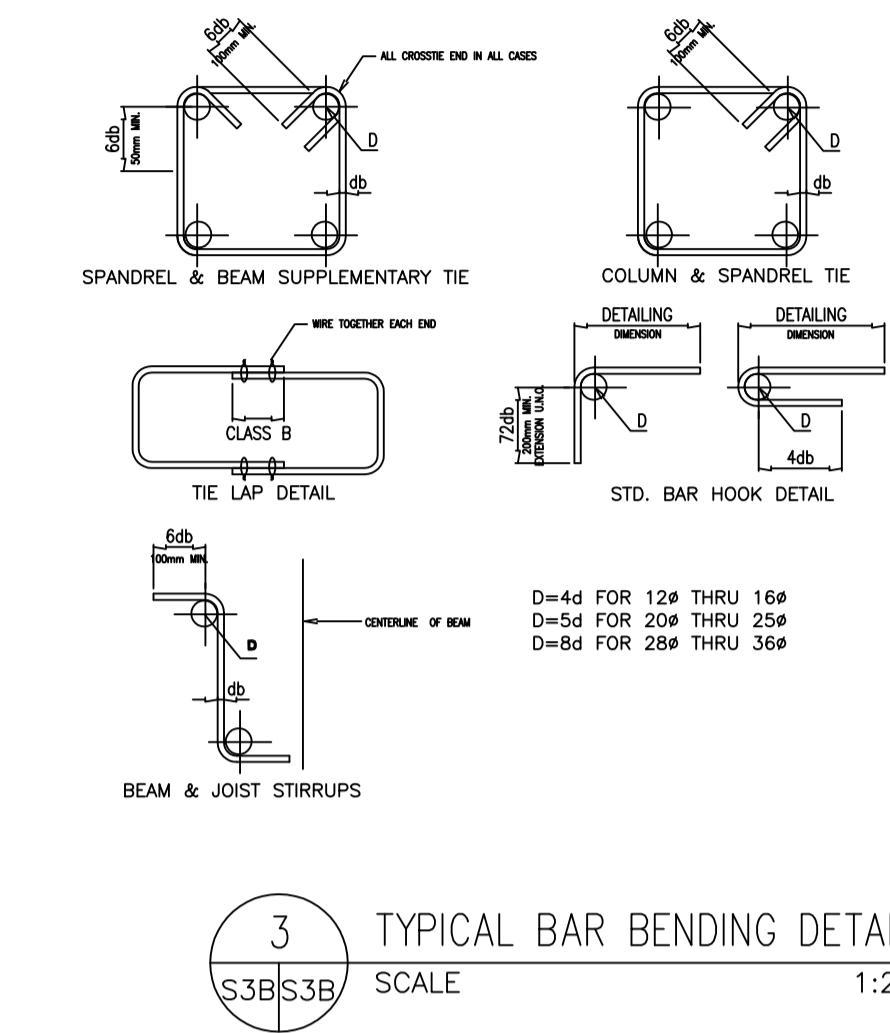
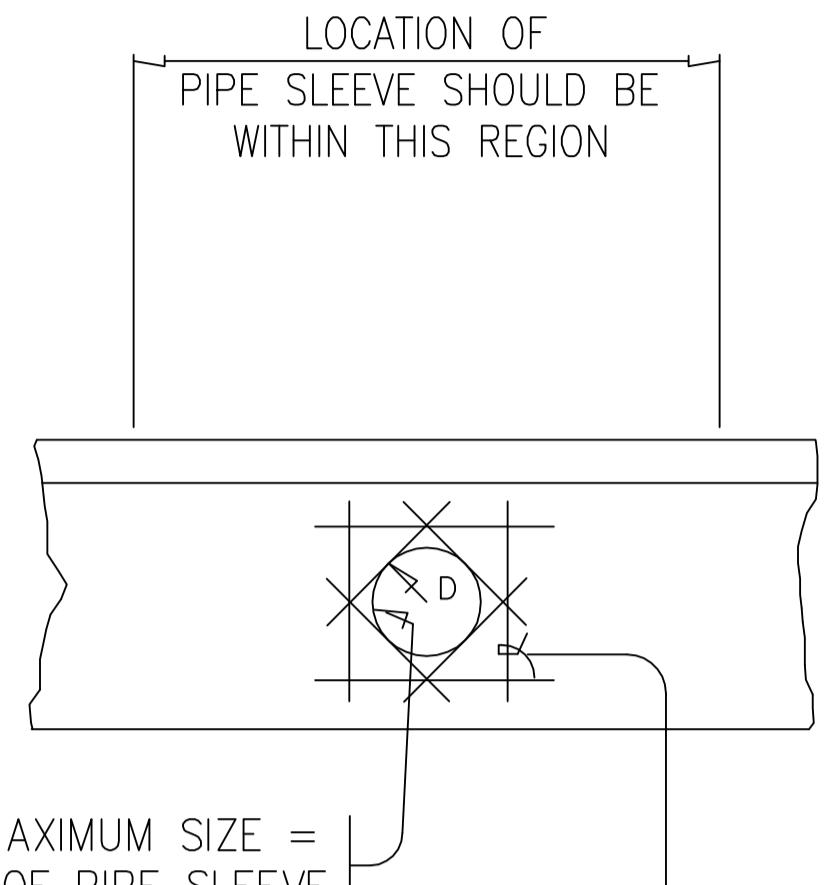
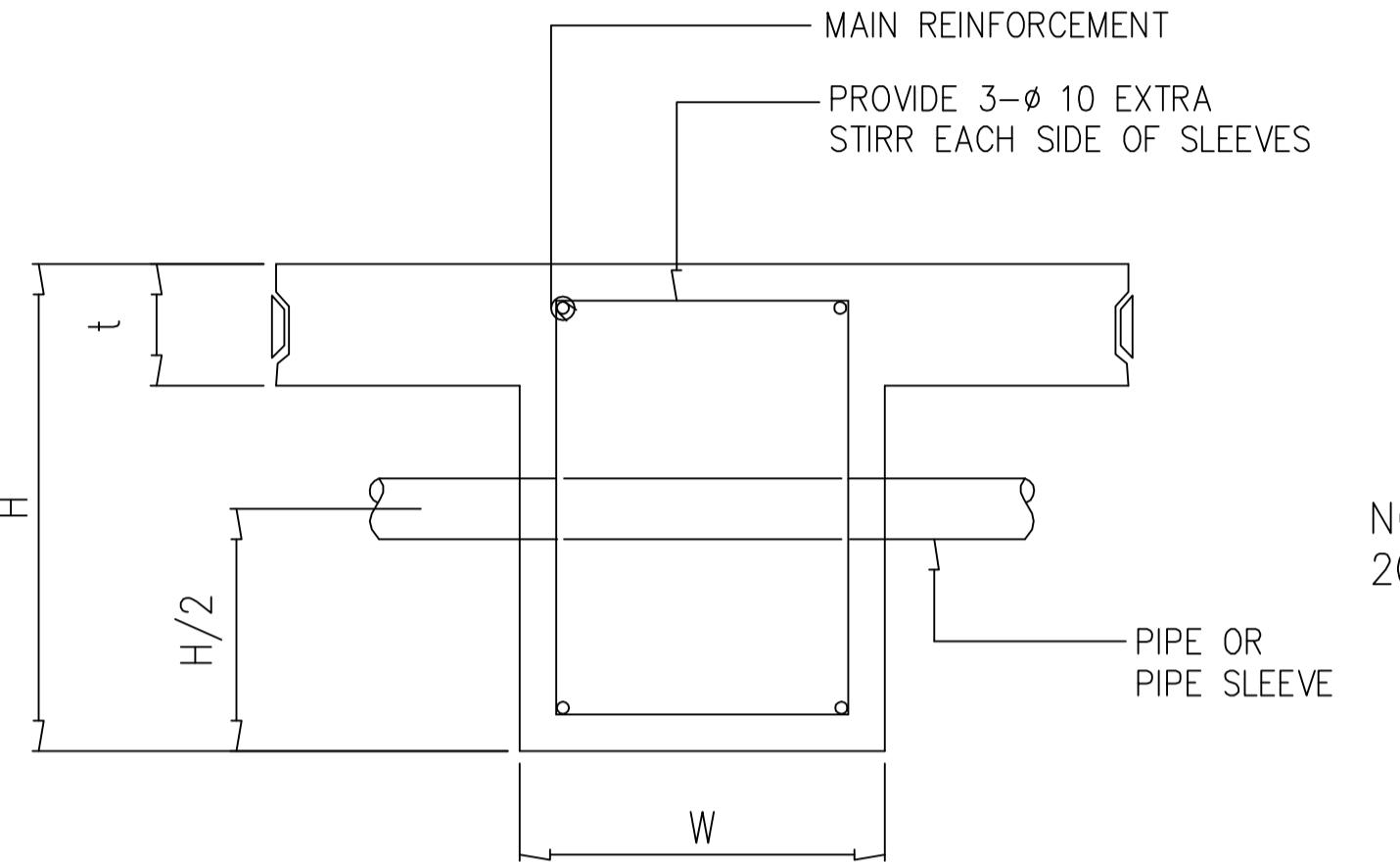
6 CONSTRUCTION JOINTS FOR SLAB ON FILL
S3A S3A SEE ABOVE

NO.	REVISIONS		DATE	BY	NO.	REVISIONS		DATE	BY	SHEET CONTENT		
	ISSUED FOR BIDDING	MVA				23SEP15						SHEET NO.
												TYPICAL DOOR AND WINDOW OPENING & LINTEL BEAM
												TYPICAL CHB WALL STIFFENER COLUMNS
												TYPICAL SLAB/WALL OPENING DETAIL
												TYPICAL CONCRETE HOLLOW BLOCK PLAN
												CONSTRUCTION JOINTS FOR SLAB ON FILL
												CHECKED AQT DRAWN MAApelo FILENAME
												APPROVED RNF DATE 23SEP15 ZK1404A-ST3A PROJ. NO. 2K1404A



NOTE:

1. PIPES OR PIPE SLEEVES SHALL NOT BE LARGER IN DIAMETER THAN 1/3 THE OVERALL DEPTH OF BEAM OR GIRDER. 2. THEY SHALL NOT BE SPACED CLOSER THAN 3 DIAMETERS ON CENTER. 3. THEY SHALL NOT IMPAIR SIGNIFICANTLY THE STRENGTH OF CONSTRUCTION. 4. SUBMIT TO STRUCTURAL ENGINEER FOR APPROVAL THE LOCATION OF EMBEDDED PIPE OR PIPE SLEEVE PRIOR TO INSTALLATION.



USE Ø20mm BARS FOR BEAM WIDTH OF 2500mm OR THICKER (EACH FACE)
USE Ø16mm BARS FOR BEAM WIDTH OF 200mm OR LESS. (EACH FACE)

NOTES ON COLUMNS:

- FOR ALL TIED COLUMNS, MIN. 4 LAYERS OF TIES SHALL BE PROVIDED AT 100mm O.C. IN COLUMN REINFORCEMENT JUST ABOVE THE GIRDER IN BOTH SIDES OF COLUMN CONST. JOINTS.
- COLUMN TIES & SPIRALS SHALL BE PROVIDED WITH EVERYWHERE BY COVERING OF CONCRETE CAST MONOLITHICALLY WITH THE CORE OF MIN. THICKNESS OF 3.81 CM. (1-1/2") MAX. SIZE OF COARSE AGGREGATE.
- WHERE COLUMNS CHANGE IN SIZE, VERT. REINF'T. SHALL BE OFFSET AT SLOPE OF NOT MORE THAN 1:6 & EXTRA 10mm dia. TIES AT 100mm SHALL BE PROVIDED THROUGHOUT THE OFFSET REGION.

BAR SIZES (MM)	LAP SPLICES LENGTH		ANCHORAGE LENGTH (MM)
	TYPE "A"	TYPE "B"	
Ø 10	400	300	600
Ø 12	450	350	600
Ø 16	610	400	600
Ø 20	760	560	600
Ø 25	1100	900	680
Ø 28	1400	1200	560
Ø 32	1900	1400	1120
Ø 36	2410	2410	1430

NOTES:

1. TYPE "A" BUNDLED BARS
TYPE "B" INDIVIDUAL BARS
2. NOT MORE THAN 33% OF THE BARS SHALL BE SPLICED WITHIN THE REQUIRED LAP LENGTH

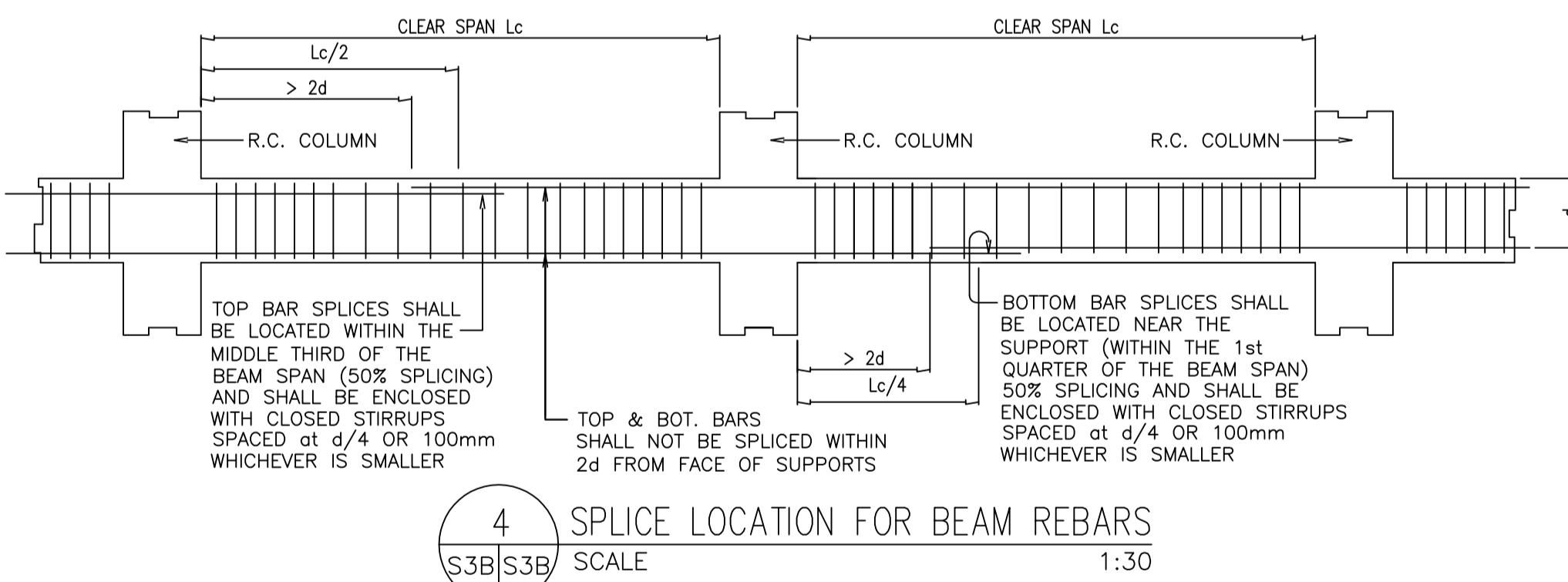
1C S3BS3B SCALE 1:40

1 S3BS3B SCALE 1:40

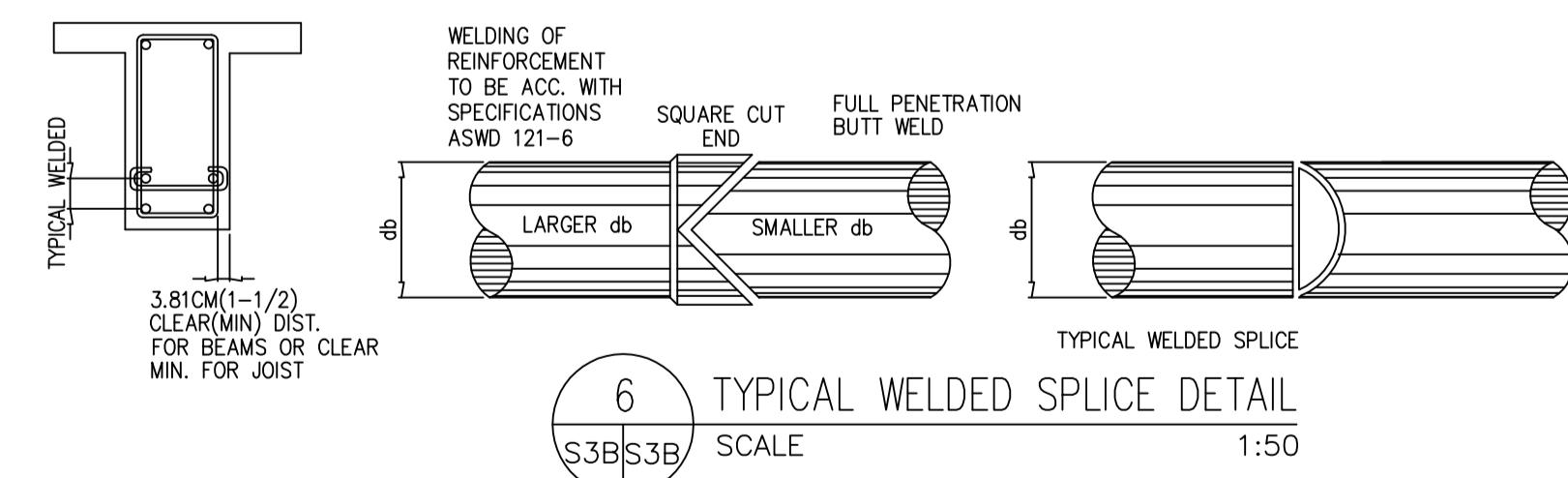
2A S3BS3B SCALE 1:25

2B S3BS3B SCALE 1:25

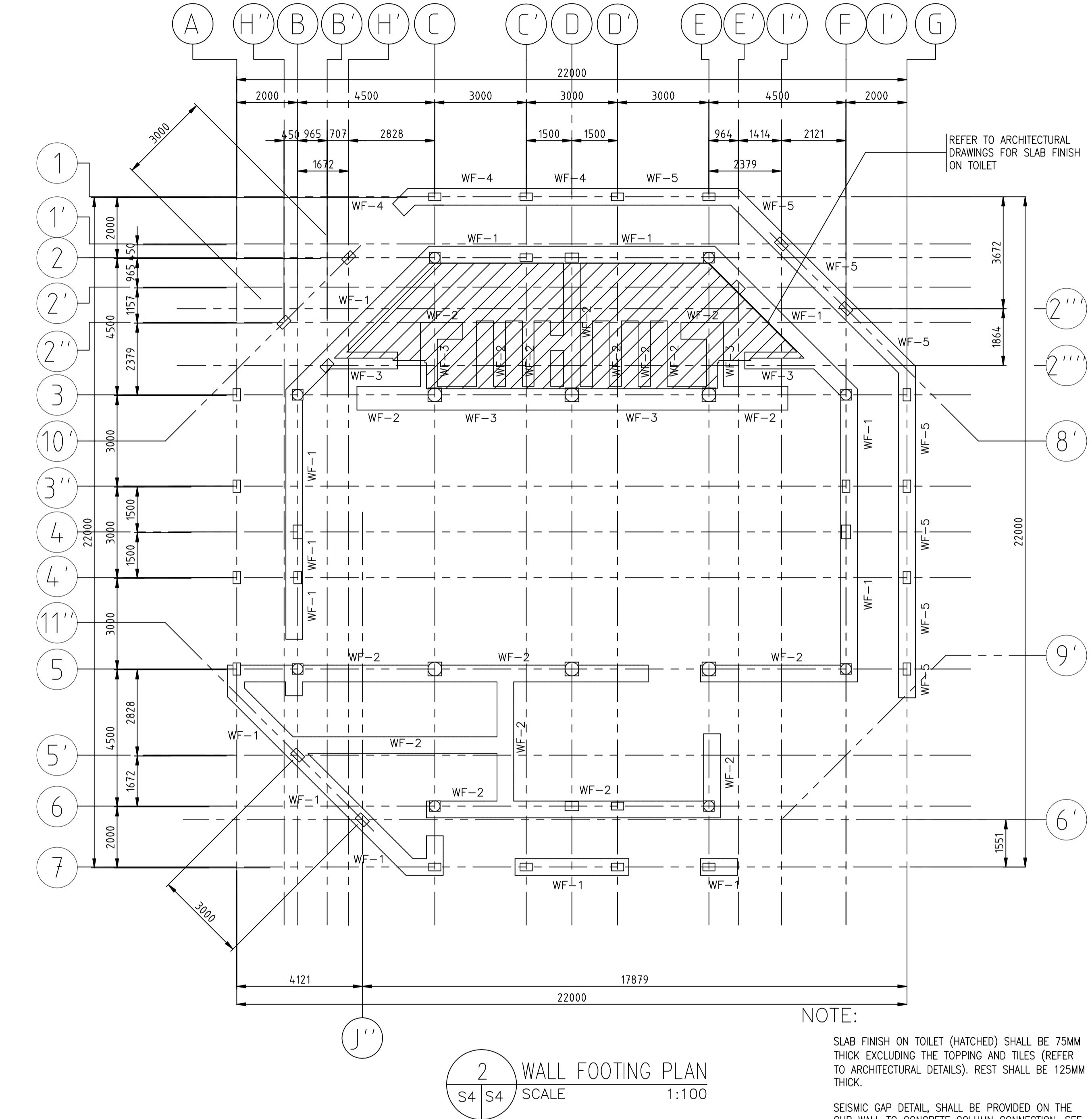
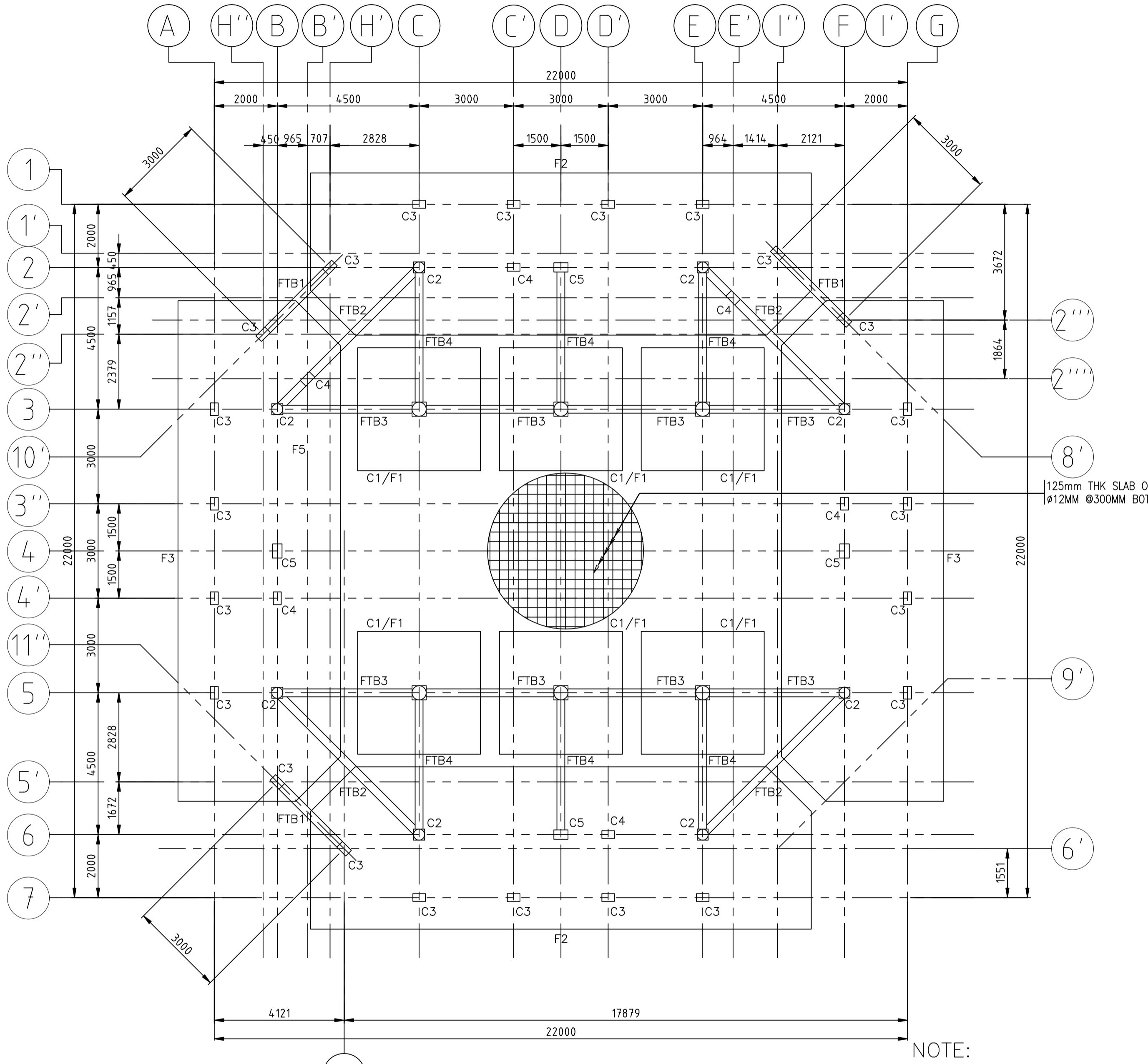
2 S3BS3B SCALE 1:25

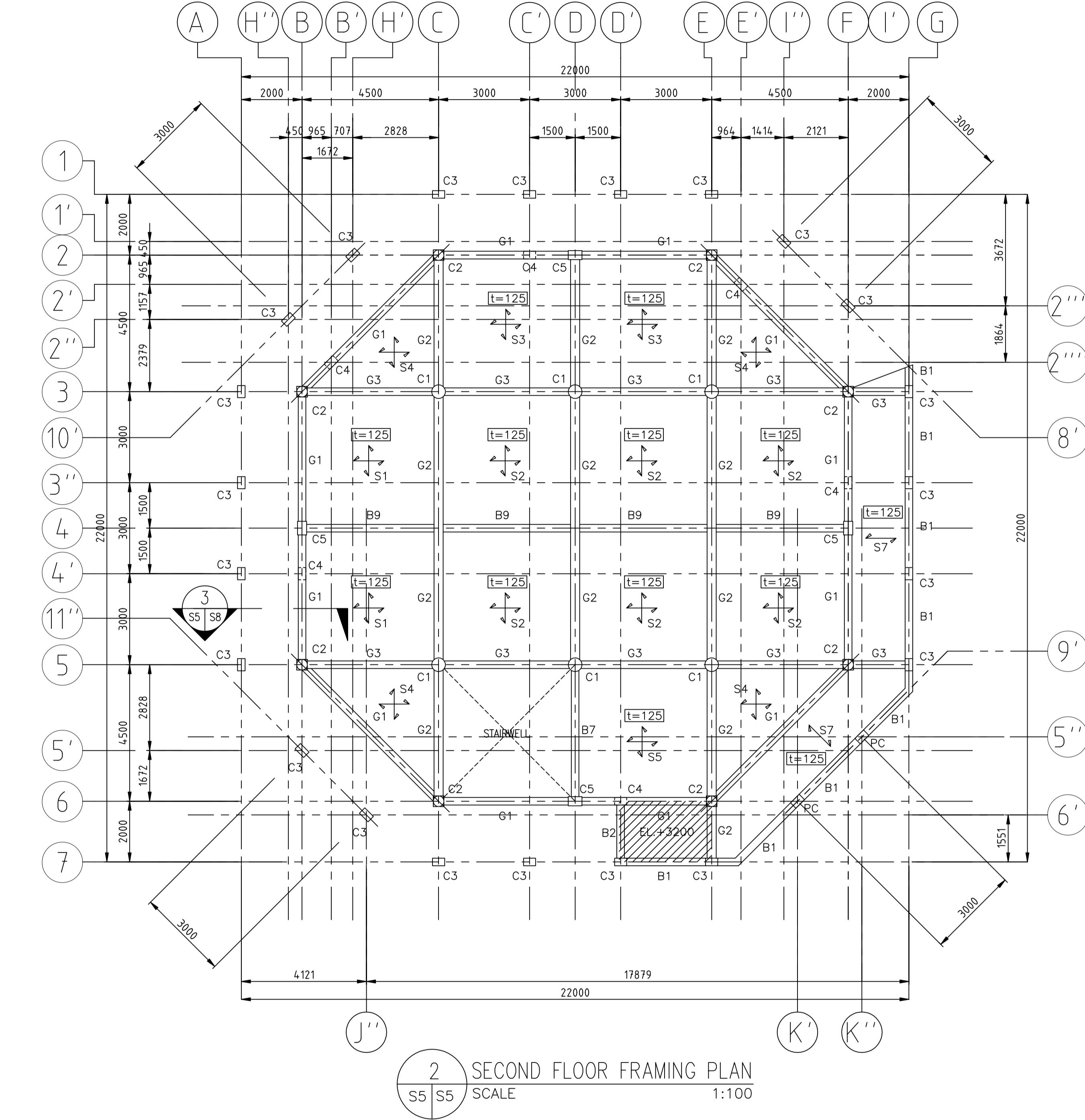
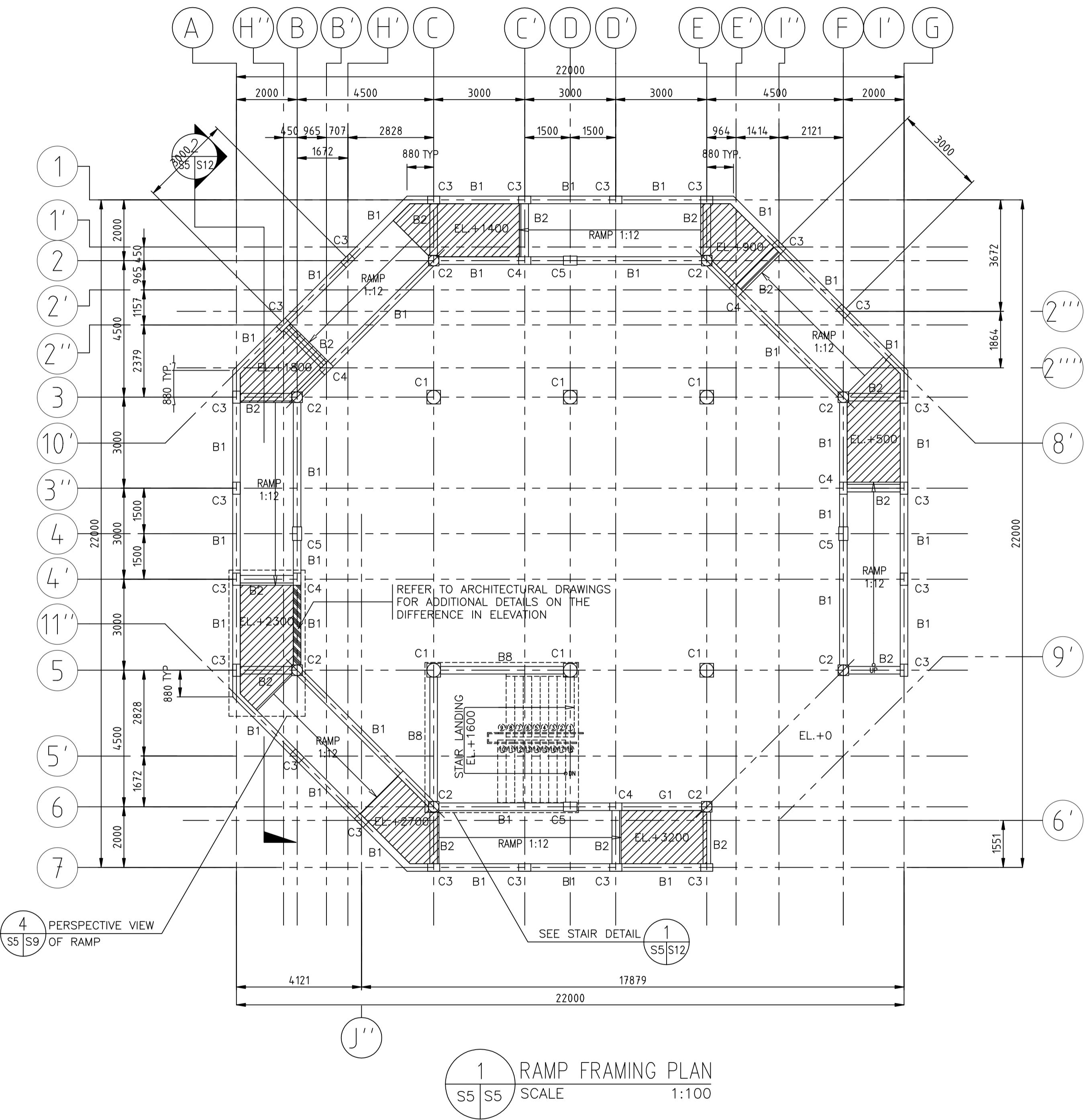


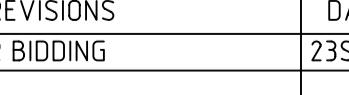
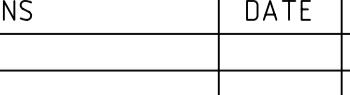
NOTE:
NO SPLICED BE PERMITTED ON BEAMS WHERE CRITICAL BENDING OCCURS, LENGTH OF LAP SPLICES WHERE PERMITTED SHALL BE AS SHOWN TABLE "A", WELD SPLICES SHALL BE DEVELOP IN TENSION AT LEAST 125% OF THE SPECIFIED YIELD OF BARS. NOT MORE THAN 50% OF THE BARS AT ANY ONE SECTION SHALL BE ALLOWED TO SPLICE THEREIN. A TYPICAL WELDED SPLICE DETAIL FOR Small dia. & Larger dia. BARS ARE SHOWN BELOW.

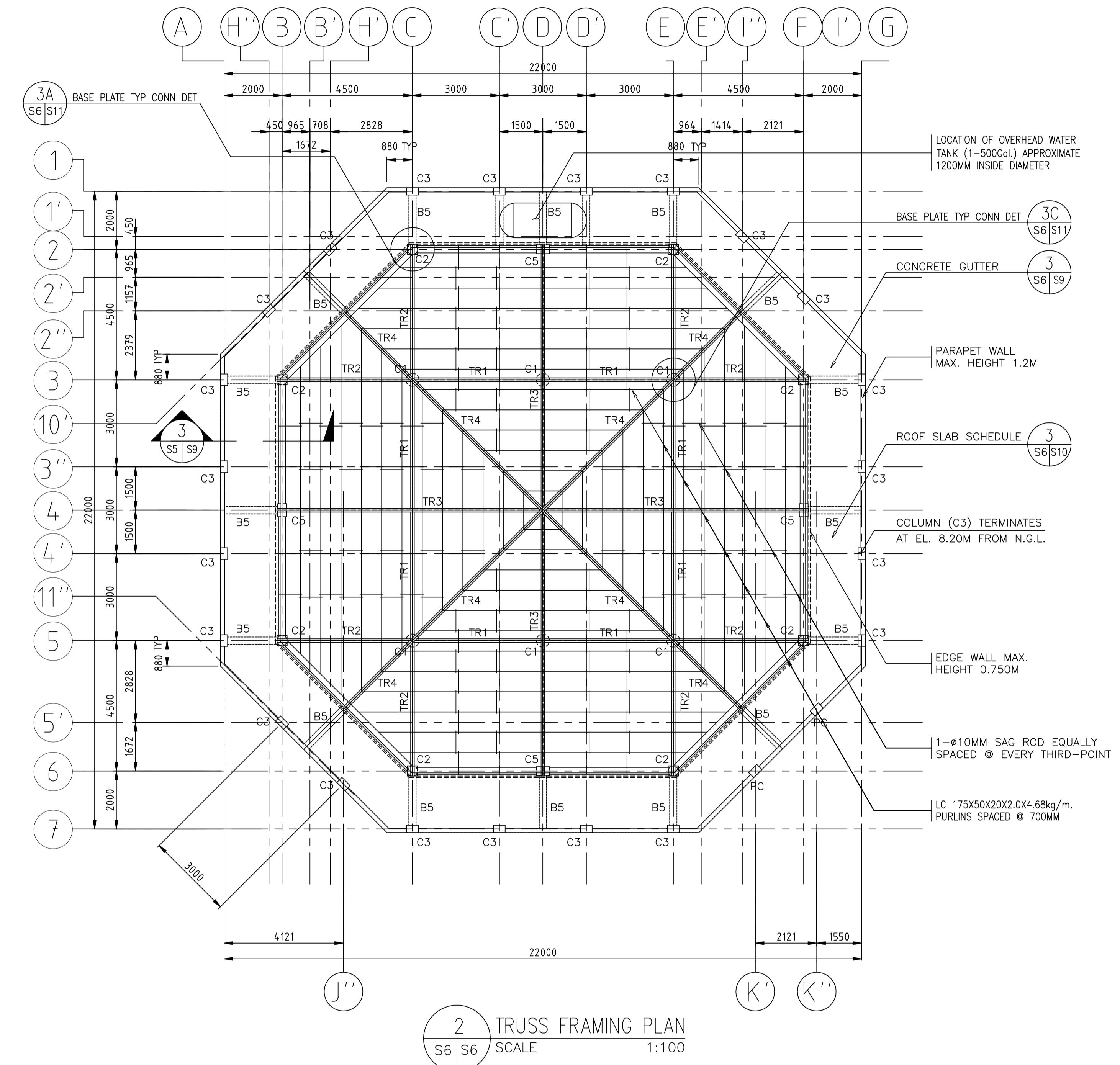
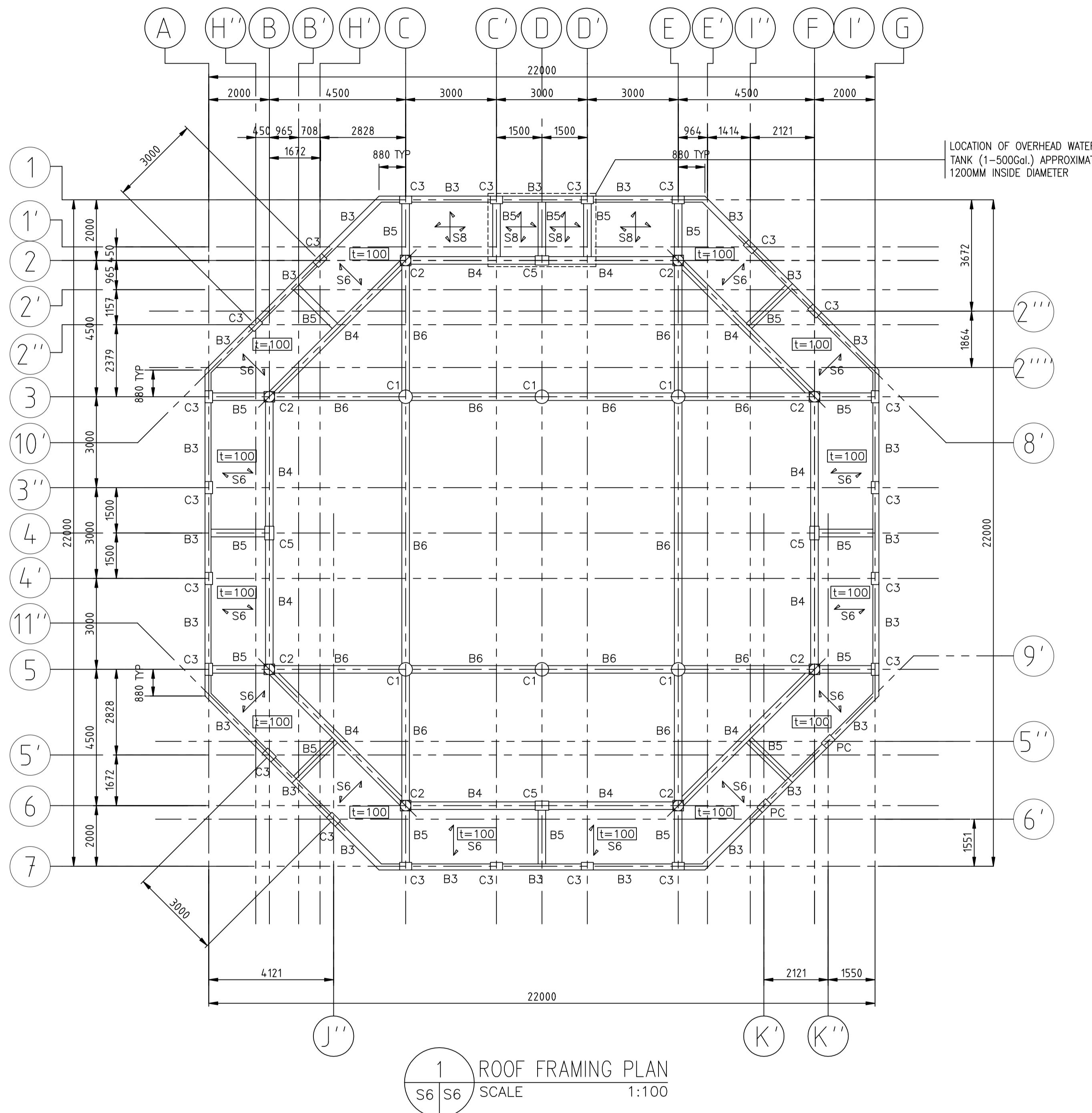


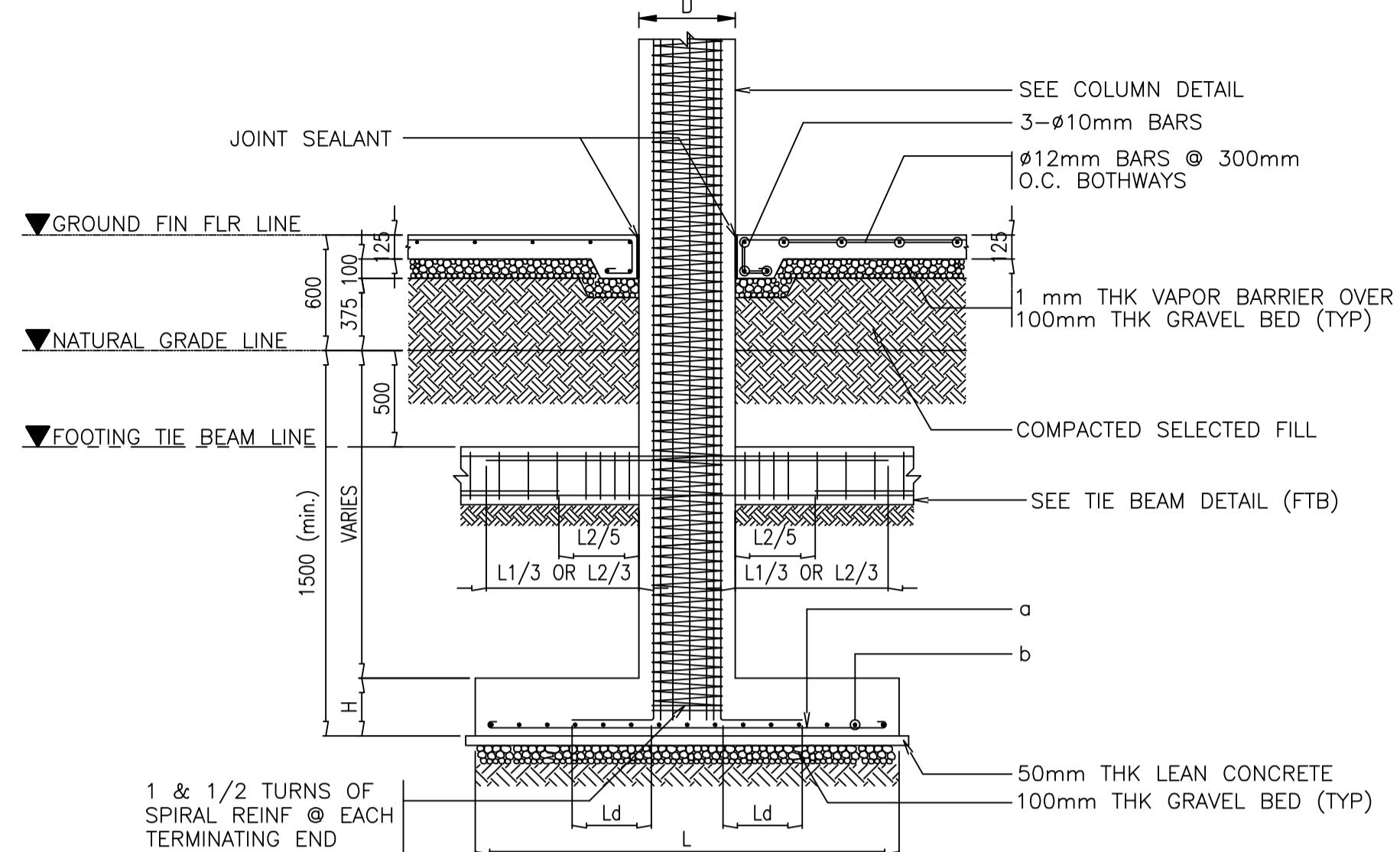
ARCHITECT / ENGINEER :	PROJECT / LOCATION :	OWNER :	NO.	REVISIONS	DATE	BY	NO.	REVISIONS	DATE	BY	SHEET CONTENT	SHEET NO.
RNFA STRUCTURAL ENGINEER	MULTI-PURPOSE CENTER CITY OF BORONGAN, EASTERN SAMAR	IOM/UNICEF	ISSUED FOR BIDDING	23SEP15	MVA						TYPICAL TIED COLUMN BAR DETAIL TYPICAL BAR BENDING DETAIL SPICE LOCATION FOR BEAM REBARS TYPICAL DROP SLAB DETAIL TYPICAL WELDED SPLICE DETAIL	EST3B
PRC Reg. No.	PTR No.:	Place of Issue : ---									CHECKED AGT DRAWN MAApelo FILENAME	
—	—	Date of Issue : ---									APPROVED RNF DATE 23SEP15	ZK1404-A-ST3B
PASIG, METRO MANILA TEL. NO. 631-1541 TO 42											PROJ. NO.	2K1404.A



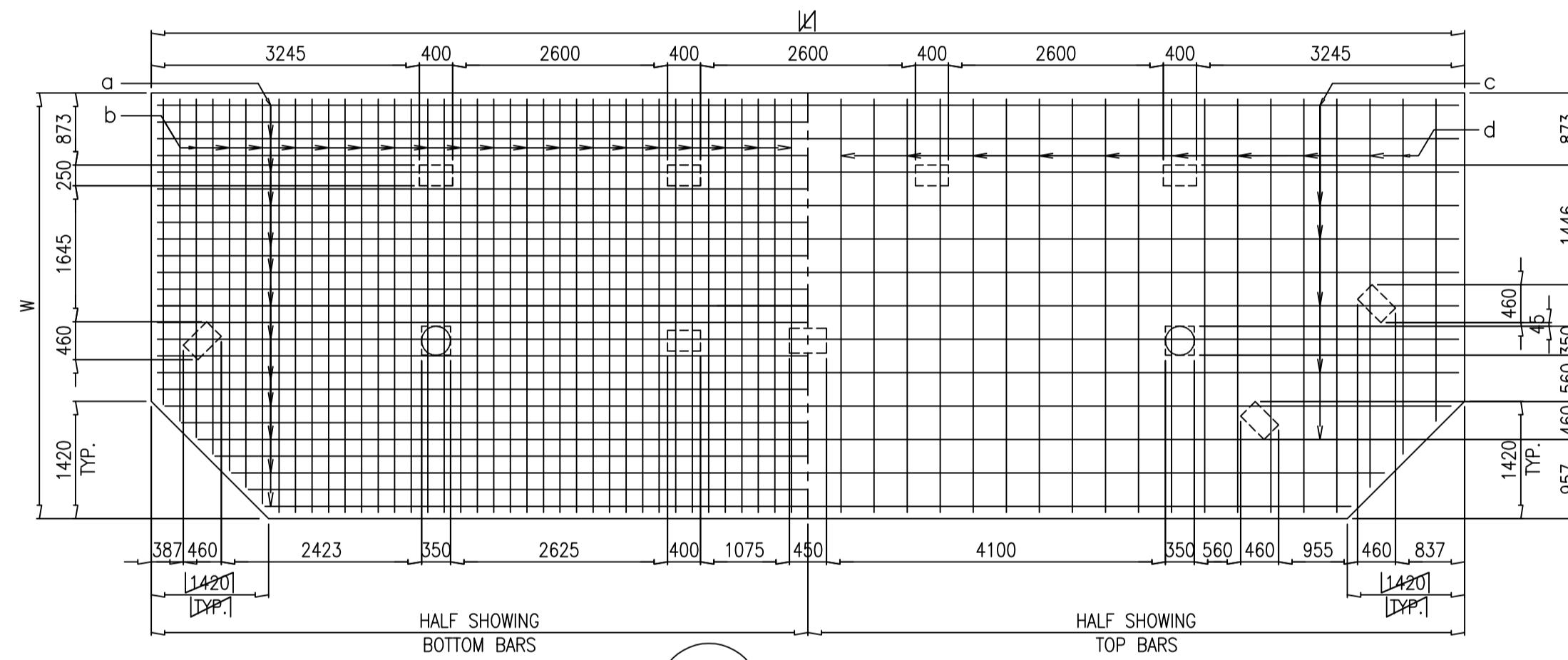


▼	ARCHITECT / ENGINEER :			PROJECT / LOCATION :			OWNER :			RAMP FRAMING PLAN SECOND FLOOR FRAMING PLAN	SHEET CONTENT			SHEET NO.							
	RNFA STRUCTURAL ENGINEER			MULTI-PURPOSE CENTER CITY OF BORONGAN, EASTERN SAMAR			 IOM • OIM	 IOM/UNICEF	NO. ISSUED FOR BIDDING 23SEP15 MVA												
	PRC Reg. No.	PTR No.:	Place of Issue : --- .																		
	—	—	Date of Issue : --- .						CHECKED				AQT	DRAWN	MAApelo	FILENAME	PROJ. NO.				
									APPROVED				RNF	DATE	23SEP15	2K1404A-ST05	2K1404A				

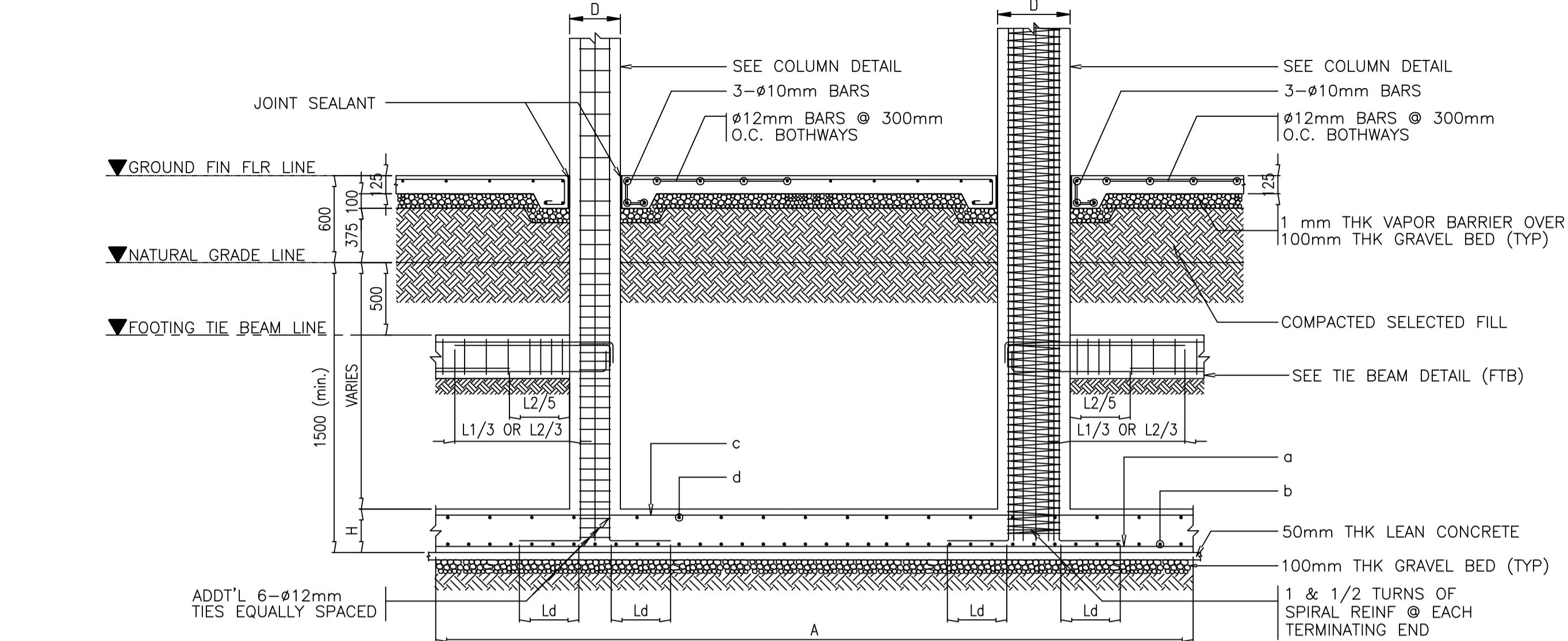




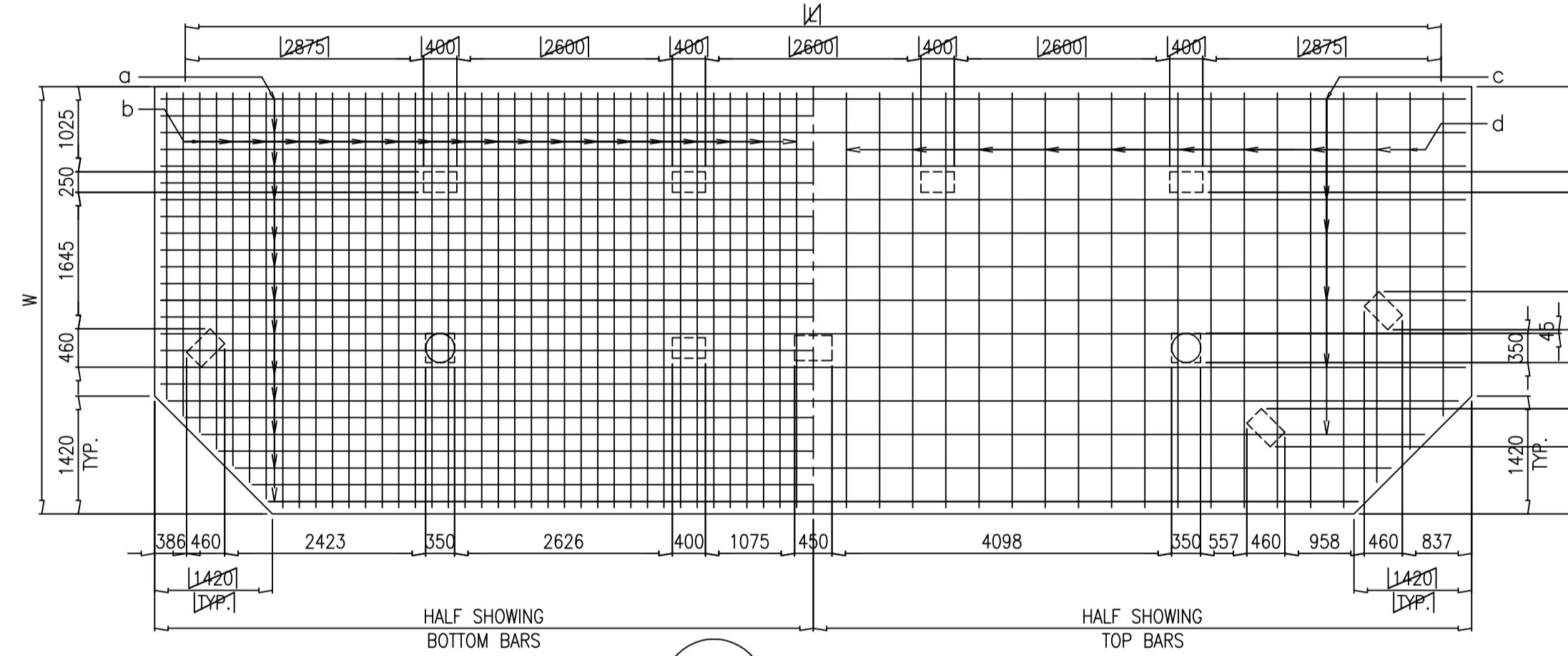
A circular callout containing the text '1A' at the top, 'S4' and 'S7' in the bottom-left quadrant, and 'SCALE' and '1:30' in the bottom-right quadrant. The text 'C1-F1 DETAIL' is positioned to the right of the circle.



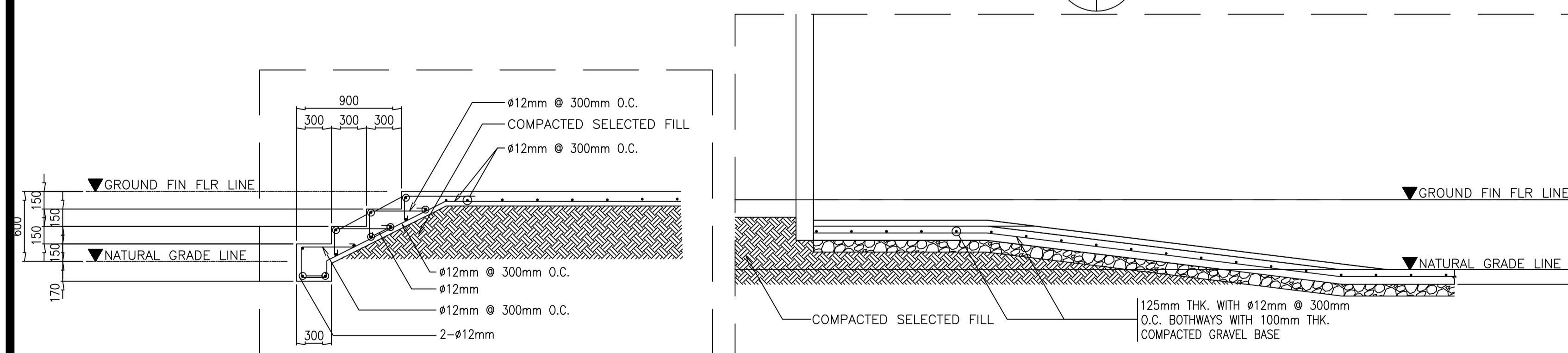
1D PLAN F2 DETAIL
S7 S7 SCALE 1:65



TYPICAL MAT FOUNDATION DETAIL AT WIDTH SECTION (W)



1F PLAN F3 DETA
S7 S7 SCALE 1:



4 STAIR ON GRADE DETAIL
S7 S7 SCALE 1:30



2 FOOTING SCHEDULE
S7 S7 SCALE 1:30



RN FERRER & ASSOCIATES, Inc.
PASIG, METRO MANILA TEL. NO. 631-1541 TO 42

ARCHITECT / ENGINEER

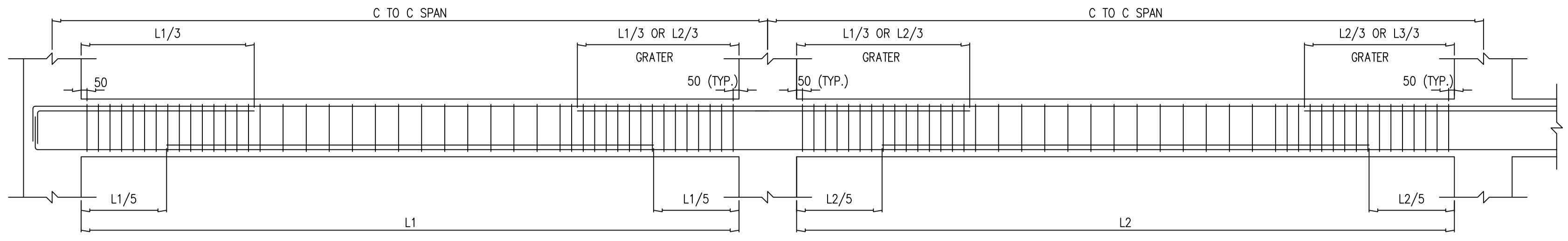
PROJECT / LOCAT

Digitized by srujanika@gmail.com

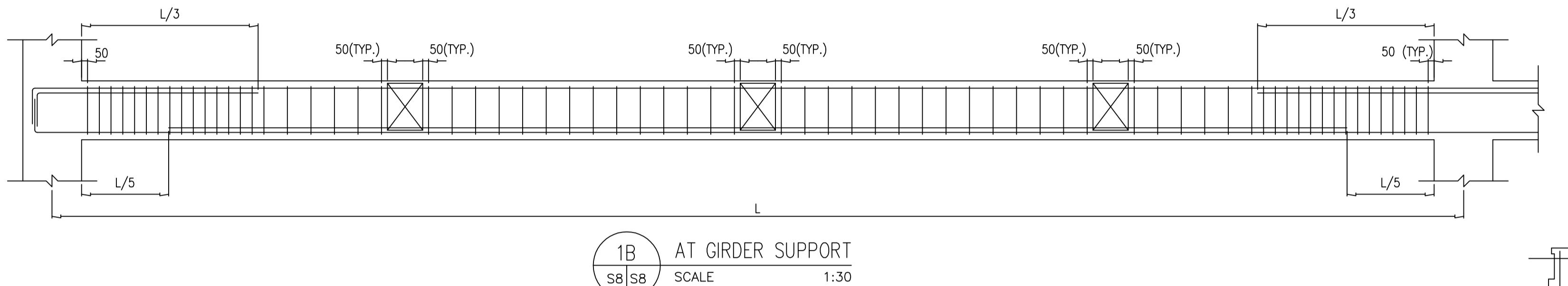
The image shows the International Organization for Migration (IOM) logo. It consists of a circular emblem containing a stylized globe with horizontal and vertical lines. Inside the globe, there is a black silhouette of a man, a woman, and a child standing together. Below the emblem, the acronym "IOM" is written in a large, bold, sans-serif font, followed by a small dot and the acronym "OIM" in a similar style. Above the emblem, the word "OWNER :" is printed in a smaller, standard font.

The UNICEF logo consists of a circular emblem featuring a stylized silhouette of a child and a woman's head, set against a globe. Below the emblem, the word "unicef" is written in a lowercase, sans-serif font.

NO.	REVISIONS	DATE	BY	NO.	REVISIONS	DATE	BY	SHEET CONTENT					SHEET NO.	
								COLUMN FOOTING DETAIL FOOTING SCHEDULE RAMP DETAIL STAIR ON GRADE DETAIL						
	ISSUED FOR BIDDING	23SEP15	MVA					COLUMN FOOTING DETAIL FOOTING SCHEDULE RAMP DETAIL STAIR ON GRADE DETAIL					EST07	
								CHECKED	AQT	DRAWN	MAApelo	FILENAME	PROJ. NO. 2K1404A-ST07	2K1404A
								APPROVED	RNF	DATE	23SEP15			



1A AT COLUMN SUPPORT
S8 S8 SCALE 1:30

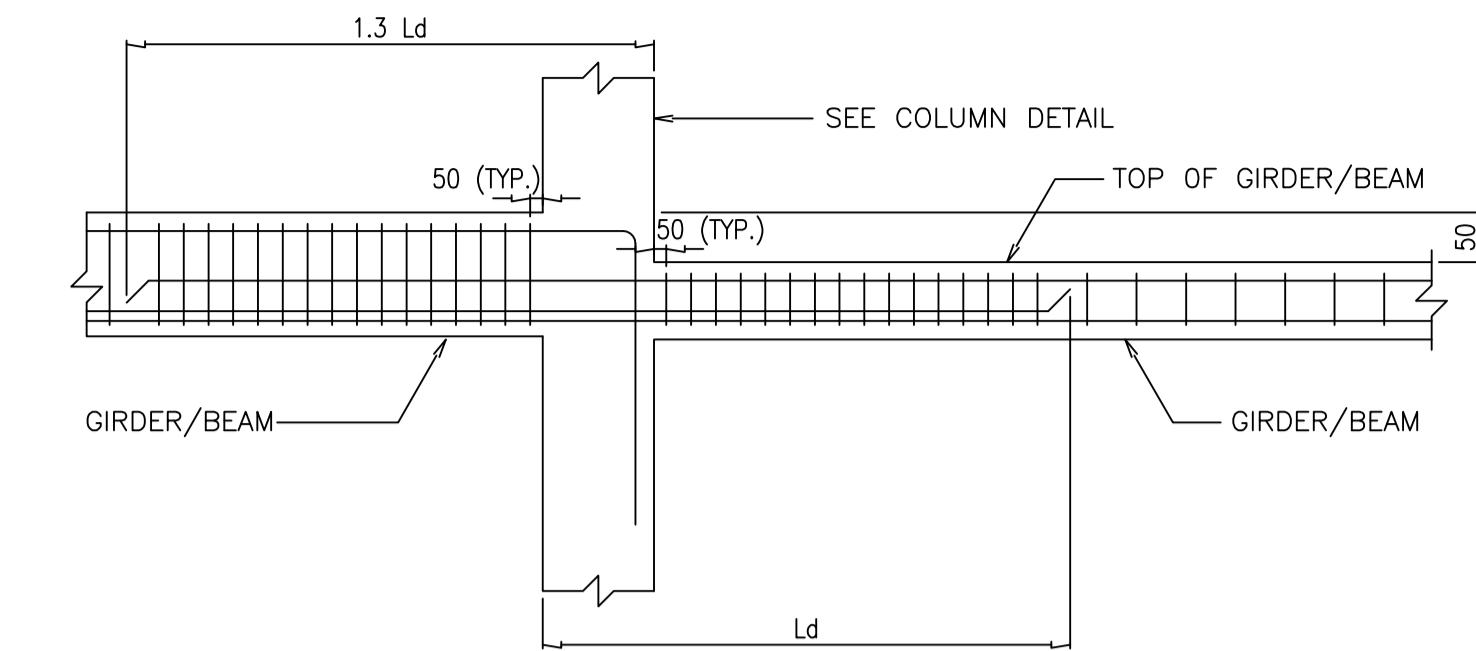


1B AT GIRDER SUPPORT
S8 S8 SCALE 1:30

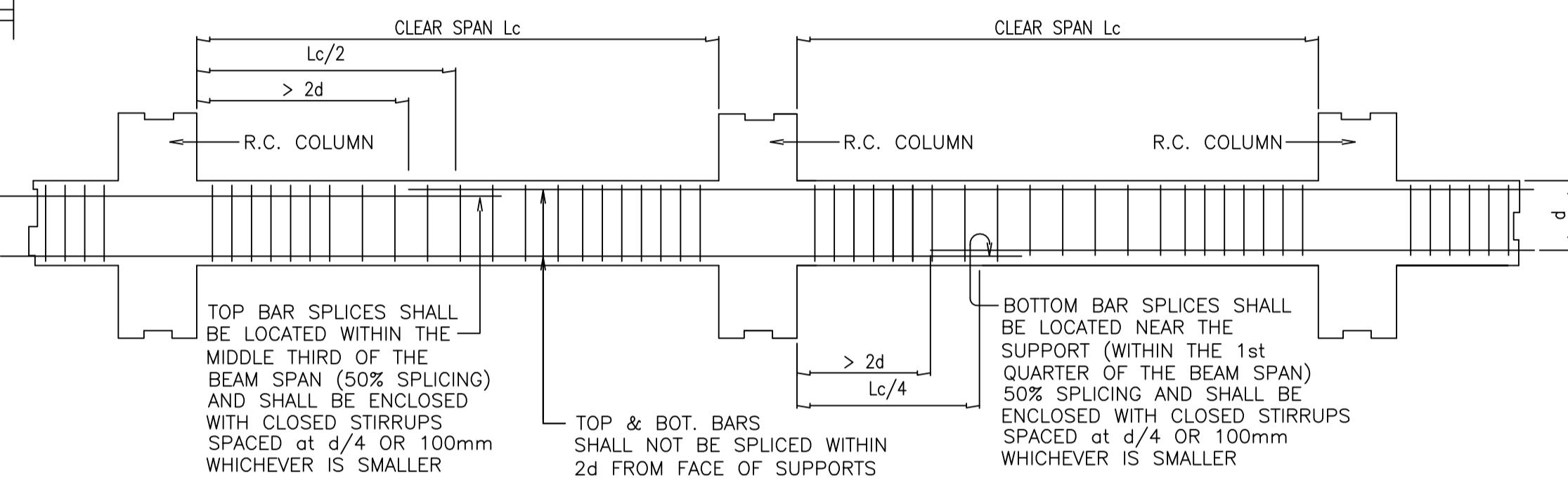
NOTE:

1. IF SPLICING 2 BARS OF DIFFERENT DIAMETERS. USE THE LAP LENGTH OF THE LARGER BAR
2. SPLICING OF REINFORCEMENT SHALL BE LIMITED TO 1/2 THE TOTAL AMOUNT OF REINFORCEMENT AT THE SECTION
3. NO LAPS IN TOP & BOTTOM TO OCCUR WITHIN A DISTANCE OF 2h FROM THE FACE OF SUPPORT OR AT MIDSPAN
4. LAPS IN FRAMING BARS TO BE STAGGERED RELATIVE TO LAPS IN MAIN TOP AND BOTTOM BARS
5. MINIMUM CLEAR DISTANCE BETWEEN BARS IN LAYERS IS 25mm.

1 TYPICAL BEAM SECTION DETAIL
S8 S8 SCALE 1:30



1C TYP DET OF DEPRESSED CIRDERS/BEAMS
S8 S8 SCALE 1:30

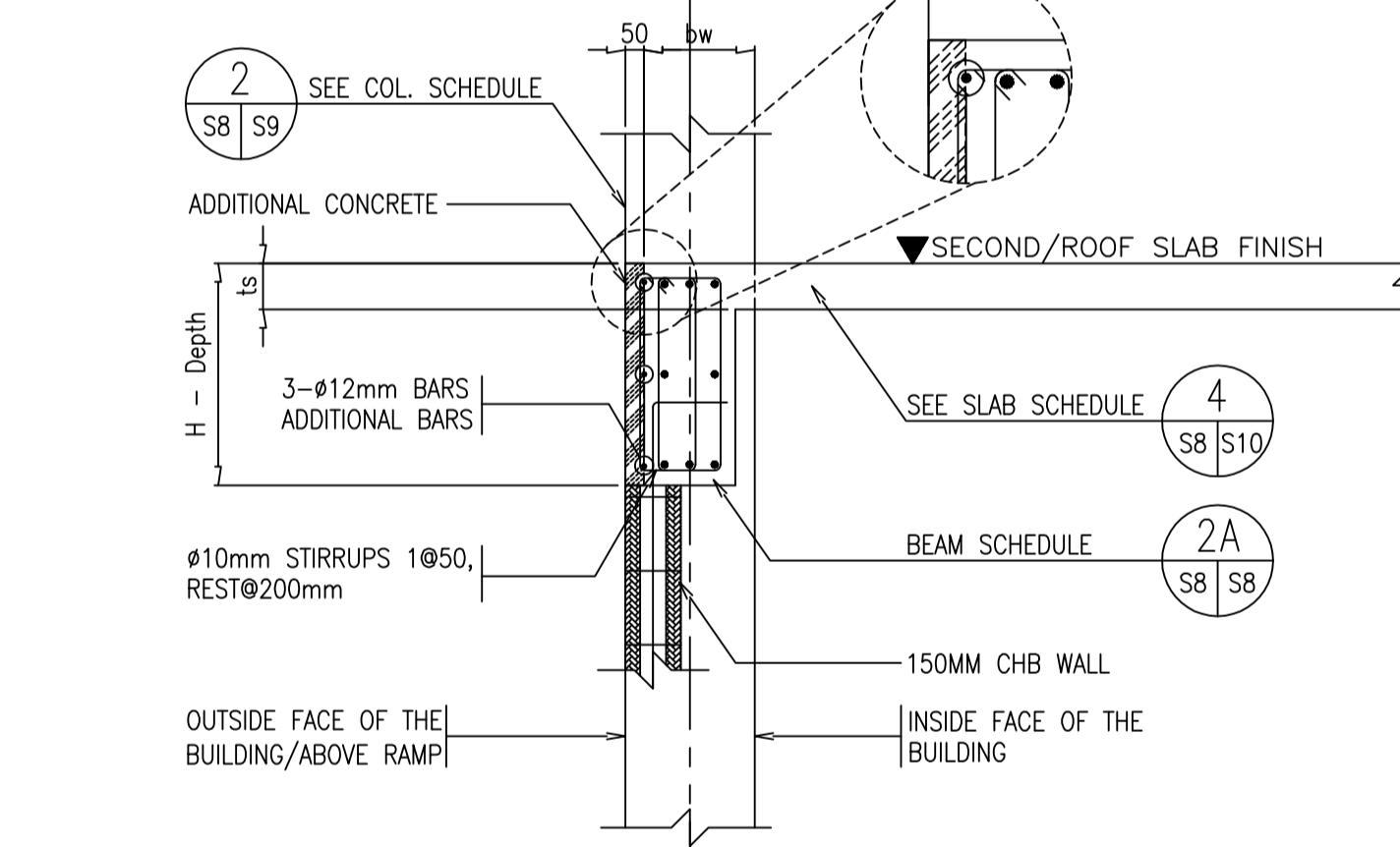


1D SPLICE LOCATION FOR BEAM REBARS
S8 S8 SCALE 1:30

Beam MARK	BEAM PROPERTIES				MAIN REINFORCEMENT								STIRRUPS REINFORCEMENT				TYPE	SCHEDULE	REMARKS		
	width bw	Height H	Rein. Main Stirrups	Rein. Torsion	LEFT SUPPORT				MIDSPAN				RIGHT SUPPORT								
mm.	mm.	mm.	mm.	mm.	Rein. Type	TB pcs.	MB pcs.	BB pcs.	Rein. Type	TB pcs.	MB pcs.	BB pcs.	Rein. Type	TB pcs.	MB pcs.	BB pcs.					
BUILDING A :																					
G1	250	600	20	10	12	B.A.B	3	2	3	B.A.B	3	2	3	2L-100	1 @ 50, 15 @ 60, REST @ 200MM O.C. TO C.L.	SEE DETAIL 3. FOR ADD'L. WIDTH					
G2	300	600	20	10	12	E.A.B	6	2	3	A.A.C	2	2	4	E.A.B	6	2	3	2L-100	1 @ 50, 16 @ 60, REST @ 200MM O.C. TO C.L.		
G3	250	600	20	10	12	B.A.A	3	2	2	A.A.A	2	2	2	B.A.A	3	2	2	2L-100	1 @ 50, 12 @ 120, REST @ 200MM O.C. TO C.L.		
B1	250	400	16	10	12	C.A.A	4	2	2	A.A.C	2	2	4	C.A.A	4	2	2	2L-100	1 @ 50, 8 @ 60, REST @ 200MM O.C. TO C.L.		
B2	250	350	16	10	12	B.-A	3	2	2	A.-B	2	2	3	B.-A	3	2	2	2L-100	1 @ 50, 7 @ 60, REST @ 200MM O.C. TO C.L.		
B3	200	300	16	10	10	A.-A	2	2	2	A.-A	2	2	2	A.-A	2	2	2	2L-100	1 @ 50, 7 @ 60, REST @ 200MM O.C. TO C.L.		
B4	250	300	16	10	10	B.-A	3	2	2	A.-A	2	2	2	B.-A	3	2	2	2L-100	1 @ 50, 7 @ 60, REST @ 200MM O.C. TO C.L.		
B5	250	300	16	10	10	A.-A	2	2	2	A.-A	2	2	2	A.-A	2	2	2	2L-100	1 @ 50, 9 @ 60, REST @ 200MM O.C. TO C.L.		
B6	250	300	16	10	10	A.-A	2	2	2	A.-A	2	2	2	A.-A	2	2	2	2L-100	1 @ 50, 19 @ 60, REST @ 200MM O.C. TO C.L.		
B7	250	400	16	10	12	B.A.A	3	2	2	B.A.A	3	2	2	B.A.A	3	2	2	2L-100	1 @ 50, 19 @ 60, REST @ 200MM O.C. TO C.L.		
B8	250	400	16	10	12	D.A.B	5	2	3	A.A.B	2	2	3	D.A.B	5	2	3	2L-100	1 @ 50, 7 @ 60, REST @ 200MM O.C. TO C.L.		
B9	250	400	16	10	12	D.A.B	5	2	3	A.A.B	2	2	3	D.A.B	5	2	3	2L-100	1 @ 50, 15 @ 60, REST @ 200MM O.C. TO C.L.		
FTB1	250	500	16	10	12	B.A.A	3	2	2	A.A.B	2	2	3	B.A.A	3	2	2	2L-100	1 @ 50, 19 @ 60, REST @ 200MM O.C. TO C.L.		
FTB2	250	500	16	10	12	D.A.A	5	2	2	A.A.C	2	2	4	D.A.A	5	2	2	2L-100	1 @ 50, 23 @ 60, REST @ 200MM O.C. TO C.L.		
FTB3	250	500	16	10	12	E.A.B	6	2	3	E.A.B	6	2	3	E.A.B	6	2	3	2L-100	1 @ 50, 23 @ 60, REST @ 200MM O.C. TO C.L.		
FTB4	250	500	16	10	12	C.A.A	4	2	2	A.A.B	2	2	3	C.A.A	4	2	2	2L-100	1 @ 50, 14 @ 60, REST @ 200MM O.C. TO C.L.		
FTB5	250	500	16	10	12	B.A.A	3	2	2	A.A.B	2	2	3	B.A.A	3	2	2	2L-100	1 @ 50, 10 @ 60, REST @ 200MM O.C. TO C.L.		

NOTE:
FOR BEAM REINFORCEMENT REFERENCING, LEFT TO RIGHT MEANS A TO G AND 1 TO 7.

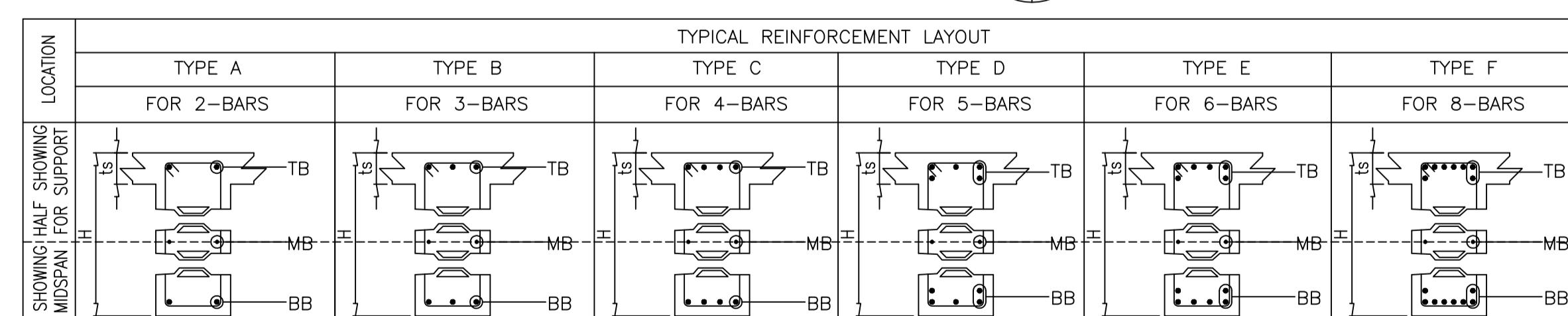
2A MAIN REINFORCEMENT & STIRRUPS
S8 S8 SCALE 1:30



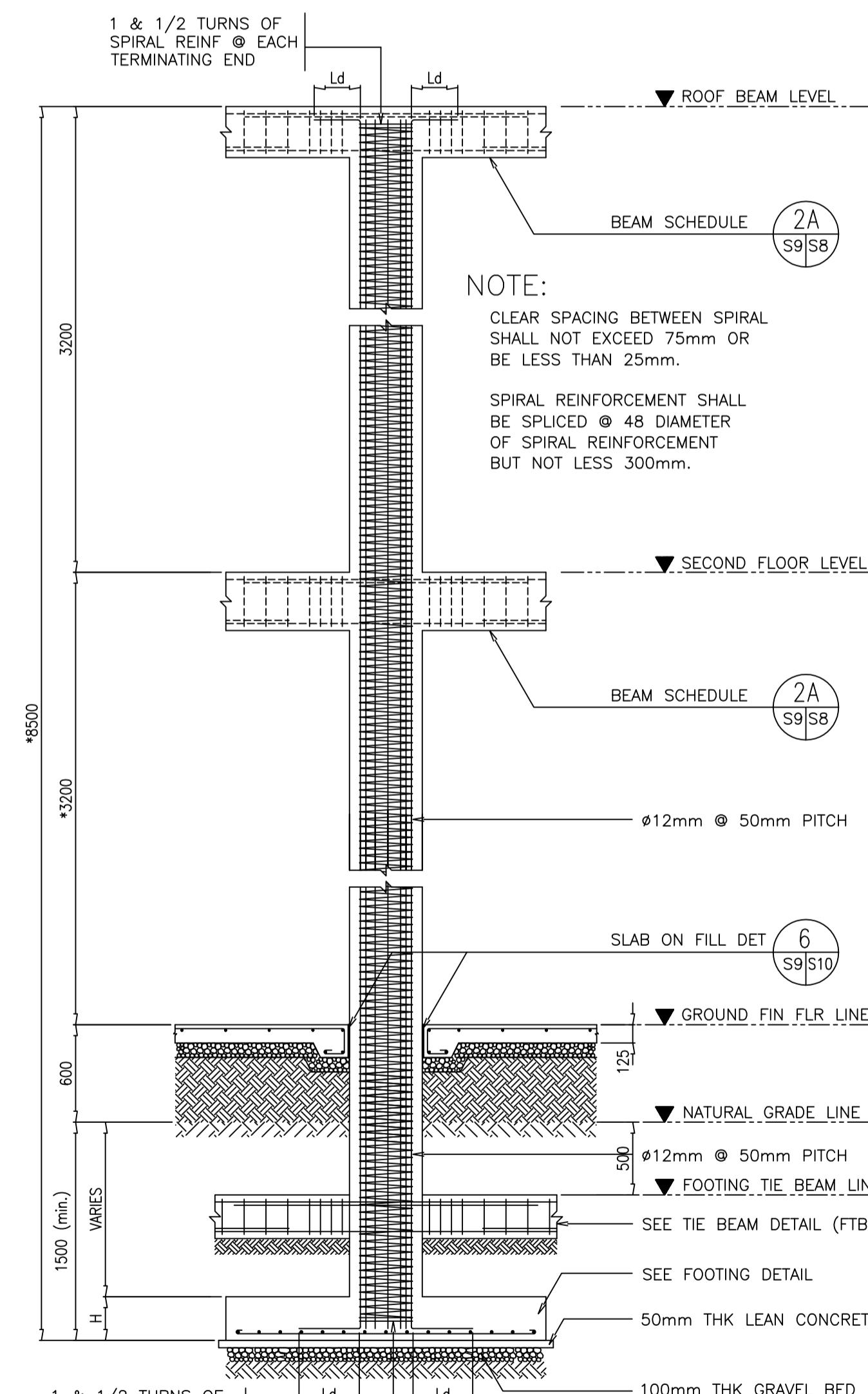
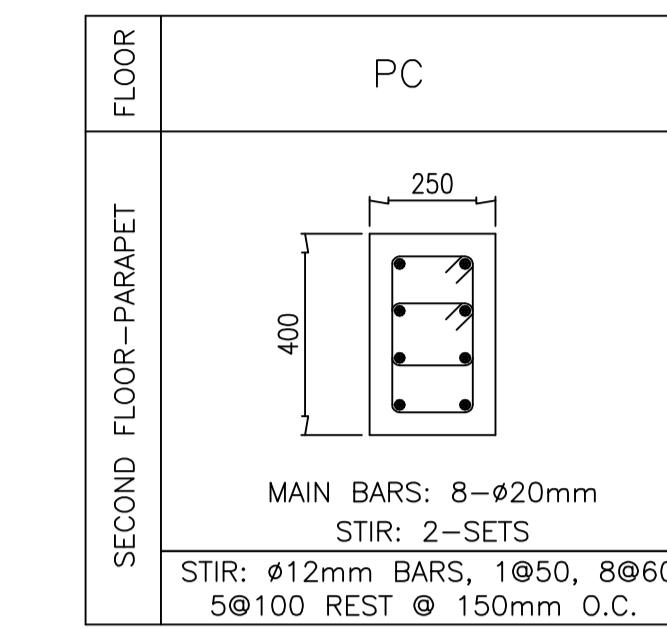
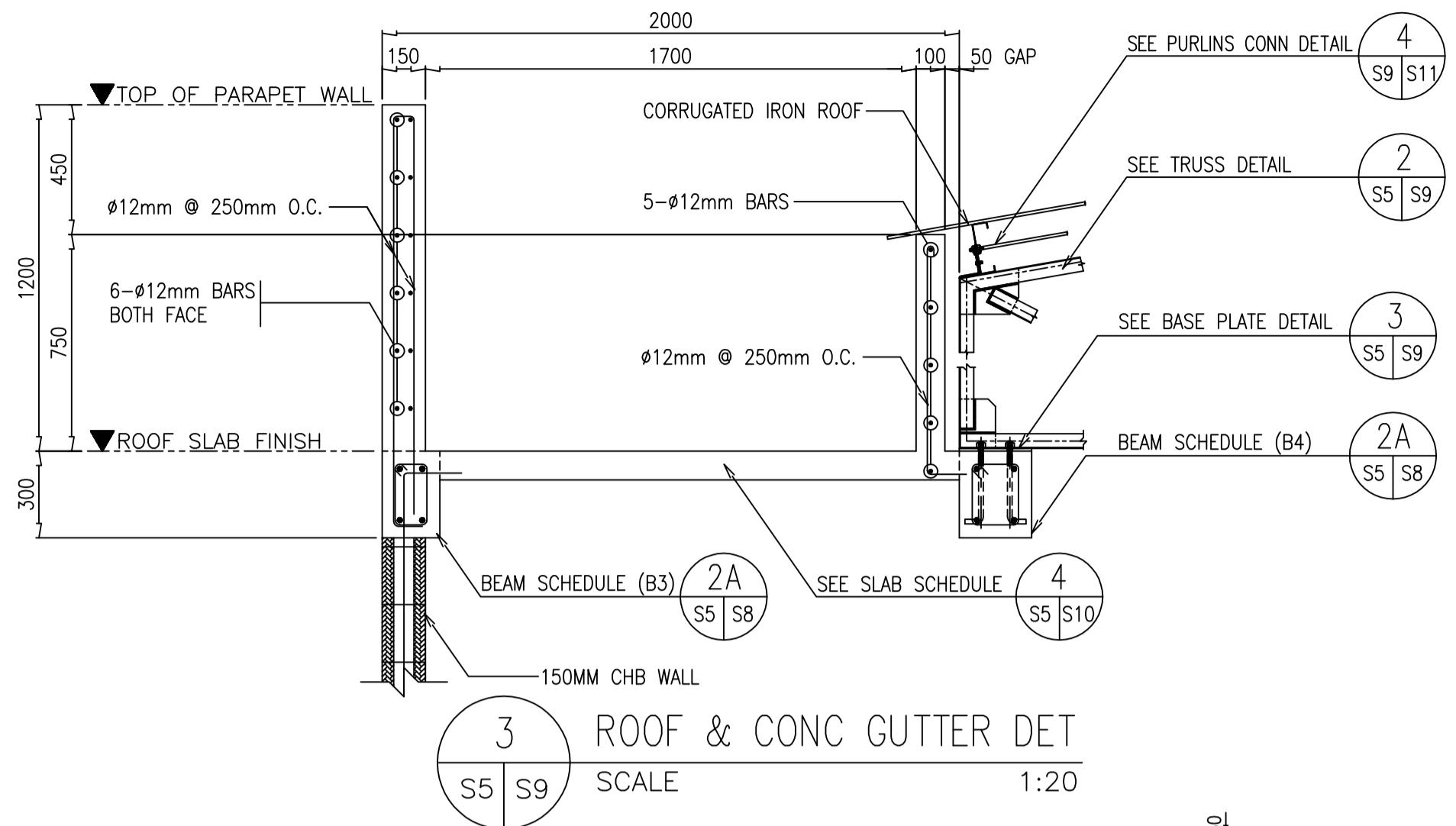
NOTE:
THE HATCHED AREA SHOWN IN THE OFFSET DRAWING SHALL BE PROVIDED TO RECONCILE THE ARCHITECTURAL REQUIREMENT.

1. AN ADDITIONAL 3-12MMØ SHALL BE PROVIDED AS SHOWN WITH STIRRUPS SPACED AT 1@50MM, REST @ 200MM.
2. THE ADDITIONAL CONCRETE SHALL BE MONOLITHICALLY POURED ALONG WITH THE ORIGINAL BEAM.

3 ADDT'L. WIDTH FOR BEAM DETAIL
S5 S8 SCALE 1:20



2B TYPICAL REINFORCEMENT LAYOUT
S8 S8 SCALE 1:20



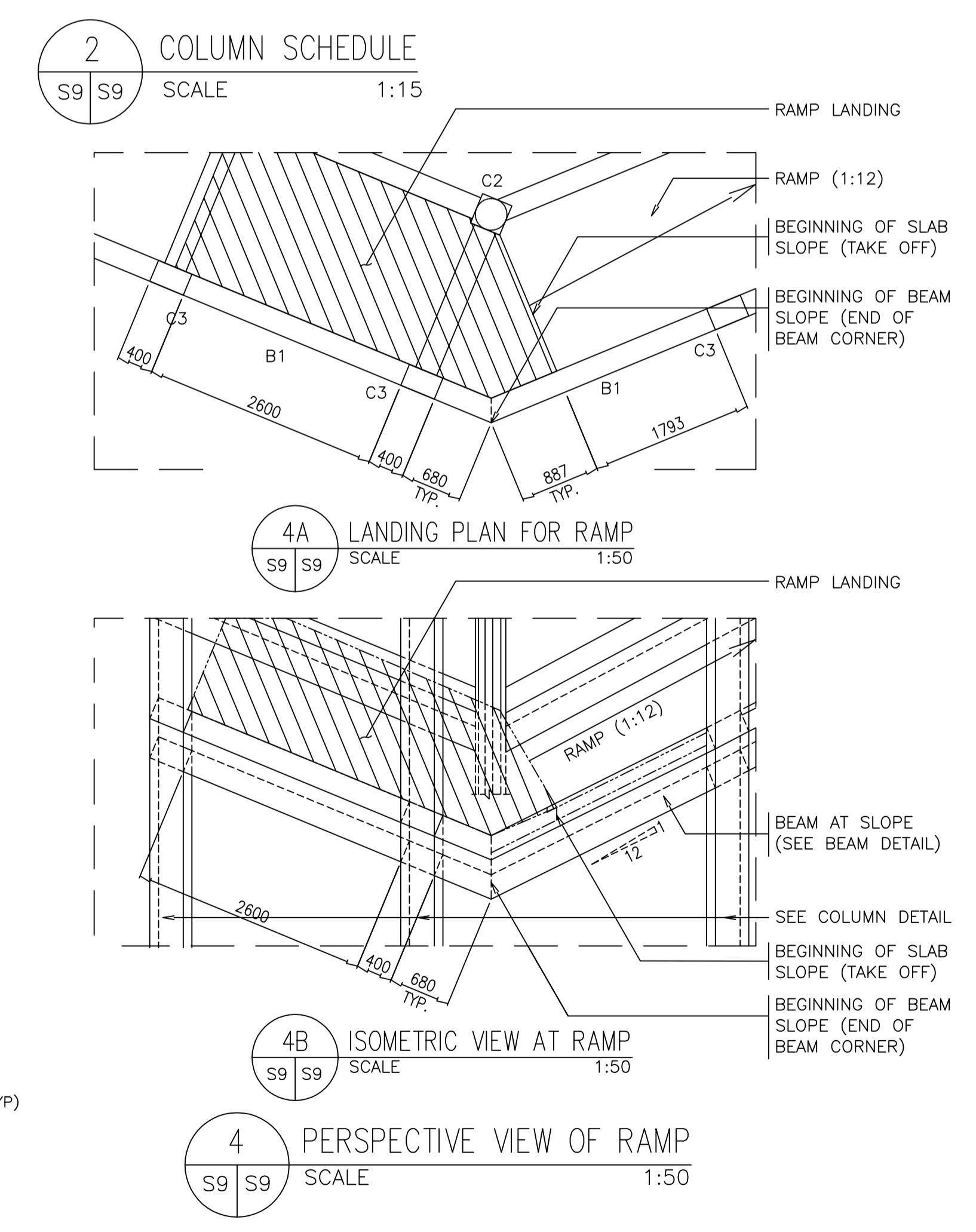
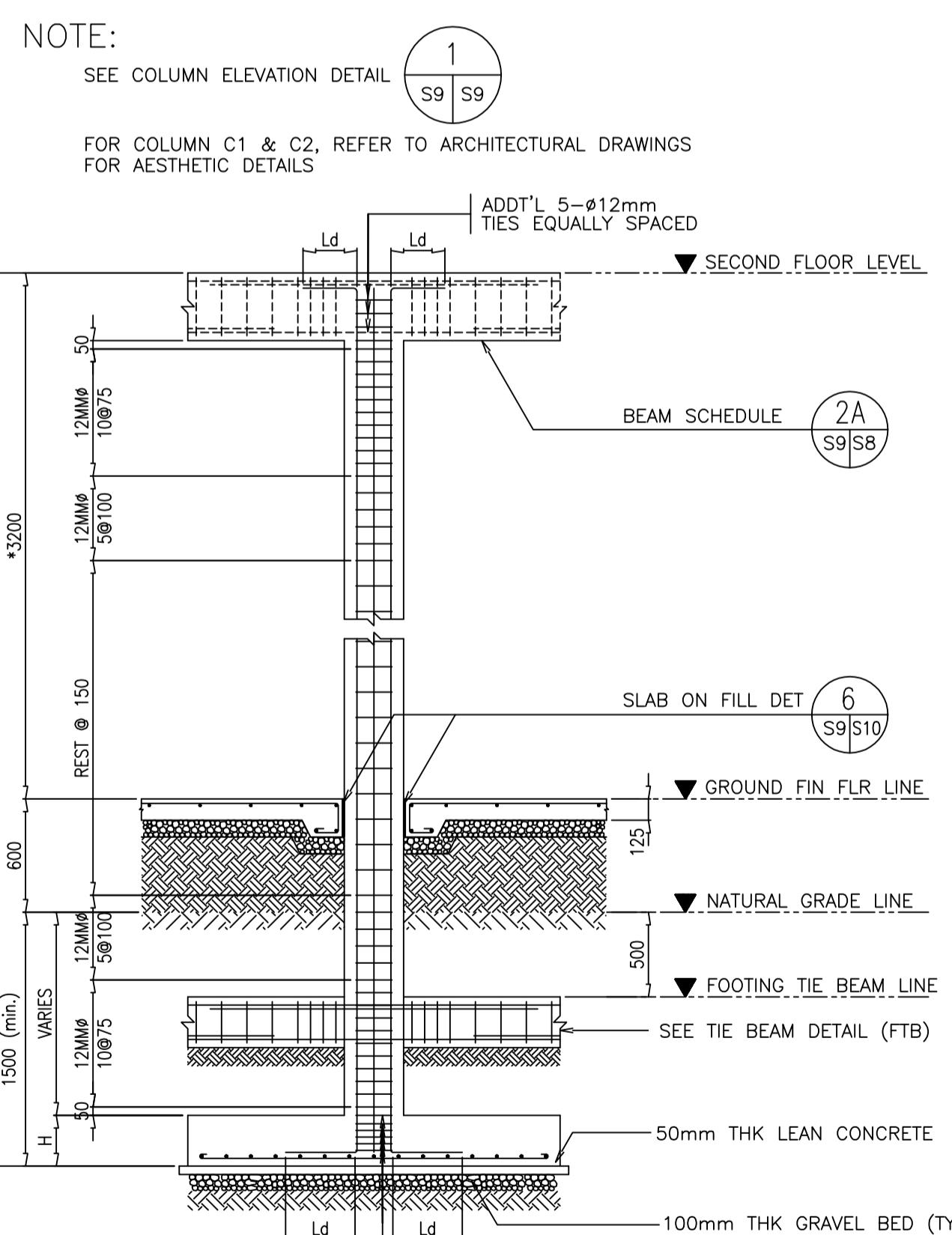
1 TYP RECTANGULAR COL ELEV DET (C3)

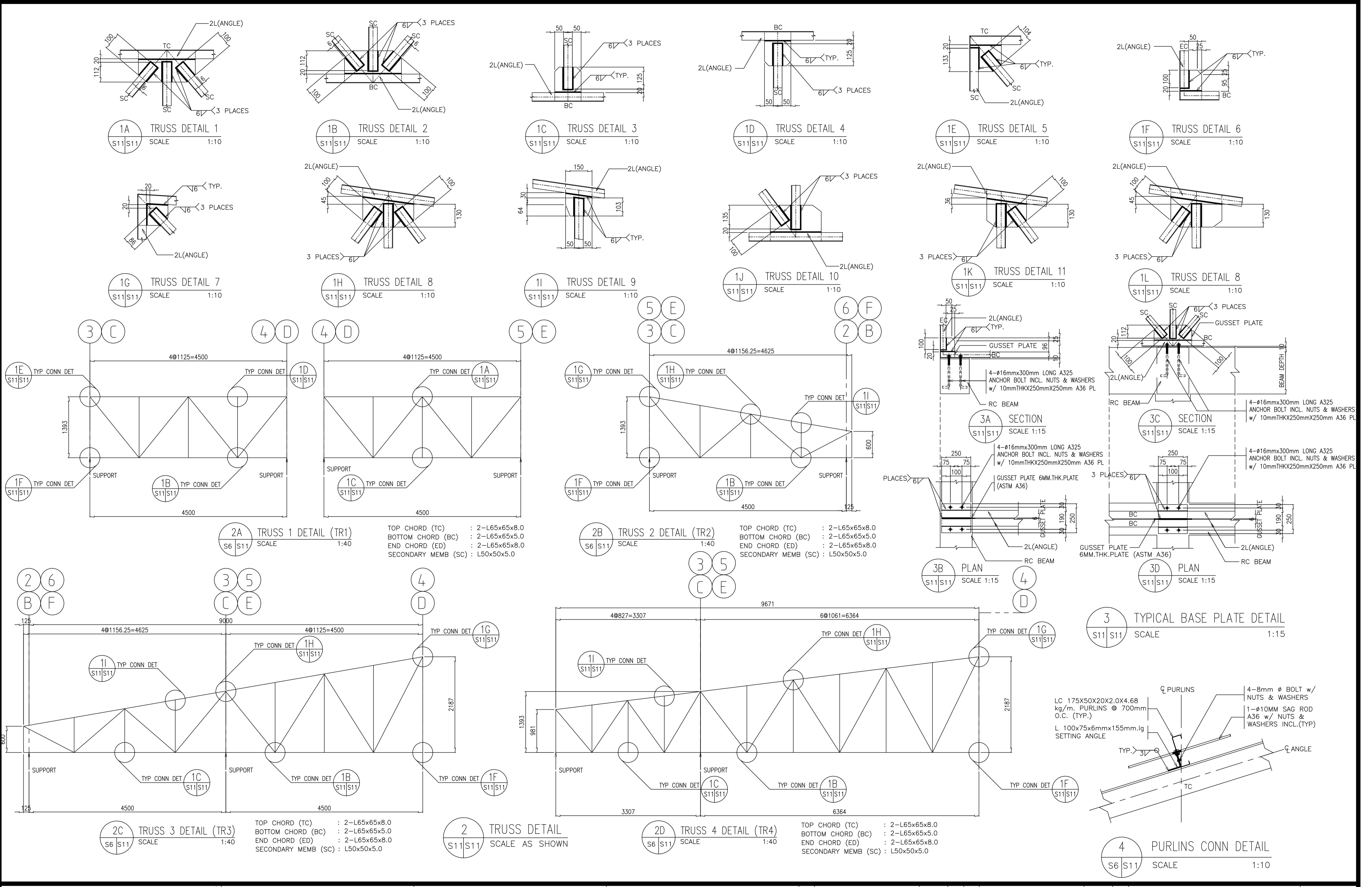
SCALE: 1:30

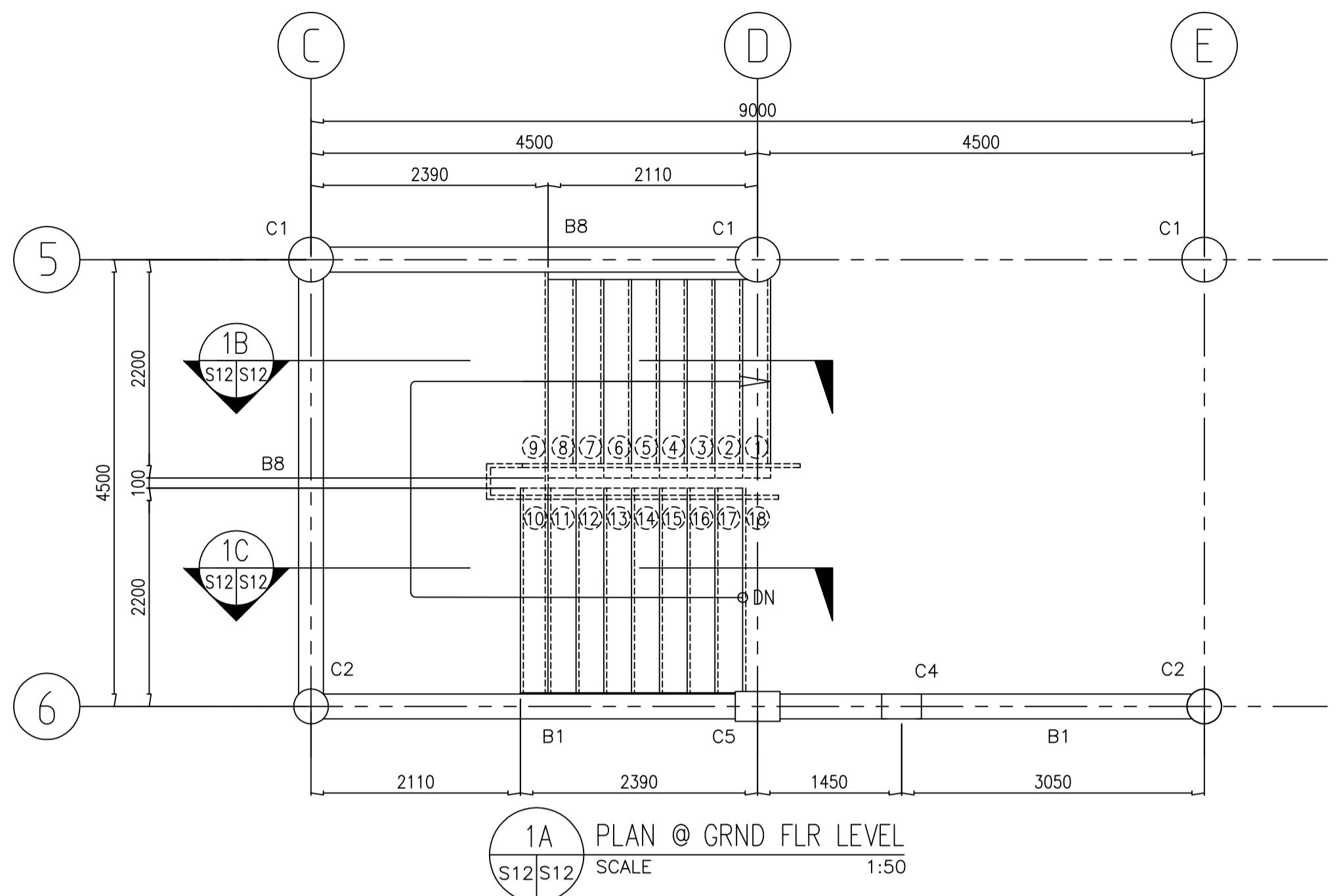
1B TYP RECTANGULAR COL ELEV DET (C3)

SCALE: 1:30

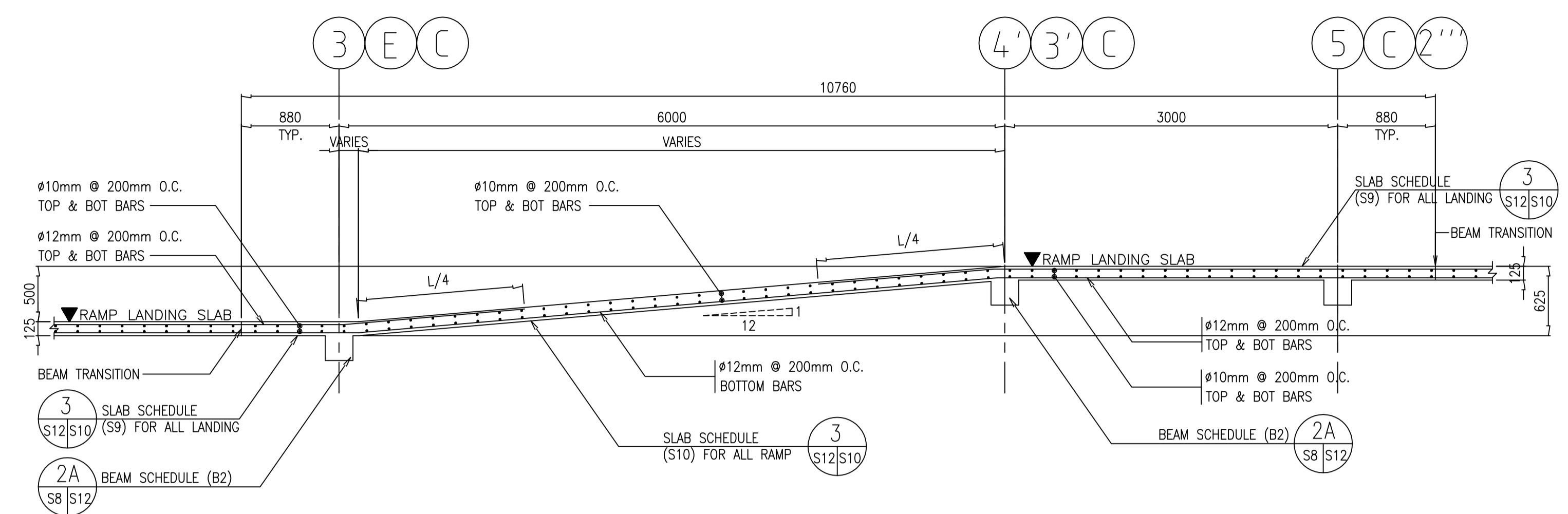
FLOOR	C1	C2	C3	C4	C5
ROOF LEVEL - PARAPET					
SECOND FLOOR - ROOF					
GROUND - SECOND FLOOR					
	MAIN BARS: 8-Ø20mm STIR: 2-SETS	MAIN BARS: 12-Ø20mm STIR: 1Ø50, 7Ø60 7Ø100 & 1Ø50 mm	MAIN BARS: 10-Ø20mm STIR: Ø12mm BARS, 1Ø50, 8Ø60 5Ø100 REST @ 150mm O.C.	MAIN BARS: 12-Ø20mm STIR: 2-SETS	MAIN BARS: 12-Ø20mm STIR: 2-SETS
	STIR: Ø12mm @ 50mm PITCH	STIR: Ø12mm @ 50mm PITCH	STIR: Ø12mm BARS, 1Ø50, 8Ø60 5Ø100 REST @ 150mm O.C.	STIR: Ø10mm BARS, 1Ø50, 10Ø75 5Ø100 REST @ 150mm O.C.	STIR: Ø10mm BARS, 1Ø50, 10Ø75 5Ø100 REST @ 150mm O.C.



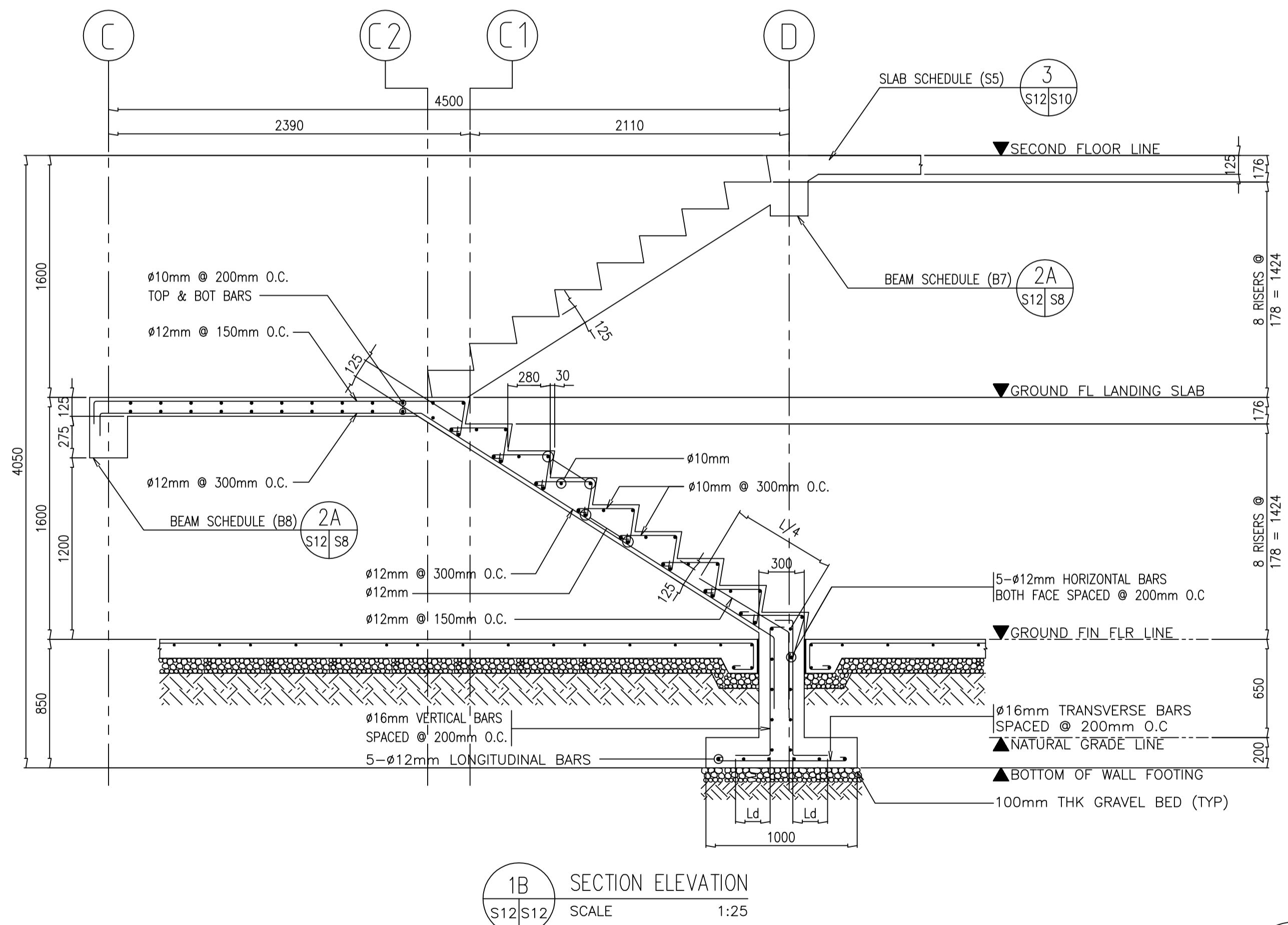




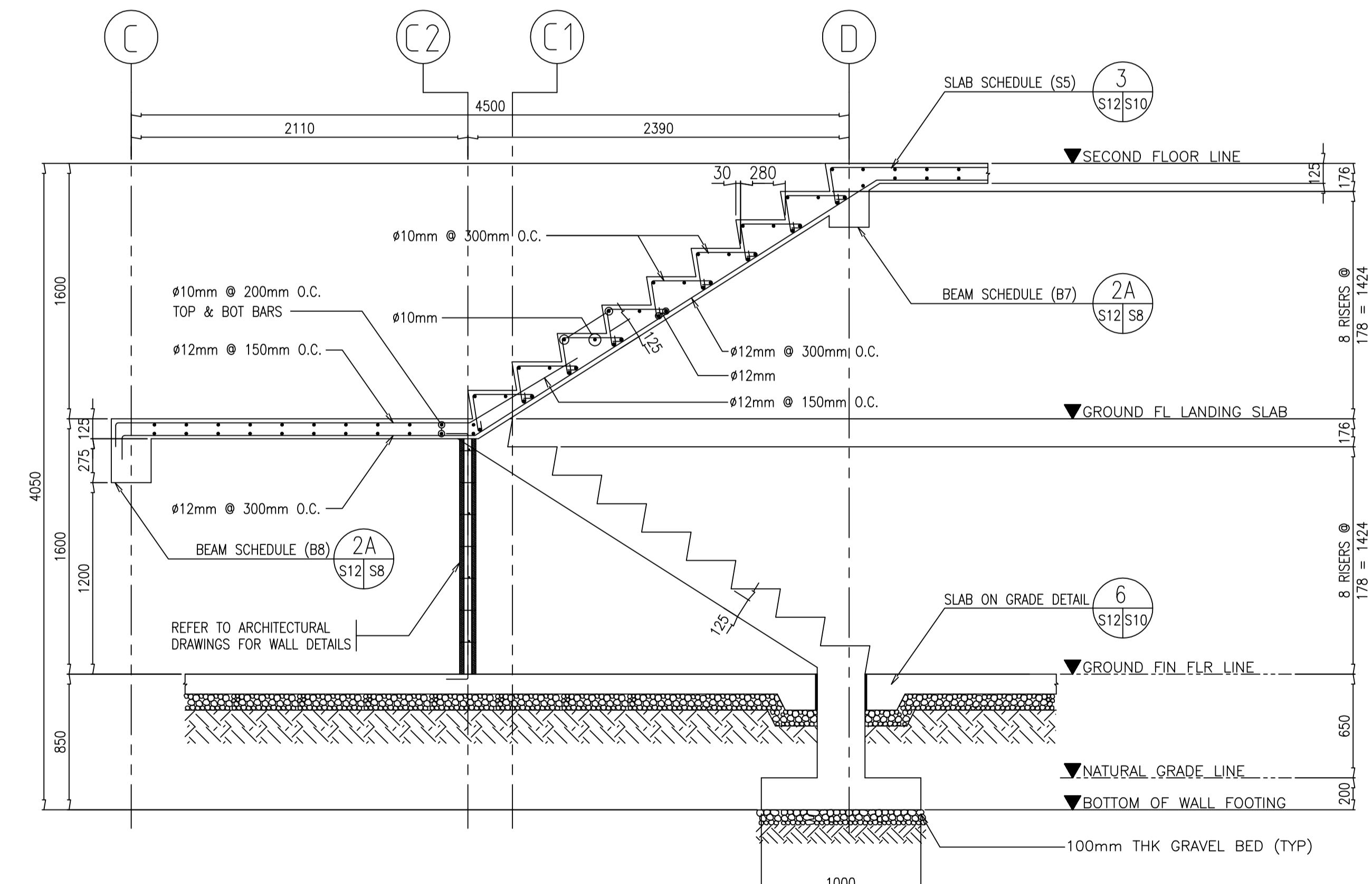
1A PLAN @ GRND FLR LEVEL
S12 S12 SCALE 1:50



2 TYPICAL RAMP REINFORCEMENT DETAIL
S12 S12 SCALE 1:35



1B SECTION ELEVATION
S12 S12 SCALE 1:25



1C SECTION ELEVATION
S12 S12 SCALE 1:25

1 CONCRETE STAIR DETAIL
S12 S12 SCALE AS SHOWN



	ARCHITECT / ENGINEER :			PROJECT / LOCATION :			OWNER :			NO.	REVISIONS		DATE	BY	REVISIONS		DATE	BY	SHEET CONTENT			
	RNFA STRUCTURAL ENGINEER			MULTI-PURPOSE CENTER CITY OF BORONGAN, EASTERN SAMAR			IOM/UNICEF				ISSUED FOR BIDDING	23SEP15	MVA	CONCRETE STAIR DETAIL TYPICAL RAMP REINFORCEMENT DETAIL				EST 12				
PRC Reg. No.	PTR No.:	Place of Issue : ---															CHECKED	AQT	DRAWN	MAApelo	FILENAME	PROJ. NO.
—	—	Date of Issue : ---															APPROVED	RNF	DATE	23SEP15	2K1404A-ST12	2K1404A