

GENERAL NOTES FOR REINFORCED CONCRETE STRUCTURE:

DESIGN TO COMPLY WITH:

- HONG KONG BUILDING (CONSTRUCTION) REGULATION, 1990
- STRUCTURAL USE OF CONCRETE, 2013
- CODE OF PRACTICE ON WIND EFFECTS, HONG KONG, 2004
- CODE OF PRACTICE FOR FIRE SAFETY IN BUILDINGS, 2011
- CODE OF PRACTICE FOR DEAD AND IMPOSED LOADS, 2011

ALL STRUCTURAL DRAWINGS MUST BE READ IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS AND OTHER RELEVANT DRAWINGS.

- STEEL REINFORCEMENTS FOR CONCRETE SHALL COMPLY WITH THE CONSTRUCTION STANDARD CS2: 2012 MINIMUM CHARACTERISTIC STRENGTH OF 500MPa FOR RIBBED STEEL REINFORCING BARS GRADE 500B/C, 250MPa FOR PLAN REINFORCING BARS GRADE 250.
- MINIMUM BOND / LAP LENGTH OF REINFORCEMENT FOR ALL STRUCTURAL ELEMENTS SHALL BE AS SPECIFIED IN THE FOLLOWING SCHEDULE:

SCHEDULE OF LAP & ANCHORAGE LENGTH FOR DESIGN TO COP 2013

DIAMETER OF BAR	FOR RIBBED STEEL REINFORCING BARS	
	GRADE C45/20D	
	ANCHORAGE	
	TL	CL
10	33 x Dia.	26 x Dia.
12	330	260
16	400	320
20	530	420
25	660	520
32	830	650
40	1060	840
40	1320	1040

LEGEND:

- TL = LAP OR ANCHORAGE LENGTH UNDER TENSION OR LAP LENGTH UNDER COMPRESSION
CL = ANCHORAGE LENGTH UNDER COMPRESSION
- NO SPLICING OF REINFORCEMENT OTHER THAN THOSE SHOWN ON THE DRAWING IS ALLOWED UNLESS OTHERWISE APPROVED BY THE ENGINEER AND TL SHALL BE PROVIDED.
- NOMINAL LAP AND ANCHORAGE FOR DISTRIBUTION BARS TO BE 300 OR WHICHEVER THE GREATER. LAP LENGTH FOR UNEQUAL SIZE BARS SHALL BE BASED UPON THE SMALLER BAR. FOR THE FOLLOWING PROVISIONS a) OR b) APPLY, THE LAP LENGTH SHOULD BE INCREASED BY A FACTOR OF 1.4.
 - WHERE A LAP OCCURS AT THE TOP OF A SECTION AS CAST AND THE MINIMUM COVER IS LESS THAN TWICE THE SIZE OF THE LAPPED REINFORCEMENT.
 - WHERE A LAP OCCURS AT THE CORNER OF A SECTION AND THE MINIMUM COVER TO EITHER FACE IS LESS THAN TWICE THE SIZE OF THE LAPPED REINFORCEMENT, OR WHERE THE CLEAR DISTANCE BETWEEN ADJACENT LAPS IS LESS THAN 75mm OR SIX TIMES THE SIZE OF THE LAPPED REINFORCEMENT, WHICHEVER IS THE GREATER.

IF BOTH PART a) & b) CONDITION APPLY, THE LAP LENGTH SHOULD BE INCREASED BY A FACTOR OF 2.0.

FOR REFERENCE ONLY

- ALL NOMINAL LAPS OF DISTRIBUTION BAR FOR SLABS AND WALLS SHALL BE 300 MINIMUM UNLESS OTHERWISE SPECIFIED.
- FOR DETAILS OF STRUCTURAL FALLS, SEE APPROPRIATE STRUCTURAL AND ARCHITECTURAL DRAWINGS.
- CONCRETE TO BE DESIGNED MIX CONCRETE AS SPECIFIED IN THE FOLLOWING SCHEDULE TO CS1:2010 AND THE GRADE DESIGNATIONS GIVEN ARE THE CHARACTERISTIC CUBE STRENGTH AT 28 DAYS AND THE MAXIMUM AGGREGATE SIZE 20mm. UNLESS OTHERWISE STATED ON THE DRAWINGS.

MEMBER	GRADE
BEAMS, SLABS AND WALLS	C45/20
COLUMNS	C45/20
WATER TANKS	C45/20

- THE EQUIVALENT SODIUM OXIDE IN CONCRETE MIX SHALL NOT EXCEED 3.0 kg/m³ OF CONCRETE. CORRESPONDING TEST CERTIFICATES ON ALKALI CONTENT IN CEMENT, ADMIXTURES, AGGREGATE ETC., ISSUED BY A HOKLAS LABORATORY AND CALCULATION OF THE EQUIVALENT SODIUM OXIDE SHOULD BE SUBMITTED TO THE RSE QUARTERLY.
- CONCRETE CUBES SHALL BE MADE AND TESTED WITH TEST REPORT IN ACCORDANCE WITH THE PROVISIONS OF THE HONG KONG BUILDING (CONSTRUCTION) REGULATIONS, 1990 AND THE CONSTRUCTION STANDARD CS1:2010, EXCEPT SECTION 7.1
- UNLESS OTHERWISE STATED, CONCRETE COVER TO ALL REINFORCEMENT SHALL BE AS SPECIFIED IN THE FOLLOWING SCHEDULE OR EQUAL TO THE DIAMETER OF THAT REINFORCEMENT, WHICHEVER IS THE GREATER:

IN CONTACT WITH EARTH	SLAB	STAIR	BEAM	COLUMN	WALL
	1) CAST ON BLINDING	50	50	50	50
2) CAST AGAINST SOIL	75	75	75	75	75

- CONCRETE COVER SHALL ALSO FULFIL THE REQUIREMENT FOR APPROPRIATE FIRE RESISTANCE RATING AS SPECIFIED IN THE CODE OF PRACTICE FOR FIRE RESISTING CONSTRUCTION OR NOMINAL COVER FOR DURABILITY WHICHEVER IS GREATER.

	CONCRETE COVER TO MAIN REINFORCEMENT			NOMINAL COVER FOR DURABILITY
	120 MINS. F.R.P.	60 MINS. F.R.P.	240 MINS. F.R.P.	
	SLAB, SIMPLY SUPPORTED	35	25	
SLAB, CONTINUOUS	25	25	45	35
STAIR	35	25	55	35
BEAM, SIMPLY SUPPORTED	50	30	80	40
BEAM, CONTINUOUS	50	30	60	40
COLUMN	35	25	35	35
WALL	25	25	25	35
WALL SLAB FOR WATER TANK	40	40	40	40

REINFORCEMENT CONSISTING OF EXPANDED METAL LATH OR A WIRE FABRIC NOT LIGHTER THAN 0.5 kg/m² WITH 2mm DIAMETER WIRE AT NOT MORE THAN 100mm CENTRES OR A CONTINUOUS ARRANGEMENT OF LINKS AT NOT MORE THAN 200mm CENTRES SHALL BE INCORPORATED IN THE CONCRETE COVER AT A DISTANCE NOT EXCEEDING 20mm FROM THE FACE OF THE STRUCTURAL MEMBERS SURROUNDING THE PLANT/MACHINE ROOMS AND AT OTHER AREAS REQUIRING 120 MINS. F.R.P. AS SPECIFIED IN THE GENERAL BUILDING PLANS.

- CONSTRUCTION JOINTS TO BE POSITIONED AS FOLLOWS:-
 - THE JOINT IN A BEAM TO BE VERTICAL AND AT ONE-THIRD OF THE SPAN.
 - THE JOINT IN A SLAB TO BE VERTICAL, AT ONE-THIRD OF THE PANEL AND PARALLEL TO THE REINFORCEMENT.
 - THE JOINT IN COLUMNS TO BE AT THE UNDERSIDE OF THE LOWEST BEAM OVER THE COLUMNS OR AT 75mm ABOVE FLOOR LEVEL.
- CONSTRUCTION JOINTS WHERE NOT SHOWN SHOULD BE LOCATED TO THE APPROVAL OF THE ENGINEER.
- DURING CONSTRUCTION THE STRUCTURE SHOULD BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED.
- SIZE OF CONCRETE ELEMENTS DOES NOT INCLUDE THICKNESS OF APPLIED FINISHES.
- NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE.
- PIPES OR CONDUITS SHALL NOT BE PLACED WITHIN THE CONCRETE COVER TO REINFORCEMENT WITHOUT THE APPROVAL OF THE ENGINEER. THE CONCRETE COVER TO EMBEDDED PIPES OR CONDUITS SHALL BE A MINIMUM OF 20mm.
- WATER BORNE PIPES SHALL NOT BE PLACED WITHIN R.C. CONCRETE WITHOUT THE APPROVAL OF THE BUILDINGS DEPARTMENT, AP AND RSE.
- SPACER BARS SHALL BE OF DIAMETER = 25mm OR DIAMETER OF MAIN BAR WHICHEVER IS GREATER @ 1.5m c/c.
- ALL ROOF SCREEDING TO BE LIGHT WEIGHT CONCRETE OF DENSITY BETWEEN 1600 TO 1700kg/m³ AND MINIMUM CUBE STRENGTH U_w=21N/mm² AT 28 DAYS.
- ALL BEAM SIZE TO BE READ AS BREADTH x DEPTH
- ALL LEVELS SHOWN IN FRAMING PLANS TO BE STRUCTURAL FLOOR LEVEL. (LEGEND: ϕ 108.7 SFL STRUCTURAL FLOOR LEVEL AT 108.7 mPD)
- ALL DIMENSION ARE IN MILLIMETRE & LEVEL IN mPD EXCEPT OTHERWISE STATED.
- ALL EARTH BACKFILLING TO BE COMPACTED TO 95% OF MAX. DRY DENSITY TO BS 1377-TS:12.
- ALL BENT TO STEEL REINFORCEMENT SHALL COMPLY WITH BS 8666:2000
- THE GENERAL BUILDING PLANS ARE SUBMITTED ON (31-12-2020).

NOTES FOR ANNOTATION OF BARS:

- ALL DIMENSIONS SHOWN ARE IN mm.
- ANY DISCREPANCY FOUND BETWEEN THE DETAILS SHOWN IN THIS DRAWING AND THAT SHOWN IN DETAILED DRAWINGS SHALL BE REPORTED TO THE ENGINEER FOR DIRECTION.
- BAR REFERENCING:

EXAMPLE: 16T32-200
NUMBER OF BARS: 16
TYPE OF STEEL: T (RIBBED STEEL REINFORCING BARS GRADE 500B/C)
DIAMETER OF BARS: 32mm
PITCH OF BARS (IF APPLICABLE): 200 mm

FOR REFERENCE ONLY

NOTES FOR CONSTRUCTION OF CANTILEVERED BEAM & SLAB:

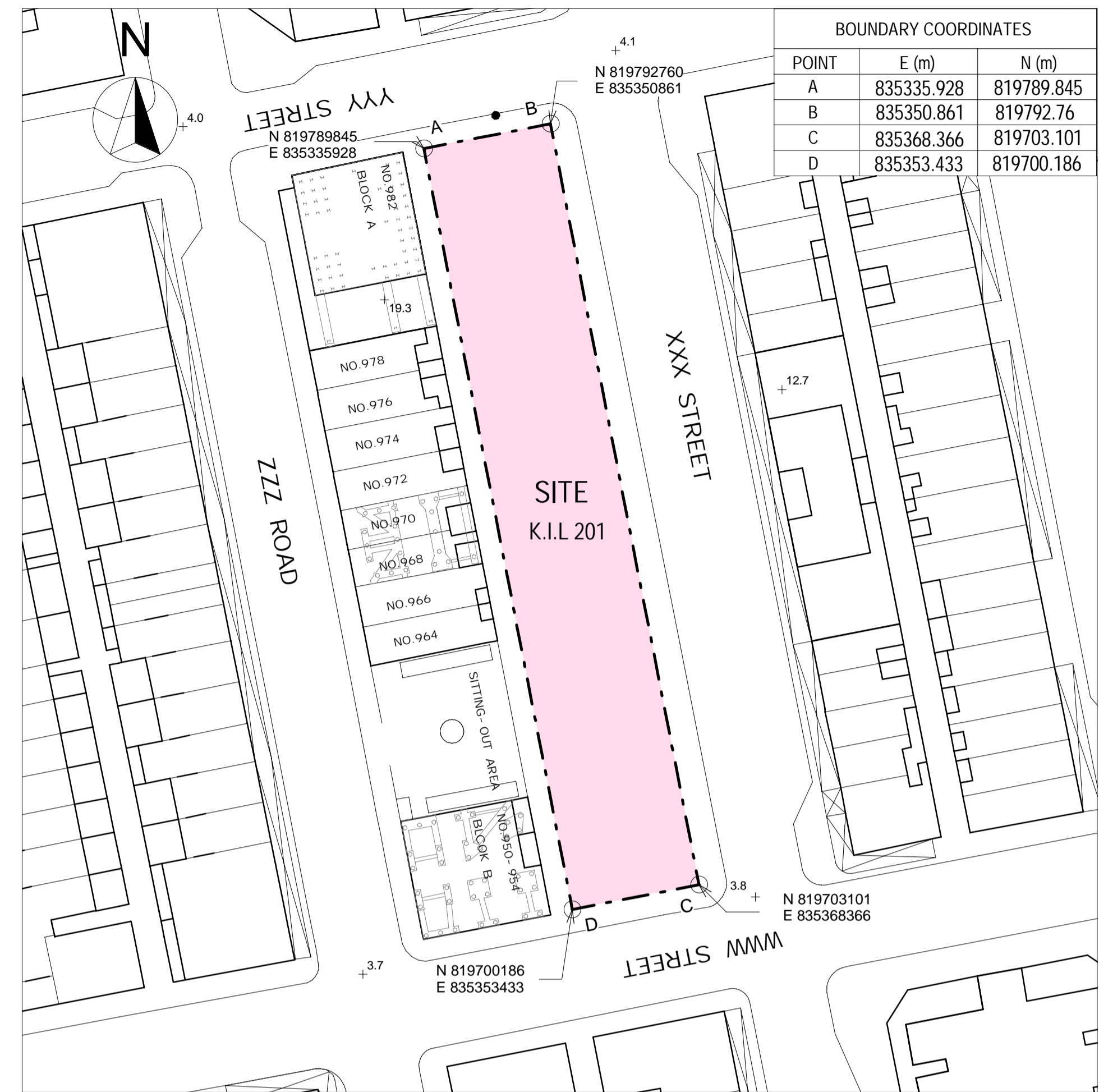
- ALL CANTILEVERED PROJECTIONS SHOULD BE CAST MONOLITHICALLY WITH AND AT THE SAME TIME AS THE DIRECTLY SUPPORTING MEMBERS. CONSTRUCTION JOINTS MUST NOT BE LOCATED ALONG THE EXTERNAL EDGE OF THE SUPPORTING MEMBERS.
- ADEQUATE BAR SPACERS SHOULD BE PROVIDED TO MAINTAIN THE POSITION AND ALIGNMENT OF THE STEEL REINFORCEMENT.
- DURING CONCRETING, ADEQUATE COMPACTION SHOULD BE GIVEN TO ENSURE GOOD QUALITY CONCRETE. EVERY ENDEAVOUR SHOULD ALSO BE MADE TO AVOID STEEL REINFORCEMENT FROM BEING DISPLACED OR DEPRESSED.
- ALL PROPPING TO THE SOFFIT OF THE FORMWORK FOR THE CANTILEVERED PROJECTIONS SHOULD BE MAINTAINED FOR AT LEAST 14 DAYS.

FOR REFERENCE ONLY

NOTES FOR WATERPROOFING CONSTRUCTION:

- WATERSTOP:
 - FOR LOCATIONS AND DETAILS OF WATERSTOP AT EXPANSION JOINTS, CONSTRUCTION JOINTS ETC. REFER TO ALL RELEVANT DRAWINGS. JOINT NOT SPECIFIED SHALL RECEIVE THE PRIOR APPROVAL BY THE ENGINEER.
 - TYPE OF WATERSTOPS SHALL BE AS SPECIFIED IN THE CONTRACT OR TO THE APPROVAL OF THE ENGINEER.
 - DETAIL OF FIXING OF WATERSTOPS SHALL BE IN ACCORDANCE WITH THE RECOMMENDATION OF THE MANUFACTURER.
 - PRIOR TO CONCRETING, THE WATERSTOP SHALL BE RAILED, CLIPPED OR TIED WITH WIRE TO ITS CORRECT POSITION SECURELY AND ADEQUATELY. DETAIL AND SPACING OF SUCH NAILING, CLIPS AND TIES SHALL BE IN ACCORDANCE WITH THE RECOMMENDATION OF THE MANUFACTURER AND TO THE APPROVAL OF THE ENGINEER.
 - CARE SHALL BE TAKEN TO AVOID ANY AIR Voids BEING TRAPPED BETWEEN THE WATERSTOP AND THE SURROUNDING CONCRETE.
 - SURROUNDING STEEL REINFORCEMENT SHALL NOT BE PLACED IN CONTACT WITH THE WATERSTOP. MINIMUM SPACING TO BE 40mm.
- ALL CONCRETE USED IN WATER RETAINING STRUCTURE SHALL BE WATERPROOFING CONCRETE AND COMPLY WITH BS8007.

FOR REFERENCE ONLY



BLOCK PLAN
1 : 500

BD REF :

BIM REF :

REV DATE AMENDMENT

PROJECT
CIC SAMPLE PROJECT

DRAWING TITLE
GENERAL NOTES FOR SUPERSTRUCTURE

SCALE AS SHOWN@A1

DRAWING NO. S001 REV. NO.

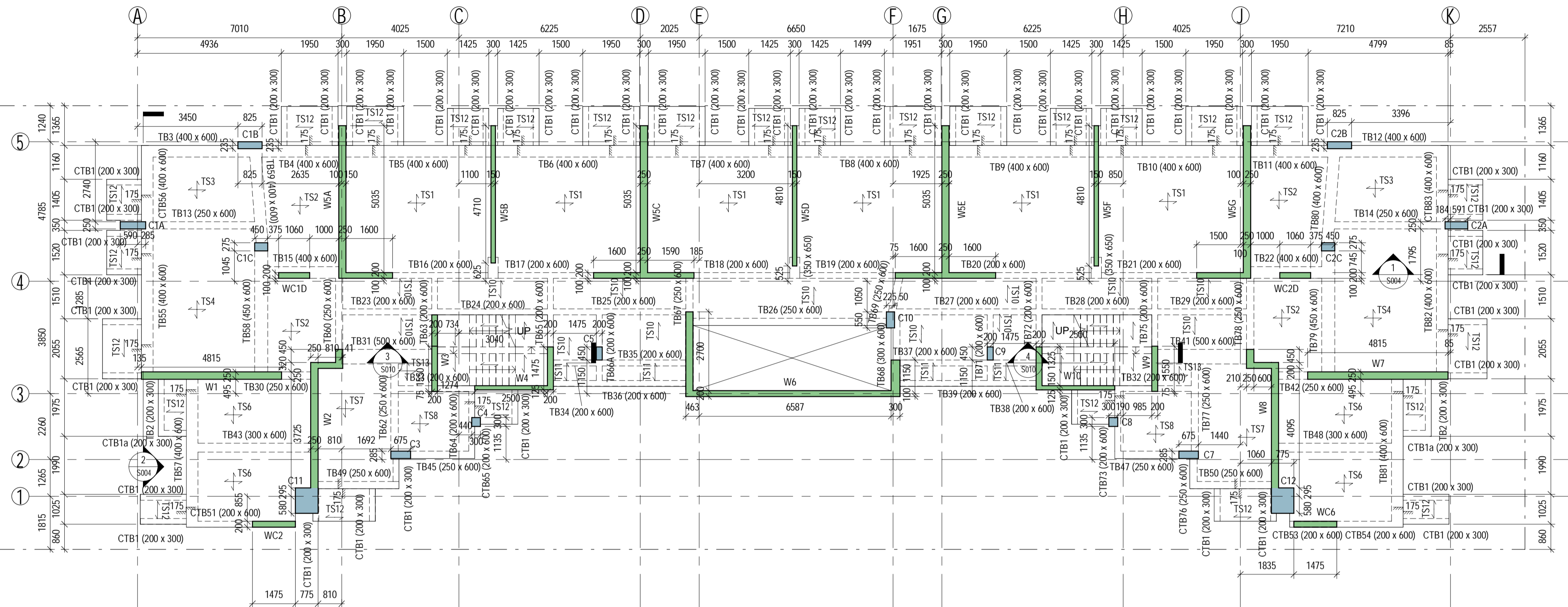
SOURCE ---

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

BD'S OFFICIAL USE

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)



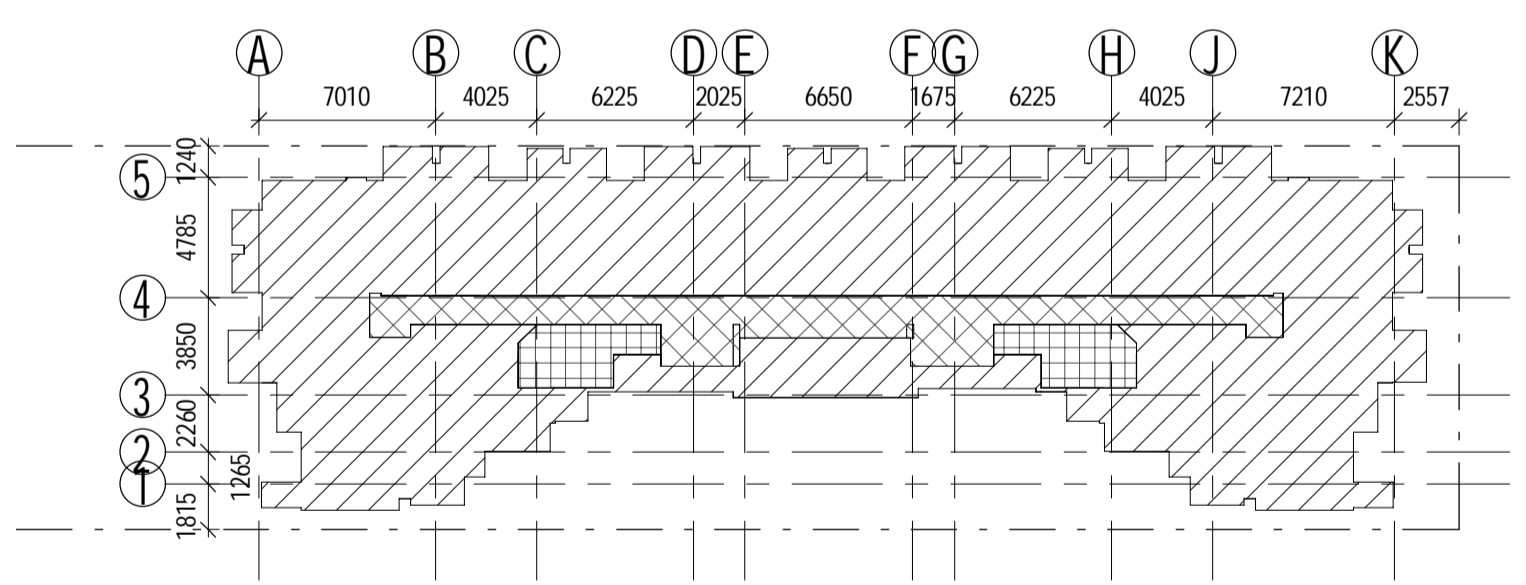
- LEGEND:**
- - - - SITE BOUNDARY
 - ▣ COLUMN / WALL ABOVE
 - ▤ COLUMN / WALL BELOW
 - WALL ABOVE & BELOW
 - ▨ COLUMN ABOVE & BELOW
 - ▧ BEARING (B.W.) / HANGER WALL (H.W.)
 - VOID
 - ⊕ +26.50 PROPOSED STRUCTURE FLOOR LEVEL
 - ⊕ TB1 (300x450) PROPOSED BEAM MARK AND BEAM SIZE
 - ↔ TS1 / ↔ TS2 PROPOSED SLAB MARK AND SPAN DIRECTION

1 TYP FLOOR FRAMING PLAN
1 : 100

- NOTES**
1. ALL BEAM SIZE TO BE 400(B)x600(D), UNLESS OTHERWISE STATED.
 2. ALL SLAB SIZE TO BE 150mm THK, UNLESS OTHERWISE STATED.

COLUMN SCHEDULE

COLUMN MARK	SIZE (mm)
C1A	250 x 875
C1B	235 x 825
C1C	275 x 450
C2A	250 x 775
C2B	235 x 825
C2C	275 x 450
C3	250 x 675
C4	300 x 300
C5	200 x 450
C7	250 x 675
C8	300 x 300
C9	200 x 450
C10	275 x 550
C11	775 x 875
C12	775 x 875



TYP FLOOR LOADING KEY PLAN
1 : 300

LOADING KEY PLAN

USAGE	LEGEND	L.L. (kPa)	FIN. (kPa)	F.R.R. (MIN)
STAIRCASE	▧	3.0	1.25	60/60/60
LOBBY	▨	3.0	1.25	60/60/60
DOMESTIC	▩	2.0	0.50	60/60/60
PLANT ROOM	⊕	7.5	1.25	60/60/60
FLAT ROOF	▤	5.0	5.60	60/60/60

TOWER FLOOR LEVEL

LEVEL	S.F.L.
5/F	+26.525
6/F	+29.850
7/F	+33.175
8/F	+36.500
9/F	+39.825
10/F	+43.150
11/F	+46.475
12/F	+49.800
15/F	+53.125
16/F	+56.450
17/F	+59.775
18/F	+63.100
19/F	+66.425
20/F	+69.750
21/F	+73.075
22/F	+76.400
23/F	+79.725
25/F	+83.050
26/F	+86.375
27/F	+89.700
28/F	+93.025
29/F	+96.350

BD REF :
BIM REF :

REV DATE AMENDMENT

PROJECT
CIC SAMPLE PROJECT

DRAWING TITLE
TYPICAL FLOOR FRAMING PLAN

SCALE AS SHOWN@A1

DRAWING NO. S002 REV. NO.

SOURCE ---

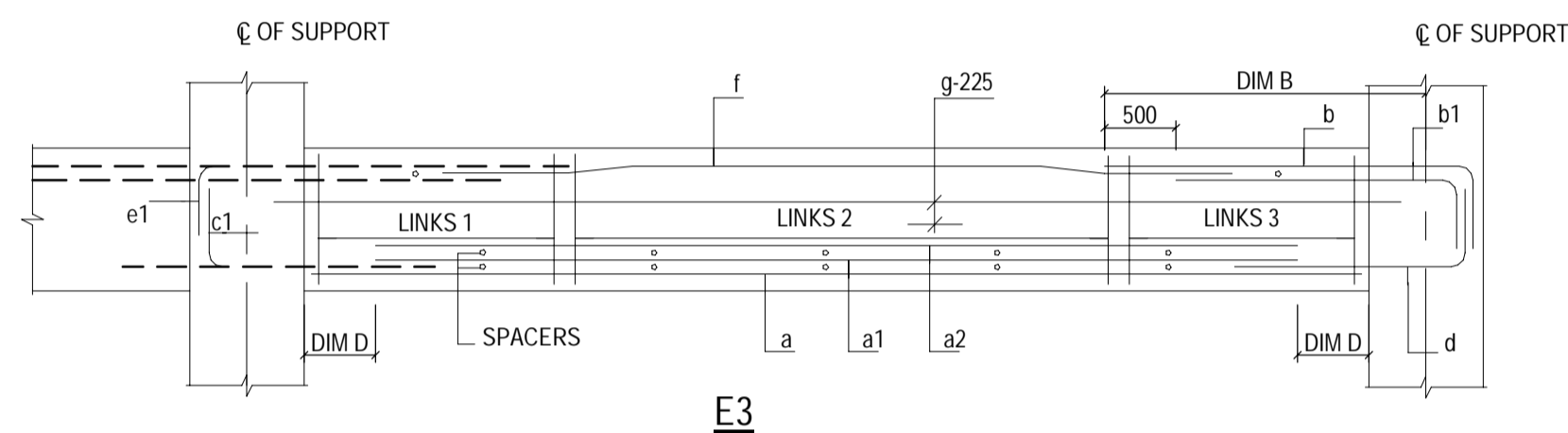
90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

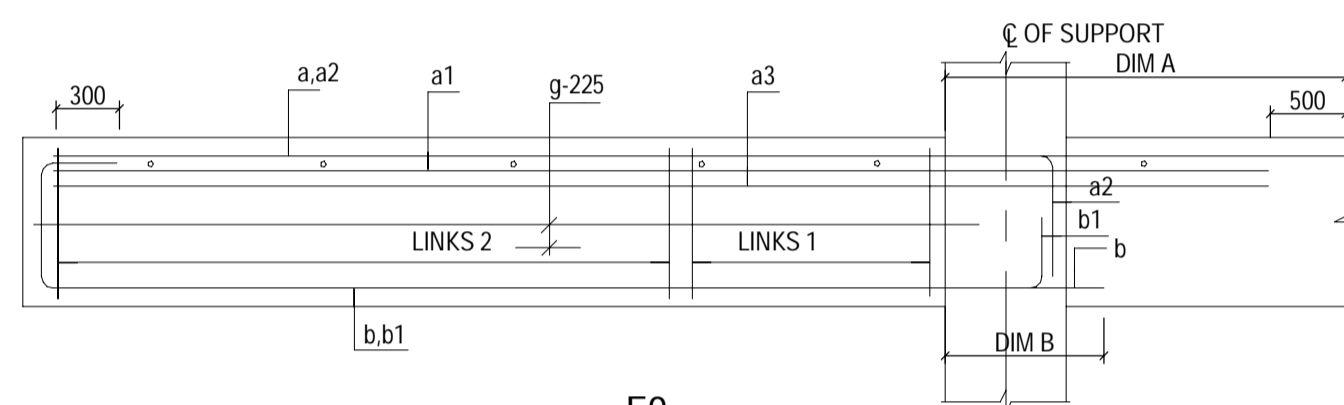
BD'S OFFICIAL USE

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)

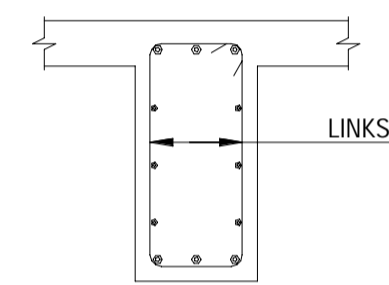
R.C. BEAM SCHEDULE																				
BEAM MARK	BEAM SIZE (BXD)	ELEV. REFER	REINFORCEMENT									LINKS			DIMENSION					
			a	a1	a2	b	b1	c	d	e	f	g	LINKS 1	LINKS 2	LINKS 3	A	B	C	D	
TB1	200 x 300	E9	2T20	-	-	-	2T16	-	-	-	-	-	-	-	-	-	2550	-	-	-
TB1a	200 x 300	E9	2T20	-	-	-	2T16	-	-	-	-	-	-	-	-	-	2550	-	-	-
TB2	200 x 300	E10	2T16	-	-	2T16	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TB3	400 x 600	E5	4T25	-	-	4T25	-	4T25	4T25	4T25	4T20	-	-	-	-	-	1300	1000	-	-
TB4	400 x 600	E4	4T25	-	-	4T25	-	-	4T25	-	4T20	-	-	-	-	-	1000	1800	-	-
TB5	400 x 600	E4	4T25	-	-	4T25	-	-	4T25	-	4T20	-	-	-	-	-	1800	1800	-	-
TB6	400 x 600	E4	4T25	-	-	4T25	-	-	4T25	-	4T20	-	-	-	-	-	1800	1800	-	-
TB7	400 x 600	E4	4T25	-	-	4T25	-	-	4T25	-	4T20	-	-	-	-	-	1800	1800	-	-
TB8	400 x 600	E4	4T25	-	-	4T25	-	-	4T25	-	4T20	-	-	-	-	-	1800	1800	-	-
TB9	400 x 600	E4	4T25	-	-	4T25	-	-	4T25	-	4T20	-	-	-	-	-	1800	1800	-	-
TB10	400 x 600	E4	4T25	-	-	4T25	-	-	4T25	-	4T20	-	-	-	-	-	1800	1000	-	-
TB11	400 x 600	E4	4T25	-	-	4T25	-	-	4T25	-	4T20	-	-	-	-	-	1000	1300	-	-
TB12	400 x 600	E3	4T25	-	-	4T25	-	-	4T25	-	4T20	-	-	-	-	-	-	-	-	-
TB13	250 x 600	E10	2T25	-	-	2T25	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TB14	250 x 600	E10	2T25	-	-	2T25	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TB51	200 x 600	E9a	2T20	2T20	2T20	2T20	-	-	-	-	-	-	-	-	-	-	1000	-	-	-
TB54	200 x 600	E9a	2T20	2T20	2T20	2T20	-	-	-	-	-	-	-	-	-	-	1000	-	-	-



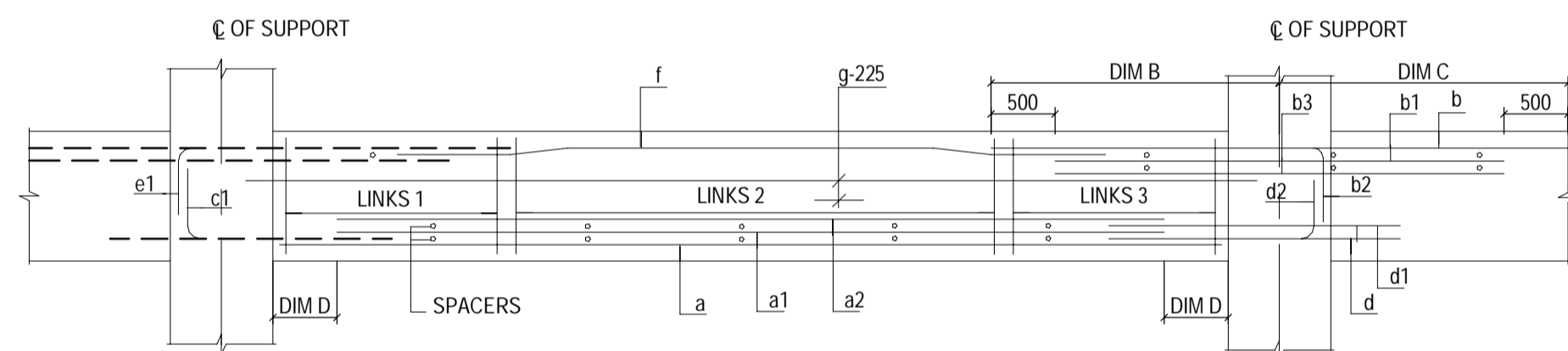
E3



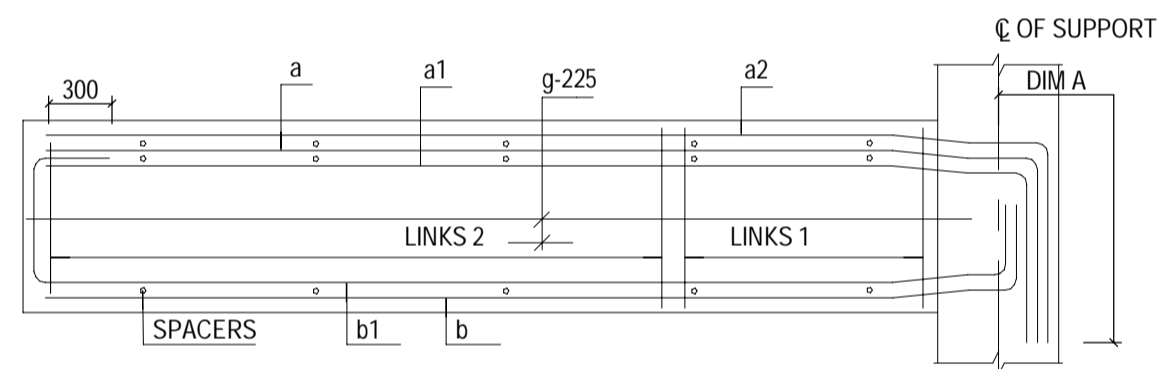
E9



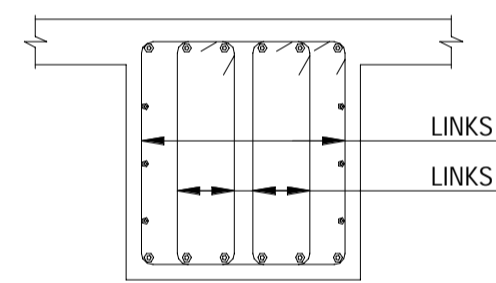
2 LEGS



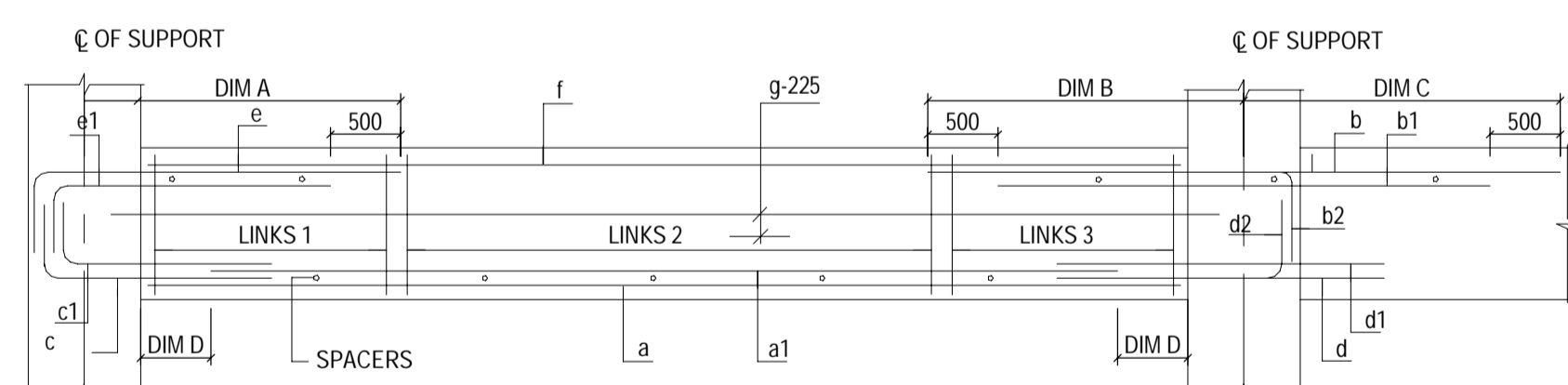
E4



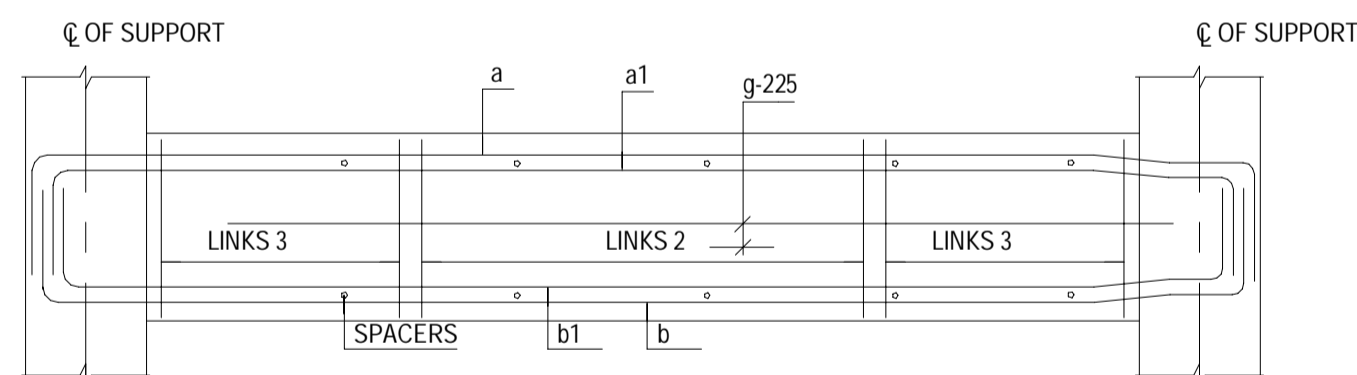
E9a



6 LEGS



E5



E10

BD REF :
 BIM REF :

REV DATE AMENDMENT

PROJECT
 CIC SAMPLE PROJECT

DRAWING TITLE
 BEAM R.C. SCHEDULE

SCALE 1 : 100@A1

DRAWING NO. S003 REV. NO.

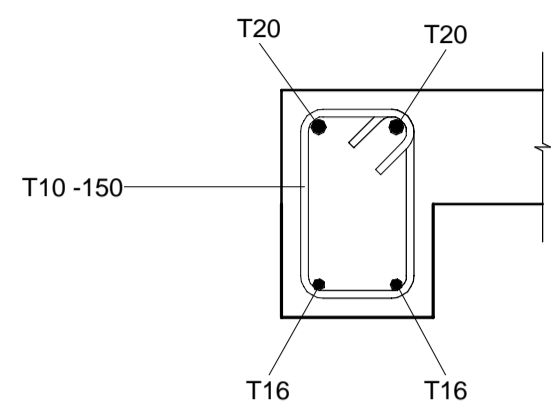
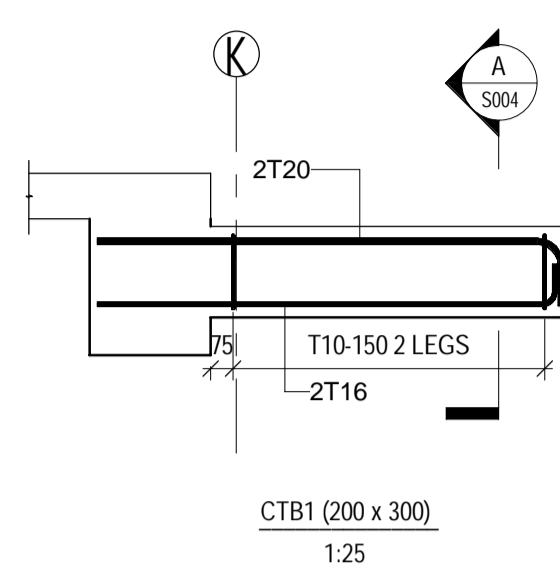
SOURCE ---

90mm (W) x 40mm (H) space for COMPANY LOGO

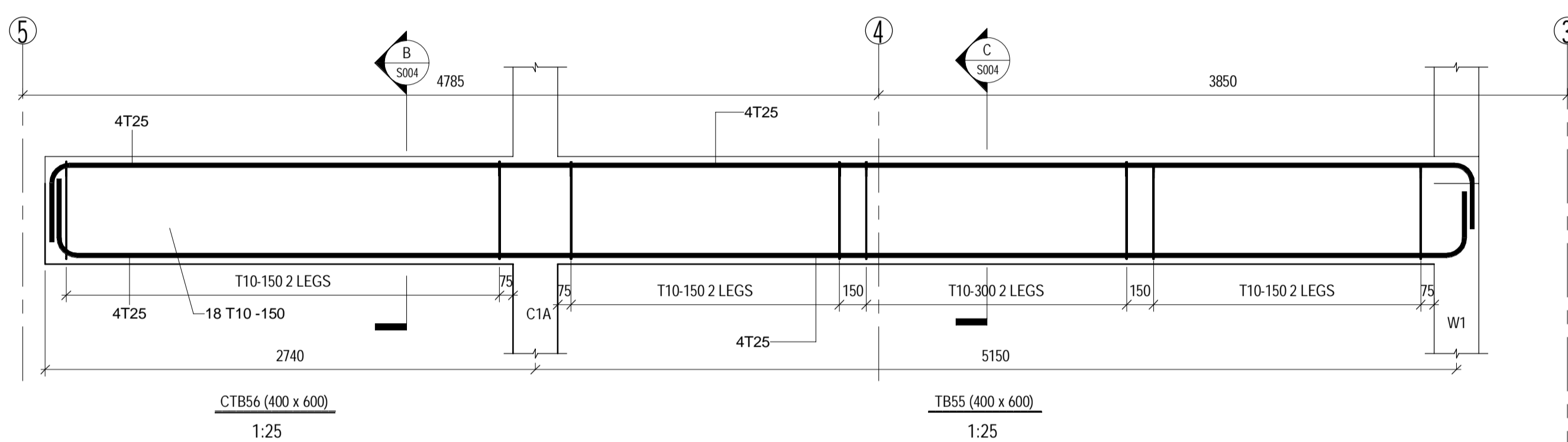
90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

BD'S OFFICIAL USE

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)

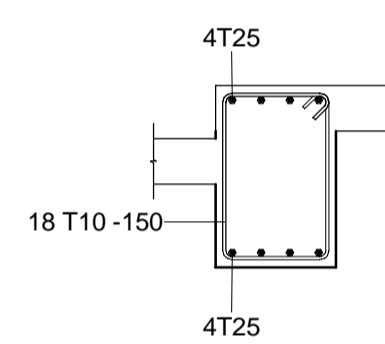


A SECTION A
1 : 10

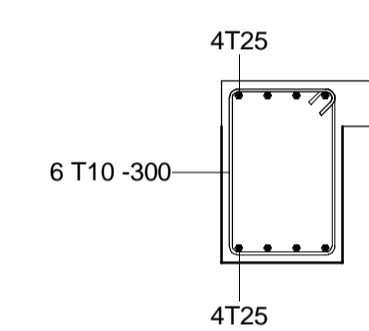


CTB56 (400 x 600)
1:25

TB55 (400 x 600)
1:25



B SECTION B
1 : 25



C SECTION C
1 : 25

BD REF :

BIM REF :

REV	DATE	AMENDMENT

PROJECT
CIC SAMPLE PROJECT

DRAWING TITLE
BEAM R.C. DETAIL

SCALE AS SHOWN@A1

DRAWING NO. S004 REV. NO.

SOURCE ---

90mm (W) x 40mm (H) space
for COMPANY LOGO

90mm (W) x 60mm (H) space
for AP/RSE/RGE's
signature/ and stamp chop

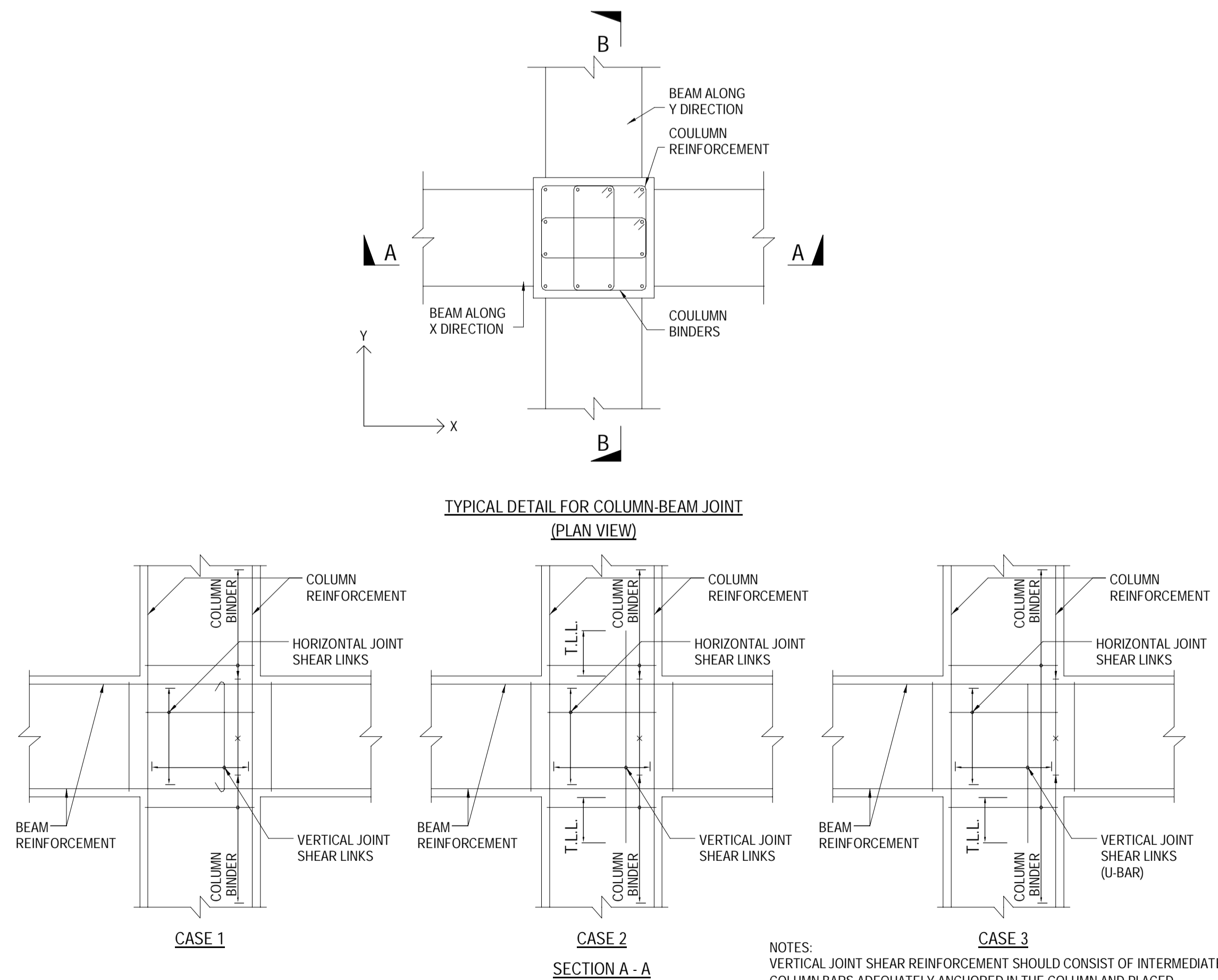
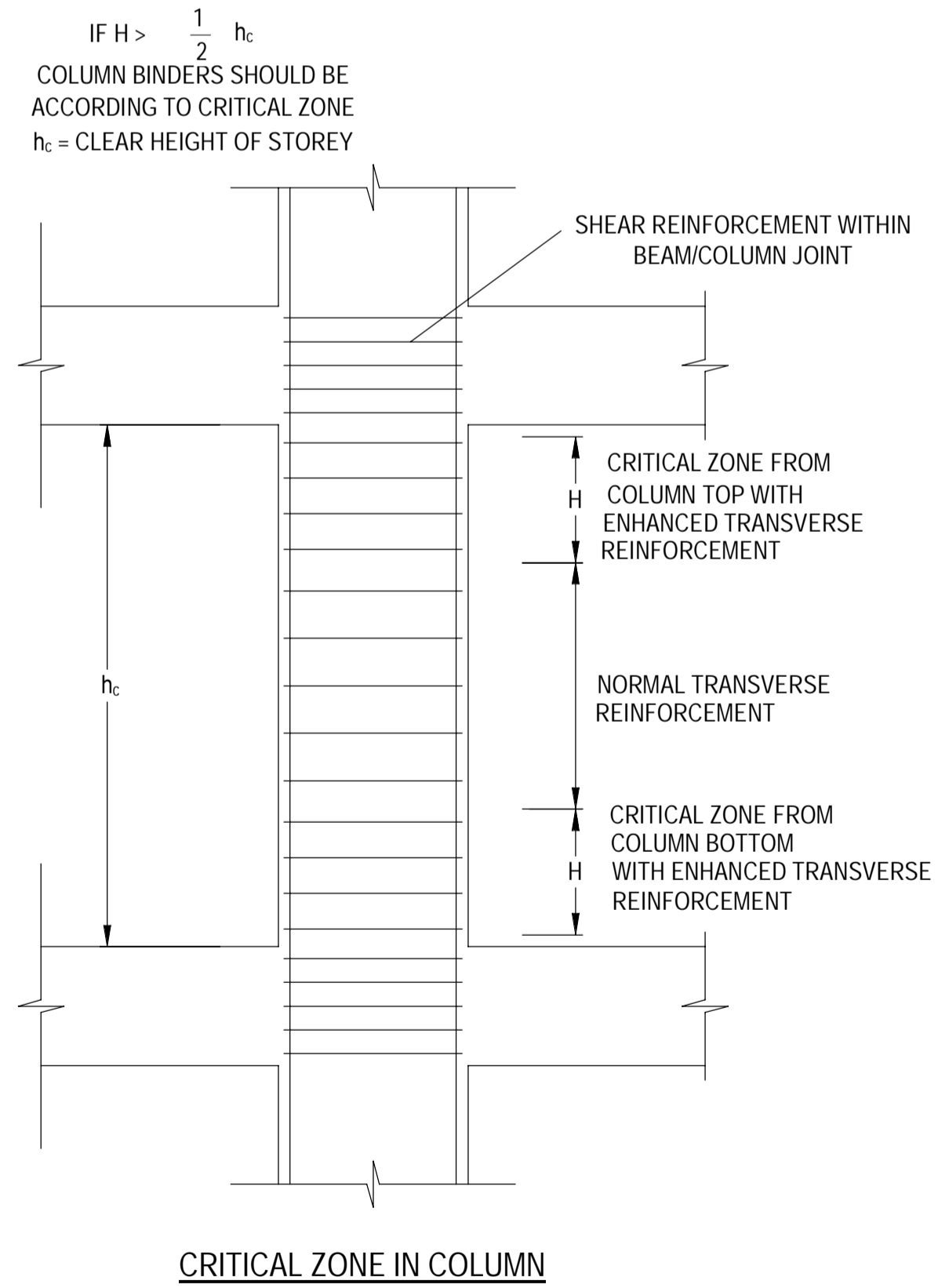
BD'S OFFICAL USE

90mm (W) x 150mm (H) space
for BD's approval stamp /
certification of copies of
approved plans
(PNAP ADM-10 APP A)

BD REF :

BIM REF :

29/F TO 5/F						
COLUMN MARK	C1A	C1B	C1C	C2A	C2B	C2C
COLUMN SIZE	250x875	235x825	275x450	250x775	235x825	275x450
VERT. BARS	14T25+2T16 (3.30%)	14T25+2T16 (3.80%)	8T32+4T20 (3.60%)	14T25+2T16 (3.50%)	14T25+2T16 (3.80%)	8T25 (3.20%)
BINDERS IN TYPICAL REGION	T10-175	T10-175	T10-175	T10-175	T10-175	T10-175
BINDERS IN CRITICAL REGION	T10-125	T10-125	T10-125	T10-125	T10-125	T10-125
CRITICAL REGION H (mm)	1000	1000	1000	1000	1000	1000
29/F TO 5/F						
COLUMN MARK	C3	C4	C5	C7	C8	C9
COLUMN SIZE	250x675	300x300	200x450	250x675	300x300	200x450
VERT. BARS	12T25 (3.50%)	6T25 (3.30%)	6T25 (3.30%)	12T25 (3.50%)	6T25 (3.30%)	6T25 (3.70%)
BINDERS IN TYPICAL REGION	T10-175	T10-175	T10-175	T10-175	T10-175	T10-175
BINDERS IN CRITICAL REGION	T10-125	T10-125	T10-125	T10-125	T10-125	T10-125
CRITICAL REGION H (mm)	1000	1000	1000	1000	1000	1000
						C10
						275x550
						10T25+2T20 (3.70%)
						T10-175
						T10-125
						1000



NOTES:
VERTICAL JOINT SHEAR REINFORCEMENT SHOULD CONSIST OF INTERMEDIATE COLUMN BARS ADEQUATELY ANCHORED IN THE COLUMN AND PLACED BETWEEN THE CORNER BARS AND WITH IN THE EFFECTIVE JOINT AREA AS DEFINED IN CLAUSE 6.8.1.3 OF THE CODE OF PRACTICE FOR STRUCTURAL USE OF CONCRETE 2013.

REV DATE AMENDMENT

PROJECT
CIC SAMPLE PROJECT

DRAWING TITLE
COLUMN R.C. DETAIL

SCALE AS SHOWN@A1

DRAWING NO. S005 REV. NO.

SOURCE ---

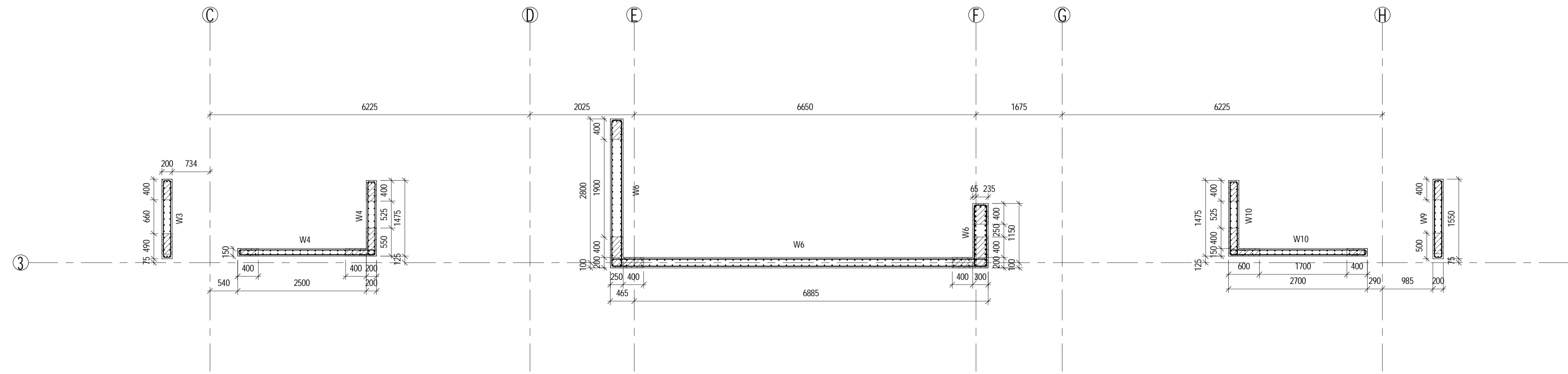
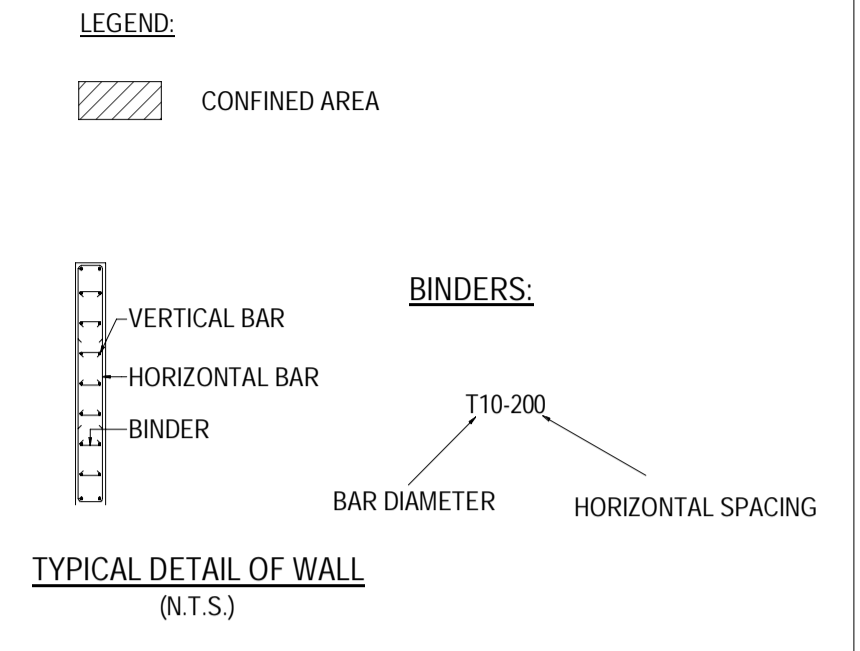
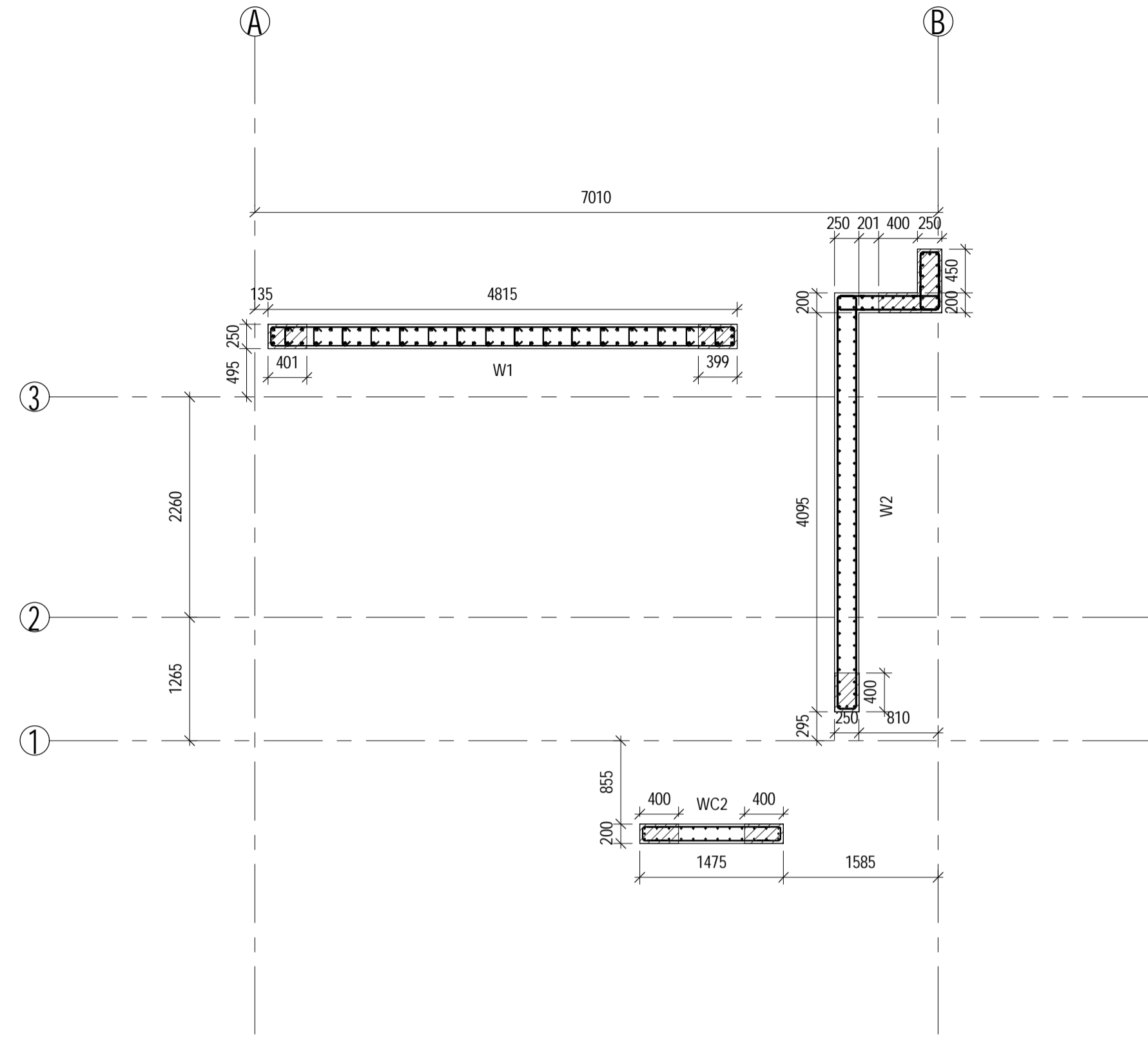
90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

BD'S OFFICIAL USE

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)

R.C. WALL SCHEDULE								
FLOOR	WALL MARK	CONCRETE GRADE	THICKNESS (mm)	VERTICAL BARS	HORIZONTAL BARS	BINDER		STEEL RATIO (%)
						HORIZONTAL	VERTICAL	
4/F	W1	C60	250	T40-150	T10-150	T12-300	150	3.4
4/F	W2	C60	250	T25-125	T12-125	-	-	1.3
4/F	W3	C60	200	T20-125	T10-100	-	-	1.3
4/F	W4	C60	150	T20-150	T10-150	-	-	1.4
4/F	W4	C60	200	T20-125	T10-100	-	-	1.3
4/F	W5A	C60	200	T20-125	T10-100	-	-	1.3
4/F	W5A	C60	250	T25-125	T12-125	-	-	1.6
4/F	W5B	C60	150	T20-100	T10-150	T12-200	150	2.1
4/F	W5C	C60	200	T20-125	T10-100	-	-	1.3
4/F	W5C	C60	250	T25-125	T12-125	-	-	1.6
4/F	W5D	C60	150	T20-125	T10-150	-	-	1.7
4/F	W5E	C60	200	T20-125	T10-100	-	-	1.3
4/F	W5E	C60	250	T25-125	T12-125	-	-	1.6
4/F	W5F	C60	150	T20-100	T10-150	T12-200	150	2.1
4/F	W5G	C60	200	T20-125	T10-100	-	-	1.3
4/F	W5G	C60	250	T32-175	T12-125	-	-	1.8
4/F	W6	C60	200	T25-150	T10-100	-	-	1.6
4/F	W6	C60	250	T20-125	T12-125	-	-	1.0
4/F	W6	C60	300	T32-100	T10-150	T12-200	150	2.1
4/F	W7	C60	250	T25-150	T12-125	-	-	1.3
4/F	W8	C60	250	T32-175	T12-125	-	-	1.8
4/F	W9	C60	200	T20-125	T10-100	-	-	1.3
4/F	W10	C60	150	T20-150	T10-150	-	-	1.4
4/F	W10	C60	200	T20-125	T10-100	-	-	1.3
4/F	WC1D	C60	200	T20-125	T10-100	-	-	1.3
4/F	WC2	C60	200	T20-125	T10-100	-	-	1.3
4/F	WC2D	C60	200	T20-125	T10-100	-	-	1.3
4/F	WC6	C60	200	T20-125	T10-100	-	-	1.3



BD REF :
 BIM REF :

PROJECT
 CIC SAMPLE PROJECT

DRAWING TITLE
 WALL R.C. DETAIL (1 OF 2)

SCALE AS SHOWN@A1

DRAWING NO. S006 REV. NO.

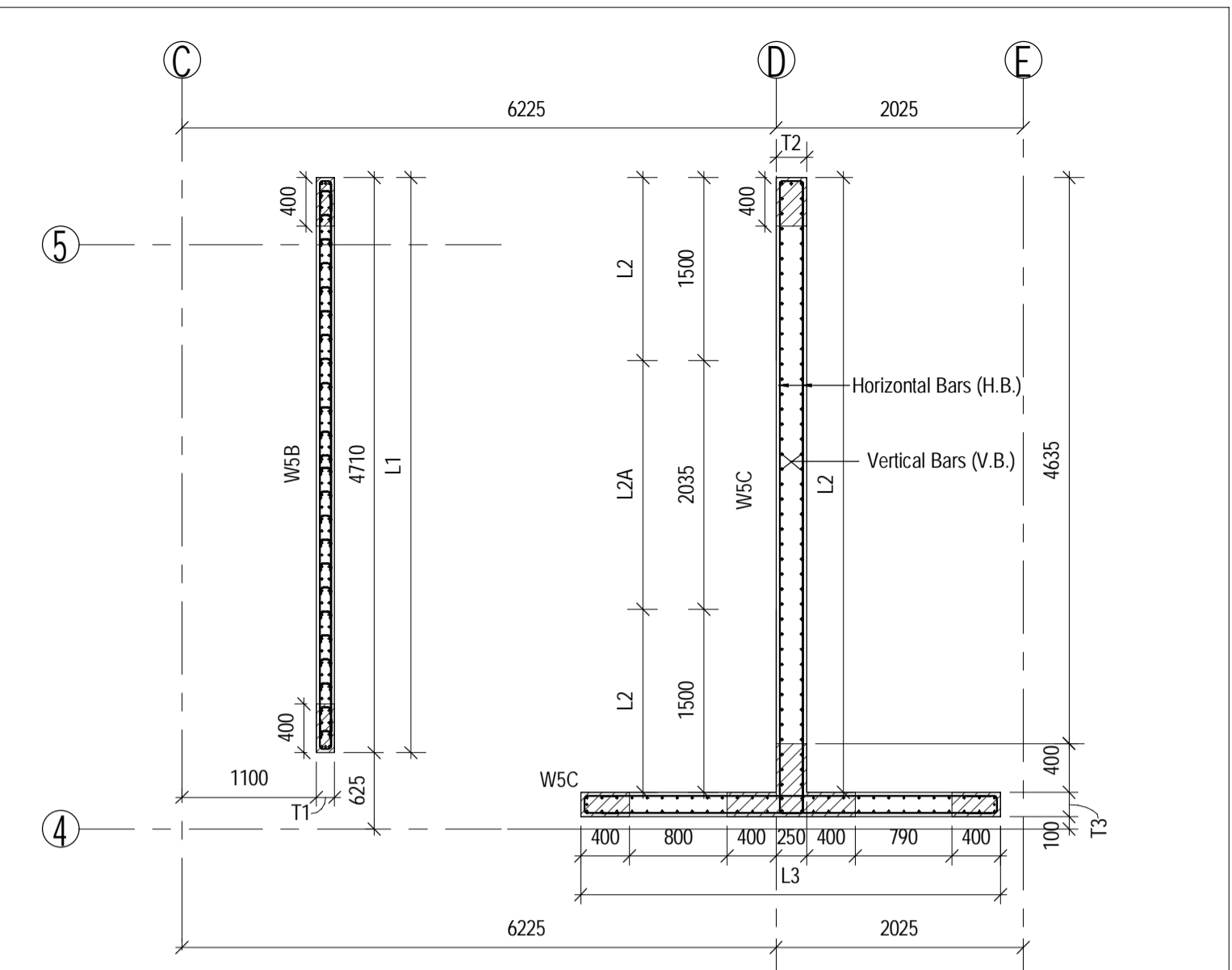
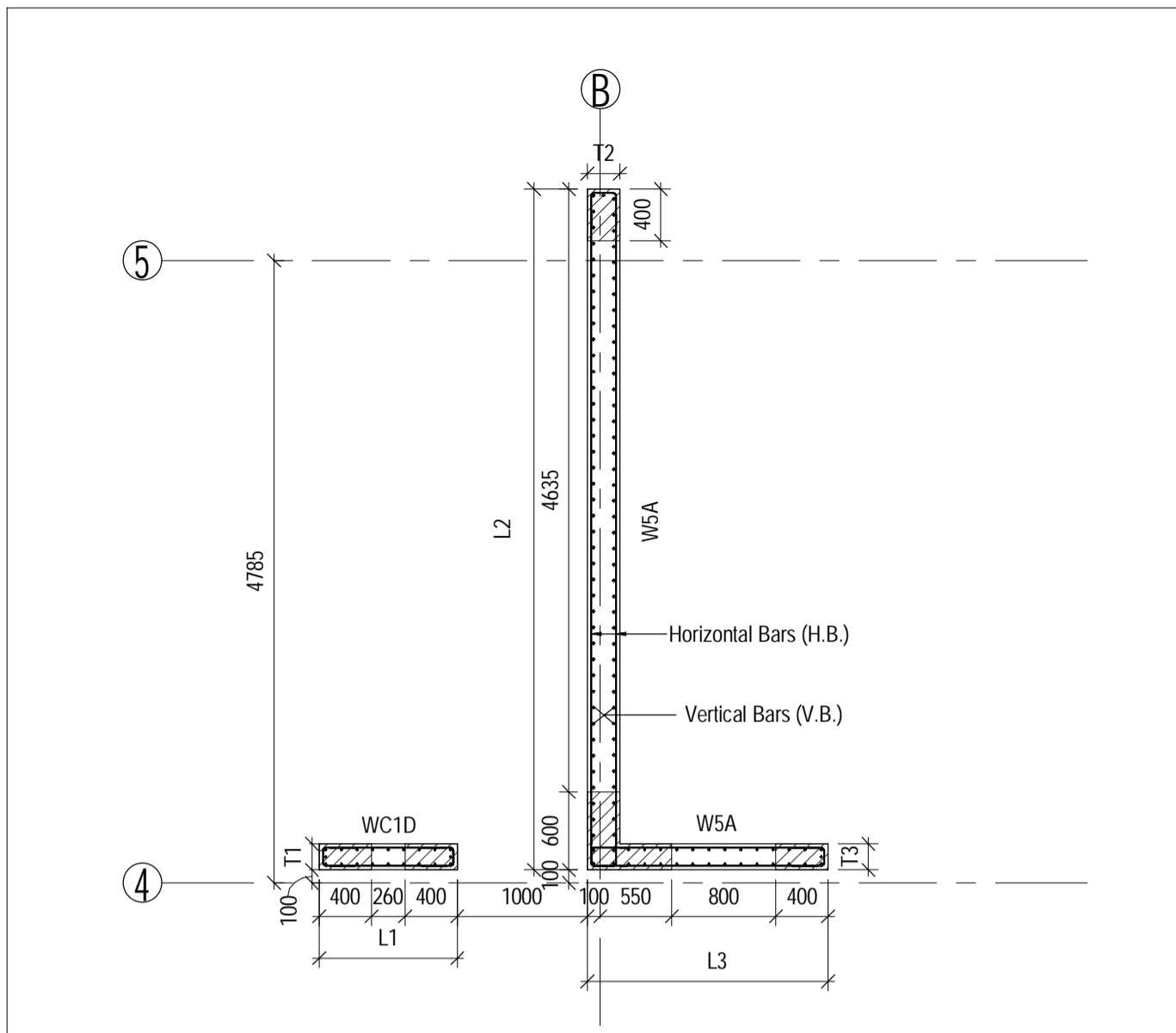
SOURCE ---

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

BD'S OFFICIAL USE

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)



FL. MARK	THICKNESS (mm)			L1	%	L2	%	L3	%
	T1	T2	T3						
27/F to 18/F	200	250	200	V.B. (E.F.) T16-150	0.67	T16-200	0.40	T16-180	0.56
				H.B. (TYP.) T16-250	0.15	T16-250	0.13	T16-250	0.15
18/F to 11/F	200	250	200	V.B. (E.F.) T16-150	0.67	T16-200	0.40	T16-180	0.56
				H.B. (TYP.) T16-250	0.15	T16-250	0.13	T16-250	0.15
11/F to 4/F	200	250	200	V.B. (E.F.) T16-150	0.67	T16-200	0.40	T16-180	0.56
				H.B. (TYP.) T16-250	0.15	T16-250	0.13	T16-250	0.15

FL. MARK	THICKNESS (mm)			L1	%	L2	%	L2A	%	L3	%
	T1	T2	T3								
27/F to 18/F	200	250	200	V.B. (E.F.) T16-150	0.67	T16-200	0.40	T16-200	0.40	T16-180	0.56
				H.B. (TYP.) T16-250	0.15	T16-250	0.13	T16-250	0.13	T16-250	0.15
18/F to 11/F	200	250	200	V.B. (E.F.) T16-150	0.67	T16-200	0.40	T16-200	0.40	T16-180	0.56
				H.B. (TYP.) T16-250	0.15	T16-250	0.13	T16-250	0.13	T16-250	0.15
11/F to 4/F	200	250	200	V.B. (E.F.) T16-150	0.67	T16-200	0.40	T16-200	0.40	T16-180	0.56
				H.B. (TYP.) T16-250	0.15	T16-250	0.13	T16-250	0.13	T16-250	0.15

BD REF :

BIM REF :

REV	DATE	AMENDMENT

PROJECT
CIC SAMPLE PROJECT

DRAWING TITLE
WALL R.C. DETAIL (Schedule)

SCALE AS SHOWN@A1

DRAWING NO. S007 REV. NO.

SOURCE ---

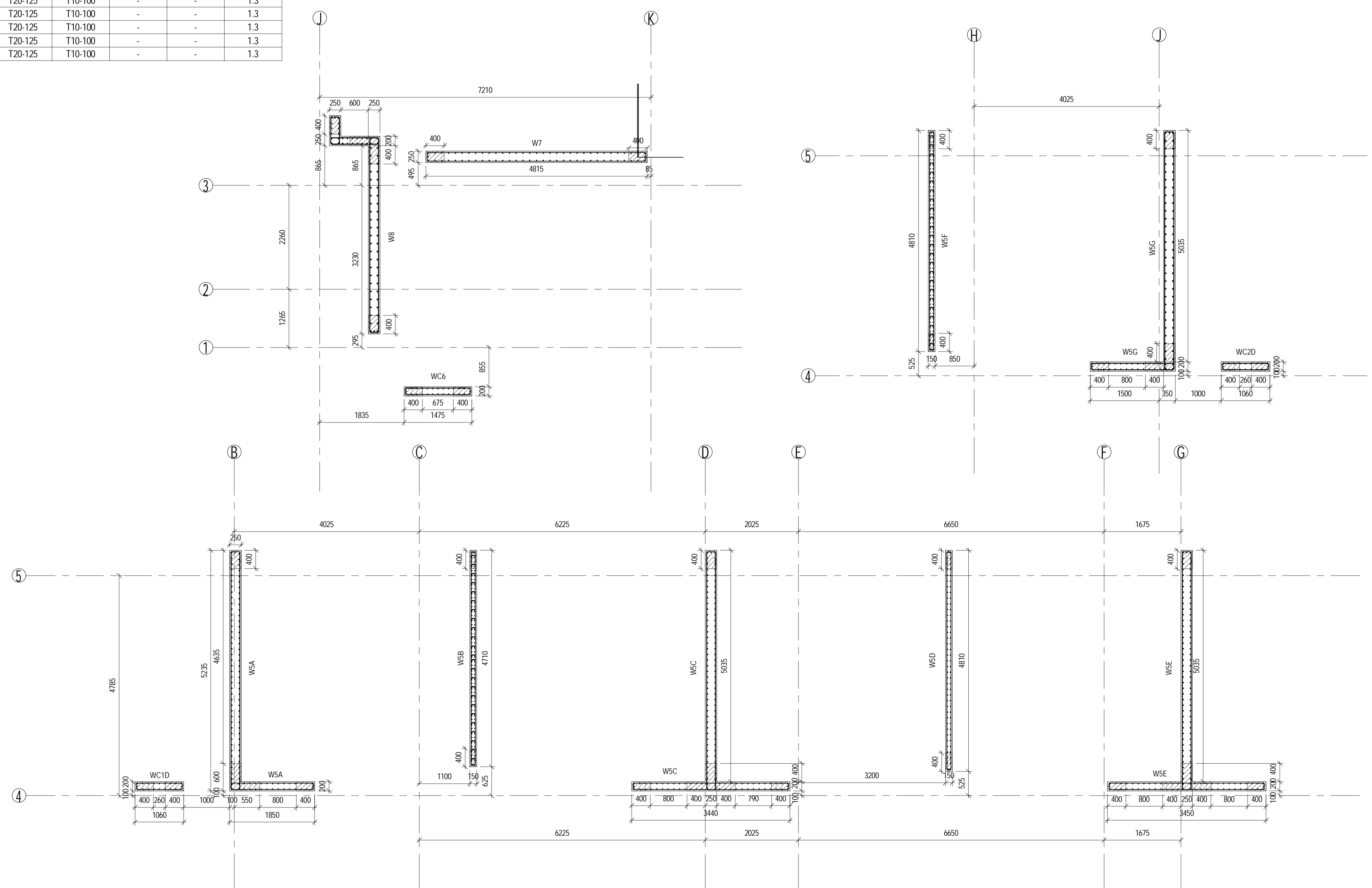
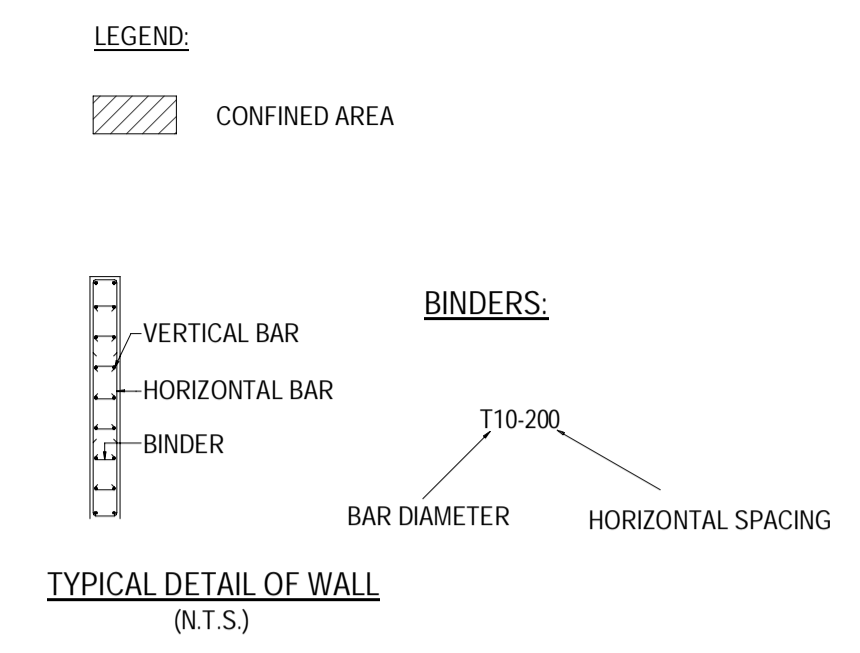
90mm (W) x 40mm (H) space
for COMPANY LOGO

90mm (W) x 60mm (H) space
for AP/RSE/RGE's
signature/ and stamp chop

BD'S OFFICIAL USE

90mm (W) x 150mm (H) space
for BD's approval stamp /
certification of copies of
approved plans
(PNAP ADM-10 APP A)

R.C. WALL SCHEDULE								
FLOOR	WALL MARK	CONCRETE GRADE	THICKNESS (mm)	VERTICAL BARS	HORIZONTAL BARS	BINDER		STEEL RATIO (%)
						HORIZONTAL	VERTICAL	
4/F	W1	C60	250	T40-150	T10-150	T12-300	150	3.4
4/F	W2	C60	250	T25-125	T12-125	-	-	1.3
4/F	W3	C60	200	T20-125	T10-100	-	-	1.3
4/F	W4	C60	150	T20-150	T10-150	-	-	1.4
4/F	W4	C60	200	T20-125	T10-100	-	-	1.3
4/F	W5A	C60	200	T20-125	T10-100	-	-	1.3
4/F	W5A	C60	250	T25-125	T12-125	-	-	1.6
4/F	W5B	C60	150	T20-100	T10-150	T12-200	150	2.1
4/F	W5C	C60	200	T20-125	T10-100	-	-	1.3
4/F	W5C	C60	250	T25-125	T12-125	-	-	1.6
4/F	W5D	C60	150	T20-125	T10-150	-	-	1.7
4/F	W5E	C60	200	T20-125	T10-100	-	-	1.3
4/F	W5E	C60	250	T25-125	T12-125	-	-	1.6
4/F	W5F	C60	150	T20-100	T10-150	T12-200	150	2.1
4/F	W5G	C60	200	T20-125	T10-100	-	-	1.3
4/F	W5G	C60	250	T32-175	T12-125	-	-	1.8
4/F	W6	C60	200	T25-150	T10-100	-	-	1.6
4/F	W6	C60	250	T20-125	T12-125	-	-	1.0
4/F	W6	C60	300	T32-100	T10-150	T12-200	150	2.1
4/F	W7	C60	250	T25-150	T12-125	-	-	1.3
4/F	W8	C60	250	T32-175	T12-125	-	-	1.8
4/F	W9	C60	200	T20-125	T10-100	-	-	1.3
4/F	W10	C60	150	T20-150	T10-150	-	-	1.4
4/F	W10	C60	200	T20-125	T10-100	-	-	1.3
4/F	WC1D	C60	200	T20-125	T10-100	-	-	1.3
4/F	WC2	C60	200	T20-125	T10-100	-	-	1.3
4/F	WC2D	C60	200	T20-125	T10-100	-	-	1.3
4/F	WC6	C60	200	T20-125	T10-100	-	-	1.3



BD REF :
BIM REF :

REV DATE AMENDMENT

PROJECT
CIC SAMPLE PROJECT

DRAWING TITLE
WALL R.C. DETAIL (2 OF 2)

SCALE AS SHOWN@A1

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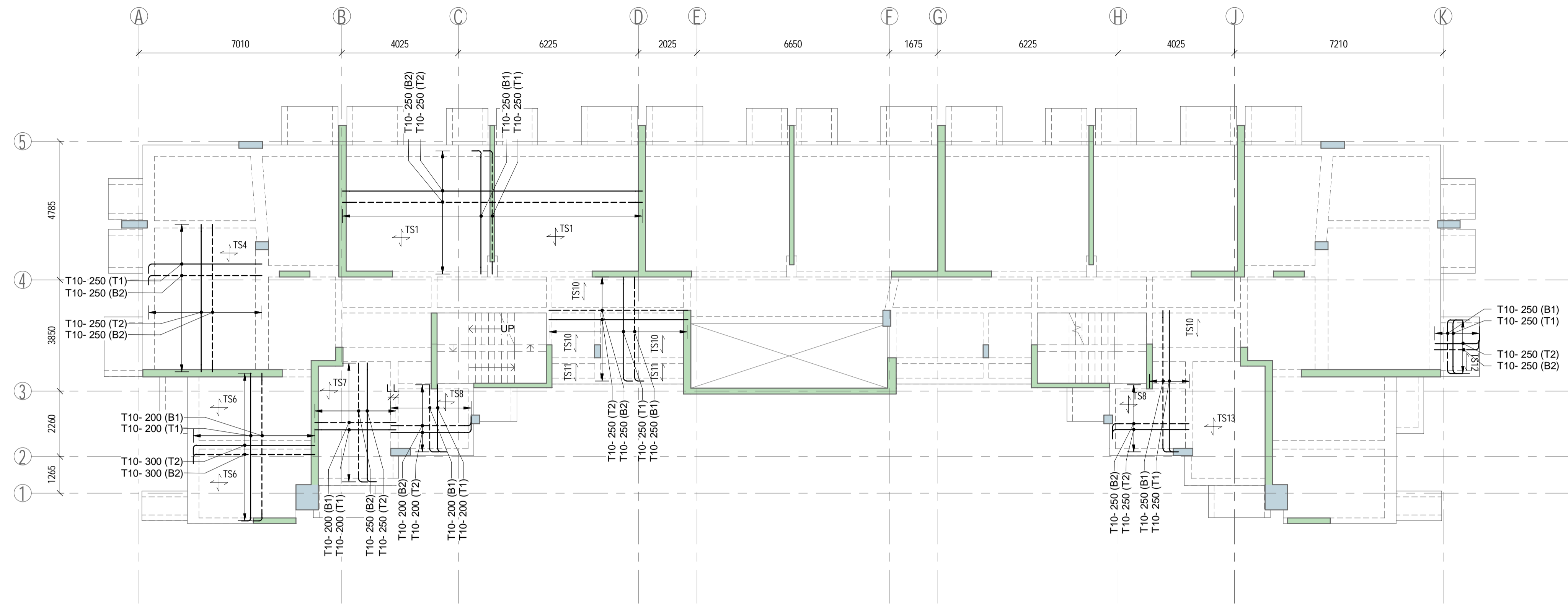
SOURCE ---

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

BD'S OFFICIAL USE

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)



1 TYP FLOOR SLAB R.C. DETAILS
1 : 100

BD REF :

BIM REF :

REV	DATE	AMENDMENT

PROJECT
CIC SAMPLE PROJECT

DRAWING TITLE
SLAB R.C. DETAIL

SCALE 1 : 100@A1

DRAWING NO. S009 REV. NO.

SOURCE ---

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

BD'S OFFICIAL USE

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)

BD REF :

BIM REF :

REV DATE AMENDMENT

PROJECT
CIC SAMPLE PROJECT

DRAWING TITLE
STAIRCASE R.C. DETAIL

SCALE AS SHOWN@A1

DRAWING NO. S010 REV. NO.

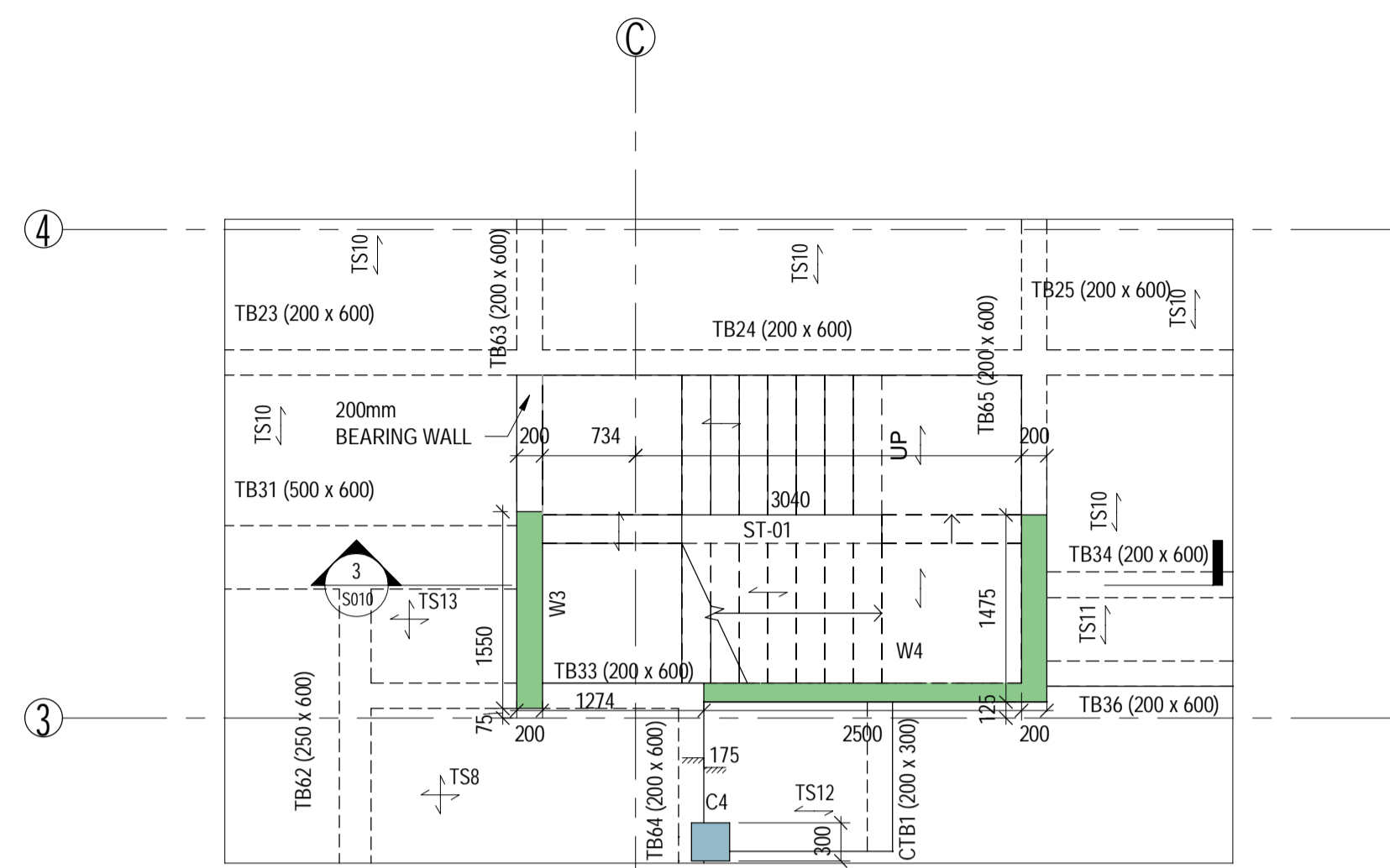
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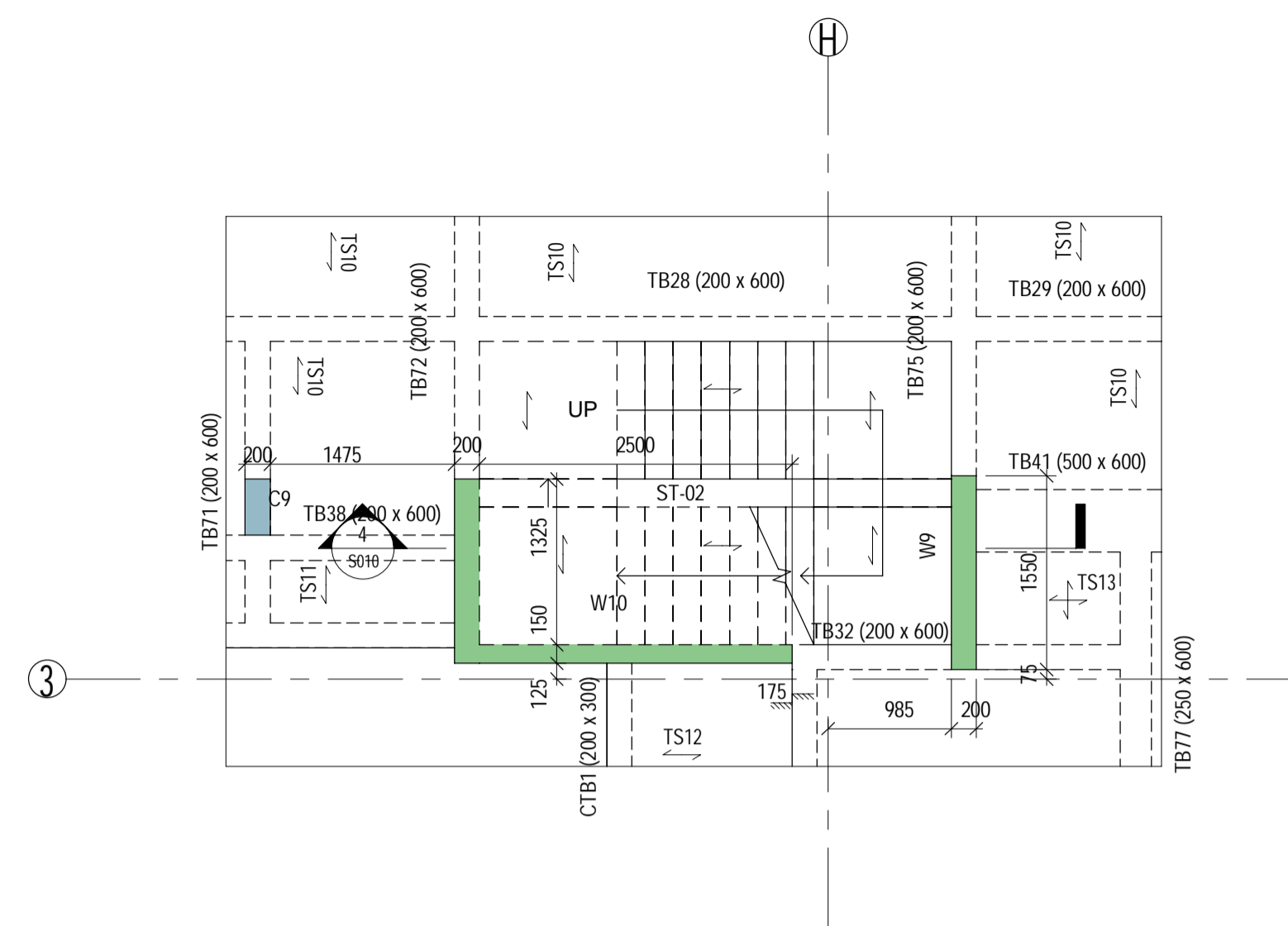
90mm (W) x 60mm (H) space
for AP/RSE/RGE's
signature/ and stamp chop

BD'S OFFICIAL USE

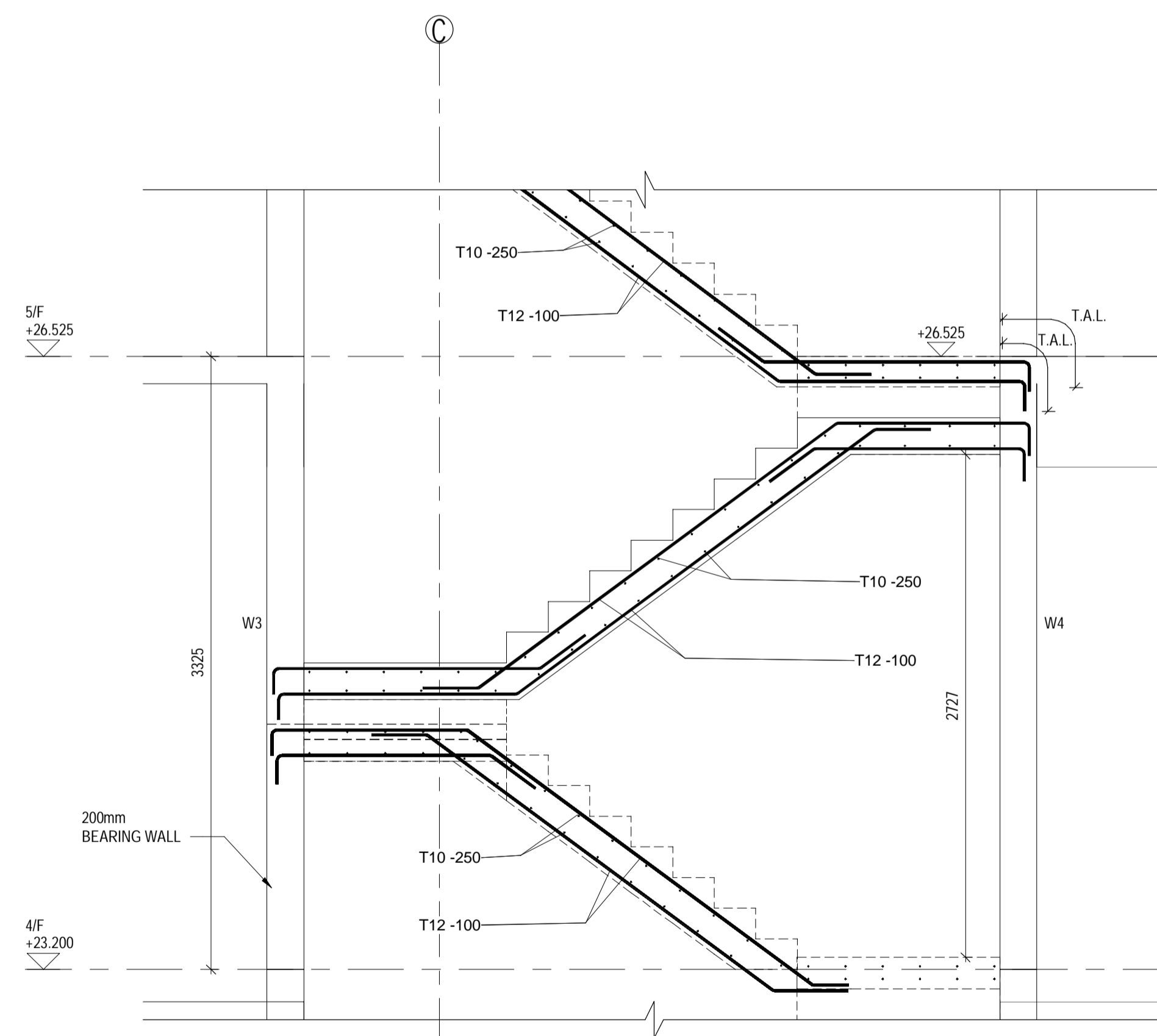
90mm (W) x 150mm (H) space
for BD's approval stamp /
certification of copies of
approved plans
(PNAP ADM-10 APP A)



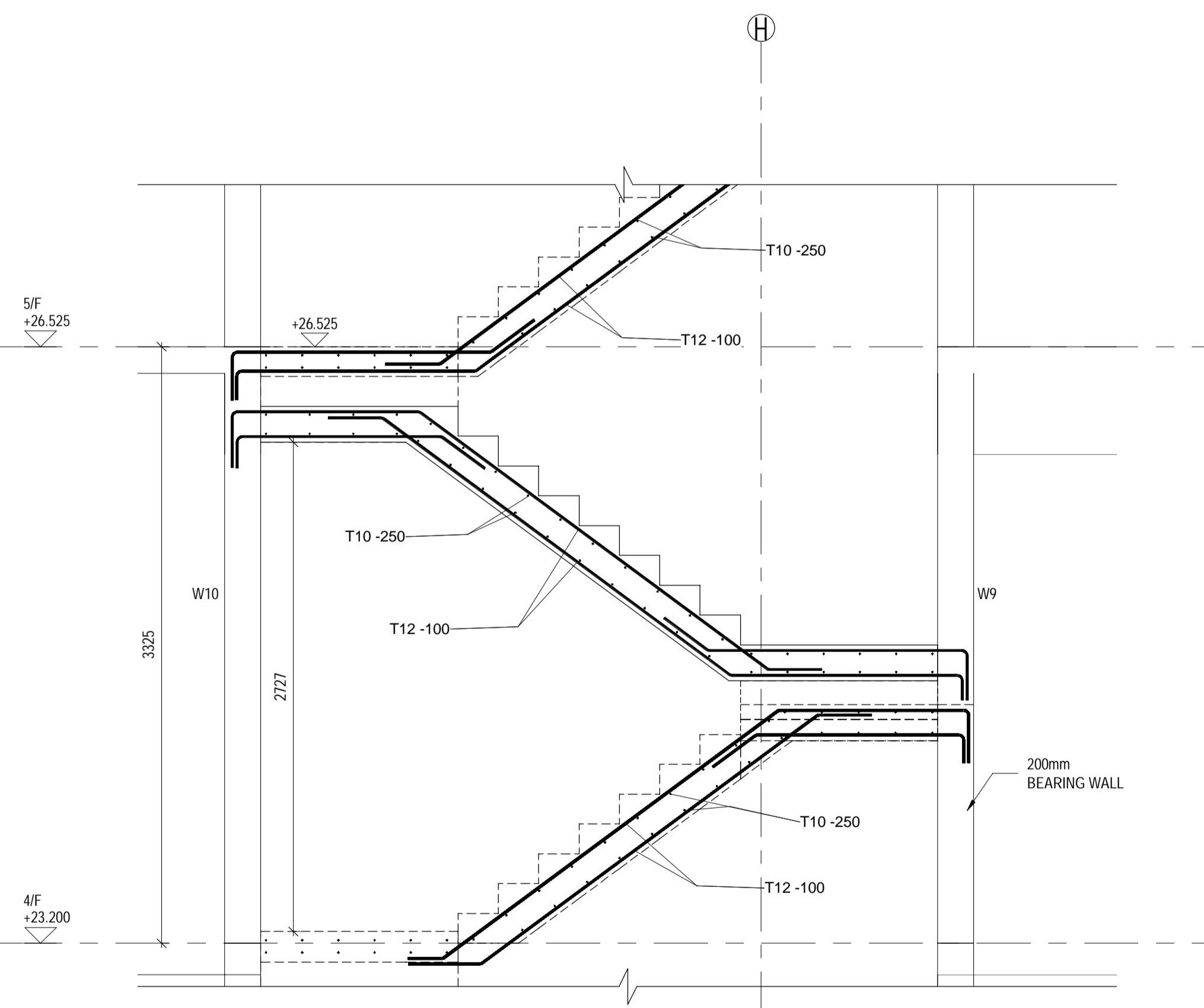
1 TYPICAL FLOOR PART PLAN OF STAIRCASE ST-01
1 : 50



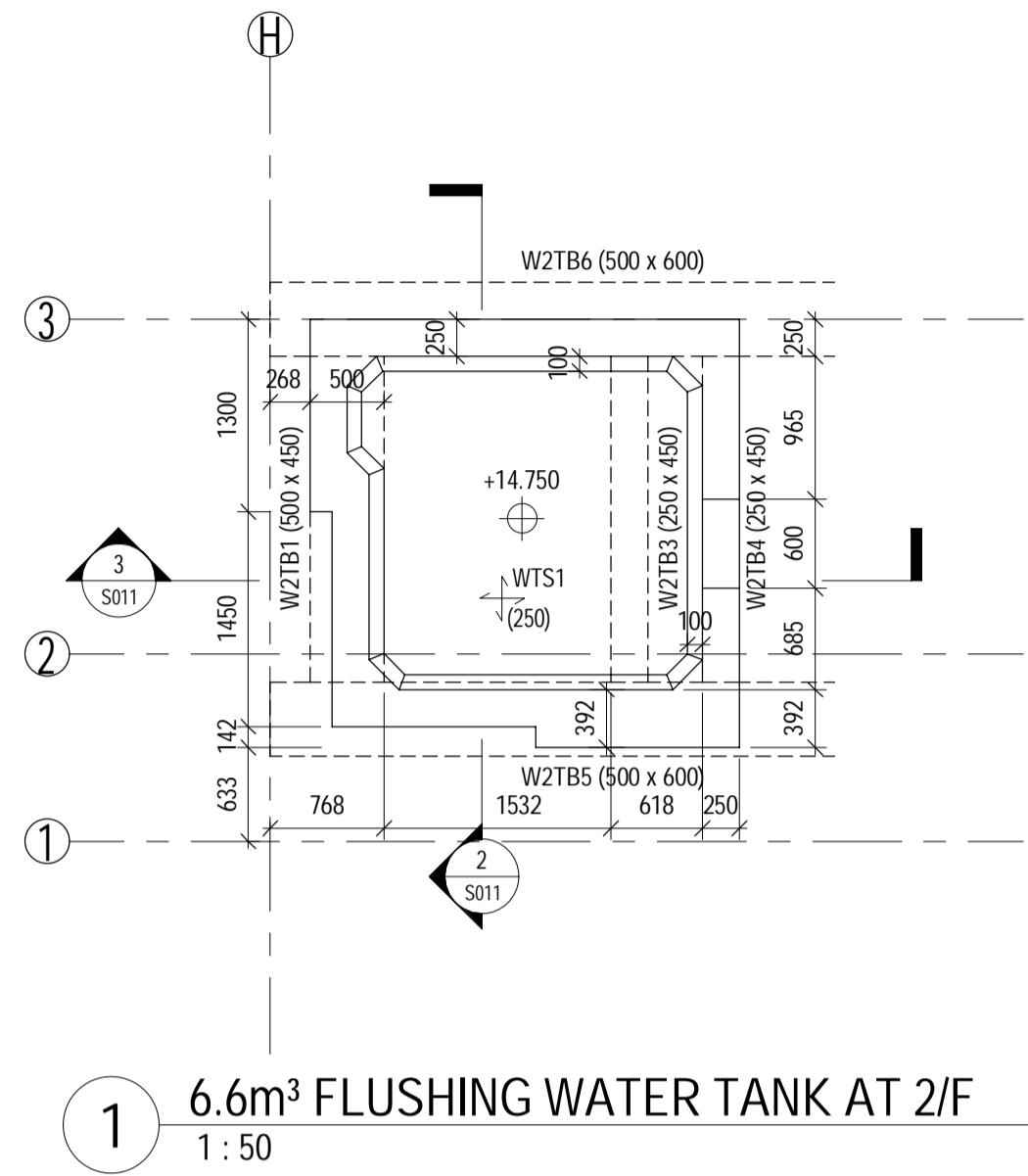
2 TYPICAL FLOOR PART PLAN OF STAIRCASE ST-02
1 : 50



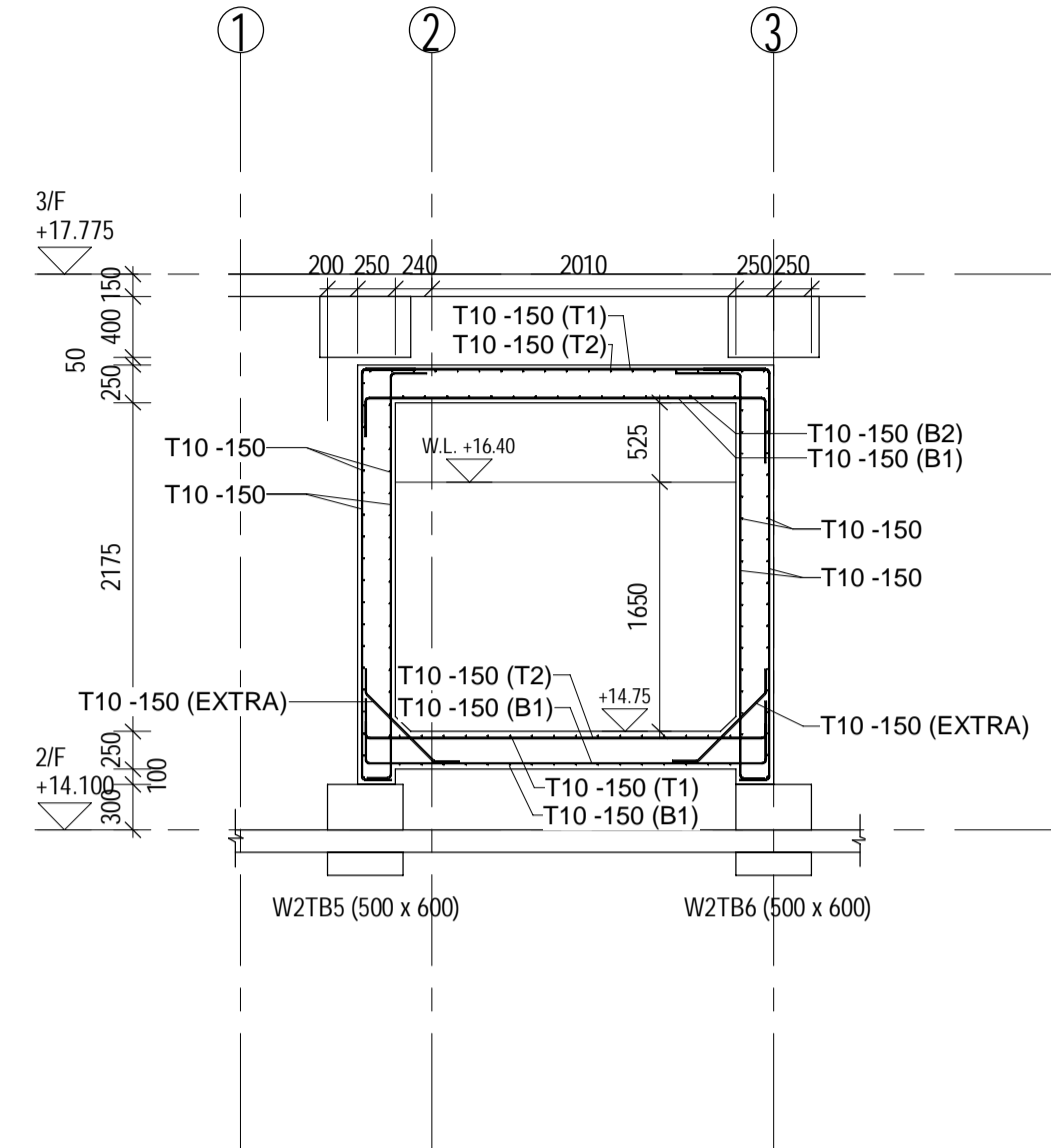
3 ST-01 (250)
1 : 25



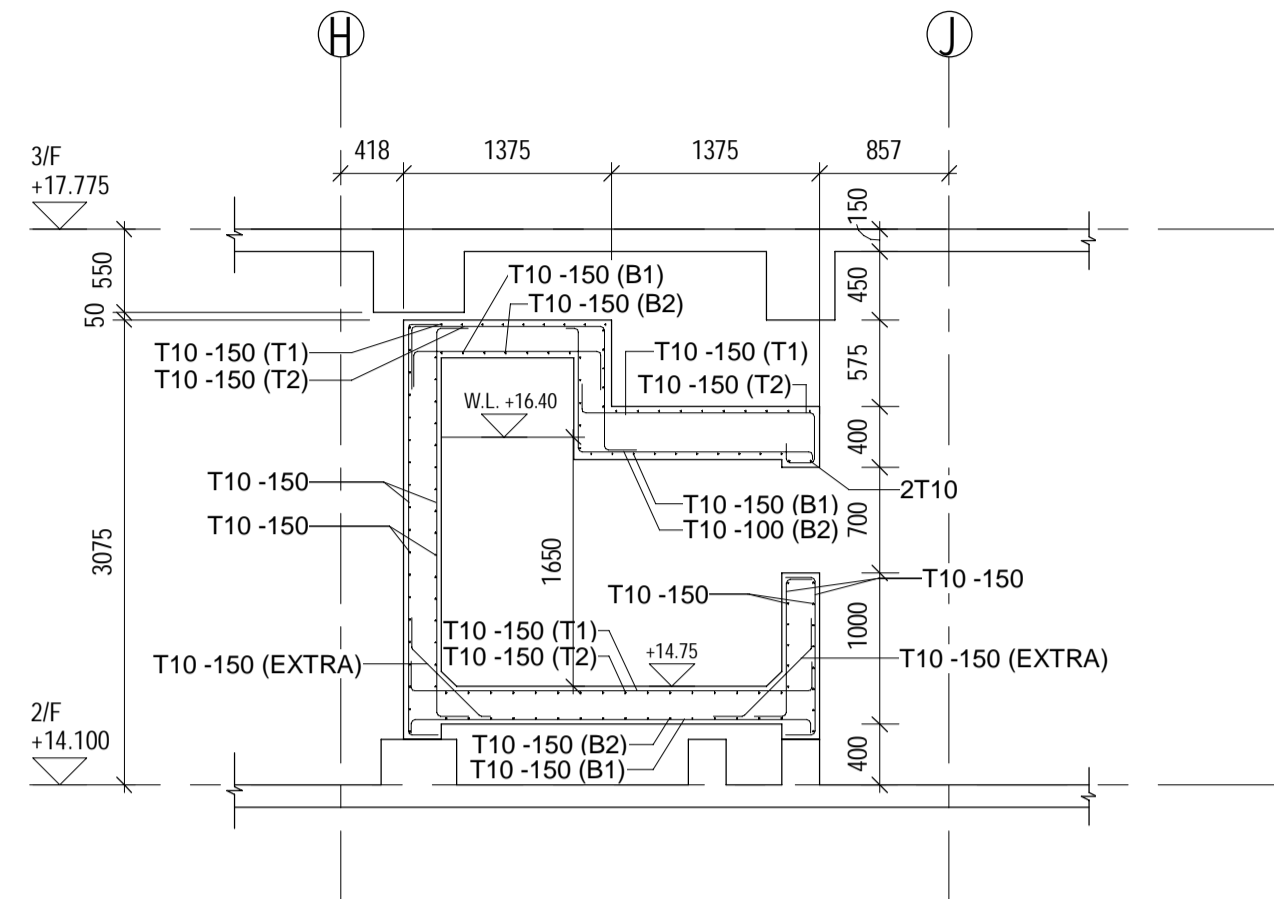
4 ST-02 (250)
1 : 25



1 6.6m³ FLUSHING WATER TANK AT 2/F
1:50



2 WATER TANK SECTION 1
1:50



3 WATER TANK SECTION 2
1:50

BD REF :
BIM REF :

REV	DATE	AMENDMENT
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PROJECT
CIC SAMPLE PROJECT

DRAWING TITLE
WATER TANK R.C. DETAIL

SCALE 1:50@A1

DRAWING NO. S011 REV. NO.

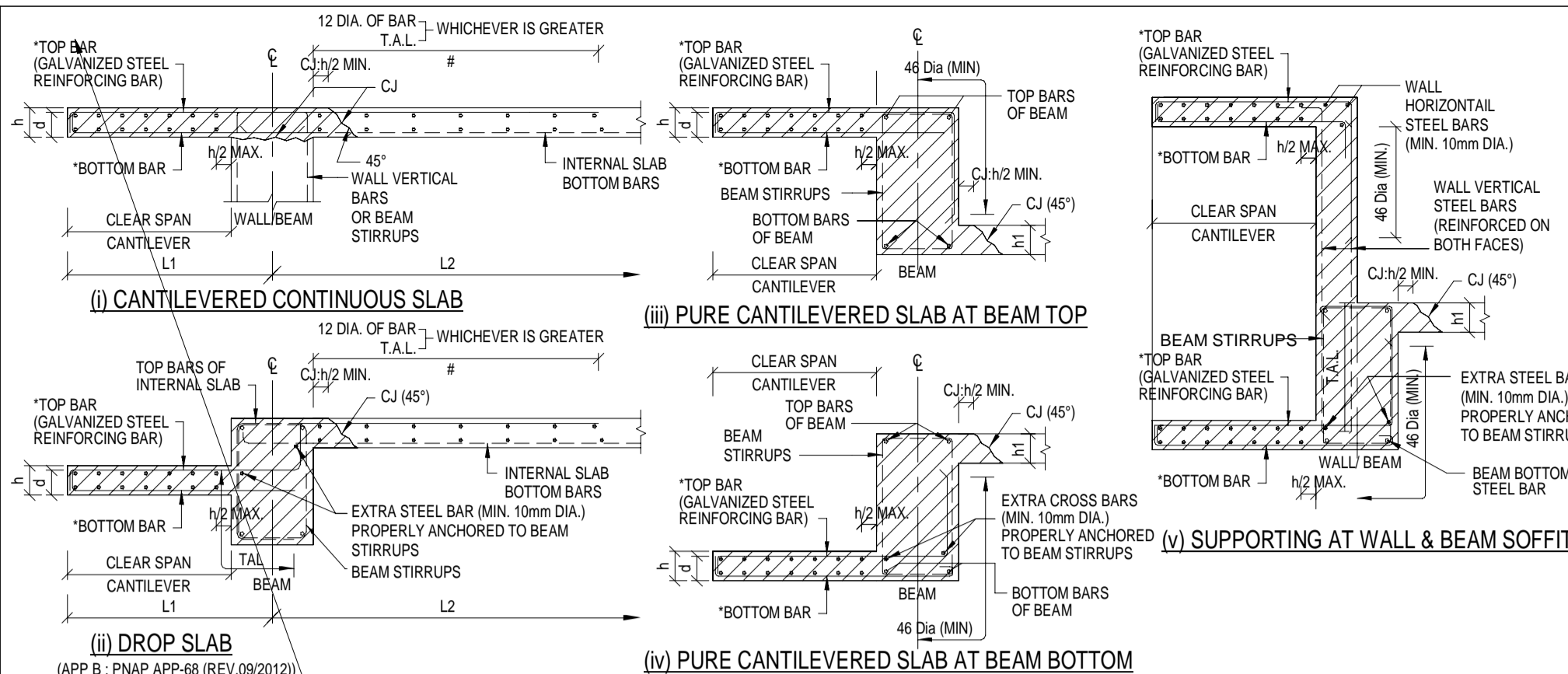
SOURCE ---

90mm (W) x 40mm (H) space
for COMPANY LOGO

90mm (W) x 60mm (H) space
for AP/RSE/RGE's
signature/ and stamp chop

BD'S OFFICAL USE

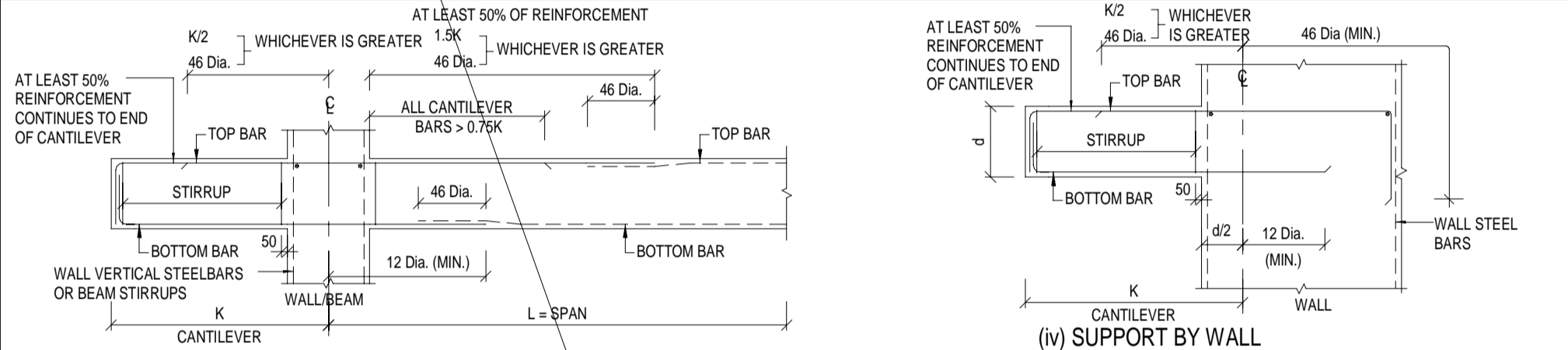
90mm (W) x 150mm (H) space
for BD's approval stamp /
certification of copies of
approved plans
(PNAP ADM-10 APP A)



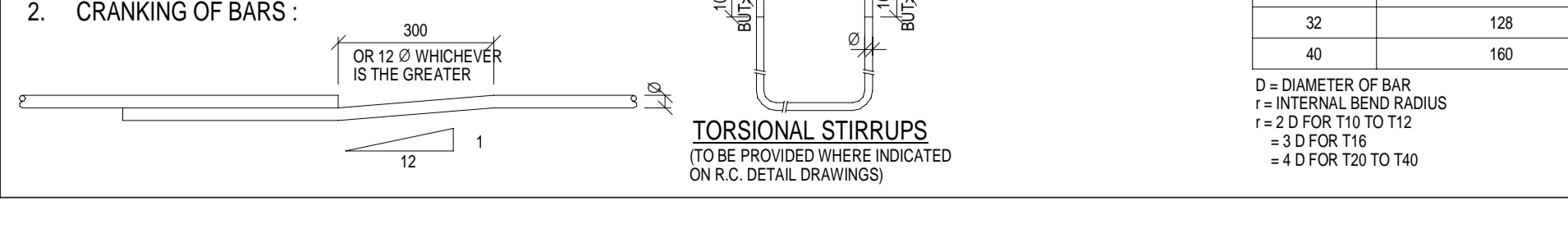
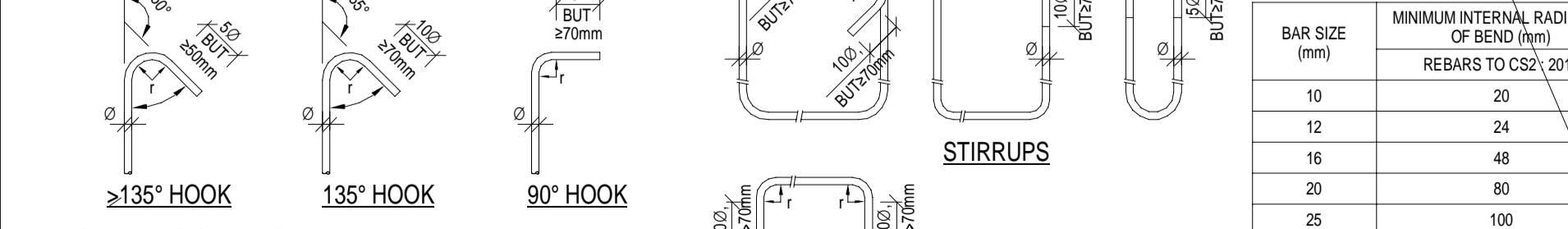
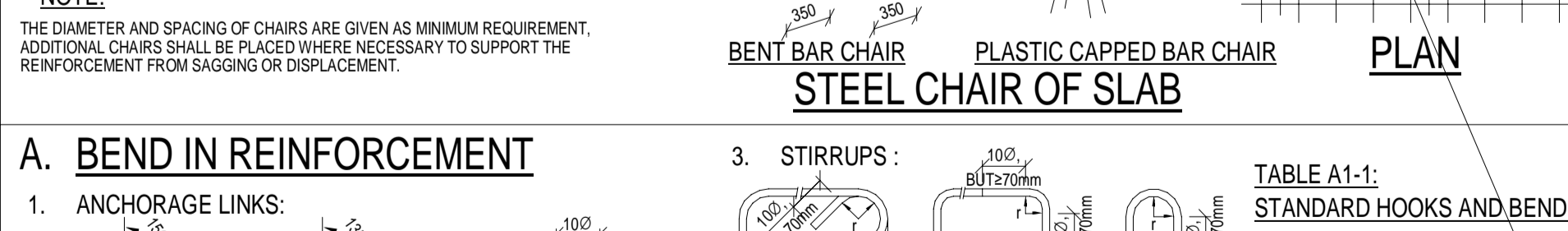
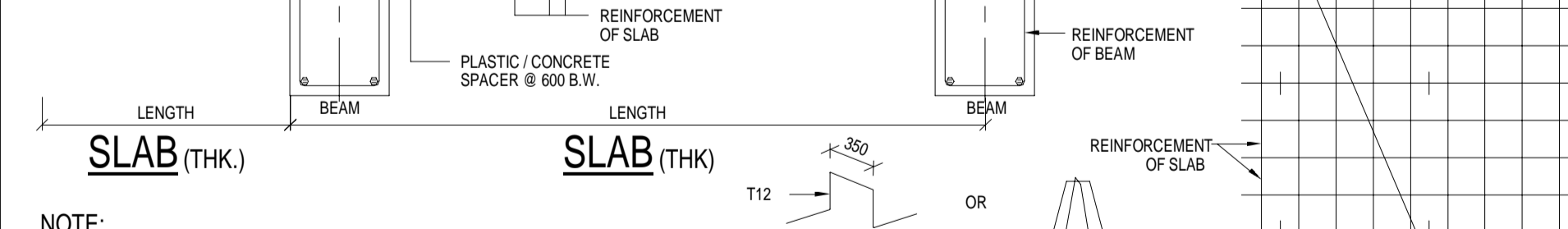
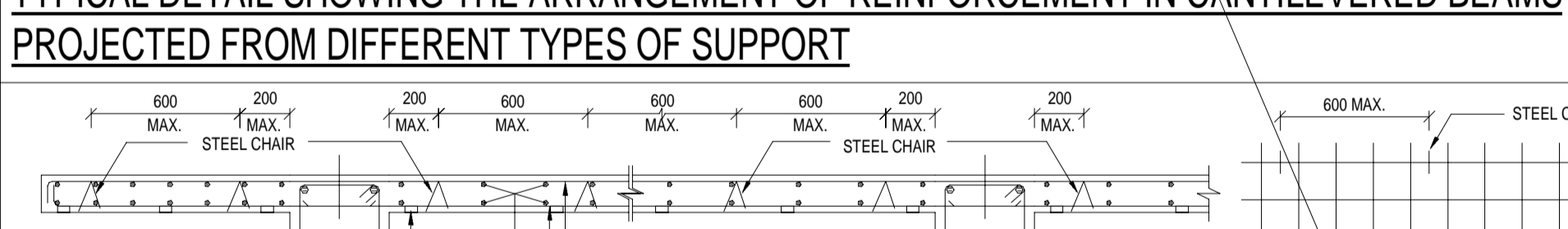
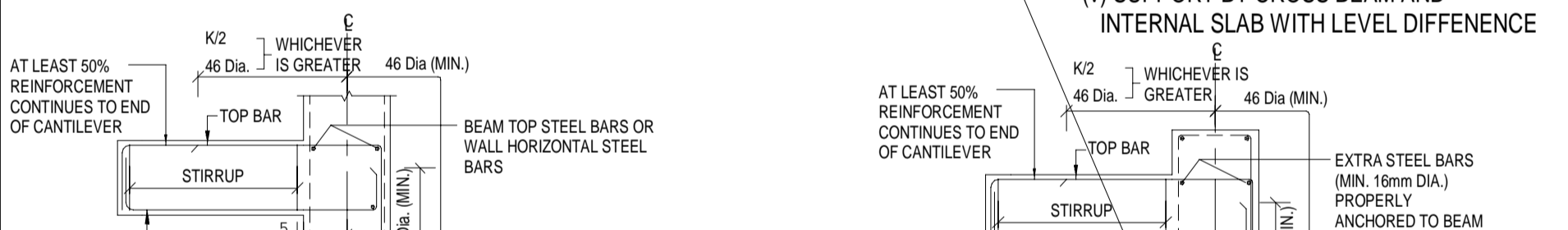
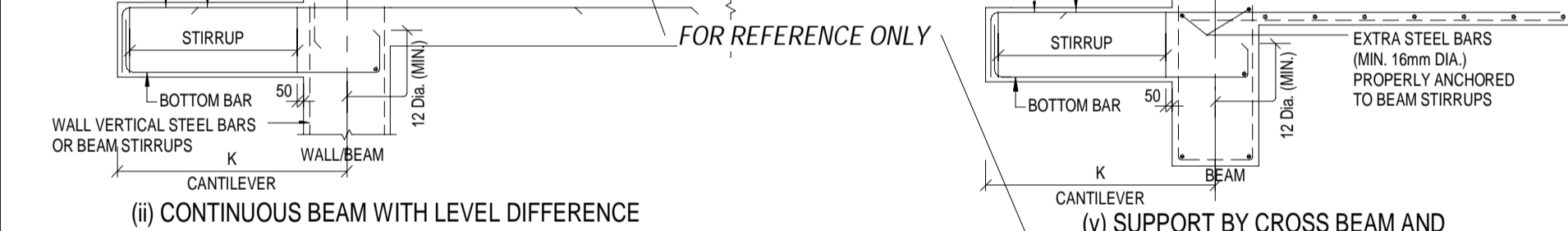
TYPICAL DETAIL SHOWING THE ARRANGEMENT OF REINFORCEMENT IN CANTILEVERED SLABS PROJECTED FROM DIFFERENT TYPES OF SUPPORT TO COMPLY WITH PNPAP APP-68

NOTES:

- * TOP BAR/BOTTOM BAR DENOTED T10-T50 TOP & BOTTOM (BOTH WAY) MIN. UNLESS OTHERWISE STATED.
- * OF REINFORCEMENT BARS OF NOT GREATER THAN 16mm FOR CANTILEVERED SLAB WITH DROP. (60% OF APPENDIX A-PNPAP APP-68 (REV.09/2012))
- # DENOTES THE GREATER OF:
 - BEYOND POINT OF CONTRAFLEXURE AT A DISTANCE OF X (X = THE GREATER OF 12 DIA. OF BAR OR d)
 - T.A.L.
 - LEGEND FOR EXTERNAL CANTILEVERED SLAB OF SPAN EXCEEDING 750mm EXPOSED TO WEATHERING)



TYPICAL DETAIL SHOWING THE ARRANGEMENT OF REINFORCEMENT IN CANTILEVERED BEAMS PROJECTED FROM DIFFERENT TYPES OF SUPPORT



NOTES: (CANTILEVER STRUCTURE)

- FOR GENERAL NOTES REFER TO DRG S001
- DESIGN & CONSTRUCTION OF CANTILEVER PROJECTING STRUCTURES (A/C HOOD & A/C PLATFORM) TO COMPLY WITH PNPAP APP-68.
- COVER TO REINFORCEMENT TO BE 40mm FOR CANTILEVERED PROJECTING STRUCTURES
- ALL MAIN REINFORCEMENT FOR CANTILEVERED SLAB OVER 750mm AND EXPOSED TO WEATHER SHOULD BE GALVANIZED REBAR TO BS EN 1461:2009 AND THICKNESS OF ZINC COATING SHALL BE MIN. 65%±18%.

GENERAL NOTES FOR R.C. CANTILEVER PROJECTING STRUCTURES

- CONSTRUCTION**
 - ALL CANTILEVERED PROJECTIONS SHOULD BE CAST MONOLITHICALLY WITH AND AT THE SAME TIME AS THE DIRECTLY SUPPORTING MEMBERS. CONSTRUCTION JOINTS MUST NOT BE LOCATED ALONG THE EXTERNAL EDGE OF THE SUPPORTING MEMBERS. IN CASE THIS IS UNAVOIDABLE, ANY ALTERNATIVE CONSTRUCTION METHOD MUST BE SUBMITTED FOR APPROVAL. SUCH METHOD SHOULD ENSURE THAT THE FINISHED PRODUCT WOULD BE ABLE TO ATTAIN A STRUCTURAL STRENGTH NO LESS THAN THAT PROVIDED BY MONOLITHIC CONSTRUCTION, AND THAT IT WOULD NOT INVITE INGRESS OF WATER THROUGH THE JOINT.
 - ADEQUATE BAR SPACERS SHOULD BE PROVIDED TO MAINTAIN THE POSITION AND ALIGNMENT OF THE STEEL REINFORCEMENT.
 - DURING CONCRETING, ADEQUATE COMPACTION SHOULD BE GIVEN TO ENSURE GOOD QUALITY CONCRETE. EVERY ENDEAVOUR SHOULD BE MADE TO AVOID STEEL REINFORCEMENT FROM BEING DISPLACED OR DEPRESSED.
 - ALL PROJECTIONS TO THE SOFFIT OF THE FORMWORK FOR THE CANTILEVERED PROJECTIONS SHOULD BE MAINTAINED FOR AT LEAST 14 DAYS AFTER CONCRETING.
- AP/RS SHALL PROVIDE ADEQUATE SUPERVISION AND INSPECTION ON THE CONSTRUCTION OF CANTILEVERED PROJECTING STRUCTURES TO ENSURE COMPLIANCE WITH THE APPROVAL PLANS.

- CONSTRUCTION REPORT**

FOR CANTILEVERED SLABS OF SPAN EXCEEDING 750mm, EXPOSED TO WEATHERING, AP/RS IN CONJUNCTION WITH THE REGISTERED CONTRACTOR, IS REQUIRED TO SUBMIT A CONSTRUCTION REPORT UPON COMPLETION OF THE WORKS, TO INCLUDE THE FOLLOWING:

 - AN AS-BUILT RECORD PLAN SHOWING:
 - THE LOCATION AND DIMENSIONS OF THE MEMBERS OF THE CANTILEVERED SLAB.
 - THE DIRECTION AND GRADIENT OF THE FALL.
 - THE LOCATION OF THE DRAINAGE OUTLETS/ DOWN PIPES.
 - THE THICKNESS OF SCREEDING AND FINISHES.
 - THE LOCATION AND DETAILS OF ALL CONSTRUCTION JOINTS.
 - THE DETAILS OF THE WATER-PROOF MEMBRANE/TANKING, WHERE APPLICABLE.
 - THE GRADE OF CONCRETE AND STEEL REINFORCEMENT.
 - THE DIAMETER AND SPACING OF STEEL REINFORCEMENT IN THE CANTILEVERED SLAB.
 - THE DATE ON WHICH THE CONCRETE WAS CAST.
 - THE CONCRETE COVER OF THE STEEL REINFORCEMENT AT CRITICAL POSITIONS OF CANTILEVERED SLABS, AS MEASURED BY COVERMETER.
 - RECORD PHOTOGRAPHS OF CANTILEVERED SLABS AND SUPPORTING MEMBERS SHOWING:
 - THE CONDITION AND ARRANGEMENT OF THE IN-POSITION STEEL REINFORCEMENT PRIOR TO CONCRETING.
 - THE CONDITION AFTER CONCRETING BUT BEFORE LAYING OF THE FINISHES AND WATER-PROOFING MATERIALS.
 - A FORM BA14 CONFIRMING THE WORKS HAVE BEEN CARRIED OUT IN ACCORDANCE WITH THE APPROVED PLANS AND ARE STRUCTURALLY SAFE.

- GENERAL NOTES OF FIXING OF REINFORCEMENT FOR CONCRETE WORKS**
- BAR REINFORCEMENT AND FABRIC REINFORCEMENT FROM EACH BATCH SHOULD NOT BE FIXED UNTIL TESTING OF THE BATCH HAS BEEN COMPLETED.
 - LOOSE RUST, EXCESSIVE FLAKY RUST OR MILL-SCALE ON REINFORCEMENT MUST BE REMOVED BY WIRE-BRUSHING, AND BADLY CORRODED, DAMAGED OR SCALING STEEL SHOULD NOT BE USED.
 - THE REINFORCEMENT SHOULD BE FIXED AT CORRECT LOCATION WITH MINIMUM COVER AS SHOWN ON APPROVED PLANS. SPACERS AND CHAIRS SHOULD BE PLACED AT MAXIMUM SPACING OF 0.6m, WHILE FOR 20mm Ø OR SMALLER BARS, THE SPACING SHOULD BE SUITABLY REDUCED TO AVOID SAGGING.
 - INTERSECTING AND LAPPING BARS SHOULD BE SUFFICIENTLY TIED TO PREVENT MOVEMENT OF THE REINFORCEMENT AND THE ENDS OF TYING WIRE, TYING DEVICES AND CLIPS SHOULD NOT ENCRUSCH INTO THE CONCRETE COVER.
 - ACCESS SHOULD BE OBTAINED BY USING PLANKS AND LADDERS OR OTHER METHODS WHICH ARE INDEPENDENTLY SUPPORTED AND WELL CLEAR OF THE COMPLETED REINFORCEMENT.
 - PREFABRICATED REINFORCEMENT CAGES SHOULD BE ADEQUATELY SUPPORTED AND BRACED BEFORE LIFTING.
 - THE REGISTERED CONTRACTOR SHOULD PROVIDE CONTINUOUS SUPERVISION TO ENSURE THE FIXING OF REINFORCEMENT IS CARRIED OUT IN ACCORDANCE WITH THE APPROVED PLANS AND IN COMPLIANCE WITH PNPAP ADV-T5. AP/RS SHOULD PROVIDE ADEQUATELY QUALITY SUPERVISION.
 - REGISTERED CONTRACTOR SHOULD INFORM THE AP/RS TO INSPECT ALL REINFORCEMENT AFTER FIXING AND IN TIME MINIMUM 6 HOURS ADVANCE OF CONCRETING, FOR WALLS, COLUMNS ETC., THE INSPECTION SHOULD BE ARRANGED BEFORE THE ERECTION OF FORMWORK.
 - THE CONTRACTOR SHOULD ENSURE THAT THE INSPECTED REINFORCEMENT BE MAINTAINED IN THE APPROVED CONDITIONS UNTIL CONCRETING HAS BEEN COMPLETED.
 - TENSION LAP LENGTH AND ANCHORAGE LENGTH:
 - LAP LENGTHS FOR UNEQUAL SIZE BARS MAY BE BASED UPON THE SMALLER BAR. THE FOLLOWING PROVISIONS APPLY:
 - WHERE A LAP OCCURS AT THE TOP OF A SECTION AS CAST AND THE MINIMUM COVER IS LESS THAN TWICE THE SIZE OF THE LAPPED REINFORCEMENT, THE LAP LENGTH SHOULD BE INCREASED BY A FACTOR OF 1.4.
 - WHERE A LAP OCCURS AT THE CORNER OF A SECTION AND THE MINIMUM COVER TO EITHER FACE IS LESS THAN TWICE THE SIZE OF THE LAPPED REINFORCEMENT OR, WHERE THE CLEAR DISTANCE BETWEEN ADJACENT LAPS (DIMENSION 's' IN ADJACENT LAPS) IS LESS THAN 75mm OR SIX TIMES THE SIZE OF THE LAPPED REINFORCEMENT, WHICHEVER IS THE GREATER, THE LAP LENGTH SHOULD BE INCREASED BY A FACTOR OF 1.4.
 - IN CASE WHERE BOTH CONDITIONS (a) & (b) APPLY, THE LAP LENGTH SHOULD BE INCREASED BY A FACTOR OF 2.0.

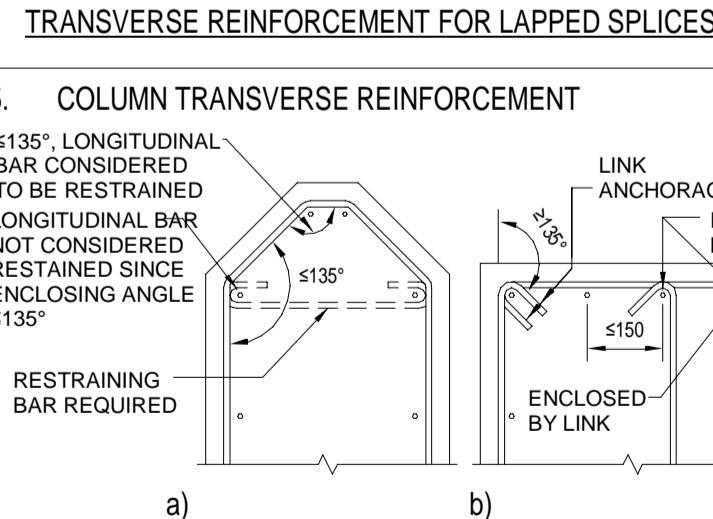
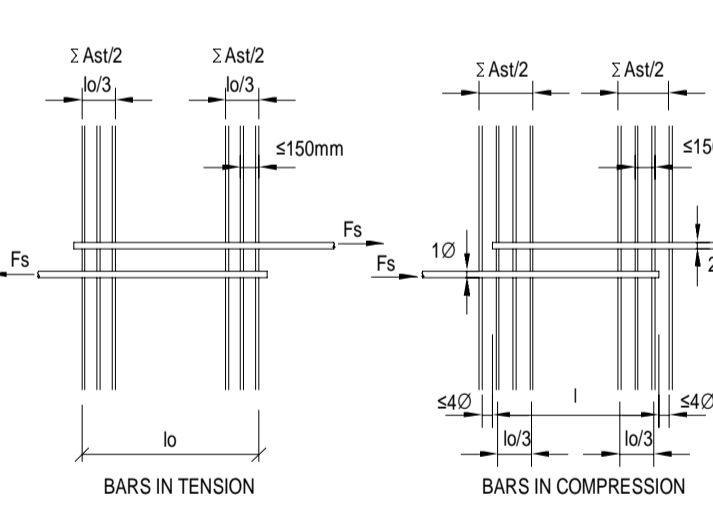
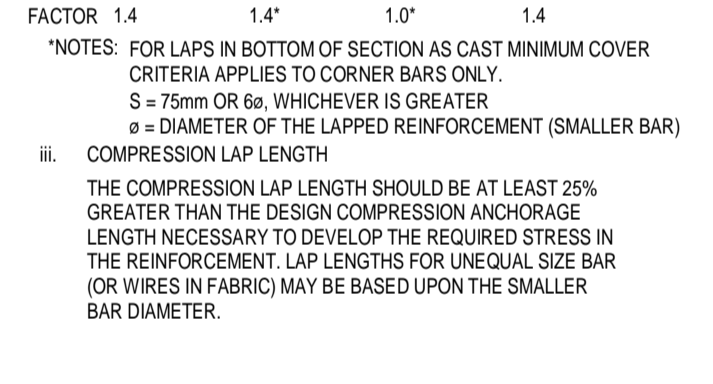
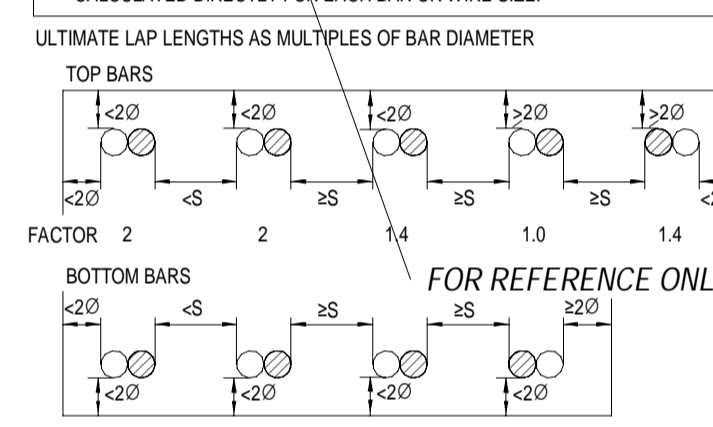
TENSION ANCHORAGE AND LAP LENGTH

CONCRETE GRADE	TYPE OF ANCHORAGE LENGTH	REINFORCEMENT TYPES	
		250 N/mm ²	500 N/mm ²
30	TENSION	36	40
	COMPRESSION	29	32
-35-	TENSION	33	38
	COMPRESSION	27	30
-40-	TENSION	31	36
	COMPRESSION	25	28
45	TENSION	29	33
	COMPRESSION	24	26
-50-	TENSION	28	31
	COMPRESSION	22	25
>60	TENSION	26	28
	COMPRESSION	20	23

ULTIMATE ANCHORAGE BOND LENGTHS (i) AS MULTIPLES OF BAR DIAMETER

CONCRETE GRADE	TYPE OF ANCHORAGE LENGTH	REINFORCEMENT TYPES	
		250 N/mm ²	500 N/mm ²
30	TENSION AND COMPRESSION LAP LENGTH - l ₀	36	40
	1.4 x TENSION LAP	50	56
-35-	TENSION AND COMPRESSION LAP LENGTH - l ₀	33	38
	1.4 x TENSION LAP	46	52
-40-	TENSION AND COMPRESSION LAP LENGTH - l ₀	31	36
	1.4 x TENSION LAP	43	49
45	TENSION AND COMPRESSION LAP LENGTH - l ₀	29	33
	1.4 x TENSION LAP	41	47
-50-	TENSION AND COMPRESSION LAP LENGTH - l ₀	28	31
	1.4 x TENSION LAP	39	44
>60	TENSION AND COMPRESSION LAP LENGTH - l ₀	26	28
	1.4 x TENSION LAP	36	40

ULTIMATE LAP LENGTHS AS MULTIPLES OF BAR DIAMETER



GENERAL NOTES:

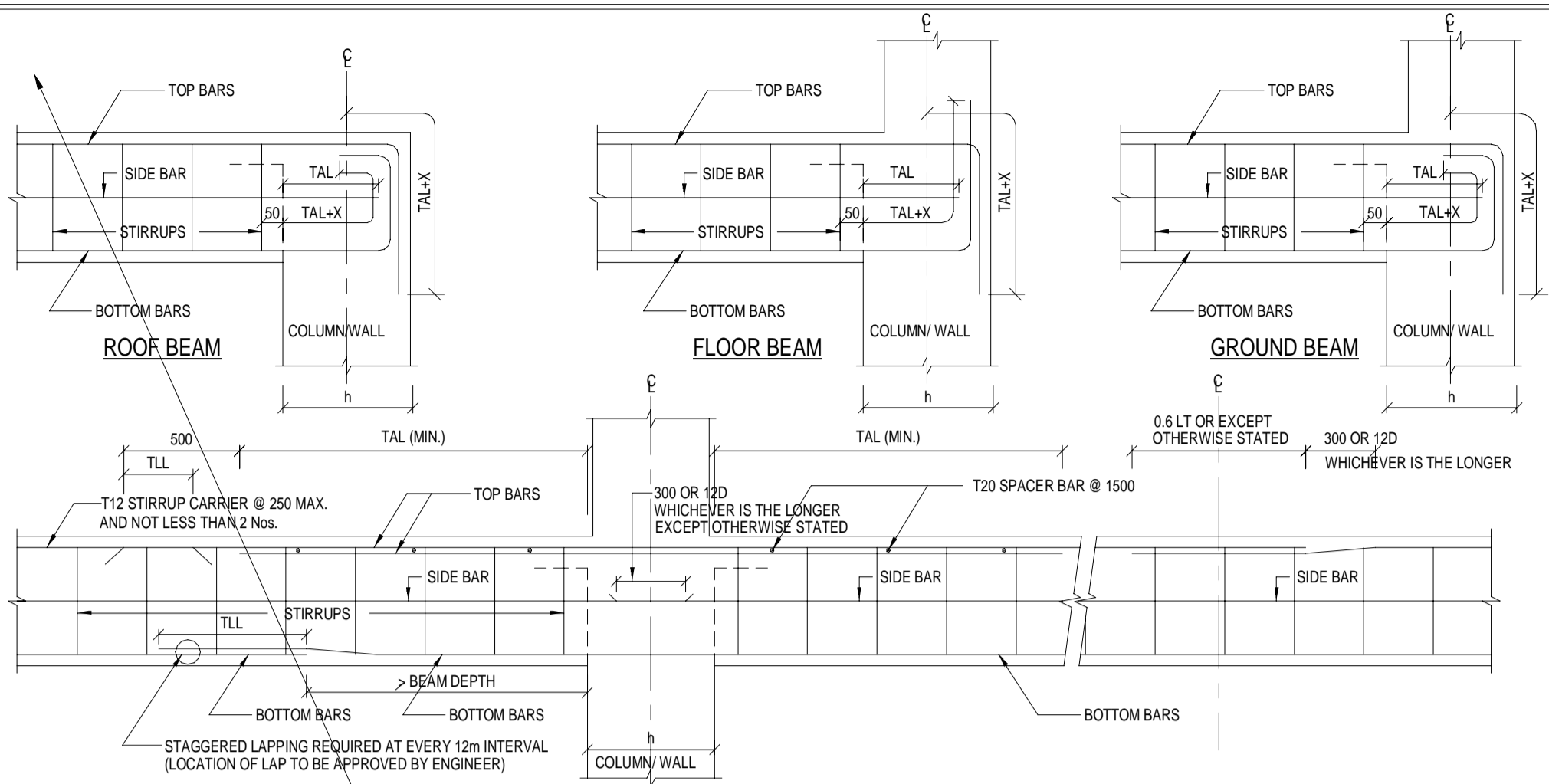
- DESIGN AND CONSTRUCTION OF STRUCTURE IN ACCORDANCE WITH:
 - HONG KONG BUILDING (CONSTRUCTION) REGULATION.
 - CODE OF PRACTICE FOR STRUCTURAL USE OF CONCRETE 2013.
 - DESIGN OF CONCRETE STRUCTURES FOR RETAINING AQUEOUS LIQUID BS 8007:1987
 - CODE OF PRACTICE FOR FIRE SAFETY IN BUILDINGS 2011.
 - CODE OF PRACTICE ON WIND EFFECTS HONG KONG 2004.
 - CONSTRUCTION TOLERANCE SHALL COMPLY WITH CLAUSE 10.2 OF CODE OF PRACTICE FOR STRUCTURAL USE OF CONCRETE 2013.
 - CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2011.
 - CODE OF PRACTICE FOR DEAD AND IMPOSED LOAD 2011.
- ALL CONCRETE FOR FLE WALL SHALL BE DESIGNED MIX GRADE 30D/20. ALL CONCRETE SHALL COMPLY WITH CS1:2010. (EXCEPT CL 7.1) WITH CONCRETE CUBE SIZE 150mm x 150mm x 150mm.

DESIGNATION (DESIGNED MIX CONC.)	ELEMENT OF CONSTRUCTION
GRADE 60D/20	ALL BEAMS, COLUMNS, SHEAR WALLS UNDER GF. & TRANSFER BEAMS
GRADE 60D/20 WATERPROOF	BASEMENT COLUMNS
GRADE 45D/20 WATERPROOF	WATER TANKS, FUEL TANKS, SEWAGE TANKS BASEMENT STRUCTURE EXCEPT COLUMN
GRADE 45D/20	ALL SLABS, STAIRCASES, BEAMS, SHEAR WALLS OVER GF, HANGER WALL, BEARING WALL, GRAVITY TOE WALL, PLINTH ON-GRADE SLAB, PARTITION WALL & NON-STRUCTURAL ELEMENT ETC.
GRADE 30D/20	ON-GRADE SLAB
GRADE 60D/20 WATERPROOF 1	BASEMENT COLUMNS

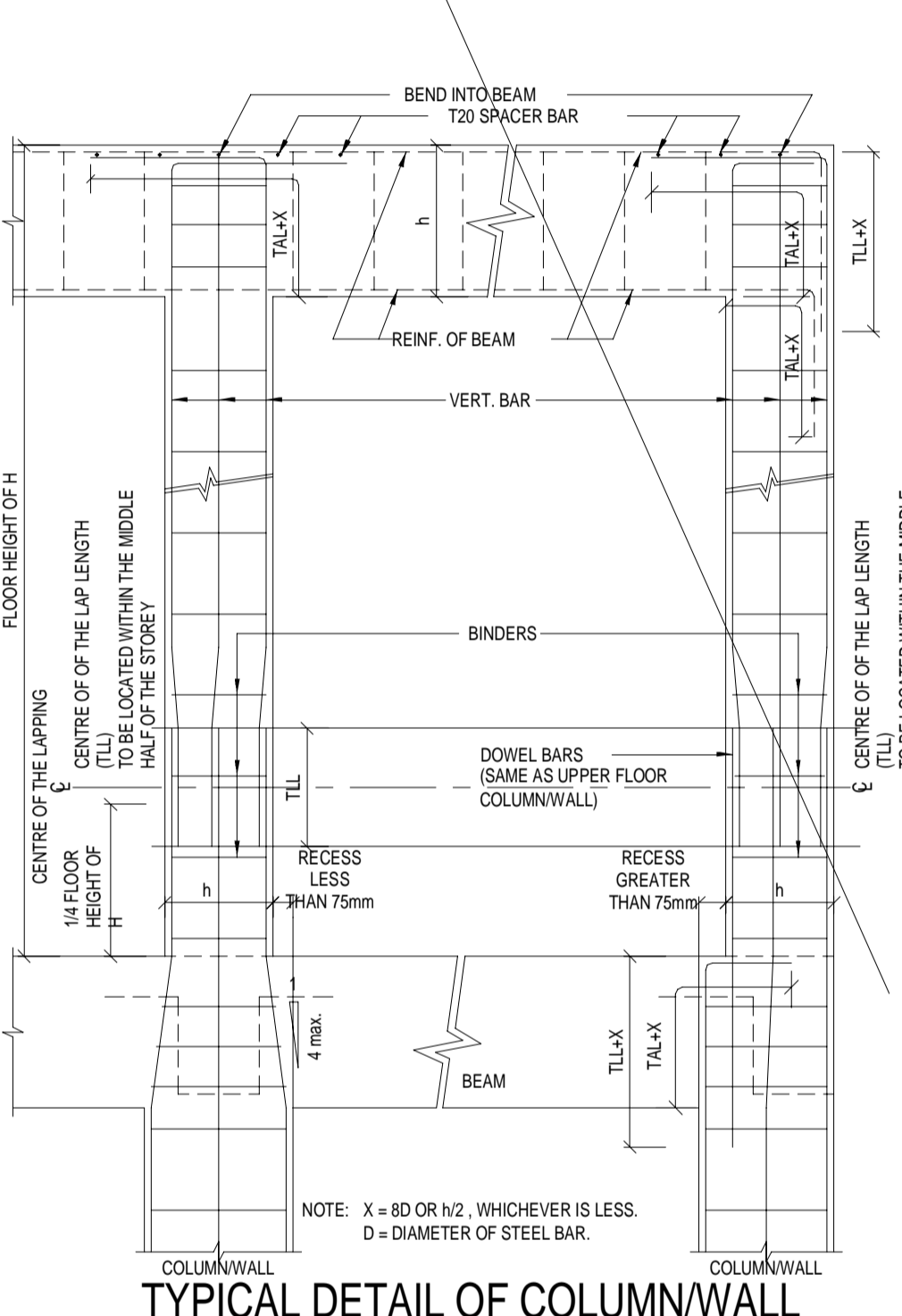
 - THE REACTIVE ALKALI OF CONCRETE EXPRESSED AS THE EQUIVALENT SODIUM OXIDE PER CUBIC METRE OF CONCRETE SHOULD NOT EXCEED 3.0 kg WHEN DETERMINED IN ACCORDANCE WITH THE SPECIFICATION ITEMS GIVEN IN APPENDIX A OF PRACTICE NOTE FOR AP/RS APP-74.
 - IF FFA IS TO BE USED, THE REQUIREMENT SPECIFIED IN PRACTICE NOTE FOR AP/RS APP-33 SHALL BE FULFILLED.
- REINFORCEMENT
 - HIGH TENSILE BAR 500B CONFORM WITH CS2: 2012 (DENOTE BY 'T') CHARACTERISTIC STRENGTH f_y = 500 N/mm²
 - ALL REINFORCEMENT SHALL BE CUT OR BENT TO COMPLY WITH BS 8666: 2005.
- MINIMUM COVER TO ALL REINFORCEMENT TO BE PROVIDED AS FOLLOW OR EQUAL TO DIAMETER OF BAR, WHICHEVER IS THE GREATER
- CEMENT CONCRETE BLINDING OF 10P/20 MIX PROVIDE FOR ALL BEAMS ON GROUND, SEE TYPICAL DETAIL REFER TO T0002 DETAIL OF BEAMS (75mm THICK)
- ALL LEVELS SHOWN ARE IN METRES (m P.D.) AND OTHER DIMENSIONS DRAWN ARE IN MILLIMETRES.
- ALL SETTING OUT DIMENSIONS SHOULD BE REFERRED TO ARCHITECTURAL DRAWING, UNLESS OTHERWISE STATED.
- ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, PLUMBING, ELECTRICAL AND MECHANICAL DRAWINGS. ALL CHASES, CHAMFERS, POCKETS, FIXING TO BE BUILT IN FOR OTHER TRADES, ETC. SHALL BE PROVIDED IN THE LOCATION AND THE SIZES SHOWN ON THE DRAWING OR AS REQUIRED.
- THE CONTRACTOR SHALL CHECK DRAWINGS OF ALL TRADES AND VERIFY ALL LEVELS AND DIMENSIONS IN ADVANCE OF THE WORK AND REPORT ANY DISCREPANCIES TO THE ENGINEER AT LEAST 21 DAYS PRIOR TO CONCRETING.
- THE CONTRACTOR SHALL MARK ALL STRUCTURAL OPENINGS FOR COMBINED BUILDING SERVICES ON STRUCTURAL FRAMING PLANS FOR ENGINEER'S APPROVAL AT LEAST 21 DAYS PRIOR TO CONCRETING OF STRUCTURE WHERE STRUCTURAL OPENING IS REQUIRED.
- ALL WATER TANK SHOULD PROVIDED OVERFLOW DEVICE TO PREVENT OVERFLOW.
- LEGEND:

HB HORIZONTAL BAR	D BAR DIAMETER	T THICKNESS OF WALL
RV VERTICAL BAR	RA RADIUS OF BEND	TPY TYPICAL
EF EACH FACE	R MILD STEEL	MIN MINIMUM
BF BOTH FACE	T HIGH TENSILE STEEL	MAX MAXIMUM
TL TENSION LAP LENGTH	H DEPTH OF BEAM	APP APPROXIMATE
TAL TENSION ANCHORAGE LENGTH	TAL THICKNESS OF SLAB	STR STRUCTURE
l ₀ LAP LENGTH	V CANTILEVER STRUCTURAL ELEMENT	

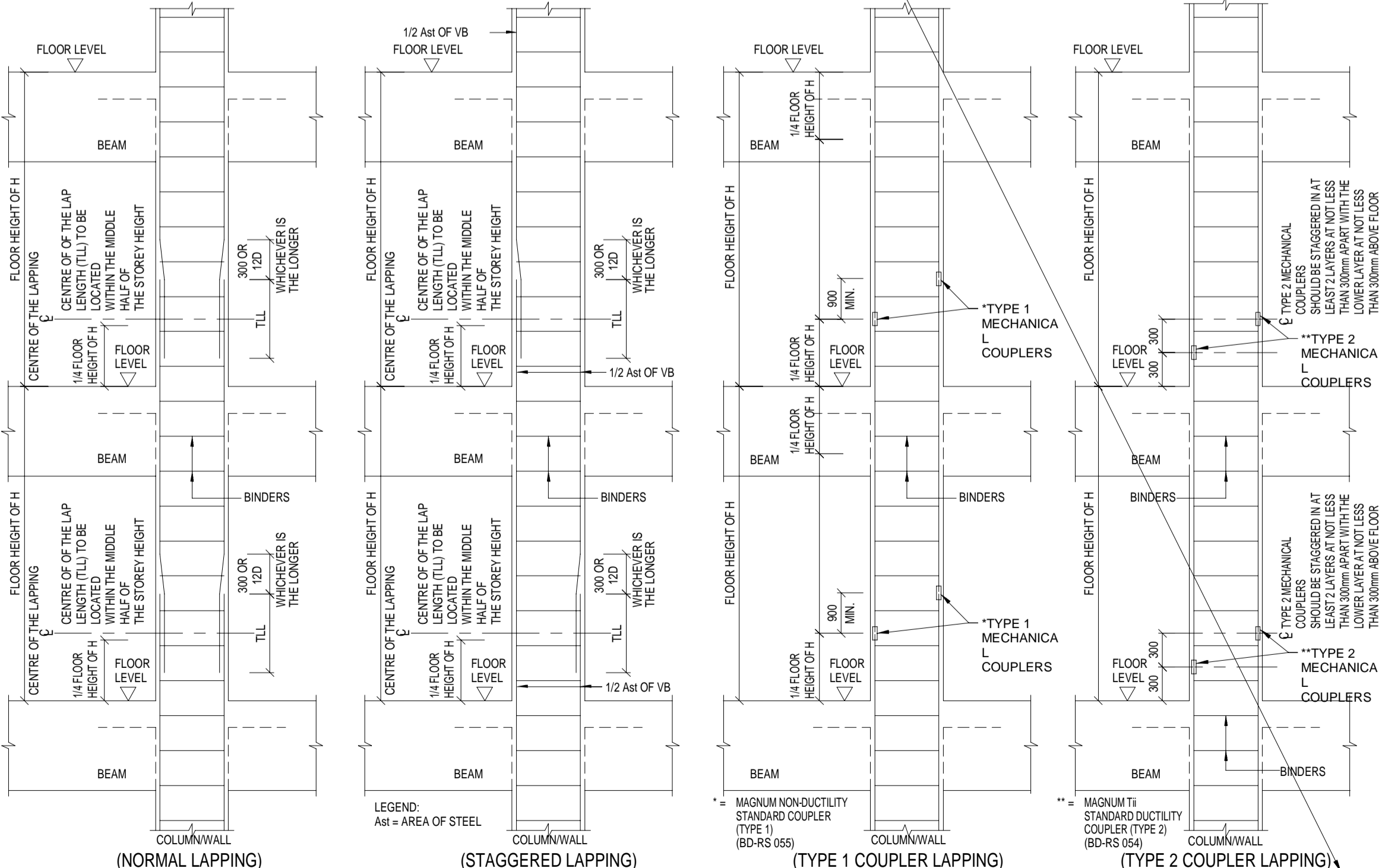
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BIM REF :		
REV	DATE	AMENDMENT
PROJECT CIC SAMPLE PROJECT		
DRAWING TITLE Typical Detail 1		
SCALE		
DRAWING NO. S012		REV. NO.
SOURCE ---		
90mm (W) x 40mm (H) space for COMPANY LOGO		
90mm (W) x 60mm (H) space for AP/RS/RGE's signature/ and stamp chop		
BD'S OFFICAL USE		



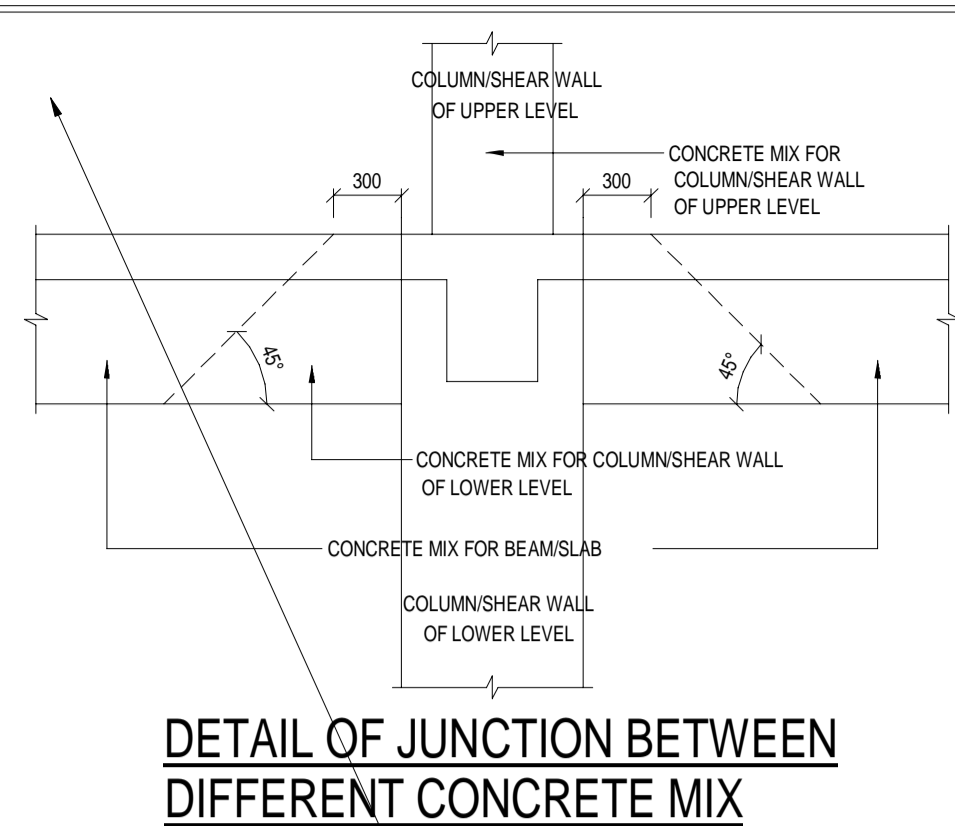
TYPICAL DETAIL OF BEAMS



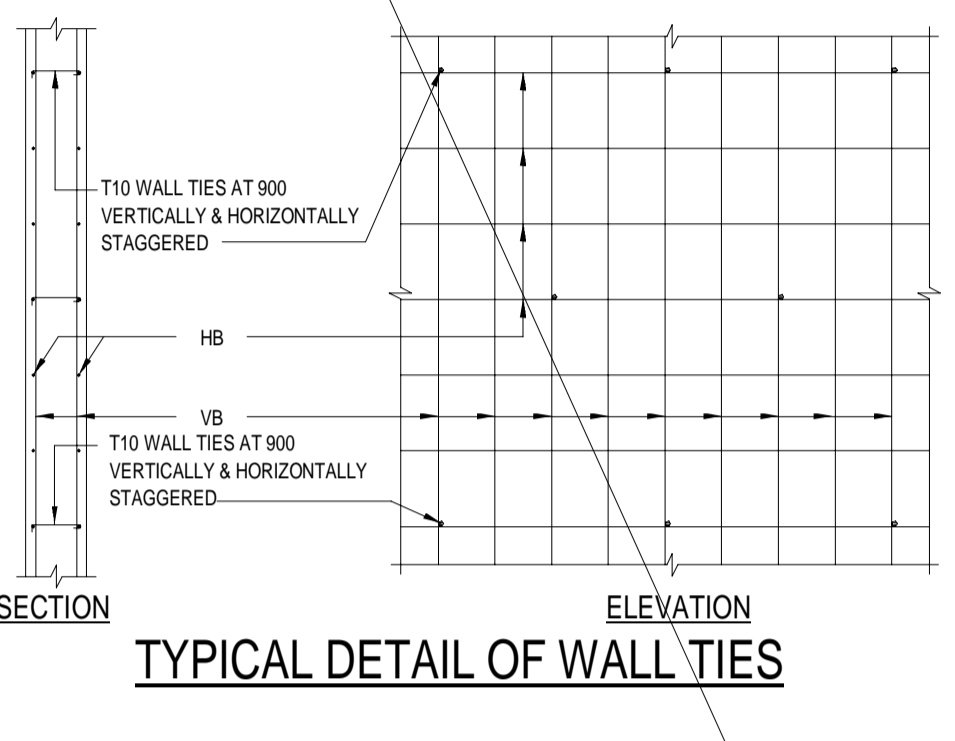
TYPICAL DETAIL OF COLUMN/WALL



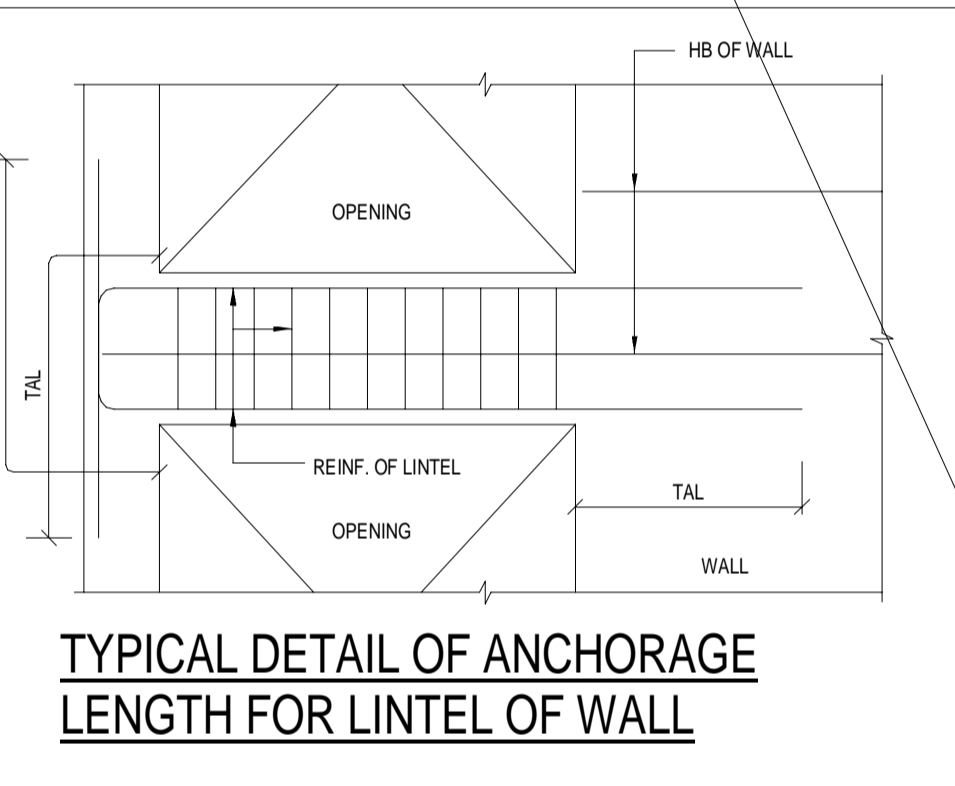
TYPICAL DETAIL OF COLUMN/WALL LAPPING



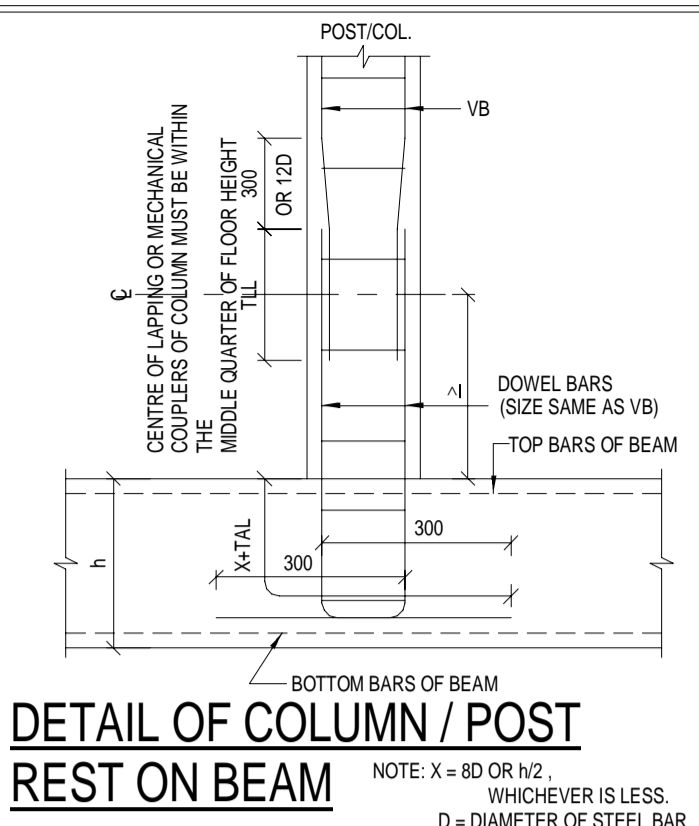
DETAIL OF JUNCTION BETWEEN DIFFERENT CONCRETE MIX



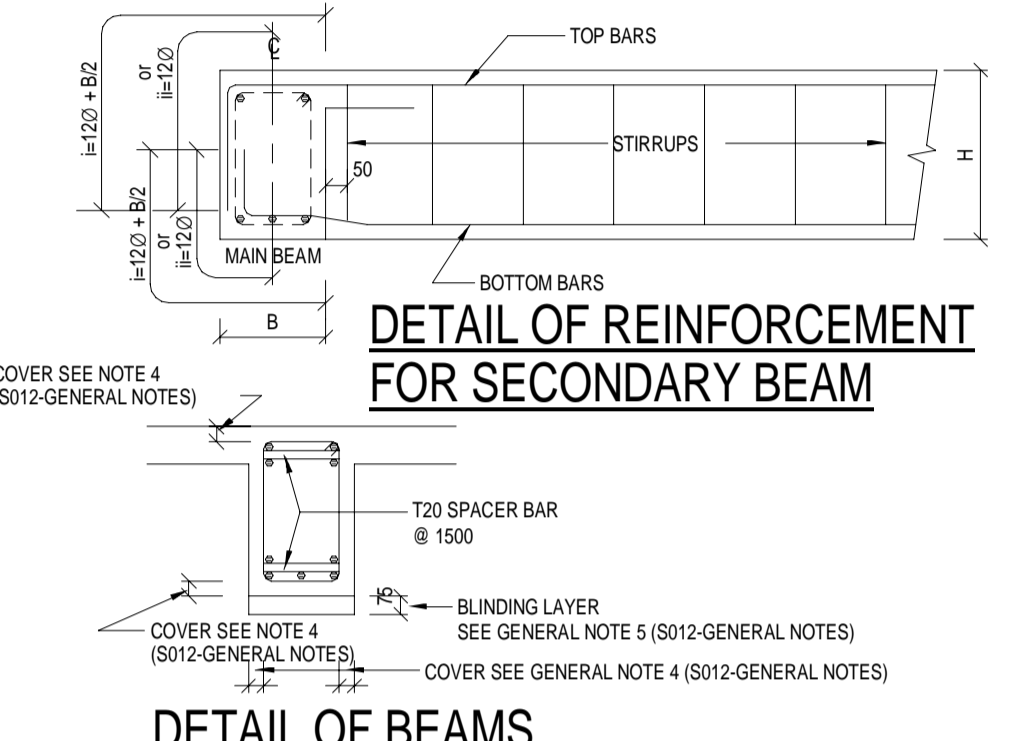
TYPICAL DETAIL OF WALL TIES



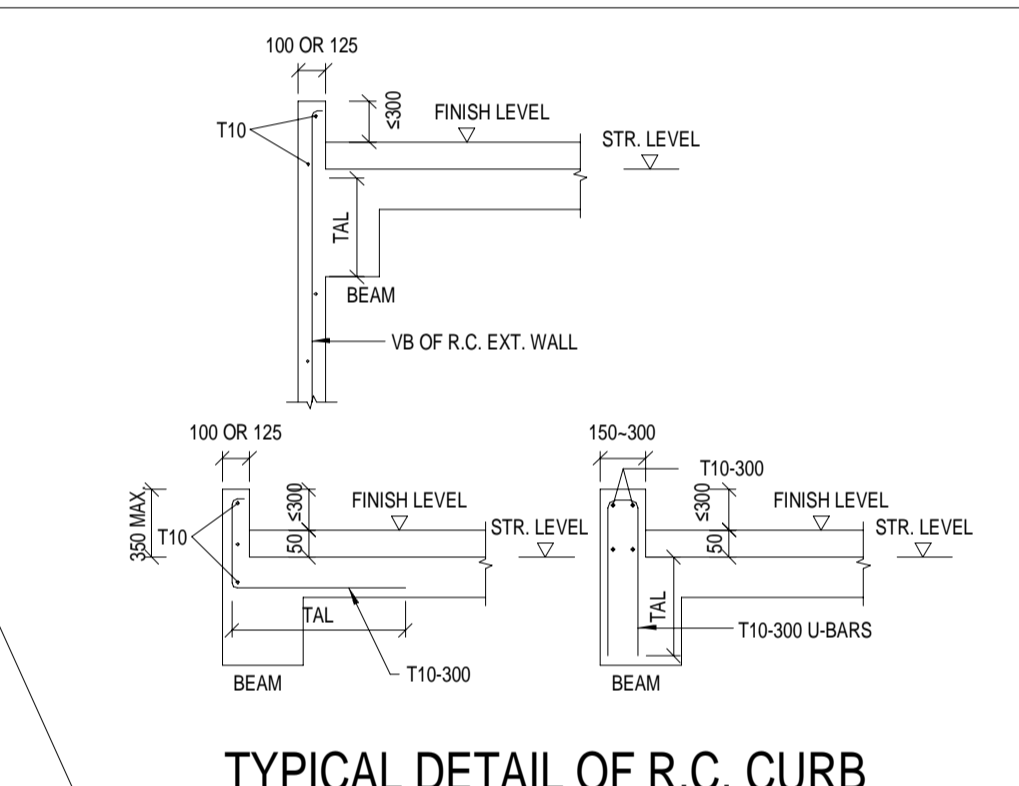
TYPICAL DETAIL OF ANCHORAGE LENGTH FOR LINTEL OF WALL



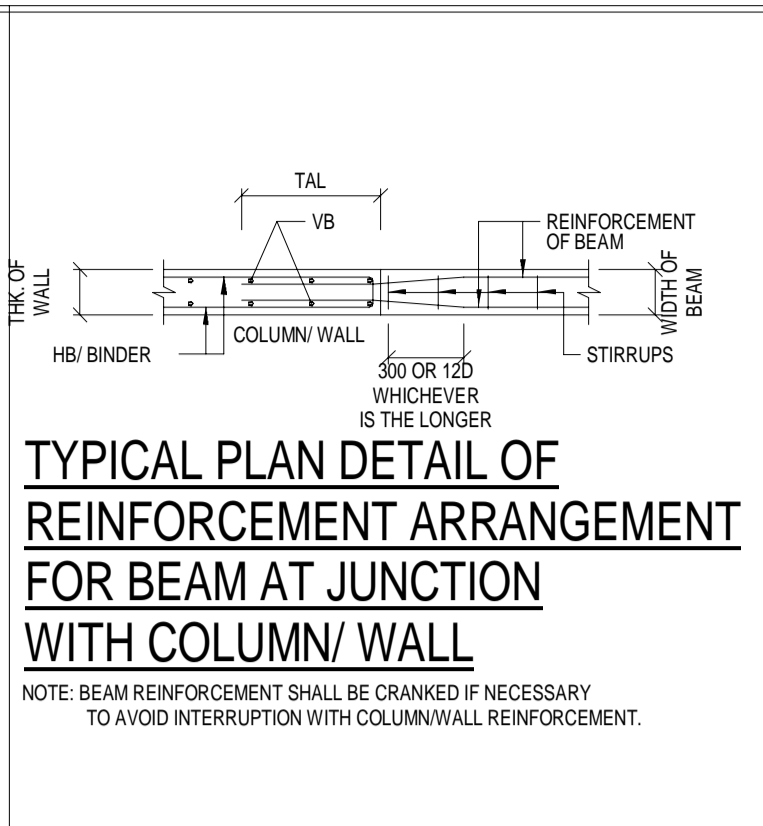
DETAIL OF COLUMN / POST REST ON BEAM



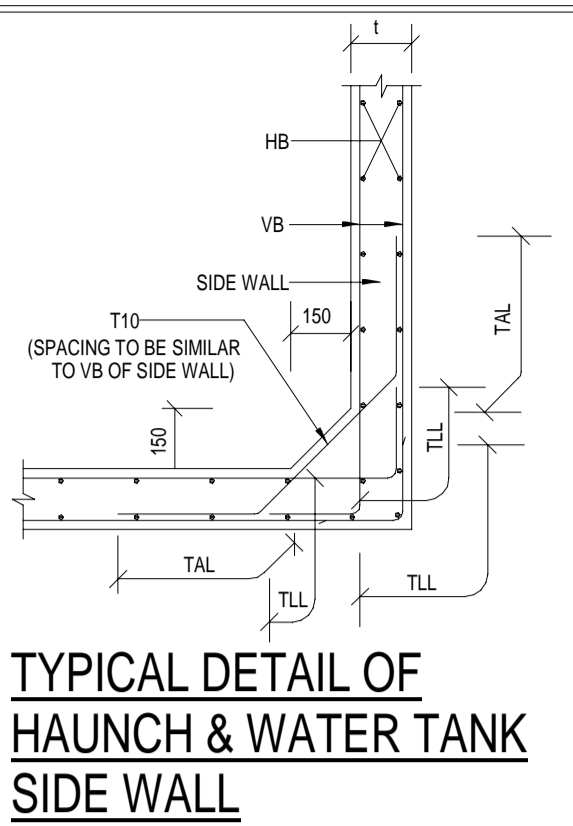
DETAIL OF REINFORCEMENT FOR SECONDARY BEAM



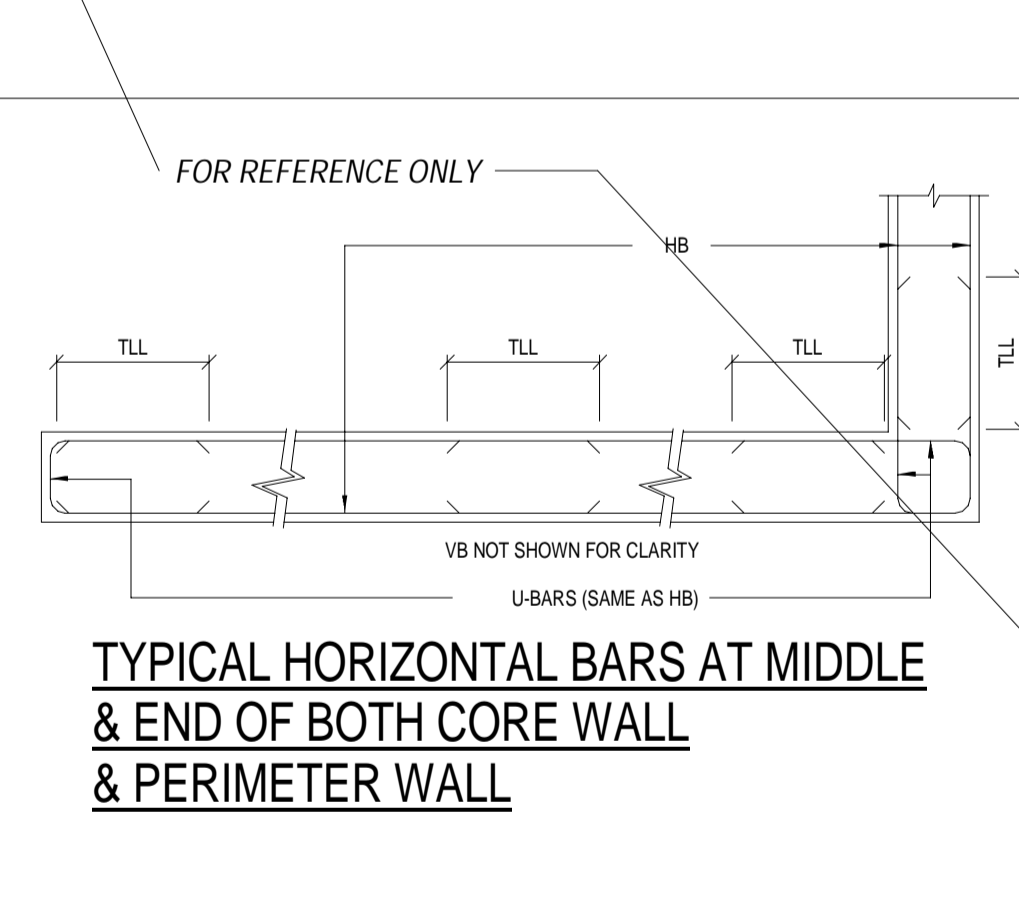
TYPICAL DETAIL OF R.C. CURB



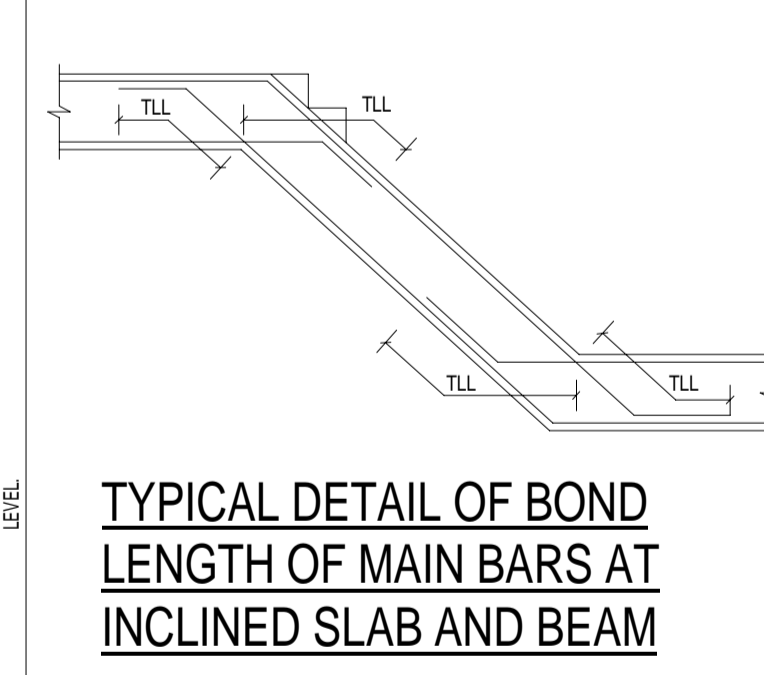
TYPICAL PLAN DETAIL OF REINFORCEMENT ARRANGEMENT FOR BEAM AT JUNCTION WITH COLUMN / WALL



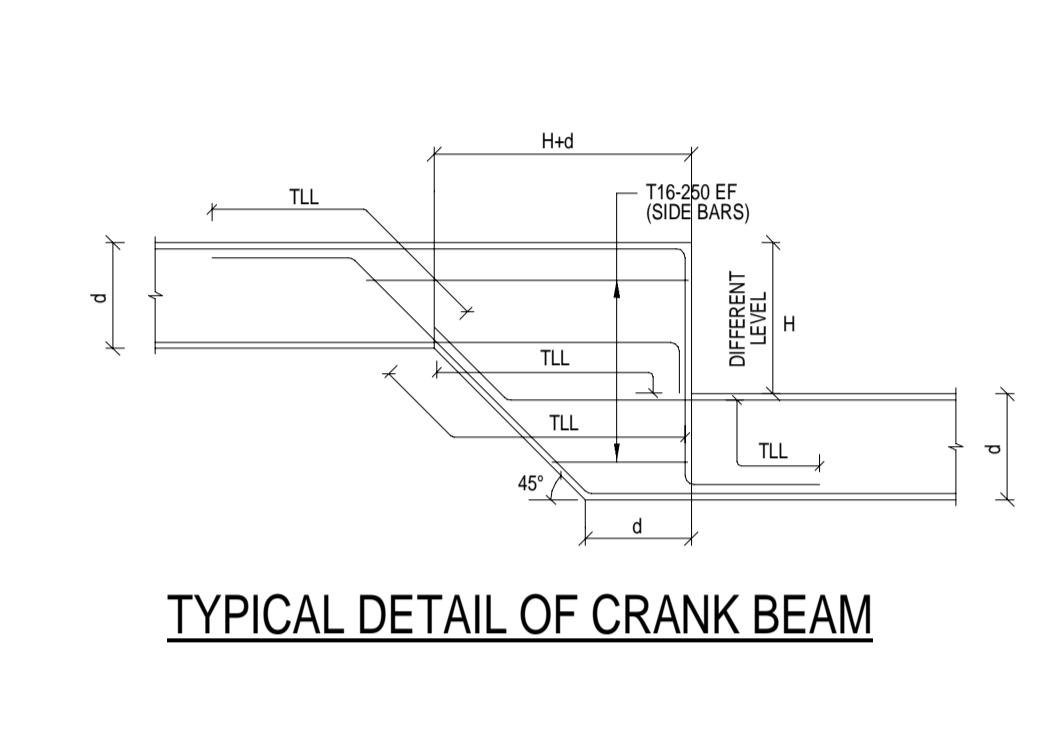
TYPICAL DETAIL OF HAUNCH & WATER TANK SIDE WALL



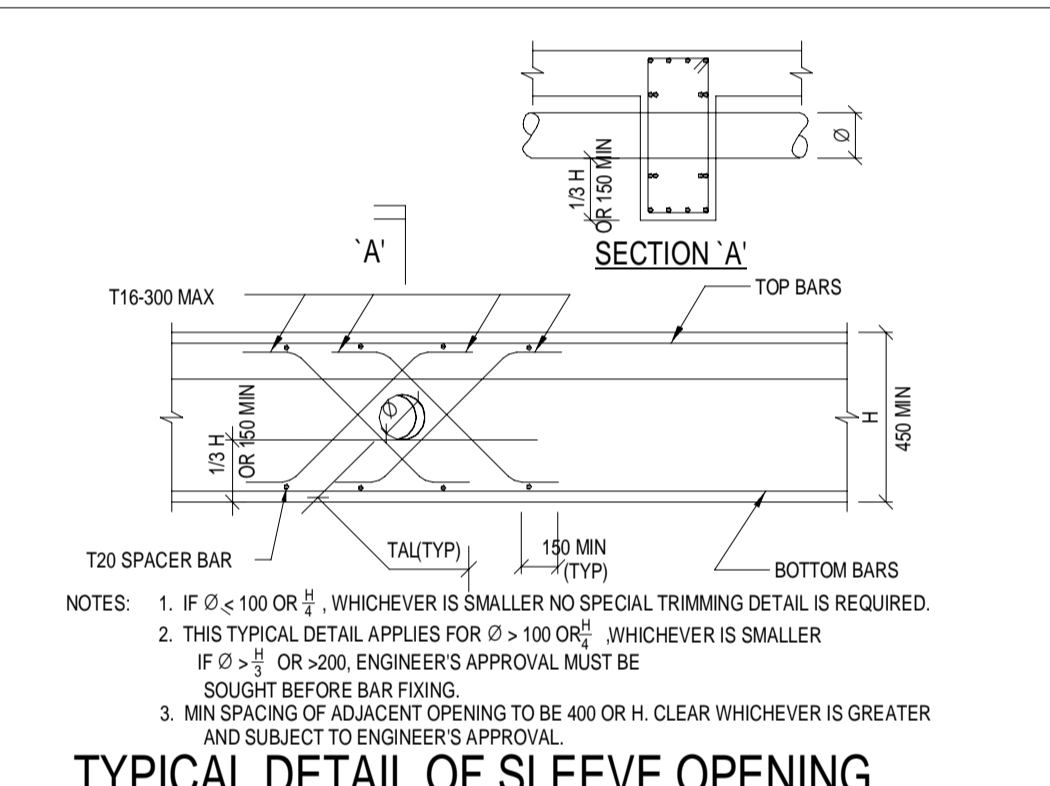
TYPICAL HORIZONTAL BARS AT MIDDLE & END OF BOTH CORE WALL & PERIMETER WALL



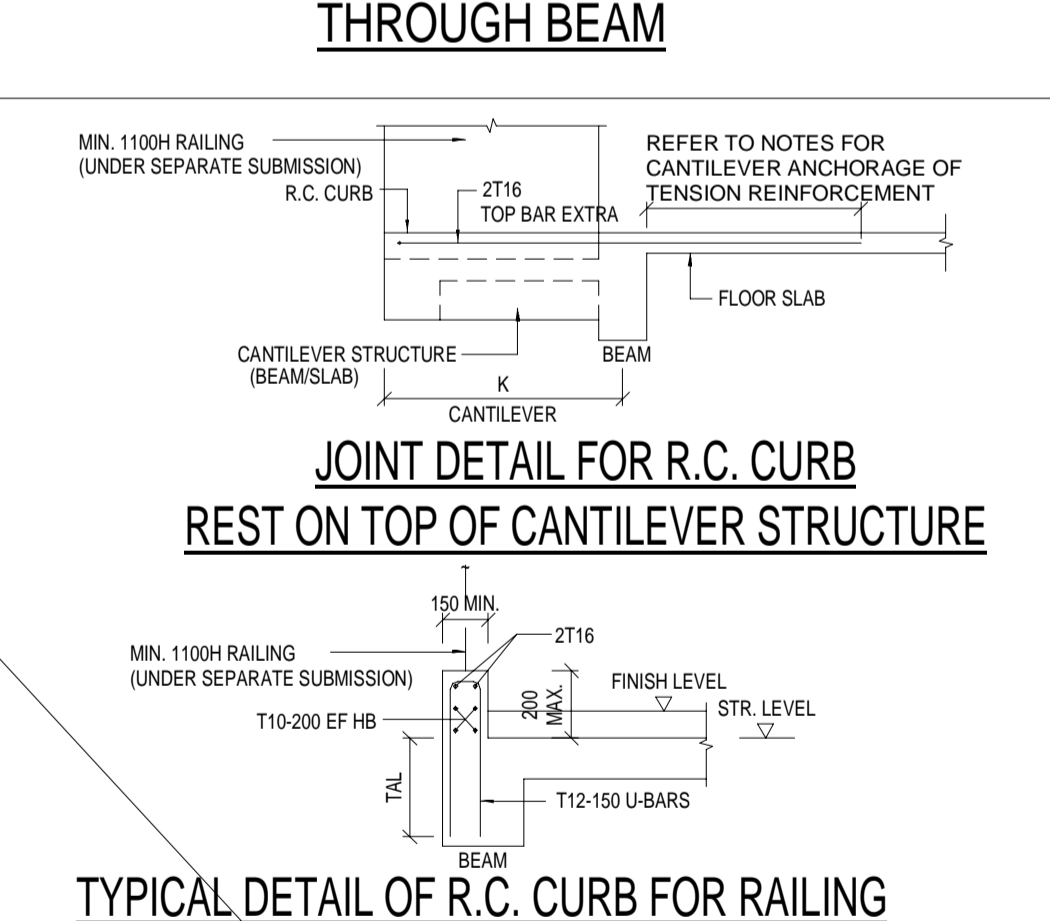
TYPICAL DETAIL OF BOND LENGTH OF MAIN BARS AT INCLINED SLAB AND BEAM



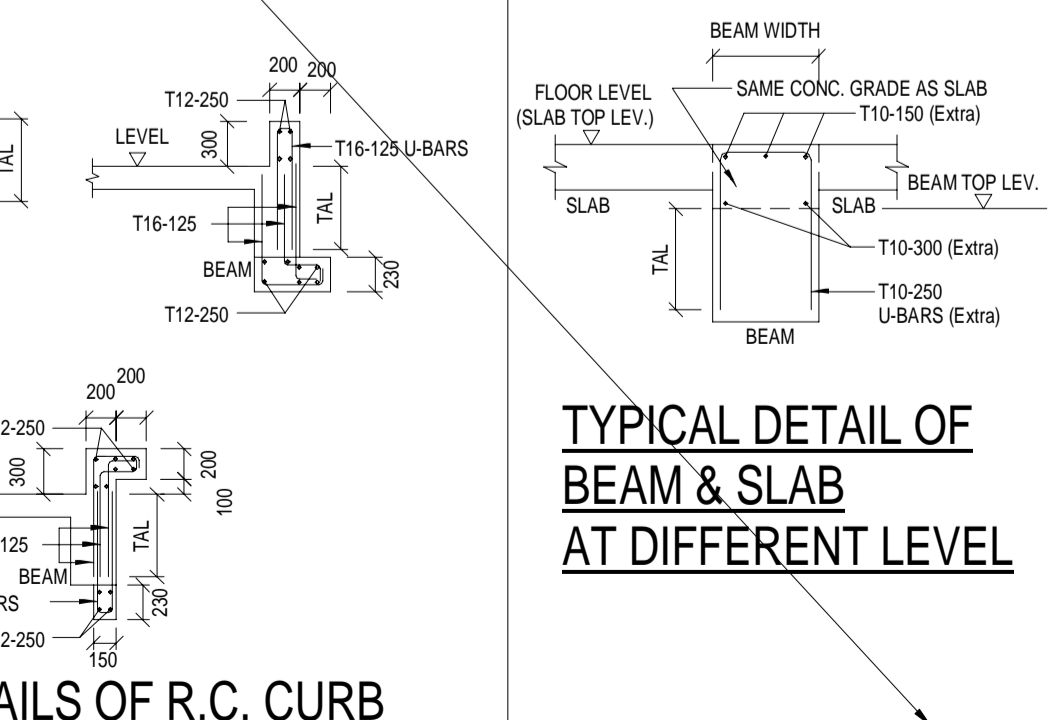
TYPICAL DETAIL OF CRANK BEAM



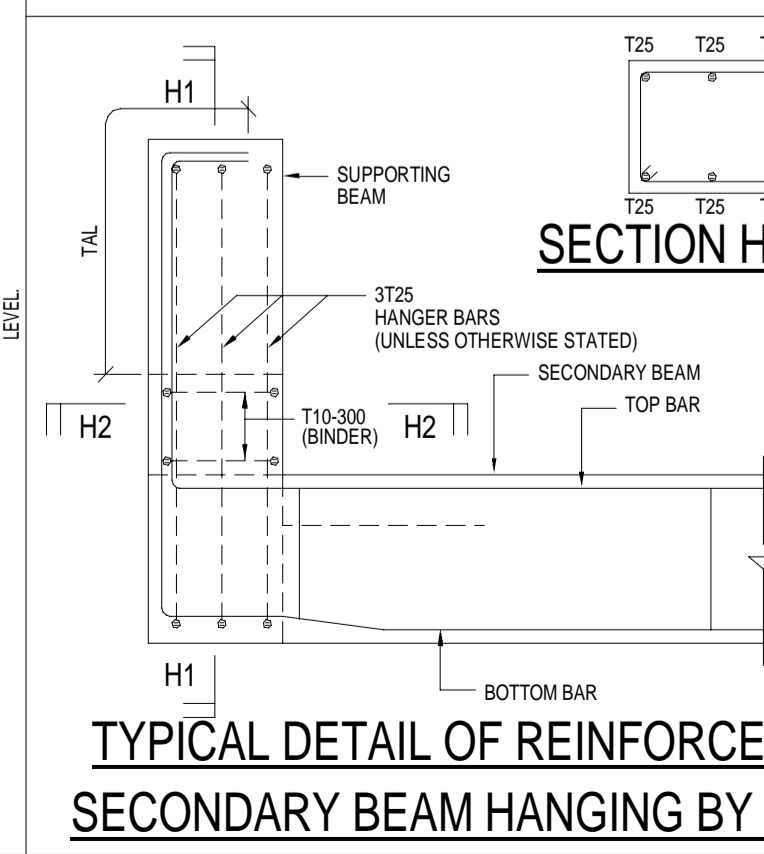
TYPICAL DETAIL OF SLEEVE OPENING THROUGH BEAM



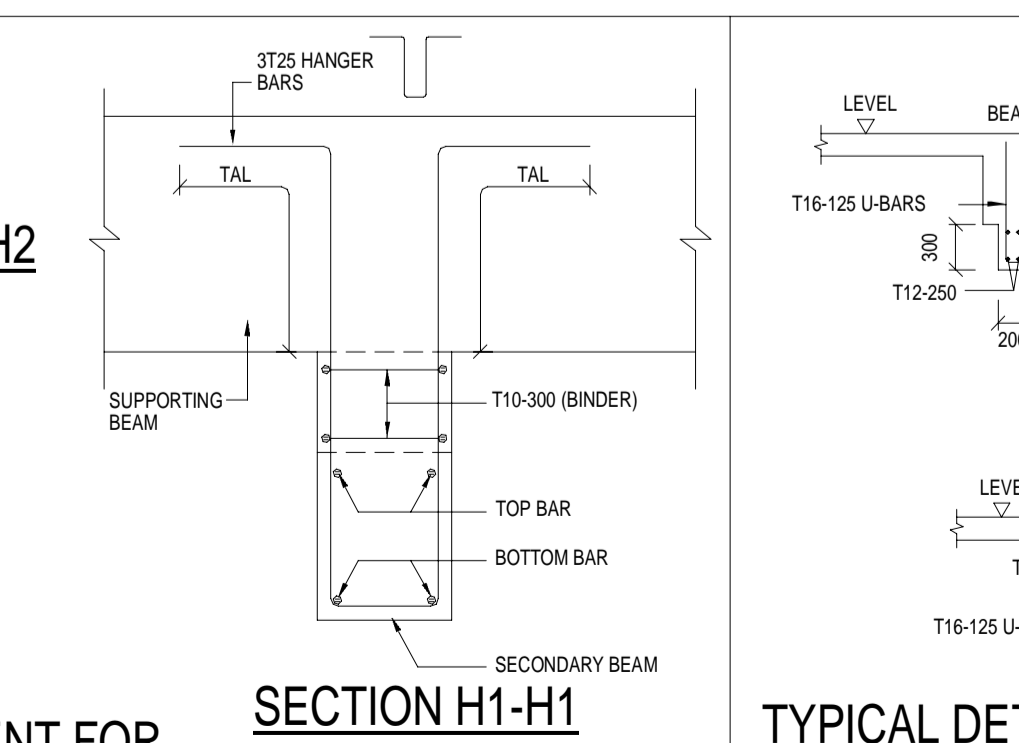
JOINT DETAIL FOR R.C. CURB REST ON TOP OF CANTILEVER STRUCTURE



TYPICAL DETAIL OF BEAM & SLAB AT DIFFERENT LEVEL



TYPICAL DETAIL OF REINFORCEMENT FOR SECONDARY BEAM HANGING BY MAIN BEAM



SECTION H1-H1

SECTION H2-H2

* CRITICAL ZONE LOCATION REFER TO CSp 9.2.2. 10mm OR 1/8 THE DIAMETER OF THE LARGEST LONGITUDINAL BAR FOR LINKS IN CRITICAL ZONE.

BD REF :		
BIM REF :		
REV	DATE	AMENDMENT
PROJECT	CIC SAMPLE PROJECT	
DRAWING TITLE	Typical Detail 2	
SCALE		
DRAWING NO.	S013	REV. NO.
SOURCE	---	
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	90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop	
BD'S OFFICAL USE		
	90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)	

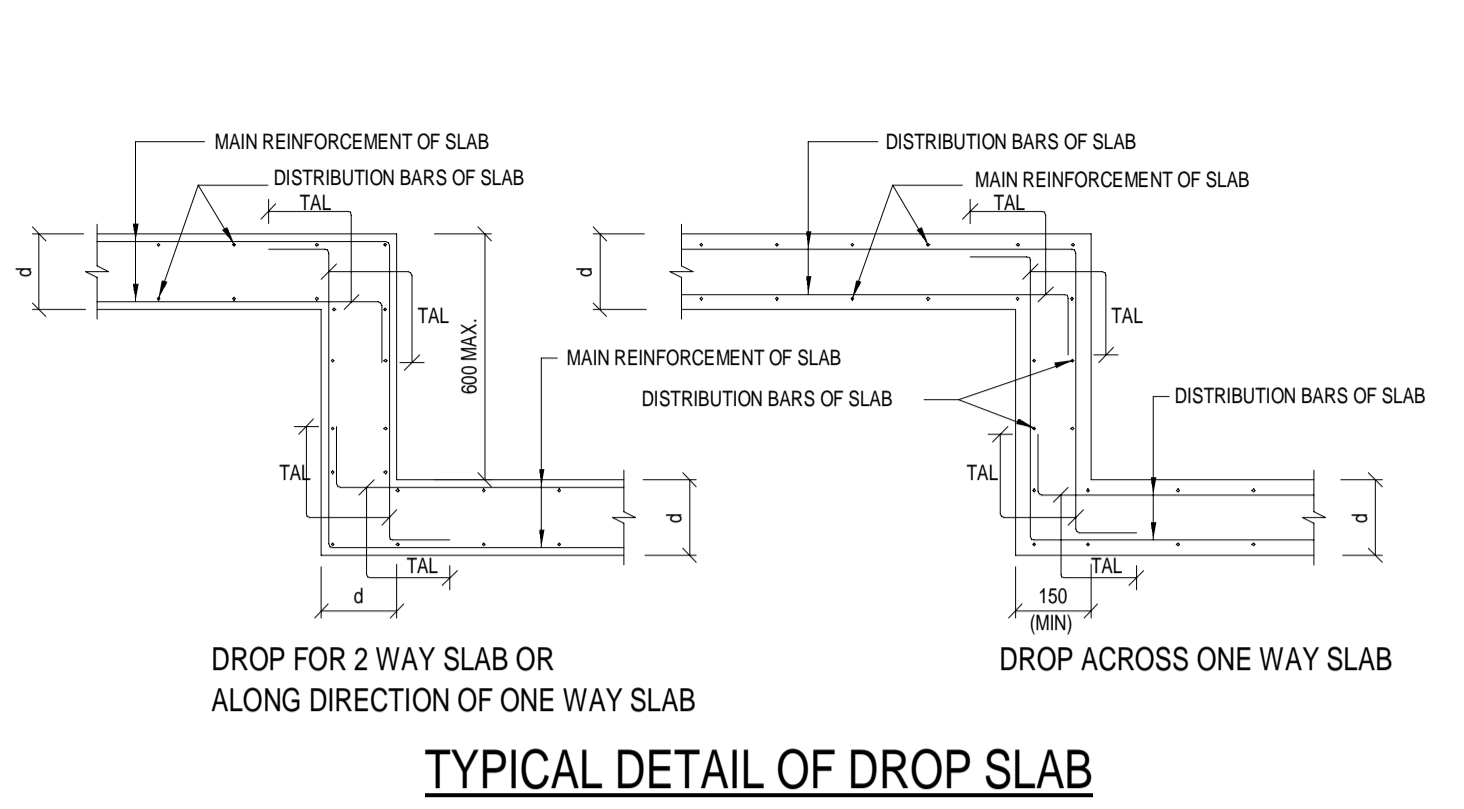
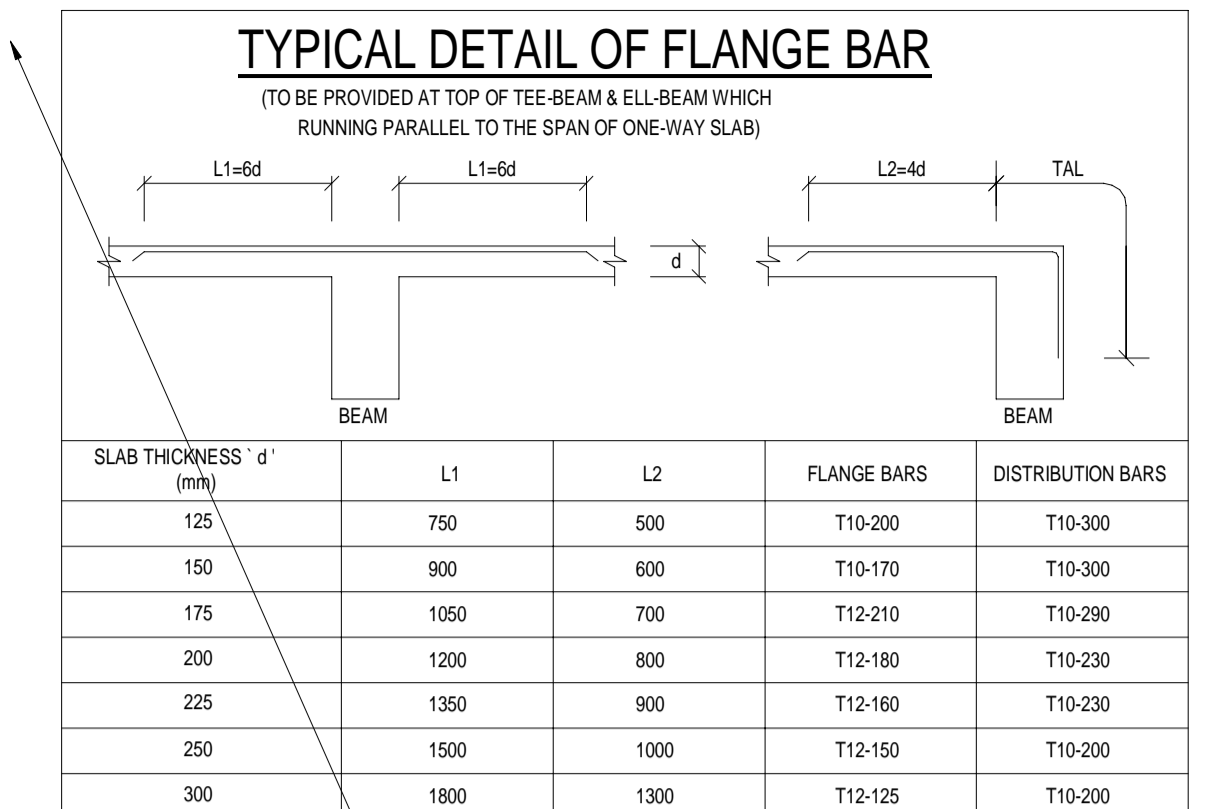


TABLE OF REINFORCEMENT FOR BEARING/HANGER & SCREEN WALL

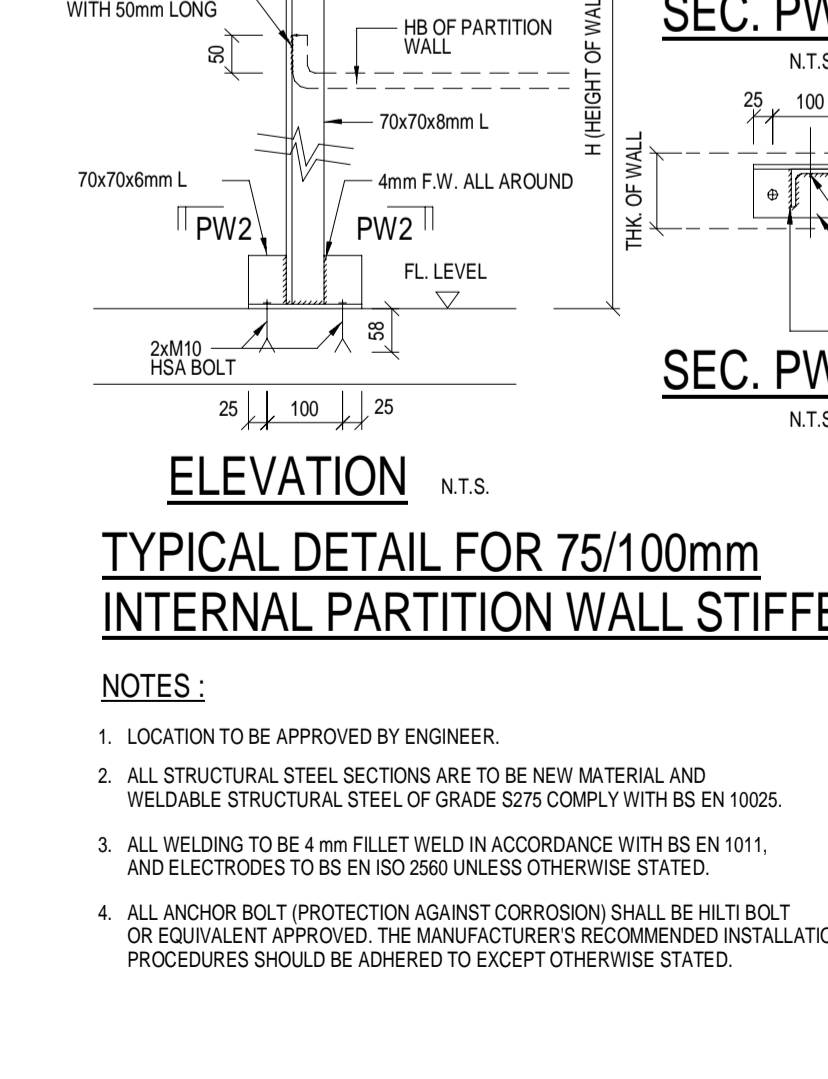
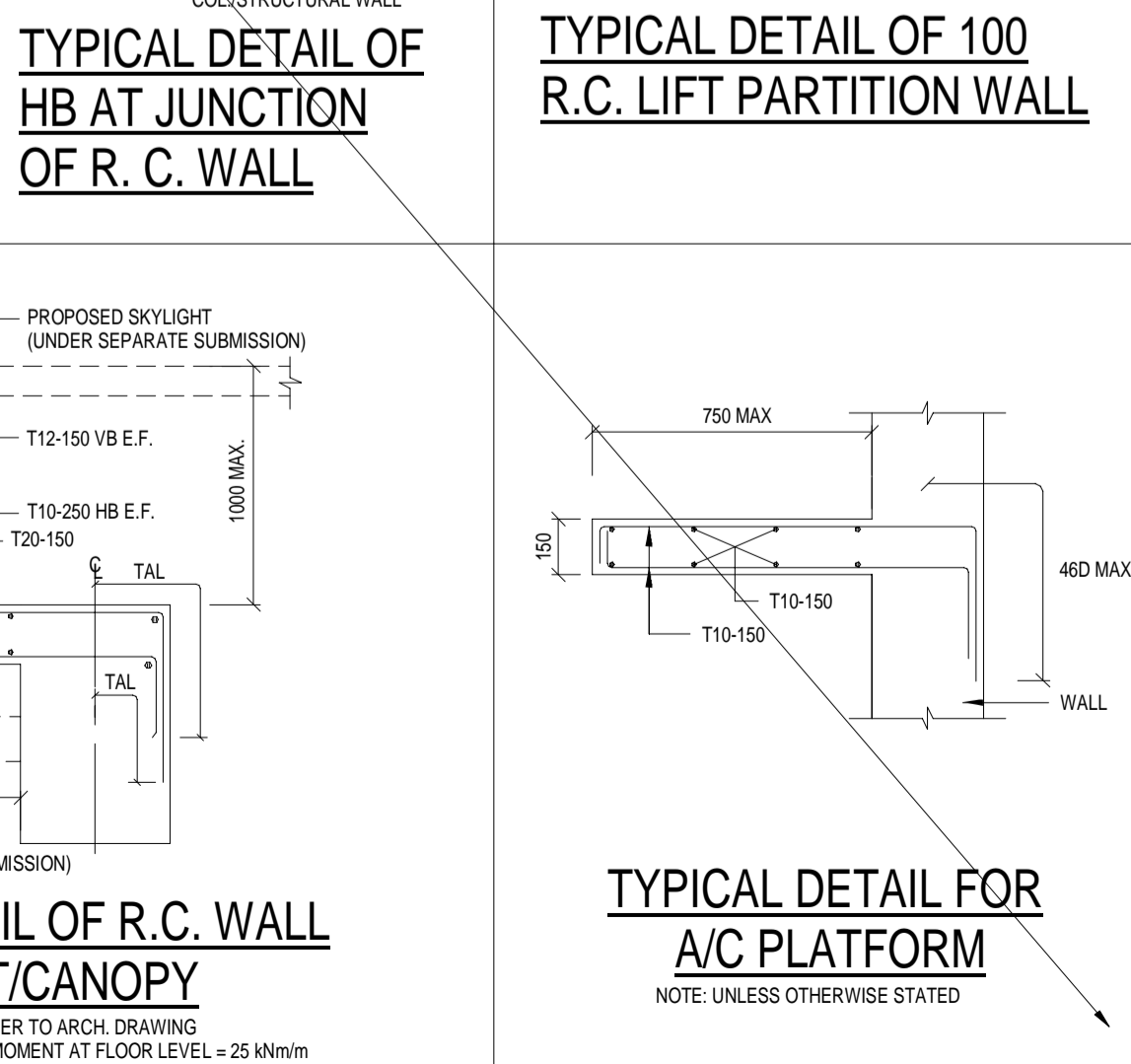
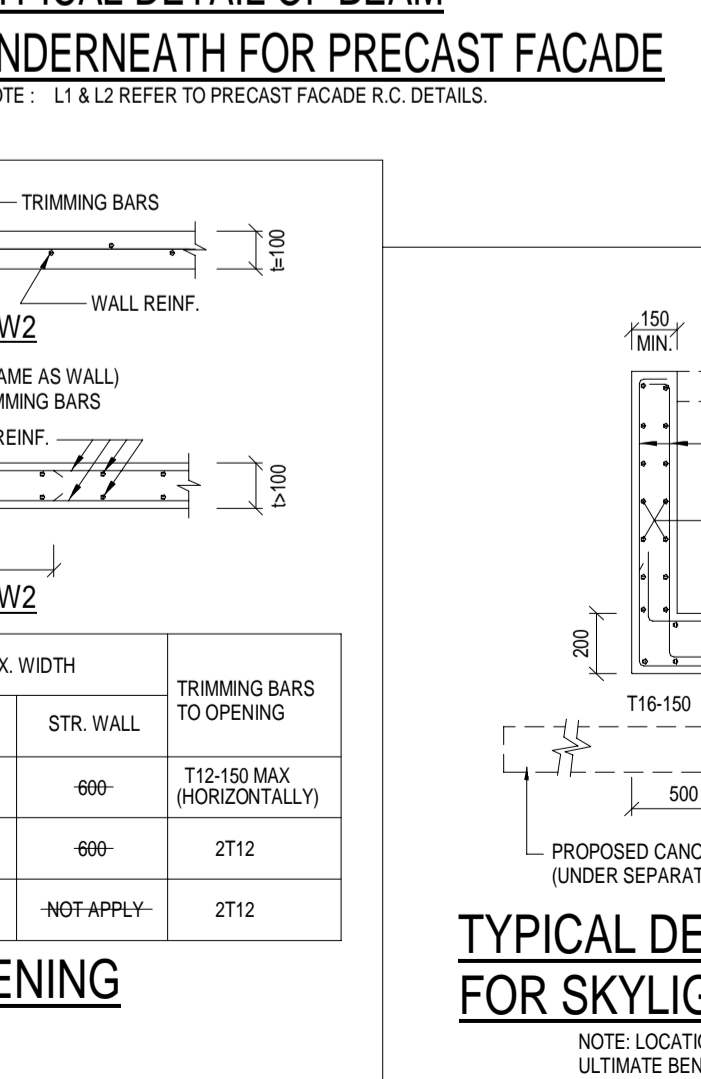
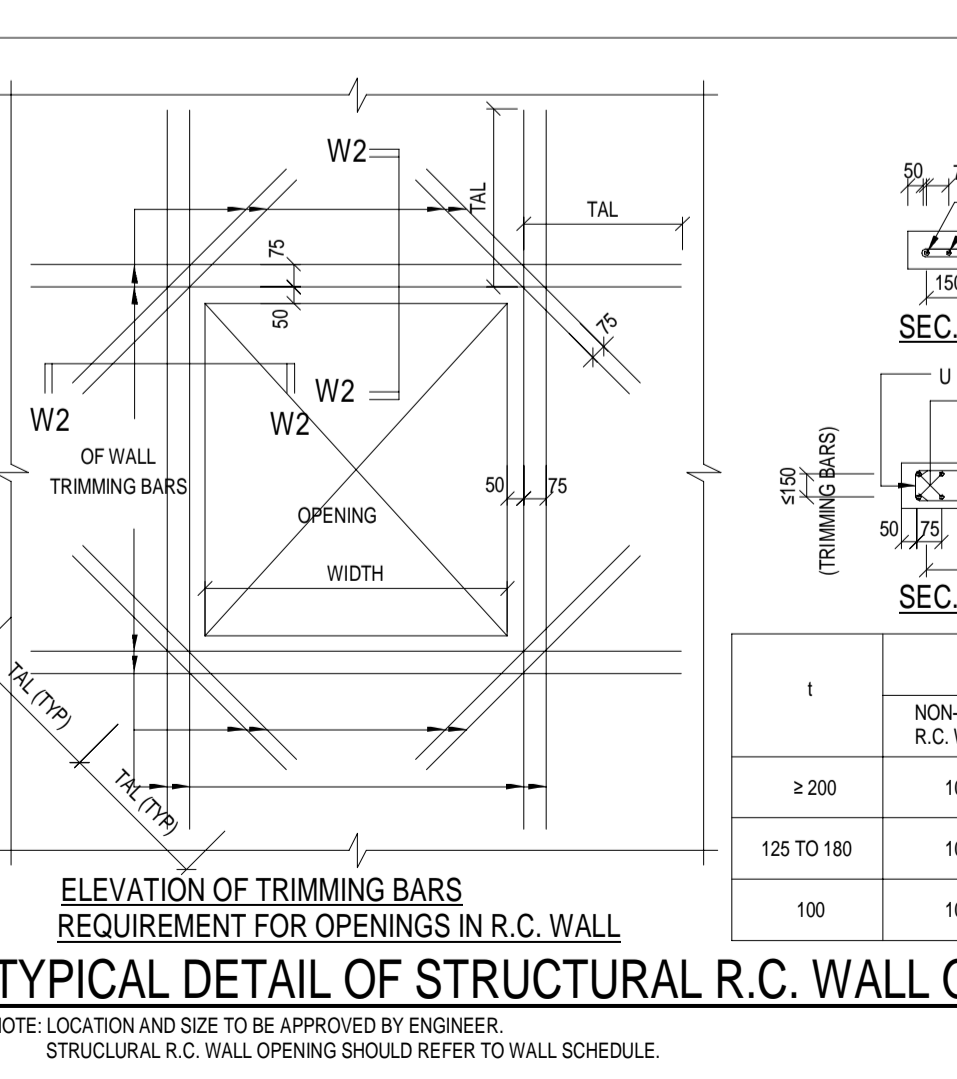
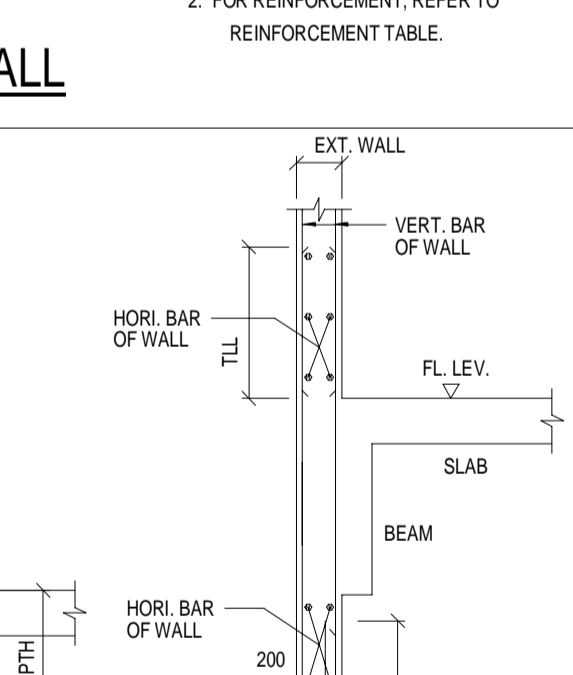
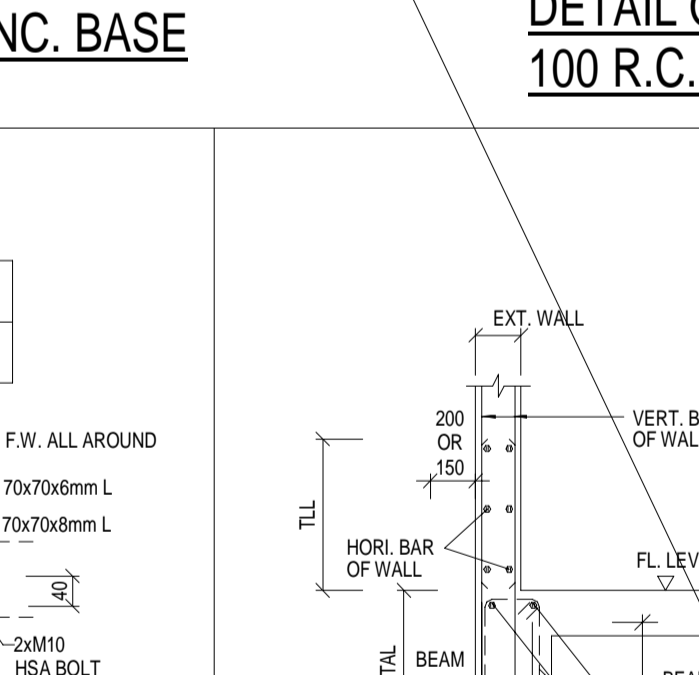
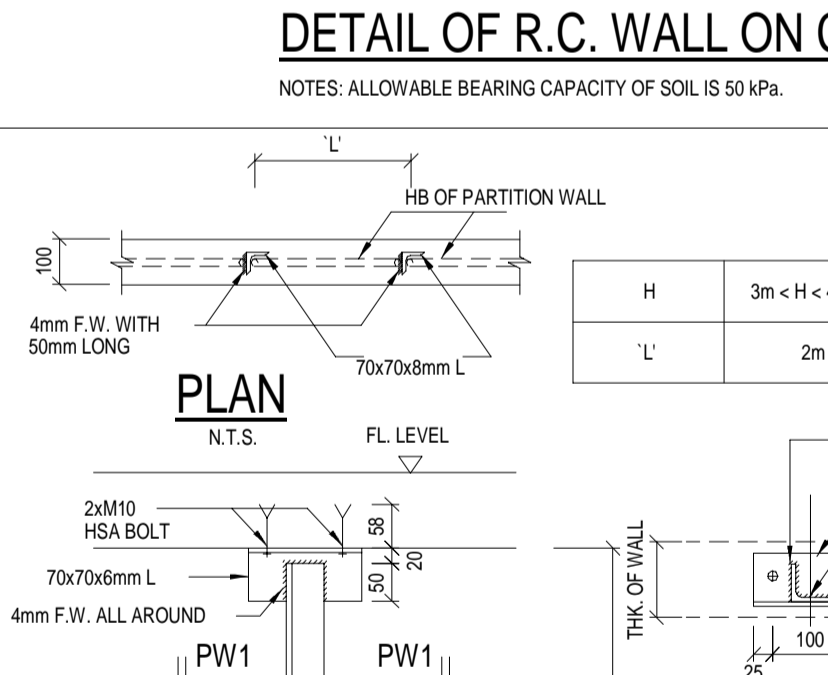
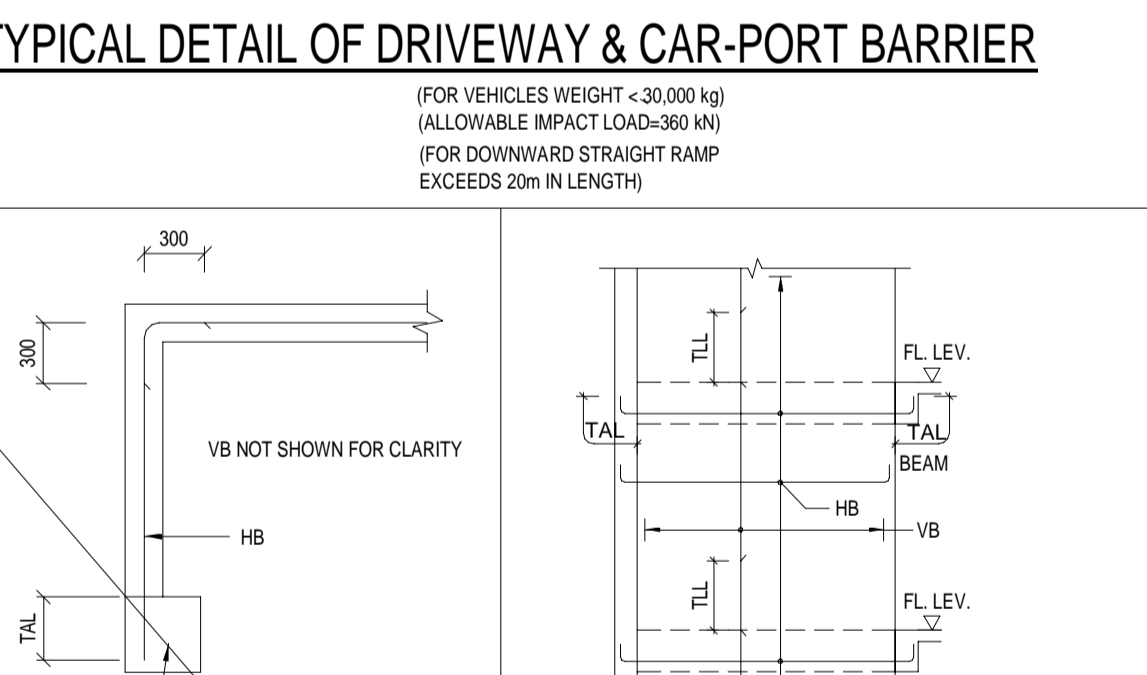
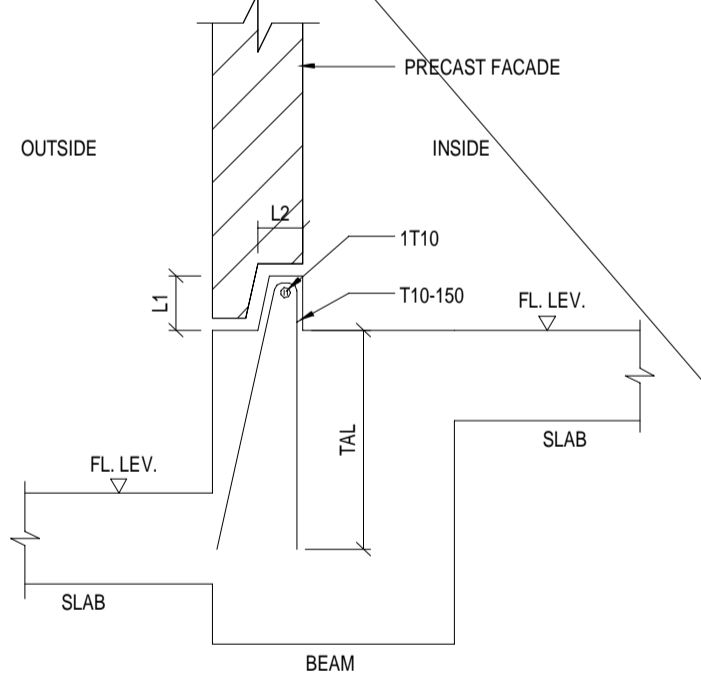
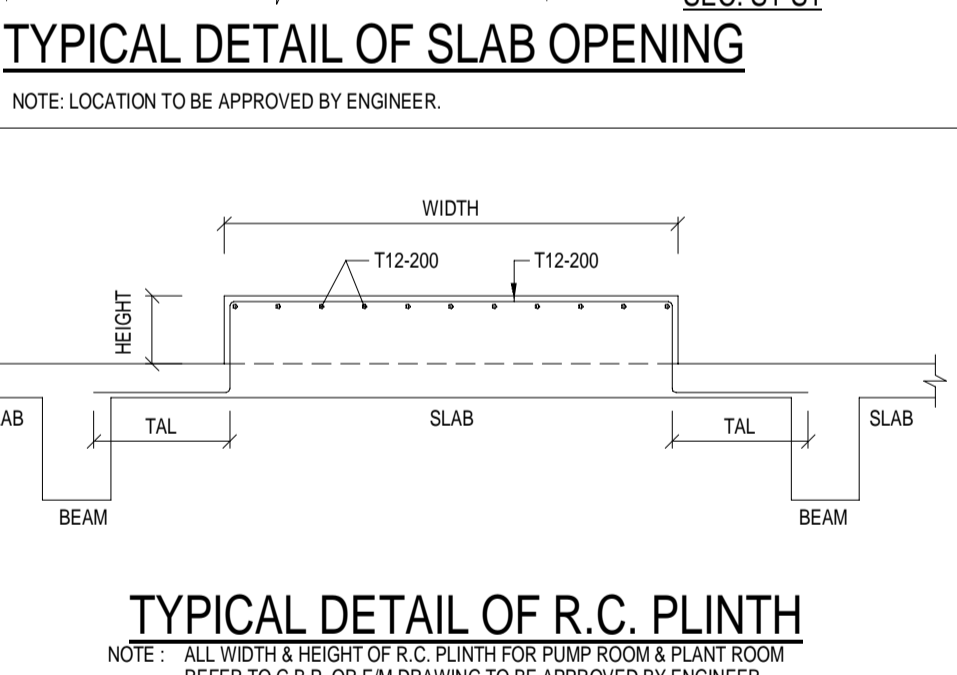
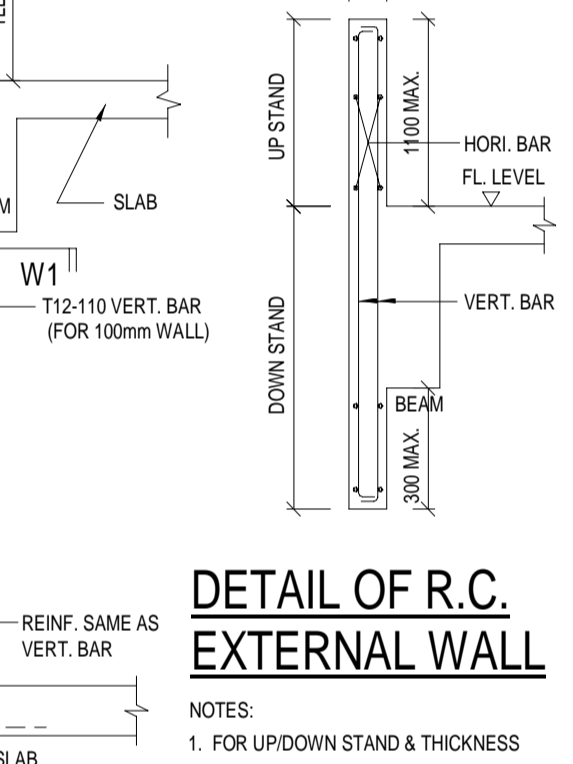
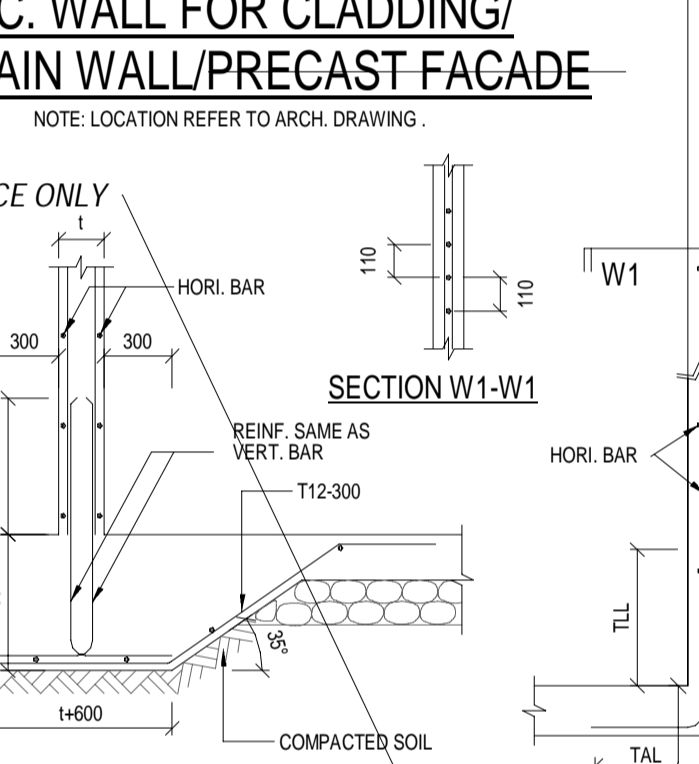
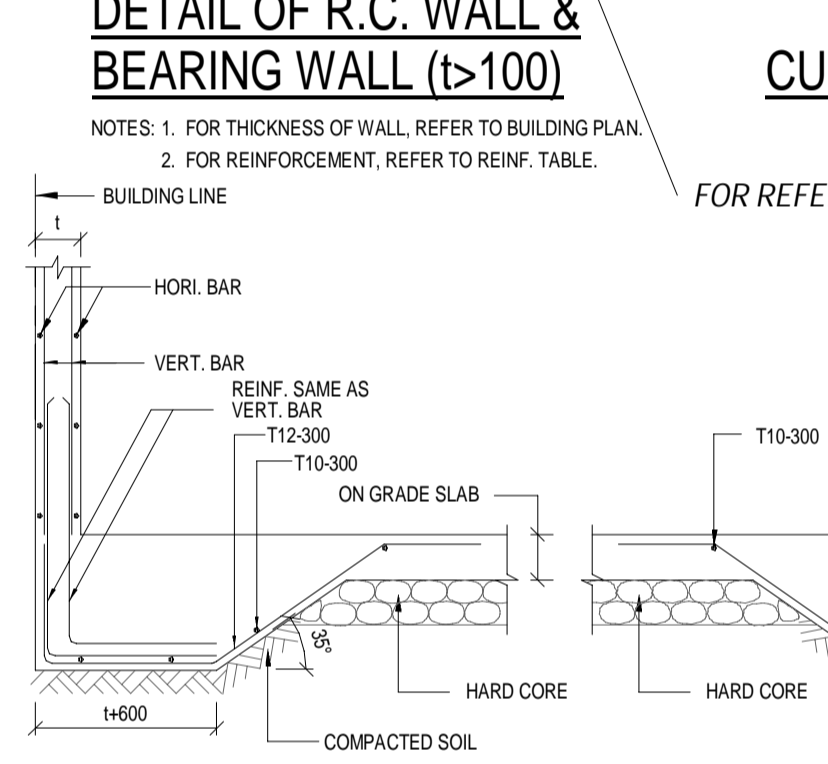
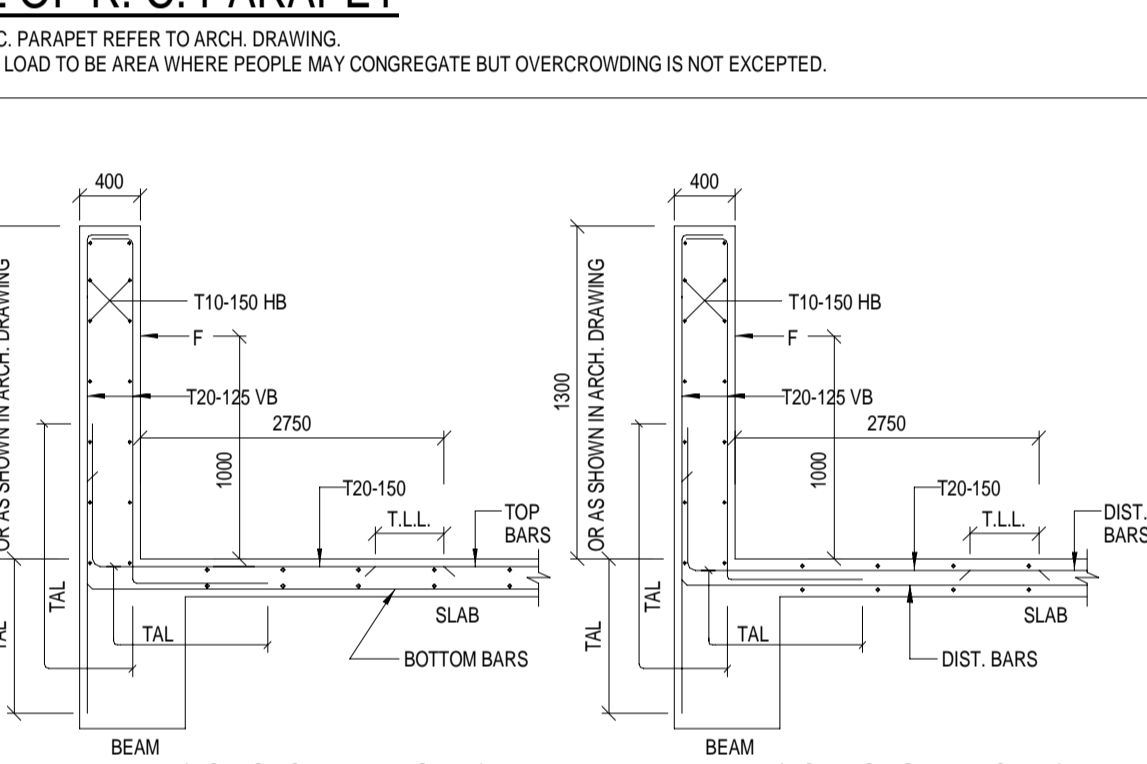
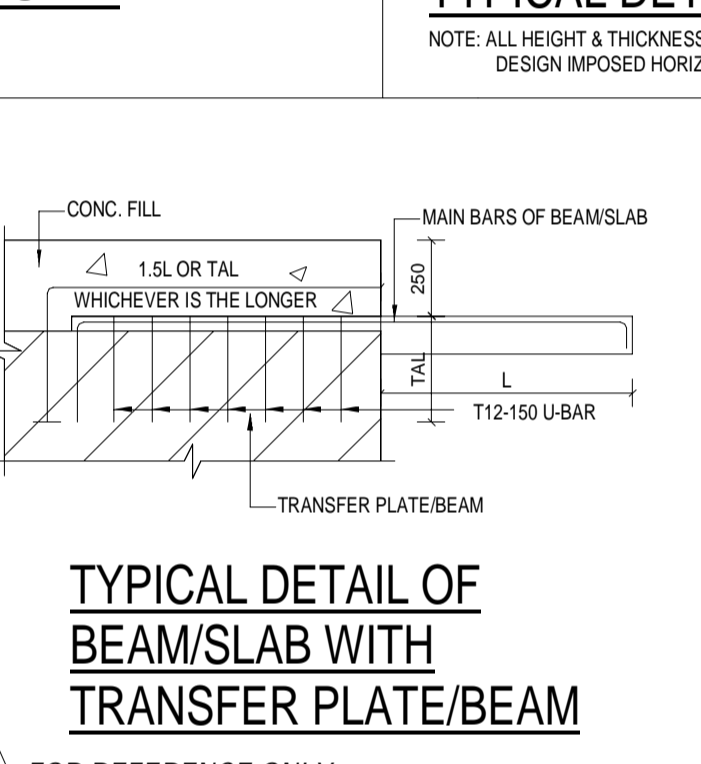
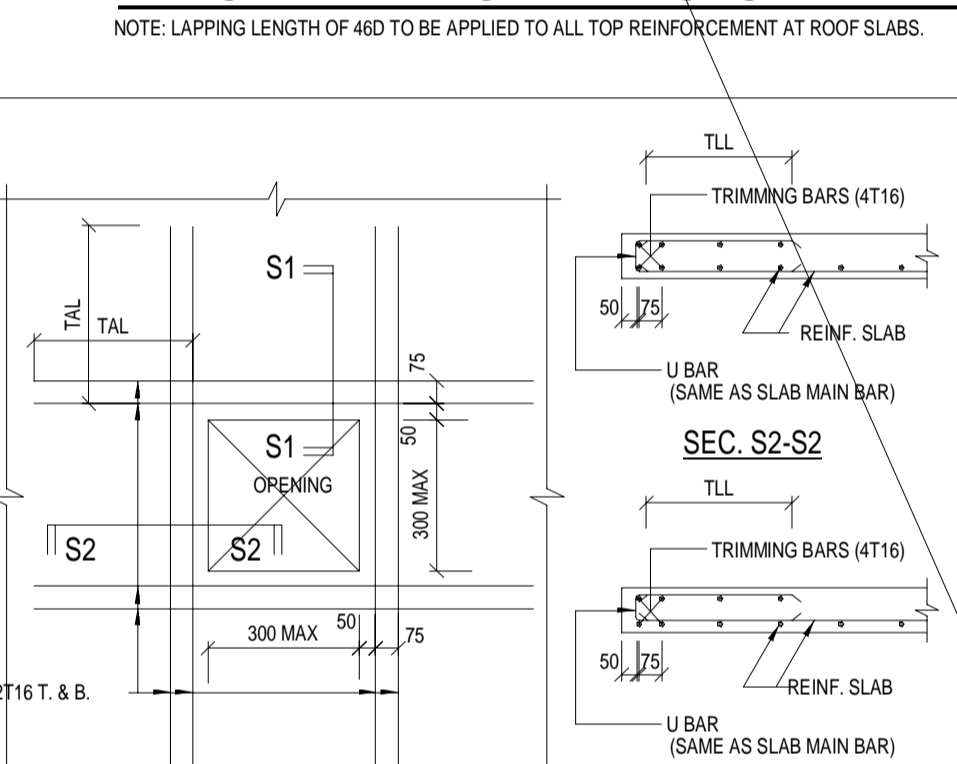
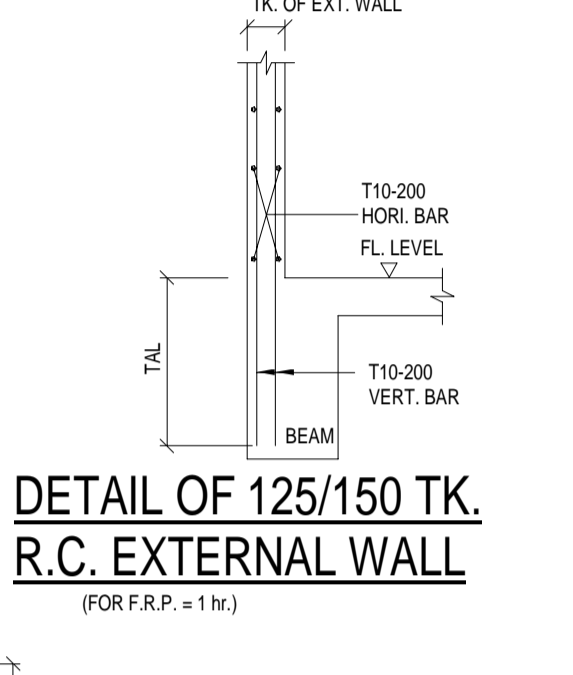
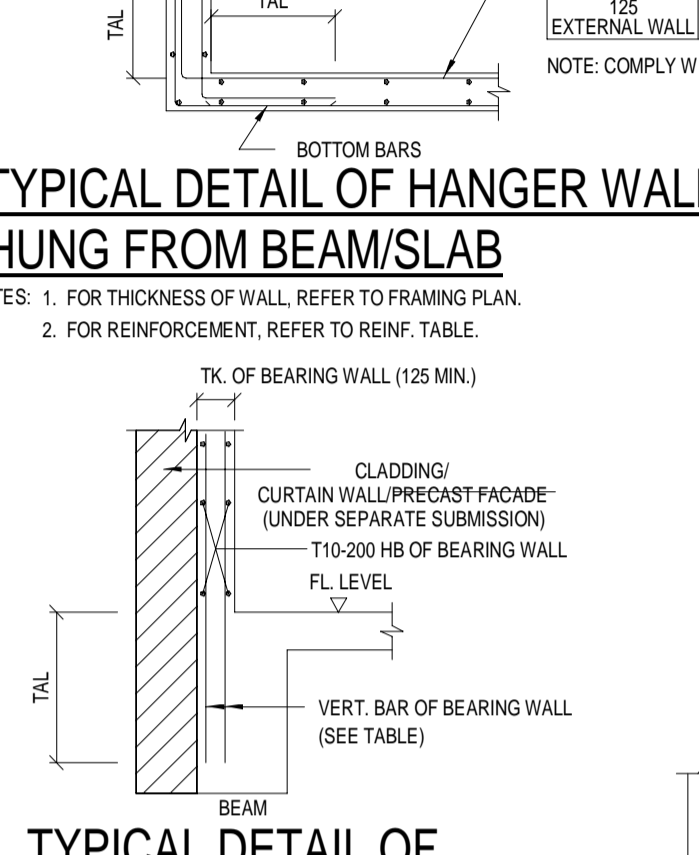
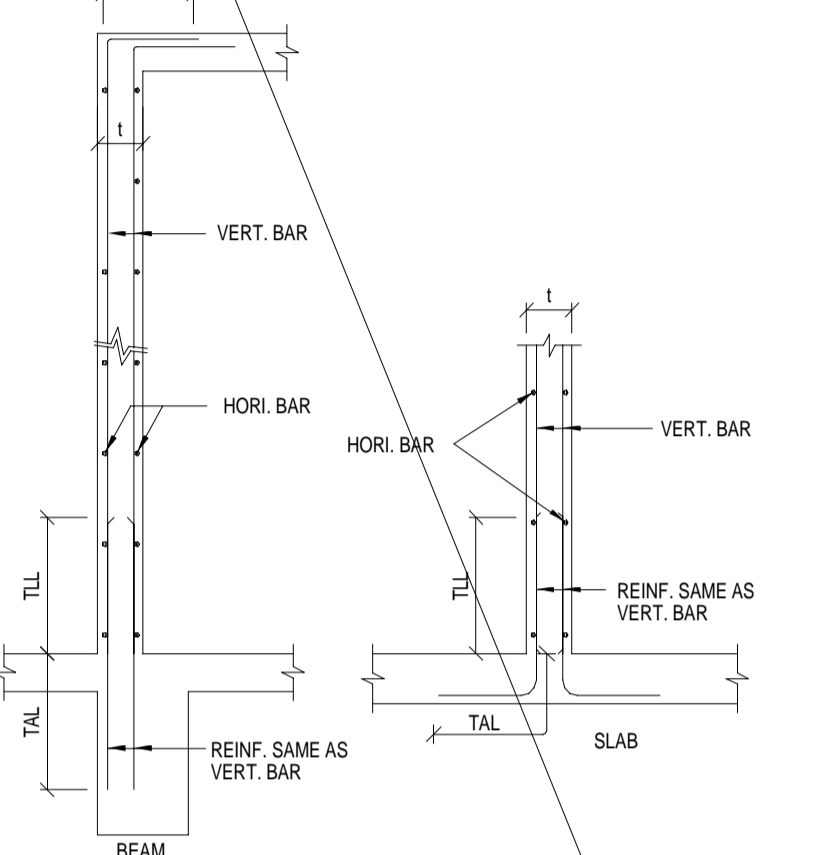
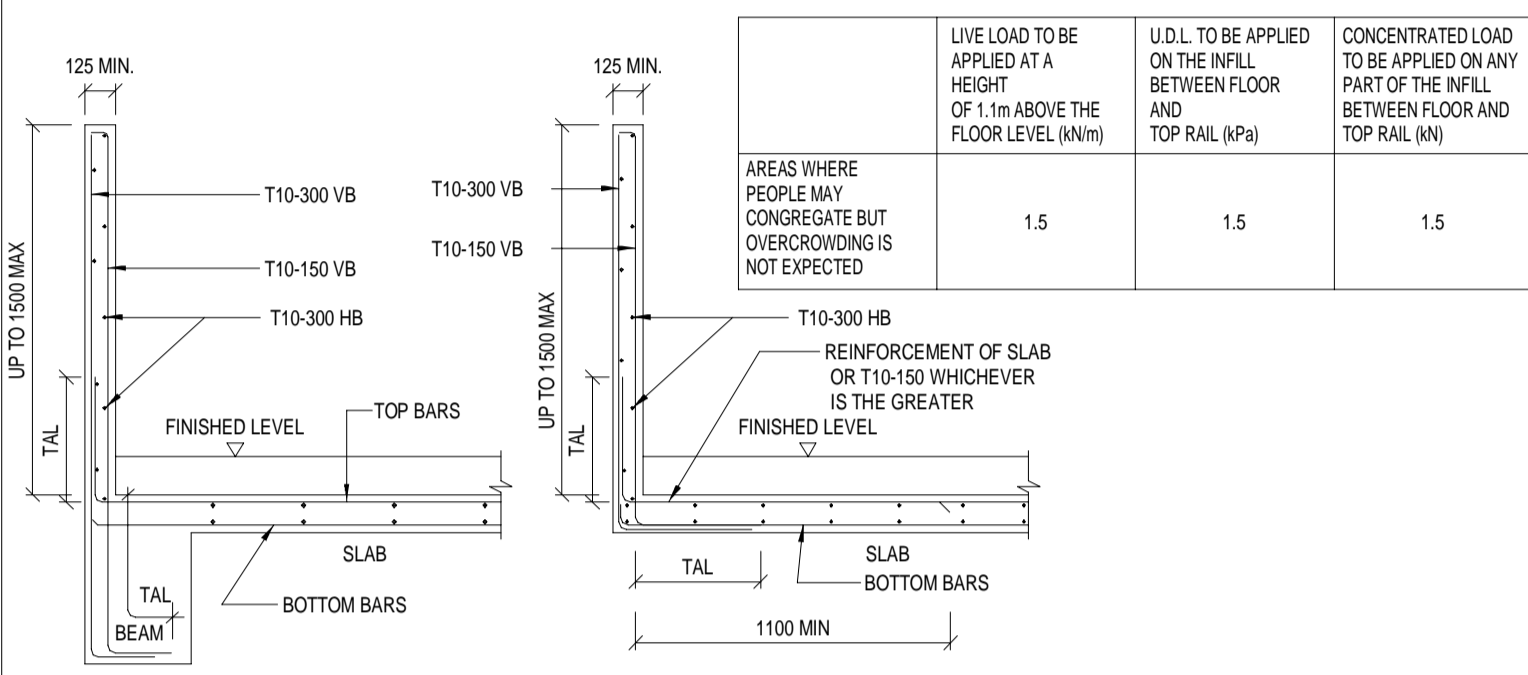
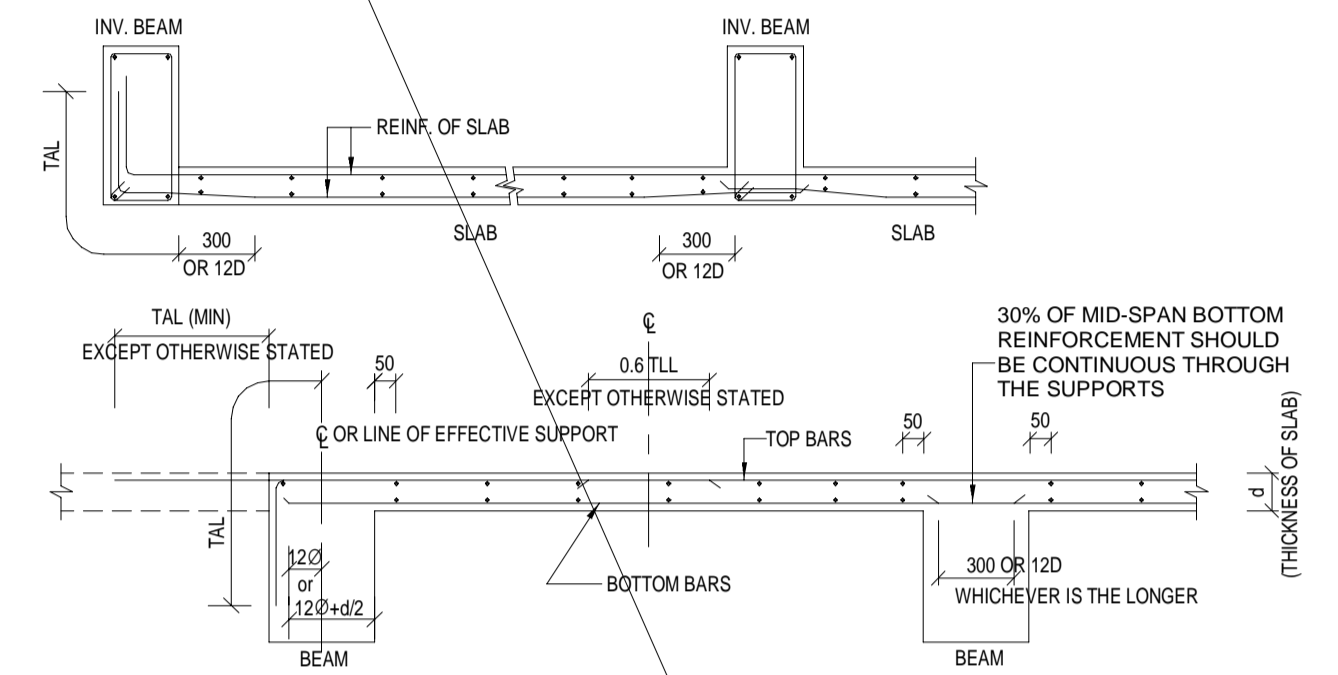
I	FIRE RESISTANCE PERIOD		HORI. BAR (EF)
	4 HOURS	2 HOURS/1 HOUR	
150mm	-	T12-150	T10-300
180mm	T12-125	T12-300	T10-300
200mm	T16-200	T12-275	T10-300
250mm	T12-225	T12-225	T10-250
300mm	T12-180	T12-180	T10-200
400mm	T16-225	T16-225	T10-225
450mm	T16-200	T16-200	T10-200

NOTE: COMPLY WITH CODE OF PRACTICE FOR FIRE SAFETY IN BUILDING 2011.

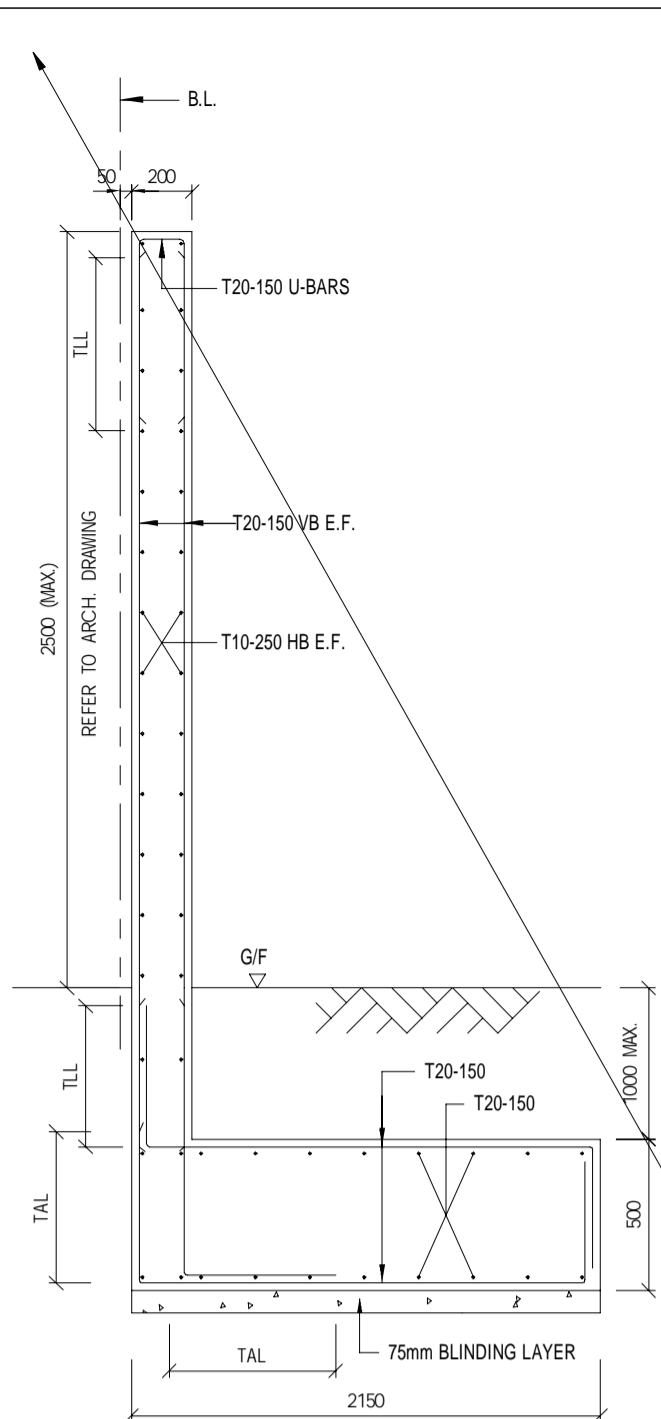
TABLE OF REINFORCEMENT FOR NON-LOAD BEARING R.C. WALL

THICKNESS (mm)	FIRE RESISTANCE PERIOD			HORI. BAR (EF)
	VERT. BAR (EF)			
	4 HOURS	2 HOURS	1 HOUR	
75	-	-	T12-150 ONE LAYER	T10-150 ONE LAYER
100	-	T12-110 ONE LAYER	T12-110 ONE LAYER	T10-300 ONE LAYER
125	-	T16-160 ONE LAYER	T10-250 ONE LAYER	T10-250 ONE LAYER
150	-	T12-150	T10-300	-
160	-	T10-300	-	T10-300
200-250	-	T10-300	T10-300	T10-250
180	T12-125	-	-	T10-300
240	T10-250	-	-	T10-250
125 EXTERNAL WALL	-	-	T10-200	T10-200

NOTE: COMPLY WITH CODE OF PRACTICE FOR FIRE SAFETY IN BUILDINGS 2011.

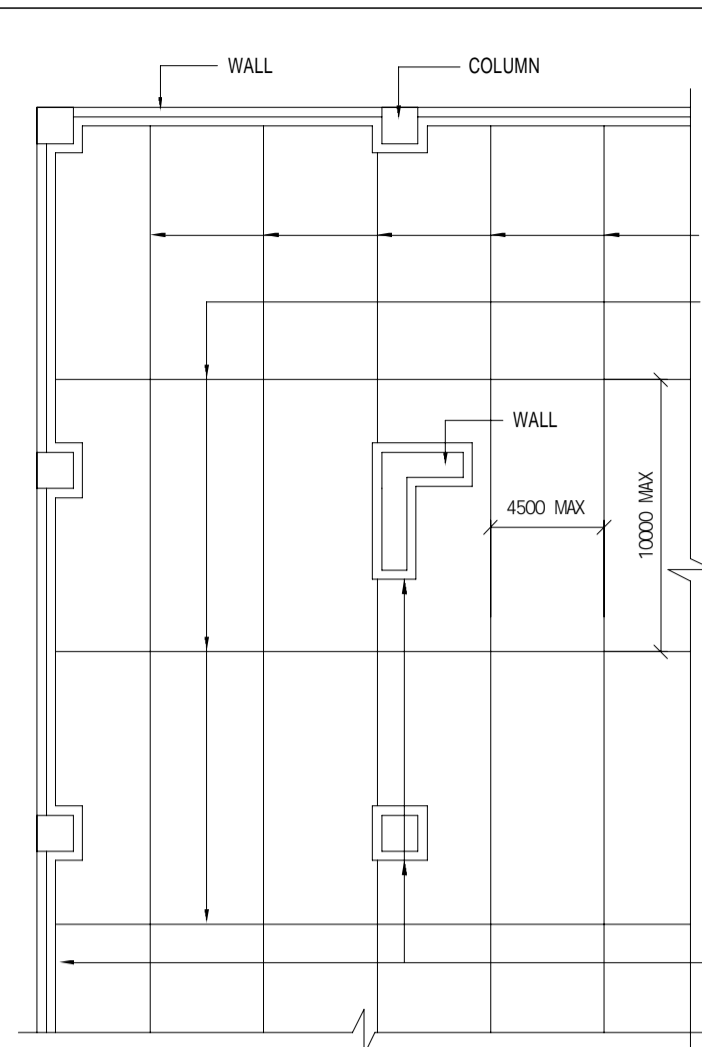


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BIM REF :		
REV	DATE	AMENDMENT
PROJECT	CIC SAMPLE PROJECT	
DRAWING TITLE	Typical Detail 3	
SCALE		
DRAWING NO.	S014	REV. NO.
SOURCE	---	
	90mm (W) x 40mm (H) space for COMPANY LOGO	
	90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop	
BD'S OFFICAL USE	90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)	



TYPICAL DETAIL OF FENCE WALL TYPE II

NOTE: LOCATION REFER TO ARCH. DRAWING.
DESIGN SOIL BEARING PRESSURE = 100 Kpa
(WITH WIND) = 125 Kpa



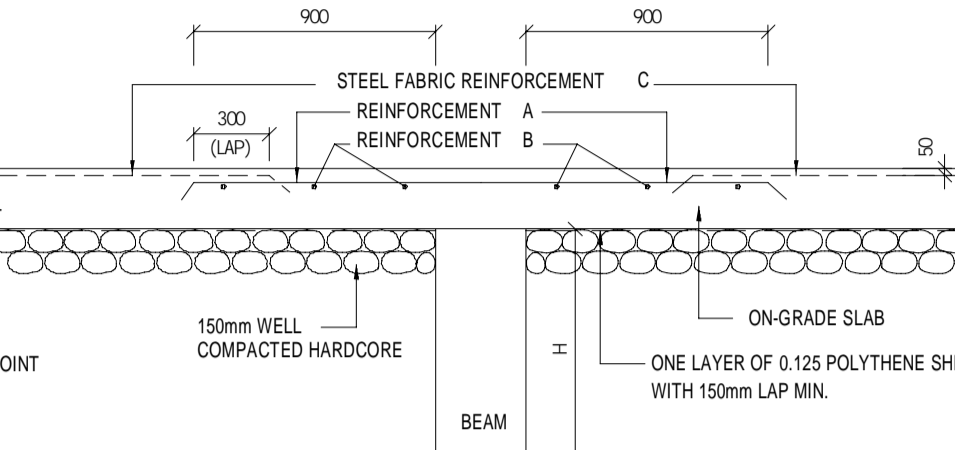
GENERAL NOTES FOR ON-GRADE SLAB

NOTE:
1. ON-GRADE SLABS TO BE CAST IN STRIPS WITH LONGITUDINAL JOINTS SPACED NOT GREATER THAN 4.5m AND WITH TRANSVERSE CONTRACTION JOINTS SPACED NOT GREATER THAN 10.0m.
PROVIDE ISOLATION JOINTS AROUND INTERNAL COLUMN/WALL AND ALONG THE PERIMETER OF THE SLAB ABUTTING EXTERNAL WALL/COLUMN. PROVIDE EXPANSION JOINT FOR SLAB LONGER THAN 60m AND THE LOCATION OF IT SHALL BE APPROVED BY ENGINEER.
2. THE INSITU FILL OF THE SOIL BENEATH SHALL BE NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY.

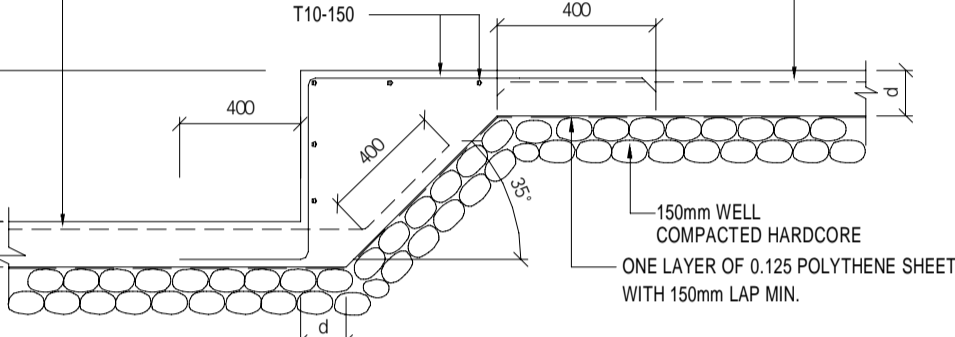
TABLE OF ON-GRADE SLAB

NOTES FOR ON-GRADE SLAB:
1. THE INSITU FILL OF SOIL BENEATH HARDCORE SHALL NOT BE LESS THAN 95% OF THE MAXIMUM DRY DENSITY.
2. 3 NOS. OF DRY DENSITY TEST SHALL BE CARRIED OUT FOR EVERY 800 sq.m OF FLOOR AREA BEFORE CONSTRUCTION OF ON-GRADE SLAB.
3. MIN. SLAB THICKNESS FOR F.R.P. > 2 HOURS IS 170mm.

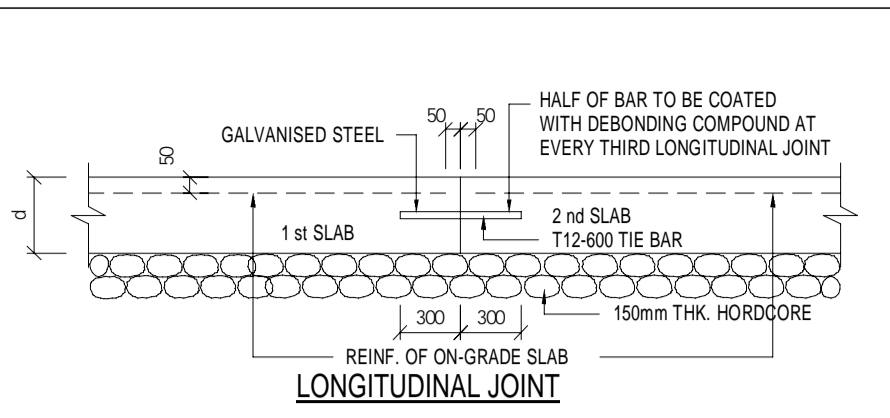
IMPOSED LOADING (KPa)	d	REINFORCEMENT			CONC. MIX
		A	B	C (BS 4483 MESH)	
UP TO 5	150	T10-150	T10-150	A142	GRADE 30D/20
>5 TO 25	250	T12-150	T10-250	B283	GRADE 30D/20



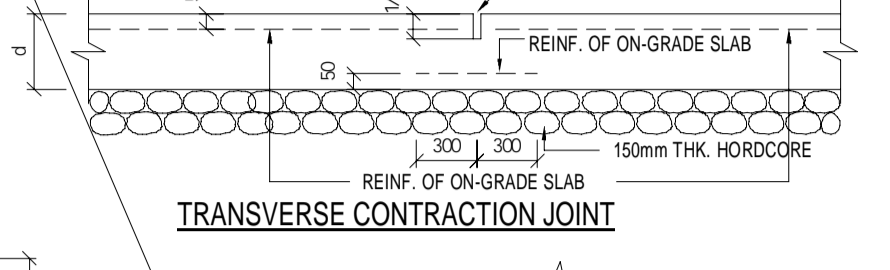
TYPICAL DETAIL OF ON-GRADE SLAB



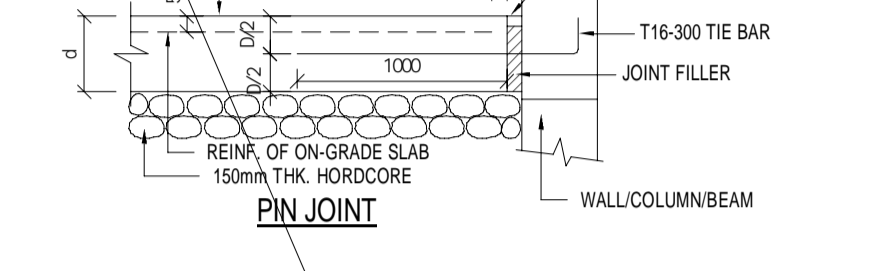
DETAIL FOR DIFFERENT LEVEL OF ON-GRADE SLAB



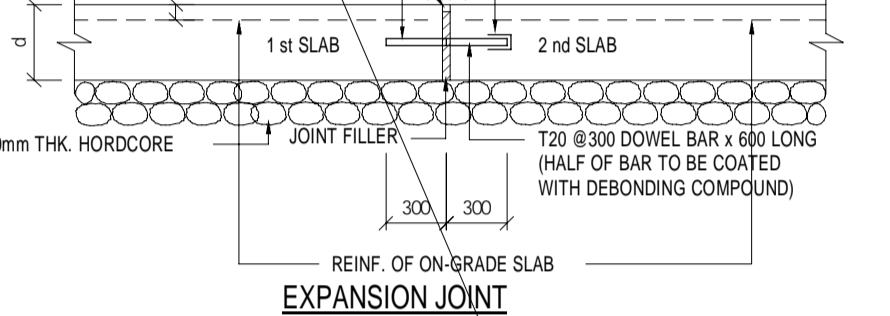
LONGITUDINAL JOINT



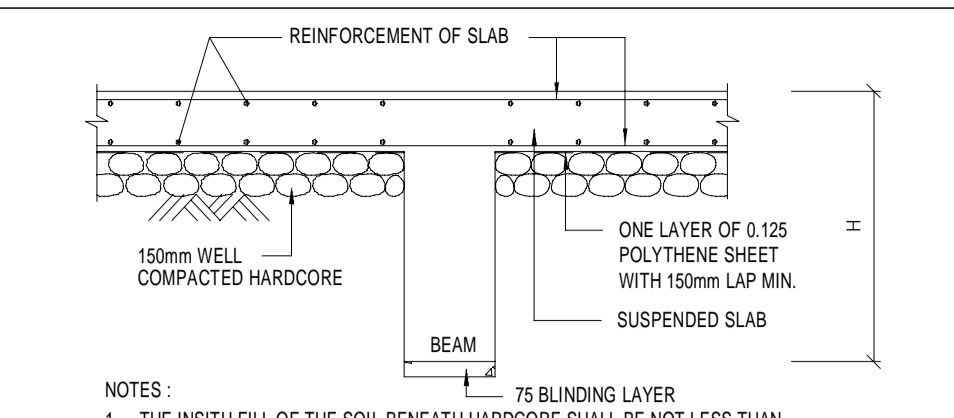
TRANSVERSE CONTRACTION JOINT



PIN JOINT

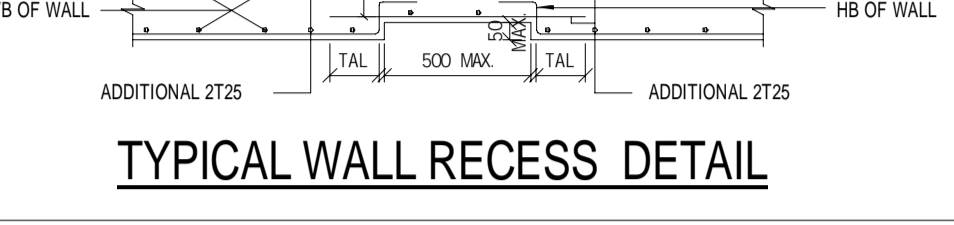


EXPANSION JOINT

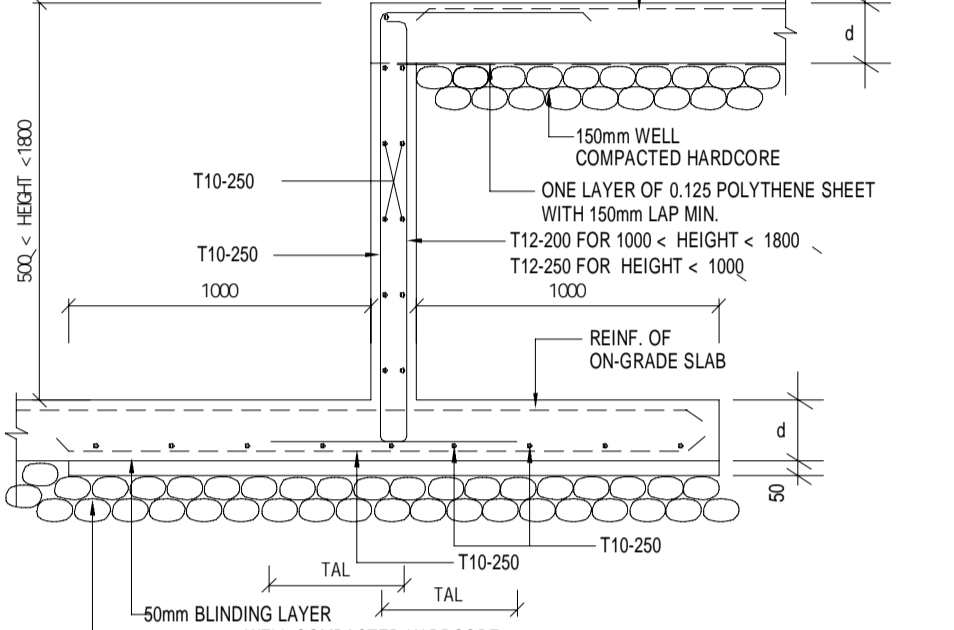


TYPICAL DETAIL OF SUSPENDED GRD. SLAB

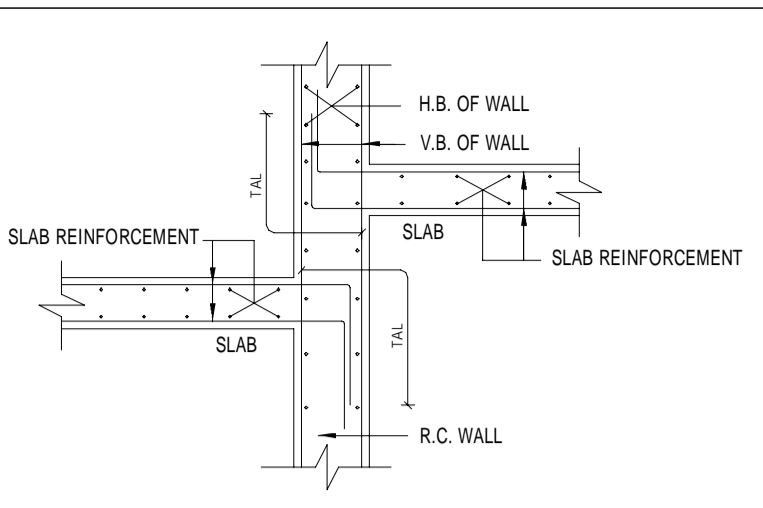
NOTES:
1. THE INSITU FILL OF THE SOIL BENEATH HARDCORE SHALL BE NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY.



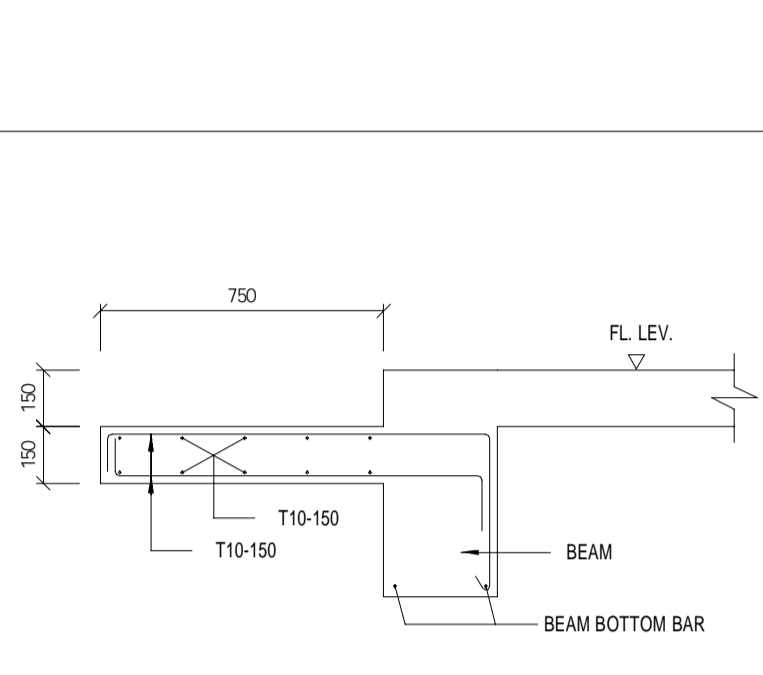
TYPICAL WALL RECESS DETAIL



TYPICAL DETAIL OF TOE WALL (FOR DIFFERENT LEVEL OF ON-GRADE SLAB)

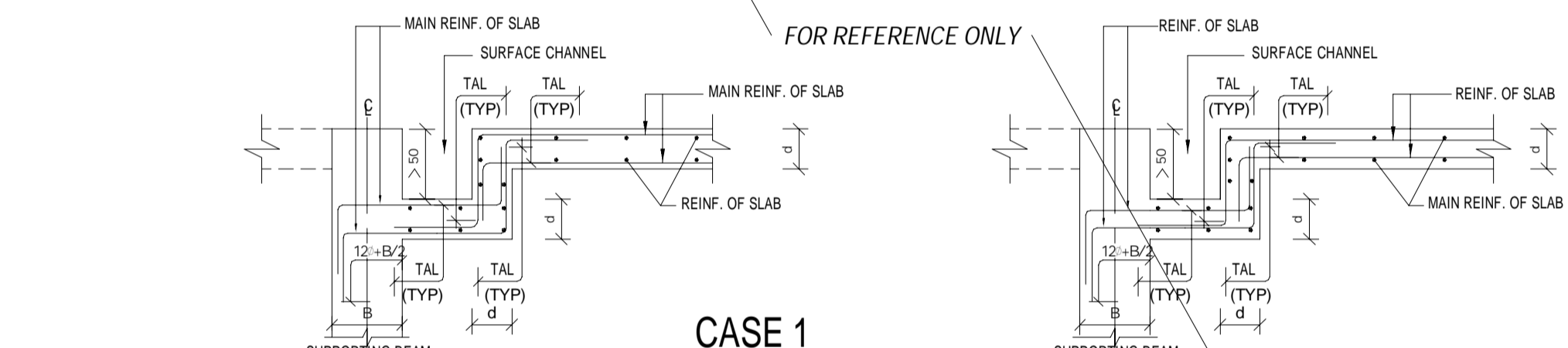


TYPICAL DETAIL FOR SLAB AT DIFFERENT LEVEL

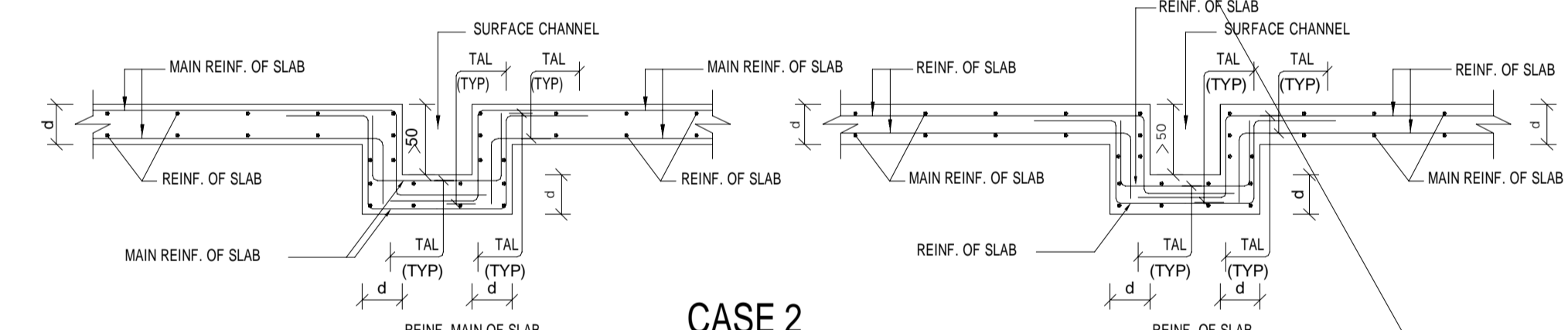


TYPICAL DETAIL FOR SUNSHADING

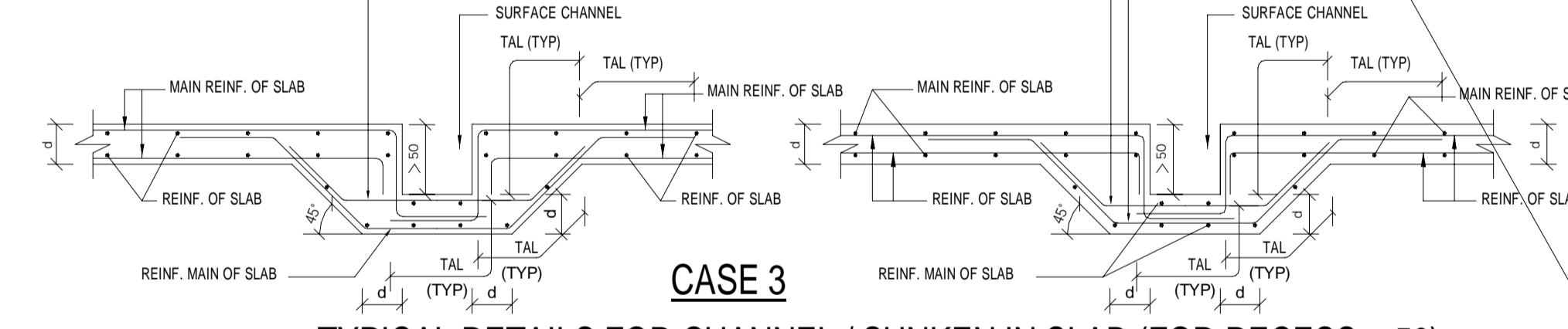
NOTE: LOCATION REFER TO ARCH. DRAWING.
ULTIMATE BENDING MOMENT AT FLOOR LEVEL = 65kNm/m



CASE 1



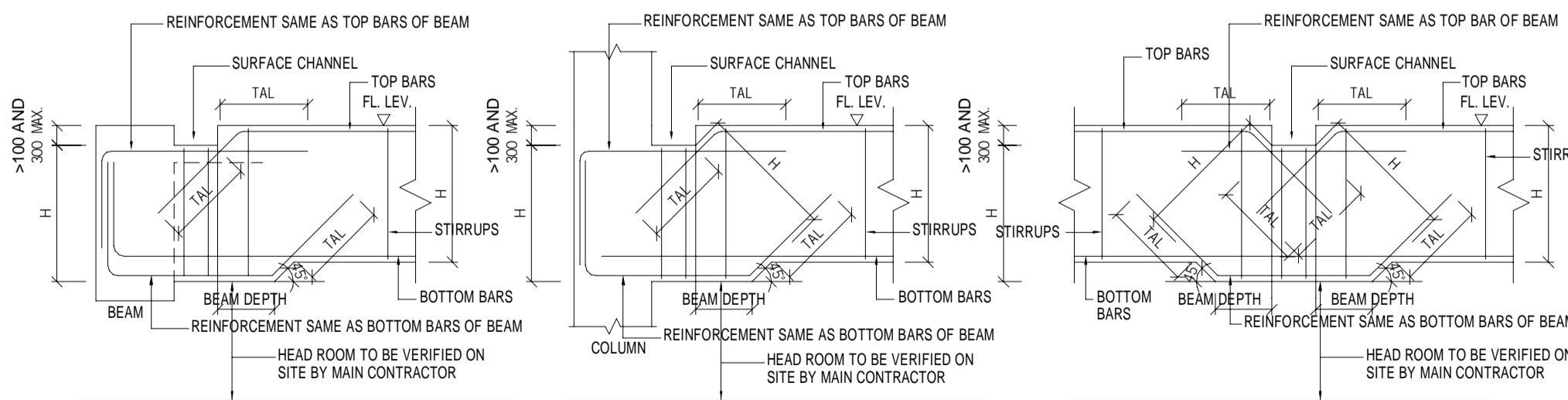
CASE 2



CASE 3

TYPICAL DETAILS FOR CHANNEL / SUNKEN IN SLAB (FOR RECESS > 50)

NOTE: 1. ALL DIMENSION & LOCATION OF SURFACE CHANNEL REFER TO ARCHITECTURAL DRAWINGS SHOULD BE VERIFIED WITH CONTRACTOR AND APPROVED BY ENGINEER.
2. d = THICKNESS OF SLAB.



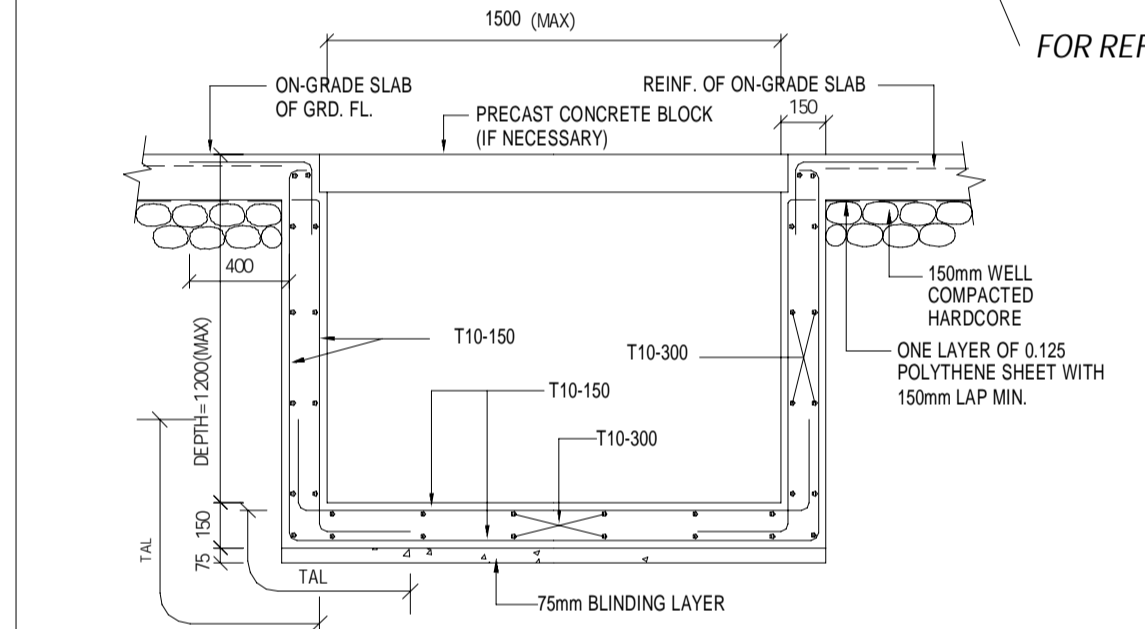
CASE 1

CASE 2

CASE 3

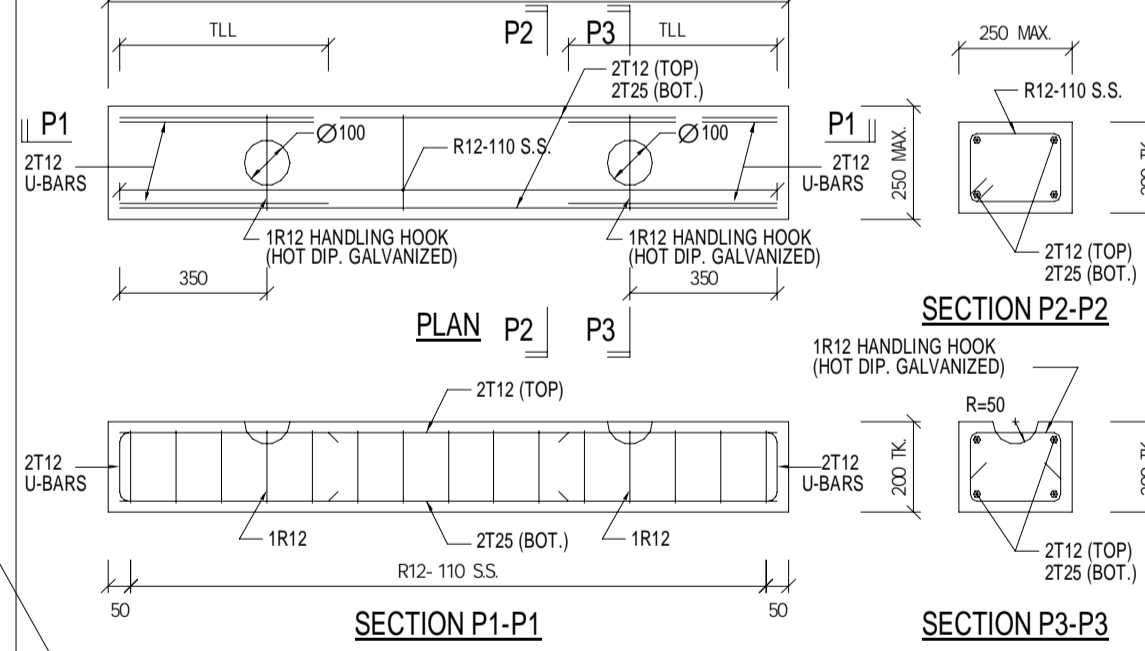
TYPICAL DETAILS FOR CHANNEL OVER BEAM (FOR RECESS > 100)

NOTE: 1. ALL DIMENSION & LOCATION OF SURFACE CHANNEL REFER TO ARCHITECTURAL DRAWINGS SHOULD BE VERIFIED WITH CONTRACTOR AND APPROVED BY ENGINEER.
2. H = DEPTH OF BEAM.



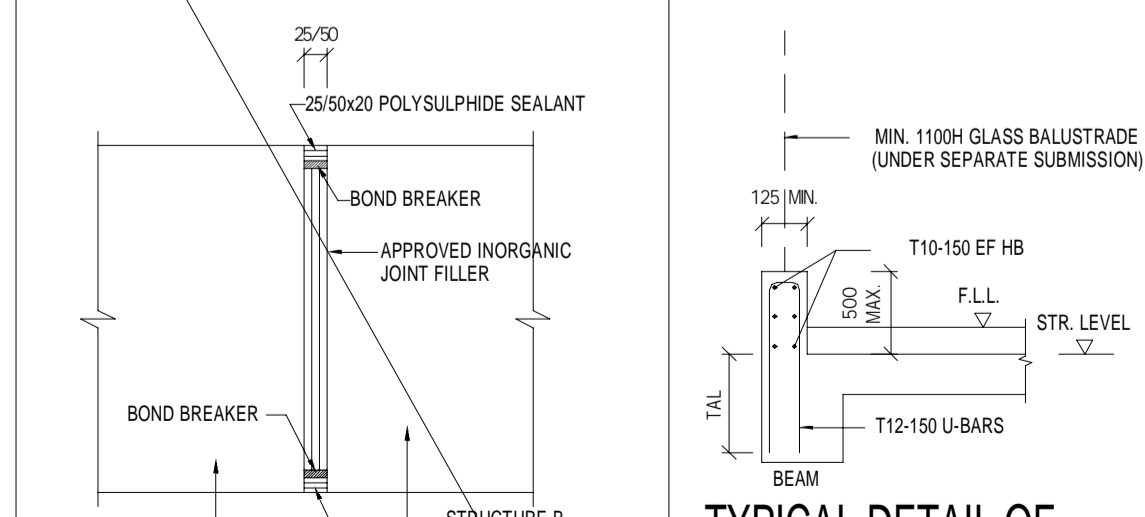
DETAIL OF PIPE TRENCH/CABLE TRENCH/ DRAW PIT (ON-GRADE)

NOTE: FOR WIDTH/LENGTH & DEPTH REFER TO ARCH. AND M.E. DRAWING.

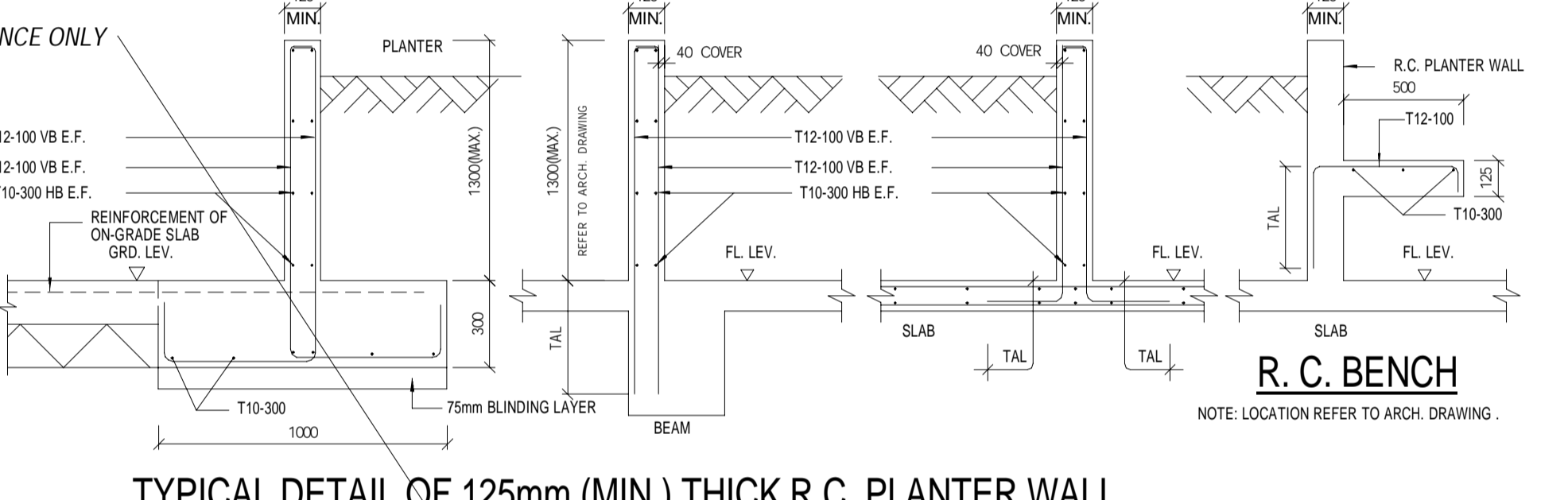


TYPICAL DETAIL OF PRECAST R.C. CONC. BLOCK

NOTES: 1. CONC. MIX TO BE GRADE 30D/20 & CONC. COVER TO BE 40mm.
2. IMPOSED LOAD = H.A. LOADING.
3. RECESS & DETAILS FOR THE HANDLING HOOKS AS SHOWN ABOVE ARE FOR REFERENCE ONLY. CONTRACTOR IS RESPONSIBLE TO VERIFY THEM WITH STATUTORY REQUIREMENT TO GET APPROVAL FROM APRISE.

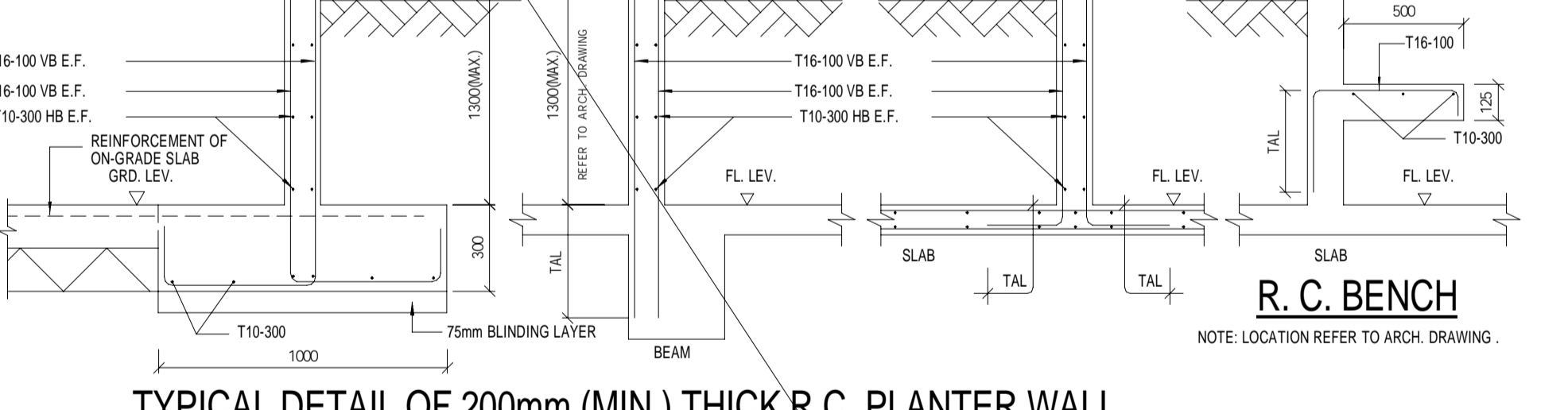


DETAIL OF MOVEMENT JOINT (REFER TO ARCHITECTURAL DRAWING FOR DETAIL)



TYPICAL DETAIL OF 125mm (MIN.) THICK R.C. PLANTER WALL

NOTE: LOCATION REFER TO ARCH. DRAWING APPROVED BY ENGINEER.

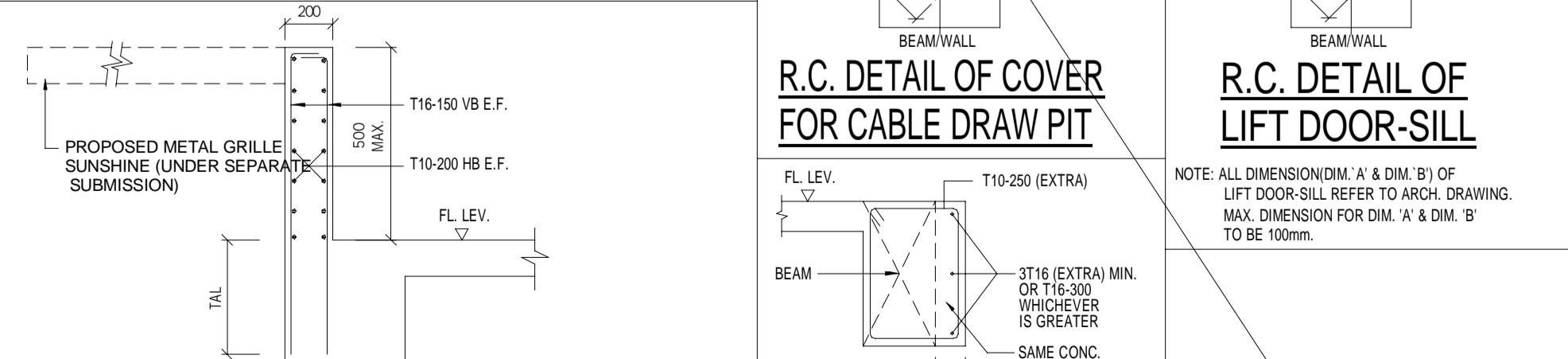


TYPICAL DETAIL OF 200mm (MIN.) THICK R.C. PLANTER WALL

NOTE: LOCATION REFER TO ARCH. DRAWING APPROVED BY ENGINEER.

POST SCHEDULE

POST MARK	DIMENSION	VERTICAL BAR	LINKS
P1	300x400	8T20	T10-175
P2	300x400	8T20	T10-175



TYPICAL DETAIL OF R.C. WALL FOR SKYLIGHT METAL GRILLE SUNSHADE

NOTE: LOCATION REFER TO ARCH. DRAWING.
ULTIMATE BENDING MOMENT AT FLOOR LEVEL = 65 kNm/m

BD REF :	
BIM REF :	
REV	DATE
PROJECT	CIC SAMPLE PROJECT
DRAWING TITLE	Typical Detail 4
SCALE	
DRAWING NO.	S015
REV. NO.	
SOURCE	---
	90mm (W) x 40mm (H) space for COMPANY LOGO
	90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop
	BD'S OFFICAL USE
	90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)

BD REF :

BIM REF :

REV	DATE	AMENDMENT

PROJECT
CIC SAMPLE PROJECT

DRAWING TITLE
STEEL STRUCTURE FLOOR PLAN

SCALE As indicated@A1

DRAWING NO. R002 REV. NO.

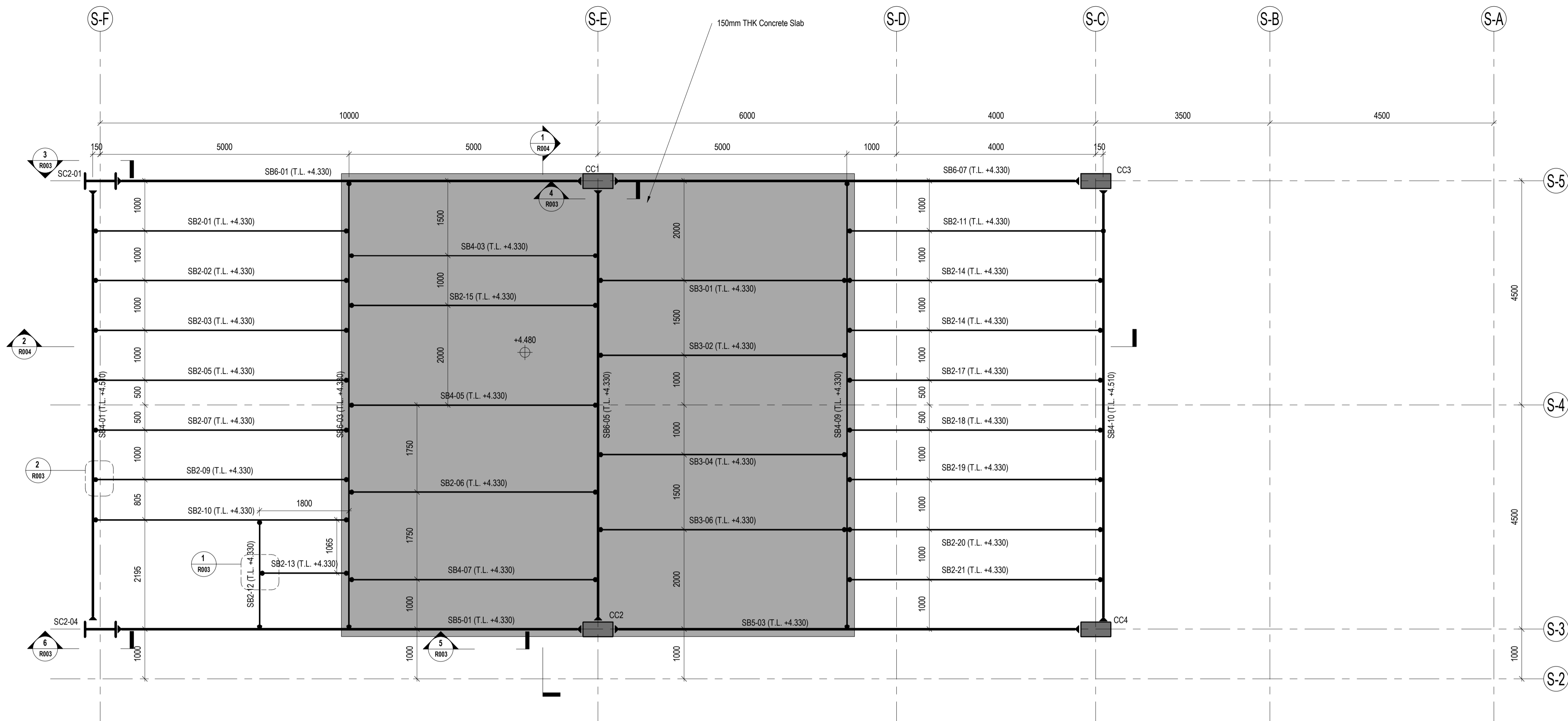
SOURCE ---

90mm (W) x 40mm (H) space
for COMPANY LOGO

90mm (W) x 60mm (H) space
for AP/RSE/RGE's
signature/ and stamp chop

BD's OFFICIAL USE

90mm (W) x 150mm (H) space
for BD's approval stamp /
certification of copies of
approved plans
(PNAP ADM-10 APP A)



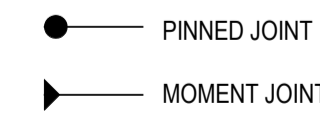
1 Level 2 Framing Plan
1 : 50

STEEL BEAM SCHEDULE		
TYPE MARK	SIZE	STEEL GRADE
SB2	UB152x89x16	S355
SB3	UB203x102x23	S355
SB4	UB356x171x57	S355
SB5	UB457x191x74	S355
SB6	UB533x210x101	S355

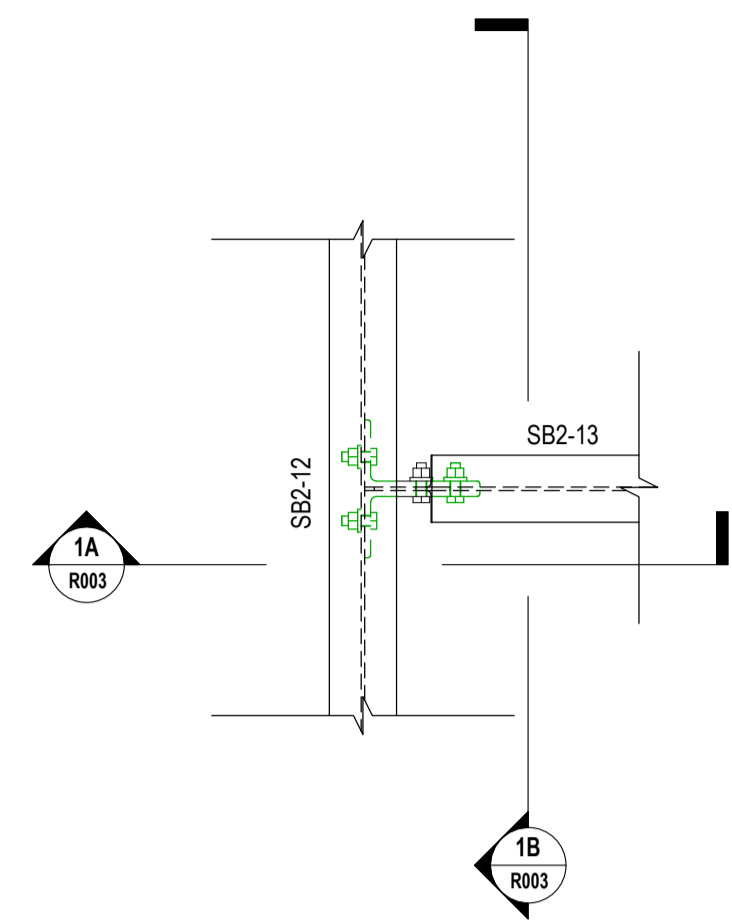
SCHEDULE OF STEEL COLUMN		
MARK	SIZE	STEEL GRADE
SC2	UB610x305x179	S355

SCHEDULE OF CONCRETE COLUMN	
Mark	SIZE
CC1	300 x 600
CC2	300 x 600
CC3	300 x 600
CC4	300 x 600

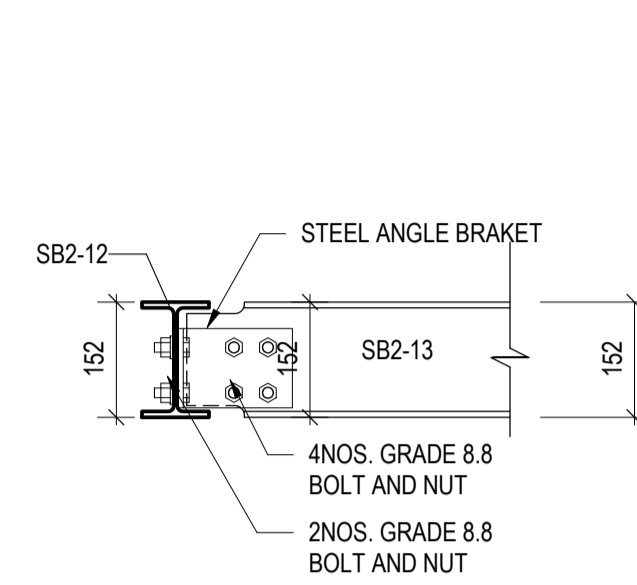
LEGEND



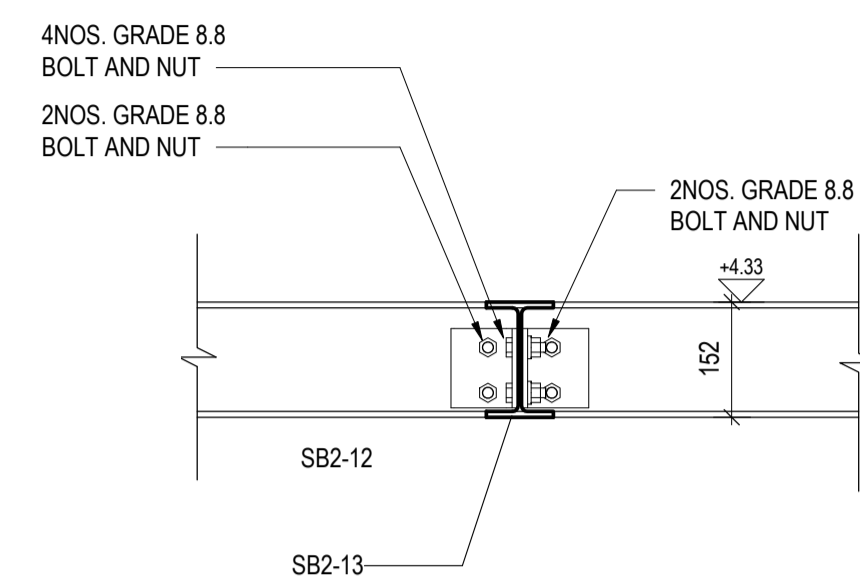
CONCRETE GRADE OF ALL CONCRETE COLUMNS TO BE C40



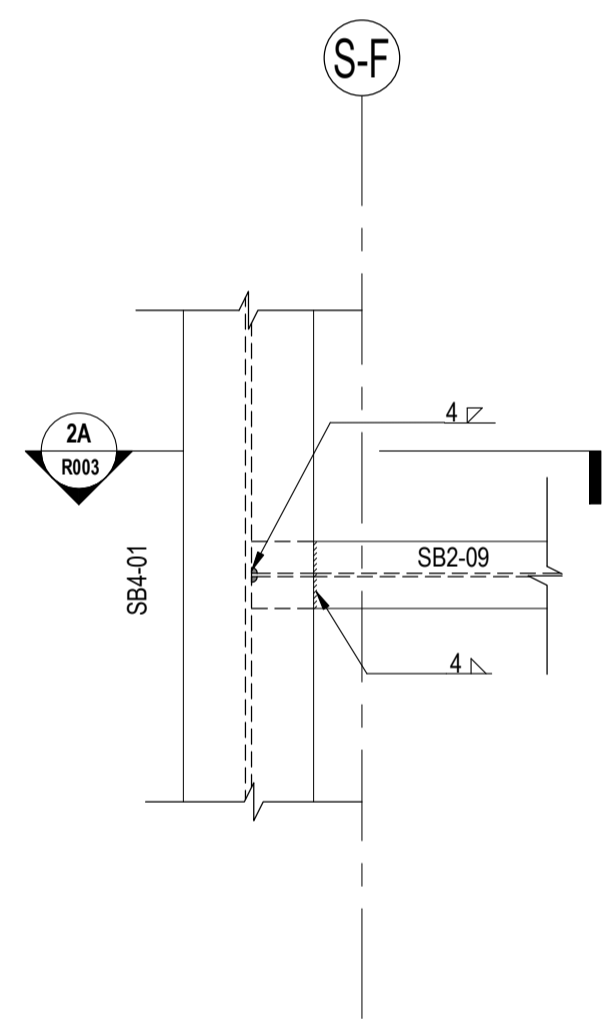
1 CONNECTION DETAIL FOR STEEL BEAM
1 : 10



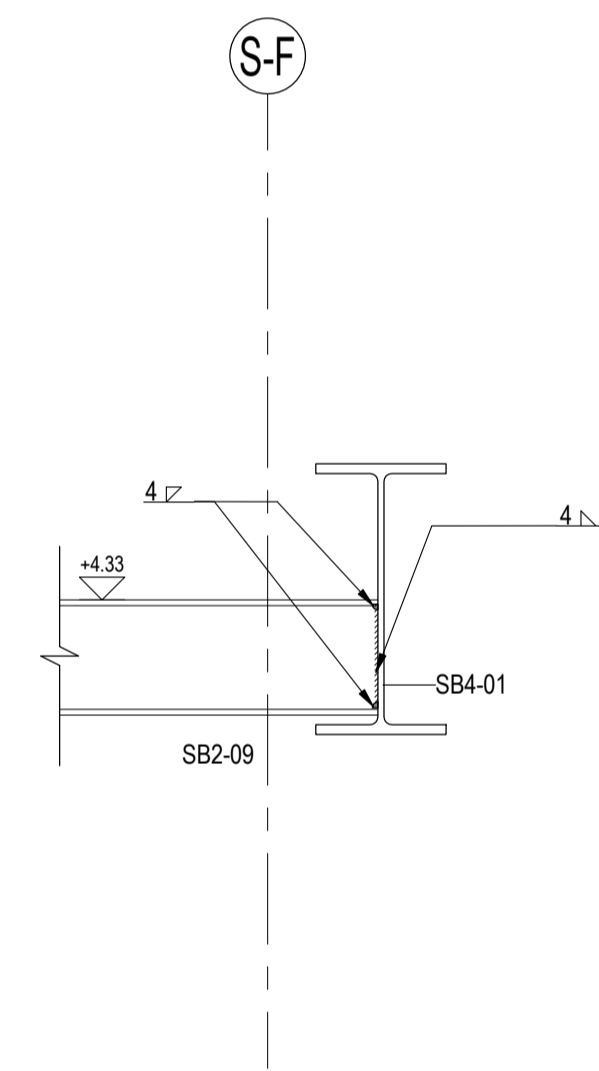
1A Section 1A
1 : 10



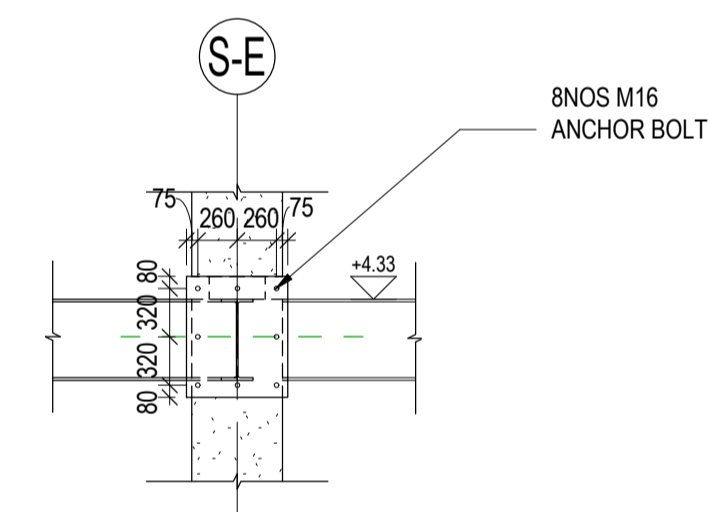
1B Section 1B
1 : 10



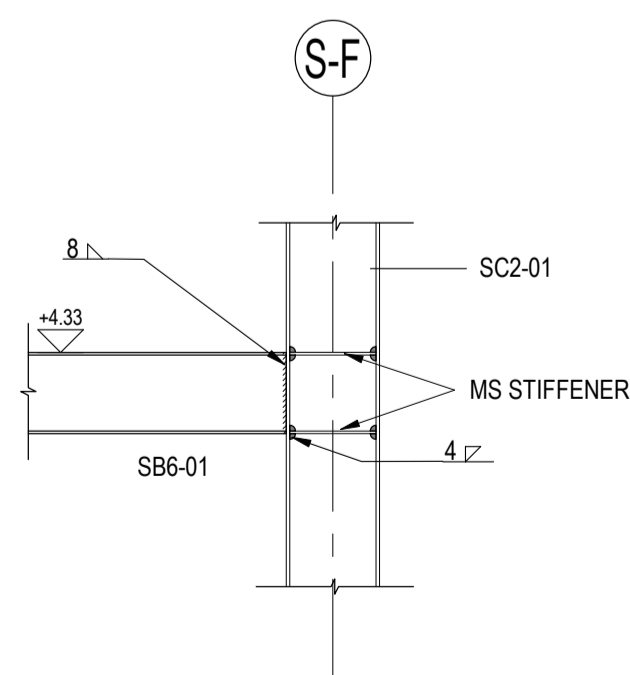
2 CONNECTION DETAIL FOR STEEL BEAM (WELDING)
1 : 10



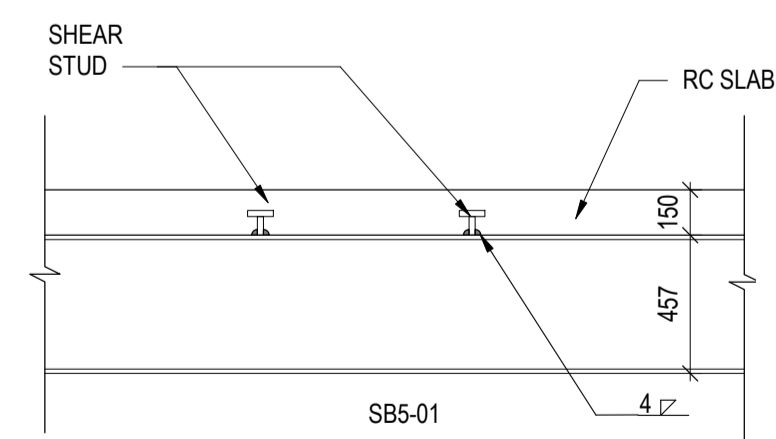
2A Section 2A
1 : 10



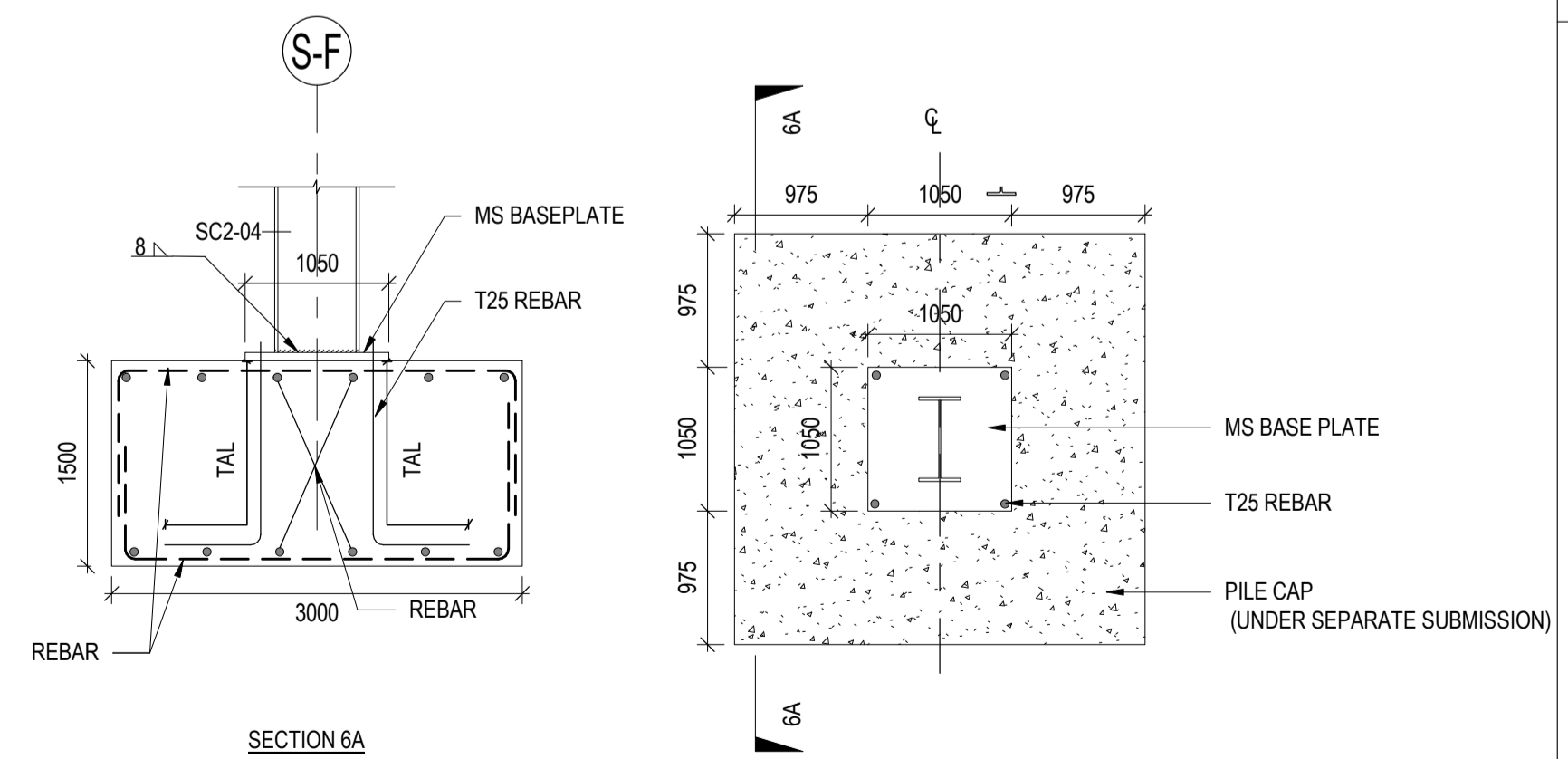
4 CONNECTION DETAIL FOR CONCRETE COLUMNS AND STEEL BEAM
1 : 50



3 CONNECTION DETAIL FOR STEEL COLUMN AND STEEL BEAM
1 : 50



5 CONNECTION DETAIL FOR CONCRETE SLAB AND STEEL BEAM
1 : 25



6 CONNECTION DETAIL FOR STEEL COLUMN AND PILE CAP
1 : 50

BD REF :

BIM REF :

REV	DATE	AMENDMENT

PROJECT
CIC SAMPLE PROJECT

DRAWING TITLE
STEEL STRUCTURE DETAIL

SCALE As indicated@A1

DRAWING NO. R003 REV. NO.

SOURCE ---

90mm (W) x 40mm (H) space
for COMPANY LOGO

90mm (W) x 60mm (H) space
for AP/RSE/RGE's
signature/ and stamp chop

BD's OFFICIAL USE

90mm (W) x 150mm (H) space
for BD's approval stamp /
certification of copies of
approved plans
(PNAP ADM-10 APP A)

BD REF :
BIM REF :

REV	DATE	AMENDMENT

PROJECT
CIC SAMPLE PROJECT

DRAWING TITLE
STEEL STRUCTURAL SECTIONS

SCALE AS SHOWN@A1

DRAWING NO. R004 REV. NO.

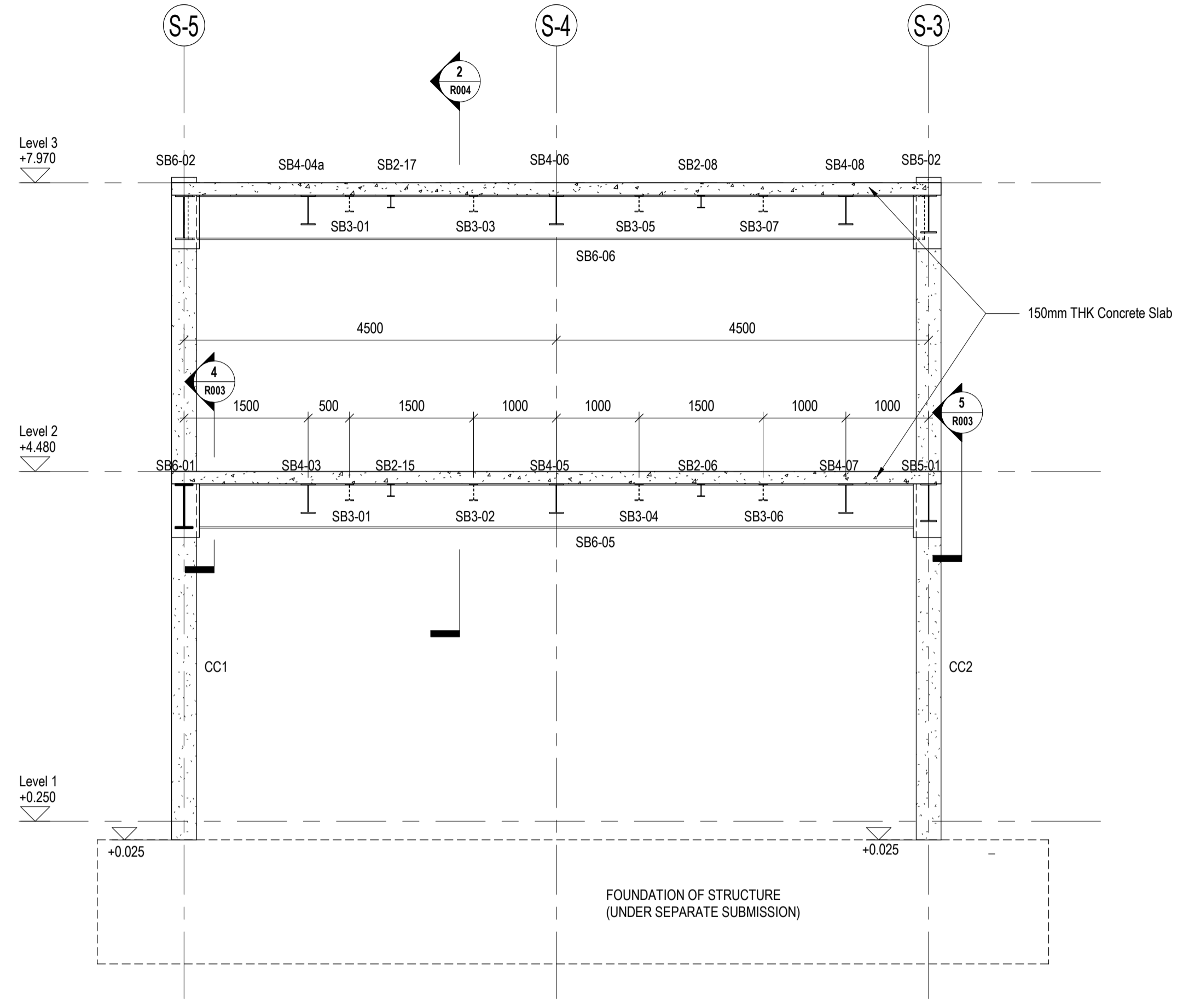
SOURCE ---

90mm (W) x 40mm (H) space
for COMPANY LOGO

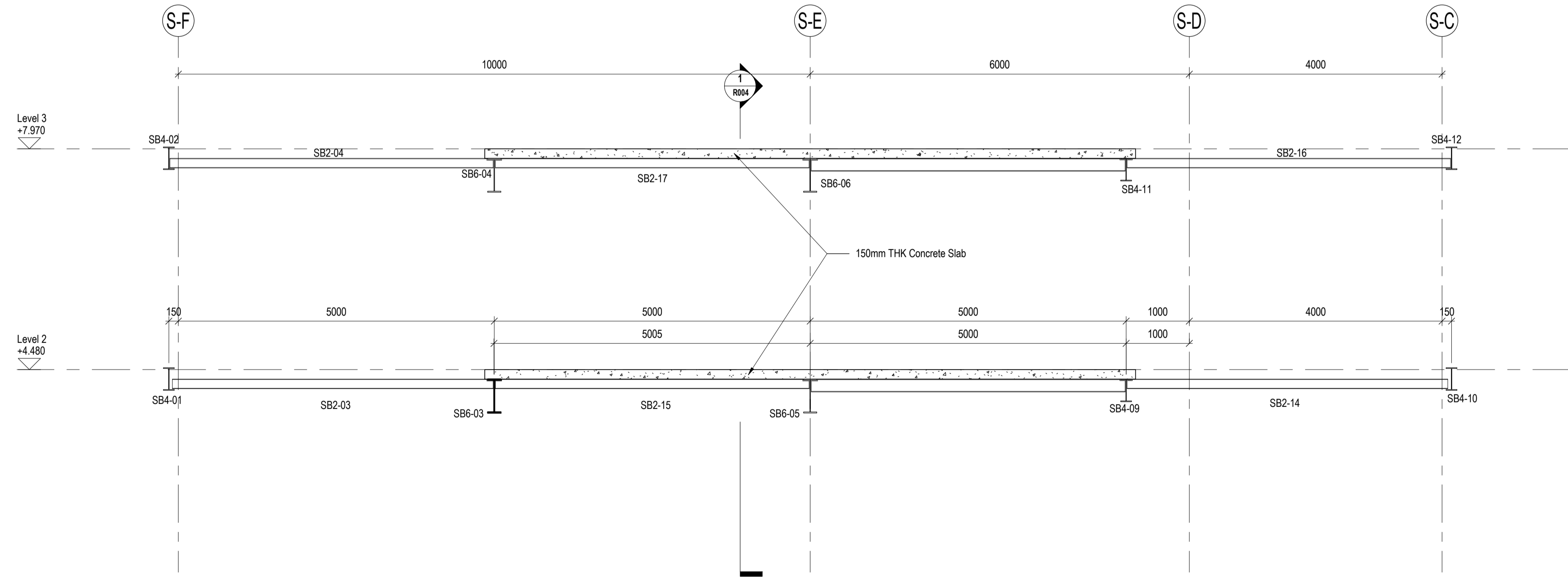
90mm (W) x 60mm (H) space
for AP/RSE/RGE's
signature/ and stamp chop

BD's OFFICIAL USE

90mm (W) x 150mm (H) space
for BD's approval stamp /
certification of copies of
approved plans
(PNAP ADM-10 APP A)



1 Section 1
1 : 50



2 Section 2
1 : 50