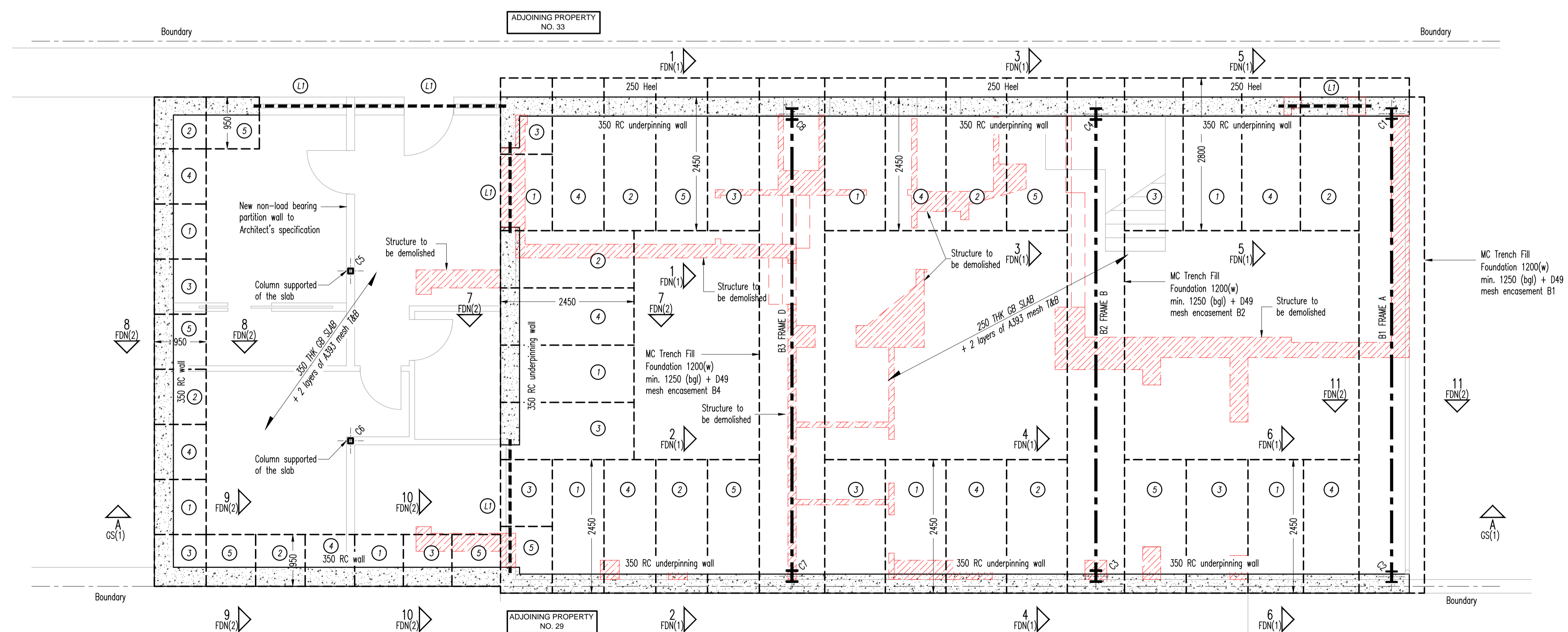


GROUND FLOOR PLAN
Scale: 1:50 @ A1



LOWER GROUND FLOOR PLAN
Scale: 1:50 @ A1

STEELWORK SCHEDULE			N.B. All steelwork from TATA Steel Advance Range. All steel grade S275 U.K.0.
Ref No	Section Size	Comments	
STEEL BEAMS			
B1	254 UKC 167		
B2	305 UKC 240		
B3	203 UKC 46		
B101	203 UKC 60		
B102	254 UKC 132		
B103	305 UKC 240		
B104	203 UKC 60		
B105	203 UKC 71		
B106	200x120x12.5 RHS		
B107	305 UKC 240		
B108	356x406x287 UKC		+ 10 Thk Steel Btm Plate
B109	203 UKC 52		
B110	203 UKC 60		
B111	203 UKC 60		
B112	203 UKC 46		
B113	203 UKC 46		+ 10 Thk Steel Top Plate
B114	203 UKC 46		+ 10 Thk Steel Top Plate
B201	203 UKC 60		
B202	203 UKC 52		
B203	203 UKC 71		
B204	203 UKC 71		
B205	152 UKC 37		
B206	152 UKC 37		
B207	203 UKC 52		
B208	203 UKC 60		
B209	203 UKC 60		
B210	203 UKC 60		
B211	152 UKC 37		
B212	203 UKC 60		
STEEL COLUMNS			
C1	203 UKC 46		
C2	203 UKC 46		
C3	203 UKC 86		
C4	203 UKC 86		
C5	100 SHS 10		
C6	100 SHS 10		
C7	203 UKC 86		
C8	203 UKC 86		
C9	203 UKC 46		
C10	203 UKC 46		

RC CONCRETE SCHEDULE		
Ref No	Section Size	Comments
RC BEAMS		
RCB1	250(w)x400(dp)	3 No 32MM # bars top & btm and H10 @ 175MM c/c shear links
RCB2	250(w)x400(dp)	3 No 32MM # bars top & btm and H10 @ 175MM c/c shear links
RCB3	250(w)x400(dp)	3 No 32MM # bars top & btm and H10 @ 175MM c/c shear links
RCB4	250(w)x400(dp)	3 No 32MM # bars top & btm and H10 @ 175MM c/c shear links
RCB5	250(w)x400(dp)	3 No 32MM # bars top & btm and H10 @ 175MM c/c shear links

LINTEL SCHEDULE			N.B. Lintels to be installed to manufacturers specification. Min. bearing 150mm each end.
Ref No	Section Size	Comments	
L1	CATNIC CN81C	Cotnic lintel	

TIMBER SCHEDULE			N.B. All timber to be C24 Grade U.K.0.
Ref No	Section Size	Comments	
FLOOR/FLAT ROOF JOISTS			
J1	200x50 @ 400 c/c	full depth perp. noggins (*)	
F1	200x50 @ 400 c/c	full depth perp. noggins (*)	

(*)noggin to be installed using BAT right angle brackets to req. depth of joist screw fixed as per manufacturers specification, no less than Gauge 10 woodscrews 50 (lg)

PADSTONE SCHEDULE			N.B. Padstones to be installed to manufacturers specification. PREFERRED SUPPLIER SUPREME CONCRETE.
Ref No	Section Size	Comments	
P1	203x102x23 UKB 1.1m lg.	SPREADER BEAM	
P2	215(lg)x102(w)x150(dp)	PLAIN PRECAST	
P3	440(lg)x102(w)x150(dp)	PLAIN PRECAST	
P4	203x102x23 UKB 1.5m lg.	SPREADER BEAM	
P5	300(lg)x100(w) C20	U/PIN EXTENSION CAST IN SITU	

DRAWING SHOWING STRUCTURE UNDER

FOR GENERAL NOTES REFER TO DWGS S-GEN(SERIES) DO NOT SCALE FROM THESE DRAWINGS ALL DIMENSIONS TO BE CHECKED ON SITE PRIOR TO ORDERING MATERIALS OR STEELWORK

REV	DESCRIPTION	BY	APP.	DATE
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STRUCTURAL DRAWING

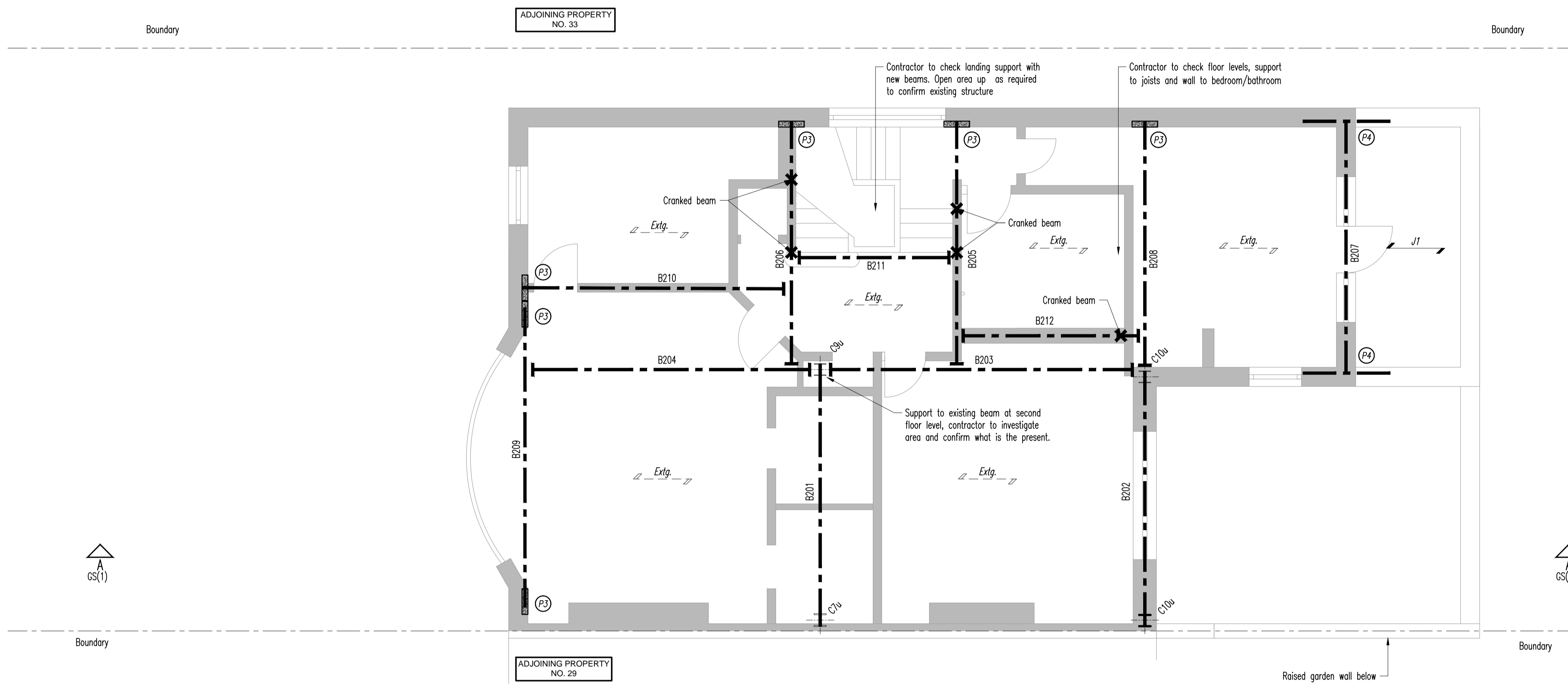
CLIENT

PROJECT
31 FERNCROFT AVENUE
LONDON, NW3

DRAWING TITLE
LOWER GROUND & GROUND FLOOR PLANS

DATE	SCALE	DESIGN	DNWL	APP.	REV.
28.09.20	1:50@A1	TT	TT	TT	

JOB NO: 2030
DRAWING NO: S-GA(0)



FIRST FLOOR PLAN
Scale: 1:50 @ A1

STEELWORK SCHEDULE			N.B All steelwork from TATA Steel Advance Range. All steel grade S275 UNLO
Ref No	Section Size	Comments	
STEEL BEAMS			
B1	254 UKC 167		
B2	305 UKC 240		
B3	203 UKC 46		
B101	203 UKC 60		
B102	254 UKC 132		
B103	305 UKC 240		
B104	203 UKC 60		
B105	203 UKC 71		
B106	200x120x12.5 RHS		
B107	305 UKC 240		
B108	356x406x287 UKC		+ 10 Thk Steel Btm Plate
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B110	203 UKC 60		
B111	203 UKC 60		
B112	203 UKC 46		
B113	203 UKC 46		+ 10 Thk Steel Top Plate
B114	203 UKC 46		+ 10 Thk Steel Top Plate
B201	203 UKC 60		
B202	203 UKC 52		
B203	203 UKC 71		
B204	203 UKC 71		
B205	152 UKC 37		
B206	152 UKC 37		
B207	203 UKC 52		
B208	203 UKC 60		
B209	203 UKC 60		
B210	203 UKC 60		
B211	152 UKC 37		
B212	203 UKC 60		
STEEL COLUMNS			
C1	203 UKC 46		
C2	203 UKC 46		
C3	203 UKC 86		
C4	203 UKC 86		
C5	100 SHS 10		
C6	100 SHS 10		
C7	203 UKC 86		
C8	203 UKC 86		
C9	203 UKC 46		
C10	203 UKC 46		

RC CONCRETE SCHEDULE		
Ref No	Section Size	Comments
RC BEAMS		
RCB1	250(w)x400(dp)	3 No 32MM ϕ bars top & btm and H10 @ 175MM c/c shear links
RCB2	250(w)x400(dp)	3 No 32MM ϕ bars top & btm and H10 @ 175MM c/c shear links
RCB3	250(w)x400(dp)	3 No 32MM ϕ bars top & btm and H10 @ 175MM c/c shear links
RCB4	250(w)x400(dp)	3 No 32MM ϕ bars top & btm and H10 @ 175MM c/c shear links
RCB5	250(w)x400(dp)	3 No 32MM ϕ bars top & btm and H10 @ 175MM c/c shear links

LINTEL SCHEDULE			N.B Lintels to be installed to manufacturers specification Min. bearing 150mm each end
Ref No	Section Size	Comments	
L1	CATNIC CN81C	Catic lintel	

TIMBER SCHEDULE			N.B All timber to be C24 Grade UNLO
Ref No	Section Size	Comments	
FLOOR/FLAT ROOF JOISTS			
J1	200x50 @ 400 c/c	full depth perp. noggins (*)	
F1	200x50 @ 400 c/c	full depth perp. noggins (*)	

(*)noggins to be installed using BAT right angle brackets to req. depth of joist screw fixed as per manufacturers specification, no less than Gauge 10 woodscrews 50 (lg)

PADSTONE SCHEDULE			N.B Padstones to be installed to manufacturers specification PREFERRED SUPPLIER SUPREME CONCRETE
Ref No	Section Size	Comments	
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P4	203x102x23 UKB 1.5m lg.	SPREADER BEAM	
P5	300(lg)x100(w) C20	U/PIN EXTENSION CAST IN SITU	

DRAWING SHOWING STRUCTURE UNDER
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STRUCTURAL DRAWING

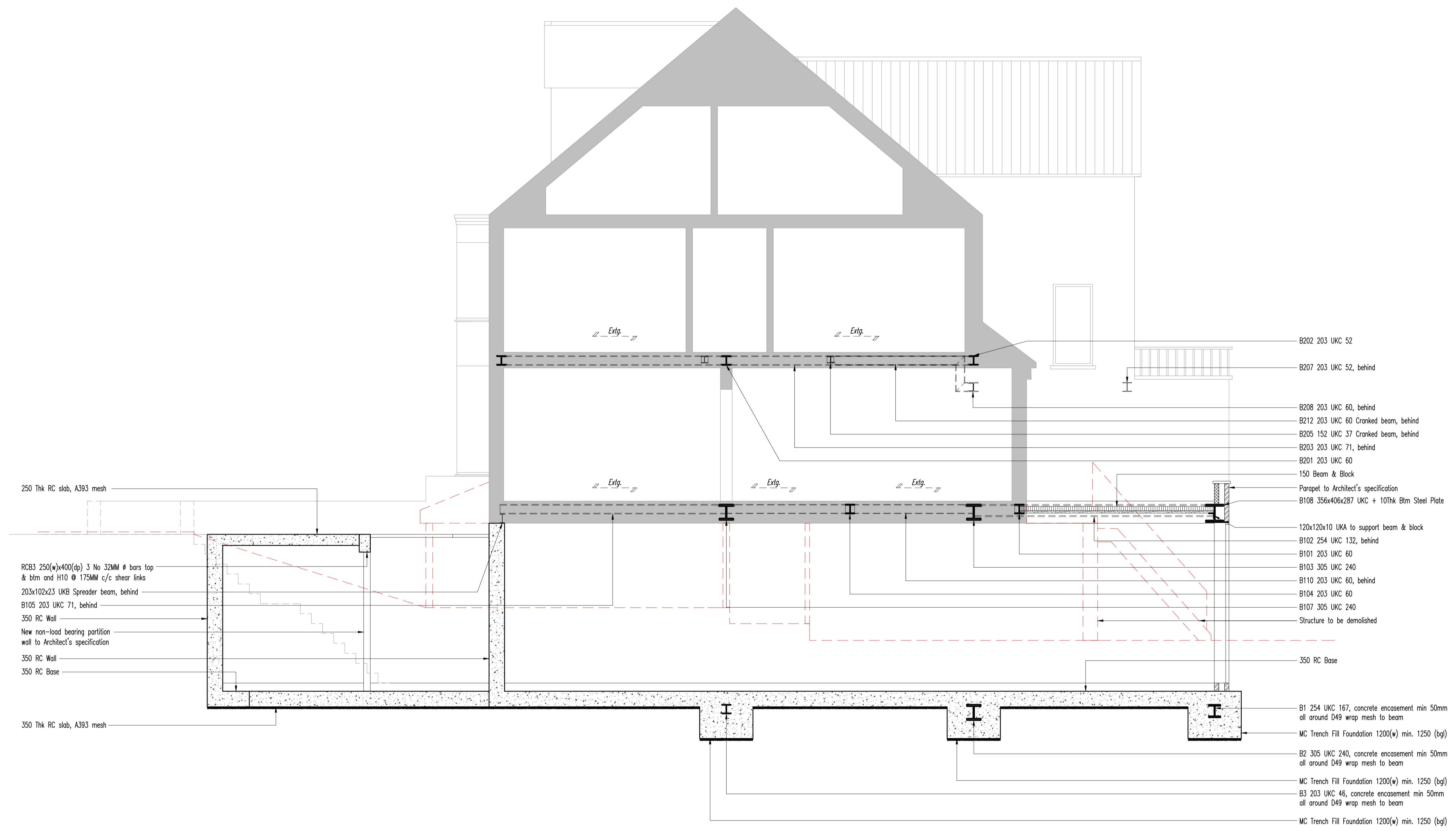
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PROJECT
31 FERNCROFT AVENUE
LONDON, NW3

DRAWING TITLE
FIRST FLOOR PLAN

DATE	SCALE	DESIGN	DNW	APP.	REV.
28.09.20	1:50@A1	TT	TT	TT	

JOB NO: 2030 DRAWING NO: S-GA(1)



250 Thk RC slab, A393 mesh

RCB3 250(w)x400(dp) 3 No 32MM ϕ bars top & btm and H10 @ 175MM c/c shear links

203x102x23 UKB Spreader beam, behind

B105 203 UKC 71, behind

350 RC Wall

New non-load bearing partition wall to Architect's specification

350 RC Wall

350 RC Base

350 Thk RC slab, A393 mesh

B202 203 UKC 52

B207 203 UKC 52, behind

B208 203 UKC 60, behind

B212 203 UKC 60 Cranked beam, behind

B205 152 UKC 37 Cranked beam, behind

B203 203 UKC 71, behind

B201 203 UKC 60

150 Beam & Block

Parapet to Architect's specification

B108 356x406x287 UKC + 10Thk Btm Steel Plate

120x120x10 UKA to support beam & block

B102 254 UKC 132, behind

B101 203 UKC 60

B103 305 UKC 240

B110 203 UKC 60, behind

B104 203 UKC 60

B107 305 UKC 240

Structure to be demolished

350 RC Base

B1 254 UKC 167, concrete encasement min 50mm all around D49 wrap mesh to beam

MC Trench Fill Foundation 1200(w) min. 1250 (lg)

B2 305 UKC 240, concrete encasement min 50mm all around D49 wrap mesh to beam

MC Trench Fill Foundation 1200(w) min. 1250 (lg)

B3 203 UKC 46, concrete encasement min 50mm all around D49 wrap mesh to beam

MC Trench Fill Foundation 1200(w) min. 1250 (lg)

SECTION A-A
Scale: 1:50 @ A1

DRAWING SHOWING STRUCTURE UNDER

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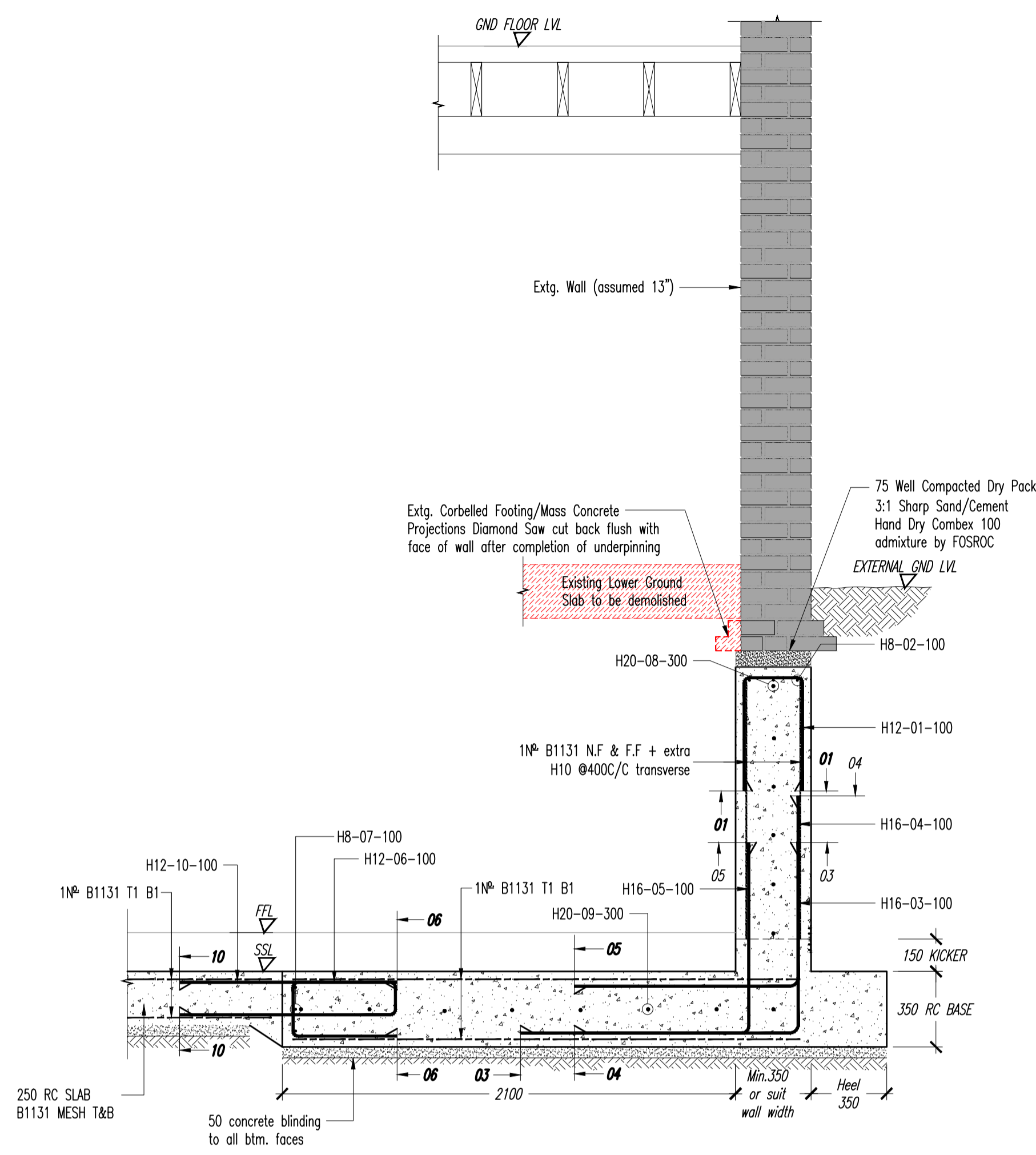
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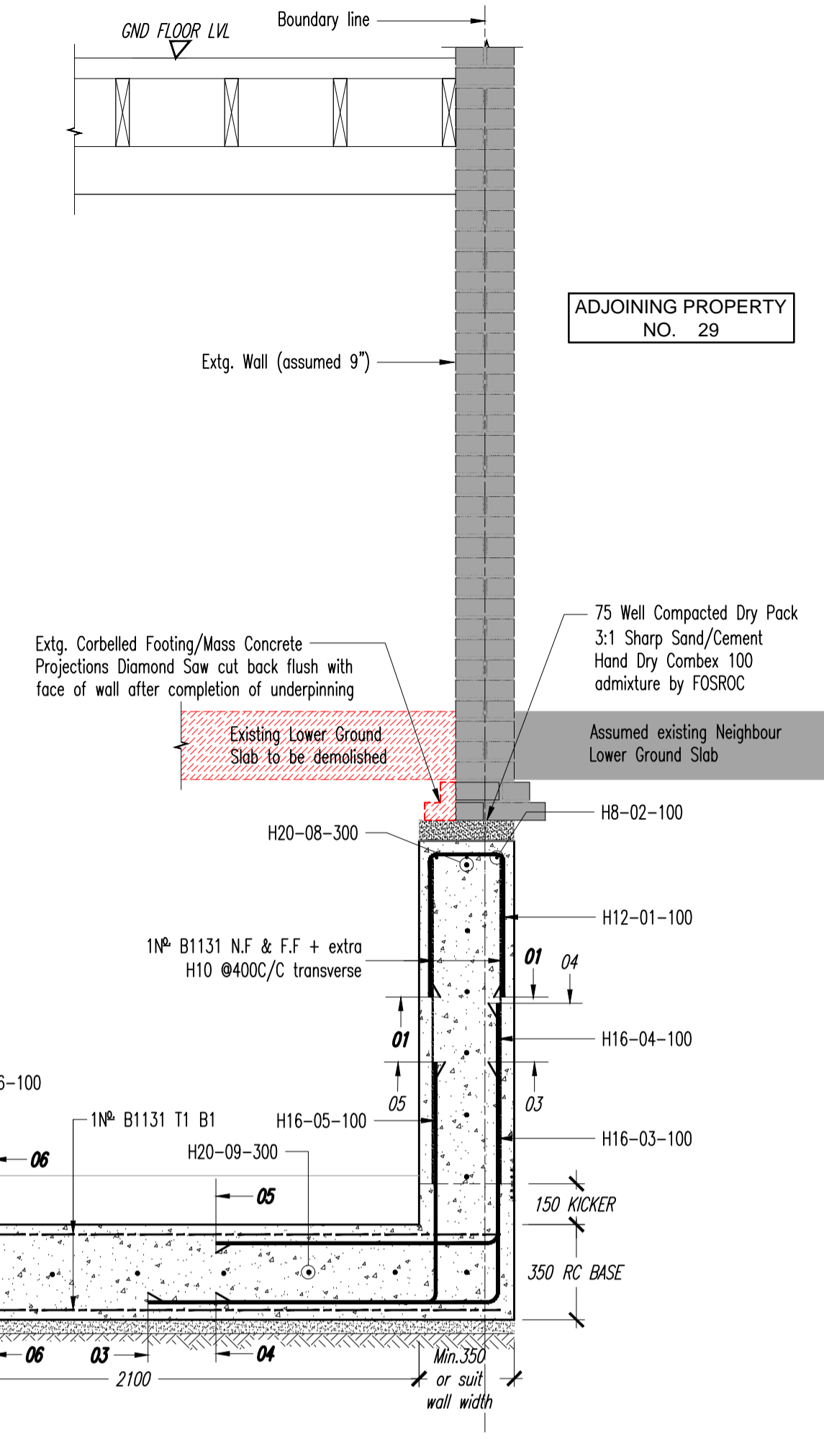
PROJECT
31 FERNCROFT AVENUE
LONDON, NW3

DRAWING TITLE
SECTION A-A

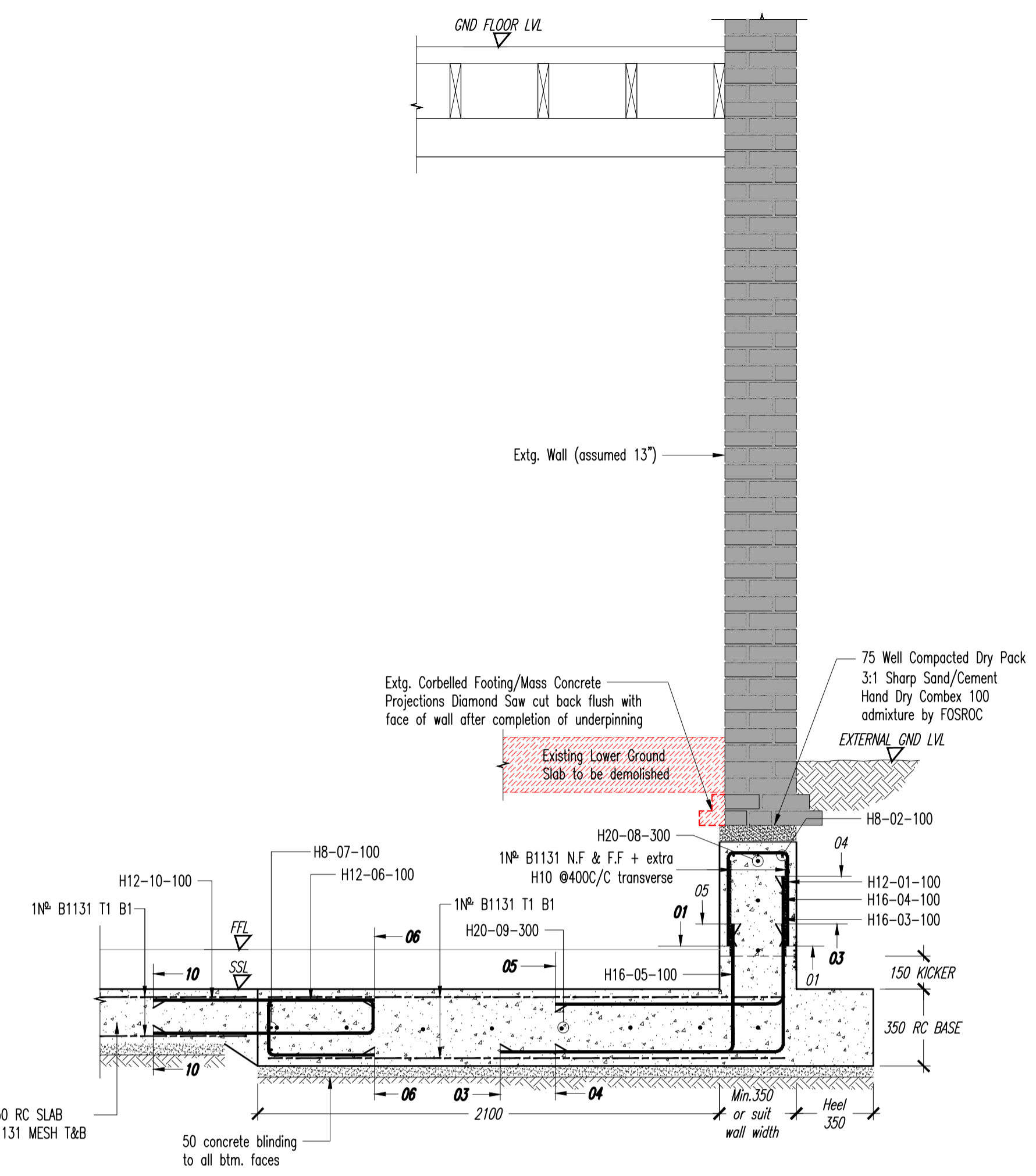
DATE	SCALE	DESIGN	DRAWN	APP.	REV.
28.09.20	1:50@A1	TT	TT	TT	A
JOB N°	DRAWING N°				
2030	S-GS(1)				



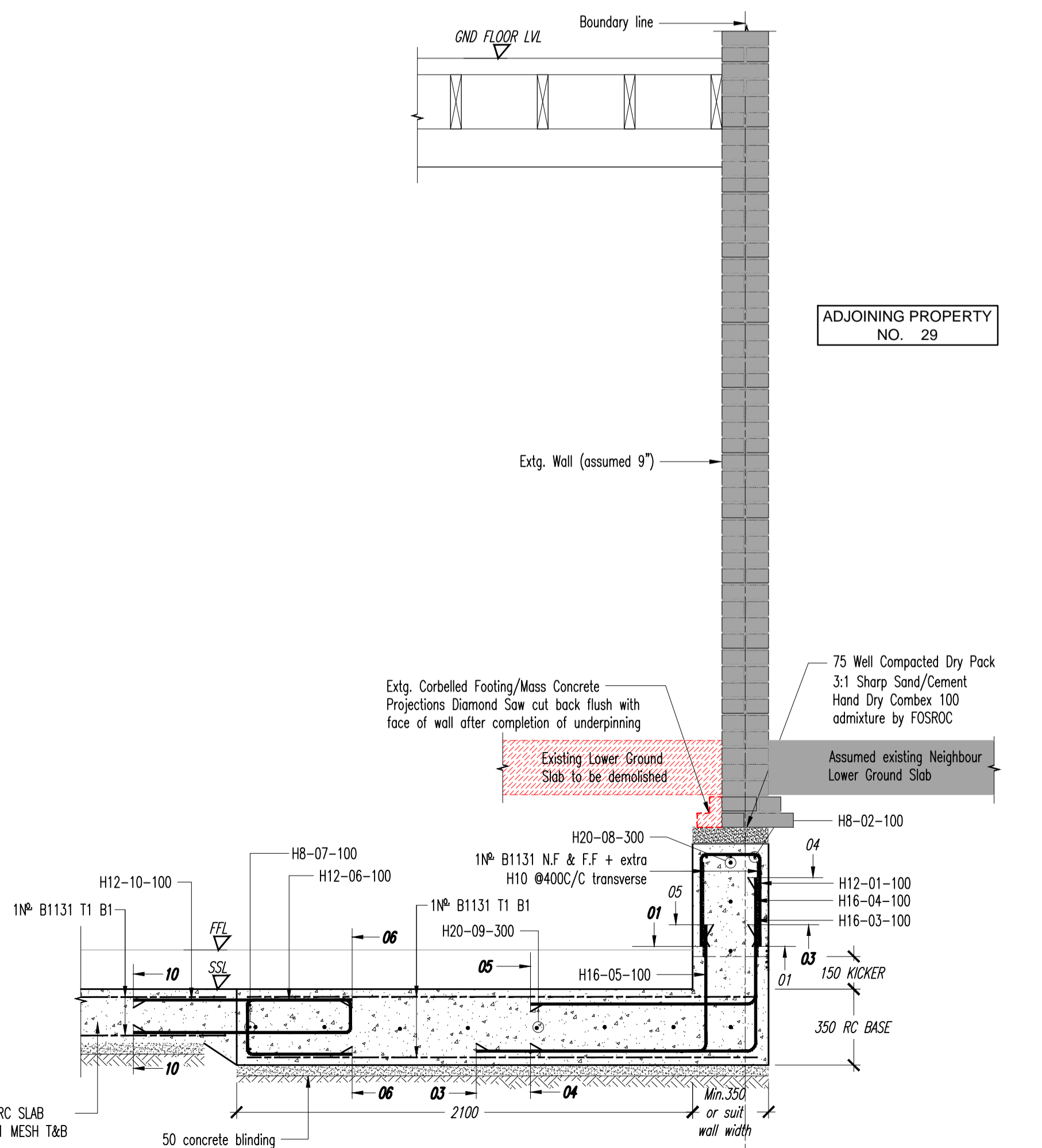
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Scale: 1:20 @ A1



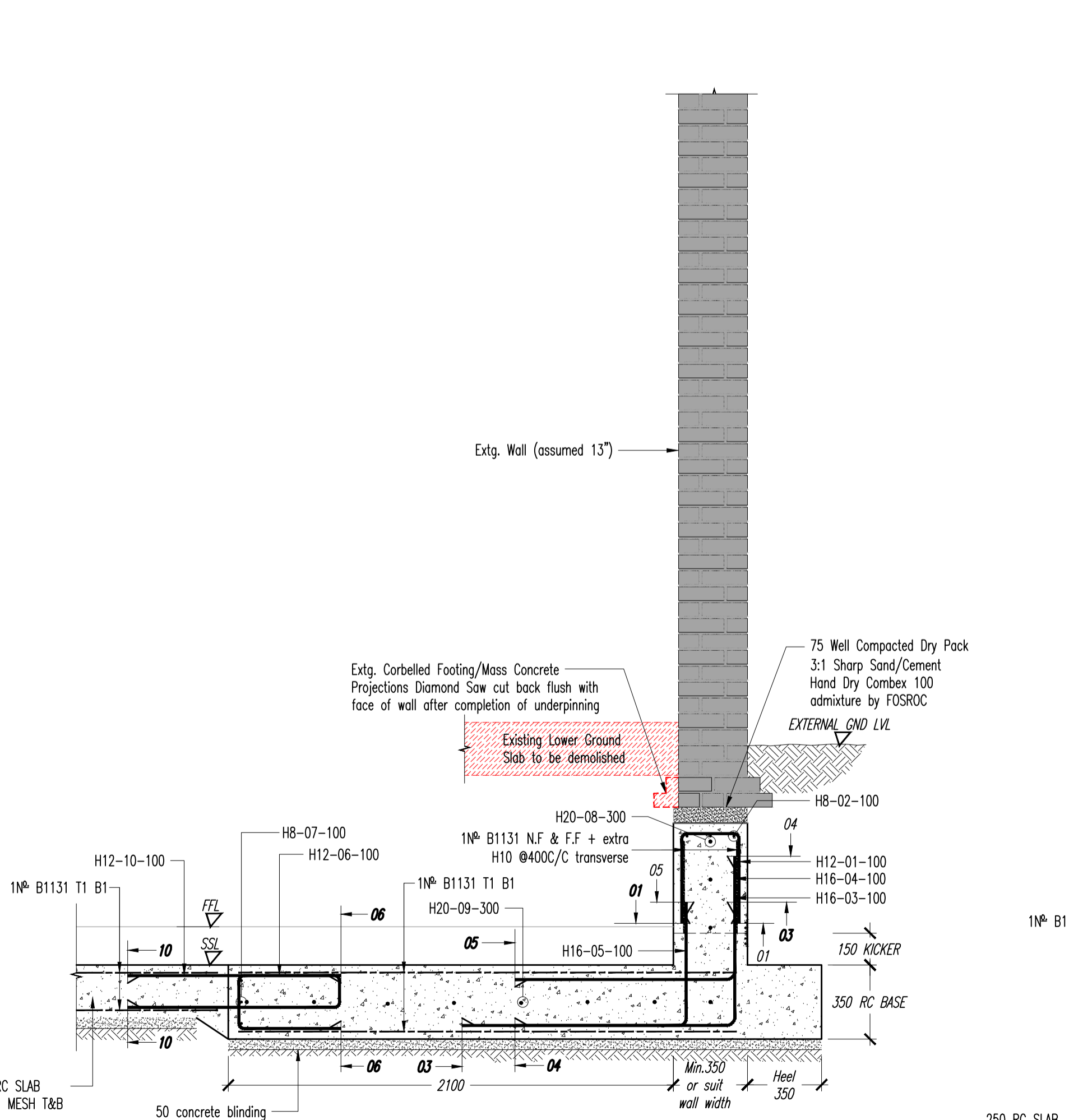
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Scale: 1:20 @ A1



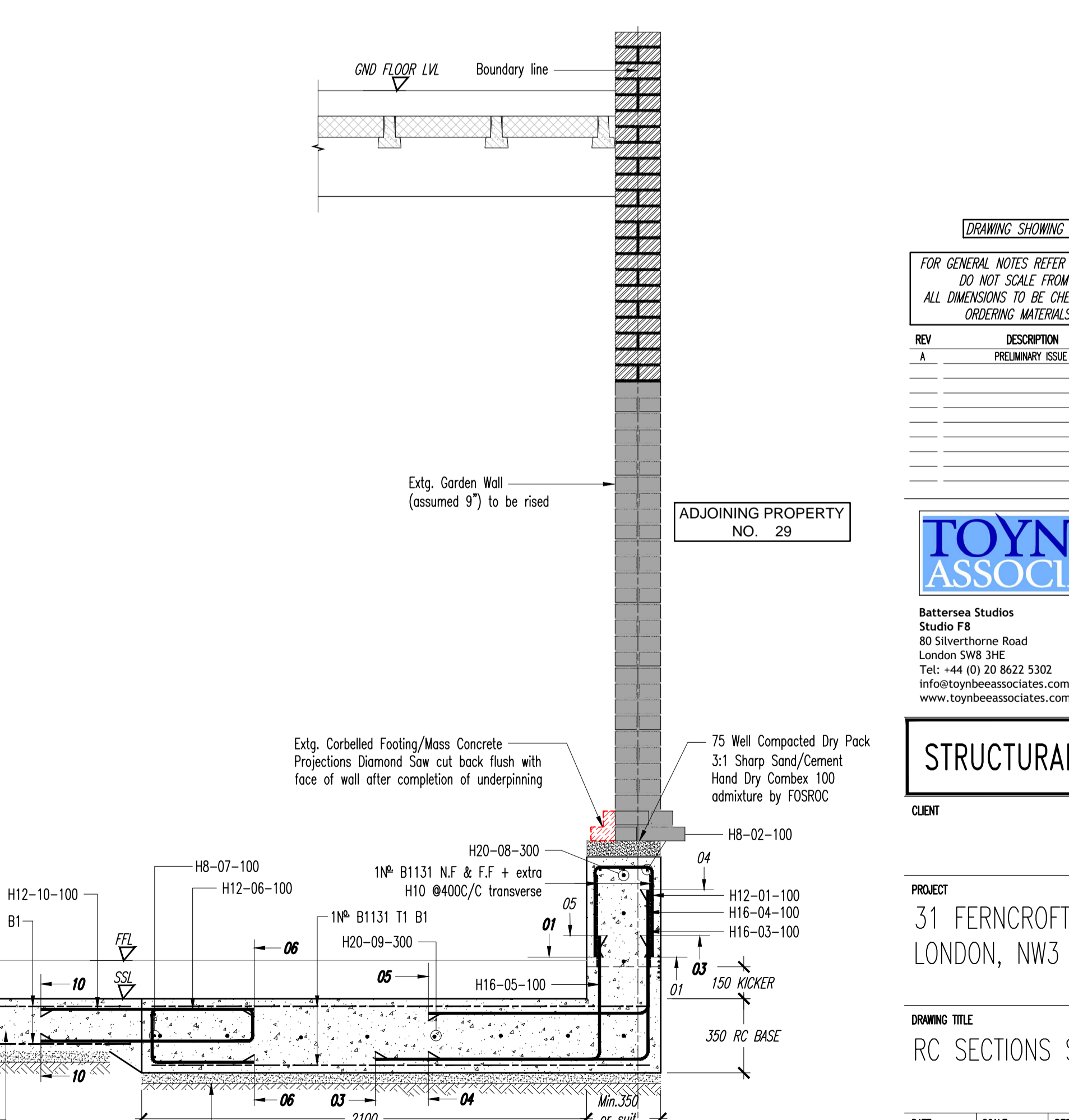
SECTION 3-3
Scale: 1:20 @ A1



SECTION 4-4
Scale: 1:20 @ A1



SECTION 5-5
Scale: 1:20 @ A1



SECTION 6-6
Scale: 1:20 @ A1

DRAWING SHOWING STRUCTURE UNDER
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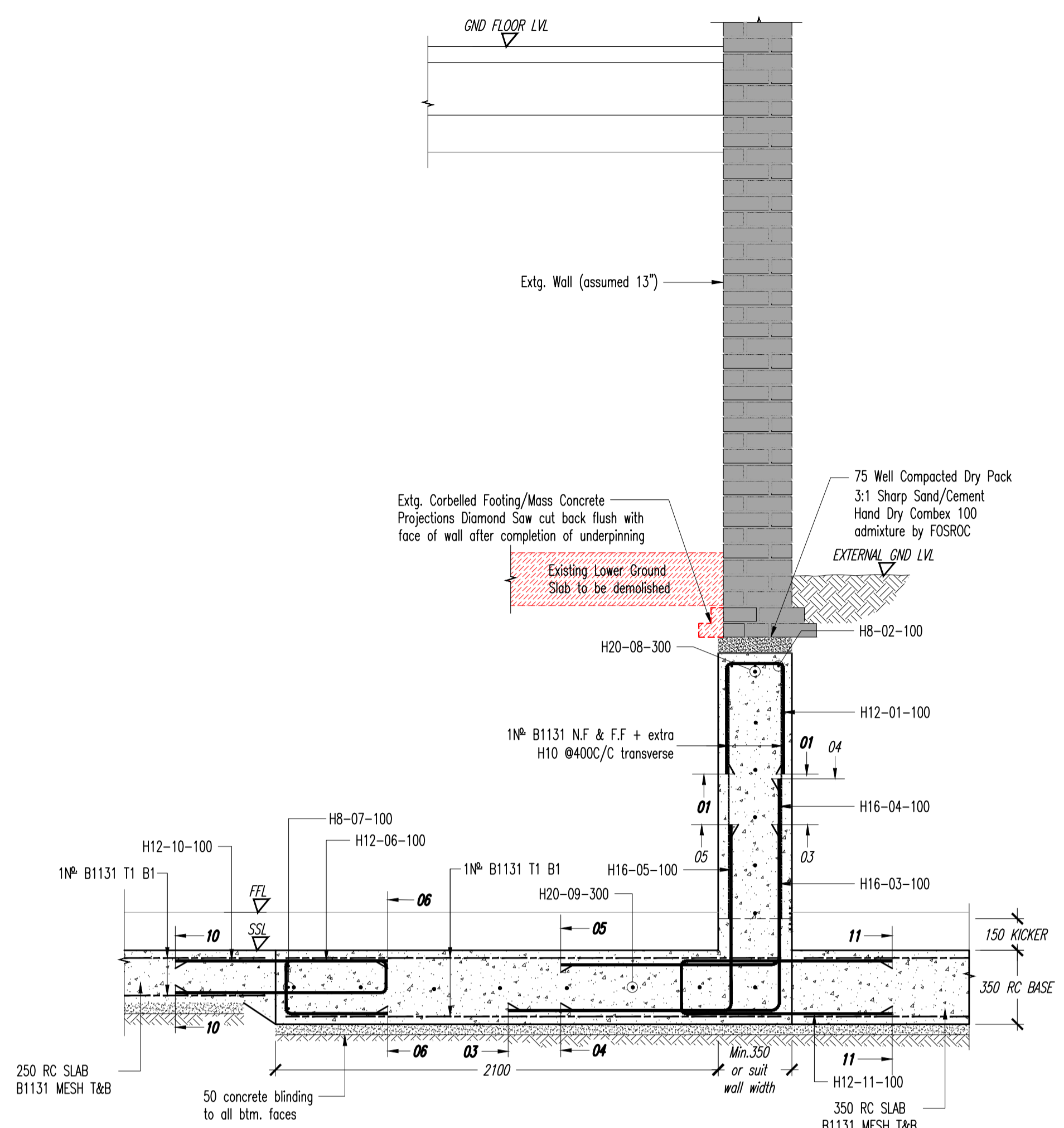
CLIENT

PROJECT
31 FERNCROFT AVENUE
LONDON, NW3

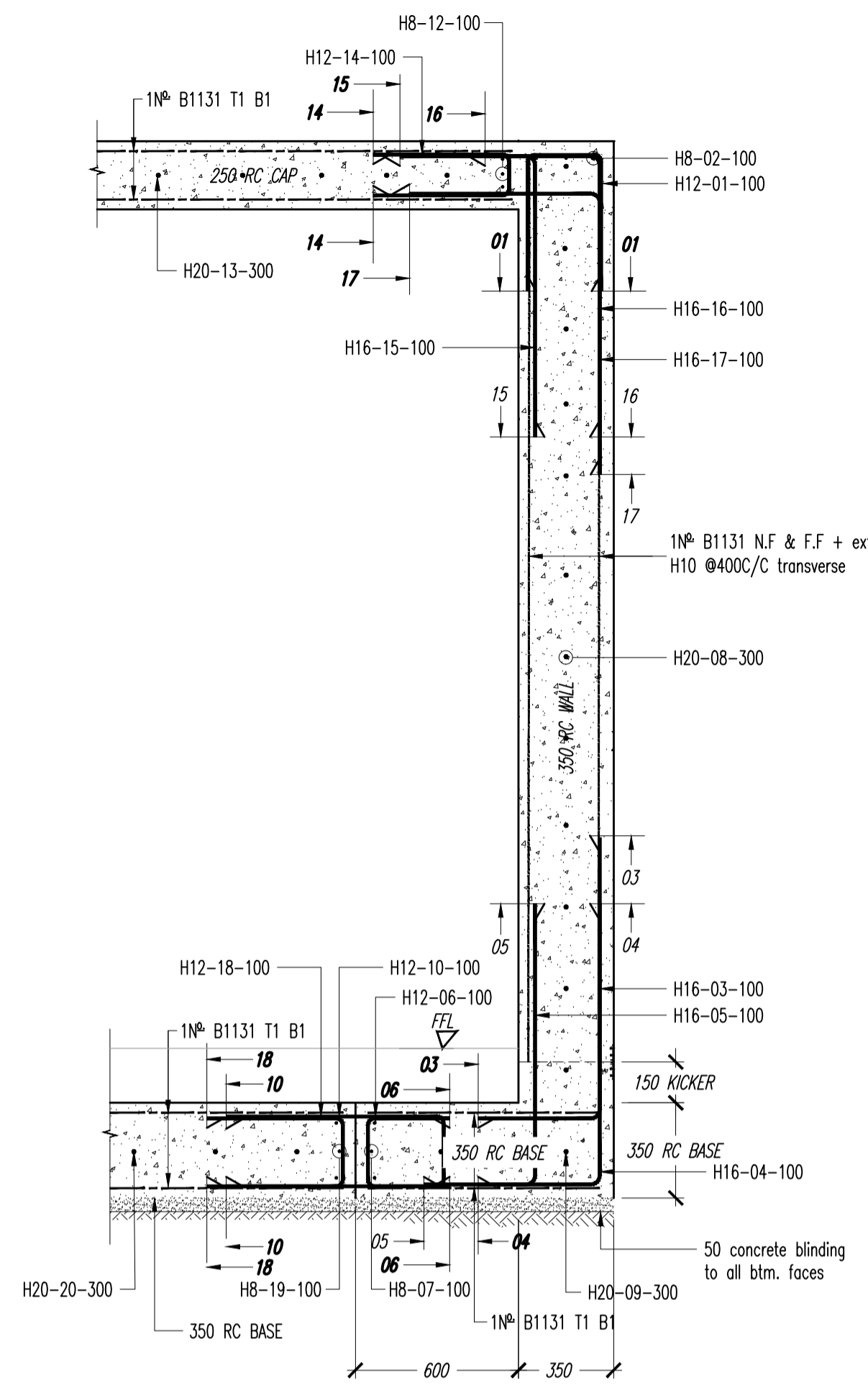
DRAWING TITLE
RC SECTIONS SHEET 1

DATE	SCALE	DESIGN	DRAWN	APP.	REV.
28.09.20	1:20@A1	TT	TT	TT	

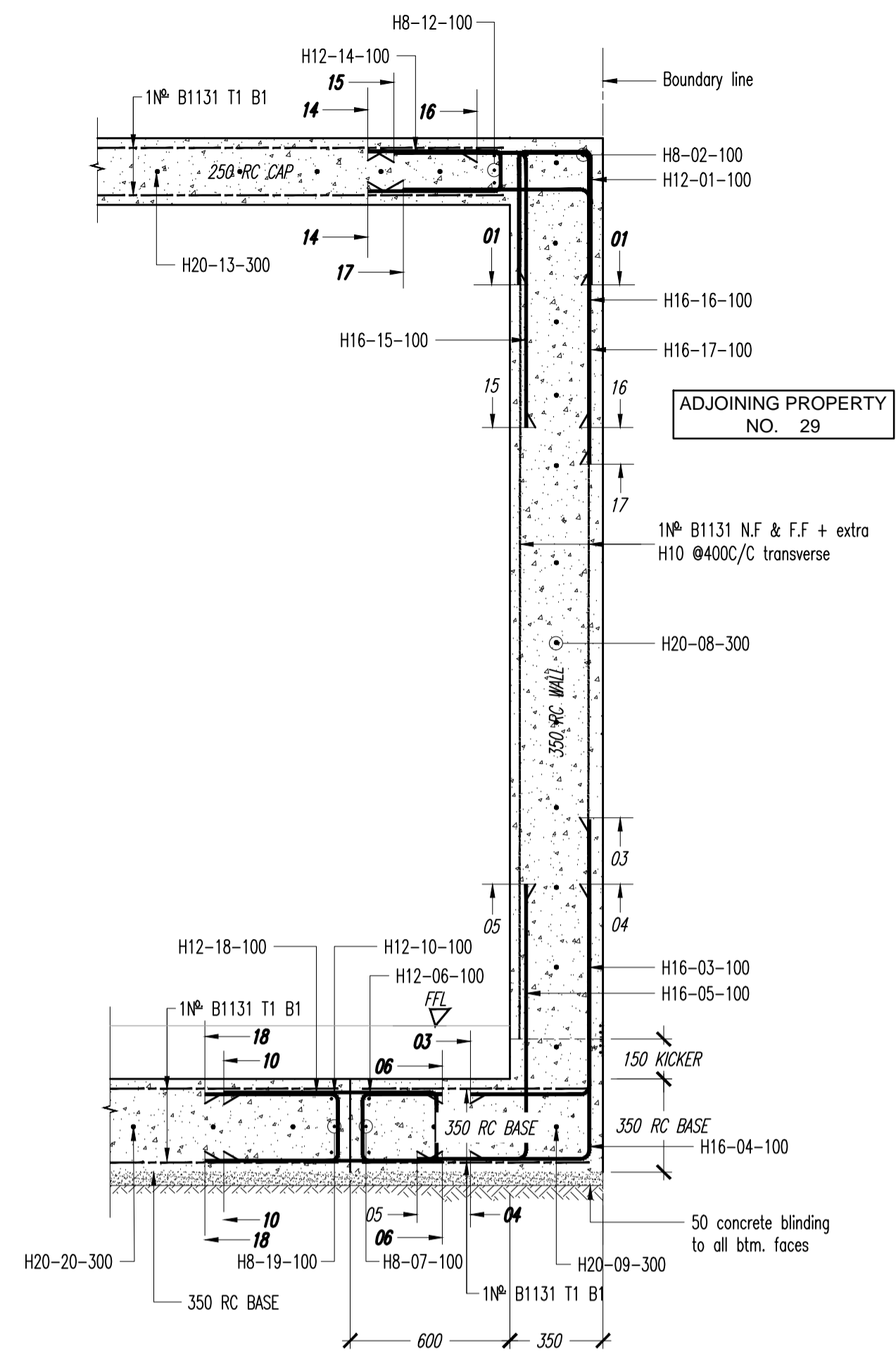
JOB NO: 2030
DRAWING NO: S-SD-FND(1)



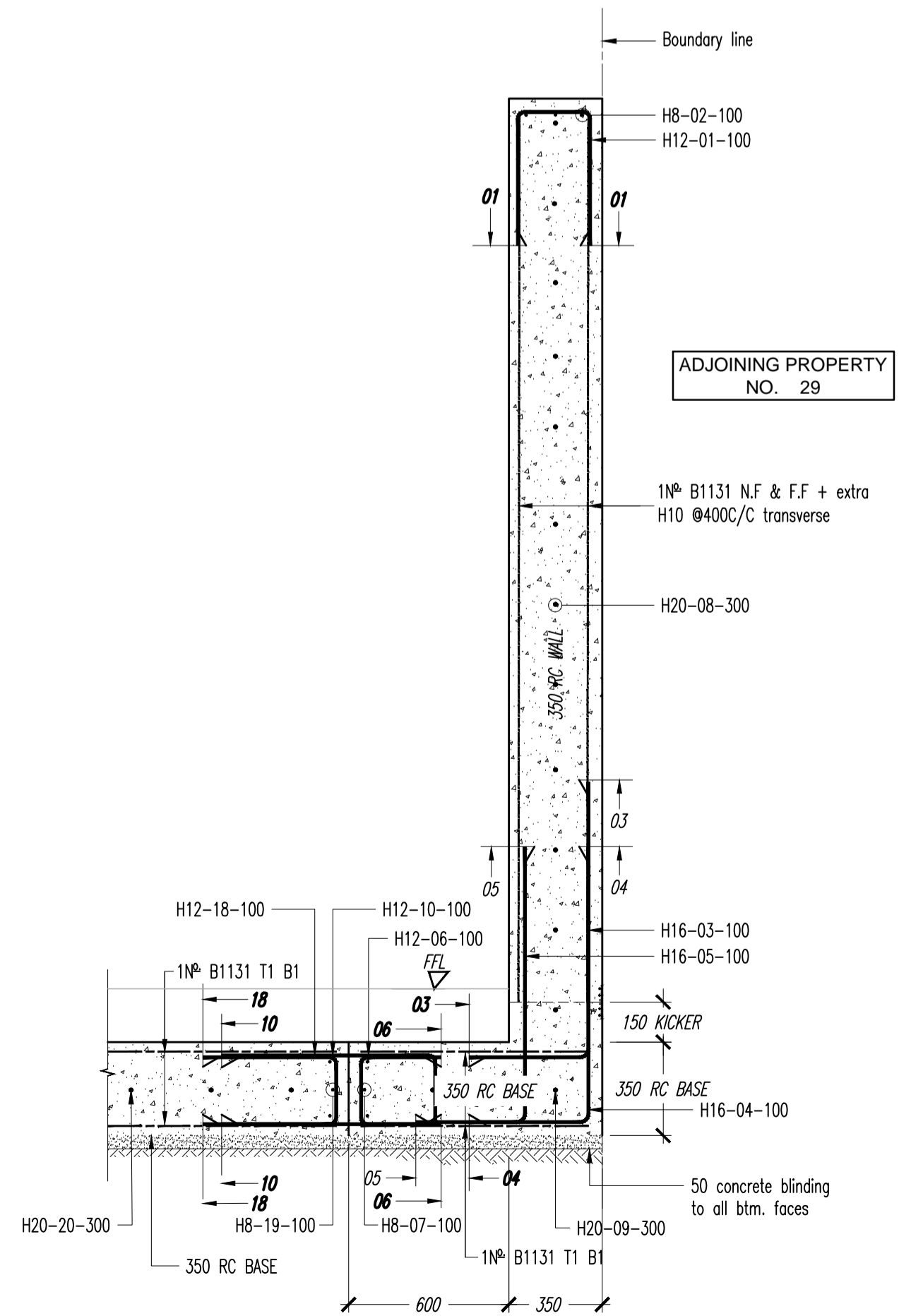
SECTION 7-7
Scale: 1:20 @ A1



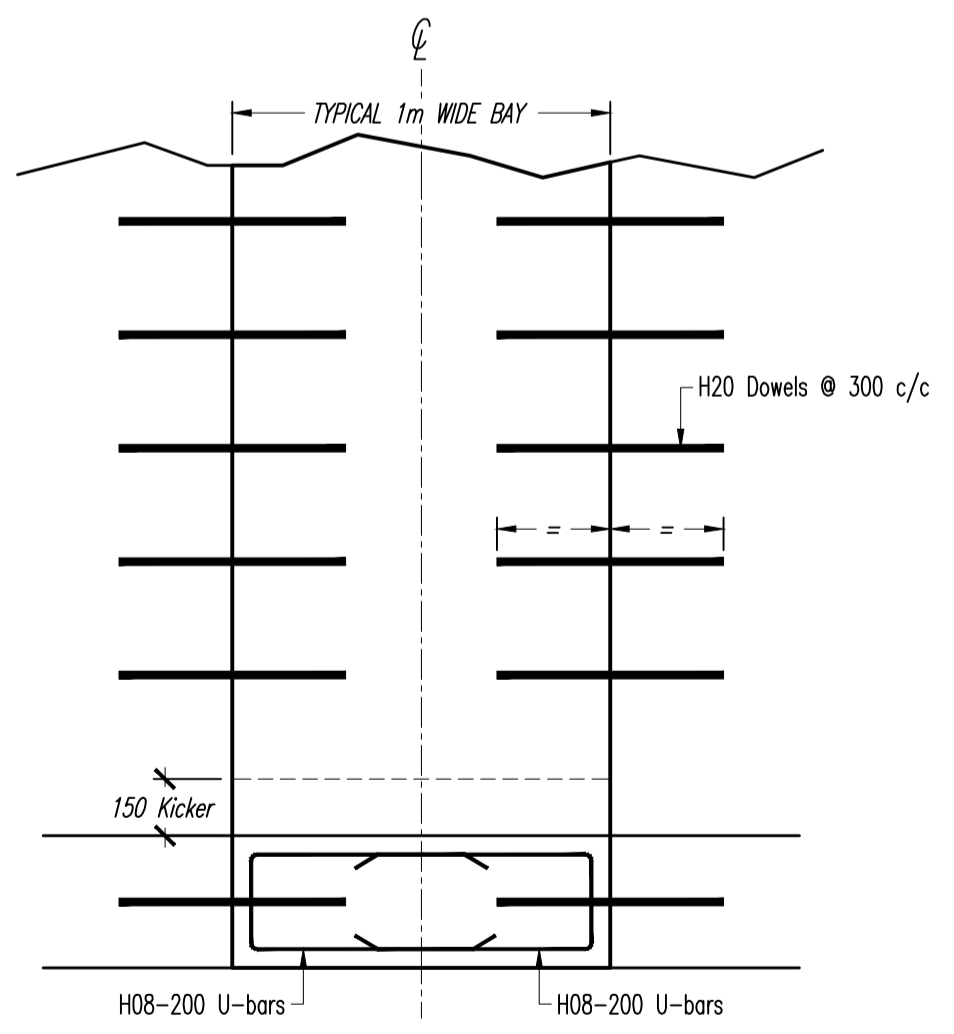
SECTION 8-8
Scale: 1:20 @ A1



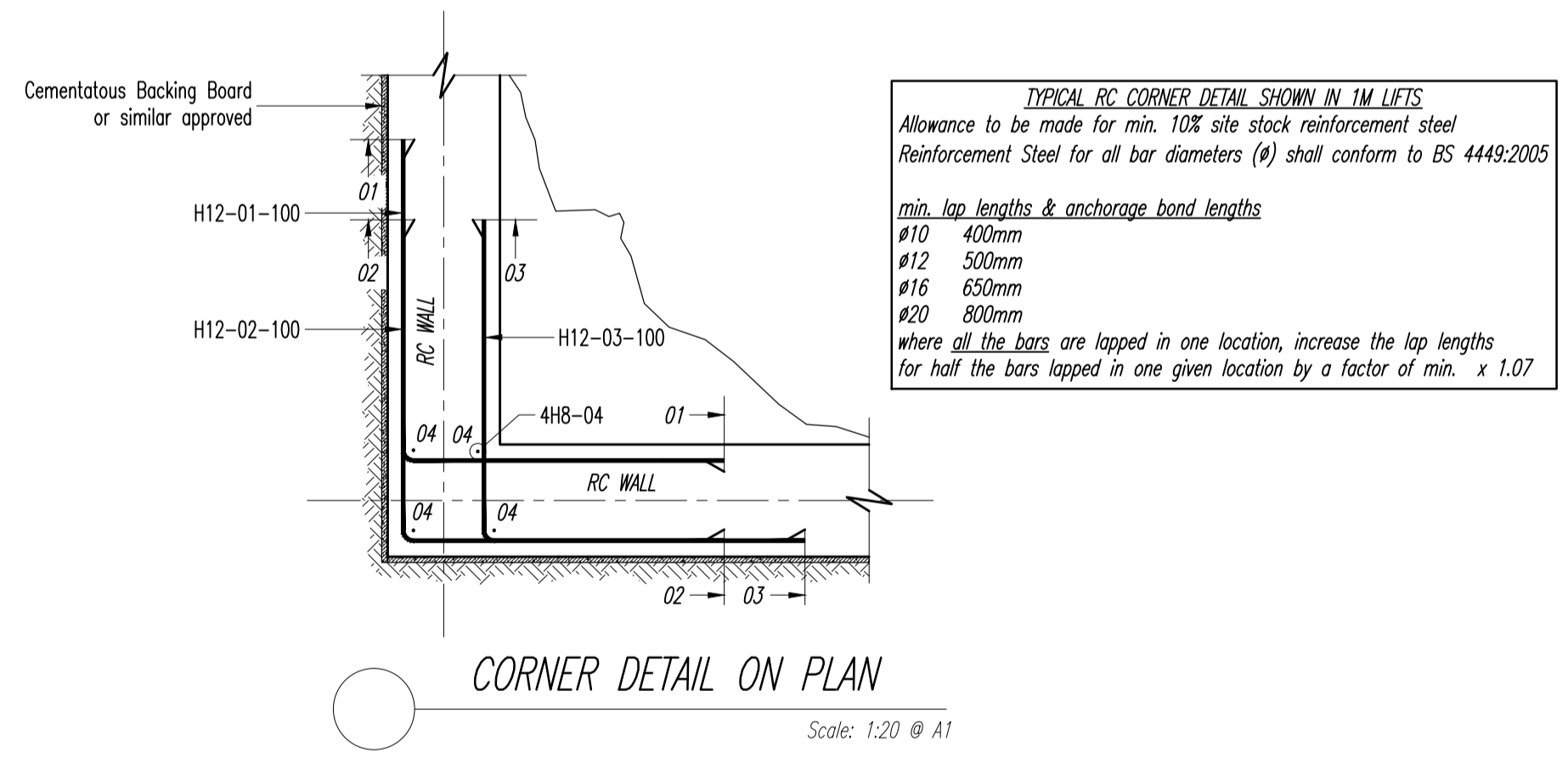
SECTION 9-9
Scale: 1:20 @ A1



SECTION 10-10
Scale: 1:20 @ A1



TYPICAL 1m WIDE BAY
UNDERPINNING ELEVATION
Scale: 1:20 @ A1



CORNER DETAIL ON PLAN
Scale: 1:20 @ A1

BAR BENDING SCHEDULE
WALL CONTINUITY REINFORCEMENT IN 1m LIFTS

MEMBER	BAR MARK	TYPE & SIZE	N° OF MBRS	N° OF BARS IN EACH	TOTAL N°	LENGTH OF EACH BAR † mm	SHAPE CODE	A * mm	B * mm	C * mm	D * mm	E/R * mm	REV LETTER
	01	H12	1	10	10	2000	11	1000	1000				A
	02	H12	1	10	10	2000	11	1000	1000				A
	03	H12	1	10	10	2000	11	1000	1000				A
	04	H8	1	4	4	1000	00	1000					A

THIS SCHEDULE CONFORMS TO BS 8666:2005
* SPECIFIED IN MULTIPLES OF 5mm † SPECIFIED IN MULTIPLES OF 25mm
STATUS: P PRELIMINARY T TENDER C CONSTRUCTION

DRAWING SHOWING STRUCTURE UNDER

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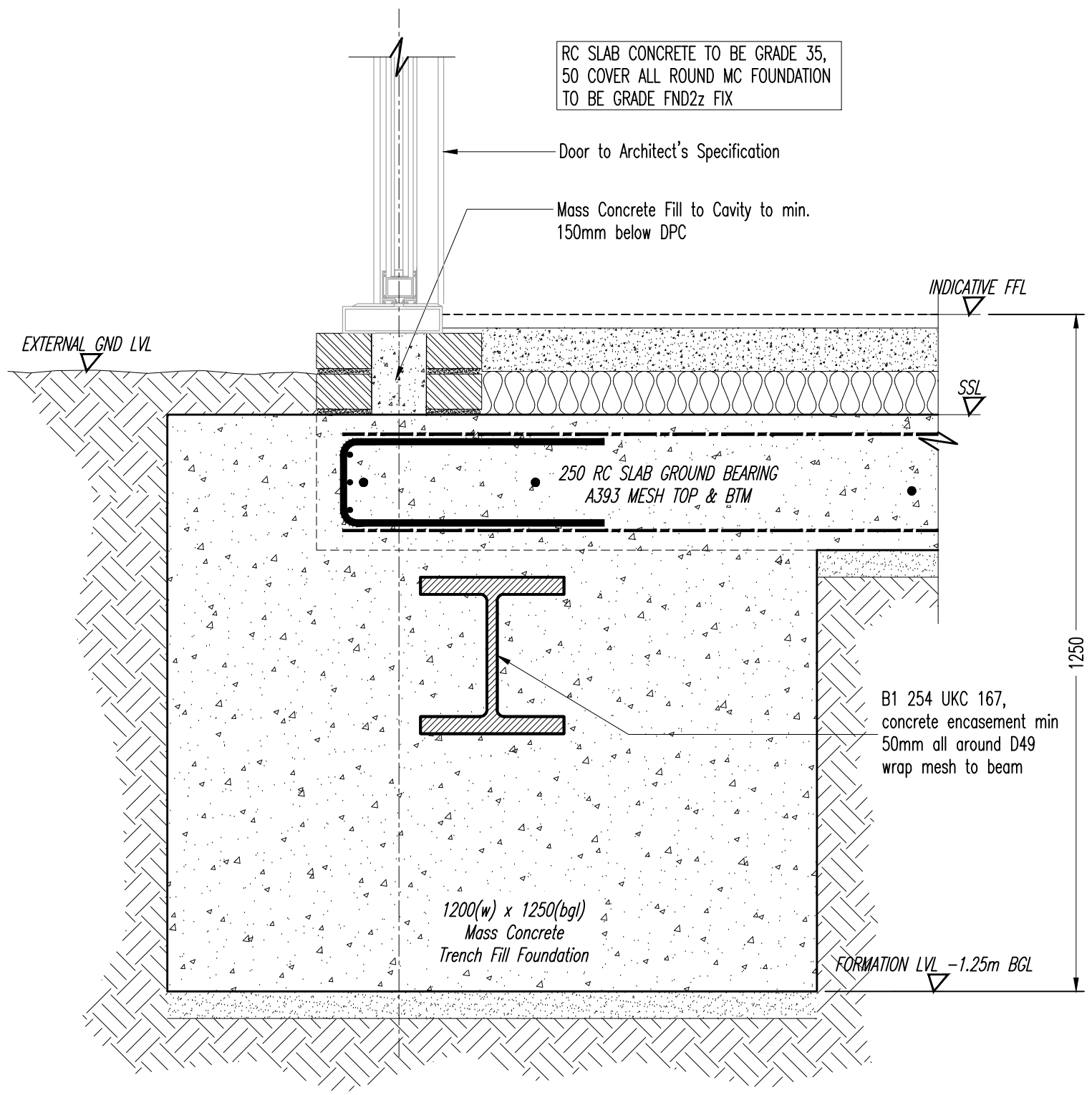
PROJECT
31 FERNCROFT AVENUE
LONDON, NW3

DRAWING TITLE
RC SECTIONS SHEET 1

DATE	SCALE	DESIGN	DRAWN	APP.	REV.
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JOB N° 2030 DRAWING N° S-SD-FND(2)

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SECTION 11-11
Scale: 1:10 @ A3

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PROJECT
31 FERCROFT AVENUE
LONDON, NW3

TITLE
FOUNDATION DETAILS SHEET 3

CLIENT

STRUCTURAL DRAWING

JOB N ^o	DESIGNED	DRAWN	APPROVED	SCALE
2030	TT	TT	TT	1:10@A3

DRAWING N^o
S-099

REV.
A

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8. DIMENSIONS MUST NOT BE SCALED FROM THE ENGINEERS DRAWINGS
9. ALL DIMENSIONS ARE IN MILLIMETRES U.N.O
10. ALL DIMENSIONS ARE GIVEN TO STRUCTURAL SURFACES U.N.O
11. NO HOLES, CHASES, CUT-OUTS OR THE LIKE MAY BE FORMED IN ANY BEAM, COLUMN, OR LOAD BEARING WALL UNLESS WRITTEN PERMISSION IS OBTAINED FROM THE ENGINEER
12. HOLES SMALLER THAN 225 x 225mm THROUGH SLABS ARE NOT NECESSARILY SHOWN ON THE ENGINEERS DRAWINGS
13. FOR SIZE AND LOCATION OF ALL SERVICES PENETRATIONS REFER TO THE SERVICE ENGINEERS AND ARCHITECTS DRAWINGS
14. INSPECTIONS MADE BY THE LOCAL AUTHORITY, NHBC OR OTHER STATUTORY BODIES, SHALL BE ARRANGED BY THE CONTRACTOR TO SUIT HIS PROGRAMME. ANY COSTS ARISING OUT OF FAILING TO CARRY OUT THE WORK TO THE SATISFACTION OF THE CHECKING AUTHORITY WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR
15. NON-STRUCTURAL FIXINGS ARE GENERALLY NOT SHOWN ON THE ENGINEERS DRAWINGS AND IF ANY SUCH DETAIL IS INDICATED IT MUST BE CONFIRMED BY CROSS-REFERENCE TO OTHER SPECIALISTS BEFORE CONSTRUCTION
16. FOR FIRE PROTECTION TO STRUCTURAL ELEMENTS SEE ARCHITECT'S SPECIFICATIONS

GENERAL DRAWINGS ABBREVIATIONS

SSL	-	STRUCTURAL SLAB LEVEL
FFL	-	FINISHED FLOOR LEVEL
SOP	-	SETTING OUT POINT
TOS	-	TOP OF STEELWORK
M.J	-	MOVEMENT JOINT
u.n.o	-	UNLESS NOTED OTHERWISE
IP	-	INTERSECTION POINT
u/s	-	UNDERSIDE
RC	-	REINFORCED CONCRETE
MC	-	MASS CONCRETE
PC	-	PRECAST CONCRETE
m/s	-	MILD STEEL
s/s	-	STAINLESS STEEL
c/c	-	CENTRES
extg.	-	EXISTING

STRUCTURAL KEY

BRICKWORK	
BLOCKWORK	
EXTG. MASONRY	
MASONRY DEMOLISHED	
CONCRETE ELEMENT	
FOUNDATIONS	
TIMBER (NEW)	
TIMBER (EXTG.)	
PADSTONE REFERENCE	
LINTEL REFERENCE	
STEELWORK CENTRELINE	
TIMBER CENTRELINE	
FLITCH BEAM CENTRELINE	
SPAN (NEW)	
SPAN (EXTG.)	
STRUCTURAL ELEMENT OVER	
STRUCTURAL ELEMENT UNDER	

STRUCTURAL MASONRY NOTES

1. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATION FOR MASONRY REQUIREMENTS IN RESPECT OF ACOUSTIC, THERMAL INSULATION AND DURABILITY REQUIREMENTS. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY IF THIS CONFLICTS WITH STRUCTURAL REQUIREMENTS
2. BLOCKWORK TO HAVE A MINIMUM COMPRESSIVE STRENGTH AS SPECIFIED ON THE DRAWINGS. ALL BLOCKWORK TO BE SOLID UNLESS SPECIFIED OTHERWISE ON THE DRAWINGS AND IS TO COMPLY WITH BS 5628 TABLE 4, REQUIREMENTS FOR SPECIAL CATEGORY OF MANUFACTURE. THE MAXIMUM WEIGHT OF AN INDIVIDUAL MASONRY UNIT MUST NOT EXCEED 20kg

BLOCKWORK SHOULD BE ADEQUATELY PROTECTED ON SITE TO AVOID SATURATION AND POSSIBLE INCREASE IN LIFTING WEIGHT. REFERENCE SHALL BE MADE TO THE PROJECT ARCHITECT/ACOUSTIC CONSULTANT FOR COMPLIANCE WITH PART E OF THE BUILDING REGULATION – SOUND TRANSMISSION
3. BLOCKWORK BELOW DPC TO BE OF FOUNDATION QUALITY (REFER TO MANUFACTURERS GUIDELINES) AND TO BE OF AT LEAST EQUAL MINIMUM COMPRESSIVE STRENGTH TO THAT INDICATED BETWEEN GROUND AND FIRST FLOOR AND IN NO CASE LESS THAN 7N/mm². BLOCKWORK TO BE OF MINIMUM MEDIUM DENSE CONCRETE BLOCKS
4. BRICKWORK TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 20N/mm² AND IS TO COMPLY WITH BS 5628 REQUIREMENTS FOR SPECIAL CATEGORY OF MANUFACTURE. ENGINEERING CLASS B BRICKWORK SHALL COMPLY WITH BS 5628 & BS 3921 (STANDARD FOR SPECIFICATION FOR CLAY BRICKS)
5. WHERE NEW OPENING FORMED INTO EXISTING MASONRY THE EXPOSED EDGES ARE TO BE MADE GOOD USING FULLY BONDED NEW BRICKWORK. ALL NEW LOADBEARING MASONRY IS TO BE FULLY TOOTHED & BONDED INTO EXISTING MASONRY WHERE APPLICABLE
6. MORTAR DESIGNATION AS FOLLOWS:

ABOVE DPC: MORTAR DESIGNATION (iii)
1:1:6 (CEMENT:LIME:SAND) OR 1:4 TO 5 (MASONRY CEMENT:SAND)

BELOW DPC: MORTAR DESIGNATION (ii)
1:(1/2):4 (CEMENT:LIME:SAND) OR 1:(2 1/2) TO (3 1/2) (MASONRY CEMENT:SAND)

N.B MASONRY CEMENT (INORGANIC FILLER OTHER THAN LIME) SHALL BE IN ACCORDANCE WITH BS EN 413-1 CLASS MC
7. THE USE OF HIGH ALUMINA CEMENT IN MORTARS IS STRICTLY PROHIBITED
8. REFER TO THE ARCHITECTS DRAWINGS FOR DETAILS OF DPC'S, DPM'S, WATERPROOFING AND INSULATION
9. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE WORKS DURING CONSTRUCTION
10. ALL BELOW GROUND CAVITY WALLS TO HAVE MASS CONCRETE INFILL UP TO MIN. 150mm BELOW THE DPC
11. ALL WALLS TO BE SYMMETRICAL ABOUT THEIR FOUNDATIONS U.N.O ON DRAWINGS
12. MOVEMENT JOINTS TO BE POSITIONED @ 6.0m c/c IN BLOCKWORK & @ 12.0m c/c IN BRICKWORK
13. ALL MOVEMENT JOINTS TO BE 15mm HYDROCELL OR SIMILAR JOINT FILLER WITH A 15x15mm TWO PART POLYSULPATE SEALANT (COLOUR & FIRE RESISTANCE TO BE ADVISED BY ARCHITECT)
14. BACKFILLING OF WALLS BELOW GROUND TO BE SIMULTANEOUS BOTH SIDES OF WALL TO PREVENT SURCHARGE ON THE MASONRY
15. POCKETS FOR PADSTONES ETC. IN PARTY WALLS TO BE FORMED BY CAREFULLY CUTTING OUT STRETCHERS & SKIMMING OFF HEADERS WHERE REQUIRED
16. LINTELS

EXTERNAL WALLS: PROVIDE PROPRIETARY LINTELS AS SPECIFIED ON THE DRAWINGS OR EQUIVALENT APPROVED BY ALTERNATIVE MANUFACTURER

INTERNAL WALLS: PROVIDE PROPRIETARY IG BOX LINTELS TO LOADBEARING INTERNAL WALLS AS SPECIFIED ON THE DRAWINGS OR EQUIVALENT APPROVED BY ALTERNATIVE MANUFACTURER

PROVIDE PROPRIETARY IG INTERNAL LINTEL TO SMALL OPENINGS IN NON LOADBEARING BLOCKWORK WALLS OR EQUIVALENT APPROVED BY ALTERNATIVE MANUFACTURER

ALL STEEL LINTELS TO BE FULLY GALVANISED AND HAVE A MINIMUM 150mm BEARING TO EACH END U.N.O

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PROJECT
 31 FERNCROFT AVENUE
 LONDON, NW3

TITLE
 GENERAL NOTES 1

CLIENT

STRUCTURAL DRAWING

JOB N ^o	DESIGNED	DRAWN	APPROVED	SCALE
2030	TT	TT	TT	NTS

DRAWING N^o
 S- GEN(1)

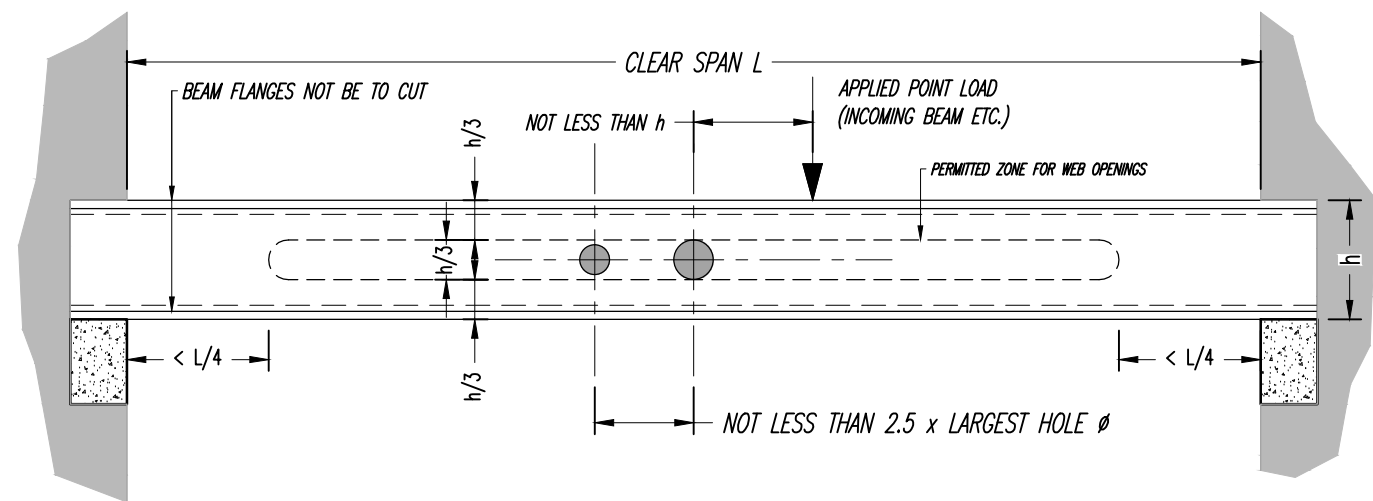
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STRUCTURAL STEELWORK NOTES

- ALL MATERIALS, FABRICATION, WORKMANSHIP AND ERECTION OF STEELWORK SHALL BE IN ACCORDANCE WITH THE NATIONAL STEELWORK SPECIFICATION FOR BUILDING CONSTRUCTION 5TH EDITION AS PUBLISHED BY THE BRITISH CONSTRUCTIONAL STEELWORK ASSOCIATION
- ALL STEELWORK TO BE S275 TO BS 4-1:2005 AND TO BS EN 10025:2004 PART 2 U.N.O ON SCHEDULES
ALL STEELWORK IN AN INTERNAL ENVIRONMENT TO BE 'ADVANCE 275 JR'
ALL STEELWORK IN AN EXTERNAL ENVIRONMENT TO BE 'ADVANCE 275 J2'

FOR HOLLOW SECTIONS (SHS & RHS) GRADE S355 TO BE USED
INTERNAL ENVIRONMENT TO BE 'ADVANCE 355 JR'
EXTERNAL ENVIRONMENT TO BE 'ADVANCE 355 J2'
WHERE GREATER TOUGHNESS IS REQUIRED USE 'ADVANCE 355 K2'

'ADVANCE' REFERS TO TATA STEEL ADVANCE SECTIONS
- ALL WELDS TO BE 6mm CFW U.N.O AND CONFORM TO BS EN 1011-1:2009 AND BS EN 1011-2:2009
ELECTRODE E35 FOR WELDS U.N.O
ALL WELDING CONSUMABLES TO BS EN ISO 2560:2009, EN 440, EN 756 & BS EN 758 AS APPROPRIATE. STORAGE & HANDLING OF CONSUMABLES TO BS EN 1011-1:2009
N.B ALL WELDING TO BE DONE BY STEELWORK FABRICATOR IN SHOP & SITE WELDING PROHIBITED
- ALL BOLTS TO BE M20 MINIMUM OF GRADE 8.8 SHERIDISED TO BS EN ISO 4017:2001, BS EN 14399
- ROLLED STEEL SECTION ARE TO BE EITHER COLD SAWN OR MACHINE CUT TO PROFILE
- BOLT LENGTHS TO BE DETERMINED BY FABRICATOR TO AVOID INCLUSION OF THREADS IN THE SHEAR PLANE OF THE CONNECTION
- STEELWORK CONNECTIONS SHALL COMPRISE NOT LESS THAN 4 NO. M20 DIA. GR. 8.8 BOLTS FOR ALL OTHER MEMBERS, EXCEPT WHERE OTHERWISE SHOWN ON THE DRAWINGS WHERE CONNECTION LOADS ARE PROVIDED BY THE ENGINEER, THE STEELWORK CONTRACTOR SHALL DESIGN CONNECTIONS WHICH WILL BE SUBJECT TO COMMENT BY THE ENGINEER
- STEEL BEAMS SHALL AT LEAST HAVE THE MINIMUM BEARINGS ON MASONRY WALLS AS SHOWN ON THE DRAWINGS. WHERE NO DETAILS OF BEARINGS ARE SHOWN PROVIDE BEARINGS TO THE FULL WIDTH OF THE SUPPORTING LEAF OR 150mm WHICHEVER IS GREATER
- STEEL COLUMNS SHALL BE RAISED OR LOWERED TO THE CORRECT LEVELS OFF FOUNDATIONS/MASONRY SUPPORTS USING SAWN STEEL PACKS NOT LESS THAN 75mm SQUARE. ALLOWANCE SHALL BE MADE FOR NOMINAL 25mm THICKNESS OF GROUT BETWEEN COLUMN BASEPLATES AND FOUNDATIONS/MASONRY SUPPORTS. GROUT SHALL TAKE THE FORM OF NEAT CEMENT SLURRY WITH A NON SHRINK ADDITIVE AND BE JUST FLUID ENOUGH TO POUR
- SITE MODIFICATIONS TO STRUCTURAL STEELWORK SHALL NOT BE CARRIED OUT UNLESS PRIOR APPROVAL HAS BEEN OBTAINED FROM THE ENGINEER
- ALL STRUCTURAL STEELWORK SHALL BE BLAST CLEANED TO BS 7079:2009 (IN THE EVENT OF PREVIOUS COATINGS USE BS EN ISO 8501-1:2007) PREPARATION GRADE SA21/2 AND, EXCEPT WHERE SPECIFIED AS GALVANISED, SHALL BE PAINTED WITH A SUITABLE GOOD QUALITY HIGH BUILD EPOXY ZINC PHOSPHATE PRIMER TO PROVIDE A DRY FILM THICKNESS OF NOT LESS THAN 75 MICRONS. A PRE-FABRICATION PRIMER MAY BE USED AT THE FABRICATORS DISCRETION. THE CONTRACTOR SHALL ENSURE THAT THE PRIMER USED IS COMPATIBLE WITH SUBSEQUENT COATINGS SPECIFIED BY OTHERS (E.G. INTUMESCENT PAINT). ALL PAINTS AND VARNISHES SHALL CONFORM TO BS EN ISO 12944-5:2007
- CONTROL QUALITY OF PREPARATION SHALL BE IN ACCORDANCE WITH BS EN ISO 12944-4:1998
- STEELWORK SPECIFIED AS GALVANISED SHALL BE BLAST CLEANED AS ABOVE & HOT DIP GALVANISED TO BS EN ISO 1461:2009 MINIMUM COATING THICKNESS 85 MICRONS
- ALL STEELWORK BELOW DPC LEVEL OR BUILT WITHIN THE MASONRY WALL CAVITY SHALL BE SITE PAINTED WITH EITHER A COMPATIBLE HIGH BUILD EPOXY ZINC PHOSPHATE PRIMER TO PROVIDE A DRY FILM THICKNESS OF NOT LESS THAN 125 MICRONS, TO ACHIEVE AN OVERALL PRIMER COATING OF 200 MICRONS (I.E. LEIGHS PAINTS EPIGRIP C400 ZINC PHOSPHATE PRIMER/BUILDCOAT OR EQUAL) OR 2 COATS OF RIV LIQUID ASPHALTIC COMPOSITION TO MANUFACTURER'S RECOMMENDATIONS AND THE SECOND COAT APPLIED AT A RATE OF 13 m² PER 5L FOLLOWING COMPLETE DRYING OF FIRST COAT
- STEELWORK BELOW DPC SHALL ALSO BE ENCASED IN NOT LESS THAN 50mm OF CONCRETE NOT WEAKER THAN SPECIFIED ON THE DRAWINGS + D49 WRAP MESH TO ALL BEAMS. ALL COLUMNS @ GROUND TO HAVE CONCRETE ENCASEMENT UP TO 150mm ABOVE GROUND LVL + D49 WRAP MESH
- PERMITTED ERECTED STEELWORK ACCURACY AS SPECIFIED IN NATIONAL STRUCTURAL STEELWORK SPECIFICATION 5th EDITION



STEEL BEAM WEB OPENINGS

RELEVANT STANDARDS FOR BOLT ASSEMBLIES

	GRADE	BOLTS	NUTS	WASHERS
BLACK BOLTS	8.8	BS EN ISO 4017	BS EN ISO 4032	BS EN ISO 7091 (100HV)
COUNTERSUNK		BS 4933	BS 4190 Grade 8	BS 4320
HOLDING DOWN		BS 7419	BS 4190 Grade 8	BS 4320

STEELWORK DIMENSIONS & TOLERANCES

FORM	DIMS	TOLERANCES
UB/UC	BS 4-1	BS EN 10034
JOISTS	BS 4-1	BS EN 10024
CHANNELS	BS 4-1	BS EN 10279
ANGLES	BS EN 10056-1	BS EN 10056-2
ROLLED TEES	BS EN 10055	BS EN 10055
SPLIT TEES	BS 4-1	AS UB/UC
HOLLOW SECTIONS (HOT FINISHED)	BS EN 10210-2	
HOLLOW SECTIONS (COLD FINISHED)	BS EN 10219-2	

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S-GEN(2)

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CONCRETE AND FOUNDATIONS

- ALL CONCRETE MIXES TO CONFORM TO BS 8500-1:2006+A1:2012 AND BS EN 206:2013
- NEW MASS FILL UNDERPINNING TO BE OF CONCRETE GRADE FND2z TO BS 8500-2:2006+A1:2012 TO MEET DC-2 CLASS SOILS
- STRIP FOUNDATIONS/TRENCH FILL FOUNDATIONS TO BE OF CONCRETE GRADE FND2z TO BS 8500-2 TO MEET DC-2 CLASS SOILS
- DRY PACKING COMPRESSIVE STRENGTH TO BE MINIMUM OF 30 N/mm² @ 28 DAYS
3:1 SHARP SAND TO CEMENT (HAND DRY)
- STRUCTURAL SLABS AND WALLS ABOVE GROUND TO BE GRADE C32/40 TO BS 8500-2 U.N.O
MINIMUM CEMENT CONTENT TO BE 300 kg/m³
WATER/CEMENT RATIO OF 0.45

STRUCTURAL SLABS AND WALLS BELOW GROUND TO BE GRADE C32/40 TO BS 8500-2 U.N.O TO SUIT DC-2 CLASS SOILS
- BLINDING TO BE CONCRETE MIX GEN1 TO BS 8500-2 AND MINIMUM 50mm THICK
- ALL REINFORCEMENT TO BE GRADE 500B U.N.O
- NO CONCRETE TESTING IS REQUIRED
- CONCRETE FINISHES TO ARCHITECT'S SPECIFICATION (SEE CONCRETE FINISHES SECTION)
- WATERPROOFING TO ARCHITECT'S SPECIFICATION
- COVER TO SLAB: TOP=30mm BTM.=50mm U.N.O
COVER TO WALLS IN GROUND: BACKFACE=75mm FRONTFACE=50mm U.N.O
- DEFORMED BARS TO BE GRADE 500B IN ACCORDANCE WITH BS 8666:2005
- FABRIC REINFORCEMENT: TO BS 4483: 2005 USING GRADE B500A
BARS TO BS 4449: 2005
- ABOVE GROUND CONSTRUCTION TO HAVE 75mm KICKER
BELOW GROUND CONSTRUCTION TO HAVE 150mm KICKER + WATERSTOP/WATERBARS WHERE APPROPRIATE
- UNDERLAY: BEFORE PLACING STRUCTURAL CONCRETE (NOT BLINDING CONCRETE) ON HARDWARE OR OTHER ABSORBENT SUBSTRATES, LAY BUILDING PAPER TO BS 1521, CLASS B OR POLYETHYLENE SHEET, 250 MICRONS THICK. LAP EDGES 150 mm.
- NO ADMIXTURES ALLOWED UNLESS APPROVED IN WRITING BY TOYNBEE ASSOCIATES
- PLACING AND COMPACTING: AT TIME OF PLACING ENSURE THAT ALL SURFACES ON WHICH CONCRETE IS TO BE PLACED ARE CLEAN, WITH NO DEBRIS, TYING WIRE CLIPPINGS, FASTENINGS OR FREE WATER
- PLACE WHILE SUFFICIENTLY PLASTIC FOR FULL COMPACTION. DO NOT ADD WATER OR RETEMPER MIXES. THE TEMPERATURE OF CONCRETE AT TIME OF PLACING MUST BE NOT LESS THAN 5°C. DO NOT PLACE AGAINST FROZEN OR FROST COVERED SURFACES
- FULLY COMPACT TO FULL DEPTH (UNTIL AIR BUBBLES CEASE TO APPEAR ON THE TOP SURFACE), ESPECIALLY AROUND REINFORCEMENT, CAST-IN ACCESSORIES, INTO CORNERS OF FORMWORK AND AT JOINTS. USE MECHANICAL VIBRATION FOR ALL CONCRETE
- CURING AND PROTECTING: PREVENT SURFACE EVAPORATION FROM CONCRETE SURFACES AS SPECIFIED BELOW BY COVERING WITH POLYETHYLENE SHEETING AS SOON AS PRACTICABLE AFTER COMPLETION OF PLACING AND COMPACTING, REMOVING ONLY TO PERMIT ANY FINISHING OPERATIONS AND REPLACE IMMEDIATELY THEREAFTER:
SURFACES WHICH WILL BE EXPOSED TO FROST, AND WEARING SURFACES OF FLOORS REGARDLESS OF WEATHER CONDITIONS: NOT LESS THAN 10 DAYS, OTHER STRUCTURAL CONCRETE SURFACES: NOT LESS THAN 5 DAYS
- ADEQUATELY PROTECT CONCRETE FROM SHOCK, INDENTATION AND PHYSICAL DAMAGE

FORMWORK

- FORMWORK FOR IN SITU CONCRETE:
WORKS BELOW GROUND: VERTICAL FACES OF STRIP FOOTINGS, BASES AND SLABS MAY BE CAST AGAINST FACES OF EXCAVATION, PROVIDED THE FACES ARE SUFFICIENTLY ACCURATE AND STABLE AND ADEQUATE MEASURES ARE TAKEN TO PREVENT CONTAMINATION OF CONCRETE. A MINIMUM COVER OF 75 mm WILL BE REQUIRED TO REINFORCEMENT
- FORMWORK:
CONSTRUCT ACCURATELY AND ROBUSTLY TO PRODUCE FINISHED CONCRETE TO THE REQUIRED DIMENSIONS. FORMED SURFACES MUST BE FREE FROM TWIST AND BOW, ALL INTERSECTIONS, LINES AND ANGLES BEING SQUARE, PLUMB AND TRUE.
CONSTRUCT (INCLUDING JOINTS BETWEEN FORMS AND COMPLETED WORK), TO PREVENT LOSS OF GROUT, USING SEALS WHEN NECESSARY. SECURE TIGHT AGAINST ADJACENT CONCRETE TO PREVENT FORMATION OF STEPS
FIX INSERTS OR BOX OUT AS REQUIRED IN CORRECT POSITIONS BEFORE PLACING CONCRETE. FORM ALL HOLES AND CHASES. DO NOT CUT HARDENED CONCRETE WITHOUT APPROVAL

FINISHES FOR INSITU CONCRETE

- TIMING: CARRY OUT FINISHING OPERATIONS AT OPTIMUM TIMES IN RELATION TO THE SETTING AND HARDENING OF THE CONCRETE. DO NOT WET SURFACES OF CONCRETE TO ASSIST SURFACE WORKING. DO NOT SPRINKLE CEMENT ONTO SURFACE
- SMOOTH FLOATED FINISH: USE A HAND FLOAT, SKIP FLOAT OR POWER FLOAT TO ACHIEVE AN EVEN SURFACE WITH NO RIDGES OR STEPS.
- TROWELLED FINISH TO RECEIVE THIN COVERINGS
- FLOAT CONCRETE TO AN EVEN SURFACE WITH NO RIDGES OR STEPS, THEN IMMEDIATELY COMMENCE CURING
- WHEN THE CONCRETE IS SUITABLY STIFF, HAND OR POWER TROWEL TO GIVE A UNIFORM, SMOOTH BUT NOT POLISHED SURFACE, FREE FROM TROWEL MARKS AND OTHER BLEMISHES, AND SUITABLE TO RECEIVE THE SPECIFIED FLOORING MATERIAL. RESUME CURING WITHOUT DELAY
- IF, BECAUSE OF INADEQUATE FINISHING OR PROTECTION, THE SURFACE OF THE CONCRETE IS NOT SUITABLE TO RECEIVE THE SPECIFIED FLOORING MATERIAL, IT MUST BE MADE GOOD BY APPLICATION OF A SMOOTHING COMPOUND
- TROWELLED FINISH FOR WEARING SURFACES: FLOAT TO AN EVEN SURFACE WITH NO RIDGES OR STEPS, THEN IMMEDIATELY COMMENCE CURING
- SUCCESSIVELY HAND OR POWER TROWEL AT INTERVALS, APPLYING SUFFICIENT PRESSURE TO CLOSE THE SURFACE, TO GIVE A UNIFORM SMOOTH FINISH FREE FROM TROWEL MARKS AND OTHER BLEMISHES. RESUME SPECIFIED CURING WITHOUT DELAY

REINFORCEMENT

- TYPICAL TENSION LAPS/ANCHORAGE FOR CONCRETE

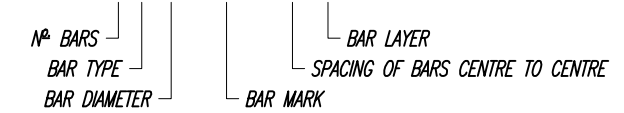
H16 - 650	H32 - 1300
H12 - 500	H25 - 1000
H10 - 400	H20 - 800

LAP LENGTHS FOR UNEQUAL SIZE BARS TO BE BASED ON SMALLER SIZE BARS

- REINFORCEMENT USED TO BE HIGH YIELD TYPE 'H' WITH DUCTILITY CLASS B

- REINFORCEMENT SHOWN THUS:

2 H 16 - 01 - 100 T1



- REINFORCEMENT SPACERS TO BE AT 1m CENTRES OR AS OTHERWISE NECESSARY TO SUPPORT THE REINFORCEMENT STEEL AS RECOMMENDED IN BS 7973:2001

- CLEANLINESS: AT TIME OF PLACING CONCRETE, REINFORCEMENT TO BE CLEAN AND FREE OF CORROSIVE PITTING, LOOSE MILLSCALE, LOOSE RUST, ICE AND SUBSTANCES WHICH MAY ADVERSELY AFFECT THE REINFORCEMENT, CONCRETE, OR BOND BETWEEN THE TWO

- FIXING REINFORCEMENT: IN ALL CASES INCLUDING GROUND BEARING SLABS, REINFORCEMENT WITH SINGLE LAYER OF FABRIC IN THE UPPER PART OF THE SLAB, FIX THE REINFORCEMENT BEFORE THE CONCRETE IS PLACED, PROVIDING SUITABLE SPACERS @ NOT MORE THAN 1m CENTRES OR CLOSER SPACING AS NECESSARY TO SUPPORT IN POSITION AND MAINTAIN THE SPECIFIED COVER

- FIX ADEQUATELY, USING TYING WIRE, WHICH MUST NOT INTRUDE INTO THE CONCRETE COVER

TYPICAL RC DETAILING ABBREVIATIONS

NF	-	NEAR FACE
FF	-	FAR FACE
EF	-	EACH FACE
T1	-	TOP OUTER LAYER
T2	-	TOP INNER LAYER
B1	-	BOTTOM OUTER LAYER
B2	-	BOTTOM INNER LAYER
STGD	-	STAGGERED
ABR	-	ALTERNATE BARS REVERSED
AS	-	AREA OF STEEL
BW	-	BOTH WAYS
LV	-	LENGTH VARIES
DS	-	DOUBLE STIRRUPS
TS	-	TRIPLE STIRRUPS
ALT	-	ALTERNATELY PLACED
CAL	-	COMPRESSIVE ANCHORAGE LENGTH
CLL	-	COMPRESSIVE LAP LENGTH
TAL	-	TENSION ANCHORAGE LENGTH
TLL	-	TENSION LAP LENGTH
b	-	WIDTH BEAM/COLUMN
h	-	DEPTH BEAM/COLUMN
d	-	EFFECTIVE DEPTH BEAM/COLUMN TO REINFORCEMENT
L	-	CLEAR SPAN BEAM/SLAB

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GENERAL NOTES 3

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STRUCTURAL DRAWING

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2030	TT	TT	TT	NTS

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S-GEN(3)

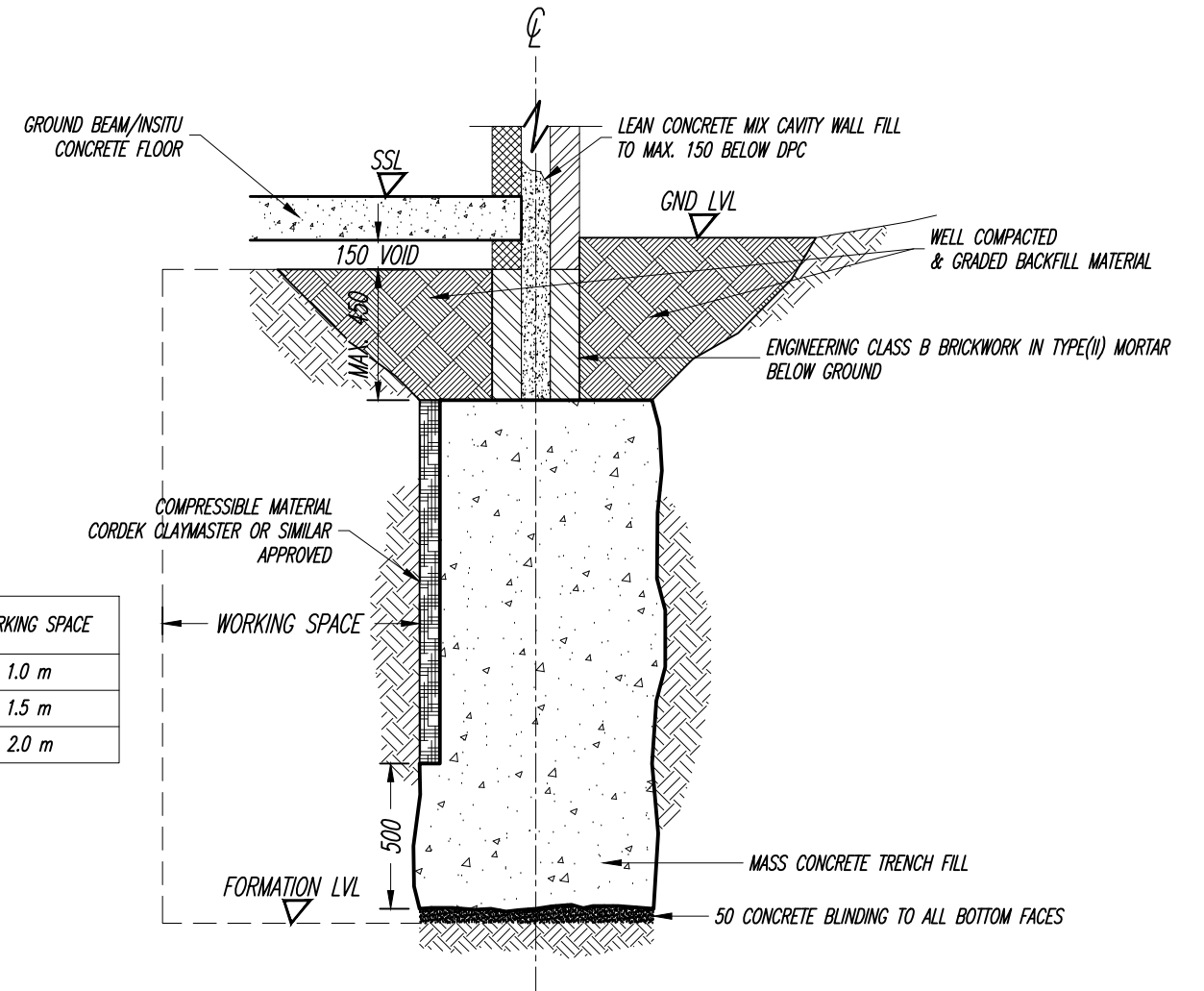
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STRUCTURAL UNDERPINNING NOTES

1. TO BE READ IN CONJUNCTION WITH THE PRELIMINARIES AND GENERAL CONDITIONS
2. WORKMANSHIP: THE WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THE ENGINEER'S DRAWINGS AND INSTRUCTIONS AND TO THE APPROVAL OF THE ARCHITECT AND THE BUILDING CONTROL OFFICER
3. ANY OTHER SEQUENCE OF OPERATIONS OR METHOD OF WORKING PROPOSED BY THE CONTRACTOR IS TO BE SUBMITTED TO THE ARCHITECT AND COPIED TO THE ENGINEER AND AGREED IN WRITING A MINIMUM OF 14 DAYS BEFORE WORK IS TO BE COMMENCED ON SITE
4. CONTRACTORS RESPONSIBILITIES: THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE UNDERPINNED STRUCTURE AND PROVIDE ALL NECESSARY SHORING, STRUTTING AND BRACING TO ENSURE ITS SAFETY AND STABILITY AT ALL TIMES
5. SERVICES: THE CONTRACTOR IS ALSO TO CARRY OUT A SURVEY OF THE PROPERTY AND ADJACENT AREA TO ESTABLISH THE LOCATION OF OBSTRUCTIONS SUCH AS SERVICE RUNS OR DRAINS. ANY OBSTRUCTION FOUND IS TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT / ENGINEER. THE CONTRACTOR IS TO ALLOW FOR ANY TEMPORARY SUPPORT TO THE SERVICES OR OBSTRUCTIONS DURING THE UNDERPINNING
6. CONSTRUCTION SEQUENCE: THE UNDERPINNING IS TO BE UNDERTAKEN IN SHORT SECTIONS NOT EXCEEDING 1 METRE IN LENGTH. THE UNDERPINNING IS TO BE UNDERTAKEN ON A 'HIT AND MISS' SEQUENCE
7. NO ADJACENT PIN IS TO BE EXCAVATED UNTIL A MINIMUM 48 HOURS AFTER THE ADJACENT PIN HAS BEEN CAST AND PACKED UP
8. THE CONTRACTOR IS TO PROVIDE DRAWINGS MARKED UP TO SHOW THE PROPOSED SEQUENCE OF UNDERPINNING A MINIMUM OF 14 DAYS BEFORE WORK IS COMMENCED
9. EXCAVATIONS: EXCAVATION SHALL BE TO THE DEPTH AND WIDTH SHOWN ON THE DRAWINGS. HOWEVER, WHERE TREE ROOTS ARE ENCOUNTERED NEW UNDERPINS ARE TO EXTEND 600MM BELOW THE LAST TRACE OF ANY ROOT ACTIVITY. THE SIDES OF THE EXCAVATIONS SHALL BE ADEQUATELY SHORED AND PROPPED TO PREVENT SUBSIDENCE OR SLIP OF THE SOIL. SOIL FACES BEHIND THE PIN AND AT THE FORMATION LEVEL SHALL BE UNDISTURBED
10. ANY SOIL FACES BEHIND THE UNDERPINNING THAT REQUIRE TO BE RETAINED SHALL BE BY PRECAST CONCRETE POLING BOARDS. THE BOARDS ARE TO HAVE HOLES TO ENABLE THE VOID BEHIND THE BOARDS TO BE GROUTED UP. THE POLING BOARDS ARE TO BE MEASURED AS LEFT IN
11. INSPECTIONS: ALL EXCAVATIONS ARE TO BE INSPECTED BY THE ENGINEER AND/OR THE BUILDING CONTROL OFFICER. MINIMUM NOTICE OF 24 HOURS IS TO BE GIVEN WHEN EXCAVATIONS ARE READY FOR INSPECTION
12. THE SOFFIT OF THE EXISTING FOOTINGS IS TO BE LEVELLED OFF AND CLEANED OF ALL LOOSE OR DETRIMENTAL MATERIAL
13. NO PROJECTING PORTIONS OF THE EXISTING FOOTINGS ARE TO BE TRIMMED EXCEPT AS SHOWN ON THE DRAWINGS OR DIRECTED BY THE ENGINEER
14. ANTI-HEAVE PRECAUTIONS: BEFORE CARRYING OUT CONCRETING INTRODUCE ANTI-HEAVE PRECAUTIONS IN THE FORM OF CLAY MASTER AS DIRECTED BY THE ENGINEER TO THE FACES OF THE EXCAVATION
15. PLACING CONCRETE: THE CONCRETE FOR THE UNDERPINNING IS TO BE RC35 CONCRETE AND POURED CONTINUOUSLY TO 75MM BELOW THE SOFFIT OF THE EXISTING FOOTING. THE CONCRETE IS TO BE FULLY COMPACTED USING A MECHANICAL VIBRATOR
16. THE TOP 75mm OF THE PIN IS TO BE FILLED TO THE FULL DEPTH AND WIDTH OF THE VOID WITH A WELL RAMMED C35 CONCRETE USING 5mm - 10mm COARSE AGGREGATE AND "COMBEX 100" EXPANDING ADMIXTURE BY FOSROC UK LIMITED IN ACCORDANCE WITH THEIR INSTRUCTIONS. THE FILLING OF THIS VOID IS TO BE UNDERTAKEN 24 HOURS AFTER THE MASS CONCRETE HAS BEEN POURED
17. OVER-EXCAVATION: EXCEPT WHERE NOTED OTHERWISE ON THE DRAWINGS, AREAS OF OVER-EXCAVATION ARE TO BE BACKFILLED WITH A GRANULAR MATERIAL AND COMPACTED IN 225mm LAYERS TO PROVIDE A STABLE SUB-BASE COMPATIBLE WITH THE FINAL FINISHES
18. SPOIL: THE CONTRACTOR WILL INCLUDE IN HIS PRICES FOR THE REMOVAL OF ALL SPOIL ARISING FROM THE WORKS WHICH IS NOT SUITABLE FOR BACKFILLING PURPOSES
19. RECORDS: A FULL RECORD OF EACH SECTION UNDERPINNED IS TO BE KEPT ON SITE AND READILY AVAILABLE FOR INSPECTION BY THE ENGINEER OR BUILDING CONTROL OFFICER
20. GUARANTEE: THE CONTRACTOR IS TO PROVIDE A 10 YEAR INSURANCE BACKED GUARANTEE FOR THE UNDERPINNING WORKS

DEPTH FOUNDATION/UNDERPINNING	WORKING SPACE
< 1.5 m	1.0 m
1.5 m - 3.0 m	1.5 m
> 3.0 m	2.0 m



TYPICAL HEAVE PRECAUTIONS FOR TRENCH FILL FOUNDATION UP TO 2.5m DEEP & WORKING SPACES

VOLUME CHANGE POTENTIAL	AGAINST SIDE OF FOUNDATION & GROUND BEAM	UNDER GROUND BEAMS & INSITU CONCRETE GROUND FLOOR	CORDEK CLAYMASTER THICKNESS FOR 'EQUIVALENT VOID'
	VOID DIMENSION [MM]	VOID DIMENSION [MM]	THICKNESS [MM]
HIGH	35	150	75
MEDIUM	25	100	50
LOW	0	50	0

FOR COMPRESSIBLE MATERIAL THE VOID DIMENSION IS THE AMOUNT THE MATERIAL WHICH SHOULD BE ABLE TO COMPRESS TO ACCOMMODATE THE HEAVE. THE ACTUAL THICKNESS OF THE COMPRESSIBLE MATERIAL SHOULD BE ESTABLISHED FROM THE MANUFACTURER'S RECOMMENDATIONS AND IS GENERALLY IN THE ORDER OF TWICE THE VOID DIMENSIONS SHOWN. N.B IF IN DOUBT SEEK GUIDANCE FROM TOYNBEE ASSOCIATES LTD.

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DRAWING N^o
 S-GEN(4)

REV.
 A

TIMBER CONSTRUCTION NOTES

1. ALL STRUCTURAL TIMBER FLOOR MEMBERS TO BE OF MINIMUM SIZE AS SHOWN ON THE DETAIL DRAWINGS. SIZES SHOWN ARE NOMINAL TIMBER SIZES EXCEPT AS NOTED ON THE DRAWINGS AND WILL BE SUBJECT TO REDUCTIONS IN FINISHED SIZE TO B.S EN 1313-1:2010
2. TIMBER FLOOR JOIST SHALL HAVE MINIMUM BEARINGS OF 100mm ON MASONRY AND 75mm ON STEEL BEAMS OR TIMBER PLATES EXCEPT AS NOTED ON THE DRAWINGS. TIMBER FLOOR JOISTS SHALL NOT BE BUILT INTO PARTY WALL CONSTRUCTIONS BUT SHALL BE SUPPORTED ON PROPRIETARY JOIST HANGERS AT SUCH LOCATIONS

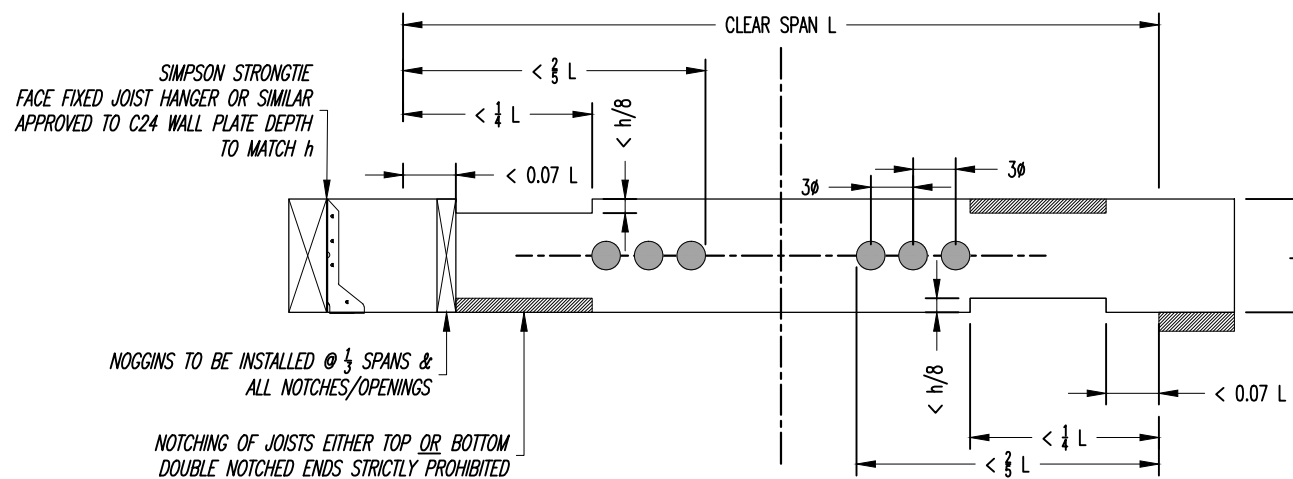
RESTRAINT TYPE JOISTS HANGERS CAPABLE OF RESISTING TENSILE FORCES, IN ACCORDANCE WITH BS 5628-1 APPENDIX C TO BE USED. ALTERNATIVELY, PROVIDE RESTRAINT STRAPS AT NOT MORE THAN 2.0m CENTRES USING 30mm x 5mm GALVANISED STRAPS WITH A TURN DOWN LENGTH OF 100mm AND STRAIGHT LENGTH OF 600mm. STRAPS FIXED TO FLOOR JOISTS WITH 50mm, N^o 10 SCREWS AT NOT MORE THAN 110mm CENTRES AND A MINIMUM OF 4 FIXINGS
3. DOUBLE JOISTS SHALL BE PROVIDED UNDER NON-LOAD BEARING STUDWORK PARTITIONS RUNNING PARALLEL WITH JOIST SPANS, UNDER BATHS, SHOWERS AND UNDER AIRING CUPBOARDS
4. ALL MEMBERS SUPPORTED ON PROPRIETARY HANGERS SHALL BE ACCURATELY CUT TO PROVIDE A FULL CONTACT WITH THE BASE OF THE HANGER AND SHALL BE FIXED IN ACCORDANCE WITH THE HANGER MANUFACTURER'S INSTRUCTIONS. JOISTS SHALL BE REBATED TO LIE FLUSH WITH UNDERSIDE OF HANGERS AND ALL NAIL HOLES TO BE FILLED
5. ALL MEMBERS FITTED INTO STEEL BEAMS SHALL PROVIDE A GOOD FIT TO THE WEB OF THE BEAM AND SHALL BE NOTCHED THE MINIMUM AMOUNT REQUIRED TO CLEAR THE BEAM FLANGES. WHERE STEEL BEAMS ARE SPECIFIED WITHIN THE FLOOR DEPTH, THE UNDERSIDE OF JOISTS SHALL BE 5mm BELOW THE UNDERSIDE OF THE BEAMS
6. EXTERNAL AND PARTY WALLS PARALLEL WITH JOISTS SPANS SHALL BE RESTRAINED AT TOP OF FLOOR JOIST LEVEL AT NOT MORE THAN 2.0m CENTRES WITH GALVANISED 30mm X 5.0mm STRAPS EXTENDING OVER A MINIMUM OF 3 JOISTS. NOGGINS NOT LESS THEN 75% OF JOIST DEPTH AND TIMBER BLOCKING ADJACENT TO WALLS SHALL BE FIXED BETWEEN JOISTS AT ALL STRAP LOCATIONS. STRAPS SHALL BE FIXED TO MEMBERS/NOGGINS WITH NOT LESS THAN 4 NO. 32mm x 3.5mm GALVANISED OR SHERARDISED SQUARE TWISTED NAILS
7. END JOISTS SHALL BE POSITIONED APPROXIMATELY 50mm FROM MASONRY WALLS. JOIST CENTRES GENERALLY SHALL BE EQUAL AND SHALL NOT EXCEED THE DESIGN CENTRES SHOWN ON THE DRAWING. MULTIPLE JOISTS, WHERE SHOWN ON THE DRAWINGS SHALL BE SECURELY NAILED TOGETHER AT NOT MORE THAN 600mm CENTRES
8. UNLESS SPECIFIED OTHERWISE, SECURELY FIX STRUTTING BETWEEN JOISTS AT CENTRES AS FOLLOWS:

JOIST SPAN OF 2.5m TO 4.5m: - ONE ROW AT CENTRE OF SPAN.
JOIST SPAN OVER 4.5m: - TWO ROWS EQUALLY SPACED

STRUTTING SHALL TAKE THE FORM OF ONE OF THE FOLLOWING.
38mm X 38mm SOFTWOOD HERRINGBONE STRUTTING LOCATED BETWEEN 5mm & 25mm CLEAR OF TOP AND BOTTOM EDGES OF JOIST

PROPRIETARY GALVANISED METAL STRUTTING FIXED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS

SOLID SOFTWOOD STRUTTING NOT LESS THAN 38mm THICK AT LEAST THREE QUARTERS OF THE DEPTH OF THE JOIST



TIMBER JOISTS NOTCHES & HOLES ALLOWANCE

REV	DESCRIPTION	BY	APP.	DATE
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PROJECT
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TITLE
 GENERAL NOTES 5

CLIENT

STRUCTURAL DRAWING

JOB N ^o	DESIGNED	DRAWN	APPROVED	SCALE
2030	TT	TT	TT	NTS

DRAWING N^o
 S- GEN(5)

REV.
 A

TEMPORARY WORKS

- IT IS THE CONTRACTORS RESPONSIBILITY TO MAKE PROVISION FOR ALL TEMPORARY WORKS AND DESIGNS SUBMITTED TO TOYNBEE ASSOCIATES PRIOR TO COMMENCEMENT OF ALL WORKS
- TEMPORARY WORKS:
TEMPORARY WORKS (TW) IS DEFINED IN BS 5975: 2008+A1:2011
"CODE OF PRACTICE FOR TEMPORARY WORKS PROCEDURES AND THE PERMISSIBLE STRESS DESIGN OF FALSEWORK" AS "THOSE PARTS OF THE WORKS THAT ALLOW OR ENABLE CONSTRUCTION OF, PROTECT, SUPPORT OR PROVIDE ACCESS TO, THE PERMANENT WORKS AND WHICH MIGHT OR MIGHT NOT REMAIN IN PLACE AT THE COMPLETION OF THE WORKS"
- IN ACCORDANCE WITH CDM CONSTRUCTION & DESIGN MANAGEMENT (2007)
ALL PRACTICABLE STEPS SHALL BE TAKEN, WHERE NECESSARY TO PREVENT DANGER TO ANY PERSON, INCLUDING, WHERE NECESSARY, THE PROVISION OF SUPPORTS OR BATTERING, TO ENSURE THAT-

ANY EXCAVATION OR PART OF AN EXCAVATION DOES NOT COLLAPSE

NO MATERIAL FROM A SIDE OR ROOF OF, OR ADJACENT TO, ANY EXCAVATION IS DISLODGED OR FALLS; AND NO PERSON IS BURIED OR TRAPPED IN AN EXCAVATION BY MATERIAL WHICH IS DISLODGED OR FALLS

SUITABLE AND SUFFICIENT STEPS SHALL BE TAKEN TO PREVENT ANY PERSON, WORK EQUIPMENT, OR ANY ACCUMULATION OF MATERIAL FROM FALLING INTO ANY EXCAVATION

SUITABLE AND SUFFICIENT STEPS SHALL BE TAKEN, WHERE NECESSARY, TO PREVENT ANY PART OF AN EXCAVATION OR GROUND ADJACENT TO IT FROM BEING OVERLOADED BY WORK EQUIPMENT OR MATERIAL
- WHERE APPROPRIATE THE CONTRACTOR WILL ENSURE THAT THE TEMPORARY WORKS COMPLY WITH THE FOLLOWING STANDARDS:
BS 4074:2000 STEEL TRENCH STRUTS
BS EN 1065:1999 ADJUSTABLE TELESCOPIC STEEL PROPS
BS EN 12811-1:2003 TEMPORARY WORKS EQUIPMENT. SCAFFOLDS. PERFORMANCE REQUIREMENTS AND GENERAL DESIGN
NASC TG20:13 (NATIONAL ACCESS & SCAFFOLDING CONFEDERATION) GOOD PRACTICE GUIDE FOR TUBE AND FITTING SCAFFOLDING
- THE PRINCIPLE CONTRACTOR SHALL BE ABLE TO DEMONSTRATE THAT THEY HAVE IN PLACE EFFECTIVE ARRANGEMENTS FOR CONTROLLING RISKS ARISING FROM THE USE OF TEMPORARY WORKS INCLUDING, BUT NOT EXCLUSIVELY, THE PREPARATION OF AN ADEQUATE DESIGN BRIEF, COMPLETE AND MAINTANCE OF A TEMPORARY WORKS REGISTER, PRODUCTION OF A TEMPORARY WORKS DESIGN (INCLUDING DESIGN RISK ASSESSMENT AND DESIGNER'S METHOD STATEMENT), INDEPENDENT CHECKING OF DESIGN AND PRE-ERECTION INSPECTION OF THE TEMPORARY WORKS MATERIALS AND COMPONENTS
- WHERE A TEMPORARY WORKS COORDINATOR (TWC) IS APPOINTED IT IS THEIR RESPONSIBILITY TO ENSURE THE CONTRACTOR'S PROCEDURES FOR THE CONTROL OF TEMPORARY WORKS ARE IMPLEMENTED ON SITE. THE PRINCIPLE ACTIVITIES OF THE TWC ARE LISTED IN BS 5975:2008 CLAUSE 7.2.5
- ON SMALL JOBS INVOLVING LOWER RISK TEMPORARY WORKS THE ROLE OF TWC & DESIGNER MAY BE CARRIED OUT BY THE SAME PERSON WHERE APPROPRIATE, PROVIDING HE/SHE IS COMPETENT TO CARRY OUT THE TASKS INCLUDING STOPPAGE OF WORKS IF IT IS NOT SATISFACTORY
- SIMPLE AND/OR POTENTIAL LOW RISK TEMPORARY WORKS INCLUDE:
STANDARD SCAFFOLD
FORMWORK LESS THAN 1.2m HIGH
HOARDING/FENCING LESS THAN 1.2m HIGH
SIMPLE PROPPING SCHEME - 1 OR 2 PROPS
SHALLOW EXCAVATIONS LESS THAN 1.2m HIGH/DEEP
- MORE COMPLEX AND/OR POTENTIAL MEDIUM RISK TEMPORARY WORKS:
FALSEWORK UP TO 3m HIGH
FORMWORK FOR COLUMNS AND WALLS UP TO 3m HIGH
MORE COMPLEX PROPPING SCHEMES - MULTIPLE PROPS @ SINGLE LEVEL
NEEDLING OF STRUCTURES UP TO 2 STOREYS HIGH
EXCAVATIONS UP TO 3m HIGH/DEEP
SIMPLE DESIGNED SCAFFOLD
TEMPORARY ROOFS
- COMPLEX AND/OR POTENTIAL HIGH RISK TEMPORARY WORKS:
FALSEWORK AND FORMWORK OVER 3m HIGH
TRENCHLESS CONSTRUCTION
WORKING PLATFORMS FOR CRANES AND PILING RIGS
TOWER CRANE BASES
FAÇADE RETENTION SCHEMES
FLYING AND RAKING SHORING
COMPLEX PROPPING SCHEMES - MULTIPLE PROPS AND MULTIPLE LEVELS
NEEDLING OF STRUCTURES GREATER THAN 2 STOREYS
COMPLEX DESIGNED SCAFFOLD
COMPLEX STRUCTURAL STEELWORK AND PRECAST CONCRETE ERECTION SCHEMES

SCAFFOLDING

SCAFFOLDING WHICH IS DEFINED AS 'BASIC SCAFFOLDS' AS DETAILED IN NASC (NATIONAL ACCESS & SCAFFOLDING CONFEDERATION) GUIDANCE NOTE TG20 IS NOT SUBJECT TO DESIGN CALCULATIONS, THESE SCAFFOLD SYSTEMS INCLUDE PUTLOG SCAFFOLD, INDEPENDENT SKELETAL TIED SCAFFOLD, INDEPENDENT TIED DEBRIS NETTED SCAFFOLDS & INDEPENDENT TIED SHEETED SCAFFOLDS
SCAFFOLDING WHICH IS SUBJECT TO DESIGN IS AS LISTED BELOW (THIS LIST IS NON EXHAUSTIVE) :

- DEAD SHORES, FLYING SHORES, RAKING SHORES
- CANTILEVERED SCAFFOLDS
- TRUSS-OUT SCAFFOLDS
- ACCESS BIRDCAGES, ACCESS SCAFFOLDS WITH MORE THAN 2 WORKING LIFTS ALLOWED WITH TG20 'BASIC SCAFFOLDS'
- FAÇADE RETENTION
- BUTTRESSED FREE-STANDING SCAFFOLDS
- TEMPORARY ROOFS & TEMPORARY BUILDINGS
- SUPPORT SCAFFOLDS
- LOADING BAYS FOUND ON THE GROUND
- MOBILE & STATIC TOWERS OUTSIDE THE BASE/HEIGHT LIMITATIONS
- FREE STANDING SCAFFOLDS OUTSIDE THE BASE/HEIGHT LIMITATIONS
- TEMPORARY RAMPS & ELEVATED ROADWAYS
- STAIRCASES & FIRE ESCAPES
- BRIDGE SCAFFOLDS
- TOWERS REQUIRING GUYS &/OR GROUND ANCHORS
- PEDESTRIAN FOOTBRIDGES OR WALKWAYS
- LIFTING GANTRIES & TOWERS
- POWER LINE CROSSINGS
- STEEPLE SCAFFOLDS
- SYSTEM SCAFFOLDS OUTSIDE USER GUIDE PARAMETERS
- TEMPORARY STORAGE ON SITE
- MASTS, LIGHTING TOWERS & TRANSMISSION TOWERS
- ADVERTISING HOARDINGS/BANNERS, SIGN BOARD SUPPORTS
- ANY SCAFFOLDING SUBJECT TO VIBRATION, HIGH LOADING, LONG TERM DURATION, HIGH RISK AREAS, LOADING FROM PASSANGERS/GOODS HOIST

HEALTH & SAFETY

- PRIOR TO WORKS COMMENCING, THE CONTRACTOR MUST NOTIFY THE LOCAL HEALTH & SAFETY EXECUTIVE AREA OFFICE OF THE WORK, USING FORM F10, IN ACCORDANCE WITH THE CDM REGULATIONS 2015. A COPY OF THE NOTIFICATION IS TO BE DISPLAYED ON SITE AND COPIED TO TOYNBEE ASSOCIATES
- THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE EXISTING STRUCTURE AND ALL RETAINED EARTH WORKS, BOTH ON THE SITE AND ON ADJOINING SITES AND MUST TAKE ALL NECESSARY PRECAUTIONS TO SAFEGUARD THEIR STABILITY. ALL TEMPORARY WORKS AND THE STABILITY OF THE WORKS IN GENERAL DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR
- THE CONTRACTOR IS TO OBTAIN RELEVANT C.O.S.H.H. INFORMATION WITH REGARDS TO THE MATERIALS HE PROPOSES TO USE IN THE WORKS AND IS TO ENSURE THAT ALL OPERATIVES ARE AWARE OF THE REQUIREMENTS STATED IN THE C.O.S.H.H. REGULATIONS
- THE CONTRACTOR IS TO COMPLY WITH THE REQUIREMENTS OF THE HEALTH & SAFETY AT WORK ACT 2007 IN TERMS OF THE EMPLOYER'S RESPONSIBILITIES
- THE CONTRACTOR MUST PAY PARTICULAR ATTENTION TO HEALTH AND SAFETY MATTERS AND METHODS OF WORKING. THE CONTRACTOR IS TO DECIDE UPON THE SEQUENCE OF WORKING AND MUST USE BEST PRACTICE AT ALL TIMES WITH PARTICULAR CARE WHEN WORKING AT HEIGHT AND BELOW GROUND,WHEN DISMANTLING, DEMOLISHING AND INSTALLING TEMPORARY SUPPORT FOR INSERTING NEW ELEMENTS TO SUPPORT EXISTING STRUCTURE
- THE CONTRACTOR SHOULD ADVISE THE CLIENT AND CONSULTANT TEAM IF THEY BECOME AWARE OF ANY PARTICULAR HEALTH AND SAFETY CONCERNS OR IF THEY DISCOVER ANY DELETERIOUS MATERIALS SUCH AS ASBESTOS ETC. WE ARE NOT EXPERTS IN MATTERS SUCH AS DELETERIOUS MATERIALS AND ARE NOT EMPLOYED TO ADVISE
- TOYNBEE ASSOCIATES ARE NOT EMPLOYED BY THE CLIENT TO PROVIDE CONTRACT ADMINISTRATION OR GENERAL SUPERVISION AND MAY NOT BE AWARE OF THE WORKS AND GENERAL PROGRESS ON SITE. IT IS ESSENTIAL THAT THE CONTRACTOR ALERT BOTH THE CLIENT AND TOYNBEE ASSOCIATES IF ANY UNFORSEEN ELEMENTS OR MATERIAL DESIGN VARIATIONS ARISE, LEADING TO ANY CHANGES TO THE STRUCTURAL DRAWINGS/SPECIFICATIONS/SCOPE OF WORK
- IT IS IMPORTANT THAT THE CONTRACTOR ALERTS THE CLIENT AND DESIGN TEAM IF THERE ARE ANY TRADES OR SKILLS REQUIRED FROM THE DRAWINGS AND OTHER CONTRACT DOCUMENTS, THAT ARE NOT WITHIN THE IMMEDIATE EXPERTISE OF THE CONTRACTOR.

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PROJECT
31 FERNCROFT AVENUE
LONDON, NW3

TITLE
GENERAL NOTES 6

STRUCTURAL DRAWING

JOB Nº	DESIGNED	DRAWN	APPROVED	SCALE
2030	TT	TT	TT	NTS

TITLE	CLIENT	DRAWING Nº	REV.
GENERAL NOTES 6		S- GEN(6)	A

PRECAST CONCRETE UNITS/BEAM AND BLOCK FLOORS

- APPROVED SUPPLIERS
THE DESIGN AND SUPPLY OF THE UNITS CAN BE OBTAINED FROM ONE OF THE FOLLOWING MANUFACTURERS:
 - BIRCHWOOD CONCRETE PRODUCTS LTD
BIRCHWOOD WAY
COTES PARK INDUSTRIAL ESTATE
SOMERCOTES
ALFRETON
DERBY DE55 4NH TEL: 01773 602432
 - BISON CONCRETE PRODUCTS LTD
AMINGTON HOUSE
SILICA ROAD
TAMWORTH
STAFFS. B77 4AZ TEL: 01827 64141
 - MARSHALLS FLOORINGS LTD
HOVERINGHAM
NOTTINGHAM NG14 7JX TEL: 01636 832000
 - MILBANK FLOORS LTD
THE AIRFIELD
EARLS COLNE
COLCHESTER
ESSEX CO6 2NS TEL: 01787 223931
 - RICHARD LEES LTD
WESTON UNDERWOOD
ASHBOURNE
DERBYSHIRE DE6 4PH TEL: 01335 360601
 - RMC CONCRETE FLOORS LTD
LONDON ROAD
WICK
BRISTOL BS15 5SJ TEL: 0117 937 3740
- SCOPE OF WORKS: THE MANUFACTURER SHALL BE RESPONSIBLE FOR THE DESIGN, SUPPLY AND ERECTION OF ALL PRECAST CONCRETE ELEMENTS AS GENERALLY DEFINED ON THE TOYNBEE ASSOCIATES LTD DRAWINGS
- MANUFACTURER'S DESIGN
PRODUCTION OF DESIGN INFORMATION: THE MANUFACTURER SHALL ADHERE TO THE DRAWINGS SUPPLIED BY THE C.A. FROM THESE HE SHALL PREPARE HIS OWN CALCULATIONS, MARKING PLANS, MANUFACTURING DETAILS AND SPECIFICATIONS
- CO-ORDINATION: THE MANUFACTURER SHALL REQUEST ADDITIONAL INFORMATION AS NECESSARY FROM THE C.A., LIAISING WITH THE C.A., CONTRACTOR AND OTHERS AS NECESSARY TO ENSURE COORDINATION OF THE WORK WITH RELATED BUILDING ELEMENTS AND SERVICES
- APPROVALS AND PROGRAMME:
TWO COPIES OF THE DRAWINGS, SPECIFICATIONS, AND CALCULATIONS SHALL BE SUBMITTED TO THE C.A. FOR COMMENT SO AS TO ALLOW AT LEAST 14 WORKING DAYS FROM DATE OF RECEIPT BEFORE COMMENCEMENT OF CONCRETE UNIT PRODUCTION. ALL DRAWINGS SHALL BEAR APPROPRIATE HEADINGS AND TITLES AND BE FULLY DETAILED SHOWING MARKING TO INDICATE LOCATIONS AND DIRECTIONS IN WHICH THE WORK IS TO BE FIXED ETC.
- ONE SET OF MANUFACTURING DRAWINGS AND CALCULATIONS SHALL BE RETURNED TO THE MANUFACTURER WITH THE C.A.'S COMMENTS. THE MANUFACTURER SHALL RE-SUBMIT ANY REVISED OR ALTERED DRAWINGS OR CALCULATIONS FOR COMMENT. A FURTHER PERIOD OF 14 WORKING DAYS AS DEFINED ABOVE, WILL APPLY TO ANY SUCH RE-SUBMISSION
- SUCH COMMENT SHALL NOT RELIEVE THE MANUFACTURER FROM RESPONSIBILITY FOR ANY ERROR SUBSEQUENTLY DISCOVERED IN THE DETAILS. TWO COPIES OF THE FINAL DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED BY THE MANUFACTURER TO THE BUILDING INSPECTOR FOR APPROVAL UNDER THE BUILDING REGULATIONS 1985, AND THE MANUFACTURER SHALL BE RESPONSIBLE FOR MAKING ANY NECESSARY AMENDMENTS TO ACHIEVE SUCH APPROVAL
- VARIATIONS: IF SUBMITTED DESIGN/PRODUCTION INFORMATION DIFFERS FROM THE REQUIREMENTS OF THE TENDER DOCUMENTS/SUB-CONTRACTORS DOCUMENTS/CONTRACT OF SALE DOCUMENTS AS APPLICABLE, EACH SUCH DIFFERENCE MUST BE THE SUBJECT OF A REQUEST FOR SUBSTITUTE OR VARIATION, SUPPORTED BY ALL

RELEVANT INFORMATION. SHOULD ANY AMENDMENT TO DESIGN/PRODUCTION INFORMATION REQUIRED BY THE C.A. BE CONSIDERED TO INVOLVE A VARIATION WHICH HAS NOT ALREADY BEEN ACKNOWLEDGED AS A VARIATION BY THE C.A., NOTIFY THE CONTRACTOR AND/OR C.A. WITHOUT DELAY AND IN ANY CASE WITHIN 7 DAYS, AND DO NOT PROCEED WITH ORDERING, FABRICATION, OR FIXING UNTIL SUBSEQUENTLY INSTRUCTED. CLAIMS FOR THE EXTRA COST OF SUCH WORK, IF MADE AFTER IT HAS BEEN CARRIED OUT, MAY NOT BE ALLOWED. SUBMIT SUFFICIENT COPIES OF FINAL VERSION OF DESIGN/PRODUCTION INFORMATION TO THE C.A. FOR DISTRIBUTION TO ALL AFFECTED PARTIES, INCLUDING 2 COPIES FOR THE CONSULTANTS

- DESIGN INFORMATION
DRAWINGS: THIS SPECIFICATION SHOULD BE READ IN CONJUNCTION WITH TOYNBEE ASSOCIATES LTD DRAWING NUMBERS ###-S-### AND ALL RELEVANT ARCHITECTS DRAWINGS
- LOADINGS

PRIVATE AREAS:
SUPERIMPOSED LOADING = 1.50 kN/m² (1.8 kN CONCENTRATED LOAD)

DEAD LOADING, EXCLUDING THE SELF WEIGHT OF THE UNITS TO BE AS FOLLOWS:
LEVELLING SCREED = 1.80 kN/m²
SERVICES = 0.50 kN/m²
PARTITIONS = 1.00 kN/m²
PLASTERBOARDED CEILING = 0.30 kN/m² (WHERE APPLICABLE)
FINISHES = 0.30 kN/m²
- GENERALLY: THE UNITS ARE TO BE DESIGNED IN ACCORDANCE WITH BS 8110-1:1997 OR BS EN 1992-1-1:2004 INCLUDING ALL CURRENT AMENDMENTS, THE BUILDING REGULATIONS 2010, AND FOR THE IMPOSED LOADS IN ACCORDANCE WITH BS 6399-1:1996 AND AS SPECIFIED AND DETAILED ON DRAWINGS
- FLOOR MASS: SEPARATING FLOORS ARE TO COMPLY WITH THE BUILDING REGULATIONS 2010 PART E. THE UNITS, TOGETHER WITH ANY BONDED SCREEDS, MUST HAVE A MINIMUM MASS OF 365 Kg/m² FOR TYPE 1 FLOORS AND 300 Kg/m² FOR TYPE 2 FLOORS
- SERVICE STRESSES: THE UNITS MUST BE REINFORCED AS NECESSARY TO RESIST HANDLING LOADS AND SERVICE STRESSES
- DEFLECTION LIMIT: DEFLECTION OF UNITS UNDER FULL DESIGN LOADS AFTER ALLOWING FOR LONG TERM CREEP DEFLECTION SHALL NOT EXCEED THAT SPECIFIED BY BS 8110 : PART 1
- FIRE RESISTANCE: THE UNITS MUST BE 1.0 HOUR FIRE RESISTANT
- MATERIALS AND WORKMANSHIP
GENERALLY: ALL MATERIALS, WORKMANSHIP AND TESTS (WHERE REQUIRED) SHALL CONFIRM TO BS 8110-1 EXCEPT WHERE VARIED BY THIS SPECIFICATION, ALL TO THE SATISFACTION OF THE C.A.
- TEST RESULTS: AS REQUIRED BY THE C.A., THE MANUFACTURER SHALL SUPPLY COPIES OF CONCRETE TEST CUBE RESULTS AND TEST CERTIFICATES FOR THE VARIOUS MATERIALS SHOWING THEIR COMPLIANCE'S WITH THE RELEVANT BRITISH STANDARDS
- DIMENSIONAL TOLERANCES: THE UNITS SHALL BE MANUFACTURED WITHIN THE TOLERANCES SET OUT BELOW:
LENGTH +5mm - 5mm
WIDTH +0mm - 3mm
THICKNESS +3mm - 3mm
STRAIGHTNESS OF BOW: (DEVIATIONS FROM INTENDED LINE)
UP TO 3m - 6mm
3 TO 6m - 9mm
- FIXINGS INTO THE UNITS: ALL FIXINGS INTO THE UNITS WHERE POSSIBLE TO BE CAST IN DURING THE MANUFACTURING PROCESS. FIXING TYPE AND POSITION TO BE TO THE APPROVAL OF THE C.A. SHOT FIRING IS NOT TO BE USED
- HOLES THROUGH PRECAST UNITS: WHERE POSSIBLE ALL HOLES THROUGH UNITS AND ANY CHASES SHALL BE FORMED DURING THE MANUFACTURING PROCESS. NO HOLES SHALL BE CUT THROUGH UNITS ON SITE WITHOUT THE APPROVAL OF THE C.A. WHERE HOLES HAVE TO BE CUT IN THE UNITS, THEY SHALL BE FORMED STRICTLY IN ACCORDANCE WITH THE MANUFACTURE'S RECOMMENDATIONS AND SHALL BE CLEAR OF REINFORCEMENT AND NIBS IN UNITS
- TRIMMING STEELWORK: ANY TRIMMING STEELWORK REQUIRED SHOULD BE CLEARLY INDICATED AND DETAILED ON THE DRAWINGS AND IS TO BE SUPPLIED WITH THE FLOOR SYSTEM. ALL TRIMMING STEELWORK IS TO BE GALVANISED

- FINISHES TO THE UNITS: EXPOSED SOFFIT AND SIDES OF UNITS ARE TO BE FINISHED TYPE B TO BS 8110-1. THE TOP SURFACE SHOULD BE SUITABLE TO RECEIVE A SAND/CEMENT SCREED FINISH. WHERE FLOOR FINISHES NEED A LEVEL SURFACE ALLOW FOR THIN LATEX LEVELLING SCREED (E.G. UNDER FLOATING TIMBER FLOOR)
- BEARINGS OF UNITS: EXPOSED UNIT BEARING ON STEEL BEAMS SHALL HAVE A MINIMUM BEARING OF 75mm. ALL OTHER BEARINGS SHALL BE FIXED WITH A MINIMUM END BEARING OF 100mm. IF NECESSARY A WET BED OF 1:2 CEMENT:SHARP SAND SHALL BE USED. INFORM C.A. WHEREVER THIS IS REQUIRED
- CONTINUITY BARS: PROVIDE 1200MM LONG H8 CONTINUITY BARS @ 1200 c/c AT ALL UNIT JOINTING OVER LOAD BEARING WALLS FOR PRECAST PLANK AREAS
- GROUTING OF UNITS: WHERE APPLICABLE USE SITE MIX CONCRETE OF PROPORTIONS 1:2.2:3.5 BY VOLUME CEMENT:SHARP SAND:10mm AGGREGATE. FOR BEAM AND BLOCK FLOORS THOROUGHLY BRUSH INTO ALL JOINTS 1:4 CEMENT:SHARP SAND.
- BLOCK STRENGTHS: FOR BEAM AND BLOCK FLOORS, BLOCKS OF MINIMUM STRENGTH 3.5N/mm² ARE TO BE USED IF THE BLOCKS ARE ALSO TESTED TO THE TRANSVERSE STRENGTH REQUIREMENT OF ACBA/PFF SPECIFICATION. IF NOT, OR IF FLOOR IS NOT GROUTED DURING CONSTRUCTION THEN 7N/mm² BLOCKS SHOULD BE USED
- SPECIFICATION OF BLOCKS TO BE:
SOLID RECTANGULAR CONCRETE BLOCKS TO BS EN 771-3:2011
GENERIC AUTOCLAVED AERATED CONCRETE INFILL BLOCKS TO BS EN 771-4:2011
- HANDLING, STORAGE AND ERECTION
HANDLING AND STORING: CARE SHALL BE EXERCISED IN THE HANDLING, STACKING AND STORING OF THE UNITS WHICH SHALL BE ADEQUATELY PROTECTED FROM THE WEATHER, DAMAGE, STAINING OR DIRTYING OF THE SURFACES WHICH WILL BE VISIBLE IN THE COMPLETED WORKS OR DETRIMENTAL TO ANY APPLIED FINISHES
- ACCURACY OF ERECTION: SURVEY THE STRUCTURE, INCLUDING ANY FIXING INSERTS, BEFORE COMMENCING ERECTION. REPORT TO C.A. IMMEDIATELY IF STRUCTURE IS NOT IN ACCORDANCE WITH THE REQUIREMENTS OF THIS SPECIFICATION
- ERECTION OF UNITS: THE UNITS SHALL BE PLACED BY CRANE AND GRAB/SLINGS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE UNITS ARE TO BE BUTTED, SCREEDED AND JOINTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MILD STEEL CONTINUITY RODS TO BE POSITIONED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- STORAGE OF MATERIALS: THE CONTRACTORS MUST NOT STACK MATERIALS ON THE FLOORS SO THAT THE DESIGN LOADING IS EXCEEDED. CONSULT THE FLOOR MANUFACTURER FOR METHODS OF HANDLING MATERIALS ON UNSCREED FLOORS AND PERMITTED POINT LOADS.

REV	DESCRIPTION	BY	APP.	DATE
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PROJECT
31 FERNCROFT AVENUE
LONDON, NW3

TITLE
GENERAL NOTES 7

STRUCTURAL DRAWING

JOB N ^o	DESIGNED	DRAWN	APPROVED	SCALE
2030	TT	TT	TT	NTS

DRAWING N^o
S-GEN(7)

REV.
A

COMPOSITE FLOOR CONSTRUCTION

1. ALL SETTING OUT TO BE IN ACCORDANCE WITH THE ARCHITECT'S DRAWINGS, ANY DISCREPANCIES BETWEEN THE ENGINEERS AND ARCHITECT'S DRAWINGS TO BE REFERRED TO THE ARCHITECT BEFORE PROCEEDING
2. ALL DIMENSIONS ARE IN MILLIMETRES, DIMENSIONS MUST NOT BE SCALED FROM DRAWINGS
3. DESIGN INFORMATION

DRAWINGS: THIS SPECIFICATION SHOULD BE READ IN CONJUNCTION WITH TOYNBEE ASSOCIATES LTD DRAWING NUMBERS ###-S-### AND ALL RELEVANT ARCHITECTS DRAWINGS

4. UNFACTORED FLOOR LOADINGS

CONSTRUCTION STAGE:

DEAD LOADS

CONCRETE SLAB (WET) = 2.65 kN/m²
 STEEL DECKING & REINFORCEMENT = 0.20 kN/m²

IMPOSED LOADS

CONSTRUCTION LOADING = 1.00 kN/m²

TOTAL = 3.85 kN/m²

COMPOSITE STAGE:

DEAD LOADS

CONCRETE SLAB (DRY) = 2.48 kN/m²
 STEEL DECKING & REINFORCEMENT = 0.20 kN/m²
 CEILING & SERVICES = 0.50 kN/m²
 FINISHES (SCREED) = 0.24 kN/m² (WHERE APPLICABLE)

IMPOSED LOADS

PARTITIONS = 1.00 kN/m²
 IMPOSED LOAD = 5.00 kN/m²

TOTAL = 9.42 kN/m²

5. DECKING

RICHARD LEES HOLORID DECKING S350 0.9mm STEEL DECK. DECKING LAYOUT TO BE PROVIDED BY SPECIALIST CONTRACTOR TOGETHER WITH FIXING ARRANGEMENT AND DETAILS IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS

6. 2 COPIES OF DRAWINGS TO BE SUBMITTED TO TOYNBEE ASSOCIATES LTD FOR APPROVAL PRIOR TO MANUFACTURE

7. DESIGN OF COMPOSITE FLOOR SYSTEM SHALL BE IN ACCORDANCE WITH BS 5950-3:1990+A1:2010 & BS EN 1994-1:2004 WHERE APPROPRIATE

8. SHEAR STUDS:

STUDS TO BE MANUFACTURED FROM LOW CARBON STEEL WITH A YIELD POINT OF 350 N/mm²
 STUDS TO BE MIN. 19mm x 100mm LONG TO ACHIEVE 95mm EFFECTIVE LENGTH AFTER WELDING. CENTRES TO BE AS NOTED ON SCHEDULE ###-S-050

9. TESTING OF SHEAR STUDS TO BE IN ACCORDANCE WITH BCSA CODE OF PRACTICE FOR METAL DECKING AND STUD WELDING. TOP SURFACE OF FLOOR STEEL BEAMS TO BE LEFT UNPAINTED TO ALLOW WELDING OF STUDS TO BEAMS. ENSURE SURFACES ARE FREE FROM GREASE, PAINT & WATER

10. REINFORCEMENT - 1 LAYER A142 ANTICRACK MESH TO BE PROVIDED IN TOP OF SLAB, MINIMUM COVER OF 25mm, PROVIDE 300mm LAPS

11. EDGE TRIMS & BRACES - ALL COLD ROLLED EDGE TRIMS AND BRACING REQUIRED FOR DECKING TO BE PROVIDED BY THE SPECIALIST STEELWORK CONTRACTOR

12. SPECIALIST CONTRACTOR TO ALLOW FOR ALL SERVICE HOLES AS INDICATED ON THE ARCHITECT/M&E ENGINEERS DRAWINGS INCLUDING ALL TRIMS AS REQUIRED. ALLOWANCE SHOULD ALSO BE MADE FOR CUTTING HOLES THROUGH DECK AFTER CURING OF CONCRETE

13. PRICING FOR SERVICES HOLES & CUTTING HOLES SHOULD BE ITEMISED & PRICED AS A SEPARATE ITEM IN THE TENDER
14. CEILING SUPPORT: #10 HOLLOWEDGE CEILING SUPPORTS @ 600 c/c GRID TO ALL UNDERSIDE OF ALL FLOOR DECKING
15. DECKING TO BE SUPPLIED INCLUSIVE OF ALL NECESSARY EDGE TRIMS, FIXINGS AND ANCILLARY ITEMS IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS
16. FINAL DESIGN AND DETAILS IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS

REV	DESCRIPTION	BY	APP.	DATE
A	ISSUED FOR INFORMATION ONLY	TT	TT	28.09.20



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PROJECT
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TITLE
 GENERAL NOTES 8

CLIENT

STRUCTURAL DRAWING

JOB N ^o	DESIGNED	DRAWN	APPROVED	SCALE
2030	TT	TT	TT	NTS

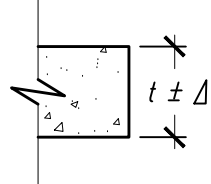
DRAWING N^o
 S- GEN(8)

REV.
 A

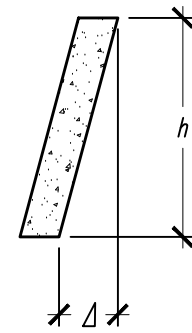
CONCRETE – CONSTRUCTION ACCURACY

THE FOLLOWING TABLES HAVE BEEN ADAPTED FROM THE 'NATIONAL STRUCTURAL CONCRETE SPECIFICATION FOR BUILDING CONSTRUCTION' (NSCS) 3rd EDITION

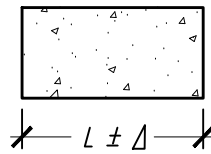
SLAB THICKNESS	
t (mm)	± Δ (mm)
≤ 150	6
150 ≤ 600	10
600 ≤ 1000	15
> 1000	20



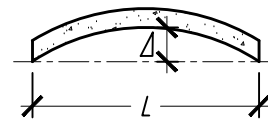
VERTICALITY	
h	± Δ (mm)
≤ 1.5m	8
1.5m ≤ 2.5m	10
2.5m ≤ 4m	15
4m ≤ 8m	20
> 8m	20 + 1mm/m over to max. 50mm



FORMED ELEMENTS	
L (mm)	± Δ (mm)
≤ 600	8
600 ≤ 1.5m	10
1.5m ≤ 8m	15
8m ≤ 15m	20
15m ≤ 30m	30
> 30m	30 + 1mm/m over

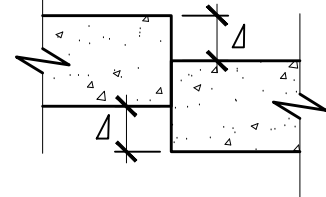


ELEMENT BOW	
L (mm)	± Δ (mm)
≤ 1.5m	6
1.5m ≤ 3m	10
3m ≤ 5m	15
5m ≤ 8m	15
> 8m	20 + 1mm/m over to max. 50mm

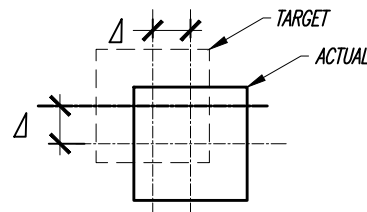


PRECAMBER Δ (mm)	± Δ (mm)
≤ 20	5
20 ≤ 40	10
> 40	15

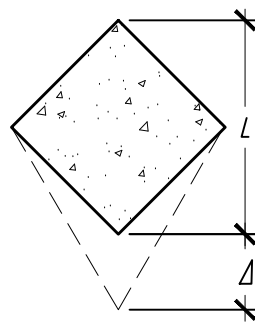
ABRUPT CHANGES OF CONTINUOUS SURFACES
(WHERE FINISH IS NOT SPECIFIED)
PERMITTED DEVIATION Δ UP TO 3mm
UP TO 5mm @ CONSTRUCTION/MOVEMENT JOINT AS MEASURED ON THE NOMINAL SURFACE OF THE FINISH FACE



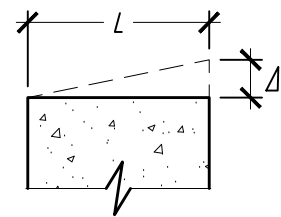
POSITION OF ELEMENTS ON PLAN
BELOW GROUND: Δ = ±30mm
ABOVE GROUND: Δ = ±10mm



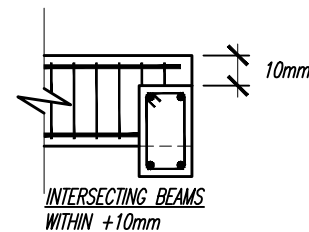
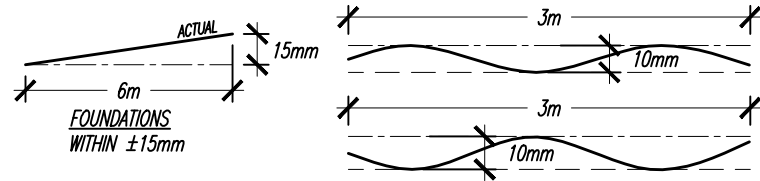
TWIST	
L (mm)	Δ (mm)
≤ 600	6
600 ≤ 3m	10
3m ≤ 8m	15
> 8m	15 + 2mm/m over



SQUARENESS	
L (mm)	Δ (mm)
≤ 600	6
600 ≤ 2m	10
2m ≤ 4m	15
> 4m	15 + 1mm/m over



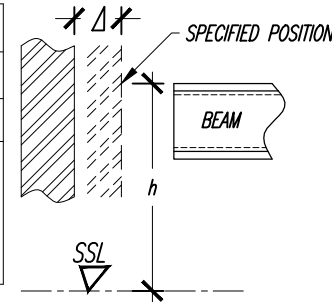
LEVEL OF ELEMENTS
FOLLOWING TOLERANCES ARE FOR 'PRE STRIKE' CONCRETE TO RECEIVE FURTHER FINISHES



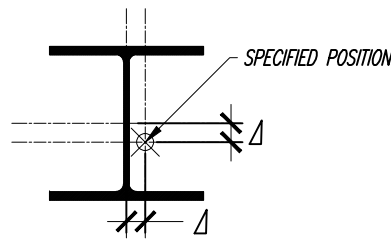
STEELWORK – CONSTRUCTION ACCURACY

THE FOLLOWING TABLES HAVE BEEN ADAPTED FROM THE 'NATIONAL STRUCTURAL STEELWORK SPECIFICATION' (NSSS) 5th EDITION

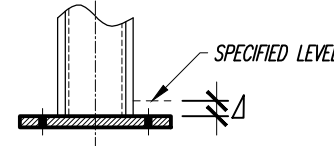
VERTICAL WALL	
h (m)	± Δ (mm)
≤ 4	15
> 4	20 + 1mm/m over to max. ±50mm



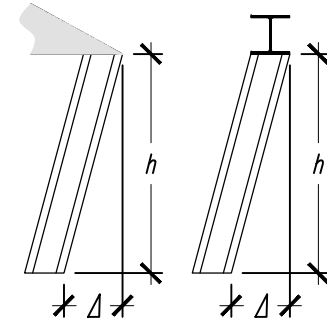
POSITION OF COLUMN AT BASE
DEVIATION OF SECTION CENTRE: Δ = 10mm



LEVEL OF COLUMN AT BASE
DEVIATION OF TOP OF BASEPLATE: Δ = ±5mm

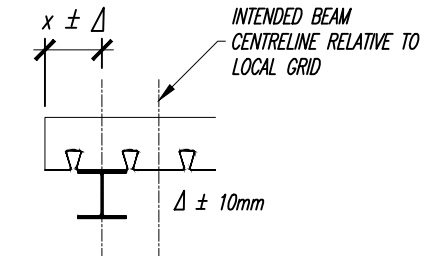


SINGLE STOREY COLUMN PLUMBS
DEVIATION OF TOP RELATIVE TO BASE:
Δ = ± h/600 OR 5mm WHICHEVER IS GREATER MAX ±25mm

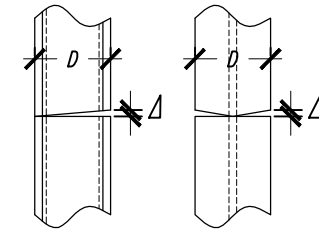


MULTI-STOREY COLUMN PLUMBS
DEVIATION IN EACH STOREY & MAXIMUM DEVIATION RELATIVE TO BASE UP TO 10 STOREYS:
Δ = ± h/600 OR 5mm WHICHEVER IS GREATER MAX TOTAL DEVIATION H ±50mm WHERE h = SINGLE STOREY HEIGHT

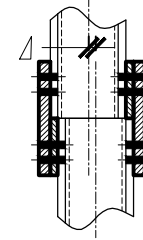
PROFILED STEEL METAL DECKING
DEVIATION OF DIMENSION BETWEEN DECKING EDGE TRIM PRIOR TO CONCRETEING AND PLACEMENT OF PERIMETER BEAM



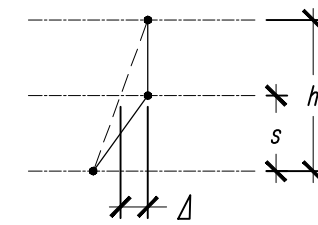
BEARING SURFACES
DEVIATION FROM HORIZONTAL LEVEL OF CONTACT BEARING SURFACES (WEBS & FLANGES)
Δ = (D/1000) + 1mm



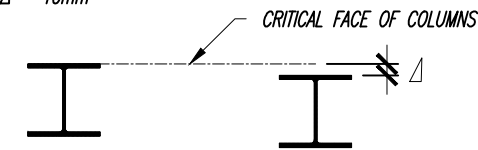
ECCENTRICITY OF COLUMN SPLICE
NON-INTENDED ECCENTRICITY ABOUT EITHER AXIS
Δ = 5mm



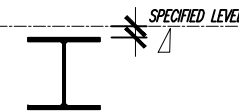
ALIGNMENT AT COLUMN SPLICE
STRAIGHTNESS OF A SPLICED COLUMN BETWEEN ADJACENT STOREY LEVELS
|Δ| = s/500 WHERE s ≤ h/2



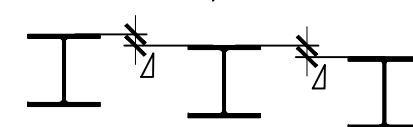
ALIGNMENT OF ADJACENT PERIMETER COLUMNS
DEVIATION RELATIVE TO NEXT COLUMN ON A LINE PARALLEL TO THE GRID LINE WHEN MEASURED AT THE BASE OR SPLICE LEVEL
Δ = 10mm



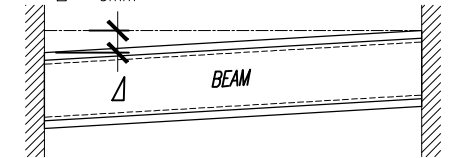
BEAM LEVEL
DEVIATION FROM SPECIFIED LEVEL AT SUPPORTING COLUMN
Δ = ±10mm



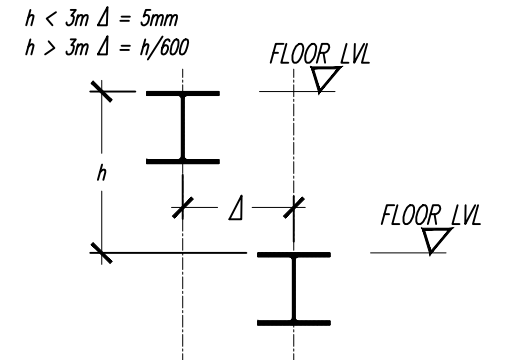
LEVEL OF ADJACENT BEAMS WITHIN A DISTANCE OF 5 METRES
DEVIATION FROM RELATIVE HORIZONTAL LEVELS (MEASURED ON CENTRELINE OF TOP FLANGE) Δ = ±5mm



LEVEL AT EACH END OF SAME BEAM
RELATIVE DEVIATION IN LEVEL AT ENDS
Δ = 5mm



BEAM ALIGNMENT
HORIZONTAL DEVIATION RELATIVE TO AN ADJACENT BEAM ABOVE & BELOW



REV	DESCRIPTION	BY	APP.	DATE
A	ISSUED FOR INFORMATION ONLY	TT	TT	28.09.20



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TITLE
GENERAL NOTES 9

STRUCTURAL DRAWING

JOB N°	DESIGNED	DRAWN	APPROVED	SCALE
2030	TT	TT	TT	NTS

DRAWING N°
S-GEN(9)

REV.
A