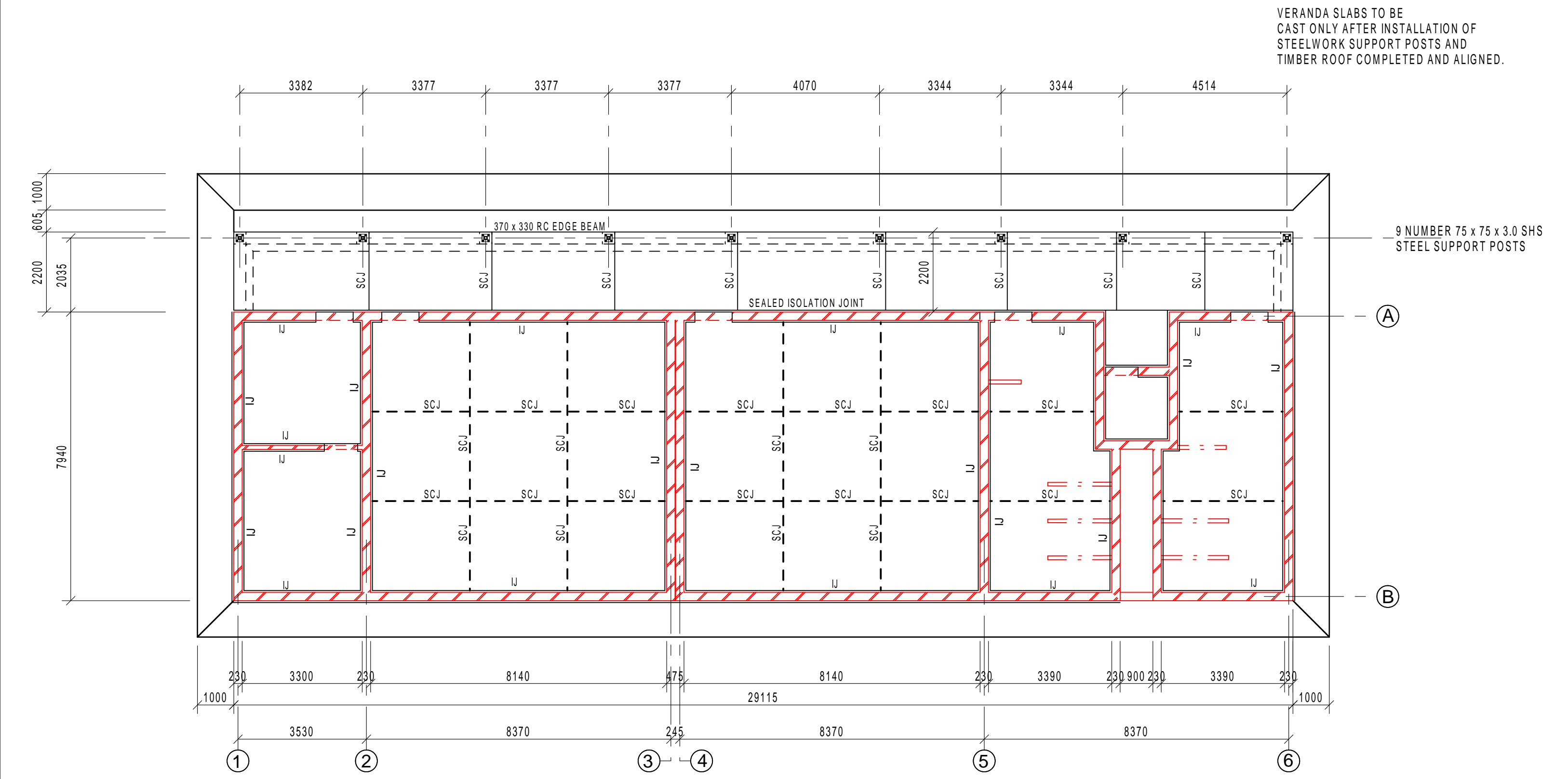


FOUNDATION LAYOUT

SCALE 1 : 100



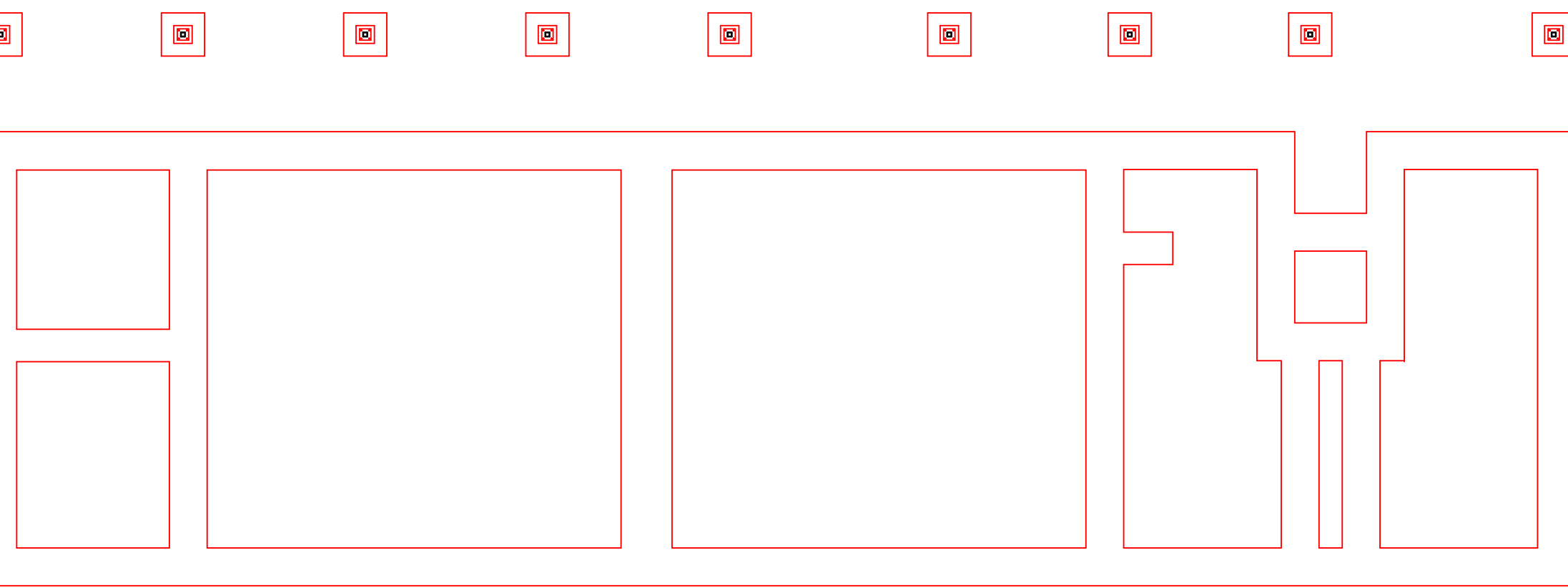
SURFACE BED LAYOUT

SCALE 1 : 100

ACCURATE SETTING OUT TO WALLS TO BE ACCORDING TO THE ARCHITECT'S DRAWINGS DIMENSIONS AND DETAILS.

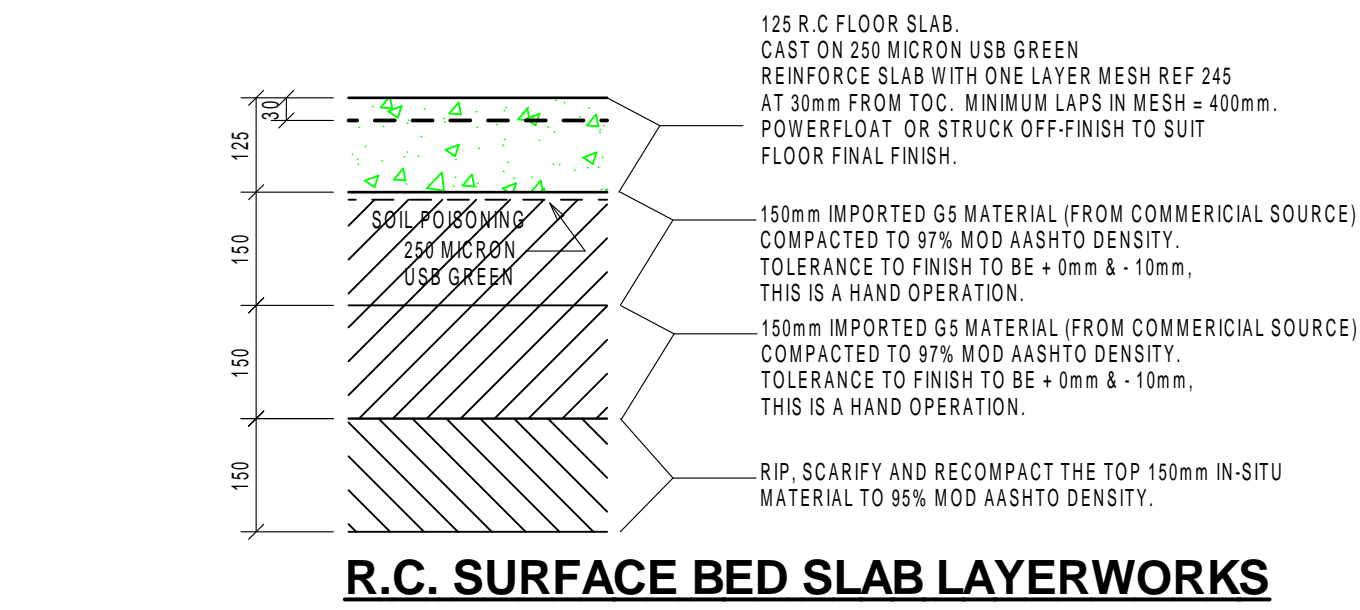
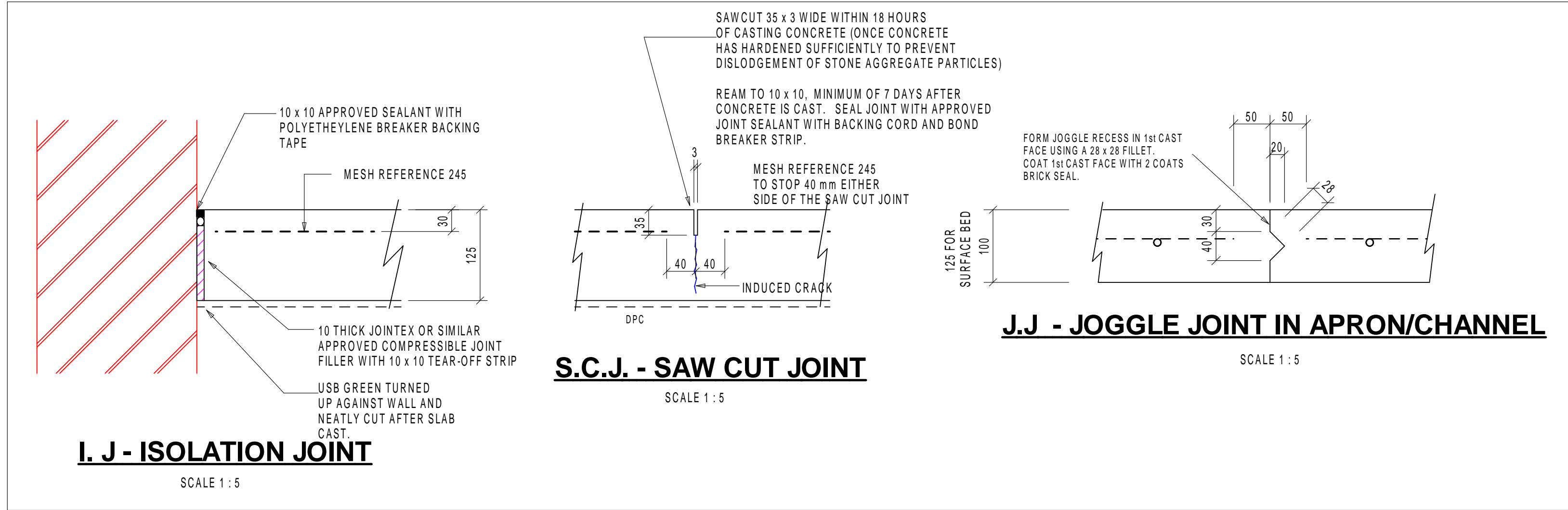
TOP OF CONCRETE TO ALL RC FOOTINGS TO BE -0.540, UNLESS NOTED OTHERWISE. THERE IS NO STEP IN THE TOP OF THE FOOTINGS.

ALL 220/230 WALLS OFF 700 x 250 RC FOOTINGS & ALL 110/115 WALLS OFF 600 x 250 RC FOOTINGS, UNLESS SHOWN OTHERWISE.



REINFORCEMENT LAYOUT

SCALE 1 : 100



SCALE 1 : 10

GENERAL NOTES:

- CONCRETE
1. ALL CONCRETE WORK SHALL BE DONE ACCORDING TO SABS 1200G.
2. ALL CASTING PROCEDURES, CONSTRUCTION METHODS AND POSITIONS OF CONSTRUCTION JOINTS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF THE PROJECT.
3. THE CONTRACTOR MUST CO-ORDINATE ALL SERVICES DRAWINGS FOR DETAILS AND POSITIONS OF OPENINGS AND SLEEVES REQUIRED FOR STORMWATER, SEWERAGE, DRAINAGE, ELECTRICAL, MECHANICAL AND OTHER SERVICES. ONLY OPENINGS LARGER THAN 100 mm DIA OR 100 x 100 mm ARE SHOWN ON STRUCTURAL DRAWINGS.
4. THE CONTRACTOR MUST OBTAIN PERMISSION FROM THE ENGINEER BEFORE ANY OPENINGS OR SERVICES WHICH ARE NOT NOTICED ON THE DRAWINGS MAY BE INTRODUCED THROUGH ANY STRUCTURAL ELEMENT.
5. THE CONCRETE COVER TO REINFORCEMENT IS AS FOLLOWS (EXCEPT WHERE OTHERWISE NOTED ON BENDING SCHEDULES):
FOUNDATIONS: + 50 mm
STAIRS IN BEAMS: + 25 mm
STAIRS IN COLUMNS: + 35 mm
SLABS: + 25 mm
6. NO BRICK WALLS ARE TO BE BUILT ON FLOOR SLABS BEFORE THE SLABS HAVE REACHED THEIR TENSILE STRENGTH. PROFORMING UNDERBATH SLABS AND BEAMS SHALL BE COMPLETELY REMOVED BEFORE BRICKWORK IS BUILT. ALL BRICKS REQUIRED FOR BRICK WALLS ON A SPECIFIC SLAB PANEL SHOULD BE STACKED EVENLY ONTO THAT SPECIFIC SLAB PANEL BEFORE WALLS ARE BEING BUILT.
7. BEAM DIMENSIONS ARE GIVEN AS A x B WHERE:
A = DEPTH OF BEAM (SLAB INCLUDED)
B = WIDTH OF BEAM
8. THE STRENGTH OF CONCRETE COVER BLOCKS SHALL AT LEAST BE EQUAL TO THE CONCRETE STRENGTH OF THE STRUCTURAL ELEMENT IN WHICH THEY ARE USED. THE SIZE AND FIXING METHOD OF COVER BLOCKS SHALL BE DISCUSSED IN ADVANCE WITH THE ENGINEER.
9. CEMENT OR CLAY HOLLOW BLOCKS SHALL BE WETTED AS THE CASTING OF CONCRETE PROGRESSES.
10. A 30 mm x 30 mm CHAMFER SHALL BE PROVIDED ON ALL VISIBLE CORNERS OF OFF-SHUTTER CONCRETE IN COLLABORATION WITH THE ARCHITECT.
11. SEE ARCHITECT'S DRAWINGS FOR DETAIL AND POSITIONS OF V-JOINTS AND DRIP JOINTS IN CONCRETE.
12. SEE ARCHITECT'S DRAWINGS FOR DETAIL AND POSITIONS OF R/W'S IN CONCRETE.
13. SEE ARCHITECT'S DRAWINGS FOR THE CASTING IN OF FININGS FOR BRICKWORK INTO CONCRETE.
14. THE FOLLOWING CANNERS ARE TO BE PROVIDED UNLESS OTHERWISE SHOWN:
CANTILEVER BEAMS AND SLABS: + SPAN / 150
OTHER BEAMS AND SLABS: + SPAN / 140
15. REINFORCEMENT
16. THE MINIMUM 28 DAY CUBE COMPRESSIVE STRENGTH OF CONCRETE SHALL BE:
a. 50mm BLINDING LAYER UNDER ALL R.C. BASES: + 10 MPa
b. R.C. FOOTINGS: + 20 MPa
c. R.C. GROUNDWORK BEAMS AND R.C. WALLS: + 30 MPa
d. R.C. SLABS, R.C. BEAMS AND R.C. STAIRS: + 30 MPa
e. R.C. COLUMNS: + 40 MPa
- MAXIMUM WATER CEMENT FOR ALL R.C. CONCRETE SHALL BE 0.53.
- ALL CONCRETE TO BE SUPPLIED BY APPROVED READY-MIX COMPANY. CONTRACTOR TO FORWARD SUPPLIERS DETAILS AT COMMENCEMENT OF PROJECT.
17. ALL CONCRETE IS TO BE PLACED IN POSITION. PUMPING OF CONCRETE IS NOT ALLOWED.
18. SIX (6) NUMBER CONCRETE TEST CUBES: 150 x 150 x 150, TO BE TAKEN FOR EVERY 30 CUBES OF CONCRETE FOR SPECIFIC REINFORCED CONCRETE ELEMENT PER DAY. TEST CUBES TO BE MADE ON SITE.
THREE (3) TESTED AT 7 DAYS AND THREE (3) TESTED AT 28 DAYS.
THOSE CUBES TESTED AT OTHER TIME PERIODS WILL NOT BE CONSIDERED AND NO PAYMENT WILL BE MADE.
19. THE CONCRETE MIX DESIGN OF ALL CONCRETE FOR R.C. ELEMENTS TO BE SUPPLIED TO THE ENGINEER FOR APPROVAL AT LEAST 4 WEEKS BEFORE CONCRETE IS REQUIRED ON SITE.
20. THE BLINDING LAYER IS TO BE MECHANICALLY VIBRATED AND TROWELED TO A LEVEL SURFACE.
21. FULL CONCRETE SURFACES TO BE EFFECTIVELY CURED FOR 7 DAYS BY COVERING WITH PLASTIC SHEETS.
WATER BASED CURING COMPOUNDS CAN BE USED ON THE EXTERNAL APRONS AND CHANNELS, AND SURFACES THAT DO NOT RECEIVE A SMOOVED FINISH.
22. FOUNDATIONS HAVE BEEN DESIGNED FOR AN ALLOWABLE SERVICE GROUND BEARING CAPACITY OF 100 kPa.
23. ALL FOUNDATION EXCAVATIONS ARE TO BE INSPECTED BY THE ENGINEER PRIOR TO CONCRETE PLACEMENT.
THE ENGINEER TO BE PROVIDED WITH 2 DAYS NOTICE FOR INSPECTIONS.
24. SURFACE BEERS
ALL DAMP PROOF MEMBRANES TO HAVE MINIMUM 600mm LAP WITH JOINTS FULLY SEALED WITH 25mm WIDE TAPE.
SAWCUT JOINTS TO TAKE PLACE 18 HOURS AFTER CASTING TO AVOID CRACKING AND RAVELLING OF JOINT EDGES.

STRUCTURAL STEELWORK:

- ALL STRUCTURAL STEELWORK MUST BE DONE ACCORDING TO SABS 1200G. ACCURACY: CLASS B.
- ALL STRUCTURAL STEEL MUST BE GRADE 355 W ACCORDING TO SABS 1431. EXCEPT COLD FORMED LIPPED CHANNELS WHICH CAN BE OF COMMERCIAL GRADE WITH A MINIMUM YIELD STRESS OF 230 MPa AND A MINIMUM ULTIMATE TENSILE STRENGTH OF 430 MPa. TEST CERTIFICATES FOR ALL MATERIALS MUST BE SUBMITTED TO THE ENGINEER BEFORE COMMENCING FABRICATION.
- WELD ELECTRODE CLASSIFICATION - GRADE E70XX, EXCEPT WHERE SPECIFIED OTHERWISE.
- THE CONTRACTOR MUST SUBMIT TWO FULL PAPER COPIES OF THE WORKSHOP DETAILS AND DRAWINGS TO THE ENGINEER FOR APPROVAL. THE ENGINEER REQUIRES 10 WORKING DAYS FOR CHECKING OF DETAILS. FABRICATION OF STRUCTURAL STEELWORK TO COMMENCE ONLY ONCE THE ENGINEER HAS PROVIDED WRITTEN APPROVAL OF THE WORKSHOP DRAWINGS. ANY CHANGES TO ENGINEER DRAWINGS MUST BE INDICATED TO AND APPROVED BY THE ENGINEER.
- THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE UNTIL THE STRUCTURE IS COMPLETED IN ITS ENTIRETY.
- RELEVANT DIMENSIONS OF ALREADY BUILT CONSTRUCTION TO BE CHECKED DURING PREPARATION OF WORKSHOP DRAWINGS. DISCREPANCIES MUST BE REPORTED TO THE ENGINEER IMMEDIATELY.
- ALL WELDED CONNECTIONS MUST BE WELDED ALL ROUND WITH A DRY CONTINUOUS FILLET WELD EXCEPT WHERE SHOWN OTHERWISE. WELDS SHALL COMPLY WITH THE REQUIREMENTS OF SABS 405.
- WELDING MUST BE ACCORDING TO SABS STANDARDS AND MUST BE APPROVED BY AN APPROVED AUTHORITY IN CONSULTATION WITH THE ENGINEER.
- ALL BOLTS TO BE GRADE 8.8 EXCEPT WHERE SHOWN OTHERWISE. HOLE SIZES TO BE 2mm LARGER THAN FASTENER SIZE UNLESS OTHERWISE NOTED.
- ALL PURLINS, KNEE BRACING AND BRACING STEELWORK AS WELL AS FASTENERS COMPRISING BOLTS, NUTS AND WASHERS, UNLESS OTHERWISE NOTED, MUST BE HOT DIPPED GALVANISED IN ACCORDANCE WITH SABS ISO 1461. GALVANISERS MUST BE NOTIFIED THAT THE GALVANISED FINISH REQUIRED IS AN ARCHITECTURAL FINISH, AND THAT ALL ZINC LUMPS, ETC MUST BE REMOVED.
NOTE THAT THE PURLINS ARE TO BE HOT DIPPED GALVANISED.
IF PURLINS ARE MADE FROM PRECUT, MATERIALS TO BE GALVANISED THEN THESE ARE TO BE HOT DIPPED GALVANISED AS WELL.
- ANY SITE WELDING APPROVED BY THE ENGINEER SHALL BE PERFORMED BY A CERTIFIED WELDER IN ACCORDANCE WITH SABS 244 PART IV.
A DETAILED METHOD STATEMENT INCLUDING ON-SITE REPAIRS TO THE ZINC COATINGS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
- ALL CUT STEELWORK IS TO BE CUT AT 90 DEGREES TO ALL EDGES UNLESS OTHERWISE SHOWN.
- MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE ARCHITECTURAL DEPARTMENT'S GENERAL PREAMBLE TO ALL TRADES.
- REFER TO CONTRACT SPECIFICATION FOR THE CORROSION PROTECTION TO THE HOT ROLLED STRUCTURAL STEELWORK.

STRUCTURAL TIMBER

- PRE-FABRICATED TIMBER ROOF TRUSSES AND PURLINS ARE TO BE DESIGNED AND SUPPLIED BY AN APPROVED SUPPLIER.
- TIMBER ROOF TRUSSES ARE TO BE DESIGNED IN ACCORDANCE WITH SANS 10163-1 (CODE OF PRACTICE FOR TIMBER STRUCTURES). LOADS ARE TO COMPLY WITH SANS 10160 (CODE OF PRACTICE FOR GENERAL PROCEDURES AND LOADING FOR THE DESIGN OF BUILDINGS).
- WORKSHOP DETAIL DRAWINGS SHALL BE CHECKED BY UKUZA BEFORE COMMENCING WITH MANUFACTURING OF TIMBER ROOF TRUSSES.
- TIMBER TRUSSES TO BE FABRICATED IN A FACTORY BY A TIMBER TRUSS FABRICATOR WHO HAS BEEN AWARDED A 'CERTIFICATE OF COMPETENCE' BY THE INSTITUTE FOR TIMBER CONSTRUCTION.
- FABRICATOR TO SUPPLY GRADE AND TREATMENT OF TIMBER TO ENGINEER FOR COMMENT PRIOR TO COMMENCEMENT OF WORKS.
- FABRICATOR TO SITE MEASURE AND CHECK ALL DIMENSIONS PRIOR TO COMMENCEMENT OF FABRICATION.
- ALL NEW TIMBER IN THE WORKS TO BE SELECTED STRUCTURAL TIMBER FREE FROM WANE AND SHAKES WITH A STRENGTH CLASS NOT LESS THAN SA PINE GRADE 6.
- ALL TIMBER TO BE CCA TREATED.
- ALL TIMBER ELEMENTS INCLUDING ADDITIONAL WIND BRACING TO BE DESIGNED AND INSTALLED TO SPECIALIST SPECIFICATION.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.

ALL RELEVANT DIMENSIONS AND LEVELS ARE TO BE CHECKED BEFORE ANY WORK IS COMMENCED AND ANY DISCREPANCIES NOTED TO BE IMMEDIATELY BROUGHT TO THE ARCHITECTS ATTENTION.

ONLY FIGURED DIMENSIONS TO BE USED, SCALING OF DRAWINGS IS NOT ALLOWED.

Revisions	Rev no	Date	Description	Rev by
A				
B				
C				
D				



L S C BRUNETTE
CONSULTING ENGINEERS

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PRINCIPAL AGENT



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DBSA
Development Bank
of Southern Africa



education
Lefapha la Thuto
Ondorwys Departement
Department of Education
NORTH WEST PROVINCE

Discipline: CIVIL/STRUCTURAL

Project Title: KGOSI SHOPE SECONDARY SCHOOL
SETLAGOLE, RATLOU DISTRICT
MUNICIPALITY, NORTH WEST
GPS COORDINATES :
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LATITUDE 26 19 45.46'S

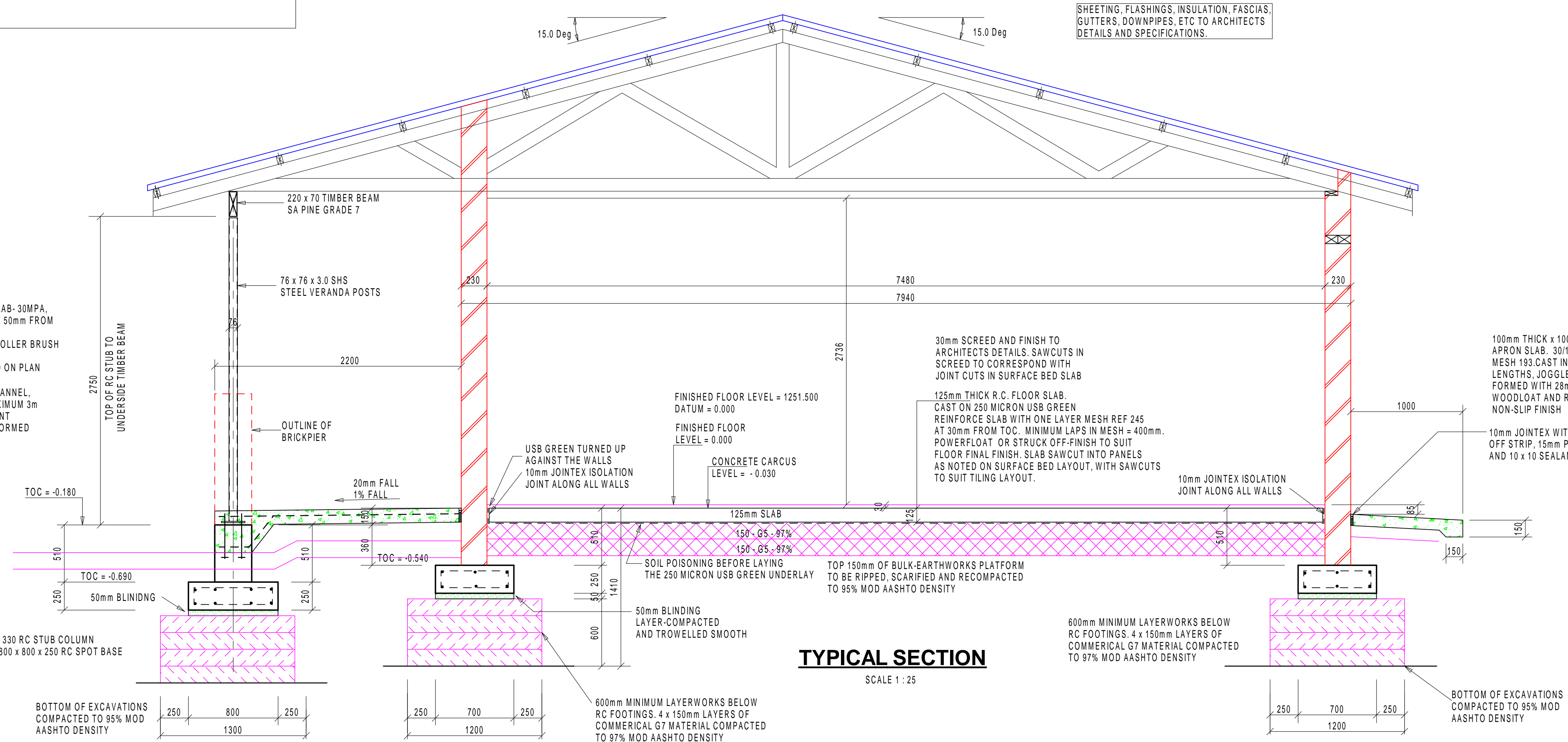
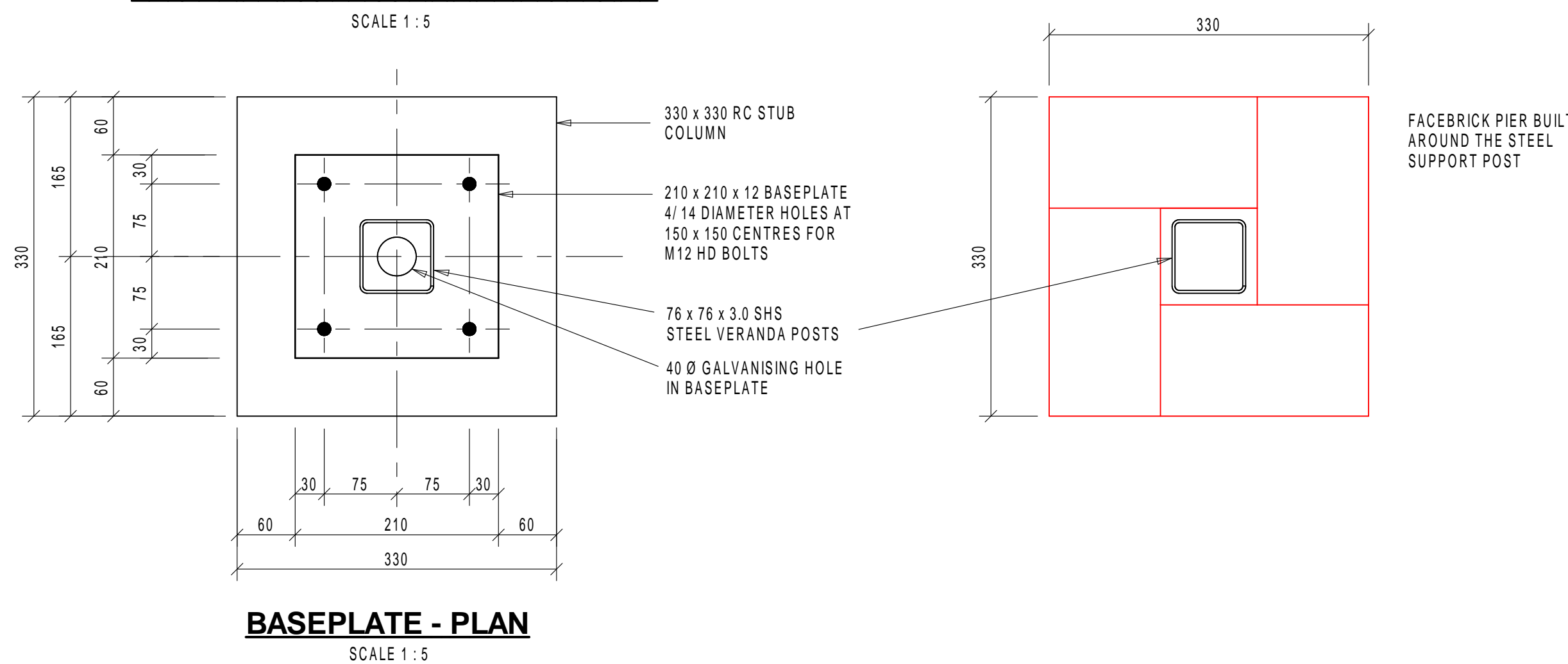
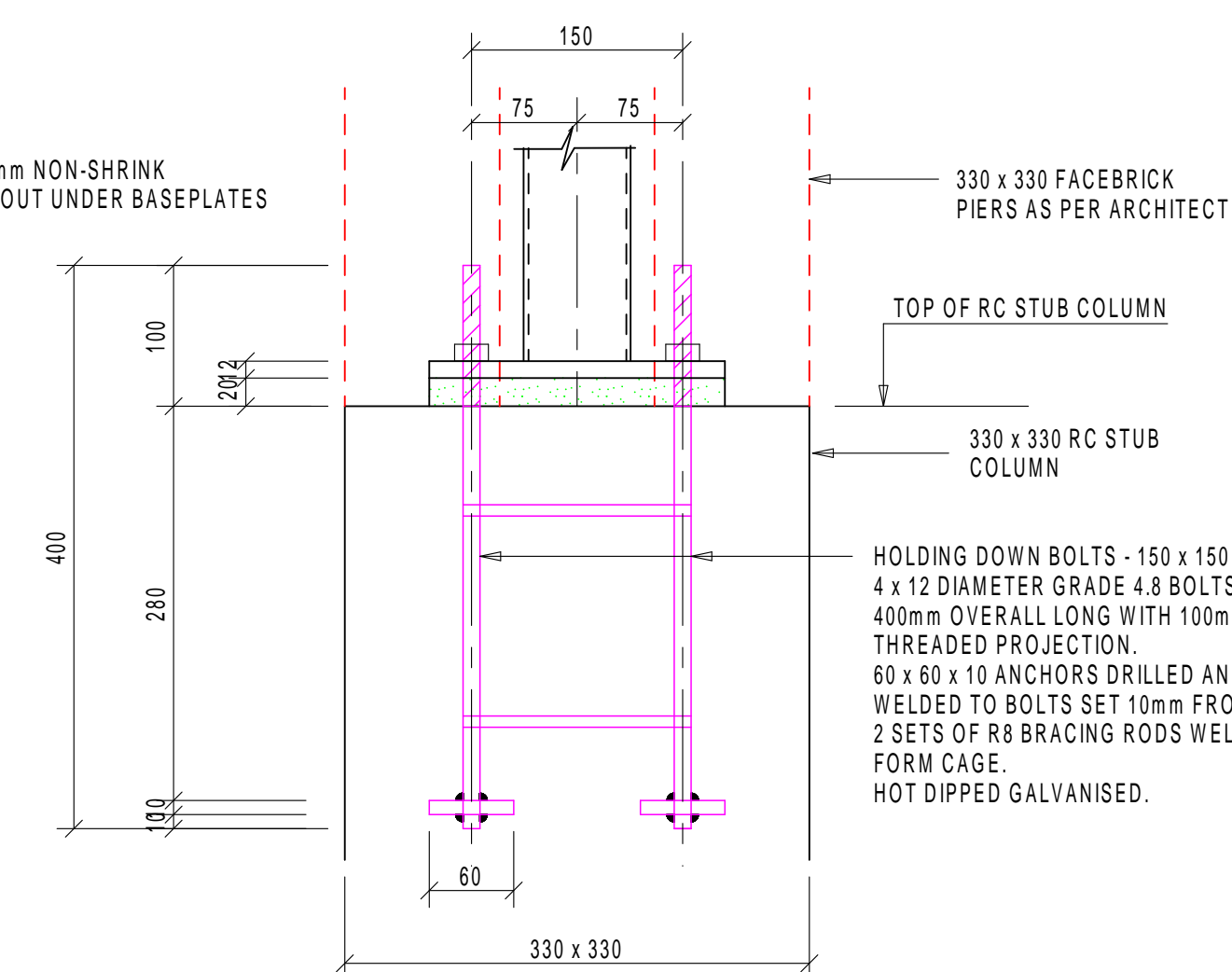
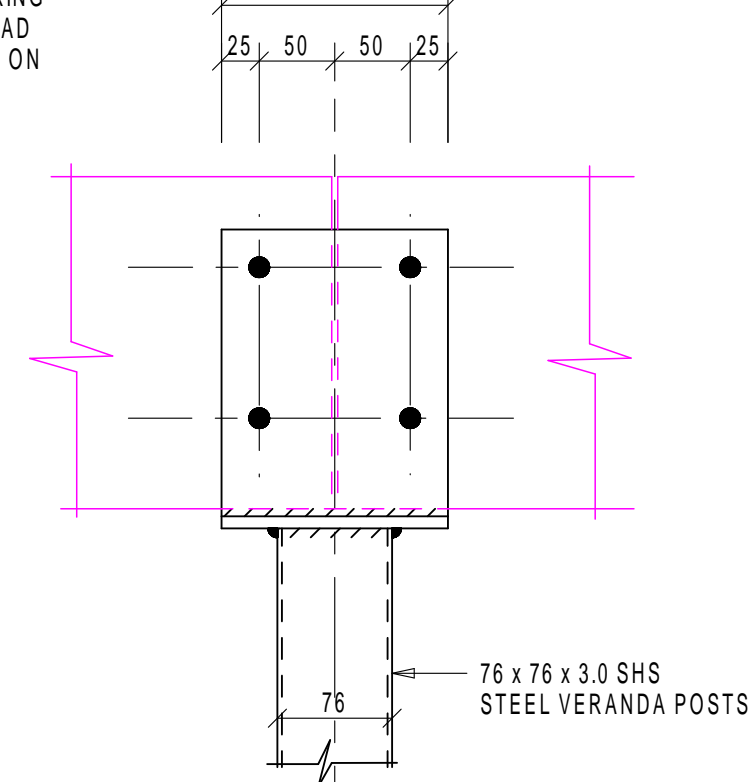
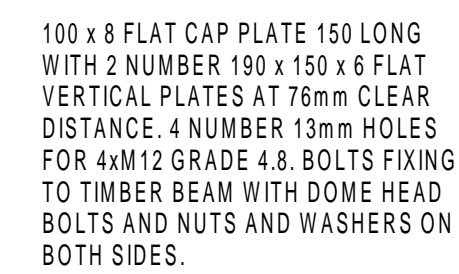
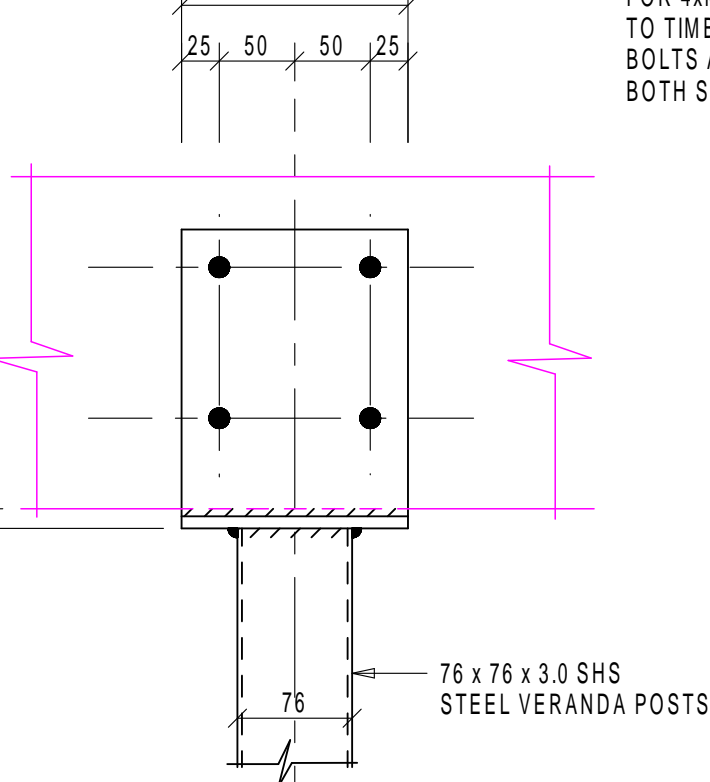
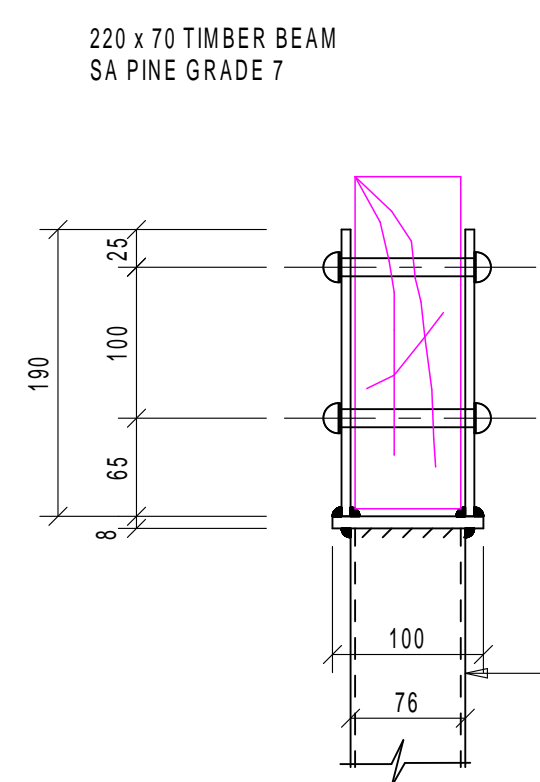
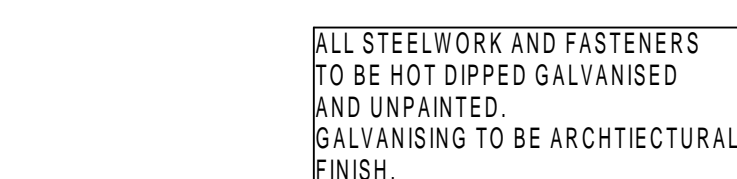
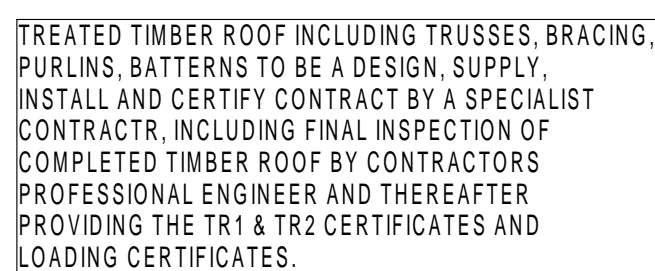
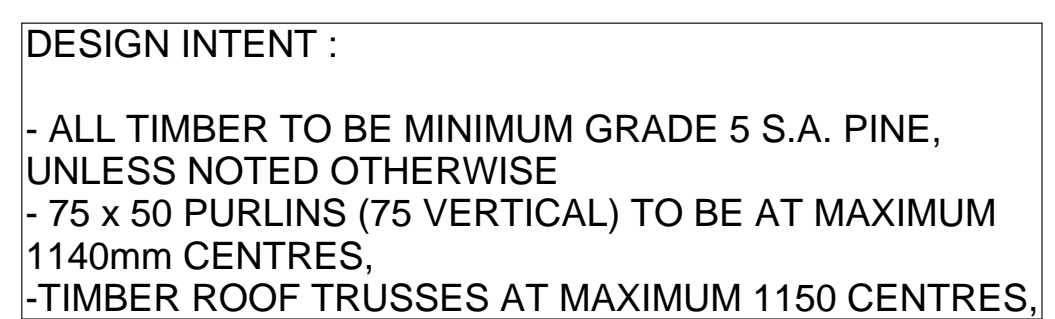
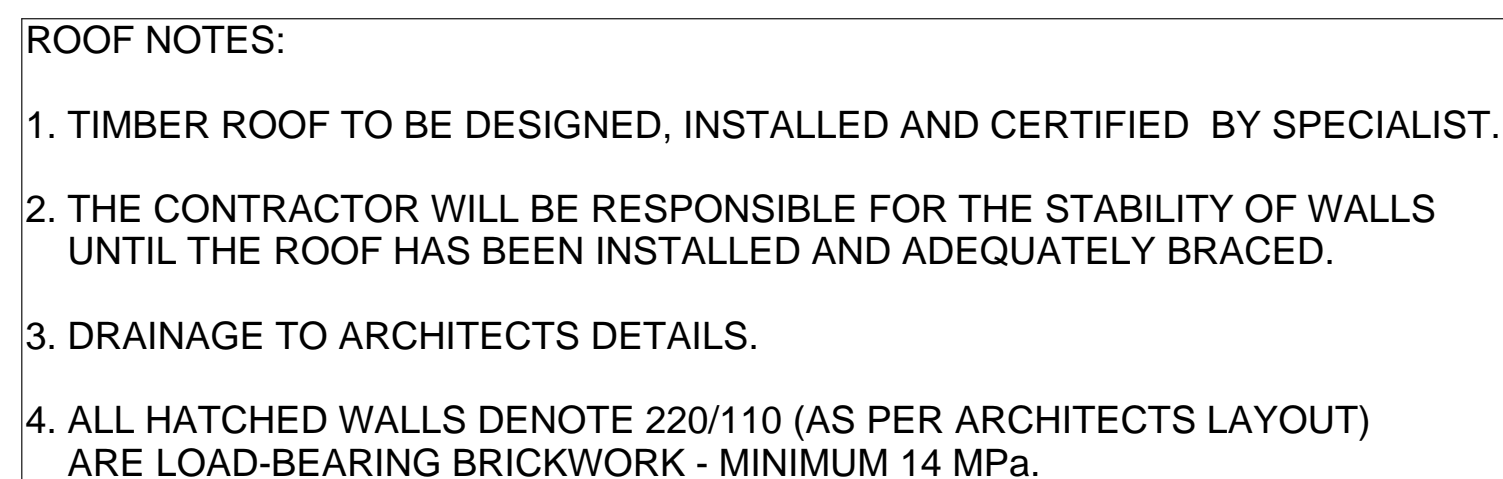
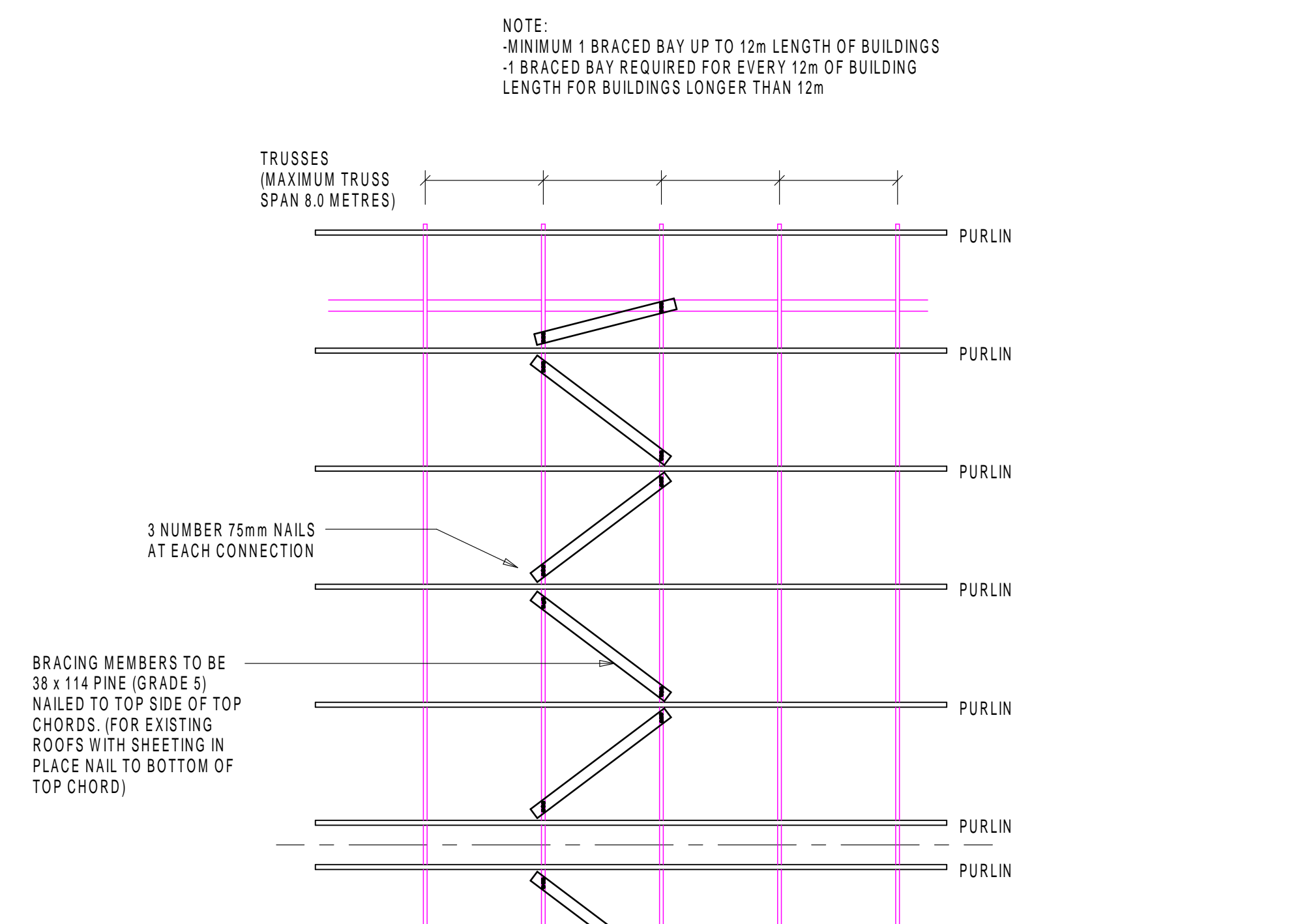
PROPOSED ADDITIONS AND ALTERATIONS

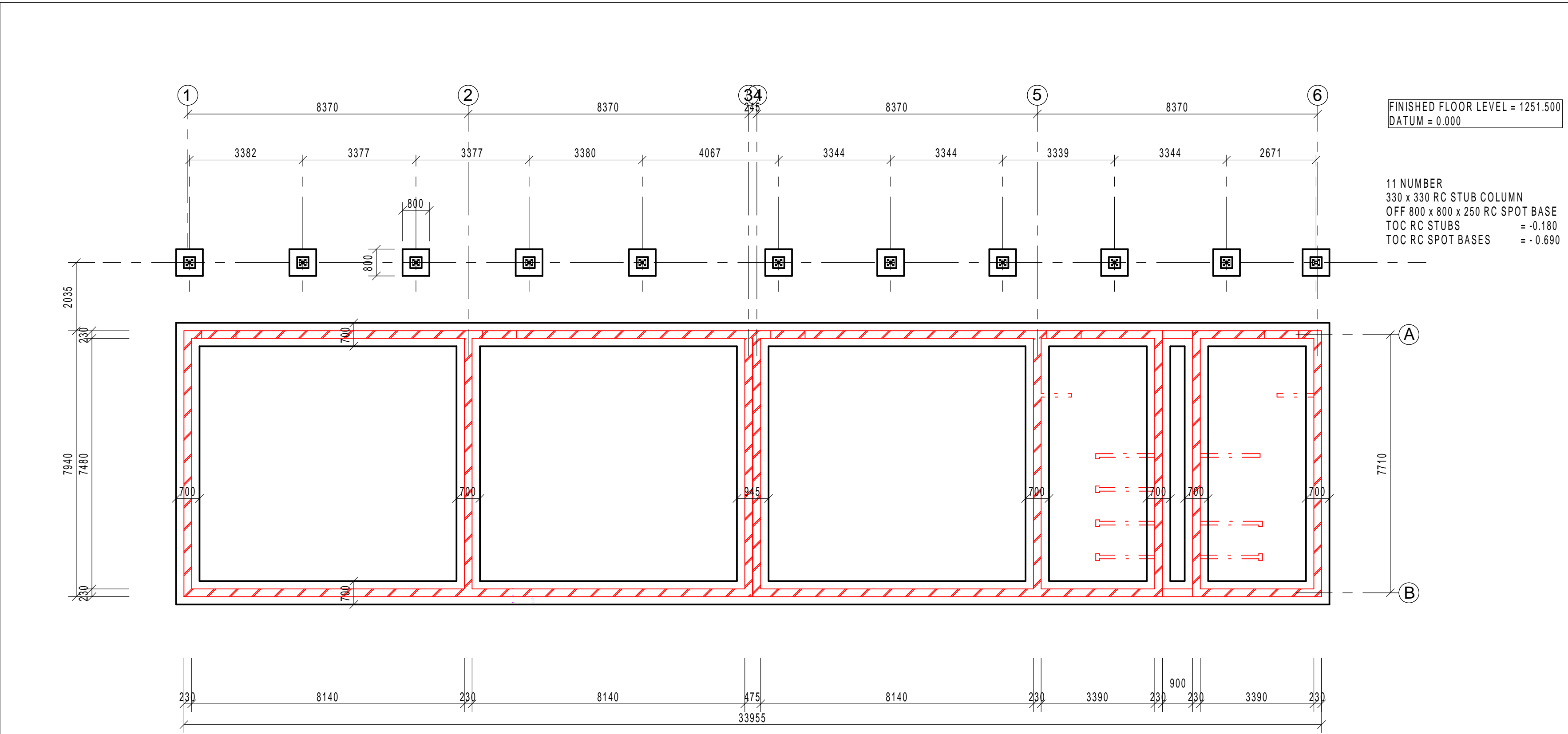
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Tender	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Construction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Drawing Description: NEW ADDITIONS AND ALTERATIONS
HOD BLOCKFACE BED AND RC ROOF LAYOUTS
FOUNDATIONS, SLAB, BEAMS, STAIRS, ROADS, ROOFS, LAYOUTS
AND LARGE SCALE CONSTRUCTION DETAILS

DRAWN:	CHECKED:
Name of Competent Person S. Naidu	Name of Competent Person S. Naidu
REG. No: PR.ENG. 20010315	REG. No: PR.ENG. 20010315
SIGNATURE:	SIGNATURE:
Scale/s: 1 : 100, 10, 5	Paper Size: A0
DATE: December 2021	Revision: 0
EMIS NUMBER: 600100694	Consultant Project Reference: D3884-21
Drawing Number: ST-AC31A-08C 01	Revision: 0

Stamped by Plans Approval Committee



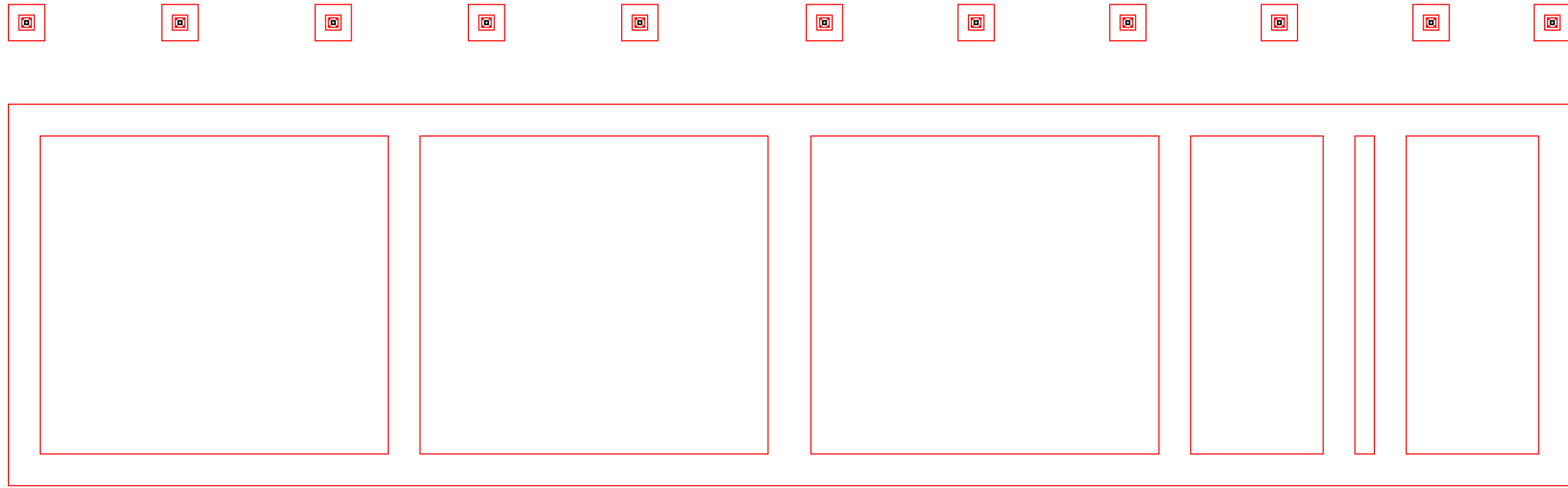


ACCURATE SETTING OUT TO WALLS TO BE ACCORDING TO THE ARCHITECT'S DRAWINGS, DIMENSIONS AND DETAILS.

TOP OF CONCRETE TO ALL RC FOOTINGS TO BE -0.540, UNLESS NOTED OTHERWISE.

THERE IS NO STEP IN THE TOP OF THE FOOTINGS.

ALL 220/230 WALLS OFF 700 x 250 RC FOOTINGS & ALL 110/115 WALLS OFF 600 x 250 RC FOOTINGS, UNLESS SHOWN OTHERWISE.

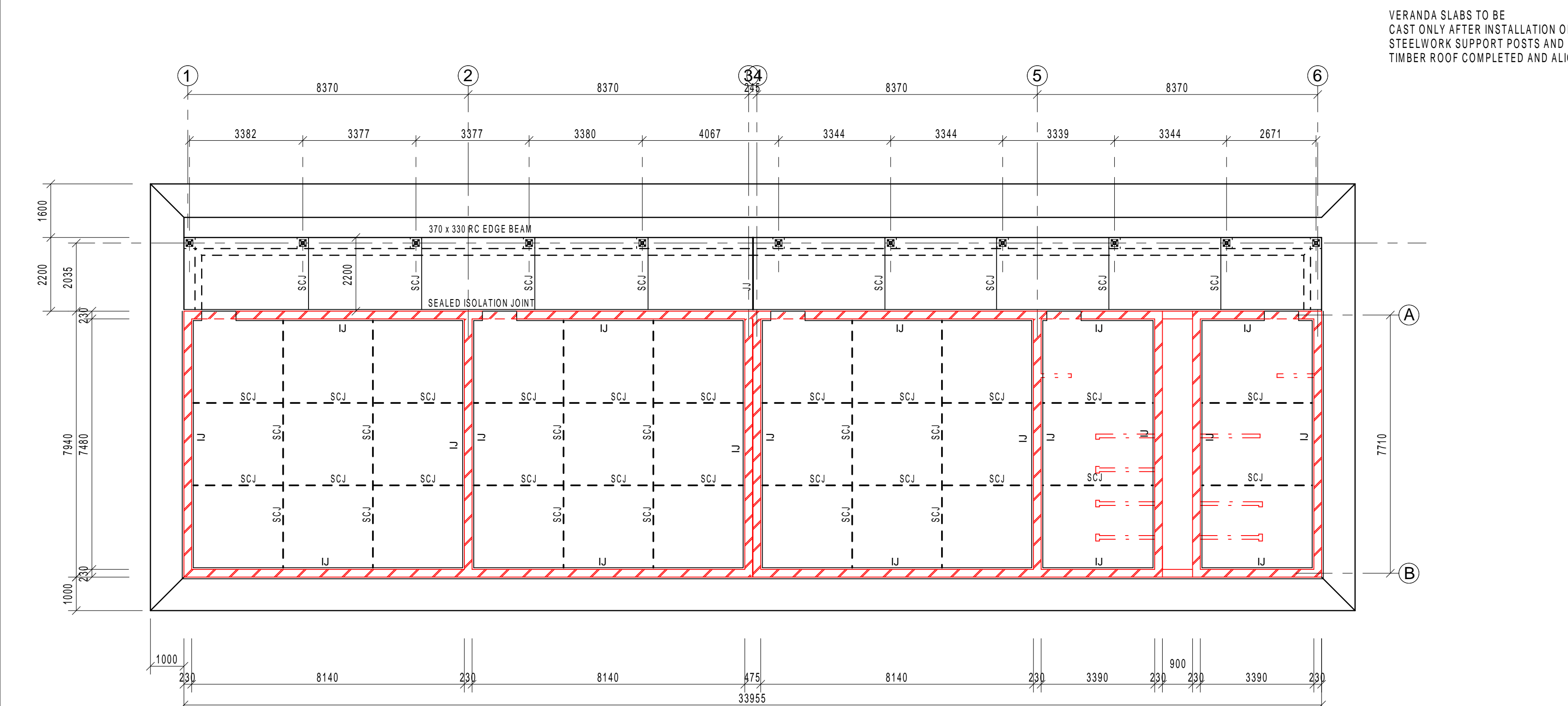


REINFORCEMENT LAYOUT

SCALE 1 : 100

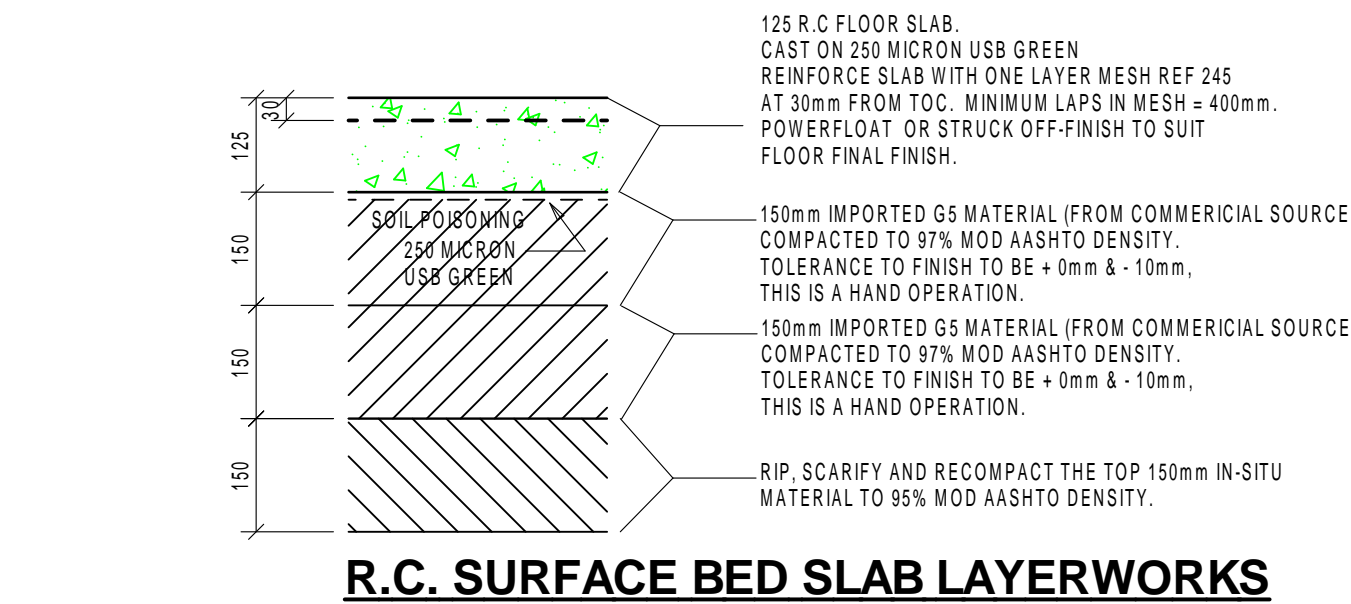
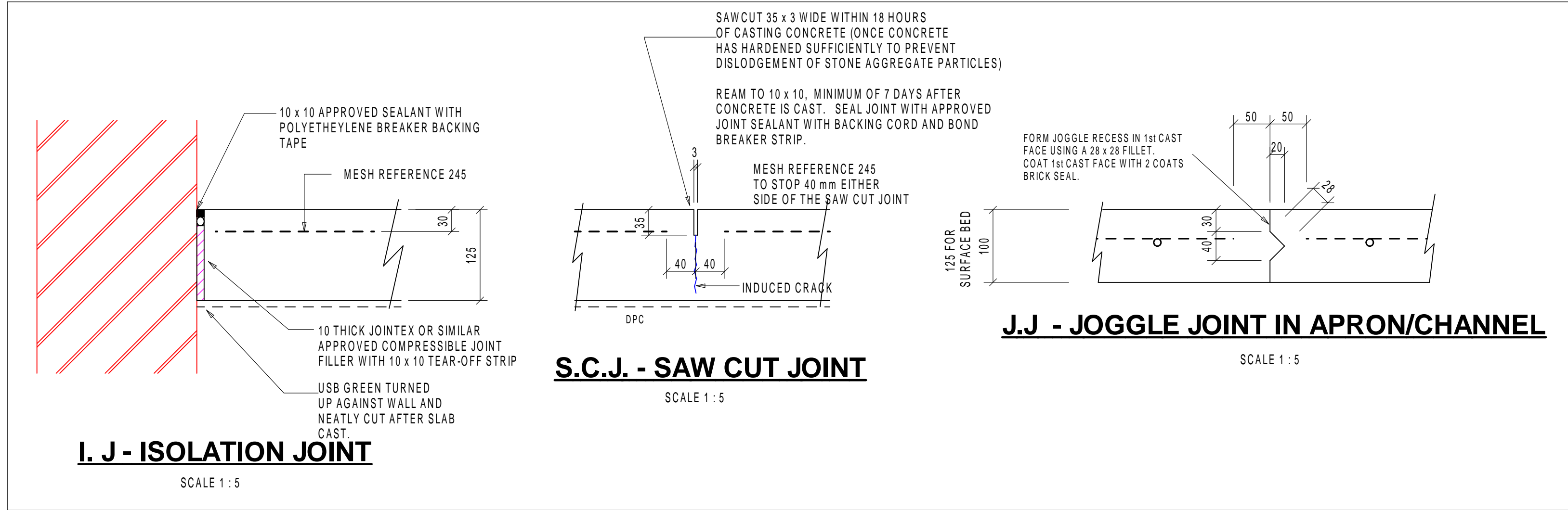
FOUNDATION LAYOUT

SCALE 1 : 100



SURFACE BED LAYOUT

SCALE 1 : 100



SCALE 1 : 10



GENERAL NOTES:

1. ALL CONCRETE WORK SHALL BE DONE ACCORDING TO SABS 1200G.
2. ALL CASTING PROCEDURES, CONSTRUCTION METHODS AND POSITIONS OF CONSTRUCTION JOINTS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF THE PROJECT.
3. THE CONTRACTOR MUST CO-ORDINATE ALL SERVICES DRAWINGS FOR DETAILS AND POSITIONS OF OPENINGS AND SLEEVES REQUIRED FOR STORMWATER, SEWERAGE, DRAINAGE, ELECTRICAL, MECHANICAL AND OTHER SERVICES. ONLY OPENINGS LARGER THAN 100 mm DIA OR 100 x 100 mm ARE SHOWN ON STRUCTURAL DRAWINGS.
4. THE CONTRACTOR MUST OBTAIN PERMISSION FROM THE ENGINEER BEFORE ANY OPENINGS OR SERVICES WHICH ARE NOT NOTICED ON THE DRAWINGS MAY BE INTRODUCED THROUGH ANY STRUCTURAL ELEMENT.
5. THE CONCRETE COVER TO REINFORCEMENT IS AS FOLLOWS (EXCEPT WHERE OTHERWISE NOTED ON BENDING SCHEDULES):
FOUNDATIONS + 50 mm
STAIRS IN BEAMS + 25 mm
STAIRS IN COLUMNS + 35 mm
SLABS + 25 mm
6. NO BRICK WALLS ARE TO BE BUILT ON FLOOR SLABS BEFORE THE SLABS HAVE REACHED THEIR TENSILE STRENGTH. PROFORM UNDERBATH SLABS AND BEAMS SHALL BE COMPLETELY REMOVED BEFORE BRICKWORK IS BUILT. ALL BRICKS REQUIRED FOR BRICK WALLS ON A SPECIFIC SLAB PANEL SHOULD BE STACKED EVENLY ONTO THAT SPECIFIC SLAB PANEL BEFORE WALLS ARE BEING BUILT.
7. BEAM DIMENSIONS ARE GIVEN AS A x B WHERE:
A = DEPTH OF BEAM (SLAB INCLUDED)
B = WIDTH OF BEAM
8. THE STRENGTH OF CONCRETE COVER BLOCKS SHALL AT LEAST BE EQUAL TO THE CONCRETE STRENGTH OF THE STRUCTURAL ELEMENT IN WHICH THEY ARE USED. THE SIZE AND FIXING METHOD OF COVER BLOCKS SHALL BE DISCUSSED IN ADVANCE WITH THE ENGINEER.
9. CEMENT OR CLAY HOLLOW BLOCKS SHALL BE WETTED AS THE CASTING OF CONCRETE PROGRESSES.
10. A 30 mm x 30 mm CHAMFER SHALL BE PROVIDED ON ALL VISIBLE CORNERS OF OFF-SHUTTER CONCRETE IN COLLABORATION WITH THE ARCHITECT.
11. SEE ARCHITECT'S DRAWINGS FOR DETAIL AND POSITIONS OF V-JOINTS AND DRIP JOINTS IN CONCRETE.
12. SEE ARCHITECT'S DRAWINGS FOR DETAIL AND POSITIONS OF R/W'S IN CONCRETE.
13. SEE ARCHITECT'S DRAWINGS FOR THE CASTING IN OF FINISHES FOR BRICKWORK INTO CONCRETE.
14. THE FOLLOWING CANNERS ARE TO BE PROVIDED UNLESS OTHERWISE SHOWN:
CANTILEVER BEAMS AND SLABS + SPAN / 150
OTHER BEAMS AND SLABS + SPAN / 400
15. REINFORCEMENT
a. ALL REINFORCEMENT SHALL COMPLY WITH THE REQUIREMENTS OF SABS 1200G.
b. THE CONTRACTOR SHALL GIVE AT LEAST 48 HOURS NOTICE TO THE ENGINEER FOR STEEL INSPECTIONS THAT ARE REQUIRED.
c. NO HEATING, FLAME CUTTING OR WELDING OF REINFORCEMENT SHALL BE ALLOWED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.
16. THE MINIMUM 28 DAY CUBE COMPRESSIVE STRENGTH OF CONCRETE SHALL BE:
a. 50mm BLINDING LAYER UNDER ALL R.C. BASES + 10 MPa
b. R.C. FOOTINGS + 30 MPa
c. R.C. GROUNDWORK BEAMS AND R.C. WALLS + 30 MPa
d. R.C. SLABS, R.C. BEAMS AND R.C. STAIRS + 30 MPa
e. R.C. COLUMNS + 40 MPa
- MAXIMUM WATER CEMENT FOR ALL R.C. CONCRETE SHALL BE 0.53.
- ALL CONCRETE TO BE SUPPLIED BY APPROVED READY-MIX COMPANY. CONTRACTOR TO FORWARD SUPPLIERS DETAILS AT COMMENCEMENT OF PROJECT.
17. ALL CONCRETE IS TO BE PLACED IN POSITION. PUMPING OF CONCRETE IS NOT ALLOWED.
18. SIX (6) NUMBER CONCRETE TEST CUBES - 150 x 150 x 150 - TO BE TAKEN FOR EVERY 30 CUBES OF CONCRETE FOR SPECIFIC REINFORCED CONCRETE ELEMENT PER DAY. TEST CUBES TO BE MADE ON SITE.
THREE (3) TESTED 7 DAYS AND THREE (3) TESTED 28 DAYS.
THOSE CUBES TESTED AT OTHER TIME PERIODS WILL NOT BE CONSIDERED AND NO PAYMENT WILL BE MADE.
19. THE CONCRETE MIX DESIGN OF ALL CONCRETE FOR R.C. ELEMENTS TO BE SUPPLIED TO THE ENGINEER FOR APPROVAL AT LEAST 4 WEEKS BEFORE CONCRETE IS REQUIRED ON SITE.
20. THE BLINDING LAYER IS TO BE MECHANICALLY VIBRATED AND TROWELLED TO A LEVEL SURFACE.
21. FULL CONCRETE SURFACES TO BE EFFECTIVELY CURED FOR 7 DAYS BY COVERING WITH PLASTIC SHEETS.
WATER BASED CURING COMPOUNDS CAN BE USED ON THE EXTERNAL APRONS AND CHANNELS, AND SURFACES THAT DO NOT RECEIVE A SMOOVED FINISH.
22. FOUNDATIONS HAVE BEEN DESIGNED FOR AN ALLOWABLE SERVICE GROUND BEARING CAPACITY OF 100 kPa.
23. ALL FOUNDATION EXCAVATIONS ARE TO BE INSPECTED BY THE ENGINEER PRIOR TO CONCRETE PLACEMENT.
THE ENGINEER TO BE PROVIDED WITH 2 DAYS NOTICE FOR INSPECTIONS.
24. SURFACE BEERS
ALL DAMP PROOF MEMBRANES TO HAVE MINIMUM 400mm LAP WITH JOINTS FULLY SEALED WITH 250mm WIDE TAPE.
SAWCUT JOINTS TO TAKE PLACE 18 HOURS AFTER CASTING TO AVOID CRACKING AND RAVELLING OF JOINT EDGES.

STRUCTURAL STEELWORK:

1. ALL STRUCTURAL STEELWORK MUST BE DONE ACCORDING TO SABS 1200G. ACCURACY - CLASS B.
2. ALL STRUCTURAL STEEL MUST BE GRADE 355 W ACCORDING TO SABS 1431. EXCEPT COLD FORMED LIPPED CHANNELS WHICH CAN BE OF COMMERCIAL GRADE WITH A MINIMUM YIELD STRESS OF 230 MPa AND A MINIMUM ULTIMATE TENSILE STRENGTH OF 430 MPa. TEST CERTIFICATES FOR ALL MATERIALS MUST BE SUBMITTED TO THE ENGINEER BEFORE COMMENCING FABRICATION.
3. WELD ELECTRODE CLASSIFICATION - GRADE E70XX, EXCEPT WHERE SPECIFIED OTHERWISE.
4. THE CONTRACTOR MUST SUBMIT TWO FULL PAPER COPIES OF THE WORKSHOP DETAILS AND DRAWINGS TO THE ENGINEER FOR APPROVAL. THE ENGINEER REQUIRES 10 WORKING DAYS FOR CHECKING OF DETAILS. FABRICATION OF STRUCTURAL STEELWORK TO COMMENCE ONLY ONCE THE ENGINEER HAS PROVIDED WRITTEN APPROVAL OF THE WORKSHOP DRAWINGS. ANY CHANGES TO ENGINEER DRAWINGS MUST BE INDICATED TO AND APPROVED BY THE ENGINEER.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE UNTIL THE STRUCTURE IS COMPLETED IN ITS ENTIRETY.
6. RELEVANT DIMENSIONS OF ALREADY BUILT CONSTRUCTION TO BE CHECKED DURING PREPARATION OF WORKSHOP DRAWINGS. DISCREPANCIES MUST BE REPORTED TO THE ENGINEER IMMEDIATELY.
7. ALL WELDED CONNECTIONS MUST BE WELDED ALL ROUND WITH A 2mm CONTINUOUS FILLET WELD EXCEPT WHERE SHOWN OTHERWISE. WELDS SHALL COMPLY WITH THE REQUIREMENTS OF SABS 405.
8. WELDING MUST BE ACCORDING TO SABS STANDARDS AND MUST BE APPROVED BY AN APPROVED AUTHORITY IN CONSULTATION WITH THE ENGINEER.
9. ALL BOLTS TO BE GRADE 8.8 EXCEPT WHERE SHOWN OTHERWISE. HOLE SIZES TO BE 2mm LARGER THAN FASTENER SIZE UNLESS OTHERWISE NOTED.
10. ALL PURLINS, KNEE BRACING AND BRACING STEELWORK AS WELL AS FASTENERS COMPRISING BOLTS, NUTS AND WASHERS, UNLESS OTHERWISE NOTED, MUST BE HOT DIPPED GALVANISED IN ACCORDANCE WITH SABS ISO 1461. GALVANISERS MUST BE NOTIFIED THAT THE GALVANISED FINISH REQUIRED IS AN ARCHITECTURAL FINISH, AND THAT ALL ZINC LUMPS, ETC MUST BE REMOVED.
- NOTE THAT THE PURLINS ARE TO BE HOT DIPPED GALVANISED.
IF PURLINS ARE MADE FROM PRECUT, MATERIAL THEN THESE ARE TO BE HOT DIPPED GALVANISED AS WELL.
11. ANY SITE WELDING APPROVED BY THE ENGINEER SHALL BE PERFORMED BY A CERTIFIED WELDER IN ACCORDANCE WITH SABS 944 PART 1.
A DETAILED METHOD STATEMENT INCLUDING ON-SITE REPAIRS TO THE ZINC COATINGS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
12. ALL CUT STEELWORK IS TO BE CUT AT 90 DEGREES TO ALL EDGES UNLESS OTHERWISE SHOWN.
13. MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE ARCHITECTURAL DEPARTMENT'S GENERAL PREAMBLE TO ALL TRADES.
14. REFER TO CONTRACT SPECIFICATION FOR THE CORROSION PROTECTION TO THE HOT ROLLED STRUCTURAL STEELWORK.

STRUCTURAL TIMBER

11. PREFABRICATED TIMBER ROOF TRUSSES AND PURLINS ARE TO BE DESIGNED AND SUPPLIED BY AN APPROVED SUPPLIER.
12. TIMBER ROOF TRUSSES ARE TO BE DESIGNED IN ACCORDANCE WITH SANS 10163-1 (CODE OF PRACTICE FOR TIMBER STRUCTURES). LOADS ARE TO COMPLY WITH SANS 10160 (CODE OF PRACTICE FOR GENERAL PROCEDURES AND LOADING FOR THE DESIGN OF BUILDINGS).
13. WORKSHOP DETAIL DRAWINGS SHALL BE CHECKED BY UKUZA BEFORE COMMENCING WITH MANUFACTURING OF TIMBER ROOF TRUSSES.
14. ALL TRUSSES TO BE FABRICATED IN A FACTORY BY A TIMBER TRUSS FABRICATOR WHO HAS BEEN AWARDED A 'CERTIFICATE OF COMPETENCE' BY THE INSTITUTE FOR TIMBER CONSTRUCTION.
15. FABRICATOR TO SUPPLY GRADE AND TREATMENT OF TIMBER TO ENGINEER FOR COMMENT PRIOR TO COMMENCEMENT OF WORKS.
16. FABRICATOR TO SITE MEASURE AND CHECK ALL DIMENSIONS PRIOR TO COMMENCEMENT OF FABRICATION.
17. ALL NEW TIMBER IN THE WORKS TO BE SELECTED STRUCTURAL TIMBER FREE FROM WANE AND SHAKES WITH A STRENGTH CLASS NOT LESS THAN SA PINE GRADE 6.
18. ALL TIMBER TO BE CCA TREATED.
19. ALL TIMBER ELEMENTS INCLUDING ADDITIONAL WIND BRACING TO BE DESIGNED AND INSTALLED TO SPECIALIST SPECIFICATION.

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Revisions			
Rev no	Date	Description	Rev by
A			
B			
C			
D			



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MUNICIPALITY, NORTH WEST
GPS COORDINATES :
LONGITUDE 25 45 36.25'
LATITUDE 26 19 45.46'S**

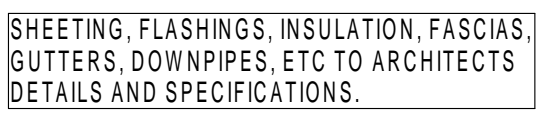
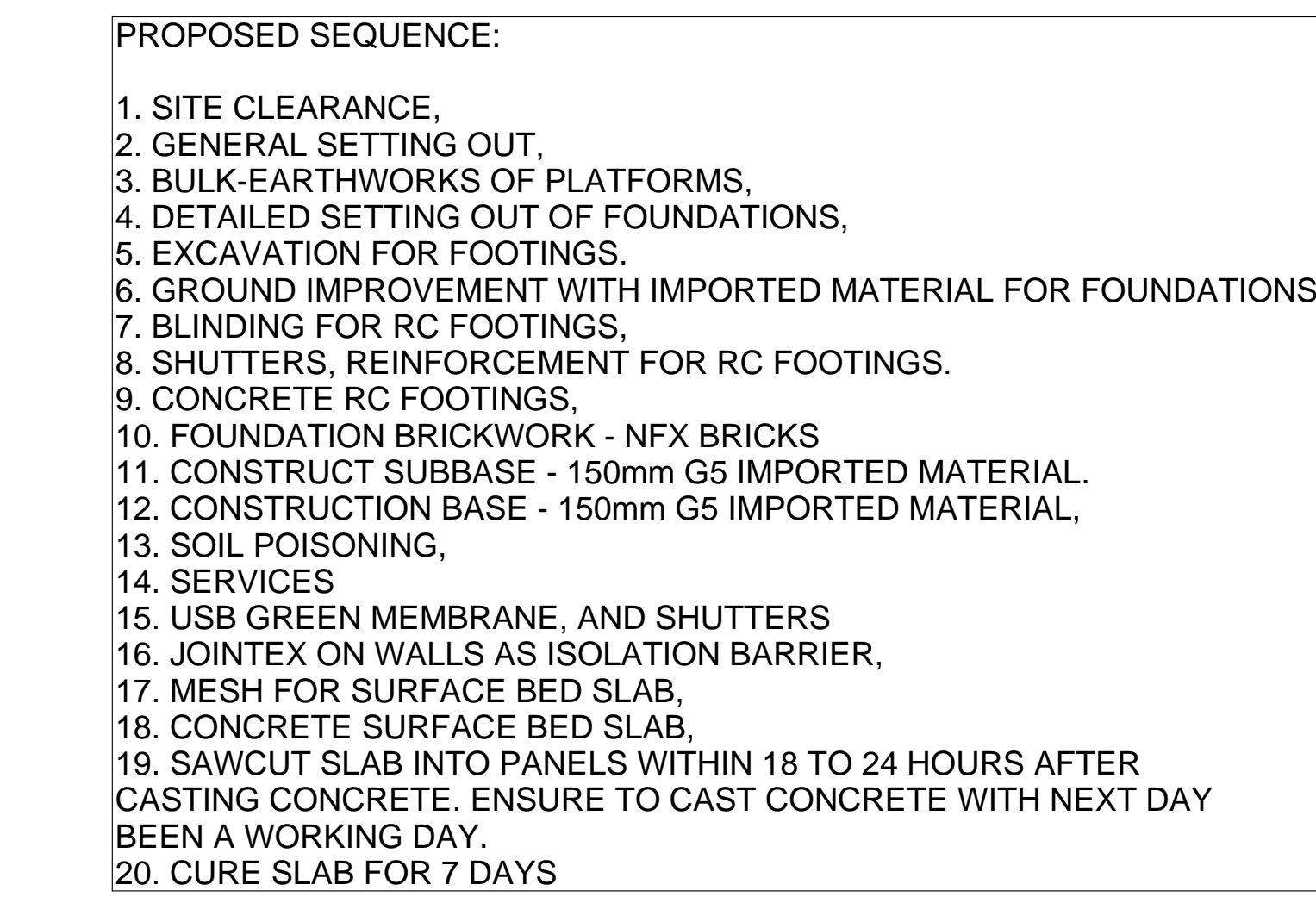
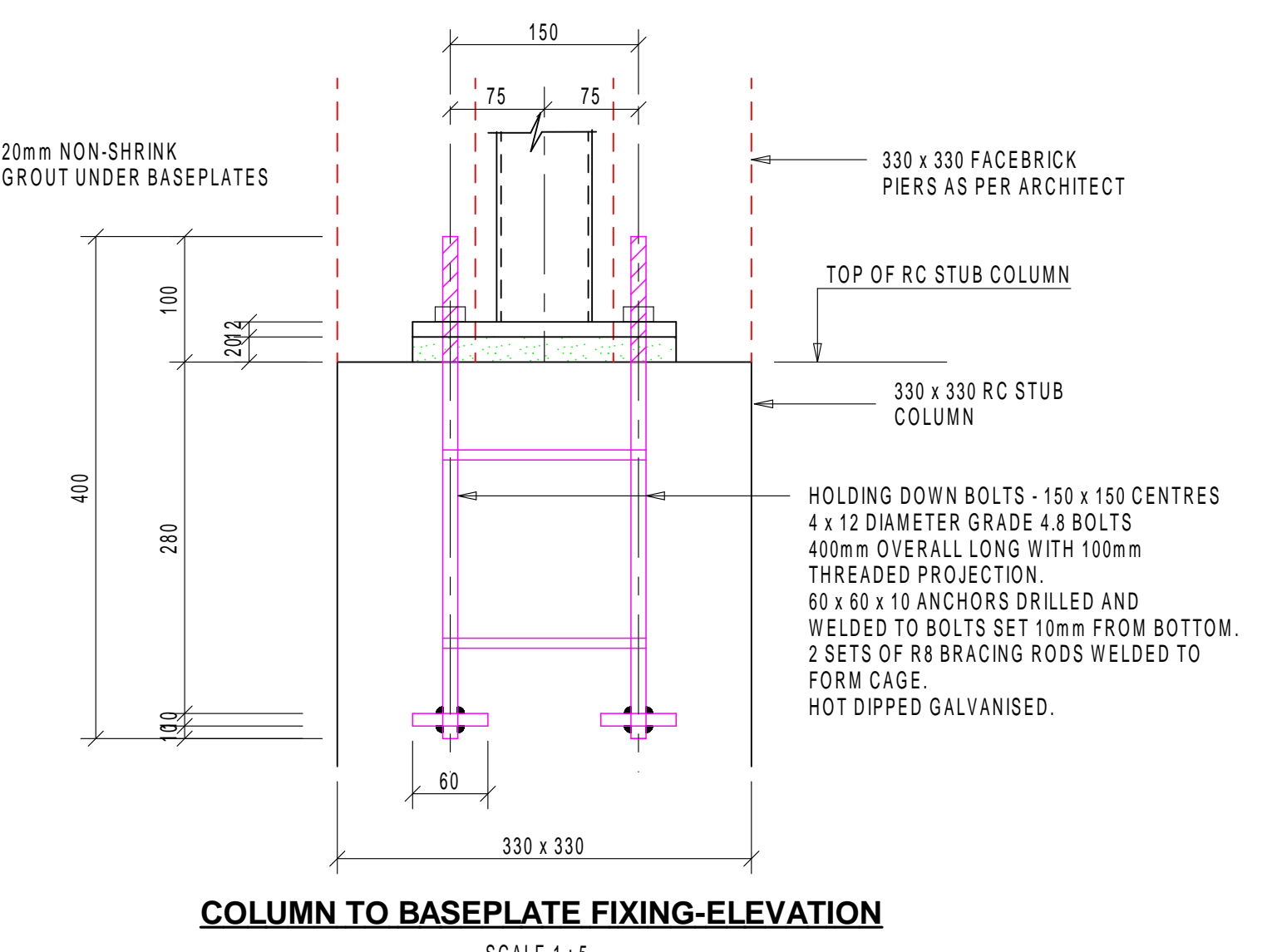
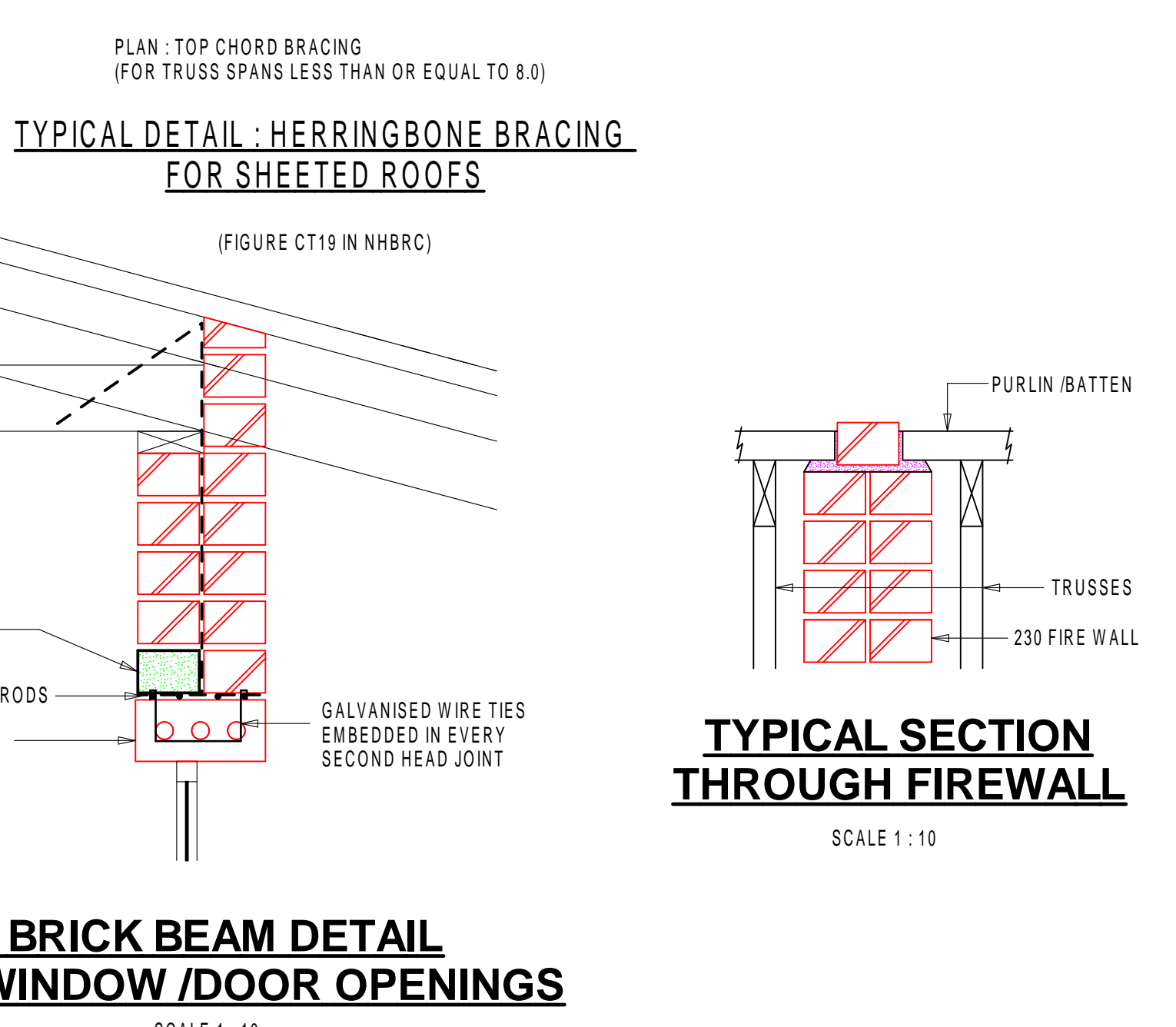
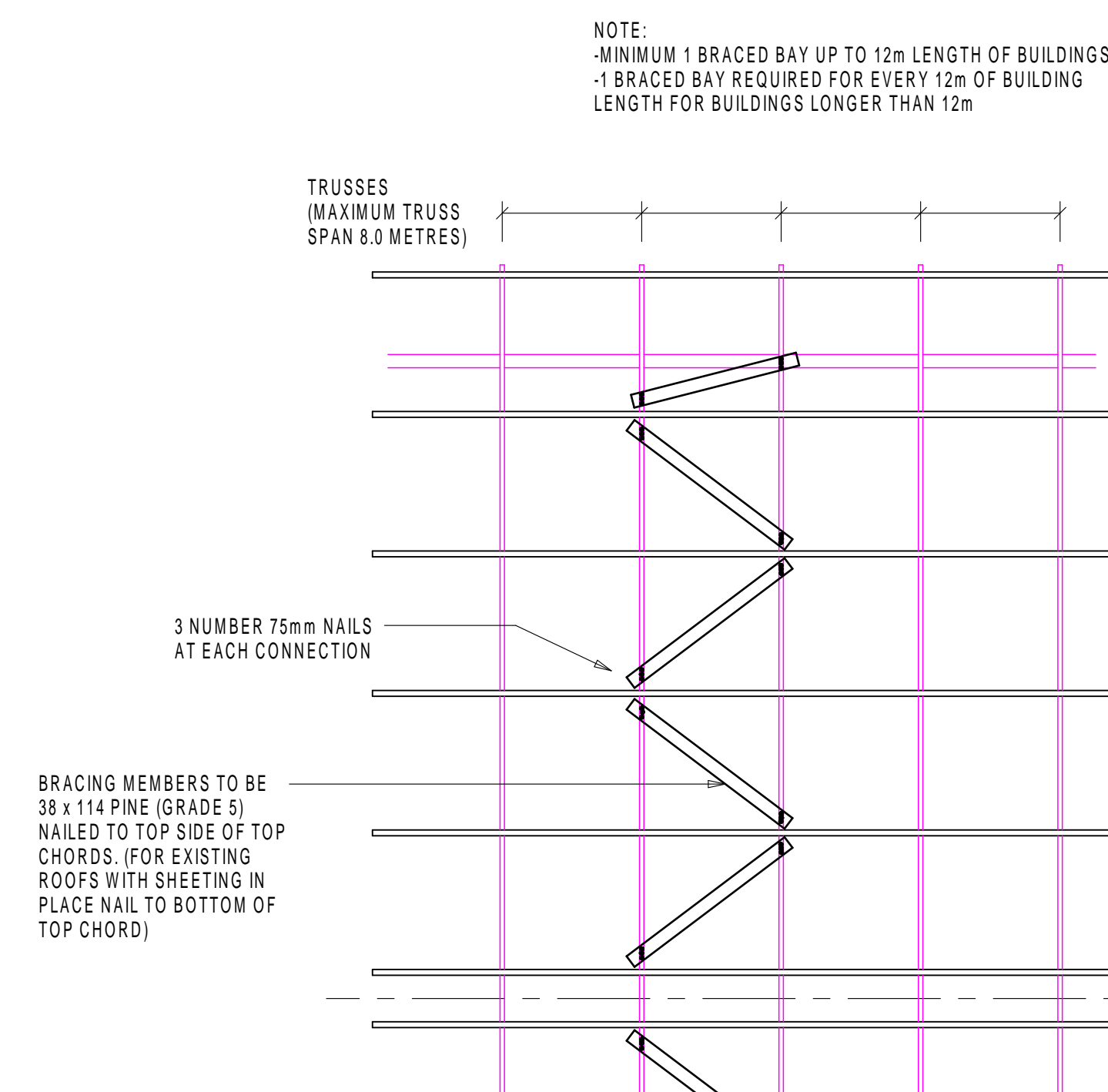
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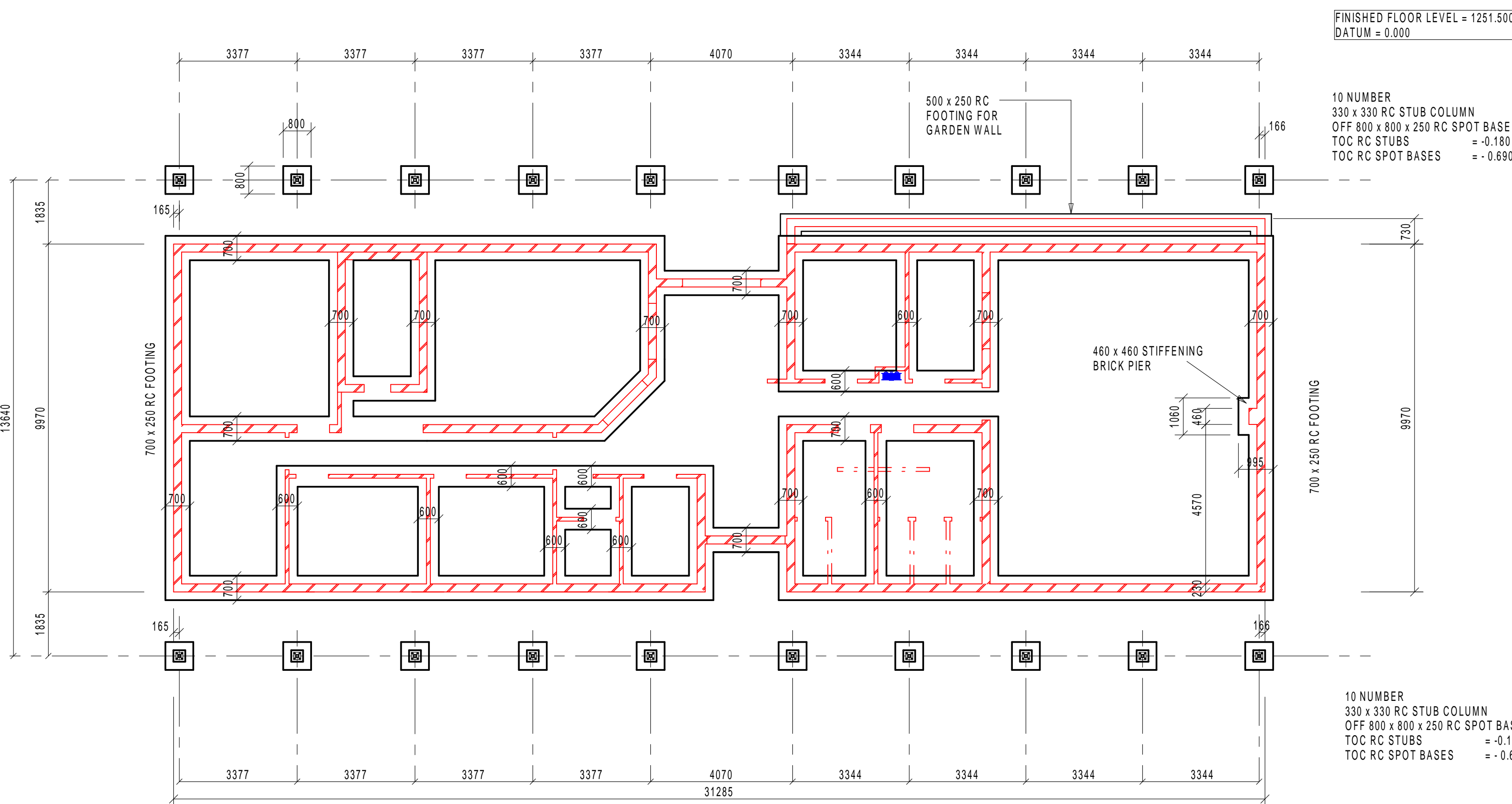
PROJECT STATUS		
Stage 1 - 3	Stage 4	Stage 5-6
Concept	Tender	Construction

Drawing Description
**NEW 3 CLASSROOM + ABUTION BLOCK
FOUNDATION, SURFACE BED AND RC ROOF LAYOUTS
AND LARGE SCALE CONSTRUCTION DETAILS**

DRAWN:		CHECKED:	
Name of Competent Person S. Naidu		Name of Competent Person S. Naidu	
REG. No.: PR.ENG. 20010315		REG. No.: PR.ENG. 20010315	
SIGNATURE:		SIGNATURE:	
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EMIS NUMBER 600100694	Consultant Project Reference D3884-21		Revision 0
Drawing Number ST-3A-SC 01		Revision 0	

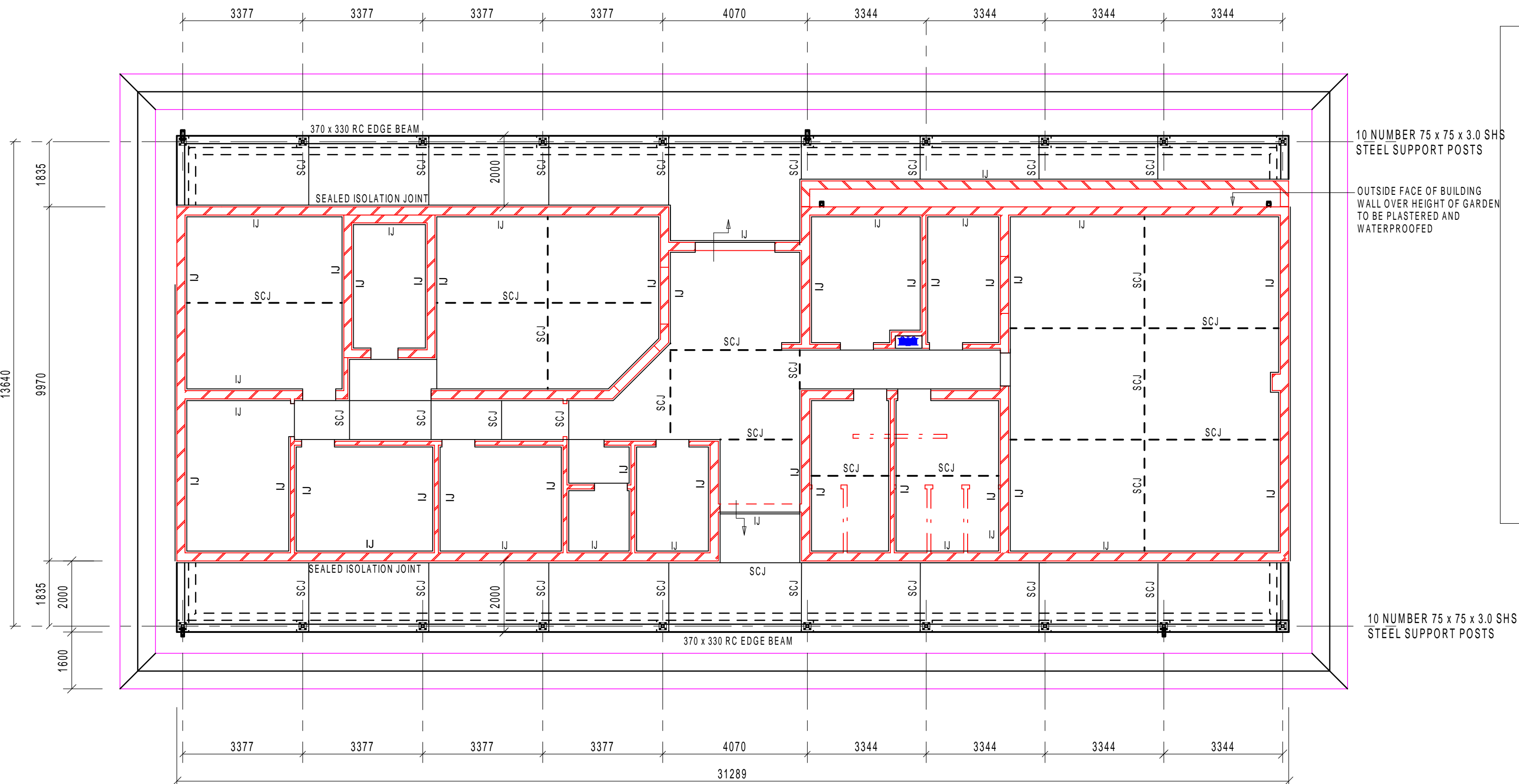
Stamped by Plans Approval Committee





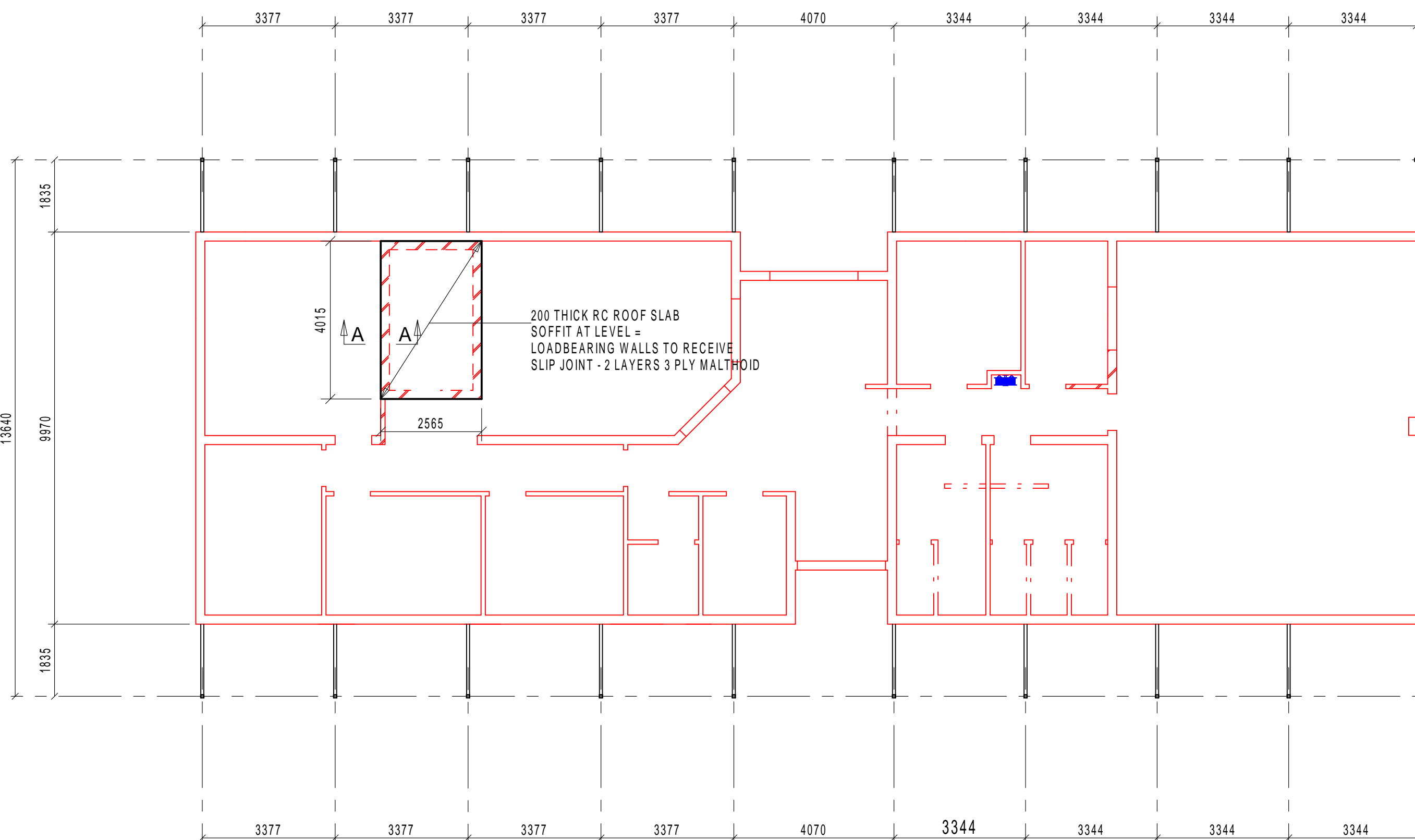
FOUNDATION LAYOUT

SCALE 1 : 100



SURFACE BED LAYOUT

SCALE 1 : 100



RC ROOF SLAB LAYOUT

SCALE 1 : 100

ACCURATE SETTING OUT TO WALLS TO BE ACCORDING TO THE ARCHITECT'S DRAWINGS DIMENSIONS AND DETAILS.

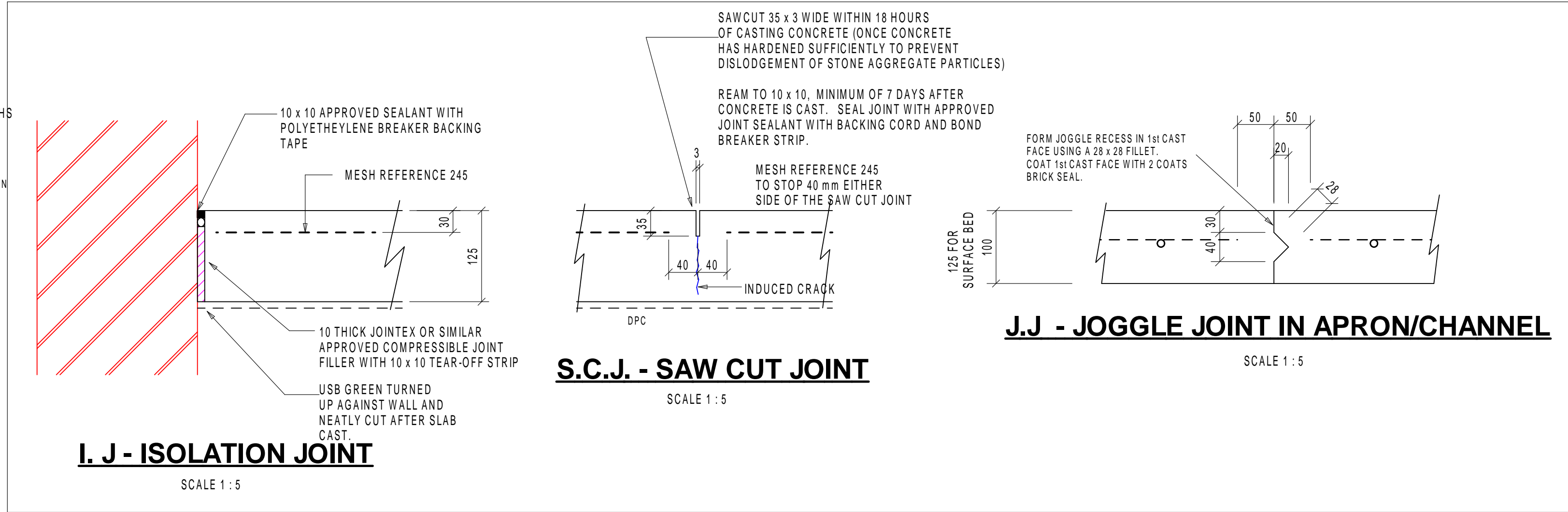
TOP OF CONCRETE TO ALL RC FOOTINGS TO BE -0.540, UNLESS NOTED OTHERWISE.

ALL 220/230 WALLS OFF 700 x 250 RC FOOTINGS & ALL 110/115 WALLS OFF 600 x 250 RC FOOTINGS, UNLESS SHOWN OTHERWISE.

FINISHED FLOOR LEVEL = 1251.500
DATUM = 0.000

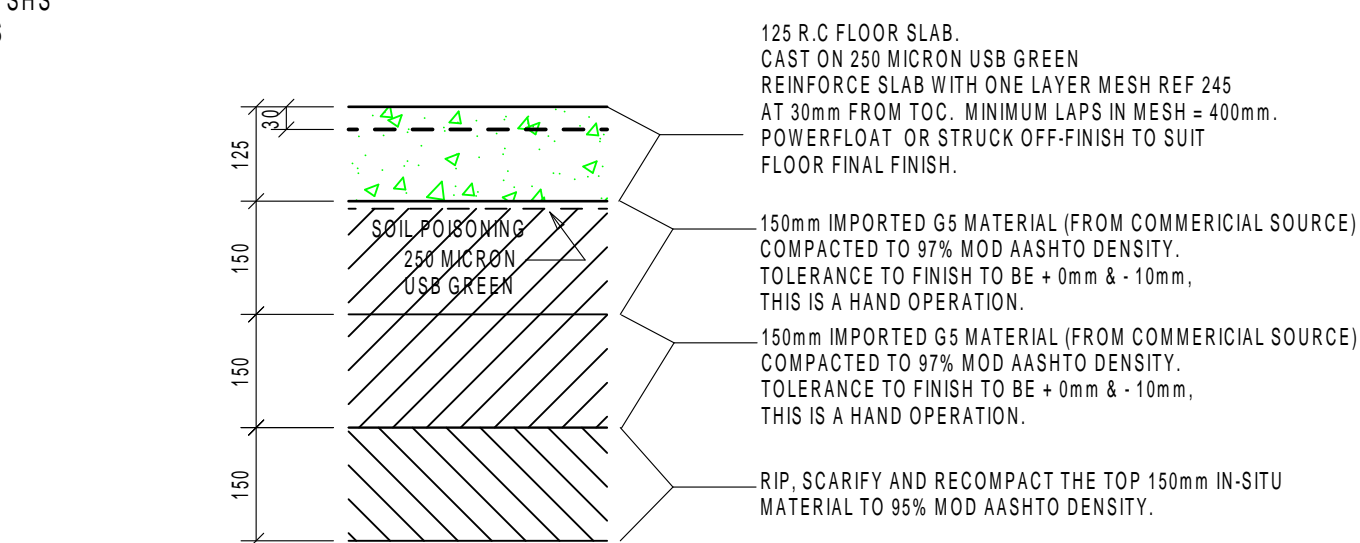
10 NUMBER
330 x 330 RC STUB COLUMN
OFF 800 x 800 x 250 RC SPOT BASE
TOC RC STUBS
TOC RC SPOT BASES
= -0.180
= -0.690

VERANDA SLABS TO BE
CAST ONLY AFTER INSTALLATION OF
STEELWORK SUPPORT POSTS AND
TIMBER ROOF COMPLETED AND ALIGNED.



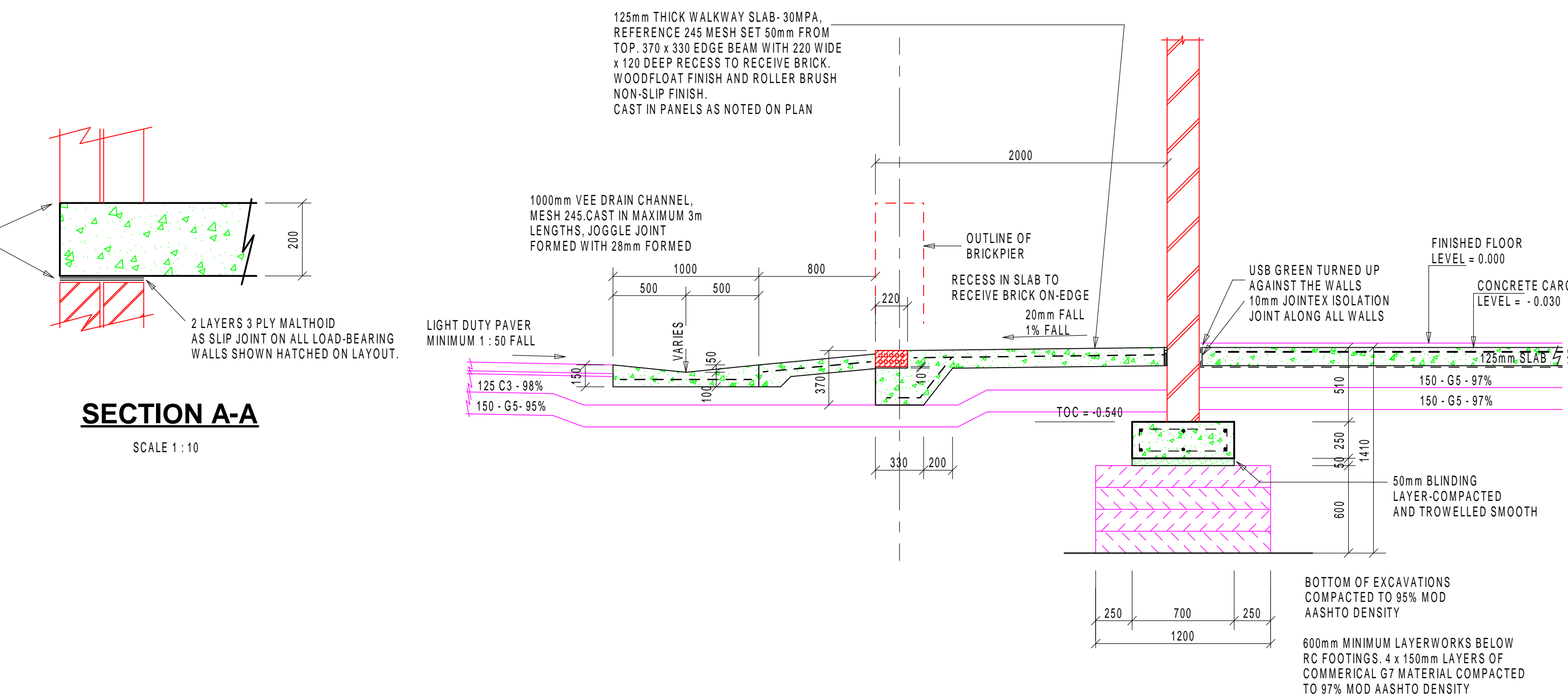
I.J. - ISOLATION JOINT

SCALE 1:5



R.C. SURFACE BED SLAB LAYERWORKS

SCALE 1:10



SECTION A-A

SCALE 1:10

GENERAL NOTES:

- CONCRETE
1. ALL CONCRETE WORK SHALL BE DONE ACCORDING TO SABS 1200G.
2. ALL CASTING PROCEDURES, CONSTRUCTION METHODS AND POSITIONS OF CONSTRUCTION JOINTS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF THE PROJECT.
3. THE CONTRACTOR MUST CO-ORDINATE ALL SERVICES DRAWINGS FOR DETAILS AND POSITIONS OF OPENINGS AND SLEEVES REQUIRED FOR STORMWATER, SEWERAGE, DRAINAGE, ELECTRICAL, MECHANICAL AND OTHER SERVICES. ONLY OPENINGS LARGER THAN 100 mm DIA OR 100 x 100 mm ARE SHOWN ON STRUCTURAL DRAWINGS.
4. THE CONTRACTOR MUST OBTAIN PERMISSION FROM THE ENGINEER BEFORE ANY OPENINGS OR SERVICES WHICH ARE NOT NOTICED ON THE DRAWINGS MAY BE INTRODUCED THROUGH ANY STRUCTURAL ELEMENT.
5. THE CONCRETE COVER TO REINFORCEMENT IS AS FOLLOWS (EXCEPT WHERE OTHERWISE NOTED ON BENDING SCHEDULES):
 - FOUNDATIONS = 50 mm
 - STIRRUPS IN BEAMS = 25 mm
 - STIRRUPS IN COLUMNS = 25 mm
 - SLABS = 25 mm
6. NO BRICK WALLS ARE TO BE BUILT ON FLOOR SLABS BEFORE THE SLABS HAVE REACHED THEIR TENSILE STRENGTH. PROPPING UNDER SLABS AND BEAMS SHALL BE COMPLETELY REMOVED BEFORE BRICKWORK IS BUILT. ALL BRICKS REQUIRED FOR BRICK WALLS ON A SPECIFIC SLAB PANEL SHOULD BE STACKED EVENLY ONTO THAT SPECIFIC SLAB PANEL BEFORE WALLS ARE BEING BUILT.
7. BEAM DIMENSIONS ARE GIVEN AS A x B WHERE:
 - A = DEPTH OF BEAM (SLAB INCLUDED)
 - B = WIDTH OF BEAM
8. THE STRENGTH OF CONCRETE COVER BLOCKS SHALL AT LEAST BE EQUAL TO THE CONCRETE STRENGTH OF THE STRUCTURAL ELEMENT IN WHICH THEY ARE USED. THE SIZE AND FINISH METHOD OF COVER BLOCKS SHALL BE DISCUSSED IN ADVANCE WITH THE ENGINEER.
9. CEMENT OR CLAY HOLLOW BLOCKS SHALL BE WETTED AS THE CASTING OF CONCRETE PROGRESSES.
10. A 30 mm x 30 mm CHAMFER SHALL BE PROVIDED ON ALL VISIBLE CORNERS OF OFF-SHUTTER CONCRETE IN COLLABORATION WITH THE ARCHITECT.
11. SEE ARCHITECT'S DRAWINGS FOR DETAIL AND POSITIONS OF J-OINTS AND DRIP JOINTS IN CONCRETE.
12. SEE ARCHITECT'S DRAWINGS FOR DETAIL AND POSITIONS OF R/WPS IN CONCRETE.
13. SEE ARCHITECT'S DRAWINGS FOR THE CASTING IN OF FININGS FOR BRICKWORK INTO CONCRETE.
14. THE FOLLOWING CARRIERS ARE TO BE PROVIDED UNLESS OTHERWISE SHOWN:
 - CANTILEVER BEAMS AND SLABS = SPAN / 150
 - OTHER BEAMS AND SLABS = SPAN / 140
15. REINFORCEMENT
16. ALL REINFORCEMENT SHALL COMPLY WITH THE REQUIREMENTS OF SABS 1200G.
17. THE CONTRACTOR SHALL GIVE AT LEAST 48 HOURS NOTICE TO THE ENGINEER FOR STEEL INSPECTIONS THAT ARE REQUIRED.
18. NO HEATING, FLAME CUTTING OR WELDING OF REINFORCEMENT SHALL BE ALLOWED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.
19. THE MINIMUM 28 DAY CUBE COMPRESSIVE STRENGTH OF CONCRETE SHALL BE:
 - 6.50 MPa BLINDING LAYER UNDER ALL R.C. BASES = 10 MPa
 - R.C. FOOTINGS = 20 MPa
 - R.C. GROUNDWORK BEAMS AND R.C. WALLS = 30 MPa
 - R.C. SLABS, R.C. BEAMS AND R.C. STAIRS = 30 MPa
 - R.C. COLUMNS = 40 MPa
20. MAXIMUM WATER CEMENT FOR ALL R.C. CONCRETE SHALL BE 0.53.
21. ALL CONCRETE TO BE SUPPLIED BY APPROVED READY-MIX COMPANY. CONTRACTOR TO FORWARD SUPPLIERS DETAILS AT COMMENCEMENT OF PROJECT.
22. ALL CONCRETE IS TO BE PLACED IN POSITION. PUMPING OF CONCRETE IS NOT ALLOWED.
23. SIX (6) NUMBER CONCRETE TEST CUBES - 150 x 150 x 150 - TO BE TAKEN FOR EVERY 30 CUBES OF CONCRETE FOR SPECIFIC REINFORCED CONCRETE ELEMENT PER DAY. TEST CUBES TO BE MADE ON SITE.
24. THREE (3) TESTED AT 7 DAYS AND THREE (3) TESTED AT 28 DAYS. THOSE CUBES TESTED AT OTHER TIME PERIODS WILL NOT BE CONSIDERED AND NO PAYMENT WILL BE MADE.
25. THE CONCRETE MIX DESIGN OF ALL CONCRETE FOR R.C. ELEMENTS TO BE SUPPLIED TO THE ENGINEER FOR APPROVAL AT LEAST 4 WEEKS BEFORE CONCRETE IS REQUIRED ON SITE.
26. THE BLINDING LAYER IS TO BE MECHANICALLY VIBRATED AND TROWELLED TO A LEVEL SURFACE.
27. FULL CONCRETE SURFACES TO BE EFFECTIVELY CURED FOR 7 DAYS BY COVERING WITH PLASTIC SHEETS.
28. WATER BASED CURING COMPOUNDS CAN BE USED ON THE EXTERNAL APONS AND CHANNELS, AND SURFACES THAT DO NOT RECEIVE A SMOOTH FINISH.
29. FOUNDATIONS HAVE BEEN DESIGNED FOR AN ALLOWABLE SERVICE GROUND BEARING CAPACITY OF 100 kPa.
30. ALL FOUNDATION EXCAVATIONS ARE TO BE INSPECTED BY THE ENGINEER PRIOR TO CONCRETE PLACEMENT.
31. THE ENGINEER TO BE PROVIDED WITH 2 DAYS NOTICE FOR INSPECTIONS.
32. SURFACE BEERS
33. ALL DAMP PROOF MEMBRANES TO HAVE MINIMUM 400mm LAP WITH JOINTS FULLY SEALED WITH 50mm WIDE TAPE.
34. SAWCUT JOINTS TO TAKE PLACE 18 HOURS AFTER CASTING TO AVOID CRACKING AND RAVELLING OF JOINT EDGES.

STRUCTURAL STEELWORK:

1. ALL STRUCTURAL STEELWORK MUST BE DONE ACCORDING TO SABS 1200G. ACCURACY - CLASS II.
2. ALL STRUCTURAL STEEL MUST BE GRADE 355 W ACCORDING TO SABS 1431. EXCEPT COLD FORMED LIPPED CHANNELS WHICH CAN BE OF COMMERCIAL GRADE WITH A MINIMUM YIELD STRESS OF 230 MPa AND A MINIMUM ULTIMATE TENSILE STRENGTH OF 430 MPa. TEST CERTIFICATES FOR ALL MATERIALS MUST BE SUBMITTED TO THE ENGINEER BEFORE COMMENCING FABRICATION.
3. WELD ELECTRODE CLASSIFICATION - GRADE E70XX. EXCEPT WHERE SPECIFIED OTHERWISE.
4. THE CONTRACTOR MUST SUBMIT TWO FULL PAPER COPIES OF THE WORKSHOP DETAILS AND DRAWINGS TO THE ENGINEER FOR APPROVAL. THE ENGINEER REQUIRES 10 WORKING DAYS FOR CHECKING OF DETAILS. FABRICATION OF STRUCTURAL STEELWORK TO COMMENCE ONLY ONCE THE ENGINEER HAS PROVIDED WRITTEN APPROVAL OF THE WORKSHOP DRAWINGS. ANY CHANGES TO ENGINEER DRAWINGS MUST BE INDICATED TO AND APPROVED BY THE ENGINEER.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE UNTIL THE STRUCTURE IS COMPLETED IN ITS ENTIRETY.
6. RELEVANT DIMENSIONS OF ALREADY BUILT CONSTRUCTION TO BE CHECKED DURING PREPARATION OF WORKSHOP DRAWINGS. DISCREPANCIES MUST BE REPORTED TO THE ENGINEER IMMEDIATELY.
7. ALL WELDED CONNECTIONS MUST BE WELDED ALL ROUND WITH A Drip CONTINUOUS FILLET WELD EXCEPT WHERE SHOWN OTHERWISE. WELDS SHALL COMPLY WITH THE REQUIREMENTS OF SABS 405.
8. WELDING MUST BE ACCORDING TO SABS STANDARDS AND MUST BE APPROVED BY AN APPROVED AUTHORITY IN CONSULTATION WITH THE ENGINEER.
9. ALL BOLTS TO BE GRADE 8.8 EXCEPT WHERE SHOWN OTHERWISE. HOLE SIZES TO BE 2mm LARGER THAN FASTENER SIZE UNLESS OTHERWISE NOTED.
10. ALL PURLINS, KNEE BRACING AND BRACING STEELWORK AS WELL AS FASTENERS COMPOSING BOLTS, NUTS AND WASHERS UNLESS OTHERWISE NOTED, MUST BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH SABS ISO 1461. GALVANIZERS MUST BE NOTIFIED THAT THE GALVANIZED FINISH REQUIRED IS AN ARCHITECTURAL FINISH, AND THAT ALL ZINC LUMPS, ETC MUST BE REMOVED.
- NOTE THAT THE PURLINS ARE TO BE HOT DIPPED GALVANIZED. IF PURLINS ARE MADE FROM PRECUT MATERIAL THEN THESE ARE TO BE HOT DIPPED GALVANIZED AS WELL.
11. ANY SITE WELDING APPROVED BY THE ENGINEER SHALL BE PERFORMED BY A CERTIFIED WELDER IN ACCORDANCE WITH SABS 944 PART 1.
12. A DETAILED METHOD STATEMENT INCLUDING ON-SITE REPAIRS TO THE ZINC COATINGS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
13. ALL CUT STEELWORK IS TO BE CUT AT 90 DEGREES TO ALL EDGES UNLESS OTHERWISE SHOWN.
14. MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE ARCHITECTURAL DEPARTMENT'S GENERAL PREAMBLE TO ALL TRADES.
15. REFER TO CONTRACT SPECIFICATION FOR THE CORROSION PROTECTION TO THE HOT ROLLED STRUCTURAL STEELWORK.

STRUCTURAL TIMBER

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2. TIMBER ROOF TRUSSES ARE TO BE DESIGNED IN ACCORDANCE WITH SANS 10163-1 (CODE OF PRACTICE FOR TIMBER STRUCTURES). LOADS ARE TO COMPLY WITH SABS 10160.
3. THE CODE OF PRACTICE FOR GENERAL PROCEDURES AND LOADING FOR THE DESIGN OF BUILDINGS.
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7. FABRICATOR TO SITE MEASURE AND CHECK ALL DIMENSIONS PRIOR TO COMMENCEMENT OF FABRICATION.
8. ALL NEW TIMBER IN THE WORKS TO BE SELECTED STRUCTURAL TIMBER FREE FROM WANE AND SHAKES WITH A STRENGTH CLASS NOT LESS THAN SA PINE GRADE 8.
9. ALL TIMBER TO BE CCA TREATED.
10. ALL TIMBER ELEMENTS INCLUDING ADDITIONAL WOOD BRACING TO BE DESIGNED AND INSTALLED TO SPECIALIST SPECIFICATION.

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Revisions	Rev No	Date	Description	Rev by
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B				
C				
D				

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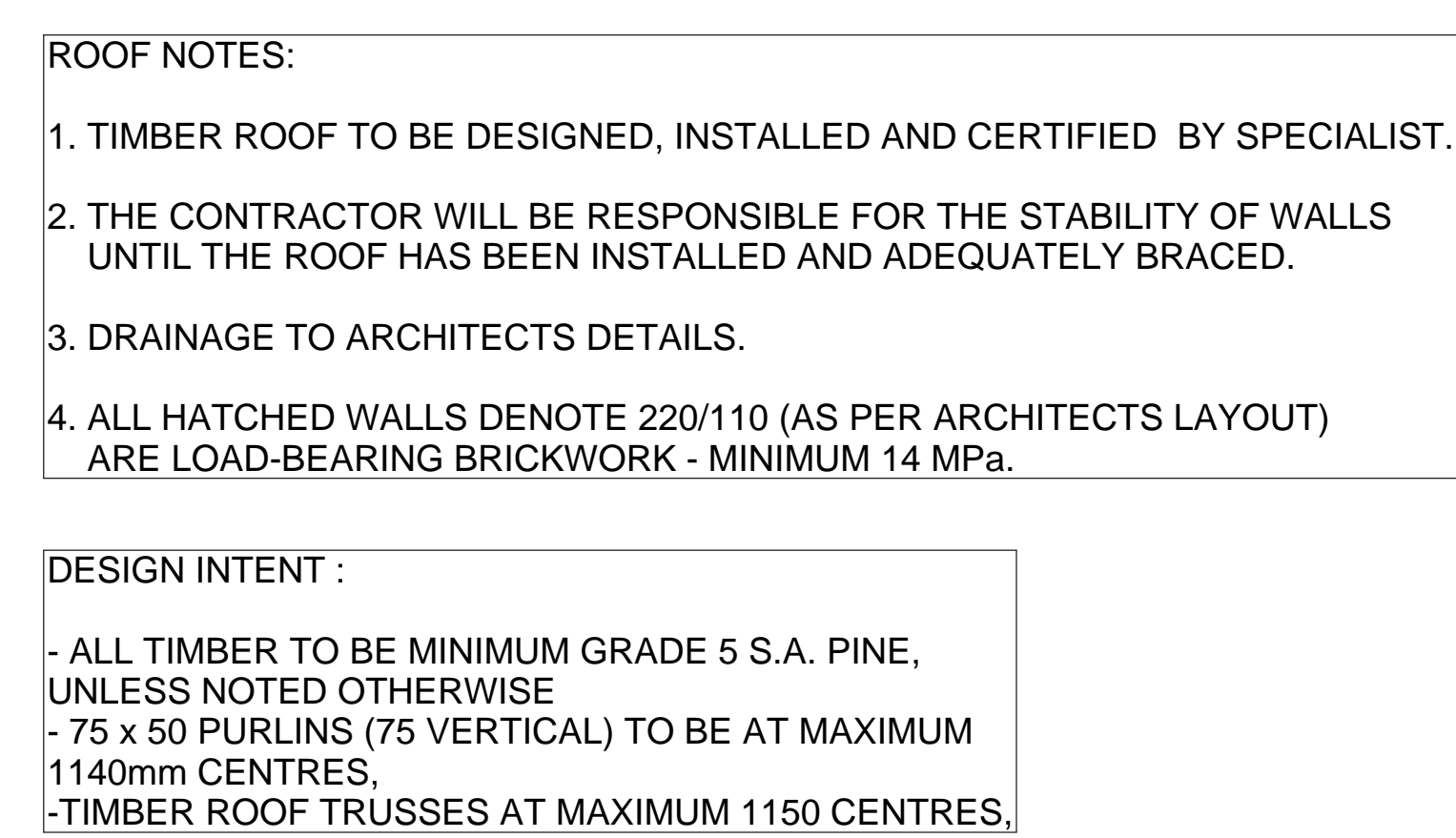
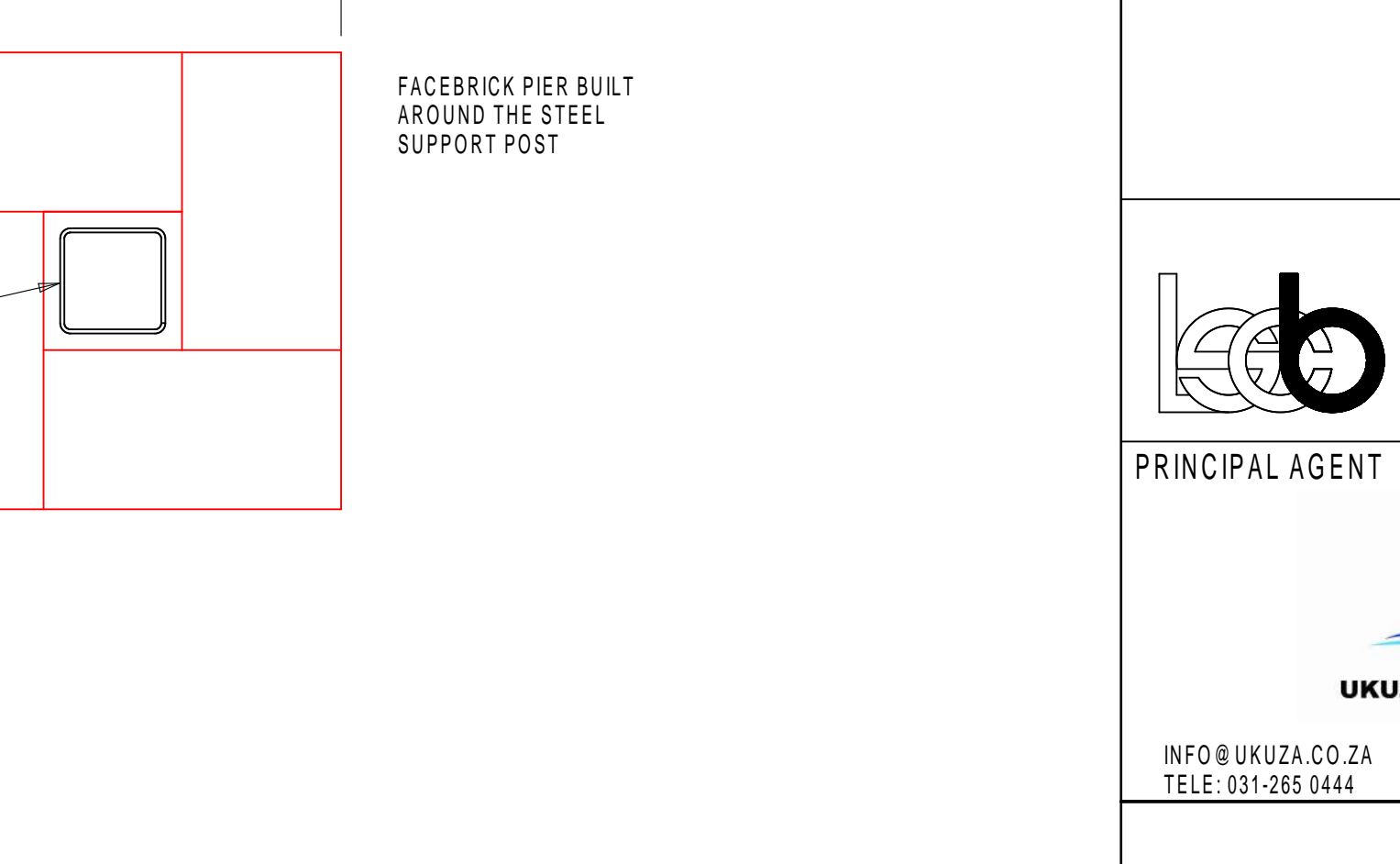
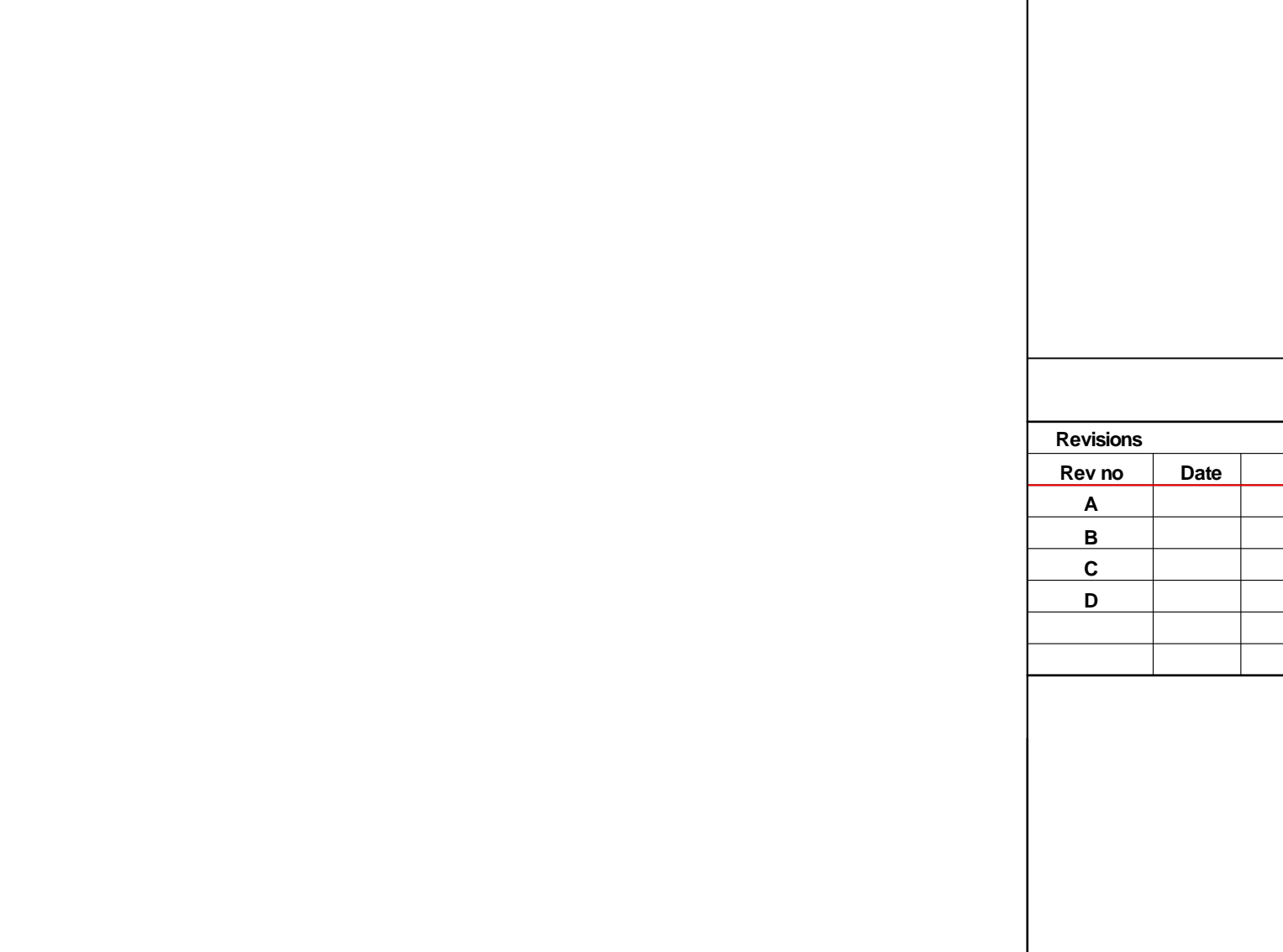
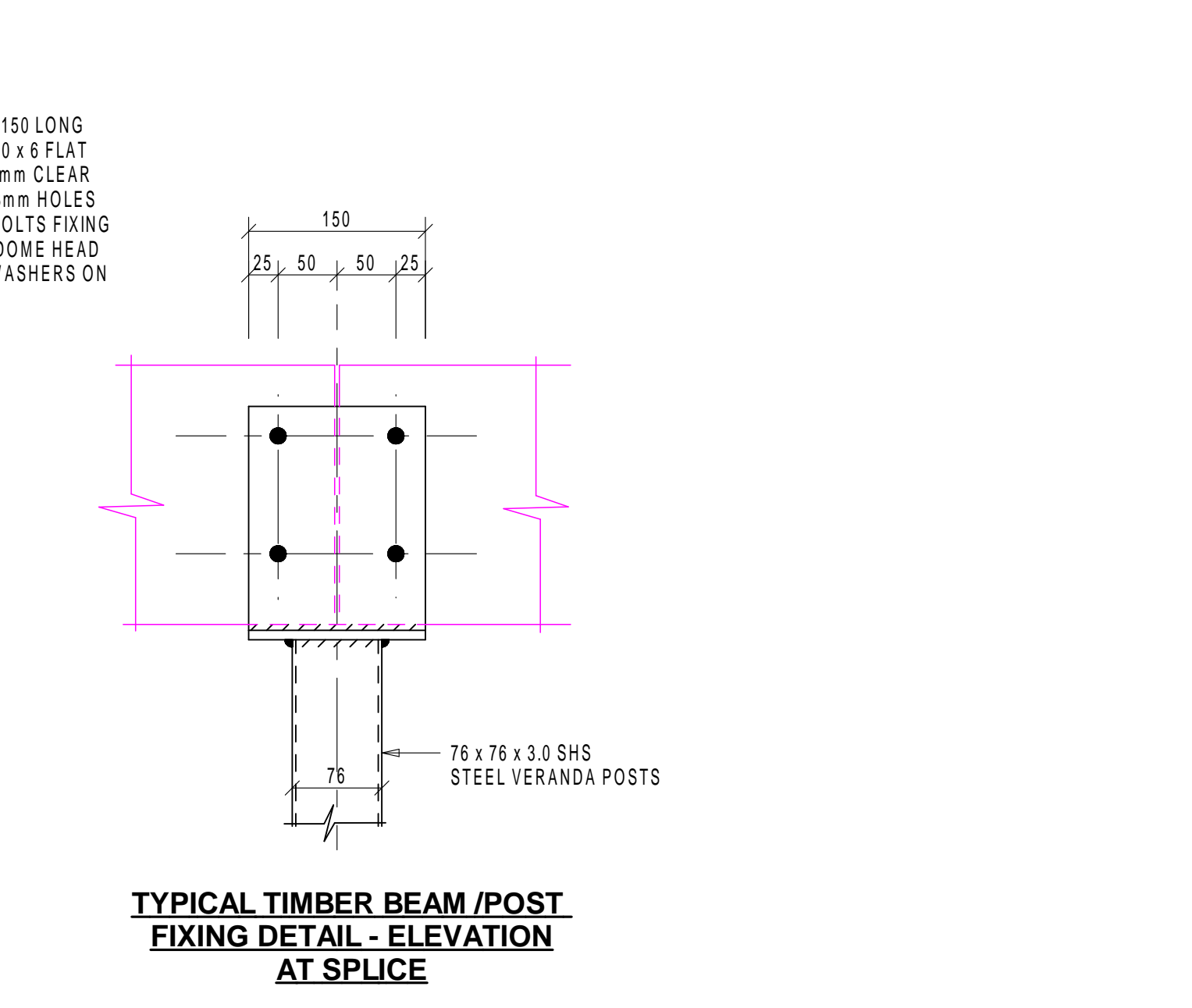
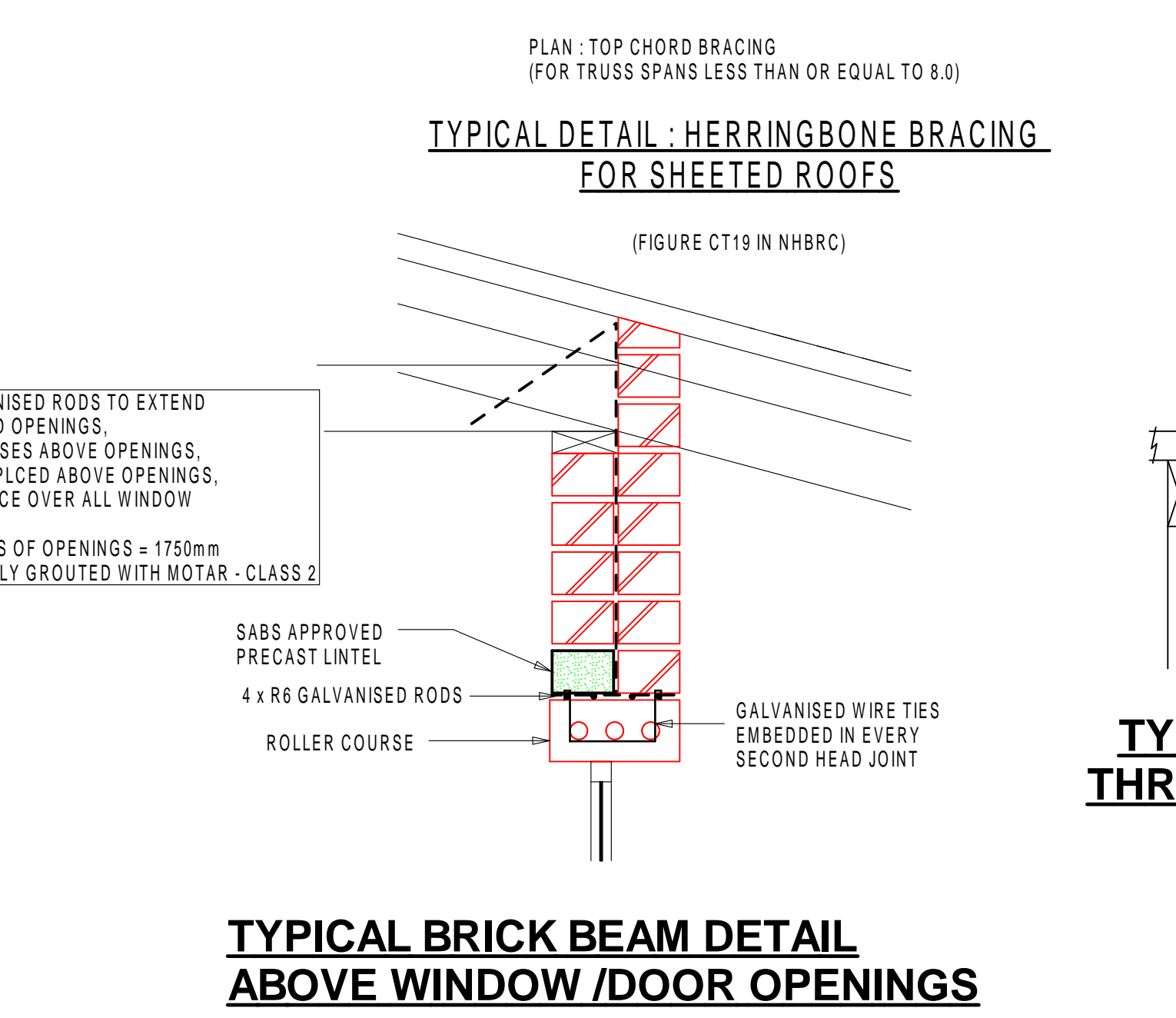
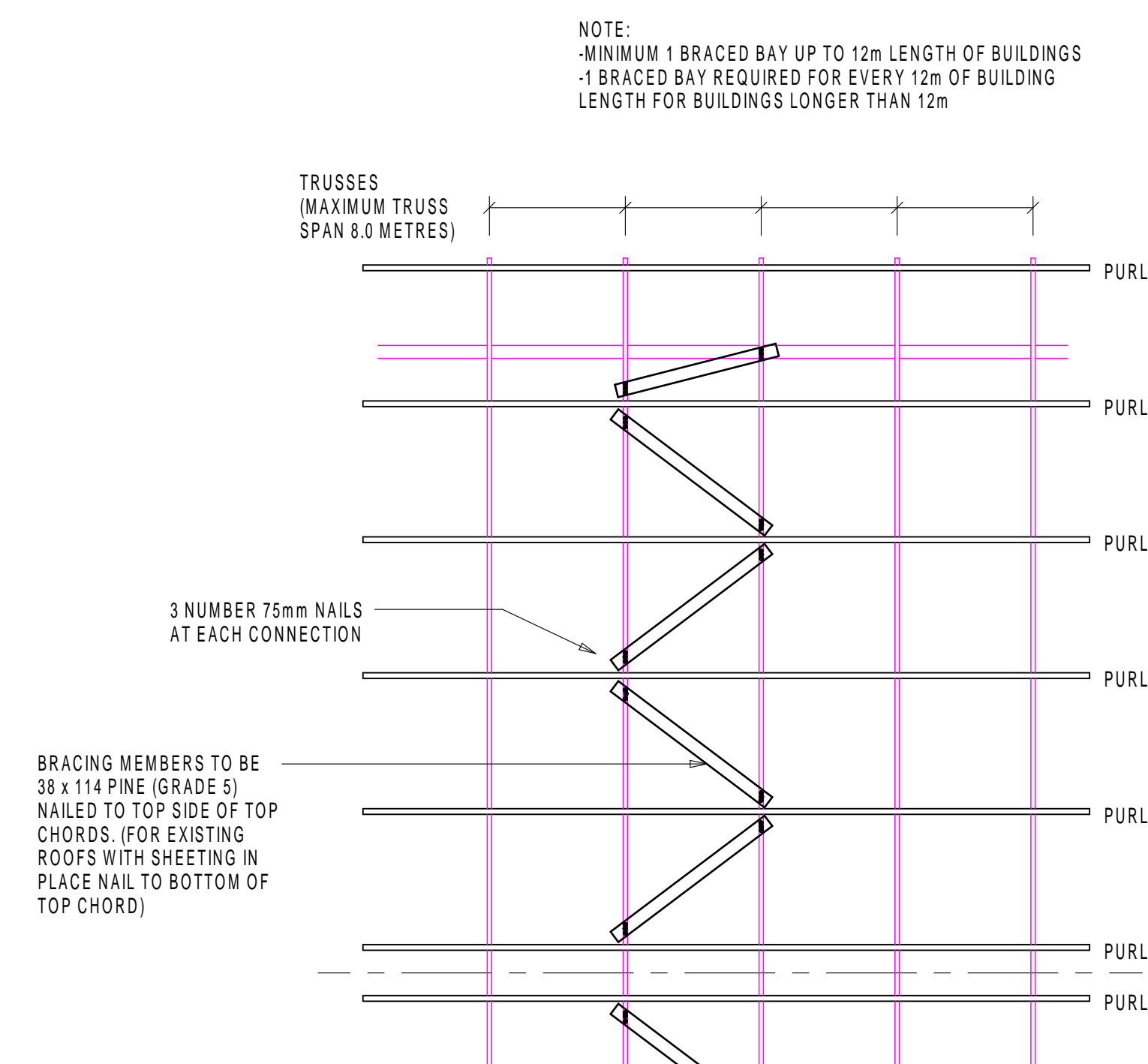
PROPOSED ADDITIONS AND ALTERATIONS

PROJECT STATUS	Stage 1 - 3	Stage 4	Stage 5-6
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NEW ADMINISTRATION BLOCK
FOUNDATION, SURFACE BED AND RC ROOF LAYOUTS
AND LARGE SCALE CONSTRUCTION DETAILS

DRAWN:	CHECKED:
Name of Competent Person S. Naidu	Name of Competent Person S. Naidu
REG. No.: PR.ENG. 20010315	REG. No.: PR.ENG. 20010315
SIGNATURE:	SIGNATURE:
Scale/s 1 : 100, 10, 5	Page Size A0
DATE December 2021	Revision 0
EMIS NUMBER 600100694	Consultant Project Reference D3884-21
Drawing Number ST-A-SC 01	Revision 0

Stamped by Plans Approval Committee



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REFER TO DRAWING SC 01 FOR CONSTRUCTION NOTES.

Revisions			
Rev no	Date	Description	Rev by
A			
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C			
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PROPOSED ADDITIONS AND ALTERATIONS

PROJECT STATUS		
Stage 1 - 3	Stage 4	Stage 5-6
Concept <input checked="" type="checkbox"/>	Tender <input type="checkbox"/>	Construction <input type="checkbox"/>

Drawing Description

NEW ADMINISTRATION BLOCK

TYPICAL SECTION AND LARGE SCALE
CONSTRUCTION DETAILS

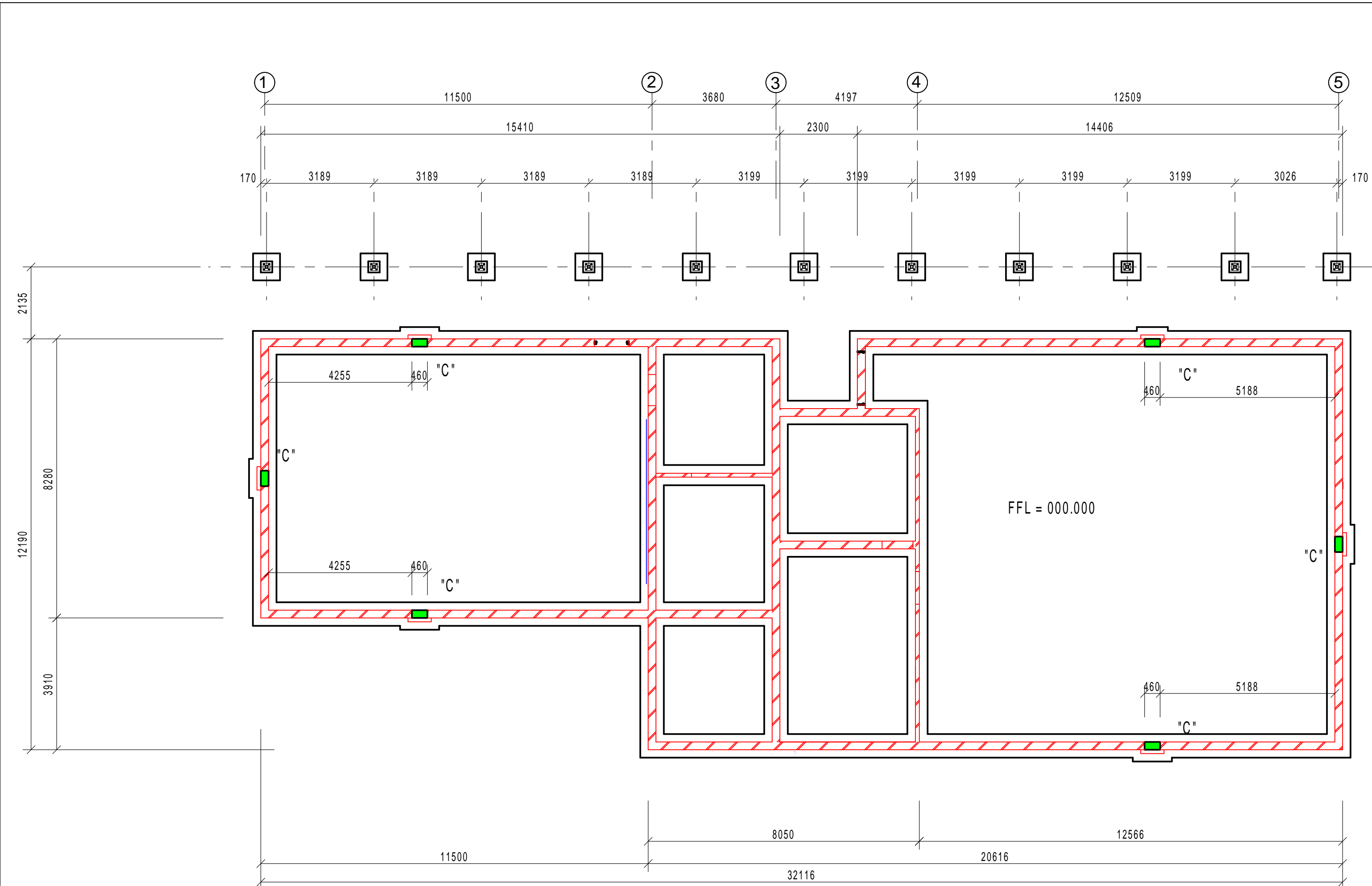
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<p>Scale/s 1 : 25, 10, 5</p>	<p>Paper Size A0</p>	<p>DATE December 2021</p>
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<p>EMIS NUMBER 600100694</p>	<p>Consultant Project Reference D3884-21</p>	<p>Revision 0</p>
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<p>Drawing Number ST-A-SC 02</p>	<p>Revision 0</p>
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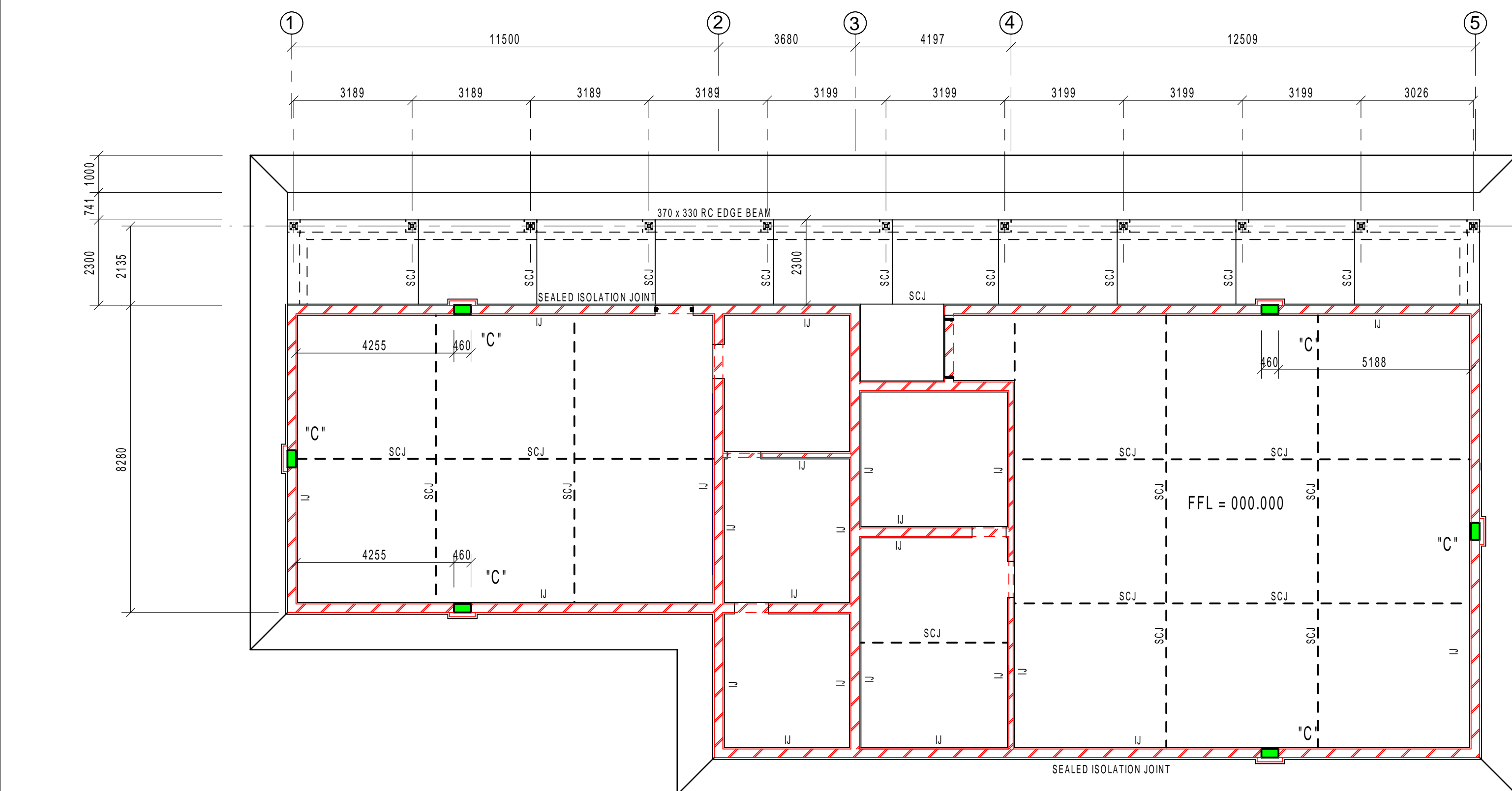
Stamped by Plans Approval Committee



FOUNDATION LAYOUT

SCALE 1 : 100

VERANDA SLABS TO BE CAST ONLY AFTER INSTALLATION OF STEELWORK SUPPORT POSTS AND TIMBER ROOF COMPLETED AND ALIGNED.



SURFACE BED LAYOUT

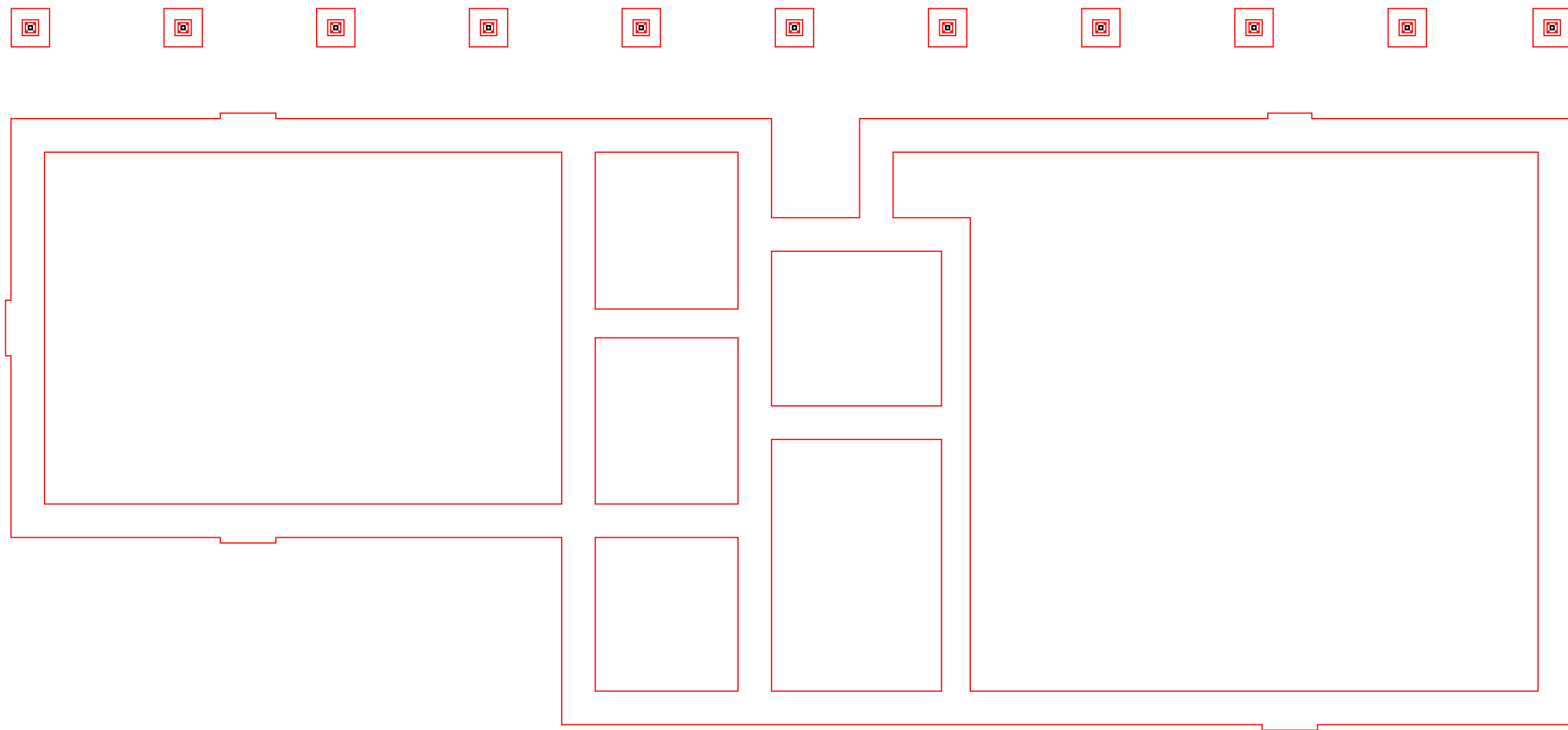
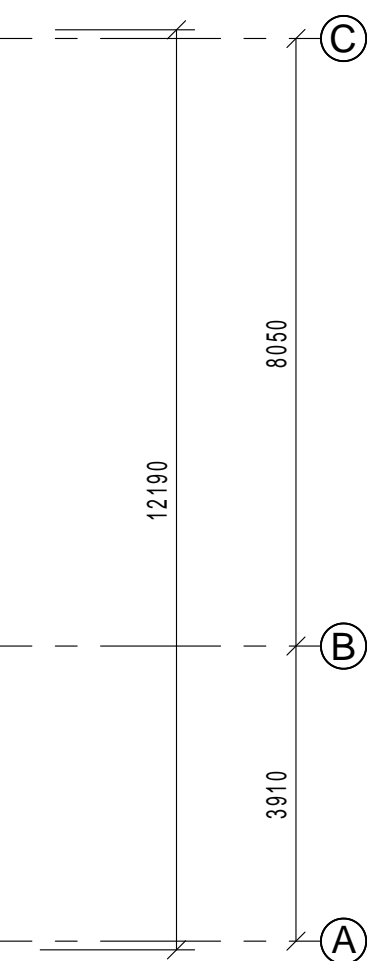
SCALE 1 : 100

'C' - 460 x 230 RC STIFFENING COLUMNS FOR FULL HEIGHT OF WALL

FINISHED FLOOR LEVEL = 1251.500
DATUM = 0.000

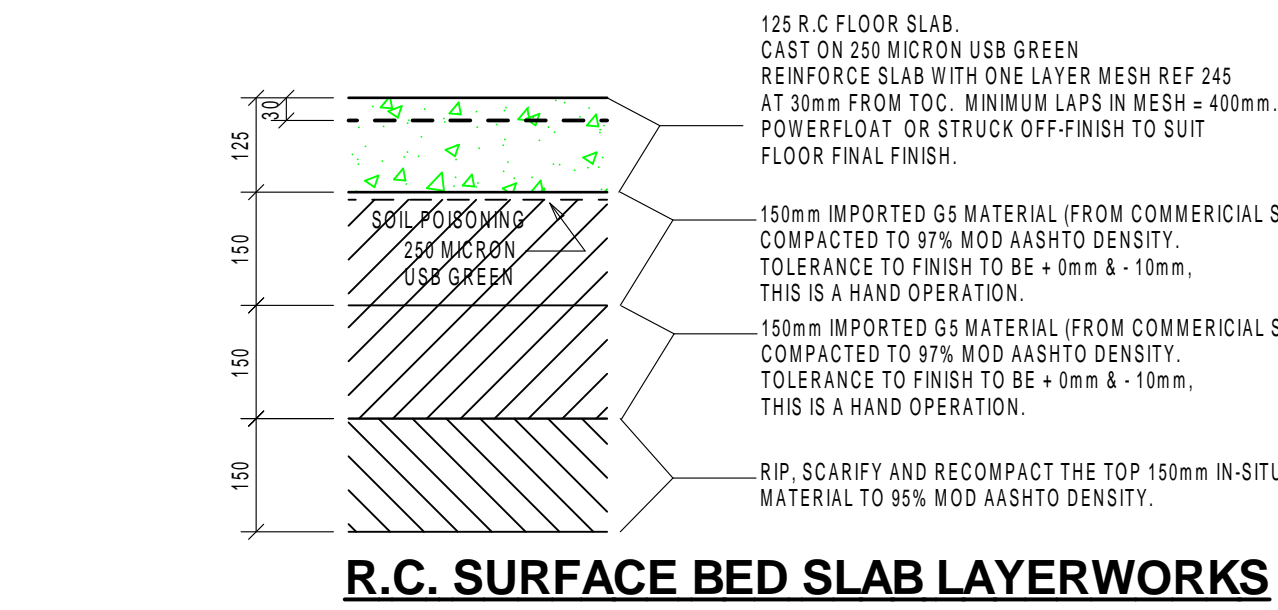
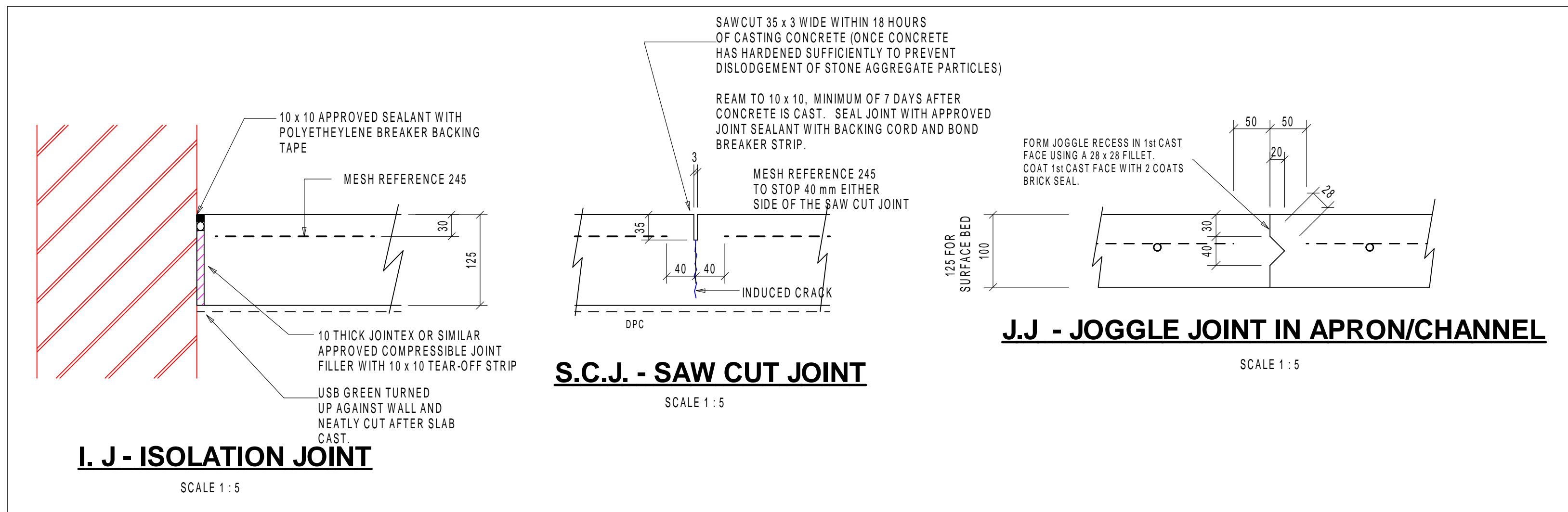
11 NUMBER 350 x 230 RC STUB COLUMN
OFF 800 x 800 x 250 RC SPOT BASE
T.O.C RC STUBS = -0.180
T.O.C RC SPOT BASES = -0.690

ACCURATE SETTING OUT TO WALLS TO BE ACCORDING TO THE ARCHITECT'S DRAWINGS, DIMENSIONS AND DETAILS.
TOP OF CONCRETE TO ALL RC FOOTINGS TO BE -0.540, UNLESS NOTED OTHERWISE.
THERE IS NO STEP IN THE TOP OF THE FOOTINGS.
ALL 220/230 WALLS OFF 700 x 250 RC FOOTINGS & ALL 110/115 WALLS OFF 600 x 250 RC FOOTINGS, UNLESS SHOWN OTHERWISE.



REINFORCEMENT LAYOUT

SCALE 1 : 100



SCALE 1 : 10

GENERAL NOTES:

- CONCRETE
1. ALL CONCRETE WORK SHALL BE DONE ACCORDING TO SABS 1200G.
2. ALL CASTING PROCEDURES, CONSTRUCTION METHODS AND POSITIONS OF CONSTRUCTION JOINTS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF THE PROJECT.
3. THE CONTRACTOR MUST CO-ORDINATE ALL SERVICES DRAWINGS FOR DETAILS AND POSITIONS OF OPENINGS AND SLEEVES REQUIRED FOR STORMWATER, SEWERAGE, DRAINAGE, ELECTRICAL, MECHANICAL AND OTHER SERVICES. ONLY OPENINGS LARGER THAN 100 mm DIA OR 100 x 100 mm ARE SHOWN ON STRUCTURAL DRAWINGS.
4. THE CONTRACTOR MUST OBTAIN PERMISSION FROM THE ENGINEER BEFORE ANY OPENINGS OR SERVICES WHICH ARE NOT NOTICED ON THE DRAWINGS MAY BE INTRODUCED THROUGH ANY STRUCTURAL ELEMENT.
5. THE CONCRETE COVER TO REINFORCEMENT IS AS FOLLOWS (EXCEPT WHERE OTHERWISE NOTED ON BENDING SCHEDULES):
FOUNDATIONS = 50 mm
STAIRS IN BEAMS = 25 mm
STAIRS IN COLUMNS = 25 mm
SLABS = 25 mm
6. NO BRICK WALLS ARE TO BE BUILT ON FLOOR SLABS BEFORE THE SLABS HAVE REACHED THEIR TENSILE STRENGTH. PROFORMING UNDERBAY SLABS AND BEAMS SHALL BE COMPLETELY REMOVED BEFORE BRICKWORK IS BUILT. ALL BRICKS REQUIRED FOR BRICK WALLS ON A SPECIFIC SLAB PANEL SHOULD BE STACKED EVENLY ONTO THAT SPECIFIC SLAB PANEL BEFORE WALLS ARE BEING BUILT.
7. BEAM DIMENSIONS ARE GIVEN AS A x B WHERE:
A = DEPTH OF BEAM (SLAB INCLUDED)
B = WIDTH OF BEAM
8. THE STRENGTH OF CONCRETE COVER BLOCKS SHALL AT LEAST BE EQUAL TO THE CONCRETE STRENGTH OF THE STRUCTURAL ELEMENT IN WHICH THEY ARE USED. THE SIZE AND FIXING METHOD OF COVER BLOCKS SHALL BE DISCUSSED IN ADVANCE WITH THE ENGINEER.
9. CEMENT OR CLAY HOLLOW BLOCKS SHALL BE WETTED AS THE CASTING OF CONCRETE PROGRESSES.
10. A 30 mm x 30 mm CHAMFER SHALL BE PROVIDED ON ALL VISIBLE CORNERS OF OFF-SHUTTER CONCRETE IN COLLABORATION WITH THE ARCHITECT.
11. SEE ARCHITECT'S DRAWINGS FOR DETAIL AND POSITIONS OF V-JOINTS IN CONCRETE.
12. SEE ARCHITECT'S DRAWINGS FOR DETAIL AND POSITIONS OF R/WPS IN CONCRETE.
13. SEE ARCHITECT'S DRAWINGS FOR THE CASTING IN OF FININGS FOR BRICKWORK INTO CONCRETE.
14. THE FOLLOWING CARRIERS ARE TO BE PROVIDED UNLESS OTHERWISE SHOWN:
CANTILEVER BEAMS AND SLABS = SPAN / 150
OTHER BEAMS AND SLABS = SPAN / 140
15. REINFORCEMENT
16. ALL REINFORCEMENT SHALL COMPLY WITH THE REQUIREMENTS OF SABS 1200G.
17. THE CONTRACTOR SHALL GIVE AT LEAST 48 HOURS NOTICE TO THE ENGINEER FOR STEEL INSPECTIONS THAT ARE REQUIRED.
18. NO HEATING, FLAME CUTTING OR WELDING OF REINFORCEMENT SHALL BE ALLOWED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.
19. THE MINIMUM 28 DAY CUBE COMPRESSIVE STRENGTH OF CONCRETE SHALL BE:
a) 50mm BLINDING LAYER UNDER ALL R.C. BASES = 10 MPa
b) R.C. FOOTINGS = 20 MPa
c) R.C. GROUNDWORK BEAMS AND R.C. WALLS = 30 MPa
d) R.C. SLABS, R.C. BEAMS AND R.C. STAIRS = 30 MPa
e) R.C. COLUMNS = 40 MPa
20. MAXIMUM WATER CEMENT FOR ALL R.C. CONCRETE SHALL BE 0.53.
21. ALL CONCRETE TO BE SUPPLIED BY APPROVED READY-MIX COMPANY. CONTRACTOR TO FORWARD SUPPLIERS DETAILS AT COMMENCEMENT OF PROJECT.
22. ALL CONCRETE IS TO BE PLACED IN POSITION. PUMPING OF CONCRETE IS NOT ALLOWED.
23. SIX (6) NUMBER CONCRETE TEST CUBES - 150 x 150 x 150 - TO BE TAKEN FOR EVERY 30 CUBES OF CONCRETE FOR SPECIFIC REINFORCED CONCRETE ELEMENT PER DAY. TEST CUBES TO BE MADE ON SITE.
24. THREE (3) TESTED AT 7 DAYS AND THREE (3) TESTED AT 28 DAYS. THOSE CUBES TESTED AT OTHER TIME PERIODS WILL NOT BE CONSIDERED AND NO PAYMENT WILL BE MADE.
25. THE CONCRETE MIX DESIGN OF ALL CONCRETE FOR R.C. ELEMENTS TO BE SUPPLIED TO THE ENGINEER FOR APPROVAL AT LEAST 4 WEEKS BEFORE CONCRETE IS REQUIRED ON SITE.
26. THE BLINDING LAYER IS TO BE MECHANICALLY VIBRATED AND TROWELLED TO A LEVEL SURFACE.
27. FULL CONCRETE SURFACES TO BE EFFECTIVELY CURED FOR 7 DAYS BY COVERING WITH PLASTIC SHEETS.
28. WATER BASED CURING COMPOUNDS CAN BE USED ON THE EXTERNAL APRONS AND CHANNELS, AND SURFACES THAT DO NOT RECEIVE A SMOOVED FINISH.
29. FOUNDATIONS HAVE BEEN DESIGNED FOR AN ALLOWABLE SERVICE GROUND BEARING CAPACITY OF 100 kPa.
30. ALL FOUNDATION EXCAVATIONS ARE TO BE INSPECTED BY THE ENGINEER PRIOR TO CONCRETE PLACEMENT. THE ENGINEER TO BE PROVIDED WITH 2 DAYS NOTICE FOR INSPECTIONS.
31. SURFACE BEERS
ALL DAMP PROOF MEMBRANES TO HAVE MINIMUM 400mm LAP WITH JOINTS FULLY SEALED WITH 50mm WIDE TAPE.
SAW CUT JOINTS TO TAKE PLACE 18 HOURS AFTER CASTING TO AVOID CRACKING AND RAVELLING OF JOINT EDGES.

STRUCTURAL STEELWORK:

1. ALL STRUCTURAL STEELWORK MUST BE DONE ACCORDING TO SABS 1200G, ACCURACY - CLASS II.
2. ALL STRUCTURAL STEEL MUST BE GRADE 355 W ACCORDING TO SABS 1431, EXCEPT COLD FORMED LIPPED CHANNELS WHICH CAN BE OF COMMERCIAL GRADE WITH A MINIMUM YIELD STRESS OF 230 MPa AND A MINIMUM ULTIMATE TENSILE STRENGTH OF 430 MPa. TEST CERTIFICATES FOR ALL MATERIALS MUST BE SUBMITTED TO THE ENGINEER BEFORE COMMENCING FABRICATION.
3. WELD ELECTRODE CLASSIFICATION - GRADE E70XX, EXCEPT WHERE SPECIFIED OTHERWISE.
4. THE CONTRACTOR MUST SUBMIT TWO FULL PAPER COPIES OF THE WORKSHOP DETAILS AND DRAWINGS TO THE ENGINEER FOR APPROVAL. THE ENGINEER REQUIRES 10 WORKING DAYS FOR CHECKING OF DETAILS. FABRICATION OF STRUCTURAL STEELWORK TO COMMENCE ONLY ONCE THE ENGINEER HAS PROVIDED WRITTEN APPROVAL OF THE WORKSHOP DRAWINGS. ANY CHANGES TO ENGINEER DRAWINGS MUST BE INDICATED TO AND APPROVED BY THE ENGINEER.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE UNTIL THE STRUCTURE IS COMPLETED IN ITS ENTIRETY.
6. RELEVANT DIMENSIONS OF ALREADY BUILT CONSTRUCTION TO BE CHECKED DURING PREPARATION OF WORKSHOP DRAWINGS. DISCREPANCIES MUST BE REPORTED TO THE ENGINEER IMMEDIATELY.
7. ALL WELDED CONNECTIONS MUST BE WELDED ALL ROUND WITH A 2mm CONTINUOUS FILLET WELD EXCEPT WHERE SHOWN OTHERWISE. WELDS SHALL COMPLY WITH THE REQUIREMENTS OF SABS 405.
8. WELDING MUST BE ACCORDING TO SABS STANDARDS AND MUST BE APPROVED BY AN APPROVED AUTHORITY IN CONSULTATION WITH THE ENGINEERS.
9. ALL BOLTS TO BE GRADE 8.8 EXCEPT WHERE SHOWN OTHERWISE. HOLE SIZES TO BE 2mm LARGER THAN FASTENER SIZE UNLESS OTHERWISE NOTED.
10. ALL PURLINS, KNEE BRACING AND BRACING STEELWORK AS WELL AS FASTENERS COMPRISING BOLTS, NUTS AND WASHERS, UNLESS OTHERWISE NOTED, MUST BE HOT DIPPED GALVANISED IN ACCORDANCE WITH SABS ISO 1461. GALVANISERS MUST BE NOTIFIED THAT THE GALVANISED FINISH REQUIRED IS AN ARCHITECTURAL FINISH, AND THAT ALL ZINC LUMPS, ETC MUST BE REMOVED.
11. ANY SITE WELDING APPROVED BY THE ENGINEER SHALL BE PERFORMED BY A CERTIFIED WELDER IN ACCORDANCE WITH SABS 944 PART IV.
12. A DETAILED METHOD STATEMENT INCLUDING ON-SITE REPAIRS TO THE ZINC COATINGS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
13. ALL CUT STEELWORK IS TO BE CUT AT 90 DEGREES TO ALL EDGES UNLESS OTHERWISE SHOWN.
14. MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE ARCHITECTURAL DEPARTMENT'S GENERAL PREAMBLE TO ALL TRADES.
15. REFER TO CONTRACT SPECIFICATION FOR THE CORROSION PROTECTION TO THE HOT ROLLED STRUCTURAL STEELWORK.

STRUCTURAL TIMBER

1. PREFABRICATED TIMBER ROOF TRUSSES AND PURLINS ARE TO BE DESIGNED AND SUPPLIED BY AN APPROVED SUPPLIER.
2. TIMBER ROOF TRUSSES ARE TO BE DESIGNED IN ACCORDANCE WITH SANS 10163-1 (CODE OF PRACTICE FOR TIMBER STRUCTURES). LOADS ARE TO COMPLY WITH SANS 10160 (CODE OF PRACTICE FOR GENERAL PROCEDURES AND LOADING FOR THE DESIGN OF BUILDINGS).
3. WORKSHOP DETAIL DRAWINGS SHALL BE CHECKED BY UKUZA BEFORE COMMENCING WITH MANUFACTURING OF TIMBER ROOF TRUSSES.
4. ALL TRUSSES TO BE FABRICATED IN A FACTORY BY A TIMBER TRUSS FABRICATOR WHO HAS BEEN AWARDED A 'CERTIFICATE OF COMPETENCE' BY THE INSTITUTE FOR TIMBER CONSTRUCTION.
5. FABRICATOR TO SUPPLY GRADE AND TREATMENT OF TIMBER TO ENGINEER FOR COMMENT PRIOR TO COMMENCEMENT OF WORKS.
6. FABRICATOR TO SITE MEASURE AND CHECK ALL DIMENSIONS PRIOR TO COMMENCEMENT OF FABRICATION.
7. ALL NEW TIMBER IN THE WORKS TO BE SELECTED STRUCTURAL TIMBER FREE FROM WANE AND SHAKES WITH A STRENGTH CLASS NOT LESS THAN SA PINE GRADE 6.
8. ALL TIMBER TO BE CCA TREATED.
9. ALL TIMBER ELEMENTS INCLUDING ADDITIONAL WIND BRACING TO BE DESIGNED AND INSTALLED TO SPECIALIST SPECIFICATION.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
ALL RELEVANT DIMENSIONS AND LEVELS ARE TO BE CHECKED BEFORE ANY WORK IS COMMENCED AND ANY DISCREPANCIES NOTED TO BE IMMEDIATELY BROUGHT TO THE ARCHITECT'S ATTENTION.
ONLY FIGURED DIMENSIONS TO BE USED. SCALING OF DRAWINGS IS NOT ALLOWED.

Revisions	Rev no	Date	Description	Rev by
A				
B				
C				
D				



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NORTH WEST PROVINCE

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Discipline **CIVIL/STRUCTURAL**

Project Title **KGOSI SHOPE SECONDARY SCHOOL
SETLAGOLE, RATLOU DISTRICT
MUNICIPALITY, NORTH WEST
GPS COORDINATES :
LONGITUDE 25 45 36.25'
LATITUDE 26 19 45.46'S**

PROPOSED ADDITIONS AND ALTERATIONS

PROJECT STATUS		
Stage 1 - 3	Stage 4	Stage 5-6
Design	Tender	Construction

Drawing Description
NEW LIBRARY BLOCK
FOUNDATION, SURFACE BED AND ROOF LAYOUTS
AND LARGE SCALE CONSTRUCTION DETAILS

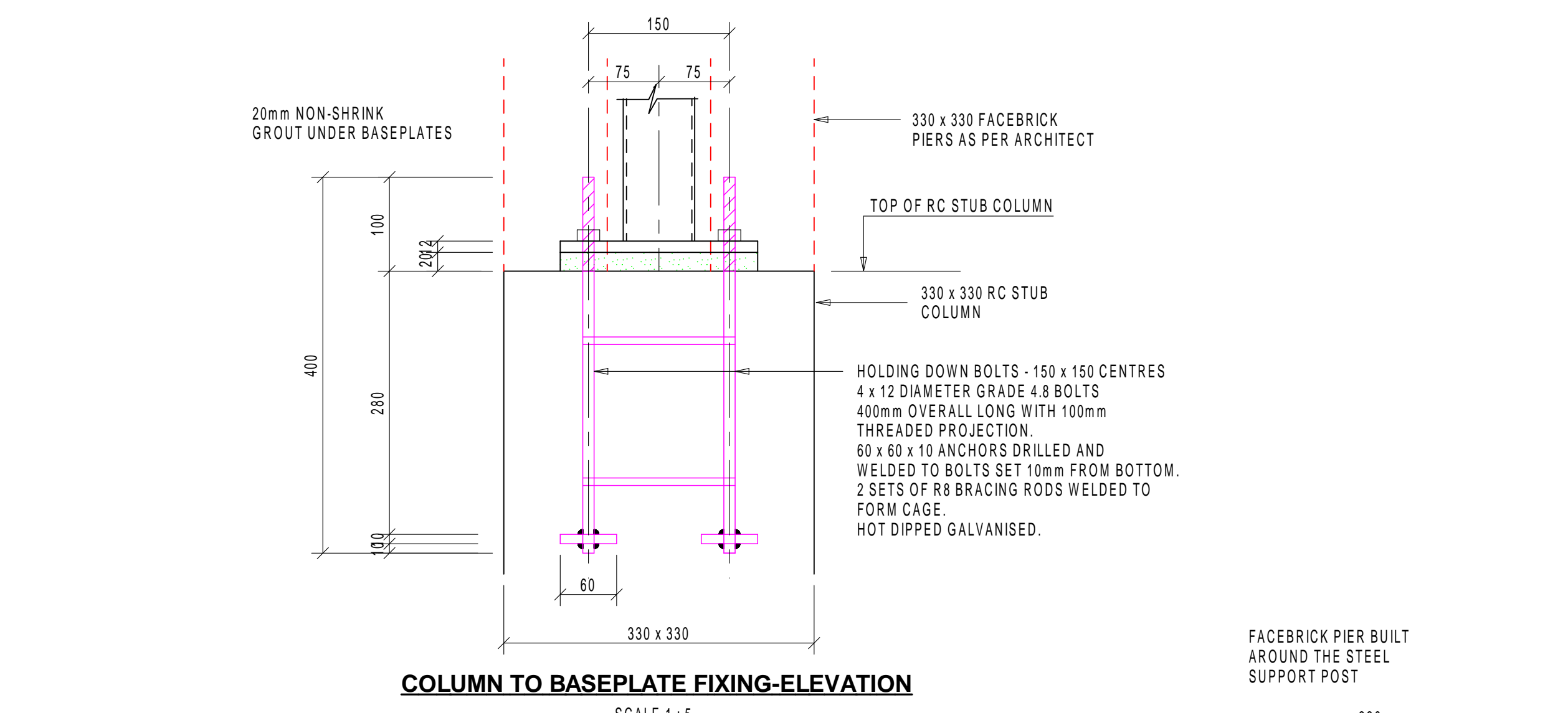
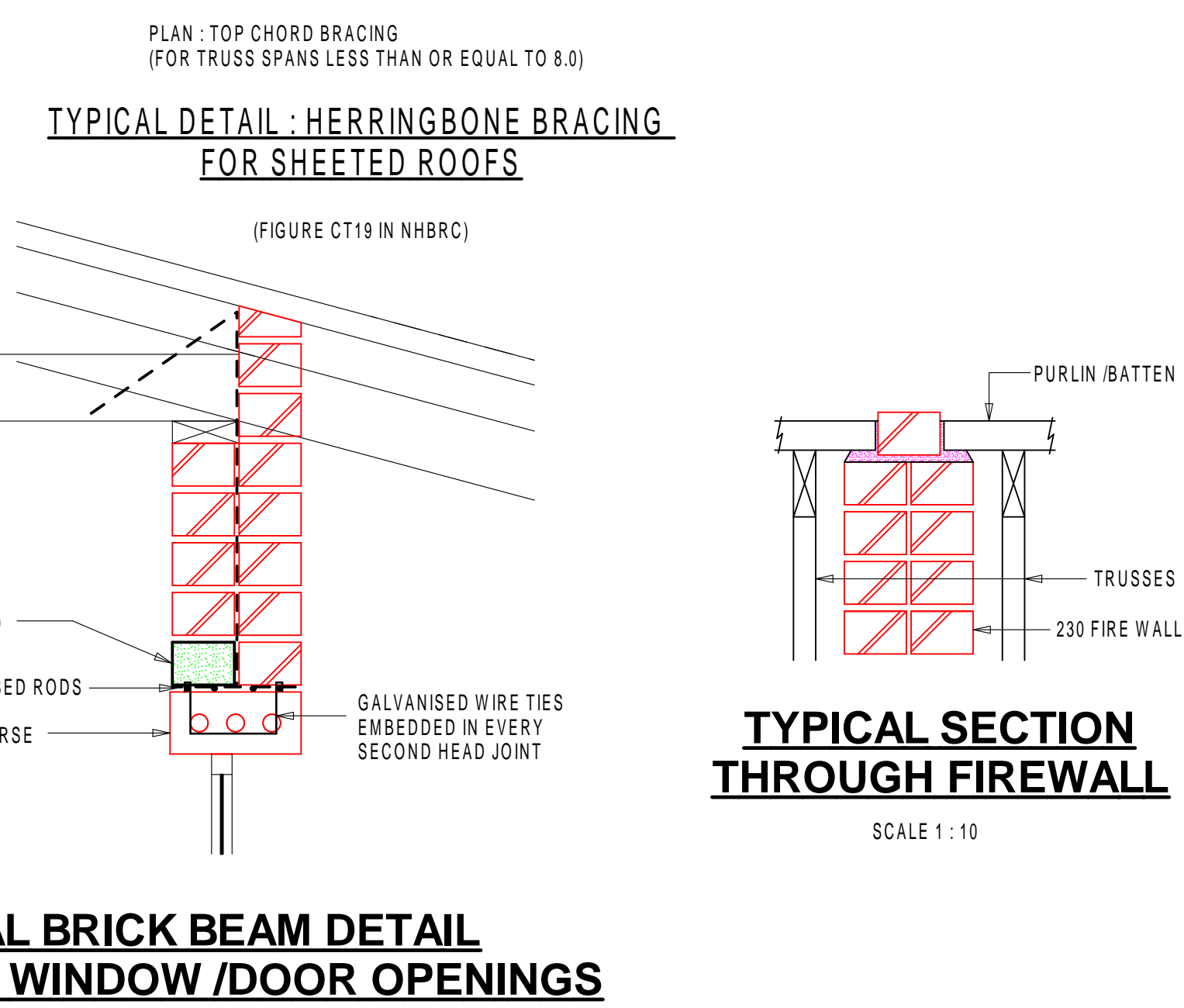
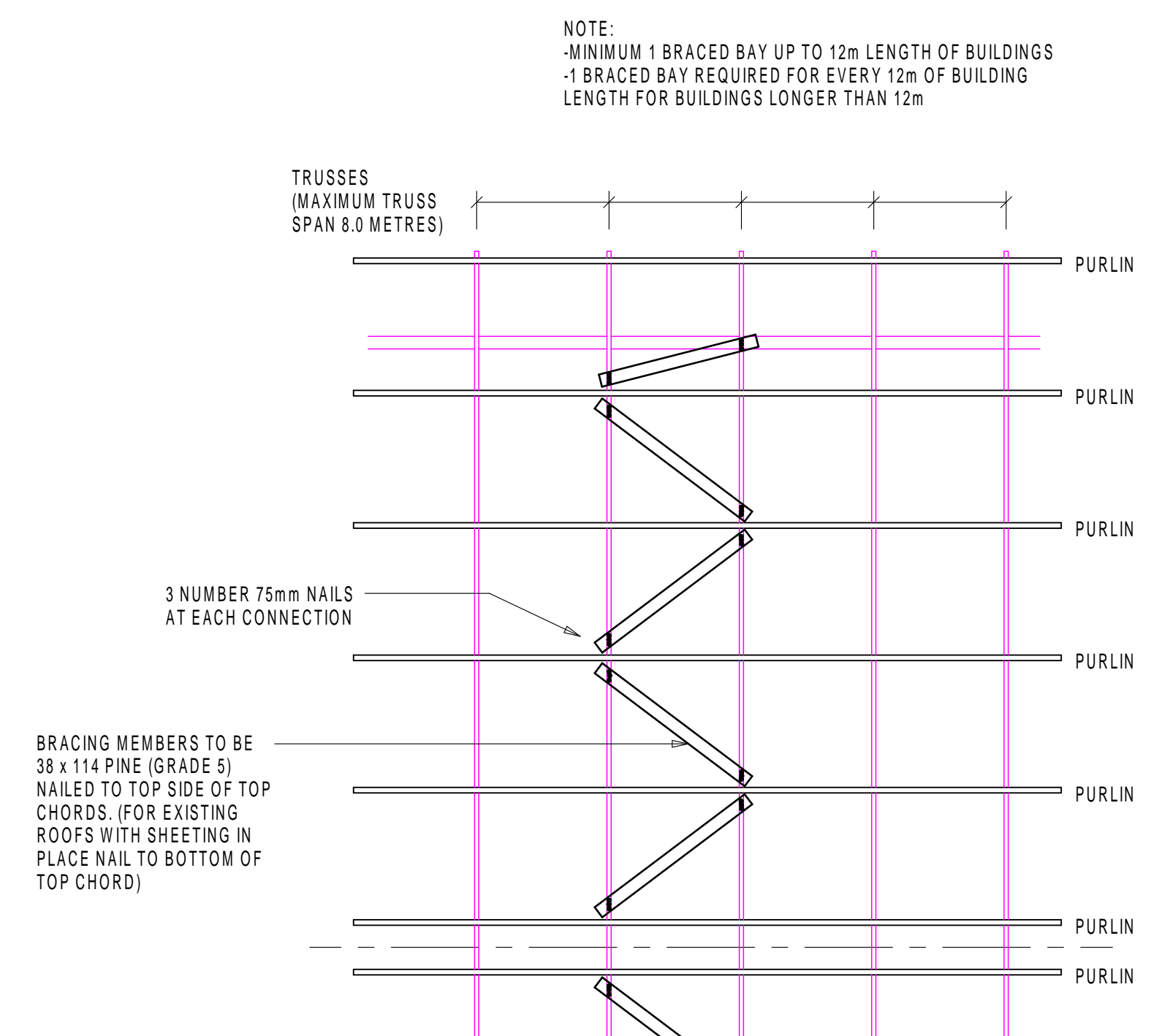
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REG. No.: PR.ENG. 20010315	REG. No.: PR.ENG. 20010315
SIGNATURE:	SIGNATURE:

Scale/s	Paper Size	DATE
1 : 100, 10, 5	A0	December 2021

EMIS NUMBER	Consultant Project Reference	Revision
600100694	D3884-21	0

Drawing Number	Revision
ST-L-SC 01	0

Stamped by Plans Approval Committee



- ROOF NOTES:
1. TIMBER ROOF TO BE DESIGNED, INSTALLED AND CERTIFIED BY SPECIALIST.
 2. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE STABILITY OF WALLS UNTIL THE ROOF HAS BEEN INSTALLED AND ADEQUATELY BRACED.
 3. DRAINAGE TO ARCHITECTS DETAILS.
 4. ALL HATCHED WALLS DENOTE 220/110 (AS PER ARCHITECTS LAYOUT) ARE LOAD-BEARING BRICKWORK - MINIMUM 14 MPa.

- DESIGN INTENT :
- ALL TIMBER TO BE MINIMUM GRADE 5 S.A. PINE, UNLESS NOTED OTHERWISE
 - 75 x 50 PURLINS (75 VERTICAL) TO BE AT MAXIMUM 1140mm CENTRES,
 - TIMBER ROOF TRUSSES AT MAXIMUM 1150 CENTRES,

TREATED TIMBER ROOF INCLUDING TRUSSES, BRACING, PURLINS, BATTERNS TO BE A DESIGN, SUPPLY, INSTALL AND CERTIFY CONTRACT BY A SPECIALIST CONTRACTOR, INCLUDING FINAL INSPECTION OF COMPLETED TIMBER ROOF BY CONTRACTORS PROFESSIONAL ENGINEER AND THEREAFTER PROVIDING THE TR1 & TR2 CERTIFICATES AND LOADING CERTIFICATES.

SHEETING, FLASHINGS, INSULATION, FASCIAS,
GUTTERS, DOWNPIPES, ETC TO ARCHITECTS
DETAILS AND SPECIFICATIONS.



Revisions			
Rev no	Date	Description	Rev by
A			
B			
C			
D			



education
Lefapha la Thuto
Onderwys Departement
Department of Education
NORTH WEST PROVINCE

Discipline	CIVIL/STRUCTURAL
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Project Title	KGOSI SHOPE SECONDARY SCHOOL SETLAGOLE, RATLOU DISTRICT MUNICIPALITY, NORTH WEST GPS COORDINATES : LONGITUDE 25 6 36.25", LATITUDE 26 19 45.46"S
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PROPOSED ADDITIONS AND ALTERATIONS
PROJECT STATUS

Stage 1 - 3	Stage 4	Stage 5-6
Concept	Tender	Construction

Drawing Description

NEW LIBRARY BLOCK
TYPICAL SECTION AND LARGE SCALE
CONSTRUCTION DETAILS

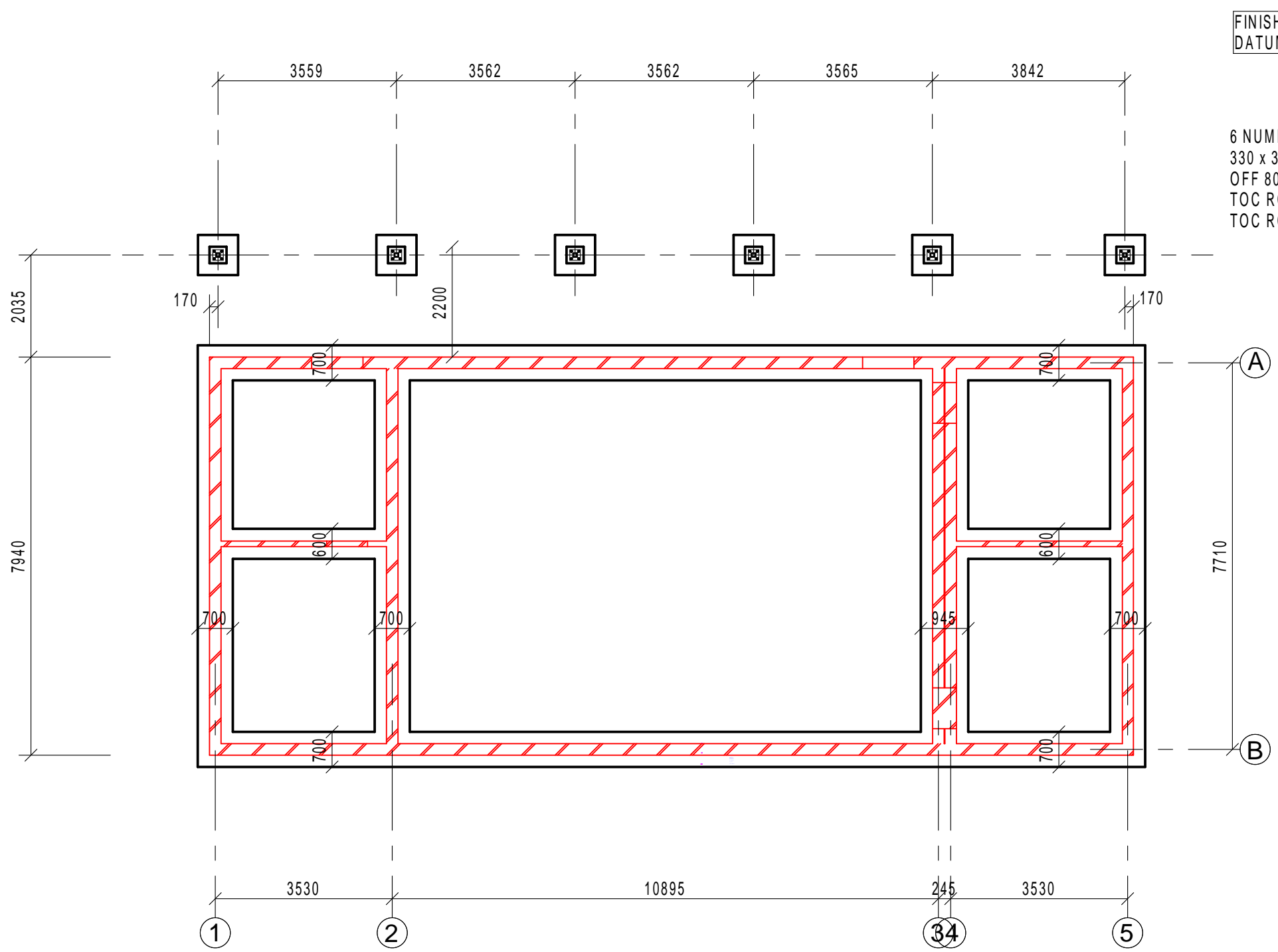
DRAWN:	CHECKED:
Name of Competent Person	Name of Competent Person

Name of Component Student S. Naidu	Name of Component Student S. Naidu
REG. No: PR.ENG. 20010315	REG. No: PR.ENG. 20010315
SIGNATURE:	SIGNATURE:

Scale/s	Paper Size	DATE
1 : 100, 10.5	A0	December 2021

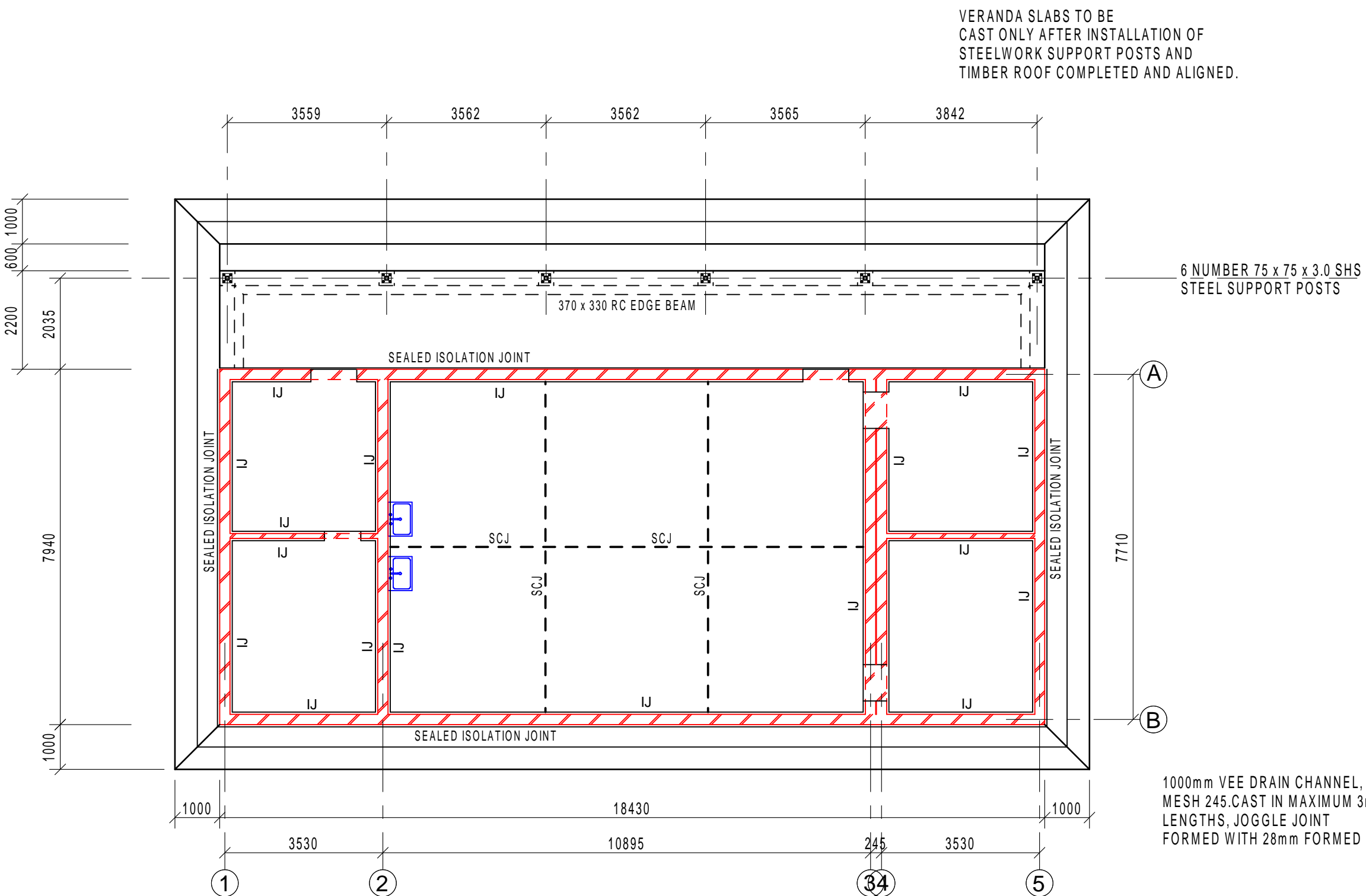
EMIS NUMBER 600100694	Consultant Project Reference D3884-21	Revision 0
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Drawing Number	Revision
ST-1-SC-02	0



FOUNDATION LAYOUT

SCALE 1 : 100



SURFACE BED LAYOUT

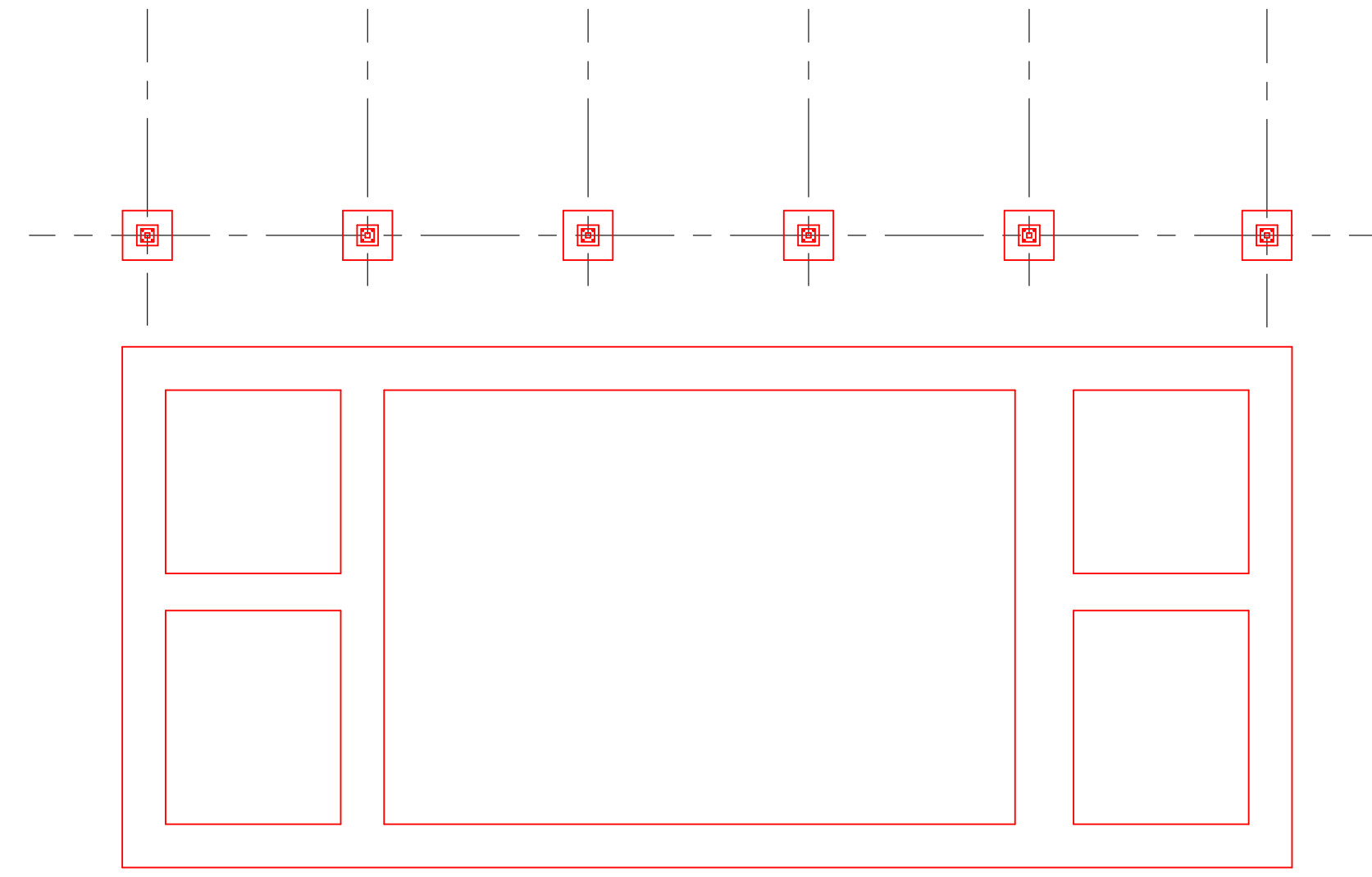
SCALE 1 : 100

ACCURATE SETTING OUT TO WALLS TO BE ACCORDING TO THE ARCHITECT'S DRAWINGS DIMENSIONS AND DETAILS.

TOP OF CONCRETE TO ALL RC FOOTINGS TO BE -0.540, UNLESS NOTED OTHERWISE. THERE IS NO STEP IN THE TOP OF THE FOOTINGS.

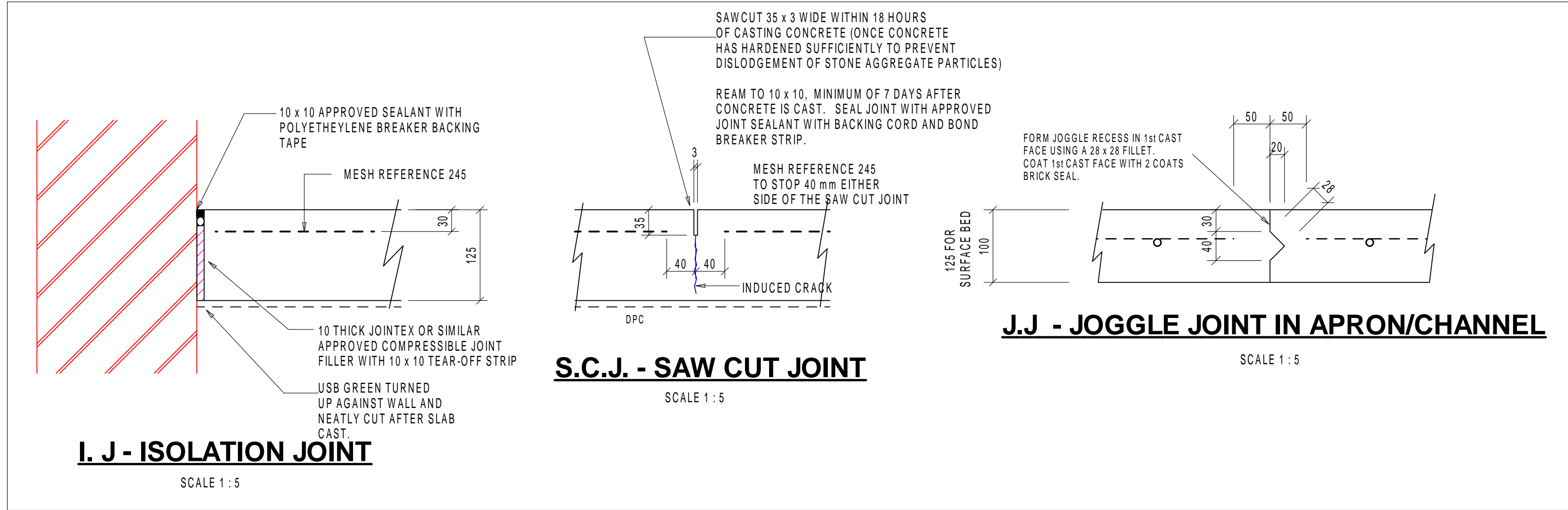
ALL 220/230 WALLS OFF 700 x 250 RC FOOTINGS & ALL 110/115 WALLS OFF 600 x 250 RC FOOTINGS, UNLESS SHOWN OTHERWISE.

475mm WALLS OF 75 x 250 RC FOOTING



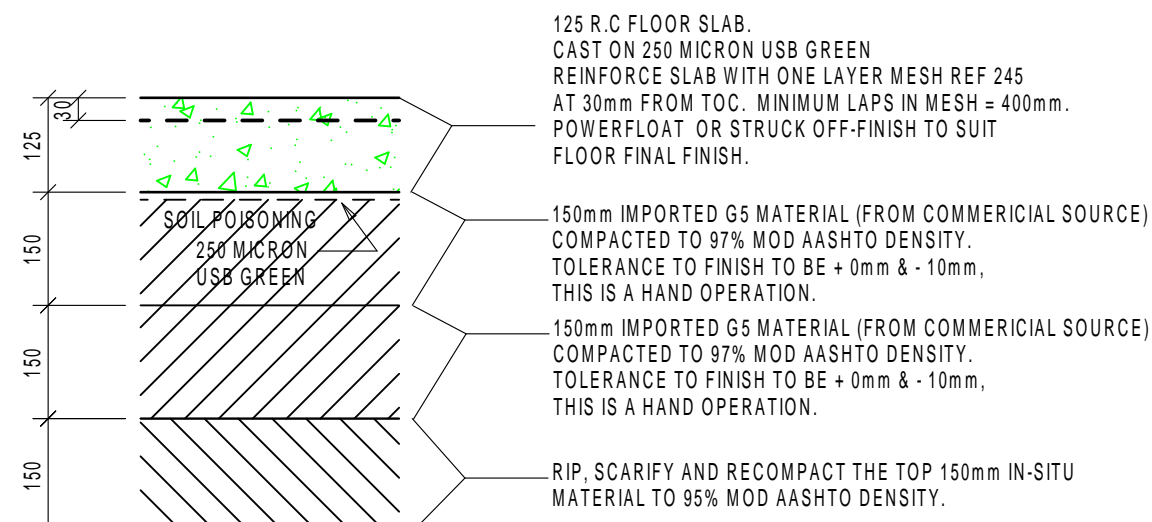
REINFORCEMENT LAYOUT

SCALE 1 : 100



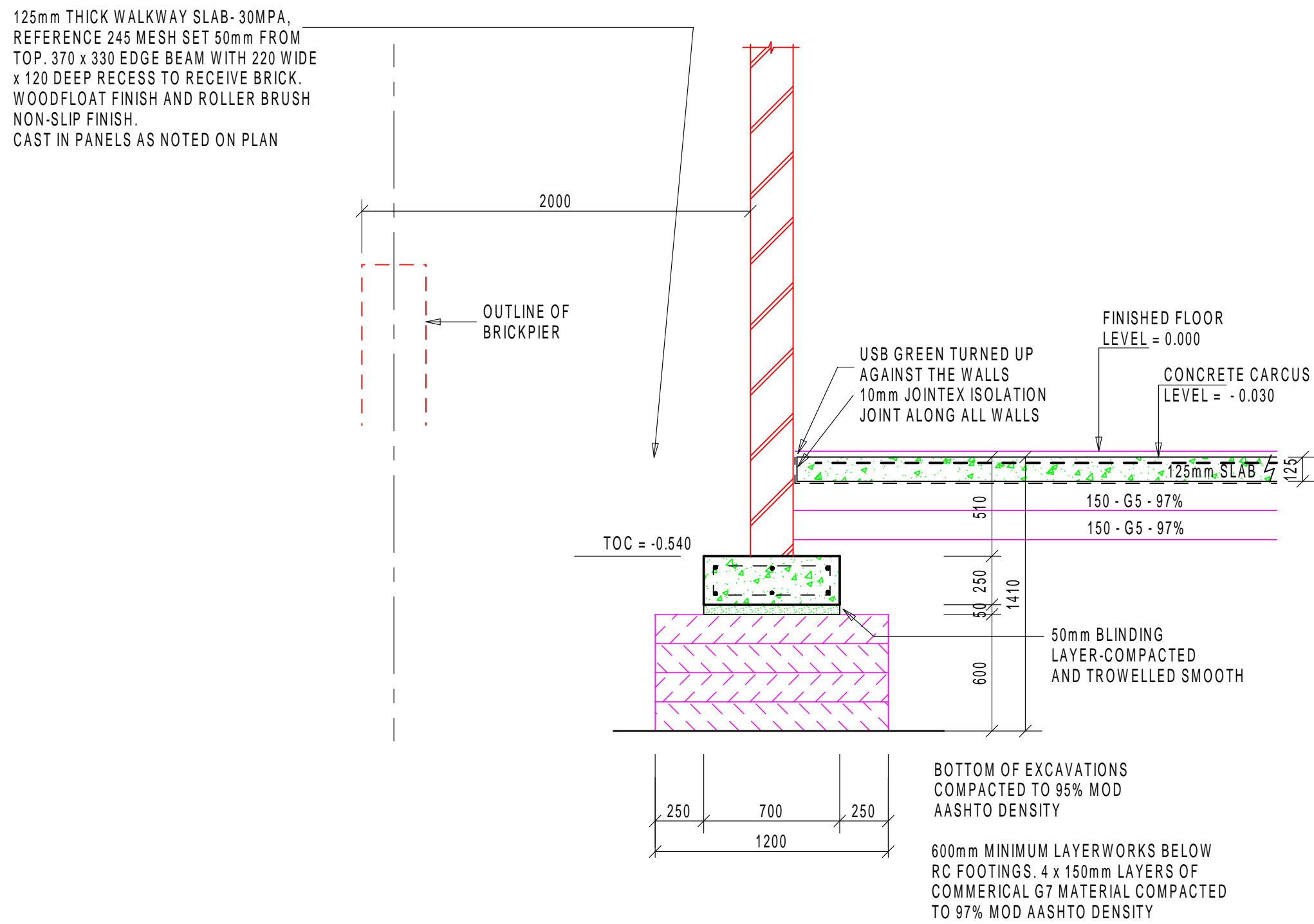
I. J - ISOLATION JOINT

SCALE 1 : 5



R.C. SURFACE BED SLAB LAYERWORKS

SCALE 1 : 10



GENERAL NOTES:

- CONCRETE
1. ALL CONCRETE WORK SHALL BE DONE ACCORDING TO SABS 1200G.
2. ALL CASTING PROCEDURES, CONSTRUCTION METHODS AND POSITIONS OF CONSTRUCTION JOINTS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF THE PROJECT.
3. THE CONTRACTOR MUST CO-ORDINATE ALL SERVICES DRAWINGS FOR DETAILS AND POSITIONS OF OPENINGS AND SLEEVES REQUIRED FOR STORMWATER, SEWERAGE, DRAINAGE, ELECTRICAL, MECHANICAL AND OTHER SERVICES. ONLY OPENINGS LARGER THAN 100 mm DIA OR 100 x 100 mm ARE SHOWN ON STRUCTURAL DRAWINGS.
4. THE CONTRACTOR MUST OBTAIN PERMISSION FROM THE ENGINEER BEFORE ANY OPENINGS OR SERVICES WHICH ARE NOT NOTICED ON THE DRAWINGS MAY BE INTRODUCED THROUGH ANY STRUCTURAL ELEMENT.
5. THE CONCRETE COVER TO REINFORCEMENT IS AS FOLLOWS (EXCEPT WHERE OTHERWISE NOTED ON BENDING SCHEDULES):
FOUNDATIONS + 50 mm
STAIRUPS IN BEAMS + 25 mm
STAIRUPS IN COLUMNS + 35 mm
SLABS + 25 mm
6. NO BRICK WALLS ARE TO BE BUILT ON FLOOR SLABS BEFORE THE SLABS HAVE REACHED THEIR TENSILE STRENGTH. PROPPING UNDERMATH SLABS AND BEAMS SHALL BE COMPLETELY REMOVED BEFORE BRICKWORK IS BUILT. ALL BRICKS REQUIRED FOR BRICK WALLS ON A SPECIFIC SLAB PANEL SHOULD BE STACKED EVENLY ONTO THAT SPECIFIC SLAB PANEL BEFORE WALLS ARE BEING BUILT.
7. BEAM DIMENSIONS ARE GIVEN AS A x B WHERE:
A = DEPTH OF BEAM (SLAB INCLUDED)
B = WIDTH OF BEAM
8. THE STRENGTH OF CONCRETE COVER BLOCKS SHALL AT LEAST BE EQUAL TO THE CONCRETE STRENGTH OF THE STRUCTURAL ELEMENT IN WHICH THEY ARE USED. THE SIZE AND FINISH METHOD OF COVER BLOCKS SHALL BE DISCUSSED IN ADVANCE WITH THE ENGINEER.
9. CEMENT OR CLAY HOLLOW BLOCKS SHALL BE WETTED AS THE CASTING OF CONCRETE PROGRESSES.
10. A 30 mm x 30 mm CHAMFER SHALL BE PROVIDED ON ALL VISIBLE CORNERS OF OFF-SHUTTER CONCRETE IN COLLABORATION WITH THE ARCHITECT.
11. SEE ARCHITECT'S DRAWINGS FOR DETAIL AND POSITIONS OF V-JOINTS AND DRIP JOINTS IN CONCRETE.
12. SEE ARCHITECT'S DRAWINGS FOR DETAIL AND POSITIONS OF R/WPS IN CONCRETE.
13. SEE ARCHITECT'S DRAWINGS FOR THE CASTING IN OF FININGS FOR BRICKWORK INTO CONCRETE.
14. THE FOLLOWING CAMBERS ARE TO BE PROVIDED UNLESS OTHERWISE SHOWN:
CANTILEVER BEAMS AND SLABS + SPAN / 150
OTHER BEAMS AND SLABS + SPAN / 400
15. REINFORCEMENT
16. ALL REINFORCEMENT SHALL COMPLY WITH THE REQUIREMENTS OF SABS 1200G.
17. THE CONTRACTOR SHALL GIVE AT LEAST 48 HOURS NOTICE TO THE ENGINEER FOR STEEL INSPECTIONS THAT ARE REQUIRED.
18. NO HEATING, FLAME CUTTING OR WELDING OF REINFORCEMENT SHALL BE ALLOWED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.
19. THE MINIMUM 28 DAY CUBE COMPRESSIVE STRENGTH OF CONCRETE SHALL BE:
6.50 MPa SLINDING LAYER UNDER ALL R.C. BASES + 10 MPa
R.C. FOOTINGS + 20 MPa
R.C. GROUNDINGS BEAMS AND R.C. WALLS + 30 MPa
R.C. SLABS, R.C. BEAMS AND R.C. STAIRS + 30 MPa
R.C. COLUMNS + 40 MPa
20. MAXIMUM WATER CEMENT FOR ALL R.C. CONCRETE SHALL BE 0.53.
21. ALL CONCRETE TO BE SUPPLIED BY APPROVED READY-MIX COMPANY. CONTRACTOR TO FORWARD SUPPLIERS DETAILS AT COMMENCEMENT OF PROJECT.
22. ALL CONCRETE IS TO BE PLACED IN POSITION. PUMPING OF CONCRETE IS NOT ALLOWED.
23. SIX (6) NUMBER CONCRETE TEST CUBES - 150 x 150 x 150 - TO BE TAKEN FOR EVERY 30 CUBES OF CONCRETE FOR SPECIFIC REINFORCED CONCRETE ELEMENT PER DAY. TEST CUBES TO BE MADE ON SITE.
24. THREE (3) TESTED AT 7 DAYS AND THREE (3) TESTED AT 28 DAYS. THOSE CUBES TESTED AT OTHER TIME PERIODS WILL NOT BE CONSIDERED AND NO PAYMENT WILL BE MADE.
25. THE CONCRETE MIX DESIGN OF ALL CONCRETE FOR R.C. ELEMENTS TO BE SUPPLIED TO THE ENGINEER FOR APPROVAL AT LEAST 4 WEEKS BEFORE CONCRETE IS REQUIRED ON SITE.
26. THE BLINDING LAYER IS TO BE MECHANICALLY VIBRATED AND TROWELLED TO A LEVEL SURFACE.
27. FULL CONCRETE SURFACES TO BE EFFECTIVELY CURED FOR 7 DAYS BY COVERING WITH PLASTIC SHEETS.
28. WATER BASED CURING COMPOUNDS CAN BE USED ON THE EXTERNAL APPROXNS AND CHANNELS, AND SURFACES THAT DO NOT RECEIVE A SMOOED FINISH.
29. FOUNDATIONS HAVE BEEN DESIGNED FOR AN ALLOWABLE SERVICE GROUND BEARING CAPACITY OF 100 kPa.
30. ALL FOUNDATION EXCAVATIONS ARE TO BE INSPECTED BY THE ENGINEER PRIOR TO CONCRETE PLACEMENT. THE ENGINEER TO BE PROVIDED WITH 2 DAYS NOTICE FOR INSPECTIONS.
31. SURFACE BEERS
32. ALL DAMP PROOF MEMBRANES TO HAVE MINIMUM 400mm LAP WITH JOINTS FULLY SEALED WITH 25mm WIDE TAPE.
33. SAWCUT JOINTS TO TAKE PLACE 18 HOURS AFTER CASTING TO AVOID CRACKING AND RAVELLING OF JOINT EDGES.

STRUCTURAL STEELWORK:

- ALL STRUCTURAL STEELWORK MUST BE DONE ACCORDING TO SABS 1200G. ACCURACY - CLASS B.
- ALL STRUCTURAL STEEL MUST BE GRADE 355 W ACCORDING TO SABS 1431. EXCEPT COLD FORMED LIPPED CHANNELS WHICH CAN BE OF COMMERCIAL GRADE WITH A MINIMUM YIELD STRESS OF 230 MPa AND A MINIMUM ULTIMATE TENSILE STRENGTH OF 430 MPa. TEST CERTIFICATES FOR ALL MATERIALS MUST BE SUBMITTED TO THE ENGINEER BEFORE COMMENCING FABRICATION.
- WELD ELECTRODE CLASSIFICATION - GRADE E70XX. EXCEPT WHERE SPECIFIED OTHERWISE.
- THE CONTRACTOR MUST SUBMIT TWO FULL PAPER COPIES OF THE WORKSHOP DETAILS AND DRAWINGS TO THE ENGINEER FOR APPROVAL. THE ENGINEER REQUIRES 10 WORKING DAYS FOR CHECKING OF DETAILS. FABRICATION OF STRUCTURAL STEELWORK TO COMMENCE ONLY ONCE THE ENGINEER HAS PROVIDED WRITTEN APPROVAL OF THE WORKSHOP DRAWINGS. ANY CHANGES TO ENGINEER DRAWINGS MUST BE INDICATED TO AND APPROVED BY THE ENGINEER.
- THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE UNTIL THE STRUCTURE IS COMPLETED IN ITS ENTIRETY.
- RELEVANT DIMENSIONS OF ALREADY BUILT CONSTRUCTION TO BE CHECKED DURING PREPARATION OF WORKSHOP DRAWINGS. DISCREPANCIES MUST BE REPORTED TO THE ENGINEER IMMEDIATELY.
- ALL WELDED CONNECTIONS MUST BE WELDED ALL ROUND WITH A 2mm CONTINUOUS FILLET WELD EXCEPT WHERE SHOWN OTHERWISE. WELDS SHALL COMPLY WITH THE REQUIREMENTS OF SABS 405.
- WELDING MUST BE ACCORDING TO SABS STANDARDS AND MUST BE APPROVED BY AN APPROVED AUTHORITY IN CONSULTATION WITH THE ENGINEER.
- ALL BOLTS TO BE GRADE 8.8 EXCEPT WHERE SHOWN OTHERWISE. HOLE SIZES TO BE 2mm LARGER THAN FASTENER SIZE UNLESS OTHERWISE NOTED.
- ALL PURLINS, KNEE BRACING AND BRACING STEELWORK AS WELL AS FASTENERS COMPRISING BOLTS, NUTS AND WASHERS, UNLESS OTHERWISE NOTED, MUST BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH SABS ISO 1461. GALVANIZERS MUST BE NOTIFIED THAT THE GALVANIZED FINISH REQUIRED IS AN ARCHITECTURAL FINISH, AND THAT ALL ZINC COATINGS MUST BE REMOVED.
- NOTE THAT THE PURLINS ARE TO BE HOT DIPPED GALVANIZED. IF PURLINS ARE MADE FROM PREGALV. MATERIAL THEN THESE ARE TO BE HOT DIPPED GALVANIZED AS WELL.
- ANY SITE WELDING APPROVED BY THE ENGINEER SHALL BE PERFORMED BY A CERTIFIED WELDER IN ACCORDANCE WITH SABS 944 PART V.
- A DETAILED METHOD STATEMENT INCLUDING ON-SITE REPAIRS TO THE ZINC COATINGS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
- ALL CUT STEELWORK IS TO BE CUT AT 90 DEGREES TO ALL EDGES UNLESS OTHERWISE SHOWN.
- MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE ARCHITECTURAL DEPARTMENT'S GENERAL PREAMBLE TO ALL TRADES.
- REFER TO CONTRACT SPECIFICATION FOR THE CORROSION PROTECTION TO THE HOT ROLLED STRUCTURAL STEELWORK.

STRUCTURAL TIMBER

- PREFABRICATED TIMBER ROOF TRUSSES AND PURLINS ARE TO BE DESIGNED AND SUPPLIED BY AN APPROVED SUPPLIER.
- TIMBER ROOF TRUSSES ARE TO BE DESIGNED IN ACCORDANCE WITH SANS 10163-1 (CODE OF PRACTICE FOR TIMBER STRUCTURES). LOADS ARE TO COMPLY WITH SABS 10163-1 (CODE OF PRACTICE FOR GENERAL PROCEDURES AND LOADING FOR THE DESIGN OF BUILDINGS).
- WORKSHOP DETAIL DRAWINGS SHALL BE CHECKED BY UKUZA BEFORE COMMENCING WITH MANUFACTURING OF TIMBER ROOF TRUSSES.
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ONLY FIGURED DIMENSIONS TO BE USED. SCALING OF DRAWINGS IS NOT ALLOWED.

Revisions			
Rev no	Date	Description	Rev by
A			
B			
C			
D			



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Discipline

CIVIL/STRUCTURAL

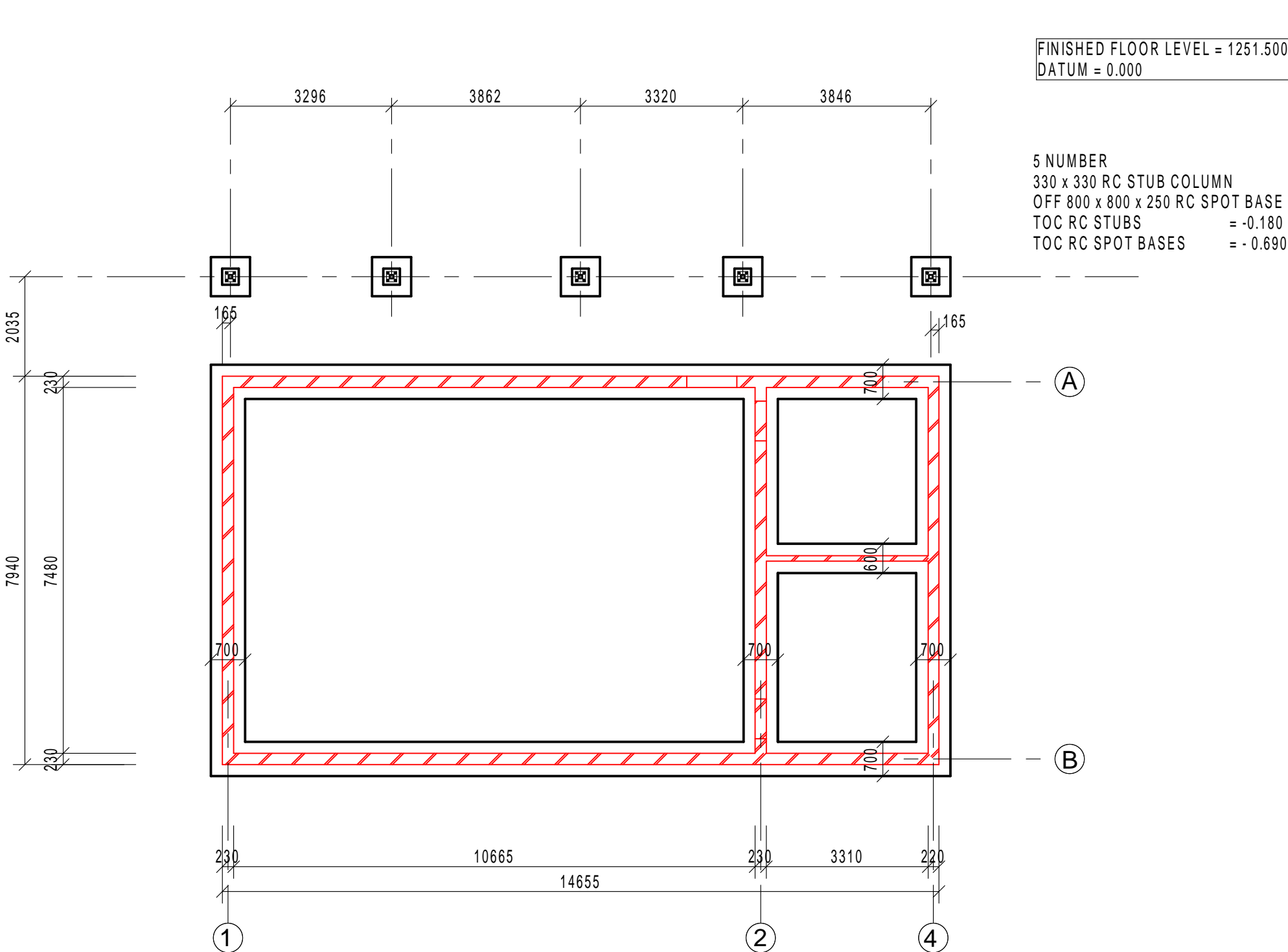
Project Title

KGOSI SHOPE SECONDARY SCHOOL
SETLAGOLE, RATLOU DISTRICT
MUNICIPALITY, NORTH WEST
GPS COORDINATES :
LONGITUDE 25 56.25',
LATITUDE 26 19 45.46'S

PROPOSED ADDITIONS AND ALTERATIONS		
PROJECT STATUS		
Stage 1 - 3	Stage 4	Stage 5-6
Design	Tender	Construction

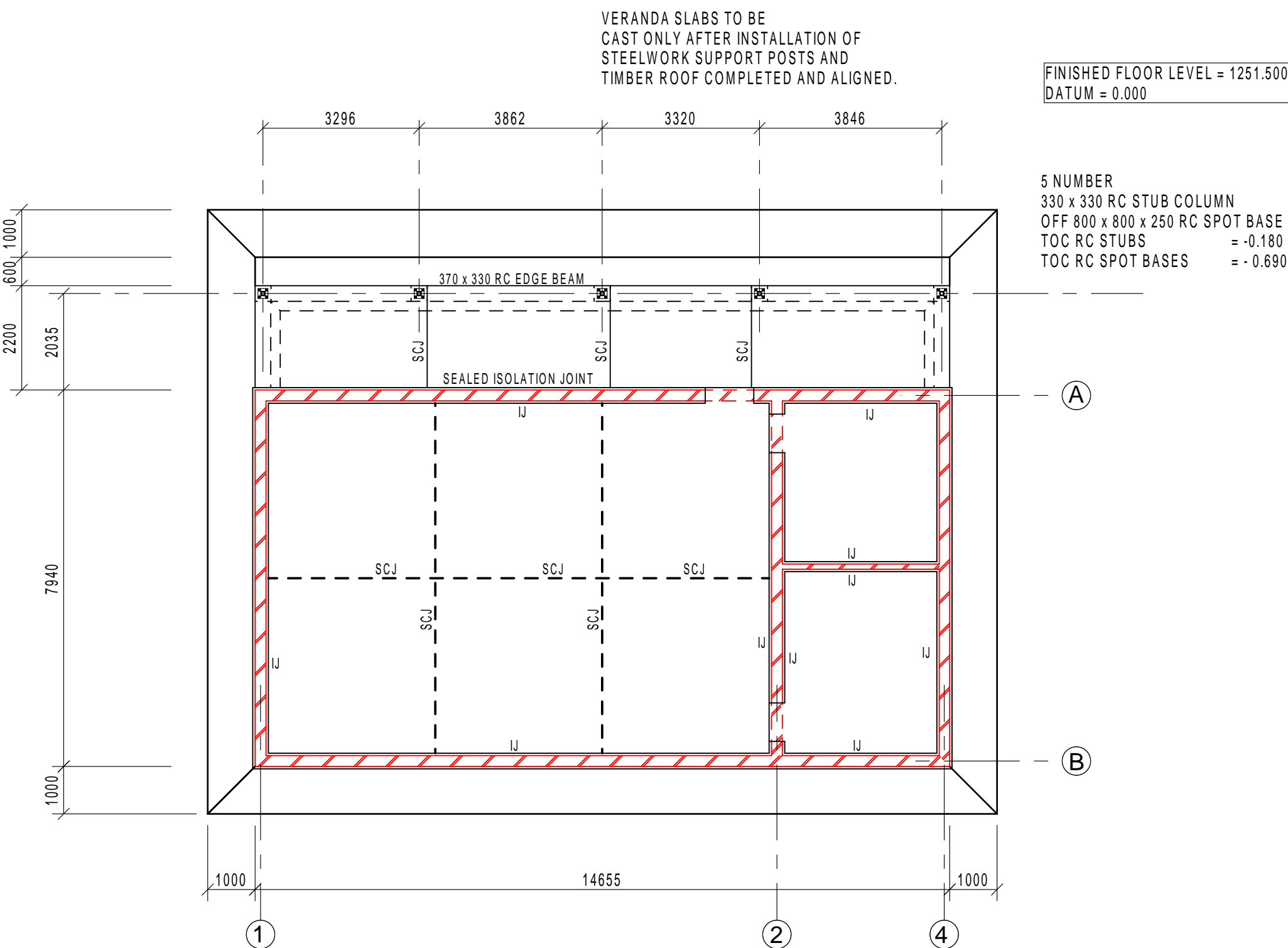
NEW MULTIPURPOSE & HOD BLOCK
FOUNDATION, SURFACE BED AND RC ROOF LAYOUTS
AND LARGE SCALE CONSTRUCTION DETAILS

DRAWN:		CHECKED:	
Name of Competent Person		Name of Competent Person	
S. Naidu		S. Naidu	
REG. No: PR.ENG. 20010315		REG. No: PR.ENG. 20010315	
SIGNATURE:		SIGNATURE:	
Scale/s		Paper Size	DATE
1 : 100, 10, 5		A0	December 2021
EMIS NUMBER		Consultant Project Reference	Revision
000100694		D3884-21	0
Drawing Number		Revision	
ST-M-SC 01		0	
Stamped by Plans Approval Committee			



FOUNDATION LAYOUT

SCALE 1 : 100



SURFACE BED LAYOUT

SCALE 1 : 100

ACCURATE SETTING OUT TO WALLS TO BE ACCORDING TO THE ARCHITECT'S DRAWINGS DIMENSIONS AND DETAILS.

TOP OF CONCRETE TO ALL RC FOOTINGS TO BE -0.540, UNLESS NOTED OTHERWISE. THERE IS NO STEP IN THE TOP OF THE FOOTINGS.

ALL 220/230 WALLS OFF 700 x 250 RC FOOTINGS & ALL 110/115 WALLS OFF 600 x 250 RC FOOTINGS, UNLESS SHOWN OTHERWISE.

FINISHED FLOOR LEVEL = 1251.500
DATUM = 0.000

5 NUMBER
330 x 330 RC STUB COLUMN
OFF 600 x 300 x 250 RC SPOT BASE
TOC RC STUBS
TOC RC SPOT BASES
= -0.180
= -0.690

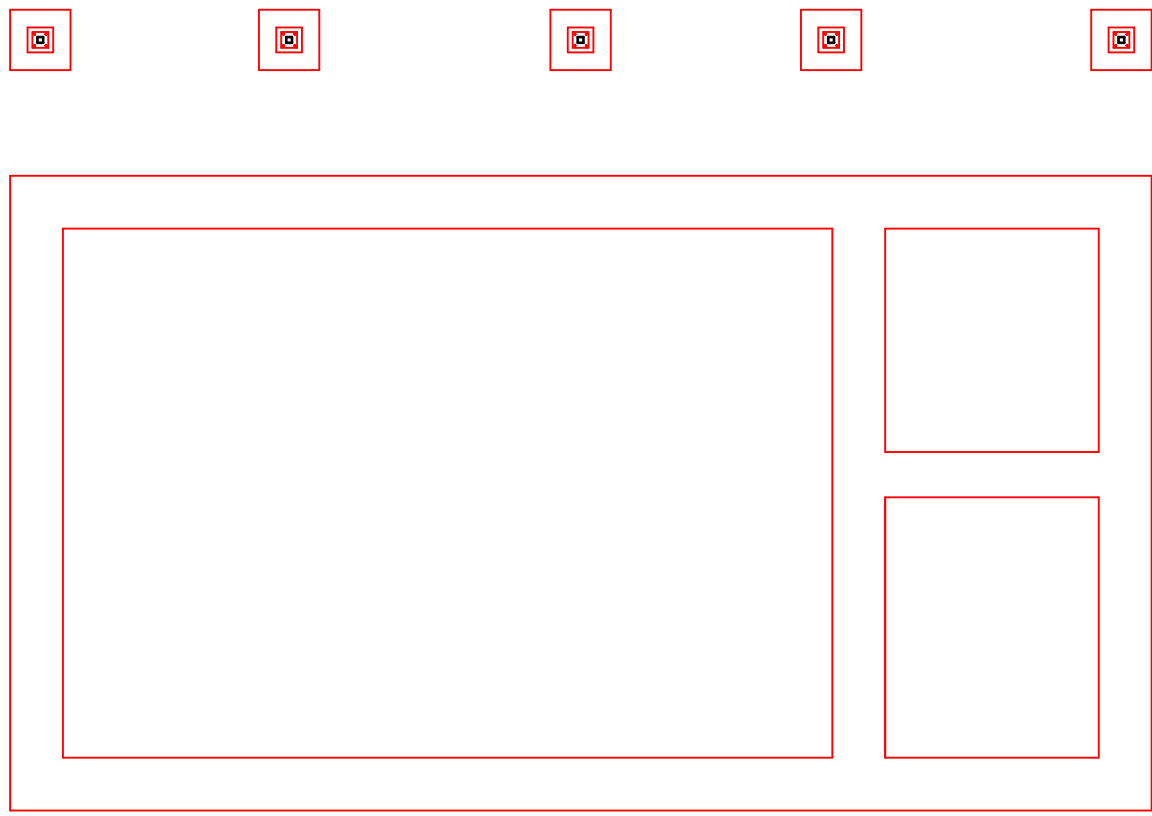
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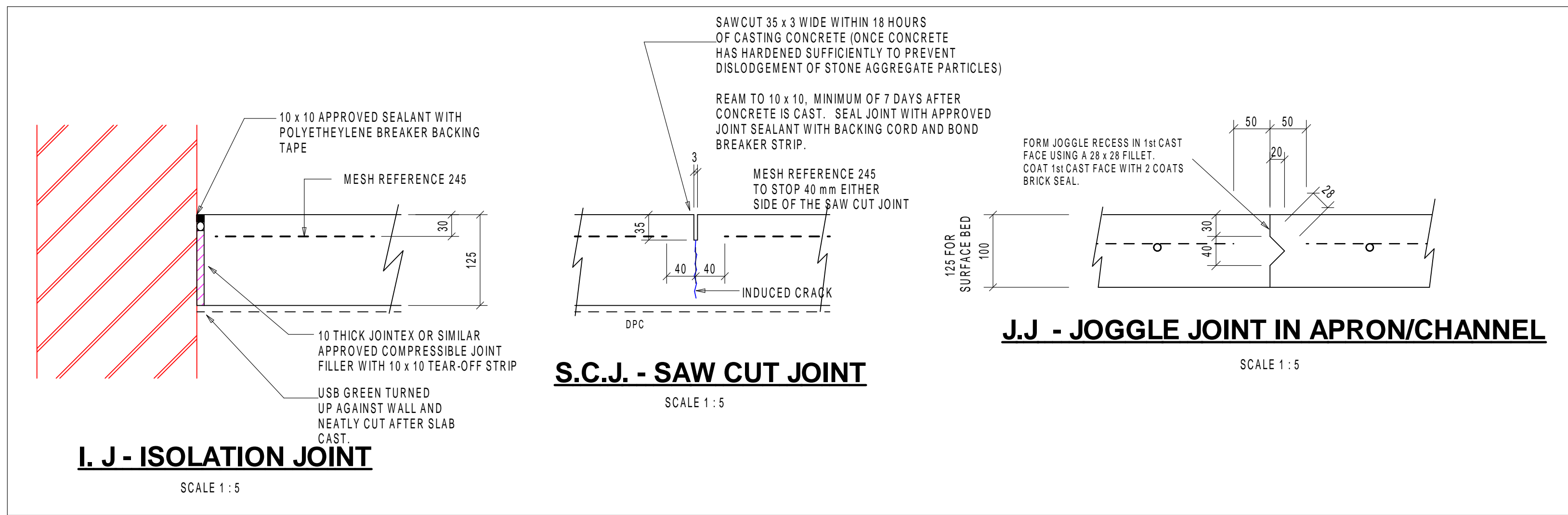
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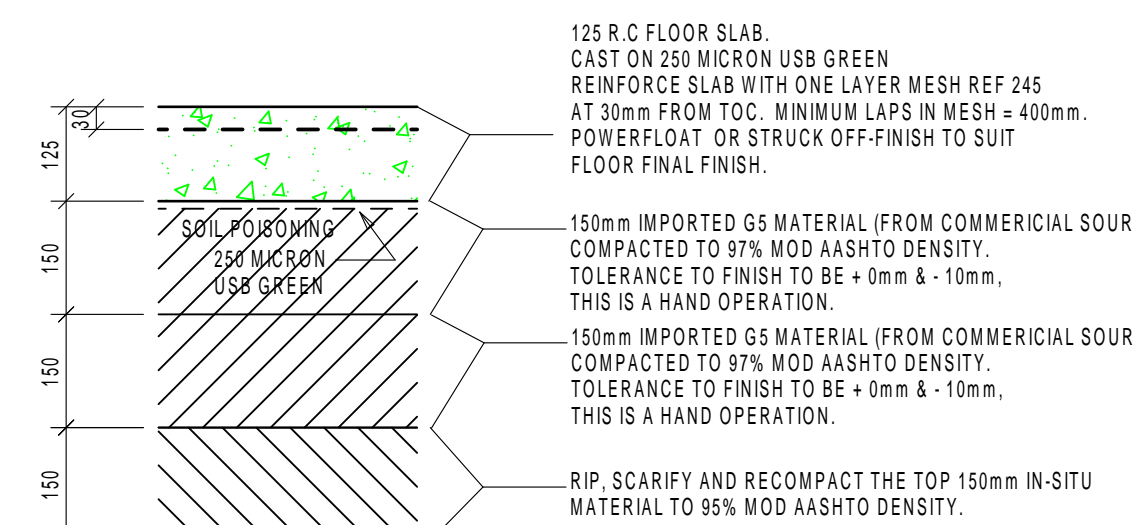
REINFORCEMENT LAYOUT

SCALE 1 : 100



I. J - ISOLATION JOINT

SCALE 1 : 5



R.C. SURFACE BED SLAB LAYERWORKS

SCALE 1 : 10

GENERAL NOTES:

1. ALL CONCRETE WORK SHALL BE DONE ACCORDING TO SABS 1200G.
2. ALL CASTING PROCEDURES, CONSTRUCTION METHODS AND POSITIONS OF CONSTRUCTION JOINTS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF THE PROJECT.
3. THE CONTRACTOR MUST CO-ORDINATE ALL SERVICES DRAWINGS FOR DETAILS AND POSITIONS OF OPENINGS AND SLEEVES REQUIRED FOR STORMWATER, SEWERAGE, DRAINAGE, ELECTRICAL, MECHANICAL AND OTHER SERVICES. ONLY OPENINGS LARGER THAN 100 mm DIA OR 100 x 100 mm ARE SHOWN ON STRUCTURAL DRAWINGS.
4. THE CONTRACTOR MUST OBTAIN PERMISSION FROM THE ENGINEER BEFORE ANY OPENINGS OR SERVICES WHICH ARE NOT INDICATED ON THE DRAWINGS MAY BE INTRODUCED THROUGH ANY STRUCTURAL ELEMENT.
5. THE CONCRETE COVER TO REINFORCEMENT IS AS FOLLOWS (EXCEPT WHERE OTHERWISE NOTED ON BENDING SCHEDULES):
FOUNDATIONS = 50 mm
STAIRS IN BEAMS = 25 mm
STAIRS IN COLUMNS = 35 mm
SLABS = 25 mm
6. NO BRICK WALLS ARE TO BE BUILT ON FLOOR SLABS BEFORE THE SLABS HAVE REACHED THEIR TENSILE STRENGTH. PROTECTING UNDERSTAIR SLABS AND BEAMS SHALL BE COMPLETELY REMOVED BEFORE BRICKWORK IS BUILT. ALL BRICKS REQUIRED FOR BRICK WALLS ON A SPECIFIC SLAB PANEL SHOULD BE STACKED EVENLY ONTO THAT SPECIFIC SLAB PANEL BEFORE WALLS ARE BEING BUILT.
7. BEAM DIMENSIONS ARE GIVEN AS A x B WHERE:
A = DEPTH OF BEAM (SLAB INCLUDED)
B = WIDTH OF BEAM
8. THE STRENGTH OF CONCRETE COVER BLOCKS SHALL AT LEAST BE EQUAL TO THE CONCRETE STRENGTH OF THE STRUCTURAL ELEMENT IN WHICH THEY ARE USED. THE SIZE AND FIXING METHOD OF COVER BLOCKS SHALL BE DISCUSSED IN ADVANCE WITH THE ENGINEER.
9. CEMENT OR CLAY HOLLOW BLOCKS SHALL BE WETTED AS THE CASTING OF CONCRETE PROGRESSES.
10. A 30 mm x 30 mm CHAMFER SHALL BE PROVIDED ON ALL VISIBLE CORNERS OF OFF-SHUTTER CONCRETE IN COLLABORATION WITH THE ARCHITECT.
11. SEE ARCHITECT'S DRAWINGS FOR DETAIL AND POSITIONS OF V-JOINTS AND DRIP JOINTS IN CONCRETE.
12. SEE ARCHITECT'S DRAWINGS FOR DETAIL AND POSITIONS OF R/W'S IN CONCRETE.
13. SEE ARCHITECT'S DRAWINGS FOR THE CASTING IN OF FININGS FOR BRICKWORK INTO CONCRETE.
14. THE FOLLOWING CAMBERS ARE TO BE PROVIDED UNLESS OTHERWISE SHOWN:
CANTILEVER BEAMS AND SLABS = SPAN / 150
OTHER BEAMS AND SLABS = SPAN / 400
15. REINFORCEMENT:
a. ALL REINFORCEMENT SHALL COMPLY WITH THE REQUIREMENTS OF SABS 1200G.
b. THE CONTRACTOR SHALL GIVE AT LEAST 48 HOURS NOTICE TO THE ENGINEER FOR STEEL INSPECTIONS THAT ARE REQUIRED.
c. NO HEATING, FLAME CUTTING OR WELDING OF REINFORCEMENT SHALL BE ALLOWED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.
16. THE MINIMUM 28 DAY CUBE COMPRESSIVE STRENGTH OF CONCRETE SHALL BE:
a. 50 MPa BLINDING LAYER UNDER ALL R.C. BASES = 10 MPa
b. R.C. FOOTINGS = 30 MPa
c. R.C. GROUNDWORK BEAMS AND R.C. WALLS = 30 MPa
d. R.C. SLABS, R.C. BEAMS AND R.C. STAIRS = 30 MPa
e. R.C. COLUMNS = 40 MPa
- MAXIMUM WATER CEMENT FOR ALL R.C. CONCRETE SHALL BE 0.53.
- ALL CONCRETE TO BE SUPPLIED BY APPROVED READY-MIX COMPANY. CONTRACTOR TO FORWARD SUPPLIERS DETAILS AT COMMENCEMENT OF PROJECT.
17. ALL CONCRETE IS TO BE PLACED IN POSITION. PUMPING OF CONCRETE IS NOT ALLOWED.
18. SIX (6) NUMBER CONCRETE TEST CUBES - 150 x 150 x 150 - TO BE TAKEN FOR EVERY 30 CUBES OF CONCRETE FOR SPECIFIC REINFORCED CONCRETE ELEMENT PER DAY. TEST CUBES TO BE MADE ON SITE.
THREE (3) TESTED AT 7 DAYS AND THREE (3) TESTED AT 28 DAYS.
THOSE CUBES TESTED AT OTHER TIME PERIODS WILL NOT BE CONSIDERED AND NO PAYMENT WILL BE MADE.
19. THE CONCRETE MIX DESIGN OF ALL CONCRETE FOR R.C. ELEMENTS TO BE SUPPLIED TO THE ENGINEER FOR APPROVAL AT LEAST 4 WEEKS BEFORE CONCRETE IS REQUIRED ON SITE.
20. THE BLINDING LAYER IS TO BE MECHANICALLY VIBRATED AND TROWELED TO A LEVEL SURFACE.
21. FULL CONCRETE SURFACES TO BE EFFECTIVELY CURED FOR 7 DAYS BY COVERING WITH PLASTIC SHEETS.
WATER BASED CURING COMPOUNDS CAN BE USED ON THE EXTERNAL APRONS AND CHANNELS, AND SURFACES THAT DO NOT RECEIVE A SMOOVED FINISH.
22. FOUNDATIONS HAVE BEEN DESIGNED FOR AN ALLOWABLE SERVICE GROUND BEARING CAPACITY OF 100 kPa.
23. ALL FOUNDATION EXCAVATIONS ARE TO BE INSPECTED BY THE ENGINEER PRIOR TO CONCRETE PLACEMENT.
THE ENGINEER TO BE PROVIDED WITH 2 DAYS NOTICE FOR INSPECTIONS.
24. SURFACE BEERS:
ALL DAMP PROOF MEMBRANES TO HAVE MINIMUM 400mm LAP WITH JOINTS FULLY SEALED WITH 25mm WIDE TAPE.
SAWCUT JOINTS TO TAKE PLACE 18 HOURS AFTER CASTING TO AVOID CRACKING AND RAVELLING OF JOINT EDGES.

STRUCTURAL STEELWORK:

1. ALL STRUCTURAL STEELWORK MUST BE DONE ACCORDING TO SABS 1200G. ACCURACY - CLASS B.
2. ALL STRUCTURAL STEEL MUST BE GRADE 355 W ACCORDING TO SABS 1431. EXCEPT COLD FORMED LIPPED CHANNELS WHICH CAN BE OF COMMERCIAL GRADE WITH A MINIMUM YIELD STRESS OF 230 MPa AND A MINIMUM ULTIMATE TENSILE STRENGTH OF 430 MPa. TEST CERTIFICATES FOR ALL MATERIALS MUST BE SUBMITTED TO THE ENGINEER BEFORE COMMENCING FABRICATION.
3. WELD ELECTRODE CLASSIFICATION - GRADE E70XX, EXCEPT WHERE SPECIFIED OTHERWISE.
4. THE CONTRACTOR MUST SUBMIT TWO FULL PAPER COPIES OF THE WORKSHOP DETAILS AND DRAWINGS TO THE ENGINEER FOR APPROVAL. THE ENGINEER REQUIRES 10 WORKING DAYS FOR CHECKING OF DETAILS. FABRICATION OF STRUCTURAL STEELWORK TO COMMENCE ONLY ONCE THE ENGINEER HAS PROVIDED WRITTEN APPROVAL OF THE WORKSHOP DRAWINGS. ANY CHANGES TO ENGINEER DRAWINGS MUST BE INDICATED TO AND APPROVED BY THE ENGINEER.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE UNTIL THE STRUCTURE IS COMPLETED IN ITS ENTIRETY.
6. RELEVANT DIMENSIONS OF ALREADY BUILT CONSTRUCTION TO BE CHECKED DURING PREPARATION OF WORKSHOP DRAWINGS. DISCREPANCIES MUST BE REPORTED TO THE ENGINEER IMMEDIATELY.
7. ALL WELDED CONNECTIONS MUST BE WELDED ALL ROUND WITH A 2mm CONTINUOUS FILLET WELD EXCEPT WHERE SHOWN OTHERWISE. WELDS SHALL COMPLY WITH THE REQUIREMENTS OF SABS 405.
8. WELDING MUST BE ACCORDING TO SABS STANDARDS AND MUST BE APPROVED BY AN APPROVED AUTHORITY IN CONSULTATION WITH THE ENGINEER.
9. ALL BOLTS TO BE GRADE 8.8 EXCEPT WHERE SHOWN OTHERWISE. HOLE SIZES TO BE 2mm LARGER THAN FASTENER SIZE UNLESS OTHERWISE NOTED.
10. ALL PURLINS, KNEE BRACING AND BRACING STEELWORK AS WELL AS FASTENERS COMPRISING BOLTS, NUTS AND WASHERS, UNLESS OTHERWISE NOTED, MUST BE HOT DIPPED GALVANISED IN ACCORDANCE WITH SABS ISO 1461. GALVANISERS MUST BE NOTIFIED THAT THE GALVANISED FINISH REQUIRED IS AN ARCHITECTURAL FINISH, AND THAT ALL ZINC LUMPS, ETC MUST BE REMOVED.
NOTE THAT THE PURLINS ARE TO BE HOT DIPPED GALVANISED.
IF PURLINS ARE MADE FROM PRECUT, MATERIAL THEN THESE ARE TO BE HOT DIPPED GALVANISED AS WELL.
11. ANY SITE WELDING APPROVED BY THE ENGINEER SHALL BE PERFORMED BY A CERTIFIED WELDER IN ACCORDANCE WITH SABS 944 PART 1.
A DETAILED METHOD STATEMENT INCLUDING ON-SITE REPAIRS TO THE ZINC COATINGS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
12. ALL CUT STEELWORK IS TO BE CUT AT 90 DEGREES TO ALL EDGES UNLESS OTHERWISE SHOWN.
13. MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE TO THE ARCHITECTURAL DEPARTMENT'S GENERAL PREAMBLE TO ALL TRADES.
14. REFER TO CONTRACT SPECIFICATION FOR THE CORROSION PROTECTION TO THE HOT ROLLED STRUCTURAL STEELWORK.

STRUCTURAL TIMBER

1. PREFABRICATED TIMBER ROOF TRUSSES AND PURLINS ARE TO BE DESIGNED AND SUPPLIED BY AN APPROVED SUPPLIER.
2. TIMBER ROOF TRUSSES ARE TO BE DESIGNED IN ACCORDANCE WITH SANS 10163-1 (CODE OF PRACTICE FOR TIMBER STRUCTURES). LOADS ARE TO COMPLY WITH SANS 10160 (CODE OF PRACTICE FOR GENERAL PROCEDURES AND LOADING FOR THE DESIGN OF BUILDINGS).
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Revisions	Rev no	Date	Description	Rev by
A				
B				
C				
D				

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DBSA
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NORTH WEST PROVINCE

CIVIL/STRUCTURAL

Project Title
KGOSI SHOPE SECONDARY SCHOOL
SETLAGOLE, RATLOU DISTRICT
MUNICIPALITY, NORTH WEST
GPS COORDINATES :
LONGITUDE 25 45 36.25'
LATITUDE 26 19 45.46'S
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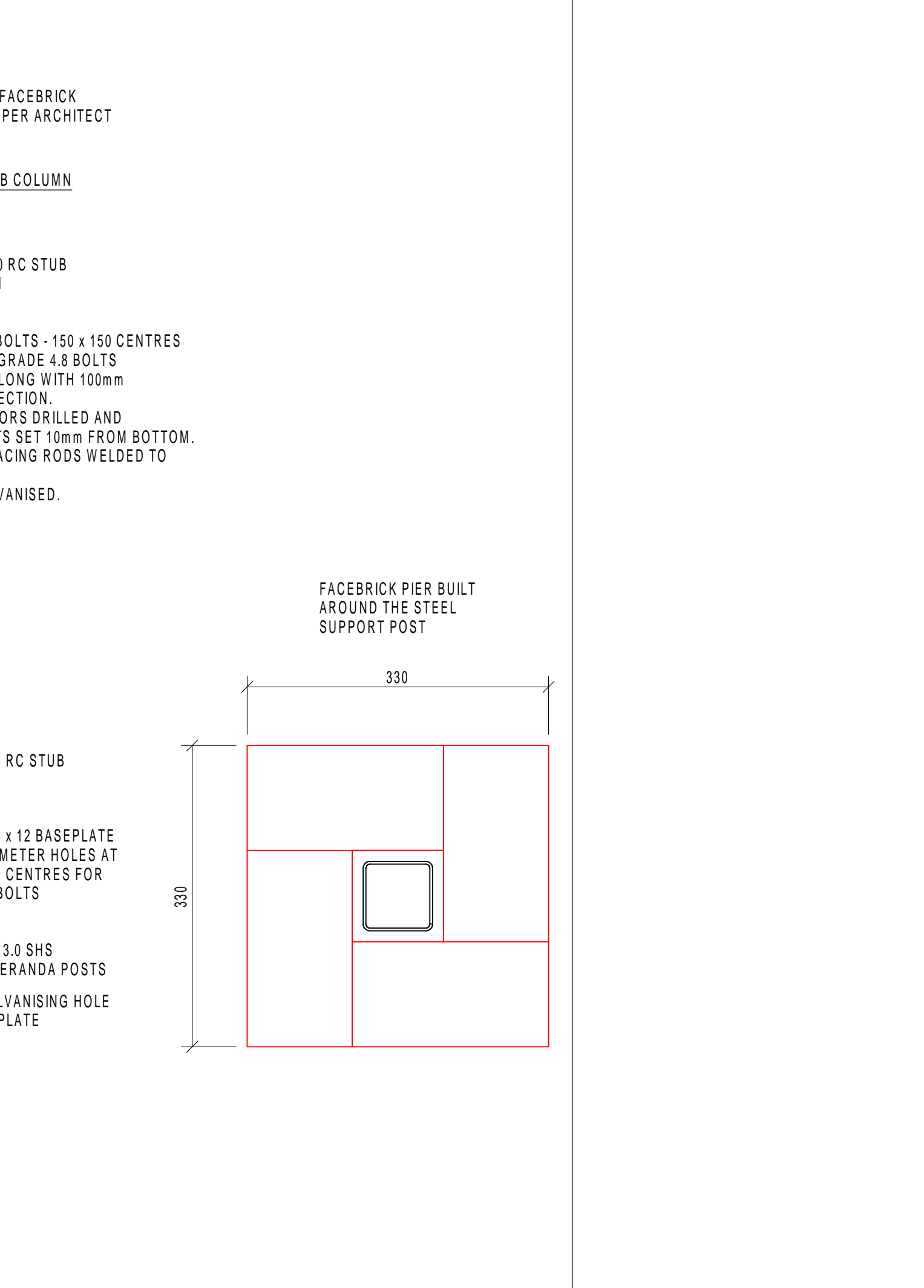
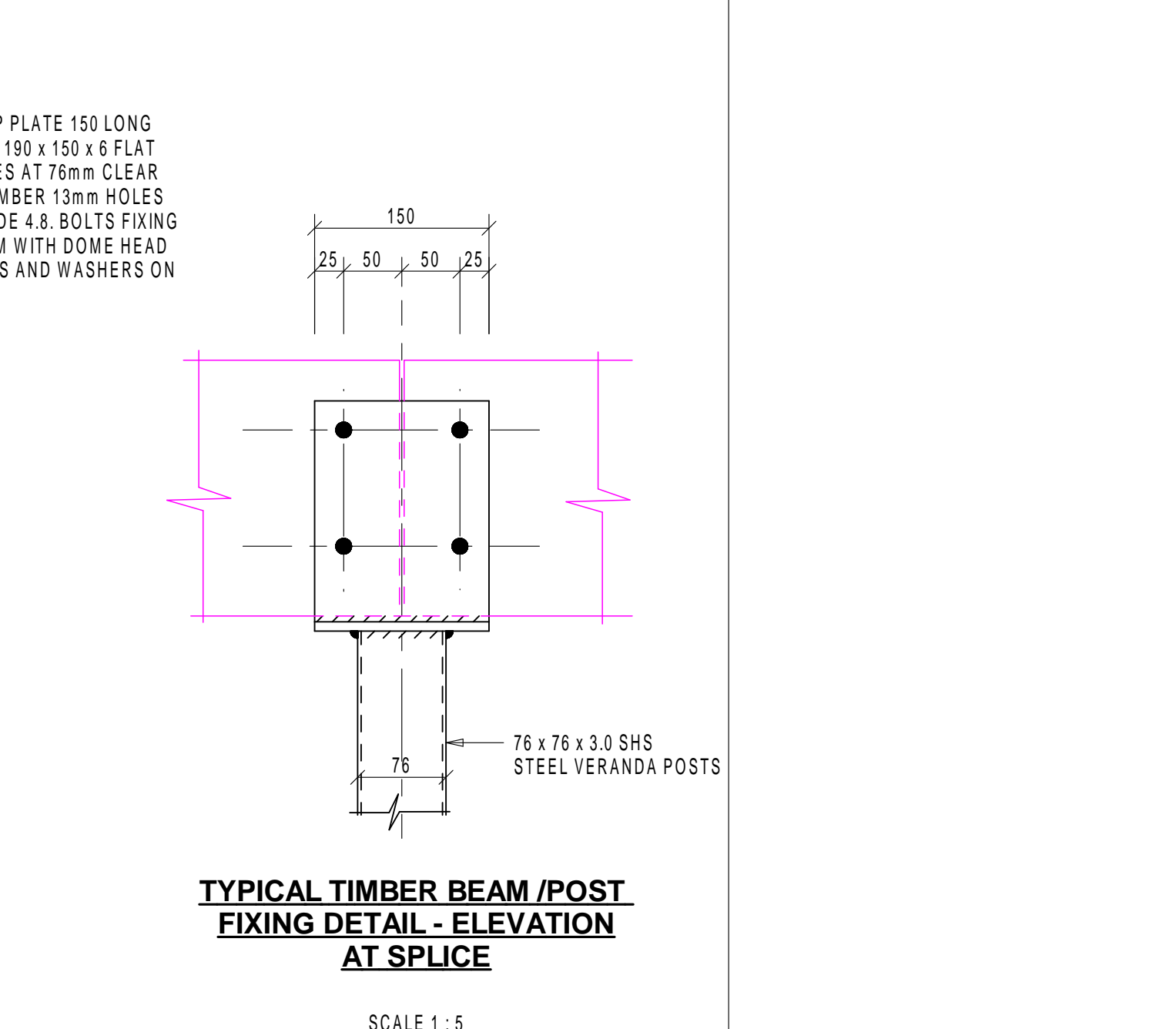
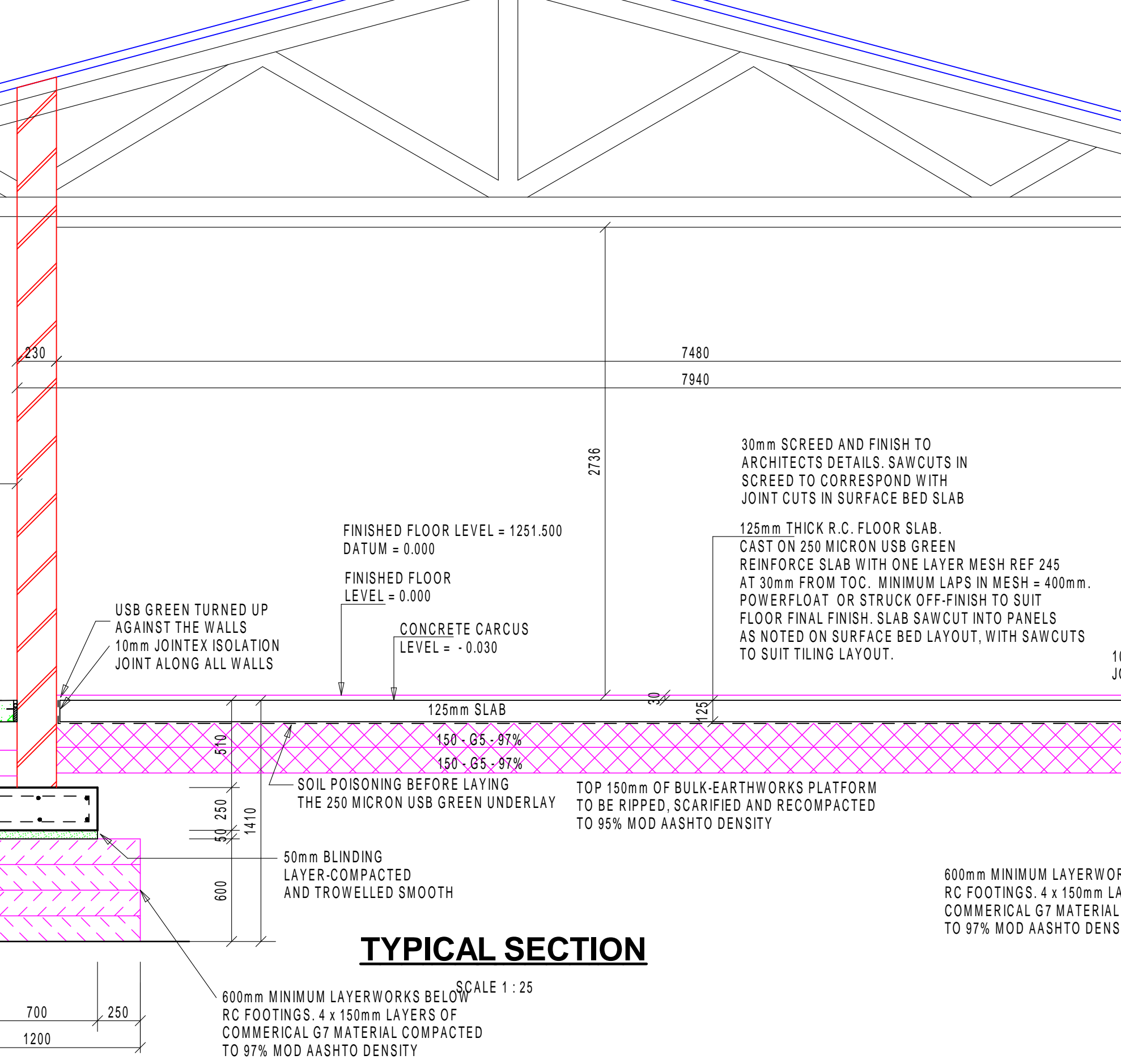
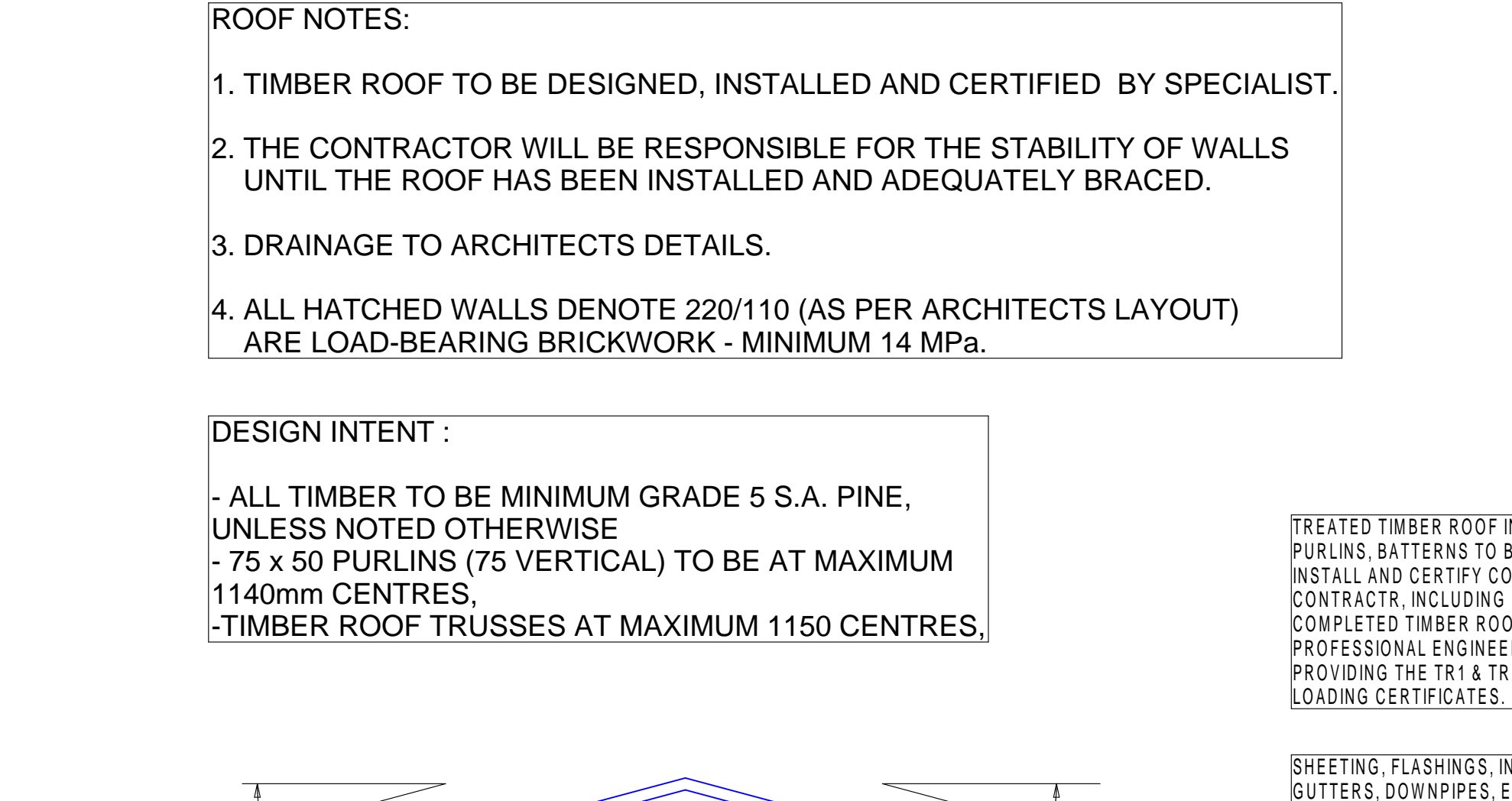
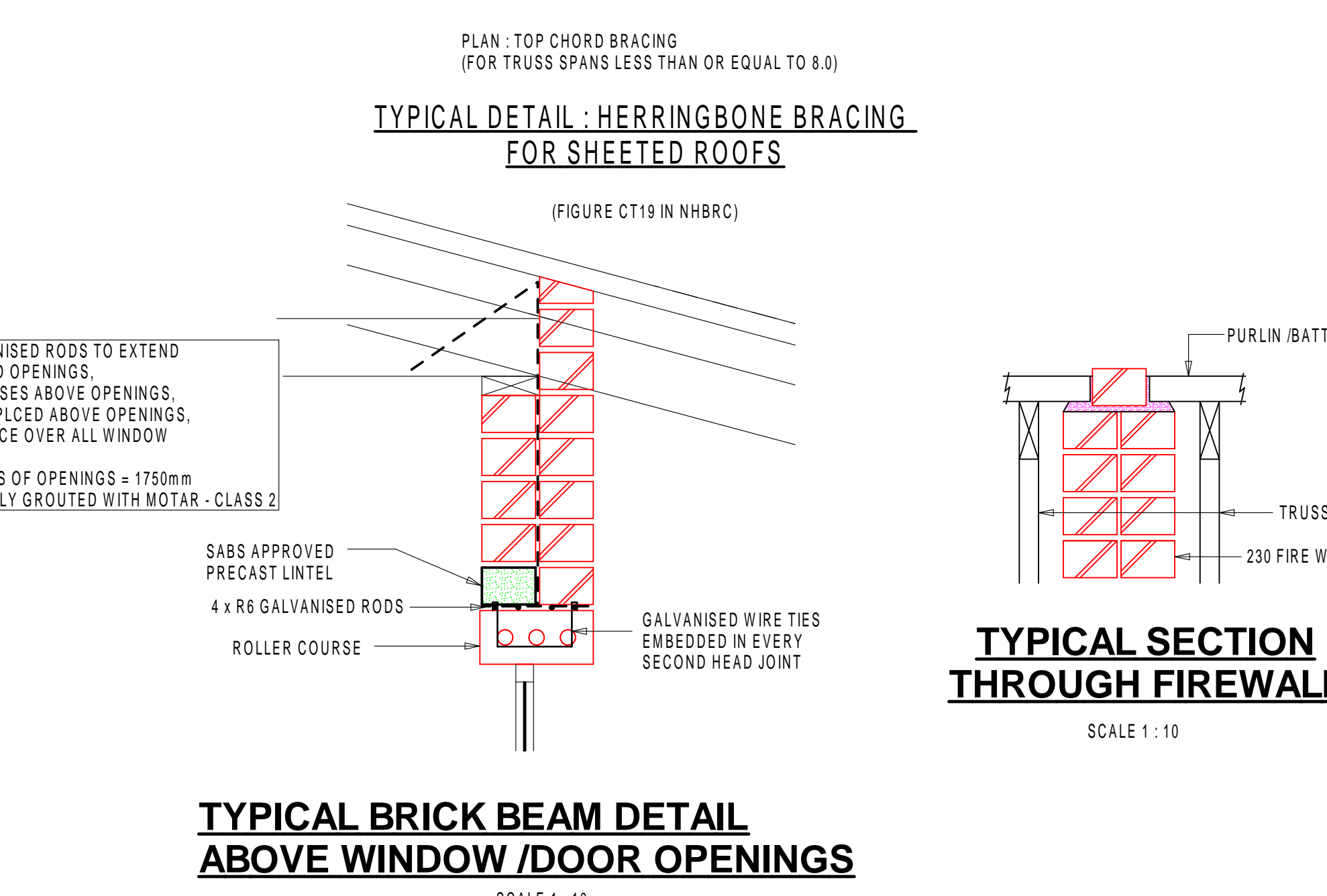
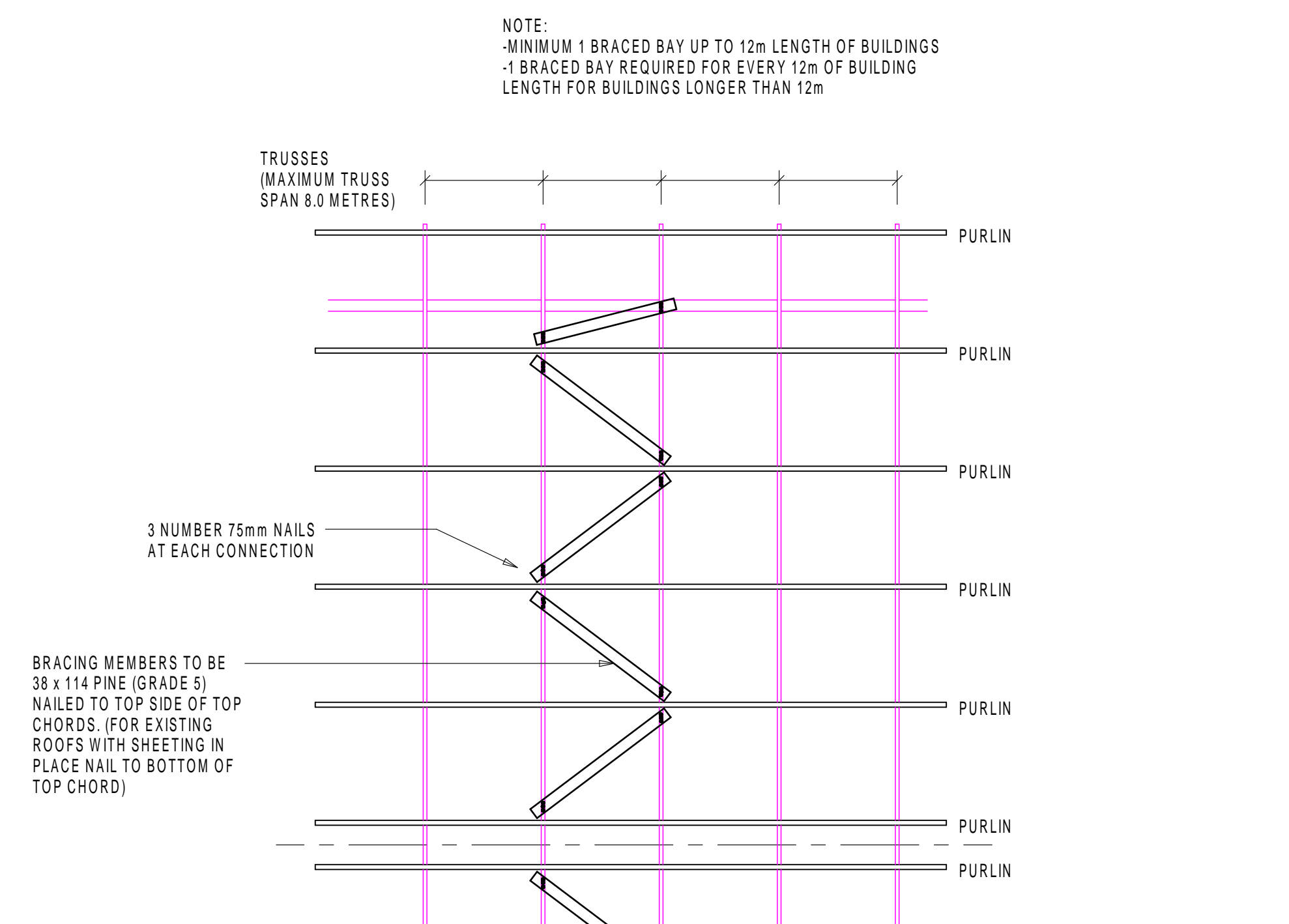
PROJECT STATUS
Stage 1 - 3 Stage 4 Stage 5-6
Drawing Description Tender Construction

NEW SCIENCE BLOCK
FOUNDATION, SURFACE BED AND RC ROOF LAYOUTS
AND LARGE SCALE CONSTRUCTION DETAILS

DRAWN:
Name of Competent Person
S. Naidu
REG. No: PR.ENG. 20010315
SIGNATURE:
Scale/s
1 : 100, 10, 5
Paper Size
A0
DATE
December 2021

EMIS NUMBER
600100694
Drawing Number
ST-S-SC 01
Revision
0

Stamped by Plans Approval Committee



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<div data-bbox="2700 1096 2789 1150">  </div> <p>UKUZA CONSULTING <small>PTY LTD</small></p> <p>INFO@UKUZA.CO.ZA TEL: 031-265 0444</p>	
<div data-bbox="2709 1218 2801 1348">  <p>DBSA</p> <p>Development Bank of Southern Africa</p> </div> <hr/> <div data-bbox="2644 1381 2721 1459">  </div> <div data-bbox="2724 1381 2873 1459"> <p>education</p> <p>Lefapha la Thuto Onderwys Departement Department of Education NORTH WEST PROVINCE</p> </div>	

Project Title	KGOSI SHOPE SECONDARY SCHOOL SETLAGOLE, RATULU DISTRICT MUNICIPALITY, NORTH WEST GPS COORDINATES : LONGITUDE 25 56 36.25", LATITUDE 26 19 45.46"S		
PROPOSED ADDITIONS AND ALTERATIONS			
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Stage 1 - 3	Stage 4	Stage 5-6	
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Drawing Description			
NEW SCIENCE BLOCK STANDARD SECTION AND LARGE SCALE CONSTRUCTION DETAILS			
DRAWING:		CHECKED:	
Name of Competent Person S. Naidu		Name of Competent Person S. Naidu	
REG. NO.: PR.ENG. 20010315		REG. NO.: PR.ENG. 20010315	
SIGNATURE:		SIGNATURE:	
Scale/s 1 : 100, 10, 5	Paper Size A0	DATE December 2021	
EMIS NUMBER 600100694	Consultant Project Reference D3884-21		Revision 0
Drawing Number ST-S-SC 02			Revision 0
Stamped by Plans Approval Committee			