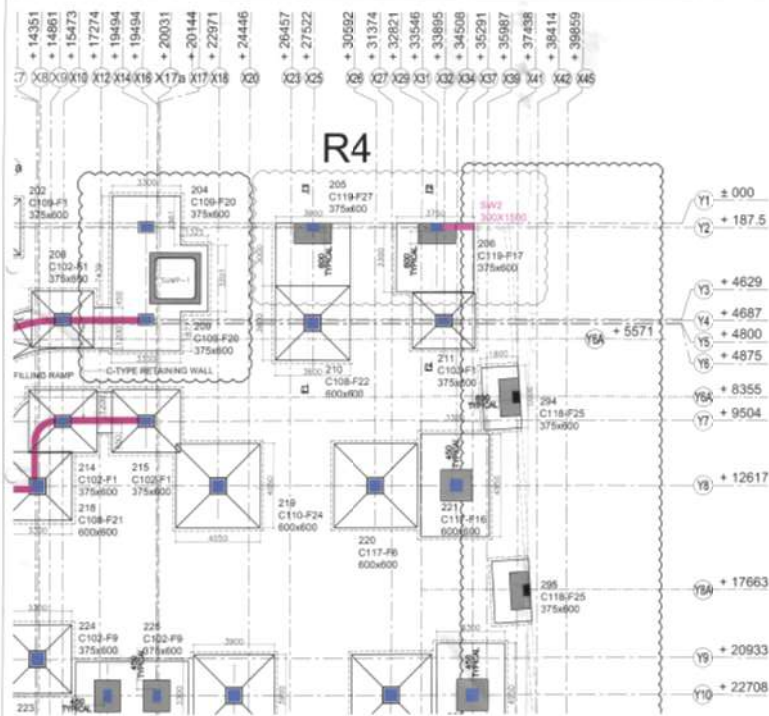
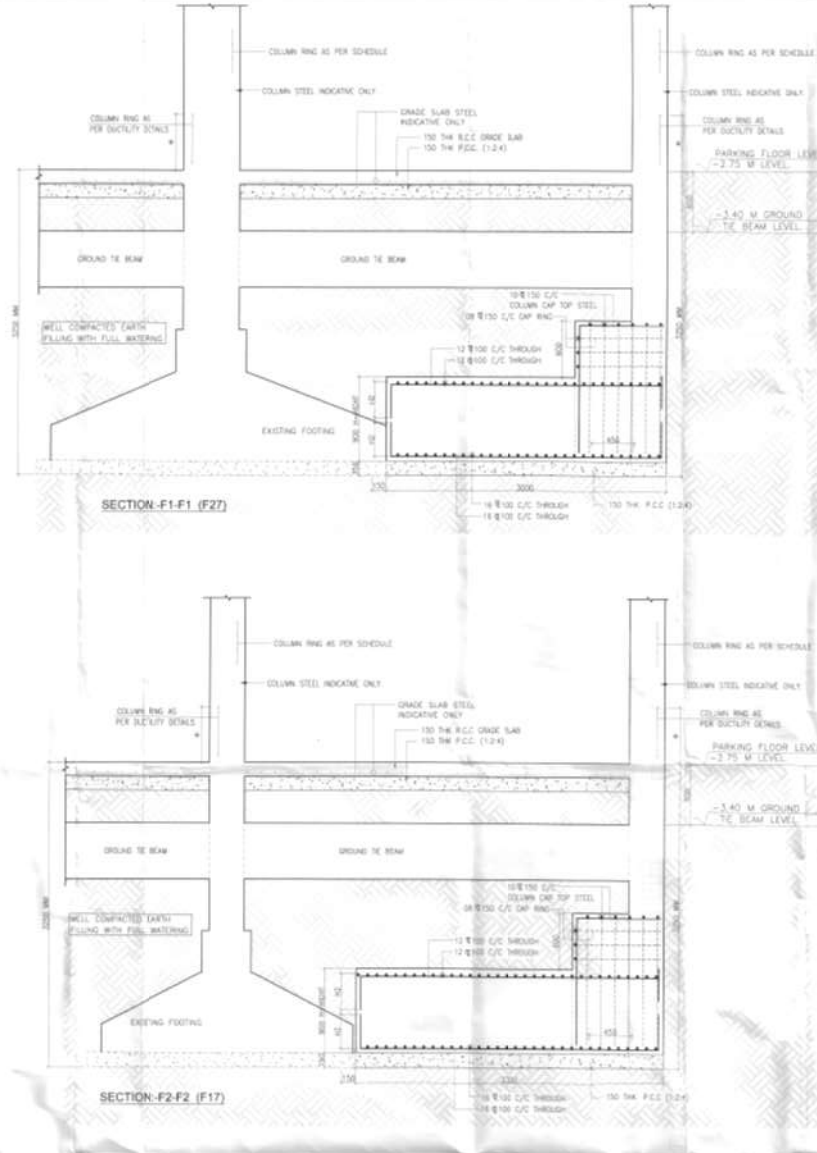




FOUNDATION LAY-OUT
CONC. MIX M-35 RF1-900 THK.
CONC. MIX M:30 TRAPEZOIDAL / COMBINED FOOTING

COLUMN SCHEDULE FOR PARKING	
COLUMN GROUP	C118
COLUMN NO.	204-205 206-207 208-209
COLUMN SIZE	300x300
COLUMN STEEL	14-20E
CONC. MIX	M-35
FOUNDATION LAYOUT	SEE DETAIL
COLUMN GROUP	C118

FOOTING SCHEDULE FOR PARKING	
COLUMN GROUP	F20
COLUMN NO.	204-205 206-207 208-209
FOOTING SIZE	300x300
FOOTING STEEL	14-20E
CONC. MIX	M-35
FOUNDATION LAYOUT	SEE DETAIL
COLUMN GROUP	F20



GOOD FOR CONSTRUCTION
17/01/2024

Mr. Jhaveri Consulting Engineers
 Structure Engineer

Mr. Kamlesh Parikh Architect
 Design Director / Architect

Mr. Ansh Engineering Solutions
 Assistant MEPP Consultants

Mr. Kalra Construction Ltd.
 EPC Contractor

Check & Found O.K.
 Professor
 Department of Civil Engineering
 S.V.P.I.T. Surbh-SYS 007

PEER REVIEWER

FOR APPROVAL	
WESTERN RAILWAYS	
BHAVNAGAR DIVISION	GATI SHAKTI UNIT
CPM-GS-BVP	
XEN-GS-BVP	
SSE-W-GS-BVP	
JE-W-GS-BVP	
JE-DRG-GS-BVP	

REV. DATE	DESCRIPTION	ISSUED BY	BY
R0 17/01/2024	TYPICAL FOOTING DETAILS & SUMP DETAILS	JCE	JGSH PARKKH
R1 20/01/2024	TYPICAL FOOTING DETAILS & SUMP DETAILS	JCE	JGSH PARKKH
R2 04/02/2024	TYPICAL FOOTING DETAILS & SUMP DETAILS	JCE	JGSH PARKKH
R3 27/02/2024	TYPICAL FOOTING DETAILS & SUMP DETAILS (REVISED AS PER NEW BOUNDARY LINE)	JCE	JGSH PARKKH
R4 21/12/2024	TYPICAL FOOTING DETAILS & SUMP DETAILS (COLUMN FOOTING SECTION-F1-F1/F2-F2)	JCE	JGSH PARKKH

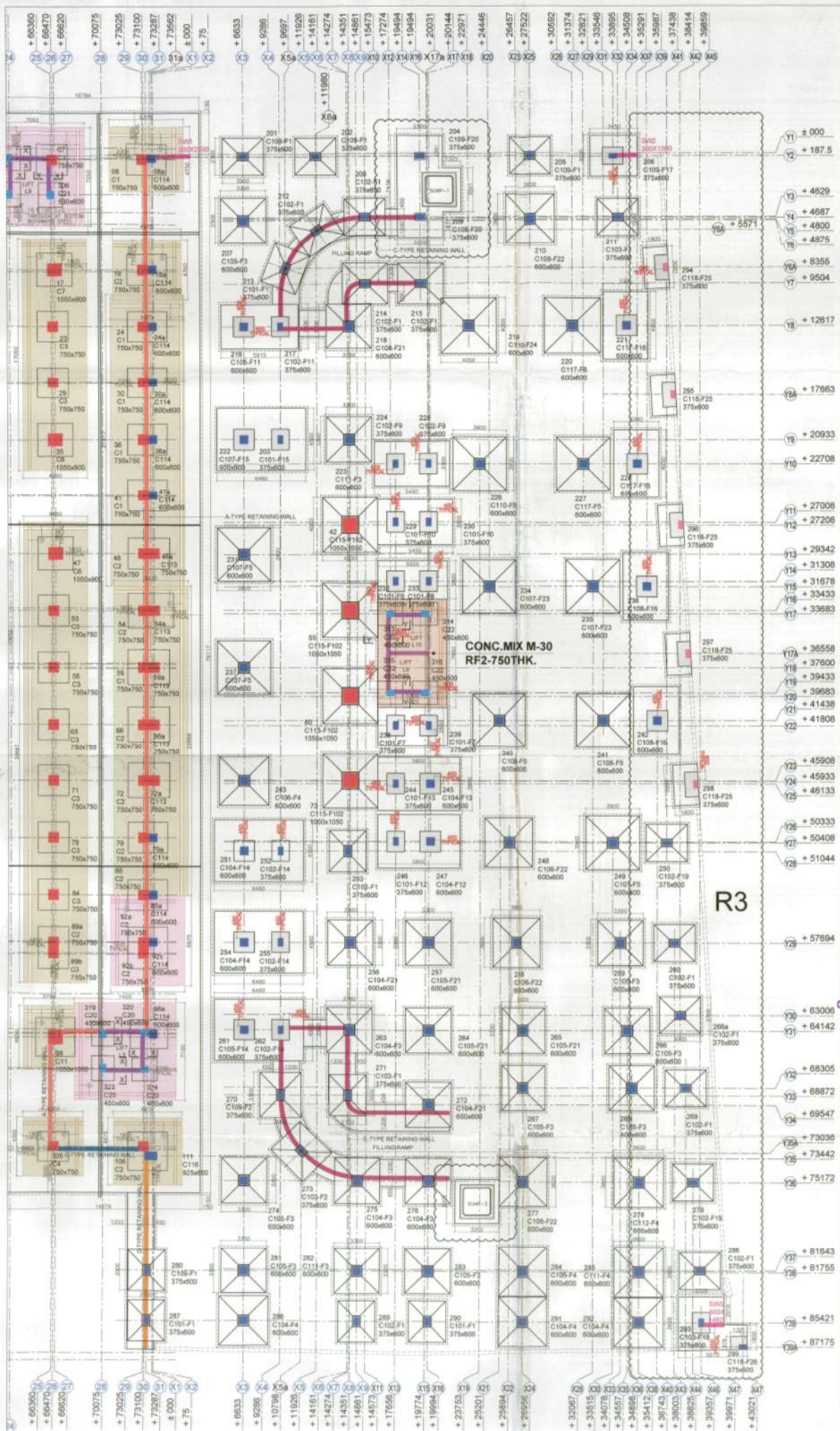
PROJECT:
MAJOR UPGRADATION OF SOMNATH RAILWAY STATION, GUJARAT, BHAVNAGAR DIVISION, WESTERN RAILWAYS

DRAWING TITLE:
FOUNDATION LAYOUT & DETAIL (COLUMN FOOTING CHANGE)

DRAWING NO:
SMNH / S-076

ORIENTATION:
 N

DATE:
27/06/2023



FOUNDATION LAY-OUT (RAFT BOTTOM PLAN)
 CONC. MIX M-35 RF1-900 THK.
 CONC. MIX M-30 TRAPEZOIDAL / COMBINED FOOTING

(A) 30" 100 C/C BOTHWAYS
 EXTRA BOTTOM JAIL (1-LAYER)
 (B) 16" 100 C/C BOTHWAYS
 EXTRA BOTTOM JAIL (1-LAYER)
 (E) 16" 100 C/C BOTHWAYS
 BOTTOM STEEL (PARKING LIFT-9&10)

GOOD FOR CONSTRUCTION
 27/06/2023

GOOD FOR CONSTRUCTION
 27/06/2023

Mrs. Jhanvi Consulting Engineers
 Structure Engineer

Mrs. Kamlesh Parikh Architect
 Design Director / Architect



Mrs. Artech Engineering Solutions
 Assistant MEP Consultants

Mrs. Katri Construction Ltd.
 EPC Contractor



Check & Found O.K.
 Professor
 Department of Civil Engineering
 SVNLT Suran-392 007

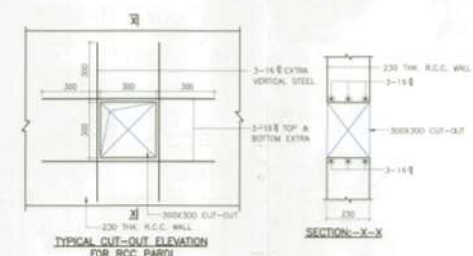
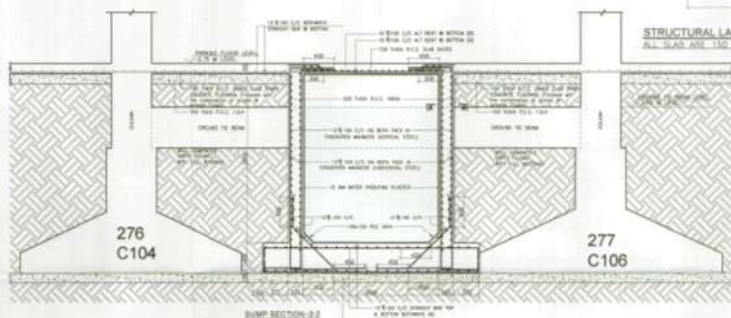
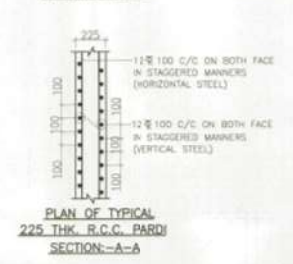
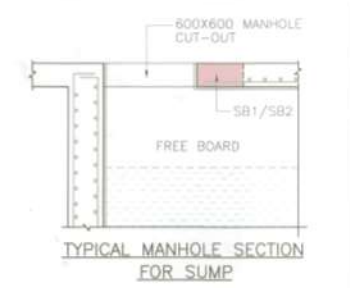
PEER REVIEWER

FOR APPROVAL	
WESTERN RAILWAYS	
BHAVNAGAR DIVISION	GATI SHAKTI UNIT
CPM-GS-BVP	
XEN-GS-BVP	
SSE-W-GS-BVP	
JE-W-GS-BVP	
JE-DRG-GS-BVP	

REV.	DATE	DESCRIPTION	ISSUED BY	BY
R0	17/1/2023	Foundation Layout - Raft Bottom Plan	JCE	JOSH PARIKH
R1	20/3/2023	Foundation Layout - Raft Bottom Plan	JCE	JOSH PARIKH
R2	06/5/2023	Foundation Layout - Raft Bottom Plan	JCE	JOSH PARIKH
R3	27/6/2023	Foundation Layout - Raft Bottom Plan (REVISED AS PER NEW BOUNDARY LINE)	JCE	JOSH PARIKH

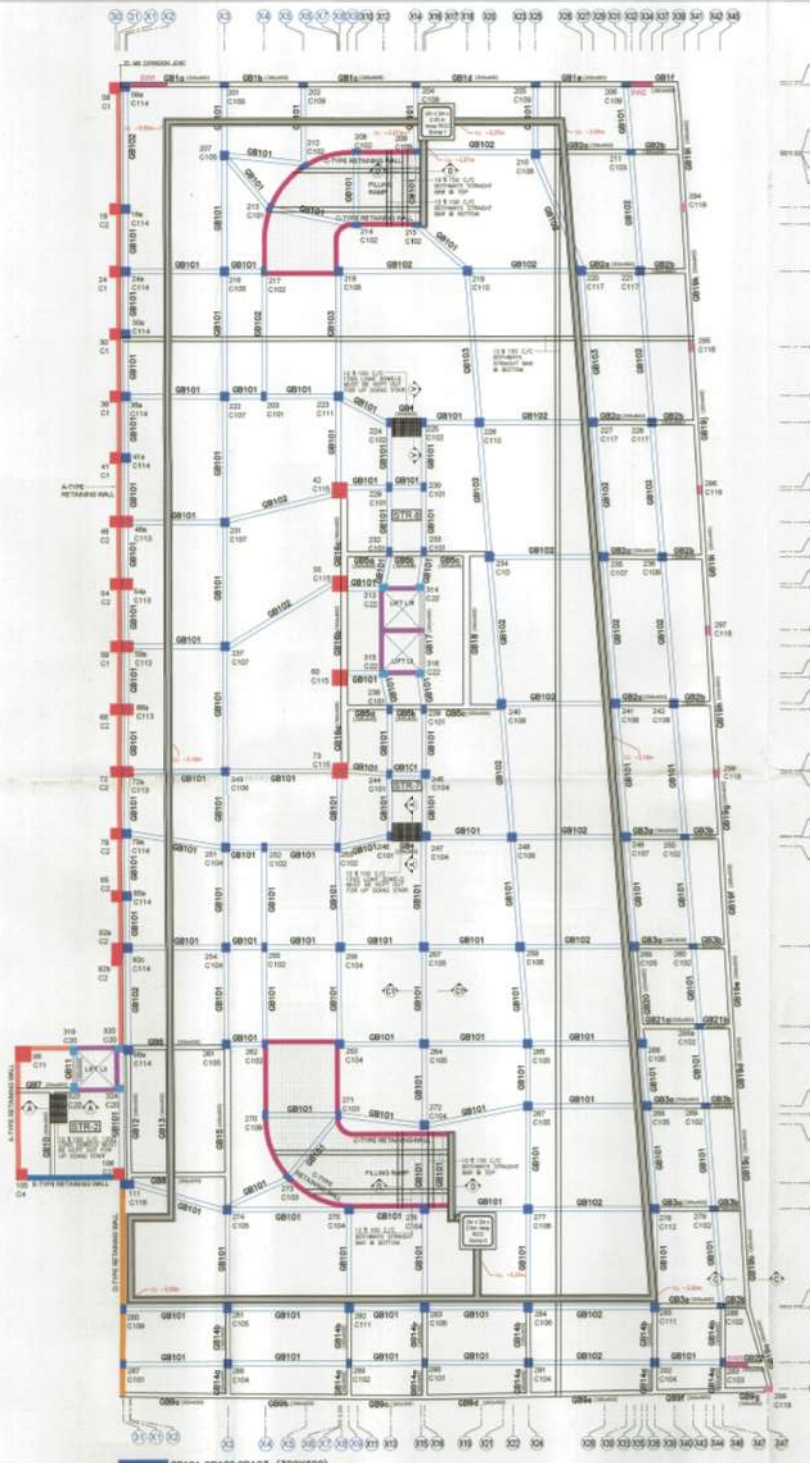
PROJECT: MAJOR UPGRADATION OF
 SOMNATH RAILWAY STATION,
 GUJARAT, BHAVNAGAR DIVISION,
 WESTERN RAILWAYS

FOUNDATION TITLE: RAFT BOTTOM PLAN
 DRAWING NO: SMNH / S-78
 DATE: 27/06/2023



FOOTING SCHEDULE FOR PARKING				
COLUMN GROUP	F20	F25	F26	
COLUMN NO.	204-209	204-225-230-237	209	R3
PERMANENT RETENTION WALL	600 x 750	675 x 1000	675 x 1000	
CONCRETE WALL	60/30	60/30	60/30	
R = 1	FOOTING SIZE AS PER FOUNDATION	1000 x 2300	1000 x 2300	FOOTING SIZE AS PER FOUNDATION
R = 2	600 RMT	600 RMT	600 RMT	600 RMT
	600 RMT			
TOP STEEL				
STEEL # 8	12 @ 180 C/C	12 @ 180 C/C	12 @ 180 C/C	
STEEL # 4	12 @ 180 C/C	12 @ 180 C/C	12 @ 180 C/C	
BOTTOM STEEL				
STEEL # 8	12 @ 180 C/C	12 @ 180 C/C	12 @ 180 C/C	
STEEL # 4	12 @ 180 C/C	12 @ 180 C/C	12 @ 180 C/C	
CONCRETE WALL	60/30	60/30	60/30	
COLUMN GROUP	F30	F25	F26	

GOOD FOR CONSTRUCTION 27/06/2023  M/s. Hrishabh Consulting Engineers Structural Engineer  M/s. Kamlesh Parekh Architect Design Director / Architect															
 M/s. Artech Engineering Solutions Assistant MEPF Consultants  M/s. Katra Construction Ltd. EPC Contractor															
 Check & Found OK Professor Department of Civil Engineering S.Y.A.T. Surab-395 007 PEER REVIEWER															
FOR APPROVAL WESTERN RAILWAYS <table><tr><td>BHAVNAGAR DIVISION</td><td>GATI SHAKTI UNIT</td></tr><tr><td>CPM-GS-BVP</td><td></td></tr><tr><td>XEN-GS-BVP</td><td></td></tr><tr><td>SSE-W-GS-BVP</td><td></td></tr><tr><td>JE-W-GS-BVP</td><td></td></tr><tr><td>JE-DRG-GS-BVP</td><td></td></tr><tr><td colspan="2"></td></tr></table>		BHAVNAGAR DIVISION	GATI SHAKTI UNIT	CPM-GS-BVP		XEN-GS-BVP		SSE-W-GS-BVP		JE-W-GS-BVP		JE-DRG-GS-BVP			
BHAVNAGAR DIVISION	GATI SHAKTI UNIT														
CPM-GS-BVP															
XEN-GS-BVP															
SSE-W-GS-BVP															
JE-W-GS-BVP															
JE-DRG-GS-BVP															
REV.	DATE														
R0	17/12/2023														
TYPICAL FOOTING DETAILS & SUMP DETAILS															
R1	20/3/2023														
TYPICAL FOOTING DETAILS & SUMP DETAILS															
R2	06/5/2023														
TYPICAL FOOTING DETAILS & SUMP DETAILS															
R3	27/6/2023														
TYPICAL FOOTING DETAILS & SUMP DETAILS (REVISED AS PER NEW BOUNDARY LINE)															
PROJECT: MAJOR UPGRADEATION OF SOMNATH RAILWAY STATION, GUJARAT, BHAVNAGAR DIVISION, WESTERN RAILWAYS															
DRAWING TITLE: TYPICAL FOOTING DETAILS & SUMP DETAILS															
DRAWING NO: SMNH / S-07c															
ORIENTATION: N															
DATE: 27/06/2023															



ALL GROUND BEAM TOP -3.40 M AS PER CONSIDERED RAIL TOP ± 0.00 LVL

NOTES FOR SLABS & BEAMS

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS IN METERS UNLESS OTHERWISE SPECIFIED
2. ALL DIMENSIONS ARE TO BE READ AND NOT TO BE MEASURED
3. THE REINFORCING BARS TO BE USED IN CONCRETE ELEMENTS ARE CONFORMING TO IS:1786-2011 WITH CFS STEEL, F_y = 250 N/MM² (F_{0.2} 350)
4. ALL DIMENSIONS ARE AS PER ARCHITECT DRAWING. ANY AMBIGUITY IF FOUND SHALL BE BROUGHT TO THE NOTICE OF THE CONSULTING ENGINEERS
5. BEFORE EXECUTION, REINFORCEMENT MUST BE GOT CHECKED BY PWC CONSULTANT
6. PORTABLE WATER SHALL BE USED FOR CONCRETE
7. PROVIDE CORNER TO MAIN STEEL AS PER TABLE GIVEN BELOW
8. SUPERVISION SHALL NOT BE OUR RESPONSIBILITY
9. STEEL CHAIRS SHALL BE PROVIDED TO KEEP THE TOP REINFORCEMENT IN PROPER POSITION
10. PROPER CORNER BLOCK SHALL BE PROVIDED
11. PROPS UNDER CANTILEVER BEAMS OR SLAB SHALL NOT BE REMOVED UNTIL SUFFICIENT COUNTER WEIGHT IS PROVIDED
12. ALL CONCRETE MIX SHALL BE MACHINE MIXED AND MACHINE VIBRATED
13. CONTRACTOR MUST USE ALL THE MATERIALS CONFORMING TO U.S. SPECIFICATIONS
14. GRADATION OF AGGREGATES 20 MM TO 10 MM = 67%
10 MM TO 5 MM = 33 %
15. OPC CEMENT M-53 GRADE OR HIGHER SHALL BE USED
16. MIX DESIGN FOR ALL PROPOSED CONCRETE MIX SHALL BE CARRIED OUT BY CONTRACTOR AND GET APPROVED BY CONSULTANT PRIOR TO START ACTUAL CONSTRUCTION ON SITE
17. POZZOLANA CEMENT SHALL NOT BE USED IN ANY STRUCTURAL ELEMENTS
18. THE NUMBER OF PROPS UNDER THE SHUTTERING SHALL BE SUCH AS TO BE ABLE TO CARRY SAFELY, ALL THE DEAD LOADS AND LIVE LOADS LIKELY TO OCCUR DURING CONSTRUCTION
19. ALL LEVELS ARE FROM UNFINISHED FLOOR LEVEL
20. SAND FILLING SHOULD BE LIGHT WEIGHT CORNER FILLING
WHOSE DENSITY IS NOT MORE THAN 1300 KG/CUM
21. ALL AAC BLOCKS WORK IN CEMENT MORTAR 1:6 UNLESS OTHERWISE SPECIFIED
22. IF THERE ARE MORE THAN TWO BARS IN SECOND LAYER 1:25 T PER IN 1050 C/C SHOULD BE PROVIDED
23. PLASTERED MUST BE USED IN ALL CONCRETE WORK AS PER MANUFACTURERS INSTRUCTION
24. FOR SLICES OF SECTION OF MEMBERS, DIMETERS AND SPACING OF BARS & STIRRUPS, REFER TO DETAILED SCHEDULE IN R.C.C. DRAINAGE & SWITCHES
25. IN TWO WAY SLAB CORNER REINFORCEMENT IS TO BE PROVIDED IN BOTH L/S ON BOTH SIDE CORNER
26. CORNER REINFORCEMENT SHOULD BE IN FORM OF WESH HAVING SAME CROSS-SECTIONAL AREA OF REINFORCEMENT AS MID-SPAN. IT SHOULD BE PROVIDED AT TOP & BOTTOM AS SHOWN IN ISOMETRIC VIEW OF CORNER REINFORCEMENT FOR A TWO-WAY SLAB
27. CONCRETE CURB OF 150mm x 150mm x 150mm SHOULD BE TESTED TIER VARIOUS CONCRETE MEMBERS AS & WHEN REQUIRED IN RECOGNISED LABORATORY. COST OF THIS WILL BE BORNE BY CONTRACTOR
28. CUT-OUTS FOR DRAINAGE SHALL BE PROVIDED AS PER ARCHITECTURAL DETAILS
29. 25 TO 15 CHAMFER SHALL BE PROVIDED AT THE FREE END OF CANTILEVER BEAMS
30. TO CARRY OUT THE CURB & MATERIAL TESTS SHALL BE CONTRACTORS RESPONSIBILITY
31. LOAD TESTING OF STRUCTURE SHALL BE CARRIED OUT BY CONTRACTOR AT HIS OWN RESPONSIBILITY BEFORE OWING POSSESSION
32. CURE TEST MUST BE CARRIED OUT FROM EVERY BATCH OF CONCRETE FOR COLUMNS, BEAMS & SLABS & TEST RESULTS OF 7 & 28 DAYS MUST BE SUBMITTED TO THE CONSULTANT IF CONTRACTOR FAILS TO DO SO, CONSULTANTS SHALL NOT BE RESPONSIBLE FOR ANY AFTERIOR STRENGTH OF STRUCTURE
33. CENTERING UNDER ALL CANTILEVERS SHOULD NOT BE REMOVED UNTIL SUFFICIENT COUNTER LOAD HAS BEEN PROVIDED &/OR AS PER INSTRUCTIONS SHOWN IN DETAIL DRAWINGS OR SCHEDULES

• NORMAL PERIOD FOR REMOVING CENTERING IS AS FOLLOWS:

• COLUMNS

1. VERTICAL FACE AFTER 24 TO 28 HOURS

• BEAMS

1. VERTICAL FACE AFTER 24 TO 48 HOURS

• SLABS

1. BOTTOM AFTER 7 DAY FOR THE SPAN UP TO 4200
2. BOTTOM AFTER 14 DAY FOR THE SPAN ABOVE 4200

• BEAMS

1. VERTICAL FACE AFTER 24 TO 48 HOURS
2. BOTTOM AFTER 14 DAY FOR THE SPAN UP TO 3400
3. BOTTOM AFTER 21 DAY FOR THE SPAN ABOVE 3400

34. CURING TO THE BEAMS SHALL BE DONE FROM THE SIDES IMMEDIATELY AFTER CASTING OF THE BEAM

35. PROPER BONDING AGENT MUST BE APPLIED ON OLD CONCRETE, WHEREVER NEW CONCRETE IS TO BE CONNECTED WITH OLD CONCRETE

CLEAR COVER TO BE PROVIDED TO MAIN REINFORCEMENT FOR CONCRETE

FOOTING	75mm
COLUMNS	50mm
SHEAR WALLS	50mm
BEAMS	50mm
SLABS	30mm
RETAINING WALLS	50mm
U.G.W.T. WALL	50mm

IMPORTANT NOTE

1. ALL CONCRETE MIX OF M-53 GRADE
2. ALL STEEL BARS OF MP-25 - GOOD GRADE
3. ALL LAP LENGTH & DEVELOPMENT LENGTH AS PER IS:1786-2011 (F_y 250)
4. THE STRUCTURE IS DESIGNED FOR 2008-11 AND IMPROVEMENT FACTOR 1.5 AS PER IS:1000-2011
5. THE STRUCTURE IS DESIGNED FOR S=0.1

NOTES

LEGEND

GOOD FOR CONSTRUCTION
27/06/2023



Mrs. Jyoti Parikh Consulting Engineers
Structure Engineer



Mrs. Kanchan Parikh Architect
Design Director / Architect



Mrs. Artech Engineering Solutions
Assistant BEPP Consultants

Mrs. Kalina Construction Ltd.
EPC Contractor



Check & Found O.K.

Professor
Department of Civil Engineering
S.V.N.I.T. Surat-395 007

PEER REVIEWER-1

PEER REVIEWER-2

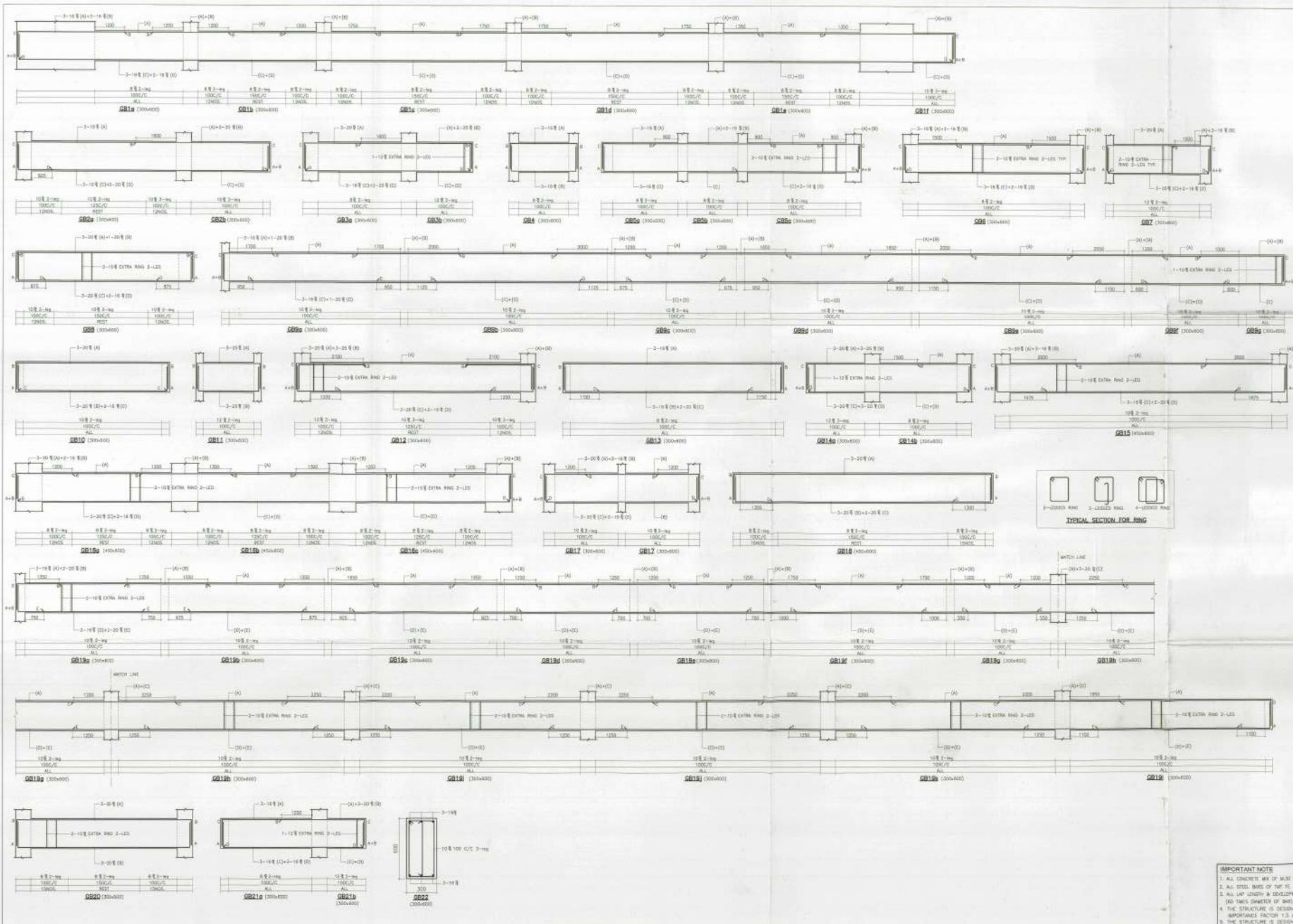
REV. DATE	DESCRIPTION	ISSUED BY	CHECKED BY
R0 26/06/2023	STRUCTURAL LAYOUT AT GROUND BEAM LEVEL	JCE	JYOTI PARIKH
R1 27/06/2023	STRUCTURAL LAYOUT AT GROUND BEAM LEVEL (LEVEL CHANGED)	JCE	JYOTI PARIKH

PROJECT: MAJOR UPGRADATION OF SOMNATH RAILWAY STATION, GUJARAT, BHAVNAGAR DIVISION, WESTERN RAILWAYS

DRAWING TITLE: STRUCTURAL LAYOUT AT GROUND BEAM LEVEL.

DRAWING NO: SMNH / S-099

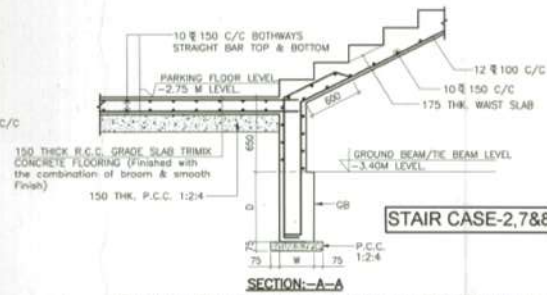
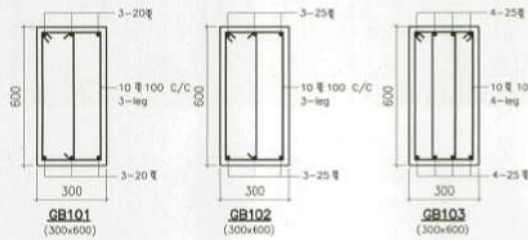
DATE: 27/06/2023



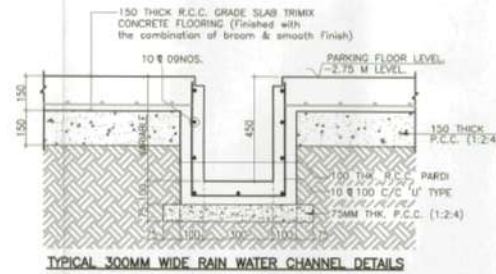
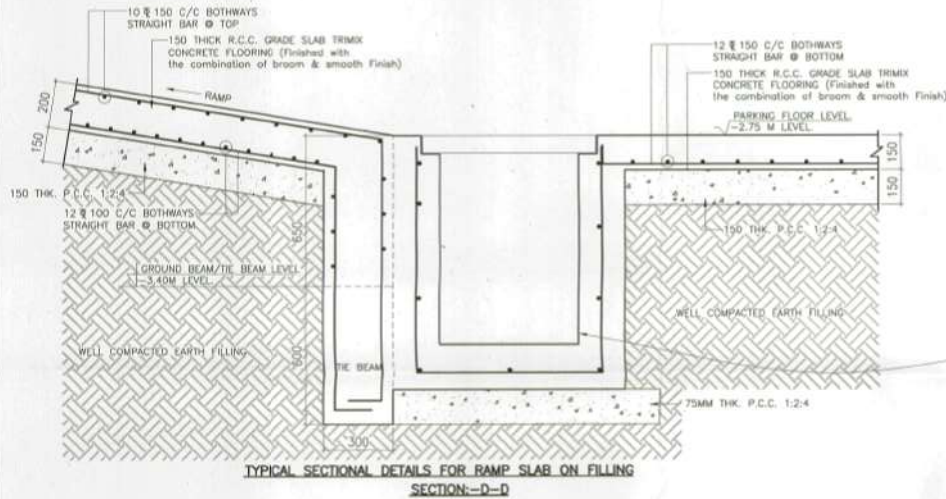
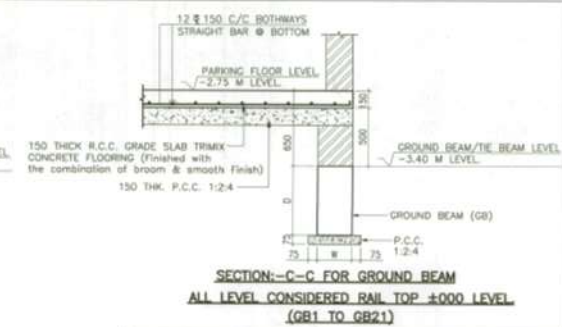
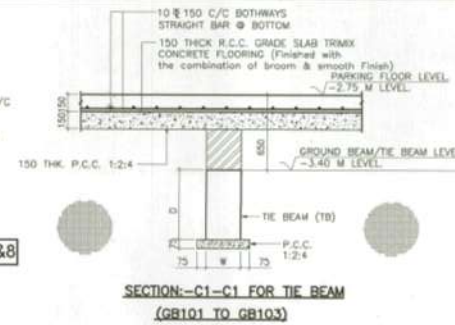
IMPORTANT NOTE

1. ALL CONCRETE: M30 OF M25 GRADE
2. ALL STEEL: RINGS OF THK 16 - 2000 GRADE
3. ALL LAP LENGTH & DEVELOPMENT LENGTH: 80D
4. (AS PER IS 456-2000)
5. THE STRUCTURE IS DESIGNED FOR ZONE-II AND IMPORTANCE FACTOR 1.5 AS PER IS 1893-2018
6. THE STRUCTURE IS DESIGNED FOR B+G+4.

GOOD FOR CONSTRUCTION 27/06/2023 		 Mr. Kamlesh Parikh Architect Design Director / Architect	
 Mr. Artech Engineering Solutions Assistant MEPF Consultants		 Mr. Katrio Construction Ltd. EPC Contractor	
 Check & Found O.K.			
PROJECT: MAJOR UPGRADATION OF SOMNATH RAILWAY STATION, GUJARAT, BHAVNAGAR DIVISION, WESTERN RAILWAYS			
DRAWING TITLE: STRUCTURAL DETAILS-1 AT GROUND BEAM LEVEL.		ORIENTATION: 	
DRAWING NO.: SMNH / S-09B		DATE: 27/06/2023	



TREAD AND RISER SHOULD BE AS PER ARCHITECTURE DRAWING



GOOD FOR CONSTRUCTION
27/06/2023



M/s. Jhanavi Consulting Engineers
Structure Engineer



M/s. Kamlesh Parekh Architect
Design Director / Architect



M/s. Artech Engineering Solutions
Assistant MEPF Consultants

M/s. Katira Construction Ltd.
EPC Contractor



Check & Found OK

Professor
Department of Civil Engineering
SVNIT, Surat-395 007

PEER REVIEWER-1

PEER REVIEWER-2

REV.	DATE	DESCRIPTION	ISSUED BY	BY
R0	26/04/2023	STRUCTURAL DETAILS-2 AT GROUND BEAM LEVEL.	JCE	JIGISH PARIKH
R1	27/06/2023	STRUCTURAL DETAILS-2 AT GROUND BEAM LEVEL. [LEVEL CHANGED]	JCE	JIGISH PARIKH

PROJECT: **MAJOR UPGRADATION OF SOMNATH RAILWAY STATION, GUJARAT, BHAVNAGAR DIVISION, WESTERN RAILWAYS**

DRAWING TITLE: **STRUCTURAL DETAILS-2 AT GROUND BEAM LEVEL.**

DRAWING NO: **SMNH / S-09c**

ORIENTATION: **N**

DATE: **27/06/2023**

- IMPORTANT NOTE**
1. ALL CONCRETE MIX OF M:30 GRADE
 2. ALL STEEL BARS OF TMT FE - 500D GRADE
 3. ALL LAP LENGTH & DEVELOPMENT LENGTH 60D (60 TIMES DIAMETER OF BAR)
 4. THE STRUCTURE IS DESIGNED FOR ZONE-III AND IMPORTANCE FACTOR 1.5 AS PER IS 1893-2016
 5. THE STRUCTURE IS DESIGNED FOR B+G+4.