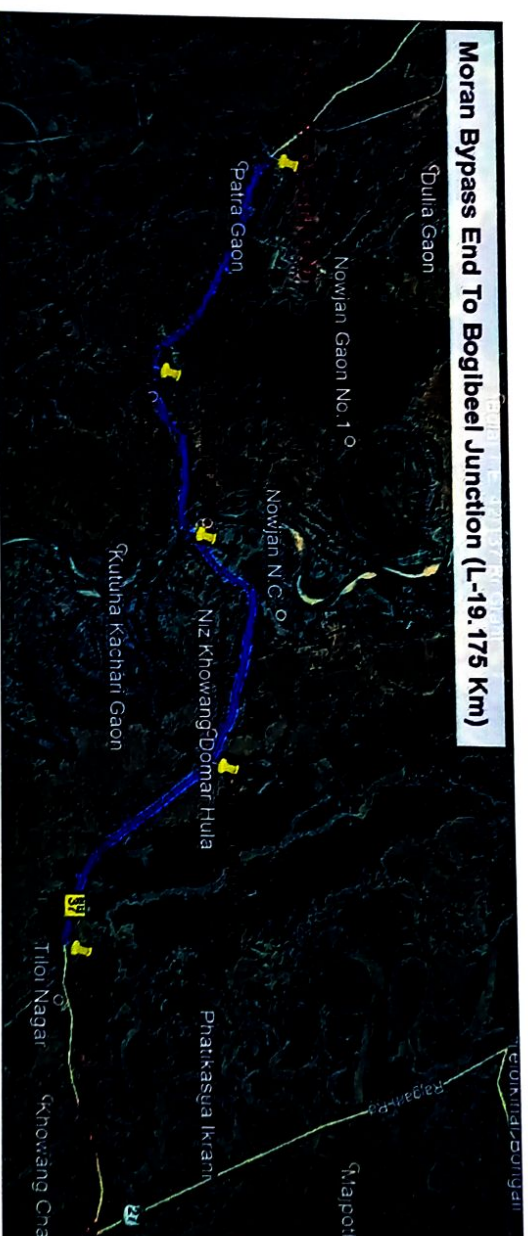




NATIONAL HIGHWAYS AND INFRASTRUCTURE DEVELOPMENT CORPORATION

PROJECT:

FOUR LANING OF NH-37 FROM END OF MORAN BYPASS (KM 562.525) TO
BOGIBEEJ JUNCTION NEAR LAPETKETA (KM 581.700) IN THE STATE OF
ASSAM UNDER SARDP-NE, PHASE 'A' ON EPC MODE - BALANCE WORK



DETAIL DRAWING OF VUP AT DESIGN CHAINAGE - 564+120

JANUARY, 2020

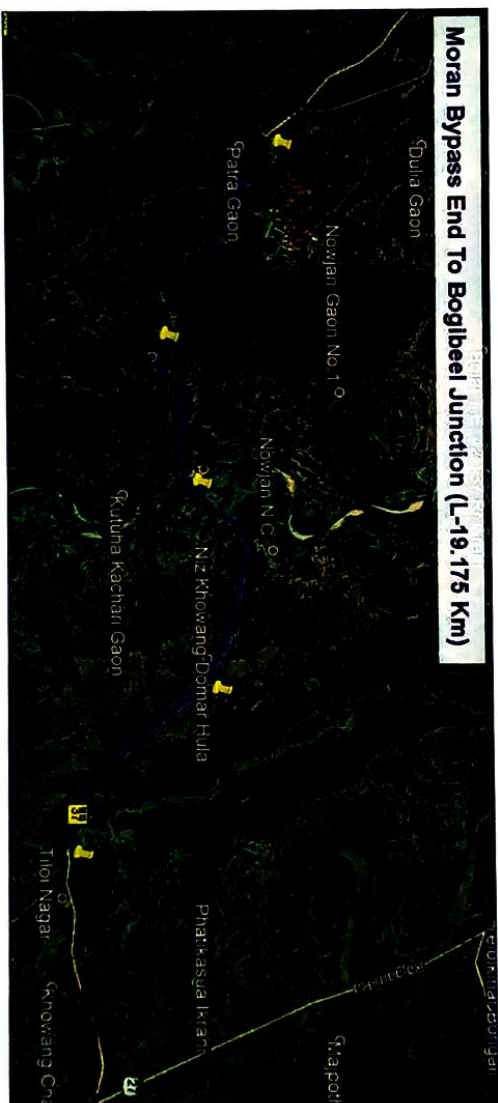
AUTHORITY ENGINEER : VOYANTS VOYANTS SOLUTIONS PVT. LTD.	EPC CONTRACTOR: M/S MANARANJAN BRAHMA WARD NO. 4, DEPOT ROAD, KOKRAJHAR, DIST: KOKRAJHAR, PIN : 783370, ASSAM	SAFETY CONSULTANT: ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.	PROOF CONSULTANT: INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI NEAR DOUL GOBINDA ROAD, AMINGAON, NORTH GUWAHATI, GUWAHATI, ASSAM, PIN : 781039
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DRAWING INDEX

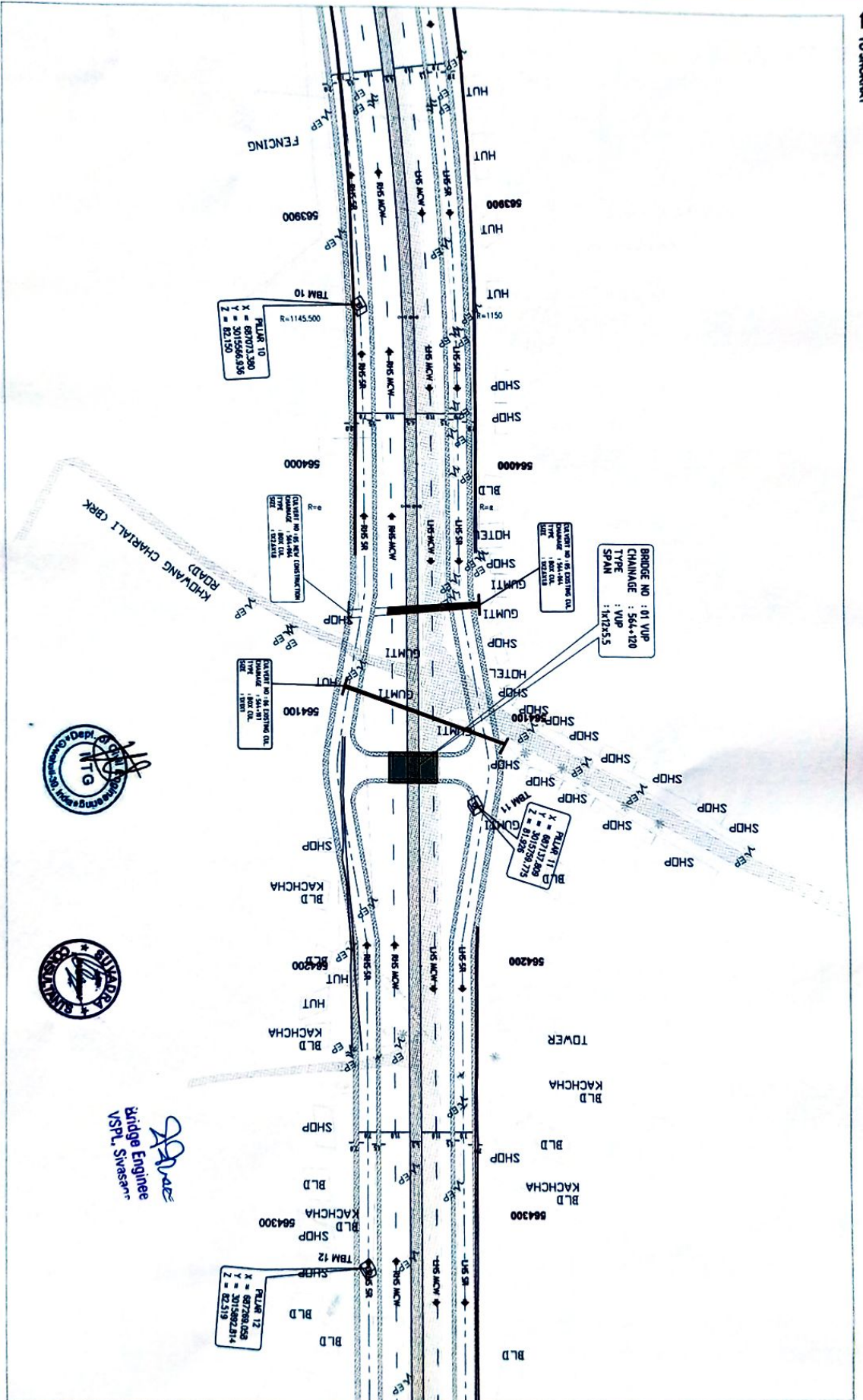
VUP AT DESIGN CH.- 564+120

SR. No.	DRAWING TITLE	DRAWING NUMBER
1	GENERAL ARRANGEMENT DRAWING	NHIDCLMB/JOR-DIB/ST/VUP/564+120/101 (SHEET 1 OF 1)
2	KEY PLAN	NHIDCLMB/JOR-DIB/ST/VUP/564+120/102 (SHEET 1 OF 1)
3	REINFORCEMENT DETAIL OF BOX	NHIDCLMB/JOR-DIB/ST/VUP/564+120/201 (SHEET 1 OF 1)
4	TYPICAL DETAIL OF RETAINING WALL	NHIDCLMB/JOR-DIB/ST/MISC/RW/006 (SHEET 1 OF 1)

REV NO	DATE	DESCRIPTION
01	JAN 2005	INITIAL AGREEMENT FOR SERVICE
		
CLIENT:		
		
AGENCY ENGINEERS : JOYNS COLLETT		
		
EPC CONTRACTOR: MR VANDANA BHAWAN		
		
SAFETY CONSULTANT: APRILCO CONSULTANTS		
		
PFCO CONSULTANT: INDIAN INSTITUTE OF TECHNOLOGY DELHI		
		
PRODUCT: NOVA STEEL ROAD (NS-27)		
FOR LANDING OF 30x42 TRUCK AND 60 TONNIA TRUCK IN		
Drawn	AS	
Checked	AS	
		
SCALE: AS SHOWN		
		
TITLE: GENERAL ARRANGEMENT DRAWING FOR W.P. AT DESIGN CK. 504-120		
		
OESB DIRECTOR:		

TO JORHAT

TO DIRGAJAH



KEY PLAN
(SCALE - 1:1)

REFERENCE DRAWING:-
1. GENERAL APPROVED DRAWING
INCCU/86/JOR-08/ST/UP/564+120/101 (SH. 1 OF 1)

Bridge Engineer
VSP. Sivasagar



REV. NO.	DATE	DESCRIPTION	CLIENT	AUTHORITY ENGINEER	PROJECT MANAGER	DESIGNER	CHECKER	DATE	REVISION	DATE	REVISION
01	2018	INITIAL SUBMISSION FOR REVIEW	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	2018	1	2018	1
02	2018	REVISION	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	2018	2	2018	2
03	2018	REVISION	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	2018	3	2018	3
04	2018	REVISION	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	2018	4	2018	4
05	2018	REVISION	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	2018	5	2018	5
06	2018	REVISION	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	2018	6	2018	6
07	2018	REVISION	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	2018	7	2018	7
08	2018	REVISION	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	2018	8	2018	8
09	2018	REVISION	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	2018	9	2018	9
10	2018	REVISION	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	ANUPRAK, TAMULI	2018	10	2018	10

Voyasite Solutions Pvt. Ltd.
Sivasagar, Assam



BAR NO.	SHAPE	DIA (mm)	SPACING (mm)	REMARKS
1	500 □ 500	16	200 C/C	A.T. WITH BAR NO. 19
1a	500 □ 500	12	200 C/C	A.T. WITH BAR NO. 1
2	—	16	200 C/C	A.T. WITH BAR NO. 7
2a	—	20	200 C/C	A.T. WITH BAR NO. 2
3	300 □ 300	16	200 C/C	A.T. WITH BAR NO. 3
3a	300 □ 300	16	200 C/C	A.T. WITH BAR NO. 3
4	—	16	200 C/C	A.T. WITH BAR NO. 4
4a	—	16	200 C/C	A.T. WITH BAR NO. 4
5	—	12	200 C/C	A.T. WITH BAR NO. 5
5a	—	10	200 C/C	A.T. WITH BAR NO. 5
6	—	12	200 C/C	A.T. WITH BAR NO. 6
6a	—	8	200 C/C	A.T. WITH BAR NO. 6
7	500 □ 500	10	2+4 NOS.	
8	500 □ 500	20	200 C/C	A.T. WITH BAR NO. 8
8a	500 □ 500	20	200 C/C	A.T. WITH BAR NO. 8
9	500 □ 500	12	200 C/C	A.T. WITH BAR NO. 9
9a	500 □ 500	12	200 C/C	A.T. WITH BAR NO. 9
10	—	12	200 C/C	A.T. WITH BAR NO. 10
10a	—	10	200 C/C	A.T. WITH BAR NO. 10
11	—	8	200 C/C	A.T. WITH BAR NO. 11
11a	—	8	200 C/C	A.T. WITH BAR NO. 11
12	300 □ 300	16	200 C/C	A.T. WITH BAR NO. 12
12a	300 □ 300	12	200 C/C	A.T. WITH BAR NO. 12
13	—	16	200 C/C	A.T. WITH BAR NO. 13
13a	—	16	200 C/C	A.T. WITH BAR NO. 13
14	—	10	200 C/C	A.T. WITH BAR NO. 14
14a	—	10	200 C/C	A.T. WITH BAR NO. 14

BAR NO.	SHAPE	DIA (mm)	SPACING (mm)	REMARKS
13	500  500	18	200 C/C	A1. TOP BAR A2. 15g
12	500  500	12	200 C/C	A1. TOP BAR A2. 15g
11	500  500	16	200 C/C	A1. TOP BAR A2. 15g
10	500  500	12	200 C/C	A1. TOP BAR A2. 15g
9	500  500	10	200 C/C	A1. TOP BAR A2. 15g
8	500  500	10	200 C/C	A1. TOP BAR A2. 15g
7	500  500	10	200 C/C	A1. TOP BAR A2. 15g
6	500  500	10	200 C/C	A1. TOP BAR A2. 15g
5	500  500	10	200 C/C	A1. TOP BAR A2. 15g
4	500  500	10	200 C/C	A1. TOP BAR A2. 15g
3	500  500	10	200 C/C	A1. TOP BAR A2. 15g
2	500  500	10	200 C/C	A1. TOP BAR A2. 15g
1	500  500	10	200 C/C	A1. TOP BAR A2. 15g

1. ALL DIMENSIONS ARE IN MILLIMETERS AND UNLESS ARE IN METERS, UNLESS OTHERWISE NOTED. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
2. CONCRETE SHALL BE DESIGN MIX WITH MINIMUM 28 DAYS COMPRESSIVE STRENGTH AS FOLLOWS:
a) RC COLUMNS 455
b) RC BEAMS 455
c) RC ROOF SLAB 455
d) RC R.C. FLOOR 455
3. MINIMUM COVER TO ANY REINFORCEMENT SHALL BE AS FOLLOWS:
a) TOP SLAB (BOTH FACE) 50mm
b) BOTTOM SLAB (BOTH FACE) 50mm
c) TOP SLAB (EARTH FACE) 75mm
d) VERTICAL WALL (OPEN FACE) 50mm
e) VERTICAL WALL (BOTH FACE) 50mm
f) BOTTOM SLAB (BOTH FACE) 75mm
4. REINFORCEMENT BAR SHALL CONFORMING TO IS 1786-1985 OR ENCE Fe-500.
5. STAPLING OF REINFORCEMENT SHALL BE DONE EITHER BY OVERLAPPING OR BY USING MECHANICAL COUPLER.
6. FOR SPREAD NO. 15.53 OF RC: 112-2011, OVERLAPPING FOR JOINTS OF REINFORCEMENT SHALL BE AS FOLLOWS:

PERCENTAGE LAPPED BARS
RELATIVE TO TOTAL CROSS
SECTION AREA

	1/2 LENGTH L _g
1.5% AS	510
3.2% AS	600
5.0% AS	720
5.0% AS	780

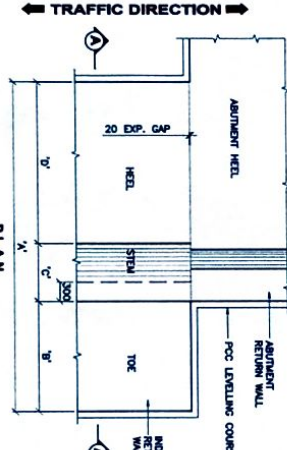
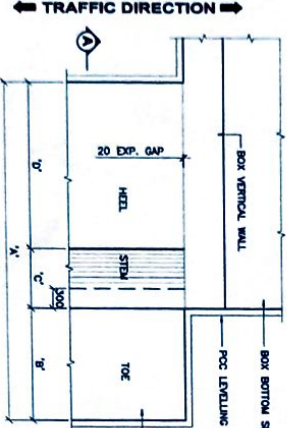
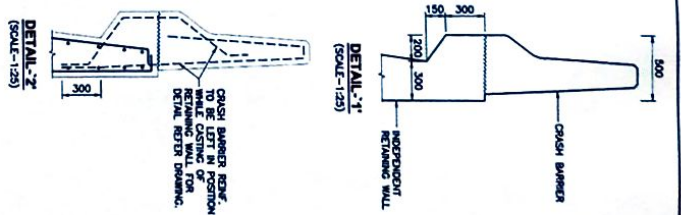
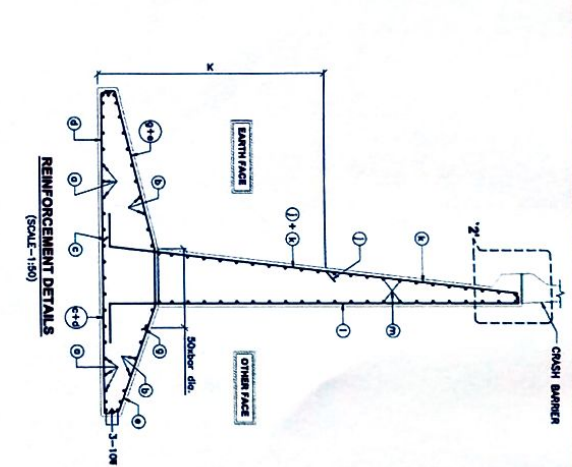
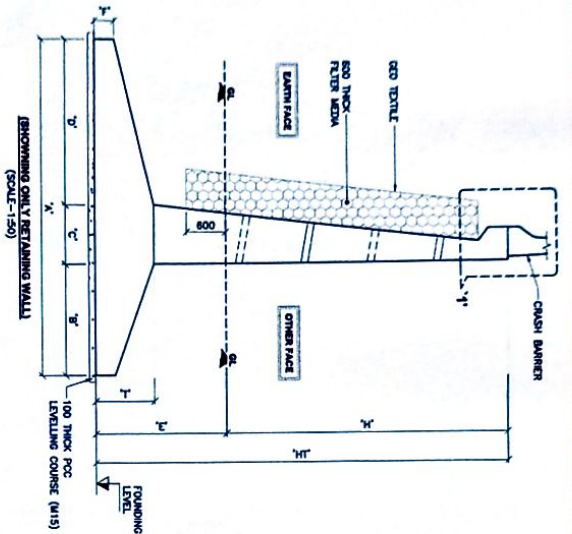
7. BARS SHOWN IN THE DRAWING ARE NOT TO BE COUNTED
UNLESS THE DATA SHALL BE FOLLOWED.

REFERENCE DRAWINGS:

1. GENERAL ANNOUNCEMENT DRAWING
RECORD/44/105-100/57/147/564/120/101 (SH. 1 OF 1)

Bridge Engineer
VSP, Sivasana

[illegible]



PLAN (WITH BOX) (SCALE-1:50)

PLAN (WITH ABUTMENT) (SCALE-1:50)

SL. NO.	REMARKS	TOTAL HEIGHT	TOTAL HEIGHT	TOTAL HEIGHT	TOTAL HEIGHT	TOTAL HEIGHT	TOTAL HEIGHT
1	2	3	4	5	6	7	8
1	10mm dia @ 200mm c/c	10mm dia @ 200mm c/c	10mm dia @ 200mm c/c	10mm dia @ 200mm c/c	10mm dia @ 200mm c/c	10mm dia @ 200mm c/c	10mm dia @ 200mm c/c
2	10mm dia @ 200mm c/c	10mm dia @ 200mm c/c	10mm dia @ 200mm c/c	10mm dia @ 200mm c/c	10mm dia @ 200mm c/c	10mm dia @ 200mm c/c	10mm dia @ 200mm c/c
3	not used	not used	not used	not used	not used	not used	not used
4	10mm dia @ 150mm c/c	12mm dia @ 125mm c/c	12mm dia @ 200mm c/c	12mm dia @ 200mm c/c	12mm dia @ 200mm c/c	12mm dia @ 200mm c/c	12mm dia @ 200mm c/c
5	10mm dia @ 150mm c/c	12mm dia @ 125mm c/c	12mm dia @ 200mm c/c	12mm dia @ 200mm c/c	12mm dia @ 200mm c/c	12mm dia @ 200mm c/c	12mm dia @ 200mm c/c
6	not used	not used	not used	not used	not used	not used	not used
7	not used	not used	not used	not used	not used	not used	not used
8	12mm dia @ 150mm c/c	12mm dia @ 125mm c/c	12mm dia @ 200mm c/c	12mm dia @ 200mm c/c	12mm dia @ 200mm c/c	12mm dia @ 200mm c/c	12mm dia @ 200mm c/c
9	10mm dia @ 200mm c/c	10mm dia @ 125mm c/c	10mm dia @ 200mm c/c	10mm dia @ 200mm c/c	10mm dia @ 200mm c/c	10mm dia @ 200mm c/c	10mm dia @ 200mm c/c
10	10mm dia @ 200mm c/c	10mm dia @ 200mm c/c	10mm dia @ 200mm c/c	10mm dia @ 200mm c/c	10mm dia @ 200mm c/c	10mm dia @ 200mm c/c	10mm dia @ 200mm c/c

SL. NO.	TOTAL HEIGHT (M)	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0
1	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00	19.00
2	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00	19.00	20.00
3	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00	19.00	20.00	21.00
4	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00	19.00	20.00	21.00	22.00
5	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00	19.00	20.00	21.00	22.00	23.00
6	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00	19.00	20.00	21.00	22.00	23.00	24.00
7	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00	19.00	20.00	21.00	22.00	23.00	24.00	25.00
8	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00	19.00	20.00	21.00	22.00	23.00	24.00	25.00	26.00
9	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00	19.00	20.00	21.00	22.00	23.00	24.00	25.00	26.00	27.00
10	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00	19.00	20.00	21.00	22.00	23.00	24.00	25.00	26.00	27.00	28.00

- NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETER, UNLESS OTHERWISE SPECIFIED.
 2. DIMENSIONS ARE NOT TO BE SOLID, ONLY MESH.
 3. DIMENSIONS SHALL BE FOLLOWED.
 4. CONCRETE SHALL BE DESIGN AS PER IS 456:2000.
 5. REINFORCEMENT SHALL BE DESIGN AS PER IS 456:2000.
 6. REINFORCEMENT SHALL BE DESIGN AS PER IS 456:2000.
 7. REINFORCEMENT SHALL BE DESIGN AS PER IS 456:2000.
 8. REINFORCEMENT SHALL BE DESIGN AS PER IS 456:2000.
 9. REINFORCEMENT SHALL BE DESIGN AS PER IS 456:2000.
 10. REINFORCEMENT SHALL BE DESIGN AS PER IS 456:2000.



ANUPAM TANULI
Project Manager
M/S. Manoj Kumar Engineering
(MIDC, 4-Lane Project)

Bridge Engineer
CPL

REV. NO.	DATE	DESCRIPTION
1	10/10/2023	INITIAL DESIGN FOR REVIEW
2	10/10/2023	REVISION 1
3	10/10/2023	REVISION 2
4	10/10/2023	REVISION 3
5	10/10/2023	REVISION 4
6	10/10/2023	REVISION 5
7	10/10/2023	REVISION 6
8	10/10/2023	REVISION 7
9	10/10/2023	REVISION 8
10	10/10/2023	REVISION 9

CLIENT:	VOYANTIS SOLUTIONS PVT. LTD.
PROJECT:	4-LANE PROJECT
LOCATION:	MAHARASHTRA
DESIGNER:	ANUPAM TANULI
CHECKER:	ANUPAM TANULI
DATE:	10/10/2023

VOYANTIS SOLUTIONS PVT. LTD.
Sivasagar, Assam