



# **National Highways Authority of India**

**(Ministry of Road Transport & Highways)  
(Government of India)**

**“CONSTRUCTION OF EIGHT LANE EXPRESSWAY STARTING BEFORE KMP EXPRESSWAY AND ENDS AT CH. 47+000 NEAR KHANPUR GHATI (KM 18+500 TO KM 47+000) SECTION OF DELHI - VADODARA GREEN FIELD ALIGNMENT (NH-148N) ON EPC MODE UNDER BHARATMALA PARIYOJANA IN THE STATE OF HARYANA ON EPC MODE”**

## **ENGINEERING PROCUREMENT AND CONSTRUCTION (EPC) AGREEMENT**

Between

**National Highways Authority of India**

G-5&6, Sector-10, Dwarka, New Delhi-110075

And

**APCO Infratech Private Limited**

4th Floor, Universal Trade Tower, Sohna Road,  
Sector-49, Gurugram-122101 (Haryana)

**VOLUME-III  
(DRAWINGS)**

July-2019

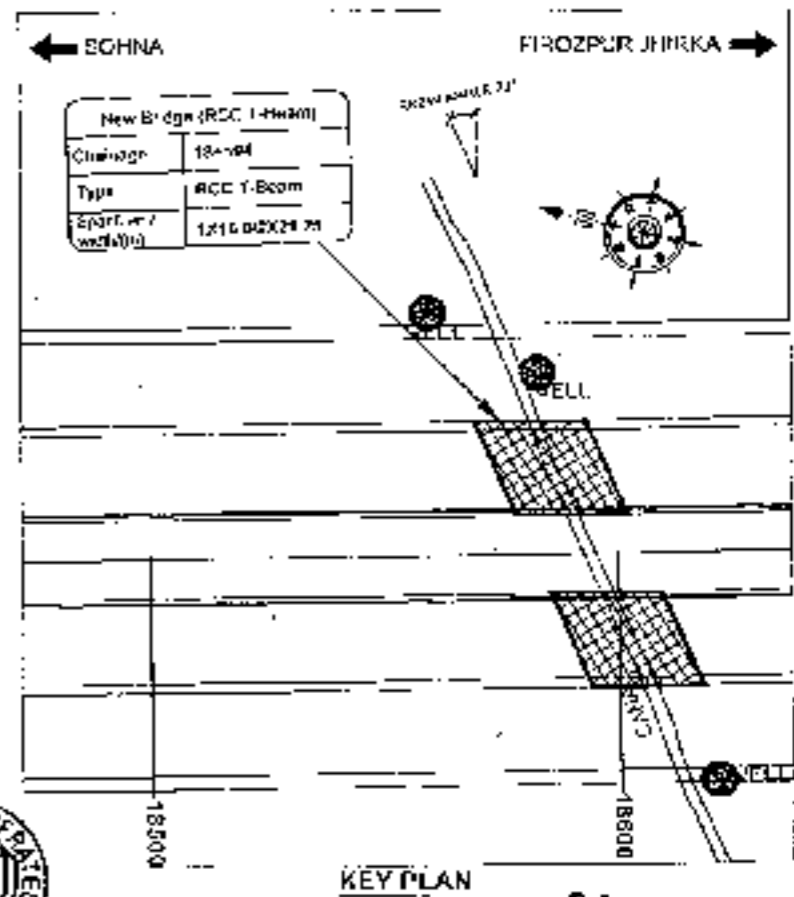
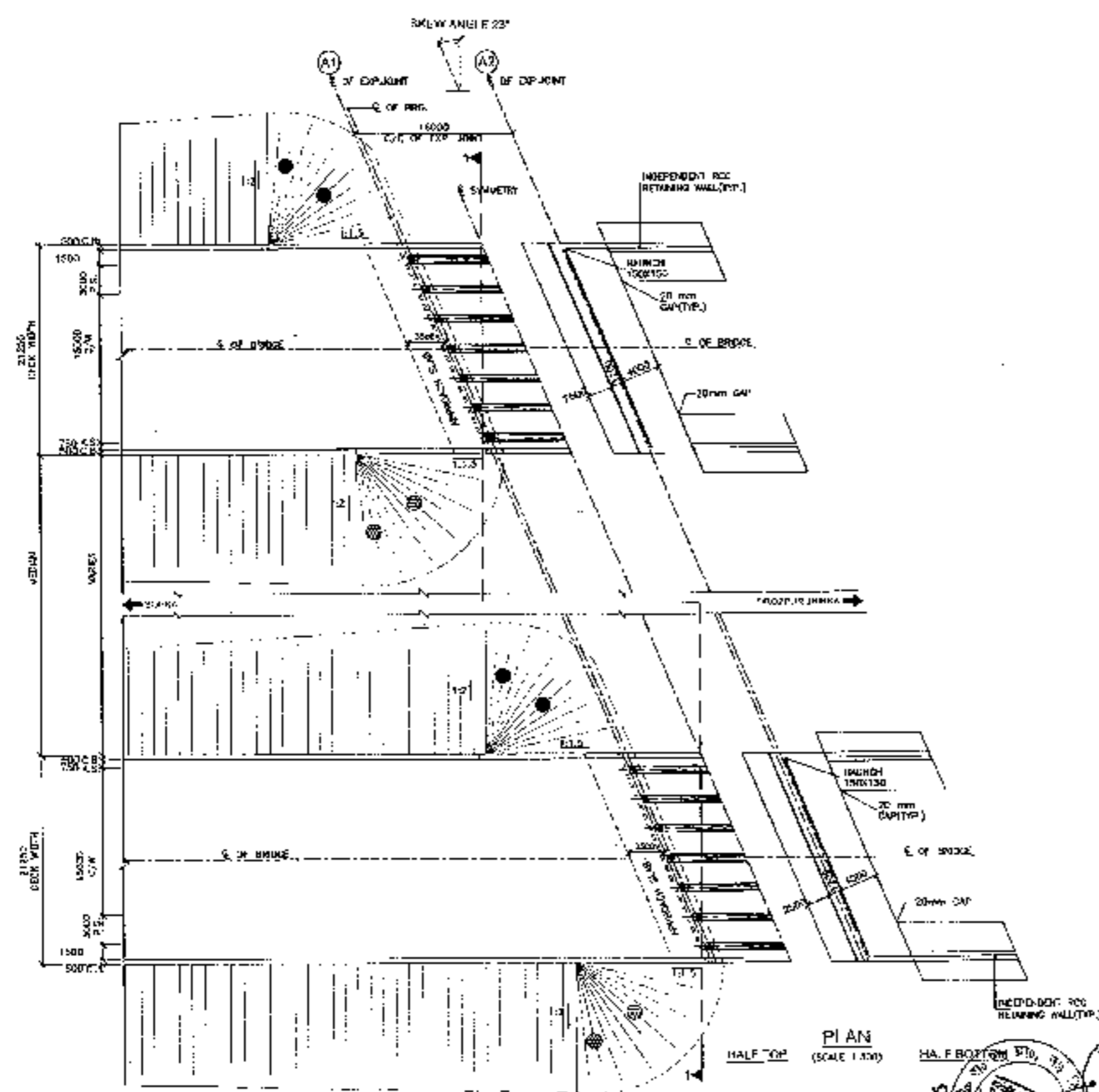
# Structural Drawings

STRUCTURAL DRAWINGS OF SOHNA- FIROZPUR JHIRKA SECTION OF DELHI-VADODARA  
EXPRESSWAYPACKAGE-II (Km. 18+500 to Km. 47+000)

# BRIDGES

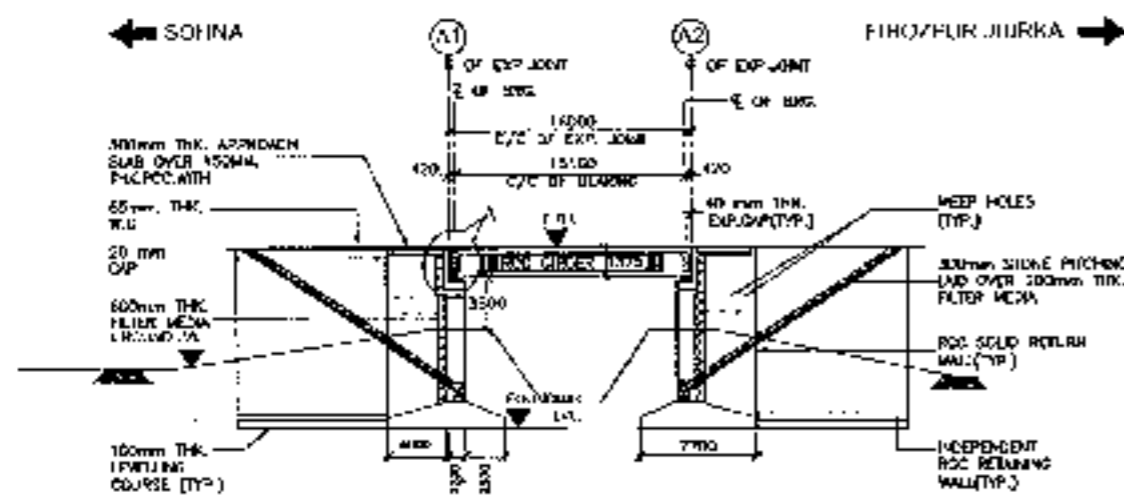
RCC T-BEAM (SIZE 1x16.0M)  
AT KM 18+594





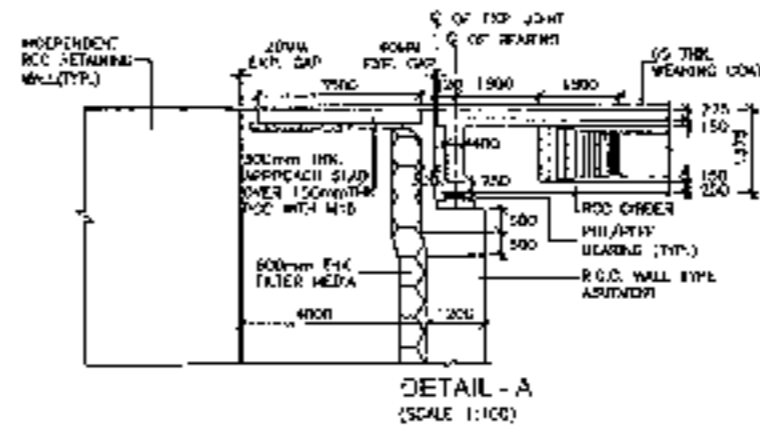
- NOTES -
1. ALL DIMENSIONS ARE IN MM AND LEVELS ARE IN METERS UNLESS OTHERWISE MENTIONED. ONLY METRIC DIMENSIONS TO BE FOLLOWED. NO DIMENSION UNIT IS MENTIONED.
  2. THE PROPOSED 1 LANE BRIDGE HAS BEEN DESIGNED FOR TOR OR FUTURE CLASS II LOGGING, BRIDGEWAY CATEGORIES.
  3. CONCRETE SHALL BE DESIGN M20 AND GRADE OF IT SHALL AS INDICATED BELOW:-  
 FOR FINISHING CONCRETE : M-15  
 SUBSTRUCTURE : M-20  
 SUPERSTRUCTURE : M-25  
 GRADY DRAINER : M-40  
 APPROACH SLAB : M-30  
 RETAINING WALLS : M-35
  4. GRADE OF SITE SHALL BE TO SLOPE CONFORMING TO IS 1906.
  5. BANK FALLING BE-HIND ABUTMENTS AND RETAIN WALLS SHALL CONSIST OF SELECTED LUMPS CORRESPONDING TO APPENDIX 'B' OF IS:2720-2014 HAVING PROPERTIES CLASS M-30/35 &  $f_{ck} = 25 \text{ N/mm}^2$ .
  6. BRIDGE COMPARTMENT AND FINISH OF BRIDGE SHALL CONFORM TO SPECIFICATIONS IN APPENDIX 'B' OF IS: 78-2014.
  7. WEAP HOLES, SPACED AT 1000 C/C WITH HORIZONTALITY AND VERTICALITY SHALL BE PROVIDED IN A STANDARD MANNER IN ABUTMENTS AND RETAIN WALLS TO 100 MM ABOVE GROUND LEVEL.
  8. CLASS III C.C. WORKING COURSE SECTION 500 OF WIDTH 5000/6000.
  9. ALL DIMENSIONS ARE TENTATIVE MAY BE CHANGED W/O DETAIL DESIGN.
  10. DIMENSION OF EXPANSION IS VARIABLE.
  11. THIS STRUCTURE IS IN STAGE THAT I.

<b>CLIENT:</b> National Highways Authority of India	<b>CONSULTANT:</b> <b>Chaitanya Projects Consultancy Pvt. Ltd.</b> G-5 2ND FLOOR, R.H. TOWER PLOT NO. 21-22 SECTOR 4, VAISHALI, GHAZIABAD PH: 0120-1227419, 4120472, FAX: 3126-4116472	<b>PROJECT:</b> Consultancy Service for the Preparation for Feasibility Study for development of Economic Corridor, Inter Corridor and Sub Corridors to improve the efficiency of freight movement in and around Delhi & NCR Panayana, U.P. & Paritosh-4 of Sohna - Ferozpur Jhinka	<b>DATE FILED:</b> GENERAL ARRANGEMENT DRAWING SPAN (1 X 121.6 M C/C EXP. JOINT) AT CH 10+500 [SOHNA - FEROZPUR JHINKA]	<b>DRAWN BY:</b> DATE: 10/05/2014 PREPARED BY: UMSHUBA CHECKED BY: UMSHUBA APPROVED BY:
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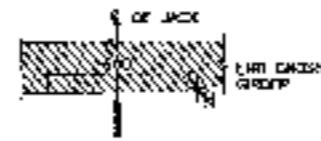


**LONGITUDINAL ELEVATION**  
(SCALE 1:500)

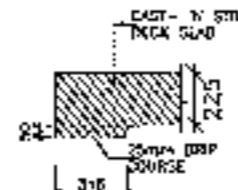
DEFORMATION (E/F) (M)	201.322	201.353	
GROUND LEVEL (M)	193.951	193.958	
CHANGING (M)	181.588	181.094	181.402



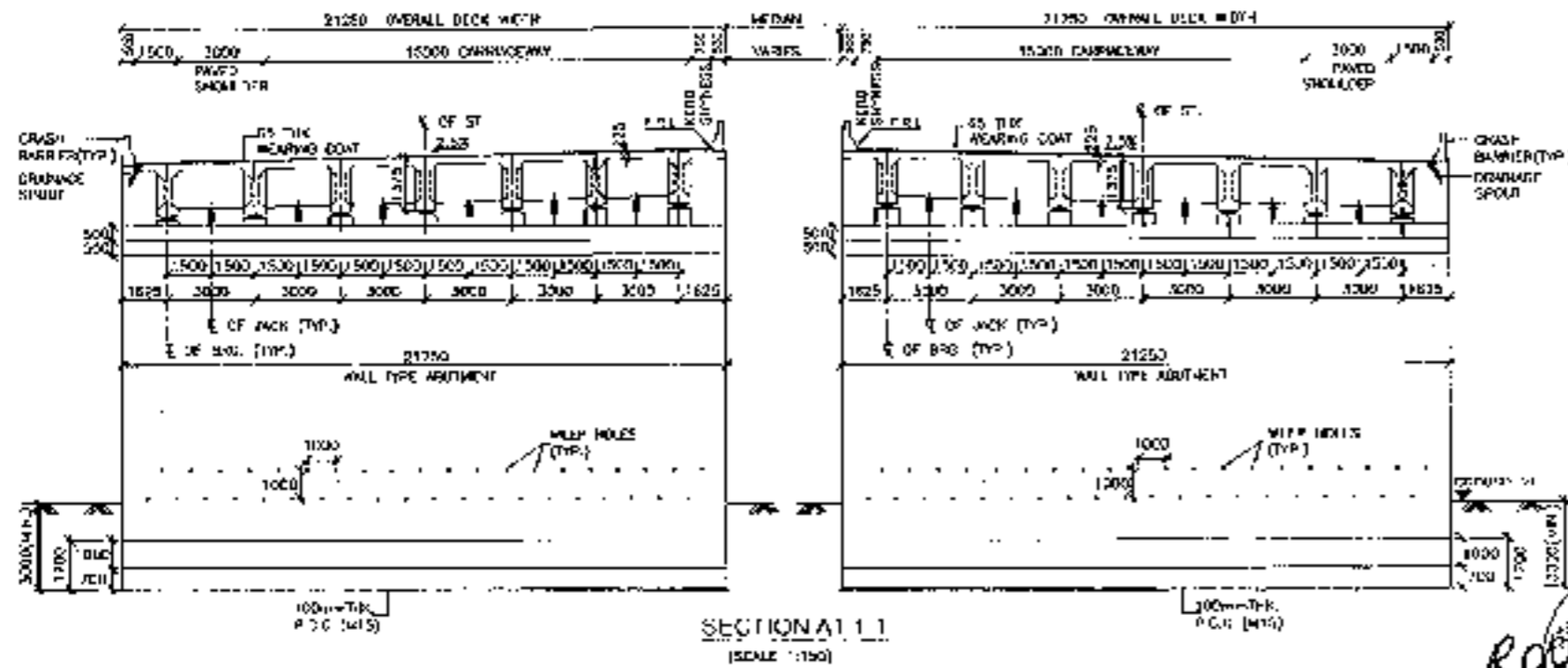
**DETAIL - A**  
(SCALE 1:100)



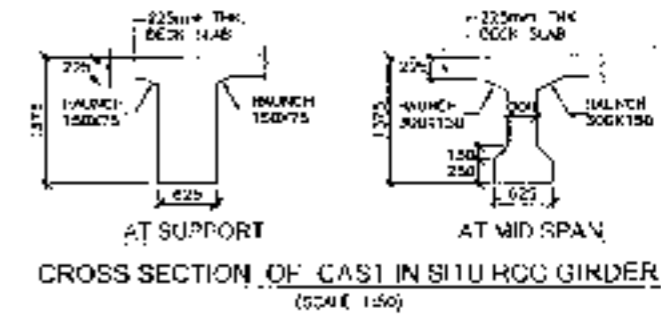
**DETAIL - B**  
DETAIL OF CURB AND GUTTER  
AT JOINT LOCATION  
(SCALE 1:50)



**DETAIL - C**  
(SCALE 1:20)



**SECTIONAL I.I**  
(SCALE 1:50)



**CROSS SECTION OF CAST IN SITU RCC GIRDER**  
(SCALE 1:50)



05

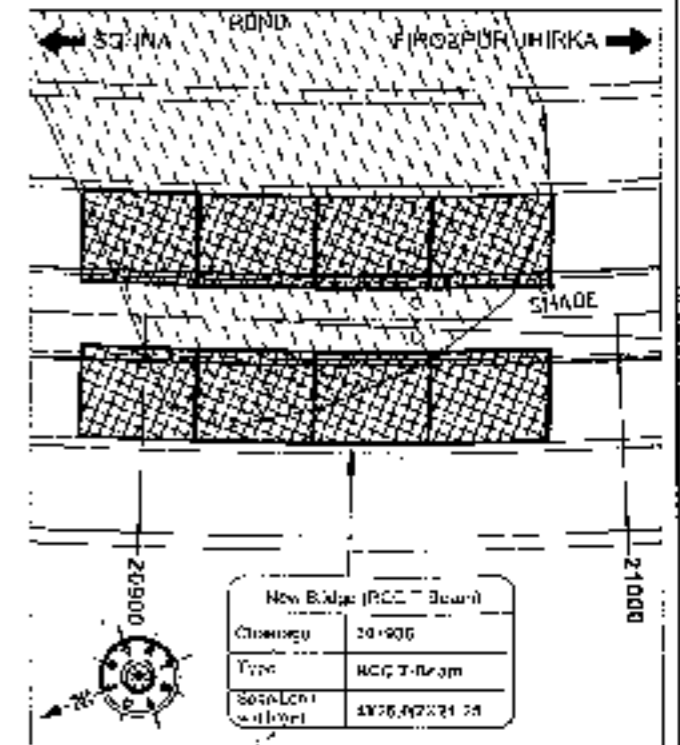
CLIENT - 	CONSULTANT - Chaitanya Projects Consultancy Pvt. Ltd. G-5 2ND FLOOR, R.K. TOWER PLOT NO - 24/22, SECTOR-4, VAISHALI, GHAZIABAD P.O. 0120322419 4120472, FAX 0120-4113472	PROJECT - Consultancy Service for the Preparation for Feasibility Report/CRP for development of Freeway Corridor, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (at G.P. Road - 4) of Rohini, Firozpur Jirka	DWG TITLE: GENERAL ARRANGEMENT DRAWING SPAN: 1 X 16.00M C/C EXP. JOINT AT CH-48-594 (SOHNA, FIROZPUR JIRKA)	DRAWING NO: CH-1500-TR-1500-100	SHEET NO: 05
				PREPARED BY: CHEKRETRY	APPROVED BY: (Signature)

RCC T-BEAM (SIZE 4x25.0M)  
AT KM 20+936

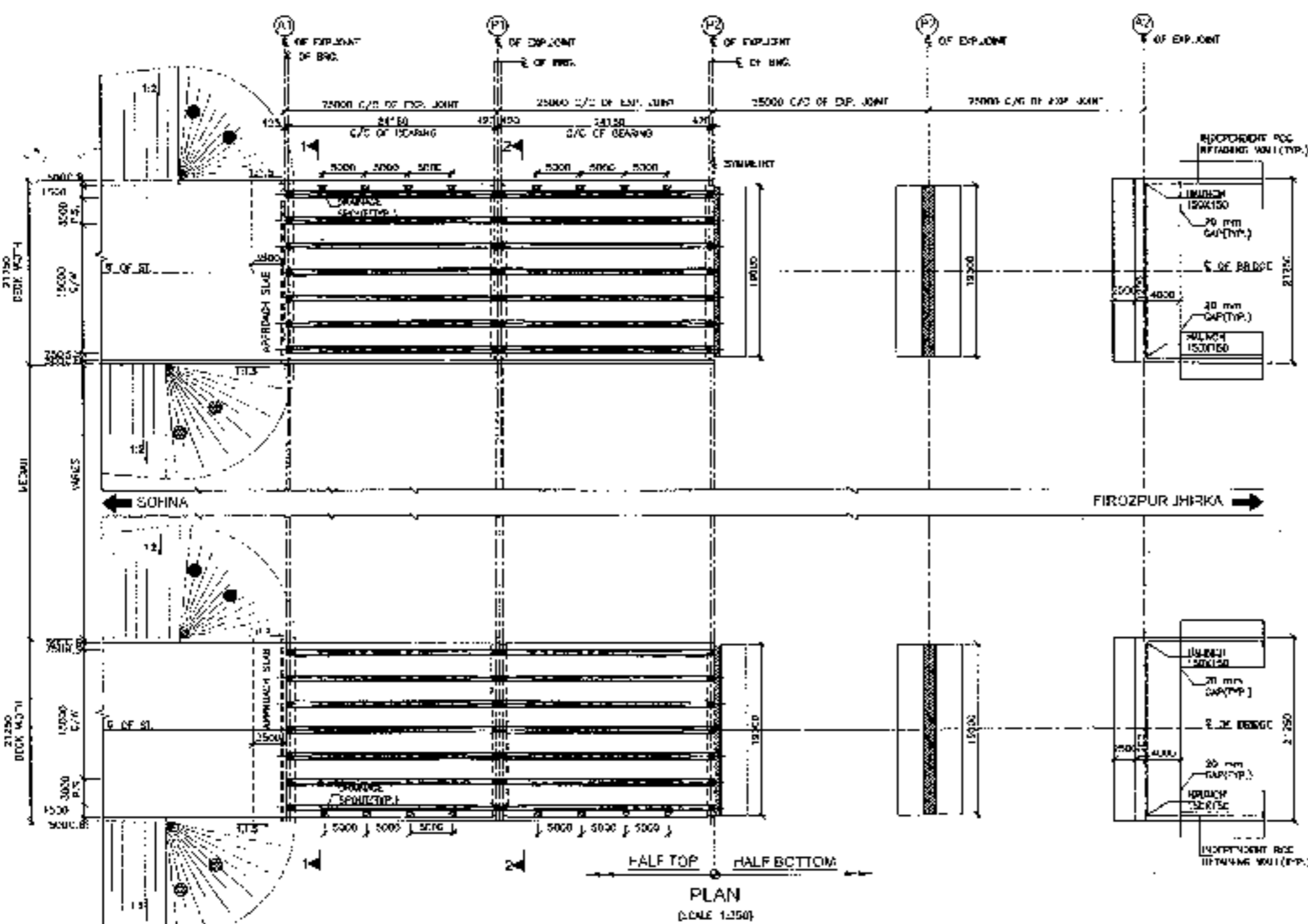


**NOTES:-**

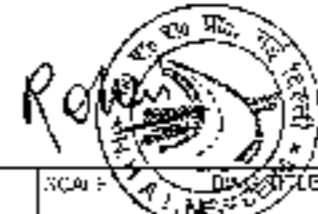
1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE MENTIONED. ONLY METRIC DIMENSIONS TO BE FOLLOWED. NO MANDREN SHALL BE SHOWN.
2. THE PROPOSED 3 LANE BRIDGE HAS BEEN DESIGNED FOR 750 C/M WITH LANE CLASS A LOADING, WHICHEVER OCCURS.
3. CONCRETE SHALL BE DESIGN MIX AND SHALL BE OF GRADE AS INDICATED BELOW:-  
 RCC DECKING COURSE : M-15  
 SUPERSTRUCTURE : M-40  
 SUBSTRUCTURE : M-25  
 CRASH BARRIER : M-40  
 APPROACH SLAB : M-20  
 RETURN/WING WALLS : M-20
4. GRADE OF SILLS SHALL BE 14-5000 CURBSHAWING TO BE TOP.
5. EACH PILING BEHIND ABUTMENTS AND RETURN WALLS SHALL EXHIBIT 2% SETTLEMENT WITH COMPENSATION TO APPEARANCE. IS OF IS:272-2014 HAVING PROPERTIES C-10,  $\sigma_{cb}$  30,  $\sigma_{ct}$  10,  $\sigma_{cp}$  20.
6. LAYING COMPACTION AND DETAIL OF BACKFILL BEHIND ABUTMENT AND RETURN WALL SHALL CONFORM TO SPECIFICATIONS IN ANNEXURE 'E' OF IS: 10-2014.
7. WELP HOLES, SPACED AT 1000 C/M BOTH HORIZONTAL AND VERTICAL SHALL BE PROVIDED IN A SMOOTHED MANNER IN ABUTMENTS AND RETURN WALLS TO THE TYPICAL SPACING 1000.
8. 45mm TYP. E.C. VIBRATING COURSE SECTION NOT TO EXCEED SPECIFICATIONS.
9. ALL DIMENSIONS ARE TENTATIVE MAY BE CHANGED AFTER FINAL DESIGN.
10. LOCATION OF DISPOSER IS INDICATED.
11. THIS STRUCTURE LIES IN ZONE III.





**KEY PLAN**



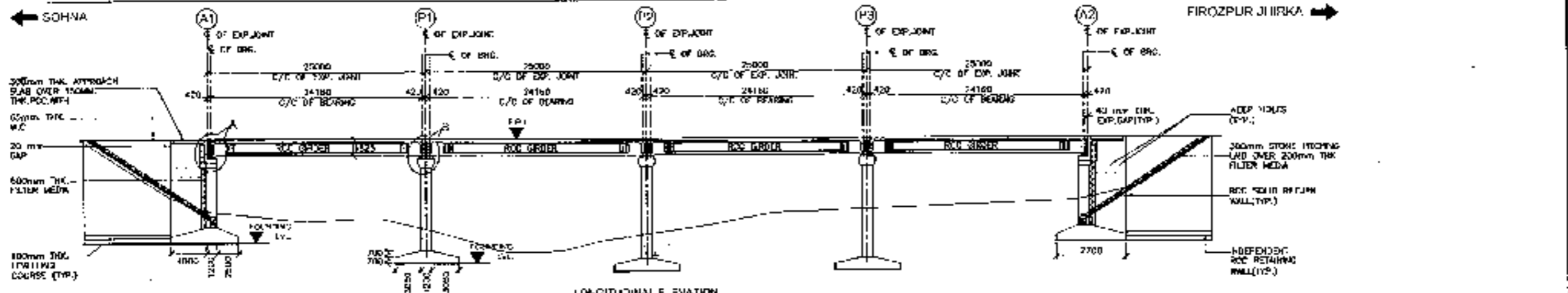
**PLAN**  
(SCALE 1:250)



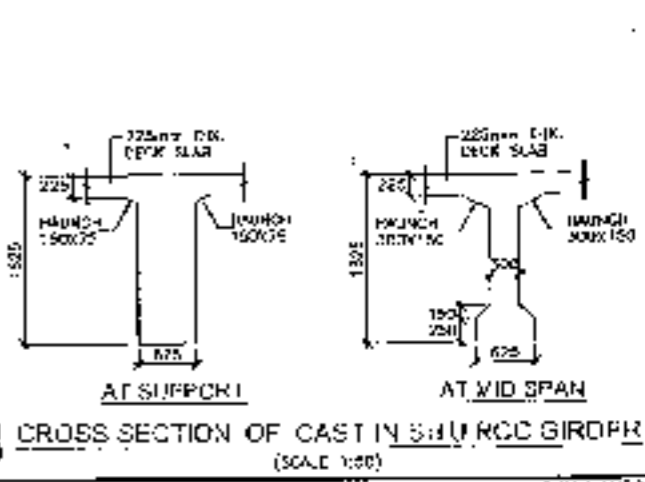
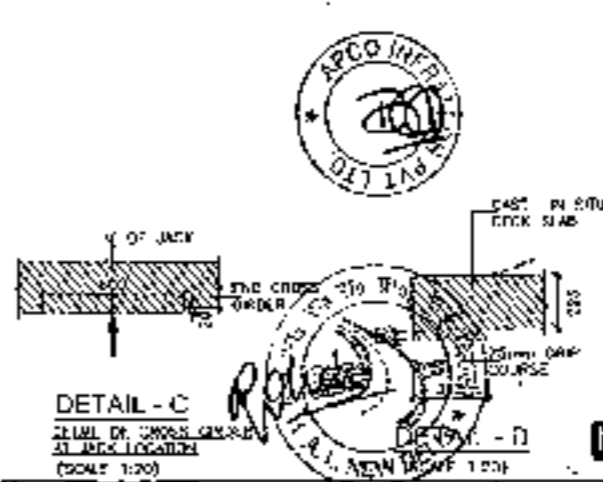
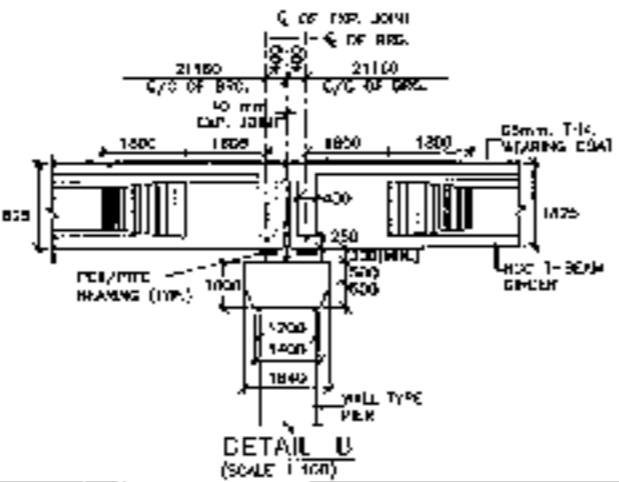
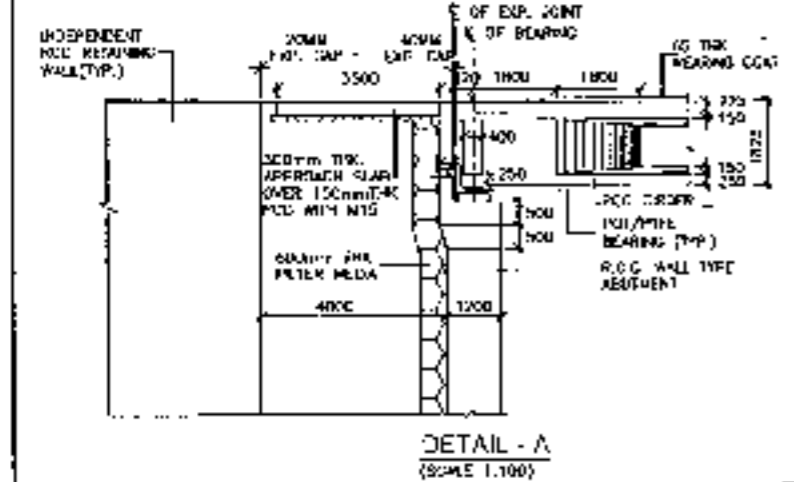
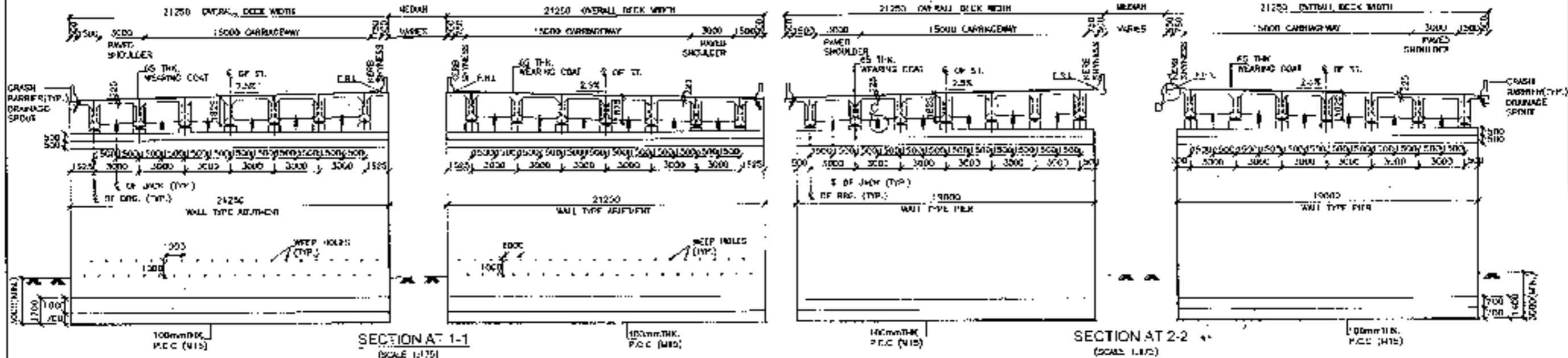
**07**

<b>CLIENT -</b>  National Highways Authority of India Plot No. 1, Sector 4, Gurgaon, Haryana	<b>CONSULTANT -</b>  Chalanya Projects Consultancy Pvt. Ltd. C.S. 2ND FLOOR, P.K TOWER PLOT NO. 21-22 SECTOR 4, VAISHALI, GURGAON PH: 0122-3225419, 4700472, FAX: 3426-110472	<b>PROJECT -</b> Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridor, Inter Connectors and Bypass Roads to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot 6/Package 4) of Sohna - Ferozpur Jhirka	<b>SCALE -</b> AS SHOWN GENERAL ARRANGEMENT DRAWINGS SPAN (3 x 25.00 M) C/E EXP. JOINTS AT CH. 20+900 SOHNA - FEROZPUR JHIRKA	<b>DRAWING No. -</b> CHAL/21/22/4/01-9995-07	<b>SHEET No. -</b> R0
				<b>DATE -</b> AUGUST 2021	<b>REVISION</b> R0
<b>PREPARED BY -</b> (Signature)	<b>CHECKED BY -</b> (Signature)	<b>APPROVED BY -</b> (Signature)	<b>DATE</b> 2021-08-04	<b>DATE</b> 2021-08-04	<b>DATE</b> 2021-08-04





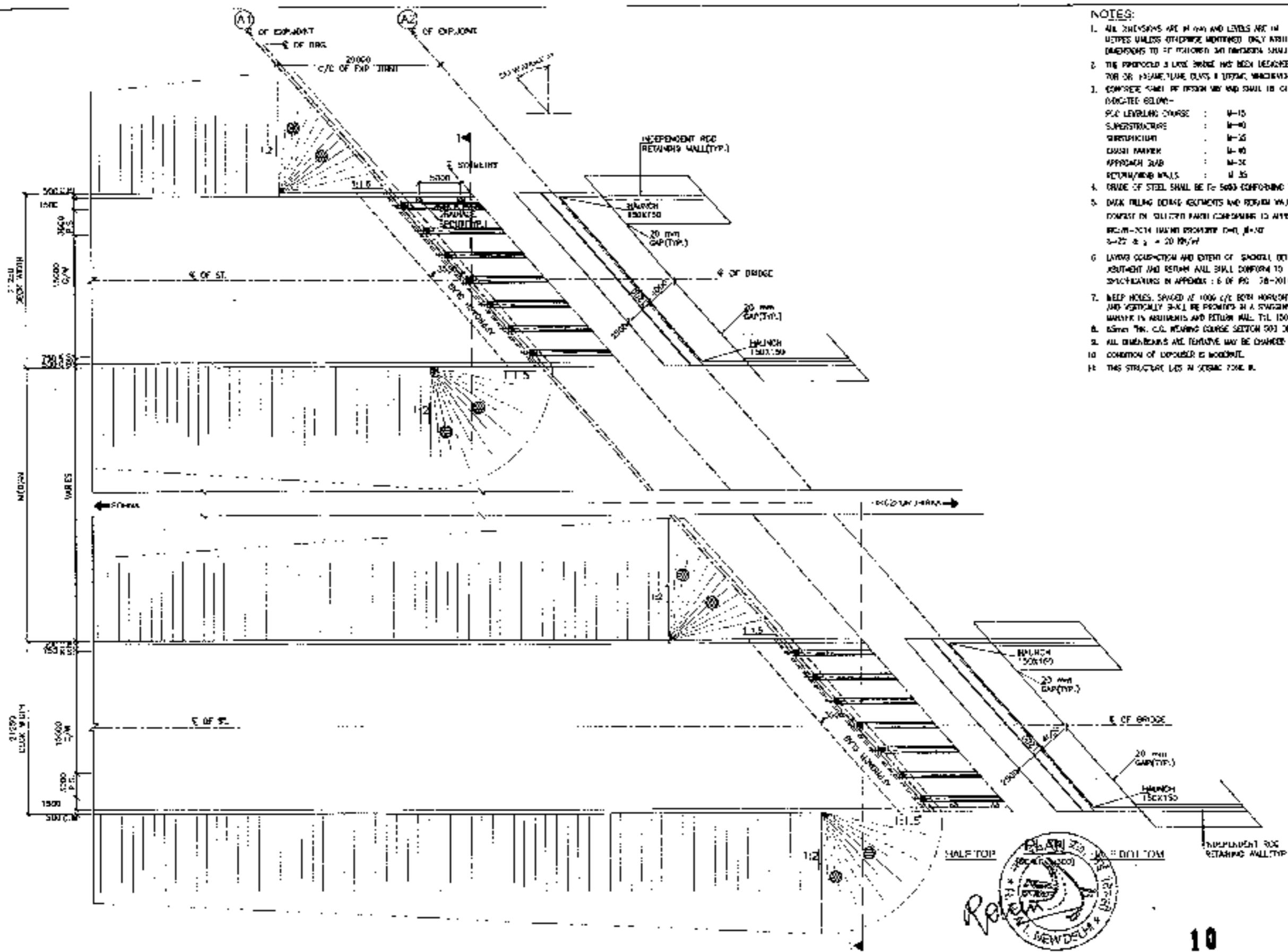
FORMATION LEVEL (M)	136.520	138.620	146.620	150.620	156.520
GROUND LEVEL (M)	122.700	122.000	122.250	129.000	133.200
CHANGING POINT	204828	204911	204935	224961	227186



<b>CLIENT</b> National Highways Authority of India	<b>CONSULTANT</b> Chaitanya Projects Consultancy Pvt. Ltd. G-5, 2ND FLOOR, RK TOWER PLOT NO. 21-22 SECTOR-4, VAISHALI, GHAZIABAD PH: 9170-222410, 9123472, FAX: 0121-4110472	<b>PROJECT</b> Consultancy Service for the Preparation for Feasibility Report (RFP) for Development of Feasibility Conditions, Inter Connectors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot 02 Package-4) of Sohra - Ferozpur Jirka	<b>SCALE</b> AS SHOWN	<b>DWG TITLE</b> GENERAL ARRANGEMENT DRAWING SPAN 14 X 20.00 M (C/C EXP. JOINT) AT CH 204900 SOHNA - FIROZPUR JIRKA	<b>DR. AND/OR</b> DRAWN BY: [Name] CHECKED BY: [Name] APPROVED BY: [Name]
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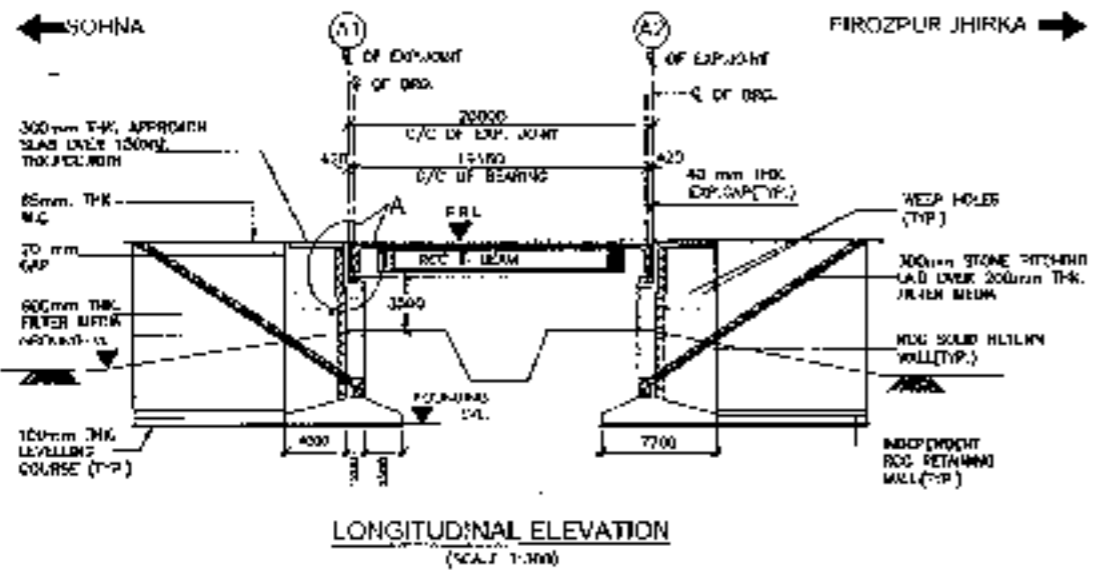
RCC T-BEAM (SIZE 1x20.0M)  
AT KM 21+570



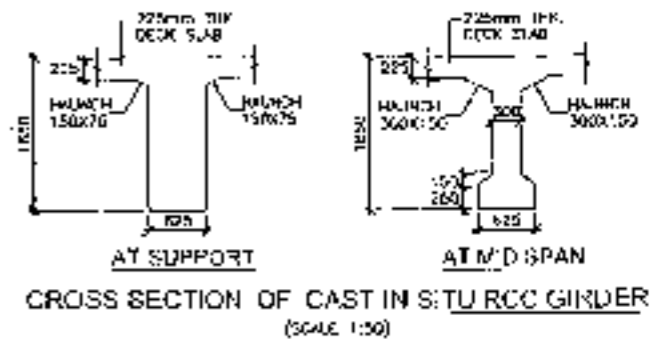
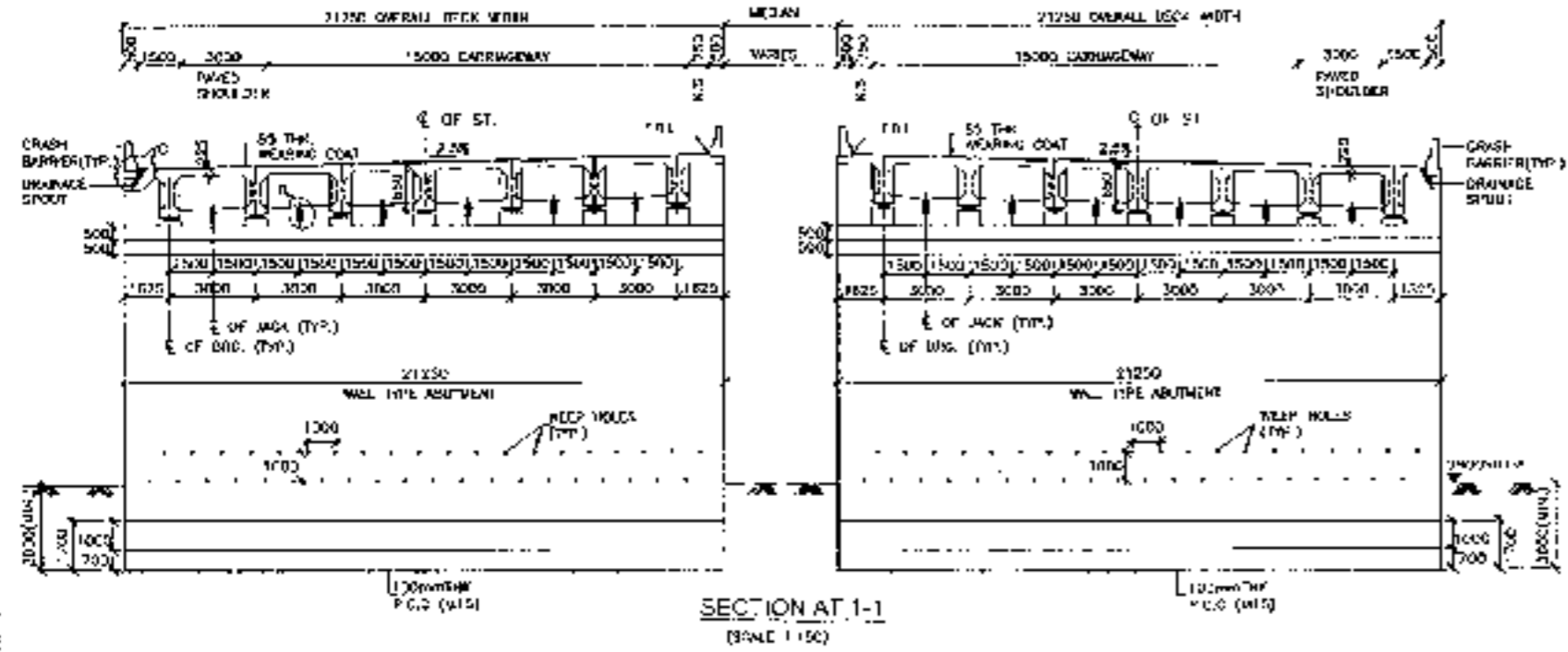
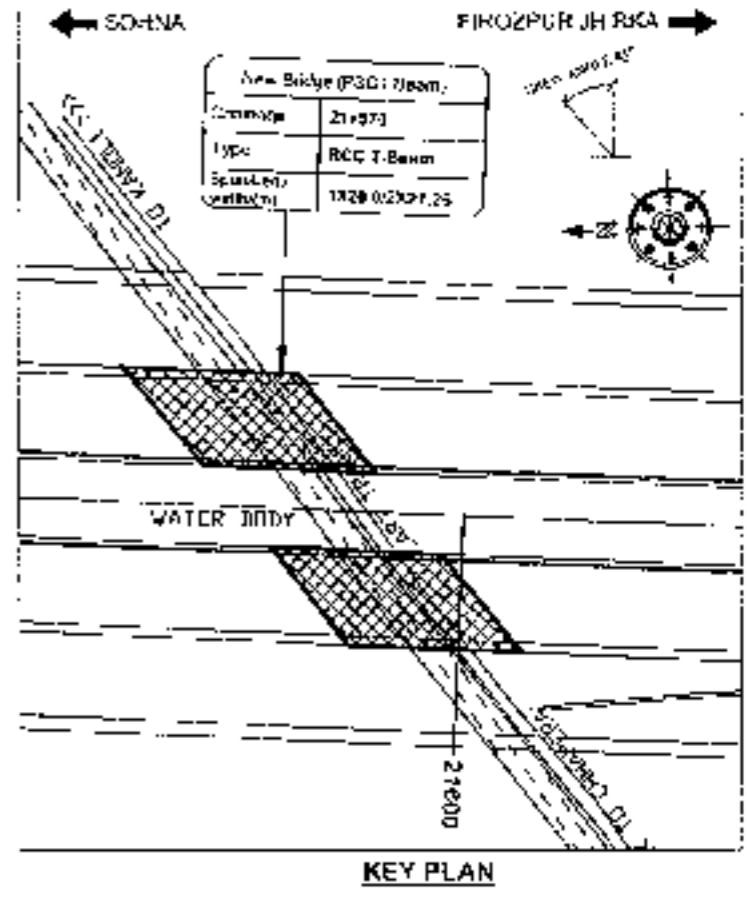
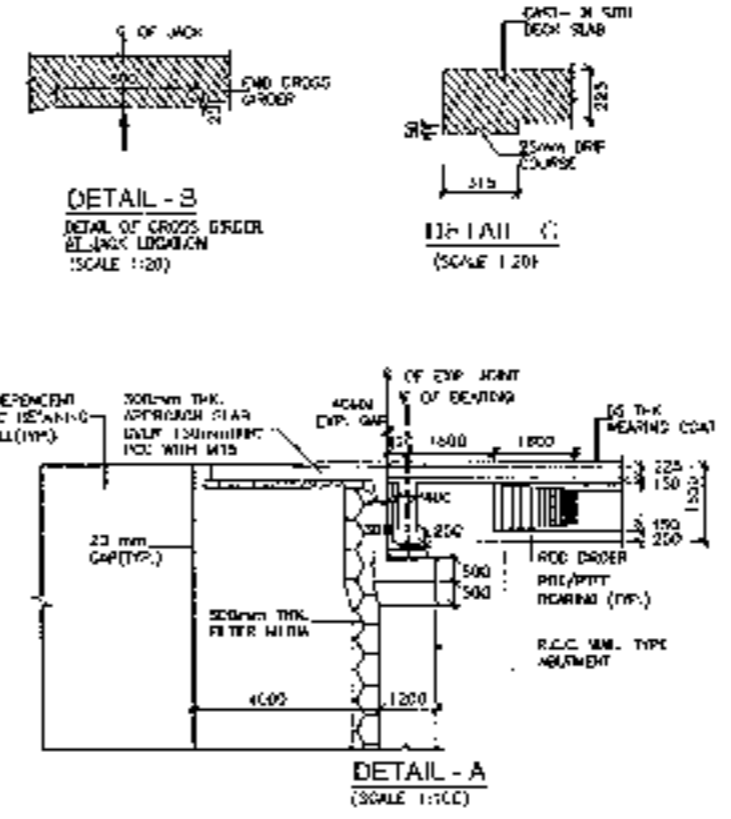


- NOTES:**
1. ALL DIMENSIONS ARE IN MM AND LEVELS ARE IN METRES UNLESS OTHERWISE NOTED. ONLY MINIMUM DIMENSIONS TO BE FOLLOWED UNLESS OTHERWISE STATED.
  2. THE PROPOSED BRIDGE HAS BEEN DESIGNED FOR TOR OR 150MM TUBE CLYS. & UTRAC. W/DRIVER COVERING.
  3. CONCRETE SHALL BE DESIGN MIX AND SHALL BE OF STRENGTH AS INDICATED BELOW:-  
 R/C LEVELING COURSE : M-10  
 SUPERSTRUCTURE : M-40  
 SUBSTRUCTURE : M-20  
 CURB PAVEMENT : M-40  
 APPROACH SLAB : M-20  
 RETAINING WALLS : M-25
  4. GRADE OF STEEL SHALL BE E-500 CONFORMING TO IS:1786.
  5. BACK FILLING BEHIND ABUTMENTS AND RETAINING WALLS SHALL CONSIST OF SPLITTED RIVER SAND ACCORDING TO ATTACHED : S-10. REGION-2014 (M&M) PROVISIONS (M-1, M-2) S-22 & 3 = 20 MM/1/1.
  6. LAYERS COMPOSITION AND EXTENT OF SANDFILL BEHIND ABUTMENT AND RETAIN WALL SHALL CONFORM TO SPECIFICATIONS IN APPENDIX : 6 OF IS: 78-2014.
  7. WEAP HOLES, SPACED AT 1000 C/C BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED IN A STAGGERED MANNER IN ABUTMENTS AND RETAIN WALL. TILL 150 mm ABOVE GROUND LEVEL.
  8. SHOW THE C/C WEARING COURSE SECTION 500 OF IAPPH SPECIFICATIONS.
  9. ALL DIMENSIONS AND TOLERANCE MAY BE CHANGED AFTER DETAIL DESIGN.
  10. CONDITION OF EXPOSURE IS WOODPILE.
  11. THIS STRUCTURE LIES IN SEISMIC ZONE II.

<p><b>CLIENT -</b> National Highways Authority of India</p>	<p><b>CONSULTANT -</b> Chaitanya Projects Consultancy Pvt, Ltd 4-5, 2ND FLOOR, N.K. TOWNSHIP III NO - 71-32, SECTION-4, VAISHALI, GHAZIABAD PH : 0120 5220419, 8107872, FAX: 0120 2110472</p>	<p><b>PROJECT -</b> Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in NDA under Bharatmala Pariyojana (Lot-6/Package-4) of Section - Firozpur Jhikra</p>	<p><b>SCALE -</b> AS SHOWN</p>	<p><b>TITLE -</b> GENERAL ARRANGEMENT DRAWINGS SPAN 7.1 x 20 CM C/C EXP. JUNCT AT CH-21-576 (SECTION: FIROZPUR JHIKRA)</p>	<p><b>DRAWING No.:</b> CH/21-576/01 DATE: AUGUST 2019 PREPARED BY: KAKUL SAGH CHECKED BY: ANIL K. S. APPROVED BY: SINGH</p>
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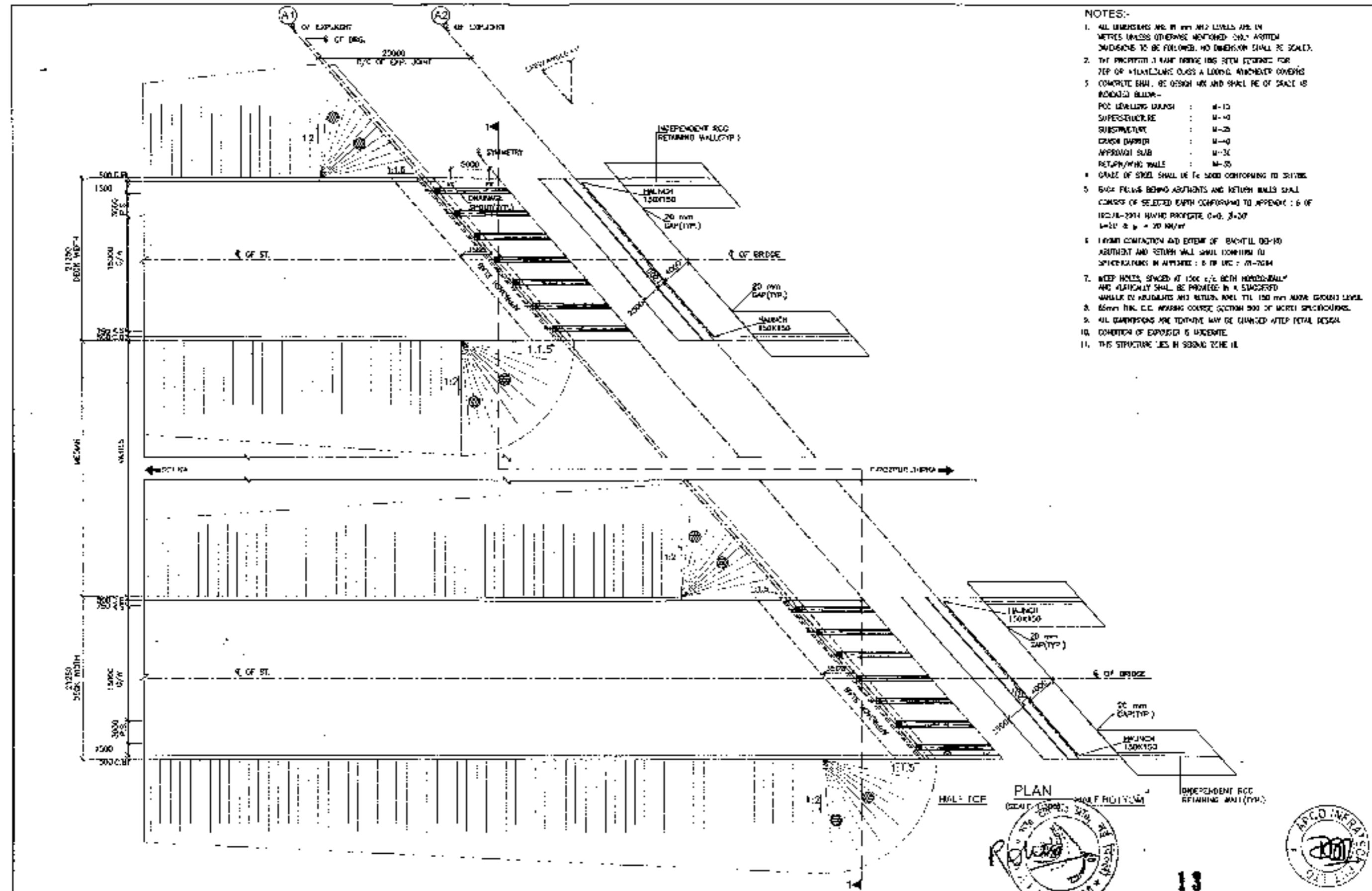
FORWARD LEVEL (m)	188.580	198.580
RIGHT HAND (m)	191.920	191.504
FINISHING (m)	214.580	214.570
	214.580	214.580



<b>CLIENT</b> National Highway Authority of India	<b>CONSULTANT</b> Ushilanya Projects Consultancy Pvt. Ltd. C-5, 2ND FLOOR, R K TOWER PLOT NO - 21-22, SECTOR-3, VAISHALI, GHAZIABAD PH: 0121-223410, 410472, FAX: 0120-411472	<b>PROJECT</b> Consultancy Services for the Preparation of Feasibility Report/PPR for development of Bypass, Corridor, Inter-Corridors and Feeder Routes to Improve the Efficiency of Freight Movement in built under Government's Partnership (Lot 04 Package 4) of Sohna - Firozpur Jhirka	<b>SCALE</b> AS SHOWN	<b>DRAWING TITLE</b> GULM-SAL GORANGI MKT DRAWING SPAN 1 X 20.00 M C/C LYP JOINT AT LH 21+580 (SOHNA - FIROZPUR JHIRKA)	<b>DRAWING No.</b> P/100/152/2014/15/2/150 <b>DATE:</b> AUGUST 2015 <b>PREPARED BY:</b> CHETAN K S <b>APPROVED BY:</b>
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RCC T-BEAM (SIZE 1x20.0M)  
AT KM 23+777





- NOTES:-**
1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS TO BE FOLLOWED. NO DIMENSION SHALL BE SCALED.
  2. THE PROVISION IS MADE ABOVE THE BRIDGE FOR TOP OF MOUNTING COLUMNS A LOADING AND COVERED CONCRETE SHALL BE DESIGN AND SHALL BE OF GRADE AS INDICATED BELOW:-  
 PCC LEVELLING GRADE : M-10  
 SUPERSTRUCTURE : M-40  
 SUBSTRUCTURE : M-20  
 CRACK DAPPER : M-40  
 APPROACH SLAB : M-30  
 RETAINING WALLS : M-30
  3. GRADE OF STREET SHALL BE AS SHOWN CONFORMING TO DESIGN.
  4. BACK FILLING BEHIND ABUTMENTS AND RETAINING WALLS SHALL CONSIST OF SELECTED EARTH CONFORMING TO APPENDIX B OF IS:1200-2014 HAVING PROPERTIES C=0, J=0.07, W=20 &  $\gamma = 20 \text{ KN/M}^3$ .
  5. LEAKAGE PROTECTION AND EXTENT OF BACKFILL BEHIND ABUTMENT AND RETAINING WALL SHALL CONFORM TO SPECIFICATIONS IN APPENDIX B OF IS:1200-2014.
  6. DEEP HOLES, SPACED AT 1500 c/c BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED IN A SCAFFOLD WALLS TO ABUTMENTS AND RETAINING WALL TILL 150 mm ABOVE GROUND LEVEL.
  7. 65mm THK. I.C.C. WEARING COURSE (SECTION 900 OF WORK SPECIFICATIONS).
  8. ALL DIMENSIONS ARE TENTATIVE MAY BE CHANGED AFTER FINAL DESIGN.
  9. CONDITION OF EXPOSURE IS UNCLASSIFIED.
  10. THIS STRUCTURE LIES IN SEIZURE ZONE II.

**PLAN**  
(GENERAL ARRANGEMENT)

SCALE : AS SHOWN

DRAWN BY: *[Signature]*

CHECKED BY: *[Signature]*

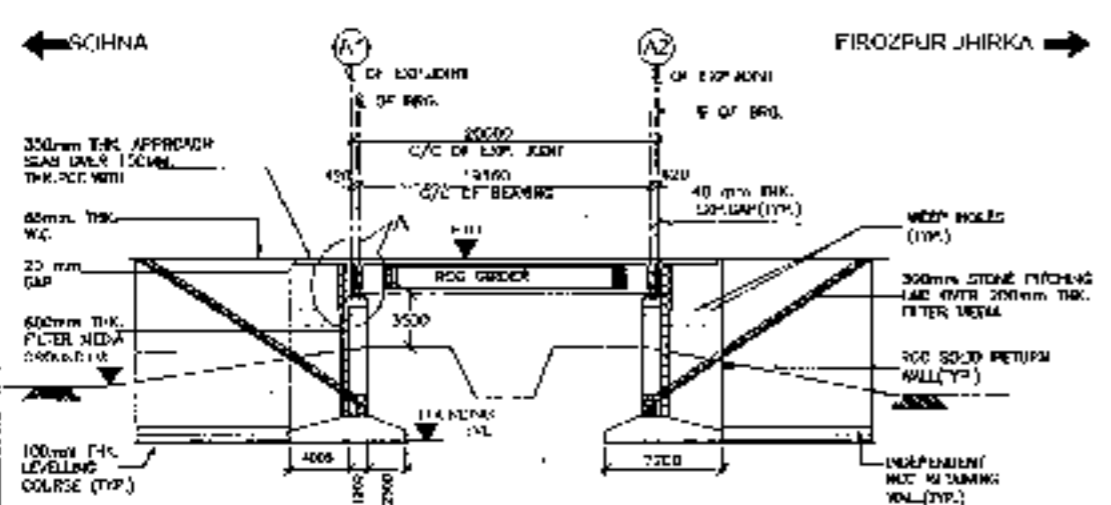
DATE: AUGUST 2016

PROJECT NO: CH-123-777

(S/O:NA, FIROZPUR, PUNJAB)

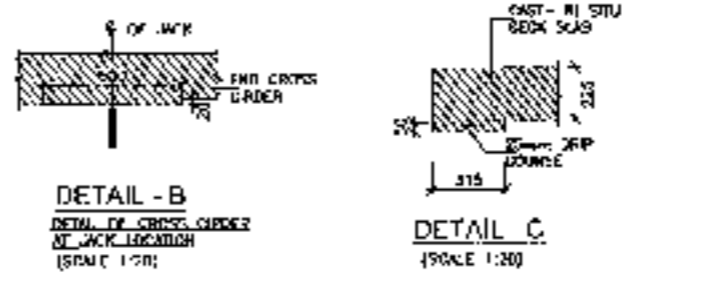
13

<p><b>CLIENT:-</b></p> <p>National Highways Authority of India</p>	<p><b>CONSULTANT:-</b></p> <p>Chaitanya Projects Consultancy Pvt. Ltd          C-5, 2ND FLOOR, R.K. TOWER PLOT NO. 21-22,          SECTOR 4, VIKRAMI, GHAZIABAD          PH: 0120-2775488, 4120472 FAX: 0120-4111432</p>	<p><b>PROJECT:-</b></p> <p>Consultancy Service for the Preparation of Feasibility Report (RFR) for the Development of Feasible Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (sub-project) of South - Firozpur-Jhansi</p>	<p><b>SCALE:-</b></p> <p>AS SHOWN</p>	<p><b>DWG. TITLE:-</b></p> <p>GENERAL ARRANGEMENT (DRAWING OF PLAN) OF BRIDGE AT CH-123-777 (S/O:NA, FIROZPUR, PUNJAB)</p>	<p><b>DATE:</b></p> <p>AUGUST 2016</p>	<p><b>APPROVED BY:</b></p> <p><i>[Signature]</i></p>
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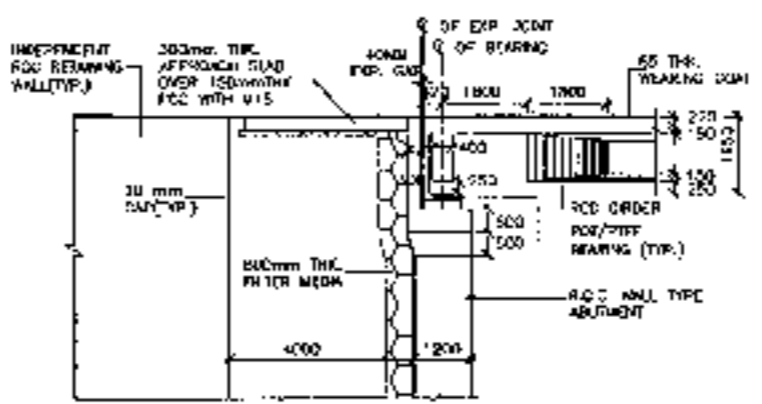


LONGITUDINAL ELEVATION  
(SCALE 1:100)

FORMATION LEVEL (M)	200.771	200.777
GRADE LEVEL (M)	192.057	192.341
DRAINAGE (M)	204.747	204.777
	23+777	23+787

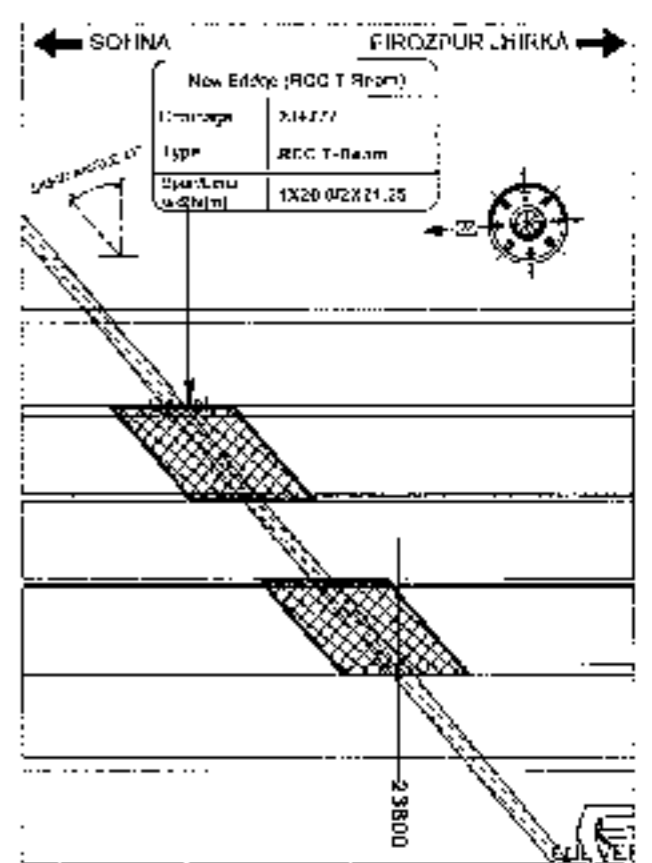


DETAIL - B  
DETAIL OF CROSS GIRDER  
AT JACK LOCATION  
(SCALE 1:20)

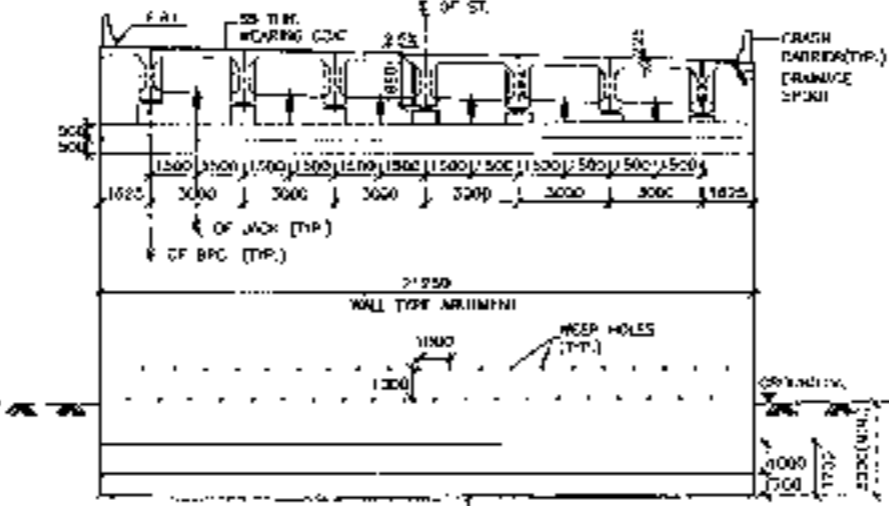
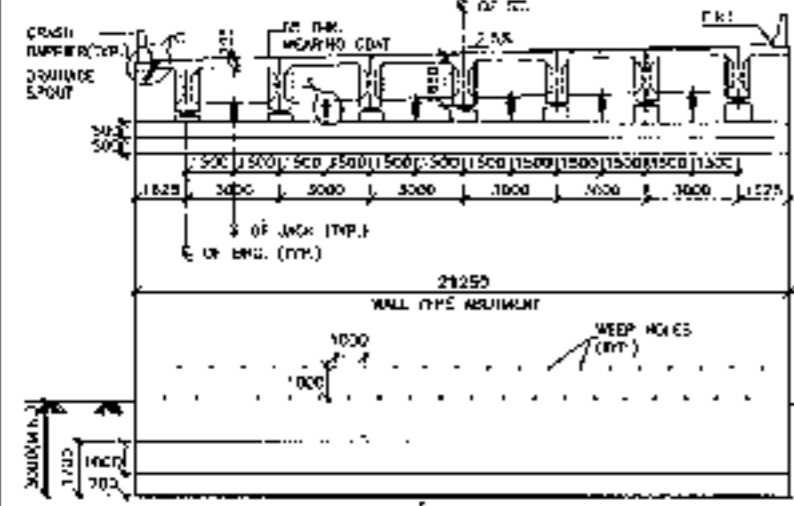
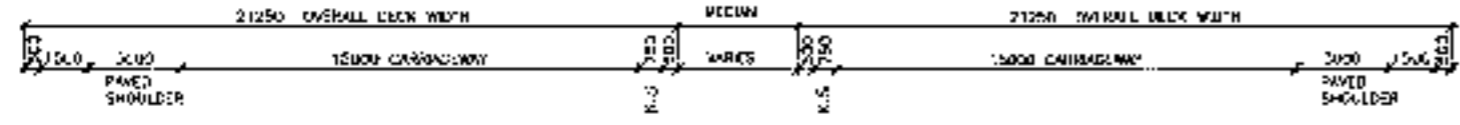


DETAIL - A  
(SCALE 1:100)

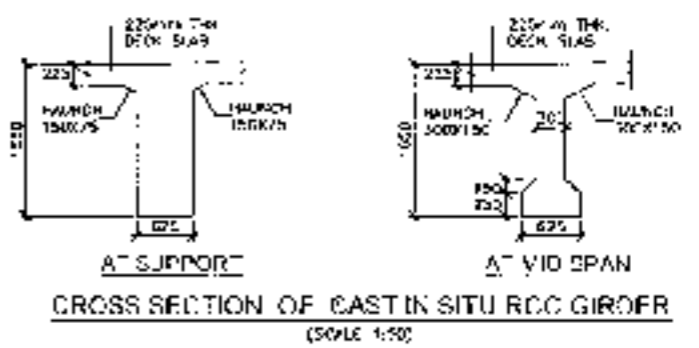
DETAIL C  
(SCALE 1:20)



KEY PLAN



SECTION AT 3-1  
(SCALE 1:100)



CROSS SECTION OF CAST IN SITU RCC GIRDER  
(SCALE 1:50)



CLIENT  
National Highway Authority of India

CONSULTANT:  
Chaitanya Projects Consultancy Pvt. Ltd.  
G-5, 2ND FLOOR, RK TOWER PLOT NO - 21-22,  
SECTOR-4, VAIDALI, GAZIABAD  
PH: 0120-3222412, 4130979, FAX: 0120-4110472

PROJECT:  
Consultancy Service for the Preparation for Possibility Report (CPR) for Development of Four-lane Concrete, Inter-Connector and Feeder Routes to Improve the traffic flow of freight movement (Khalia under Bharatmala Project) (L1) (GPR-Stage-2) at Sohna - Firozpur Jhirka

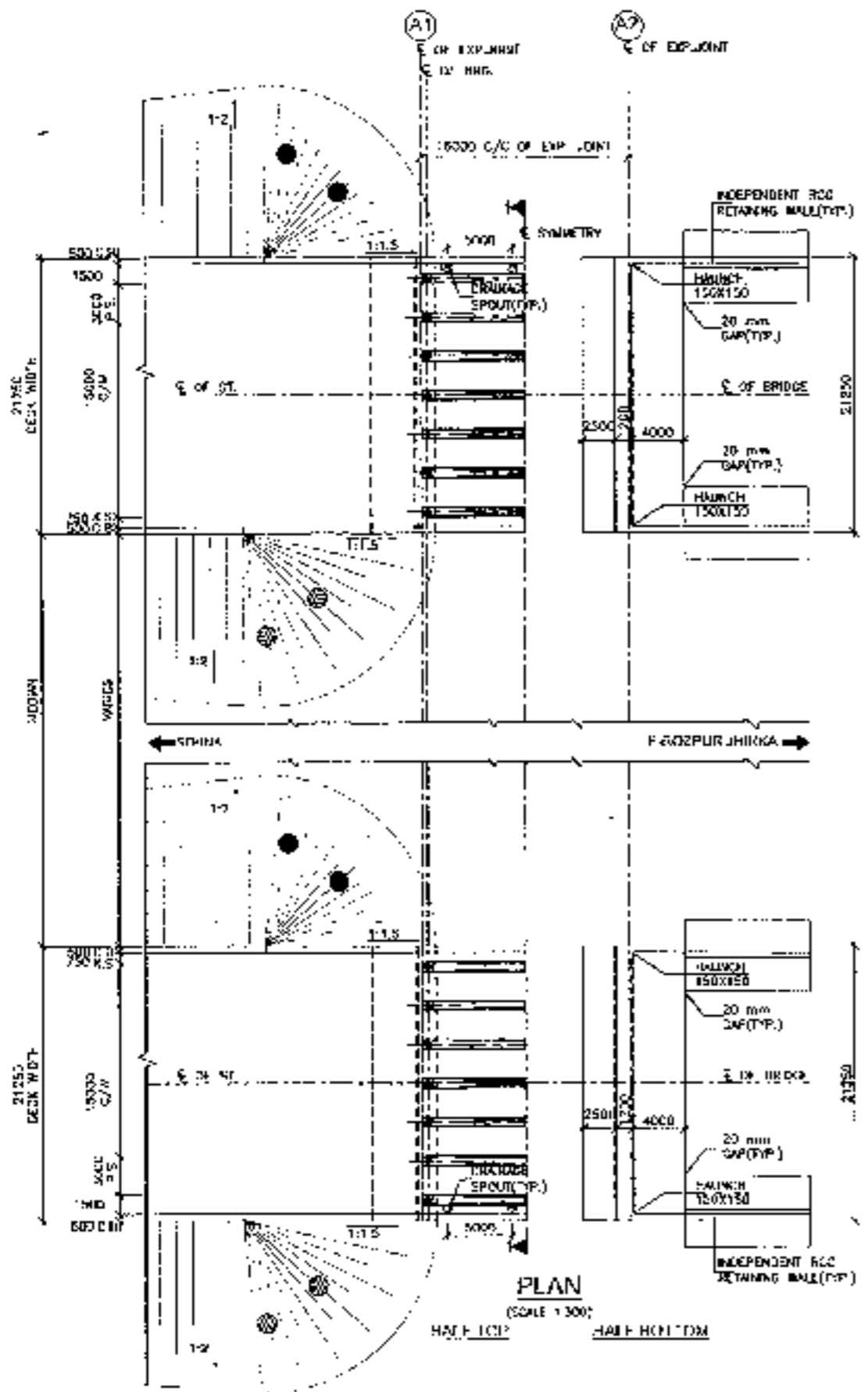
SCALE - AS SHOWN  
PROJECT TITLE:  
GENERAL ARRANGEMENT DRAWING  
SPAN 1 X 21.00 M RCC GIRDER JOINT  
AT CH-23-777  
(SOHNA - FIROZPUR JHIRKA)

GRAPHIC NO. -	ISSUES NO. -
DATE: 08/05/2017	REVISED: 00
PREPARED BY: [Name]	APPROVED BY: [Name]
CHECKED BY: [Name]	DATE: [Date]

RCC T-BEAM (SIZE 1x16.0M)  
AT KM 24+515

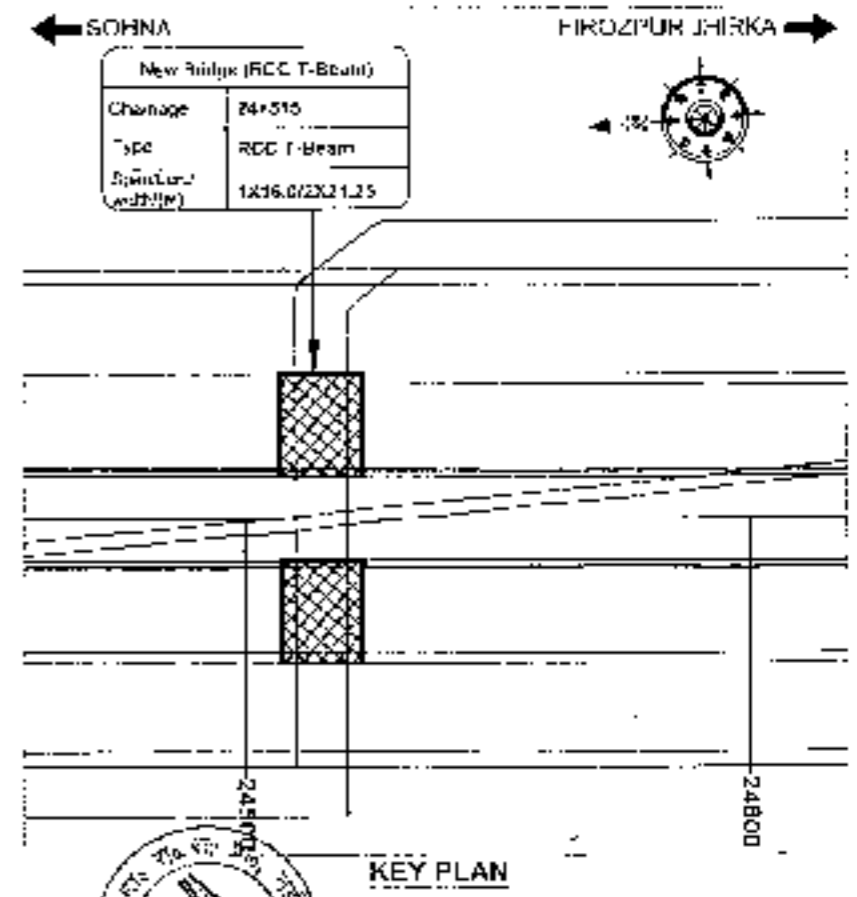






- NOTES:-
1. ALL DIMENSIONS ARE IN mm AND LEVELS ARE IN METERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS TO BE FOLLOWED. NO DIMENSIONS SHALL BE SCALED.
  2. THE PROPOSED BRIDGE HAS BEEN DESIGNED FOR AFD OF +1.0M, HAW, ISAS A ULSAR, WHICHEVER GOVERNS.
  3. CONCRETE SHALL BE DESIGN M40 AND SHALL BE OF GRADE AS INDICATED BELOW:-
 

RCC LINDING CONCRETE	M-45
SLAB/STRUCTURE	M-40
TRANSVERSE	M-35
DECK BARRIER	M-40
APPROACH SLAB	M-40
RETURNING WALLS	M-30
  4. GRADE OF STILL SHALL BE 1% SLOPE CONFORMING TO IS:1708.
  5. BACK FILLING BEHIND ABUTMENTS AND RETURN WALLS SHALL CONSIST OF SELECTED EARTH CONFORMING TO APPENDIX : G OF IS:3700 2014 HAVING (MOISTURE 2-0, S-30, S-20 & g - 20 KV/m<sup>3</sup>).
  6. LAYING COMPACTION AND DETAIL OF BACKFILL BEHIND ABUTMENT AND RETURN WALL SHALL CONFORM TO SPECIFICATIONS IN APPENDIX : G OF IS : 38-2011.
  7. WELP HOLES, SPACED AT 1000 C/E BOTH HORIZONTAL AND VERTICALLY SHALL BE PROVIDED IN A STAGGERED MANNER IN ABUTMENTS AND RETURN WALL TILL 150 mm ABOVE FINISH LEVEL.
  8. 60mm DIA. 20' WEARING SURFACE SECTION 500 OF NORTH SPECIFICATIONS.
  9. ALL DIMENSIONS ARE TENTATIVE MAY BE CHANGED AFTER DETAIL DESIGN.
  10. QUANTITY OF CONCRETE IS APPROXIMATE.
  11. THIS STRUCTURE LIES IN SEISMIC ZONE II.

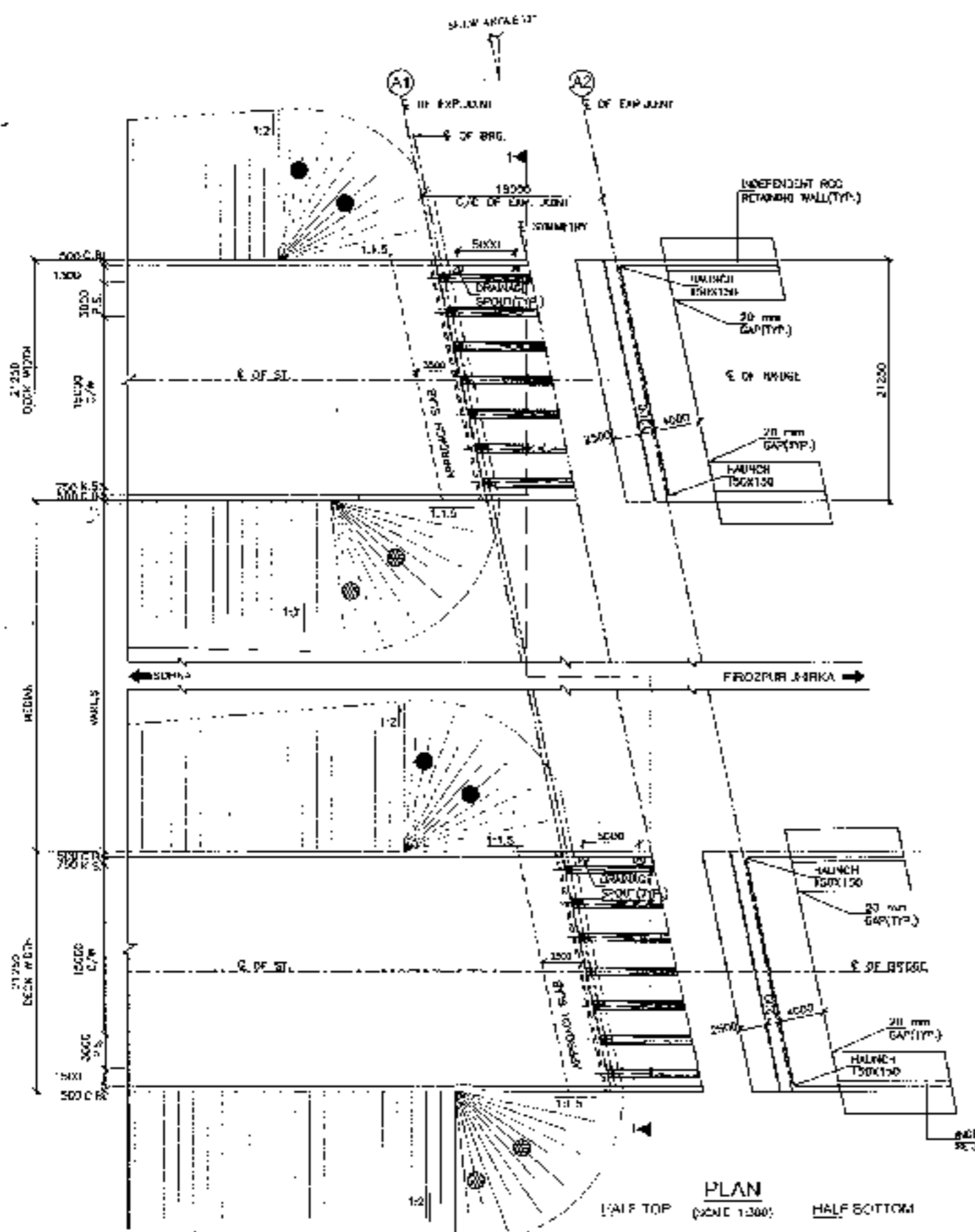


<b>CLIENT:</b> National Highway Authority of India	<b>CONSULTANT:</b> Chaitanya Projects Consultancy Pvt. Ltd. G-3, 2ND FLOOR, K TOWER PLOT NO. 21/22 SECTION-4 VAINSHALI, CHAZIABAD P.O. 0120-2223440, 0120472 FAX: 011-4110472	<b>PROJECT:</b> Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot 6/Package 4) of Sohna - Firozpur Jhirka	<b>SCALE:</b> AS SHOWN	<b>DWG TITLE:</b> GENERAL ARRANGEMENT DRAWING SPAN (1 X 16.00 M C/E EXP. JOINT) AT CH. 24+515 (SOHNA - FIROZPUR JHIRKA)	<b>DRAWING No.:</b> 1.021-12001-00000-000 <b>DATE:</b> AUGUST 2014 <b>PREPARED BY:</b> CHIEF ENGINEER <b>IN CHARGE:</b>	<b>REVISION:</b> RD <b>APPROVED BY:</b>
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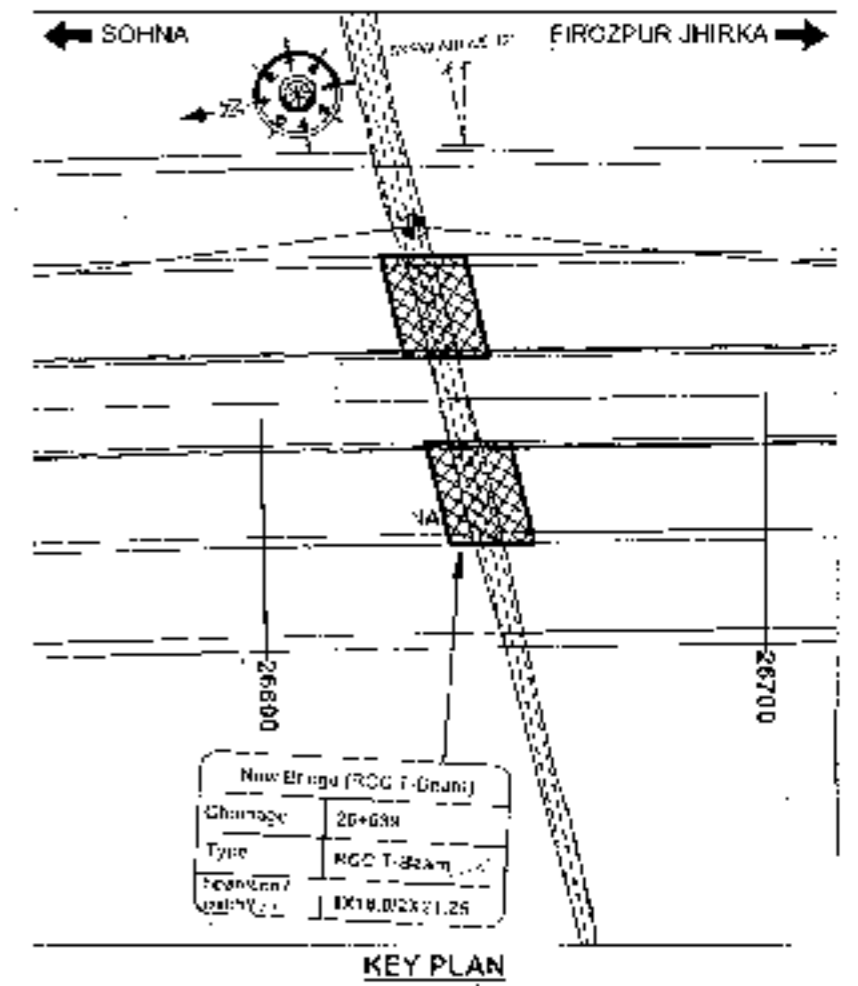


RCC T-BEAM (SIZE 1x16.0M)  
AT KM 26+639

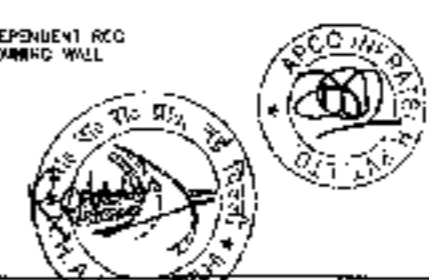




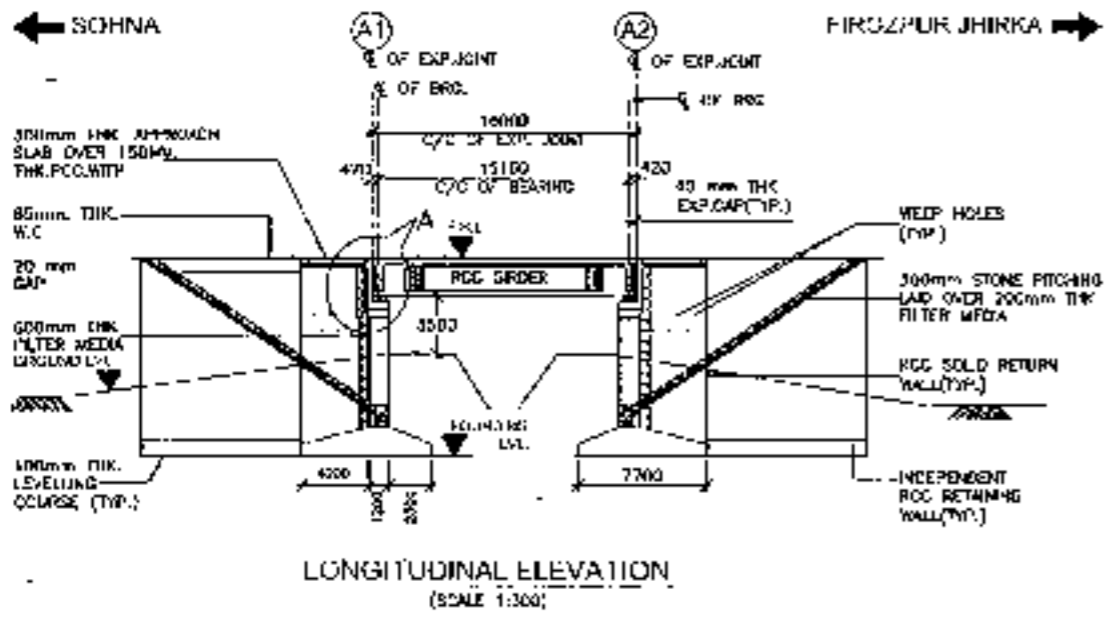
- NOTES -**
1. ALL DIMENSIONS ARE IN MM AND LEVELS ARE IN METERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS TO BE FOLLOWED. NO DIMENSION SHALL BE SCALED.
  2. THE PROPOSED 3 LANE BRIDGE HAS BEEN DESIGNED FOR 20R OR 11.4M/3.1M CLASS A TRUCK, WHICHEVER GOVERNS.
  3. CONCRETE SHALL BE DESIGN MIX AND SHALL BE OF GRADE AS INDICATED BELOW:-  
 RCC LEVELLING COURSE : M-15  
 SUPERSTRUCTURE : M-40  
 SUBSTRUCTURE : M-25  
 CRACK BARRIER : M-40  
 APPROACH SLAB : M-30  
 RETAINING WALLS : M-35
  4. GRADE OF STIFF WALL OR 10-5000 CONFORMING TO IS:1196
  5. BACK FILLING BEHIND ABUTMENTS AND RETAIN WALLS SHALL CONSIST OF SELECTED EARTH CONFORMING TO APPENDIX - 5 OF IRC:78-2014 HAVING PERCENTAGE C-10, S-10, N-10 & L = 70 %/m<sup>3</sup>
  6. LAYING, COMPACTION AND EXTENT OF BACKFILL BEHIND ABUTMENT AND RETAIN WALL SHALL CONFORM TO SPECIFICATIONS IN APPENDIX - 6 OF IRC - 78-2014
  7. WEIR HEIGHT, SPACING AT 1000 c/c WITH IMPROVEMENT AND VERTICALLY SHALL BE PROVIDED IN A STAGGERED MANNER IN ABUTMENTS AND RETAIN WALL TILL 150 mm ABOVE GROUND LEVEL.
  8. 45mm THK. C.C. WEARING COURSE SECTION 500 OF NORTH DIRECTION.
  9. ALL DIMENSIONS AND QUANTITIES MAY BE CHANGED AFTER FINAL DESIGN. COMPARISON OF QUANTITIES IS MANDATORY.
  11. THIS STRUCTURE LIES IN SEISMIC ZONE II.



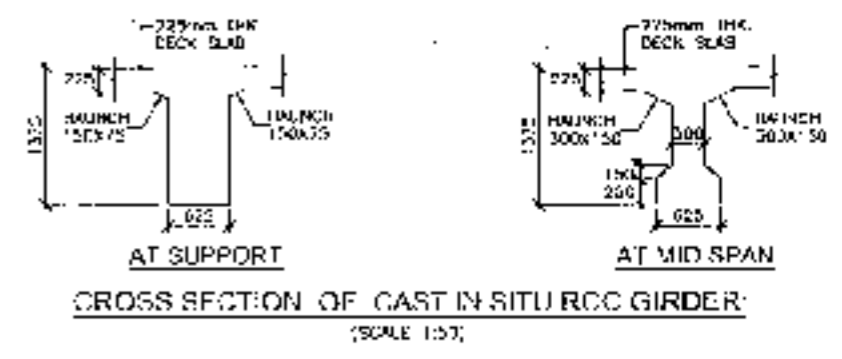
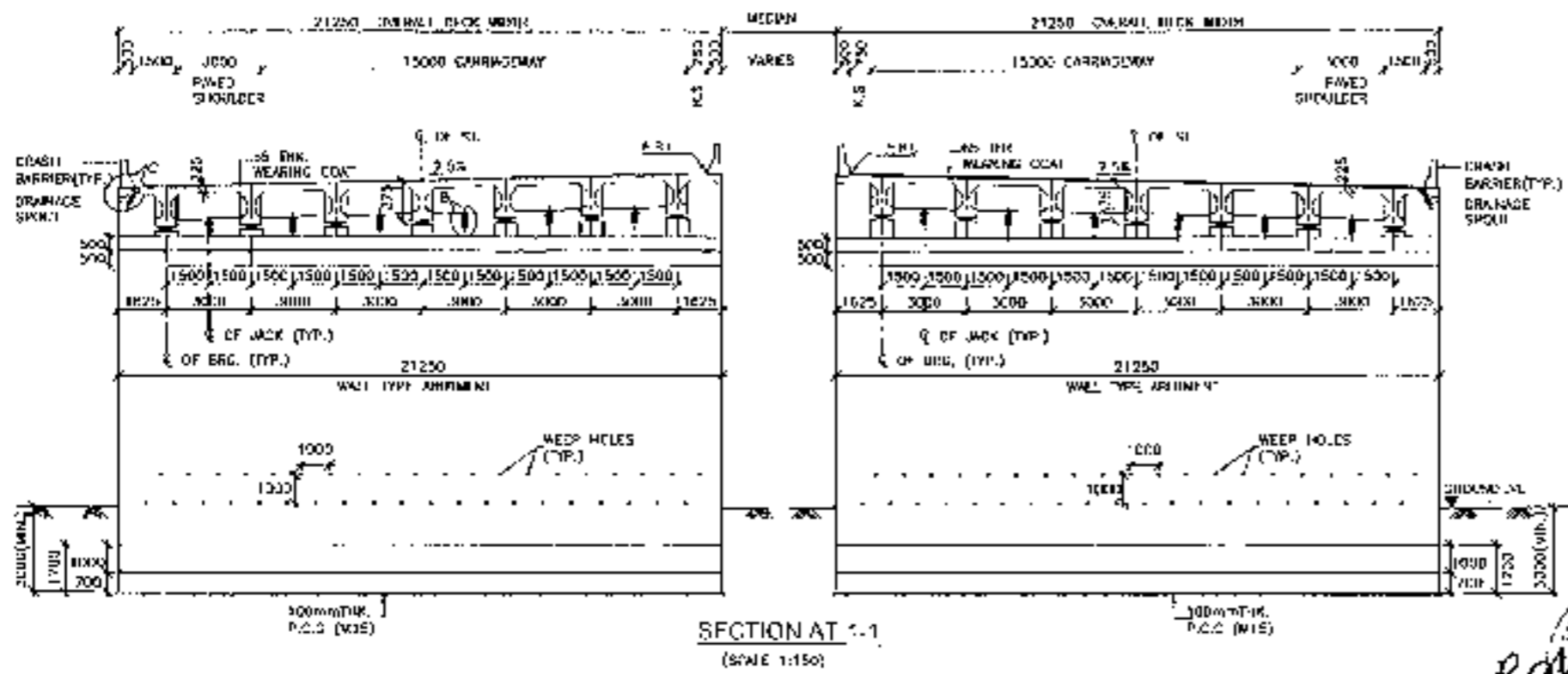
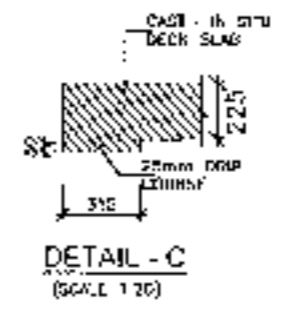
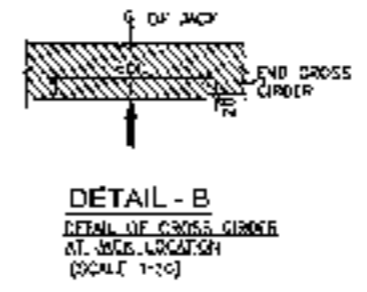
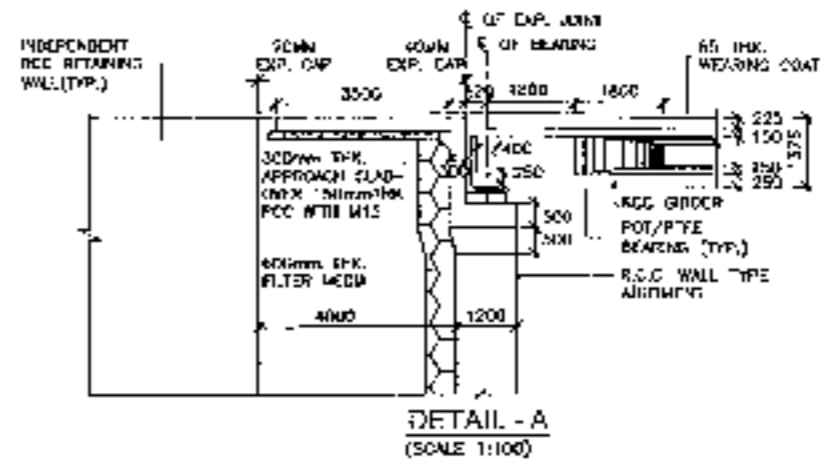
**PLAN**  
(SCALE 1:300)  
HALF TOP HALF BOTTOM



<b>CLIENT-</b> National Highways Authority of India Ministry of Road Transport & Highways, Govt. of India	<b>CONSULTANT-</b> Chaitanya Projects Consultancy Pvt. Ltd. C-5, 2ND FLOOR, B K 11 WFR PLOT NO.-27/97, SECTOR-4, VARSHALI, GHAZIABAD PH: 0120-9223419, 4120472, FAX: 0120-4110472	<b>PROJECT-</b> Consultancy Service for the Preparation for Feasibility Report/PPR for development of Expressway Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot 4/Package-1) of section B-Songadha to Bikiner and section 2 Kota to Vedauna	<b>SCALE -</b> AS SHOWN	<b>DWG TITLE -</b> GENERAL ARRANGEMENT DRAWING SPAN 1 X 18.00M (C.C. EXP. JOINT) AT CH-26+694 (SOHNA - FIRAZPUR JHIRKA)	<b>DRAWING NO. -</b> CHN/1/2011/50/WORK/10		DATE - 20/07/2011	Revision - 00
					PREPARED BY - UFFCHERIL N. DEEPTI SHUKLA	CHECKED BY - N. DEEPTI SHUKLA	APPROVED BY - N. DEEPTI SHUKLA	



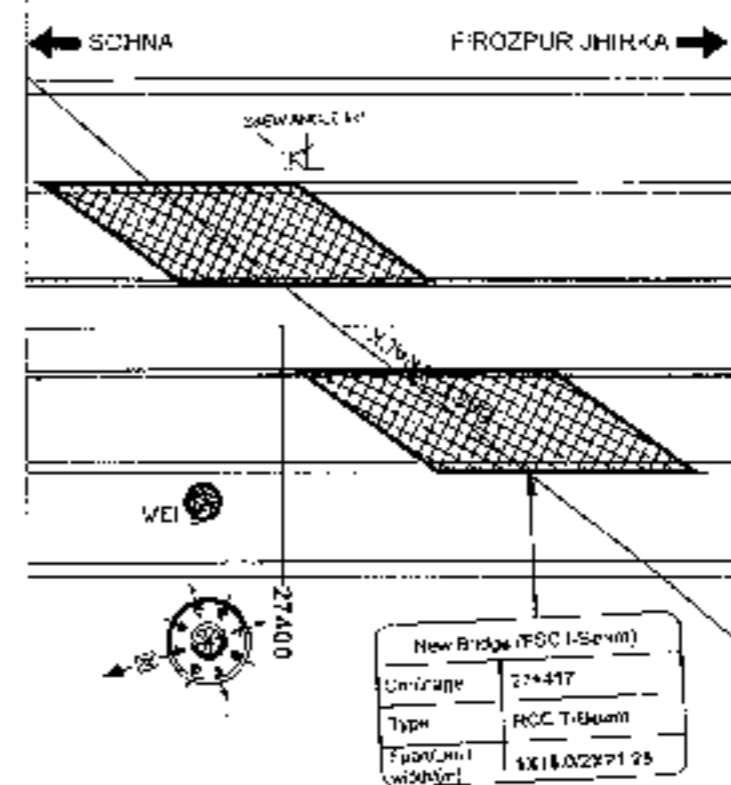
FORMATION (P.V. IN)	137.728	137.728
FORMATION (P.V. IN)	139.857	139.857
CHANGRE (m)	28+831	28+838
	28+847	



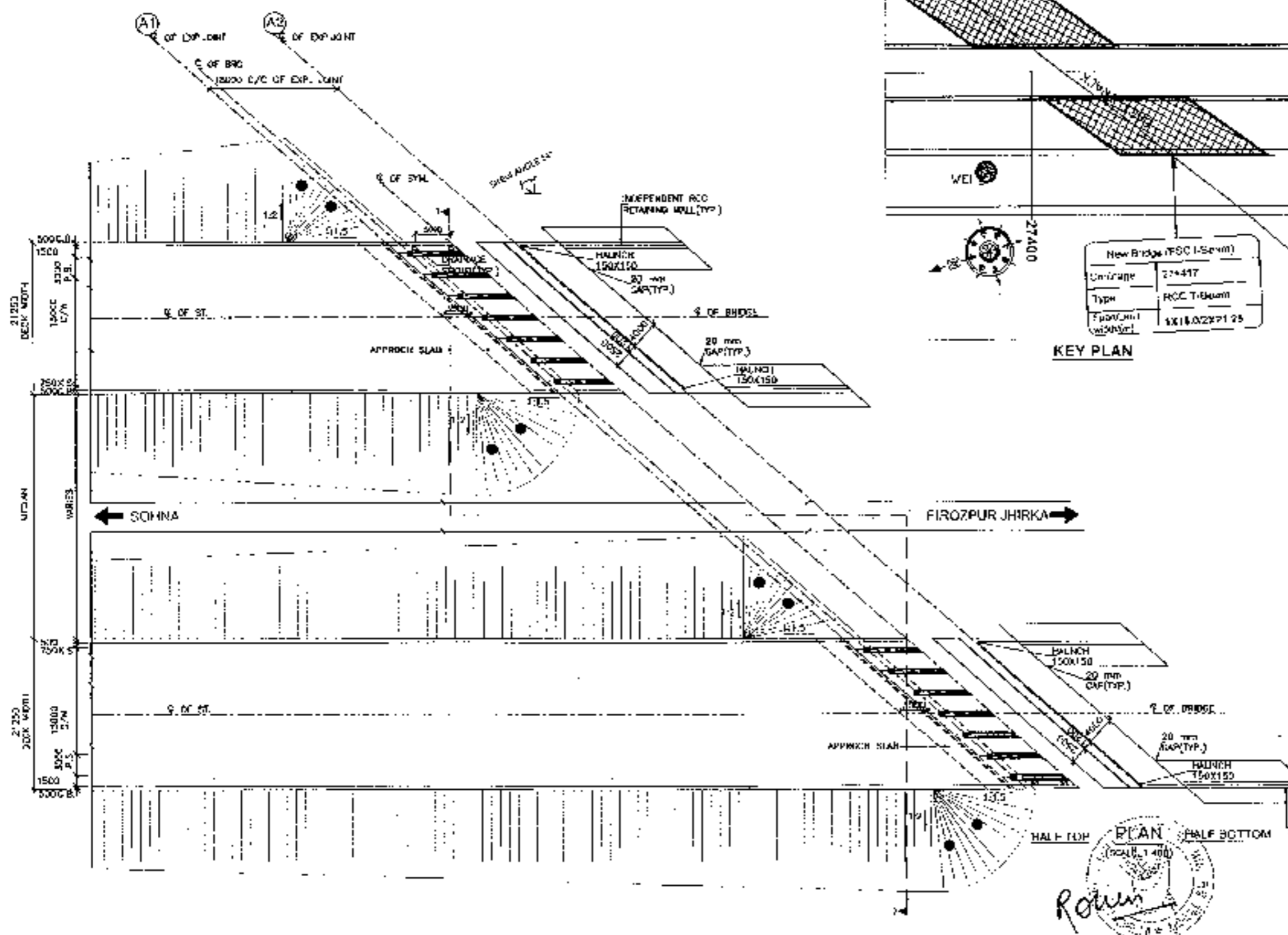
<b>CLIENT:</b> National Highways Authority of India Ministry of Road Transport and Highways, Govt. of India	<b>CONSULTANT:</b> Chaitanya Projects Consultancy Pvt. Ltd. G-5 2ND FLOOR, R.K. TOWER, PLOT NO. 21-22 SECTOR 4, VAISHALI, GHAZIABAD PH : 0120-3221419, 4120472, FAX : 0120-4110472	<b>PROJECT:</b> Consultancy Service for the Preparation for Feasibility Report/ DPR for development of Express Carriers, Inter-Connectors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (II) at (Sector-4) of Sohna - Firuzpur Jhirka	<b>SCALE -</b> AS SHOWN	<b>DWG TITLE -</b> GENERAL ARRANGEMENT DRAWING SPAN : 18.00 M (20 EXP. Joints) AT 01+26+559 (SOHNA - FIRUZPUR, JHIRKA)	<b>Drawing No. -</b> 2009-1000-3000-00 <b>DATE -</b> AUGUST 2018 <b>PREPARED BY -</b>	<b>REVISION NO.</b> Revision: 01 <b>CHECKED BY -</b> VIKAS SAINI <b>APPROVED BY -</b> VIKAS SAINI
					<b>APPROVED BY -</b> VIKAS SAINI	

RCC T-BEAM (SIZE 1x18.0M)  
AT KM 27+417





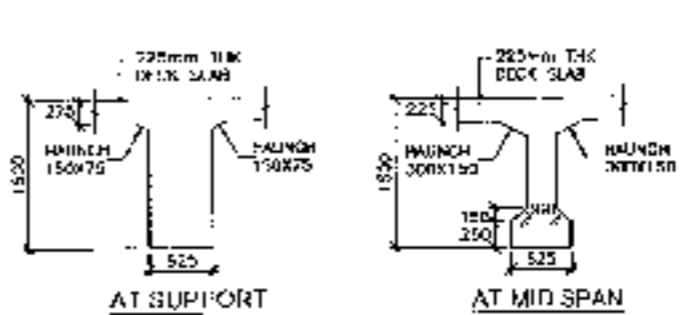
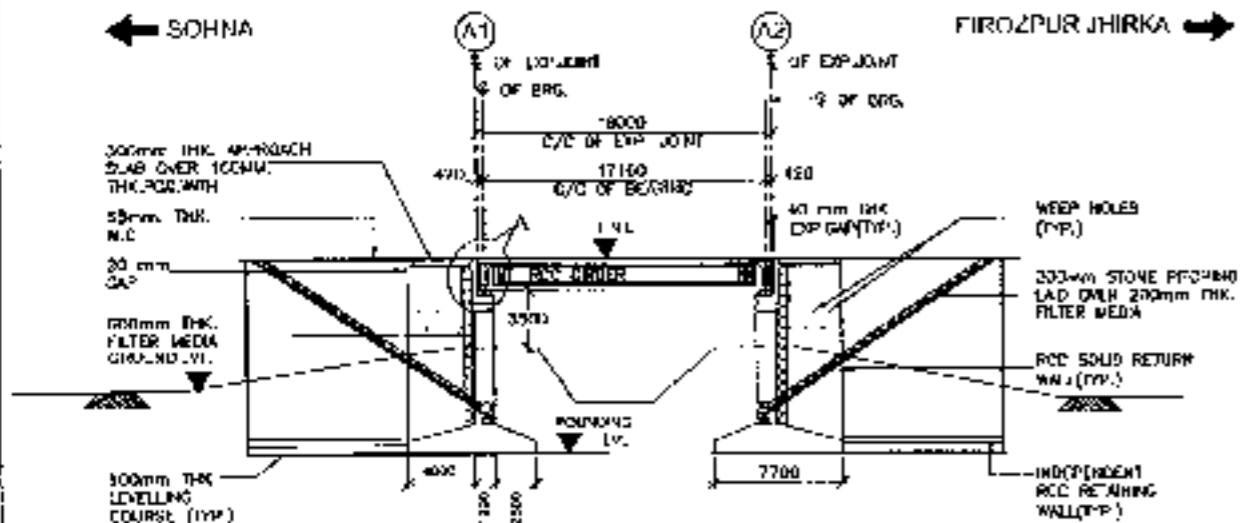
- NOTES:-**
1. ALL DIMENSIONS ARE IN METERS AND LEVELS ARE IN METERS UNLESS OTHERWISE MENTIONED. ONLY THE DIMENSIONS TO BE FOLLOWED BY CONTRACTOR SHALL BE SCALED.
  2. THE PROPOSED 5 LANE BRIDGE HAS BEEN DESIGNED FOR ONE WAY TRAFFIC AND TO HAVE A UTILITY TRENCH FOR WATER SUPPLY AND SEWERAGE LINES TO BE LOCATED BELOW.
  3. CONCRETE SHALL BE DESIGN MIX AND SHALL BE C INDICATED BELOW:-  
 RCC LEVELING COURSE : M-15  
 SUPERSTRUCTURE : M-40  
 SUBSTRUCTURE : M-25  
 CRUSH BARRIER : M-40  
 APPROACH SLAB : M-30  
 RETAINING WALLS : M-35
  4. GRADE OF STEEL SHALL BE EN-250D conforming to IS:1785.
  5. BACK FILLING BEHIND ABUTMENTS AND RETURN WALLS SHALL BE COMPACTED EARTH conforming to APP M:20-2014 (GRADE TRAFFIC) C.C. 10:30. S:20 & 6 - 20 100/100.
  6. LAYING COMPACTOR AND DENSITY OF BACKFILL BE ABUTMENT AND RETURN WALL SHALL CONFORM TO SPECIFICATIONS OF APPENIX - 5 OF IRC : 78-2017.
  7. WEIR PILES SPACED AT 1000 C/C BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED IN A STAGED MANNER IN ABUTMENTS AND RETURN WALL TILL 15% DOWN THE U.C. ALONG COURSE SECTION AND 10% DOWN THE U.C. ALONG COURSE SECTION AND 10% DOWN THE U.C. ALONG COURSE SECTION.
  8. ALL FOUNDATIONS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS OF APPENIX - 5 OF IRC : 78-2017.
  9. ALL FOUNDATIONS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS OF APPENIX - 5 OF IRC : 78-2017.
  10. CONDITION OF DRAINAGE IS UNKNOWN.
  11. THIS STRUCTURE LIES IN ZONE II LINE 11.



22

<p><b>CLIENT:-</b></p> <p>National Highways Authority of India</p>	<p><b>CONSULTANT:-</b></p> <p>Chaitanya Projects Consultancy Pvt. Ltd.        C-5, 2ND FLOOR, R.K. TOWN, PLOT NO.-21-22,        SECTION 4, VAISHALI, GHAZIABAD        PH: 0120-3223419, 4120472, FAX: 0120 4119477</p>	<p><b>PROJECT:-</b></p> <p>Consultancy Service for the Preparation for Feasibility Report (FR) for Development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (I.C.C. Package-I) of Sohna - Firozpur Jhirka</p>	<p><b>SCALE:-</b></p> <p>AS SHOWN</p>	<p><b>DWG TITLE:-</b></p> <p>GENERAL ARRANGEMENT DRAWING        (SPAN X 18.02 M. C.C. P.F. JUNCTION)        A/C L.H.-274417        (SECTION OF SOHNA - FIROZPUR JHIRKA)</p>	<p><b>DRAWING NO.:</b> CHCP-1502  <b>DATE:</b> 12/11/2024  <b>PREPARED BY:</b> CHPC  <b>APPROVED BY:</b> CHPC</p>
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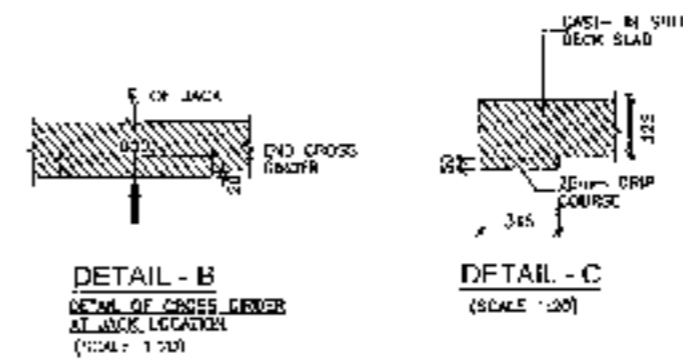
← SOHNA FEROZPUR JHIRKA →



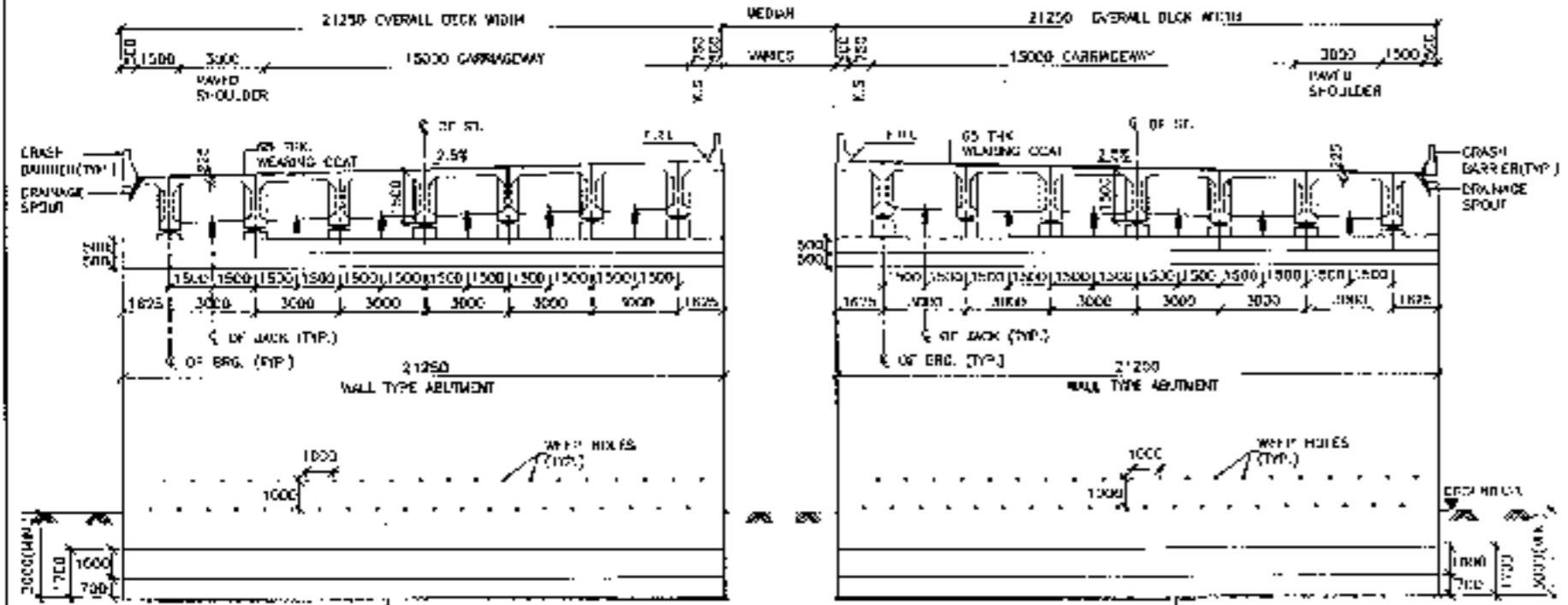
CROSS SECTION OF CAST IN SITU RCC GIRDER (SCALE: 1:50)

LONGITUDINAL ELEVATION (SCALE: 1:100)

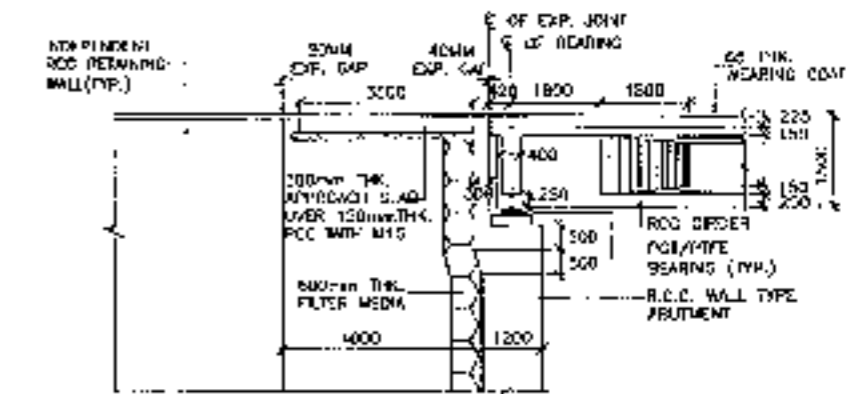
FORMATION LEVEL (M)	195.47	195.47	195.47
GROUND LEVEL (M)	191.200	191.200	191.800
CHAINAGE (M)	27+1408	27+1417	27+120



DETAIL - B: DETAIL OF CROSS GIRDER AT JACK LOCATION (SCALE: 1:50)  
 DETAIL - C: (SCALE: 1:50)



SECTION AT 1-1 (SCALE: 1:150)



DETAIL - A (SCALE: 1:100)



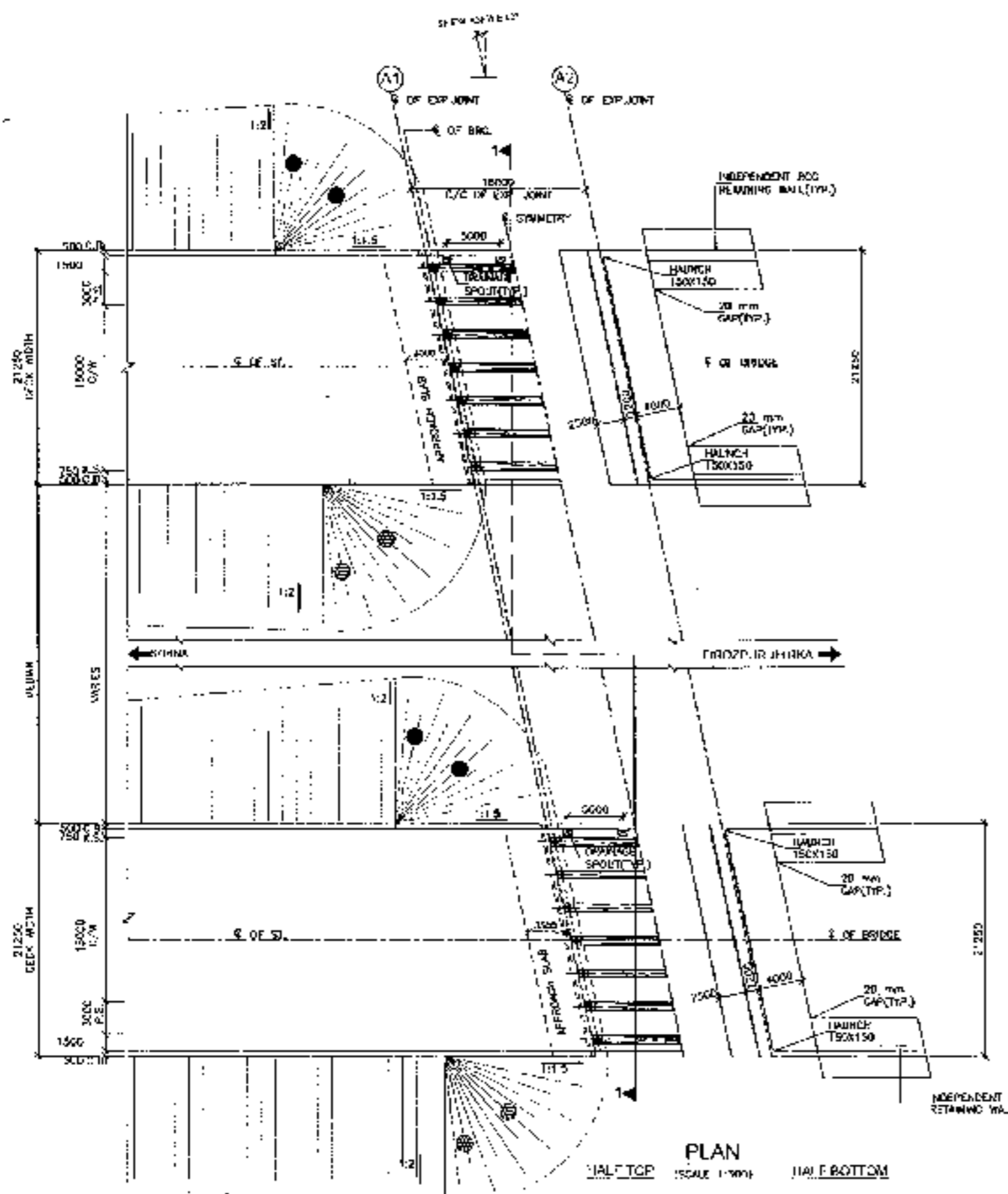
23

<p>CLIENT -</p> <p>National Highways Authority of India</p>	<p>CONSULTANT -</p> <p>Chaitanya Projects Consultancy Pvt. Ltd.                  C-8, 2ND FLOOR, R.K TOWER PHASE NO. 2                  SECTOR 1 WASHALI, GHAZIABAD                  PH: 920 322318, 9177472, FAX: 437161027</p>	<p>PROJECT -</p> <p>Consultancy Service for the Preparation for Feasibility Report/DRD for development of Economic Corridor, Inter Corridors and 3 feeder Routes to improve the efficiency of freight movement in the states of Uttar Pradesh and Bihar in the region of (Lucknow/Faizabad) at Sohra - Ferozpur Corridor</p>	<p>SCALE -</p> <p>AS SHOWN</p>	<p>DWG TITLE -</p> <p>GENERAL ARRANGEMENT DRAWING                  SPAN I X 15.00 M X CC-LXXI JOINT                  AT CH-177417                  INDIA - U.P. (PHU) (L&amp;A)</p>	<p>DESIGNED BY -</p> <p>CPC/13208-10-P715-100</p> <p>DRAWN BY -</p> <p>PREPARED BY -</p> <p>CHECKED BY -</p> <p>APPROVED BY -</p>
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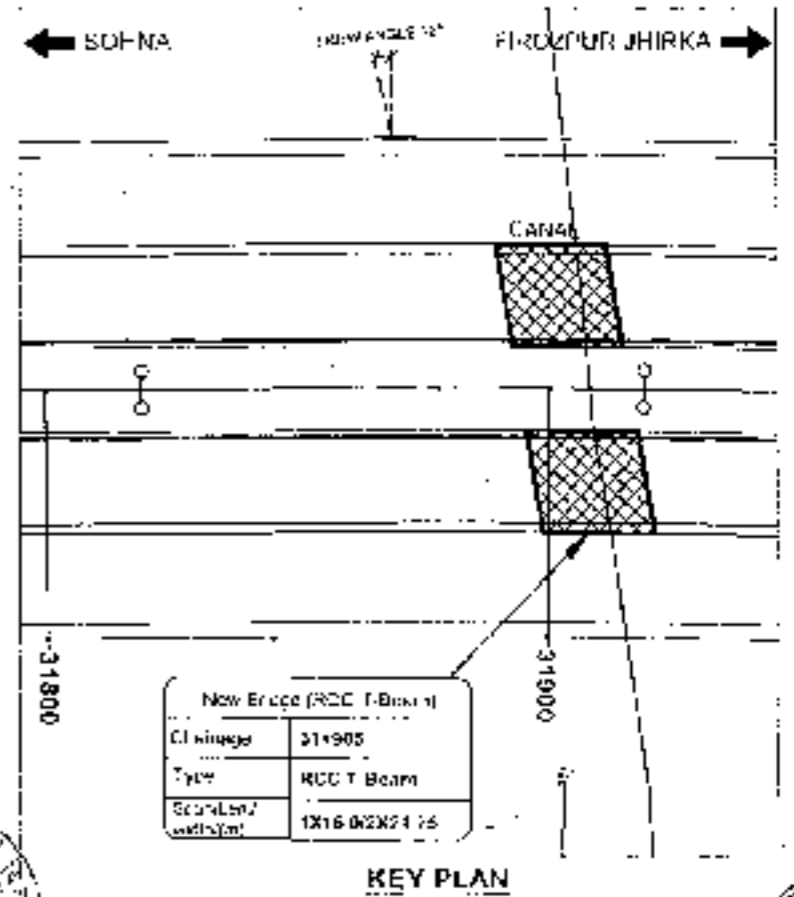


RCC T-BEAM (SIZE 1x16.0M)  
AT KM 31+905





PLAN  
 HALF TOP (SCALE 1:100)    HALF BOTTOM

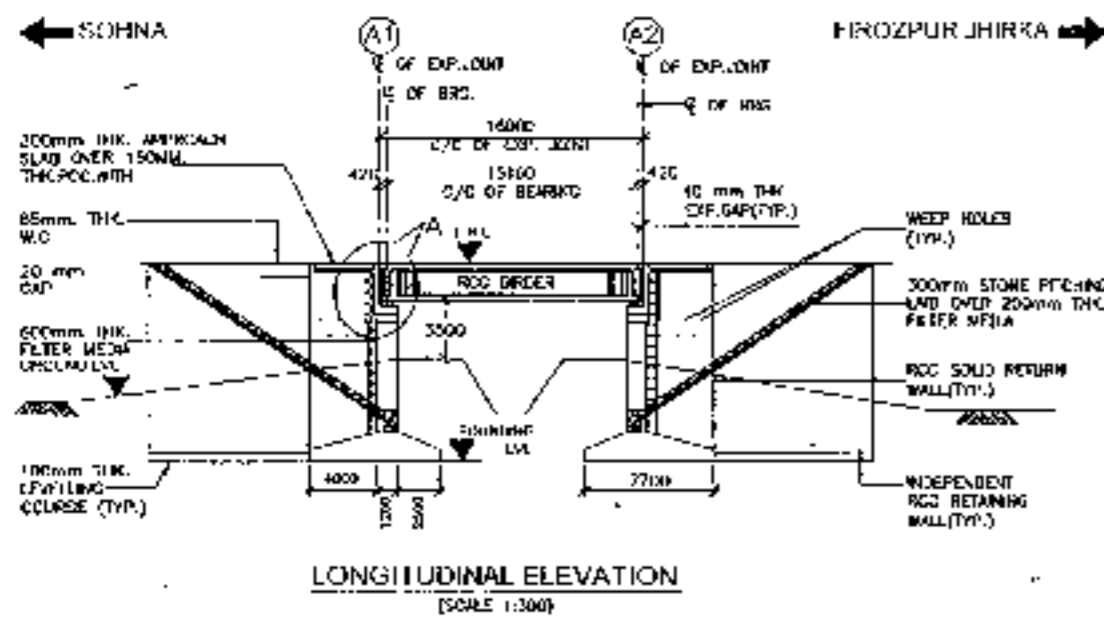


KEY PLAN

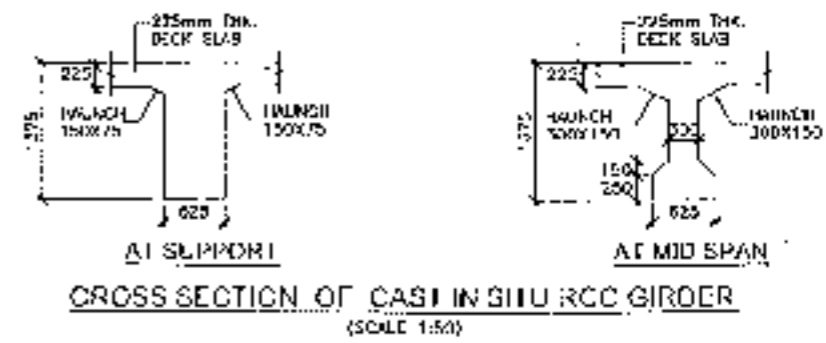
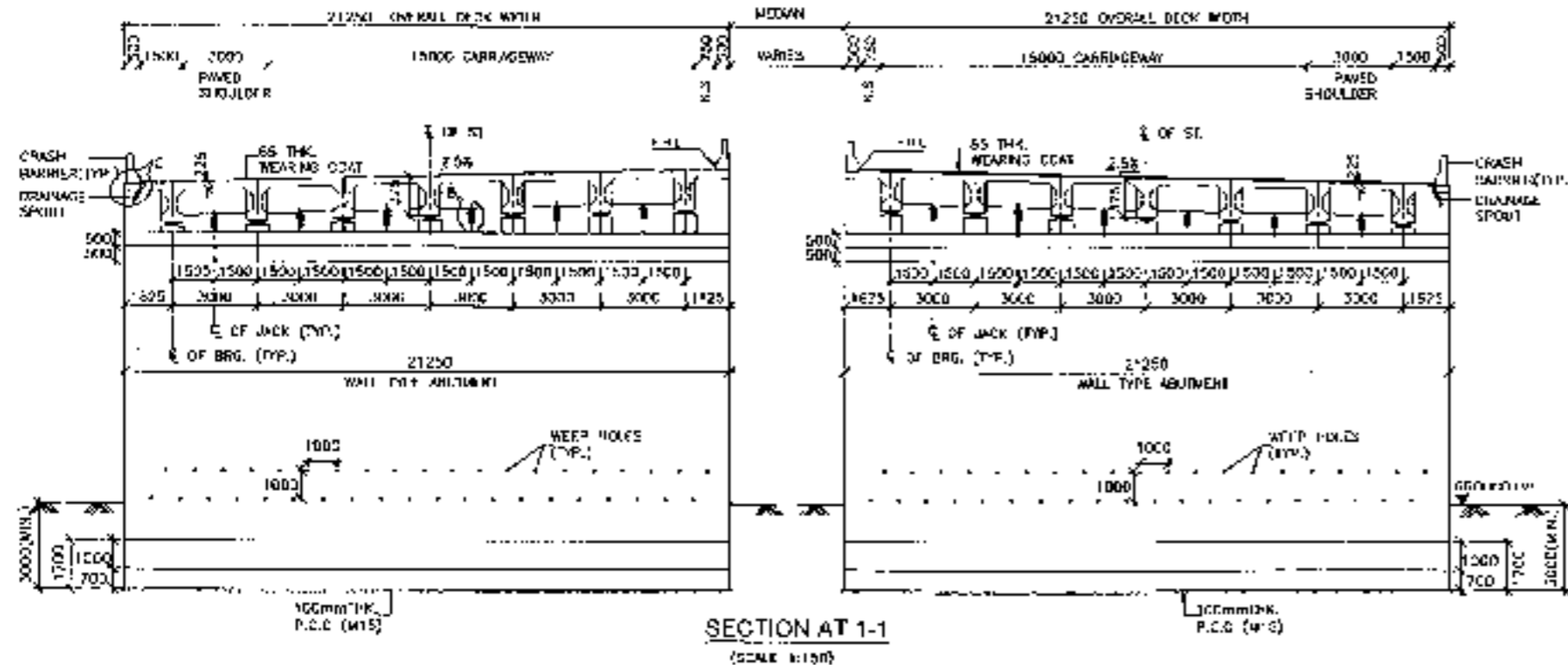
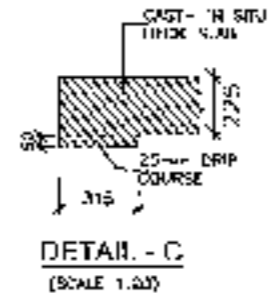
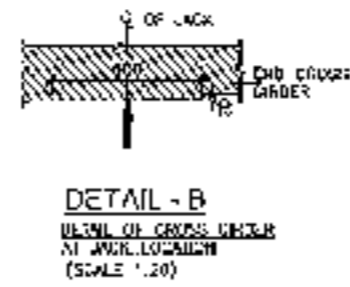
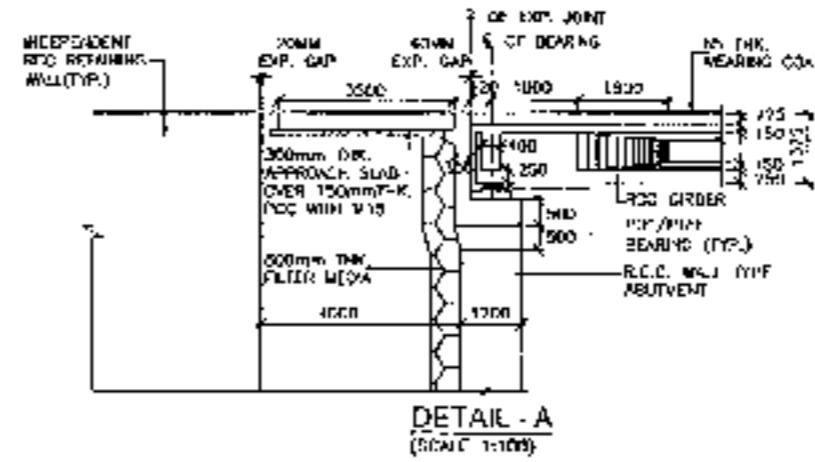
- NOTES.
1. ALL DIMENSIONS ARE IN METRES AND LEVELS ARE IN METRES UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS TO BE FOLLOWED. NO DIMENSION SHALL BE SCALED.
  2. THE PROPOSED 3 LANE BRIDGE HAS BEEN DESIGNED FOR JOM OR +LANE CLASS & LOADING WHICHEVER GOVERNS.
  3. CONCRETE SHALL BE DESIGN MIX AND SHALL BE OF GRADE AS INDICATED HEREIN -  
 RCC LEVELING COURSE : M-15  
 SUPERSTRUCTURE : M-40  
 SUBSTRUCTURE : M-25  
 CRACK SURFER : M-40  
 APPROACH ROAD : M-30  
 RETURN/WING WALLS : M-30
  4. GRADE OF STEEL SHALL BE AS PER REQUIREMENTS TO IS 1786.
  5. BACK FILLING BEHIND RETAINMENTS AND RETURN WALLS SHALL CONSIST OF SELECTED GROUND CONFORMING TO APPENDIX - 6 OF IRC:26-2014 HAVING PROPERTIES  $C=0$ ,  $\beta=30$ ,  $\gamma=20$  kN/m<sup>3</sup>.
  6. LAYING COMPANION AND EXTENT OF FACETILL RETING ATTJMENT AND RETURN WALL SHALL CONFORM TO SPECIFICATIONS IN APPENDIX - 6 OF IRC : 26-2014
  7. WEPP HOLES, SPACED AT 1000 c/c BOTH HORIZONTALY AND VERTICALLY SHALL BE PROVIDED IN A STAGGERED MANNER IN RETAINMENTS AND RETURN WALL. FILL 150 mm ABOVE GROUND LEVEL.
  8. 65mm THK. G.C. WEARING COURSE SECTION 500 OF NORTH SPECIFICATIONS.
  9. ALL DIMENSIONS ARE TENTATIVE. MAY BE CHANGED AFTER DETAIL DESIGN.
  10. CONDITION OF EXPLOSER IS MODERATE.
  11. THIS STRUCTURE LIES IN SEISMIC ZONE II.



<p>CLIENT:   National Highways Authority of India</p>	<p>CONSULTANT:   Chaitanya Projects Consultancy Pvt Ltd        C-3, 2ND FLOOR, R.K. TOWER PLOT NO. 11/1/7, SECTOR-4, VAISALI, GHAZIABAD        PH: 0120-3233419, 4126472, FAX: 0120-3413472</p>	<p>PROJECT:        Consultancy Service for the Preparation for Feasibility Report (FPR) for development of Economic Corridor, Inter Corridors and Feeder Roads to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6/Package-4) of SoHna - Ferozpur Jhirka</p>	<p>SCALE:        AS SHOWN</p>	<p>DWG TITLE:        GENERAL ARRANGEMENT DRAWING        SPAN: 12x16.0x22.175 (RCC T-BEAM)</p>	<p>DRAWING No: 100        DATE: AUGUST 2018        PREPARED BY: [Name]        CHECKED BY: [Name]        APPROVED BY: [Name]</p>
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FORMAL OVERPASS W/	136.779	156.789
APPROACH SLAB W/	106.807	188.001
DRAINAGE W/	31+897	31+905



*Retan*



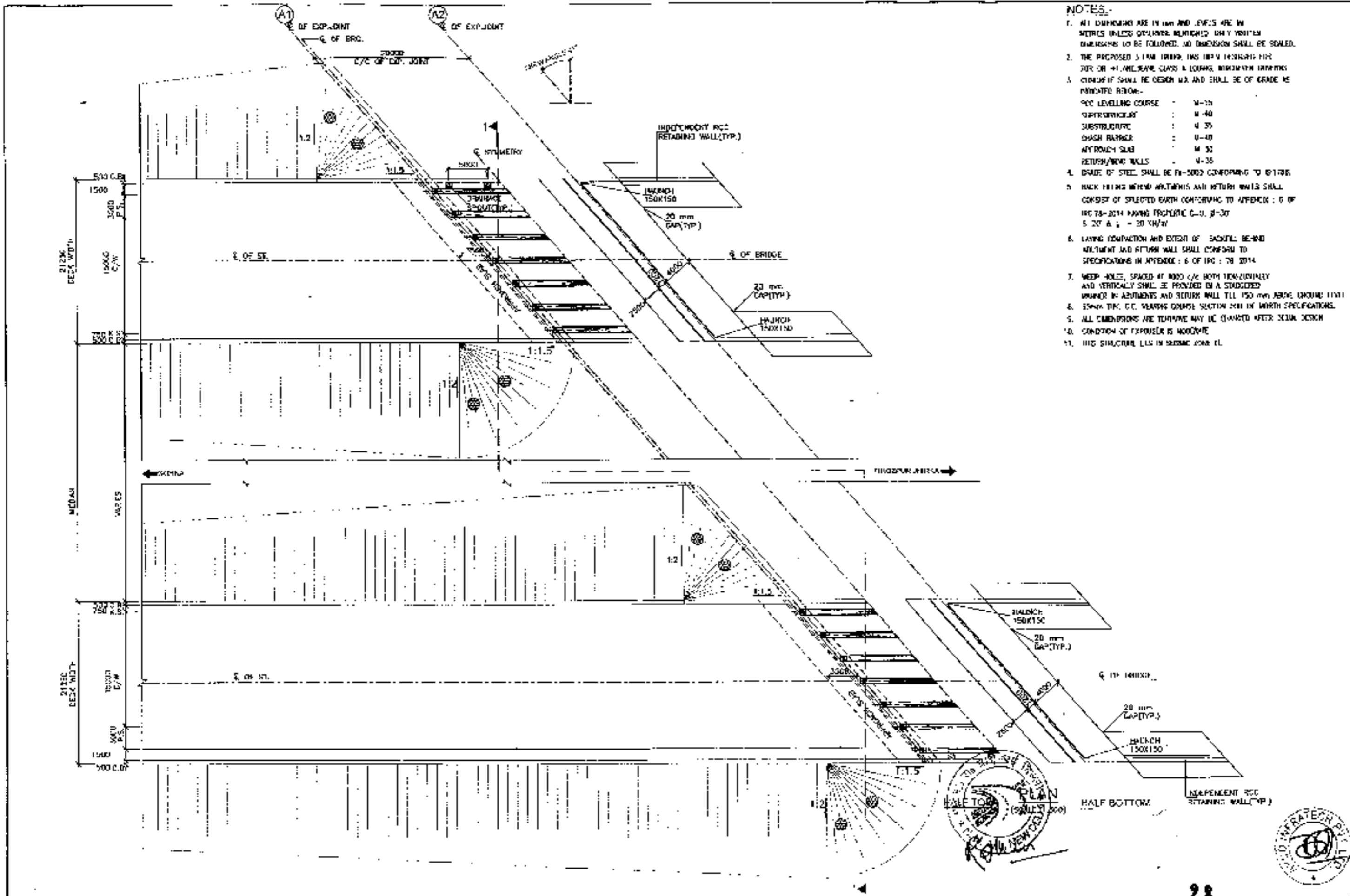
<b>CLIENT</b> 	<b>CONSULTANT</b> 	<b>PROJECT</b> Consultancy Service for the Preparation of Feasibility Report/DPR for development of Economic Corridors, Entry Corridors and Feeder Routes to improve the efficiency of transport movement in India under Bharatmala Pariyojana (Lot 06-2019-01) of Sohna - Ferozpur Jhirka	<b>SCALE</b> AS SHOWN	<b>DWG TITLE</b> GENERAL ARRANGEMENT DRAWING SPAN 11 (C/C 30 M C.C. EXP. JOINT)	<b>DRAWING No.</b> CRP/1500/06/0001/100
					<b>DATE</b> AUGUST 2019
<b>APPROVED BY</b> [Signature]		<b>APPROVED BY</b> [Signature]		<b>APPROVED BY</b> [Signature]	

RCC T-BEAM (SIZE 1x20.0M)  
AT KM 32+781

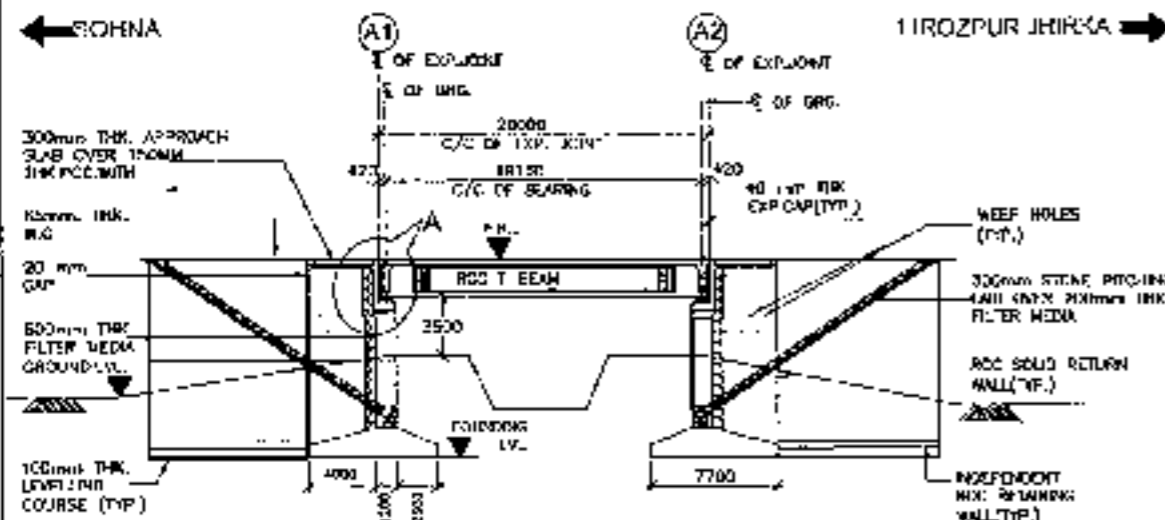
*Polen*



- NOTES:-**
1. ALL DIMENSIONS ARE IN mm AND LEVELS ARE IN METRES UNLESS OTHERWISE MENTIONED. ONLY POSITION DIMENSIONS TO BE FOLLOWED. NO DIMENSION SHALL BE SCALED.
  2. THE PROPOSED 3 LANE BRIDGE HAS 100M SPANNING OVER 70R OR +1.0M SLAB CLASS A LOANS. BIDDING DRAWINGS CONTRACT SHALL BE DESIGN M3 AND SHALL BE OF GRADE AS INDICATED BELOW:-  
 RCC LEVELLING COURSE : M-15  
 SUPERSTRUCTURE : M-40  
 SUBSTRUCTURE : M-35  
 DASH BARRIER : M-40  
 APPROACH SLAB : M-30  
 RETURN/RETAIN WALLS : M-35
  3. GRADE OF STEEL SHALL BE Fe-500D CONFORMING TO IS 1786.
  4. BACK FILLING BEHIND ABUTMENTS AND RETURN WALLS SHALL CONSIST OF SILENTED EARTH CONFORMING TO APPENDIX : 6 OF IRC 78-2014 HAVING PROPORTION C-1, S-30, S-20 & G-30.
  5. LAYING, CONTRACT AND EXTENT OF BACKFILL BEHIND ABUTMENT AND RETURN WALL SHALL CONFORM TO SPECIFICATIONS IN APPENDIX : 6 OF IRC : 78-2014.
  6. WEEP HOLES, SPACED AT 1000 C/C BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED IN A STAGGERED MANNER IN ABUTMENTS AND RETURN WALL TILL 150 mm ABOVE GROUND LEVEL.
  7. 50mm THK. C.C. SEPARATION COURSE SHALL BE IN WIDTH SPECIFICATIONS.
  8. ALL DIMENSIONS ARE TENTATIVE MAY BE CHANGED AFTER FINAL DESIGN.
  9. CONDITION OF EXPOSURE IS MODERATE.
  10. THIS STRUCTURE LIES IN SEISMIC ZONE II.

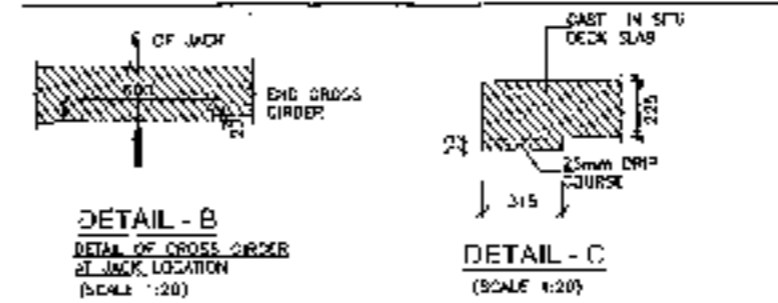


<p><b>CLIENT:-</b> National Highways Authority of India</p>	<p><b>CONSULTANT:-</b> Chaitanya Projects Consultancy Pvt. Ltd. C-1, 2ND FLOOR, R-4 TOWER 31, GATE NO. 24-22, SECTOR-4, WASHALI GHAZIABAD, PH-01103223119, 4124012, FAX: 011-264111002</p>	<p><b>PROJECT</b> Consultancy Service for the Preparation for Feasibility Report for development of Economic Corridors, Inner Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (at a location) of Sahasra - Prayagraj Jct. etc.</p>	<p><b>SCALE</b> AS SHOWN</p>	<p><b>DWG TITLE:-</b> GENERAL ARRANGEMENT DRAWING (SPAN &amp; RETURN WALLS AT EXP. JOINT) AT CH-024221</p>	<p><b>DATE</b> 08/08/2024 <b>PREPARED BY</b> [Signature] <b>CHECKED BY</b> [Signature]</p>
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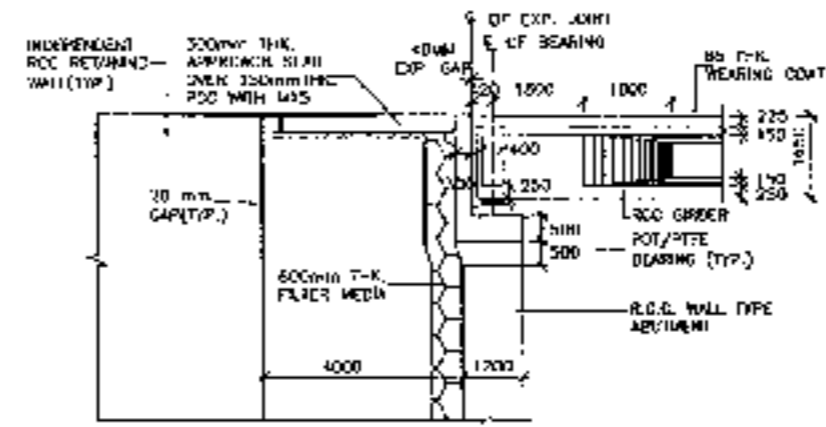


**LONGITUDINAL ELEVATION**  
(SCALE 1:300)

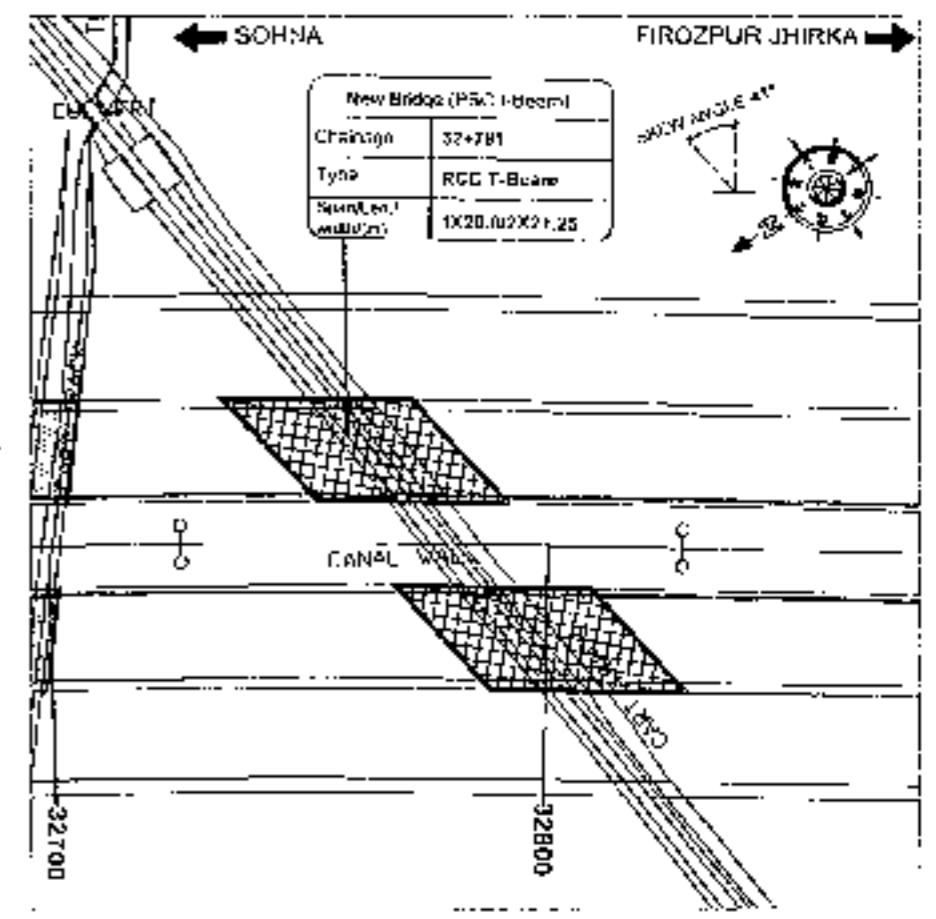
FORM TOP LEVEL (m)	186.540	196.540
GROUND LEVEL (m)	190.770	150.630
CHAINAGE (m)	32+771	32+791



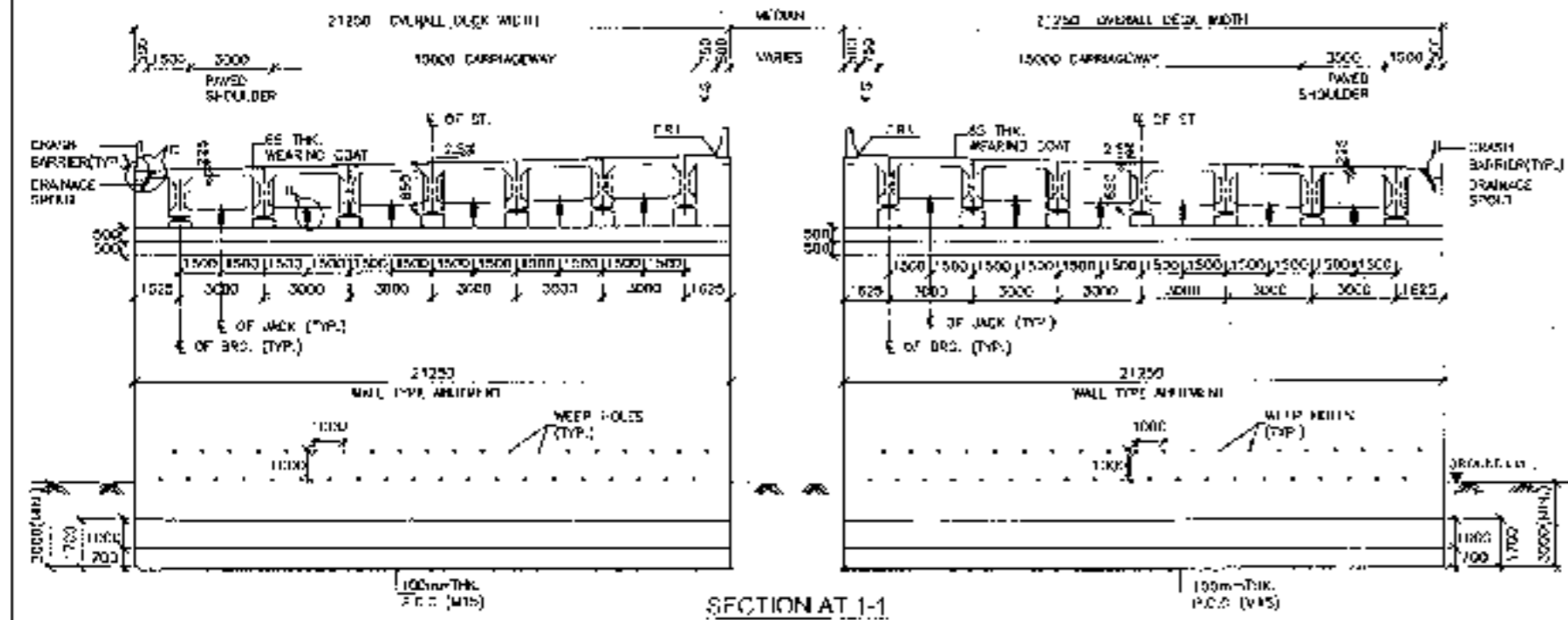
**DETAIL - C**  
(SCALE 1:20)



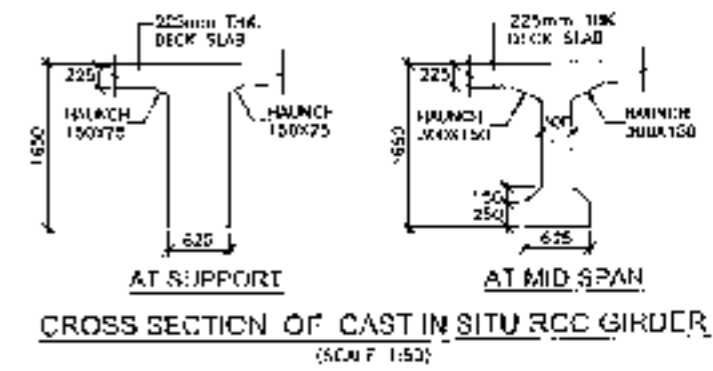
**DETAIL - A**  
(SCALE 1:100)



**KEY PLAN**



**SECTION AT 1-1**  
(SCALE 1:50)



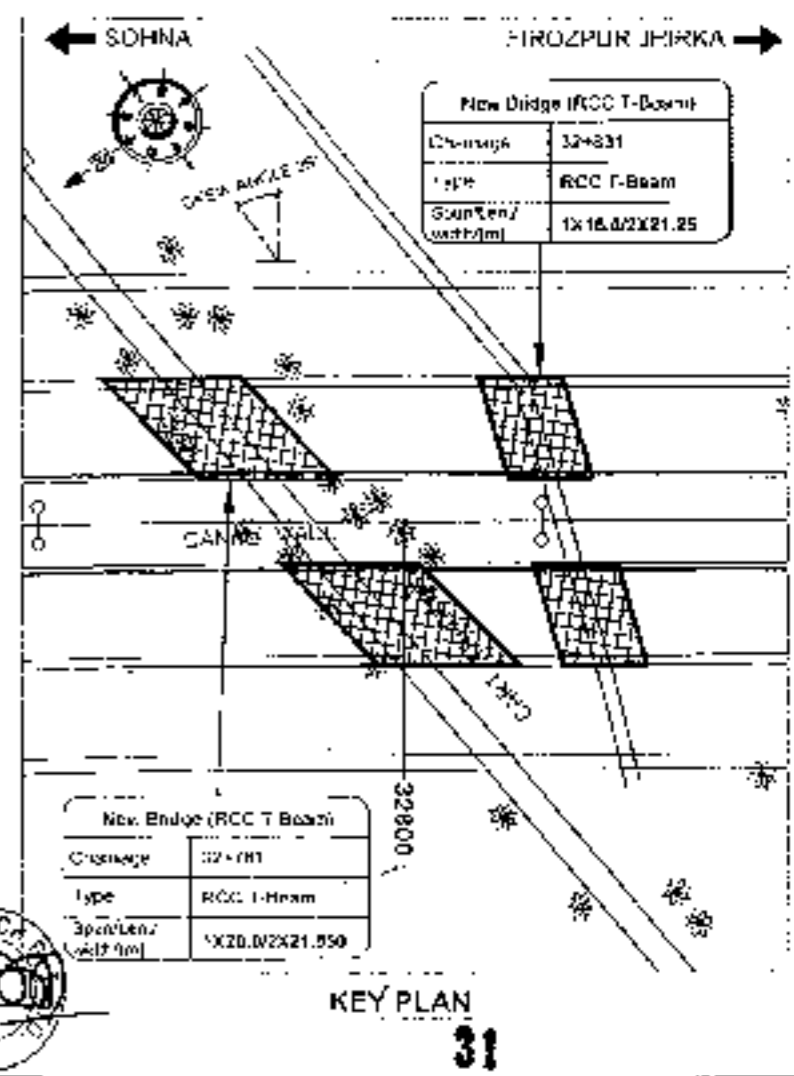
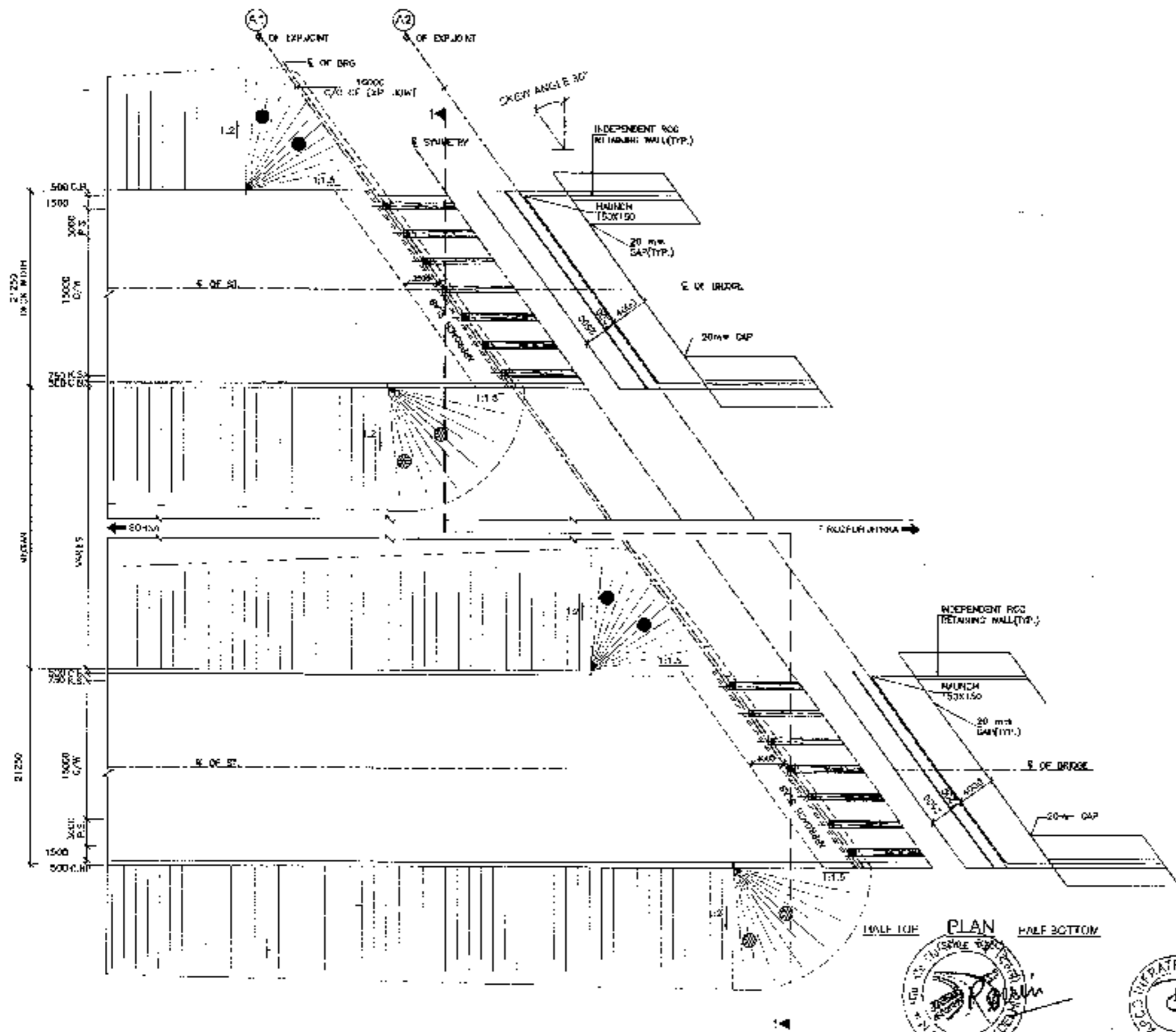
**CROSS SECTION OF CAST IN SITU RCC GIRDER**  
(SCALE 1:50)



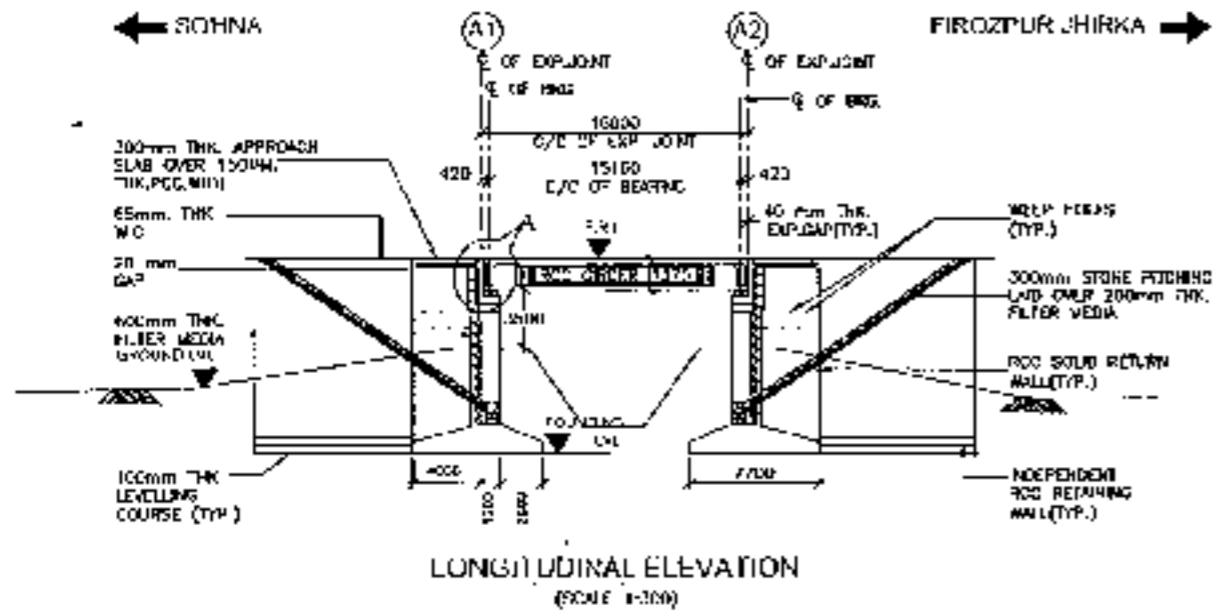
<b>CLIENT</b> 	<b>CONSULTANT</b> 	<b>PROJECT</b> Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6 Package-4) of SoHna - Firozpur Jhirkha	<b>SCALE</b> AS SHOWN	<b>DWG TITLE</b> GENERAL ARRANGEMENT DRAWING (SPAN 1 X 20.00 M @ C.C. EXP. JUNCTION) AT CH 32+781 (SHEVA - FROZPUR JHIRKA)	<b>DRAWING No.</b> CH/15/2014/10/10/10
					<b>DATE</b> - 04/12/2018 <b>PREPARED BY</b> - KISHOR KUMAR <b>CHECKED BY</b> - MD. A. RAHMAN

RCC T-BEAM (SIZE 1x16.0M)  
AT KM 32+831

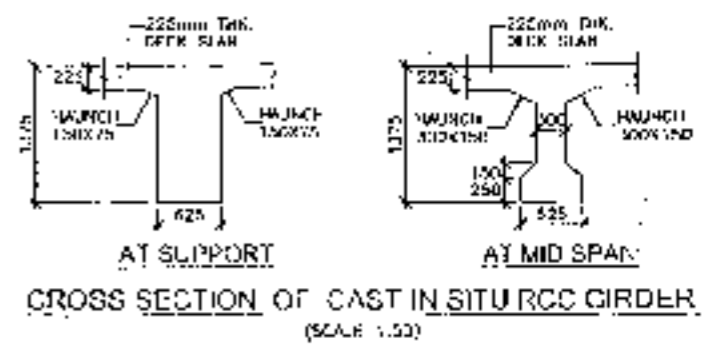
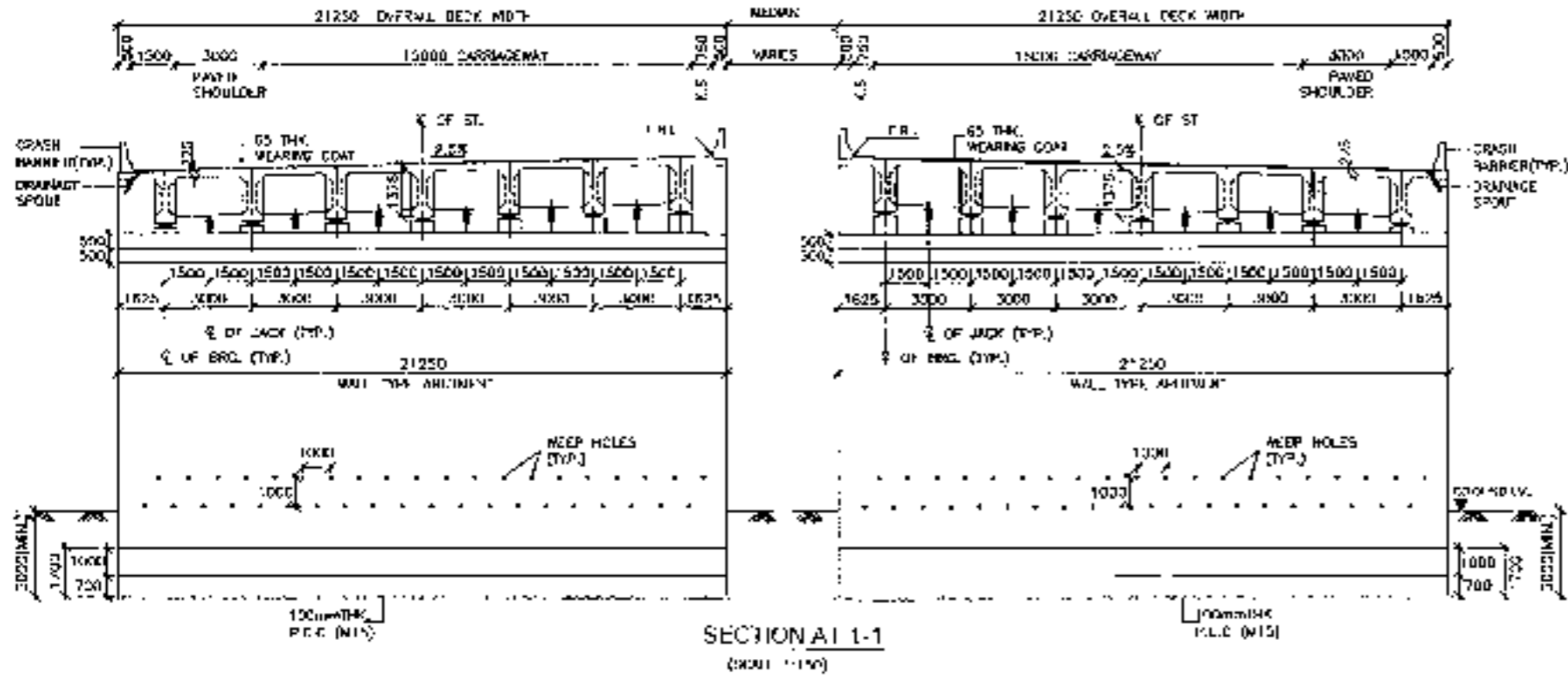
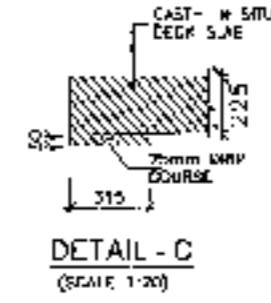
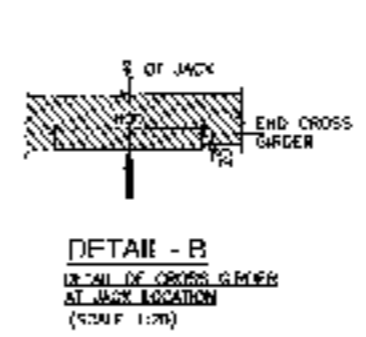
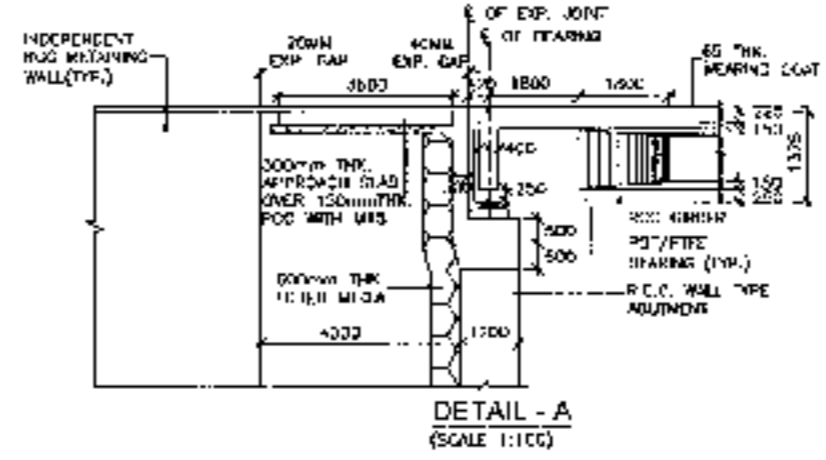




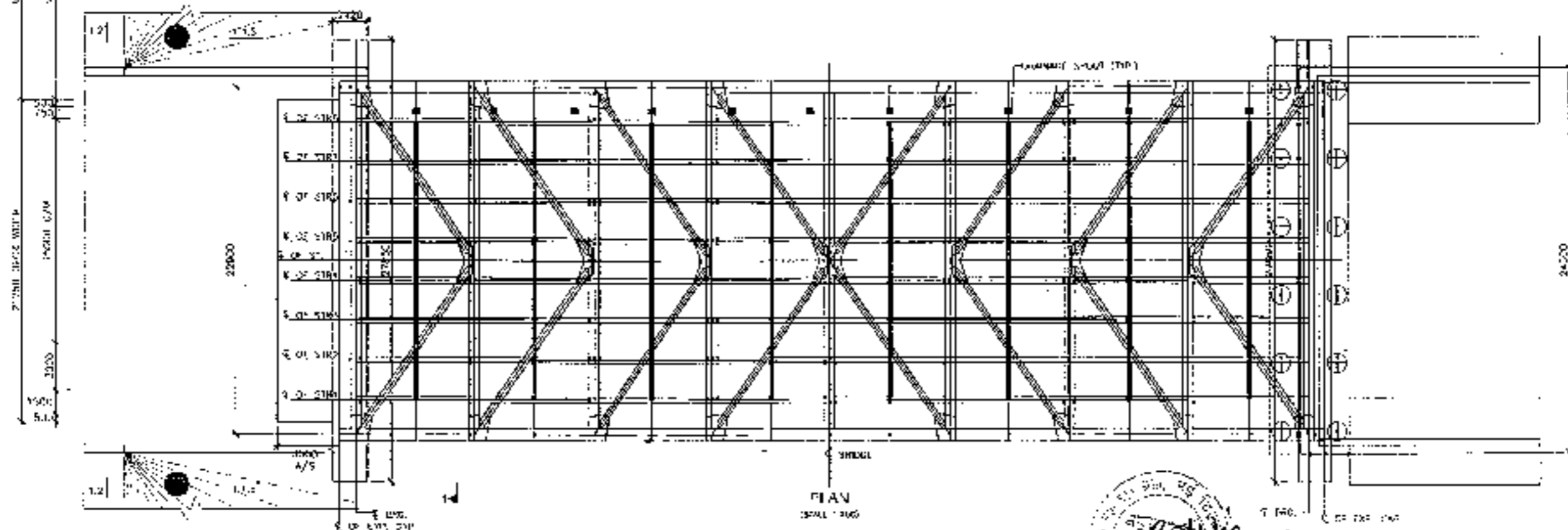
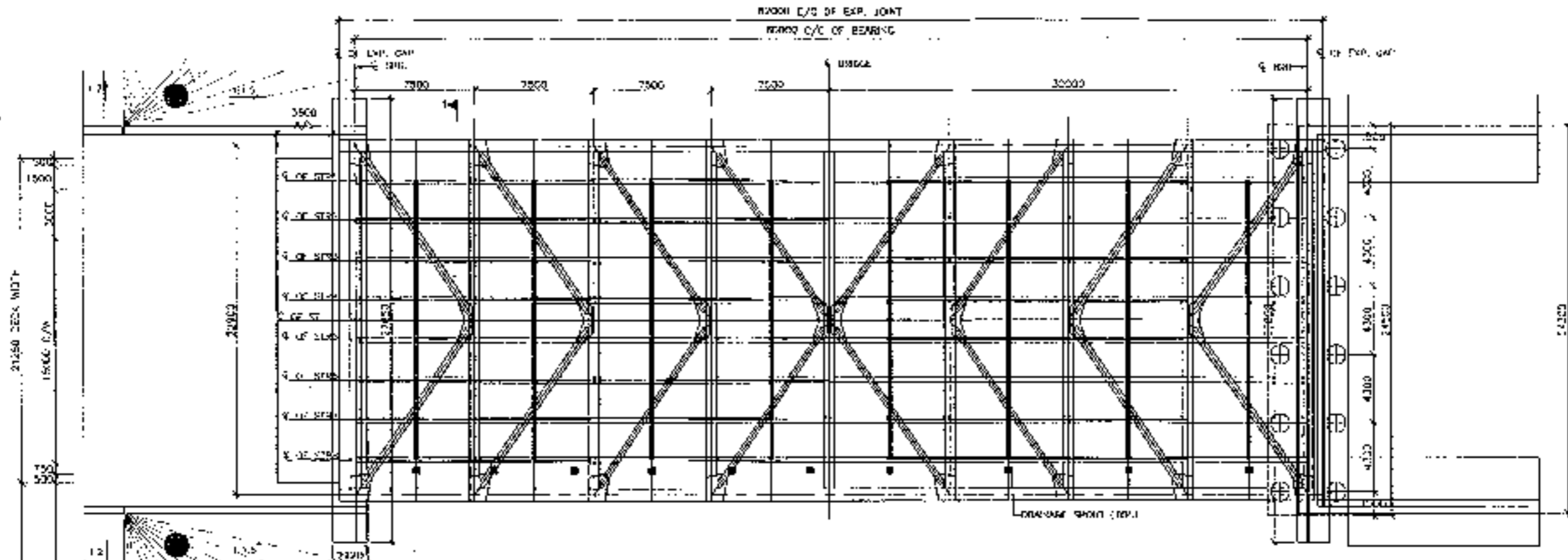






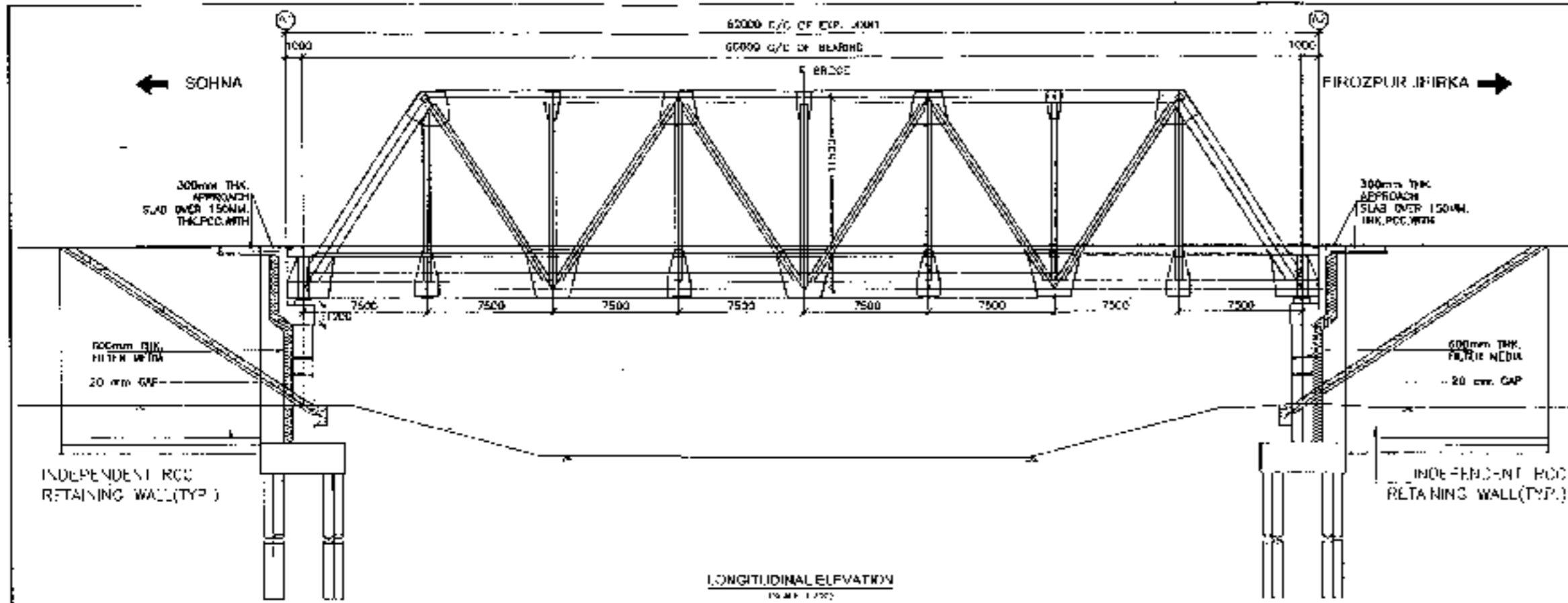
LI-WALL LEVEL (M)	197.400	197.493	
GROUND LEVEL (M)	191.420	191.633	
DRAINAGE (M)	32+823	32+831	32+839



<b>CLIENT:</b> National Highway Authority of India	<b>CONSULTANT:</b> Chaitanya Projects Consultancy Pvt. Ltd. C-5, 2ND FLOOR, R.K. TOWER PLOT NO - 21/22, SHYAMLA, VAISHALI, GATEWAY PH: 0120-4771419, 4102472, FAX: 0120-4113477	<b>PROJECT:</b> Consultancy Service for the Preparation of Feasibility Report/DPA for Development of Economic Corridors, Inter Corridors and Feeder Routes to Improve the Efficiency of Freight Movement in India under Bharatmala Pariyojana (I) at Sohna - Firozpur Jhirka	<b>SCALE:</b> AS SHOWN	<b>DWG TITLE:</b> GENERAL ARRANGEMENT DRAWING SPAN 1 X 16.0M (C/S EXP. JOINT) AT C/S 32+832	<b>DRAWN BY:</b>
					<b>DATE:</b> AUGUST 2014
<b>SOHNA - FIROZPUR JHIRKA</b>		<b>APPROVED BY:</b>	<b>DATE:</b>	<b>PREPARED BY:</b>	<b>DATE:</b>



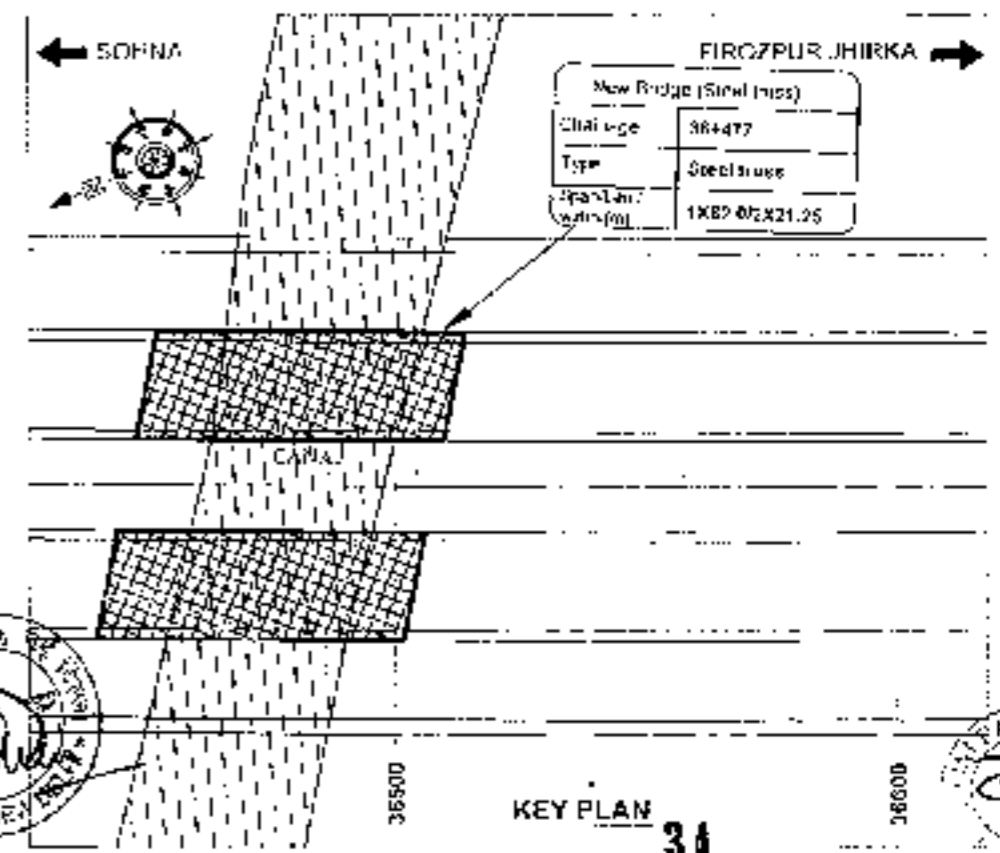
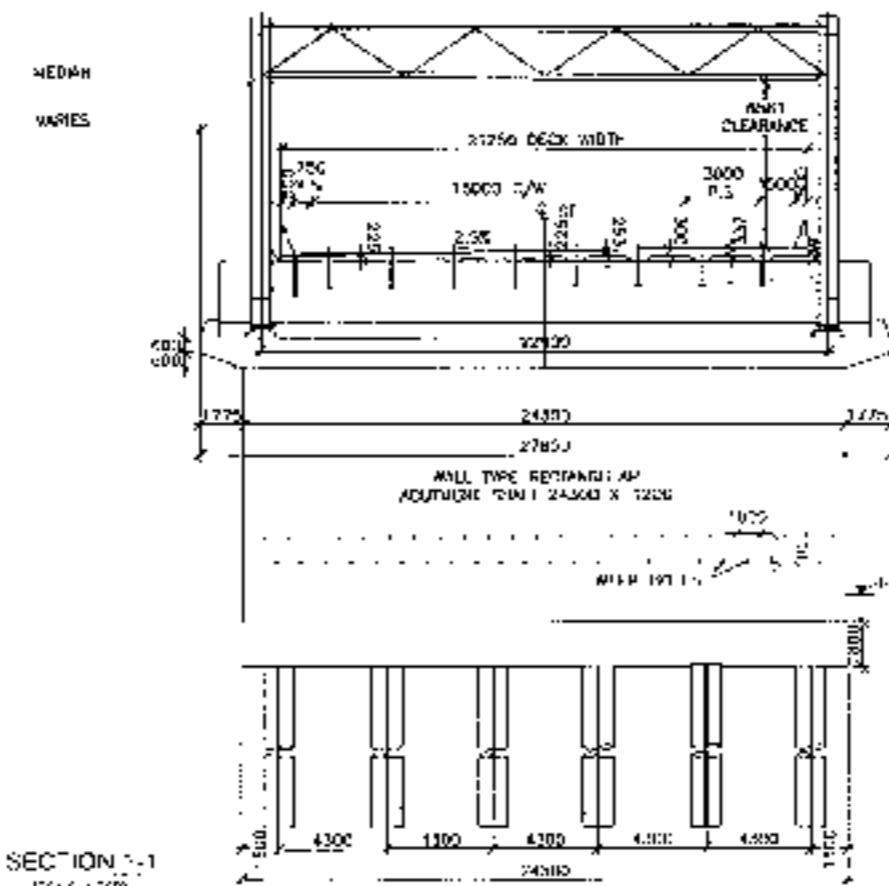
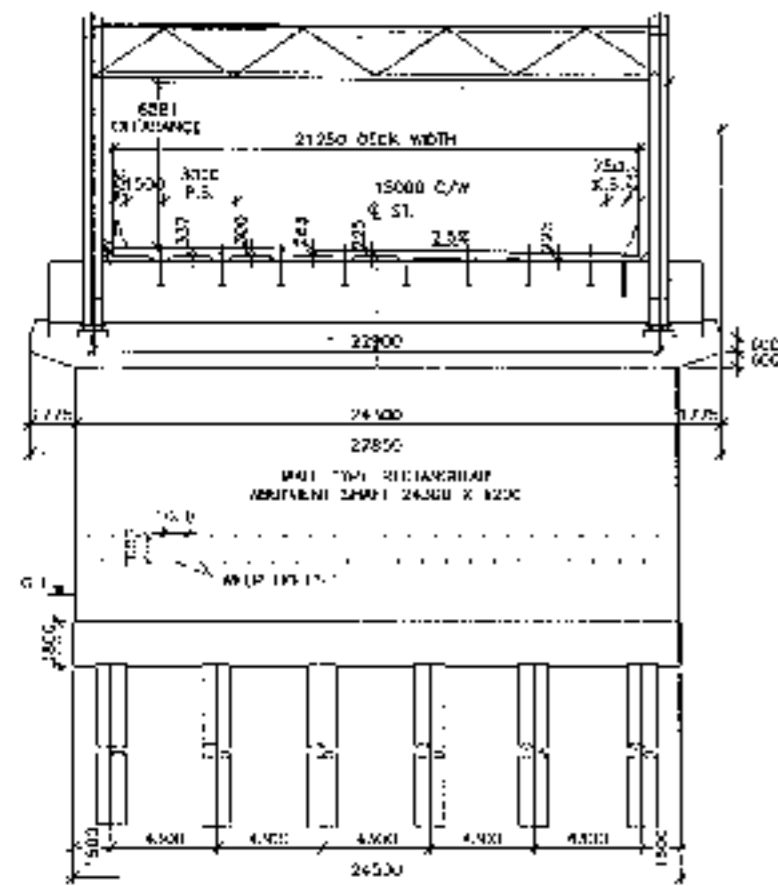
<p>CLIENT:</p>  <p>National Highways Authority of India</p>	<p>CONSULTANT:</p>  <p>Chaitanya Projects Consultancy Pvt. Ltd          C-5, 2ND FLOOR, R.K. TOWER PLOT NO - 21-22,          SEC 31/14, VAISHALI, GHAZIABAD          Ph: 0120-3223419, 4191072, FAX: 0120-4110472</p>	<p>PROJECT:</p> <p>Consultancy Service for the Preparation for Feasibility Report (UPK for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in ICDs under Rowatnalla Railway Station, Lot of Package-41 of Sojha - Ferozpur Jharkh</p>	<p>SCALE:</p> <p>AS SHOWN</p>	<p>DWG TITLE:</p> <p>GENERAL ARRANGEMENT DRAWING (SPAN 1 X 5000 M/C/C EXP JOINT) AT CP 16+177</p>	<p>DATE: 16/08/2010</p> <p>PREPARED BY: P. SINGH</p> <p>CHECKED BY: P. SINGH</p> <p>APPROVED BY: P. SINGH</p>
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- NOTES:
- ALL DIMENSIONS ARE IN MM.
  - AGREEMENTS SHALL BE SIGNED FROM THE DRAWING EARLY WRITTEN DISCUSSION SHALL BE FOLLOWING.
  - THE WORK SHALL BE ACCORDING TO THE PROVISIONS OF IS 800 AND A CLASS LOADING AS PER IS 800-1983.
  - THIS BRIDGE SHALL BE DESIGNED FOR BATHUR AND 20% I.C.
  - ANALYSIS AND DESIGN OF STEEL MEMBER AS PER IS 800-1983.
  - ANALYSIS AND DESIGN OF COMPOSITE CONCRETE DECK AS PER IS 456-1978.
  - ALL STEEL PLATES USED IN FABRICATION OF THIS BRIDGE ARE OF GRADE E250A.
  - GRADE OF CONCRETE FOR DECK, BRIDGE BARRIER AND APPROACH SLAB SHALL BE M 20.
  - STEEL JOINTS SHALL BE WELDED SHALL CONFORM TO IS 800-1983.
  - ALL MEMBER SHALL BE MULTIPLE ROLLED SECTION FOR MAXIMUM STRENGTH.
  - LOAD BENCHES OF APPROACH PIER SHALL BE DESIGNED BY RETAINING WALL ENGINEER SEPARATELY.
  - WINDMILL FABRICATION:
    - A. APPROX. FACTOR: 1.05
    - B. W.P.L.: 1.0
    - C. WIND SPEED: 22.22 M/S (40 KNOTS)
  - ALL DIMENSIONS OF SUBSTRUCTURE & FOUNDATION ARE TENTATIVE AND MAY CHANGE DURING CONSTRUCTION.
  - MINIMUM CLEAR COVER TO OUTER MOST REINFORCEMENT SHALL BE AS UNDER:
    - A. DECK SLAB: 25MM (OR MORE AS REQUIRED)
    - B. SUBSTRUCTURE: 25MM
    - C. FOUNDATION: 75MM

LONGITUDINAL ELEVATION  
(SCALE: 1/200)

FORMATION LEVEL (m)	187.250	187.550
GROUND LEVEL (m)	188.321	187.981
CHANGELINE (m)	184.448	36+500

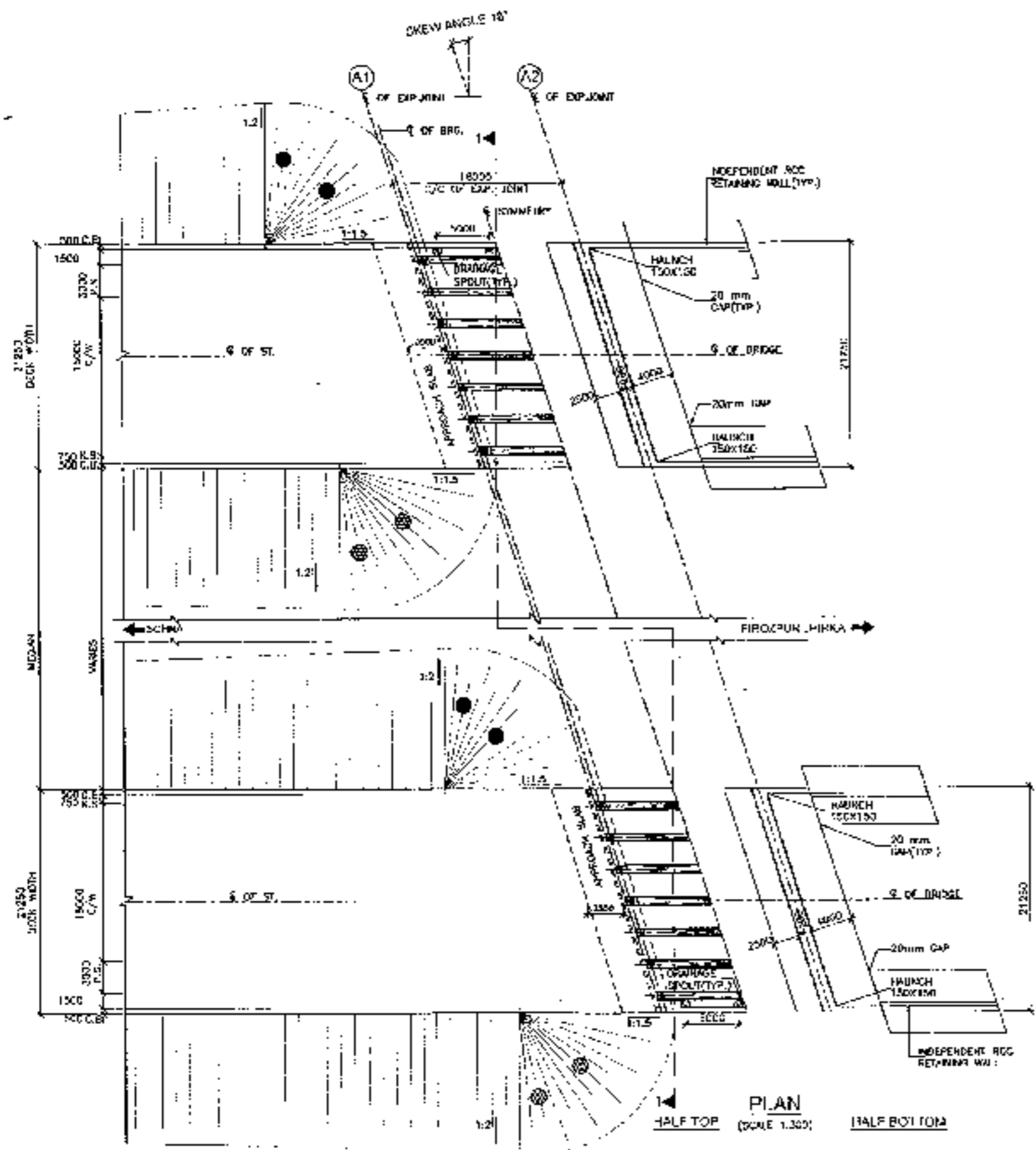


KEY PLAN  
34

CLIENT: National Highways Authority of India	CONSULTANT: Chaitanya Projects Consultancy Pvt. Ltd. C-5, 2ND FLOOR, R.K. TOWER PLOT NO. 21-22 SECTION-4, VAISHALI, GHAZIABAD PH: 9120-2225410, 9120472, FAX: 0120-4110472	PROJECT: Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Intra Corridors and Feeder Routes to Improve the efficiency of Inland movement in India under Bharatmala Pariyojna (Lot-1 (Package 4) of Subno - 1) (Firozpur Jhirka)	SCALE: AS SHOWN	DWG. (T.C.): GENERAL ARRANGEMENT DRAWINGS (SPAN X R.C.C. TRUSS JOINT) AT CH-36+477 (SOHNA - FIROZPUR JHIRKA)	DRAWING NO.: CH-36+477-15-100-00	SHEET 1 OF 2
			DATE: AUGUST 2017	PREPARED BY: [Name]	CHECKED BY: [Name]	APPROVED BY: [Name]

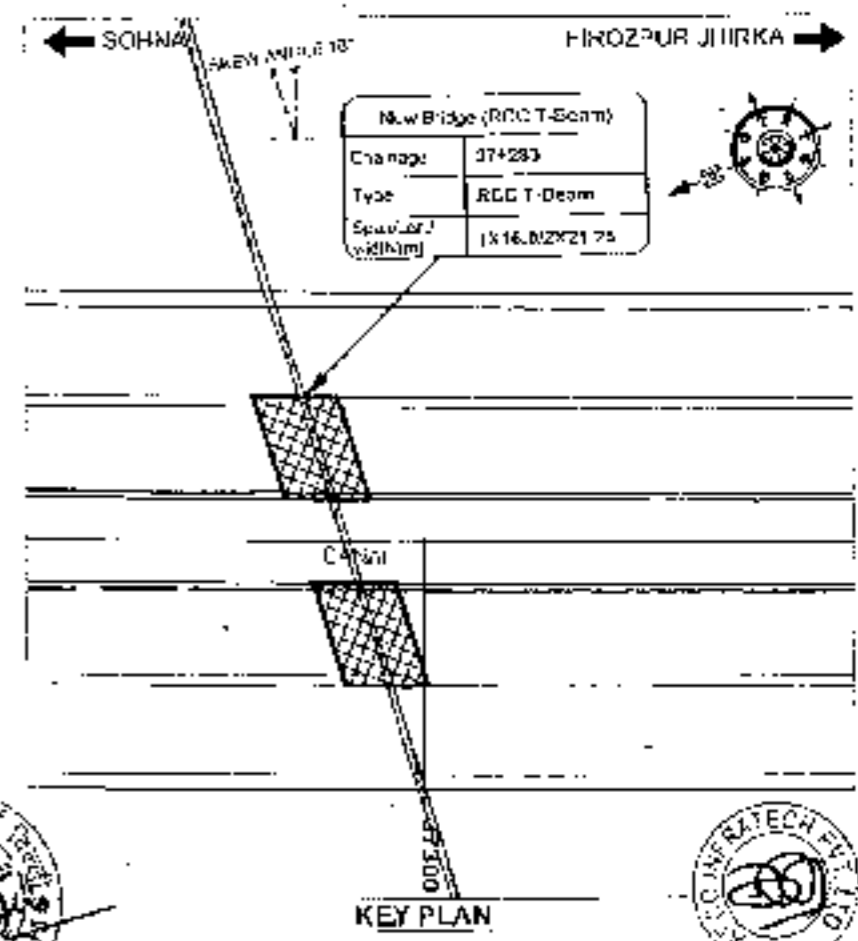
RCC T-BEAM (SIZE 1x16.0M)  
AT KM 37+283





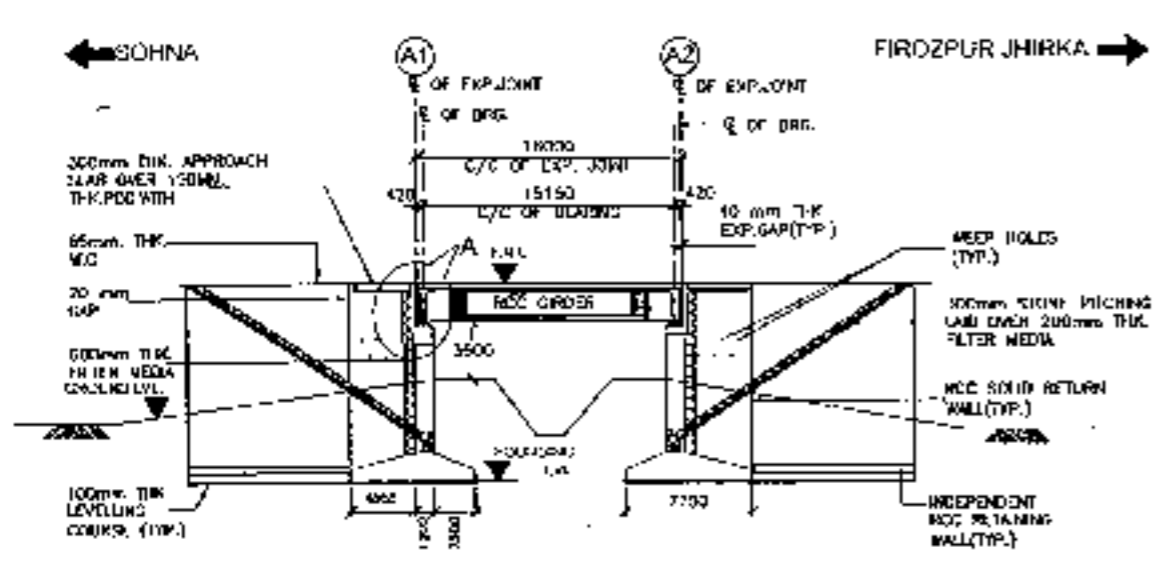
PLAN  
SCALE 1:300  
HALF TOP  
HALF BOTTOM

- NOTES:-**
1. ALL DIMENSIONS ARE IN MM AND LEVELS ARE IN METRES UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS TO BE FOLLOWED. NO DIMENSION SHALL BE SCALED.
  2. THE PROPOSED LANE WIDTH HAS BEEN DIMENSIONED FOR 200 OR 110mm CLASS A TYPING AND WEAR COURSE.
  3. CONCRETE SHALL BE DESIGN MIX AND SHALL BE OF GRADE AS INDICATED BELOW:-  
 RCC REVEILING COURSE : M-15  
 STRUCTURE : M-40  
 SUBGRADE : M-20  
 CRASH BARRIER : M-40  
 APPROACH SLAB : M-30  
 RETAINING WALLS : M-35
  4. GRADE OF STEEL SHALL BE Fe-250D CONFORMING TO IS:1163.
  5. MAXIMUM FILLING BEHIND ABUTMENTS AND RETAIN WALLS SHALL CONSIST OF SELECTED EARTH CONFORMING TO APPENDIX - 6 OF IS:1163-2014 HAVING PROPERTIES C-3, S-30, S=20 & G = 20 kN/m<sup>3</sup>.
  6. LANE DIMENSION AND EXTENT OF BACKFILL BEHIND ABUTMENT AND RETAIN WALL SHALL CONFORM TO SPECIFICATIONS IN APPENDIX - 6 OF IS: 1163-2014.
  7. WEAP HOLES SPACED AT 1000 K/G DOWN HORIZONTAL AND VERTICALLY SHALL BE PROVIDED IN A STAGGERED MANNER IN WIDTH AND RETURN WALL. ALL 150 mm ABOVE FINISH LEVEL.
  8. 65mm THK. CC WEARING COURSE SECTION AND IF ANY SPECIFICATION.
  9. ALL DIMENSIONS ARE TO FINISH UNLESS OTHERWISE SPECIFIED.
  10. CONDITION OF EXPOSURE IS MODERATE.
  11. THIS STRUCTURE LIES IN ZONE II.



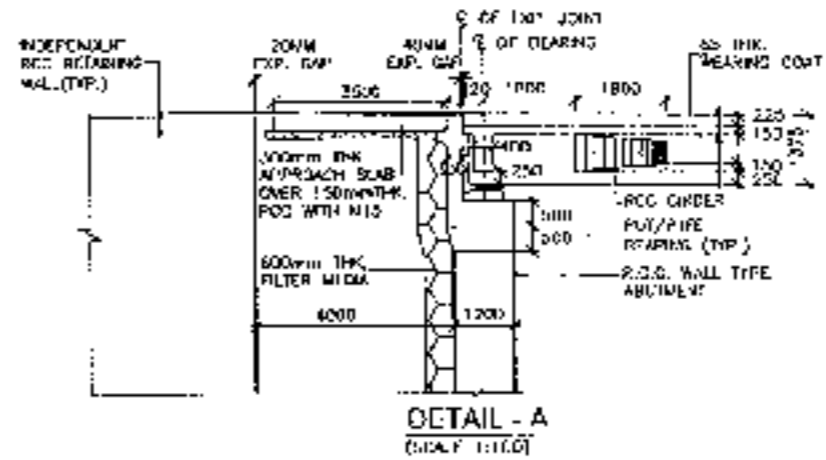
KEY PLAN

<p>CLIENT:- National Highways Authority of India</p>	<p>CONSULTANT:- Chaitanya Projects Consultancy Pvt. Ltd. C-5, JINDI P. O. INDIA TOWER PLOT NO. 21-22, SECTOR-4 VASHTALI, GHAZABAD PH: 0129-3225410, 4120472, FAX: 0129-4110472</p>	<p>PROJECT:- Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Sub-Package-2) of section 1 Sonoria to Bikaner and Section 2: Kota to Vadedara</p>	<p>SCALE:- AS SHOWN</p>	<p>OWG TITLE:- GENERAL ARRANGEMENT DRAWING SPAN 1 X 16.02M C/C EXP. JOINT: AT CH-37+283 (SOHNA - FIROZPUR JHIRKA)</p>	<p>DRAWING No. - LFC/4/52/01/07-21/25-103 DATE - AUGUST 2016 PREPARED BY: CHAKRABORTY CHECKED BY: CHAKRABORTY</p>
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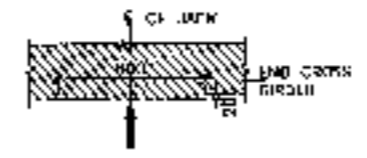


**LONGITUDINAL ELEVATION**  
(SCALE 1:500)

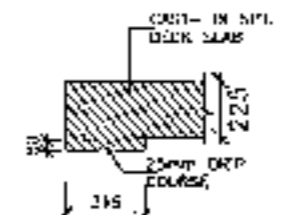
FORMATION LEVEL (m)	196.71	196.71
GRADUUM LEVEL (m)	188.700	188.701
CHAINAGE (m)	37+275	37+283



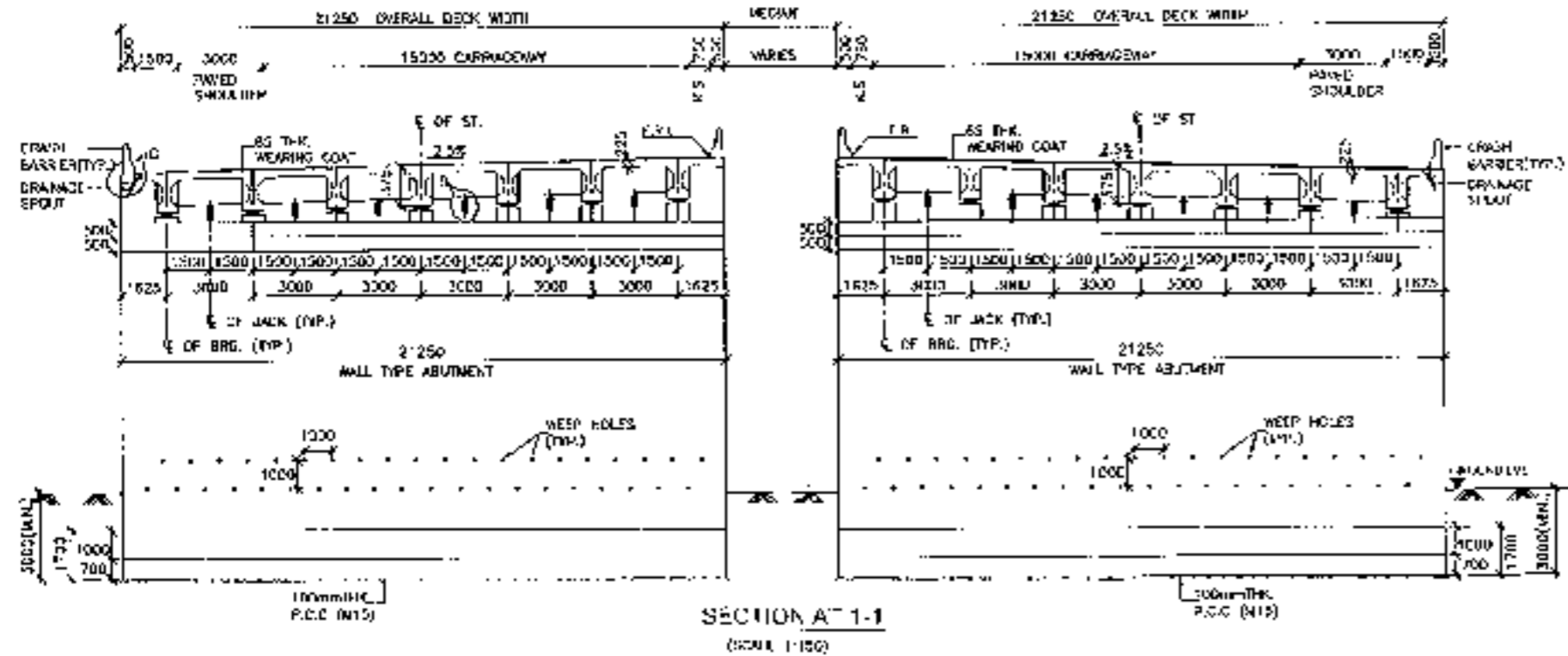
**DETAIL - A**  
(SCALE 1:100)



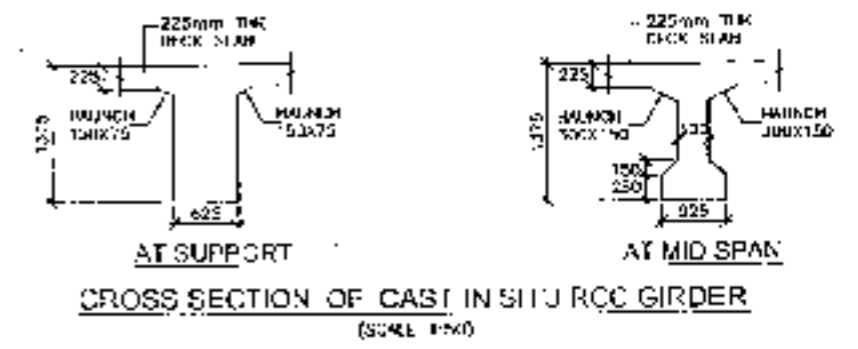
**DETAIL - B**  
DETAIL OF CROSS SECTION  
AT JACK LOCATION  
(SCALE 1:20)



**DETAIL - C**  
(SCALE 1:20)





**SECTION AT 1-1**  
(SCALE 1:100)



**CROSS SECTION OF CAST IN SITU RCC GIRDER**  
(SCALE 1:50)

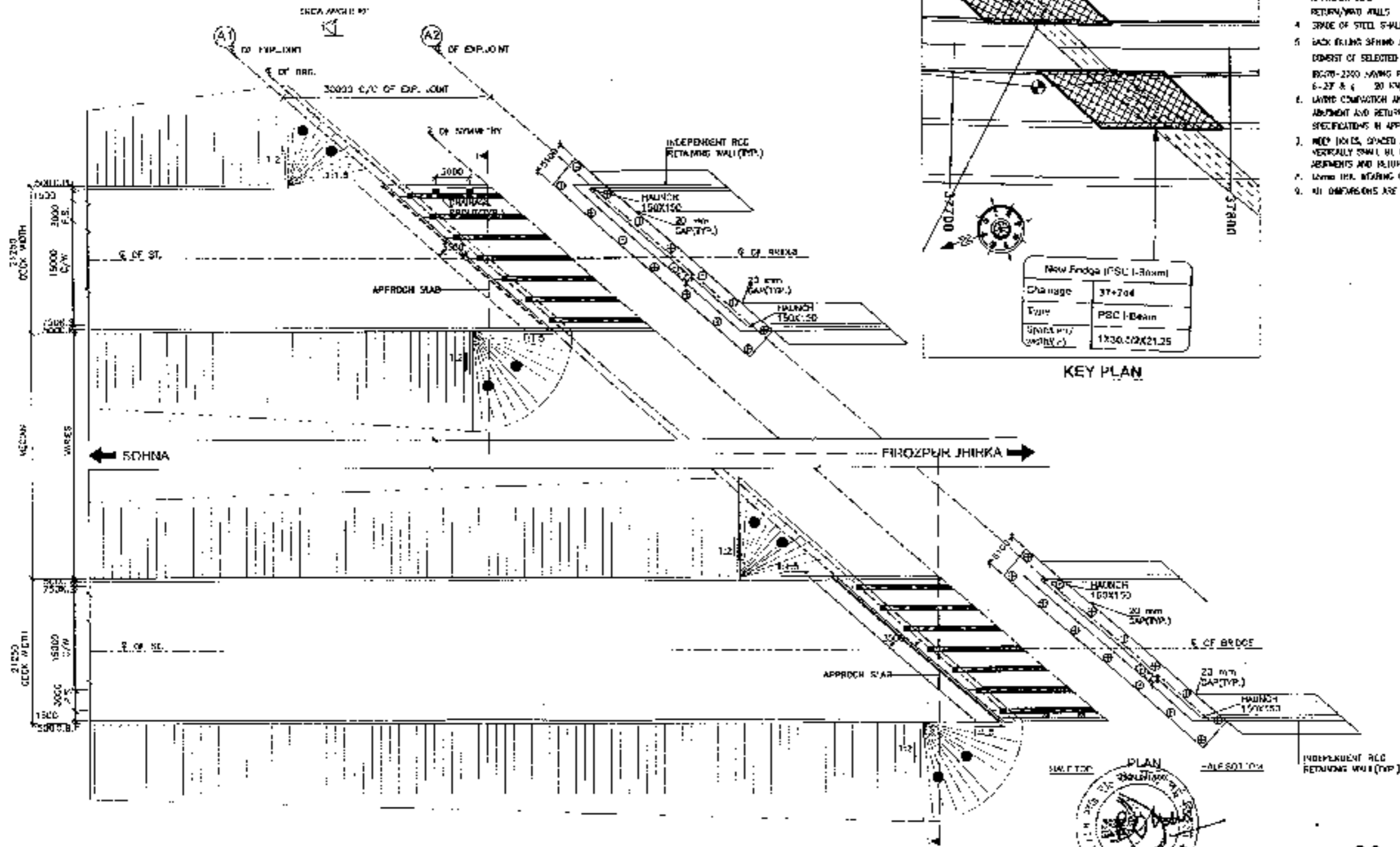


37

<b>CLIENT:-</b>  National Highways Authority of India New Delhi	<b>CONSULTANT:-</b>  Chalfahya Projects Consultancy Pvt. Ltd. C-5, 2ND FLOOR, R.K. TOWER PLOT NO. 21-22, BECTORIA, VAISHALI, GHAZIABAD PH: 0120-3223419, 4120473, FAX: 0120-4110472	<b>PROJECT:-</b> Consultancy Services for the Preparation of Feasibility Report for the development of Economic Corridor, Bypass Corridor and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6 Post-4g2-4) of Salma - Farooq Corridor	<b>SCALE:-</b> AS SHOWN	<b>DWG TITLE:</b> GENERAL ARRANGEMENT DRAWING SPAN: 11 X 16.00 M @ EXP. JOINT AT C-1-37-263 SOHNA - FIRAZPUR JHIRKA	<b>DRAWING No.:</b> C/2014-182/002/4-20/3-010	<b>SHEET No.:</b> 00
					<b>DATE:</b> AUGUST 2015	<b>APPROVED BY:</b>

PSC I-BEAM (SIZE 1x30.0M)  
AT KM 37+744

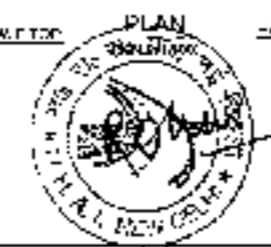




- NOTES:-**
1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS TO BE FOLLOWED. NO DIMENSION SHALL BE SCALED.
  2. THE PROPOSED BRIDGE HAS BEEN DESIGNED FOR FOR OR +1% SURFACE DRAINAGE, WHICHEVER OCCURS.
  3. CLARITY SHALL BE DESIGN AND SHALL BE OF GRADE AS INDICATED BELOW:-  
 RCC LEVELING COURSE : M-15  
 SUPERSTRUCTURE : M-40  
 SUBSTRUCTURE : M-15  
 CRUSH BRIDGE : M-10  
 APPROACH SLAB : M-30  
 RETURN WALL : M-35
  4. GRADE OF STEEL SHALL BE Fe-500 CONFORMING TO IS:1786
  5. BACK FILLING BEHIND ABUTMENTS AND RETURN WALLS SHALL CONSIST OF SELECTED EARTH CONFORMING TO APPROX: 60% UP TO 2000 HAVING PROPERTIES C-0,  $\phi$ -30, 6-27 &  $\gamma$  20 kN/m<sup>3</sup>
  6. LAYING CONSTRUCTION AND EXTENT OF BACKFILL BEHIND ABUTMENT AND RETURN WALL SHALL CONFORM TO SPECIFICATIONS IN APPENDIX 5 OF IRC : 75-2011
  7. REEF NAILS, SPACED AT 1000 c/c BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED IN A STAGGERED MANNER IN ABUTMENTS AND RETURN WALL AT 150 mm ABOVE GROUND LEVEL
  8. LAYING THE BEARING COURSE SECTION 500 OF NORTH SPECIFICATIONS
  9. ALL DIMENSIONS ARE TENTATIVE MAY BE CHANGED WITHIN DESIGN

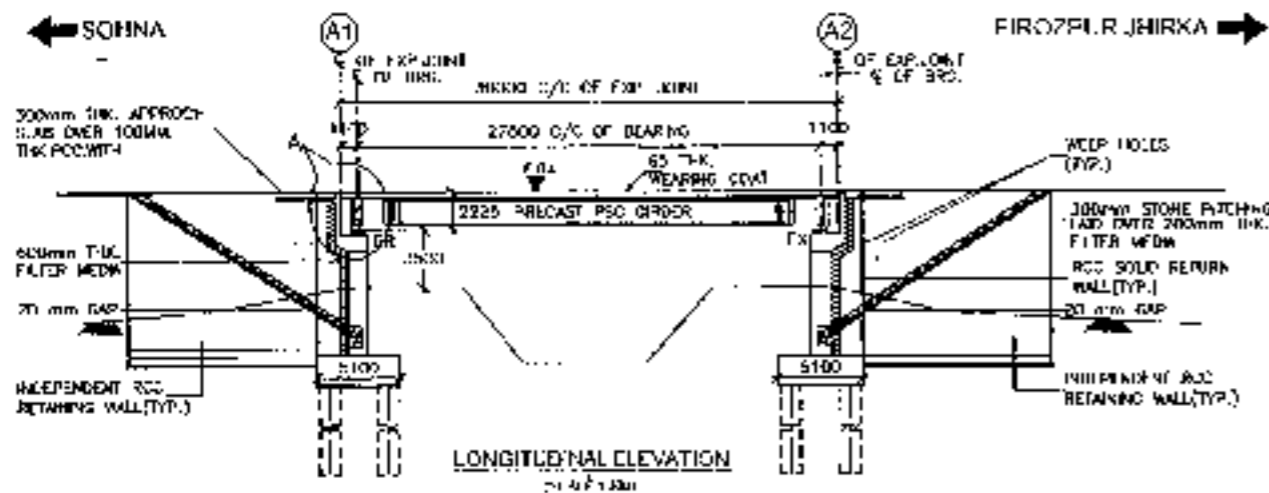
New Bridge (PSC I-Beam)	
Change	37+204
Type	PSC I-Beam
Span length/wheel width (c)	1x30.00x21.25

KEY PLAN

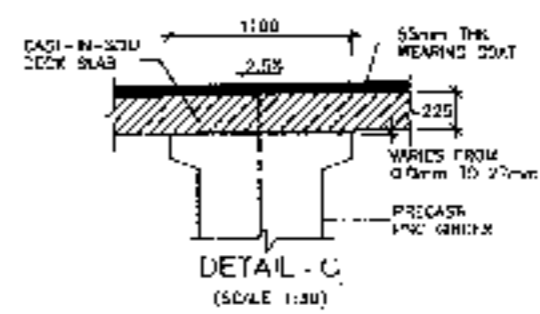
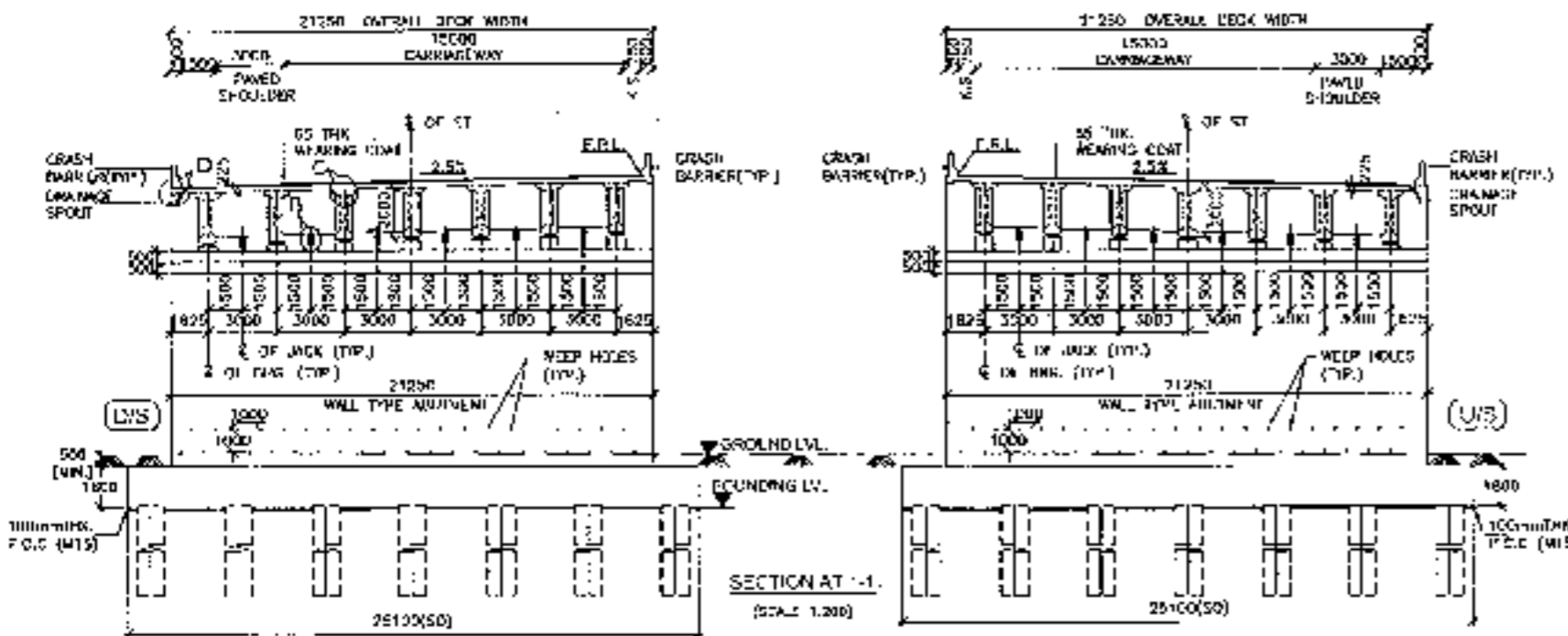
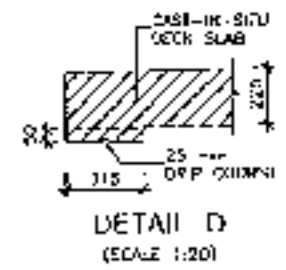
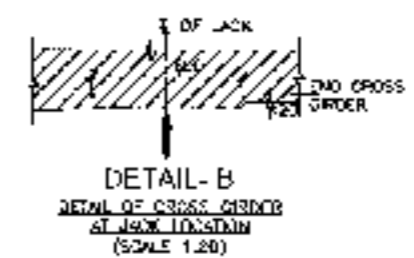
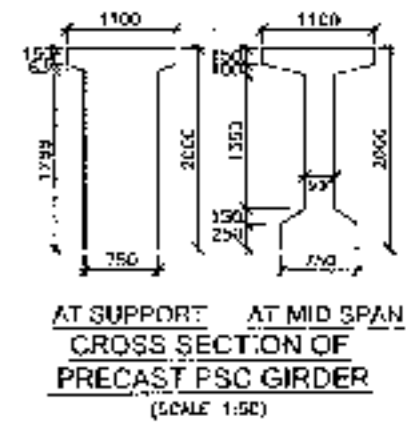
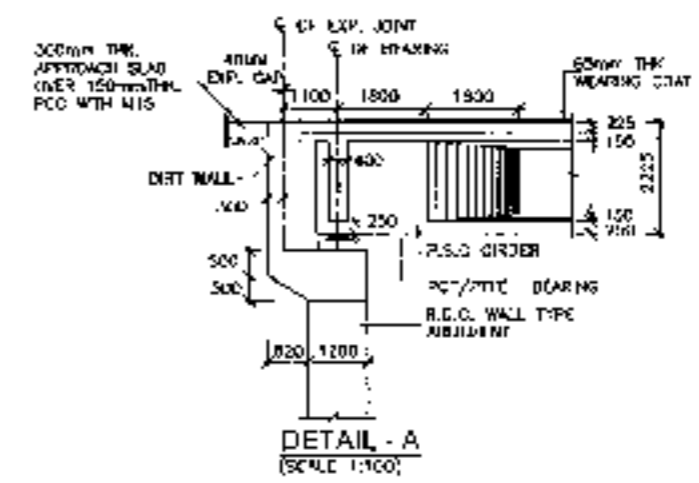


<b>CLIENT:-</b> 	<b>CONSULTANT:-</b> 	<b>PROJECT:-</b> Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (L-10-2/F.No.1492-4) of Sohna - Firozpur Jhirka	<b>SCALE</b> AS SHOWN	<b>DWG TITLE:-</b> GENERAL ARRANGEMENT DRAWING (SPAN 1x 30.00 M OVER 10.00 M) AT CH-37+204 (SHEET NO. 39 OF 40)	<b>DRAWING NO.:</b> CH-37+204-39	<b>DATE:</b> 10/10/2016	<b>PREPARED BY:</b>	<b>CHECKED BY:</b>	<b>APPROVED BY:</b>
					<b>REVISIONS:</b>	<b>DATE:</b>	<b>BY:</b>	<b>BY:</b>	<b>BY:</b>





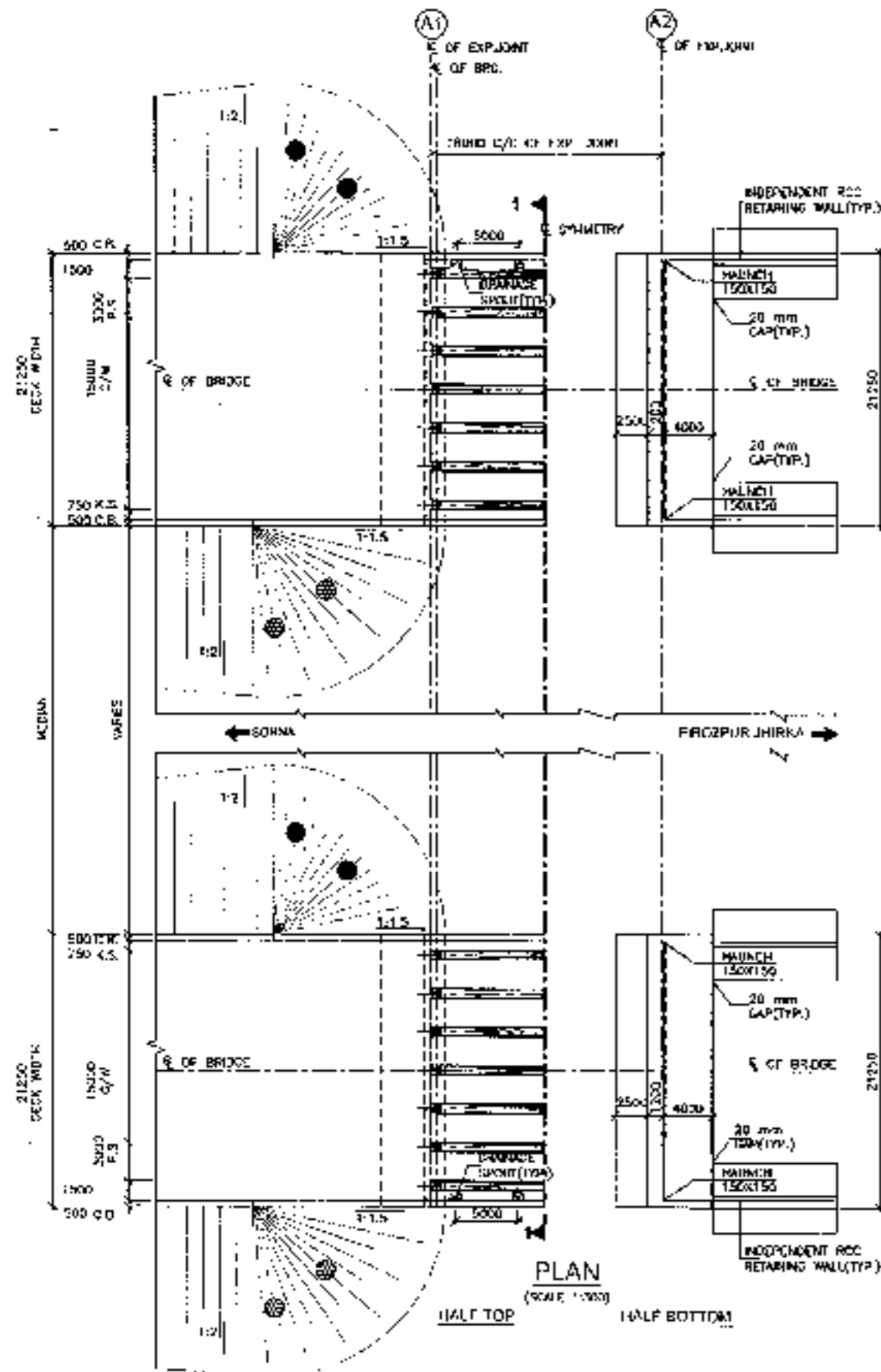
FORMATION LEVEL (m)	183.789	183.708
FINISHED P.V.HI (m)	187.818	187.812
CHAINAGE (m)	37+729	37+744



<b>CLIENT</b> National Highways Authority of India CH-3, 2nd Floor, Connaught Place, New Delhi-110028	<b>CONSULTANT</b> Chaitanya Projects Consultancy Pvt. Ltd. C-5, 2ND FLOOR, R.K. TOWER PLOT NO - 21-77 SECTION-4, VASHTALI, GHAZIABAD PH: 0126-3222410, 3129172, FAX: 0126-6113472	<b>PROJECT</b> Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot GP/1/Kage-4) of Sohna - Firozpur Jhirka	<b>SCALE</b> AS SHOWN	<b>DWG TITLE</b> GENERAL ARRANGEMENT DRAWING (SPAN 1 X 23.00 M CC EXP. JOINT) A/ CH 37/144 (SOHNA - FIROZPUR JHIRKA)	<b>DRAWING No.</b> CH/37/144/17-154.8-103
					<b>DATE</b> AUGUST 2015
<b>PREPARED BY</b> RAJESH KUMAR	<b>CHECKED BY</b> RAJESH KUMAR	<b>APPROVED BY</b> RAJESH KUMAR			

RCC T-BEAM (SIZE 1x18.0M)  
AT KM 38+860



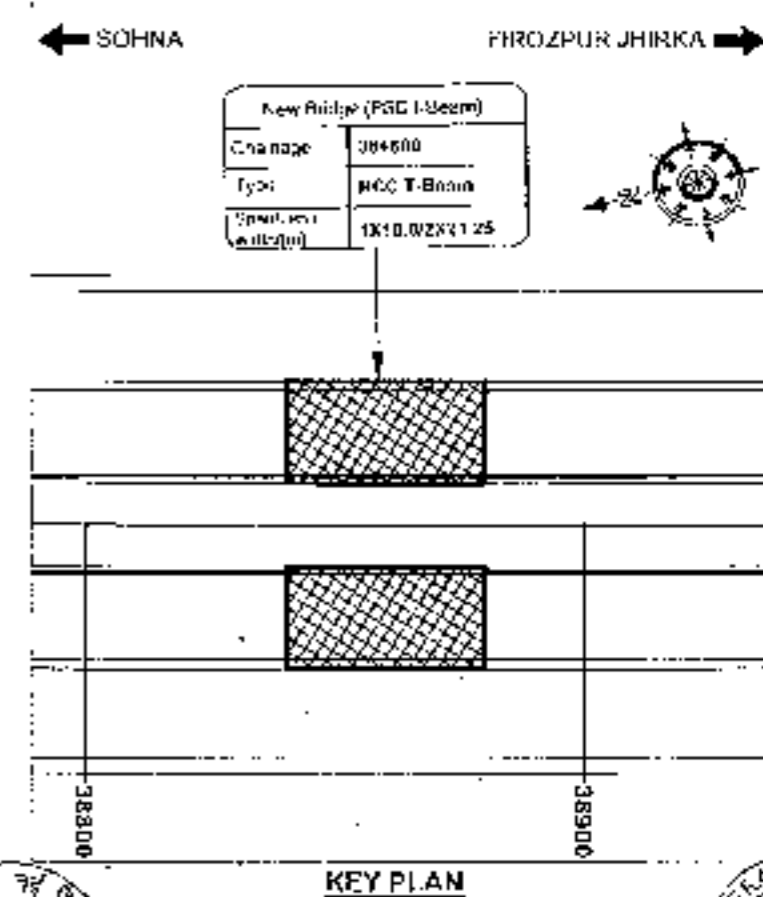


PLAN  
(SCALE: 1:500)

HALF TOP HALF BOTTOM



NOTES:

1. ALL DIMENSIONS ARE IN MM AND LEVELS ARE IN METRES (UNLESS OTHERWISE MENTIONED, ONLY WRITTEN DIMENSIONS TO BE FOLLOWED, NO DIMENSION SHALL BE SCALE).
2. THE PROPOSED 3 LANE BRIDGE HAS BEEN DESIGNED FOR JOR ON 4-LANE 2-LANE CLASS A LOADING, WHICH WILL GOVERN.
3. GRADE OF ROAD TO BE DESIGN AND SHALL BE OF GRADE AS INDICATED BELOW:  
 ROAD LEVELING COURSE : M-15  
 SUPERSTRUCTURE : M-40  
 SUBSTRUCTURE : M-40  
 CRUSH PAVEMENT : M-40  
 FINISCH SURF : M-40  
 RETAINING WALLS : M-40
4. GRADE OF STEEL SHALL BE Fe-500 (CONFORMING TO IS:1786).
5. BACK FILLING BEHIND ADJUSTMENTS AND RETURN WALLS SHALL CONSIST OF SELECTED FORTH (CONTAINING 10 APPROX) : 5 OF BS:12-2014 HAVING PROPERTIES  $D=0$ ,  $\beta=37$ ,  $E=20$  &  $\gamma = 20$  KN/m<sup>3</sup>.
6. FINISH COMPACTED AND EXIST OF BACKFILL BEHIND ADJUSTMENT AND RETURN WALL SHALL CONFORM TO SPECIFICATIONS IN APPENDIX - II OF IS: 12-2014.
7. VEEB HOLES, SPACED AT 1000 c/c BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED ON A REGULAR NUMBER OF ADJUSTMENTS AND RETURN WALL (ALL 150 mm ABOVE CRACKED LEVEL).
8. 65mm THK. D.C. WEARING COURSE SECTION SOO OF NORTH SPECIFICATIONS.
9. ALL DIMENSIONS ARE TENTATIVE MAY BE CHANGED AFTER DETAIL DESIGN.
10. CONDITION OF EXPOSURE IS URBAN.
11. THIS STRUCTURE LIES IN SEISMIC ZONE II.

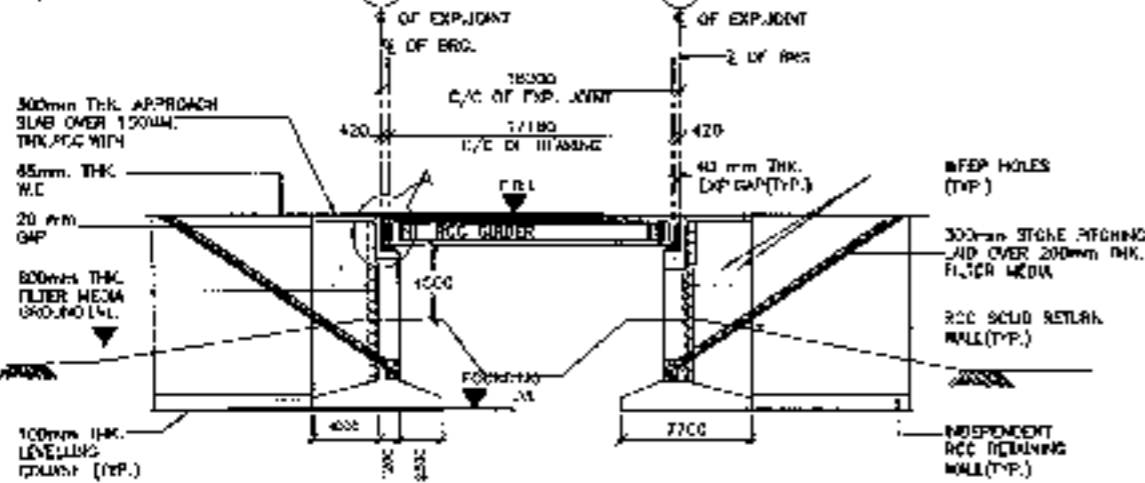


KEY PLAN



<p>CLIENT:</p>  <p>National Highways Authority of India</p>	<p>CONSULTANT:</p>  <p>Chaitanya Projects Consultancy Pvt. Ltd.        C-3, 2ND FLOOR, K.K. TOWER PLOT NO. 21-22,        SECTOR 4, VAISHALI, GHAZIABAD        Ph: 0120-4223470, 4123472, FAX: 0120-1115672</p>	<p>PROJECT:</p> <p>Consultancy Service for the Preparation for Feasibility Report/CRF for development of Economic Corridors Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Package-4, at Sohna - Frozpur Jhirka</p>	<p>SCALE: A.E. DRAWING TITLE:-</p> <p>AS SHOWN GENERAL ARRANGEMENT DRAWING (SPAN 1 X 10.0 M C.C. EXP. JOINT) AT CH-33-870 (SOHNA - FROZPUR JHIRKA)</p>	<p>DRAWN BY: CH-15-03-01-001-010</p> <p>DATE: AUGUST 2018</p> <p>PREPARED BY: CHECKED BY:</p> <p>APPROVED BY:</p>
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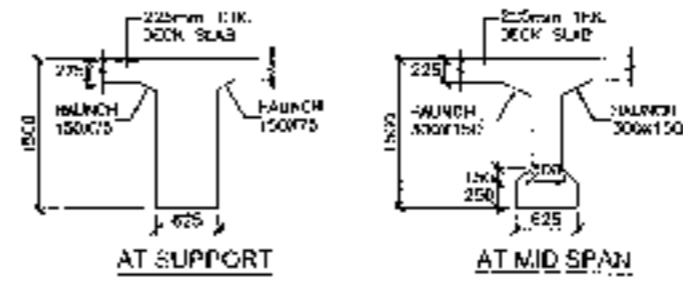
← SOHNA → FIROZPUR JHIRKA →



LONGITUDINAL ELEVATION

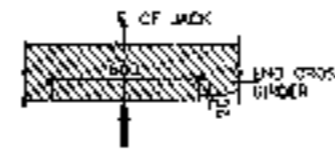
(SCALE 1:300)

FORMATION LEVEL (m)	194.840	194.840
GROUND LEVEL (m)	187.570	187.570
DRAINAGE (m)	38+851	38+879



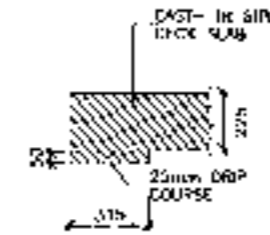
CROSS SECTION OF CAST IN SITU R.C.C GIRDER

(SCALE 1:20)



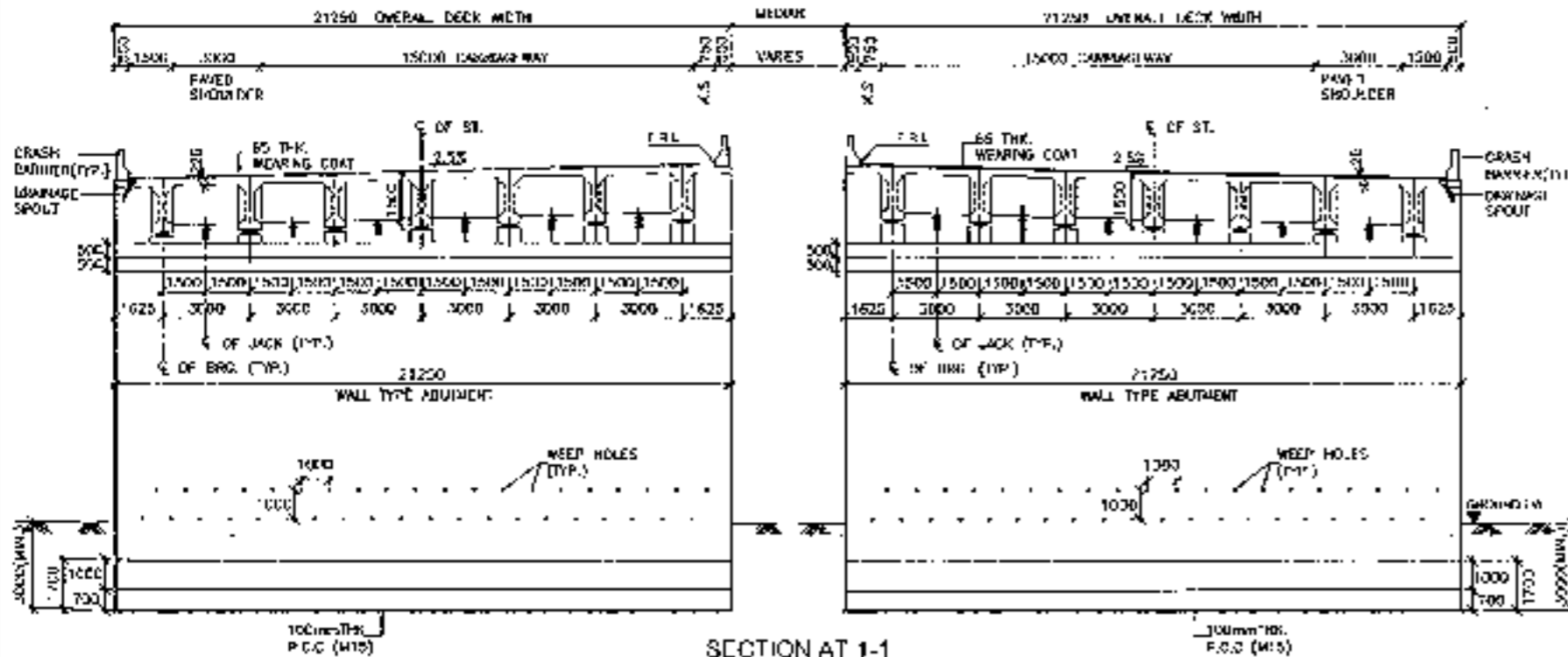
DETAIL - D

DETAIL OF CROSS GIRDER AT JACK LOCATION (SCALE 1:20)



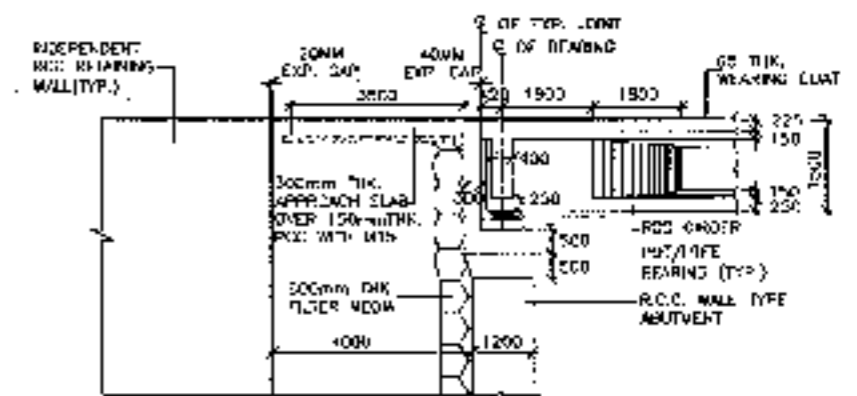
DETAIL - C

(SCALE 1:20)



SECTION AT 1-1

(SCALE 1:150)



DETAIL - A

(SCALE 1:100)



<b>CLIENT -</b> 	<b>CONSULTANT -</b>  Chaitanya Projects Consultancy Pvt Ltd G-5, 2ND FLOOR, B & TOWER PLOT NO. - 21-42, SECTOR 4, VAISHALI, GHAZIABAD PH - 0120-3793413, 4170472, FAX - 0120-4110412	<b>PROJECT -</b> Consultancy Service for the Preparation of Feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (i) - Package 41 of Sohna - Firozpur Jhirka	<b>SCALE -</b> AS SHOWN	<b>DATE -</b> AUGUST 2018	<b>DRAWING NO.</b> GENERAL ARRANGEMENT DRAWING (SPAN 1 X 18 CU.M. C.C. EXP. JOINT) AT CH-38-860	<b>DATE:</b> AUGUST 2018	<b>REVISION:</b> 00
						<b>PREPARED BY:</b>	<b>APPROVED BY:</b>

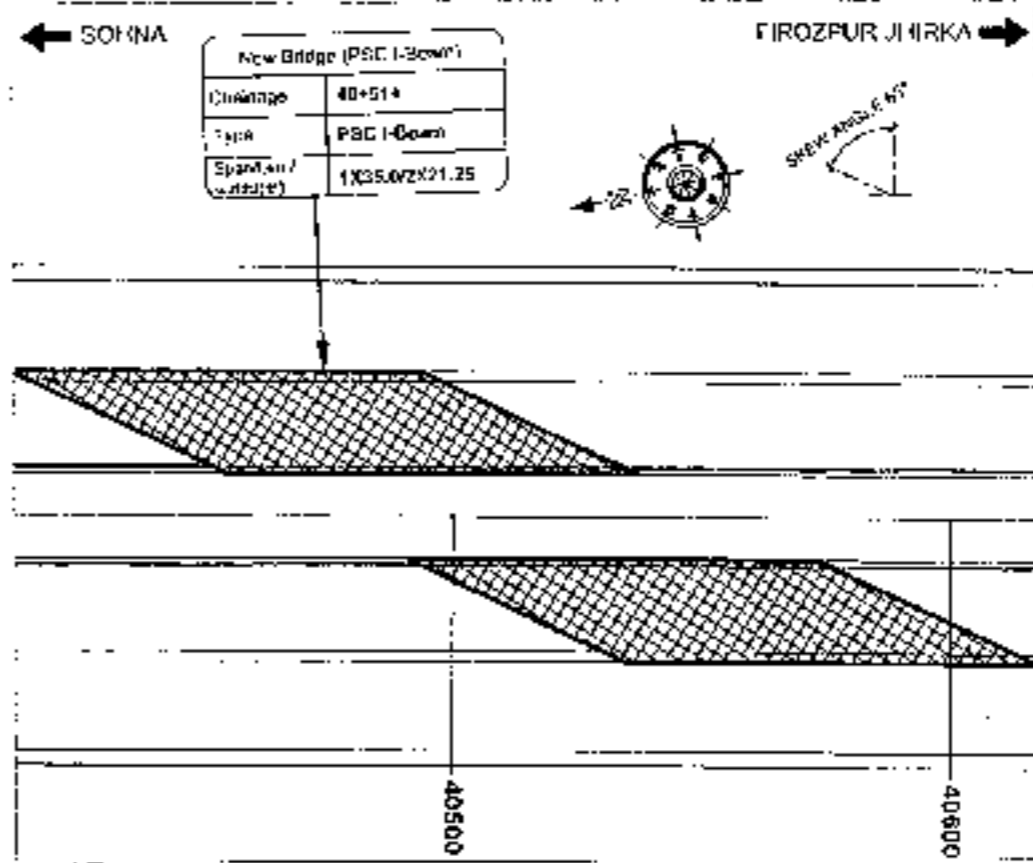
AT KM 40+514

PSC I-BEAM (SIZE 1x35.0M)

AT KM 40+514

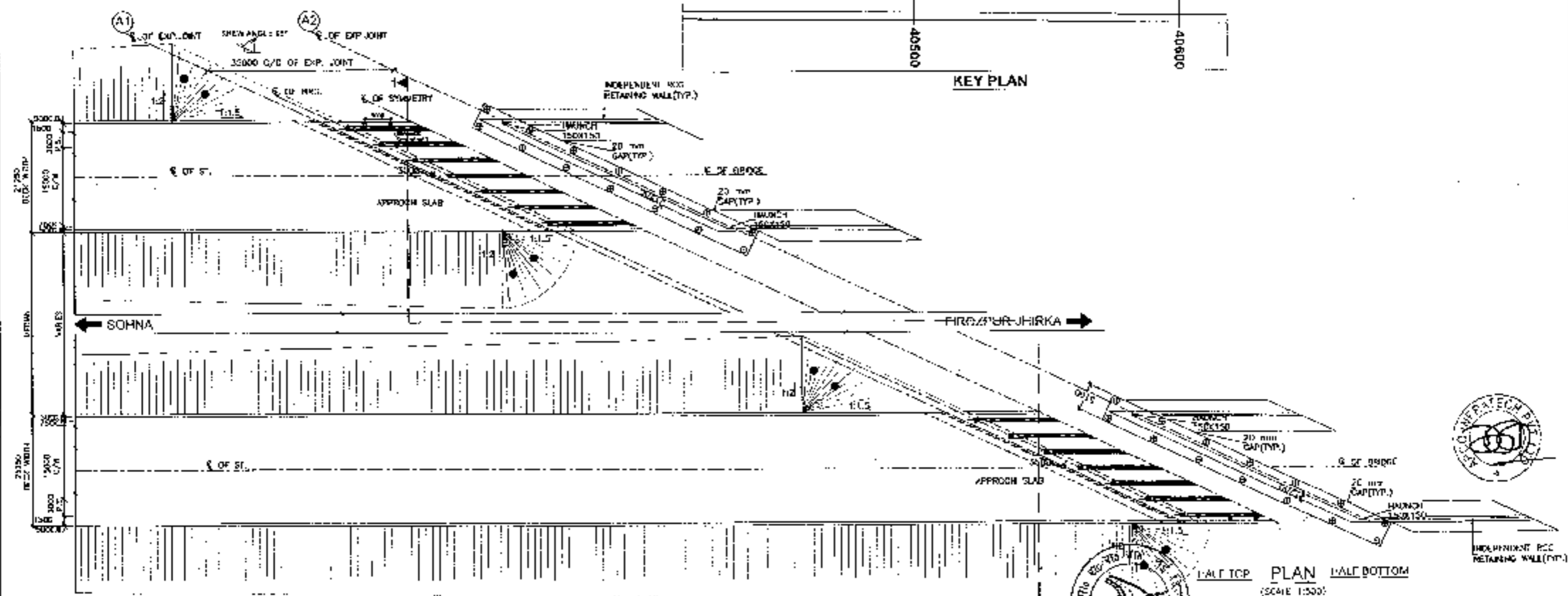


PSC I-BEAM (SIZE 1x35.0M) "



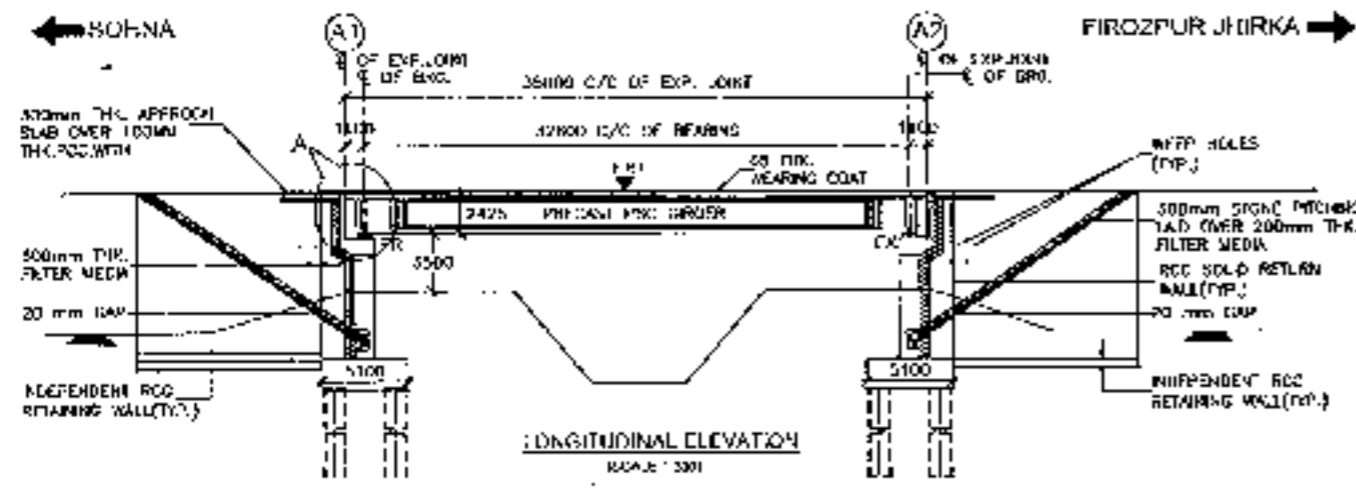
- NOTES -
- ALL DIMENSIONS ARE IN METERS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED. ONLY WRITTEN DIMENSIONS TO BE FOLLOWED. NO DIMENSION SHALL BE SCALLED.
  - THE PROPOSED 3 LANE BRIDGE HAS BEEN DESIGNED FOR 200 OR 110 KN/AXLE CLASS A LOADING, WHICHEVER GOVERNS.
  - CONCRETE SHALL BE DESIGN MIX AND SHALL BE OF GRADE AS INDICATED BELOW:-
 

POC LEVELLING COURSE	M-15
SUBSTRUCTURE	M-40
WEAR SURFACE	M-25
CRASH BARRIER	M-40
APPROACH SLAB	M-20
RETAINING WALLS	M-25
  - GRADE OF STILL WATER TO BE 2000 CORRECTING TO GATE.
  - BACK FILLING BEHIND ABUTMENTS AND RETAIN WALLS SHALL CONSIDER TO SELECTED EARTH COMPOSITION IS APPLICABLE TO THE NORTH-SOUTH BRIDGE PRESENTLY C-3, B-302.  $\beta = 0.7$   $\gamma_{sat} = 20 \text{ KN/m}^3$
  - LAND COMPOSITION AND EXTENT OF BACKFILL BEHIND ABUTMENT AND RETAIN WALL SHALL CONFORM TO SPECIFICATIONS IN APPENDIX - 4 OF MC - 2014.
  - KEEP PILES, SPACES AT 1000 C/A BOTH HORIZONTALLY AND VERTICALLY FROM OR MINIMUM IN A STAGGERED MANNER IN ABUTMENTS AND RETAIN WALL TILL 150 mm ABOVE GROUND LEVEL.
  - REFER THE WORKING COURSE SECTION 200 OF NORTH SPECIFICATIONS.
  - ALL DIMENSIONS ARE FORWARD WAY OR DOWNWARD AFTER DETAIL DESIGN.

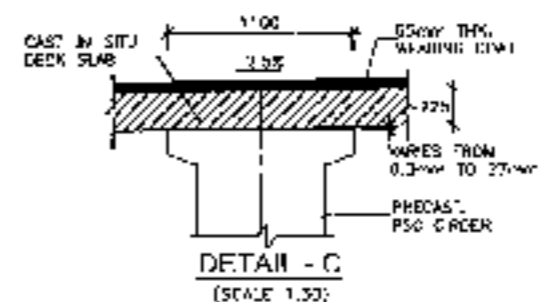
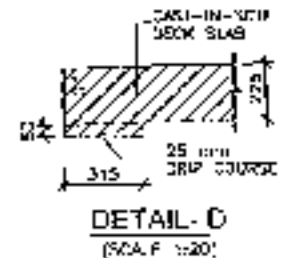
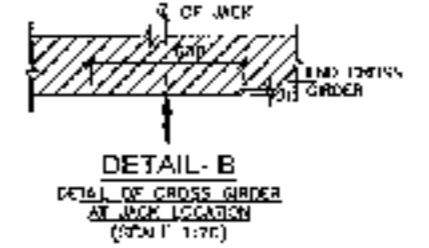
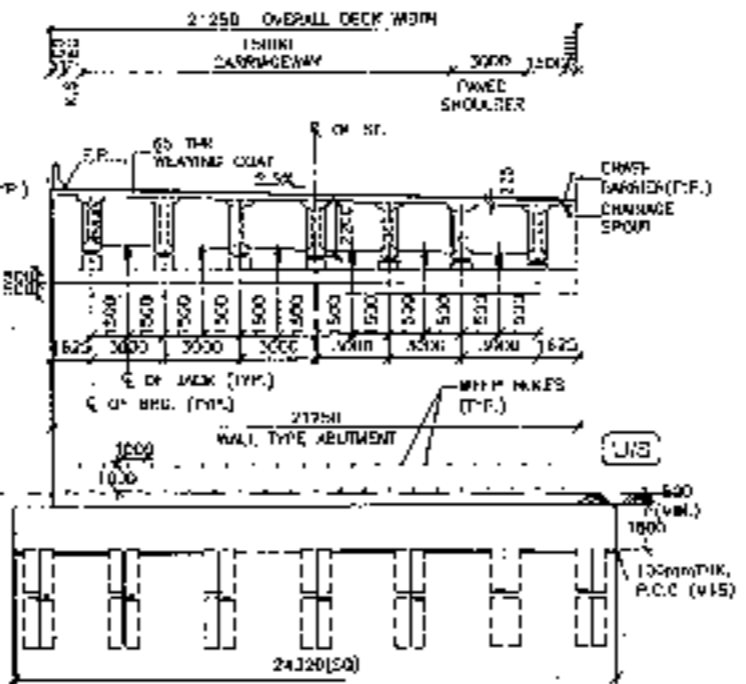
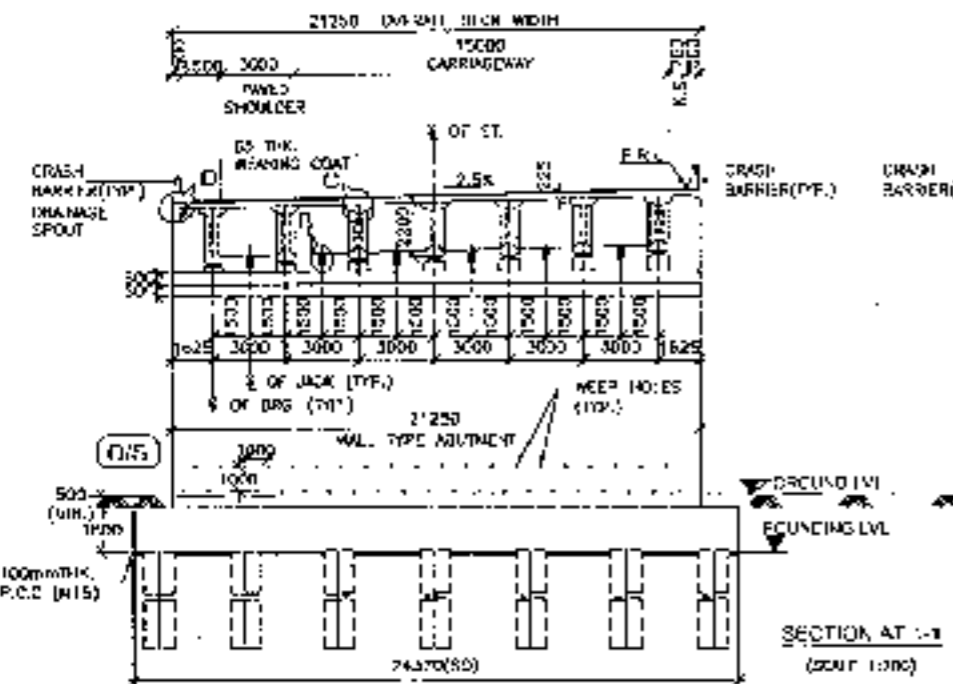
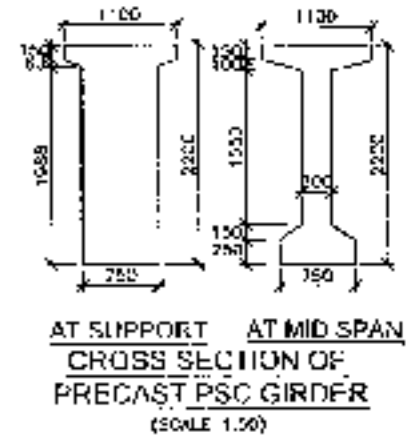
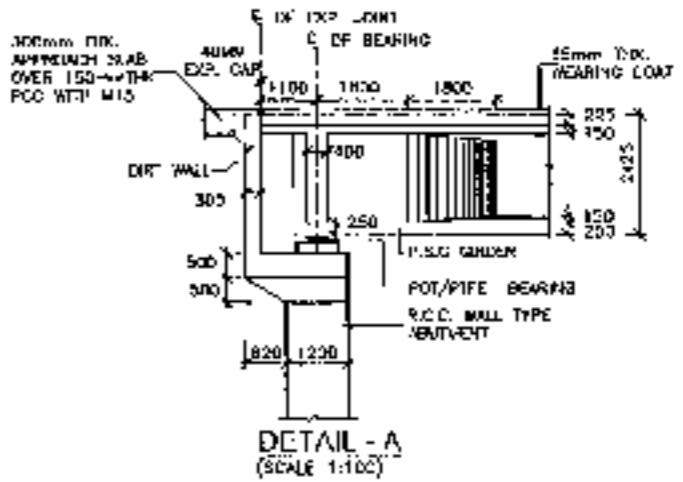


SCALE: 1:500  
 PLAN HALF TOP / HALF BOTTOM  
 DRAWING NO. 15  
 DATE: AUGUST 2018  
 PREPARED BY: [Signature]  
 CHECKED BY: [Signature]  
 APPROVED BY: [Signature]

<b>CLIENT:-</b> 	<b>CONSULTANT:-</b> 	<b>PROJECT:-</b> Consultancy Service for the Preparation for Feasibility Report/DPR for Development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot 6/Package 4) of Sohra - Firozpur Jhirka	SCALE: AS SHOWN DATE: 15/08/2018 DRAWING TITLE: GENERAL ARRANGEMENT DRAWING (SPAN 1x35.00 M C-C EXP. JOINT) AT CH 40+514	DRAWING NO.: 15	SHEET NO.: 1 OF 1
				DATE: AUGUST 2018	DESIGNED BY: [Signature]



FORMAT/ON LEVEL (m)	195.171	195.171
GROUND LEVEL (m)	189.403	189.298
CHIMNAGE (m)	481495.50	401514
		401531.50

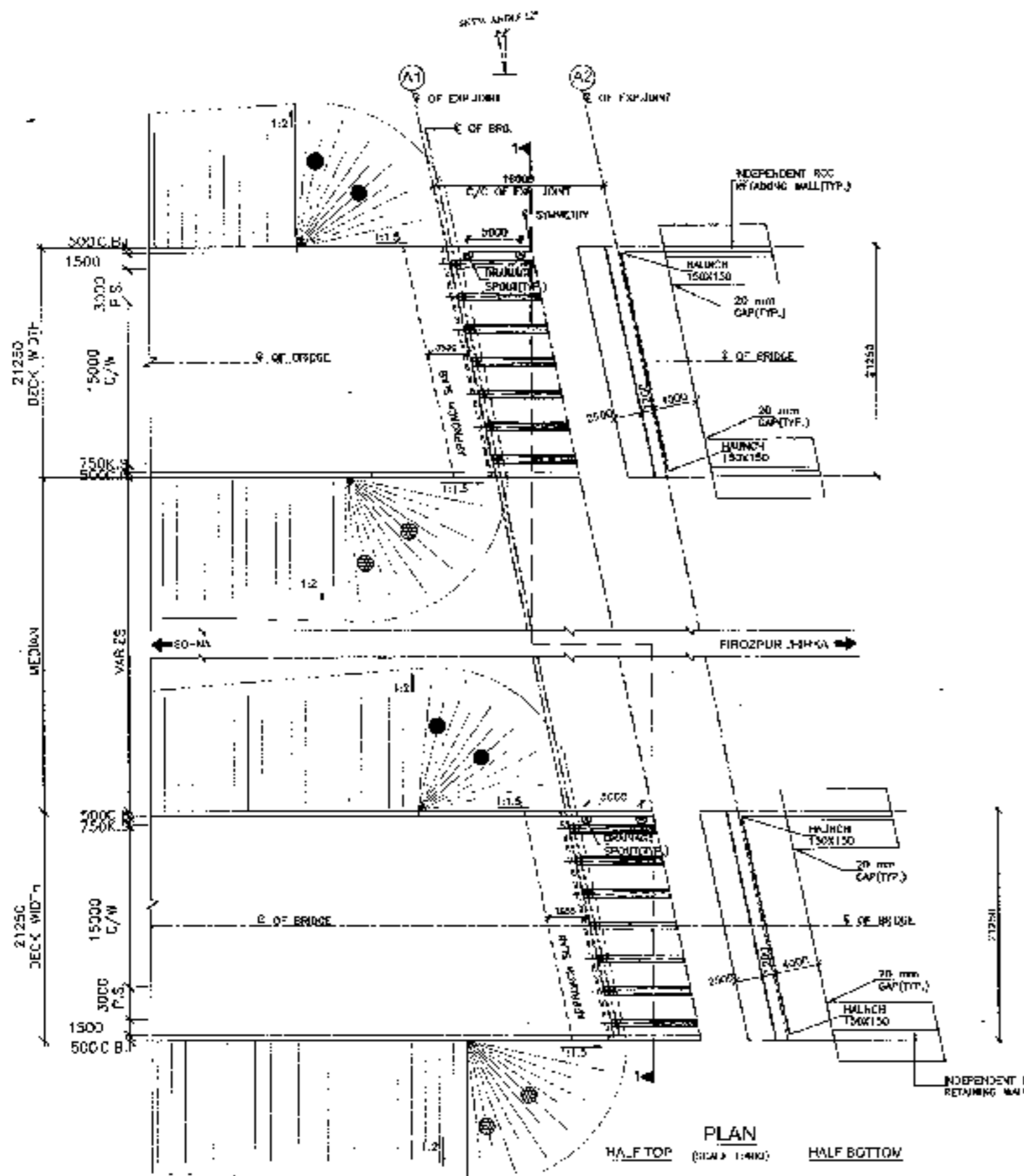


<b>CLIENT:</b> 	<b>CONSULTANT:</b>  Chaitanya Projects Consultancy Pvt. Ltd. C-3 2ND FLOOR, BLK POWER PLOT NO. 21-22, SECTOR-4, VASISALI, CHAZIABAD PH: 0120 3223449, 4178412, FAX: 0120 4110472	<b>PROJECT:</b> Consultancy Service for the Preparation for Feasibility Report/DRP for development of Economic Corridor, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (I) at (Package-I) of Sohna - Firozpur Jhirka	<b>SCALE:</b> AS SHOWN	<b>DATE:</b> AUGUST 2014	<b>DRWG TITLE:</b> GENERAL ARRANGEMENT DRAWING (SPAN X 1500 M G.C.C. EXP. JOINT) AT CH 401514	<b>DRWING NO.:</b> CH/2014/2014/401514-100	<b>SHEET NO.:</b> 1 OF 1
						<b>PREPARED BY:</b>	<b>CHECKED BY:</b>

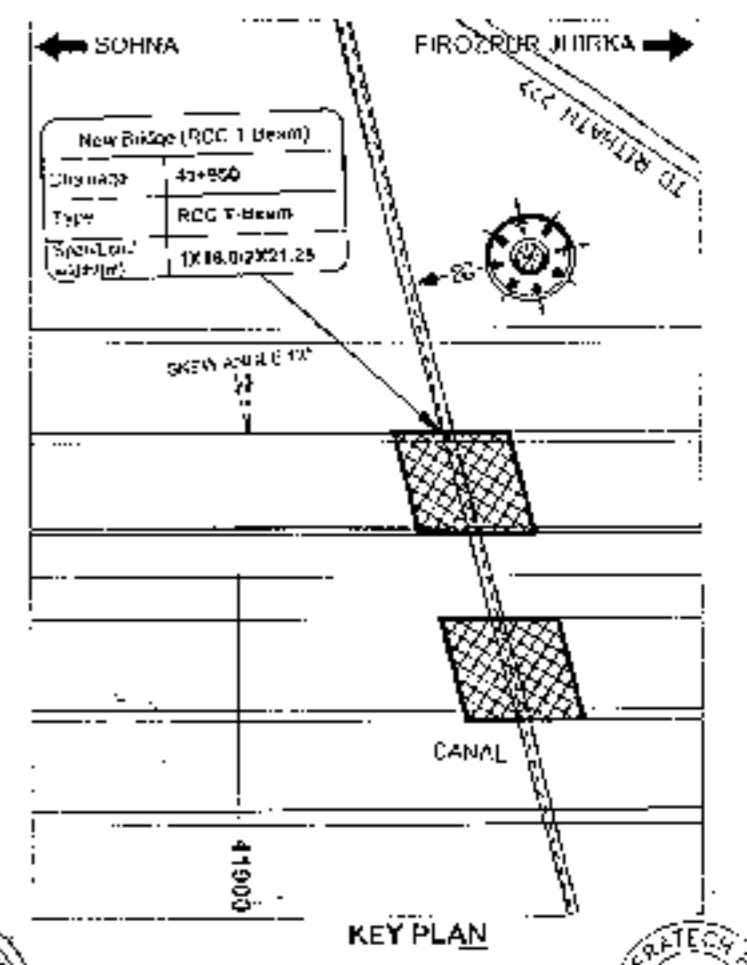
RCC T-BEAM (SIZE 1x16.0M)  
AT KM 41+950



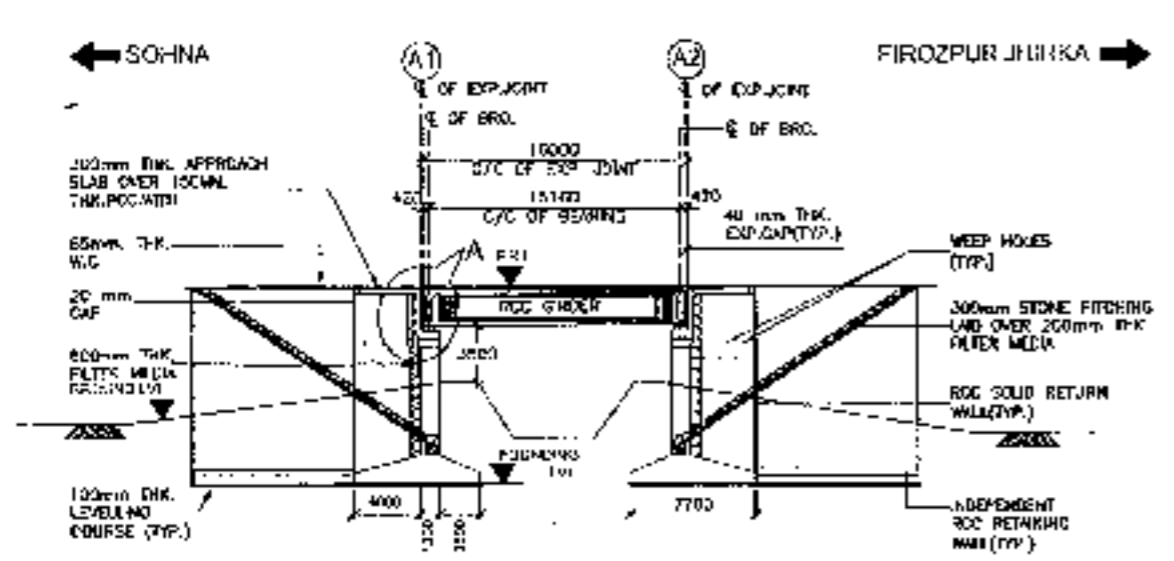




- NOTES:-**
1. ALL DIMENSIONS ARE IN MM AND LEVELS ARE IN METRES UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS TO BE FOLLOWED. NO DIMENSION SHALL BE SCALED.
  2. THE PROPOSED 3 LANE BRIDGE HAS BEEN DESIGNED FOR 75R OR 1 LANE, 3 LANE CLASS A LOADING, WHO-EVER COVERING.
  3. CONCRETE SHALL BE DESIGN MIX AND SHALL BE OF GRADE AS INDICATED BELOW:-  
 RCC LEVELLING COURSE : M-15  
 SUPERSTRUCTURE : M-40  
 SUBSTRUCTURE : M-35  
 CRASH BARRIER : M-40  
 APPROACH SLAB : M-30  
 RETURN/RETAIN WALLS : M-30
  4. GRADE OF STIFF WALLS TO BE 5000 (UNIFORM) TO 60-100.
  5. BACK FILLING BEHIND ABUTMENTS AND RETURN WALLS SHALL BE BEST OF CALCULATED SAND CONTAINING 10% APPROX. % OF MOISTURE HAVING PROPERTIES (C=0, P=20) SPECIFIC GRAVITY = 2.65.
  6. LAYING COMPACTION AND CURB OF BACKFILL BEHIND ABUTMENT AND RETURN WALL SHALL CONFORM TO SPECIFICATIONS IN APPENDIX - 5 OF IS : 20-2014.
  7. KEEP HOLES SPACED AT 1000 C/C BOTH HORIZONTAL & VERTICAL SHALL BE PROVIDED IN A STAGGERED MANNER IN ABUTMENTS AND RETURN WALL FILL 150 mm ABOVE GROUND LEVEL.
  8. 10mm THK. CC PLAINING OVER SURFACE SO AS TO MEET SPECIFICATIONS.
  9. ALL DIMENSIONS AND MATERIAL MAY BE CHANGED AFTER DETAILED DESIGN.
  10. POSITION OF EXPANSION IS INDICATED.
  11. THIS STRUCTURE LIES IN SEISMIC ZONE II.

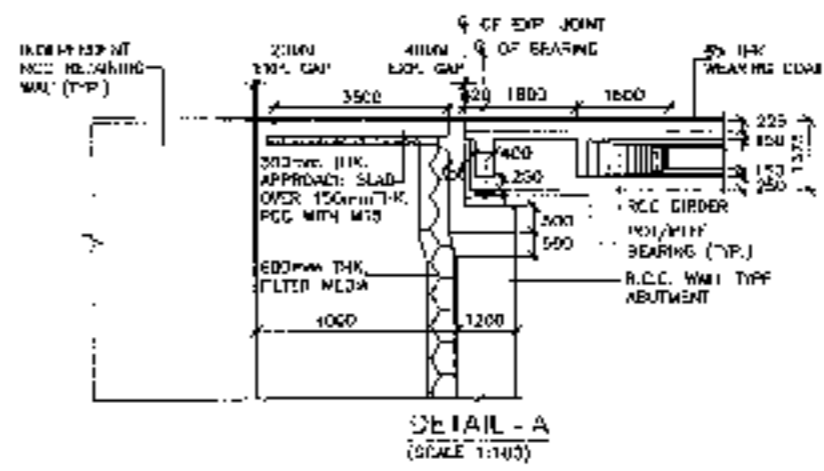


<b>CLIENT</b> National Highway Authority of India 	<b>CONSULTANT</b> Chaitanya Projects Consultancy Pvt. Ltd. C-3, 2ND FLOOR, R.K. TOWER PLOT NO. 21-22, SECTOR 4, VAISHALI, GHAZIABAD PH. 0120-322415, 4120472, FAX. 0120-4110473	<b>PROJECT</b> Consultancy Service for the Preparation for Feasibility Report/OPR for development of Economic Corridor, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-1/Package-5) of section I-Bangura to Bikaner and Section 2 Keta to Varanasi	<b>SCALE</b> AS SHOWN	<b>DRAWING TITLE</b> GENERAL ARRANGEMENT DRAWING SPAN 1 X 18.0 M C/C EXP. JOINT; AT CH-41+850 (SOHNA - FIROZPUR JHARKA)	<b>DRAWING NO.</b> CPCL/2023/01-050/S/01 <b>DATE:</b> AUGUST 2023 <b>REVISION:</b> R0 <b>PREPARED BY:</b> [Signature] <b>CHECKED BY:</b> [Signature] <b>APPROVED BY:</b> [Signature]
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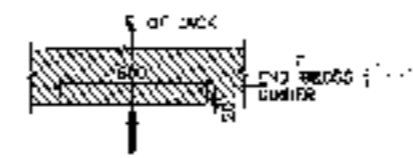


LONGITUDINAL ELEVATION  
(SCALE 1:100)

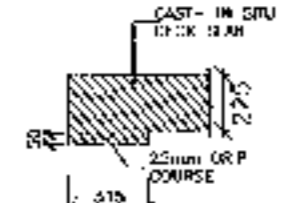
FORMATION LEVEL (m)	185.621	185.621
GRADE LEVEL (m)	189.750	189.525
CHANGELINE (m)	41+842	41+850



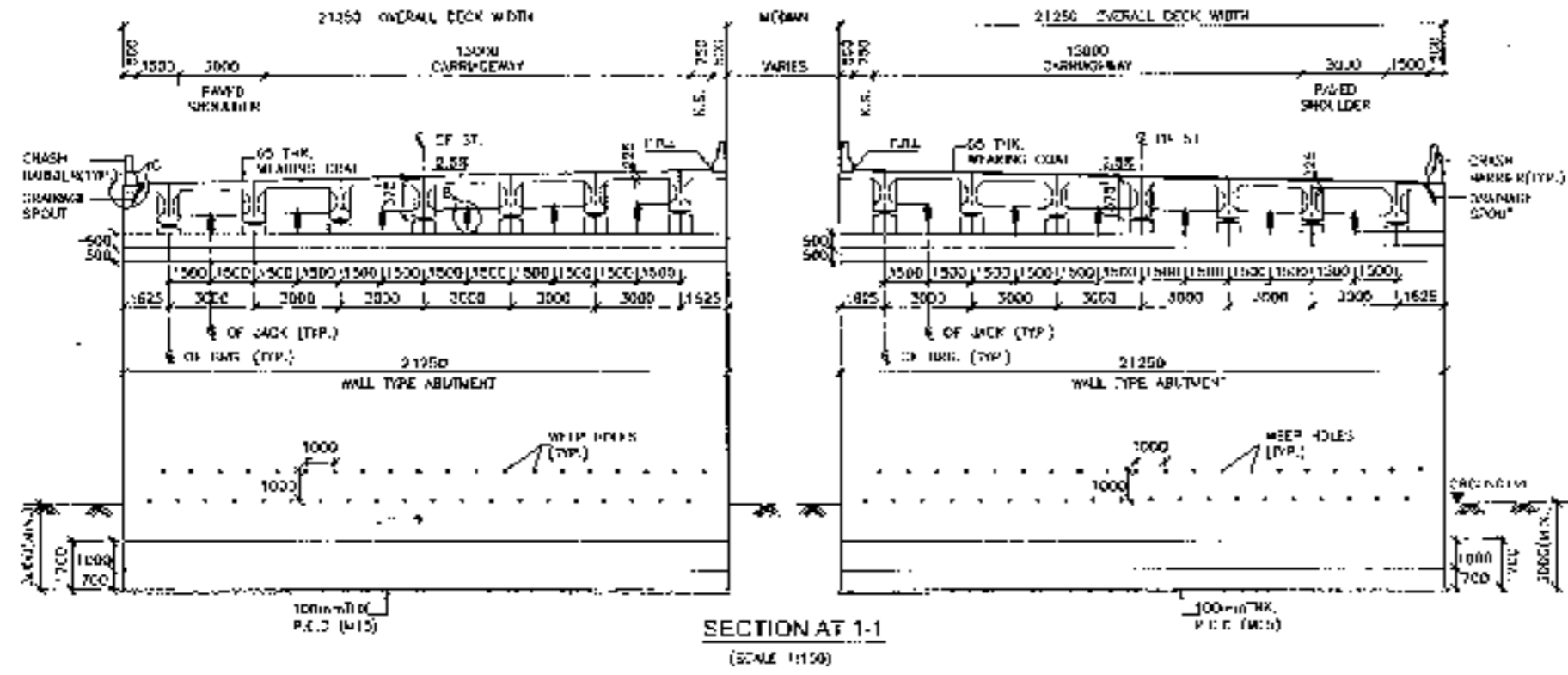
DETAIL - A  
(SCALE 1:100)



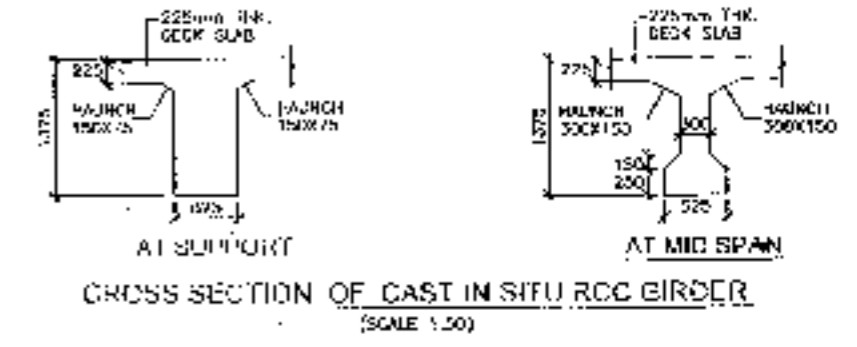
DETAIL - B  
DETAIL OF CROSS GIRDER  
AT JACK LOCATION  
(SCALE 1:50)



DETAIL - C  
(SCALE 1:50)



SECTION AT 1-1  
(SCALE 1:150)



CROSS SECTION OF CAST IN SITU RCC GIRDER  
(SCALE 1:50)



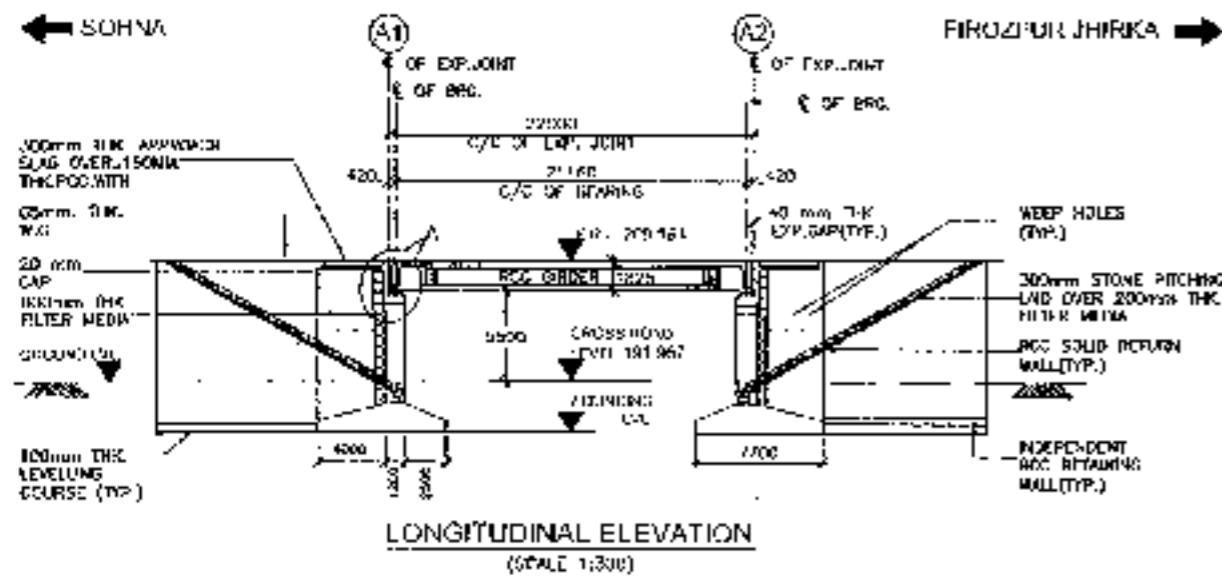
<b>CLIENT:</b> National Highways Authority of India	<b>CONSULTANT:</b> Chaitanya Projects Consultancy Pvt. Ltd. G-5, 2ND FLOOR, R.K. TOWER PLOT NO.- 21-52, SECTION 4, VAISHALI GHAZIABAD PH: 0120-3223410, 4120472 FAX: 01170-4110472	<b>PROJECT:</b> Consultancy Service for the Preparation for Feasibility Report/DIR for development of Economic Corridors Inter Corridors and Feeder Routes to improve the efficiency of freight movement in tolls under Pradhan Mantri Karmannaughta Yojana (Karmannaughta Yojana) at Sohna - Firozpur Jhinka	<b>SCALE:</b> AS SHOWN	<b>DWS TITLE:</b> GENERAL ARRANGEMENT DRAWINGS SPAN AT 16.00 M C/C EXP. JOINT AT CH 41+850	<b>DATE:</b> 18.08.2016 <b>PREPARED BY:</b> CHK/CHK <b>CHECKED BY:</b> CHK/CHK <b>APPROVED BY:</b> CHK/CHK
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# LVUP & VUP

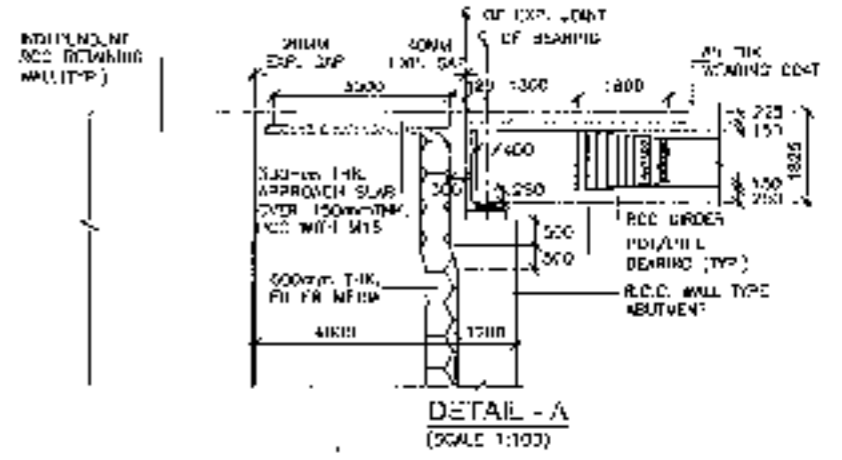
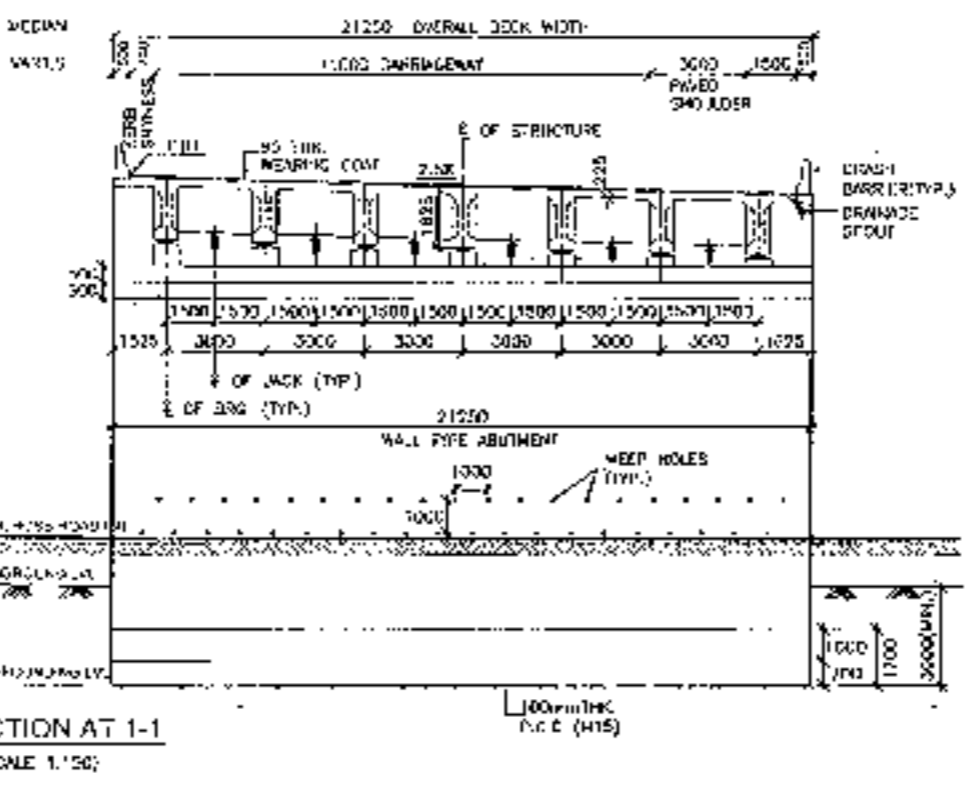
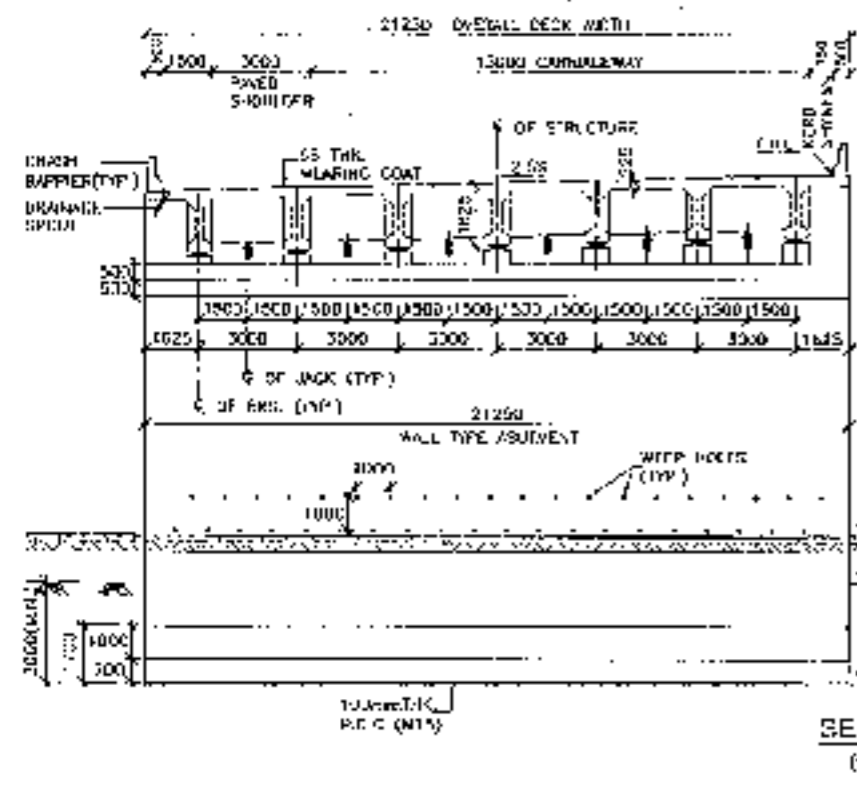
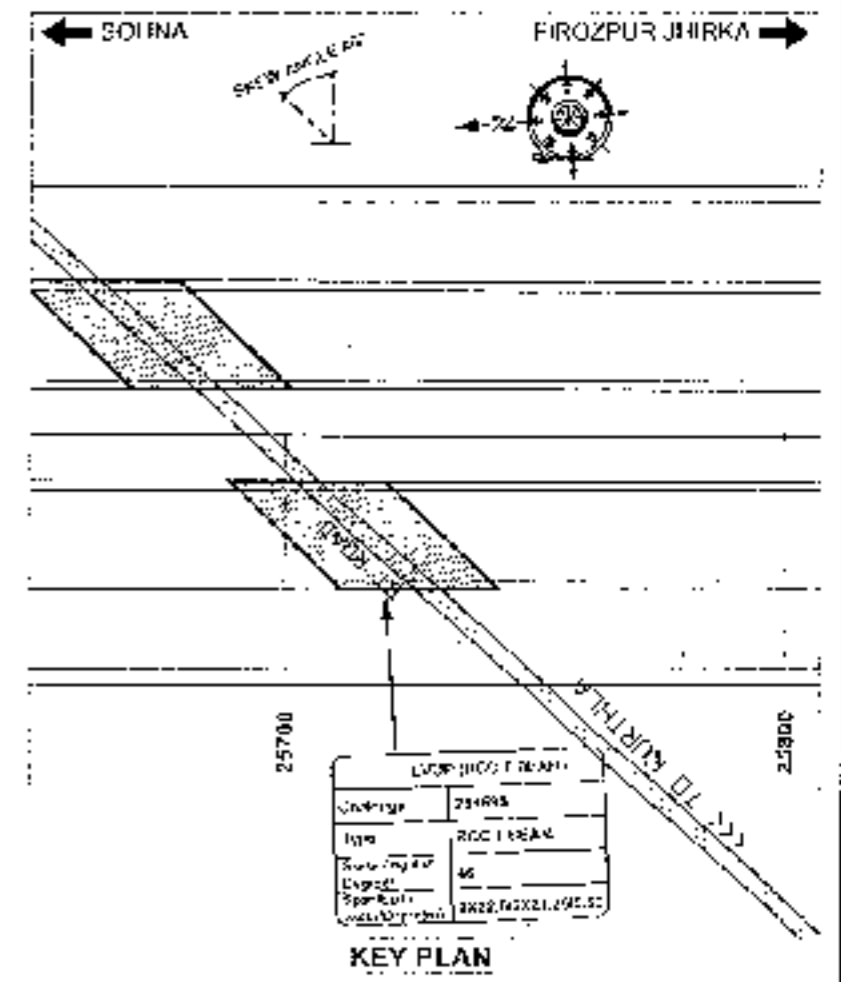
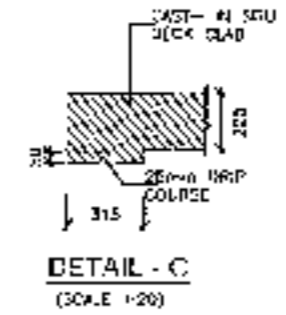
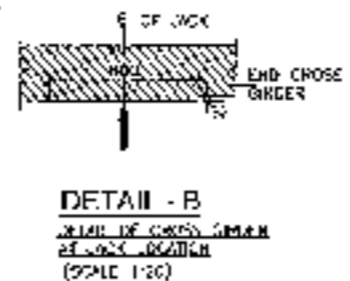
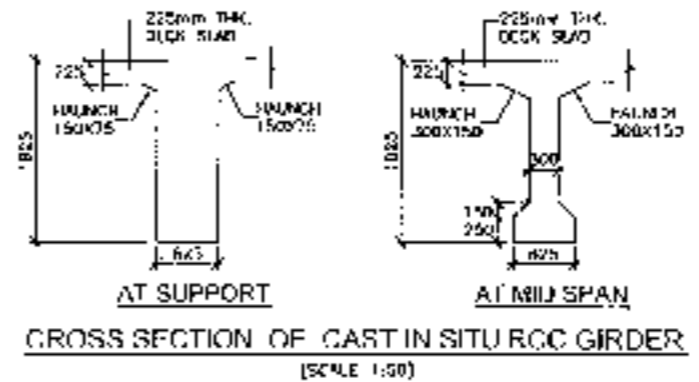


LVUP  
RCC T-BEAM (SIZE 1x22.0M)  
AT KM 25+695

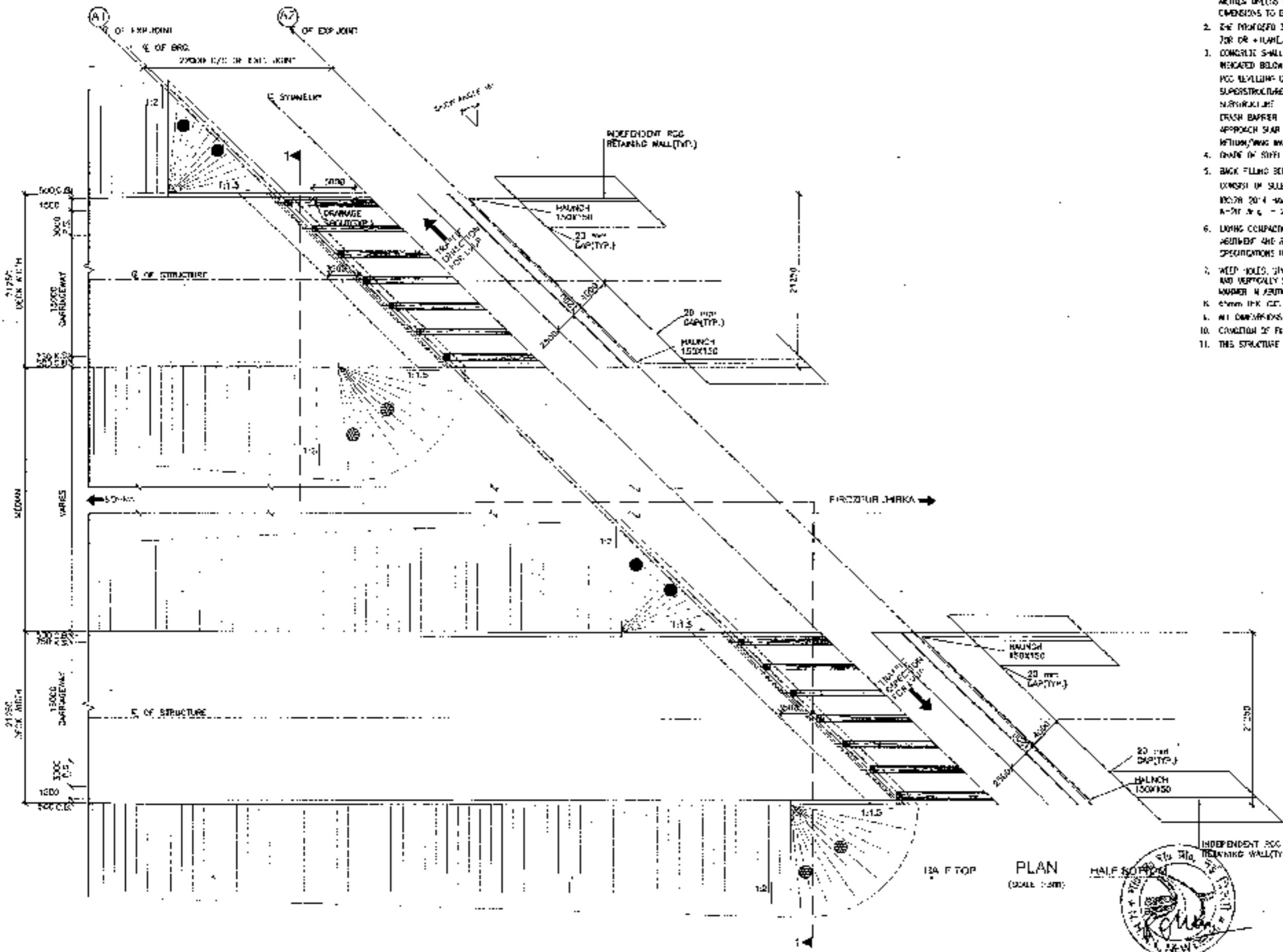




FORK CENTERLINE	200.183	200.103
GROUND LEVEL	191.278	191.469
ELEVATION (m)	75.4884	75.4885
	75.4884	75.4885



52



- NOTES:-
1. ALL DIMENSIONS ARE IN METRE AND TYPICAL ARE IN METRES UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS TO BE FOLLOWED. NO DIMENSION SHALL BE SOLED.
  2. THE PROPOSED 3 LANE BRIDGE HAS BEEN DESIGNED FOR TOR OR +FLAMELINE CLASS A LOADS, UNLESS OTHERWISE GOVERN.
  3. CONCRETE SHALL BE DESIGN M30 AND SHALL BE OF GRADE AS INDICATED BELOW:-
 

POC REVEILING CURBS	M-15
SUPERSTRUCTURE	M-40
SUBSTRUCTURE	M-30
CRASH BARRIER	M-40
APPROACH SLAB	M-30
RETAINING WALLS	M-25
  4. GRADE OF SITE SHALL BE MAINTAINING TO EXIST.
  5. BACK FILLING BEHIND ABUTMENTS AND RETAIN WALLS SHALL BE CONSIST OF SUGGESTED BATH SPECIFICATIONS TO APPENDIX - 6 OF MO. 2014 HAVING PROTECTIVE C-0, U-20, A-20, B-0, C-0, D-20.
  6. LAYING COMPACTION AND EXTENT OF BACKFILL BEHIND ABUTMENT AND RETAIN WALL SHALL CONFORM TO SPECIFICATIONS IN APPENDIX - 6 OF IS: 72-2014
  7. WEAP HOLES, SPACED AT 1000 c/c BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED IN A SUGGESTED MANNER IN ABUTMENTS AND RETAIN WALL. ALL 150 mm ABOVE GROUND LEVEL.
  8. ALL DIMENSIONS ARE TENTATIVE AND SUBJECT TO BE CHECKED AFTER FINAL DESIGN.
  9. CANTONMENT OF BRIDGE SHALL BE AS PER SPECIFICATIONS.
  10. CANTONMENT OF BRIDGE SHALL BE AS PER SPECIFICATIONS.
  11. THIS STRUCTURE IS IN SEISMIC ZONE II.

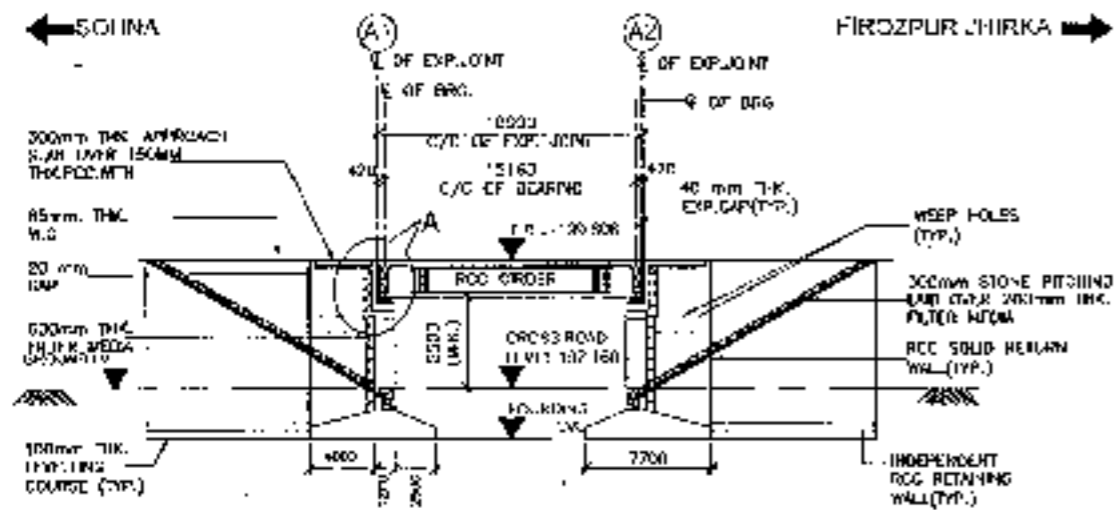


53

CLIENT:- National Highways Authority of India CHANDIGARH	CONSULTANT:- Chaitanya Projects Consultancy Pvt. Ltd. C-5, 2ND FLOOR, R K TOWER PLDT NO.-23-22, SECTION-3, VAISHALI, GHAZIABAD PH: 0120-3223113, 4123472, FAX: 0120-4110172	PROJECT:- Consultancy Service for the Preparation for Feasibility, Report/DPR for Development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Part-6) Package-4) of Section - I, Hazrat Nizka	SCALE:- AS SHOWN	DWG TITLE:- GENERAL ARRANGEMENT DRAWING LV/JP (SPAN X 20.00) MAO EXP. JOINT AT CH 254695 (SECTION OF HAZRAT NIZKA)	DRAWING NO:- DATE: AUGUST 2018 PREPARED BY: [Signature] CHECKED BY: [Signature] APPROVED BY: [Signature]
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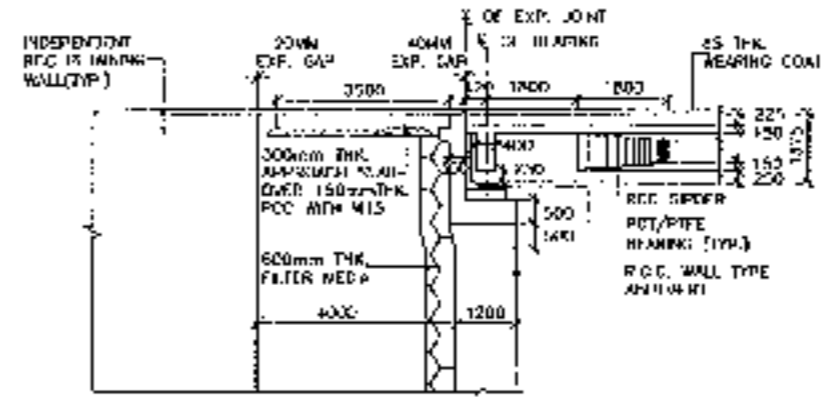
LVUP  
RCC T-BEAM (SIZE 1x16.0M)  
AT KM 27+695



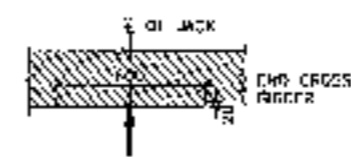


LONGITUDINAL ELEVATION  
(SCALE 1:300)

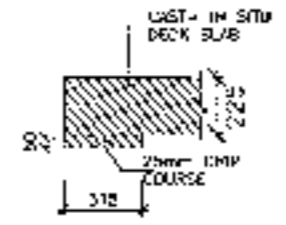
HEIGHT OF PAV. (m)	150.808	150.808	150.808
GRU. SURF. LEVEL (m)	151.557	151.557	151.557
CHANGING (m)	274.845	274.845	274.845



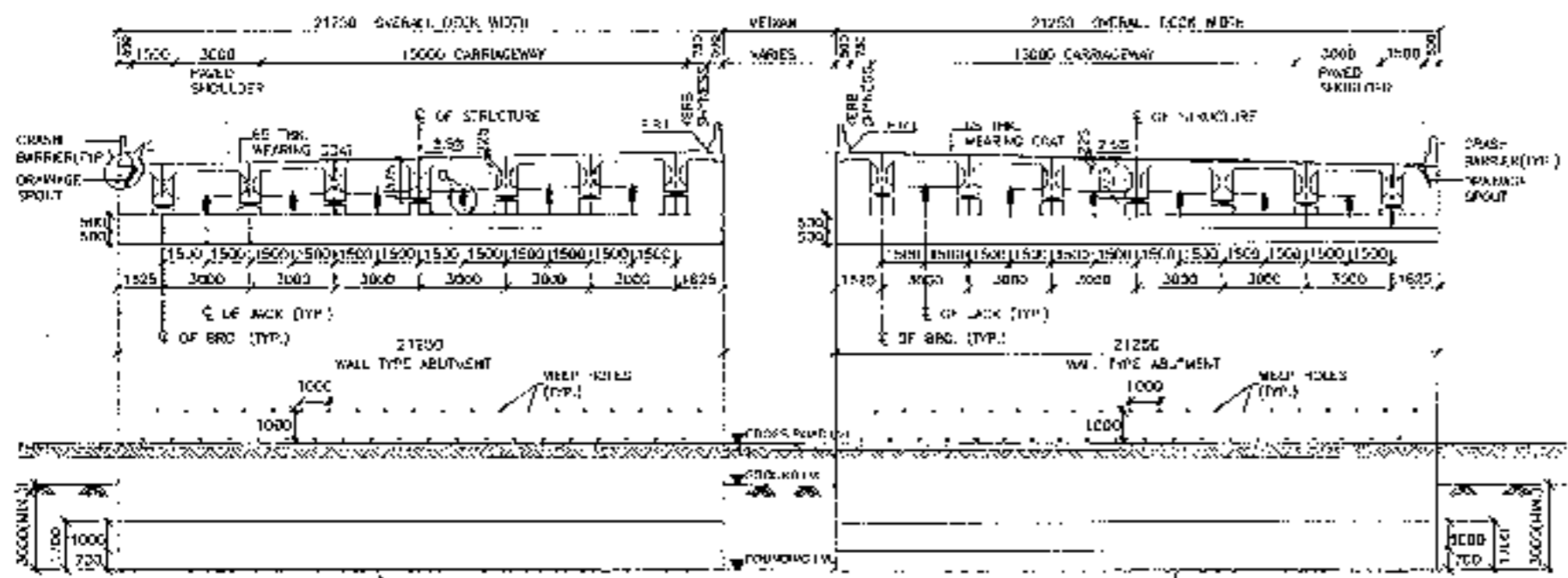
DETAIL - A  
(SCALE 1:100)



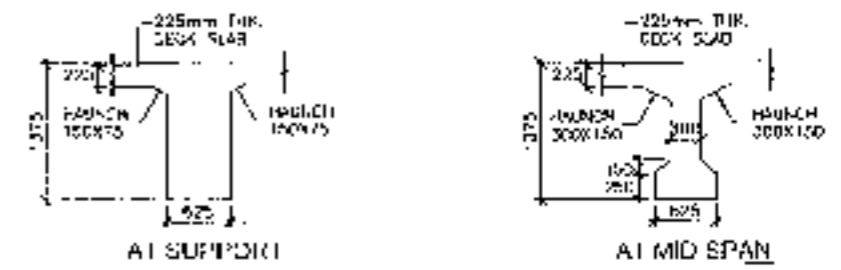
DETAIL - B  
DETAIL OF CROSS SECTION  
AT JACK LOCATION  
(SCALE 1:20)



DETAIL - C  
(SCALE 1:20)



SECTION AT 1-1  
(SCALE 1:150)

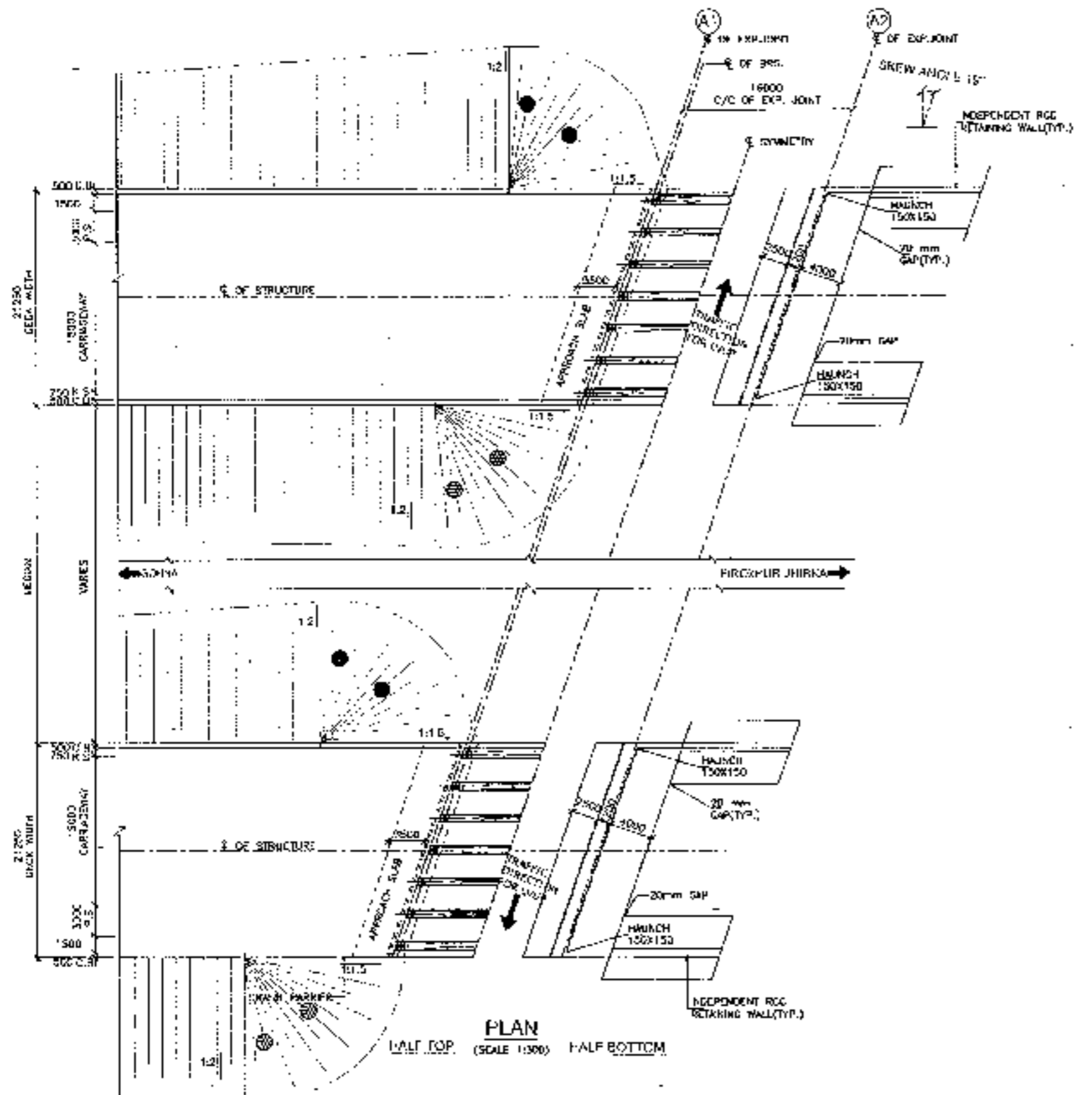


CROSS SECTION OF CAST IN SITU RCC GIRDER  
(SCALE 1:50)



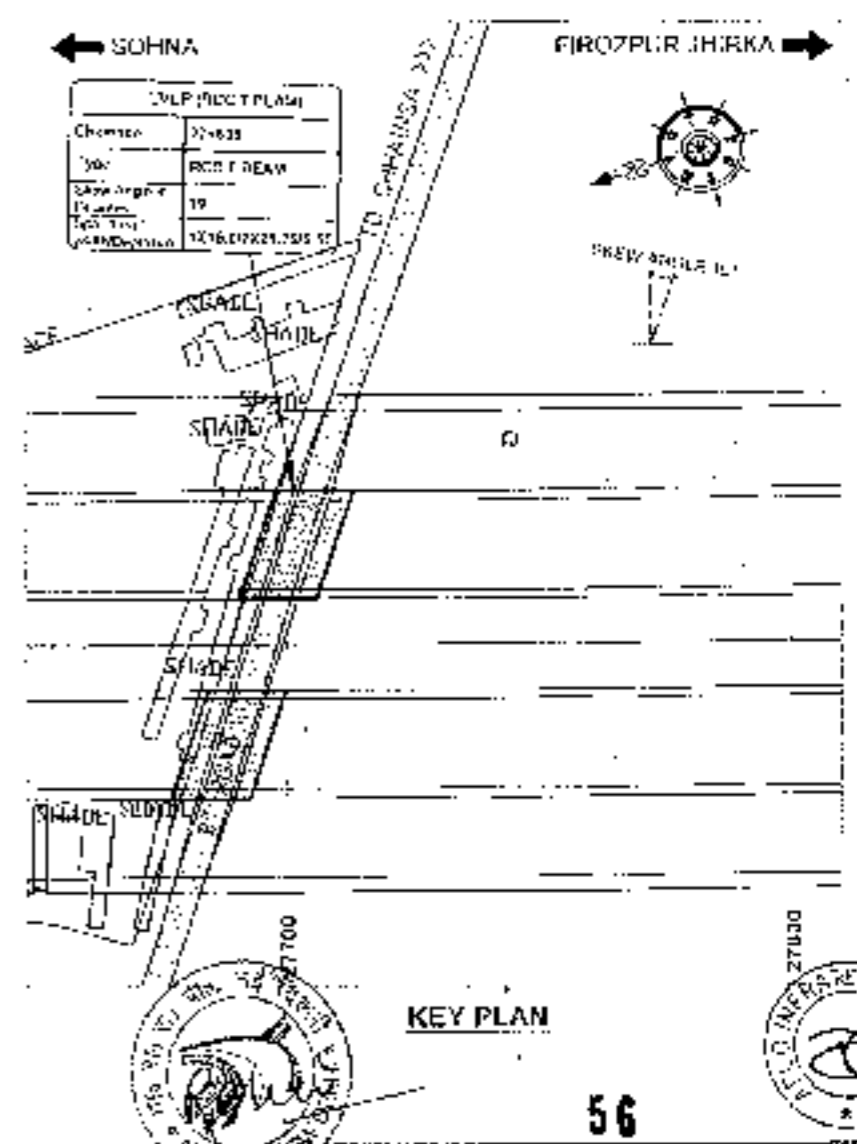
<b>CLIENT:</b> National Highways Authority of India 	<b>CONSULTANT:</b> Chaitanya Projects Consultancy Pvt. Ltd. G-5, 2ND FLOOR, P.R.K. TOWER PLOT NO. 21/22, SECTOR-4, VAISHALI, GHAZIABAD PH: 9520 322419, 6129477, FAX: 0120-4111472 	<b>PROJECT:</b> Consultancy Service for the Preparation for Feasibility Report (RFR) for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana [Lot-6/Part-1(a)-1] of Scheme - Ferozpur Jhirka	<b>SCALE:</b> AS SHOWN	<b>DWG TITLE:</b> GENERAL ARRANGEMENT DRAWING (V.P. (SPAN 1 X 18) BETWEEN EXP. JOINT) AT CH-17+688 (SOHNA - FIROZPUR JHIRKA)	<b>DRAWING No.:</b> C-CIP/17/01/27/0050-100 <b>DATE:</b> AUGUST 2018 <b>PREPARED BY:</b> CHITRANJAN <b>CHECKED BY:</b> MUKESH KUMAR <b>APPROVED BY:</b> NITESH KUMAR
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PLAN  
HALF TOP (SCALE 1:500) HALF BOTTOM

- NOTES**
1. ALL DIMENSIONS ARE IN mm AND LEVELS ARE IN METRES UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS TO BE FOLLOWED. NO DIMENSION SHALL BE SCALE.
  2. THE PROFILES & ARE RATIO HAS BEEN DESIGNED FOR THE LR & LR+L, LR+L+L, LR+L+L+L, WHICHEVER GOVERNS.
  3. CONCRETE SHALL BE DESIGN BY AND SHALL BE IN ACCORDANCE AS INDICATED BELOW:-  
 RCC FLOORING COURSE : M-15  
 SUPERSTRUCTURE : M-40  
 SUBSTRUCTURE : M-30  
 CRASH BARRIER : M-40  
 APPROACH SLAB : M-30  
 RETAINING WALLS : M-30
  4. GRADE OF SILE, SHALL BE IN ACCORDANCE TO IS:1186.
  5. BACK FILLING BE-HIND RETAINMENTS AND RETURN WALLS SHALL CONSIST OF SELECTED FORTH CONFORMING TO APPENDIX - 3 OF IS:2514 (UNLTD PROPERTIES E=0.3,  $\phi=37^\circ$ ,  $\mu=27$  &  $\mu_c = 20$  kN/m<sup>2</sup>).
  6. LIVING CONNECTION AND EXTENT OF WORKED, BEHIND APPROACH AND RETURN WALL SHALL CONFORM TO SPECIFICATIONS IN APPENDIX - 4 III OF IS: 1186-1114.
  7. WEFF WIDTH, SPACED AT 1000 c/c BOTH HORIZONTAL AND VERTICALLY SHALL BE PROVIDED IN A ENCLOSED MANNER BY REINFORCEMENT AND SETBACK SHALL 150 mm ABOVE GROUND LEVEL.
  8. REFER THE CC WEAVING COURSE SECTION 500 OF NORTH SPECIFICATIONS.
  9. ALL DIMENSIONS ARE TENTATIVE AND BE CHANGED WITH THE DATA RECEIVED.
  10. CONDITION OF EXPOSURE IS MODERATE.
  11. THIS STRUCTURE LIES IN SEVERE ZONE II.



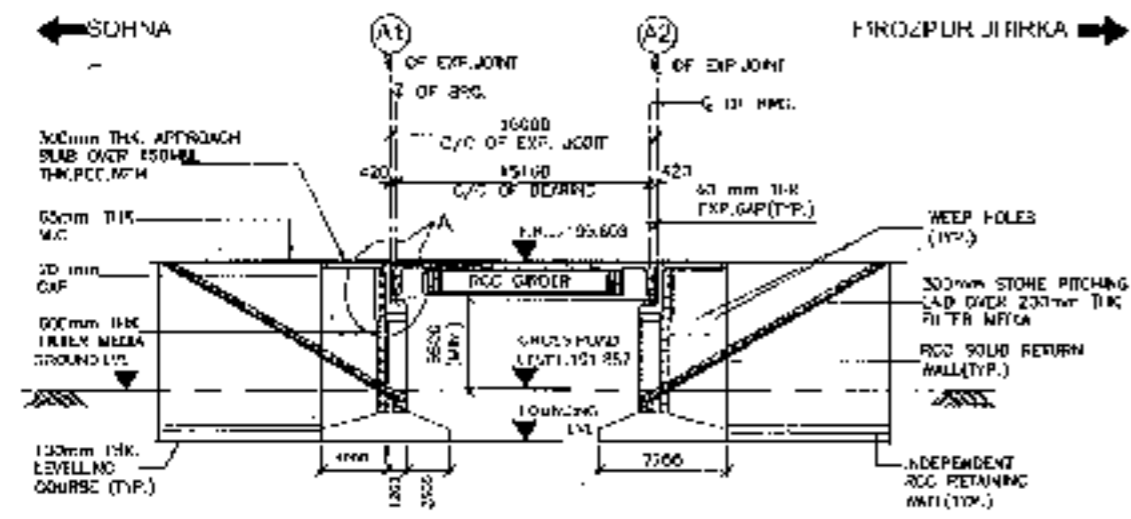
KEY PLAN

56

<p>CLIENT:- National Highways Authority of India</p>	<p>CONSULTANT:- Chaitanya Projects-Consultancy Pvt Ltd C-3, 2ND FLOOR, R.K.TOWER PLOT NO.-21-22, OFFICE 4, VAISHALI, GHAZIABAD PH: 0120-7223419, 01201872 FAX: 0120-4110472</p>	<p>PROJECT:- Consultancy Services for the Preparation of Feasibility Report/DFR for development of Economic Corridor, Inter Corridors and Feeder Routes to improve the efficiency of Inland movement in India under Bharatmala Pariyojana (Part of Package-4) of Scheme - 2 under Jharkhand</p>	<p>SCALE - AS SHOWN</p>	<p>DWG NO. N.H.A./.../.../... GENERAL ARRANGEMENT DRAWING C/C OF EXP. JOINT AT SOHNA - FIROZPUR JIRKA</p>	<p>DRAWING No. 13/01/2011/2011-09/01-10 DATE: AUGUST 2011 PREPARED BY: ... CHECKED BY: ... APPROVED BY: ...</p>
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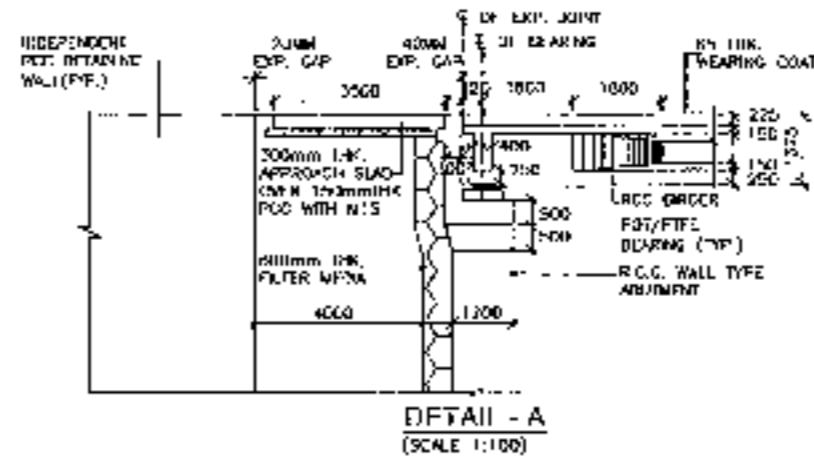
LVUP  
RCC T-BEAM (SIZE 1x16.0M)  
AT KM 29+333



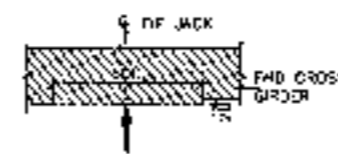


LONGITUDINAL ELEVATION  
(SCALE 1:300)

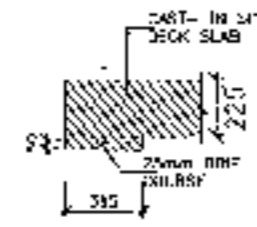
CONCRETE LEVEL (M)	139.603	139.503
GROUND LEVEL (M)	131.757	131.142
CHANGELINE	29+325	29+333
		29+341



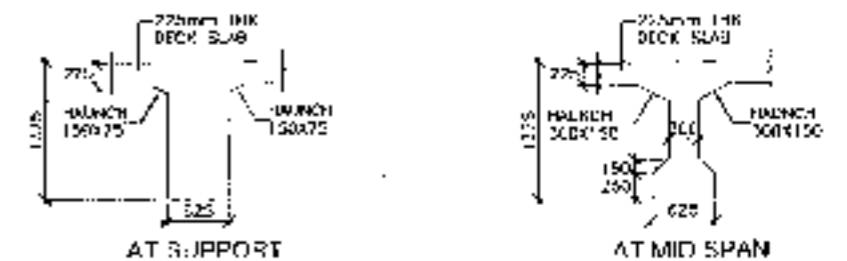
DETAIL - A  
(SCALE 1:100)



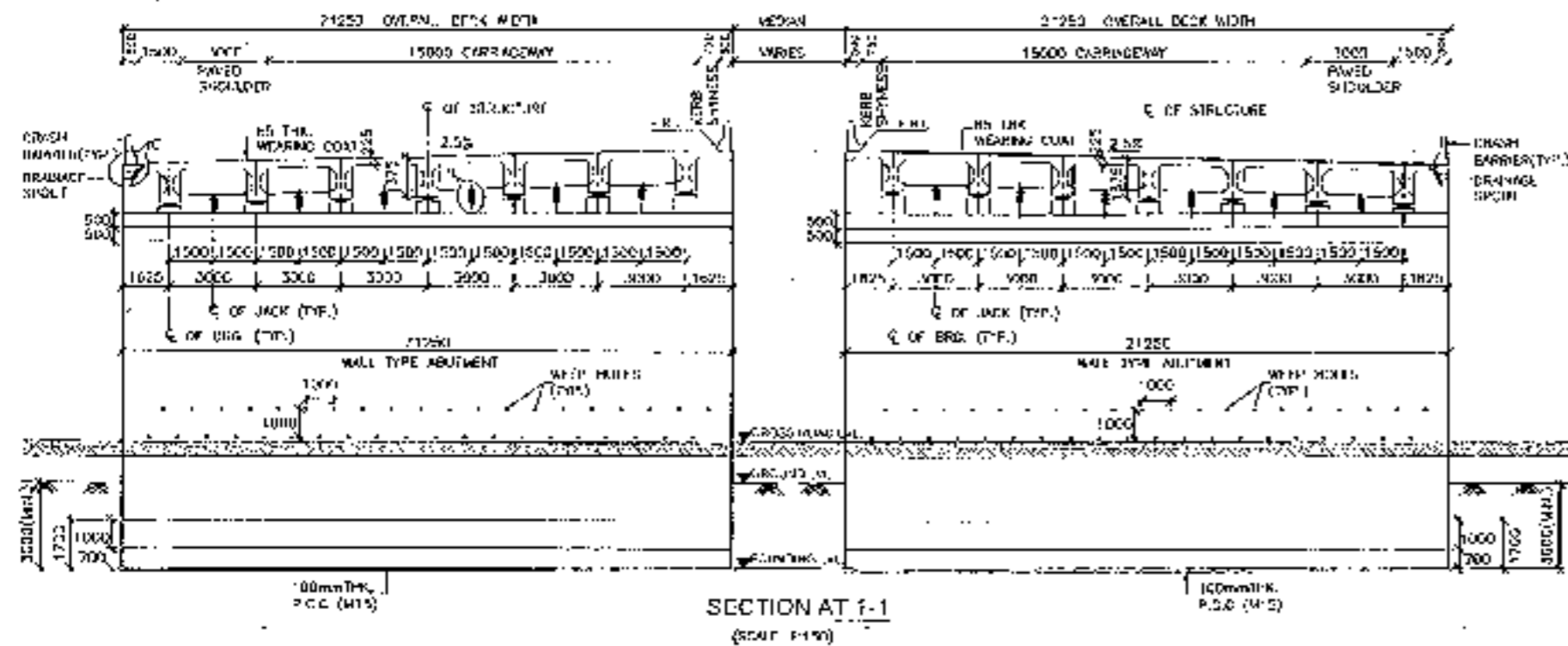
DETAIL - B  
DETAIL OF CROSS GIRDER  
AT JACK LOCATION  
(SCALE 1:20)



DETAIL - C  
(SCALE 1:20)



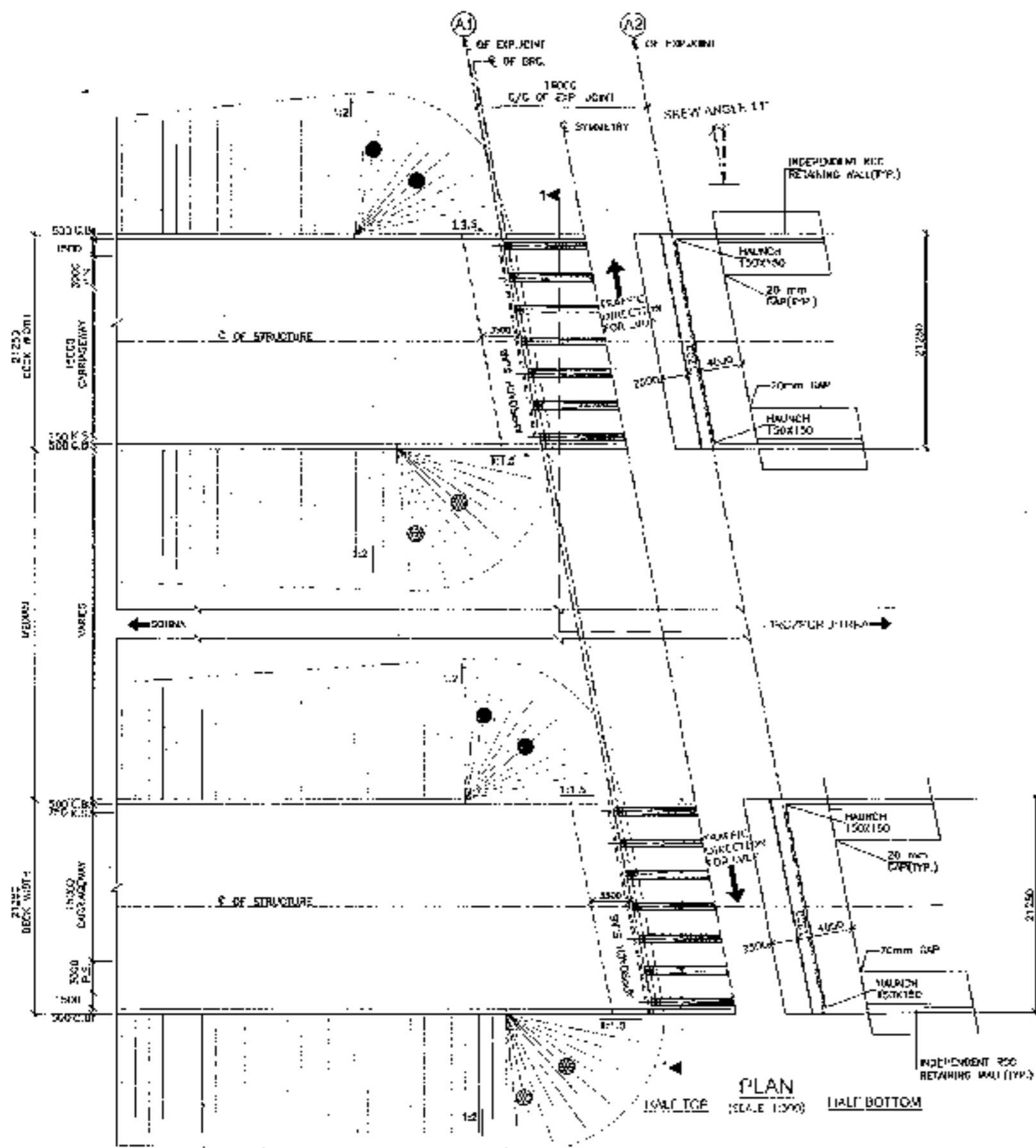
CROSS SECTION OF CAST IN SITU RCC GIRDER  
(SCALE 1:40)



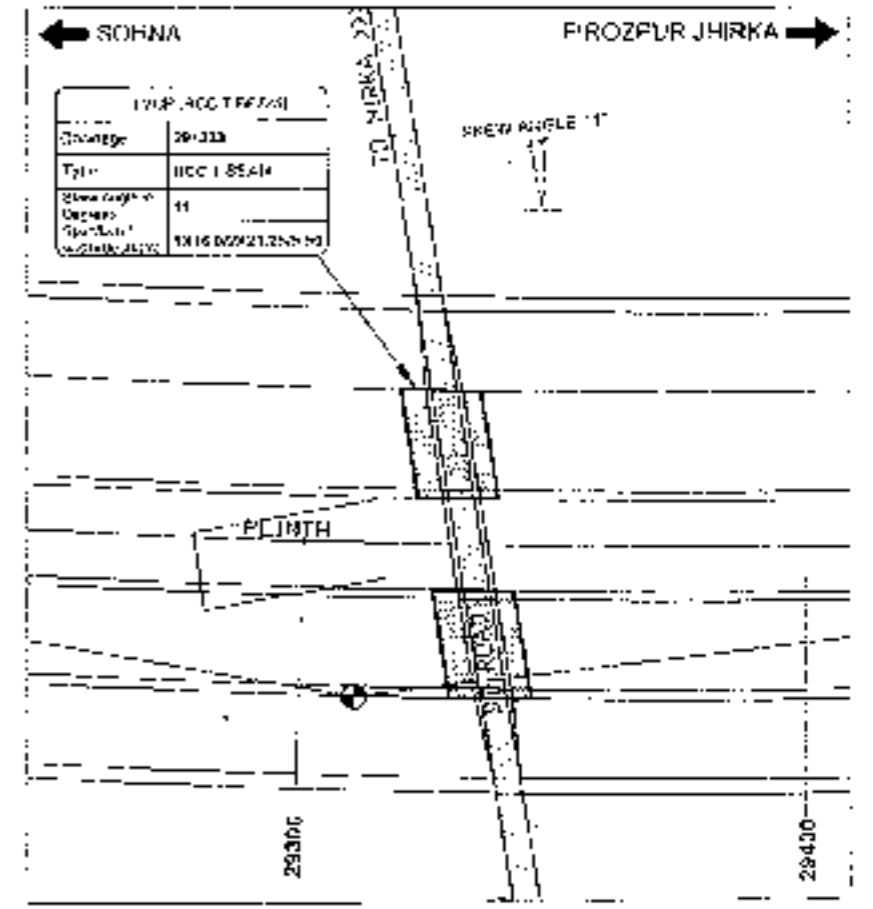
SECTION AT F-1  
(SCALE 1:100)



CLIENT: National Highways Authority of India	CONSULTANT: Chaitanya Projects Consultancy Pvt. Ltd. C-5, 2ND FLOOR, BLK. TOWER PLOT NO- 21-22, SECTOR 4, VAISHALI, GHAZIABAD PH: 0120-3223419 4198472, FAX: 0120-4110477	PROJECT: Consultancy Service for the Preparation for Feasibility Report/ DPR for Development of Four-lane Diversion into Corridor and Feeder Routes to improve the efficiency of freight movement in India under Abhyasana Pariyojana (Lot-6/Package-4) of Sohna - Firozpur Jirka	SCALE - AS SHOWN	DWG TITLE: GENERAL ARRANGEMENT DRAWING LVIP (SPAN 1 X 16.00M C/C EXP. JOINT) AT CH-29-333 (SOHNA - FIROZPUR JIRKA)	SHEET NO. 1 PROJECT NO. CH-29-333-110 DATE: AUGUST 2018 PREPARED BY: [NAME] CHECKED BY: [NAME] APPROVED BY: [NAME]
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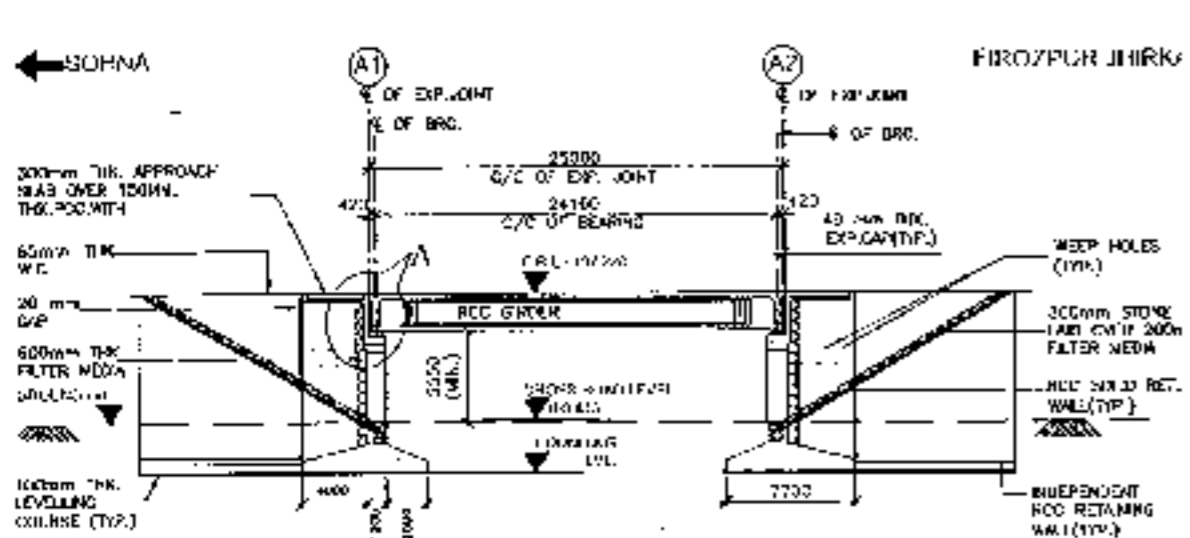
- NOTES:**
1. ALL DIMENSIONS ARE IN MM AND LEVELS ARE IN METRES UNLESS OTHERWISE SPECIFIED. ONLY WRITTEN DIMENSIONS TO BE FOLLOWED. NO DIMENSION SHALL BE TAKEN.
  2. THE PROPOSED 3. AND 4. LANE HAS BEEN DESIGNED FOR HIM OR ATANKING CLASS A (TRAM) WHICHEVER COMES.
  3. CONCRETE SHALL BE DESIGN MIX AND SHALL BE IN CLASS AS INDICATED BELOW:-  
 RCC FOUNDATION CONCRETE : M-15  
 SUPERSTRUCTURE : M-40  
 SUBSTRUCTURE : M-40  
 CURB, BARRIER : M-40  
 APPROACH SLAB : M-30  
 RETURN/WIND WALLS : M-30
  4. GRADE OF SITE SHALL BE TO 5000 CONFORMING TO IS:1723.
  5. BACK FILLING BEHIND ABUTMENTS AND RETURN WALLS SHALL CONSIST OF SELECTED FILLING PROFFERED TO APPENDIX : 8 OF IS:73-2014 USING PROFFERED C-40 (3-50) 6-20 & 5 = 25 kg/m<sup>3</sup>.
  6. LAYING COMPACTION AND EXTENT OF BACKFILL BEHIND ABUTMENT AND RETURN WALL SHALL CONFORM TO SPECIFICATIONS IN APPENDIX : 8 III IV : IS:73-2014.
  7. WEAP MEETS SPACED AT 1000 c/c BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED IN A STANDARD MANNER IN ABUTMENTS AND RETURN WALL. TILL 150 mm ABOVE GROUND LEVEL.
  8. 50mm THK. CC WEARING COURSE SECTION 500 OF WIDTH SPECIFICATIONS.
  9. ALL DIMENSIONS ARE TOLERANCE MAY BE CHANGED AFTER DETAIL DESIGN.
  10. LOCATION OF DUCTS IS INDICATED.
  11. THIS STRUCTURE LIES IN ZONE III.



<b>CLIENT:</b> National Highways Authority of India 	<b>CONSULTANTS:</b> Chaitanya Projects Consultancy Pvt. Ltd. G-3, 2ND FLOOR, R.K. TOWER PLOT NO. 21-22, SECTOR 4, VAISHALI, GHAZIABAD PH: 0120-2224415, 4120412, FAX: 0120-1110472	<b>PROJECT:</b> Consultancy Services for the Preparation of Feasibility Report (DPK) for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India Under Bharatmala Pariyojana (KORP/FA/2014-4) of SoHna - Frozpur Jhirka	<b>SCALE:</b> AS SHOWN	<b>DWG. T.TITLE:</b> GENERAL ARRANGEMENT DRAWING L.V.L.P. (SPAN 11 X 1.80M C/C EXP. JOINT) AT CH-291373 (SOHNA - FROZPUR JHIRKA)	<b>DRAWING No.:</b> 10000000000000000000 <b>DATE:</b> AUGUST 2015 <b>PREPARED BY:</b> RAJNEESH SINGH <b>CHECKED BY:</b> MOH. SALAM <b>APPROVED BY:</b> S. K. JAIN
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VUP  
RCC T-BEAM (SIZE 1x25.0M)  
AT KM 34+619

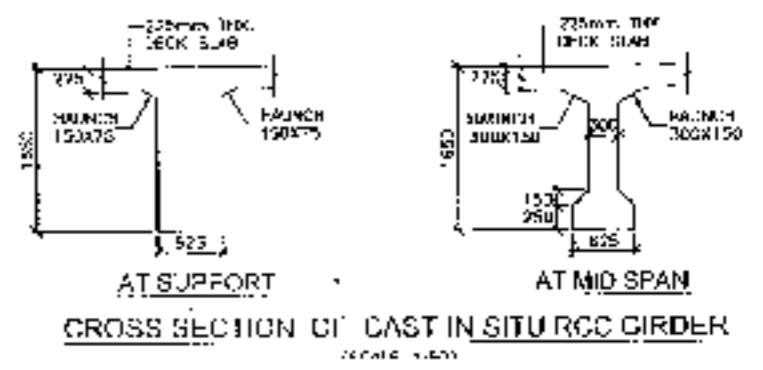
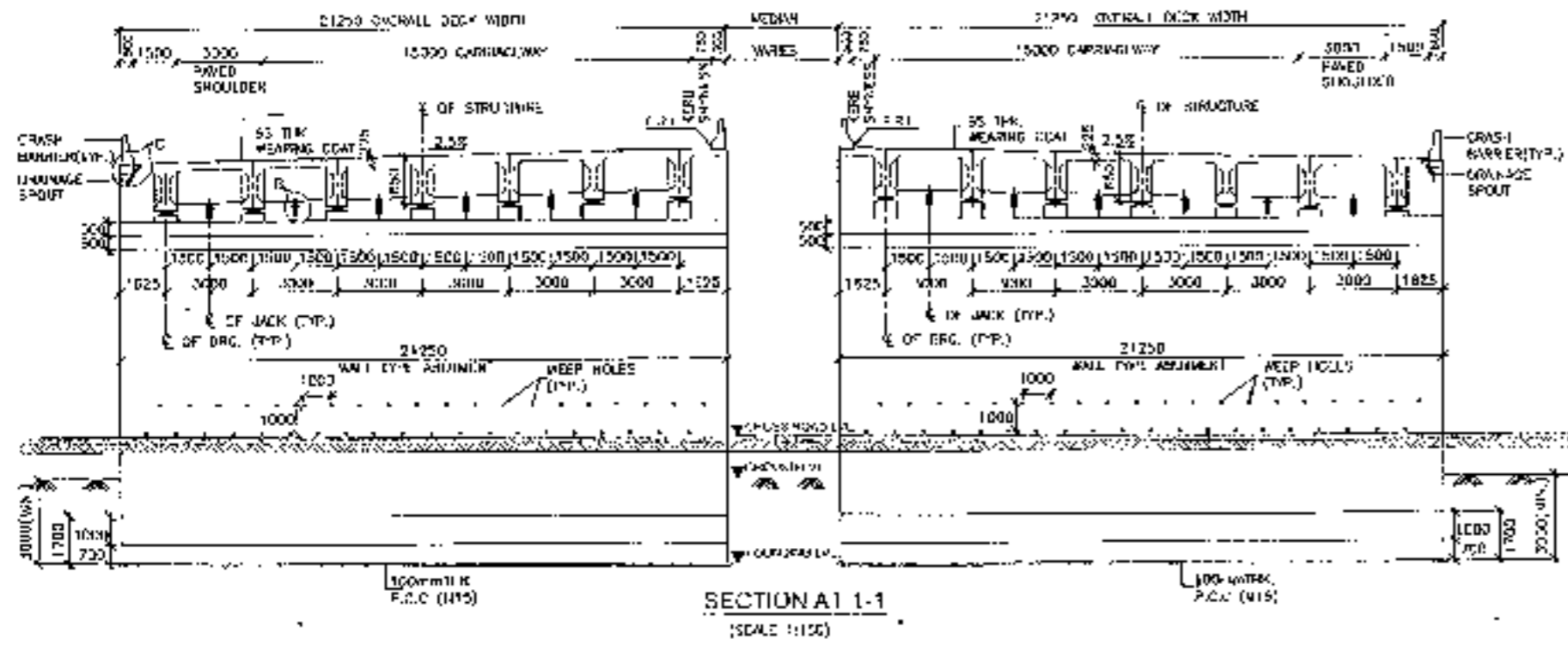
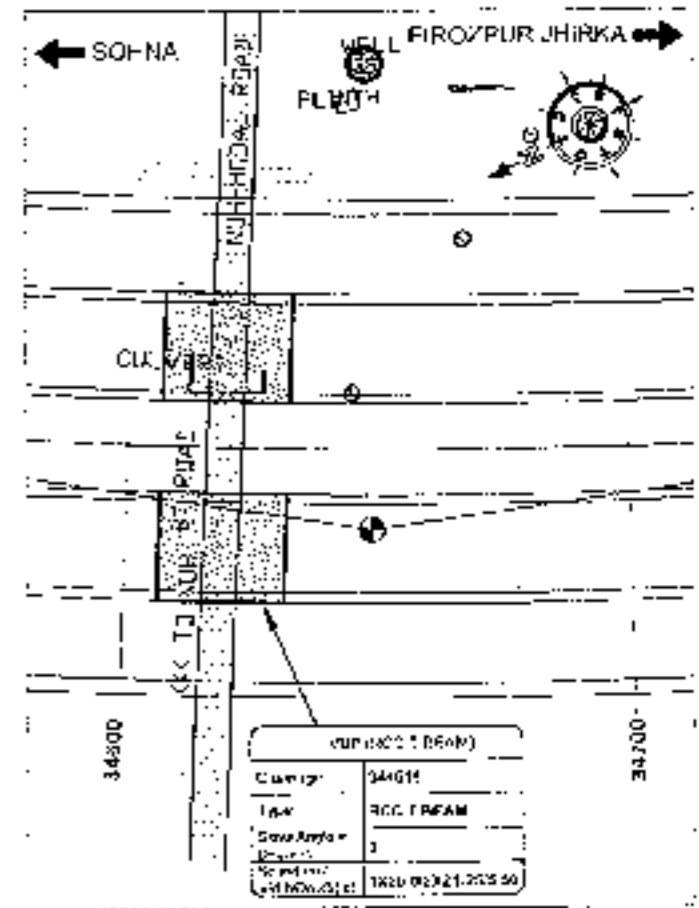
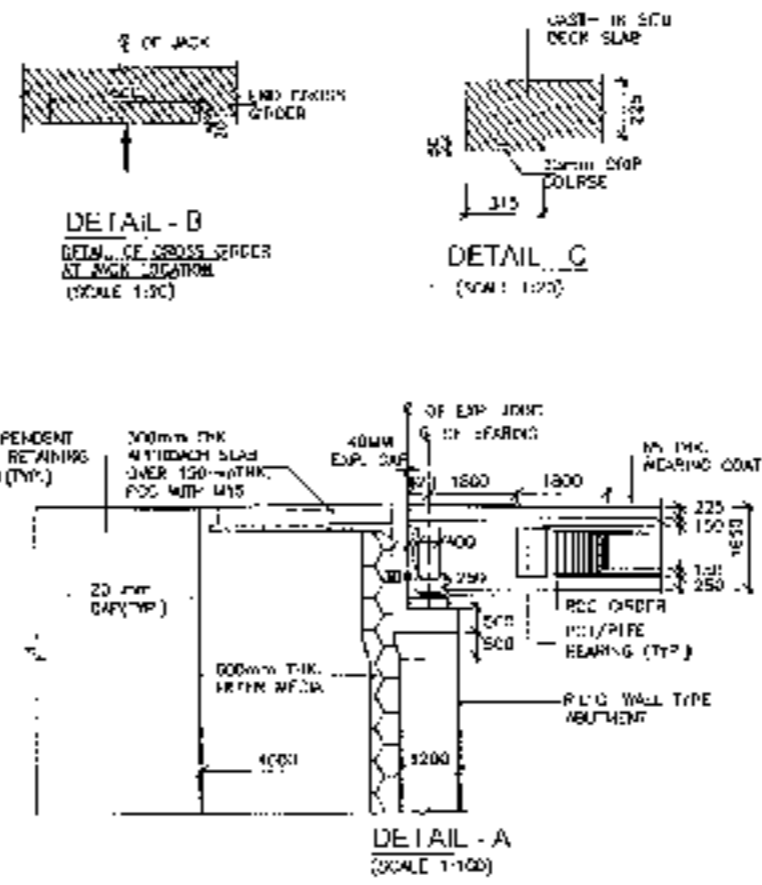




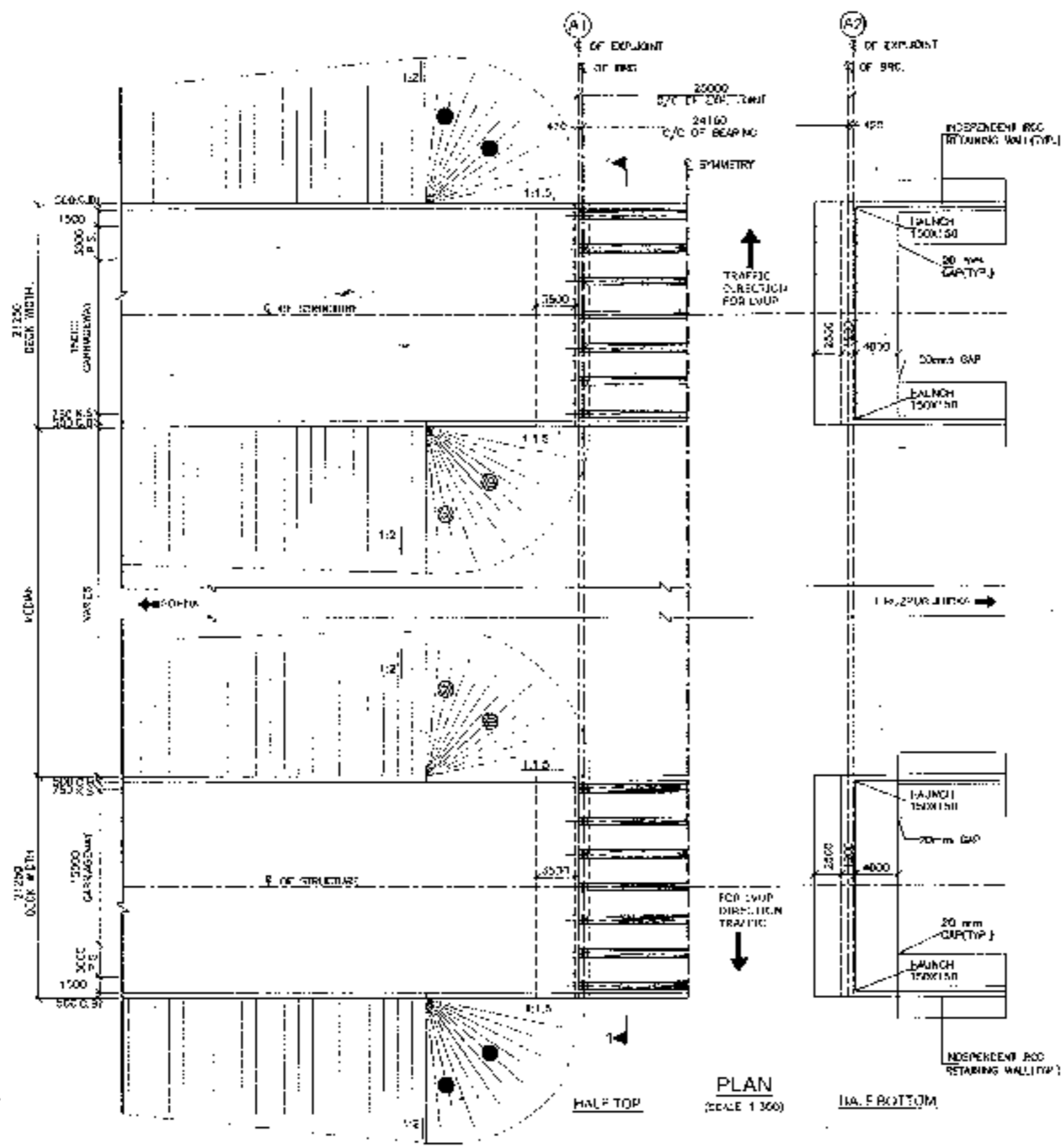
LONGITUDINAL ELEVATION  
(SCALE 1:500)

REDUCTION FROM (m)	197.228	197.228
SHOULDER LEVEL (m)	189.345	189.105
CORNERAGE (m)	34+606.50	34+631.50

CHANGING AT 0+0015.34+610



<b>CLIENT</b> National Highways Authority of India 	<b>CONSULTANT</b> Chaityanya Projects Consultancy Pvt. Ltd. G-5, 2ND FLOOR, K TOWER PLOT NO - 21-22, SECTOR 4, VAIDEHALI, GHAZIABAD PH: 0120-3223418, 4120472, FAX: 0120-4110472	<b>PROJECT</b> Consultancy Service for the Preparation for Feasibility Report/DPR for development of Premium Corridors, Inter Corridors and feeder Routes to improve the efficiency of freight movement in India under AI (atmega) Program (Lot 6 Package-6) of Solna - Ferozpur Jhirka	<b>SCALE</b> AS SHOWN	<b>WORK SHEET</b> GENERAL ARRANGEMENT DRAWING V.I.P (SPAN 1 X 25.00 M) C/C OF JOINT AT CH. 34+615 (SONNA - FEROZPUR JHIRKA)	<b>DRAWING No.</b> CPD/15/2016-245/45/137 <b>DATE</b> AUGUST 2016 <b>PREPARED BY</b> CH. 34+615 <b>CHECKED BY</b> MCHD SAKI <b>APPROVED BY</b> SPPHAI
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- NOTES:-
1. ALL DIMENSIONS ARE IN MM AND LEVELS ARE IN METERS UNLESS OTHERWISE MENTIONED. ONLY WHOLE NUMBERS TO BE FOLLOWED. NO DIMENSION SHALL BE SHOWN IN FRACTIONS TO BE FOLLOWED. NO DIMENSION SHALL BE SHOWN IN FRACTIONS TO BE FOLLOWED.
  2. THE PROPOSED 3 LANE BRIDGE HAS BEEN DESIGNED FOR TOR OR 4 LANE, CLASS A SCAND. YONGEVEN GOVT. CIVIL ENGR. SHALL BE INFORMED AND SHALL BE OF GRADE AS SHOWN AT THE SITE.
  3. PCC LEVELING COURSE : M-12  
SUPERSTRUCTURE : M-42  
SUBSTRUCTURE : M-15  
DRAIN RIGIDITY : M-42  
APPROACH SLAB : M-30  
RETAINING WALLS : M-25
  4. GRADE OF STEEL SHALL BE Fe-500 CONFORMING TO S:1006
  5. MAXIMUM PERCENTAGE OF WEAR AND TEAR SHALL BE CONSIST OF SELECTED EARTH CONFORMING TO SPECIFIC : 6 OF IS:2720-2004 (WASHING PROPERTIES C-1, D-10, F-20 & G-20) 40/100
  6. LANE DIMENSION AND EXTENT OF BACKSTAY BEHIND APPROACH AND RETURN WALL SHALL CONFORM TO SPECIFICATIONS IN APPENDIX - 6 OF IRC : 78-2014
  7. ASPHALT SHALL BE SPREAD AT 1000 g/m<sup>2</sup> BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED IN A ENCLOSED MANNER IN APPROACHES AND RETURN WALL 150 mm ABOVE GROUND LEVEL.
  8. DRAINAGE, C.C. WEARING COURSE SHALL BE AS PER SPECIFICATIONS.
  9. ALL DIMENSIONS ARE TO BE MAINTAINED AFTER FINAL DESIGN.
  10. DIMENSIONS OF APPROACH TO BE MAINTAINED.
  11. THIS STRUCTURE LIES IN ZONE B.



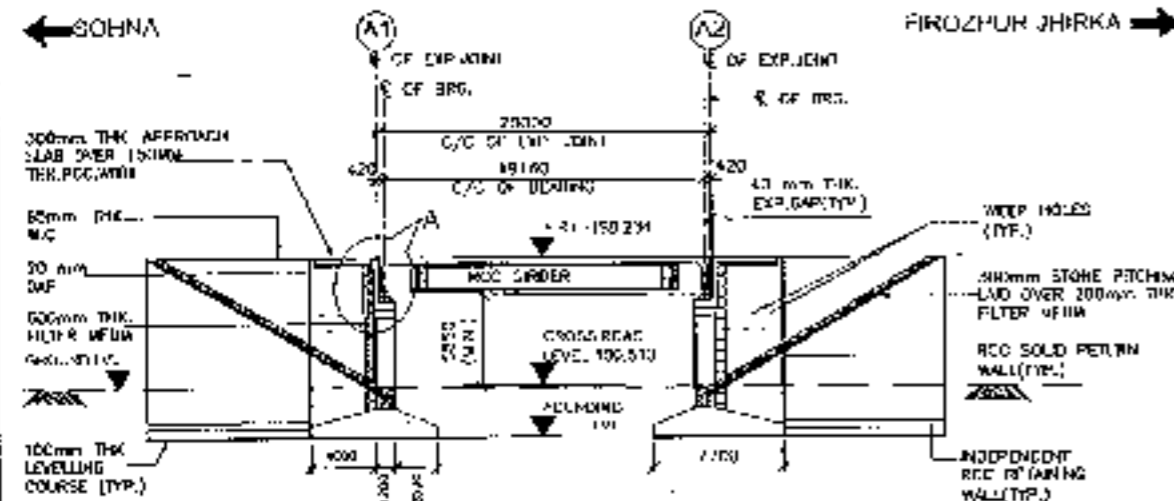
62

<p>CLIENT:- National Highway Authority of India</p>	<p>CONSULTANT:- Chaitanya Projects Consultancy Pvt. Ltd. C-5, 2ND FLOOR, R.K TOWER PLOT NO.- 21-22, SECTOR 4, VAISHALI, GAZIABAD PH: 9120-3223419, 4120472, FAX: 0120-4110472</p>	<p>PROJECT:- Consultancy Service for the Preparation for Feasibility Report (RFP) for the development of Economic Corridor, also Corridor and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (e-Pathshala) of India - Firozpur Jinnah</p>	<p>SCALE:- AS SHOWN</p>	<p>DWG. TITLE:- GENERAL ARRANGEMENT DRAWING V.P. (SPAN 1 X 24.00 M CG EXP. CONC.) AT CH-34-619 (CHINA - FIROZPUR JIRKA)</p>	<p>DATE: AUGUST 2016 PREPARED BY: CHHECKED BY: APPROVED BY: SUNIL KUMAR SHARMA SUNIL KUMAR SHARMA SUNIL KUMAR SHARMA</p>
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LVUP  
RCC T-BEAM (SIZE 1x20.0M)  
AT KM 42+457

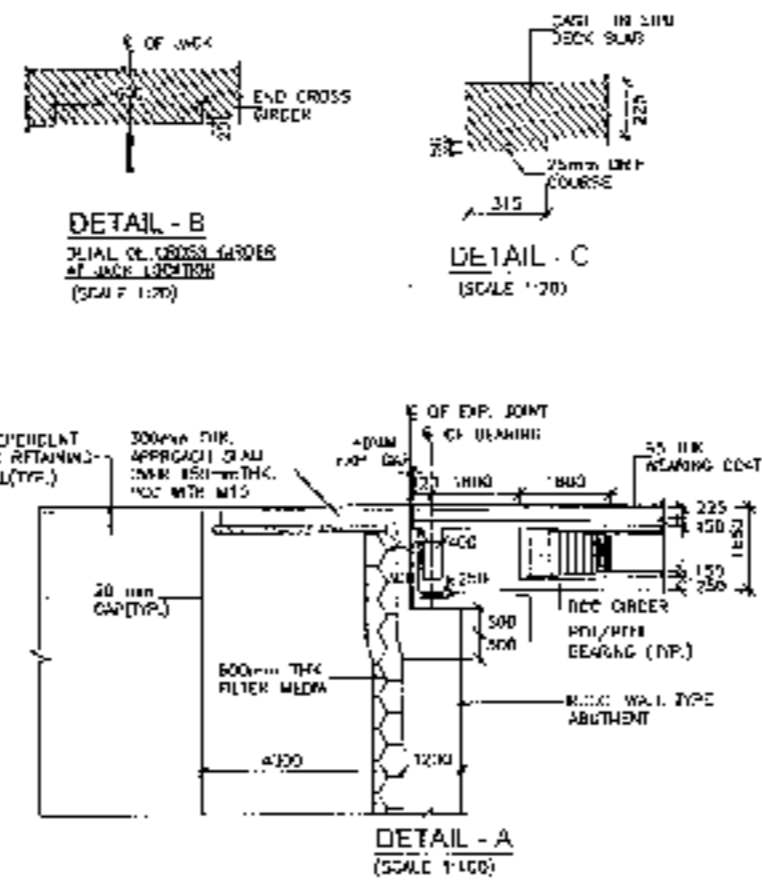




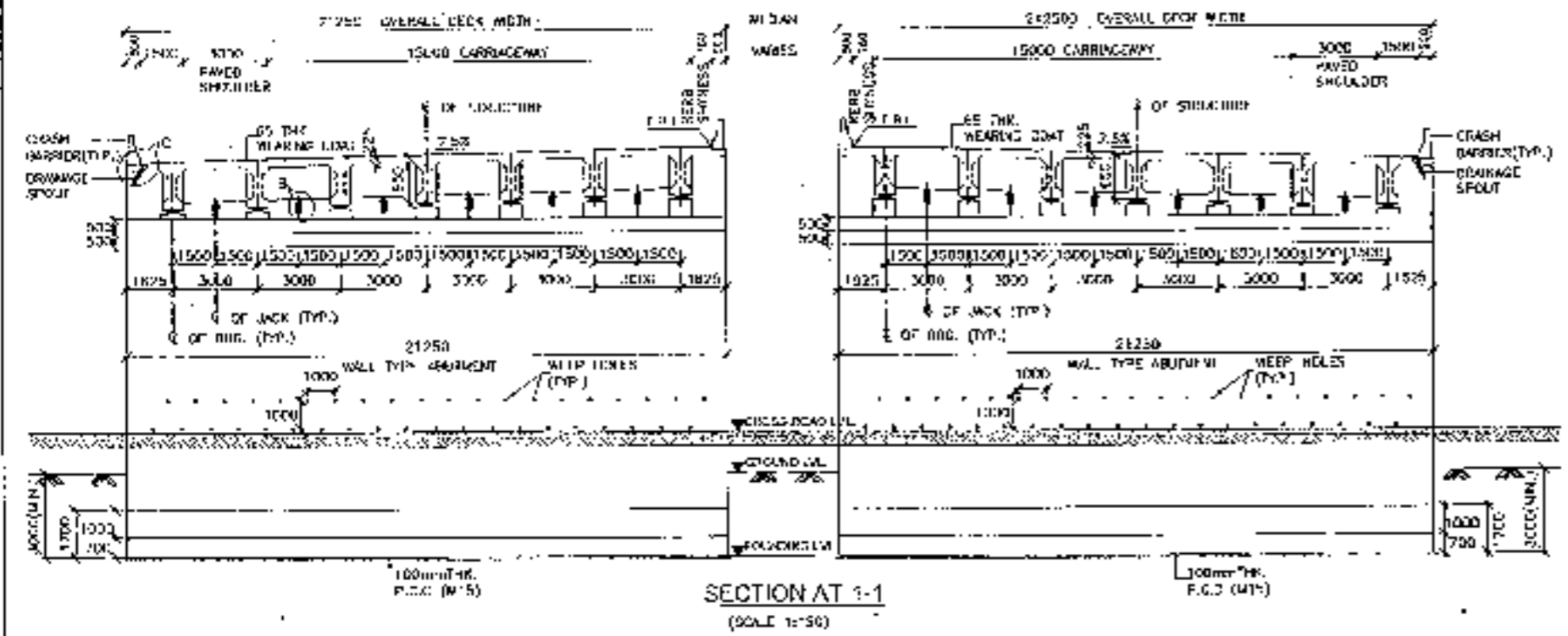
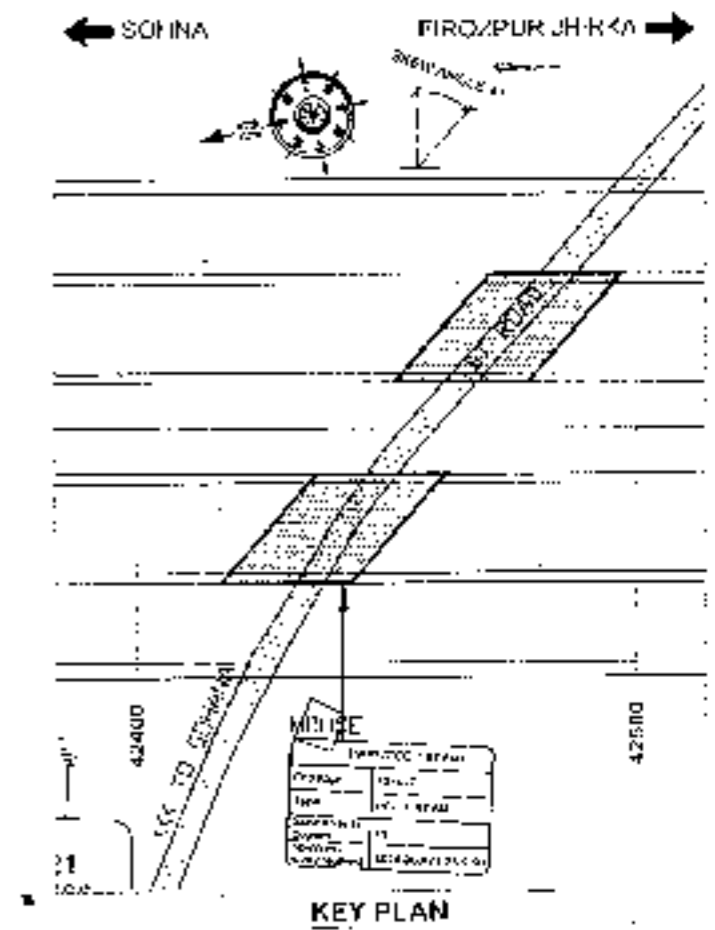


**LONGITUDINAL ELEVATION**  
(SCALE 1:200)

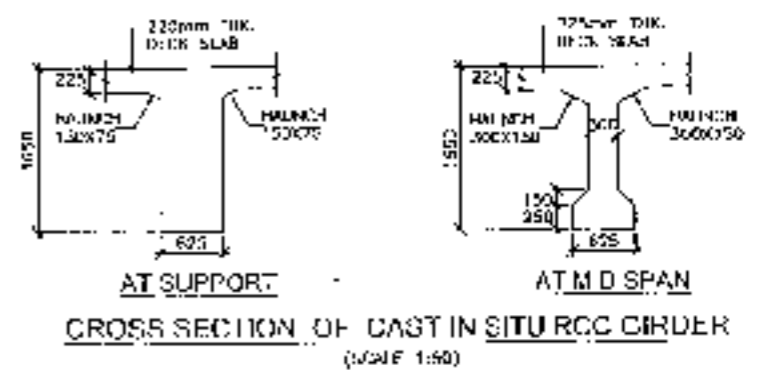
FORMATION LEVEL (m)	198.234	198.744
GROUND LEVEL (m)	189.480	189.571
CHANGELINE (m)	424-447	42-457, 42-467



**DETAIL - A** (SCALE 1:100)  
**DETAIL - B** (SCALE 1:100)  
**DETAIL - C** (SCALE 1:200)



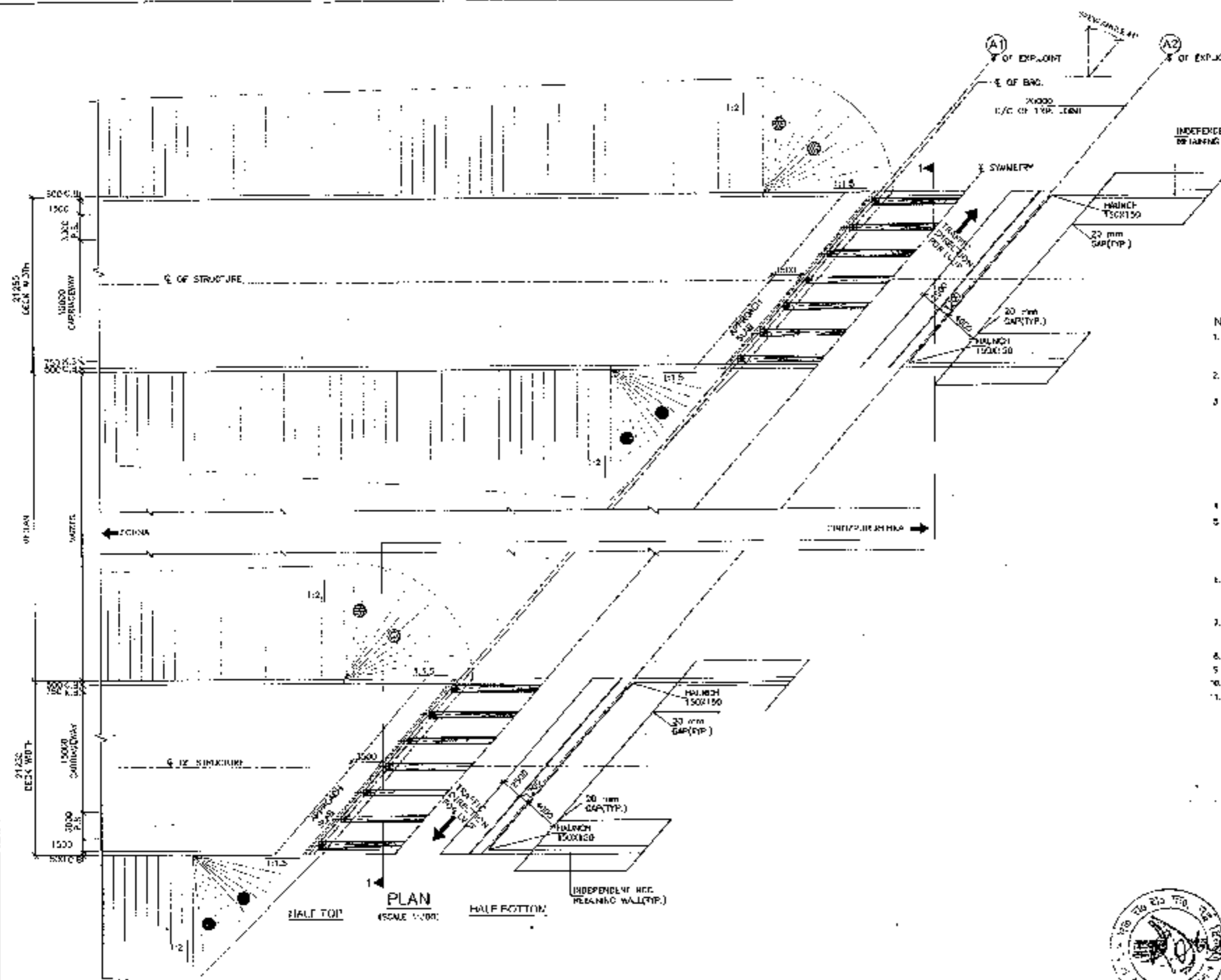
**SECTION AT 1-1** (SCALE 1:50)



**CROSS SECTION OF CAST IN SITU RCC GIRDER**  
(SCALE 1:50)



<b>CLIENT:</b> National Highways Authority of India 	<b>CONSULTANT:</b> Chailanya Projects Consultancy Pvt. Ltd.  G-5, 2ND FLOOR, R.K. TOWER, PLOT NO.- 21/22, SECTOR-4, VAISHALI, CHAZASAD PH: 0120-2229819, 0120-2229817, FAX: 0120-4113472	<b>PROJECT:</b> Consultancy Service for the Preparation for Feasibility Report/PR for development of Economic Corridor, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala 100 years (100Bharatmala) of Sub-3 - Firozpur Jirka	<b>SCALE:</b> AS SHOWN	<b>DWG TITLE:</b> GENERAL ARRANGEMENT DRAWING CVUP (SPAN 1 X 20.00 METRE EXISTING) AT CH-42-457 (SOHNA - FIROZPUR JIRKA)	<b>DRAWING No.:</b> 1244575/100 CPCO/100/2011/1244575/100
					<b>DATE:</b> AUGUST 2013
					<b>PREPARED BY:</b> [Signature] <b>CHECKED BY:</b> [Signature] <b>APPROVED BY:</b> [Signature]



- NOTES:-**
1. ALL DIMENSIONS ARE IN MM AND LEVELS ARE IN METERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS TO BE FOLLOWED AND DIMENSION SHALL BE SCALED.
  2. THE PROPOSED J LANE BRIDGE HAS BEEN DESIGNED FOR TOR OR +LAMEJORAL CLASS A LOADING, WHICHEVER GOVERNS.
  3. FINISH SHALL BE DESIGN GR. AND SHALL BE OF GRADE AS INDICATED BELOW -
 

POC LEVELING COURSE	M-45
SUBSTRUCTURE	M-40
SUBSTRUCTURE	M-30
CANAL BENCHER	M-40
APPROACH ROAD	M-30
RETAINING WALLS	M-25
  4. GRADE OF STEEL SHALL BE 17-MNPS CONFORMING TO IS778.
  5. BACK FILLING BEHIND ABUTMENTS AND RETAIN WALLS SHALL CONSIST OF SELECTED LAMM CONFORMING TO APPENDIX G OF IRC-2014 (UNLESS PROPOSED C-2, G-17, G-20 & G-21 ARE/AS).
  6. LAMM COMPACTION AND EXTENT OF BACKFILL BEHIND ABUTMENT AND RETAIN WALL SHALL CONFORM TO SPECIFICATIONS IN APPENDIX H OF IRC-2014.
  7. KEEP HOLES SPACED AT 1000 c/c BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED IN A STAGGERED MANNER IN ABUTMENTS AND IS 1000 MM TILL 150 MM ABOVE GROUND LEVEL.
  8. SHOW THE RCC REINFORCING COURSE SECTION 500 QU. MUMI-4 SPECIFICATIONS.
  9. ALL DIMENSIONS ARE TENTATIVE MAY BE CHANGED AFTER DETAIL DESIGN.
  10. LOCATION OF BRIDGE IS MODERN.
  11. THIS STRUCTURE LIES IN ZONE II.

**PLAN**  
SCALE: 1:500



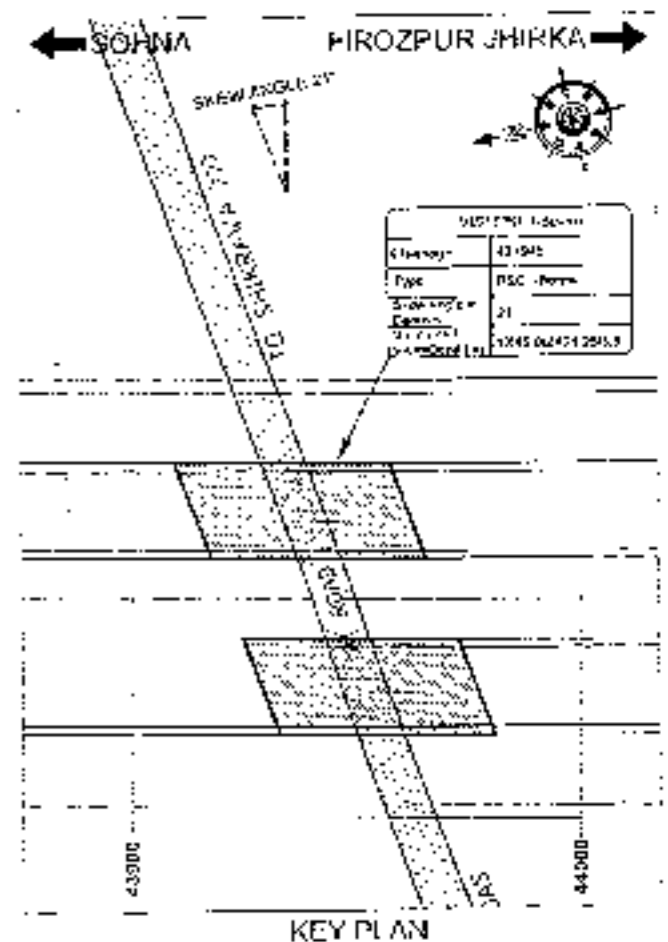
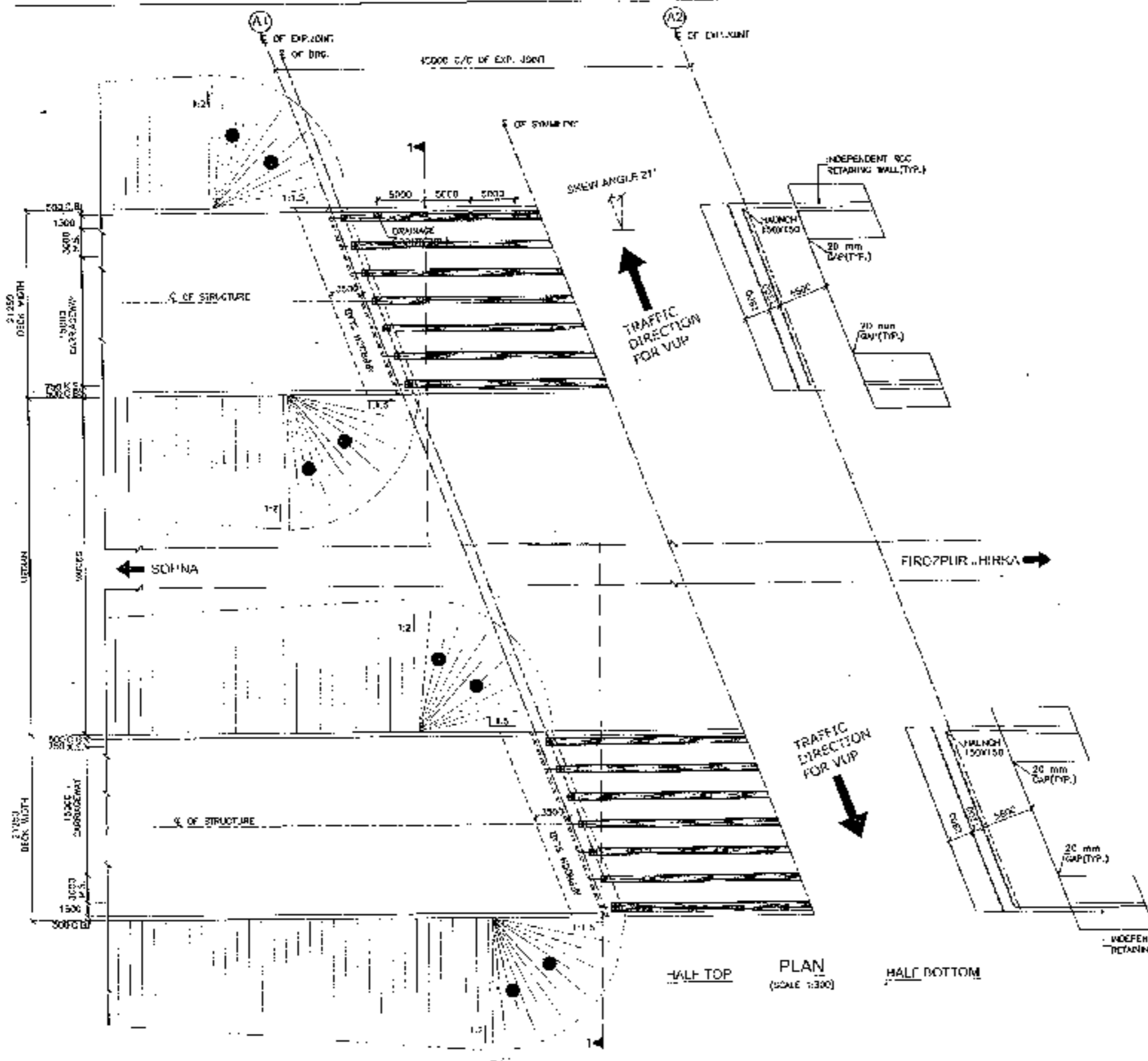
<b>CLIENT:-</b> National Highways Authority of India New Delhi	<b>CONSULTANT:-</b> Chaityanya Projects Consultancy Pvt. Ltd. G-2 AND 11/00R, R.K. KUMAR PLOT NO. 21-22, ST. G10P-3, VAISHALI, GHAZIABAD PH.: 0120-3223419, 4120472, FAX: 0120-4140472	<b>PROJECT:-</b> Consultancy Service for the Preparation for Feasibility Report (FPR) for development of Economic Corridor, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-01Pac) sgn-4) of Salwa - Farakka Jharkha	<b>SCALE:-</b> AS SHOWN	<b>DWG TITLE:-</b> GENERAL ARRANGEMENT DRAWING LVUP (SHAN) X 20 20 M (C/C EXP. JOINT) AT CH-124457 (SOHNA - T. ROZIHUN, JHARKHA)	<table border="1"> <tr> <td><b>DATE:-</b> AUGUST 2016</td> <td><b>PREPARED BY:-</b> SARVJIT SINGH</td> <td><b>CHECKED BY:-</b> SUNIL KUMAR</td> <td><b>APPROVED BY:-</b> MPS</td> </tr> </table>	<b>DATE:-</b> AUGUST 2016	<b>PREPARED BY:-</b> SARVJIT SINGH	<b>CHECKED BY:-</b> SUNIL KUMAR	<b>APPROVED BY:-</b> MPS
<b>DATE:-</b> AUGUST 2016	<b>PREPARED BY:-</b> SARVJIT SINGH	<b>CHECKED BY:-</b> SUNIL KUMAR	<b>APPROVED BY:-</b> MPS						

VUP  
PSC I-BEAM (SIZE 1x45.0M)  
AT KM 43+945





- NOTES:-**
1. ALL DIMENSIONS ARE IN METRE AND LEVELS ARE IN METRES UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS IN INCHES OR FEET SHALL BE SCALED.
  2. THE PROPOSED DRAWING HAS BEEN DESIGNED FOR 70R OR 100R CLASS CLASS A SINGLE APPROXIMATE GRADES.
  3. CONCRETE SHALL BE DESIGN MIX AND SHALL BE OF GRADE AS MENTIONED BELOW:  
 FOR LEVELLING COURSE : M-15  
 SUPERSTRUCTURE : M-40  
 SUBSTRUCTURE : M-25  
 CURB BARRIER : M-40  
 APPROACH SLAB : M-30  
 RETURNING WALLS : M-25
  4. GRADE OF STEEL GIRLS OF T-500 CONFORMING TO IS 1008
  5. BACK FILLING BEHIND ABUTMENTS AND RETURN WALLS SHALL CONSIST OF SELECTED LOCAL COMPACTING TO APPENDIX - 4 TO RTO-2000 USING MIXTURE C-0, (3-20) 1-20 & G - 20 (M<sup>3</sup>/M<sup>2</sup>)
  6. LAYING COMPACTING AND EXTENT OF BACKFILL BEHIND ABUTMENTS AND RETURN WALL SHALL CONFORM TO SPECIFICATIONS IN APPENDIX - 6 OF IRC : 70-2014
  7. NAIL PLATES, SPACED AT 1000 C/S BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED IN A STRUCTURED MANNER IN ABUTMENTS AND RETURN WALL TILL 150 mm ABOVE GROUND LEVEL.
  8. 10mm DIA. WEARING COURSE SECTION AND OF WIDTH SPECIFICATIONS
  9. ALL DIMENSIONS ARE TYPICAL AND TO BE CHECKED AFTER INITIAL ISSUAL.

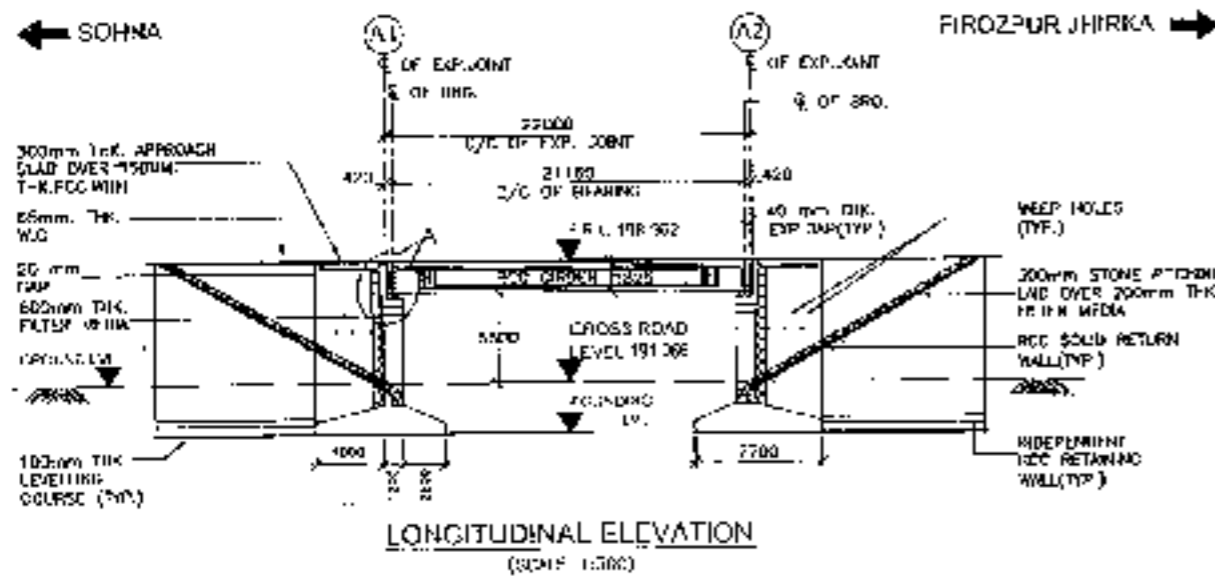


68

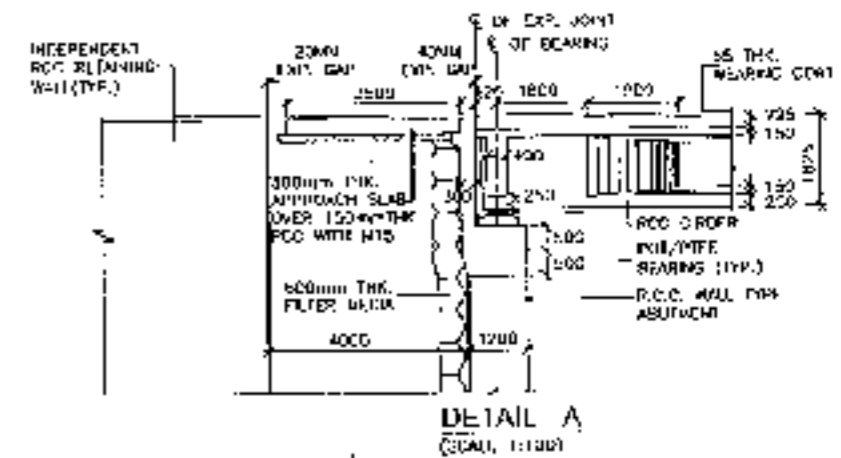
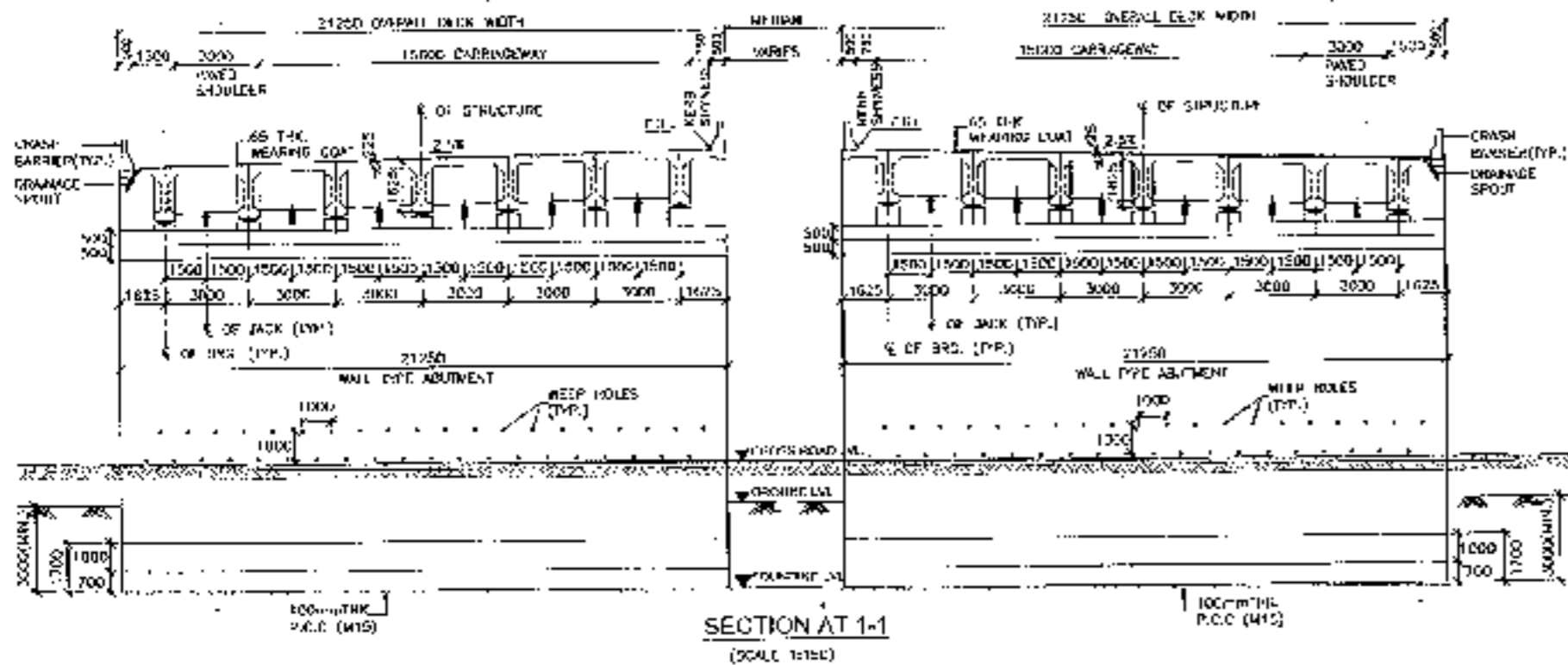
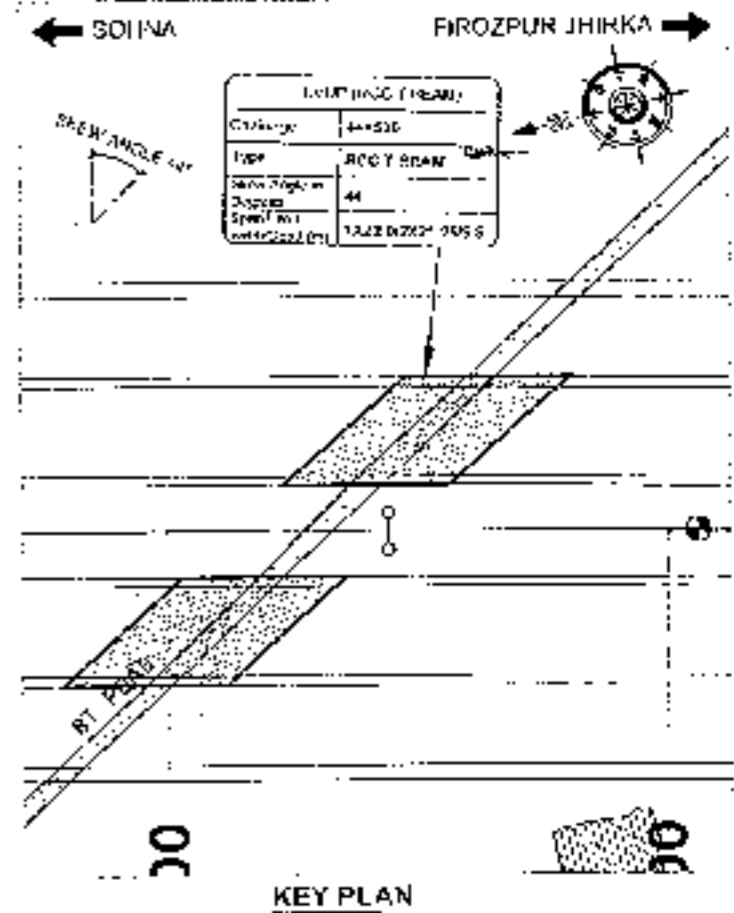
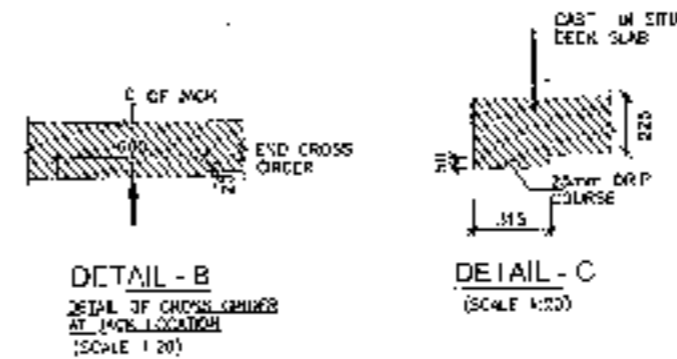
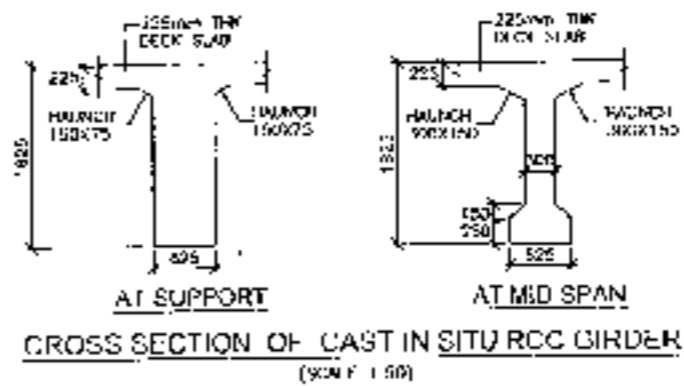
	<b>CONSULTANT:-</b> Chaitanya Projects Consultancy Pvt. Ltd. C-6, 2ND FLOOR, R.K. TOWER PLOT NO.- 21-22, SECTOR-4, VASHTAM I, GHAZIABAD PIN-0120-322349, 4170672, FAX: 0120-1110072	<b>PROJECT:-</b> Consultancy Service for the Preparation for Feasibility Report (RFP) for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-07/Package-4) of Solana - Ferozpur Bypass	<b>SCALE:-</b> AS SHOWN	<b>ISSUE TITLE</b> GENERAL ARRANGEMENT DRAWING VUP (SPAN 1 X 45.00 M C/S EXP. JOINT) AT CH-43-915 (SOLANA - FEROPUR BYPASS)	<b>DRAWING NO.:</b> CH-43-915	<b>DATE:</b> AUGUST 2018	<b>REVISION:</b> R0
	<b>PREPARED BY:</b> RAJESH KUMAR	<b>CHECKED BY:</b> NORD FAIR	<b>APPROVED BY:</b> ILLUJ				

LVUP  
RCC T-BEAM (SIZE 1x22.0M)  
AT KM 44+530



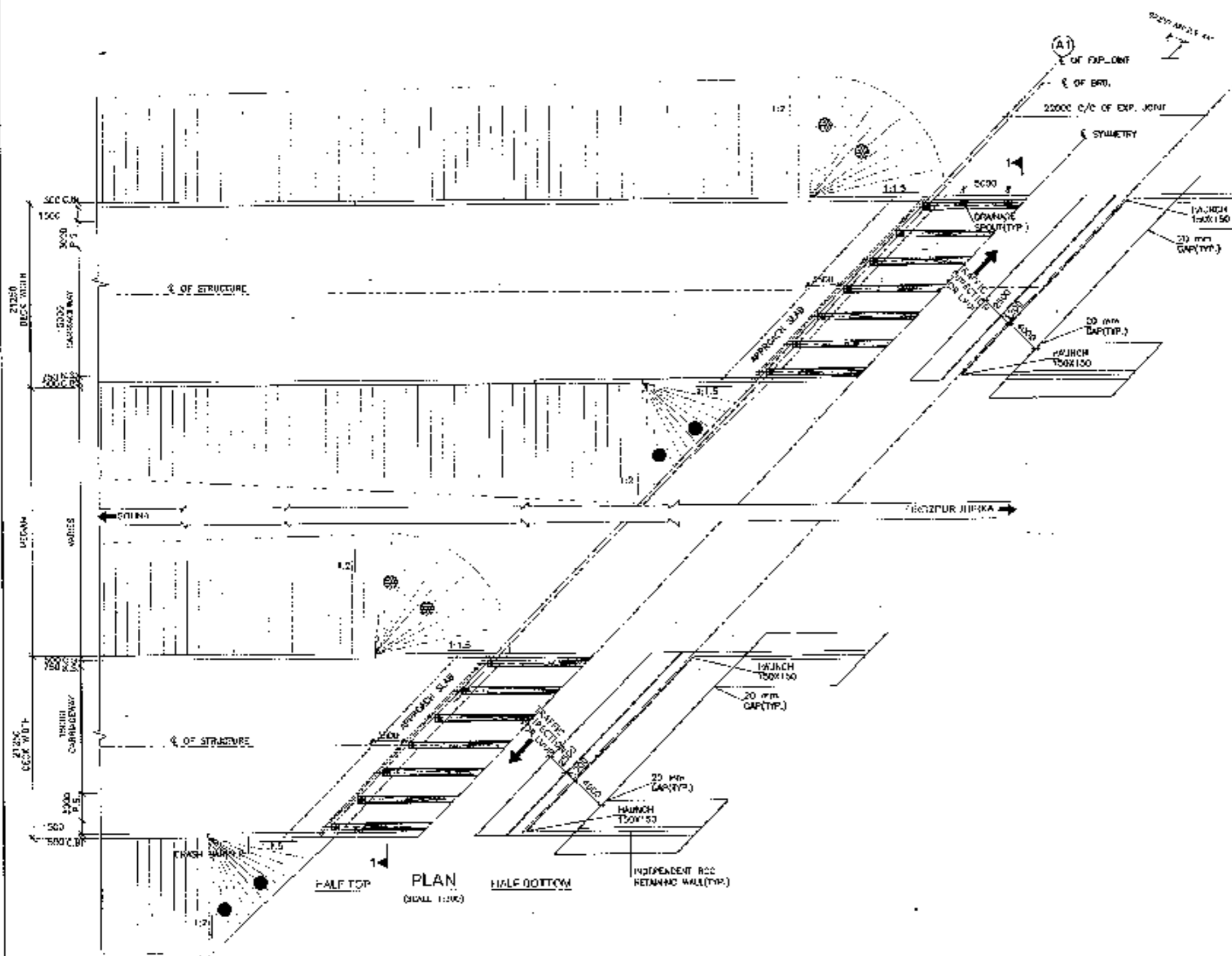


FINISH LEVEL (m)	198.962	198.962
BRIDGE EXP. JOINT	150.150	189.740
CHANGING POINT	44+515	44+530
		15+544



70

CLIENT: National Highway Authority of India	CONSULTANT: Chaitanya Projects Consultancy Pvt Ltd G-3, 2ND FLOOR, R.K. TOYAL WHITING - 71-77, SECTOR-4, VASUNDHRA, GHAZIABAD P.H. 0120-3223419, 4120472, FAX: 0120-411472	PROJECT: Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridor, Inter Corridor and Feeder Roads to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6) Phase-4 of Sohna - Firozpur Jhirka	SCALE: AS SHOWN	DWG TITLE: GENERAL ARRANGEMENT DRAWING (SPAN 1 X 30.10 M G.C. EXP. JOINT) AT CH 44+530 (SUBS. - FIROZPUR JHIRKA)	DRAWING NO. GEP/13204/2018/001
			DATE: AUGUST 2018	PREPARED BY: CHANDRA SHEKHAR CHECKED BY: VISHU KUMAR APPROVED BY: NIPESH	



- NOTES:-**
- ALL DIMENSIONS ARE IN mm AND LEVELS ARE IN METRES UNLESS OTHERWISE MENTIONED. ONLY MINIMUM DIMENSIONS TO BE FOLLOWED. NO DIMENSION SHALL BE SOLED.
  - THE PROPOSED 3 LANE BRIDGE HAS BEEN DESIGNED FOR 100 OR 110 LANE, SAME CLASS A LOADING, WHICHEVER BE LOWERS.
  - CONCRETE SHALL BE DESIGN M20 AND SHALL BE OF GRADE AS INDICATED BELOW:-  
 RCC LEVELING COURSE : M-15  
 SUPERSTRUCTURE : M-40  
 SUBSTRUCTURE : M-30  
 CRASH BARRIER : M-40  
 APPROACH SLAB : M-30  
 RETAINING WALLS : M-25
  - GRADE OF STEEL SHALL BE Fe-500D CONFORMING TO IS:1786.
  - BACK FILLING BEHIND ABUTMENTS AND RETAIN WALLS SHALL CONFORM TO SPECIFIED DATA CORRESPONDING TO APPENDIX 5 OF IS:28:2014 (GRADE: MASHUT C-1, S=5%  
 $1-20' \leq S \leq 20' \text{ km/hr}$
  - LOADING EQUIPMENT AND POSITION OF TRUCKS BEHIND ABUTMENT AND RETAIN WALL SHALL CONFORM TO SPECIFICATION IN APPENDIX 6 OF IRC : 78:2014
  - WEAP NOTES, SPACED AT 1000 c/c BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED IN A STAGGERED MANNER IN ABUTMENTS AND RETAIN WALL. ALL 100 mm ABOVE FINISH GRADE LEVEL.
  - 45mm THK CG WEARING COURSE SECTION 500 OF WIDTH SPECIFICATIONS
  - ALL DIMENSIONS AND FINISHES MAY BE CHANGED AFTER DETAIL DESIGN.
  - CONDITION OF IMPORTANCE IS MODERATE.
  - THIS STRUCTURE LIES IN SEISMIC ZONE III.

PLAN (SCALE 1:100)  
 HALF TOP  
 HALF BOTTOM  
 INDEPENDENT RCC RETAINING WALL (TYP.)



<p><b>CLIENT:-</b> National Highways Authority of India Ministry of Road Transport &amp; Highways, Government of India</p>	<p><b>CONSULTANT:-</b> Chaitanya Projects Consultancy Pvt. Ltd. G-5, 2ND FLOOR, RK TOWER, PLOT NO.- 21-22, SECTION-4, VAISHALI, SHAZIBAD Ph: 0120-3223410, 4120472, FAX: 0120-4118087</p>	<p><b>PROJECT:-</b> Consultancy Services for the Preparation for Feasibility Report (FPR) for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6/Phase-4) of Solina - Ferozpur Jhinka</p>	<p><b>SCALE:-</b> AS SHOWN</p>	<p><b>DRAWN BY:-</b> GENERAL ARRANGEMENT DRAWING 1/100 (SPAN 1 X 27.00 M C/C EXP. JOINT) AT 04-34+500 SHEVA - PROJECT OFFICE</p>	<p><b>DRAWING No.:</b> (SHEV) 1 OF 21  <b>DATE:</b> AUGUST 2018  <b>PREPARED BY:</b> CHICKERU BY  <b>APPROVED BY:</b> CHICKERU BY</p>
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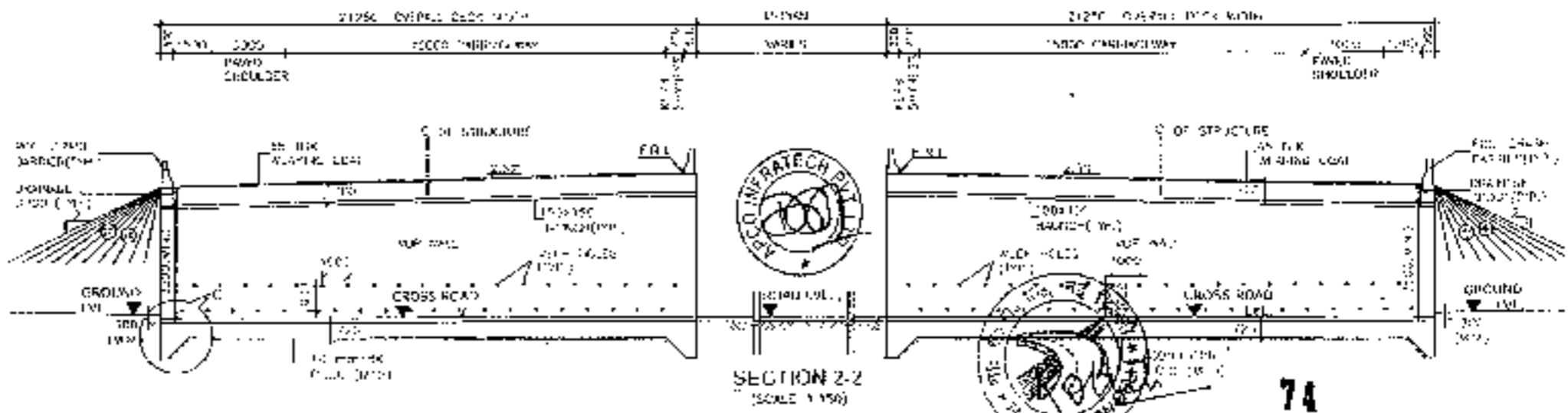
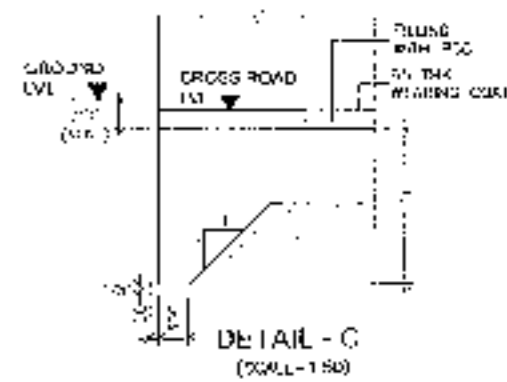
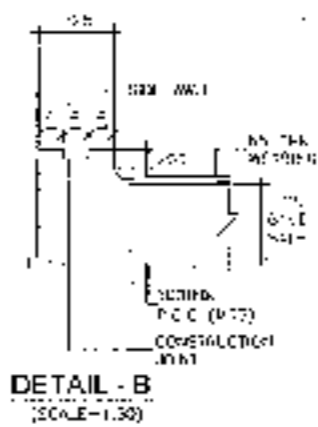
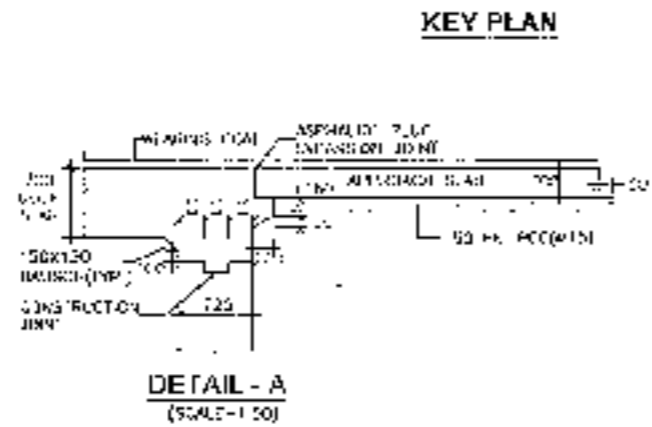
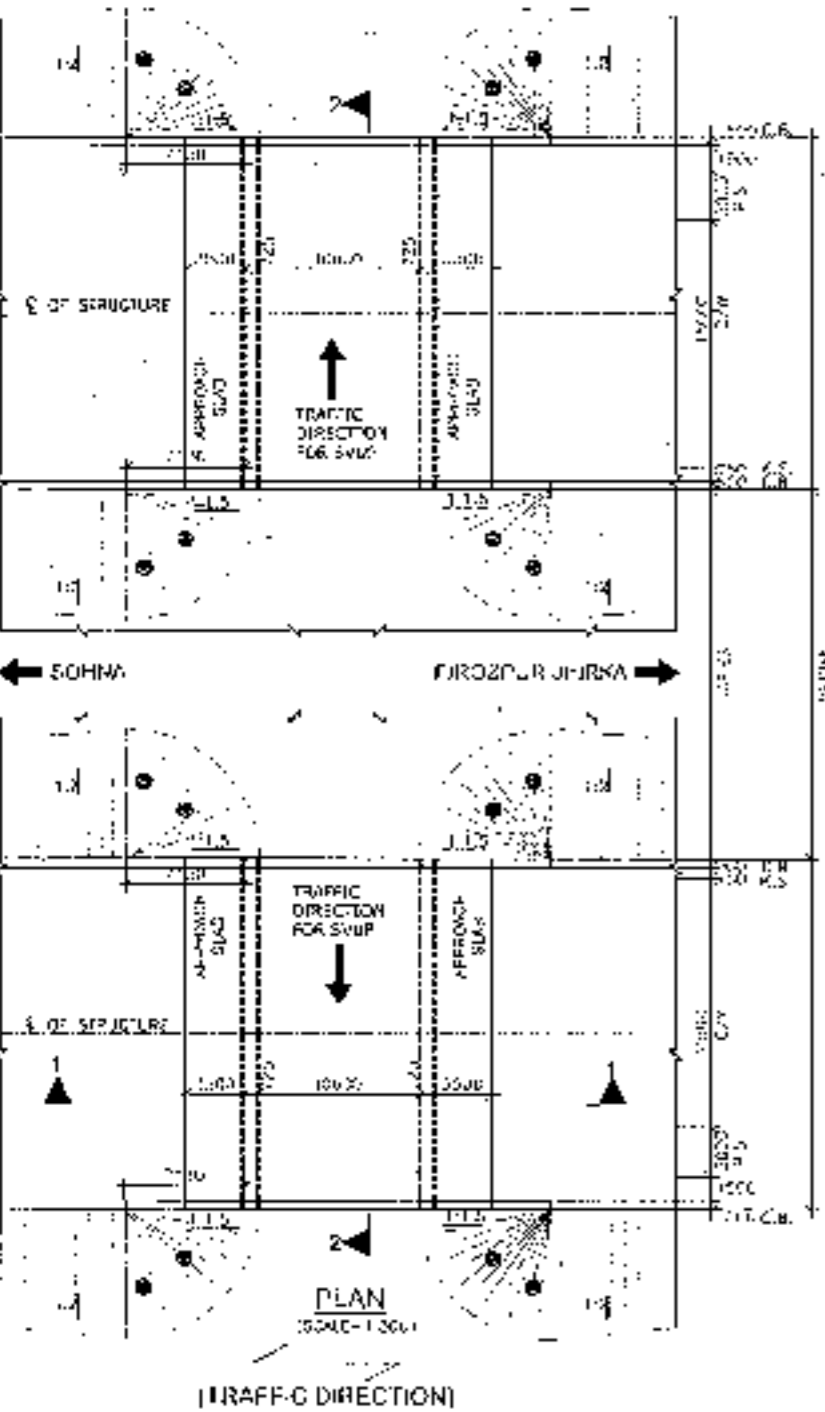
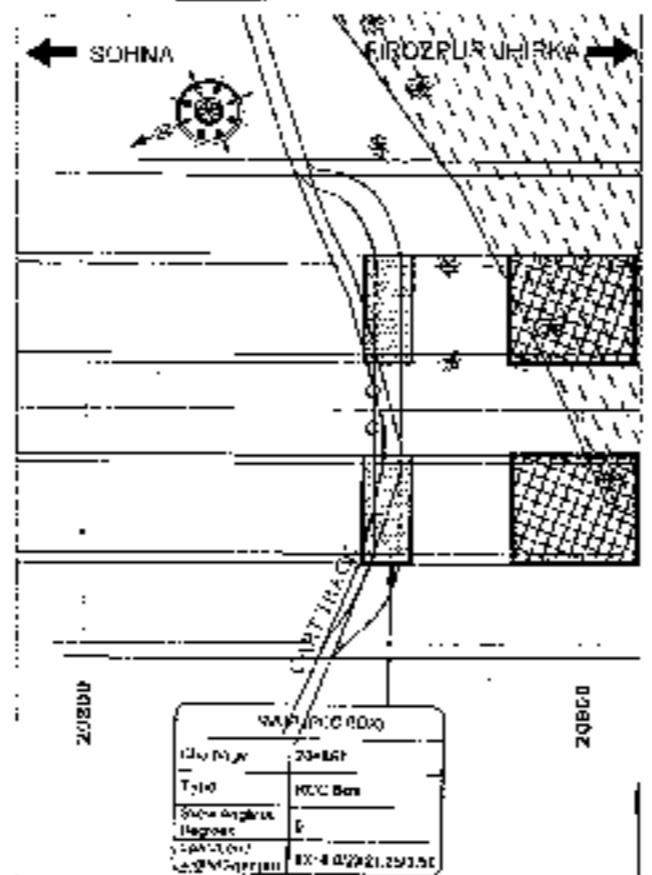
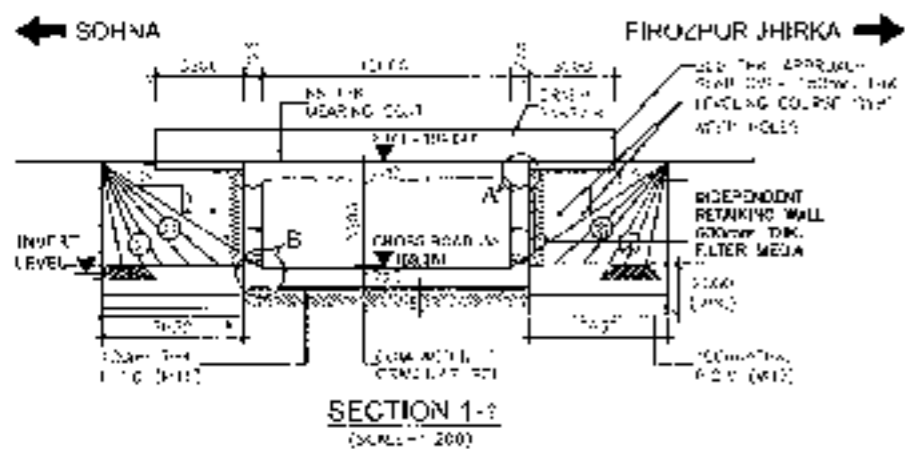


# SVUP



SVUP (1x10.0x3.5m.)  
@ CH.20+861



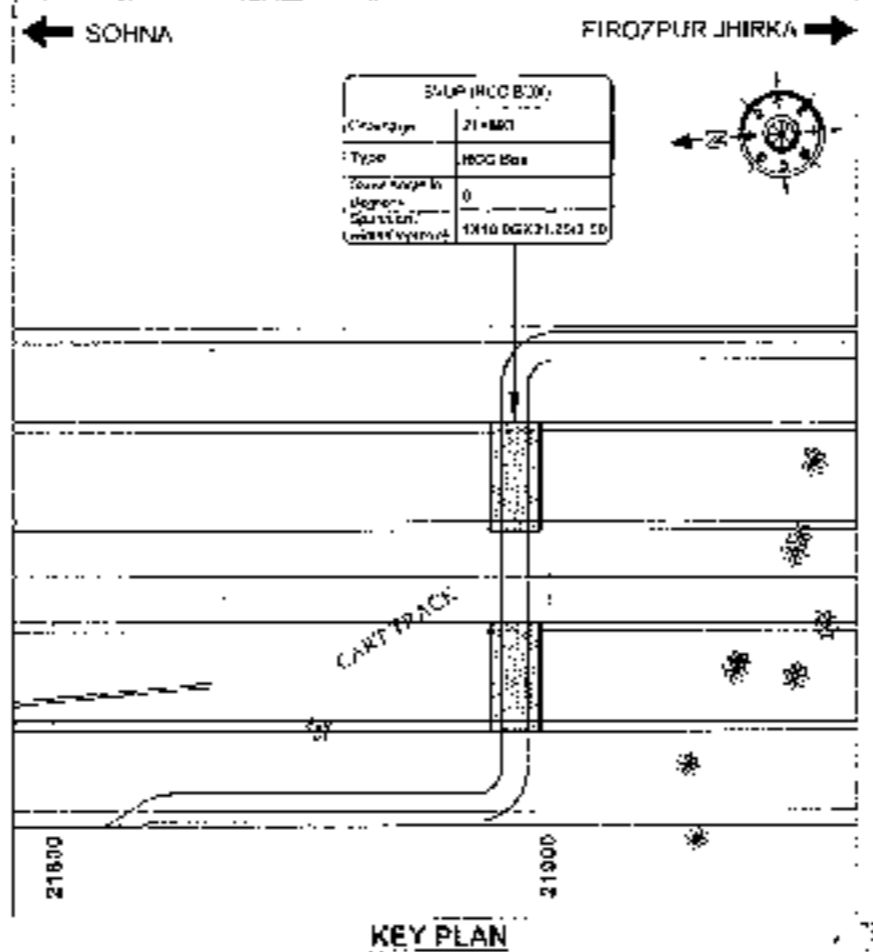
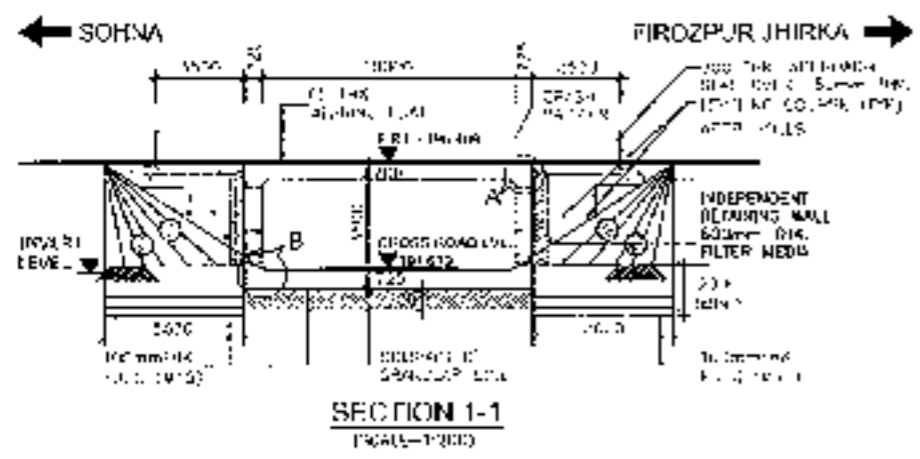


- NOTES:-**
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED. ONLY METRIC DIMENSIONS SHALL BE FOLLOWED.
  2. CHANGE & LEVEL SHALL BE VERIFIED WITH THE RELEVANT PLAN & PROFILE DRAWINGS. VARIATION (IF ANY) SHALL BE INFORMED TO ENGINEER FOR MODIFICATION.
  3. EXPANSION OR CONTRACTION JOINTS SHALL BE PROVIDED AT THE FOLLOWING SPACINGS:-  
CONC. & R.C.C. - 2000mm
  4. EXPANSION JOINT (CONC.) SHALL BE FILLED BY ASPHALTIC FILL EXPOSED TO AIR.
  5. GRADE OF CONCRETE IN VARIOUS ELEMENTS SHALL BE AS FOLLOWS:-  
RCC CURB WALL - M25  
APPROACH SLAB - M20  
RCC BOX - M25  
AFFRANCHI WALL - M20  
RCC RAILING - M20  
CRASH BARRIER - M20
  6. NET SUE BEARING CAPACITY AT FOUNDATION LEVEL SHALL BE AS FOLLOWS:-  
BOX - 10 t/m<sup>2</sup>  
AFFRANCHI WALL - 15 t/m<sup>2</sup>
  7. WALL HOLE SHALL BE PROVIDED @ 1000 MM C/C STAGGERED, BOTH HORIZONTALLY AND VERTICALLY IN RETAINING WALL FROM FLOOR LEVEL TO 1000 FLOOR LEVEL.
  8. BACKFILLING DURING BOX SHALL BE CARRIED OUT SIMULTANEOUSLY.
  9. GRADE IN SUE SHALL BE R-1000 CONFORMING TO S 1400 P 1000.
  10. SOFT TACK WEARING COAT SHALL CONSIST OF LAYER OF 50mm THICK ASPHALT IN 25mm THK OVER 100mm BITUMINOUS COURSE.
  11. 10% OF DEPTH OF KEY AT BASE SLAB FOR BASE SLAB THICKNESS SHALL BE IN 'D' UP TO 500mm 1000mm GREATER THAN 500mm 1000mm
  12. 600 THK FILTER MEDIA SHALL BE PROVIDED BEHIND RETAINING WALL.
  13. FOR DETAILS OF RETAINING WALL & FLOOR PROTECTION WORKS REFER SEPARATE DRAWINGS.
  14. THIS STRUCTURE IS IN ZONED ZONE V.
  15. SRI IS TAKEN AT MEAN EDGE.

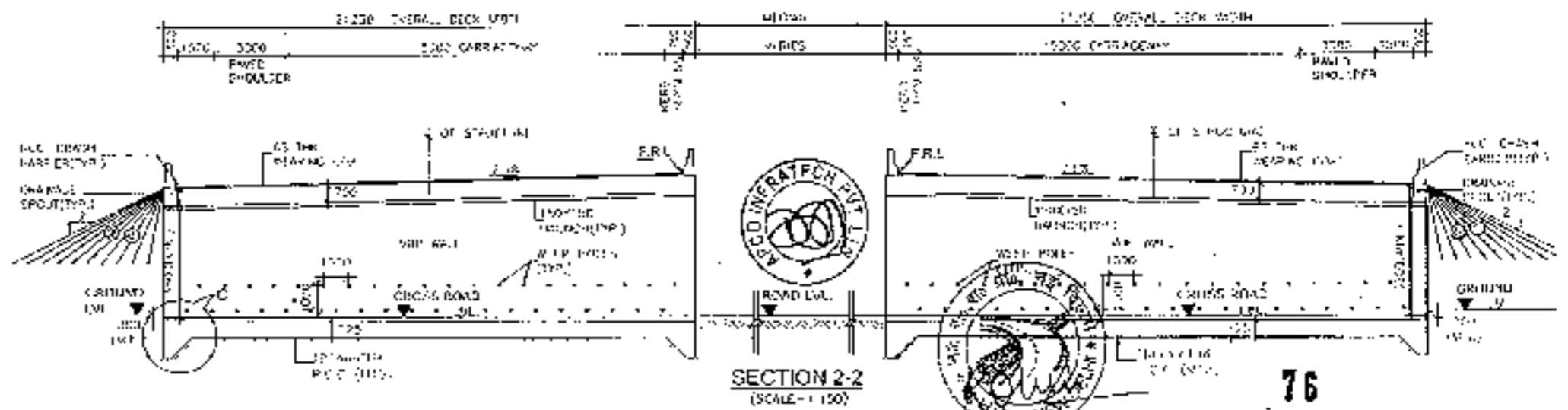
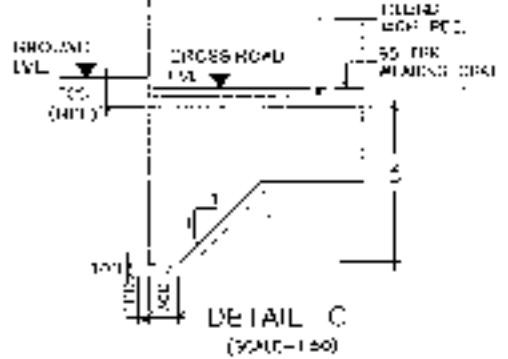
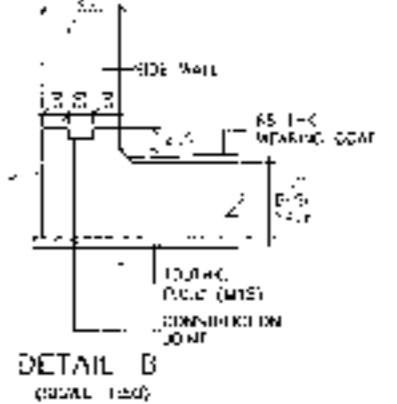
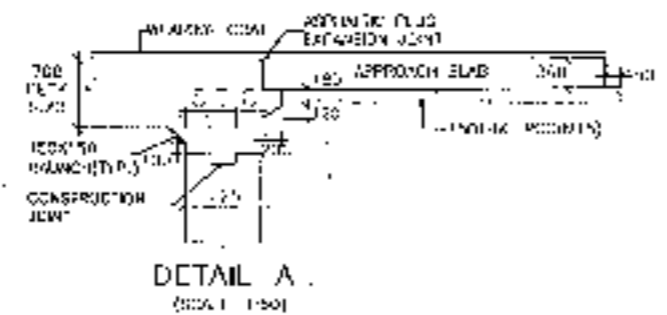
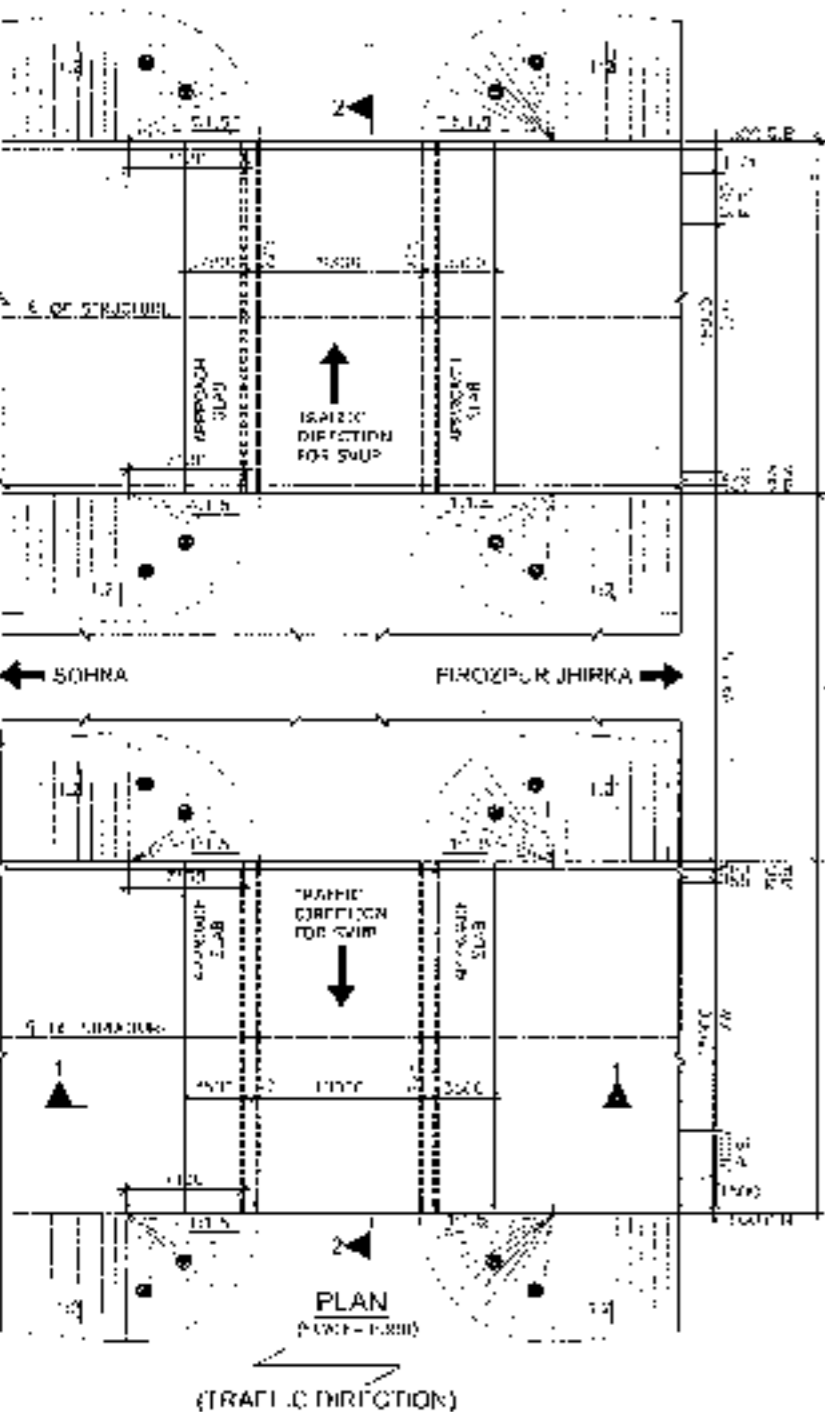
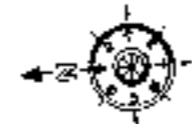
<p><b>CLIENT:-</b> National Highways Authority of India</p>	<p><b>CONSULTANT:-</b> Chaitanya Projects Consultancy Pvt Ltd G-5, 2ND FLOOR, P.K. TOWER PLOT NO.-21/22, SECTOR-4, VAISHALI, GHAZIABAD PH:-9120 3223410, 4120472, FAX:-0177 4110472</p>	<p><b>PROJECT:-</b> Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India Under Bharatmala Pariyojana (Lot-6/Package-4) of Sohna - Firozpur Jhirka</p>	<p><b>SCALE:-</b> AS SHOWN</p>	<p><b>DWG TITLE:-</b> GENERAL ARRANGEMENT DRAWING SVP/VS/2C/1X10/CX3/5/1 ATCH - 2C+061 SHEET NO. 74</p>	<p><b>DRAWING NO.:</b> CRP/12024/20-06/VS/1/10</p>
					<p><b>DATE:</b> AUGUST 2015</p>

SVUP (1x10.0x3.5m.)  
@ CH.21+893





SUMP (RCC BOX)	
Capacity	21000
Type	RCC Box
Ground level	0
Span	10.00
Length	10.00

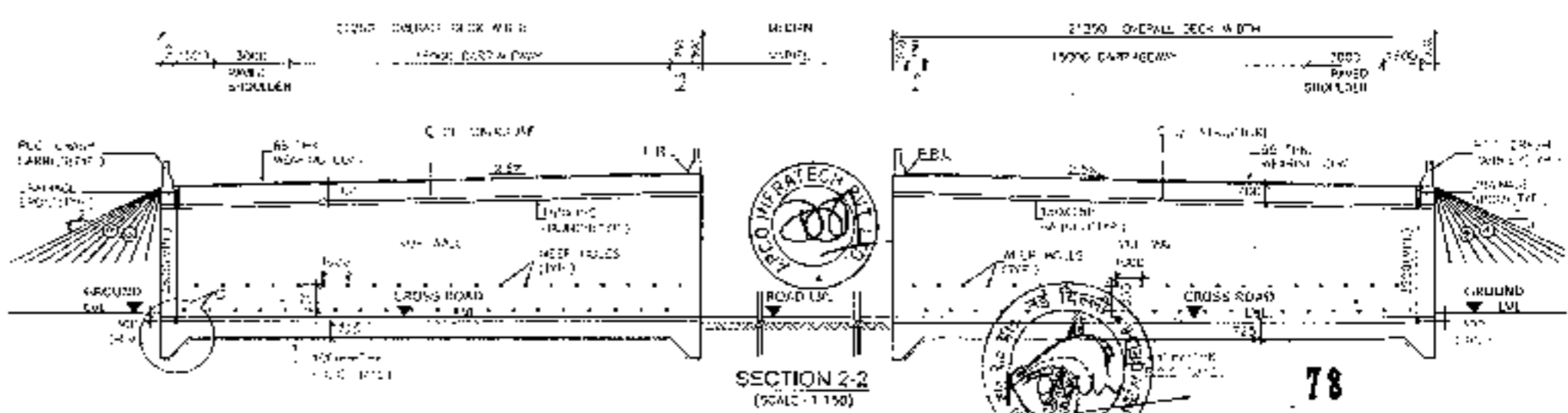
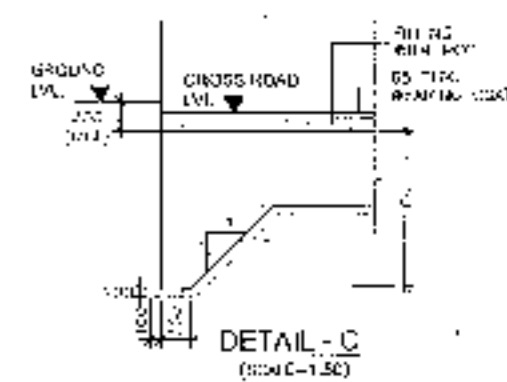
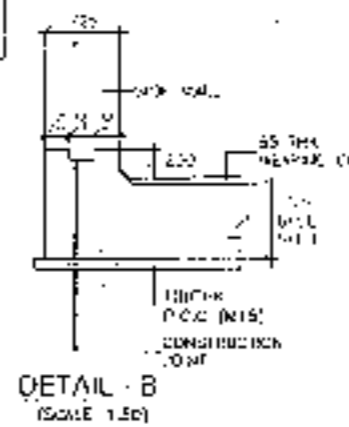
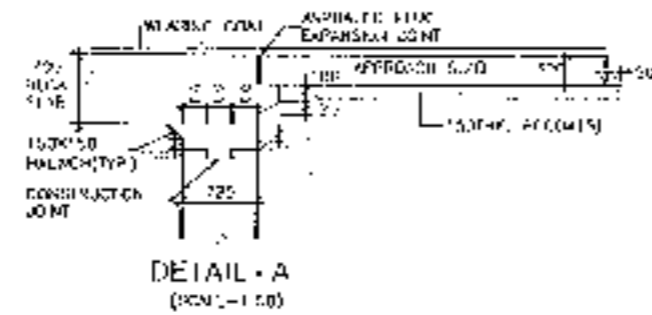
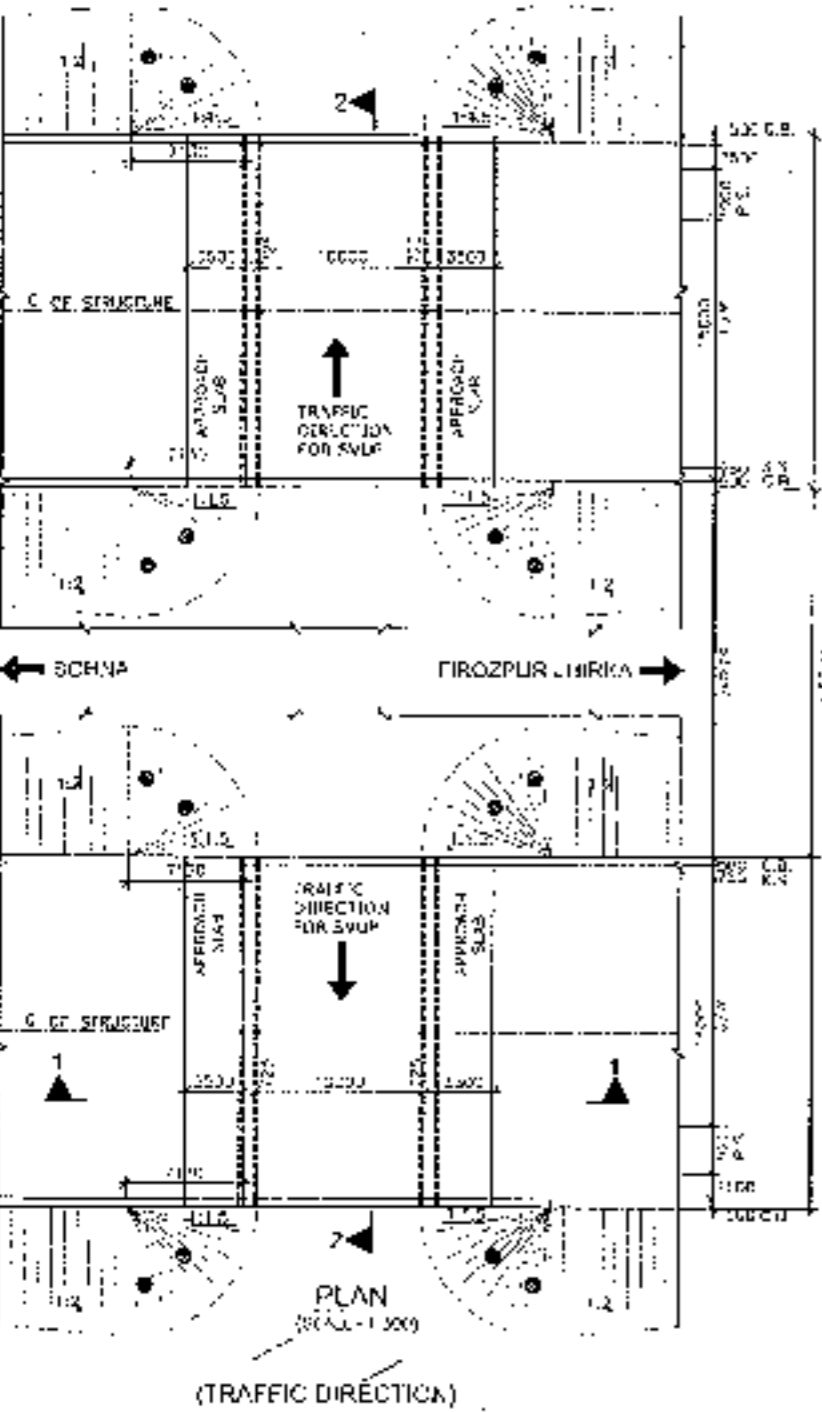
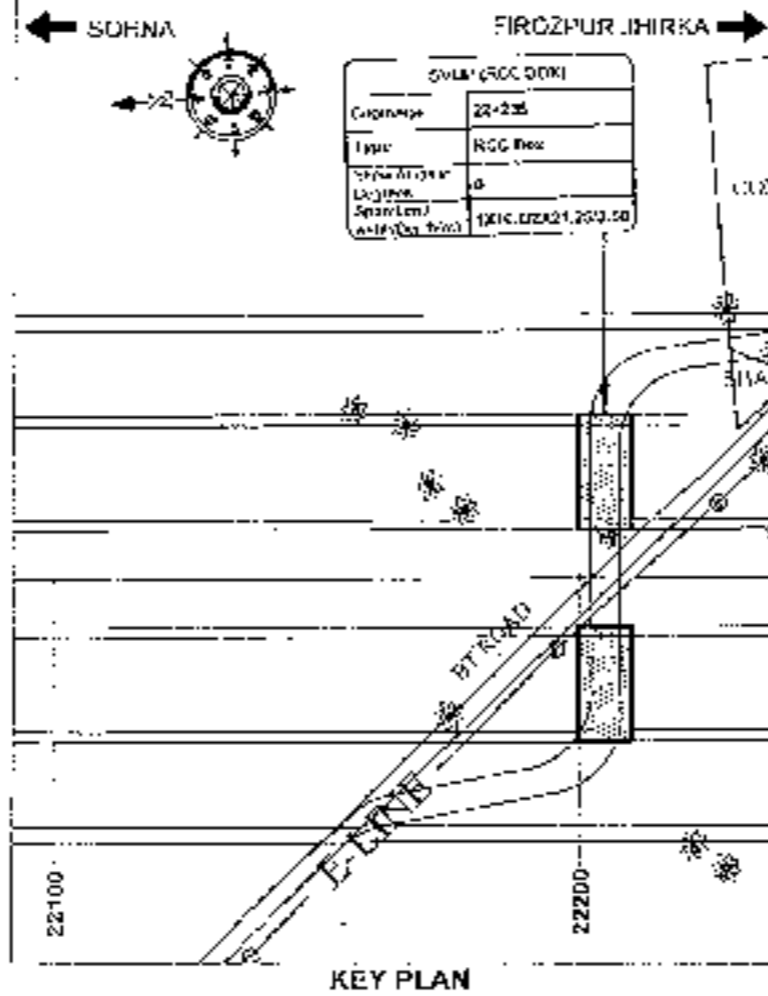
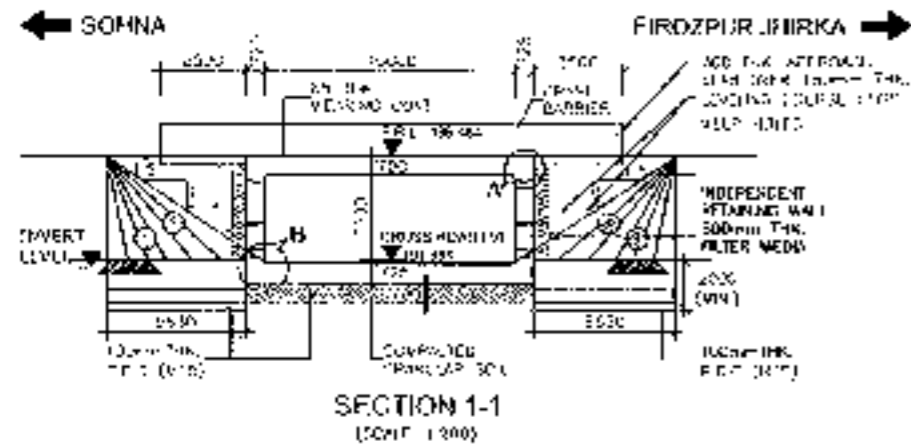


**NOTES:-**

1. ALL DIMENSIONS ARE IN MILLIMETERS. LEVELS ARE IN METERS UNLESS DIFFERENT MENTIONED. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
2. DIMENSIONS & LEVEL SHALL BE VERIFIED WITH THE SUPPLIER'S PLAN & PROFILE DRAWINGS. VARIATION (IF ANY) SHALL BE REPORTED TO ENGINEER FOR MODIFICATION.
3. PROPERTIES OF SELECTED BACK FILL BEHIND RETAINING WALL SHALL BE AS FOLLOWS:-  
 3.1.  $\phi > 30 \text{mm} > 20 \text{mm}$   
 3.2.  $\phi > 30 \text{mm} > 20 \text{mm}$
4. EXPANSION GAP (20mm) WILL BE FILLED UP BY ASPHALTIC PLUG EXPANSION JOINT.
5. GRADE OF CONCRETE IN VARIOUS ELEMENTS SHALL BE AS FOLLOWS:  
 RCC CURB/WALL : M25  
 APPROACH SLAB : M30  
 RCC BOX : M30  
 RETAINING WALL : M30  
 RCC RAILING : M30  
 CRUSH BRICKER : M10
6. ALL SOFT BEARING CAPACITY AT FOUNDATION LEVEL FOR DESIGN IS AS FOLLOWS:-  
 BOX : 10 t/m<sup>2</sup>  
 RETAINING WALL : 15 t/m<sup>2</sup>
7. WEAPENING SHALL BE PROVIDED @ 1000 MM C/C STAGGERED BOTH HORIZONTALLY AND VERTICALLY IN RETAINING WALL FROM GROUND LEVEL TO HIGH FLOOR LEVEL.
8. BACKFILL BEHIND BOX SHALL BE COMPACTED SIMULTANEOUSLY.
9. GRADE OF STEEL SHALL BE Fe-250D CONFORMING TO IS 1786 GRM.
10. MINIMUM THICK WEARING COURSE SHALL BE 100MM OR 1.5% OF TOTAL WEIGHT OF MASTIC ASPHALT OF 25MM THK. OVER 100MM BITUMINOUS COURSE.
11. TWC IS 100MM C/C AT 100MM LEAF.  
 FOR BASE SLAB THICKNESS VALUE OF 2%  
 UPTO 300mm : 1200mm  
 GREATER THAN 300mm : 1500mm  
 1/4 = BASE SLAB THICKNESS
12. SOFT SOIL FILTER MEDIA SHALL BE PROVIDED BEHIND RETAINING WALL.
13. FOR DETAILS OF RETAINING WALL & FLOOR PROTECTION WORKS REFER SEPARATE DRAWINGS.
14. THIS STRUCTURE LIES IN SEISMIC ZONE IV.
15. TRI = 5 TAKEN AT NEIGHB EDGE.

SVUP (1x10.0x3.5m.)  
@ CH.22+205





- NOTES:-**
- ALL DIMENSIONS ARE IN MILLIMETERS, LEVELS ARE IN METERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
  - CHANGE & LEVEL SHALL BE VERIFIED WITH THE RELEVANT PLAN & PROFILE DURING VISITATION (IF ANY) SHALL BE REPORTED TO ENGINEER FOR NEAR FUTURE.
  - PROPERTIES OF SELECTED BACK FILL BEHIND RETAINING WALL SHALL BE AS FOLLOWS:  
 $C=0$  &  $S=30$  &  $w=20$  (1/3)
  - EXPANSION GAP (20mm) WILL BE FILLED UP BY ASPHALTIC PLUG EXPANSION JOINT.
  - GRADE OF COLLECTOR IN VARIOUS ELEMENTS SHALL BE AS FOLLOWS:-  
 RETAINING WALL : 1/100  
 APPROACH SLAB : 1/200  
 RCC BOX : 1/200  
 RETAINING WALL : 1/100  
 RCC RAILING : 1/100  
 CRASH BARRIER : 1/400
  - NET SAFE BEARING CAPACITY AT FOUNDING LEVEL FOR DESIGN IS AS FOLLOWS:-  
 BULK : 10 t/m<sup>2</sup>  
 RETAINING WALL : 15 t/m<sup>2</sup>
  - DEEP HOLES SHALL BE PROVIDED AT 1000 MM C/C SPACED, BOTH HORIZONTALLY AND VERTICALLY IN RETAINING WALL FROM GROUND LEVEL TO HIGH WATER LEVEL.
  - BACK FILLING BEHIND BOX SHALL BE CARVED OUT SIMULTANEOUSLY.
  - GRADE OF SOIL SHALL BE 1% SLOPE CORRECTIVE TO 2% MAXIMUM.
  - DOWN PITCH WEARING COAT SHALL CONSIST OF LAYER OF 50mm THICK ASPHALT OF 20mm THK. INTR. 50mm BITUMINOUS COURSE.
  - MIN. IS DEPTH OF KEY AT BASE SLAB.  
 FOR 2200 SLAB THICKNESS VALUE OF 'D' : 200mm  
 FOR 1500 SLAB THICKNESS : 150mm  
 'd' = BASE SLAB THICKNESS.
  - 300 THK. FILTER MEDIA SHALL BE PROVIDED BEHIND RETAINING WALL.
  - FOR DETAILS OF RETAINING WALL & FLOOR PROTECTION WORKS REFER SEPARATE DRAWINGS.
  - THIS STRUCTURE LIES IN SEISMIC ZONE V.
  - FOR ALL DETAILS REFER DRAWING NO. 78.

<b>CLIENT:-</b> National Highways Authority of India Plot No. 2, Sector 4, Vaishali, GATEWAY, GAZIABAD	<b>CONSULTANT:-</b> Chaltanya Projects Consultancy Pvt. Ltd C-5, 2ND FLOOR, R.K. TOWER PLOT NO.- 21-22, SECTOR-4 VAISHALI, GAZIABAD Ph. 0120-3223449, 2129472, FAX: 0120-4110472	<b>PROJECT:-</b> Consultancy Service for the Preparation for Feasibility Report/ DPR for development of Economic Corridor, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot B/Package 4) of Sonna - Firozpur Jhirka	<b>SCALE:-</b> AS SHOWN	<b>DRAWING No.:</b> CCH/15/04/21-22/05/02 <b>DATE:</b> AUGUST 2018 <b>PREPARED BY:</b> M.H.E. KHAN <b>CHECKED BY:</b> M.H.E. KHAN <b>APPROVED BY:</b> M.H.E. KHAN	 <b>APCO INFRATECH PVT. LTD.</b> GENERAL ARRANGEMENT DRAWING S.C.I.P (S.P. 12.10.10) 5mm AT C/H 221705 SONNA - FIROZPUR JHIRKA

SVUP (1x10.0x4.5m.)  
@ CH.25+450





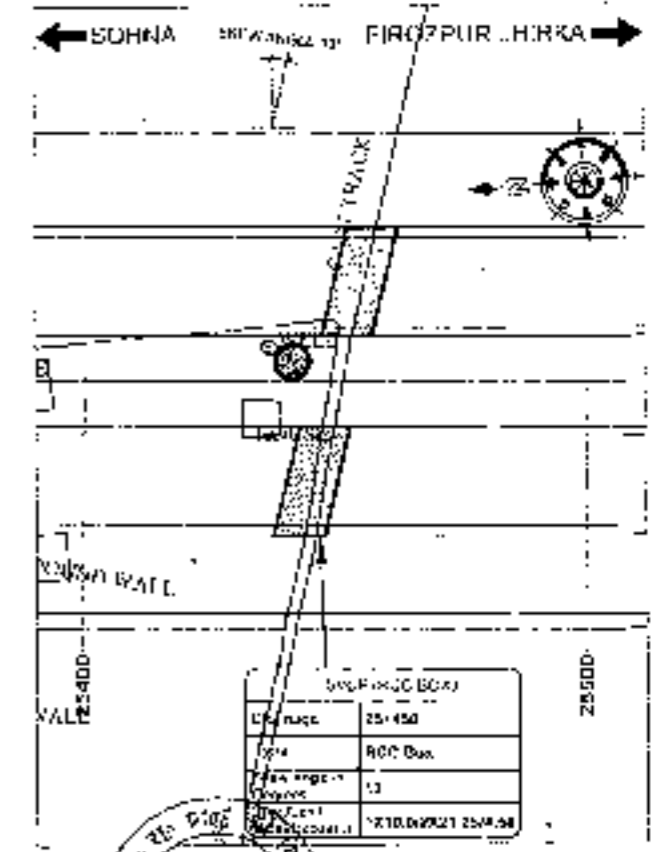
**NOTES:-**

1. ALL DIMENSIONS ARE IN MILLIMETERS, LEVELS ARE IN METERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
2. DIMENSIONS & LEVEL SHALL BE VERIFIED WITH THE RELEVANT PLAN & PROFILE DRAWING. VARIATION (IF ANY) SHALL BE REPORTED TO ENGINEER FOR MODIFICATION.
3. PROPERTIES OF SPECIFIED BACK FILL BEHIND RETAINING WALL SHALL BE AS FOLLOWS:-  
C-0.4 > 35% 20.1/m<sup>3</sup>
4. EXPANSION GAP (20mm) WILL BE FILLED UP BY ASPHALTIC PLUG EXPANSION JOINT.
5. GRADE OF CONCRETE IN VARIOUS ELEMENTS SHALL BE AS FOLLOWS:-  

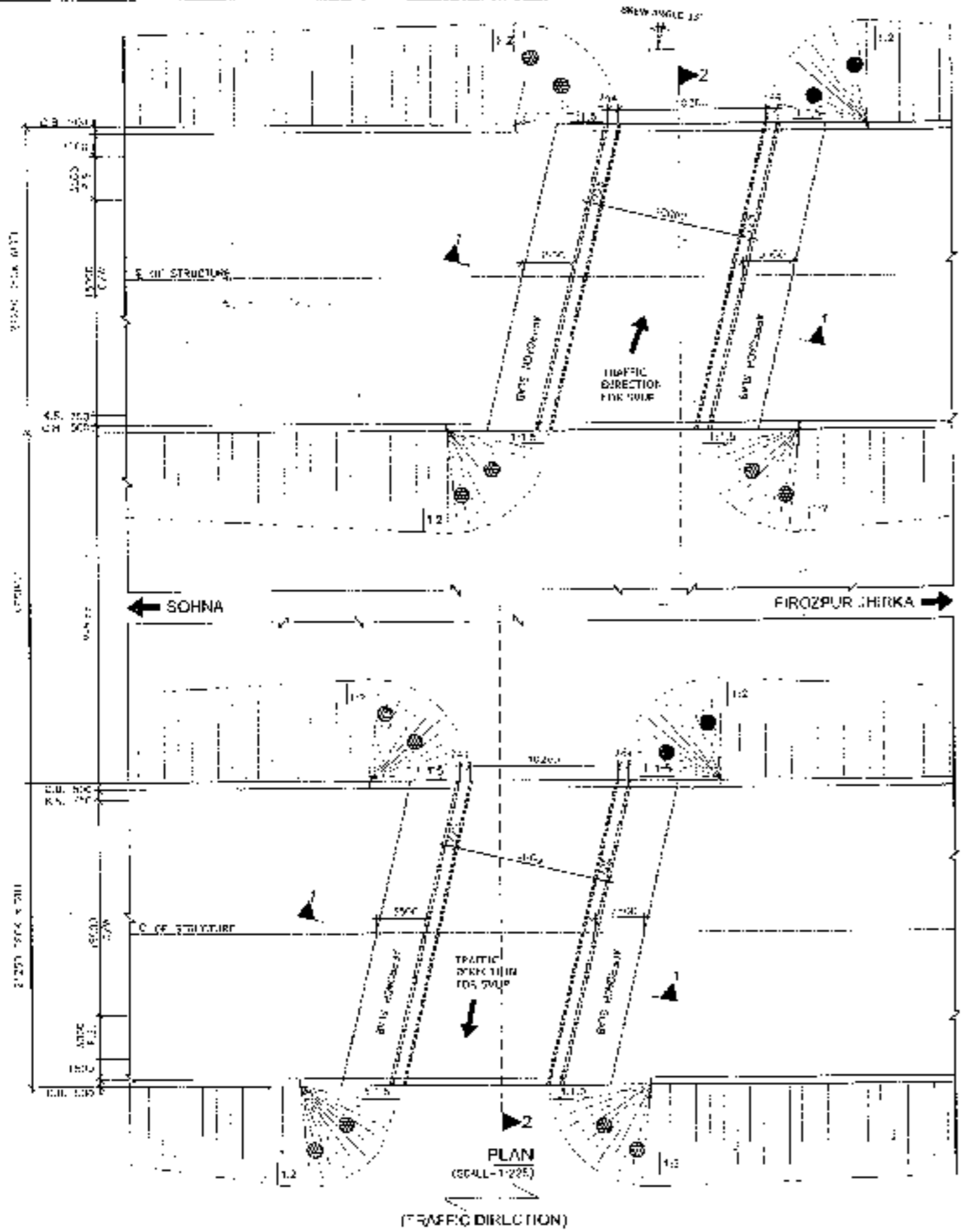
ROD CURTAIN WALL	M15
APPROACH SLAB	M30
BOX GIRDER	M30
RETAINING WALL	M30
ROD BARRING	M30
GRAVEL BARRIER	M40
6. NET VEHICULAR CAPACITY AT FOUNDING LEVEL FOR CURB IS AS FOLLOWS:-  

BOX	13 1/2/m <sup>2</sup>
RETAINING WALL	13 1/2/m <sup>2</sup>
7. DEEP ISOLS SHALL BE PROVIDED IN 1000 MM C/C STAGGERED BOTH HORIZONTALLY AND VERTICALLY IN RETAINING WALL FROM GROUND LEVEL TO HIGH FLOOD LEVEL.
8. BACKFILL BEHIND BOX SHALL BE BARRICED ON SIMULTANEOUSLY.
9. GRADE OF STEEL SHALL BE Fe 500B CONFORMING TO IS:1786:2008.
10. 6MM THICK WELDING COAT SHALL CONSIST OF LAYER OF OF BASIC ALUMINUM OF 20mm THK OVER 40MM CHROMIUM DOLDRS.
11. MIN. DEPTH OF KEY AT BASE SLAB  

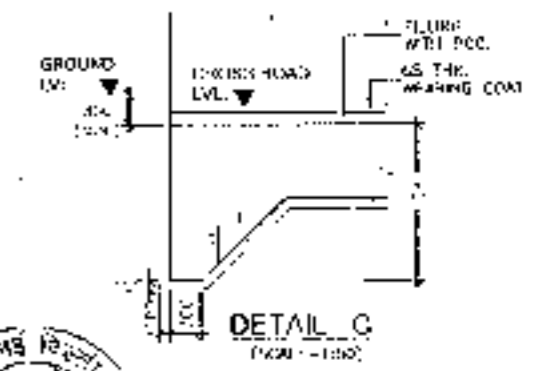
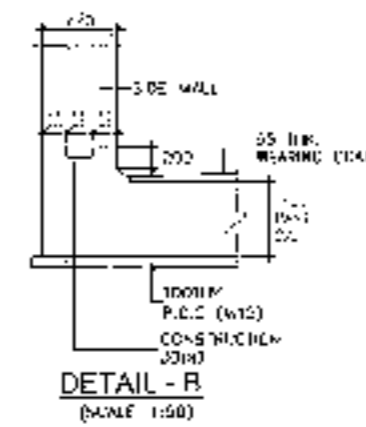
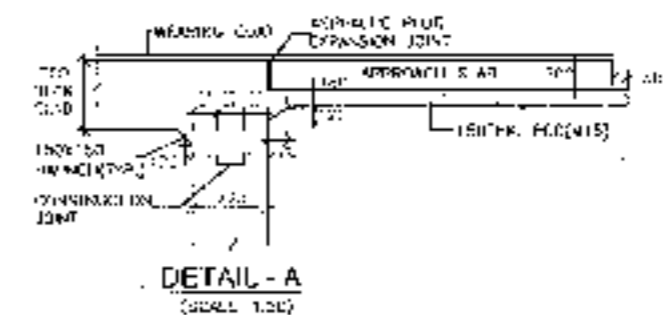
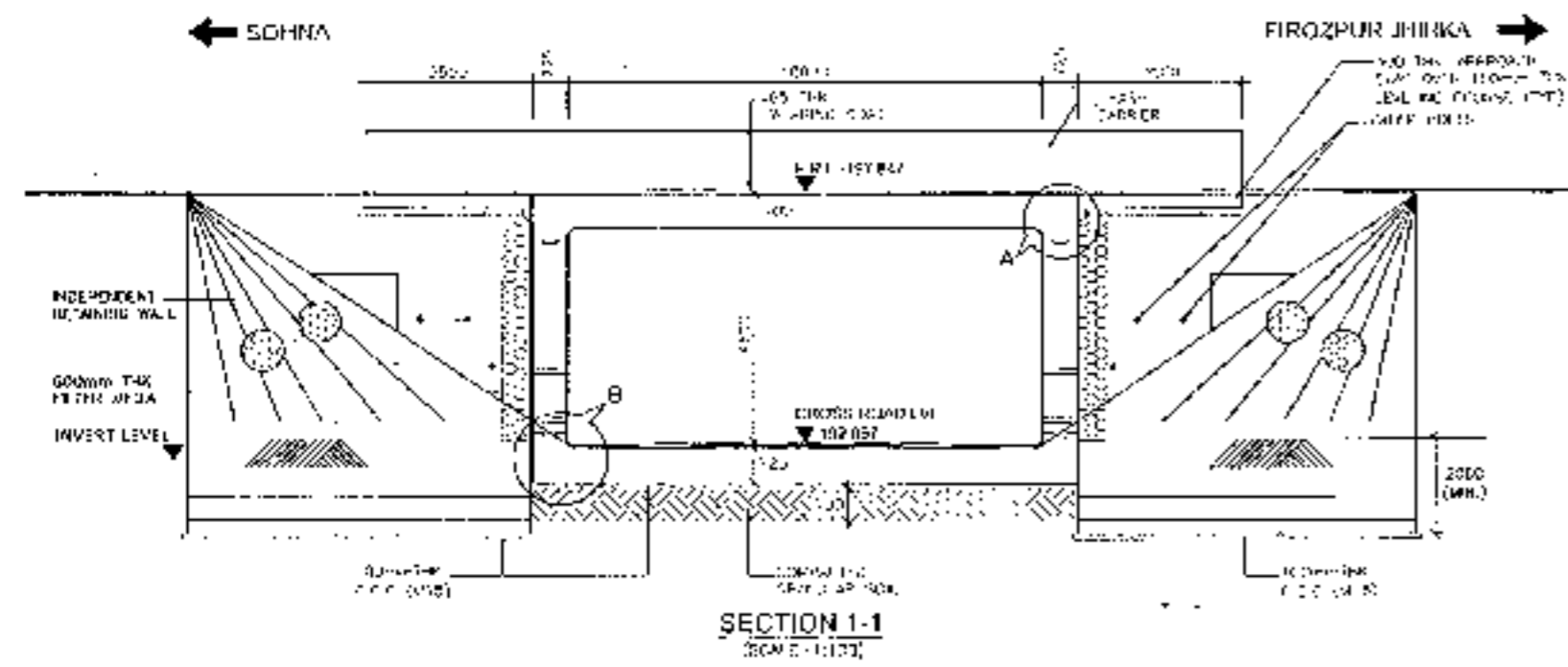
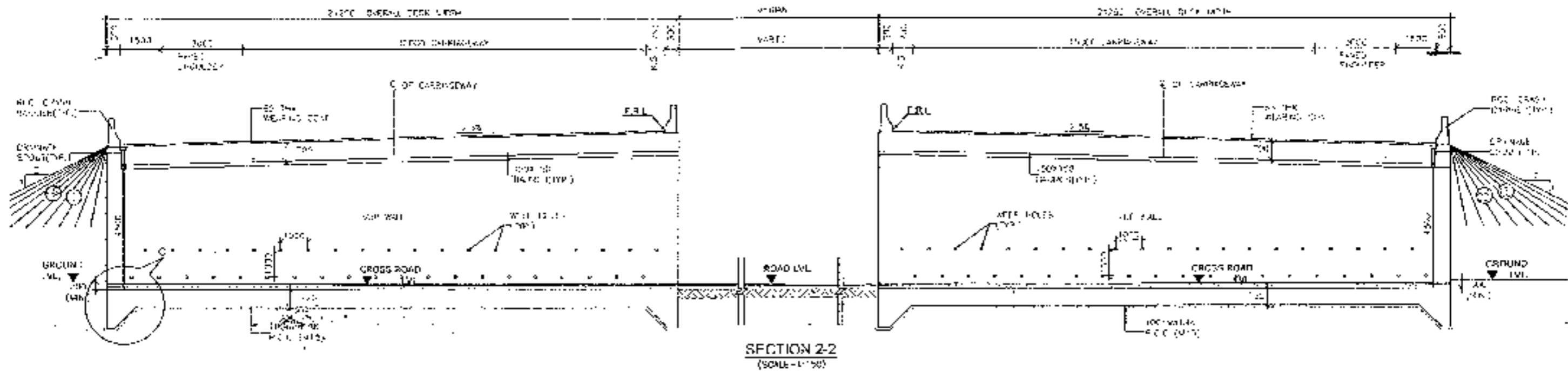
FOR BASE SLAB THICKNESS	VALUE OF 'D'
UP TO 300mm	1200mm
GREATER THAN 300mm	0.400mm
12. 400 THK FILTER MEDIA SHALL BE PROVIDED BEHIND RETAINING WALL.
13. FOR DETAILS OF RETAINING WALL & EARTH PROTECTION WORKS REFER TO RELEVANT DRAWINGS.
14. THIS STRUCTURE LIES IN SEISMIC ZONE V.
15. F.F. IS TAKEN AT MCGAN EDGE.



80

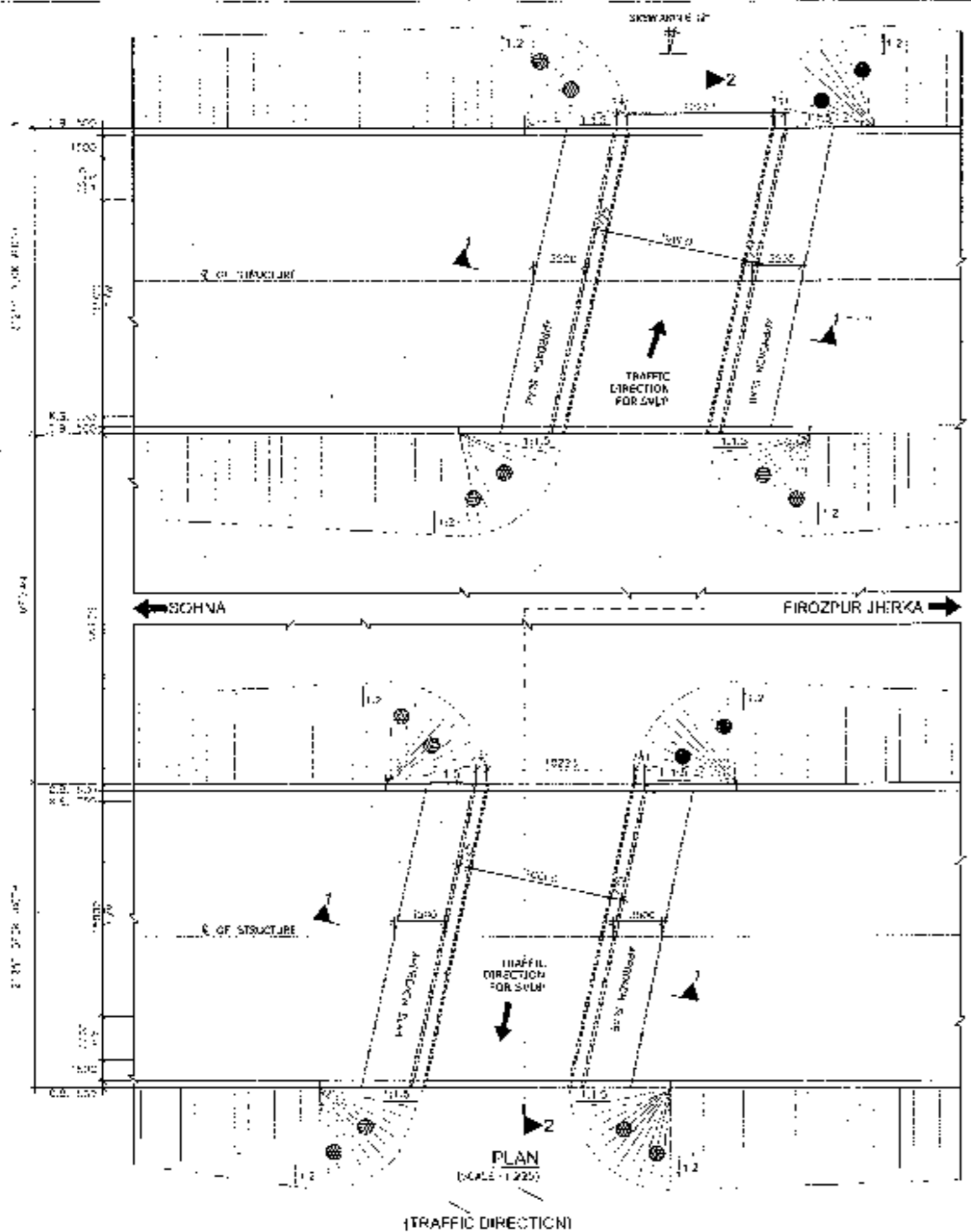


<b>CLIENT:</b> National Highways Authority of India Ministry of Road Transport & Highways, Govt. of India	<b>CONSULTANT:</b> Chaitanya Projects Consultancy Pvt. Ltd. G-5, 2ND FLOOR, B-2 TOWER PLOT NO - 2F-22, SECTOR 4, VASIHAI, GHAZIABAD P.H: 0120-3223419, 4170472 FAX: 0120-411047	<b>PROJECT:</b> Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6/Package-4) of Sohna - Firozpur Jhirka	<b>SCALE:</b> AS SHOWN	<b>DWG TITLE:</b> GENERAL ARRANGEMENT DRAWING SV. (R/SIZE) X (L/DX) (M) AT CH - 25+450 SOHNA - FIROZPUR JHIRKA	<b>DRAWING No.:</b>	<b>DATE:</b> AUGUST 2016	<b>PREPARED BY:</b>	<b>CHECKED BY:</b>	<b>APPROVED BY:</b>
					(SHEET 1 OF 21) CIVIL - SOHNA-FIROZPUR JHIRKA	M. S. RAO	S. S. RAO	M. S. RAO	



81

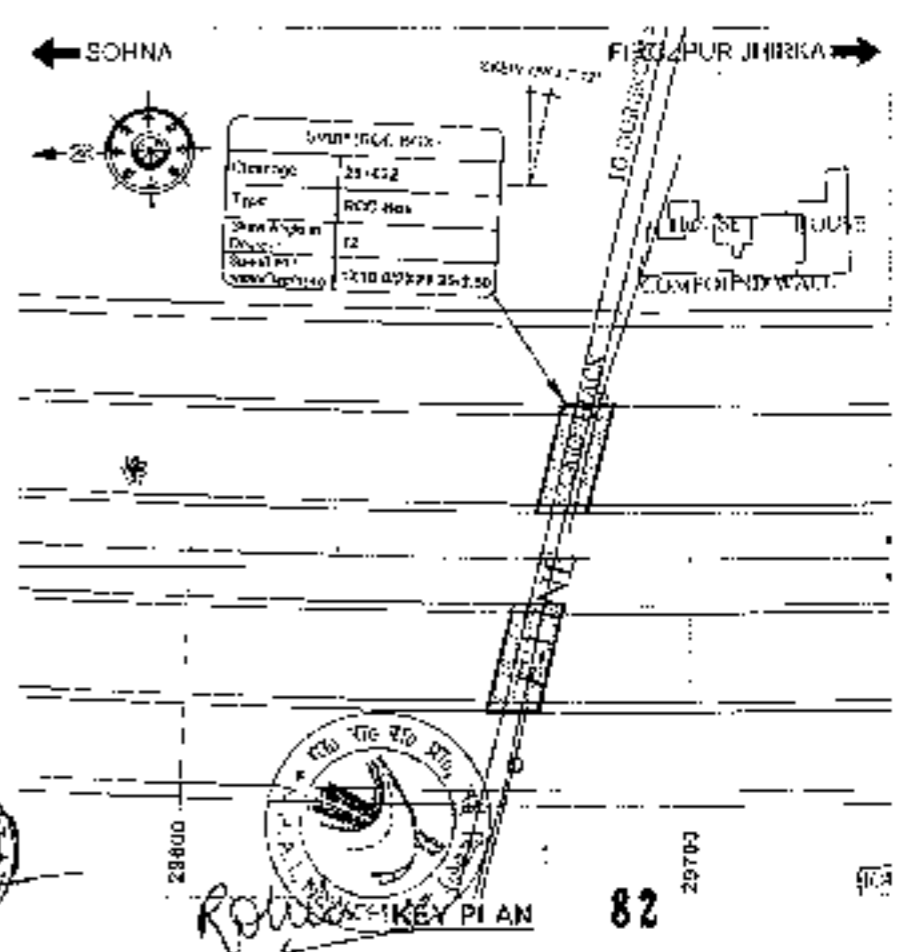
<p>CLIENT:- National Highways Authority of India</p>	<p>CONSULTANT:- Chaitanya Projects Consultancy Pvt. Ltd. C-5, 2ND FLOOR, R.K. TOWER PLOT NO. - 24-22, SECTOR-4 VAISHALI GHAZIABAD PH. 0120-3223419, 4826472, FAX. 3120-4110072</p>	<p>PROJECT:- Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot 6/Package 4) of Sohma - Firozpur Jhinka</p>	<p>SCALE:- AS SHOWN</p>	<p>DWG. TITLE:- GENERAL ARRANGEMENT DRAWING SULPHUR - EXHIBIT 4 AT CH - 25440</p>	<p>DRAWING NO. - DATE - AUGUST 2018 PREPARED BY - CHECKED BY - APPROVED BY -</p>
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- NOTES:-**
1. ALL DIMENSIONS ARE IN MILLIMETERS. LEVELS ARE IN METERS UNLESS OTHERWISE MENTIONED. DIMENSIONS WRITTEN SHALL BE FOLLOWED.
  2. DRAINAGE & LEVEL SHALL BE DERIVED FROM THE RELEVANT PLAN & PROFILE DRAWINGS. POSITION OF ANY SHALL BE REPORTED TO ENGINEER FOR VERIFICATION.
  3. PROPERTIES OF SELECTED BACK FILL BEHIND RETAINING WALL SHALL BE AS FOLLOWS:-  
 C-0,  $\sigma > 30\text{cm} = 2.0 \text{ t/m}^3$ .
  4. EXHAUSTION GRAY (20mm) SHALL BE FILLED UP BY ASPHALTIC PAVE EXPANSION JOINT.
  5. GRADE OF CONCRETE IN VARIOUS PORTIONS SHALL BE AS FOLLOWS:-  
 RCC CURTAIN WALL : M30  
 APPROACH SLAB : M30  
 RCC BOX : M30  
 RETAINING WALL : M30  
 R.C. RAFT : M30  
 CURB BARKER : M30
  6. NET SAFE BEARING CAPACITY AT FOUNDING LEVEL FOR DESIGN IS AS FOLLOWS -  
 BOX : 12 t/m<sup>2</sup>  
 RETAINING WALL : 15 t/m<sup>2</sup>
  7. REEF BARS SHALL BE PROVIDED @ 100mm C/C STAGGERED. USED HORIZONTALLY AND VERTICALLY IN RETAINING WALL WITH GRADING LEVEL TO HIGH FLOOR LEVEL.
  8. BACKFILL DURING BOX SHALL BE CARRIED OUT SIMULTANEOUSLY.
  9. GRADE OF STEEL SHALL BE F460 CONFORMING TO IS 786-2008.
  10. 50MM THICK WEARING COAT SHALL CONSIST OF LAYER OF BITUMINOUS COURSE.
  11. KEY'S DEPTH OF KEY AT BASE SLAB  

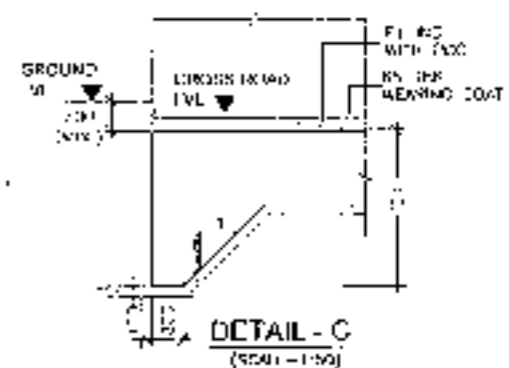
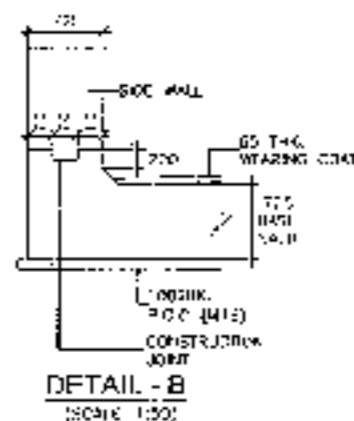
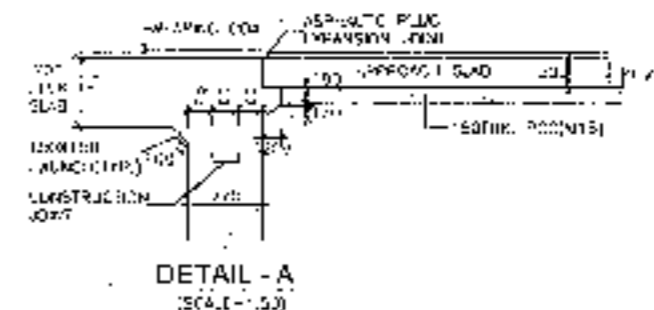
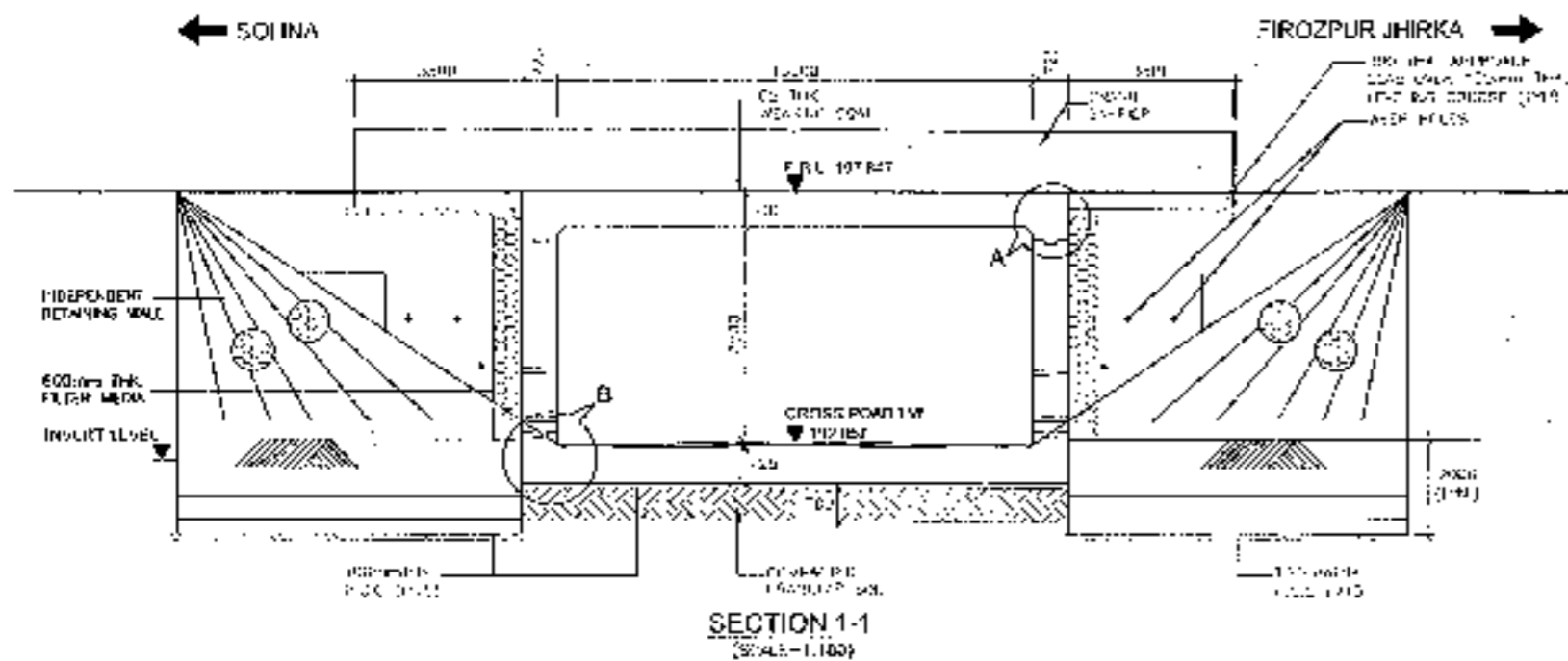
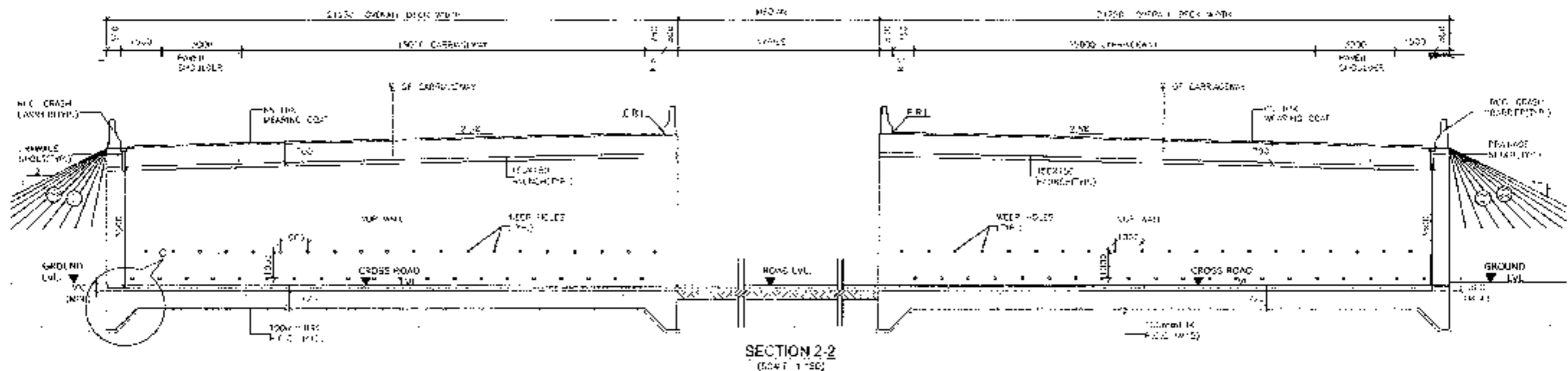
FOR BASE SLAB THICKNESS	VALUE OF 'D'
UP TO 200mm	100mm
GRATER THAN 200mm	24-100mm

 D = BASE SLAB THICKNESS
  12. 600 THY REEFER BARS SHALL BE PROVIDED ALONG RETAINING WALL.
  13. FOR DETAILS OF RETAINING WALL & FLOOR PROTECTION WORKS REFER SEPARATE DRAWINGS.
  14. THE STRUCTURE LIES IN SEISMIC ZONE 4.
  15. 'R' IS TAKEN AT MEDIAN EDGE.



SVUP (1x10.0x3.5m.)  
@ CH.29+672



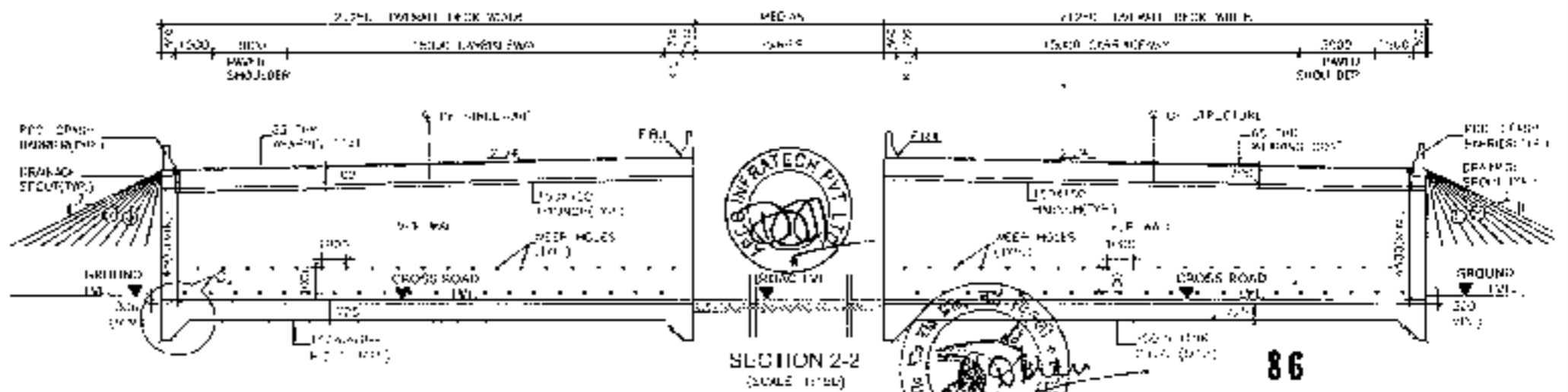
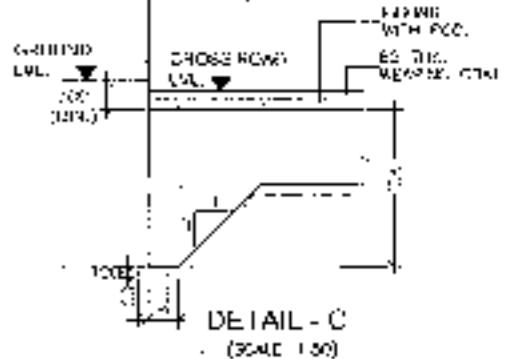
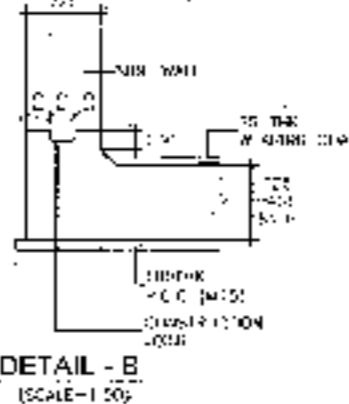
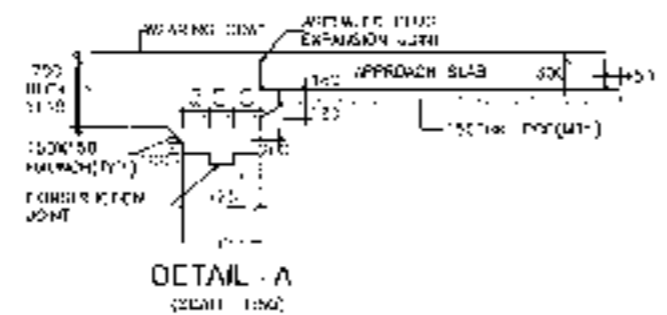
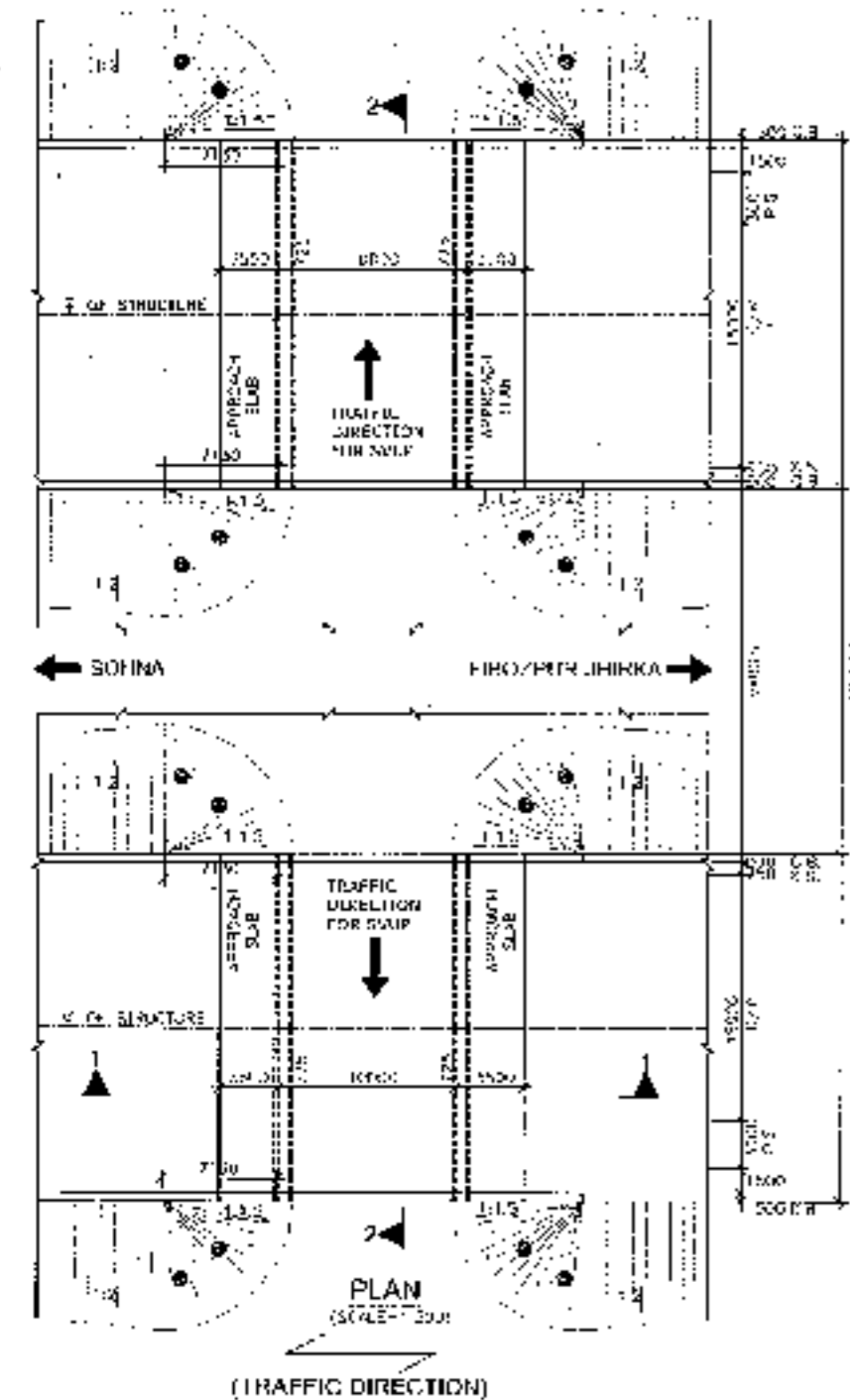
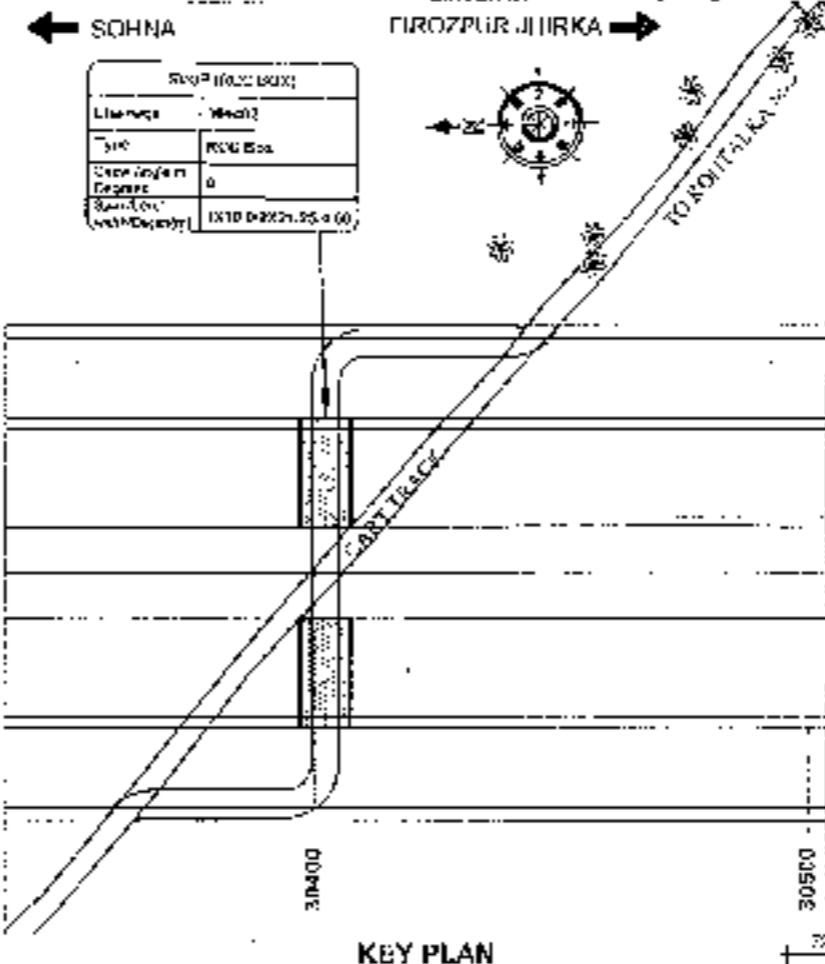
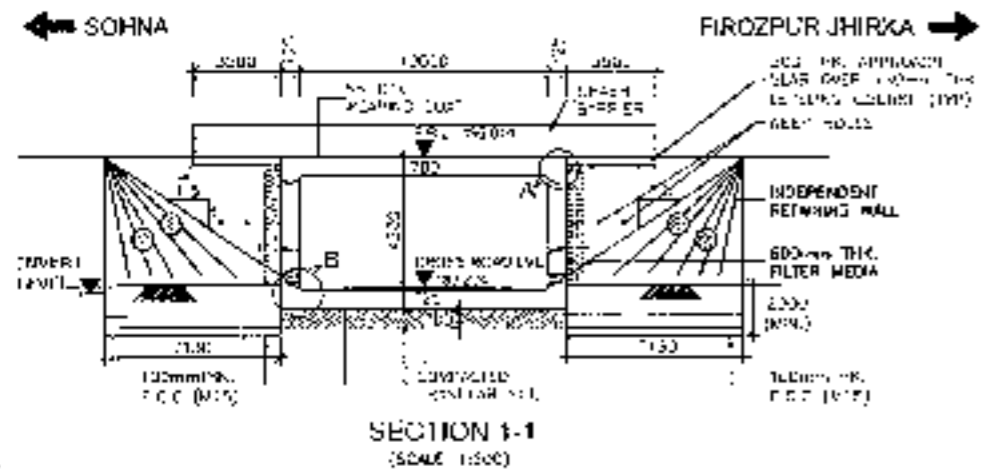


84

CLIENT: <b>National Highways Authority of India</b> <small>Ministry of Road Transport &amp; Highways, Govt. of India</small>	CONSULTANT: <b>Challanya Projects Consultancy Pvt. Ltd.</b> C 5, 2ND FLOOR, R.K. TOWER FLOT NO. 21-22, SECTOR-4 VAISHALI, GHAZIABAD P.O. 0120-0223413, 4120472, FAX 0120-4110472	PROJECT: Consultancy Services for the Preparation for Feasibility Report (RFR) for Development of Economic Corridors, Inter Corridors and Feeder Routes to Improve the Efficiency of Freight Movement in India Under Bharatmala Pariyojana (Part-5 Package-4) of Sahibp - Firozpur Jhirka	SCALE: AS SHOWN	DRAWING No. - <b>GEN/2016/07/00120</b> <b>GENERAL ARRANGEMENT DRAWING</b> SVJN (SVN 1X10) (KS.3km) AT CH - 2916/2 (SHEET - 84 OF 85)	DRAWN BY: ANIRUJ KUMAR	CHECKED BY: NANI JAIN	DATE: AUGUST 2016	APPROVED BY: NANI JAIN	SHEET 2 OF 2
					APPROVED BY: NANI JAIN	APPROVED BY: NANI JAIN	APPROVED BY: NANI JAIN		

SVUP (1x10.0x4.5m.)  
@ CH.30+402



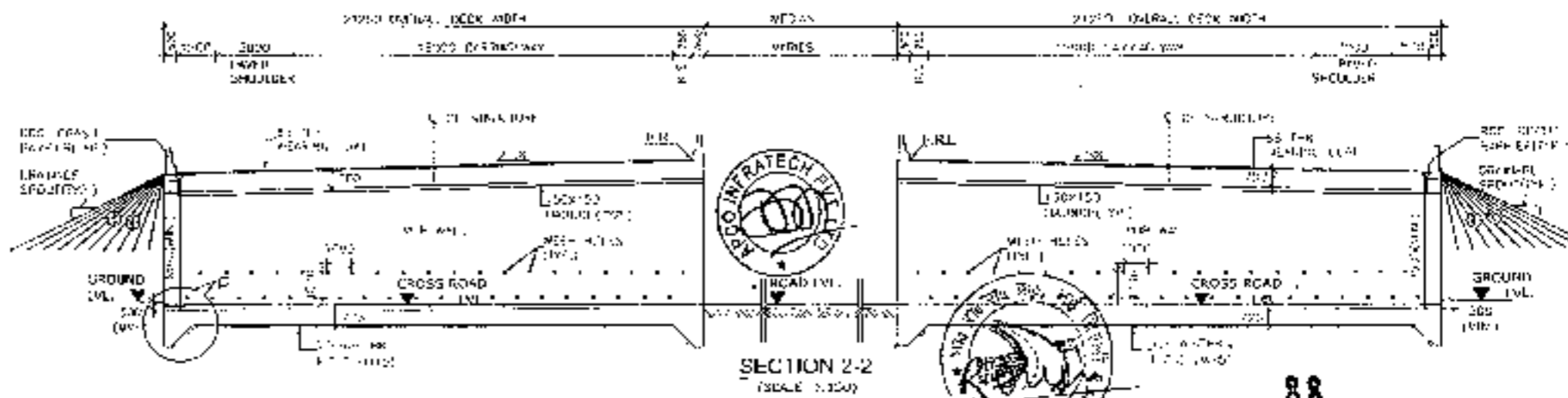
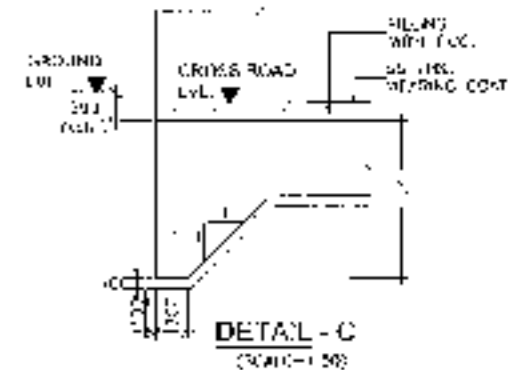
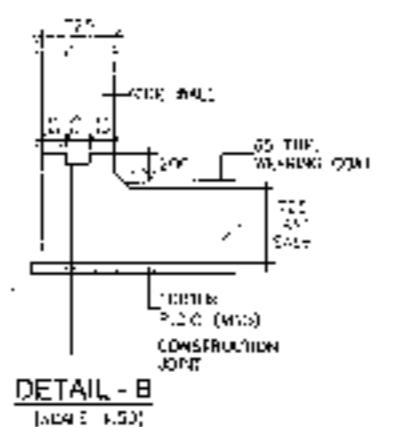
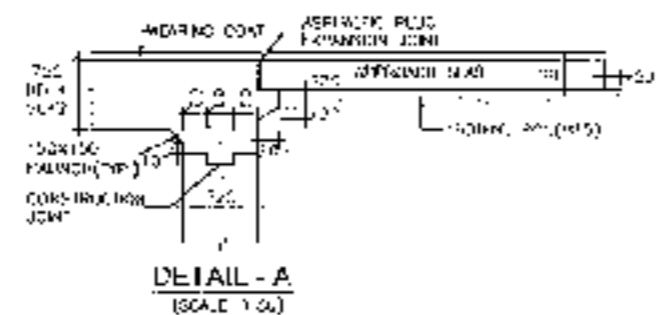
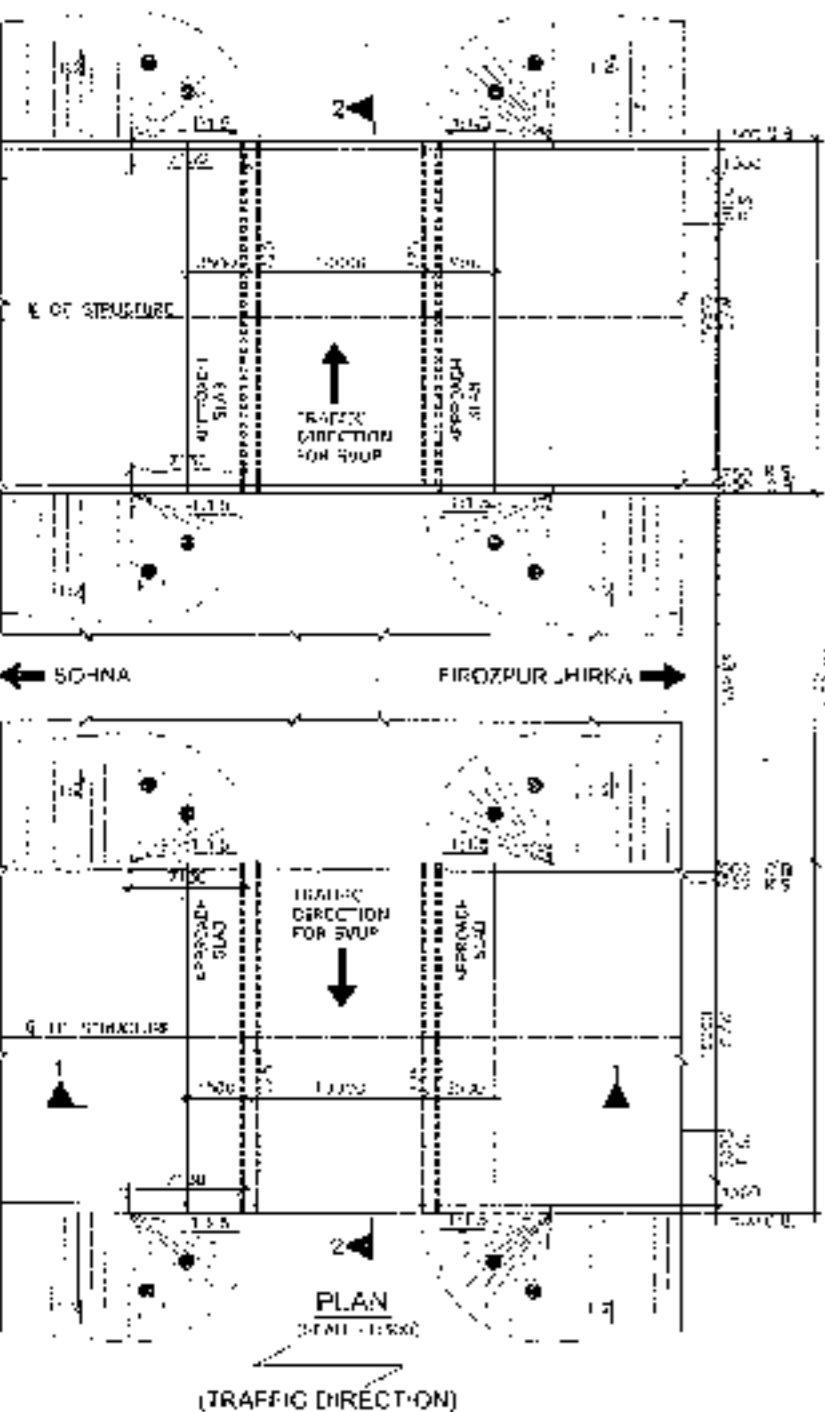
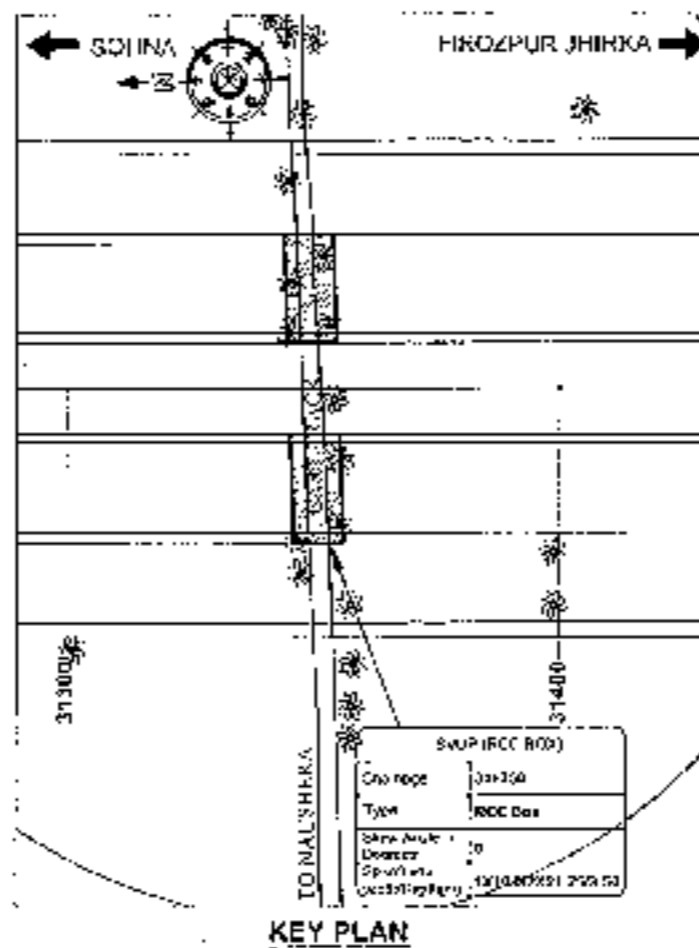
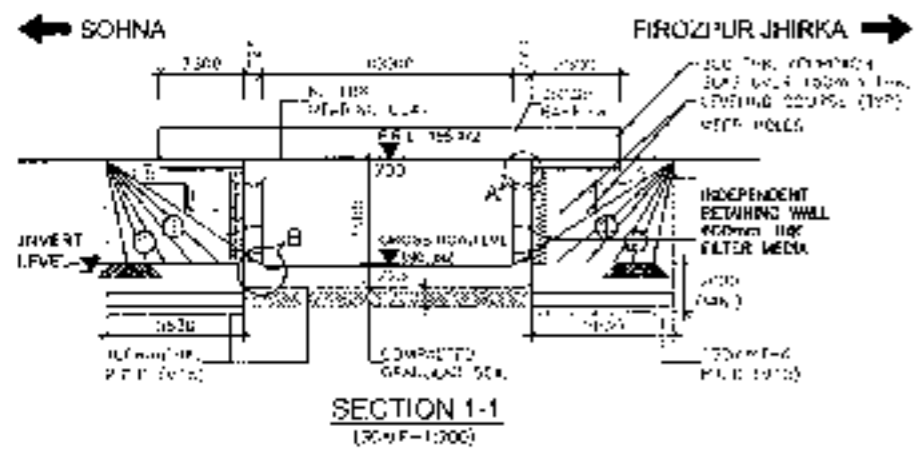


- NOTES:-**
1. ALL DIMENSIONS ARE IN MILLIMETERS. LEVELS ARE IN METERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
  2. DRAINAGE & FIVE SHALL BE VERIFIED WITH THE MEASUREMENT PLAN & PROFILE DRAWINGS. VARIATION (IF ANY) SHALL BE HIGHLIGHTED IN YELLOW FOR MODIFICATION.
  3. PROPERTIES OF SELECTED BACK FILL BEHIND RETAINING WALL SHALL BE AS FOLLOWS:  
C.B. 0 > 30% 2.0 1/4/15
  4. EXPANSION JOINT (20mm) SHALL BE FILLED UP BY ASPHALTIC FIBRE EXPANSION JOINT.
  5. GRADE OF CONCRETE IN VARIOUS ELEMENTS SHALL BE AS FOLLOWS:-  
PCC CURB WALL : M30  
APPROACH SLAB : M30  
SIDE WALK : M30  
FINISHING WALL : M30  
W/C PAVING : M30  
CRASH BARRIER : M40
  6. NET SAFE BEARING CAPACITY AT FOUNDING LEVEL FOR DESIGN IS AS FOLLOWS:-  
RCC : 10 t/m<sup>2</sup>  
RETAINING WALL : 15 t/m<sup>2</sup>
  7. WELD HOLES SHALL BE PROVIDED IN 1000 MM D/C STAINLESS STEEL BOTH HORIZONTALLY AND VERTICALLY IN RETAINING WALL FROM GROUND LEVEL TO 1000 F.O.DD (EVE).
  8. BACKFILLING BEHIND BOX SHALL BE CARRIED OUT SIMULTANEOUSLY.
  9. GRADE OF STEEL SHALL BE EN-250 CONFORMING TO IS:1786:2008.
  10. SAND TRICK WEARING COURSE SHALL CONSIST OF LAYER UP OF MANKI ASPHALT OF 25mm THK OVER 40mm GRANULAR COURSE.
  11. 'DK' & DEPTH OF JOY AT BASE SLAB FOR BASE SLAB THICKNESS VALUE OF 'DK'  
UP TO 300mm : 700mm  
GREATER THAN 300mm : 1/300mm
  12. 600 THK. FILTER MEDIA SHALL BE PROVIDED BEHIND RETAINING WALL.
  13. FOR DETAILS OF RETAINING WALL & FLOOR PROTECTION WORKS REFER SEPARATE DRAWINGS.
  14. THIS STRUCTURE IS IN SOBM CONCRETE.
  15. FRI. IS TAKEN AT W/DEN ELEV.

SVUP (1x10.0x3.5m.)  
@ CH.31 + 350







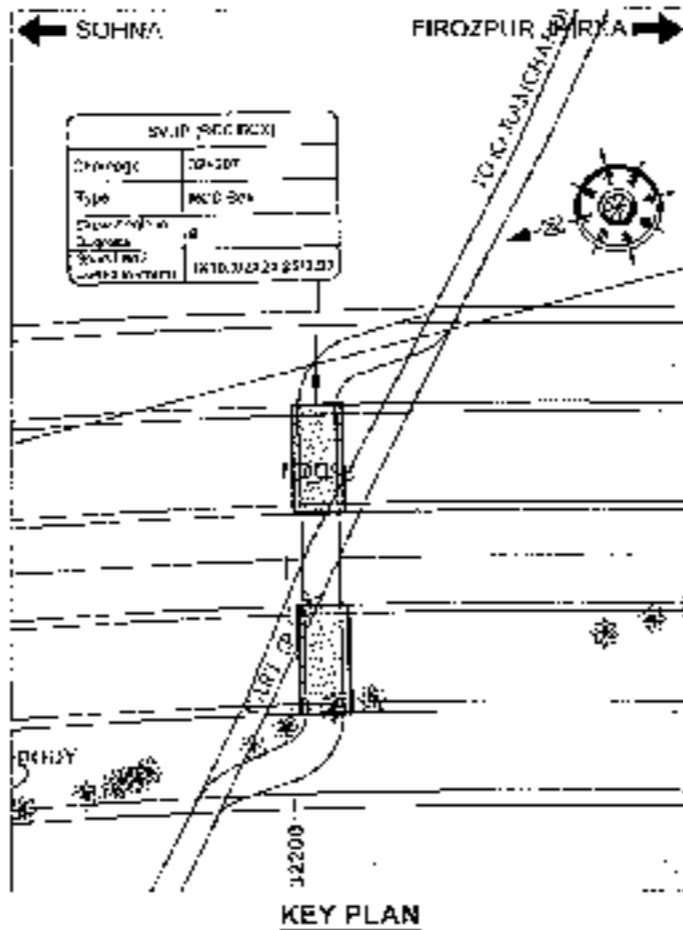
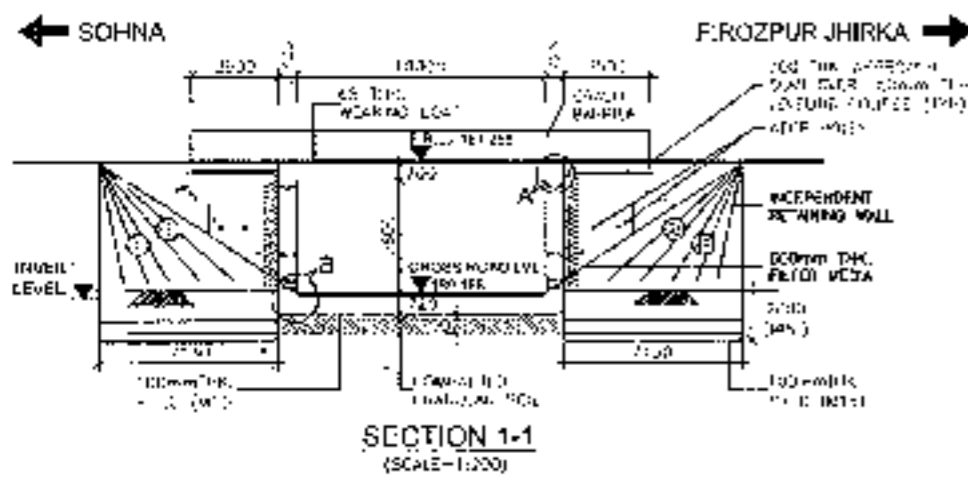
**NOTES:-**

1. ALL DIMENSIONS ARE IN MILLIMETERS, LEVELS ARE IN METERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
2. CHANGES & REVISIONS SHALL BE SHOWN WITH THE SUITABLE PLAN & PROFILE DRAWINGS. VARIATION (IF ANY) SHALL BE REPORTED TO CLIENTS FOR MODIFICATION.
3. PROPERTIES OF SELECTED BACK FILL BEHIND RETAINING WALLS SHALL BE AS FOLLOWS:-  
C-8, I<sub>p</sub> > 30% > 2.0 I<sub>p</sub>/3.
4. EXPANSION GAP (20mm) WILL BE FILLED UP BY ASPHALTIC PLUS EXPANSION JOINT.
5. GRADE OF CONCRETE IN VARIOUS ELEMENTS SHALL BE AS FOLLOWS:-  
RCC CURTAIN WALL : M15  
APPROACH SLAB : M30  
RCC BOX : M30  
RETAINING WALL : M30  
RCC RAILING : M30  
CRASH BARRIER : M40
6. MINIMUM BEARING CAPACITY AT FINISHING LEVEL TOP DESIGN IS AS FOLLOWS:-  
RCC : 10 I<sub>p</sub>/42  
RETAINING WALL : 10 I<sub>p</sub>/42
7. WEAR TEES SHALL BE PROVIDED @ 1000 MM C/C STAGGERED BOTH HORIZONTALLY AND VERTICALLY IN BEARING WALL FROM GROUND LEVEL TO HIGH FLOOD LEVEL.
8. BACKFILL BEHIND BOX SHALL BE CARRIED OUT SIMULTANEOUSLY.
9. GRADE OF STEEL SHALL BE AS PER IS 1786:2003.
10. ROAD SURF BEHIND ROAD SHALL CONSIST OF LAYER 14 OF MASTIC ASPHALT OF 25mm THK. OVER 4cm GRANULAR COURSE.
11. D<sub>15</sub> IS D<sub>85</sub> OF KLY AT BASE SLAB.  
FOR BASE SLAB THICKNESS : VALUE OF 'D'  
UP TO 200mm : 1200mm  
GREATER THAN 200mm : 1300mm  
D = BASE SLAB THICKNESS
12. SOIL FILTER MEDIA SHALL BE PROVIDED BEHIND RETAINING WALL.
13. FOR DETAILS OF RETAINING WALL & FLOOR PROTECTION WORKS REFER SEPARATE DRAWINGS.
14. THIS STRUCTURE IS IN SLIPPER ZONE 'V'.
15. 'M.L.' IS TAKEN AT MIDSPAN EDGE.

<p>CLIENT:</p> <p>National Highways Authority of India</p>	<p>CONSULTANT:</p> <p>Chaitanya Projects Consultancy Pvt. Ltd. C-5, 2ND FLOOR, P.K. TOWER PLOT NO. - 21 22, SECTION-4, VAISHALI, GHAZIABAD PH: 0120 3220449, 4120472. FAX: 0120 4110472</p>	<p>PROJECT:</p> <p>Consultancy Service for the Preparation for Feasibility Report (RFR) for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6/Package 4) of Sohna - Firozpur Jhirka</p>	<p>SCALE:</p> <p>AS SHOWN</p>	<p>DATE:</p> <p>01/08/2021</p>	<p>DRAWING No.:</p> <p>LRP/15/2021/0004/10</p> <p>DATE: 01/08/2021</p> <p>PREPARED BY: [Signature]</p> <p>CHECKED BY: [Signature]</p> <p>DATE: 01/08/2021</p>	<p>REVISION: R0</p> <p>APPROVED BY: [Signature]</p>
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SVUP (1x10.0x3.5m.)  
@ CH.32+207





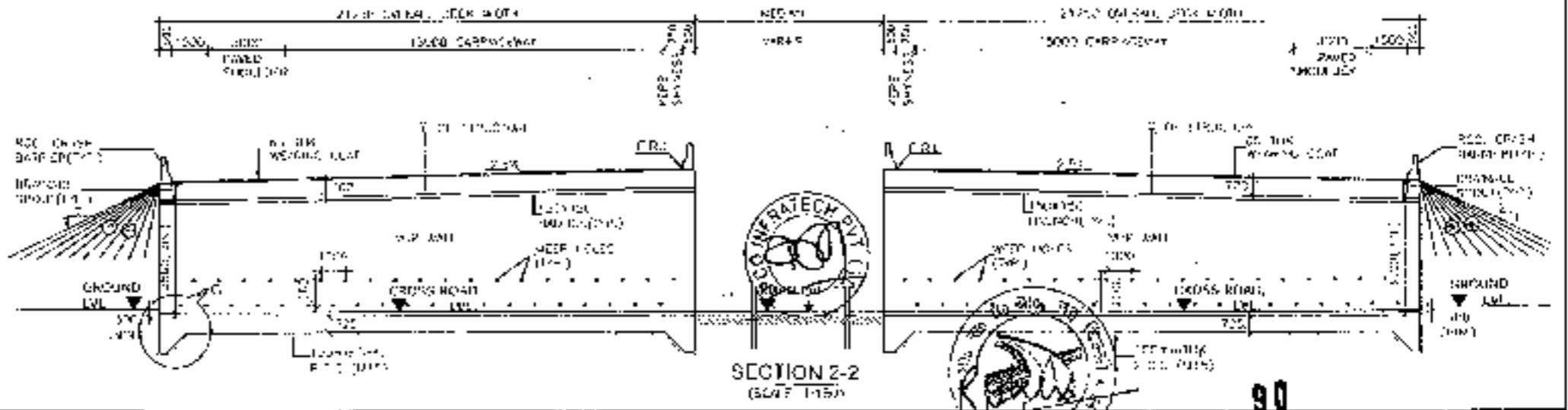
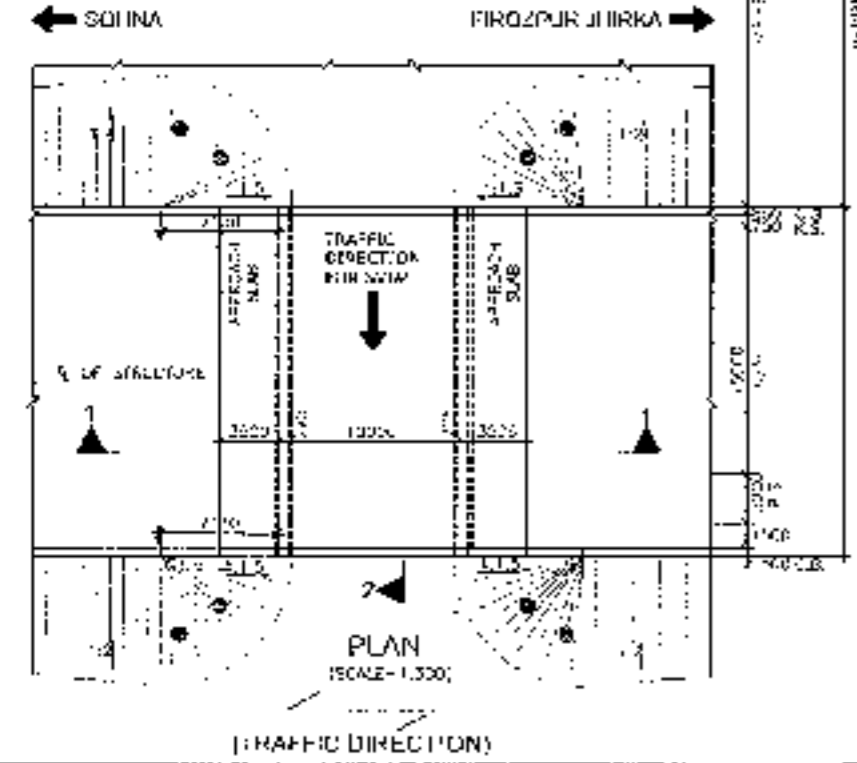
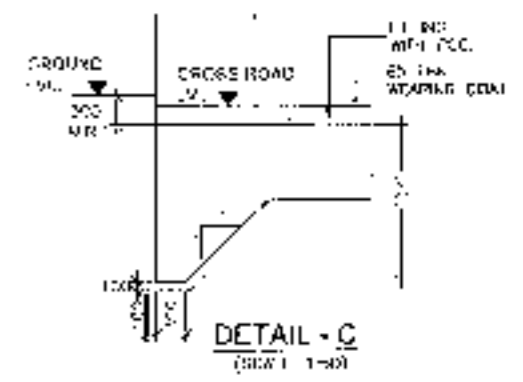
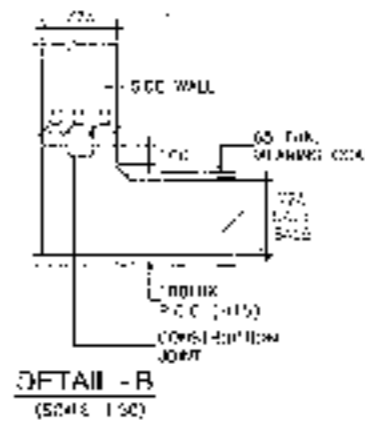
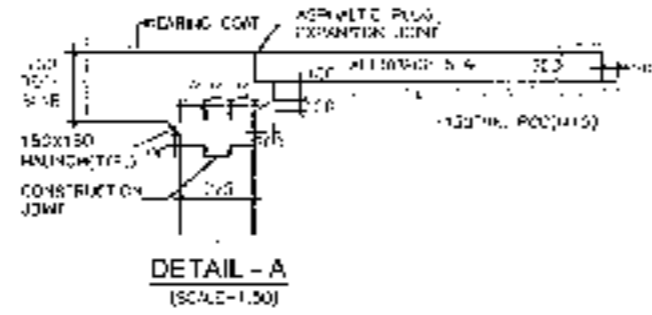
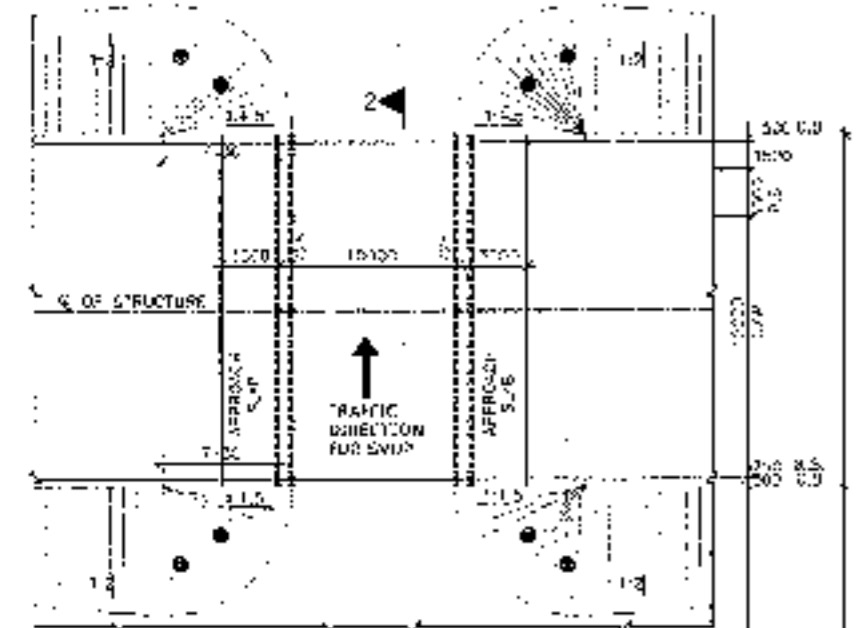
- NOTES:-**
- ALL DIMENSIONS ARE IN MILLIMETERS. LEVELS ARE IN METERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
  - CHANGING & LEVEL SHALL BE CHECKED WITH THE RETAINING PLAN & PROFILE DRAWINGS. VARIATION (IF ANY) SHALL BE REPORTED TO ENGINEER FOR MODIFICATION.
  - PROPERTIES OF SELECTED PACK FILL BEHIND RETAINING WALL SHALL BE AS FOLLOWS -  

MOISTURE CAP (20mm)	W/ 10
PERMEABILITY	10 <sup>-3</sup> L/m <sup>2</sup> s
  - FINISHING CAP (20mm) W/ 10 FILL BY ASPHALTIC PLUS EXPANDED JOINT.
  - GRADE OF CONCRETE IN VARIOUS ELEMENTS SHALL BE AS FOLLOWS -  

MCC CURTAIN WALL	M15
ASPHALTIC PLUS	M40
RET. WALL	M30
RET. WALL	M30
CRASH BARRIER	M40
  - NET SAFE BEARING CAPACITY AT FINISHING LEVEL FOR DESIGN IS AS FOLLOWS -  

MCC	10 T/m <sup>2</sup>
RETAINING WALL	15 T/m <sup>2</sup>
  - WEAP HOLES SHALL BE PROVIDED @ 1000 MM 2/3 STAGGERED, BOTH HORIZONTALLY AND VERTICALLY IN RETAINING WALL FROM GROUND LEVEL TO HIGH FLOOD LEVEL.
  - BACKFILLING BEHIND WALL SHALL BE COMPLETED SHALTIFFLY.
  - GRADE OF STEEL SHALL BE R-STEEL CONFORMING TO IS 17853 2008.
  - 8MM THICK WEARING COAT SHALL CONSIST OF LAYER OF 60 THK ASPHALTIC PLUS EXPANDED JOINT.
  - REINFORCEMENT SHALL BE AS FOLLOWS -  

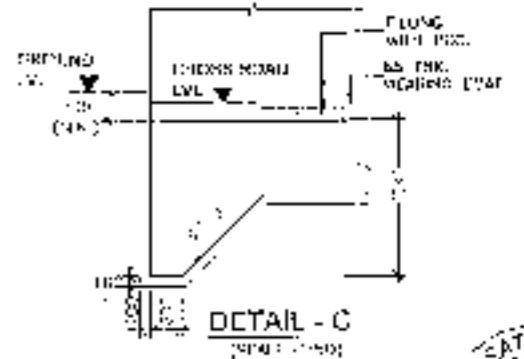
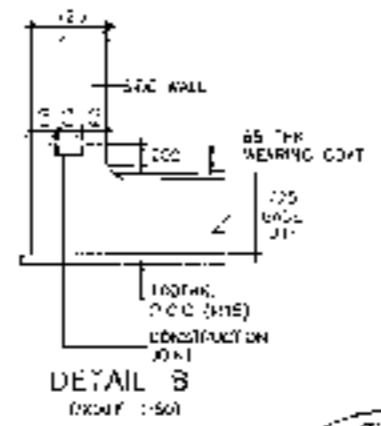
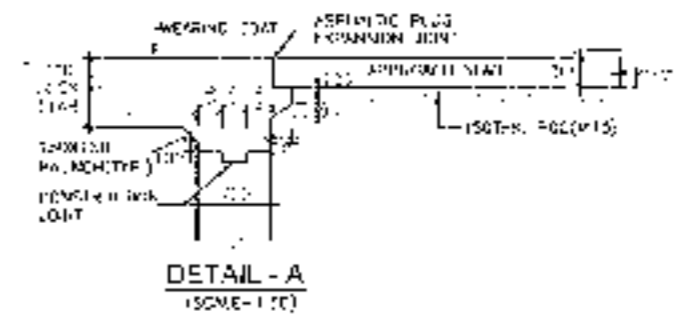
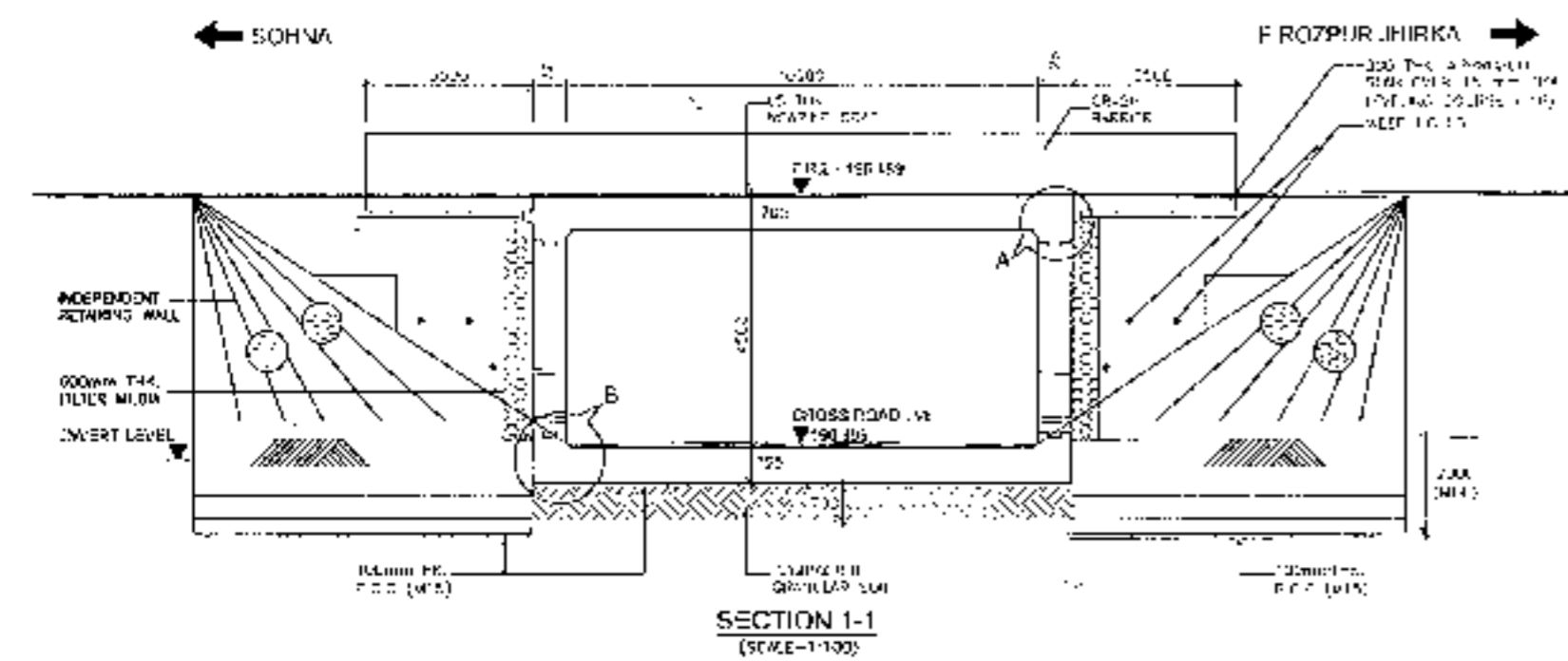
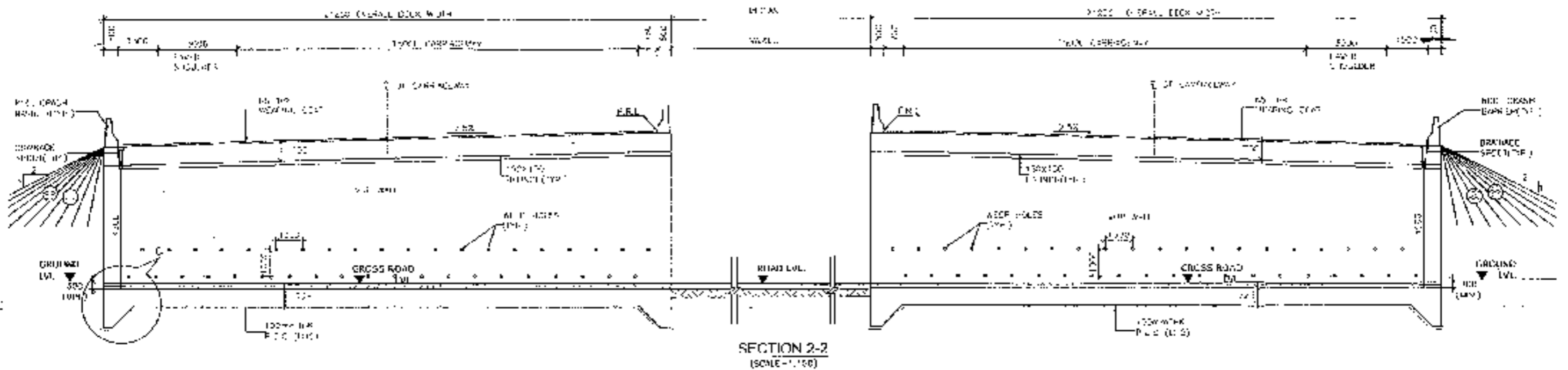
CONCRETE GRADE	VALUE OF DR
UP TO 300mm	1200mm
GREATER THAN 300mm	1500mm
  - TOP IS DEPTH OF 10% AT 10% STAG.
  - 600 THK. FILTER MEDIA SHALL BE PROVIDED BEHIND AS SHOWN.
  - FOR DETAILS OF RETAINING WALL & CROSS PROTECTION WORKS REFER SEPARATE DRAWINGS.
  - MS IS TAKEN AT MEDIAN EDGE.



CLIENT: National Highways Authority of India	CONSULTANT: Chaitanya Projects Consultancy Pvt Ltd G-3, 2ND FLOOR, R.K. TOWER PLOT NO - 25-22, SECTOR-4, VAISHALI, INDIA PH. 9120-2231-0, 4120172, FAX C120-8110452	PROJECT: Consultancy Services for the Preparation for Feasibility Report/EPR for development of Economic Corridors, Intra Corridors and Feeder Routes to improve the efficiency of freight movement in India under Khairatnagar Panyojana (Lot-6/Package-3) of Sohna - Firozpur Jhirka	SCALE: AS SHOWN	DWG. TITLE: GENERAL ARRANGEMENT DRAWING SVUP (S/L: 1X10.0X3.5m) AT CHL-32+207 SHINA, FIROZPUR JHIRKA	DRAWING No.: CHP/11/2013/420/MS/130 DATE: AUGUST 2013 PREPARED BY: K. L. SINGH CHECKED BY: M. S. SAH APPROVED BY: S. L. SINGH
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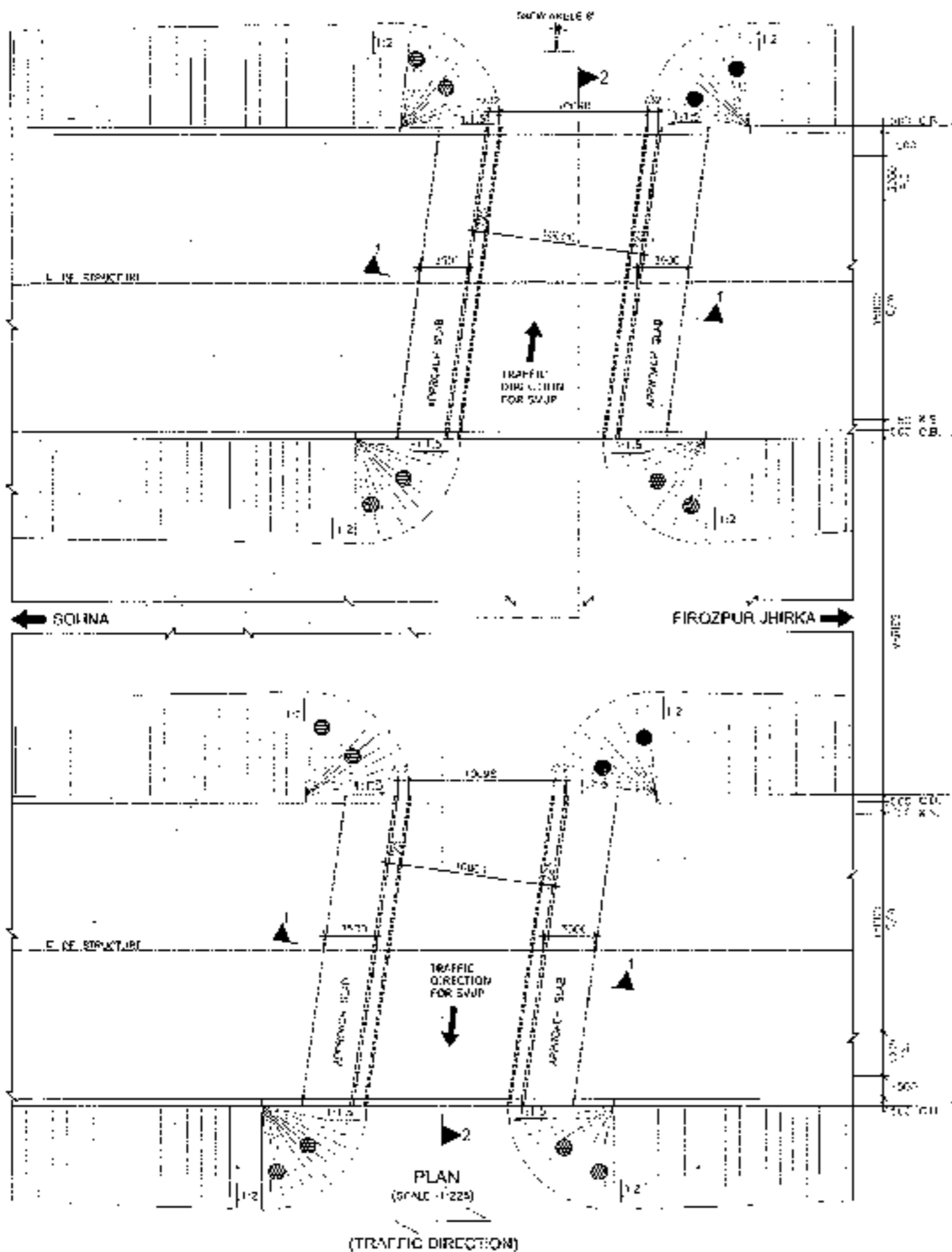
SVUP (1x10.0x4.5m.)  
@ CH.32+697





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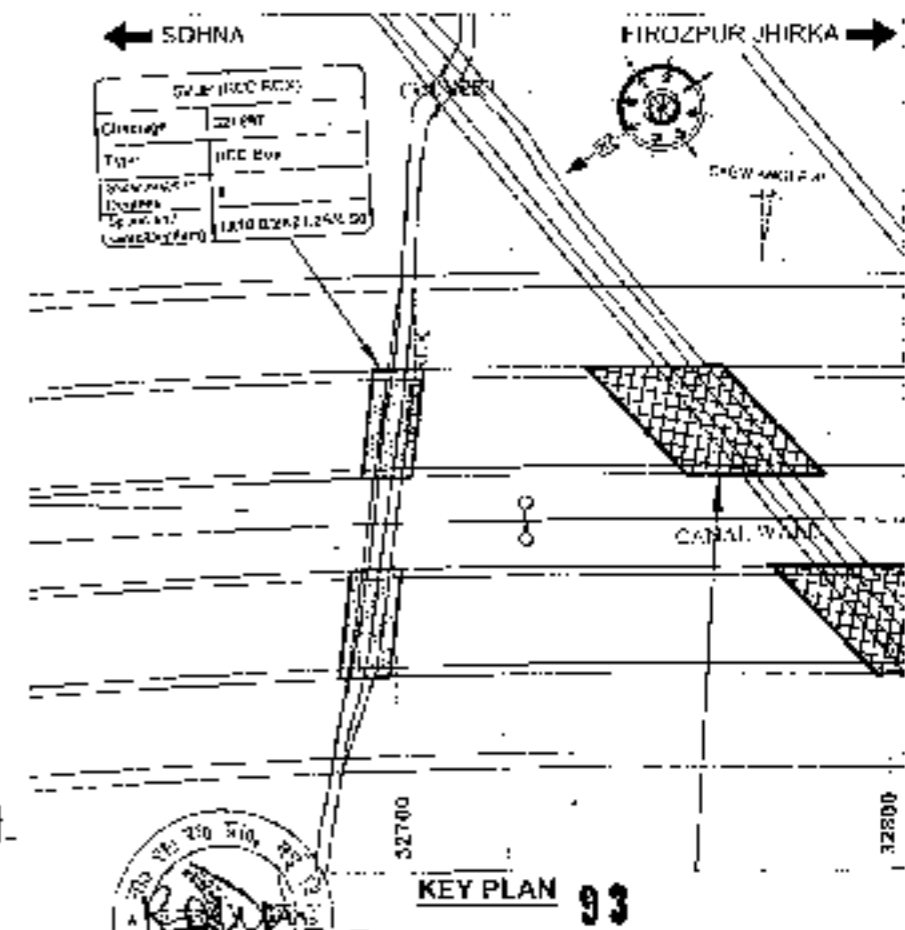
<p>CLIENT - National Highways Authority of India</p>	<p>CONSULTANT - Chaitanya Projects Consultancy Pvt. Ltd. C-3 2ND FLOOR, R.K. TOWNS PLOT NO. 21-22, SECTOR-4, VASHTI, GHAZIABAD PH. 0120-3223419, 4170472, FAX: 0120-4113472</p>	<p>PROJECT - Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-5/Package-4) of Sohma - Ferozpur Jhirka</p>	<p>SCALE - AS SHOWN</p>	<p>GENERAL ARRANGEMENT DRAWING SHEET NO. 1X10.024.500 AT CH-124507 SOHMA - FEROPUR JHIRKA</p>	<p>DRAWING No. - SHEET 2 OF 4 DATE - AUGUST 2015 PREPARED BY - CHECKED BY - APPROVED BY -</p>
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PLAN (SCALE: 1:225)  
(TRAFFIC DIRECTION)

**NOTES:-**

1. ALL DIMENSIONS ARE IN MILLIMETRE, METRE AND IN METRES UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
2. CHAIRAGE & LEVEL SHALL BE VERIFIED WITH THE FOLLOWING PLAN & PROFILE DRAWINGS. VARIATION (IF ANY) SHALL BE REPORTED TO ENGINEER FOR MODIFICATION.
3. DIMENSIONS OF SELECTED BACK FILL BEHIND RETAINING WALL SHALL BE AS FOLLOWS:-  
 1st 3000 mm - 1:1.5  
 2nd 3000 mm - 1:1.5
4. EXPANSION GAP (20mm) SHALL BE FILLED UP BY ASPHALTIC FILL EXPANSION JOINT.
5. GRADE OF CONCRETE IN VARIOUS ELEMENTS SHALL BE AS FOLLOWS:  
 RCC CURTAIN WALL : M25  
 APPROACH SLAB : M30  
 RCC BOX : M30  
 RETAINING WALL : M30  
 RCC FLOORING : M30  
 CRASH BARRIER : M40
6. NET SAFE BEARING CAPACITY AT FOUNDING LEVEL FOR DESIGN IS AS FOLLOWS :-  
 BOX : 10 t/m<sup>2</sup>  
 RETAINING WALL : 15 t/m<sup>2</sup>
7. WEAR SURFACE SHALL BE PROVIDED AT LEVEL 100 CM ABOVE FINISHED BOTH FOUNDATIONS AND APPROACH IN RETAINING WALL FROM GROUND LEVEL TO HIGH FLOOD LEVEL.
8. BACK FILL BEHIND BOX SHALL BE CARRIED OUT SIMULTANEOUSLY.
9. GRADE OF FILL SHALL BE IN ACCORDANCE TO IS:1726:2000.
10. 50MM THICK WEAR COURSE SHALL CONSIST OF LAYER OF BITUMINOUS ASPHALT OF 25MM THK. OVER 10MM BITUMINOUS COURSE.
11. MIN. DEPTH OF KEY AT BASE SLAB.  
 FOR BASE SLAB EMBEDED VALUE OF 'd'  
 UP TO 900mm : 100mm  
 GREATER THAN 900mm : >300mm  
 d = BASE SLAB THICKNESS
12. 500 THK. FIBRE MESH SHALL BE PROVIDED BEHIND RETAINING WALL.
13. FOR DETAILS OF RETAINING WALL & FLOOR PROTECTION WORKS REFER SEPARATE DRAWINGS.
14. THIS STRUCTURE LIES IN SEISMIC ZONE V.
15. TRL IS TAKEN AT MEAN LEVEL.

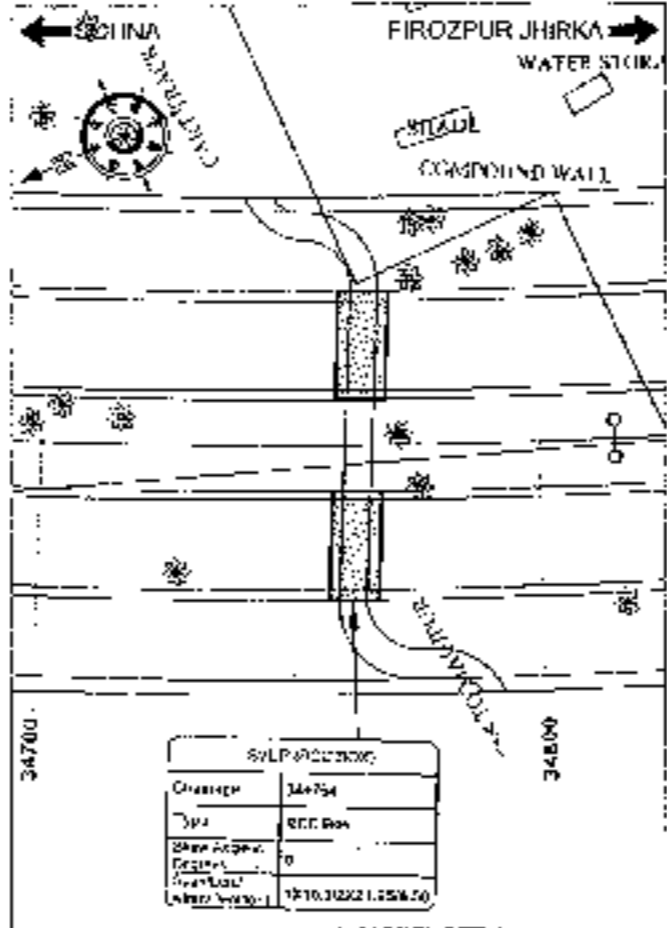
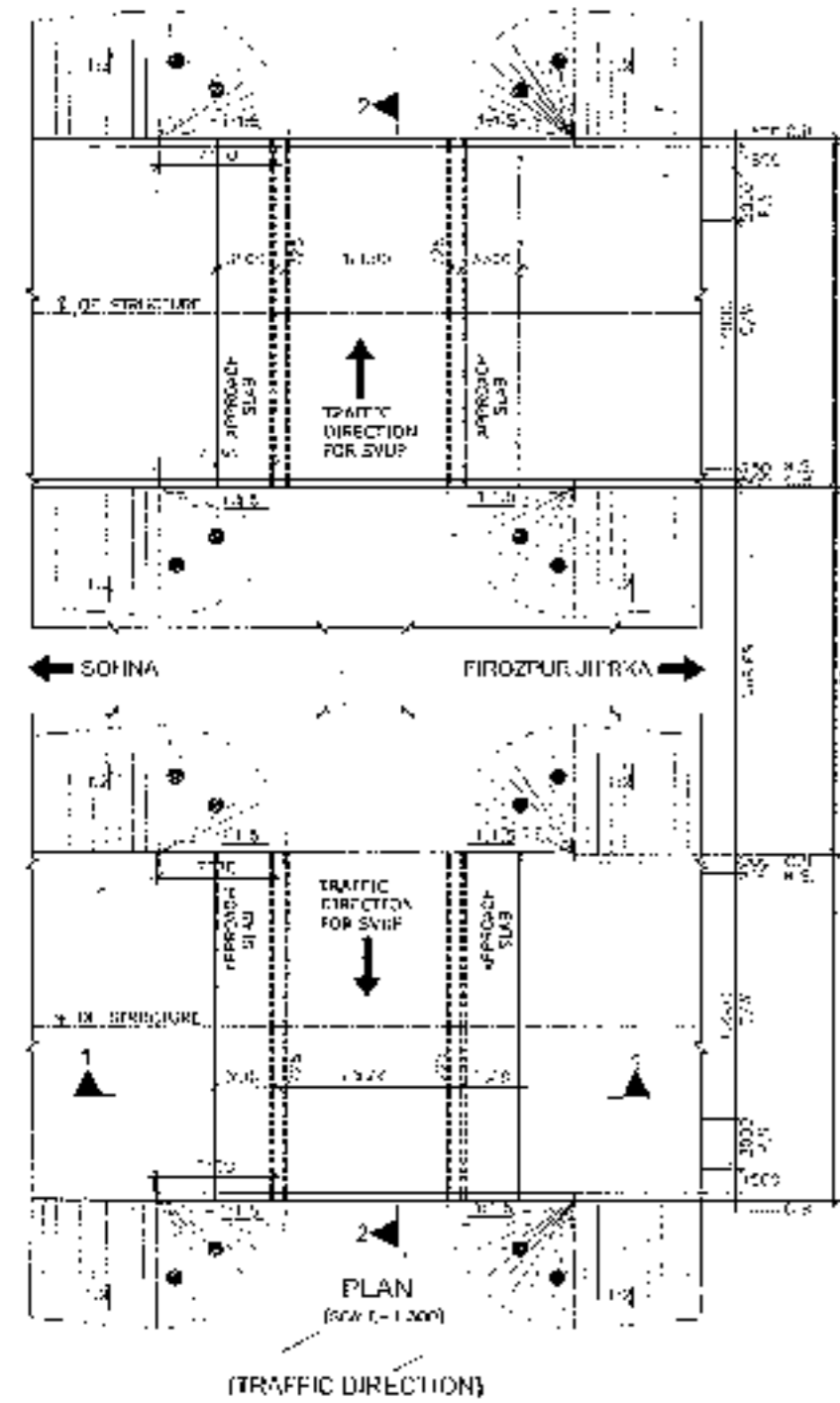
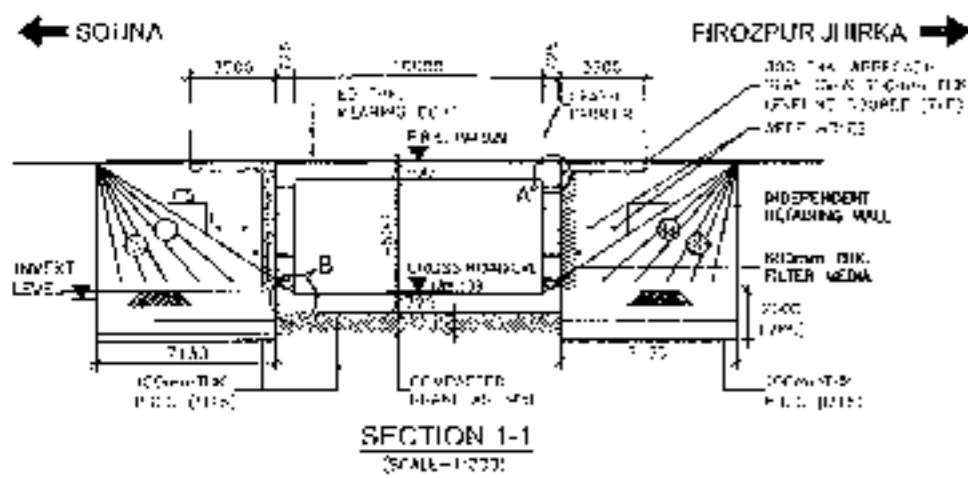


KEY PLAN 93

<p>CLIENT National Highways Authority of India</p>	<p>CONSULTANT: Chaitanya Projects Consultancy Pvt. Ltd. C-4, 2ND FLOOR, I.I.T. TOWER PLOT NO - 23-22, SECTOR-4, VAISHALI, GHAZIABAD PH: 0422 3223419, 4120472, FAX: 0120-4110472</p>	<p>PROJECT: Consultancy Service for the Preparation for Feasibility Report (RPR) for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6/Package-4) of Sohna - Firozpur Jhirka</p>	<p>SCALE :- AS SHOWN</p>	<p>GENERAL ARRANGEMENT DRAWING SWJP (S/IF 1X10.1X4.5m) AT CH-22/RSV SOHNA - FIROZPUR JHIRKA</p>	<p>DRAWING No. : ISHP/12024-17-BASE-10</p>	<p>SHEET TOP 21</p>
					<p>DATE : AUGUST 2018</p>	<p>Revision: 00</p>
<p>PREPARED BY : A.P. RAJESH KUMAR</p>	<p>CHECKED BY : M.D. BHASKAR</p>	<p>APPROVED BY : (Signature)</p>				

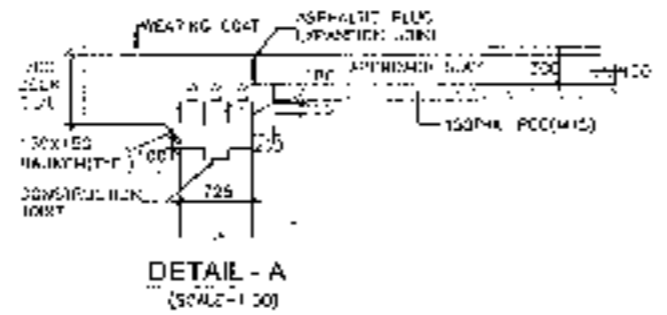
SVUP (1x10.0x4.5m.)  
@ CH.34+764



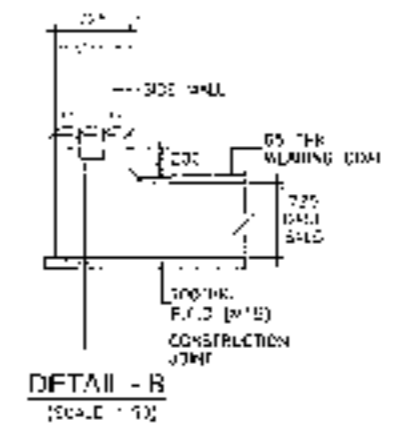


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Sheet No.	0
Project No.	1210.10221.25A.50

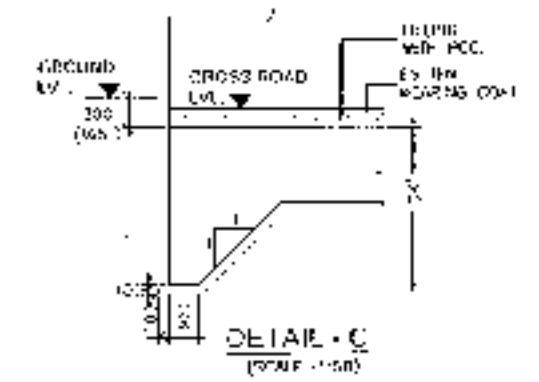
KEY PLAN



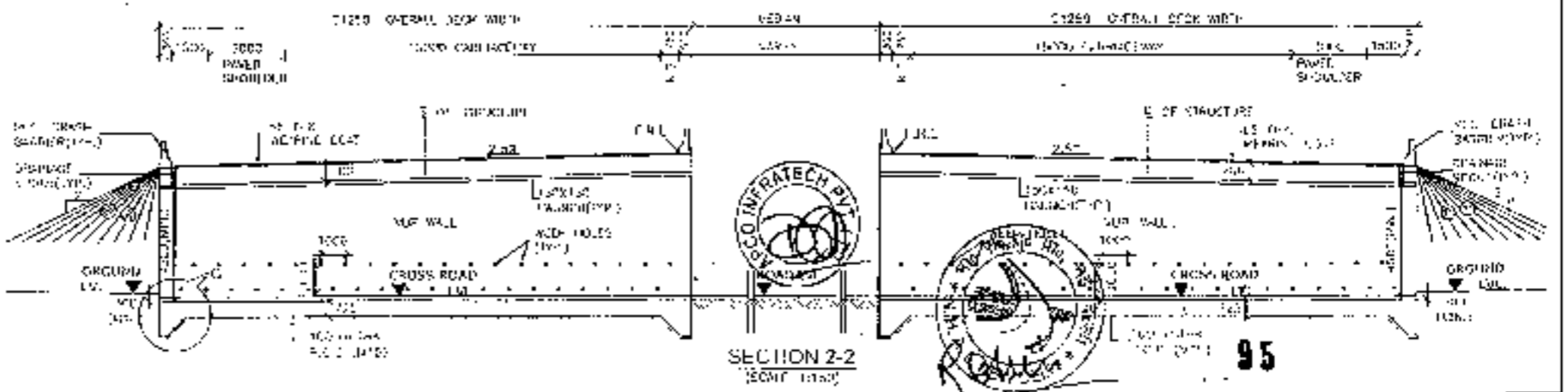
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DETAIL - B (SCALE=1:50)



DETAIL - C (SCALE=1:50)



SECTION 2-2 (SCALE=1:50)

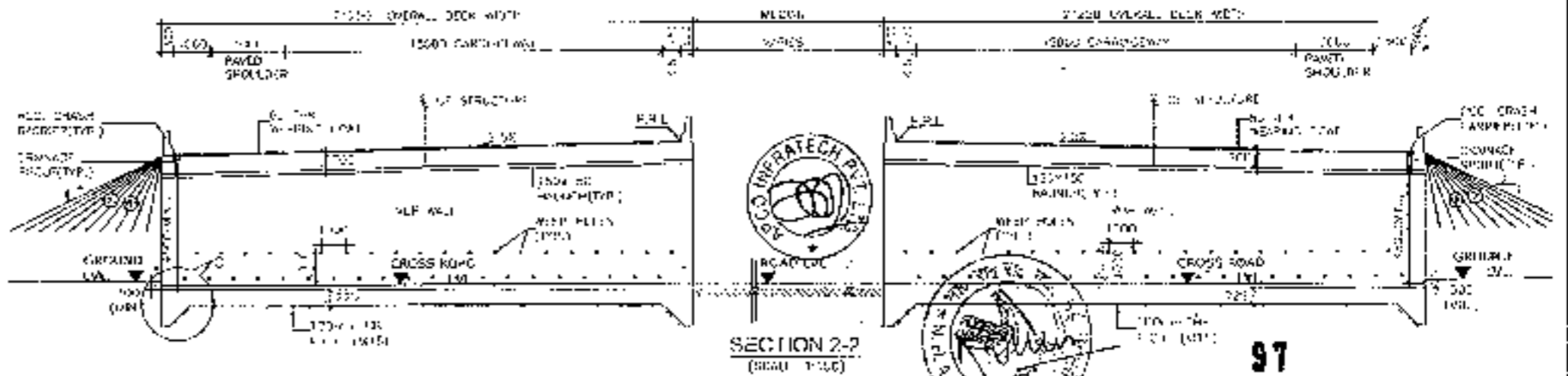
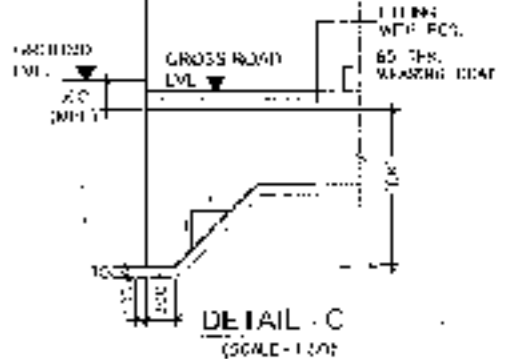
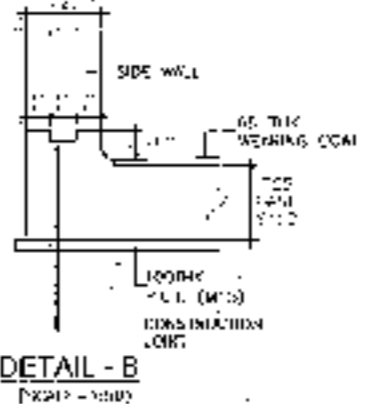
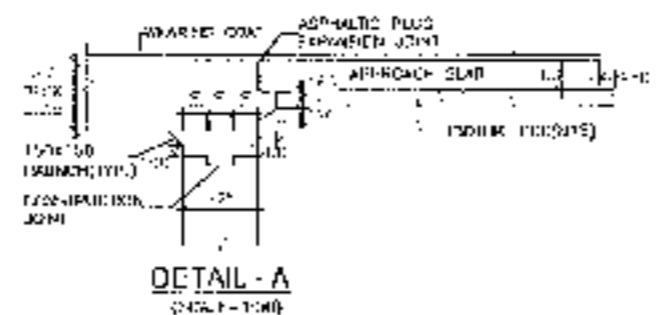
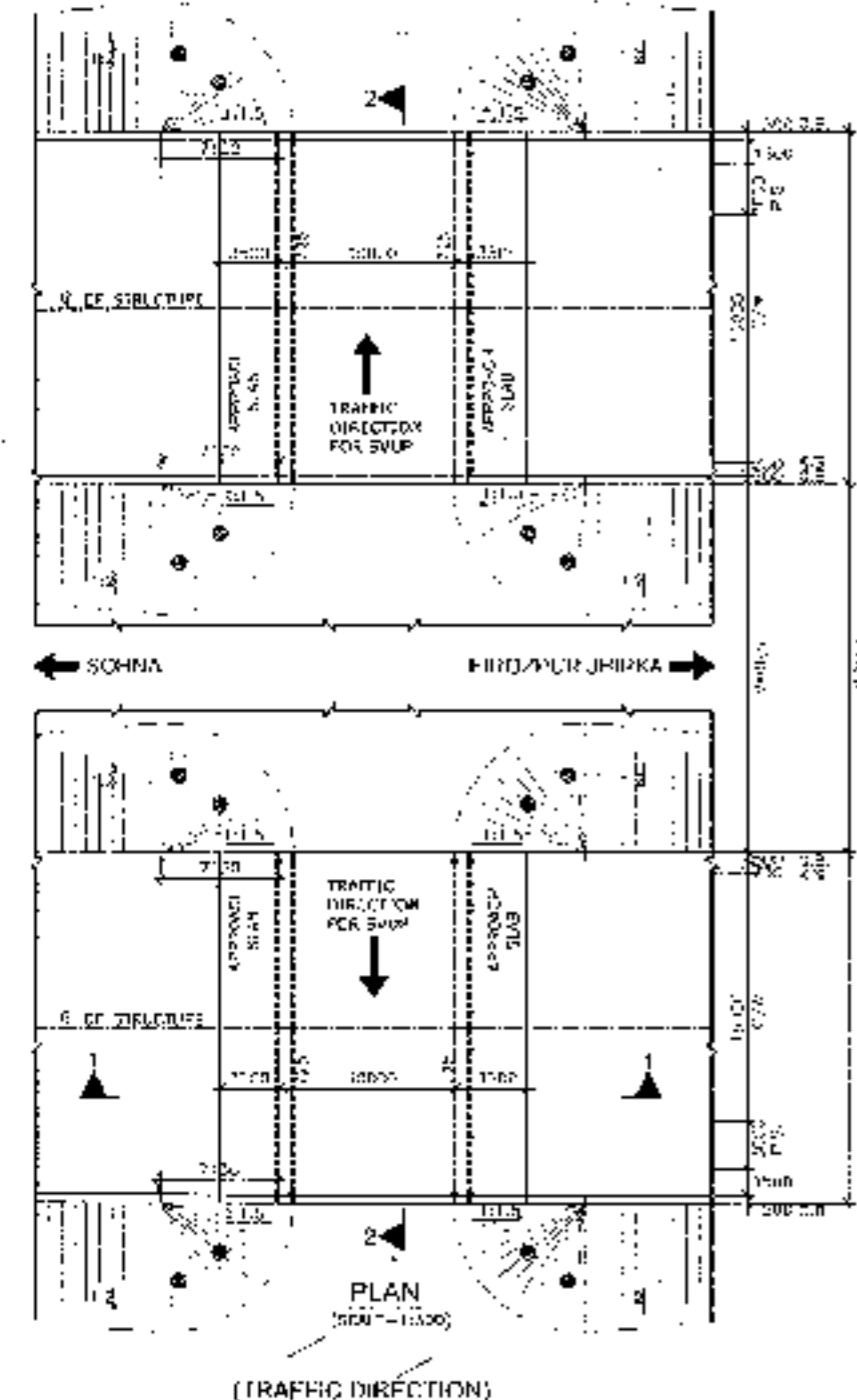
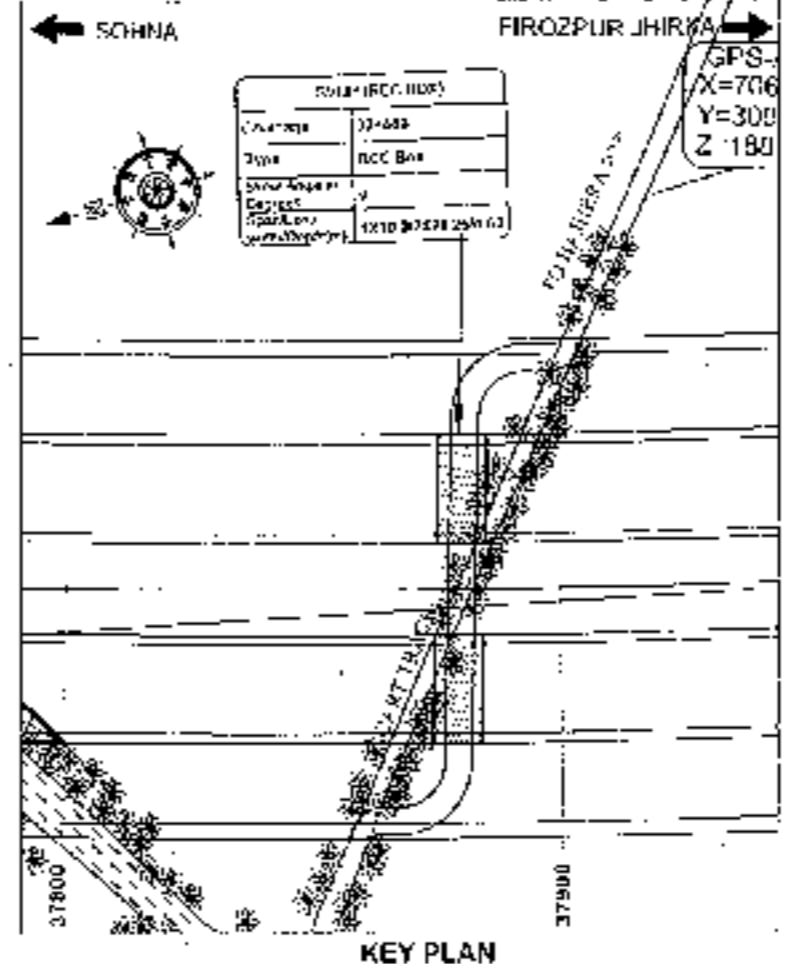
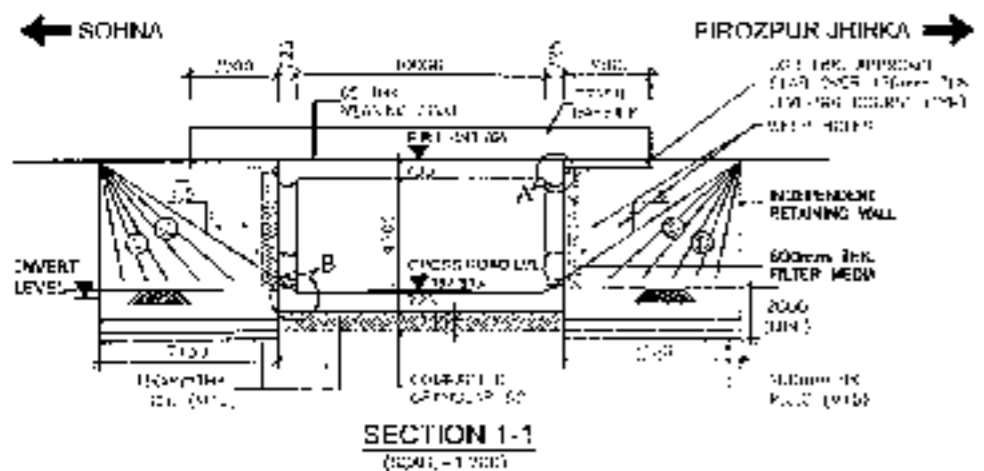
- NOTES:-**
- ALL DIMENSIONS ARE IN MILLIMETERS. LEVELS ARE IN METERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
  - CHANGE & LEVEL SHALL BE VERIFIED WITH THE EXISTING PLAN & PROFILE DRAWINGS, VARIATION (IF ANY) SHALL BE REPORTED TO ENGINEER FOR MODIFICATION.
  - PROFILES IN SELECTED ROCK HILL BEHIND RETAINING WALL SHALL BE AS FOLLOWS:-  
 C&G, 40 x 200 x 400 (1/20)
  - EMBEDDED GAP (20mm) WILL BE FILLED UP BY ASPHALTIC PLUS JOINTING JOINT
  - SLOPE OF CONCRETE IN VARIOUS ELEMENTS SHALL BE AS FOLLOWS:-  
 PCC CURTAIN WALL - 1%  
 APPROACH SLAB - 1%  
 CONC. BOX - 1%  
 RETAINING WALL - 1%  
 PCC RAILING - 4%  
 CRASH BARRIER - 4%  
 RET. WALL - 1%  
 APPROACH SLAB - 1%  
 CONC. BOX - 1%  
 RETAINING WALL - 1%  
 PCC RAILING - 4%  
 CRASH BARRIER - 4%
  - RET. WALL BEHAVIOR CAPACITY AT FINISHING LEVEL FOR DESIGN A AS FOLLOWS:-  
 CONC. BOX - 10 L/M<sup>2</sup>  
 RETAINING WALL - 15 L/M<sup>2</sup>
  - WEEP HOLES SHALL BE PROVIDED @ 1000 MM C/C STAGGERED WITH HORIZONTALITY AND VERTICALITY IN RETAINING WALL FROM GROUND LEVEL TO THE FLOOD LEVEL
  - BACKFILL BEHIND BOX SHALL BE COVERED UP SIMULTANEOUSLY
  - SLOPE OF STEEL SHALL BE 1:25 CONFORMING TO IS:700 2000
  - 60MM THK BRASS COAT SHALL CONSIST OF LAYER OF OF MASTIC ASPHALT OF 25mm THK OVER 40MM ALUMINIUM COAT.
  - CON. IS UPPER OF KEY AT BASE SEAL.
  - FOR BASE SLAB THICKNESS VALUE OF 'd' UPTO 900mm 1200mm GREATER THAN 900mm d = BASE SLAB THICKNESS
  - 600 THK. FILTER MEDIA SHALL BE PROVIDED BEHIND RETAINING WALL.
  - FOR DETAILS OF RETAINING WALL & ROAD PROTECTION WORKS REFER SEPARATE DRAWINGS
  - SEE DIMENSIONS IN THE TRAFFIC JUNCTION
  - FRL IS TAKEN AT MEDIAN EDGE.

<b>CLIENT:-</b> National Highways Authority of India	<b>CONSULTANT:-</b> Chaitanya Projects Consultancy Pvt Ltd C-5, 2ND FLOOR, R.K. TOWER PLOT NO - 21-22, SECTOR 8, VAISHALI, GHAZIABAD PH: 0120-3223419, 4120472, FAX: 0120 4110472	<b>PROJECT:-</b> Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (I of 8 Package 4) of Sohna - Firozpur Jhrka	<b>SCALE:-</b> AS SHOWN	<b>DWG TITLE:-</b> GENERAL ARRANGEMENT DRAWING (SWP) SIZE 1X10.0X4.5m AT CH-344754 (SOHNA-FIROZPUR JH JHRKA)	<b>DRAWING No.:</b> PROJ/SW/10/2019/001
					<b>DATE:</b> AUGUST 2019
					<b>PREPARED BY:</b> CHANDAN K
					<b>CHECKED BY:</b> CHANDAN K
					<b>APPROVED BY:</b> ALLUJ



SVUP (1x10.0x4.5m.)  
@ CH.37+880



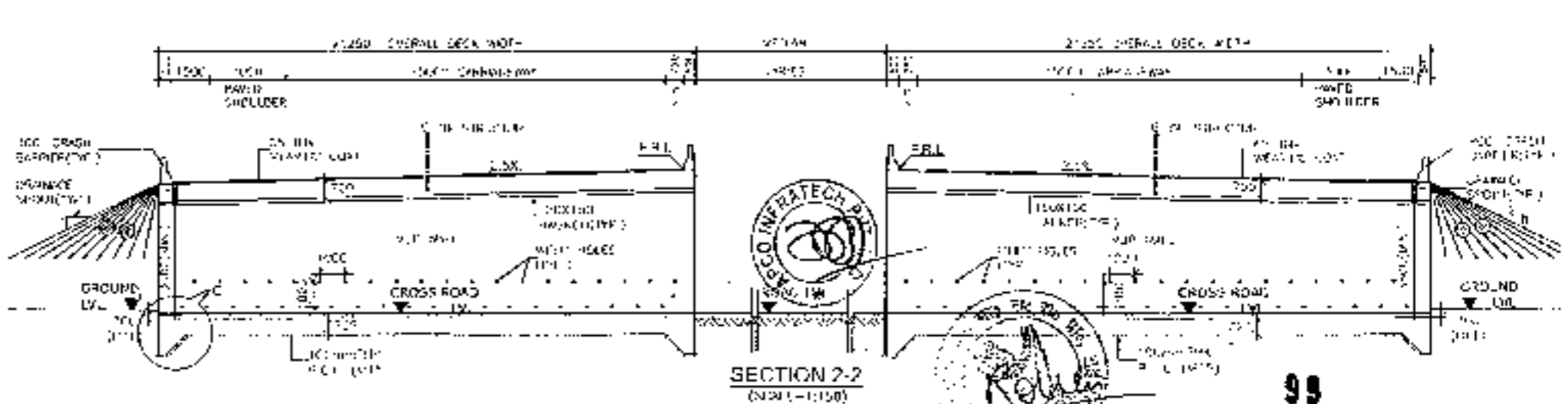
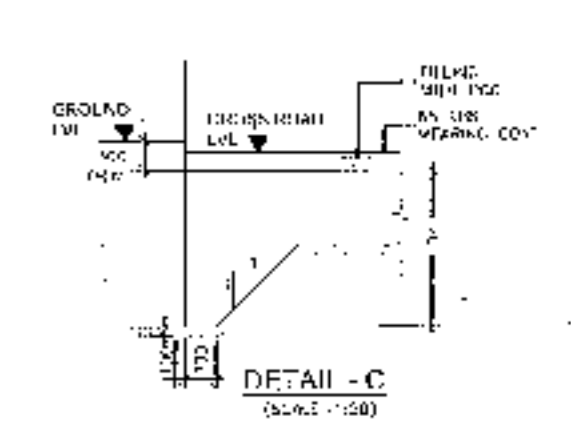
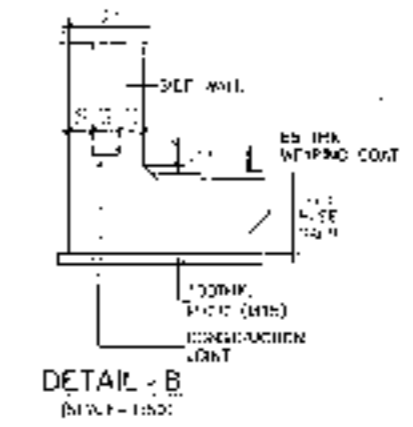
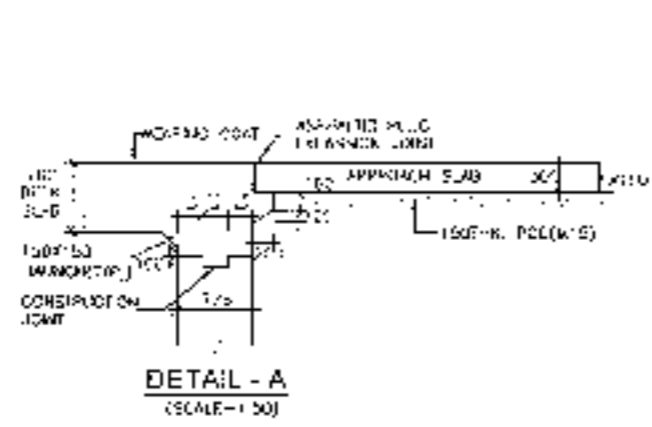
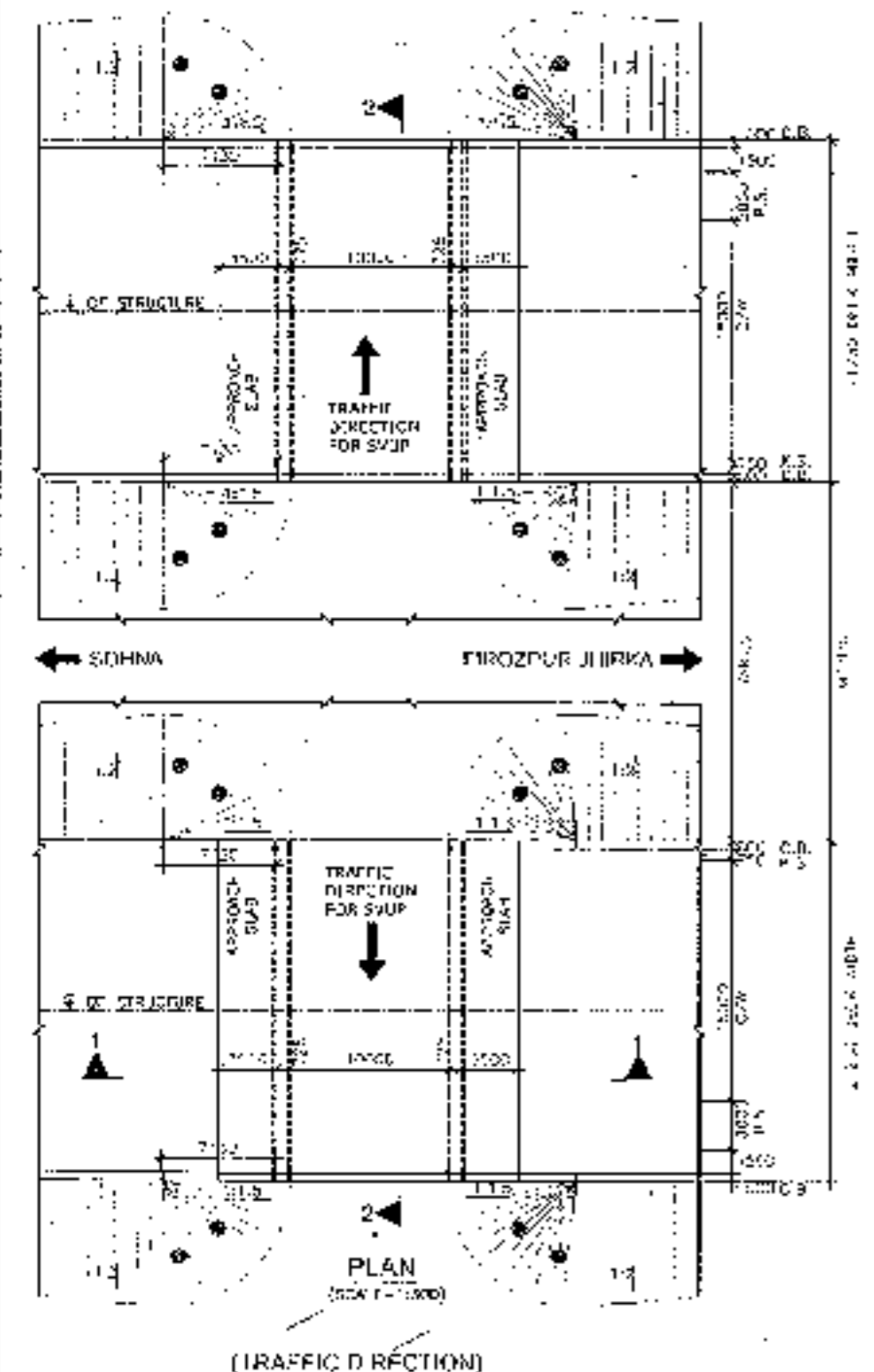
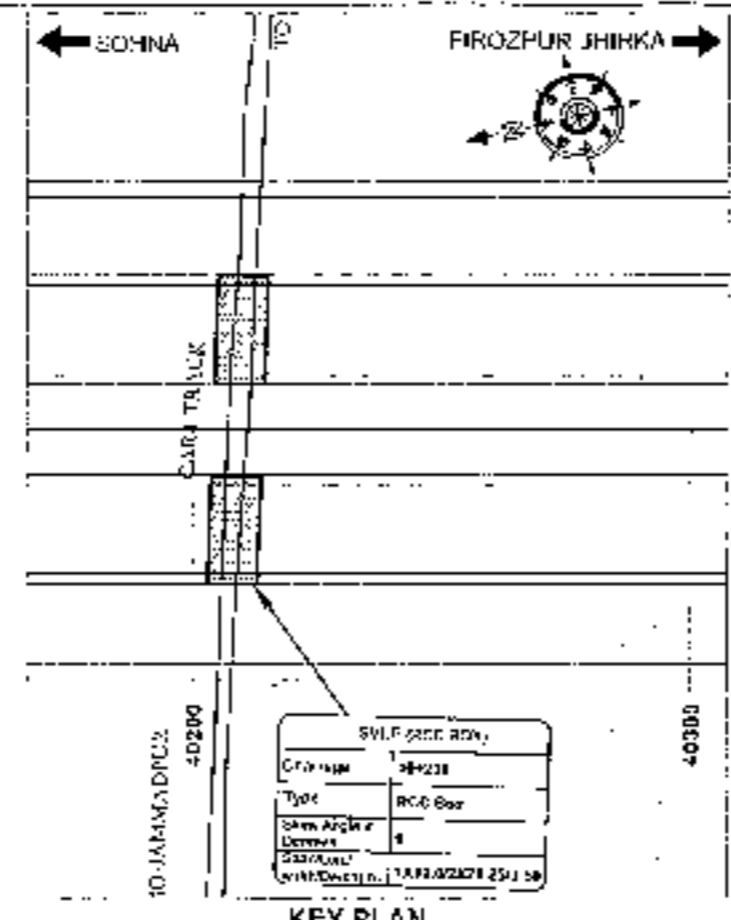
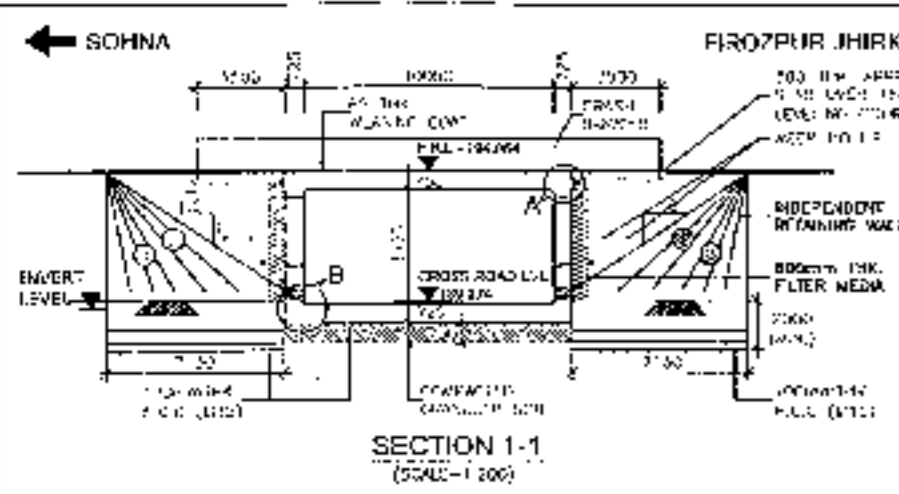


- NOTES:-**
- ALL DIMENSIONS ARE IN MILLIMETERS. LEVELS ARE IN METERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
  - TERMINAL & UPSET SHALL BE CHECKED WITH THE RETAINING PLAN & PROFILE DRAWINGS. VARIATION (IF ANY) SHALL BE INDICATED TO ENGINEER FOR MODIFICATION.
  - PROPERTIES OF SELECTED ROCK FILL BEHIND RETAINING WALL SHALL BE AS FOLLOWS:-  
 C-10, F-1, P-1, S-1, U-1, V-1, W-1, X-1, Y-1, Z-1
  - EXPANSION GAP (20mm) WILL BE FILLED UP BY ASPHALTIC PLUS EXPANDED JOINT.
  - GRADE OF CONCRETE IN VARIOUS ELEMENTS SHALL BE AS FOLLOWS:-  
 RCC CURTAIN WALL : M15  
 APPROACH SLAB : M30  
 RCC BOX : M30  
 RETAINING WALL : M30  
 RCC RAILING : M30  
 CRASH BARREL : M40
  - NET WALL BEARING CAPACITY AT FOLLOWING LEVEL FOR DESIGN IS AS FOLLOWS:-  
 BOX : 10 t/m<sup>2</sup>  
 RETAINING WALL : 15 t/m<sup>2</sup>
  - WEAP HOLDS SHALL BE PROVIDED @ 1000 MM C/C SQUARED, BOTH HORIZONTALLY AND VERTICALLY IN RETAINING WALL FROM GROUND LEVEL TO HIGH FLOOD LEVEL.
  - BACKFILLING BEHIND BOX SHALL BE CARRIED OUT SIMULTANEOUSLY.
  - GRADE OF STEEL SHALL BE Fe-500 CONFORMING TO IS 1786:2008.
  - 50MM THK WEARING COAT SHALL BE LAYED ON TOP OF EACH COURSE OF MASSIVE ASPHALTIC PLUS EXPANDED JOINT.
  - 10% OF DEPTH OF RCC AT BASE SLAB.
  - FOR BASE SLAB THICKNESS VALUE OF 'D' :-  
 UPTO 300mm : 1200mm  
 GREATER THAN 300mm : 1.100mm  
 D = BASE SLAB THICKNESS
  - 60 THK WEARING COAT SHALL BE PROVIDED BEHIND RETAINING WALL.
  - FOR DETAILS OF BEARINGS WALL & FLOOD PROTECTION WORKS REFER SEPARATE DRAWINGS.
  - THIS STRUCTURE LIES IN SLIGHT CURVE 'Y'.
  - R.L. IS TAKEN AT MEAN SEA LEVEL.

<b>CLIENT:</b> National Highways Authority of India Ministry of Road Transport & Highways, Govt. of India	<b>CONSULTANT:</b> Chaitanya Projects Consultancy Pvt. Ltd. C-5, 2ND FLOOR, R.K. TOWER, PLOT NO. 21/22 SECTION-A, UNISMAI, GHAZIABAD PH: 0120-3223449, 41204172, FAX: 0120-4113472	<b>PROJECT:</b> Consultancy Service for the Preparation of Feasibility Report (DPR) for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot 0/Package 4) of Sohna - Firozpur Jhirka	<b>SCALE:</b> AS SHOWN	<b>DWG. TITLE:</b> GENERAL ARRANGEMENT DRAWING SWP/SIZE 1X10X1.5M AT CH - 37+890 SOHNA - FIROZPUR JHIRKA	<b>DRAWING NO.:</b> CH/07/152CH/37+890-3-107
<b>DATE:</b> AUGUST 2018		<b>PREPARED BY:</b> ... <b>CHECKED BY:</b> ...		<b>REVISION:</b> ... <b>APPROVED BY:</b> ...	

SVUP (1x10.0x3.5m.)  
@ CH.40+209





- NOTES:-**
- ALL DIMENSIONS ARE IN MILLIMETERS, LEVELS ARE IN METERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
  - CHANGES & LEVEL SHALL BE MARKED WITH THE RELEVANT PLAN & PROJECT DRAWINGS. VARIATION (IF ANY) SHALL BE REPORTED TO ENGINEER FOR MODIFICATION.
  - PROPERTIES OF SELECTED BACK FILL BEHIND RETAINING WALL SHALL BE AS FOLLOWS -  
L-9, @ 2.5% & 2.0% (1/m).
  - EXPANSION GAP (30mm) SHALL BE FILLED UP BY ASPHALTIC FILL EXPANSION JOINT.
  - GRADE TO BE CONCRETED IN VARIOUS ELEMENTS SHALL BE AS FOLLOWS -  
RETAINING WALL : M25  
APPROACH SLAB : M20  
RCC BOX : M20  
RETAINING WALL : M20  
RCC RAILING : M20  
CRASH BARRIER : M40
  - NET SAFE BEARING CAPACITY AT FOUNDING LEVEL FOR DESIGN IS AS FOLLOWS -  
BOX : 10 t/m<sup>2</sup>  
RETAINING WALL : 15 t/m<sup>2</sup>
  - WEAP HOLES SHALL BE PROVIDED @ 1000mm C/C THROUGH BOTH HORIZONTALLY AND VERTICALLY IN RETAINING WALL FROM GROUND LEVEL TO HIGH FLOOD LEVEL.
  - PAVING WORK SHALL BE CARRIED OUT SIMULTANEOUSLY.
  - GRADE OF STEEL SHALL BE Fe-500D CONFORMING TO IS 1786:2008.
  - 60mm THK WEARING COAT SHALL CONSIST OF LAYER OF BITUMAST ASPHALT OF 25mm THK OVER 35mm BITUMINOUS COURSE.
  - 'D' IS DEPTH OF KEY AT BASE SLAB.  
FOR BASE SLAB THICKNESS : VALUE OF 'D' UPTO 500mm : 200mm,  
GREATER THAN 500mm : 4-500mm  
'd' = BASE SLAB THICKNESS
  - 150mm THK FILTER MEDIA SHALL BE PROVIDED BEHIND RETAINING WALL.
  - FOR DETAILS OF RETAINING WALL & FLOOR PROTECTION WORKS REFER SEPARATE DRAWINGS.
  - THIS STRUCTURE LIES IN SEISMIC ZONE II.
  - TO BE TAKEN AT UPON L100.

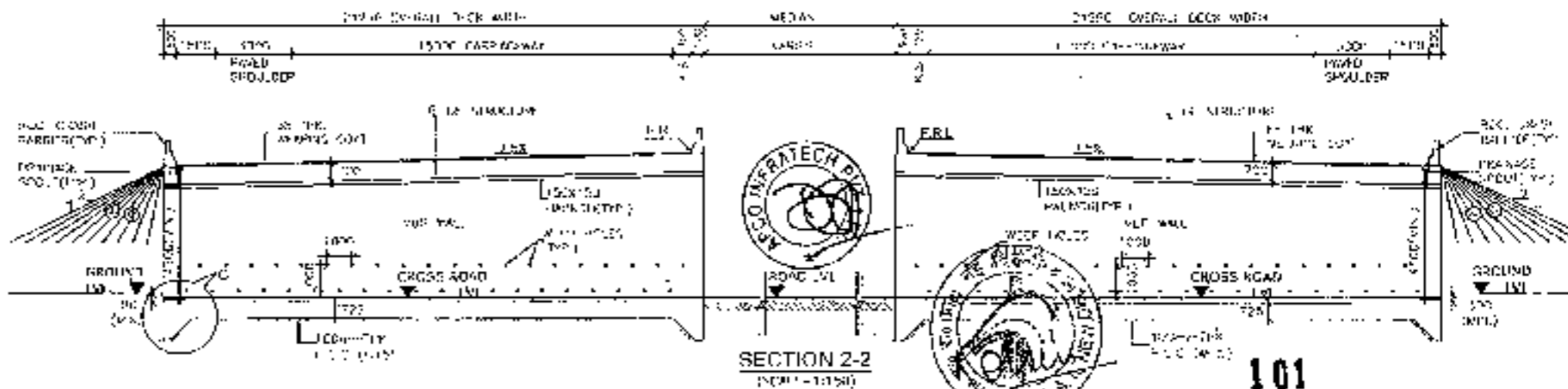
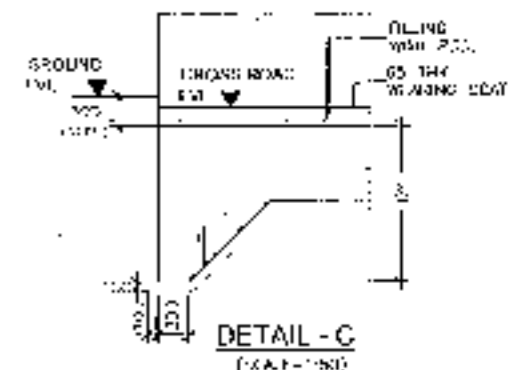
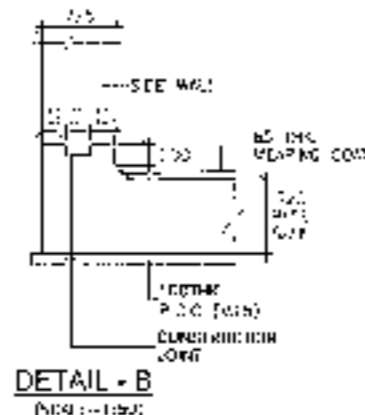
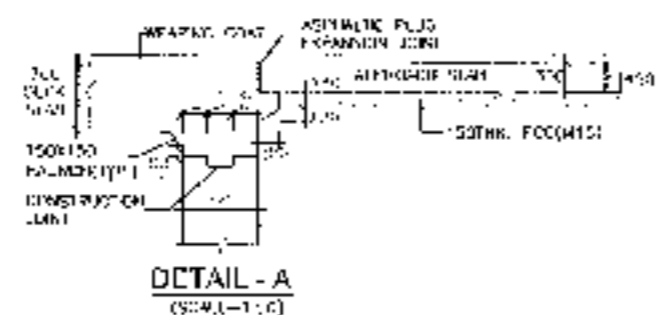
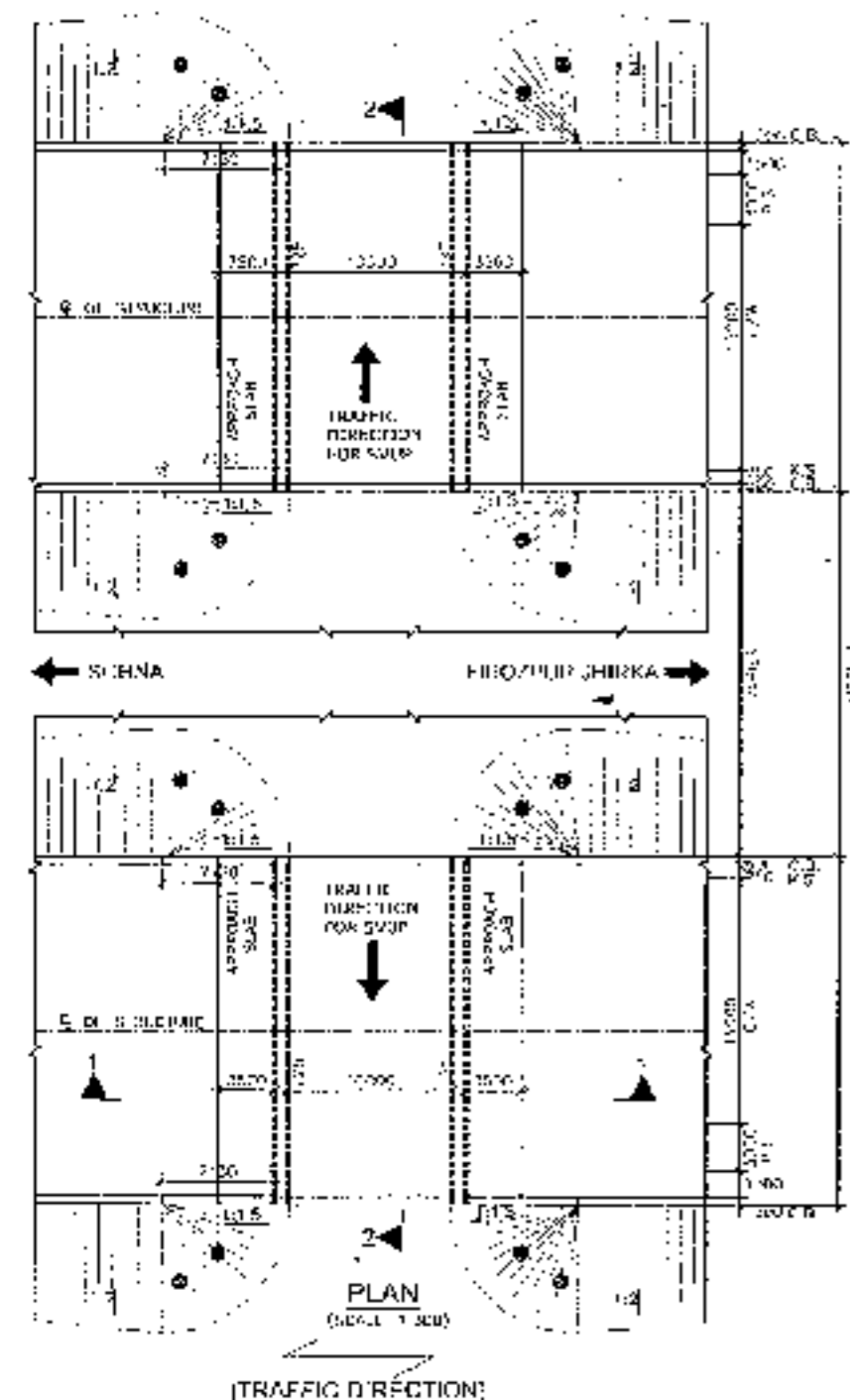
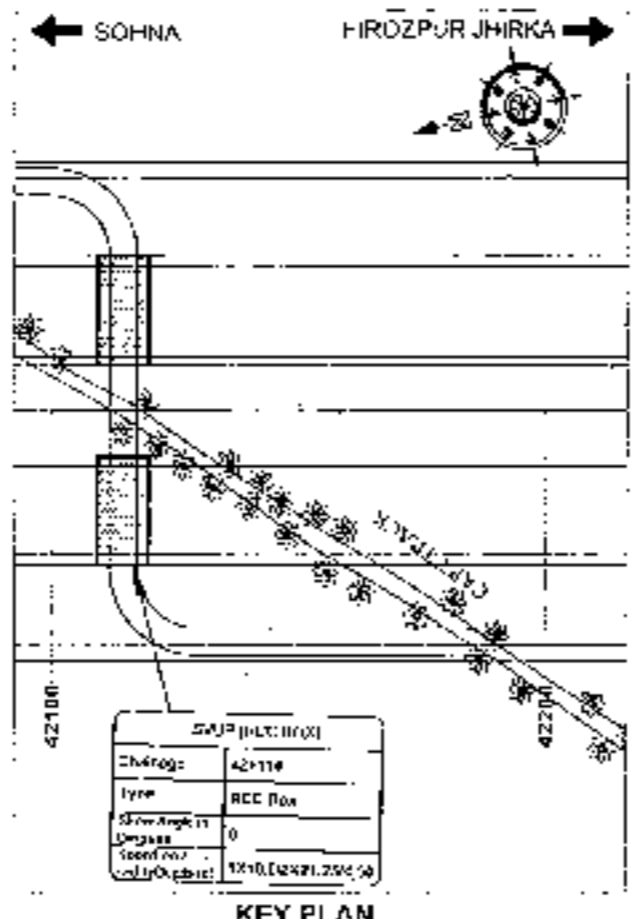
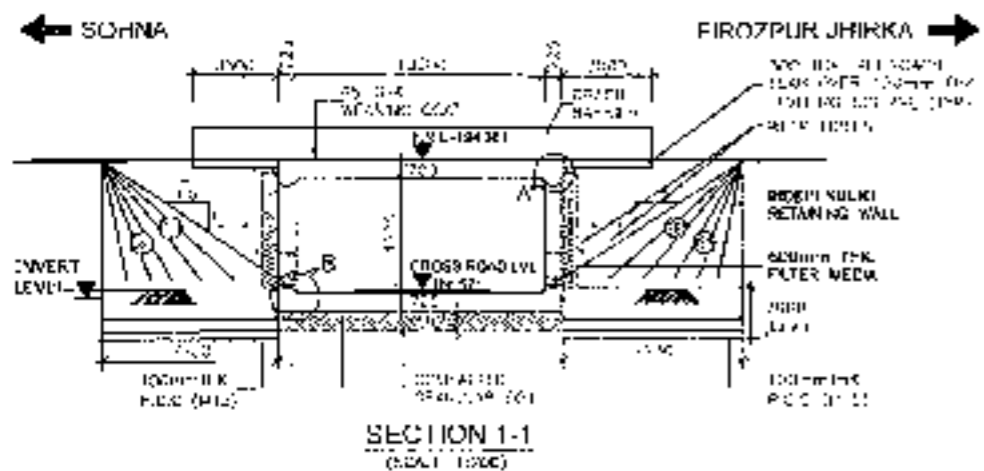
<b>CLIENT:</b> National Highways Authority of India Ministry of Road Transport & Highways, Govt of India	<b>CONSULTANT:</b> Chaitanya Projects Consultancy Pvt. Ltd. G-5, 2ND FLOOR, R.K. TOWER PLOT NO-21-22, SITE FOR 4, VASHALI, SHAJIBABAD PH: 0120-2223415, 4123472, FAX: 0120-4110472	<b>PROJECT:</b> Consultancy Services for the Preparation of Feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6/Package-4) of Sohra - Firozpur Jhirka	<b>SCALE:</b> AS SHOWN	<b>DATE:</b> AUGUST 2018 <b>GENERAL ARRANGEMENT DRAWING</b> SVUJ/S/18-1018/03/501 AT CH. 30-300 (SOHNA - FIROZPUR JHIRKA)	<b>DRAWING No.</b> LSP/18/03/03/03/03-03
					<b>DATE:</b> AUGUST 2018 <b>PREPARED BY:</b> HULSHI-SACHIN <b>CHECKED BY:</b> NARIN-SACHIN <b>APPROVED BY:</b> [Signature]

SVUP (1x10.0x4.5m.)  
@ CH.42+114



100



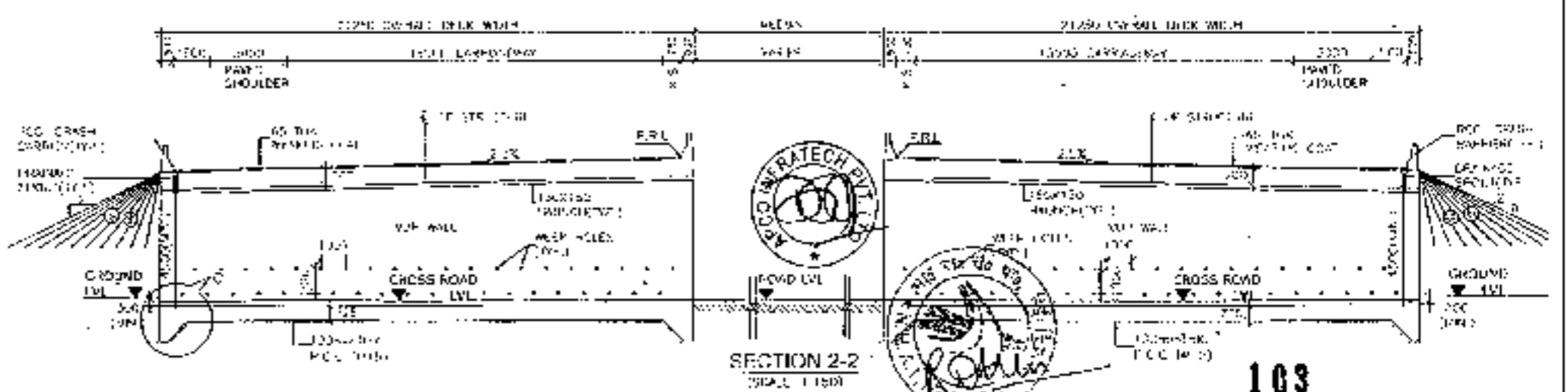
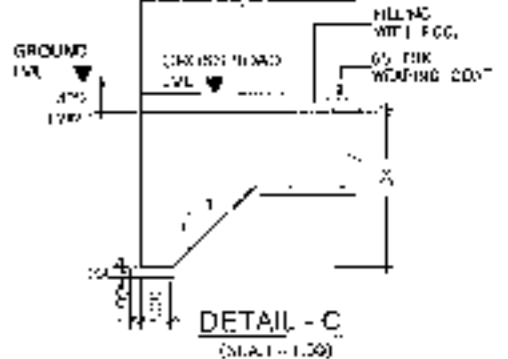
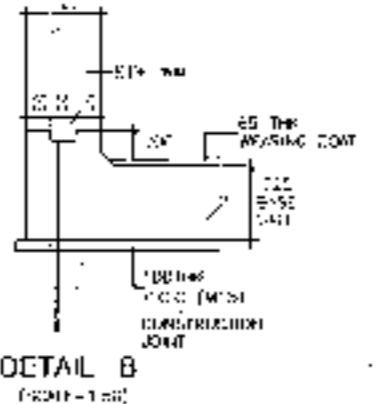
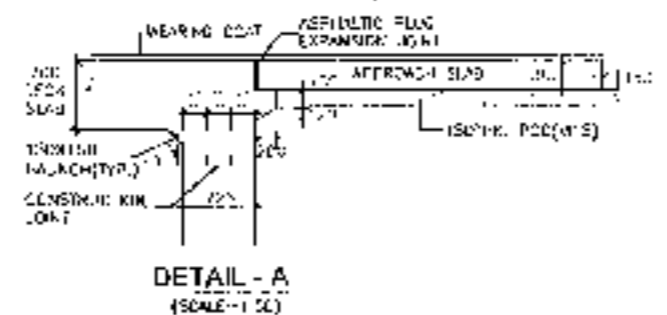
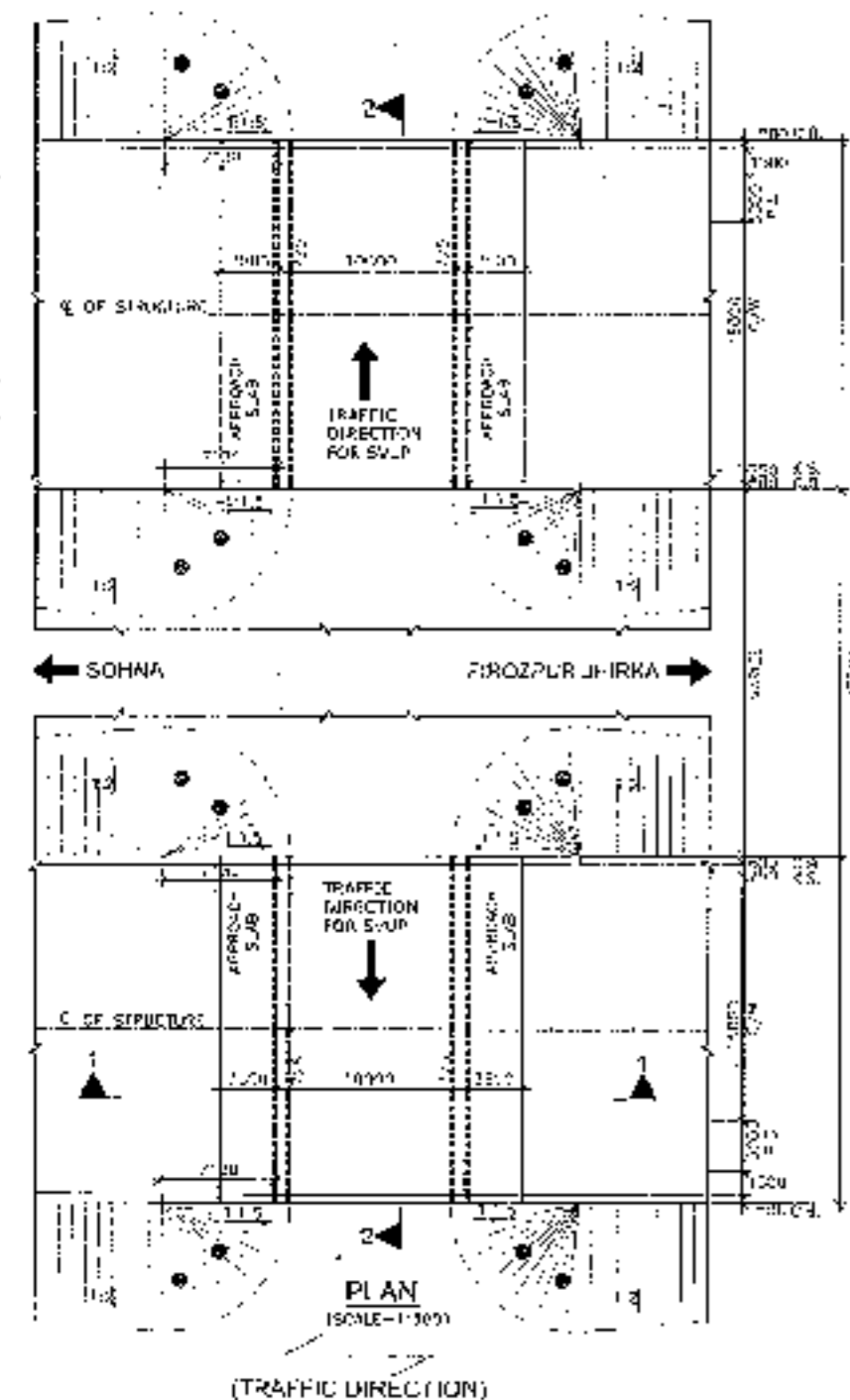
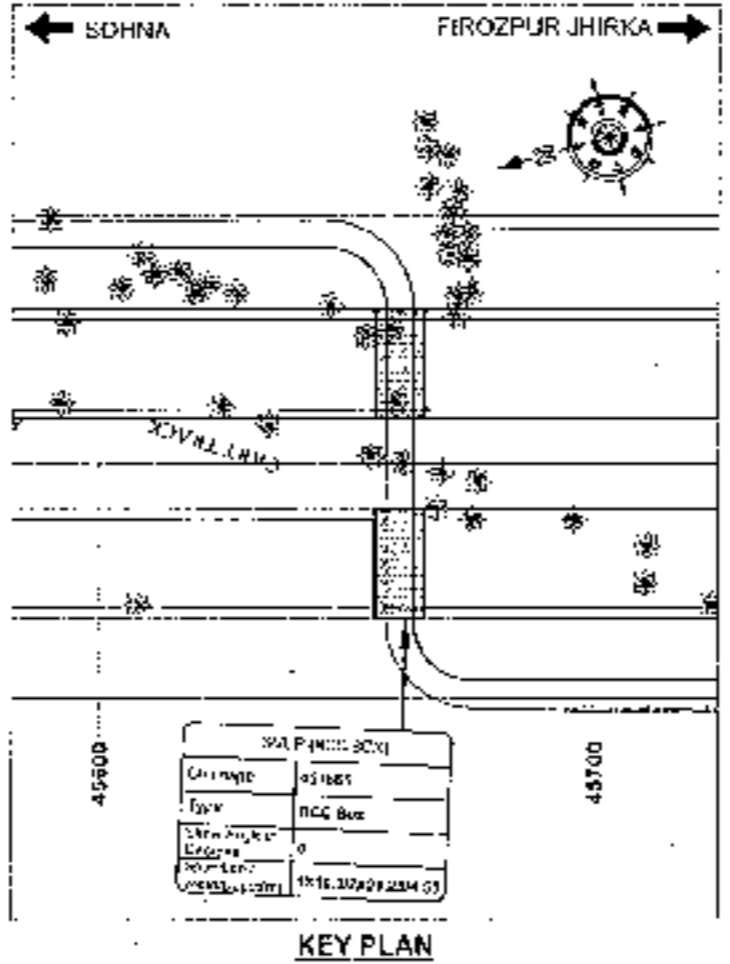
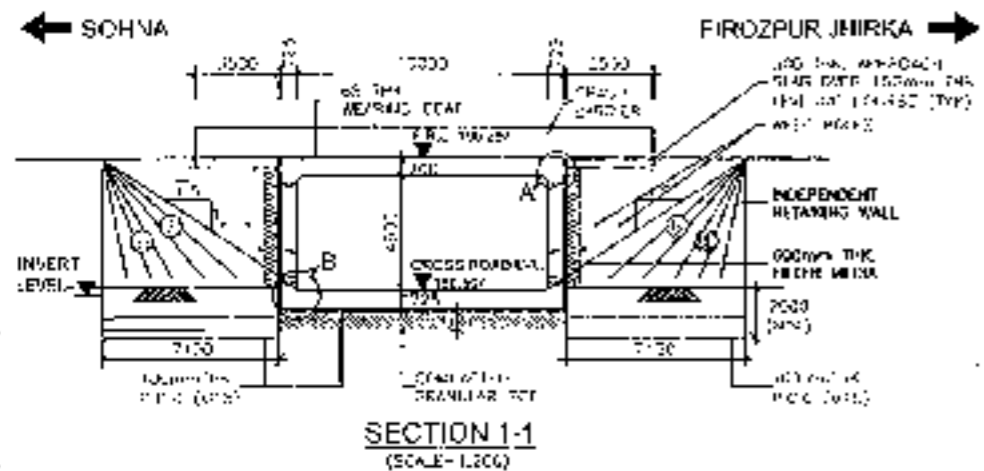


- NOTES:-**
1. ALL DIMENSIONS AND IN DIMENSIONS, LEVELS ARE IN METERS UNLESS OTHERWISE MENTIONED. THEY SHALL BE WRITTEN EXPANDED SHALL BE FOLLOWED.
  2. CHANGE & LEVEL SHALL BE WRITTEN WITH THE RELEVANT PLAN & PROFILE DRAWINGS. VARIATION (IF ANY) SHALL BE REPORTED TO ENGINEER FOR MODIFICATION.
  3. PROPERTIES OF RETAINING WALL MIX DESIGN SHALL BE AS FOLLOWS -  
 L-10, W-2, A-10, F-10, S-10
  4. EXPANSION GAP (20mm) WILL BE FILLED UP BY ASPHALTIC FLUID EXPANSION JOINT.
  5. GRADE OF FLOORING IN VARIOUS ELEMENTS SHALL BE AS FOLLOWS -  
 RCC CURB WALL - M15  
 APPROACH SLAB - M30  
 RCC BOX - M30  
 RETAINING WALL - M30  
 RCC PILING - M30  
 GRADE LAMINA - M40
  6. NET SAFE BEARING CAPACITY AT FOUNDING LEVEL (FOR DESIGN) IS AS FOLLOWS.  
 RCC - 10 t/m<sup>2</sup>  
 RETAINING WALL - 15 t/m<sup>2</sup>
  7. WEAP COAT SHALL BE PROVIDED BY 1000 MM C/C STAGGERED BOTH HORIZONTALLY AND VERTICALLY IN RETAINING WALL FROM GROUND LEVEL TO HIGH FLOOD LEVEL.
  8. BACKFILLING BEHIND BOX SHALL BE CARRIED OUT SIMULTANEOUSLY.
  9. SURF OF STIFF SOIL (E) TO BE CARRIED OUT ACCORDING TO 5:1000 SLOPE.
  10. 60MM THICK WRAPING COAT SHALL CONSIST OF LAYER OF 30MM ASPHALTIC FLUID EXPANSION JOINT OVER 30MM BITUMINOUS COURSE.
  11. 'D' IS DEPTH OF KEY AT BASE SLAB.  
 FOR BASE SLAB THICKNESS VALUE OF 'D'  
 UP TO 300mm - 1200mm  
 GREATER THAN 300mm - 41000mm  
 'd' = BASE SLAB THICKNESS
  12. 150 THK FILTER MEDIA SHALL BE PROVIDED BEHIND RETAINING WALL.
  13. FOR DETAILS OF RETAINING WALL & FLOOR PROTECTION WORKS REFER SEPARATE DRAWINGS.
  14. THIS STRUCTURE LIES IN SEISMIC ZONE V.
  15. FOR IS DRAWN AT MIDIAN LEVEL.

<b>CLIENT:-</b> National Highways Authority of India New Delhi	<b>CONSULTANT:-</b> Chaitanya Projects Consultancy Pvt Ltd C-2, 2ND FLOOR, R.K. TOWER PLOT NO.-21-22, SECTOR-4, VAISHALI, GHAZIABAD Ph. 0120-3223459, 4120472, FAX: 0120-4130472	<b>PROJECT:-</b> Consultancy Service for the Preparation for Feasibility Report (DPR) for development of Economic Corridor, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lor-RIParkaya-4) of Sohna - Firozpur Jhirka	<b>SCALE -</b> AS SHOWN	<b>OWS-TITLE</b> GENERAL ARRANGEMENT DRAWING SWP(SUMP) 1X10 (24X50) AT CH. 42+119 (SOHNA - FIROZPUR JHIRKA)	<b>DRAWING NO.</b> UPR/15/ACH/241/10-100 <b>DATE:</b> AUGUST 2018 <b>PREPARED BY:</b> K. L. DEVI SWGA <b>CHECKED BY:</b> M. B. SAH <b>APPROVED BY:</b> M. L. SAH
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SVUP (1x10.0x4.5m.)  
@ CH.45+661





- NOTES:-**
1. ALL DIMENSIONS ARE IN MILLIMETERS, EXCEPT AS OTHERWISE MENTIONED. UNLESS OTHERWISE SPECIFIED.
  2. CHANGE & LEVEL SHALL BE REFERRED WITH THE RELEVANT PLAN & PROFILE DRAWINGS. VARIATION (IF ANY) SHALL BE REFERRED TO SIGNATOR FOR MODIFICATION.
  3. PROPERTIES OF SELECTED BACK FILL BEHIND RETAINING WALL SHALL BE AS FOLLOWS:  

CB	100
FC	100
  4. EXPANSION GAP (20mm) WILL BE FILLED UP BY ASPHALTIC PEG EXPANSION JOINT.
  5. GRADE OF CONCRETE IN VARIOUS ELEMENTS SHALL BE AS FOLLOWS:-  

PCC CURB WALL	M20
APPROACH SLAB	M30
RCC BOX	M30
RETAINING WALL	M30
RCC RAILING	M20
CRASH BARRIER	M40
  6. NET SAFE BEARING CAPACITY AT FINISHING LEVEL FOR DESIGN IS AS FOLLOWS:  

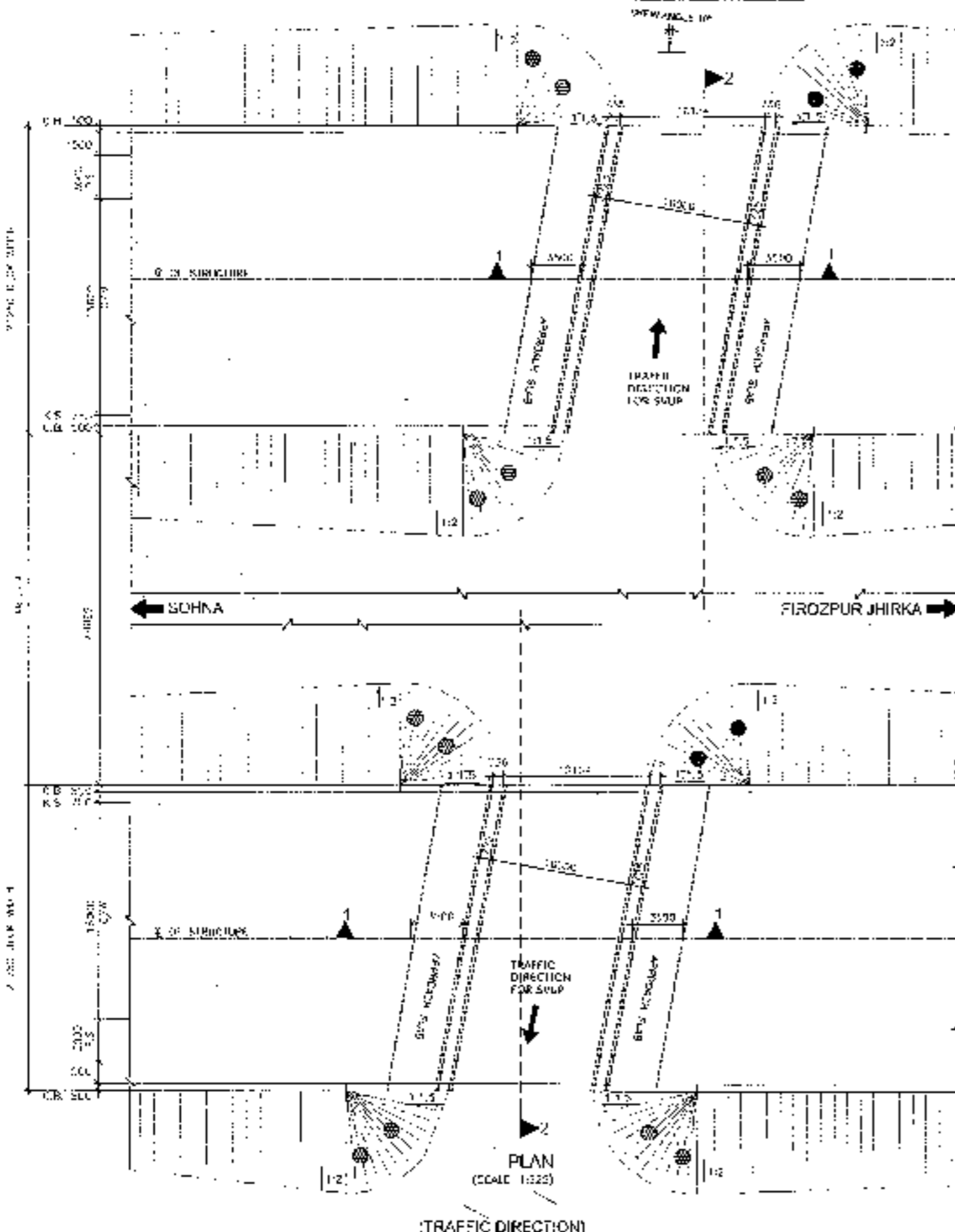
BOX	10 t/m <sup>2</sup>
RETAINING WALL	15 t/m <sup>2</sup>
  7. WEED HOLES SHALL BE PROVIDED @ 1000 MM C/C. STAGGERED BOTH HORIZONTALLY AND VERTICALLY IN RETAINING WALL FROM GROUND LEVEL TO HIGH ROAD LEVEL.
  8. BACKFILL BEHIND BOX SHALL BE CARRIED OUT SIMULTANEOUSLY.
  9. GRADE OF STAFF SHALL BE AS PER CONCERNING IS:SP:786.20003.
  10. 40MM THICK WEARING COAT SHALL CONSISTS OF LAYER OF 100MM THICK WASTE ASPHALT OF 25mm THK OVER 40MM BITUMINOUS COURSE.
  11. 'OK' IS DEPTH OF KEY AT BASE SLAB.  

FOR CONCRETE SLAB THICKNESS	VALUE OF 'OK'
UP TO 100mm	200mm
100-150mm	400mm
150-200mm	600mm
> 200mm	800mm
  12. 500 THK. FILTER MEDIA SHALL BE PROVIDED BEHIND RETAINING WALL.
  13. FOR DETAILS OF RETAINING WALL & FLOOR PROTECTION WORKS REFER SEPARATE DRAWINGS.
  14. THIS STRUCTURE LIES IN SEISMIC ZONE IV.
  15. FRI IS TAKEN AS WITHIN SLAB.

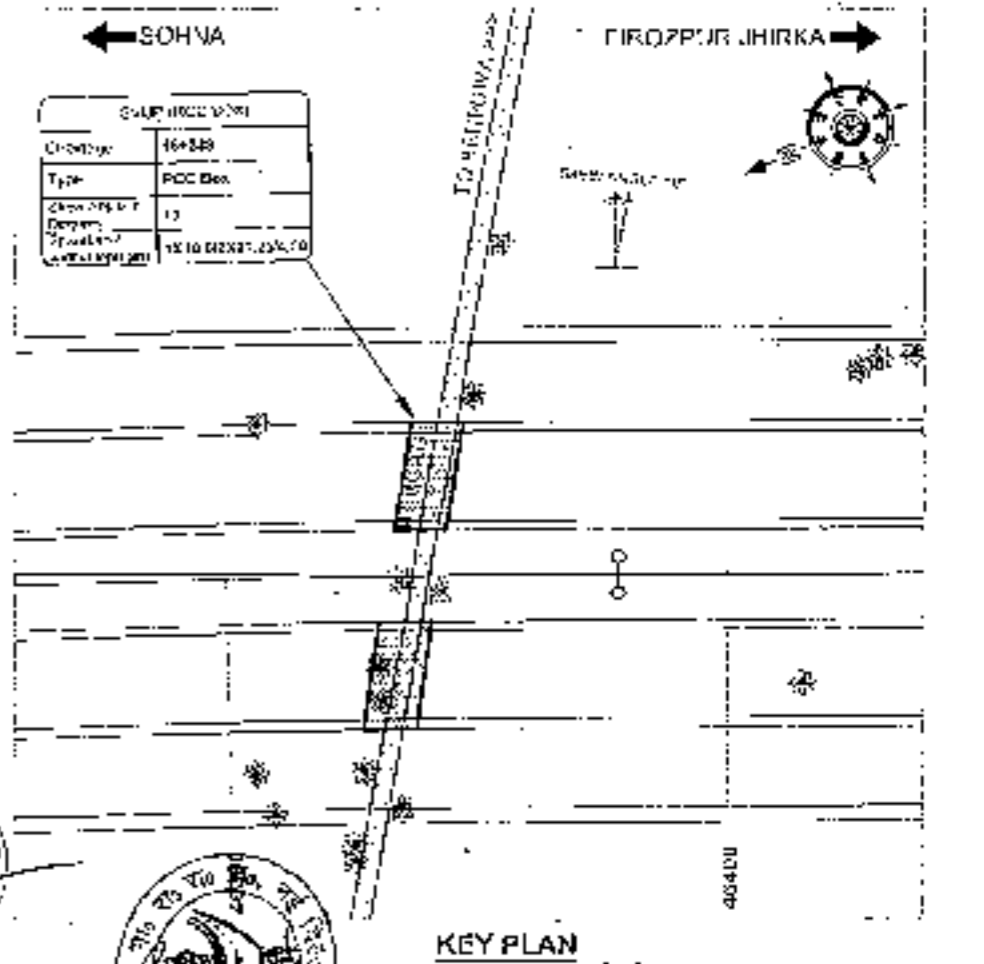


SVUP (1x10.0x4.5m.)  
@ CH.46+338

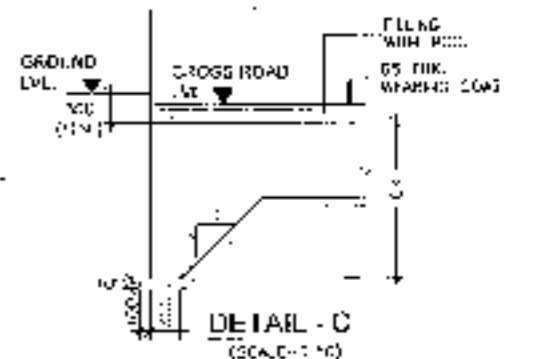
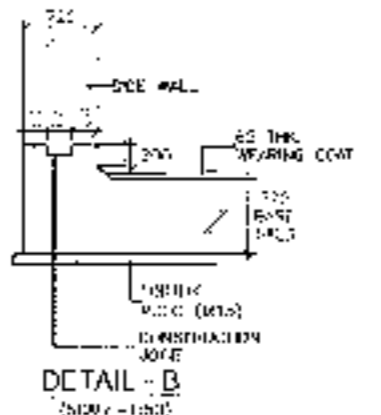
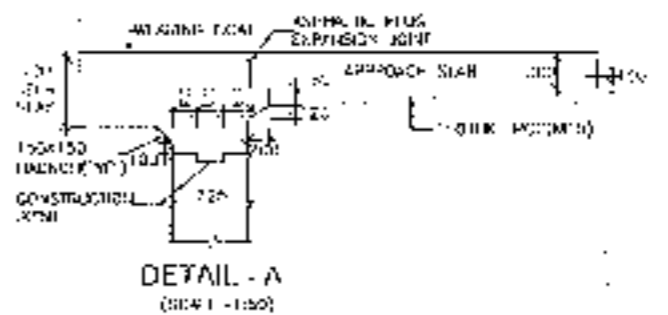
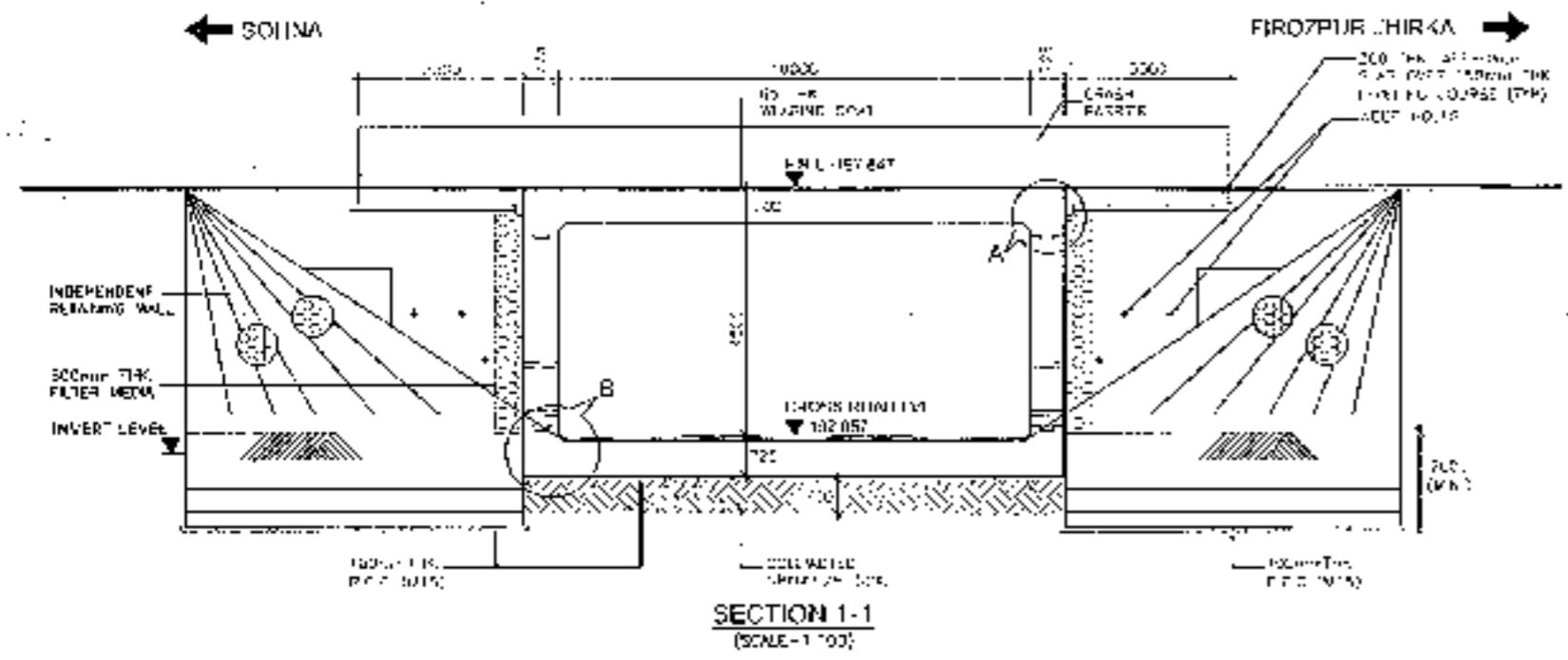
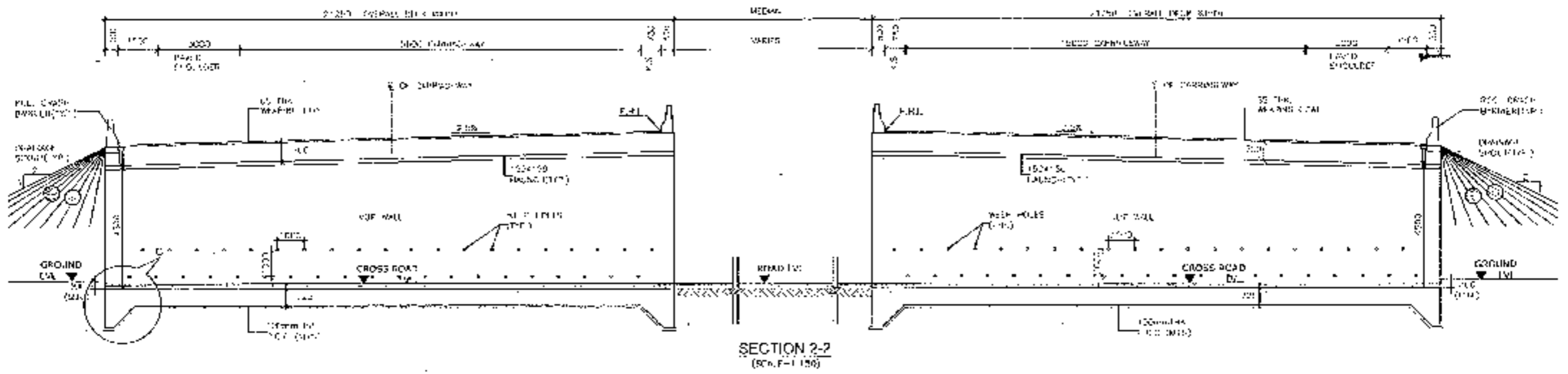




- NOTES:-**
1. ALL DIMENSIONS ARE IN MILLIMETERS. LEVELS ARE IN METERS UNLESS OTHERWISE SPECIFIED. ONLY WHITTEN DIMENSIONS SHALL BE FOLLOWED.
  2. GRADE & LEVEL SHALL BE VERIFIED WITH THE ILLUSTRATED PLAN & PROFILE DRAWINGS, WHETHER OF ANY KIND, OR REPORTED TO ENGINEER FOR MODIFICATION.
  3. PROPERTIES OF SELECTED BACK FILL BEHIND RETAINING WALL SHALL BE AS FOLLOWS:  
 C-3,  $\phi = 300 \times 20 \times 1/200$ .
  4. EXPANSION JOINT (20mm) WILL BE FILLED UP BY ASPHALTIC FLUX EXPANSION JOINT.
  5. GRADE OF CONCRETE IN VARIOUS ELEMENTS SHALL BE AS FOLLOWS:  
 RCC CURTAIN WALL : M15  
 APPROACH SLAB : M30  
 INCL. BRK : M30  
 RETAINING WALL : M30  
 RCC SAVING : M30  
 CRCS - BARRIER : M30
  6. NET UNIT BEARING CAPACITY AT FINISHING LEVEL FOR DESIGN IS AS FOLLOWS:-  
 BRK : 10 T/m<sup>2</sup>  
 RETAINING WALL : 15 T/m<sup>2</sup>
  7. WEAP JOISTS SHALL BE PROVIDED @ 1000 MM C/C STAGGERED, BOTH HORIZONTALLY AND VERTICALLY IN RETAINING WALL FROM GROUND LEVEL TO FINISH FLOOR LEVEL.
  8. BACKFILLING BEHIND SOUP SHALL BE COMING DIRECTLY FROM SOUP.
  9. GRADE OF STEEL SHALL BE Fe-250 CONFORMING TO IS 1786:2008.
  10. MINIMUM WEARING SURF SHALL CONSIST OF LAYER OF 150 MM ASPHALT @ 200mm THK OVER 100mm GRANULAR COURSE.
  11. 'D' IS DEPTH OF KEY AT CURB SLAB.  
 FOR BASE SLAB THICKNESS : VALUE OF 'D'  
 UPTO 500mm : 100mm  
 GREATER THAN 500mm : 1/20th THK  
 't' = BASE SLAB THICKNESS
  12. 600 THK FLYER MEDIA SHALL BE PROVIDED BEHIND RETAINING WALL.
  13. FOR DETAILS OF RETAINING WALL & FLOOR PROTECTION WORKS, REFER SEPARATE DRAWING.
  14. 100 STRONGITE IS IN DESIGN ZONE V.
  15. FSL IS TAKEN AT WEIR EDGE.



KEY PLAN  
105



106

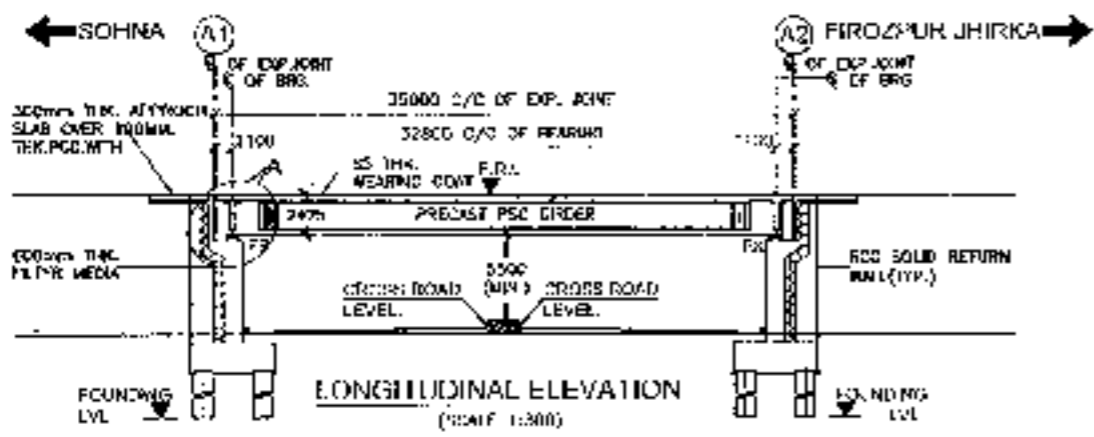
<b>CLIENT:</b> National Highways Authority of India Plot No. 10, Sector 10, Gurgaon, Haryana	<b>CONSULTANT:</b> Chaitanya Projects Consultancy Pvt. Ltd. C-5, 2ND FLOOR, R.K. TOWN PLOT NO. 21-22 SECTOR-4, VASHPALI, GHAZIABAD PH: 0120-3223619, 4120479, FAX 0120-4180472	<b>PROJECT:</b> Consultancy Service for the Preparation for Feasibility Report (RFR) for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under the national Policy (Lot 6 Package 4) of Suburb - Ferozpur Jirka	<b>SCALE:</b> AS SHOWN	<b>DWG TITLE:</b> GENERAL ARRANGEMENT DRAWING SW/1P(S)7F 1X=0.044.5m AT CH-46+338 (SCALE 1:100)	<b>DRAWING No.:</b> CH/1/2011/1F-334S/101 <b>DATE:</b> AUGUST 2012 <b>PREPARED BY:</b> K.C. SINGH <b>CHECKED BY:</b> V.K. SINGH <b>APPROVED BY:</b> M.K. SINGH
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# INTERCHANGE

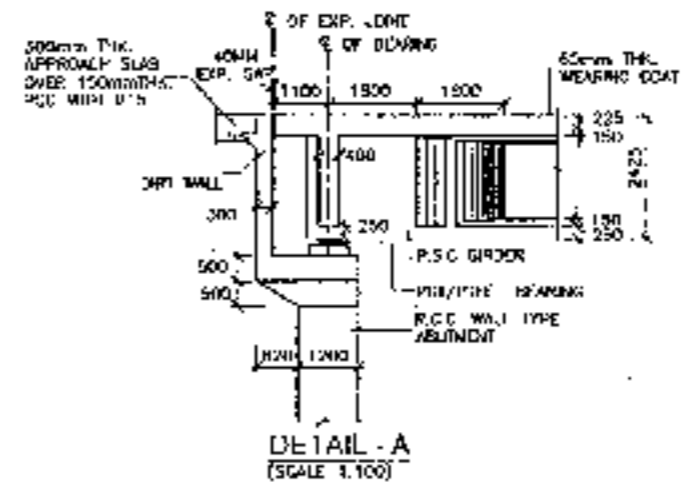


107

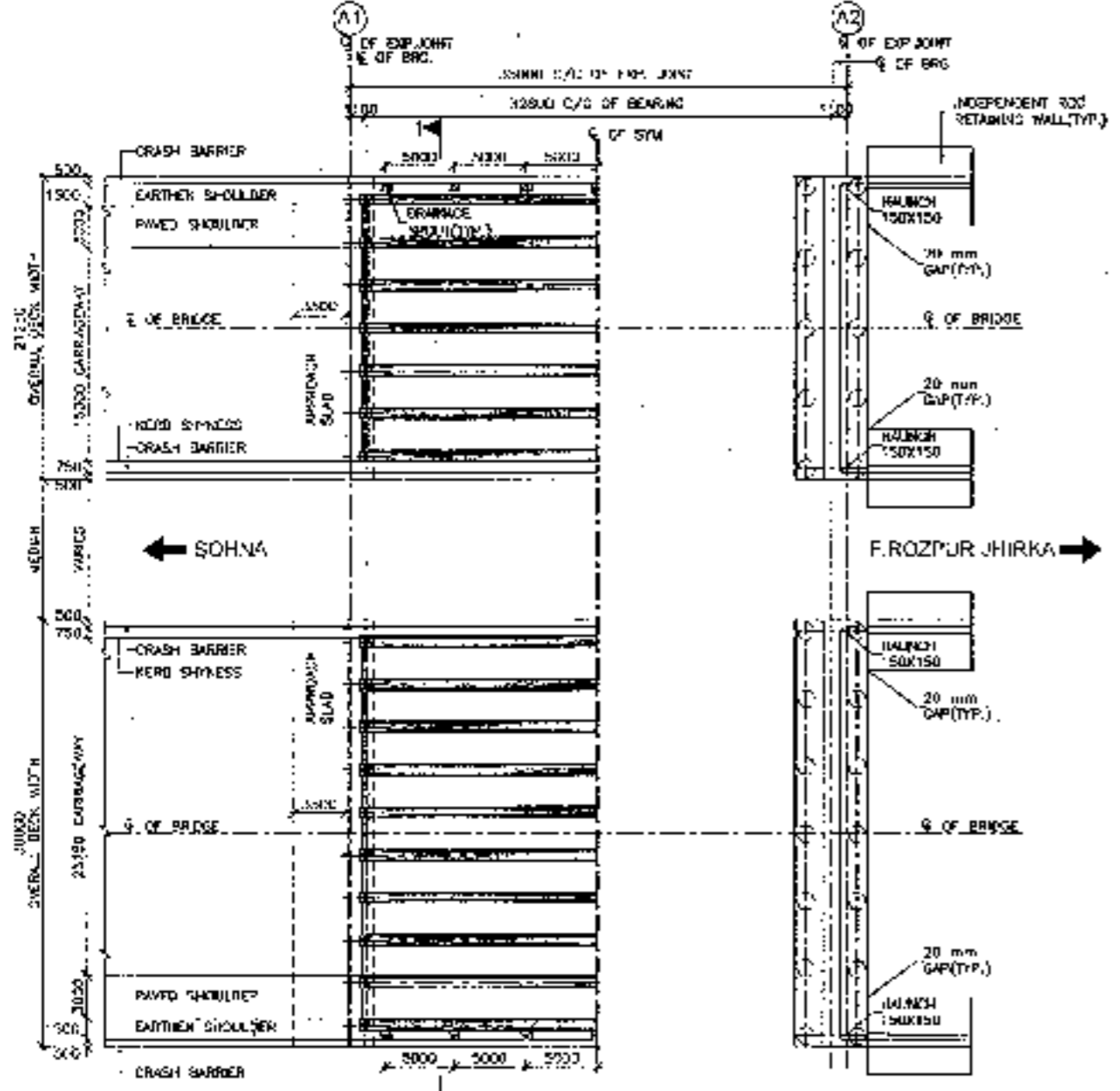




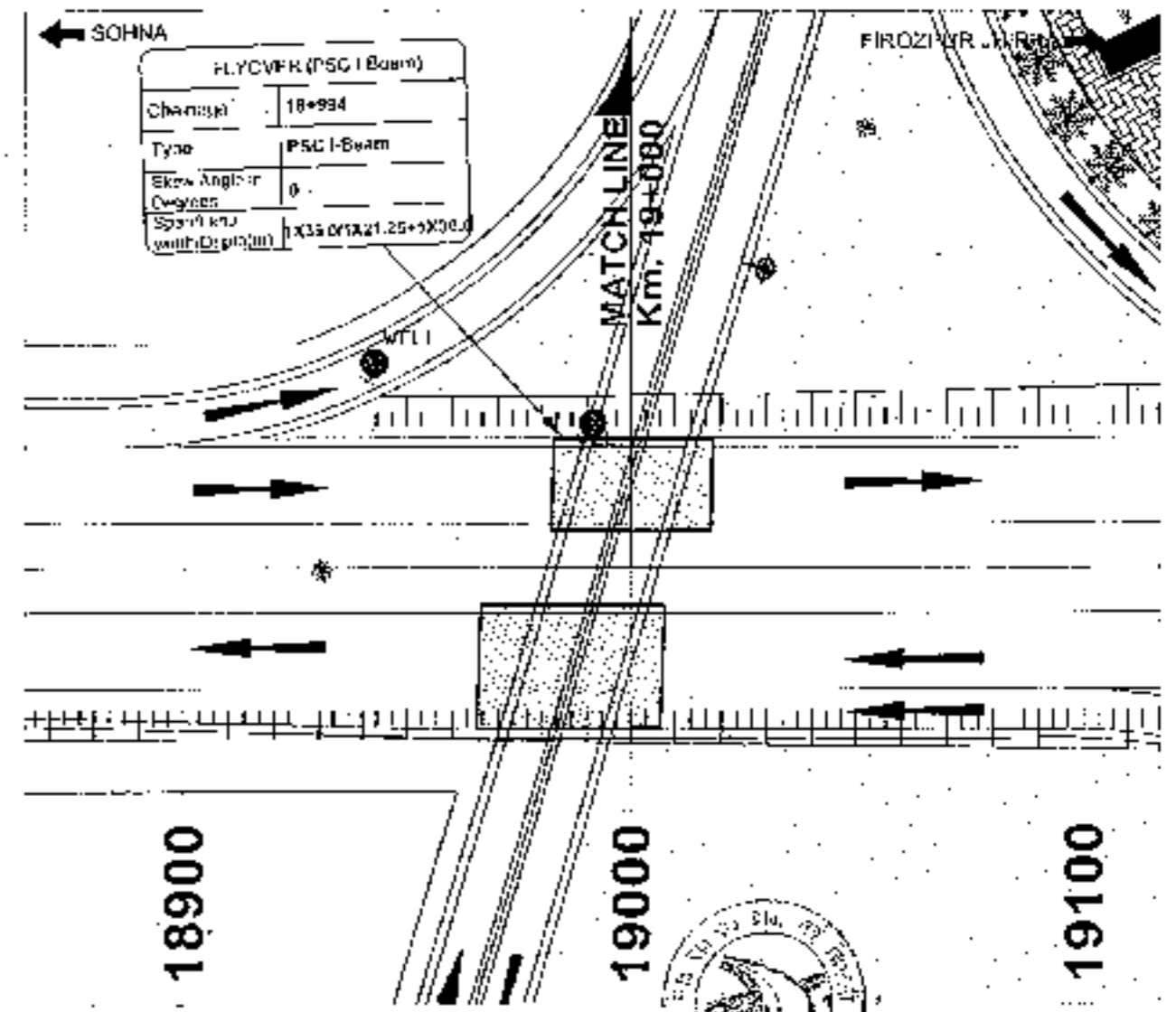
FORMATION LEVEL (m)	000.000	000.000	CHAINAGE AT 0.000 IS 19+00
GROUND LEVEL (m)	000.000	000.000	
CHAINAGE (m)	-00+017.5	00+000	00+017.5



- NOTES:-
- ALL DIMENSIONS ARE IN MM AND LEVELS ARE IN METRES UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS TO BE FOLLOWED. NO DIMENSION SHALL BE SCALE D.
  - THE PROPOSED 3 LANE BRIDGE HAS BEEN DESIGNED FOR FOR 3 LANE, CLASS A LOADING. APPROACH SPANS.
  - CONCRETE SHALL BE DESIGN MIX AND QUALITY OF CONCRETE AS SPECIFIED BELOW:-  
 PCC LEVELING COURSE : M-15  
 SUPERSTRUCTURE : M-40  
 STRUCTURE : M-35  
 CRASH BARRIER : M-40  
 APPROACH SLAB : M-30  
 RETURNING WALLS : M-35
  - GRADE OF STEEL SHALL BE Fe-500 CONFORMING TO IS:1786.
  - BACK FILLING BEHIND ABUTMENTS AND RETURN WALLS SHALL CONSIST OF SELECTED EARTH CONFORMING TO APPENDIX : B OF I.C.T.D-2000 HAVING PROPERTIES C=0, φ=30°  
 s=20% & q = 25 KN/m<sup>2</sup>
  - LAYING TECHNIQUE AND PATTERN OF REINFORCEMENT SHALL BE AS PER IS:456 AND IS:456 PART 2. REFER TO SPECIFICATIONS IN APPENDIX : B OF I.C.T.D-2014
  - REINFORCEMENT SHALL BE PROVIDED WITH NEARLY HORIZONTAL AND VERTICALLY SHALL BE PROVIDED IN A STAGGERED MANNER IN ABUTMENTS AND RETURN WALL TILL 100 mm ABOVE GROUND LEVEL.
  - 50mm THK. WEARING COAT SHALL BE AS PER SPECIFICATIONS
  - ALL DIMENSIONS ARE TENTATIVE AND MAY BE CHANGED AFTER DETAIL DESIGN.

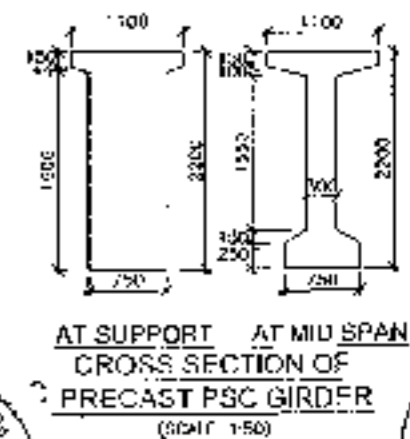
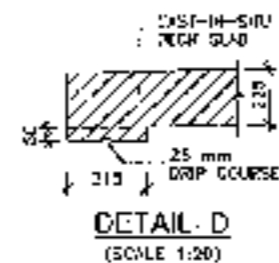
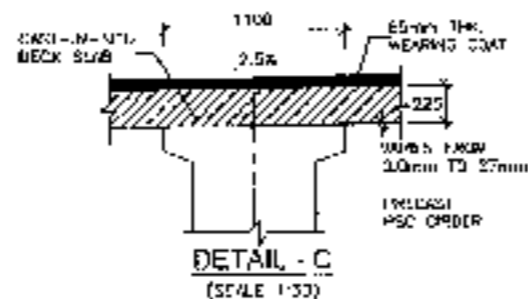
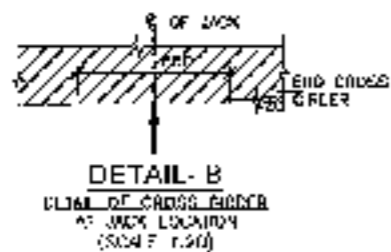
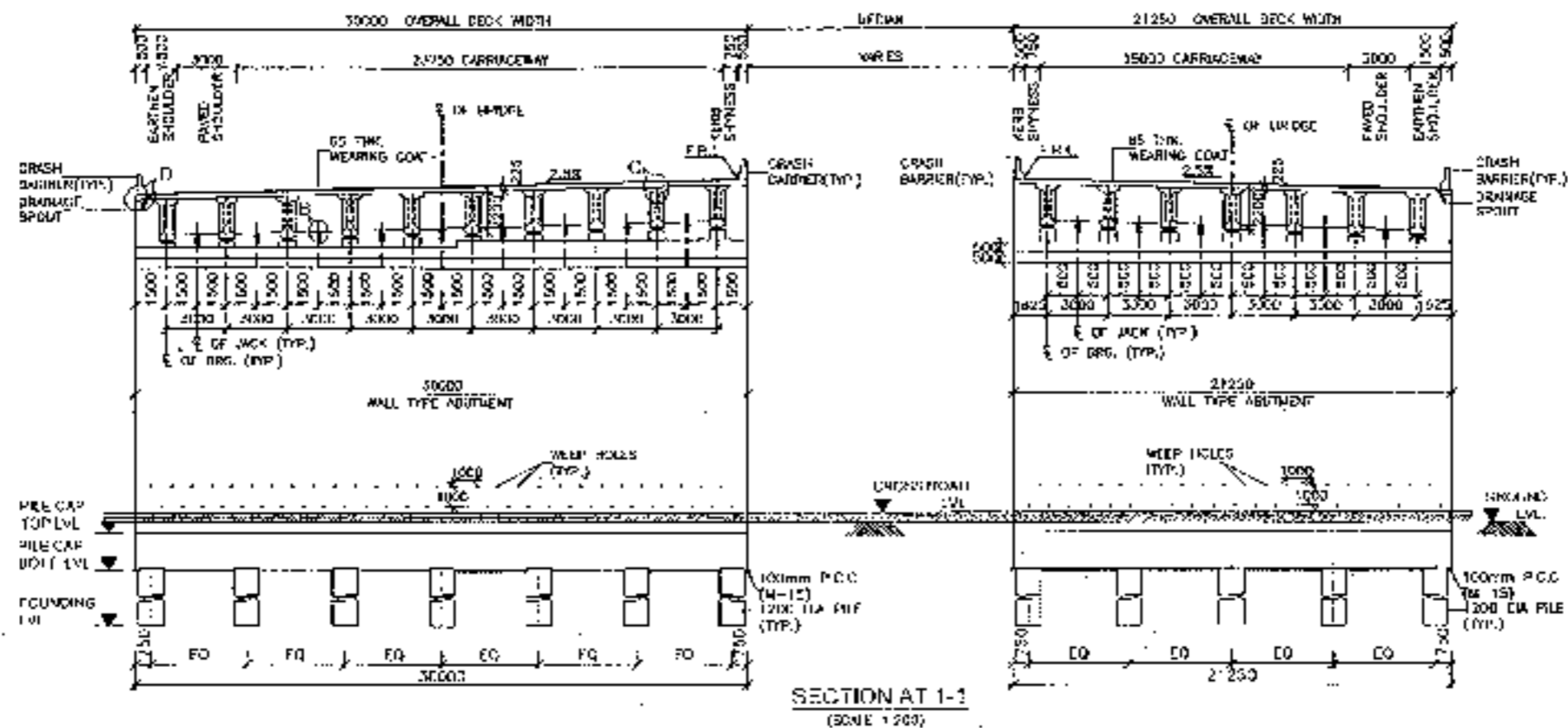


HALF TOP PLAN (SCALE 1:300) HALF BOTTOM





KEY PLAN

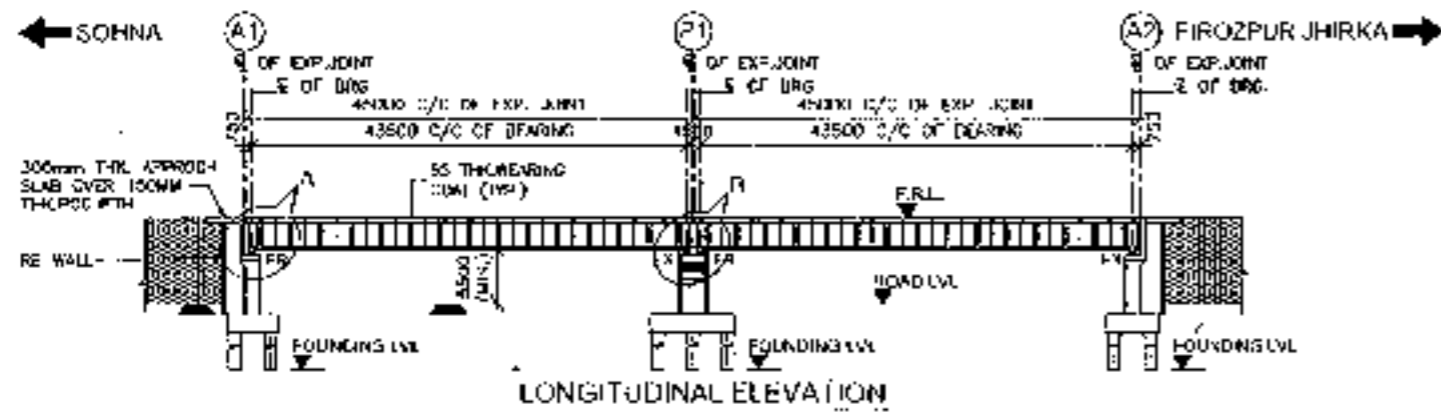
<b>CLIENT:-</b> National Highways Authority of India Ministry of Road Transport and Highways, Government of India	<b>CONSULTANT:-</b> Chaitanya Projects Consultancy Pvt. Ltd. C-5, 2ND FLOOR, P.K. TOWER PLOT NO. 21 22, SECTOR-4, VAISALI, GHAZIABAD TEL: 9120-3223419, 4120472, FAX: 0120-4113472	<b>PROJECT:-</b> Consultancy Service for the Preparation for Feasibility Report/ DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bilateralship Pariyojana (Lot-6/Package-4) of Sohna - Firozpur Jhirka	<b>SCALE:-</b> AS SHOWN	<b>DWG TITLE:-</b> GENERAL ARRANGEMENT DRAWING (SPAN 1 X 35.03 M @ EXP. JOINT) AT LN - 19+000 (SOHNA - FIROZPUR JHIRKA)	<b>DRAWING NO.:</b> C/P/12/2014/15-0001/109 <b>DATE:</b> AUGUST 2014 <b>PREPARED BY:</b> SHRINIKET <b>CHECKED BY:</b> NADIP SAHA <b>APPROVED BY:</b> M. S. GUPTA
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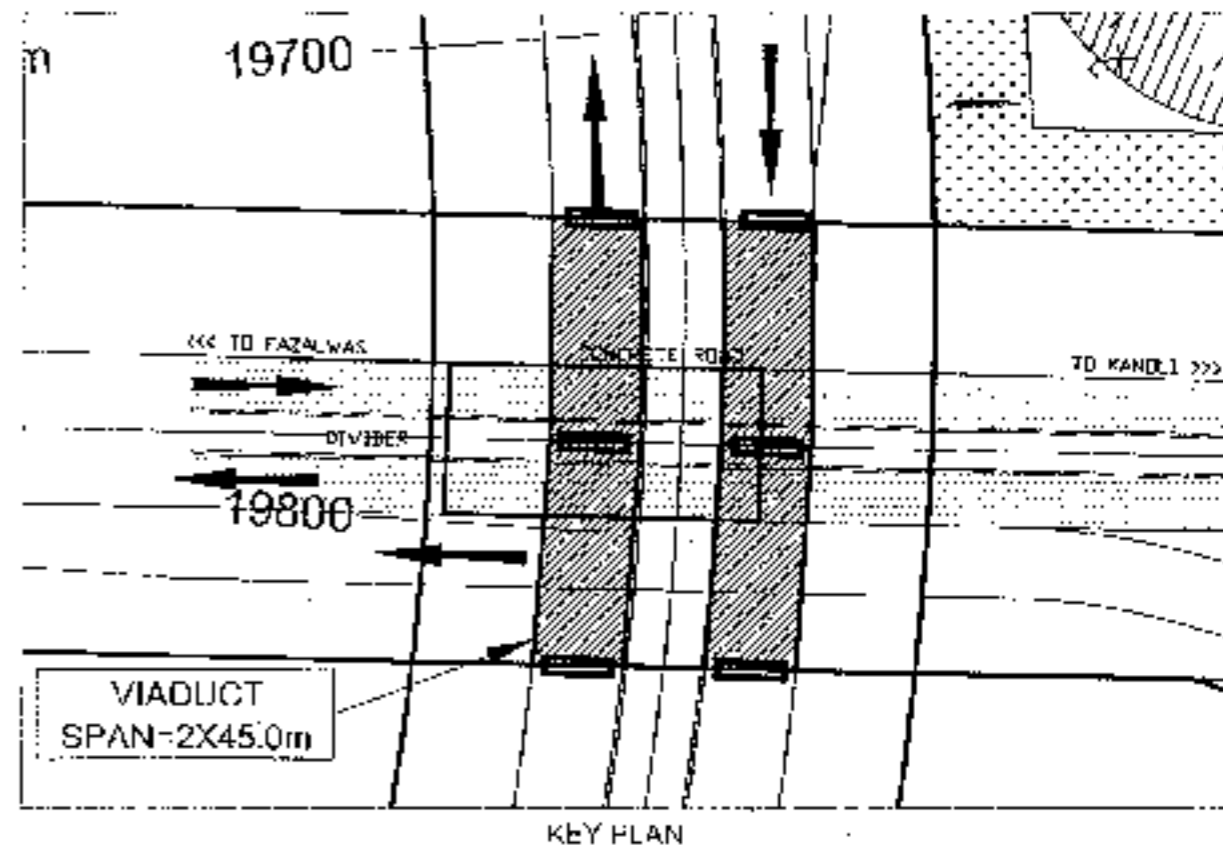
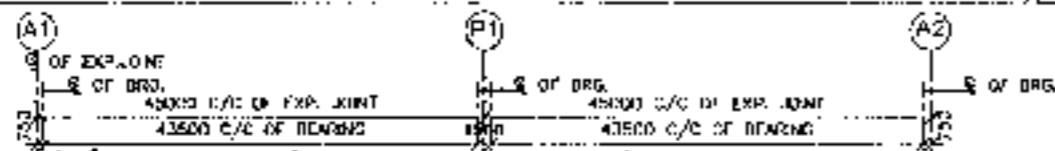
109



<b>CLIENT</b>  National Highways Authority of India Ministry of Road Transport & Highways, Govt. of India	<b>CONSULTANT</b>  Chaitanya Projects Consultancy Pvt Ltd C-5, 2ND FLOOR, RK TOWER PLOT NO. 21-22, SECTION-4, VAISHALI, GHAZIABAD PH: 9120-3223449, 41780477, FAX: 0120-41180472	<b>PROJECT</b> Consultancy Service for the Preparation for Feasibility Report/DPR for Development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (I to II Package-4) of Sabar - Circum Jharkh	<b>SCALE</b> AS SHOWN	<b>DWG TITLE</b> GENERAL ARRANGEMENT DRAWING (SPAN 1 X 35 TO MCC EXP. JOINT) AT CH-19(09) (SOHNA - FIROZPUR - HIRKA)	<b>DRAWING No.</b> CHCP-182-011-19-01042-10 <b>DATE</b> AUGUST 2022 <b>PREPARED BY</b> MUNISHUCCI <b>CHECKED BY</b> NAGESH KALWA <b>APPROVED BY</b> HIRKA
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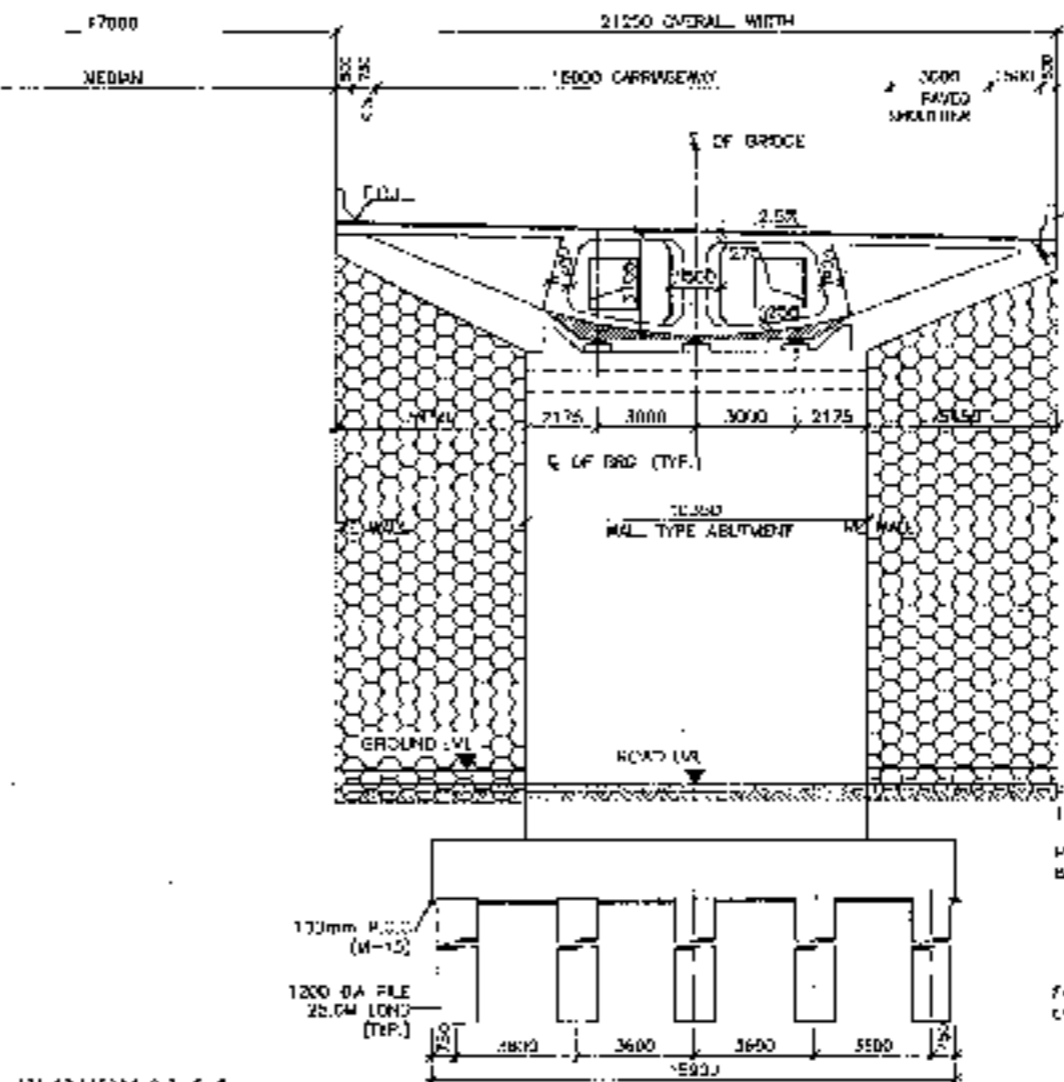
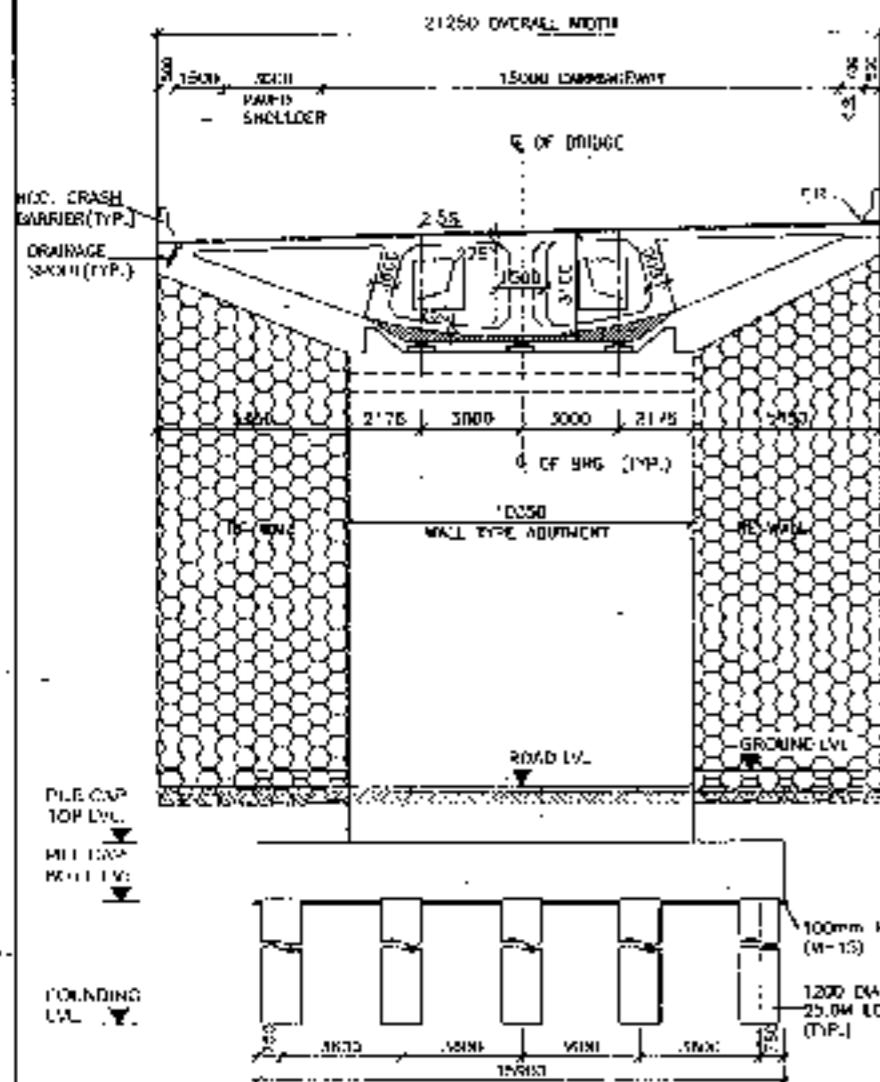


CHAINAGE (m) 0+000 0+400 0+800 0+805 CHAINAGE AT DIVISION IS 10+724

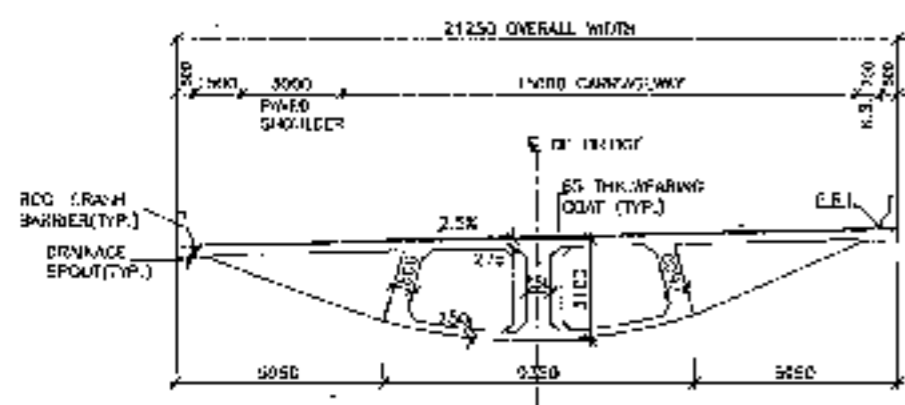


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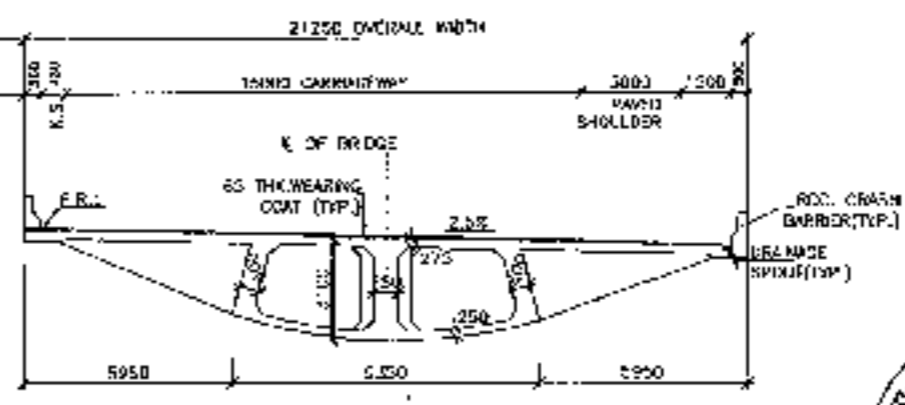
<p>CLIENT:- National Highways Authority of India</p>	<p>CONSULTANT:- Chaitanya Projects Consultancy Pvt. Ltd. 1/A, 2ND FLOOR, H.K. TOWER, PLOT NO. 21/22, SECTOR-4, VAISHALI, GHAZIABAD. PH. 0120-3225419, 4723472, FAX 0120-4180472</p>	<p>PROJECT:- Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-5/Package-4) of Sohna - Firozpur Jhirka</p>	<p>SCALE:- AS SHOWN</p> <p>DWG TITLE:- GENERAL ARRANGEMENT DRAWING SPAN (1 X 45.0 M C/C EXP. JOINT) AT CH. 81704 (SOHNA - FIROZPUR JHIRKA)</p>	<p>DRAWING No. 19/2014-01 DATE: AUGUST 2014 PREPARED BY: [Signature] CHECKED BY: [Signature] APPROVED BY: [Signature]</p>
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SECTION AT 1-1  
(SCALE 1:150)



SECTION AT 2-2  
(SCALE 1:150)



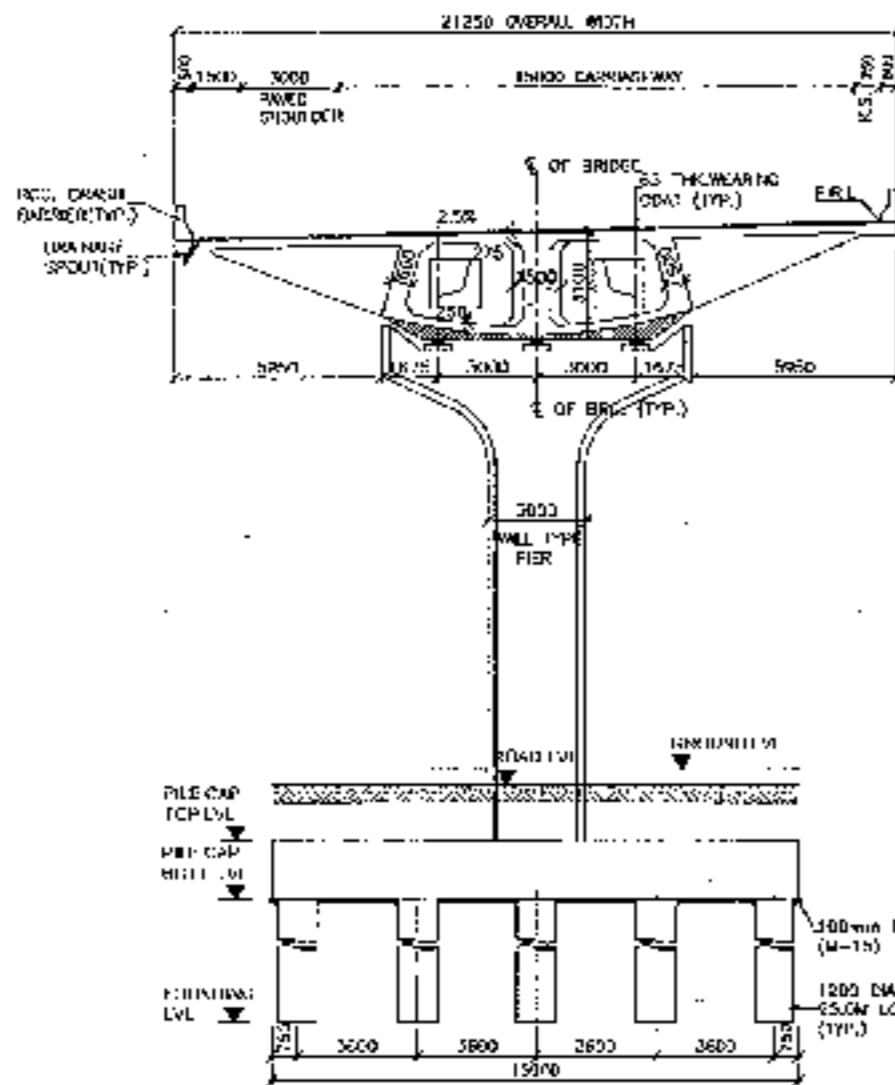
- NOTES:**
1. ALL DIMENSIONS ARE IN METRE UNITS AND LEVELS IN METRES UNLESS MENTIONED OTHERWISE.
  2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
  3. GRADE OF CONCRETE IN VARIOUS COMPONENTS SHALL BE AS UNDER:
    - STRUCTURE: M45
    - SURFACE STRUCTURE: M45
    - CRASH BARRIER: M45
    - APPROACH ROAD: M33
    - INDEPENDENT RETAINING WALL: M33
  4. THE BRIDGE IS DESIGNED FOR ONE LANE OF CLASS A TRAFFIC OR CLASS A LOADING OR 3 LANE OF CLASS A LOADING WHICHEVER.
  5. UNITS SHALL BE ORIENTED PERPENDICULAR TO THE BRIDGE AXIS AND SHALL BE ALIGNED ALONG THE HORIZONTAL LINE.
  6. FOUNDATION DEPTH SHALL BE VERIFIED AFTER CONFIRMATORY BORE HOLE.
  7. THE SAFE BEARING CAPACITY OF PILE AT FOUNDATION LEVEL IS:
    - (a) 300 TON FOR PILE FOUNDATION
    - (b) 25 TON FOR CEMENT FOUNDATION
  8. BACK FILLING BEHIND ABUTMENTS SHALL CONSIST OF SELECTED EARTH CONFORMING TO APPENDIX 6 OF H.O. TO 2002 HAVING PROPERTIES: C=1, Ø=30°, 6-20% & W=18 KN/M<sup>3</sup>.
  9. WEED HOLE: SPACED AT 100 CM BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED IN A STAGGERED MANNER IN ABUTMENT WALLS.
  10. CONSTRUCTION OF ABUTMENT TYPE CAN BE CARRIED OUT WITH A PILING MACHINE IN SEPARATE STEPS IN CONJUNCTION WITH BEARING MACHINE OPERATOR AS APPROVED BY ENGINEER IN CHARGE AND ALSO TO SUIT THE REQUIREMENTS OF CONSTRUCTION SCHEME AND FOR PROVIDING ACCESS FROM DECK FOR INSPECTION PURPOSES.
  11. STRIP REAL TYPE EXPANSION JOINTS SHALL BE PROVIDED.
  12. POT CURVED JOINTS SHALL BE PROVIDED.
  13. THE FOUNDATIONS HAVE BEEN SURVEILED ON 15 UNITS OF THE GEOTECHNICAL INVESTIGATION REPORT. IF DURING ACTUAL EXECUTION THE SUB SOIL STRATA IS FOUND TO BE DIFFERENT FROM THAT SHOWN IN THE ABOVE REPORT, THE DESIGN SHALL BE SUITABLY MODIFIED.
  14. CONFIGURATION OF GROUND CROSS SECTION TO BE MAINTAINED THROUGHOUT EXECUTION OF WORK.
  15. FOR DETAILS OF RETAINING WALLS FOLLOW THE H.O. TO 2002 (PART II).
  16. FOR DETAILS OF CRASH BARRIER, DRAINAGE SPOUT, ETC. TO BE USED IN WALL DRAWING.
  17. CONDITION OF EXPOSURE WITH DIMENSION SHALL BE AS PER H.O. TO 2002 (PART II).



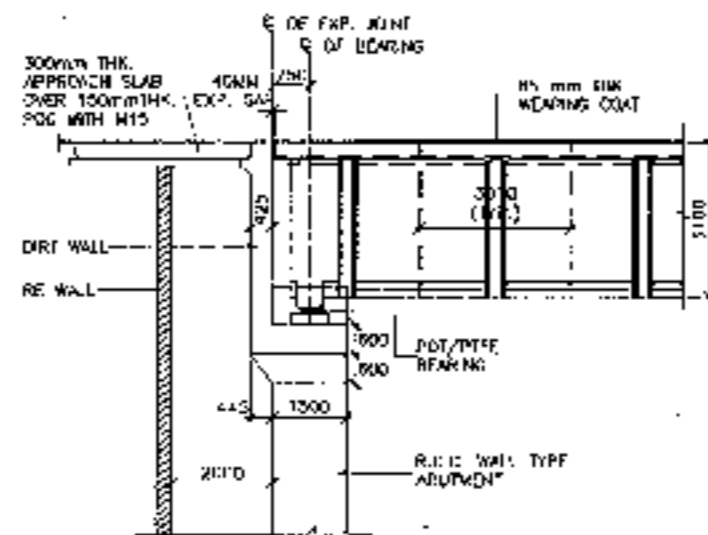
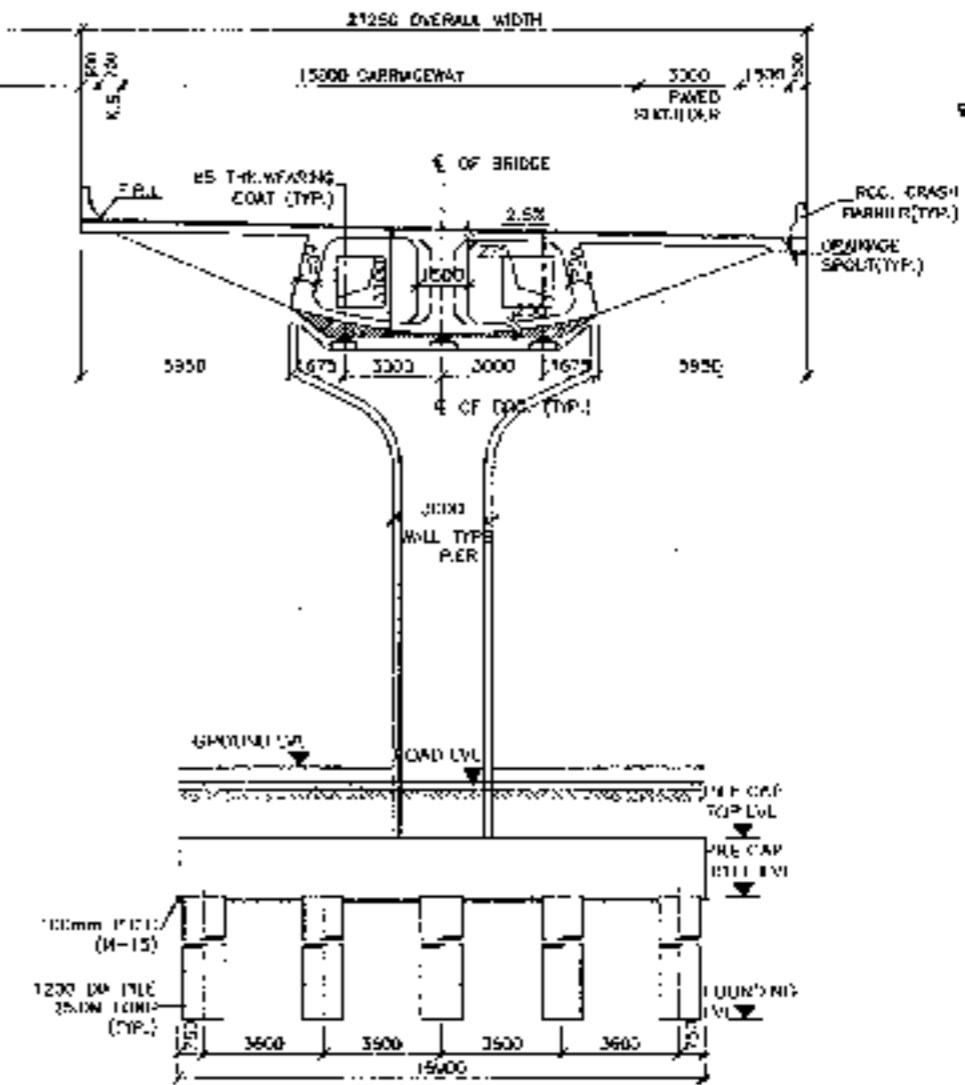
111

<p>CLIENT:- National Highways Authority of India</p>	<p>CONSULTANT:- Chaitanya Projects Consultancy Pvt. Ltd. C-5 2ND FLOOR, P.K. TOWER PLOT NO. 21-27 SECTOR-6, VAISHALI, GHAZIABAD PH: 0120-3221415, 4123474, FAX: 0120-4113472</p>	<p>PROJECT:- Consultancy Service for the Preparation for Feasibility Report (DPR) for development of Economic Corridors, Intra Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-02 Package-1) of Solani - Ferozpur Jharkh</p>	<p>SCALE: AS SHOWN</p>	<p>DWG TITLE:- GENERAL ARRANGEMENT DRAWING SPAN (1 X 45.0 M) (C EXP. JOINT) AT CH. 19+784 (S-7-KA) (PROJ. IN. INRR)</p>	<p>DRAWING NO.:- LPCP/1520/19/TMS/101 DATE: MARCH 2016 PREPARED BY: [Signature] CHECKED BY: [Signature] APPROVED BY: [Signature]</p>
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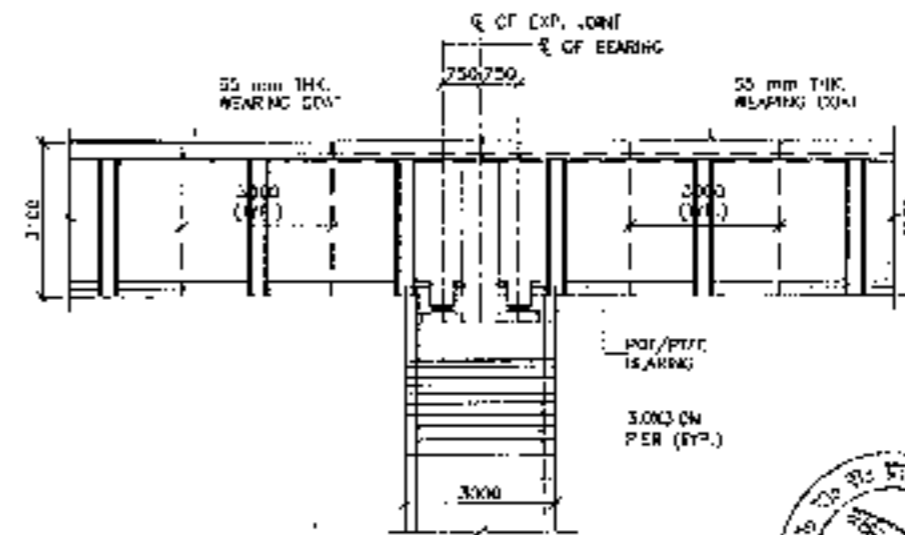




SECTION A: 3-3  
(SCALE 1:150)



DETAIL - A  
(SCALE 1:100)

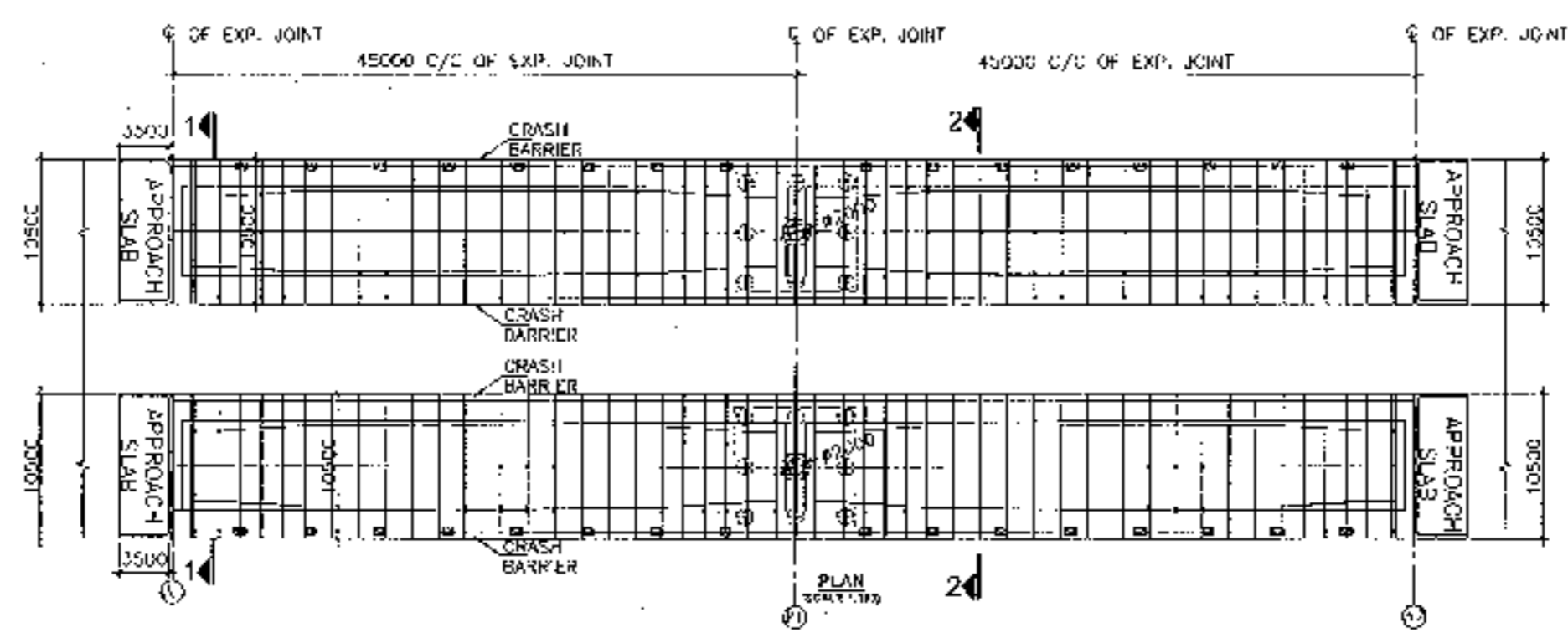
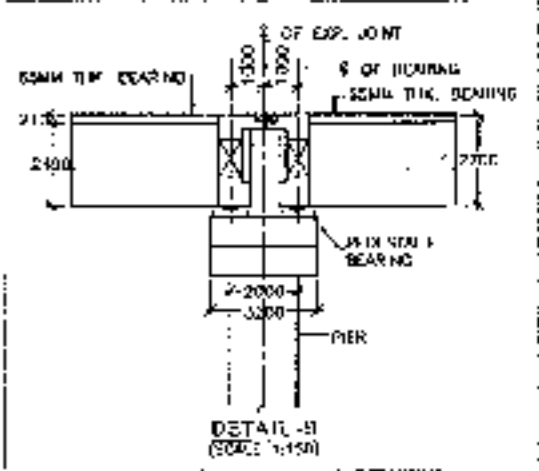
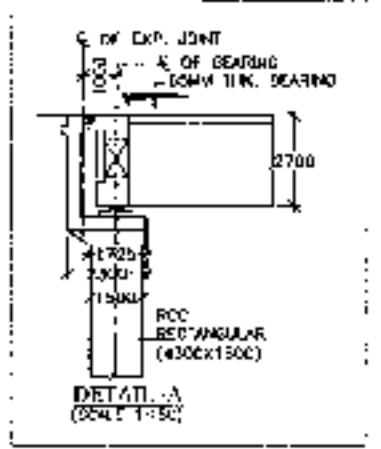
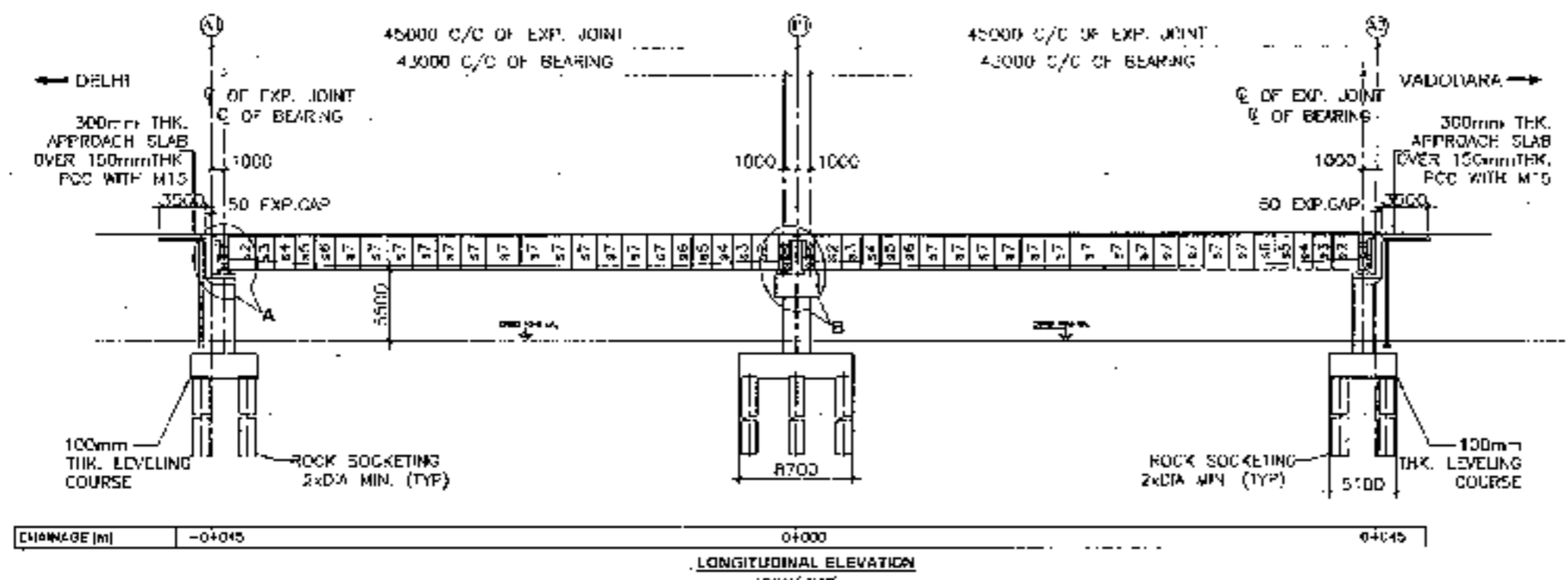


DETAIL - B  
(SCALE 1:100)





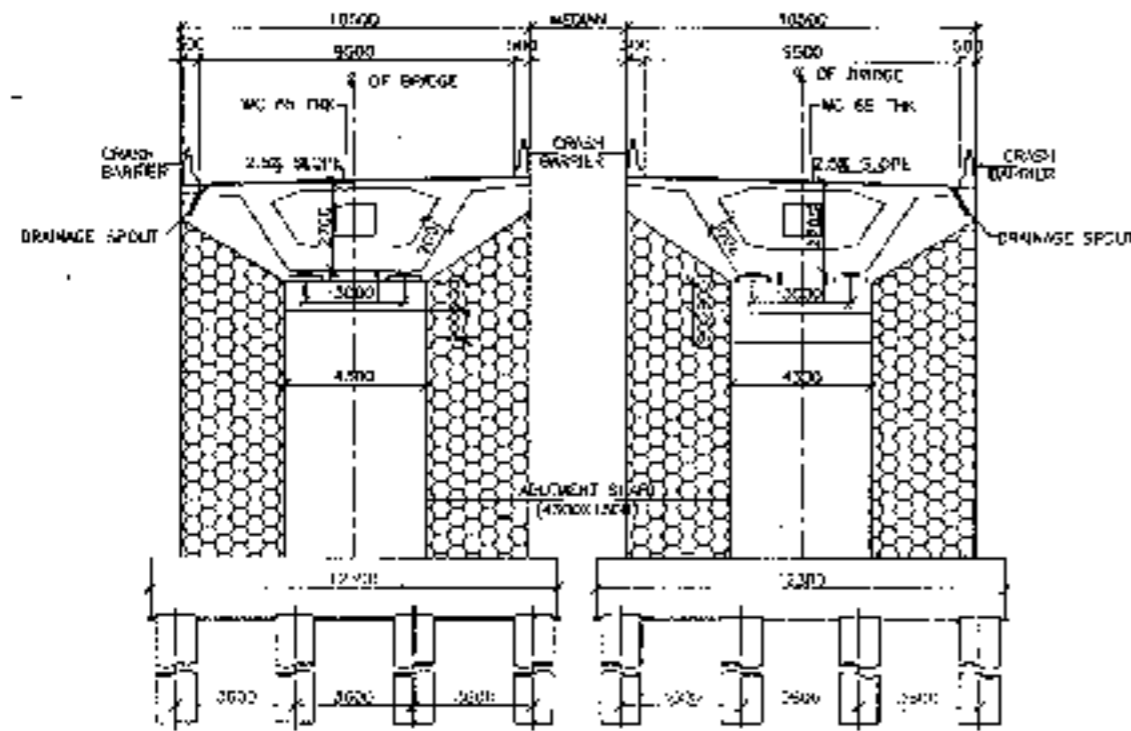
112

<p>CLIENT: National Highways Authority of India</p>	<p>CONSULTANT: Chaitanya Projects Consultancy Pvt. Ltd. G-5, 2ND FLOOR, R.K. TOWER PLOT NO. 21/22, SECTOR-4, VAISHALI, GHAZIABAD PH.: 0120-425419, 412442, FAX: 0120-4110117</p>	<p>PROJECT: Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojaya (Lot-6/Parikrma-4) of Solina - Ferozpur Jhirka</p>	<p>SCALE: AS SHOWN</p>	<p>DWG TITLE: GENERAL ARRANGEMENT DRAWING SPAN (1) X 25.0 M GC EXP JOINT, AT CH 194/84 (SOLINA, HIRAPUR JHIRKA)</p>	<p>DRAWING No.: C/CP/102/CH-19/1940-10 DATE: AUGUST 2018 PREPARED BY: CHECKED BY: DESIGNED BY: REVISION: 01/1</p> <p>(SHEET 5 OF 3) Revised: RD APPROVED BY: DATE:</p>
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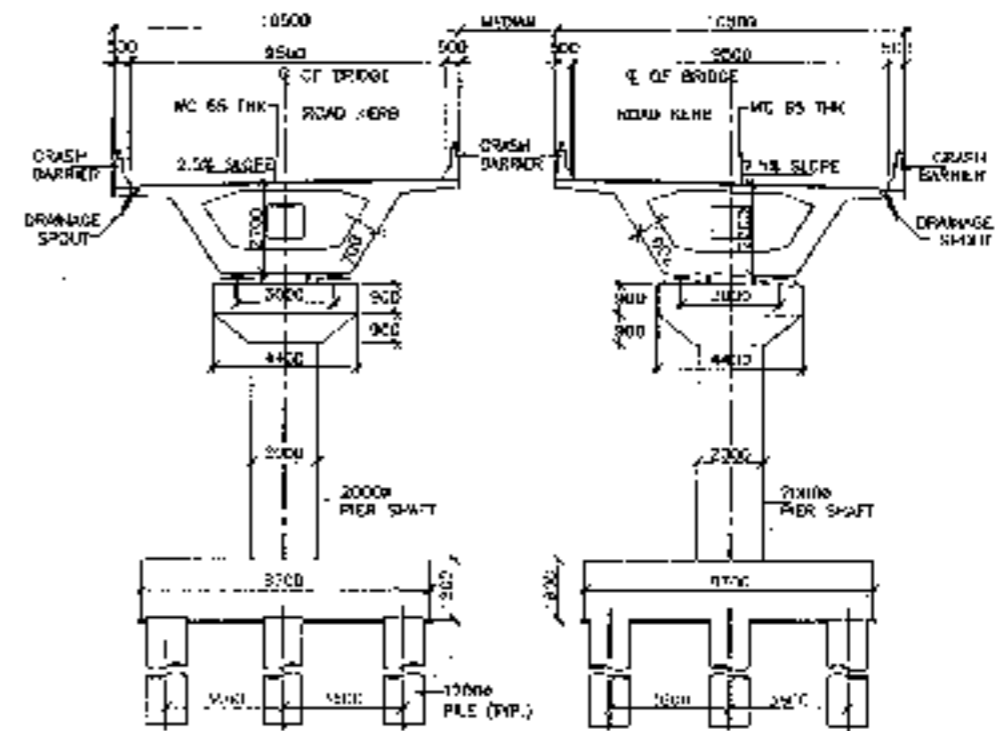


113

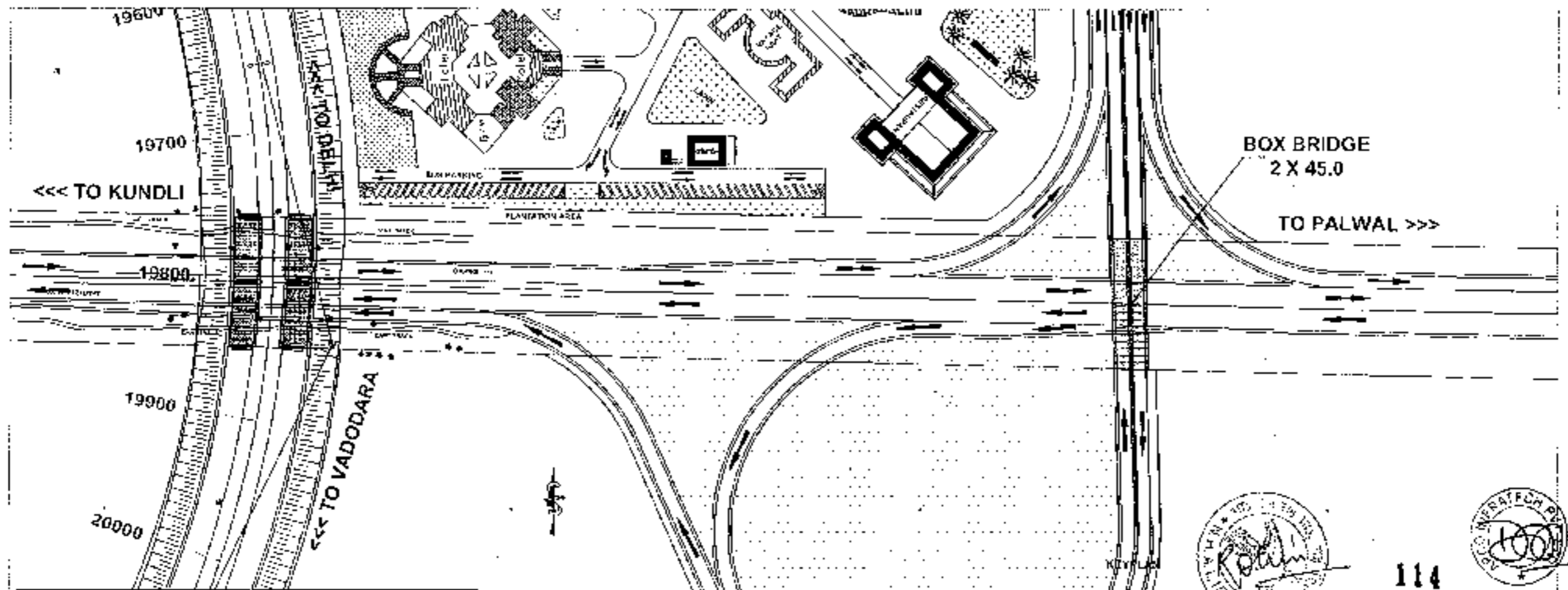
<p>CLIENT:-</p>  <p>National Highways Authority of India</p>	<p>CONSULTANT:-</p>  <p>Chaitanya Projects Consultancy Pvt. Ltd. C-5, 2ND FLOOR, P.K. TOWER PLOT NO - 21-22, SECTION 4, VAINHALLI, CHAZIARAH PH: 0120-3223478, 4123472, FAX: 0120-4111077</p>	<p>PROJECT:-</p> <p>Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-BIPackage-4) of Solana - Fatehpur Jivka</p>	<p>SCALE:-</p> <p>AS SHOWN</p>	<p>DWG TITLE:-</p> <p>GENERAL ARRANGEMENT DRAWING (SPAN 2X 45.00 M C/C EXP. JOINT) AT RAMP PORTION (SALONA - FATEHPUR JIVKA)</p>	<p>DRAWING NO:- (SHEET 1 OF 2) C/P/152/BA/MP/PHD/FORIS-101</p> <p>DATE - AUGUST 25/10 Revision: 03</p> <p>PREPARED BY: [Signature] CHECKED BY: [Signature] APPROVED BY: [Signature]</p>
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SECTION AT 1-1  
(SCALE 1:150)

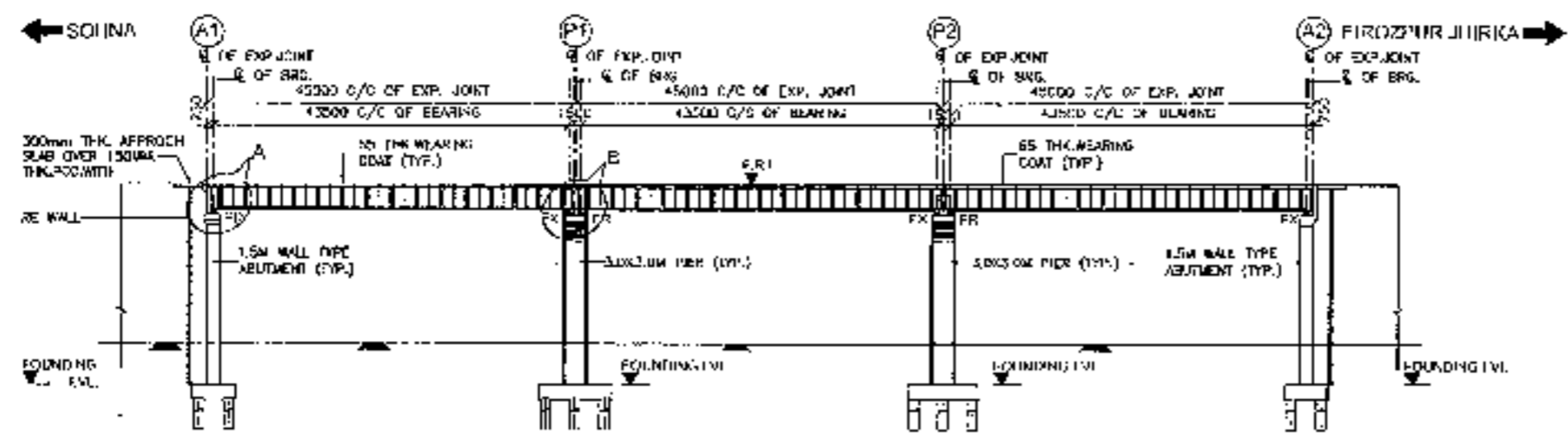


SECTION AT 2-2  
(SCALE 1:150)



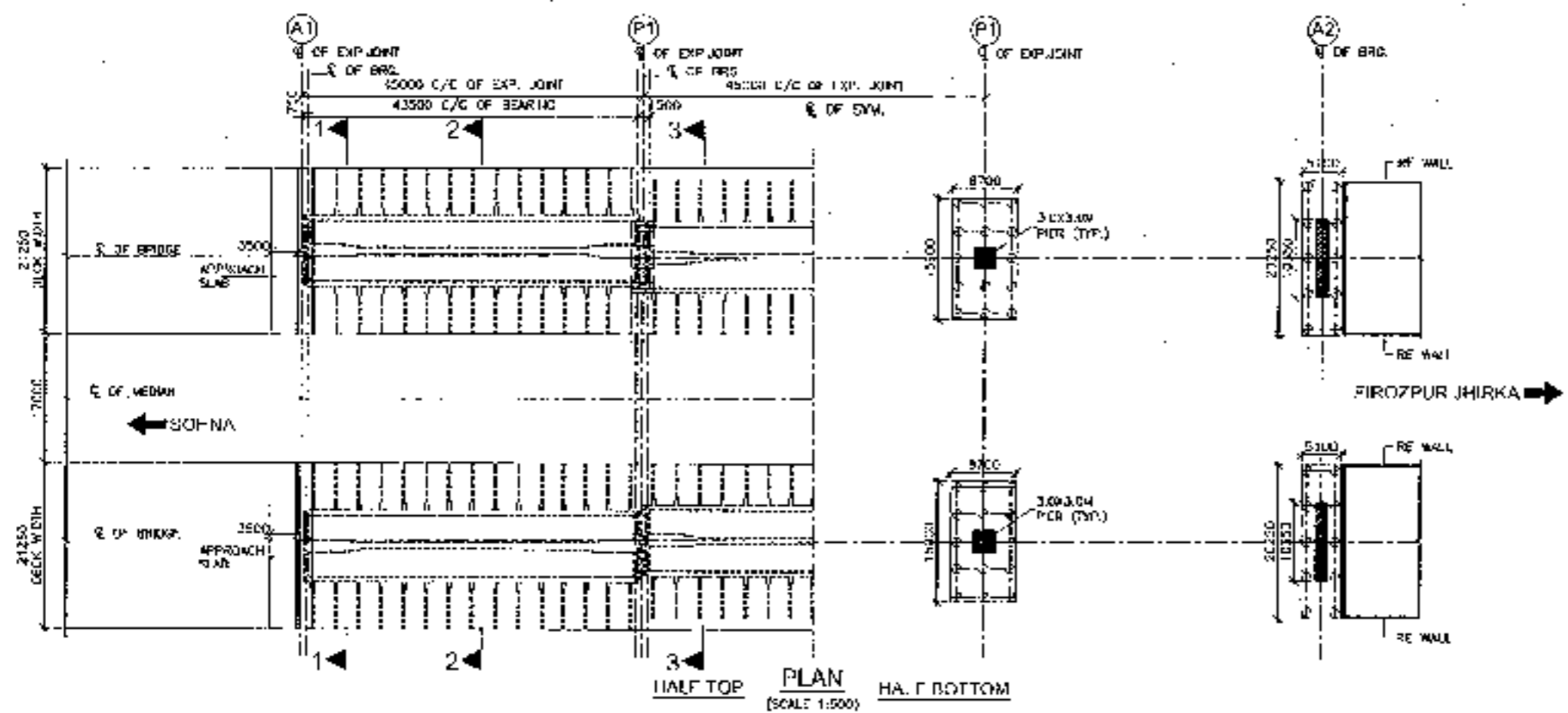
114

<p>CLIENT:- National Highways Authority of India Ministry of Road Transport &amp; Highways, Govt. of India</p>	<p>CONSULTANT:- Chaitanya Projects Consultancy Pvt. Ltd. C-5, 2ND FLOOR, R.K. TOWER PLOT 403-21-22, SECTOR-3, VASHTALI, GHAZIABAD PH: 0120-3273415, 4420472, FAX: 0120-4110472</p>	<p>PROJECT:- Consultancy Service for the Preparation for Feasibility Report (DPR) for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6/Package-4) of Scheme - Firozpur Jharka</p>	<p>SCALE:- AS SHOWN</p>	<p>DWG. TITLE:- GENERAL ARRANGEMENT DRAWING (SPAN 2X 45.00 M CIC EXP. JOINT) AT RAMP PORTION (PLAN) - FOTUP JH. (S-4)</p>	<p>DRAWING No. - CPCIP-1525001-FOUR10R5 100 (SHEET 2 OF 2) DATE - AUGUST 2018 PREPARED BY - P. K. SINGH CHECKED BY - MOHIT SAHNI APPROVED BY - M. RAO</p>
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LONGITUDINAL ELEVATION  
(SCALE 1:500)

CHAINAGE (m)	-00+067.5	+00+027.5	00+000	00+022.5	00+057.5	CHAINAGE AT 00+000 IS 02+261
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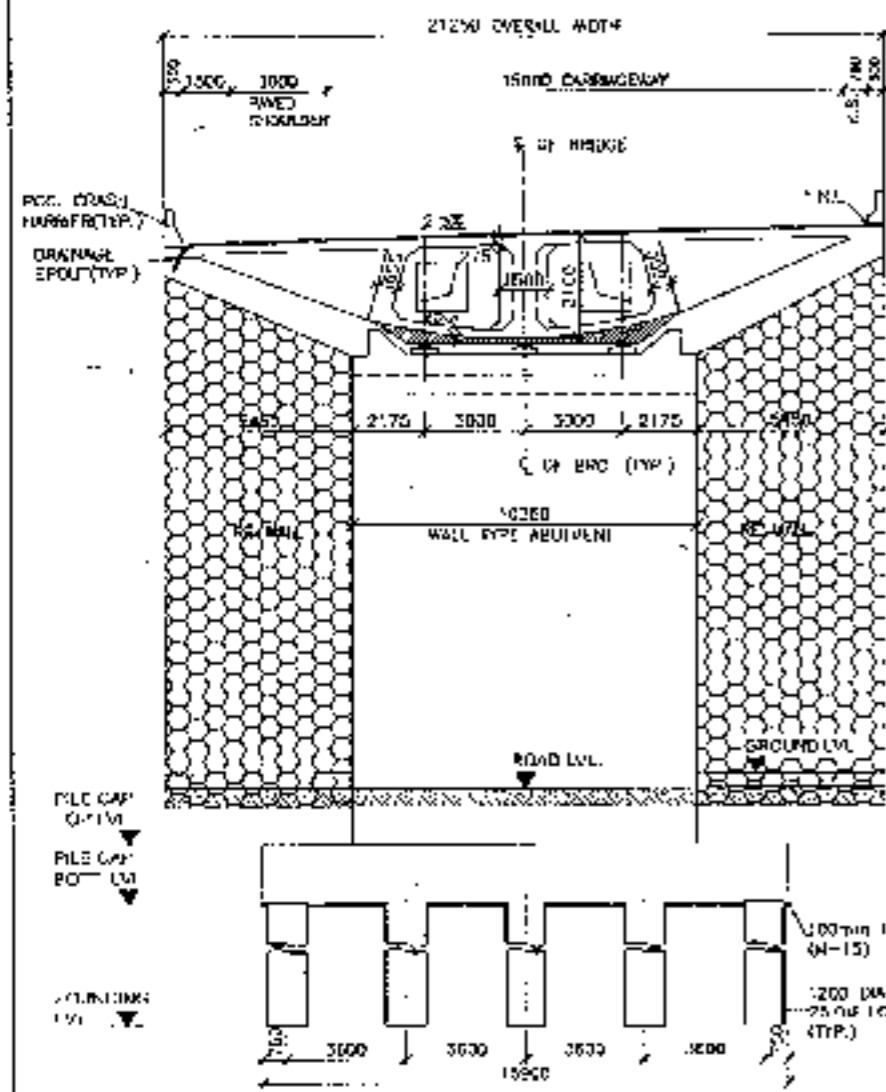
PLAN  
(SCALE 1:500)

- NOTES -**
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED OR NOTED OTHERWISE.
  2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
  3. GRADE OF CONCRETE IN VARIOUS COMPONENTS SHALL BE AS UNDER:  
 SLAB/STRUTS OF ..... M30  
 SUPP. STRUTS OF ..... M30  
 APPROACH SLAB ..... M30  
 INDEPENDENT RETAINING WALL ..... M30
  4. THE BRIDGE IS DESIGNED FOR ONE LANE OF TRAFFIC IN EACH DIRECTION AND ONE LANE OF CLASS A LOADING OR 2 LANE OF CLASS A LOADING WHICHEVER.
  5. UNIFORM JOINTS THROUGHOUT THE BRIDGE SHALL BE OF THE FOLLOWING TYPE:  
 TO THE BRIDGES AND  
 PIER SHALL BE ALIGNED ALONG THE DRAIN LINE.
  6. FOUNDATION DEPTH SHALL BE GIVEN IN THE FOUNDATION DRAWING TO THE GROUND LEVEL.
  7. THE SAFE BEARING CAPACITY OF ROCK AT FOUNDATION LEVEL IS:  
 a) 100 TON PER SQUARE METRE  
 b) 25 TON PER SQUARE METRE
  8. BACK FILLING BEHIND ABUTMENTS SHALL CONSIST OF SPECIFIED MATERIAL CONFORMING TO APPENDIX OF IS: 2000 (MINIMUM PROPERTIES C-10, 20, 30, 50, 60 & 70 KN/M<sup>2</sup>).
  9. WEEP HOLES SPACED AT 1500 MM BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED IN A STAGGERED MANNER IN ABUTMENTS AND PIER.
  10. CONSTRUCTION OF ABUTMENTS SHALL BE CARRIED OUT AFTER FINALIZATION OF BEARING SIZES IN CONSULTATION WITH BEARING MANUFACTURER AS APPROVED BY ENGINEER IN CHARGE AND ALSO TO SUIT THE REQUIREMENTS OF CONSTRUCTION SEQUENCE AND FOR PROVIDING ACCESS FROM DECK FOR INSPECTION PURPOSES.
  11. STRIP SEAL TYPE EXPANSION JOINTS SHALL BE PROVIDED.
  12. FOR CUM PIER SPACING SHALL BE PROVIDED.
  13. THE FOUNDATIONS HAVE BEEN FORMED ON THE BASIS OF THE GEOTECHNICAL INVESTIGATION REPORT. IN CASE OF ANY CHANGE IN THE SUBSOIL DATA IS FOUND TO BE DIFFERENT FROM THAT SHOWN IN THE ABOVE REPORT, THE DESIGN SHALL BE REVISIT AND REDESIGNED.
  14. CONSTRUCTION OF RETAINING WALLS SHALL BE IN ACCORDANCE WITH THE FOLLOWING CODES:  
 IS: 8000-1983 (PART 1 & 2) FOR RETAINING WALLS  
 IS: 8000-1983 (PART 3) FOR RETAINING WALLS
  15. FOR DETAILS OF BRIDGE STRUCTURE AND COMPONENTS REFER TO THE DRAWING SHEETS.
  16. CONSTRUCTION OF THE BRIDGE SHALL BE IN ACCORDANCE WITH THE FOLLOWING CODES:  
 IS: 8000-1983 (PART 1 & 2) FOR RETAINING WALLS  
 IS: 8000-1983 (PART 3) FOR RETAINING WALLS

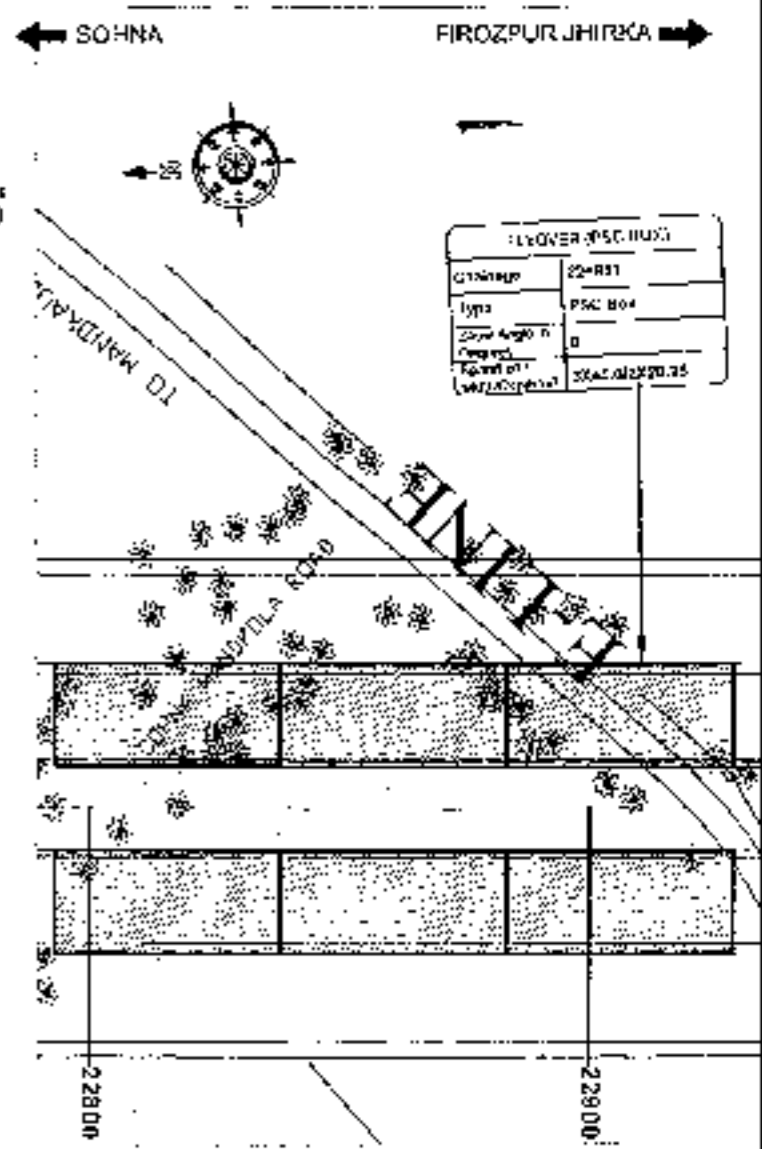
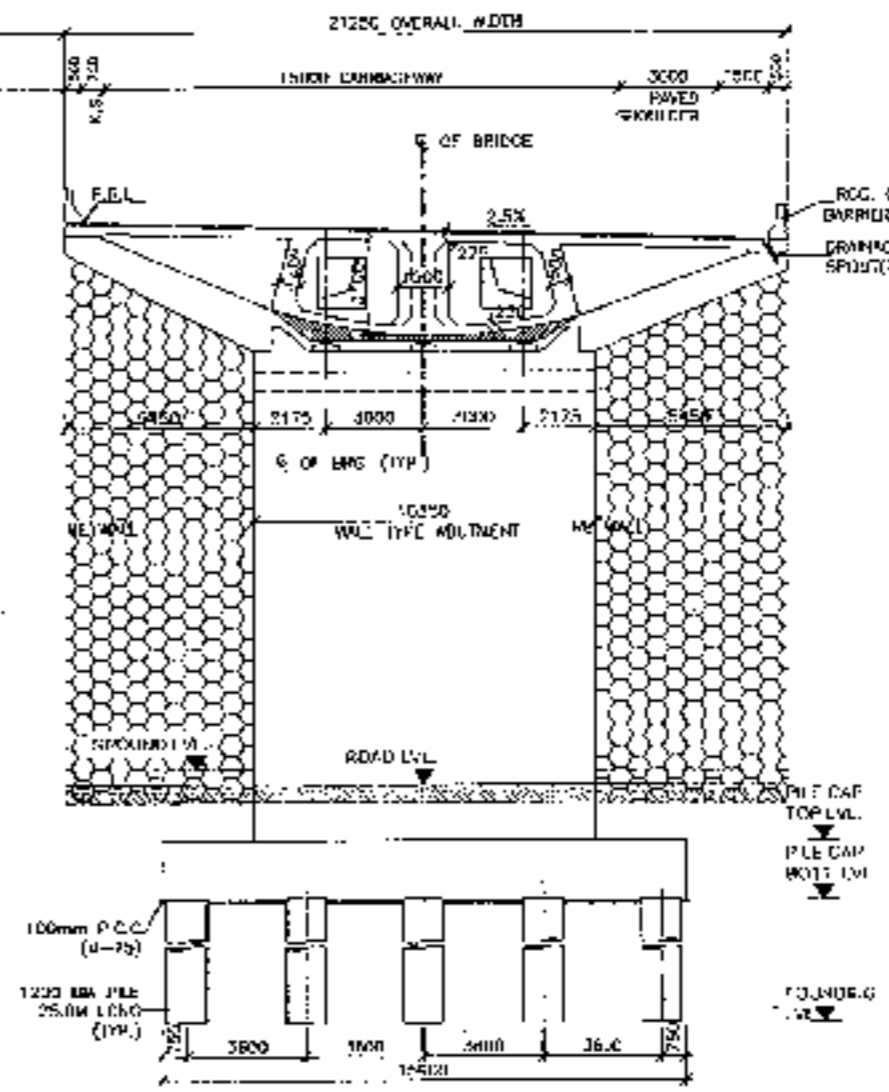


115

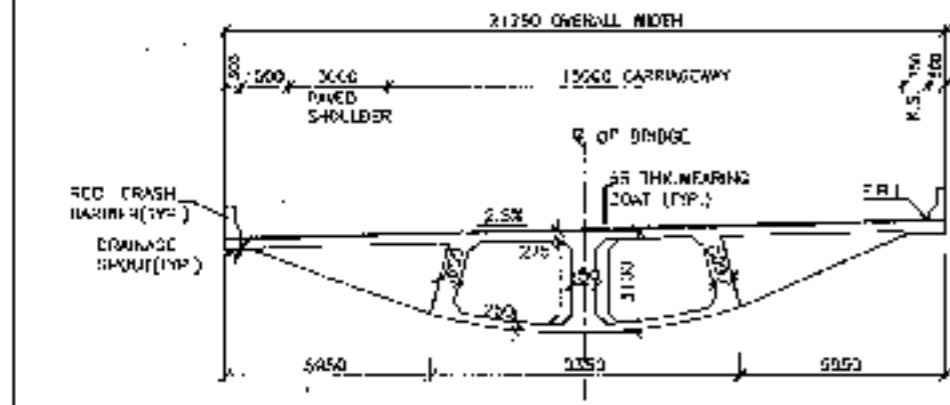
<b>CLIENT:</b> National Highways Authority of India National Highways Authority of India Plot No. 1, Sector 1, Gurgaon, Haryana	<b>CONSULTANT:</b> Chaitanya Projects Consultancy Pvt. Ltd. C-5, JEWEL TOWER, 21-22, SI-C/10-A, VASHTALI, Gurgaon PH: 0120-323410, 4120472, FAX: 0120-4110072	<b>PROJECT:</b> Consultancy Service for the Preparation for Feasibility Report (DPR) for development of Economic Corridor Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (1st Stage) of Sohra - Firozpur Jhirka	<b>SCALE -</b> AS SHOWN	<b>DWG TITLE -</b> GENERAL ARRANGEMENT DRAWING SPAN (S X 45.00M C/C EXP. JOINT) AT CH 22+801 (FORMERLY FIROZPUR JHIRKA)	<b>DRAWING No.:</b> CPCL-1508-2016-115-115	<b>SHEET NO. OF 10</b>
					<b>DATE:</b> AUGUST 2016	<b>Revision:</b> RU
<b>PREPARED BY:</b> PRADEEP	<b>CHECKED BY:</b> VEER PRAKASH	<b>APPROVED BY:</b> RAJESH				



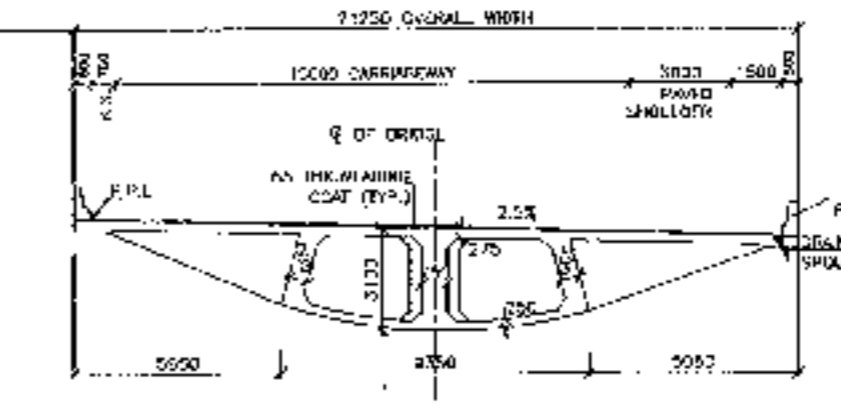
SECTION AT 1-1  
(SCALE 1:150)



KEY PLAN



SECTION AT 2-2  
(SCALE 1:150)



CLIENT -  
National Highways Authority  
of India

CONSULTANT -  
Chaitanya Projects Consultancy Pvt. Ltd.  
C-5, 2ND FLOOR, R.K. TOWER PLOT NO. 21-22  
SECTOR-4, VAIGISALI, GHAZIABAD  
PH: 0120-3227413, 4176477, FAX: 0120 4110472

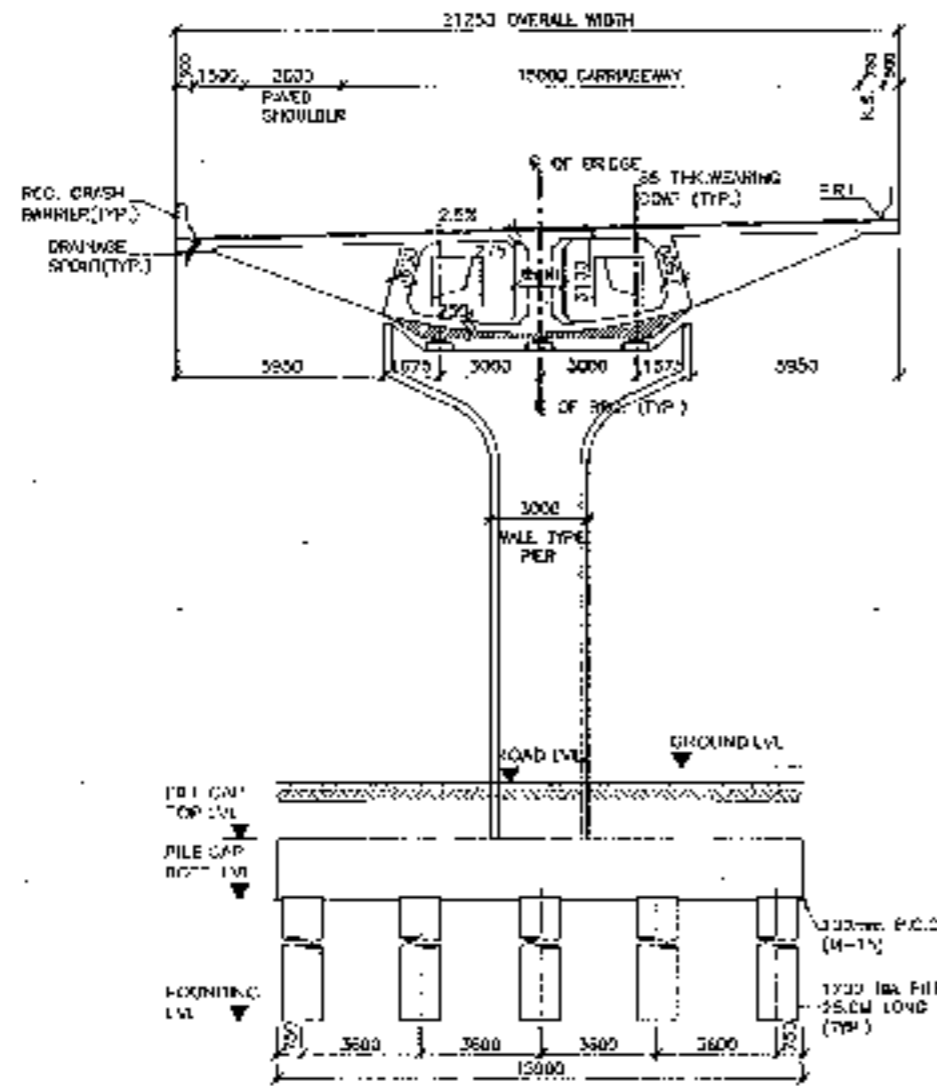
PROJECT -  
Consultancy Service for the Preparation for Feasibility Report/ DPR for development of Ferozpur Corridor, Inter Connectors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-4/Package-4) of Sohna - Ferozpur Jhinka

SCALE -  
AS SHOWN

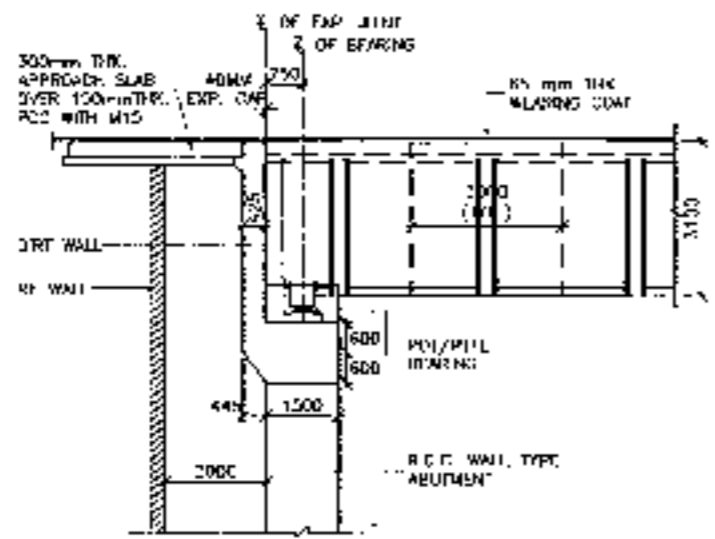
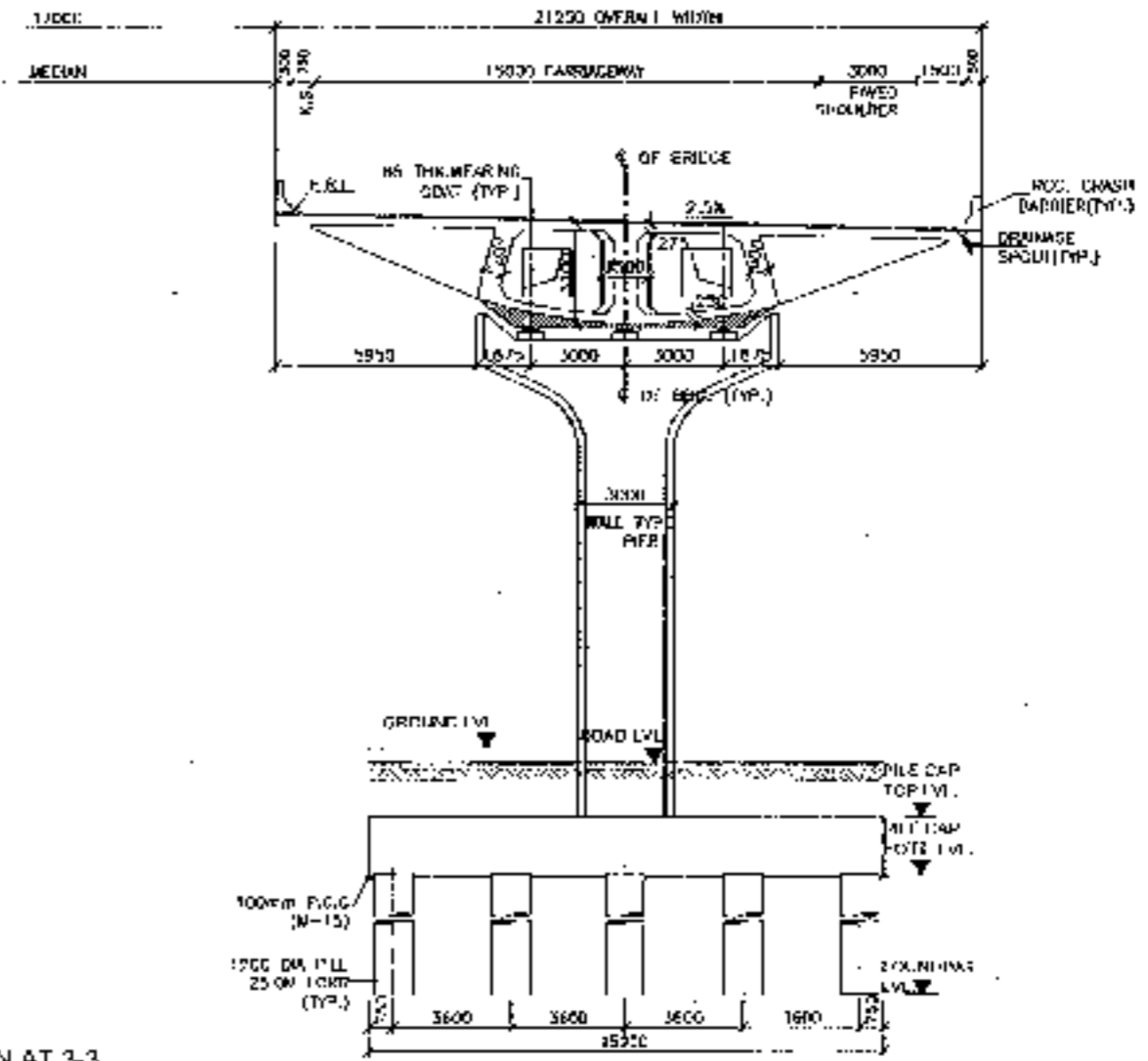
DWG TITLE -  
GENERAL ARRANGEMENT DRAWING  
SPAN 13 X 45.00 M O.C EXP JOINT,  
AT CH 22-881  
SOHNA - FIROZPUR JHINKA

DRAWING No. -  
DATE: AUGUST 2018  
PREPARED BY: [Signature]  
CHECKED BY: [Signature]  
APPROVED BY: [Signature]

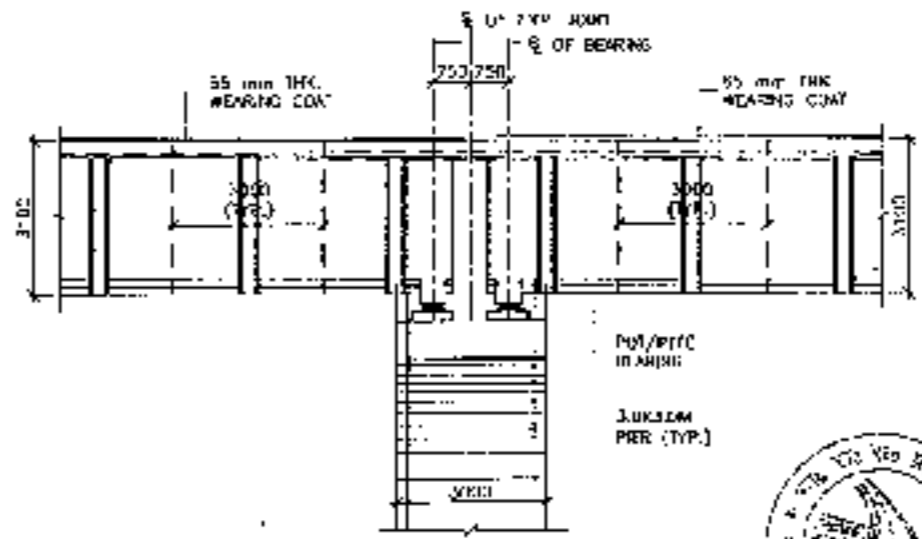




SECTION AT 3-3  
(POINT R150)



DETAIL - A  
(SCALE 1:100)



DETAIL - B  
(SCALE 1:100)



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<p>CLIENT:- National Highways Authority of India</p>	<p>CONSULTANT:- Chaitanya Projects Consultancy Pvt. Ltd. G-5, 2ND FLOOR, R.K. TOWER PLOT NO.- 21-22 SECTOR-4, VAISHALI, GHAZIABAD PH: 0120-1223419 4120472. FAX: 0120-4119472</p>	<p>PROJECT:- Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to Improve the efficiency of freight movement in India under Bharatmala Pariyojana (I-II &amp; Package-4) of Sahya - Hospur Jharka</p>	<p>SCALE:- AS SHOWN</p>	<p>DWG TITLE: GENERAL ARRANGEMENT DRAWING SPAN (3 X 45.00 M) @ EXP. JOINT AT TEL. 22-801 (CHINA - LINGZHU JHARKA)</p>	<p>DRAWING NO.: CPCL/150122/22-801-001 DATE: AUGUST 2012 PREPARED BY: SHANKAR CHECKED BY: MOHIT KUMAR APPROVED BY: SHANKAR</p>
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PLAN & PROFILE  
PLAN & PROFILE OF SOHNA- FIROZPUR JHIRKA SECTION OF DELHI-VADODARA EXPRESSWAY  
PACKAGE-II (Km. 18+500 to Km. 47+000)



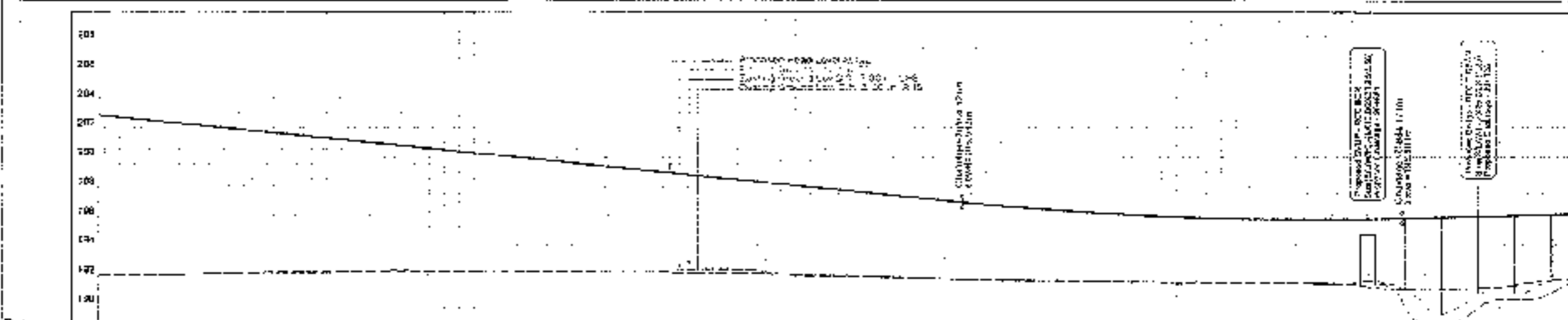
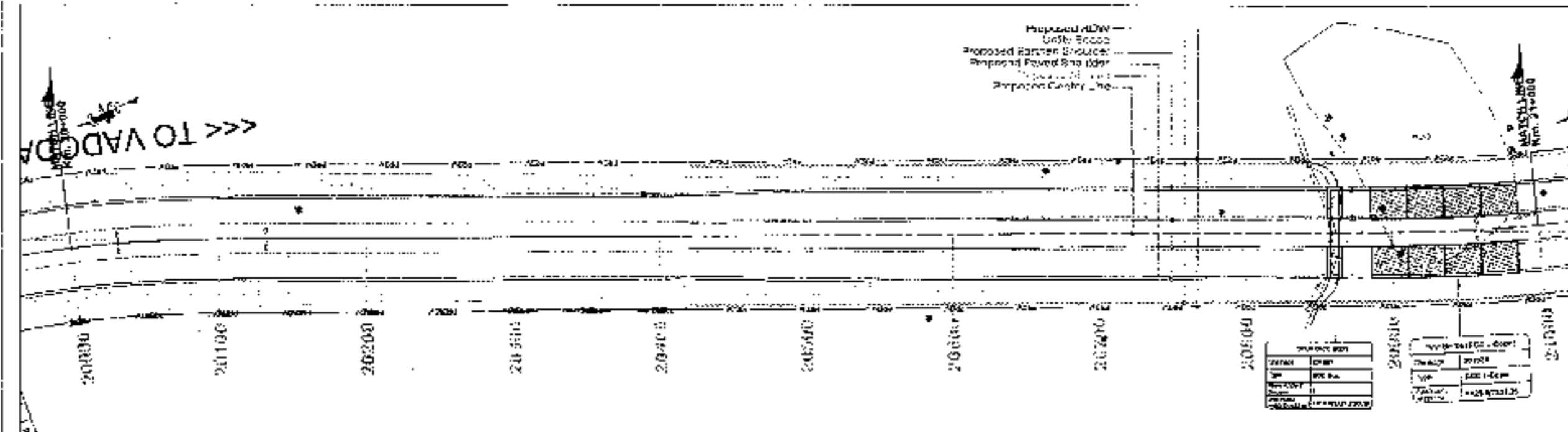








TO SOHNA ← | → TO FIROZPUR JIRKA



Stationing (m)	Proposed Road Level (m)	Existing Ground Level (m)	Proposed Grade (%)	Vertical Curve Data
20000	203.73	203.73	0.00	
20010	203.73	203.73	0.00	
20020	203.73	203.73	0.00	
20030	203.73	203.73	0.00	
20040	203.73	203.73	0.00	
20050	203.73	203.73	0.00	
20060	203.73	203.73	0.00	
20070	203.73	203.73	0.00	
20080	203.73	203.73	0.00	
20090	203.73	203.73	0.00	
20100	203.73	203.73	0.00	
20110	203.73	203.73	0.00	
20120	203.73	203.73	0.00	
20130	203.73	203.73	0.00	
20140	203.73	203.73	0.00	
20150	203.73	203.73	0.00	
20160	203.73	203.73	0.00	
20170	203.73	203.73	0.00	

### PROPOSED LEGEND

PROP. RL	.....
PROP. CL	.....
UTILITY	.....
BLU. LINE	.....
PROP. GW	.....
PROP. EB	.....
UTILITY SPACE	.....
PROP. CL	000
MATCH LINE	.....
PROPOSED LEVEL AT 1% OF GRD	.....
EXISTING ROAD LEVEL AT 1% OF GRD	.....
PROP. ROAD LINE AT 1% OF GRD	.....
PROP. ROAD LINE AT 2% OF GRD	.....
PROP. ROAD LINE AT 3% OF GRD	.....
PROP. ROAD LINE AT 4% OF GRD	.....
PROP. ROAD LINE AT 5% OF GRD	.....
PROP. ROAD LINE AT 6% OF GRD	.....
PROP. ROAD LINE AT 7% OF GRD	.....
PROP. ROAD LINE AT 8% OF GRD	.....
PROP. ROAD LINE AT 9% OF GRD	.....
PROP. ROAD LINE AT 10% OF GRD	.....
PROP. ROAD LINE AT 11% OF GRD	.....
PROP. ROAD LINE AT 12% OF GRD	.....
PROP. ROAD LINE AT 13% OF GRD	.....
PROP. ROAD LINE AT 14% OF GRD	.....
PROP. ROAD LINE AT 15% OF GRD	.....

### EXISTING LEGEND

BRANCH ROAD	.....
BUILDING STRUCTURE	.....
BUS STOP	.....
BOUNDARY WALL	.....
CENTER LINE	.....
CULVERT	.....
GRAIN	.....
ELECTR. POLE	.....
SK ROW	.....
EXISTING ROAD	.....
GATE	.....
WATER PUMP	.....
W.T.	.....
KILOMETER STONE	.....
LAND POST	.....
WATER	.....
DR	.....
WELL	.....
POT-HOLE	.....
RUBBER	.....
RAILWAY TRACK	.....
SHAP PIN	.....
DRY ROAD	.....
DRYING PIT	.....
WELL	.....
TRANSFORMER	.....
TOILET	.....
TOWER	.....
WATER TOWER	.....
MILL	.....

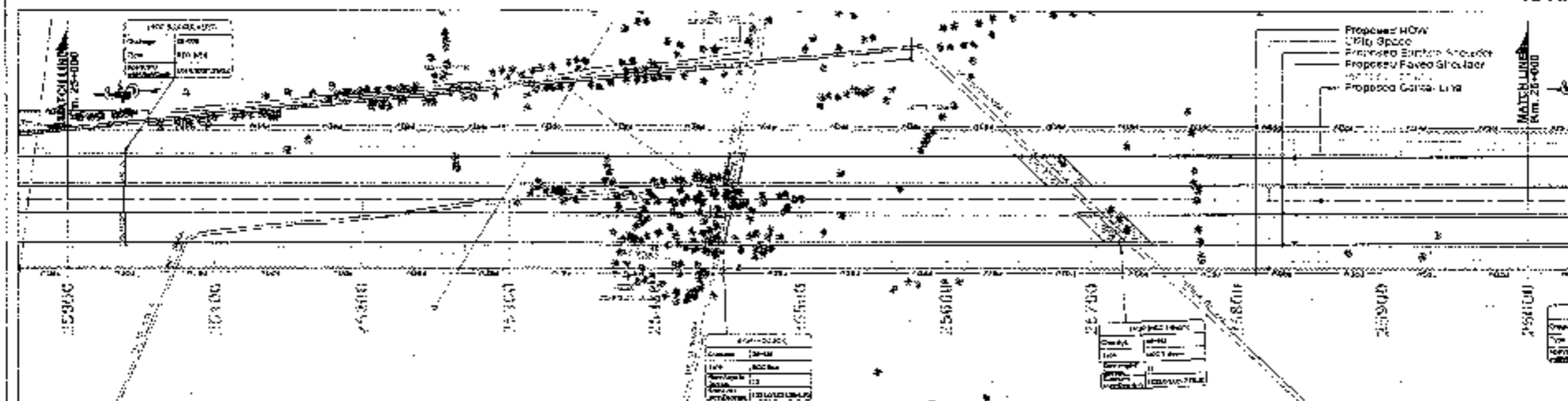
<b>CLIENT:</b> <p>National Highways Authority of India Ministry of Road Transport and Highways, Government of India</p>	<b>CONSULTANT:</b> <p>Chaitanya Projects Consultancy Pvt. Ltd. G-4, 2ND FLOOR, H.K. TOWER PLOT NO. 2-22, SECTOR-4, VAISHALI, GHAZIABAD Ph: 0120-3223010, 4720472, FAX: 0120-4110472</p>	<b>PROJECT:</b> Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridor, Inter Corridors and Feeder Routes to improve the efficiency of Inland movement in India under Bharatmala Pariyojna (Lot-6/Package-4) of Sohna - Firozpur Jirka	<b>SCALE:</b> Horizontal = 1:2000 Vertical = 1:100	<b>DWG TITLE:</b> PLAN & PROFILE (SOHNA - FIROZPUR JIRKA) (Km. 30 - 40) TO (Km. 40 - 50)	SPC-15/2000/2014-17 Date: 10/10/2014 Prepared by: [Name] Checked by: [Name] Drawn by: [Name]
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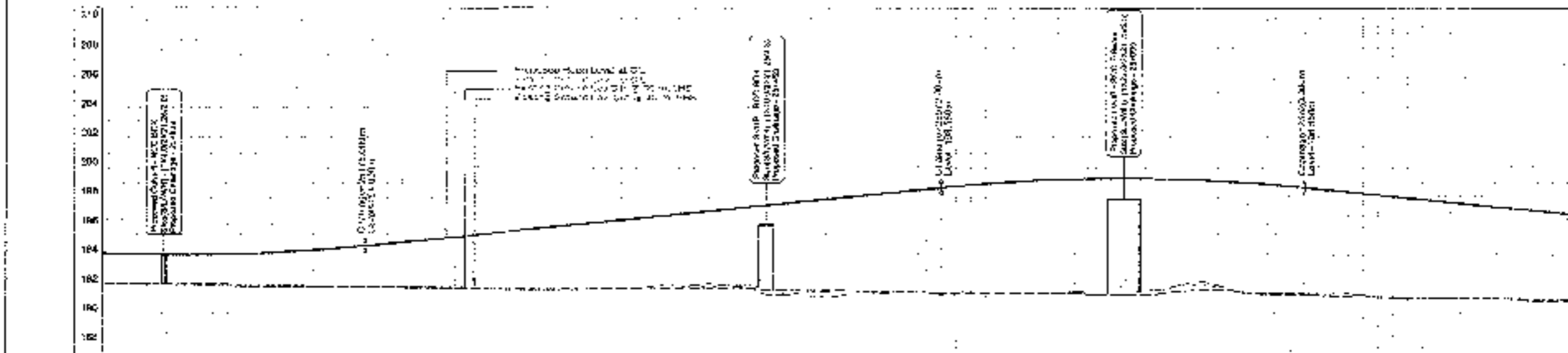








PROPOSED LEGEND	
1P LINE	---
PROP. ROW	---
PROP. BOUNDARY	---
PROP. FASAD SHOULDER	---
PROP. CARRIAGE LANE	---
UTILITY GRADE	---
PROP. G.P.	---
PROP. G.S.	---
PROP. G.W.	---
PROP. G.O.	---
PROP. G.P.	---
PROP. G.S.	---
PROP. G.W.	---
PROP. G.O.	---
PROP. G.P.	---
PROP. G.S.	---
PROP. G.W.	---
PROP. G.O.	---



EXISTING LEGEND	
GRADE	---
BRANCH ROAD	---
EXISTING STRUCTURE	---
EXISTING ROAD	---
EXISTING DRAIN	---
EXISTING UTILITY	---
EXISTING GATE	---
EXISTING PUMP	---
EXISTING TOWER	---
EXISTING SIGN POST	---
EXISTING MEDIAN	---
EXISTING G.P.	---
EXISTING G.S.	---
EXISTING G.W.	---
EXISTING G.O.	---

Stationing	Proposed Road Profile (m)	Existing Ground Profile (m)	Proposed Grade Line (m)
25+000	194.00	194.00	194.00
25+010	194.10	194.10	194.10
25+020	194.20	194.20	194.20
25+030	194.30	194.30	194.30
25+040	194.40	194.40	194.40
25+050	194.50	194.50	194.50
25+060	194.60	194.60	194.60
25+070	194.70	194.70	194.70
25+080	194.80	194.80	194.80
25+090	194.90	194.90	194.90
25+100	195.00	195.00	195.00
25+110	195.10	195.10	195.10
25+120	195.20	195.20	195.20
25+130	195.30	195.30	195.30
25+140	195.40	195.40	195.40
25+150	195.50	195.50	195.50
25+160	195.60	195.60	195.60
25+170	195.70	195.70	195.70
25+180	195.80	195.80	195.80
25+190	195.90	195.90	195.90
25+200	196.00	196.00	196.00
25+210	196.10	196.10	196.10
25+220	196.20	196.20	196.20
25+230	196.30	196.30	196.30
25+240	196.40	196.40	196.40
25+250	196.50	196.50	196.50
25+260	196.60	196.60	196.60
25+270	196.70	196.70	196.70
25+280	196.80	196.80	196.80
25+290	196.90	196.90	196.90
25+300	197.00	197.00	197.00
25+310	197.10	197.10	197.10
25+320	197.20	197.20	197.20
25+330	197.30	197.30	197.30
25+340	197.40	197.40	197.40
25+350	197.50	197.50	197.50
25+360	197.60	197.60	197.60
25+370	197.70	197.70	197.70
25+380	197.80	197.80	197.80
25+390	197.90	197.90	197.90
25+400	198.00	198.00	198.00
25+410	198.10	198.10	198.10
25+420	198.20	198.20	198.20
25+430	198.30	198.30	198.30
25+440	198.40	198.40	198.40
25+450	198.50	198.50	198.50
25+460	198.60	198.60	198.60
25+470	198.70	198.70	198.70
25+480	198.80	198.80	198.80
25+490	198.90	198.90	198.90
25+500	199.00	199.00	199.00
25+510	199.10	199.10	199.10
25+520	199.20	199.20	199.20
25+530	199.30	199.30	199.30
25+540	199.40	199.40	199.40
25+550	199.50	199.50	199.50
25+560	199.60	199.60	199.60
25+570	199.70	199.70	199.70
25+580	199.80	199.80	199.80
25+590	199.90	199.90	199.90
25+600	200.00	200.00	200.00

**CLIENT:**  
National Highways Authority of India

**CONSULTANT:**  
Chakanya Projects Consultancy Pvt. Ltd.  
C-6, 2ND FLOOR, H.K. ROAD, PLOT NO. 25-22,  
SECTOR-4, VASIHALLI, CHAKRABAD  
PH. 0120-322234, 4120472, FAX: 0120-4110472

**PROJECT:**  
Consultancy Services for the Preparation of Feasibility Report/DPR for development of Economic Corridor, Inter Corridor and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6/Package-4) of Sonna-Ferozpur Jirka

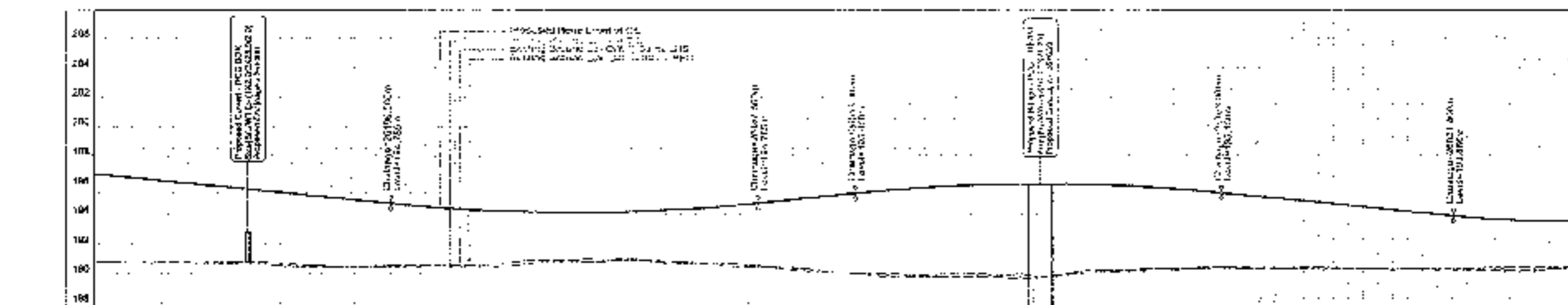
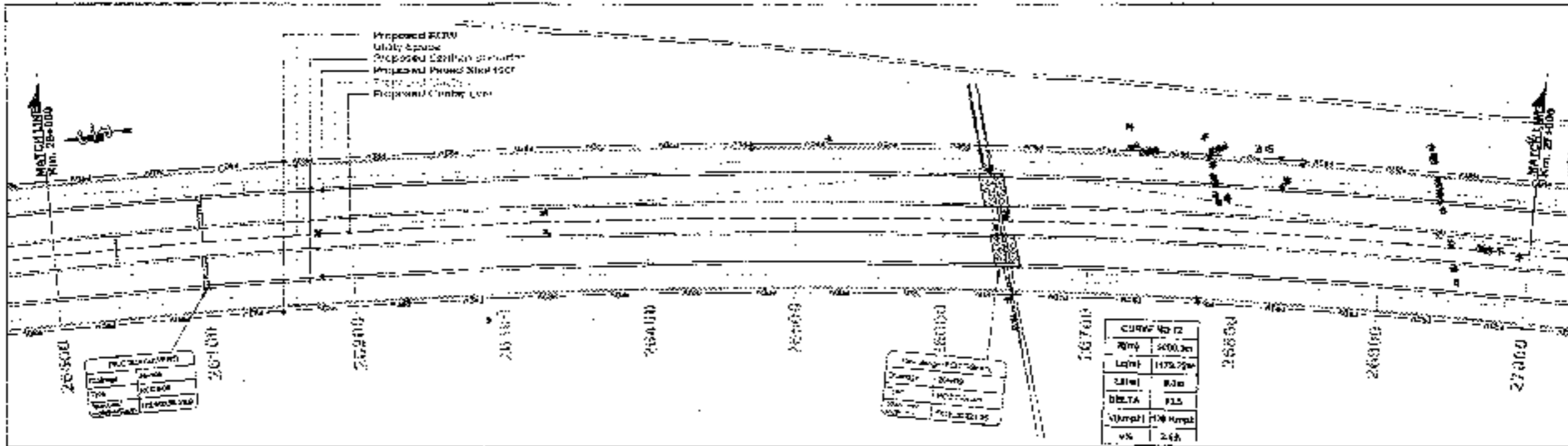
**SCALE:**  
Horizontal: 1:2000  
Vertical: 1:200

**DWG TITLE:**  
PLAN & PROFILE  
SONNA-FEROZPUR JIRKA  
DKM 25+000 TO DKM 26+000

**DATE:** 12/10/2019  
**PREPARED BY:** [Name]  
**CHECKED BY:** [Name]  
**APPROVED BY:** [Name]







Station	Proposed Road Elevation	Existing Ground Elevation	Proposed Grade	Excavation/Build-up
26+500	194.50	191.50	2.5%	3.00
26+600	194.55	191.55	2.5%	3.00
26+700	194.60	191.60	2.5%	3.00
26+800	194.65	191.65	2.5%	3.00
26+900	194.70	191.70	2.5%	3.00
27+000	194.75	191.75	2.5%	3.00

PROPOSED LEGEND	
[Symbol]	ROAD
[Symbol]	PROVIDE
[Symbol]	MECHANICAL
[Symbol]	EDGE STOP
[Symbol]	PROP CH
[Symbol]	PROP GR
[Symbol]	UTILITY GRADE
[Symbol]	PROP CH
[Symbol]	PROP CH
[Symbol]	SWITCH & GP
[Symbol]	PROP ROADWAY AT 2% OF CH
[Symbol]	Proposed Roadway at 1% of CH
[Symbol]	Proposed Roadway at 2% of CH
[Symbol]	Proposed Roadway at 3% of CH
[Symbol]	Proposed Roadway at 4% of CH
[Symbol]	Proposed Roadway at 5% of CH
[Symbol]	Proposed Roadway at 6% of CH
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[Symbol]	Proposed Roadway at 36% of CH
[Symbol]	Proposed Roadway at 37% of CH
[Symbol]	Proposed Roadway at 38% of CH
[Symbol]	Proposed Roadway at 39% of CH
[Symbol]	Proposed Roadway at 40% of CH
[Symbol]	Proposed Roadway at 41% of CH
[Symbol]	Proposed Roadway at 42% of CH
[Symbol]	Proposed Roadway at 43% of CH
[Symbol]	Proposed Roadway at 44% of CH
[Symbol]	Proposed Roadway at 45% of CH
[Symbol]	Proposed Roadway at 46% of CH
[Symbol]	Proposed Roadway at 47% of CH
[Symbol]	Proposed Roadway at 48% of CH
[Symbol]	Proposed Roadway at 49% of CH
[Symbol]	Proposed Roadway at 50% of CH
[Symbol]	Proposed Roadway at 51% of CH
[Symbol]	Proposed Roadway at 52% of CH
[Symbol]	Proposed Roadway at 53% of CH
[Symbol]	Proposed Roadway at 54% of CH
[Symbol]	Proposed Roadway at 55% of CH
[Symbol]	Proposed Roadway at 56% of CH
[Symbol]	Proposed Roadway at 57% of CH
[Symbol]	Proposed Roadway at 58% of CH
[Symbol]	Proposed Roadway at 59% of CH
[Symbol]	Proposed Roadway at 60% of CH
[Symbol]	Proposed Roadway at 61% of CH
[Symbol]	Proposed Roadway at 62% of CH
[Symbol]	Proposed Roadway at 63% of CH
[Symbol]	Proposed Roadway at 64% of CH
[Symbol]	Proposed Roadway at 65% of CH
[Symbol]	Proposed Roadway at 66% of CH
[Symbol]	Proposed Roadway at 67% of CH
[Symbol]	Proposed Roadway at 68% of CH
[Symbol]	Proposed Roadway at 69% of CH
[Symbol]	Proposed Roadway at 70% of CH
[Symbol]	Proposed Roadway at 71% of CH
[Symbol]	Proposed Roadway at 72% of CH
[Symbol]	Proposed Roadway at 73% of CH
[Symbol]	Proposed Roadway at 74% of CH
[Symbol]	Proposed Roadway at 75% of CH
[Symbol]	Proposed Roadway at 76% of CH
[Symbol]	Proposed Roadway at 77% of CH
[Symbol]	Proposed Roadway at 78% of CH
[Symbol]	Proposed Roadway at 79% of CH
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[Symbol]	Proposed Roadway at 87% of CH
[Symbol]	Proposed Roadway at 88% of CH
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[Symbol]	Proposed Roadway at 94% of CH
[Symbol]	Proposed Roadway at 95% of CH
[Symbol]	Proposed Roadway at 96% of CH
[Symbol]	Proposed Roadway at 97% of CH
[Symbol]	Proposed Roadway at 98% of CH
[Symbol]	Proposed Roadway at 99% of CH
[Symbol]	Proposed Roadway at 100% of CH

EXISTING LEGEND	
[Symbol]	DRIVE
[Symbol]	BRICKWORK
[Symbol]	BUILDING STRUCTURE
[Symbol]	ELEV STOP
[Symbol]	ADJUNCTION WALL
[Symbol]	OPEN DRAIN
[Symbol]	CULVERT
[Symbol]	DRAIN
[Symbol]	ELECTRIC PIP
[Symbol]	SEWER
[Symbol]	SEWER ROAD
[Symbol]	Gate
[Symbol]	WATER PUMP
[Symbol]	PIT
[Symbol]	RESERVOIR
[Symbol]	TOWER POST
[Symbol]	Median
[Symbol]	OPC
[Symbol]	Pillar
[Symbol]	PETROL PUMP
[Symbol]	RIVER/NA
[Symbol]	RAILWAY TRACK
[Symbol]	ROW WALL
[Symbol]	RAILROAD
[Symbol]	TELEPHONE POLE
[Symbol]	TEMPLE
[Symbol]	TRANSFORMER
[Symbol]	TOWNT
[Symbol]	UNDERPASS
[Symbol]	WATER PUMP
[Symbol]	WELL

**CLIENT**  
National Highways Authority of India  
Ministry of Road Transport and Highways, New Delhi

**CONSULTANT**  
Chaitanya Projects Consultancy Pvt. Ltd.  
G-3, 2ND FLOOR, PLAZA TOWER PLOT NO. 21-22,  
SECTOR-4, VAISHIA, GHAZIABAD  
PH : 0120-3222499, 4120472, Fax: 0120-4110472

**PROFIT**  
Consultancy Service for the Preparation of Feasibility Report (DPR) for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-4/Package-4) of Sohna - Firozpur Jhirka

**SCALE**  
Horizontal: 1:200  
Vertical: 1:20

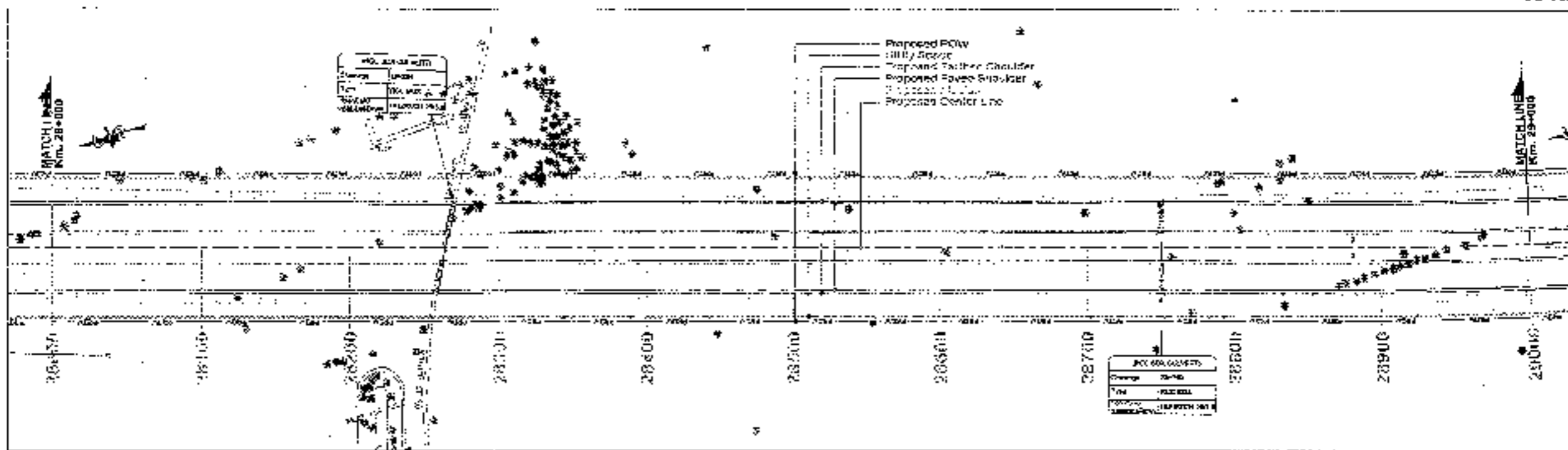
**DWG TITLE**  
Profile for SOHNA - FIROZPUR JHIRKA  
(SS 26+500 to 27+000)

**DATE** AUGUST 2024  
**PROJECT NO** NHA/2024/001  
**REVISION** 00  
**AUTHOR** [Name]  
**CHECKED** [Name]  
**APPROVED** [Name]



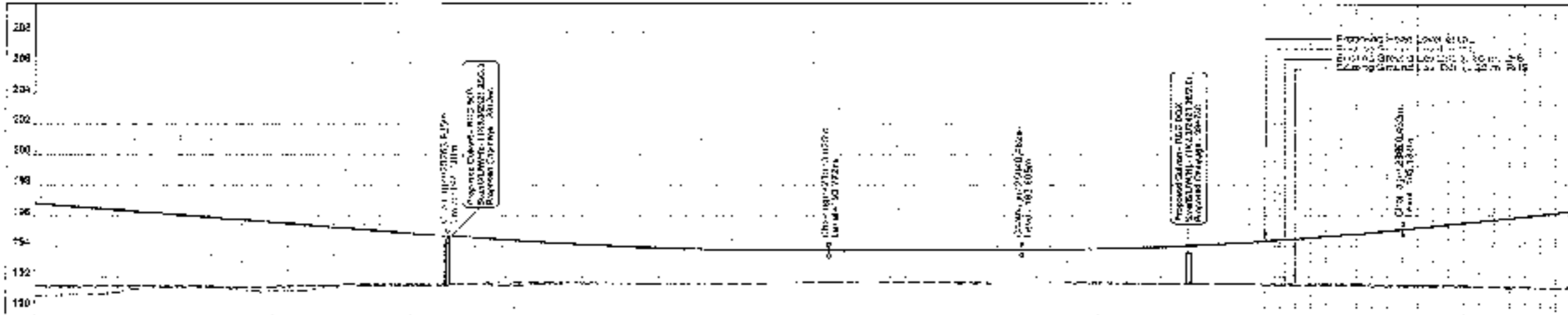
TO SOHNA

TO FIROZPUR JAIKRA



PROPOSED LEGEND	
HIL LINE	---
PROP. CV	---
PROF. CV	---
PROP. STRIP	---
PROP. EW	---
PROP. CS	---
UTILITY SPACE	---
PROP. OH	---
MATCH LINE	---
PROPOSED LEVEL	---
EXISTING LEVEL	---
SUPER ELEVATION	---
GRADIENT	---
GRID	---

EXISTING LEGEND	
SHOULDER	---
SHOULDER ROAD	---
BUILDING STRUCTURE	---
BUS STOP	---
SEMI-MUR WALL	---
CENTER LINE	---
UTILITY	---
RAIL	---
ELECTRIC POLE	---
RAILWAY	---
EXISTING ROAD	---
GATE	---
LAND POLE	---
WELL	---
MEASUREMENT STONE	---
LAMP POST	---
WATER	---
DFC	---
PLANT	---
RAILWAY CROSSING	---
RIVER/CREEK	---
RAILWAY TRACK	---
RAILWAY	---
RAILROAD	---
TELEPHONE TOWER	---
TEMPLE	---
TRANSFORMER	---
TOLL	---
TRUCK	---
WATER HOUSE	---
WELL	---



Stationing	Proposed Elev. (m)	Existing Elev. (m)	Grade (%)	Vertical Curve Height (m)
26+500	193.772	193.772	2.5	1.25
26+600	193.772	193.772	2.5	1.25
26+700	193.772	193.772	2.5	1.25
26+800	193.772	193.772	2.5	1.25
26+900	193.772	193.772	2.5	1.25
27+000	193.772	193.772	2.5	1.25
27+100	193.772	193.772	2.5	1.25
27+200	193.772	193.772	2.5	1.25
27+300	193.772	193.772	2.5	1.25
27+400	193.772	193.772	2.5	1.25
27+500	193.772	193.772	2.5	1.25
27+600	193.772	193.772	2.5	1.25
27+700	193.772	193.772	2.5	1.25
27+800	193.772	193.772	2.5	1.25
27+900	193.772	193.772	2.5	1.25
28+000	193.772	193.772	2.5	1.25
28+100	193.772	193.772	2.5	1.25
28+200	193.772	193.772	2.5	1.25
28+300	193.772	193.772	2.5	1.25
28+400	193.772	193.772	2.5	1.25
28+500	193.772	193.772	2.5	1.25
28+600	193.772	193.772	2.5	1.25
28+700	193.772	193.772	2.5	1.25
28+800	193.772	193.772	2.5	1.25
28+900	193.772	193.772	2.5	1.25
29+000	193.772	193.772	2.5	1.25

**CLIENT:** National Highways Authority of India  
**CONSULTANT:** Chhabra Projects Consultancy Pvt. Ltd.  
**PROJECT:** Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridor, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6/Package-4) of Sohna - Firozpur Jhark  
**SCALE:** Horizontal = 1:2000, Vertical = 1:200  
**DWG. TITLE:** PLAN & PROFILE OF SOHNA - FIROZPUR JHARK (Lot-6/Package-4) of  
**DATE:** JUNE 2015  
**PROJECT NO.:** 2015/01/01  
**REVISION:** 1.0  
**APPROVED BY:** [Signature]  
**DATE:** 2015-06-01





TO SOHNA

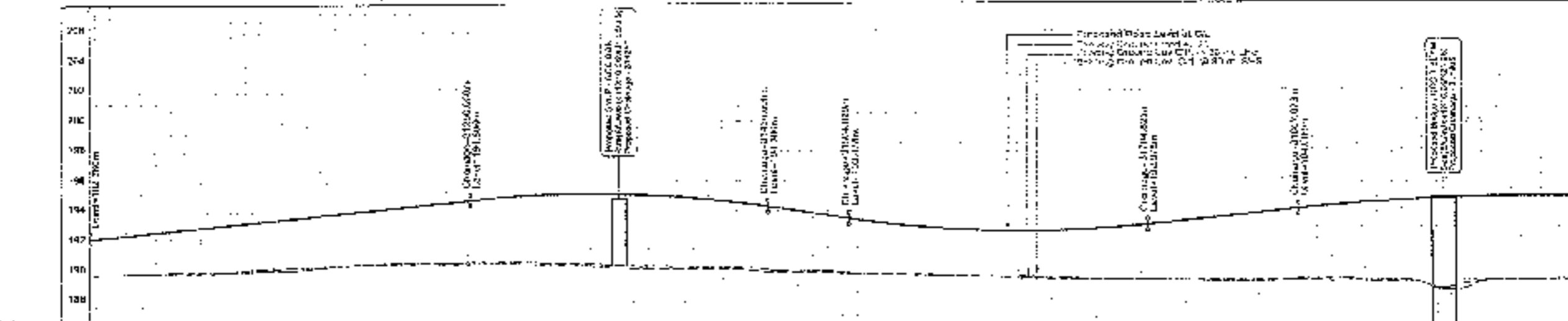
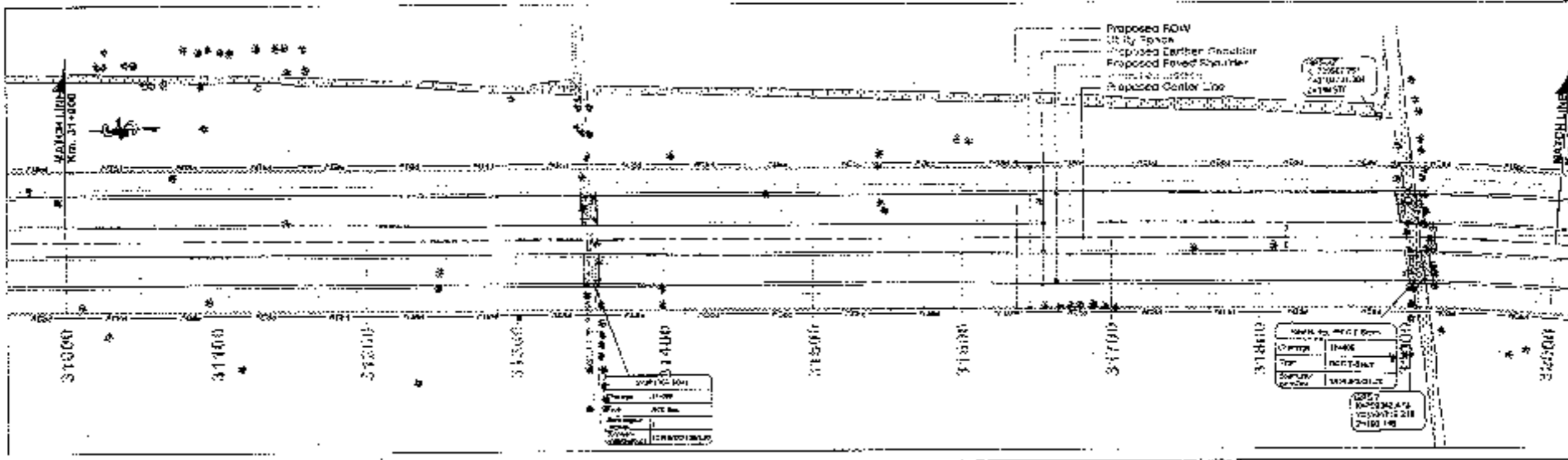
TO FEROZPUR JHIRKA

PROPOSED LEGEND

Table with 2 columns: Symbol and Description. Includes items like REF LINE, PAVEMENT, MEDIAN, etc.

EXISTING LEGEND

Table with 2 columns: Symbol and Description. Includes items like BRIDGE, BRANCH ROAD, RAILROAD, etc.



Large data table with multiple columns containing numerical values for road elevation, drainage, and other technical specifications.

CLIENT: National Highways Authority of India. Logo and address details.

CONSULTANT: Chakanya Projects Consultancy Pvt. Ltd. Logo and address details.

PROJECT: Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Inner Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-2/Package-4) of Sohra - Ferozpur Jhirka.

SCALE: Horizontal = 1:2000, Vertical = 1:200. DWG FILE: PLAN & PROFILE (SOHNA - FEROPUR JHIRKA).

APPROVALS: Includes fields for DATE, AMOUNT, and various official stamps and signatures.

← TO SOHNA

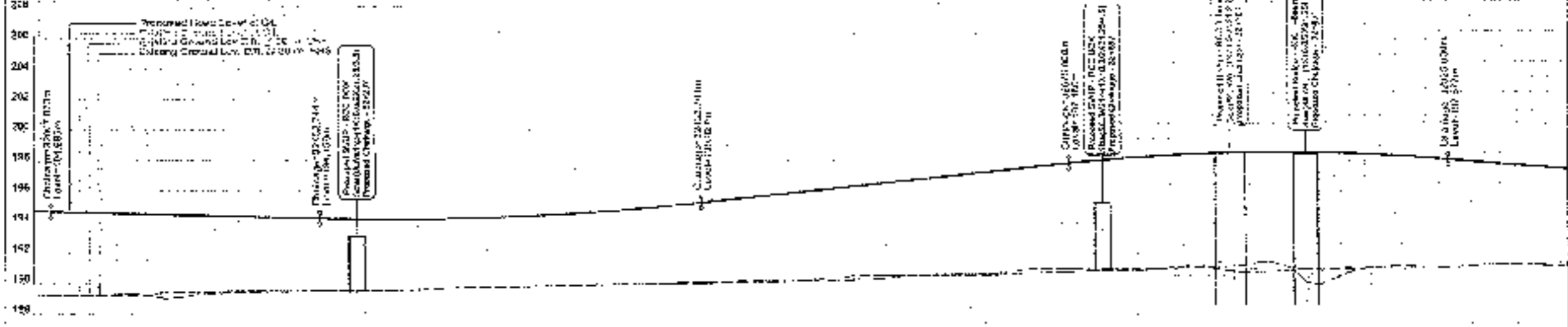
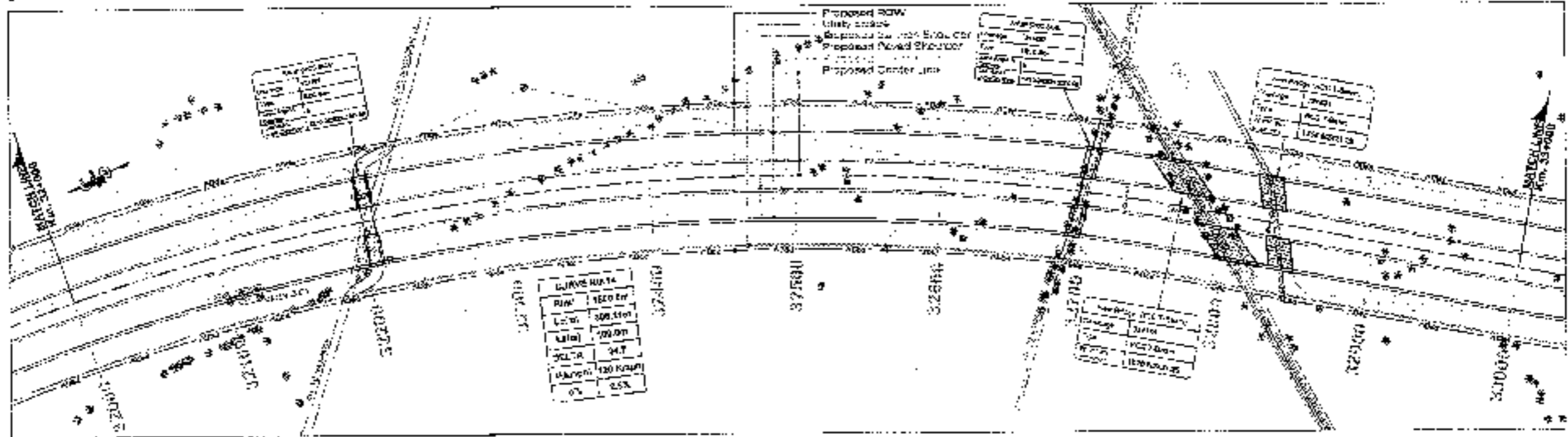
TO FIKOZPUR JHIRKA →

**PROPOSED LEGEND**

HP LINE	—
PROP. CC	—
NEEDM	—
STAGE STRIP	—
PROP. CAN	—
PROP. SS	—
UTL. TV GRADE	—
PROP. ROW	—
PROP. CH	—
WATER LINE	—
PROJ. ROAD LEVEL AT G.L. OF CAN	—
Ground Road Level at G.L. of CAN	—
PROP. GROUND UTY. DETAIL 20M x 20M	—
PROP. GROUND UTY. DETAIL 10M x 10M	—
PROP. GROUND UTY. DETAIL 5M x 5M	—
SURF ELEVATION	—
CHANGING	—
GRID	—

**EXISTING LEGEND**

BRIDGE	—
BRANCH ROAD	—
BUS STOP	—
BUS STOP SCHEDULE	—
BUS STOP	—
BOUNDARY WALL	—
SECTION LINE	—
CU VERT	—
DRAIN	—
ELECTRIC POLE	—
EX ROW	—
EXISTING ROAD	—
GATE	—
HIGH PUMP	—
HUT	—
KIOSK/SHOP	—
LAKE/POND	—
MEDIA	—
OFC	—
PILLAR	—
PETROL PUMP	—
RIVER/CHANNEL	—
RAILWAY TRACK	—
POW PILLAR	—
SIGN BOARD	—
TELEPHONE POLE	—
TOWER	—
WATER TOWER	—
WELL	—
WATER HOUSE	—
TREE	—



Station	Proposed Road Level at G.L. of CAN	Existing Ground Level	Proposed Center Line	Proposed Right-of-Way
32000.00	195.140	195.140	32000.00	32000.00
32010.00	195.140	195.140	32010.00	32010.00
32020.00	195.140	195.140	32020.00	32020.00
32030.00	195.140	195.140	32030.00	32030.00
32040.00	195.140	195.140	32040.00	32040.00
32050.00	195.140	195.140	32050.00	32050.00
32060.00	195.140	195.140	32060.00	32060.00
32070.00	195.140	195.140	32070.00	32070.00
32080.00	195.140	195.140	32080.00	32080.00
32090.00	195.140	195.140	32090.00	32090.00
32100.00	195.140	195.140	32100.00	32100.00
32110.00	195.140	195.140	32110.00	32110.00
32120.00	195.140	195.140	32120.00	32120.00
32130.00	195.140	195.140	32130.00	32130.00
32140.00	195.140	195.140	32140.00	32140.00
32150.00	195.140	195.140	32150.00	32150.00
32160.00	195.140	195.140	32160.00	32160.00
32170.00	195.140	195.140	32170.00	32170.00
32180.00	195.140	195.140	32180.00	32180.00
32190.00	195.140	195.140	32190.00	32190.00
32200.00	195.140	195.140	32200.00	32200.00
32210.00	195.140	195.140	32210.00	32210.00
32220.00	195.140	195.140	32220.00	32220.00
32230.00	195.140	195.140	32230.00	32230.00
32240.00	195.140	195.140	32240.00	32240.00
32250.00	195.140	195.140	32250.00	32250.00
32260.00	195.140	195.140	32260.00	32260.00
32270.00	195.140	195.140	32270.00	32270.00
32280.00	195.140	195.140	32280.00	32280.00
32290.00	195.140	195.140	32290.00	32290.00
32300.00	195.140	195.140	32300.00	32300.00
32310.00	195.140	195.140	32310.00	32310.00
32320.00	195.140	195.140	32320.00	32320.00
32330.00	195.140	195.140	32330.00	32330.00
32340.00	195.140	195.140	32340.00	32340.00
32350.00	195.140	195.140	32350.00	32350.00
32360.00	195.140	195.140	32360.00	32360.00
32370.00	195.140	195.140	32370.00	32370.00
32380.00	195.140	195.140	32380.00	32380.00
32390.00	195.140	195.140	32390.00	32390.00
32400.00	195.140	195.140	32400.00	32400.00
32410.00	195.140	195.140	32410.00	32410.00
32420.00	195.140	195.140	32420.00	32420.00
32430.00	195.140	195.140	32430.00	32430.00
32440.00	195.140	195.140	32440.00	32440.00
32450.00	195.140	195.140	32450.00	32450.00
32460.00	195.140	195.140	32460.00	32460.00
32470.00	195.140	195.140	32470.00	32470.00
32480.00	195.140	195.140	32480.00	32480.00
32490.00	195.140	195.140	32490.00	32490.00
32500.00	195.140	195.140	32500.00	32500.00

**CLIENT:**  
National Highways Authority of India

**CONSULTANT:**  
Chaitanya Projects Consultancy Pvt. Ltd.  
C-3, 2ND FLOOR, RAJ TOWER PLOT NO- 21-22, SECTOR-4, VAISHALI, GHAZIABAD  
PH: 0120-2233418, 4120472. FAX: 0120-4110472

**PROJECT:**  
Consultancy Service for the Preparation of Feasibility Report/UPR for development of Economic Corridor, Inter Corridor and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojna (Lot-6/Package-4) of Sohna - Firozpur Jhirka

**SCALE:**  
Horizontal = 1:2000  
Vertical = 1:200

**CDWG TITLE:**  
PLAN & PROFILE  
SOHNA - FIKOZPUR JHIRKA  
KM 12+00 TO KM 14+00

**DATE:** 12/12/2014  
**PROJECT NO:** 1629AM/2014/RP/8/01  
**REVISIONS:** 1  
**BY:** SKS/SID

TO SOHNA

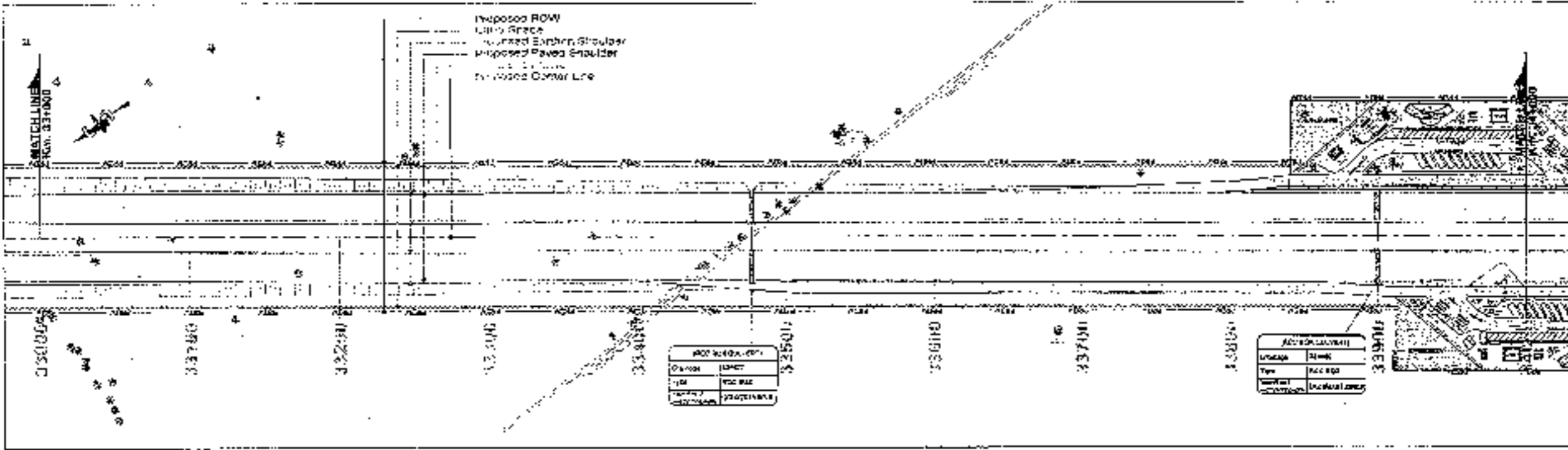
TO FEROZPUR JHIRKA

**PROPOSED LEGEND**

MFLINE	-----
PROP. CL	-----
WSPN	-----
EDGE STRIP	-----
PROP. DIV	-----
PROP. SG	-----
UTILITY SPACE	-----
PROV	-----
PROP. IN	GOC
MATCHLINE	-----
PROP. ROAD LVL	-----
AT GOLDEN	-----
PROPOSED	-----
EXISTING	-----
PROPOSED	-----
PROPOSED	-----
PROPOSED	-----
PROPOSED	-----
PROPOSED	-----
PROPOSED	-----
PROPOSED	-----
PROPOSED	-----
PROPOSED	-----
PROPOSED	-----
PROPOSED	-----

**EXISTING LEGEND**

BRIDGE	-----
BOUNDARY	-----
BUILDING	-----
DESTRUCTIVE	-----
D.S. STOP	-----
BOUNDARY WALL	-----
CENTERLINE	-----
DILUTED	-----
DRIVE	-----
ELECTRIC CABLE	-----
EXPLAN	-----
EXISTING ROAD	-----
GATE	-----
HAND PUMP	-----
HAUT	-----
KILOMETER	-----
STAKE	-----
LAMP POST	-----
MEAS	-----
OFF	-----
ALIVE	-----
PETROL PUMP	-----
RIVER/DALE	-----
RAILWAY TRACK	-----
HOW DRAIN	-----
SIGN BOARD	-----
TRAFFIC LIGHT	-----
TRAFFIC	-----
TURNOVER	-----
POLE	-----
TOWER	-----
WIRE MESH	-----
TREE	-----



Stationing	Proposed Road Level at Road Centerline (m)	Proposed Road Level at Road Edge (m)	Proposed Road Level at Road Side (m)	Proposed Road Level at Road Shoulder (m)	Proposed Road Level at Road Footway (m)	Proposed Road Level at Road Embankment (m)	Proposed Road Level at Road Cut (m)	Proposed Road Level at Road Bridge (m)	Proposed Road Level at Road Tunnel (m)	Proposed Road Level at Road Overpass (m)
3000.0	100.00	99.50	99.00	98.50	98.00	97.50	97.00	96.50	96.00	95.50
3010.0	99.50	99.00	98.50	98.00	97.50	97.00	96.50	96.00	95.50	95.00
3020.0	99.00	98.50	98.00	97.50	97.00	96.50	96.00	95.50	95.00	94.50
3030.0	98.50	98.00	97.50	97.00	96.50	96.00	95.50	95.00	94.50	94.00
3040.0	98.00	97.50	97.00	96.50	96.00	95.50	95.00	94.50	94.00	93.50
3050.0	97.50	97.00	96.50	96.00	95.50	95.00	94.50	94.00	93.50	93.00
3060.0	97.00	96.50	96.00	95.50	95.00	94.50	94.00	93.50	93.00	92.50
3070.0	96.50	96.00	95.50	95.00	94.50	94.00	93.50	93.00	92.50	92.00
3080.0	96.00	95.50	95.00	94.50	94.00	93.50	93.00	92.50	92.00	91.50
3090.0	95.50	95.00	94.50	94.00	93.50	93.00	92.50	92.00	91.50	91.00
3100.0	95.00	94.50	94.00	93.50	93.00	92.50	92.00	91.50	91.00	90.50
3110.0	94.50	94.00	93.50	93.00	92.50	92.00	91.50	91.00	90.50	90.00
3120.0	94.00	93.50	93.00	92.50	92.00	91.50	91.00	90.50	90.00	89.50
3130.0	93.50	93.00	92.50	92.00	91.50	91.00	90.50	90.00	89.50	89.00
3140.0	93.00	92.50	92.00	91.50	91.00	90.50	90.00	89.50	89.00	88.50
3150.0	92.50	92.00	91.50	91.00	90.50	90.00	89.50	89.00	88.50	88.00
3160.0	92.00	91.50	91.00	90.50	90.00	89.50	89.00	88.50	88.00	87.50
3170.0	91.50	91.00	90.50	90.00	89.50	89.00	88.50	88.00	87.50	87.00
3180.0	91.00	90.50	90.00	89.50	89.00	88.50	88.00	87.50	87.00	86.50
3190.0	90.50	90.00	89.50	89.00	88.50	88.00	87.50	87.00	86.50	86.00
3200.0	90.00	89.50	89.00	88.50	88.00	87.50	87.00	86.50	86.00	85.50
3210.0	89.50	89.00	88.50	88.00	87.50	87.00	86.50	86.00	85.50	85.00
3220.0	89.00	88.50	88.00	87.50	87.00	86.50	86.00	85.50	85.00	84.50
3230.0	88.50	88.00	87.50	87.00	86.50	86.00	85.50	85.00	84.50	84.00
3240.0	88.00	87.50	87.00	86.50	86.00	85.50	85.00	84.50	84.00	83.50
3250.0	87.50	87.00	86.50	86.00	85.50	85.00	84.50	84.00	83.50	83.00
3260.0	87.00	86.50	86.00	85.50	85.00	84.50	84.00	83.50	83.00	82.50
3270.0	86.50	86.00	85.50	85.00	84.50	84.00	83.50	83.00	82.50	82.00
3280.0	86.00	85.50	85.00	84.50	84.00	83.50	83.00	82.50	82.00	81.50
3290.0	85.50	85.00	84.50	84.00	83.50	83.00	82.50	82.00	81.50	81.00
3300.0	85.00	84.50	84.00	83.50	83.00	82.50	82.00	81.50	81.00	80.50
3310.0	84.50	84.00	83.50	83.00	82.50	82.00	81.50	81.00	80.50	80.00
3320.0	84.00	83.50	83.00	82.50	82.00	81.50	81.00	80.50	80.00	79.50
3330.0	83.50	83.00	82.50	82.00	81.50	81.00	80.50	80.00	79.50	79.00
3340.0	83.00	82.50	82.00	81.50	81.00	80.50	80.00	79.50	79.00	78.50
3350.0	82.50	82.00	81.50	81.00	80.50	80.00	79.50	79.00	78.50	78.00
3360.0	82.00	81.50	81.00	80.50	80.00	79.50	79.00	78.50	78.00	77.50
3370.0	81.50	81.00	80.50	80.00	79.50	79.00	78.50	78.00	77.50	77.00
3380.0	81.00	80.50	80.00	79.50	79.00	78.50	78.00	77.50	77.00	76.50
3390.0	80.50	80.00	79.50	79.00	78.50	78.00	77.50	77.00	76.50	76.00
3400.0	80.00	79.50	79.00	78.50	78.00	77.50	77.00	76.50	76.00	75.50



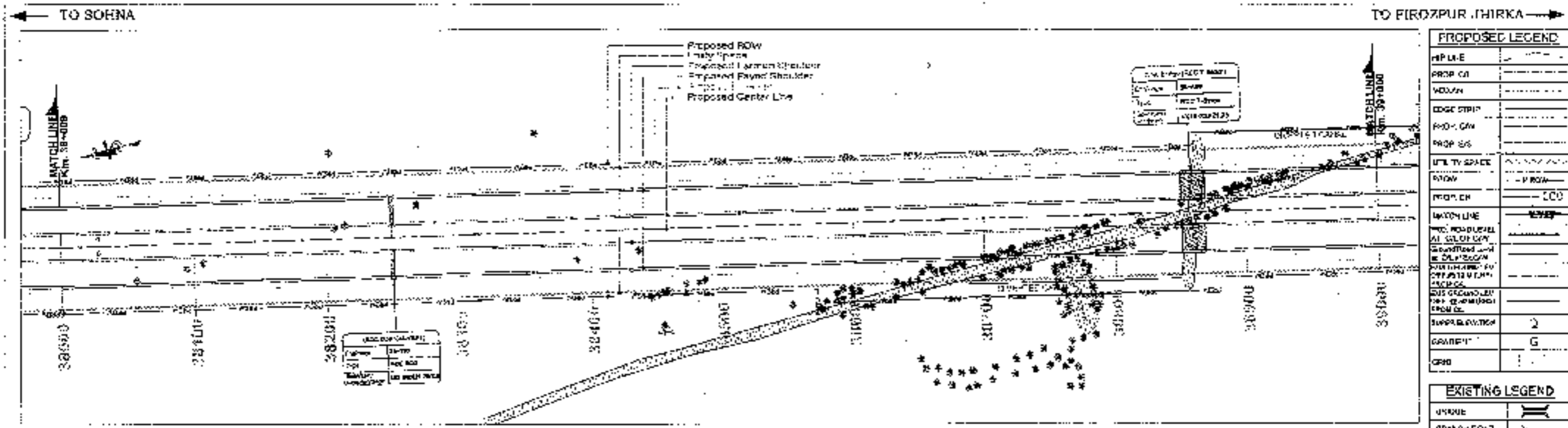




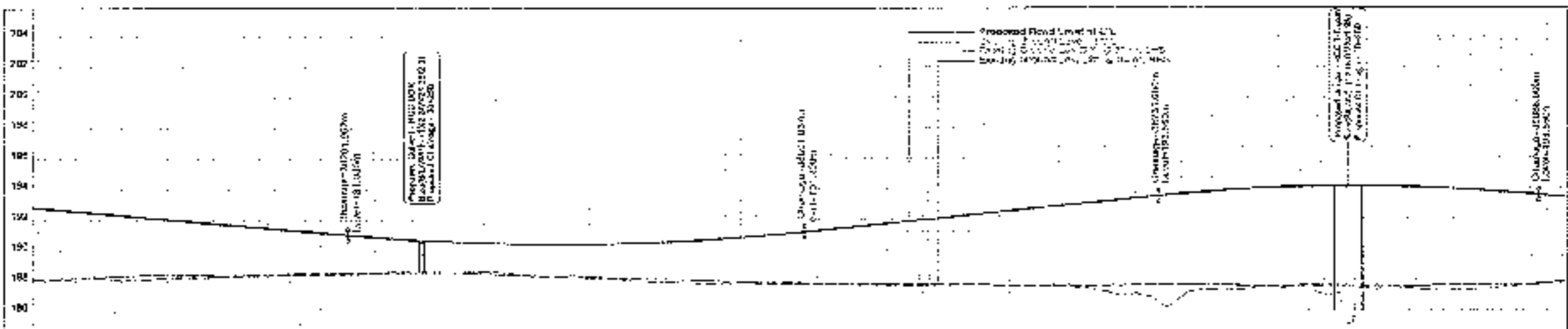








LINE	---
PROP. ROW	---
LANE	---
EDGE STRIP	---
PROP. CAN	---
PROP. SW	---
UTILITY SPACE	---
ROW	---
PROP. CH	---
MATCH LINE	---
PROP. ROAD LEVEL	---
EXIST. ROAD LEVEL	---
PROPOSED GRADE	---
EXIST. GRADE	---
PROP. GRASS	---
PROP. ASPHALT	---
PROP. CONCRETE	---
PROP. GRAVEL	---
PROP. SAND	---
PROP. SOIL	---



UNRAVE	---
BRIDGE ROAD	---
RAILWAY TRACK	---
SUB. PROP.	---
BOUNDARY WALL	---
WATER	---
DRAIN	---
ELECTRIC POLE	---
EXIST. ROAD	---
EXIST. ROAD	---
DATE	---
ROAD PUMP	---
WELL	---
RAILWAY STATION	---
CAMP SITE	---
MEDIAN	---
PROP.	---
PUMP	---
RAILWAY	---
RAILWAY TRACK	---
ROAD PUMP	---
WELL	---
RAILWAY STATION	---
CAMP SITE	---
MEDIAN	---
PROP.	---
PUMP	---
RAILWAY	---
RAILWAY TRACK	---
ROAD PUMP	---
WELL	---
RAILWAY STATION	---
CAMP SITE	---
MEDIAN	---
PROP.	---
PUMP	---
RAILWAY	---

STATION	38+00.00	38+05.00	38+10.00	38+15.00	38+20.00	38+25.00	38+30.00	38+35.00	38+40.00	38+45.00	38+50.00	38+55.00	38+60.00	38+65.00	38+70.00	38+75.00	38+80.00	38+85.00	38+90.00	38+95.00	39+00.00
PROPOSED ROAD LEVEL (P.R.L.)	195.20	195.50	195.80	196.10	196.40	196.70	197.00	197.30	197.60	197.90	198.20	198.50	198.80	199.10	199.40	199.70	200.00	200.30	200.60	200.90	201.20
EXISTING GROUND LEVEL (E.G.L.)	193.50	193.80	194.10	194.40	194.70	195.00	195.30	195.60	195.90	196.20	196.50	196.80	197.10	197.40	197.70	198.00	198.30	198.60	198.90	199.20	199.50
PROPOSED GRADE (P.G.)	195.20	195.50	195.80	196.10	196.40	196.70	197.00	197.30	197.60	197.90	198.20	198.50	198.80	199.10	199.40	199.70	200.00	200.30	200.60	200.90	201.20
GRADE DIFFERENCE (P.G. - E.G.L.)	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70

<b>CLIENT</b> National Highways Authority of India Ministry of Road Transport & Highways, Government of India	<b>CONSULTANT</b> Chaitanya Projects Consultancy Pvt. Ltd. G-5, 3RD FLOOR, I.A. LOWER PLOT NO. 21-22, SECTION-4, VAISHALI, GHAZIABAD PH : 0120-3223818, 4123472, FAX: 0120-4119472	<b>PROJECT</b> Consultancy Service for the Preparation for Feasibility Report (DPF) for development of Economic Corridor, Inbar Gaidand and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojaya (Lot-6/Package-4) of Solera - Ferozpur Jhirka	<b>SCALE</b> Horizontal - 1:2000 Vertical - 1:200	<b>DATE</b> 20/08/2018	<b>DWG TITLE</b> PLAN & PROFILE (SECTION-A - FERROZPUR JHIRKA-4) (SCALE 1:4000/1:2000)	<b>PROJECT NO.</b> ETCO/1205/2018/01/01/01	<b>DATE OF ISSUE</b> 20/08/2018	<b>DESIGNER</b> 	<b>CHECKED</b> 	<b>APPROVED</b> 
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TO SOLINA

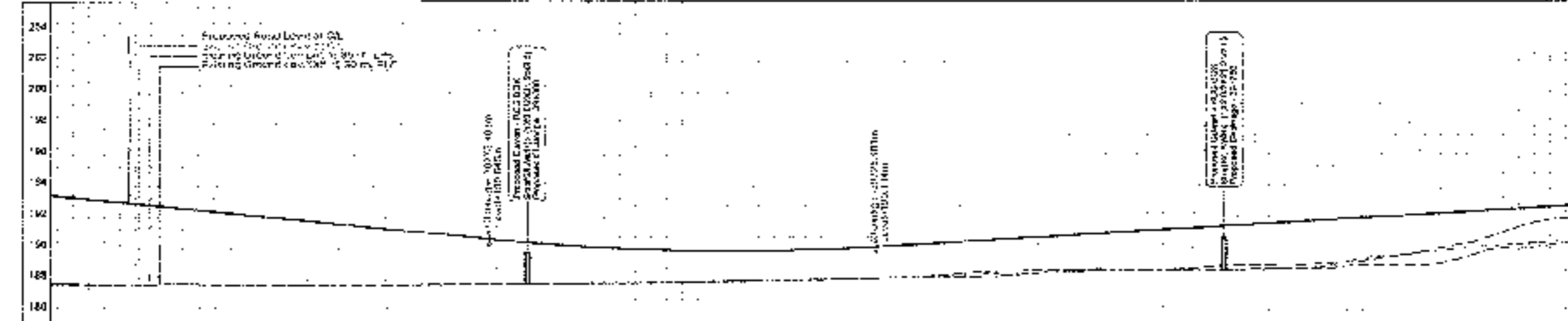
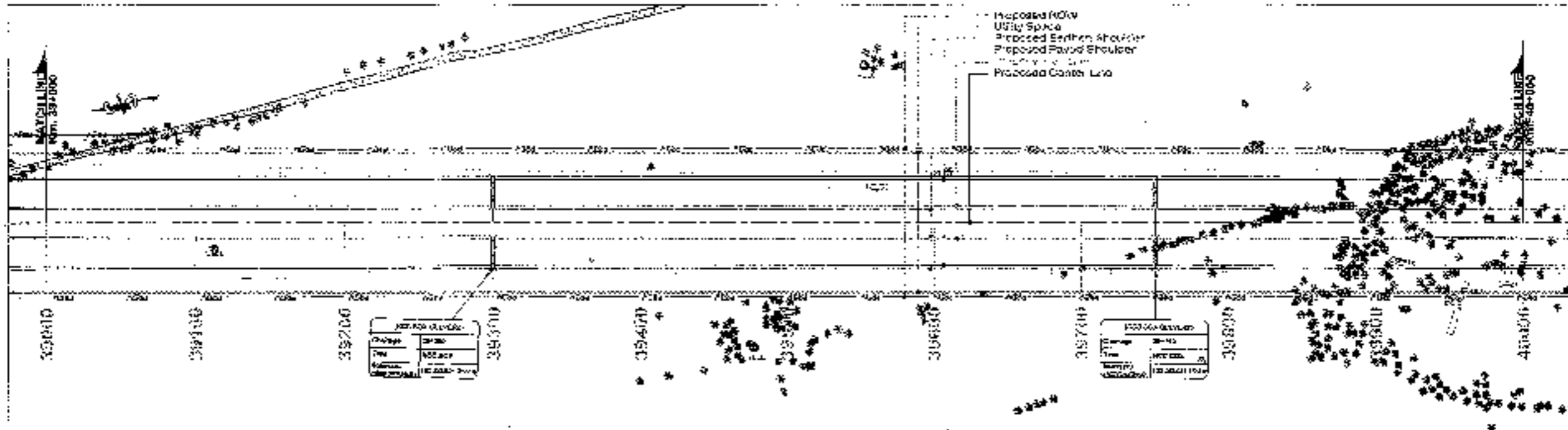
TO FIRUZPUR JIRKA

PROPOSED LEGEND

HP LINE	
PROP. CL.	
MEDIAN	
EDGE STR.	
FRYD. CH.	
PROP. CH.	
UTILITY SPACE	
PROVA	
PROP. CP.	
WATCHLINE	
PRO. ROAD LEVEL AT 2% OF G.W.	
PROPOSED CURVE	
PRO. ROAD LEVEL AT 2% OF G.W.	
PRO. ROAD LEVEL AT 2% OF G.W.	
PRO. ROAD LEVEL AT 2% OF G.W.	
PRO. ROAD LEVEL AT 2% OF G.W.	
PRO. ROAD LEVEL AT 2% OF G.W.	
GRADIENT	
G.P.C.	

EXISTING LEGEND

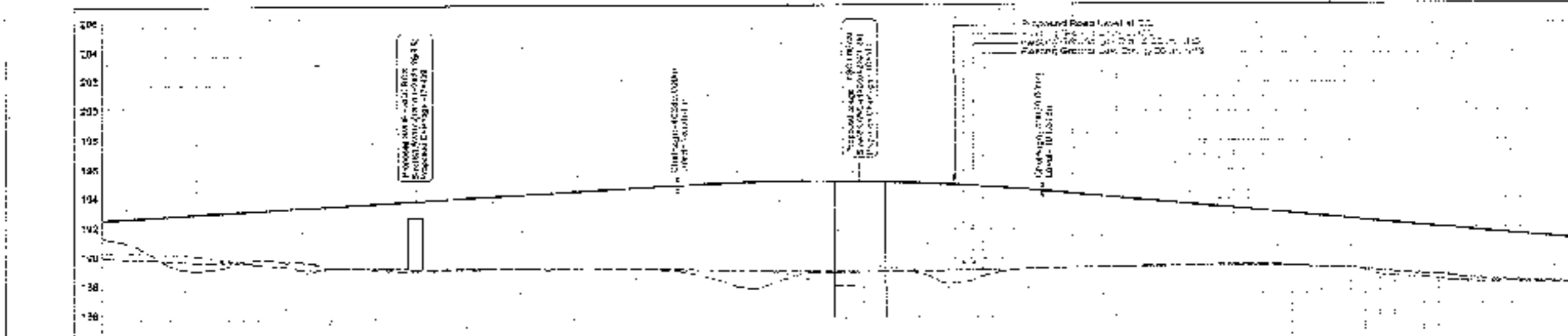
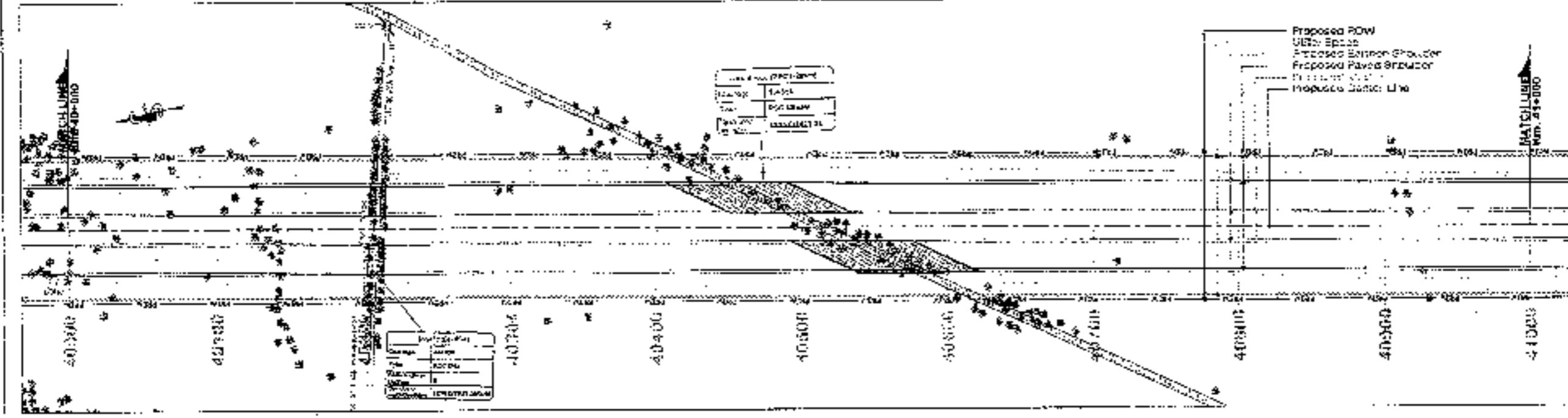
BRIDGE	
BRANCH ROAD	
STRUCTURE	
SUB. STR.	
SECONDARY VALL.	
CENTERLINE	
CLEVERT	
URBAN	
ELECTRIC POLE	
CR. ROAD	
EXISTING ROAD	
RAIL	
HAND PUMP	
HUT	
WATER TOWER	
STONE	
LAWN POND	
WADIAM	
G.P.C.	
MILLAR	
PETROL PUMP	
HYDRAULIC	
RAILWAY TRACK	
ARM. PILLAR	
IRON PILLAR	
TELEPHONE P.O.	
FEAR P.	
CONCRETE	
TURLEY	
TOWER	
WATER HOUSE	
WELL	



<b>Stationing</b>	39200	39210	39220	39230	39240	39250	39260	39270	39280	39290	39300	39310	39320	39330	39340	39350	39360	39370	39380	39390	39400	39410	39420	39430	39440	39450	39460	39470	39480	39490	39500	39510	39520	39530	39540	39550	39560	39570	39580	39590	39600	39610	39620	39630	39640	39650	39660	39670	39680	39690	39700	39710	39720	39730	39740	39750	39760	39770	39780	39790	39800
<b>Proposed Road Level</b>	182.00	182.10	182.20	182.30	182.40	182.50	182.60	182.70	182.80	182.90	183.00	183.10	183.20	183.30	183.40	183.50	183.60	183.70	183.80	183.90	184.00	184.10	184.20	184.30	184.40	184.50	184.60	184.70	184.80	184.90	185.00	185.10	185.20	185.30	185.40	185.50	185.60	185.70	185.80	185.90	186.00	186.10	186.20	186.30	186.40	186.50	186.60	186.70	186.80	186.90	187.00	187.10	187.20	187.30	187.40	187.50	187.60	187.70	187.80	187.90	188.00
<b>Existing Ground</b>	180.00	180.50	181.00	181.50	182.00	182.50	183.00	183.50	184.00	184.50	185.00	185.50	186.00	186.50	187.00	187.50	188.00	188.50	189.00	189.50	190.00	190.50	191.00	191.50	192.00	192.50	193.00	193.50	194.00	194.50	195.00	195.50	196.00	196.50	197.00	197.50	198.00	198.50	199.00	199.50	200.00	200.50	201.00	201.50	202.00	202.50	203.00	203.50	204.00	204.50	205.00	205.50	206.00	206.50	207.00	207.50	208.00	208.50	209.00	209.50	210.00
<b>Clearance</b>	2.00	1.60	1.20	0.80	0.40	0.00	0.40	0.80	1.20	1.60	2.00	2.40	2.80	3.20	3.60	4.00	4.40	4.80	5.20	5.60	6.00	6.40	6.80	7.20	7.60	8.00	8.40	8.80	9.20	9.60	10.00	10.40	10.80	11.20	11.60	12.00	12.40	12.80	13.20	13.60	14.00	14.40	14.80	15.20	15.60	16.00	16.40	16.80	17.20	17.60	18.00	18.40	18.80	19.20	19.60	20.00					

TO SONNA

TO FIROZPUR JHIRKA



Station	Proposed Road Level (m)	Ground Level (m)
40+300	102.848	102.801
40+310	102.801	102.801
40+320	102.801	102.801
40+330	102.801	102.801
40+340	102.801	102.801
40+350	102.801	102.801
40+360	102.801	102.801
40+370	102.801	102.801
40+380	102.801	102.801
40+390	102.801	102.801
40+400	102.801	102.801
40+410	102.801	102.801
40+420	102.801	102.801
40+430	102.801	102.801
40+440	102.801	102.801
40+450	102.801	102.801
40+460	102.801	102.801
40+470	102.801	102.801
40+480	102.801	102.801
40+490	102.801	102.801
40+500	102.801	102.801
40+510	102.801	102.801
40+520	102.801	102.801
40+530	102.801	102.801
40+540	102.801	102.801
40+550	102.801	102.801
40+560	102.801	102.801
40+570	102.801	102.801
40+580	102.801	102.801
40+590	102.801	102.801
40+600	102.801	102.801
40+610	102.801	102.801
40+620	102.801	102.801
40+630	102.801	102.801
40+640	102.801	102.801
40+650	102.801	102.801
40+660	102.801	102.801
40+670	102.801	102.801
40+680	102.801	102.801
40+690	102.801	102.801
40+700	102.801	102.801
40+710	102.801	102.801
40+720	102.801	102.801
40+730	102.801	102.801
40+740	102.801	102.801
40+750	102.801	102.801
40+760	102.801	102.801
40+770	102.801	102.801
40+780	102.801	102.801
40+790	102.801	102.801
40+800	102.801	102.801

**PROPOSED LEGEND**

UTR	
Prop. Row	
UTR: Space	
Proposed Shoulder	
Proposed Paved Shoulder	
Proposed Lane	

**EXISTING LEGEND**

BRIDGE	
BRIDGE ROAD	
UTILITY STRUC. W.C.	
BUS STOP	
BOUNDARY WALL	
BOUNDARY LINE	
CULVERT	
DRAIN	
ELECTRIC POLE	
EX. ROW	
EXISTING ROAD	
GATE	
PAVED ROAD	
M.T.	
RETENTION WALL	
JUNCTION	
W.C.	



**CLIENT:** National Highways Authority of India

**CONSULTANT:** Charanya Projects Consultancy Pvt. Ltd., C-2, 2ND FLOOR, R.K.TOWER PLOT NO.-24-22, SECTOR-4, WAIS-461, GHAZIABAD, PH. 0120-3225410, 4120472, FAX: 0120-410472

**PROJECT:** Consultancy Service for the Preparation for Feasibility Report/ DPR for development of Economic Corridor, Inter Connectors and Feeder Routes to improve the efficiency of freight movement in India under Bharatiya Pariyojana (I-L-8-Page-4) of Sonna - Firozpur Jhirka

**SCALE:** Vertical - 1:200, Horizontal - 1:200

**DWG. TITLE:** PLAN & PROFILE (SONNA - FIROZPUR JHIRKA) (I-L-8-Page-4)

**DATE:** 08/01/2013

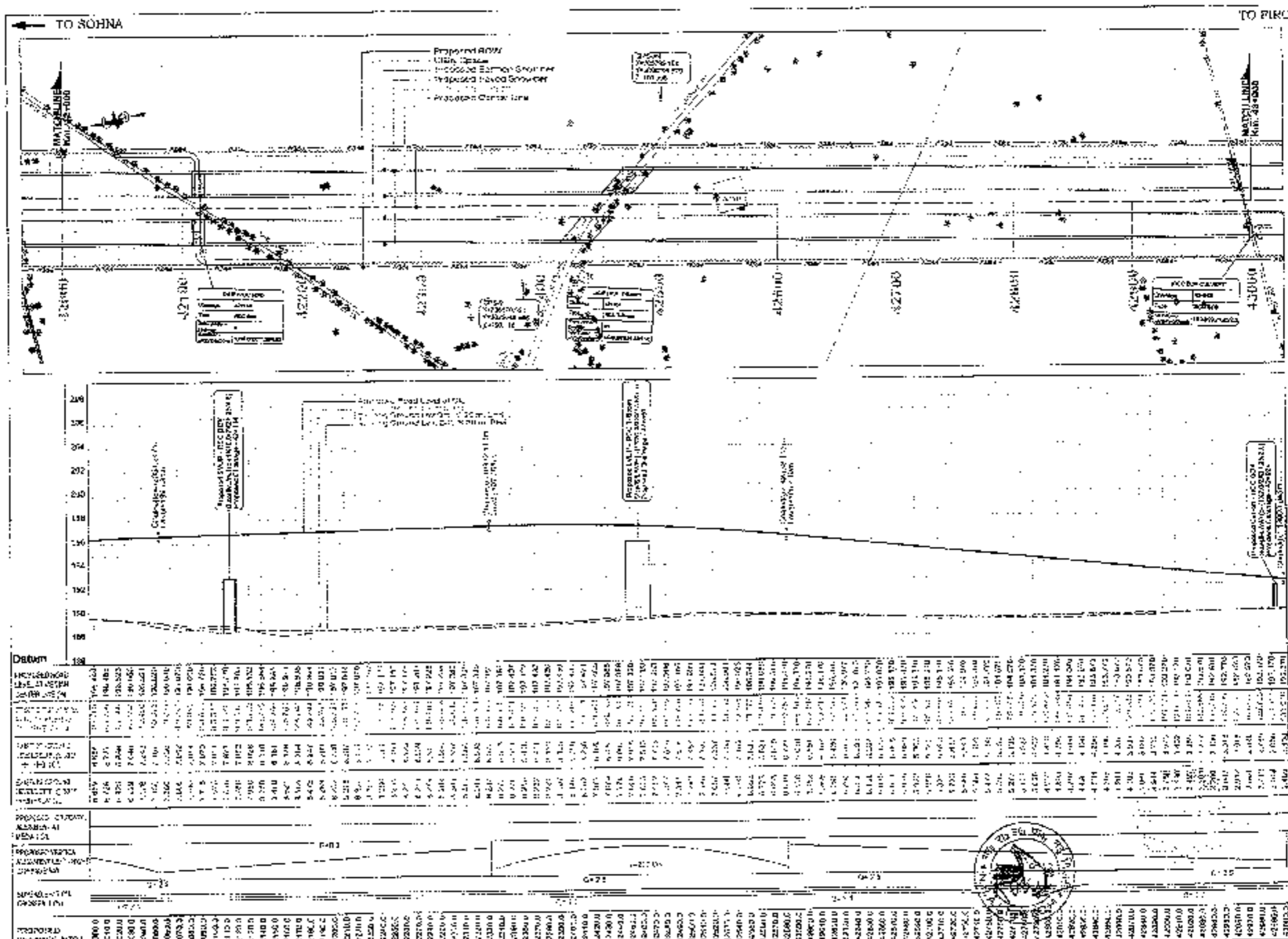
**PROJECT ENGINEER:** [Signature]

**CHECKED BY:** [Signature]

**DESIGNED BY:** [Signature]







PROPOSED CHANGING ELEVATION	DATUM	PROPOSED CHANGING ELEVATION	DATUM	PROPOSED CHANGING ELEVATION	DATUM	PROPOSED CHANGING ELEVATION	DATUM
40000.0	188.00	40100.0	189.00	40200.0	190.00	40300.0	191.00
40400.0	194.00	40500.0	195.00	40600.0	196.00	40700.0	197.00
40800.0	198.00	40900.0	199.00	41000.0	200.00	41100.0	201.00
41200.0	202.00	41300.0	203.00	41400.0	204.00	41500.0	205.00
41600.0	206.00	41700.0	207.00	41800.0	208.00	41900.0	209.00
42000.0	210.00	42100.0	211.00	42200.0	212.00	42300.0	213.00
42400.0	216.00	42500.0	217.00	42600.0	218.00	42700.0	219.00
42800.0	222.00	42900.0	223.00	43000.0	224.00	43100.0	225.00
43200.0	228.00	43300.0	229.00	43400.0	230.00	43500.0	231.00
43600.0	234.00	43700.0	235.00	43800.0	236.00	43900.0	237.00
44000.0	238.00	44100.0	239.00	44200.0	240.00	44300.0	241.00
44400.0	244.00	44500.0	245.00	44600.0	246.00	44700.0	247.00
44800.0	250.00	44900.0	251.00	45000.0	252.00	45100.0	253.00
45200.0	256.00	45300.0	257.00	45400.0	258.00	45500.0	259.00
45600.0	262.00	45700.0	263.00	45800.0	264.00	45900.0	265.00
46000.0	268.00	46100.0	269.00	46200.0	270.00	46300.0	271.00
46400.0	274.00	46500.0	275.00	46600.0	276.00	46700.0	277.00
46800.0	280.00	46900.0	281.00	47000.0	282.00	47100.0	283.00
47200.0	286.00	47300.0	287.00	47400.0	288.00	47500.0	289.00
47600.0	292.00	47700.0	293.00	47800.0	294.00	47900.0	295.00
48000.0	298.00	48100.0	299.00	48200.0	300.00	48300.0	301.00
48400.0	304.00	48500.0	305.00	48600.0	306.00	48700.0	307.00
48800.0	310.00	48900.0	311.00	49000.0	312.00	49100.0	313.00
49200.0	316.00	49300.0	317.00	49400.0	318.00	49500.0	319.00
49600.0	322.00	49700.0	323.00	49800.0	324.00	49900.0	325.00
50000.0	328.00	50100.0	329.00	50200.0	330.00	50300.0	331.00

PROP. ROW	---
PROPOSED BARRIER CHANNEL	---
PROPOSED GRADED SHOULDER	---
PROPOSED CENTERLINE	---
UTILITY GRADE	---
PROPOSED	---
PROPOSED	---
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PROPOSED	---

EXISTING ROAD	---
EXISTING STRUCTURE	---
EXISTING	---
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EXISTING	---



CLIENT: National Highways Authority of India

CONSULTANT: Chaitanya Projects Consultancy Pvt. Ltd.  
 C-5, 2ND FLOOR, R.K.TOWER PLOT NO.-21-22  
 SECTION 4, VASNAHALLI, GHAZIABAD  
 PH. 0120-3223466, 4174747, FAX: 0120-4113672

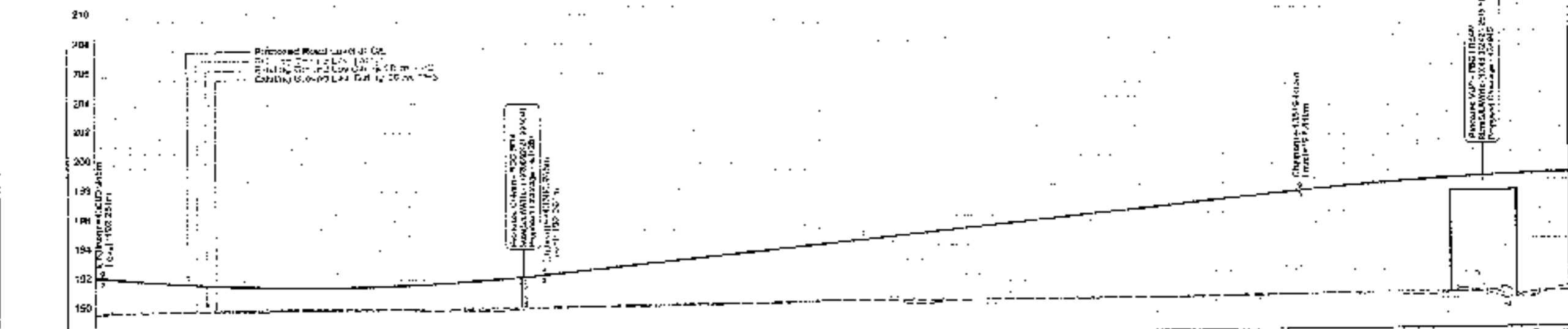
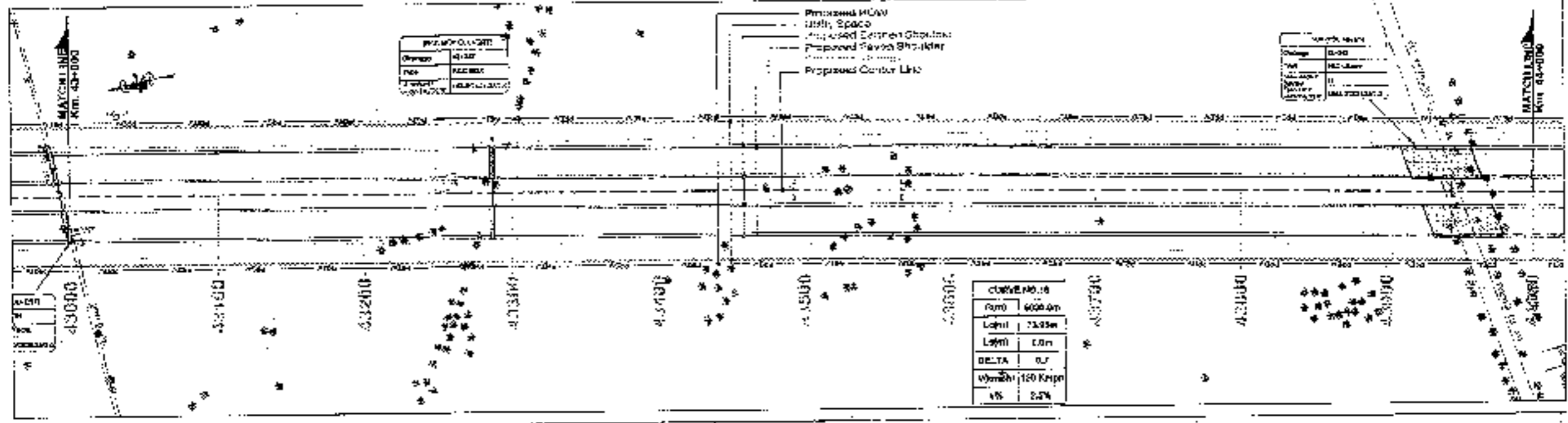
PROJECT: Consultancy Service for the Preparation of Feasibility Report (DPR) for development of Economic Corridor, Inter Corridors and Feeder Road to improve Lta efficiency of freight movement in India under Bharatnara Pariyojaya (Bot-4/Package-6) of Andhra - Firozpur-Jirka

SCALE: Horizontal: 1:2000 Vertical: 1:200  
 PLAN & PROFILE: SOHNA - FIROZPUR JIRKA (S.M. 42400+ TO KM. 43+00)

DRAWING NO: 144  
 DATE: 11.11.2010  
 PROJECT: ROAD NO. 1  
 DRAWN BY: J. K. KISHOREY  
 CHECKED BY: S. K. MISHRA

TO SOHNA

TO FIRKOZPUR JHIRKA



Stationing	4+ LINE	PROV. CH	PROV. CH	PROV. CH	PROV. CH
43000	158.40	158.40	158.40	158.40	158.40
43050	158.40	158.40	158.40	158.40	158.40
43100	158.40	158.40	158.40	158.40	158.40
43150	158.40	158.40	158.40	158.40	158.40
43200	158.40	158.40	158.40	158.40	158.40
43250	158.40	158.40	158.40	158.40	158.40
43300	158.40	158.40	158.40	158.40	158.40
43350	158.40	158.40	158.40	158.40	158.40
43400	158.40	158.40	158.40	158.40	158.40
43450	158.40	158.40	158.40	158.40	158.40
43500	158.40	158.40	158.40	158.40	158.40
43550	158.40	158.40	158.40	158.40	158.40
43600	158.40	158.40	158.40	158.40	158.40
43650	158.40	158.40	158.40	158.40	158.40
43700	158.40	158.40	158.40	158.40	158.40
43750	158.40	158.40	158.40	158.40	158.40
43800	158.40	158.40	158.40	158.40	158.40
43850	158.40	158.40	158.40	158.40	158.40
43900	158.40	158.40	158.40	158.40	158.40
43950	158.40	158.40	158.40	158.40	158.40
44000	158.40	158.40	158.40	158.40	158.40

**CLIENT:** National Highways Authority of India

**CONSULTANT:** Charanya Projects Consultancy Pvt. Ltd., P-5, 2ND FLOOR, R.K. TOWER, Plot NO. 27-27, SECTOR-4, VAISHALI, CHANDERGARH  
PH: 0123-9223419, 9123672, FAX: 0123-4118872

**PROJECT:** Consultancy Services for the Preparation for Feasibility Report/RR for development of Economic Corridors, like Gurdurs and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Part-B/Package-4) of Sohna - Firozpur Jhirka

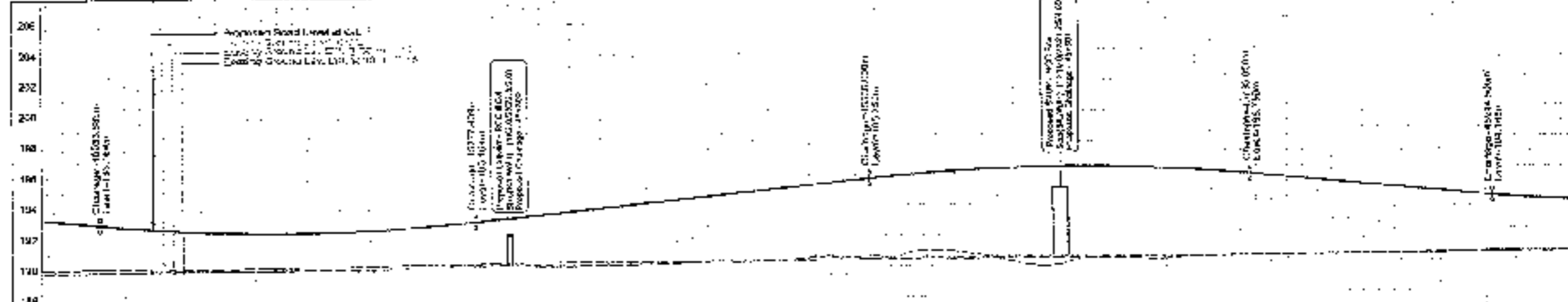
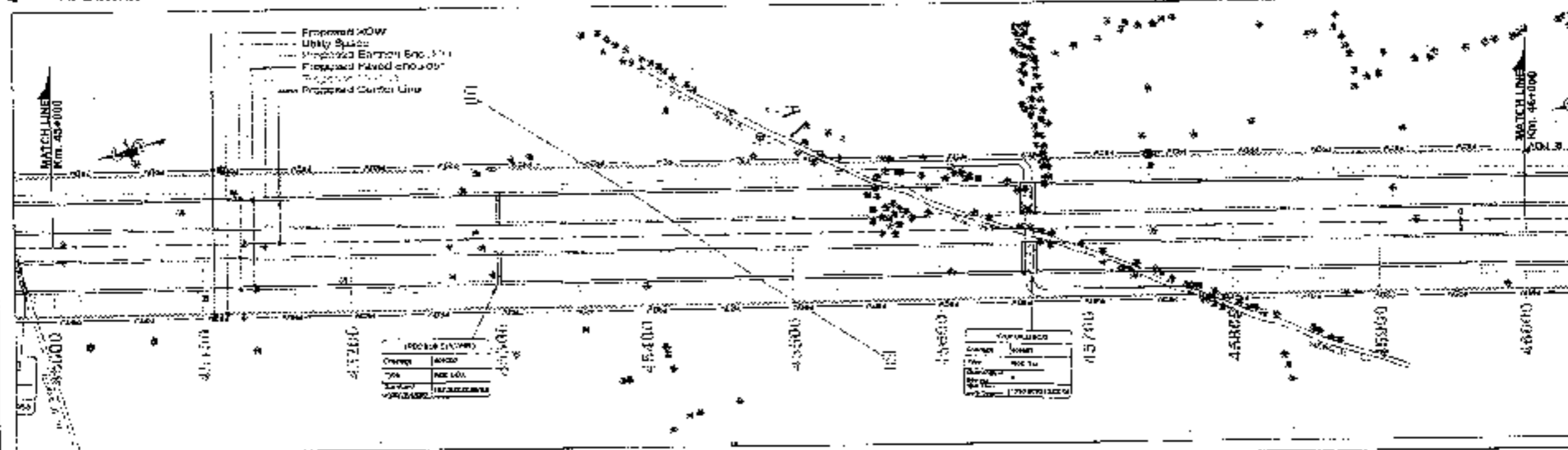
**SCALE:** Horizontal = 1:2000, Vertical = 1:200

**DWG TITLE:** PLAN & PROFILE ISHINA - FIRKOZPUR JHIRKA (KM P. 300 TO 344 102)

**DATE:** 15/05/2018  
**PROJECT NO:** ISHINA/RR/300/2017/001  
**JOB NO:** 300/2017/001

**DESIGNED BY:**   
**CHECKED BY:**   
**APPROVED BY:**





Stationing	Proposed Road Level at C/L	Existing Road Level at C/L	Proposed Road Level at Edge of Pavement	Existing Road Level at Edge of Pavement	Proposed Road Level at Shoulder	Existing Road Level at Shoulder
453000	192.00	191.50	192.50	191.00	193.00	191.50
453100	192.50	192.00	193.00	191.50	193.50	192.00
453200	193.00	192.50	193.50	192.00	194.00	192.50
453300	193.50	193.00	194.00	192.50	194.50	193.00
453400	194.00	193.50	194.50	193.00	195.00	193.50
453500	194.50	194.00	195.00	193.50	195.50	194.00
453600	195.00	194.50	195.50	194.00	196.00	194.50
453700	195.50	195.00	196.00	194.50	196.50	195.00
453800	196.00	195.50	196.50	195.00	197.00	195.50
453900	196.50	196.00	197.00	195.50	197.50	196.00
454000	197.00	196.50	197.50	196.00	198.00	196.50
454100	197.50	197.00	198.00	196.50	198.50	197.00
454200	198.00	197.50	198.50	197.00	199.00	197.50
454300	198.50	198.00	199.00	197.50	199.50	198.00
454400	199.00	198.50	199.50	198.00	200.00	198.50
454500	199.50	199.00	200.00	198.50	200.50	199.00
454600	200.00	199.50	200.50	199.00	201.00	199.50
454700	200.50	200.00	201.00	199.50	201.50	200.00
454800	201.00	200.50	201.50	200.00	202.00	200.50
454900	201.50	201.00	202.00	200.50	202.50	201.00
455000	202.00	201.50	202.50	201.00	203.00	201.50

**CLIENT:** National Highways Authority of India

**CONSULTANT:** Chahanya Projects Consultancy Pvt. Ltd. C-4, 2ND FLR COR, R.K. TOWER PLOT NO. 41-22, SECTOR-4, VAIEHALLI, GHAZIABAD. PH.: 0120-3223415, 4120472. FAX: 0120-4110472

**PROJECT:** Consultancy Service for the Preparation of Feasibility Report/PPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-8/Package-4) of Sohana - Ferozpur Jirka

**SCALE:** Horizontal: 1:2000, Vertical: 1:200

**DATE:** 14/07/2024

**PROJECT NO.:** 47

**LOGO:** National Highways Authority of India, Chahanya Projects Consultancy Pvt. Ltd.

TO SOHNA

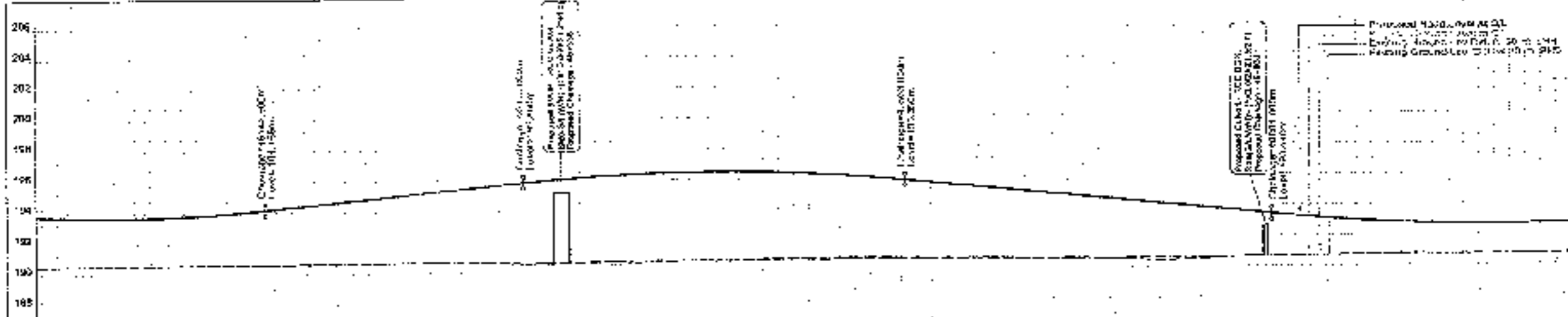
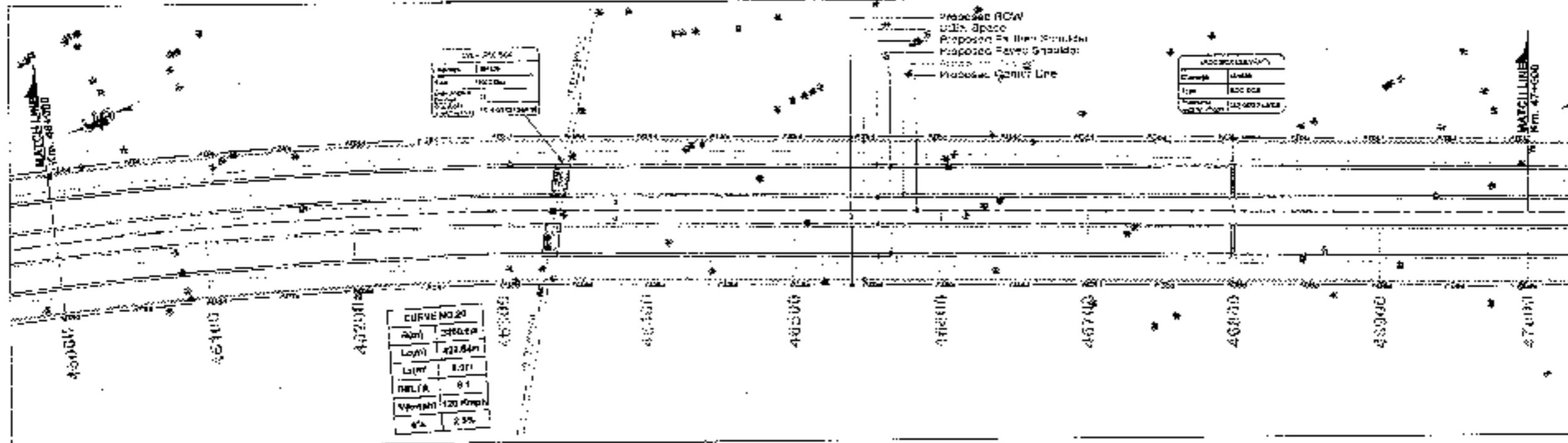
TO FIROZPUR JHIRKA

**PROPOSED LEGEND**

SPINE	
PROP. CR.	
EDGE STRIP	
PROP. CR.	
PROF. LN.	
MULTI SPACE	
PROF. LN.	
PROP. CR.	
PROF. LN.	
PROF. LN.	
PROF. LN.	
PROF. LN.	
PROF. LN.	
PROF. LN.	
PROF. LN.	
PROF. LN.	
PROF. LN.	
PROF. LN.	

**EXISTING LEGEND**

BRIDGE	
BRIDGE ROAD	
UTILITY STRUCTURE	
BUS STOP	
BOUNDARY WALL	
CENTER LINE	
CUL-DE-SAC	
RAIL	
ELECTRIC POLE	
EX. ROAD	
EXISTING ROAD	
GATE	
LAND MARK	
+0	
RECONMETER	
RAIL POST	
MEDIAN	
CRS	
WELL	
PETROL PUMP	
AMBIENALA	
RAILWAY TRACK	
RELAPELAX	
SURVEY MARK	
TELEPHONE POLE	
TEMPLE	
TRANSFORMER	
TREST	
TOWER	
WAREHOUSE	
WELL	



Station	Prop. Road Level (m)	Existing Ground Level (m)	Prop. Road Level (m)	Existing Ground Level (m)
46053.4	182.704	182.704	182.704	182.704
46054.0	182.704	182.704	182.704	182.704
46055.0	182.704	182.704	182.704	182.704
46056.0	182.704	182.704	182.704	182.704
46057.0	182.704	182.704	182.704	182.704
46058.0	182.704	182.704	182.704	182.704
46059.0	182.704	182.704	182.704	182.704
46060.0	182.704	182.704	182.704	182.704
46061.0	182.704	182.704	182.704	182.704
46062.0	182.704	182.704	182.704	182.704
46063.0	182.704	182.704	182.704	182.704
46064.0	182.704	182.704	182.704	182.704
46065.0	182.704	182.704	182.704	182.704
46066.0	182.704	182.704	182.704	182.704
46067.0	182.704	182.704	182.704	182.704
46068.0	182.704	182.704	182.704	182.704
46069.0	182.704	182.704	182.704	182.704
46070.0	182.704	182.704	182.704	182.704
46071.0	182.704	182.704	182.704	182.704
46072.0	182.704	182.704	182.704	182.704
46073.0	182.704	182.704	182.704	182.704
46074.0	182.704	182.704	182.704	182.704
46075.0	182.704	182.704	182.704	182.704
46076.0	182.704	182.704	182.704	182.704
46077.0	182.704	182.704	182.704	182.704
46078.0	182.704	182.704	182.704	182.704
46079.0	182.704	182.704	182.704	182.704
46080.0	182.704	182.704	182.704	182.704
46081.0	182.704	182.704	182.704	182.704
46082.0	182.704	182.704	182.704	182.704
46083.0	182.704	182.704	182.704	182.704
46084.0	182.704	182.704	182.704	182.704
46085.0	182.704	182.704	182.704	182.704
46086.0	182.704	182.704	182.704	182.704
46087.0	182.704	182.704	182.704	182.704
46088.0	182.704	182.704	182.704	182.704
46089.0	182.704	182.704	182.704	182.704
46090.0	182.704	182.704	182.704	182.704
46091.0	182.704	182.704	182.704	182.704
46092.0	182.704	182.704	182.704	182.704
46093.0	182.704	182.704	182.704	182.704
46094.0	182.704	182.704	182.704	182.704
46095.0	182.704	182.704	182.704	182.704
46096.0	182.704	182.704	182.704	182.704
46097.0	182.704	182.704	182.704	182.704
46098.0	182.704	182.704	182.704	182.704
46099.0	182.704	182.704	182.704	182.704
46100.0	182.704	182.704	182.704	182.704

**CLIENT:** National Highways Authority of India

**CONSULTANT:** Chamanya Projects Consultancy Pvt. Ltd.  
 C-4, 2<sup>nd</sup> FLOOR, RAJTOURAM PLOT NO. 21-22,  
 SECTION-4, VAISHALI, G1122ADAD  
 PH: 011-26322419, 4520472, FAX: 011-4110472

**PROJECT:** Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6/Package-4) of Sohra - Firozpur Jhirka

**SCALE:** Horizontal = 1:2000, Vertical = 1:200

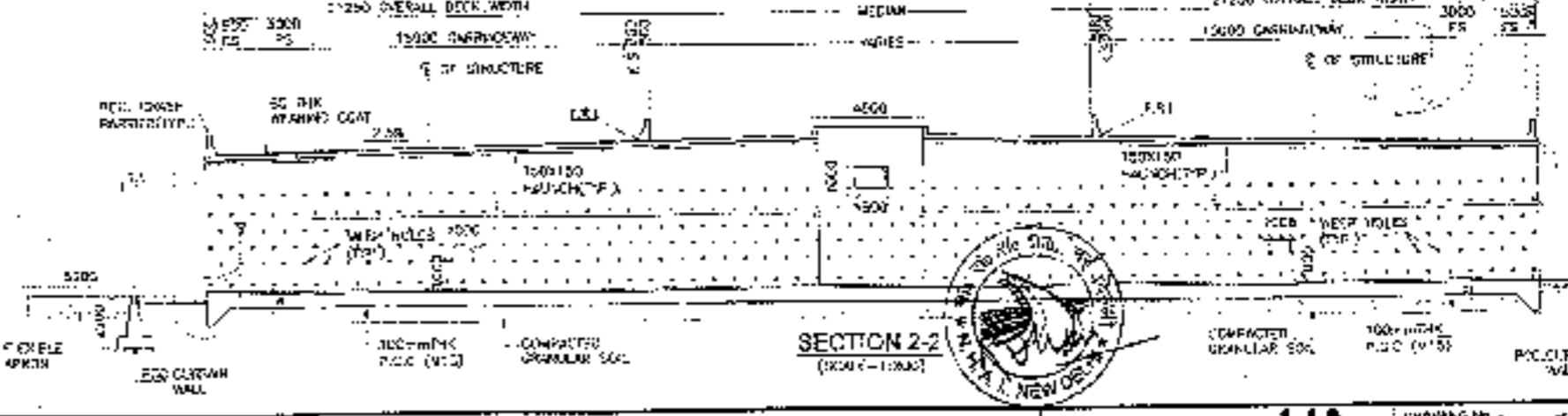
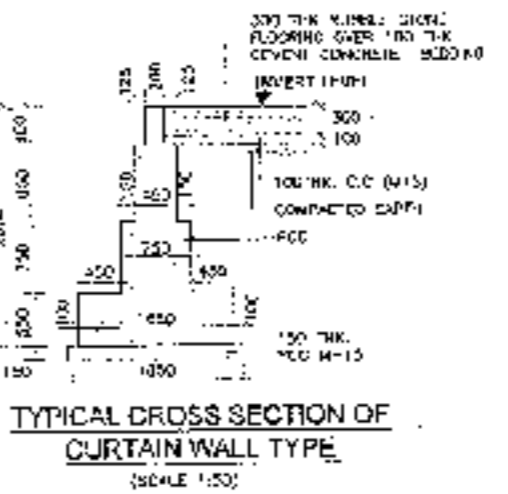
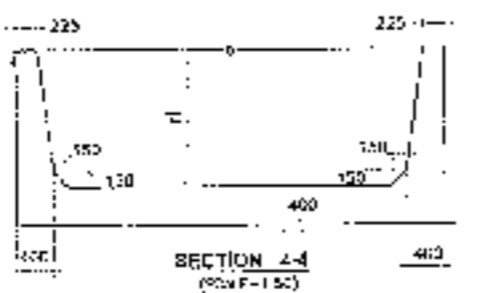
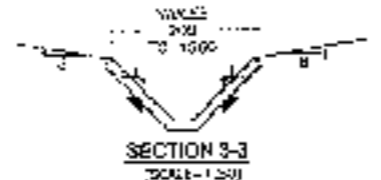
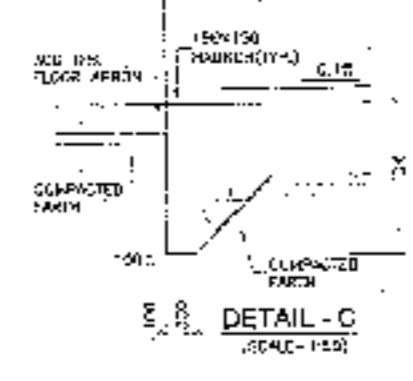
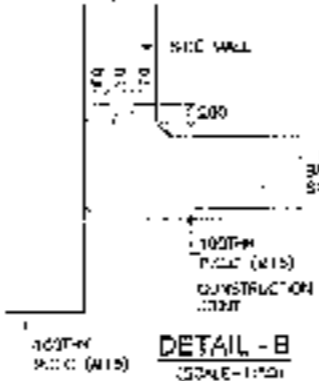
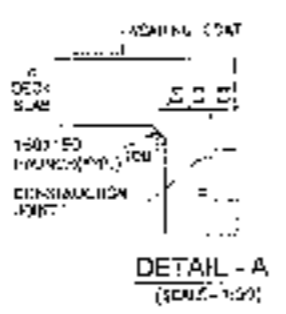
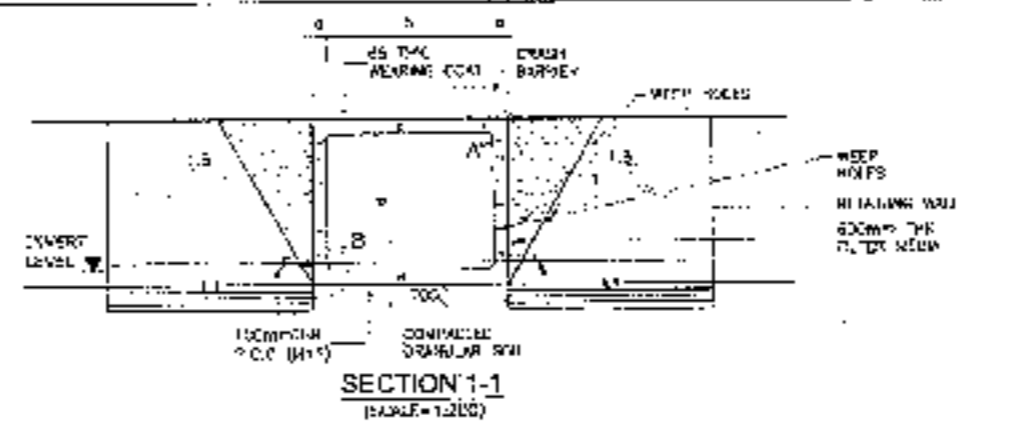
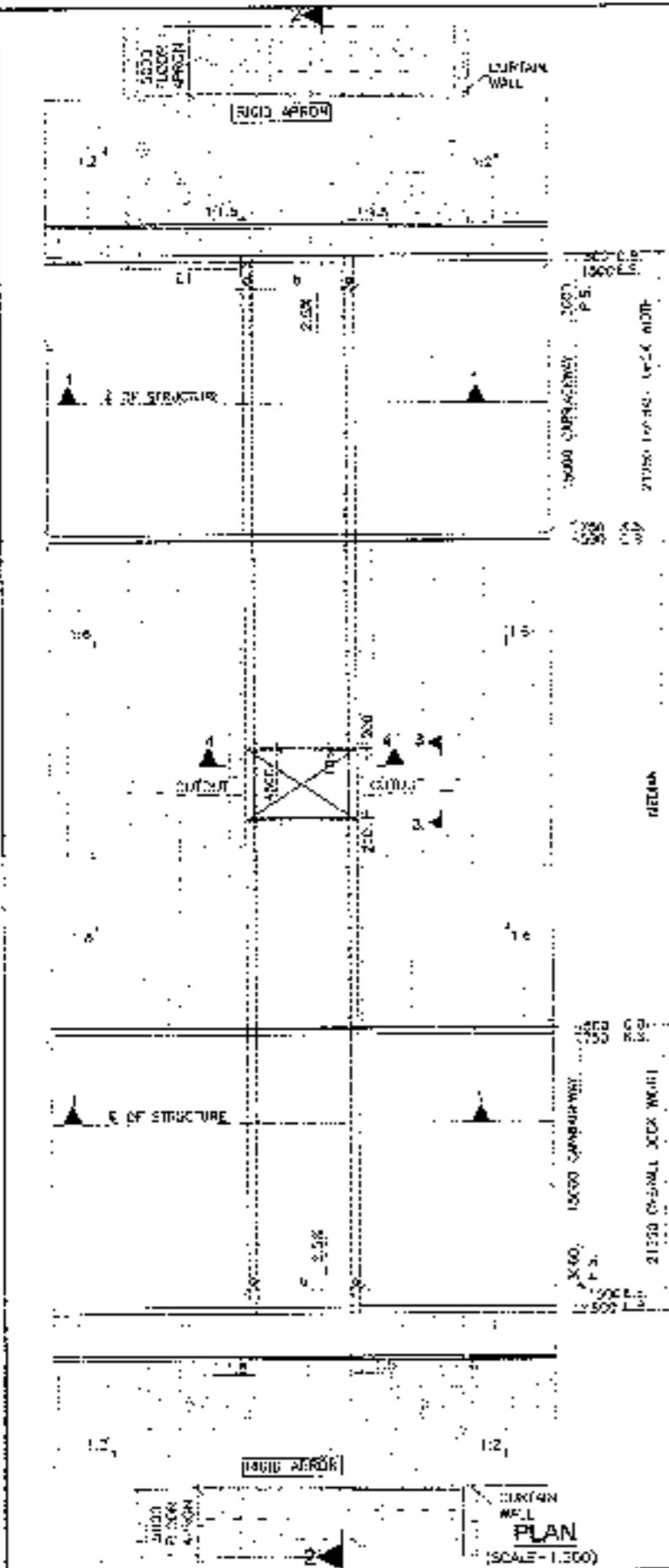
**DATE:** AUGUST 2016

**PROJECT NO.:** 148

**PLAN & PROFILE:** SOHNA - FROZPUR JHIRKA (KM 45-00 TO KM 47-00)

**DR. RAJESH K. SHARMA**

**DR. RAJESH K. SHARMA**



- NOTES:-**
1. ALL DIMENSIONS ARE IN MILLIMETERS, LEVELS ARE IN METERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
  2. CHANGE & LEVEL SHALL BE VERIFIED WITH THE RELEVANT PLAN & PROFILE DRAWINGS. VARIATION (IF ANY) SHALL BE REPORTED TO ENGINEER IN WRITING.
  3. PROPERTIES OF SELECTED BACK FILL BEHIND RETAINING WALL SHALL BE AS FOLLOWS:-  
 $\gamma = 18 \text{ kN/m}^3$   
 $\phi = 30^\circ$   
 $c = 10 \text{ kPa}$
  4. EXPANSION GAP (20MM) WILL BE FILLED UP BY ASPHALTIC PLUG EXPANSION JOINT.
  5. GRADE OF CONCRETE & VARIOUS ELEMENTS SHALL BE AS FOLLOWS:-  
 P.C.C. CURTAIN WALL: M15  
 CRUSH BARREY: M15  
 RETAINING WALL: M30
  6. NOT SAFE BEARING CAPACITY AT FOUNDING LEVEL FOR DESIGN S AS FOLLOWS:-  
 $\sigma = 10 \text{ t/m}^2$
  7. WEEP HOLES SHALL BE PROVIDED @ 1000 MM C/C STAGGERED, BOTH HORIZONTALLY AND VERTICALLY IN RETAINING WALL FROM GROUND LEVEL TO HIGH FLOOD LEVEL.
  8. BACKFILL BEHIND BOX SHALL BE CARRIED OUT SIMULTANEOUSLY.
  9. GRADE OF STEEL SHALL BE AS FOLLOWS CONFORMING TO IS:17853.
  10. 80MM THK WEARING COAT SHALL CONSIST OF LAYER OF MASTIC ASPHALT OF 7MM THK OVER 40MM BITUMINOUS COURSE.
  11. KEY IS CEPTED AT TYP. END.  
 FOR BASE SLAB THICKNESS: VALUE OF 'D'  
 UP TO 300MM: 200mm  
 GREATER THAN 300mm: 1/300mm  
 $D = \text{BASE SLAB THICKNESS}$
  12. 600 THK. FILTER MEDIA SHALL BE PROVIDED BEHIND RETAINING WALL.
  13. FOR DETAILS OF RETAINING WALL & FLOOR PROTECTION WORKS REFER SEPARATE DRAWINGS.
  14. THIS STRUCTURE IS IN SEISMIC ZONE II.
  15. FILL IS TAKEN AT MEDIAN EDGE.
  16. DURATION OF EXPOSURE IS MODERATE.
  17. REFER SHEET 2 OF 2 FOR RETAINING WALL DETAILS.

Span/Cell Arrangement	Span (b)	Clear opening (d)	Top slab (c)	Bottom Slab (e)	Side wall (a)
1x2.0x2.0	2.0	2.0	0.225	0.225	0.225
1x3.0x2.0	3.0	2.5	0.225	0.250	0.250
1x3.0x3.0	3.0	3.0	0.225	0.250	0.250
1x4.0x2.0	4.0	3.6	0.250	0.275	0.275

**CLIENT:** National Highways Authority of India

**CONSULTANT:** Chaitanya Projects Consultancy Pvt. Ltd.  
 C-6, 2ND FLOOR, R.K. TOWER PLOT NO. 21-22, SECTOR 4, VAISHALI, GHAZIABAD  
 PH: 0121-3225115, 4120472, FAX: 0120-4110472

**PROJECT:** Consultancy Service for the Preparation for Feasibility Report (DPR) for development of Economic Corridors, Inter Corridors and Feeder Roads to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-B/Package-4) of Solna - Ferozpur Jharkh

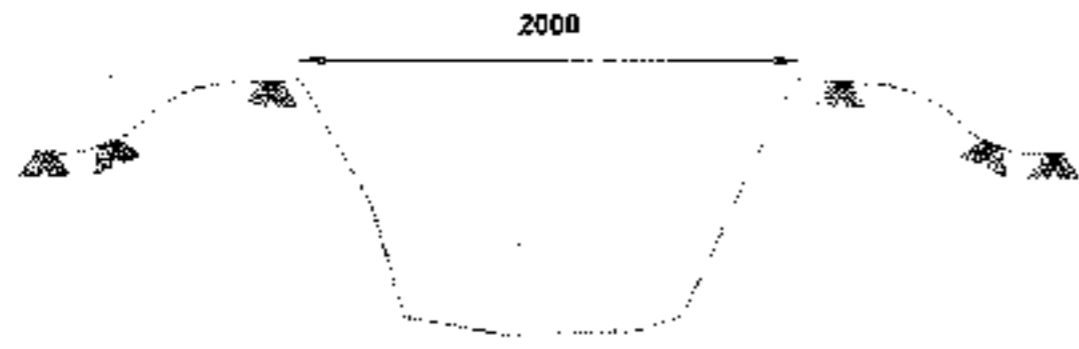
**SCALE:** AS SHOWN

**DWG TITLE:** GENERAL ARRANGEMENT DRAWING BOX CULVERT (WITHOUT FILLING) PACKAGE-2

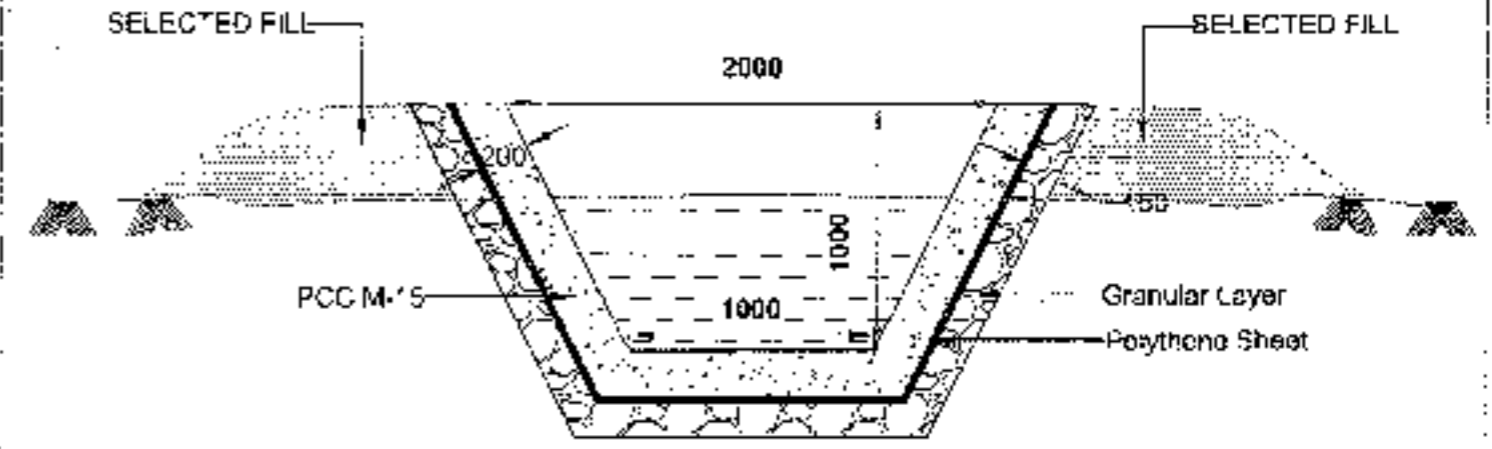
**149**

**SHAWING No.:** CPOR-1338.C/S-01  
**DATE:** SEPTEMBER 2018  
**PREPARED BY:** [Name]  
**CHECKED BY:** [Name]  
**APPROVED BY:** [Name]

**SHEET 1 OF 2**





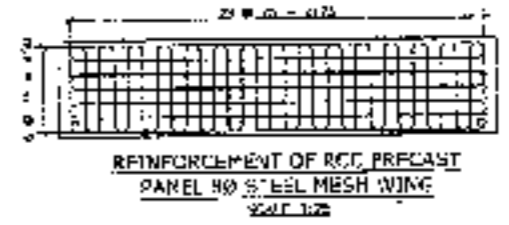
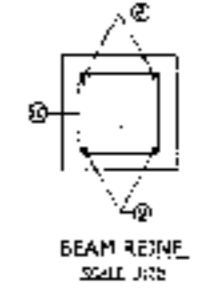
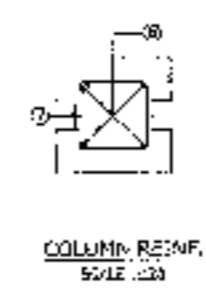
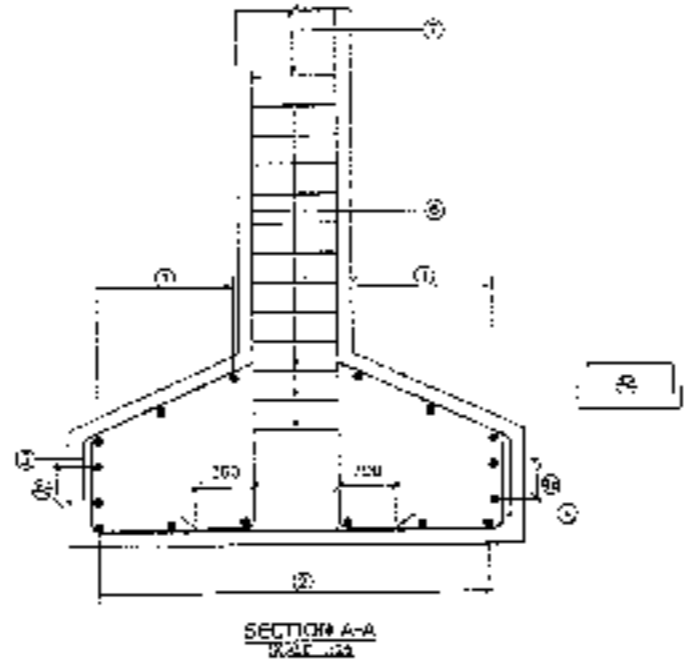
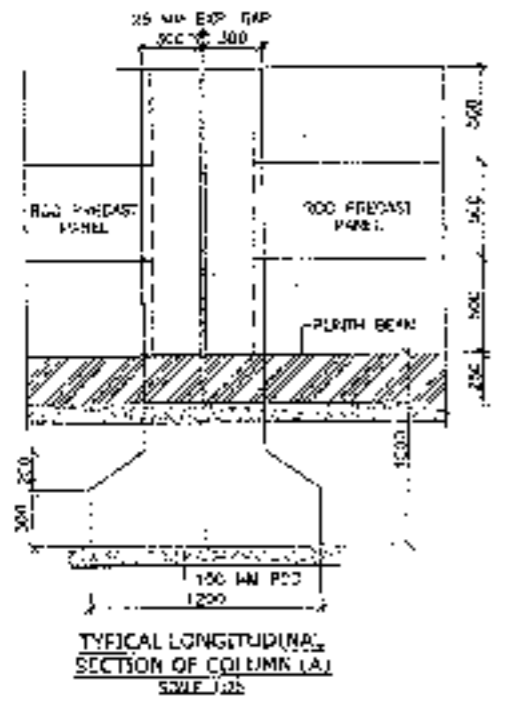
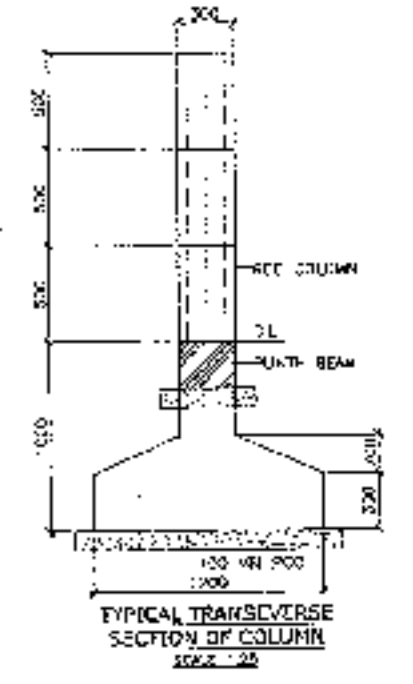
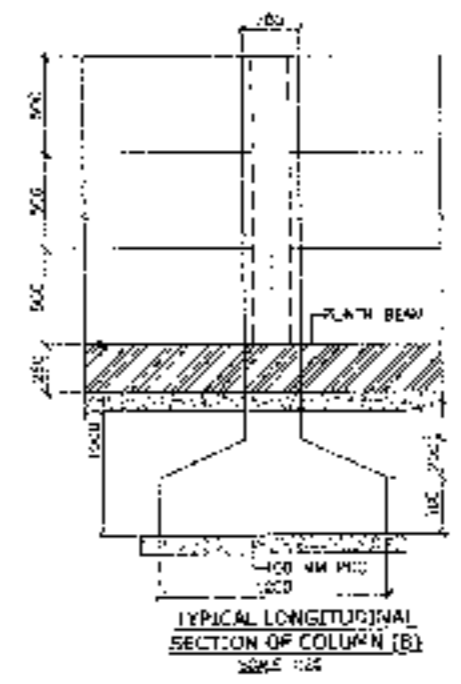
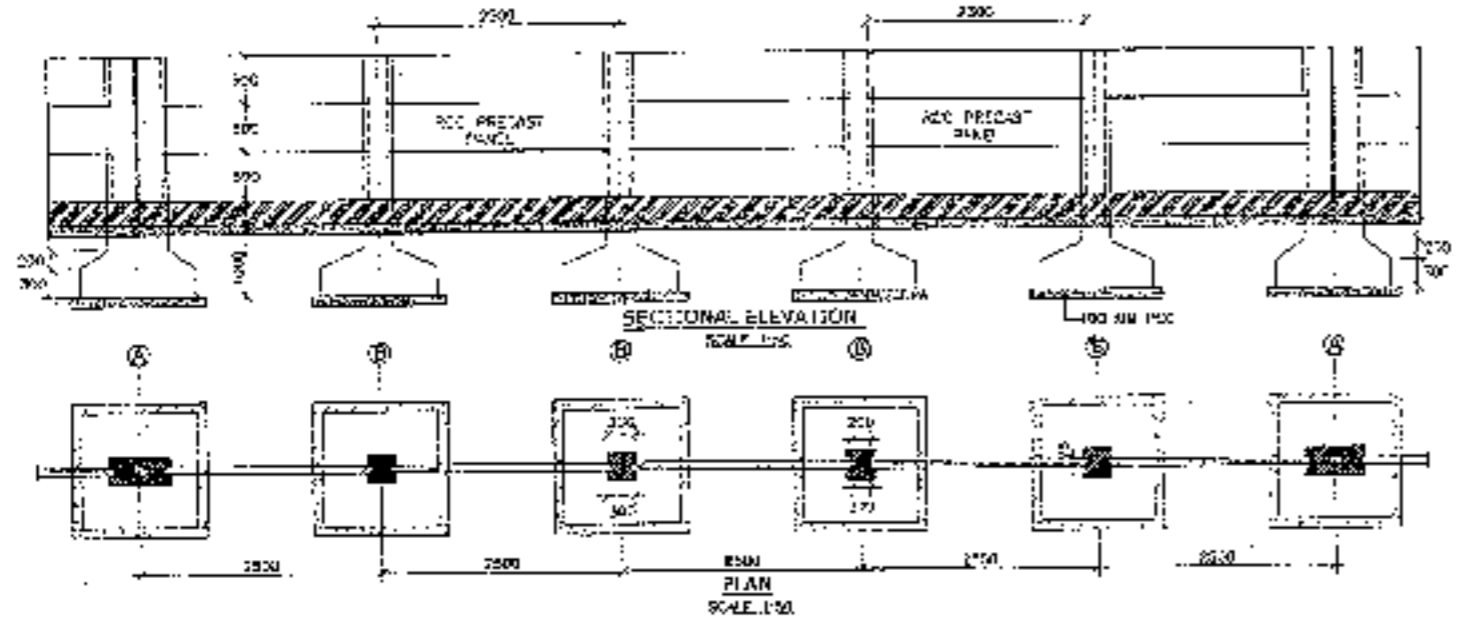
TYPICAL CROSS SECTION  
OF EXISTING CANAL



TYPICAL CROSS SECTION FOR  
CANAL DIVERSION



<b>CLIENT</b>  <b>National Highways Authority of India</b> <small>CHAITANYA PROJECTS CONSULTANCY PVT. LTD.</small>	<b>CONSULTANT</b>  <b>Chaitanya Projects Consultancy Pvt. Ltd.</b> C-5, 2ND FLOOR, A.K.TOWER PLAT NO. 21-22, SECTOR-4, VAISHALI GHAZIABAD PHL: 0120-3225415, 4100472, FAX: 0120-4110472	<b>PROJECT</b> Consultancy Service for the Preparation for Feasibility Report (M&E) for development of Economic Corridors, Intra-Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (LoS&Package-4) of Soha - Ferozpur Jharkh	<b>SCALE</b> 1:50 TYPICAL CROSS SECTION FOR CANAL DIVERSION	<b>DRAWN BY</b> [Signature]	<b>DATE</b> 04.10.2024
					<b>APPROVED BY</b> [Signature]



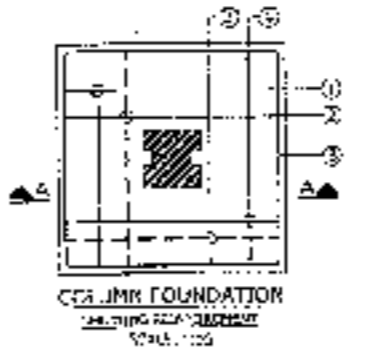
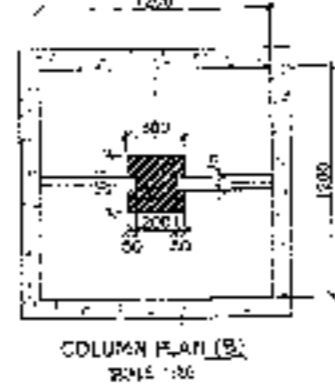
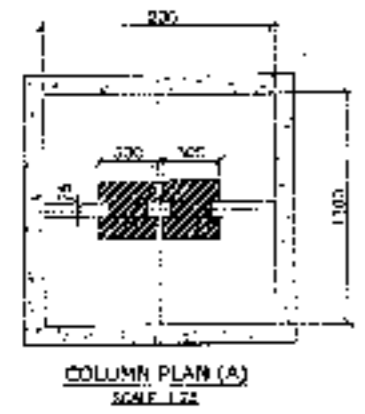
REINFORCEMENT SCHEDULE

BAR MARK	BAR DIA (mm)	SPACING/NUMBER (mm)	REMARK
1	10	200 c/c	
2	10	200 c/c	
3	10	200 c/c	
4	10	200 c/c	
4a	10	200 c/c	EDGE PART
5	10	200 c/c	
6	10	200 c/c	
7	8	200 c/c	
8	10	200 c/c	
9	10	200 c/c	
10	8	200 c/c	

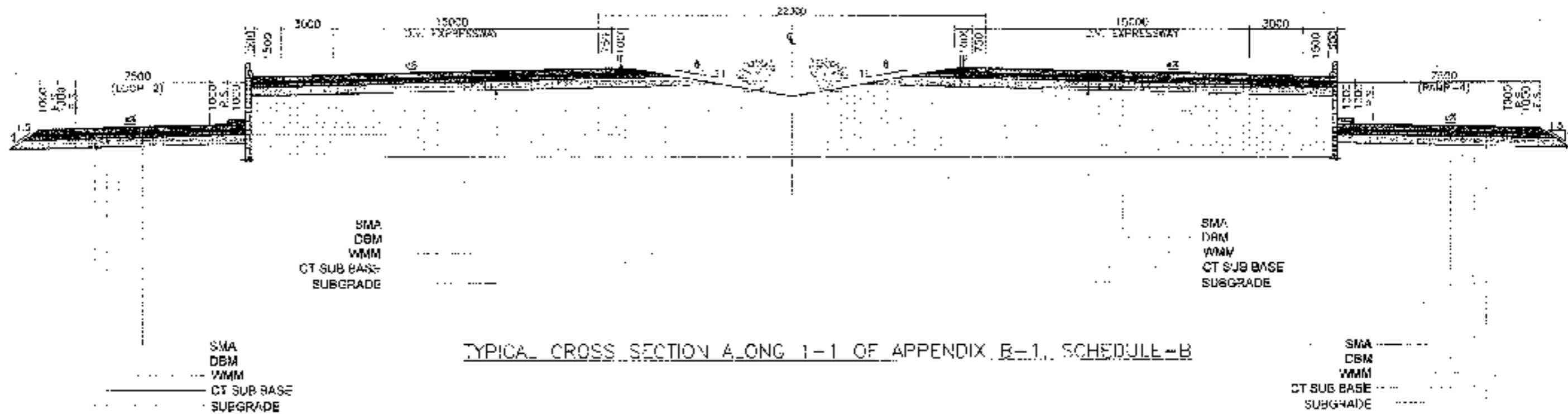
LEGEND


TOP BAR	—————
BOTTOM BAR	—————
C. V.	—————
LENGTH VARIES	—————


- NOTES:-
- ALL DIMENSIONS ARE IN MM.
  - ONLY MINIMUM DIMENSIONS TO BE FOLLOWED.
  - CONCRETE SHALL BE DESIGN MIX AND SHALL BE OF GRADE AS MENTIONED BELOW:-  
 RCC LEVELING COURSE : M-15  
 SCUM & COLUMN : M-25
  - GRADE OF STEEL SHALL BE 15-2000 CONFORMING TO IS 1786.
  - CLAY ONLY TO COVER SHALL BE AS FOLLOWS:-  
 1. BEAM & COLUMN : SCUM  
 2. FOUNDATION : SCUM







CLIENT -  **National Highways Authority of India**  
Ministry of Road Transport & Highways, Govt. of India

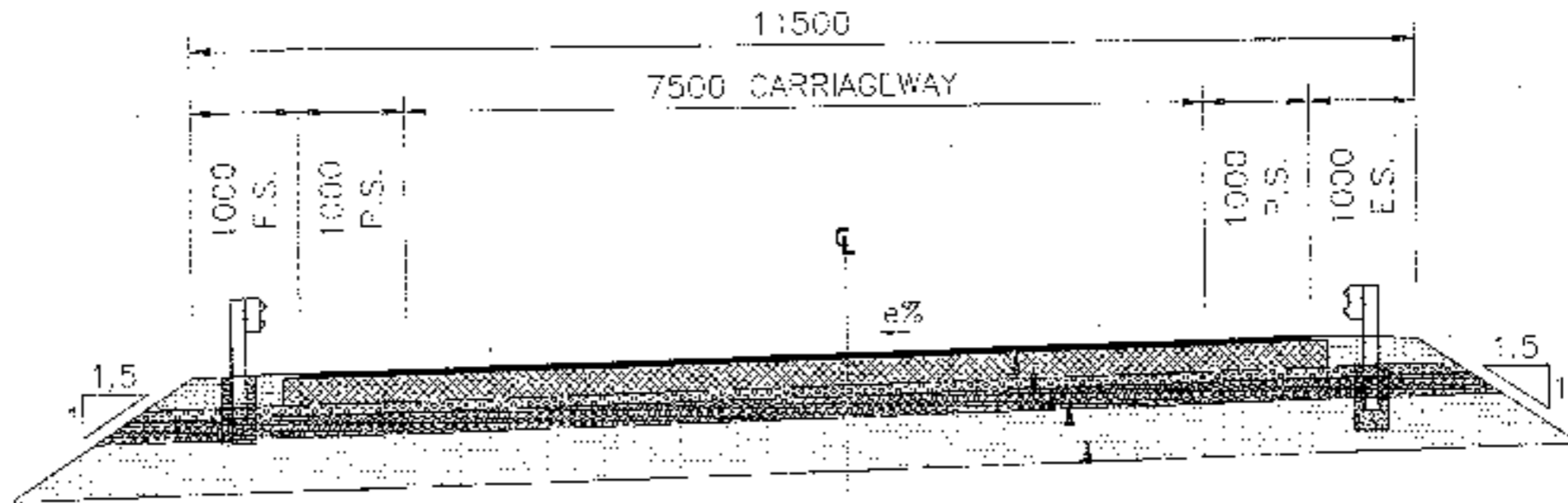
CONSULTANT -  **Chaitanya Projects Consultancy Pvt. Ltd.**  
G-2, 2ND FLOOR, P.K. TOWER PLOT NO. - 21-22, BECTORA, VAISHALI, BHARUWAN, GUJARAT  
PH: 7120-3223415, 4120472, FAX: 0120-4115471

PROJECT - Consultancy Service for the Preparation of Feasibility Report/DPR for development of Economic Corridors, Inter-Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6/Package-4) at Sahas - Falgunpur Jorika

SCALE - Horizontal: 1:2000  
Vertical: 1:200

DWG TITLE - **152**  
TYPICAL CROSS SECTION SECTION L-1

DATE	BY	CHECKED	APPROVED
OCTOBER 2011			
PROJECTED	DESIGNED	CHECKED	APPROVED
R.K. JAIN	SANTOSH	DEBARAJAN	S.S. SURESH



SMA  
DBM  
WMM  
CT SUB BASE  
SUBGRADE

TYPICAL CROSS SECTION ALONG 2-2 OF APPENDIX B-1, SCHEDULE-B



**National Highway Authority of India**  
Ministry of Road Transport and Highways, Government of India



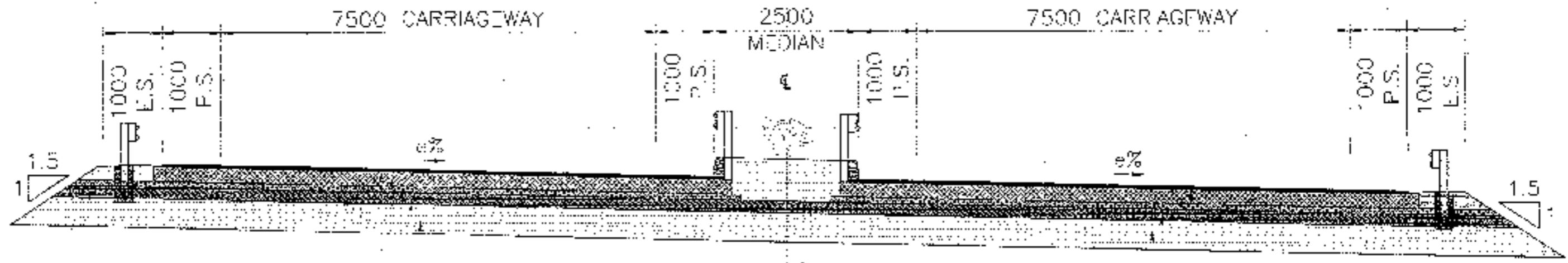
**CONSULTANT**  
Chafanya Projects Consultancy Pvt. Ltd.  
C-5, 2ND FLOOR, R.M. TOWER PLOT NO. 21-22,  
SECTOR-4, VAISHALI, SHRIGARAU  
PH: 0120-3223418, 4120672, FAX: 0120-4110672

**PROJECT**  
Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6/Package-4) of Solna - Ferozpur Jhirka

**SCALE** -  
Horizontal: 1:2000  
Vertical: 1:200

**DWG NO.** - 159  
TYPICAL CROSS SECTION  
SECTION 3-3

DATE: OCTOBER 2018		REVISION: 00	
DESIGNED BY: S. S. SINGH	CHECKED BY: S. S. SINGH	DRAWN BY: S. S. SINGH	APPROVED BY: S. S. SINGH





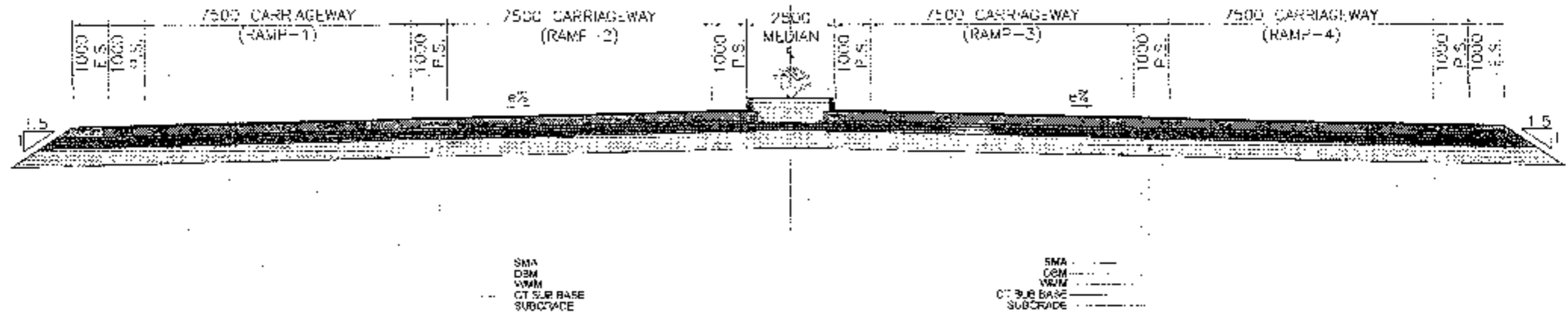
SMA  
 DBM  
 WMM  
 CT SUB BASE  
 SUBGRADE

SMA  
 DBM  
 WMM  
 CT SUB BASE  
 SUBGRADE

TYPICAL CROSS SECTION ALONG 3/3 OF APPENDIX B-1, SCHEDULE-B



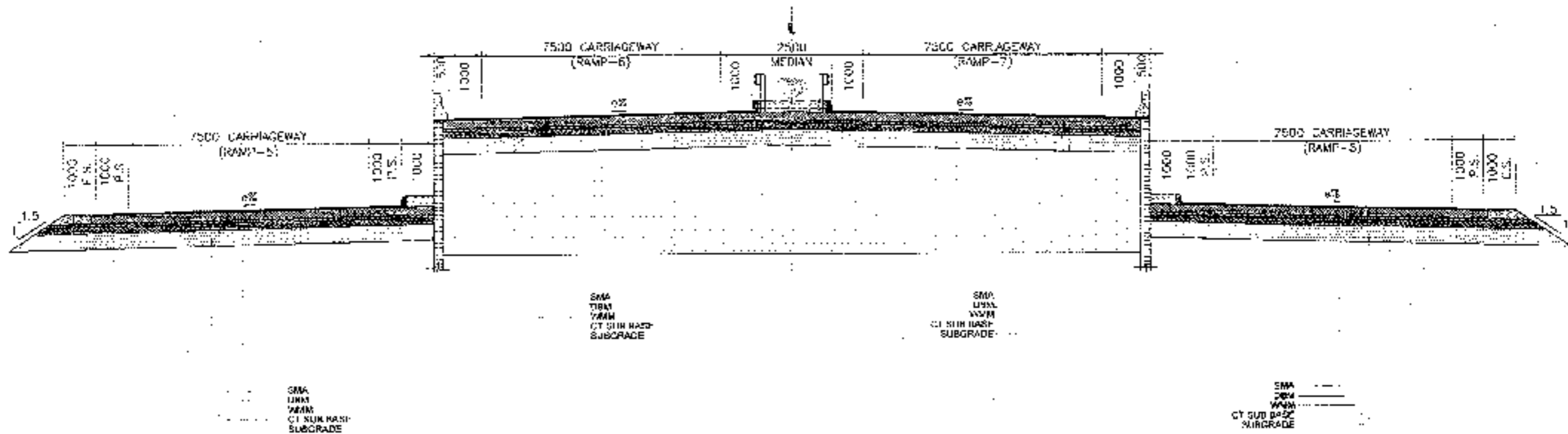
<p>CLIENT -   National Highways Authority of India                  (Ministry of Road Transport &amp; Highways, Govt. of India)</p>	<p>CONSULTANT -   Chaitanya Projects Consultancy Pvt. Ltd.                  C-4, 2ND FLOOR, H.K. TOWER PLD 1 NO - 21-22                  SECTOR-4, VAISHALI, GHAZIABAD                  PH: 0120-3223415, 4120472, FAX: 0120-4110472</p>	<p>PROJECT:                  Consultancy Service for the Preparation of Feasibility Report/DPR for development of Expressway Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (I-II-III) Package-4) of Sabana - Ferozpur, Haryana</p>	<p>SCALE :-                  Horizontal: 1:2000                  Vertical: 1:200</p>	<p>DWG TITLE: <b>154</b>                  TYPICAL CROSS SECTION SECTION 1-1</p>	<p>DRAWING No: CHOA-ESW/EXP/PR/CS/CS                  DATE: OCTOBER 2018                  PREPARED BY: [Signature] CHECKED BY: [Signature] APPROVED BY: [Signature]                  KETALANANDA SANTOSH MURADANAN SURESH</p>
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TYPICAL CROSS SECTION ALONG 4-4 OF APPENDIX B-1, SCHEDULE-B





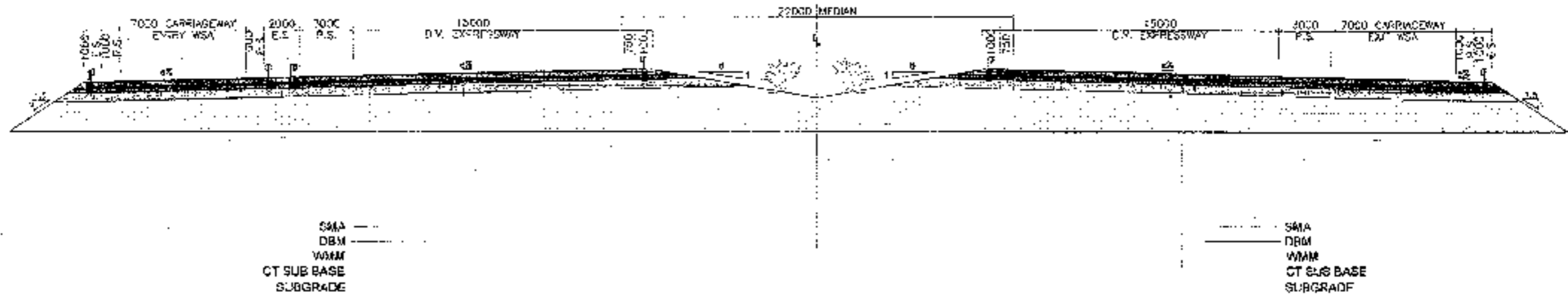
<b>CLIENT</b> National Highways Authority of India Ministry of Road Transport and Highways, Government of India	<b>CONSULTANT</b> Chaitanya Projects Consultancy Pvt. Ltd. 2-5, 2ND FLOOR, R.K. TOWER FLOT NO- 21-22, SECTOR-4, VAISHALI, CHAZDABAG PH.: 0120-3123110, 4120472; FAX: 0120-4119472	<b>PROJECT</b> Consultancy Service for the Preparation for Feasibility Report/DPFR for Development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6/Package-4) of Sabha - Farooqpur Jorika	<b>SCALE</b> Horizontal = 1:2000 Vertical = 1:200	<b>DWG FILE</b> 155 TYPICAL CROSS SECTION SECTION 4-4	<b>DRWG No</b> CPCL/AS/2019/01/01/2004
					DATE: OCTOBER 2019 PROJECT NO: 2019/01/01/2004 DRAWN BY: SANKAR CHECKED BY: SANKAR APPROVED BY: SANKAR



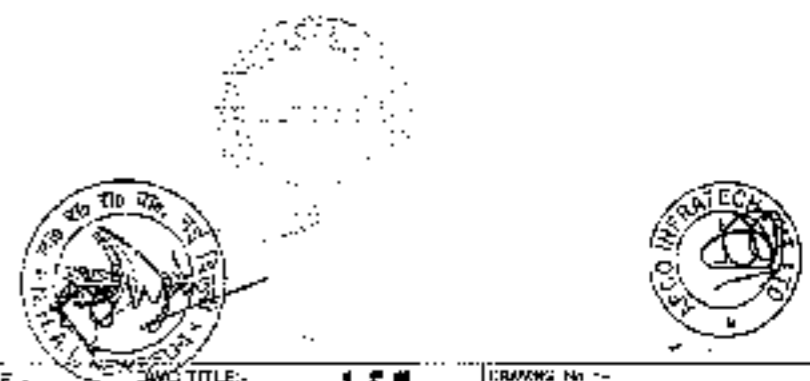
TYPICAL CROSS SECTION ALONG 5-5 OF APPENDIX B-1, SCHEDULE-B





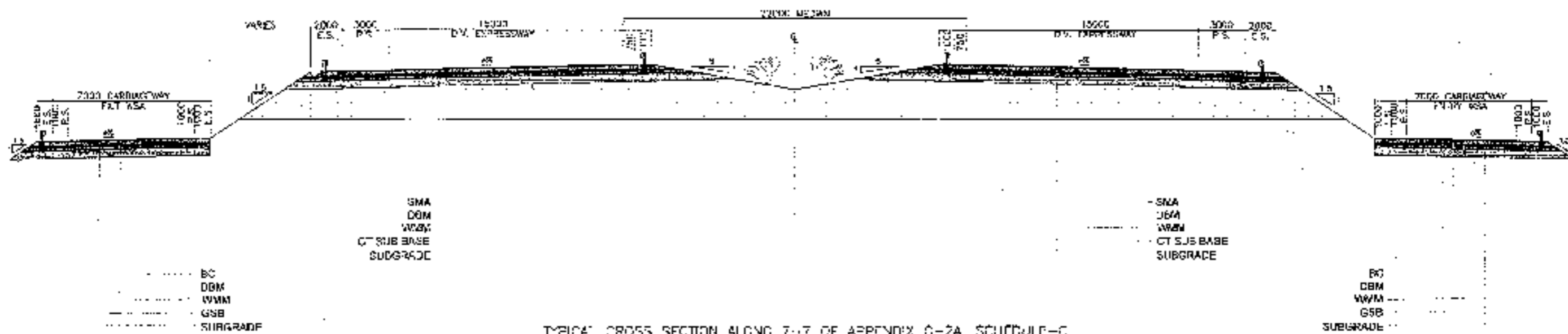
<p>CLIENT:   <b>National Highways Authority of India</b>                  Ministry of Road Transport and Highways, Government of India</p>	<p>CONSULTANT:   <b>Chaitanya Projects Consultancy Pvt. Ltd.</b>                  G-5, 2ND FLOOR, R.K. TOWER PLOT NO. 21-22,                  SECTOR-4, VAISHALI, GHAZIABAD                  PH.: 0120-3223418, 4120472, FAX: 0120-4110472</p>	<p>PROJECT:                  Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6/Package-4) of Sahasra - Firazpur Jct. etc.</p>	<p>SCALE:                  Horizontal: 1:2000                  Vertical: 1:200</p>	<p>DWG TITLE: <b>156</b>                  TYPICAL CROSS SECTION SECTION 1.5</p> <p>DRWING No: 156                  DATE: OCTOBER 2016                  PREPARED BY: S.K. MITTAL                  CHECKED BY: S.K. MITTAL                  APPROVED BY: S.K. MITTAL</p>
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TYPICAL CROSS SECTION ALONG 6-6 OF APPENDIX C-2A, SCHEDULE-C


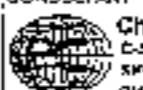


<p>CLIENT-</p>  <p>National Highways Authority of India</p>	<p>CONSULTANT-</p>  <p>Charataya Projects Consultancy Pvt. Ltd. C-5, 3RD FLOOR, H.K. TOWER PLLOT NO-28-22, SECTOR-4, VAISHALI, GHAZIABAD PH: 0120-3223473-4130472, FAX: 0120-4110472</p>	<p>PROJECT-</p> <p>Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Intra-Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (LoC-IPackage-4) of Sohra - Ferozpur JHDK</p>	<p>SCALE -</p> <p>Horizontal- 1:5000 Vertical- 1:200</p>	<p>DWG TITLE-</p> <p><b>157</b> TYPICAL CROSS SECTION SECTION 6-6</p>	<p>DRAWING No -</p> <p>GROUP-INDIA/INFRA/PH/IC506</p> <table border="1"> <tr> <td>DATE: OCTOBER 2016</td> <td>Revision: 001</td> </tr> <tr> <td>PROJECT: SOHRA - FEROPUR JHDK</td> <td>DESIGNED BY: CHAKRABORTY</td> </tr> <tr> <td>SCALE: 1:5000</td> <td>CHECKED BY: CHAKRABORTY</td> </tr> <tr> <td>DATE: 14/10/2016</td> <td>APPROVED BY: CHAKRABORTY</td> </tr> </table>	DATE: OCTOBER 2016	Revision: 001	PROJECT: SOHRA - FEROPUR JHDK	DESIGNED BY: CHAKRABORTY	SCALE: 1:5000	CHECKED BY: CHAKRABORTY	DATE: 14/10/2016	APPROVED BY: CHAKRABORTY
DATE: OCTOBER 2016	Revision: 001												
PROJECT: SOHRA - FEROPUR JHDK	DESIGNED BY: CHAKRABORTY												
SCALE: 1:5000	CHECKED BY: CHAKRABORTY												
DATE: 14/10/2016	APPROVED BY: CHAKRABORTY												

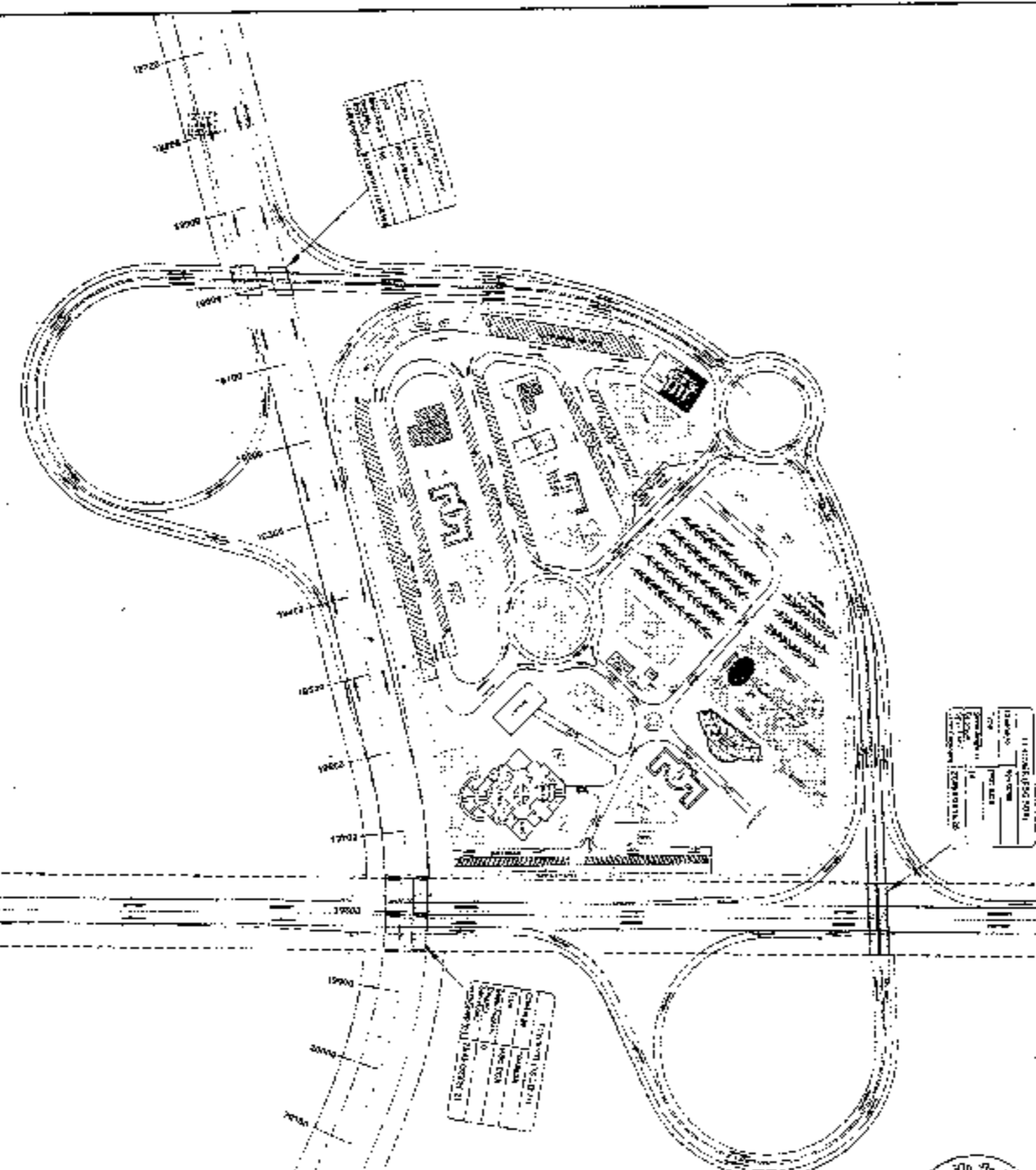


TYPICAL CROSS SECTION ALONG 7-7 OF APPENDIX C-2A SCHEDULE-C



<p>CLIENT:-   <b>National Highways Authority of India</b>                  Ministry of Road Transport and Highways, Government of India</p>	<p>CONSULTANT:-   <b>Cheitanya Projects Consultancy Pvt. Ltd.</b>                  C-3, 2ND FLOOR, P.N. TOWER PLOT NO.- 21-22, SMC FOR-4, VAISHALI, GHAZIABAD                  PH: 0120-3223415, 4126472. FAX: 0120-4112472</p>	<p>PROJECT:-                  Consultancy Service for the Preparation for Feasibility Report/IDPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6/Package-4) of Bohra - Farooqpur Jhriks</p>	<p>SCALE:-                  Horizontal- 1:2000                  Vertical- 1:200</p>	<p>DRAWING No: <b>158</b>                  PHYSICAL CROSS SECTION SECTION 07</p>	<p>DRAWING No: <b>CPC-2020/NEW/PROJ/05/11</b>                  DATE OF ISSUE: <b>Rev. 01</b>                  PREPARED BY: <b>...</b> CHECKED BY: <b>...</b> APPROVED BY: <b>...</b>                  AUTHORITY: <b>...</b> PROJECT: <b>...</b> DRAWING NO: <b>...</b></p>
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# Appendix-C-1 Schedule-C



WAYSIDE AMENITIES AT BWP INTERCHANGE		
SR. NO	DESCRIPTION	APPROX. AREA (SQ.M)
1	FOOD PLAZA, RESTAURANT ETC.	5000
7	TRAVEL INFORMATION & PASSENGER FACILITIES	800
1	TOILET BLOCK	150
4	ODOR TREATMENT BLOCK	1200
5	COOK HOUSE & STORES	400
6	HOTEL/MOTEL	10000
7	TRAIN CENTER	2000
8	VENTILATED FACILITY FOR FRESH AIR SUPPLY	600
9	SERVICE STATION & REPAIR SHOP BUILDING	150
10	HIGHWAY PETROL BUILDING/ADMINISTRATIVE BLDG.	1500
11	1.5 S.	254
12	JEP	200
13	TRAVEL	150
14	HILL PAD AREA	1000
15	PERIMETER BOUNDARY	1500
17	PICKUP AREA	1000
18	PARKING AREA (20000 SQ. METERS)	10000
19	PARKING AREA (CAR/MOTOR)	1075
20	PARKING AREA (CAR SERVICE STATION)	200
21	PARKING AREA (AMBULANCE SERVICE ENTRANCE)	2000
22	PARKING AREA (BUS SERVICE)	5000
23	STATION MAINTENANCE & WASHING AREA	1000
24	SPACE FOR SHOP	100
25	SHOPS/STALLS	330
26	MAINTENANCE OFFICE	125
27	SECURITY ROOM	100
28	WASTE/GARBAGE DUMP TREATMENT AREA	100
29	ELECTRICAL SUBSTATION	100
30	WATER STORAGE TANK	50
31	OR MAIN WATER DUCK (2 NOS)	50
32	WATER WELL	0
33	WEIGHING OFFICE	40
34	WEIGHING BRIDGE	50
35	LOADING PUNT GRY	150
36	PARKING AREA (TRUCKS/TRAILERS) (20000)	5500
37	PARKING AREA (TRUCKS) (20000)	5500
38	PARKING AREA (TRUCKS) (10000)	2500
39	LOADING AREA (TRUCKS)	200
40	EMERGENCY	500
TOTAL BLOCK AREA		100000

**LEGEND:-**  
 PROPOSED CENTER LINE  
 PROPOSED CARRIAGEWAY  
 PROPOSED SHOULDER  
 PRGW - DELHI VADODARA FAWAY  
 ROW - KMP EXPRESSWAY

**CLIENT:-**  
 National Highways Authority of India  
 Ministry of Road Transport & Highways, Government of India

**CONSULTANT:-**  
 Chaitanya Projects Consultancy Pvt. Ltd.  
 2nd and 3rd Floor, P.K. Tower, Plot No. 21-22, Sector-4, Vashi, Maharashtra  
 PH: 0120-3223418, 4170472, FAX: 0120-4410472

**PROJECT:-**  
 Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6) Package-4; Sehna - Firozpur Jhirka

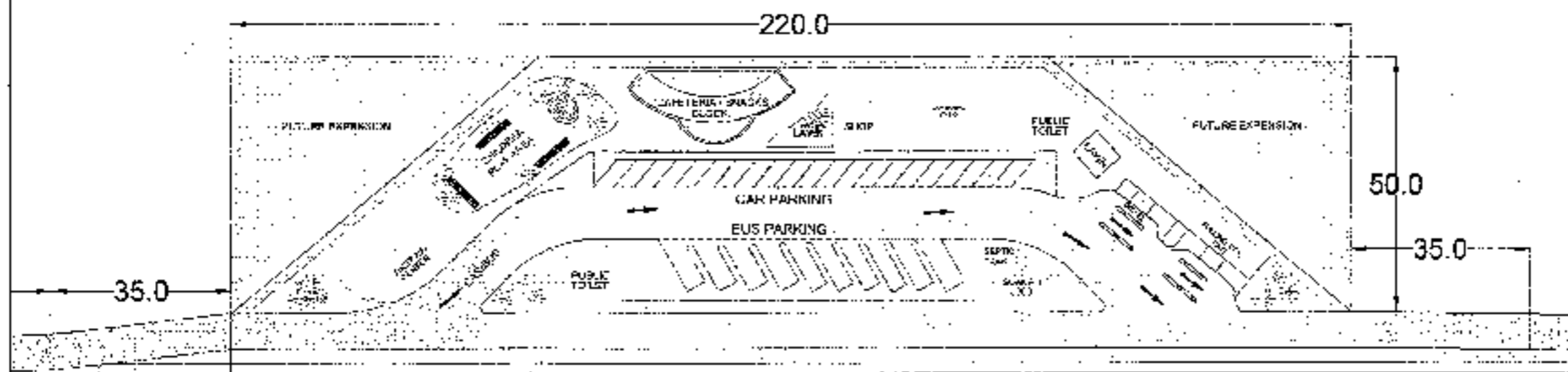


**DRAWING No - 159**  
**DRAWING TITLE - LAYOUT PLAN OF WAYSIDE AMENITIES AT CIL-IV-NOW AT KMP CROSSING**



# Appendix-C-2 Schedule-C

WAYSIDE AMENITIES- 220m x 50m		
S. NO	Description	APPROX. AREA (SQ.M.)
1	SHOPS	30
2	CAFETERIA/ SHACKS BLOCK	250
3	TOILET	50
4	PARKING AREA (CARS NOS 23)	750
5	PARKING AREA (BUSES NOS 10)	500
6	PETROL PUMP	450
7	SERVICE STATION & OFFICE	300
8	FIRST AID CENTER	40
9	CHILDREN PLAYING AREA	600
10	FUTURE EXPANSION AREA	5000
TOTAL		7970



CARRIAGEWAY

MEDIAN

CARRIAGEWAY

CLIENT:  
National Highways Authority  
of India



CONSULTANT:  
Chaitanya Projects Consultancy Pvt. Ltd.  
C-5, 2ND FLOOR, R K TOWER FLOT NO. 21-22,  
SECTOR-4, VAISHALI, GHAZIABAD  
PH. 0120 3223419, 4120472, FAX: 0122 4810472

PROJECT:  
Consultancy Service for the Preparation for Feasibility Report/EPR for  
development of Economic Corridors, Intra Corridors and Feeder Routes to  
improve the efficiency of freight movement in India under Bharatmala  
Paragana (Lot-6/Package-4: Sohans - Firozpur Jhirka)

SCALE:  
NTS



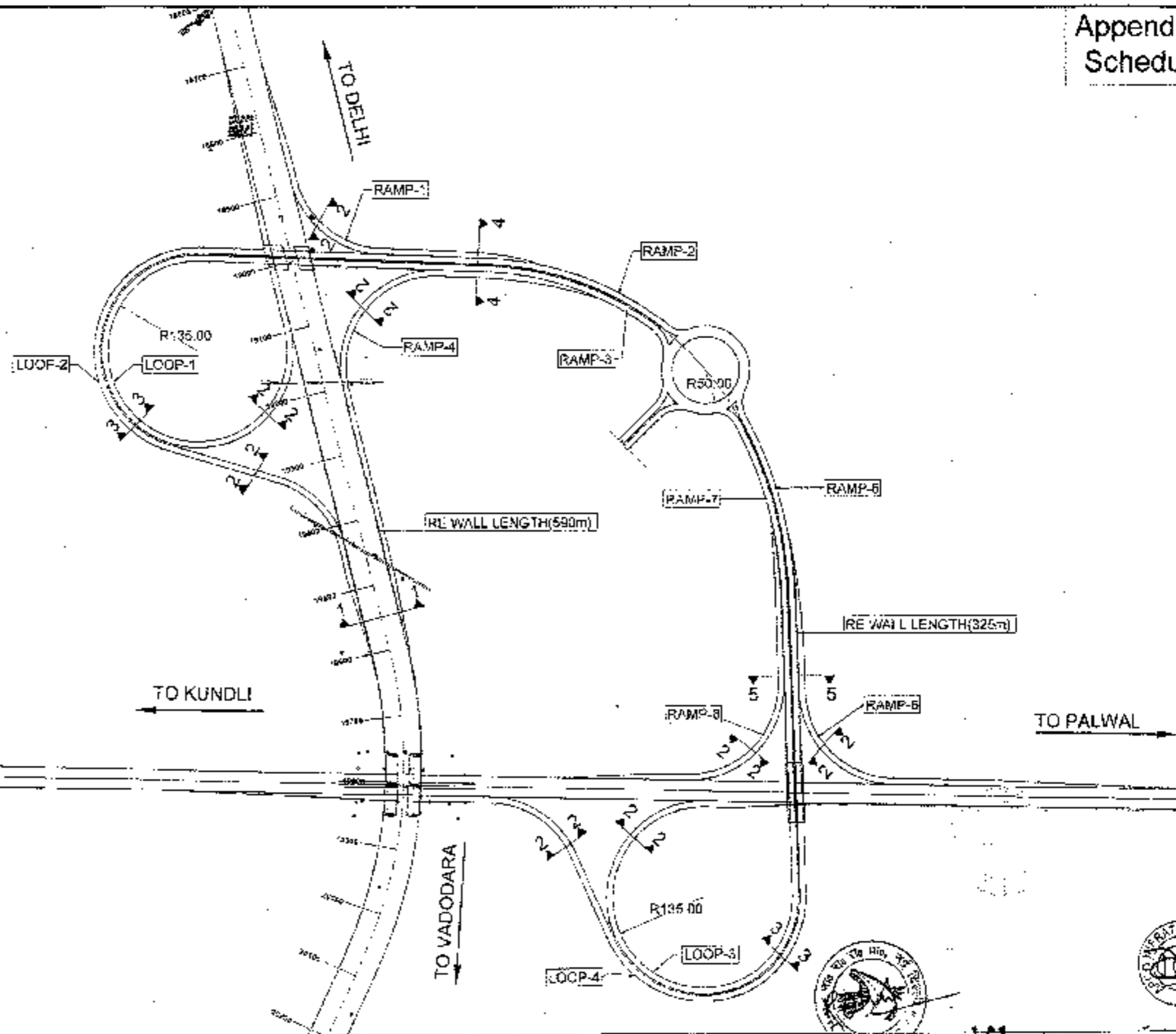
168

DRAWING TITLE:  
LAYOUT PLAN OF WAYSIDE AMENITIES  
AT CH-15 (950+115) & CH-1A (6.5 (RHS))



DRAWING NO: GPRP 150/160/17/18/19/20

DATE	DESIGNED BY	CHECKED BY	APPROVED BY
05/10/2018	1		



CLIENT -  
National Highways Authority  
of India  
Ministry of Road Transport & Highways, Govt. of India

CONSULTANT -  
Chaitanya Projects Consultancy Pvt. Ltd.  
G-5, 2ND FLOOR, ICK TOWEN (LOT NO. 21-22)  
SECTOR-1, VAISHALI, CHAZABA  
P.L: 0170-3223419, 4120472, FAX: 0170-4110472

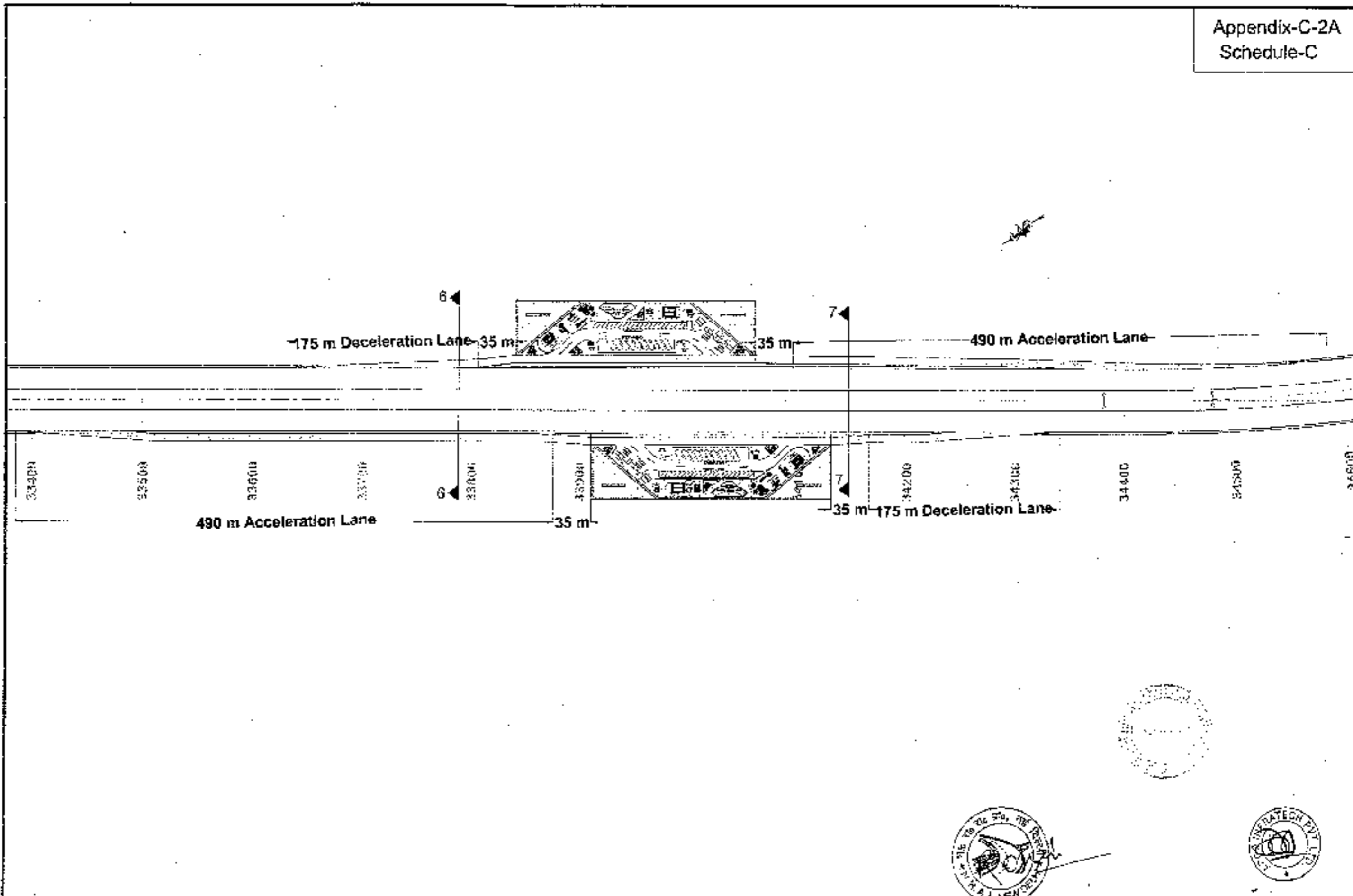
PROJECT -  
Consultancy Service for the Preparation for Possibility Report/DPR for  
development of Economic Corridor, Inner Corridor and Feeder Routes  
to improve the efficiency of freight movement in India under Bharatmala  
Parayana (Lot-6) Package-4-Subna - Ferozpur Jhirka

SCALE -  
NTS



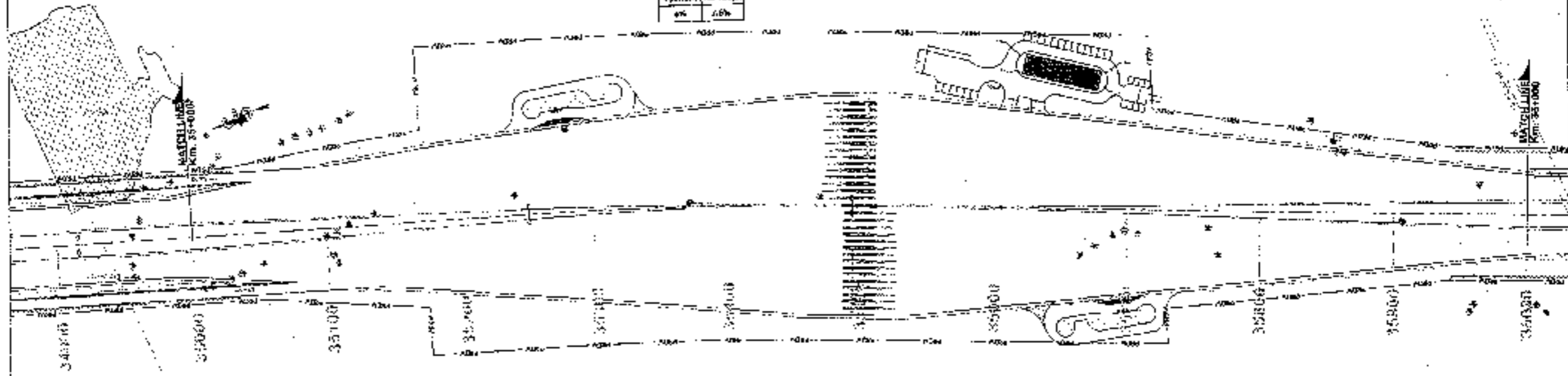
101

DRAWING NO -		PROJECT/SECTION/PRINT NO	
DATE	SCALE	ISSUED BY	REVISED BY
10/01/24	1:1000	SK	SK
NAME	CHECKED	DATE	DATE
SK	SK		



<p><b>CLIENT:</b> National Highways Authority of India NHAI, 15/11/1984, Complex of Madhya Pradesh, Gandhinagar, New Delhi</p>	<p><b>CONSULTANT:</b> Chaitanya Projects Consultancy Pvt. Ltd. G-5 7ND FLOOR, F.K. TOWER PLOT NO-21-22, SECTION-4, VASHTI, GHAZIABAD PH.: 0120-3223479, 4120472, FAX: 0120-4110472</p>	<p><b>PROJECT:</b> Consultancy Service for the Preparation for Feasibility Report (DFR) for development of Economic Corridor, Arter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-B) Package-4: Sonma - Firozpur Jhirka</p>	<p><b>SCALE:</b> HTS</p>	<p><b>DRAWING NO:</b> 162 LAYOUT PLAN OF WAYSIDE AMENITIES AT CH-33+400 (LHS) &amp; CH-34+00 (RHS)</p>	<p><b>DRAWING No:</b> CH/15/2018/EXP.1/4/16/2A/162 DATE: SEPTEMBER 2018 PREPARED BY: [Signature] CHECKED BY: [Signature]</p>
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CURVE NO. 18	
Dist	500.0m
Left	241.15m
Right	0.0m
SECJA	6.6
Vertical	120 Kmph
g%	1.6%



CLIENT:  
**National Highways Authority of India**  
CONDAK H BHA TOWER 4th Floor, Conda, Gurgaon

CONSULTANT:  
**Chaitanya Projects Consultancy Pvt. Ltd.**  
 C-5, 2ND FLOOR, AK TOWER PLOT NO.-17-22,  
 SECTOR-4, VAISHALI, GHAZIABAD  
 PH: 0120-3220419, 4220432, FAX: 0123-4115472

PROJECT:  
 Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridor, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojna (Lot-6/Package-4) of Sohna - Firozpur Jharka.

SCALE:  
 Horizontal: 1:2000

DATE: 11/08/2015  
 SHEET NO. **163**  
 SOHNA - FIROZPUR JHARKA  
 AT - CR-13-60

DATE	BY	REVISION
11/08/2015	...	...

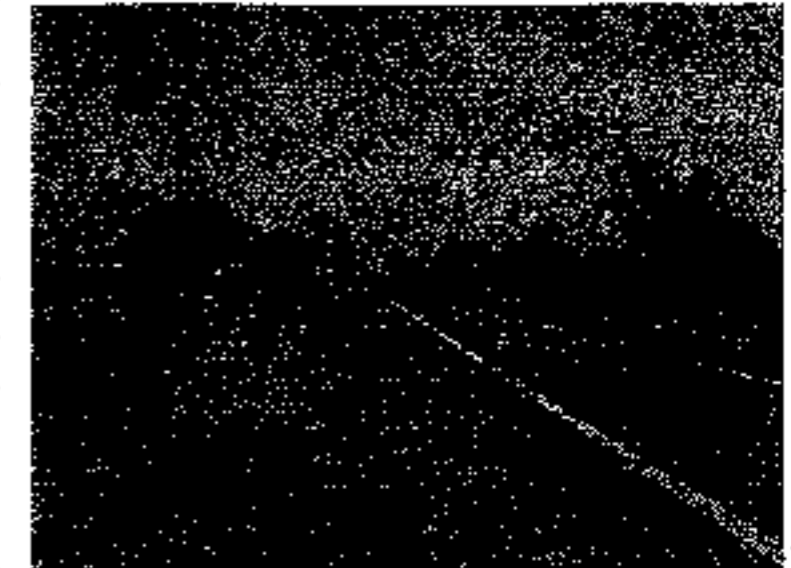
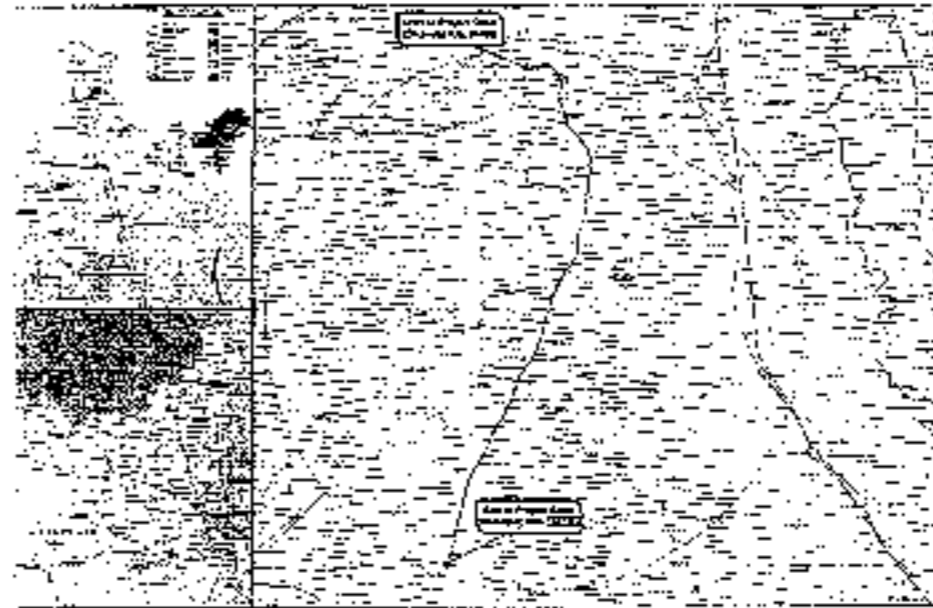
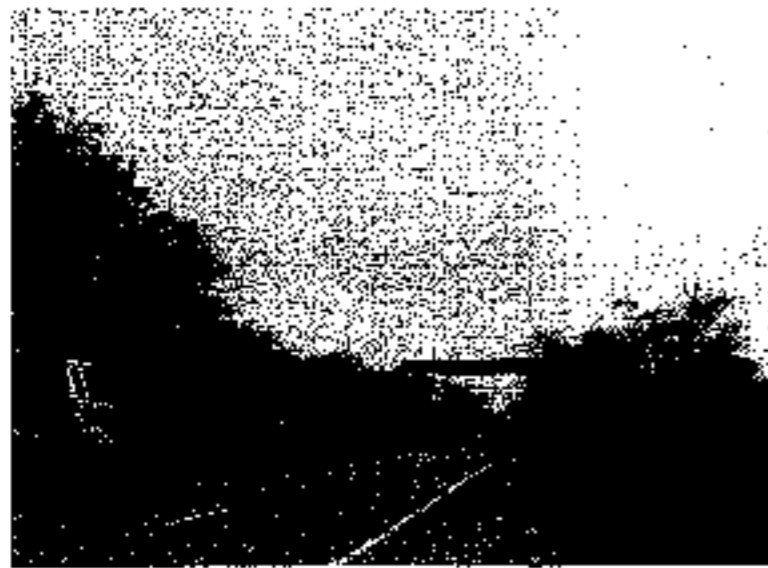


**BHARATMALA**  
ROAD TO PROSPERITY

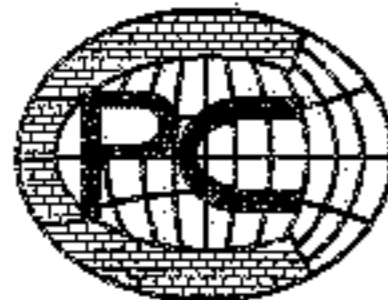


## National Highways Authority of India

**Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6/Package-4) of Sohna - Firozpur Jhirka**



**ROAD SIGNAGE & MARKING PLAN OF SOHNA- FIROZPUR JHIRKA SECTION-  
OF DELHI-VADODARA EXPRESSWAY  
PACKAGE-II (Km. 18+500 to Km. 47+000)  
SEPTEMBER 2018**



**Chaitanya Projects Consultancy Pvt. Ltd.**

C-5, 2nd Floor, Plot No. 21-22, R.K. Tower, Sector-4,  
Vaishali, Ghaziabad - 201010

Ph:- 0120-3223419, 4120472, Fax:- 0120-4110472

Email:- [chaitanya.projects@gmail.com](mailto:chaitanya.projects@gmail.com)

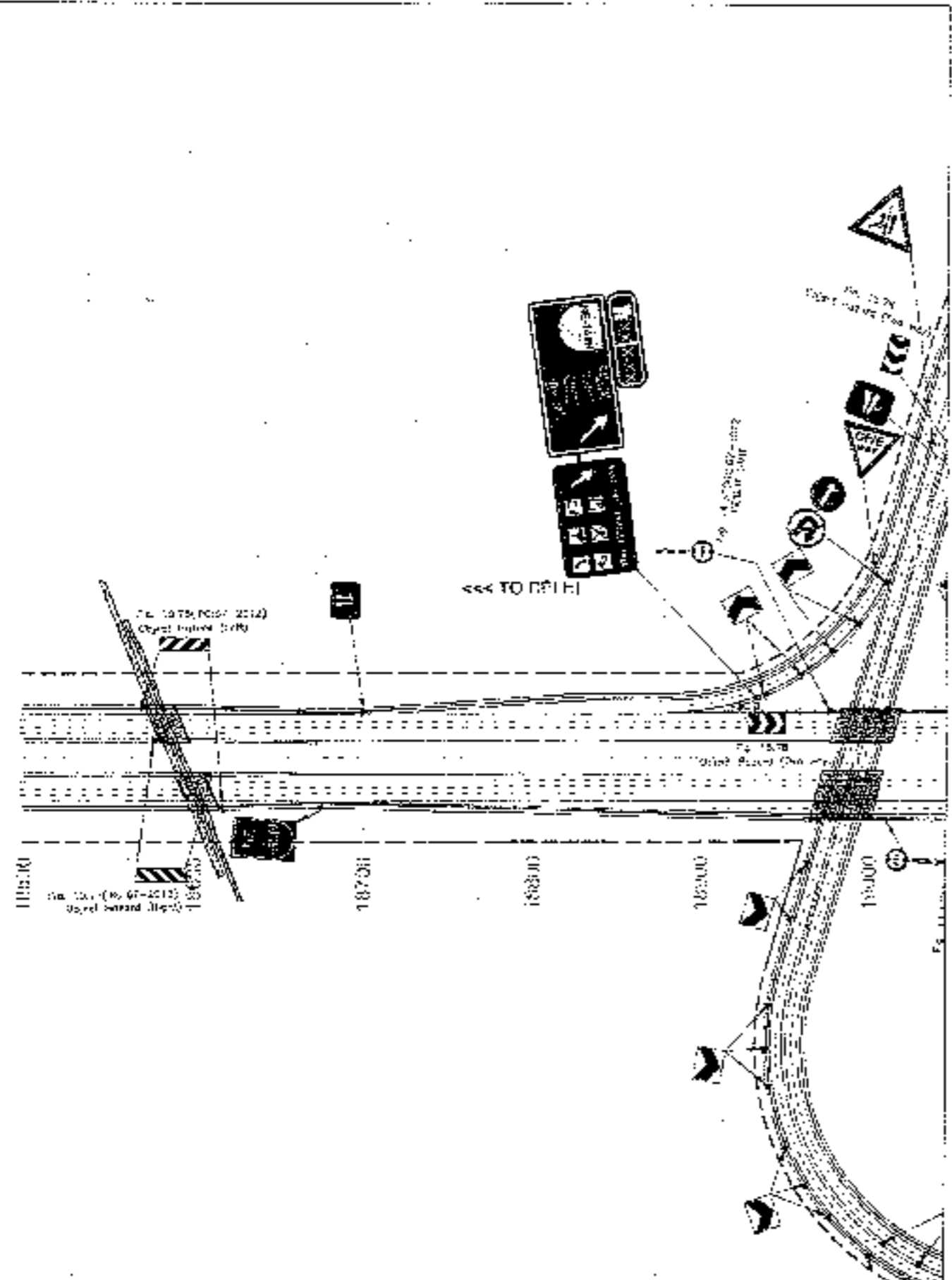


ROAD SIGNAGE & MARKING PLAN  
SOHNA- FIROZPUR JHIRKA SECTION OF DELHI-VADODARA EXPRESSWAY  
PACKAGE-II (Km. 18+500 to Km. 47+000)





← TO SOHNA

TO FIROZPUR JIRKA →

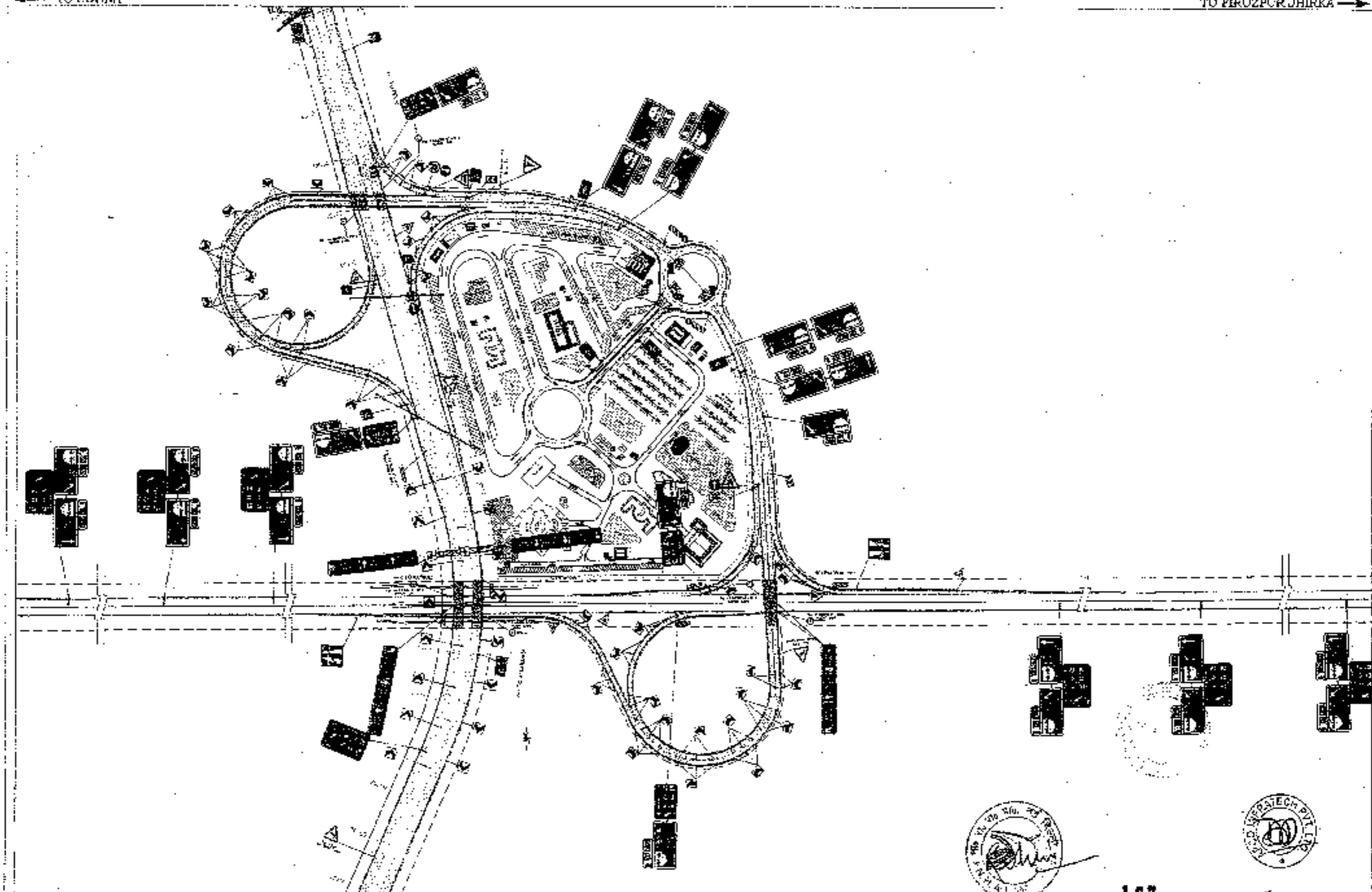



166


<p>CLIENT:</p>  <p><b>National Highways Authority of India</b> Ministry of Road Transport &amp; Highways, Government of India</p>	<p>CONSULTANT:</p>  <p><b>Chaitanya Projects Consultancy Pvt. Ltd.</b> C-6, 2ND FLOOR, A.K.TOWER PLOT NO.-21-22, SECTOR-4, VAISHALI, GHAZIABAD PH.: 0120-8225479, 4120472, FAX: 0120-4-16442</p>	<p>PROJECT:</p> <p>Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6/Package-4: Sohna - Firozpur Jirka)</p>	<p>SCALE:</p> <p>1:200</p>	<p>DWG TITLE:</p> <p>FIG-3 ROAD SIGNAGE &amp; MARKING PLAN (SOHNA - FIROZPUR JIRKA) (KM 18+200 TO KM 19+000)</p>	<p>DRAWING No.:</p> <p>CPCL-INDIA/EXP/PROJ/SHY/01</p> <p>DATE: SEPTEMBER 2015</p> <p>DESIGNED BY: [Signature]</p> <p>CHECKED BY: [Signature]</p> <p>SCALE: 1:200</p> <p>DATE: 15/09/2015</p>
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TO SONNA

TO FIROZPUR JHIRKA



**CLIENT:**  

**National Highways Authority of India**  
Ministry of Road Transport and Highways, Govt. of India

**CONSULTANT:**  

**Chaitanya Projects Consultancy Pvt. Ltd.**  
 C-5, 2ND FLOOR, R.K. TOWER, P.O. NO. 21-22, SECTOR-4, VAISHALI, GHAZIABAD  
 PH: 0120-4223449, 4120472, FAX: 0120-4110472

**PROJECT:**  
 Consultancy Services for the Preparation for Feasibility Report/DPR for development of Expressway Corridors, Intra Corridors and Feeder Routes, so improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-B/Package-4: Sonna - Firozpur Jhirka)

**SCALE:**  
 1:2000

**SYMBOLS:**  
 ROAD SIGNAGE & MARKING PLAN  
 (SONNA - FIROZPUR JHIRKA)  
 INTERCHANGE

**DRAWING No.:**  
 200-10284-XP-INTERSAM-01A

**DATE:** SEPTEMBER 2015

**BY:** [Signature]  
**CHECKED BY:** [Signature]  
**APPROVED BY:** [Signature]

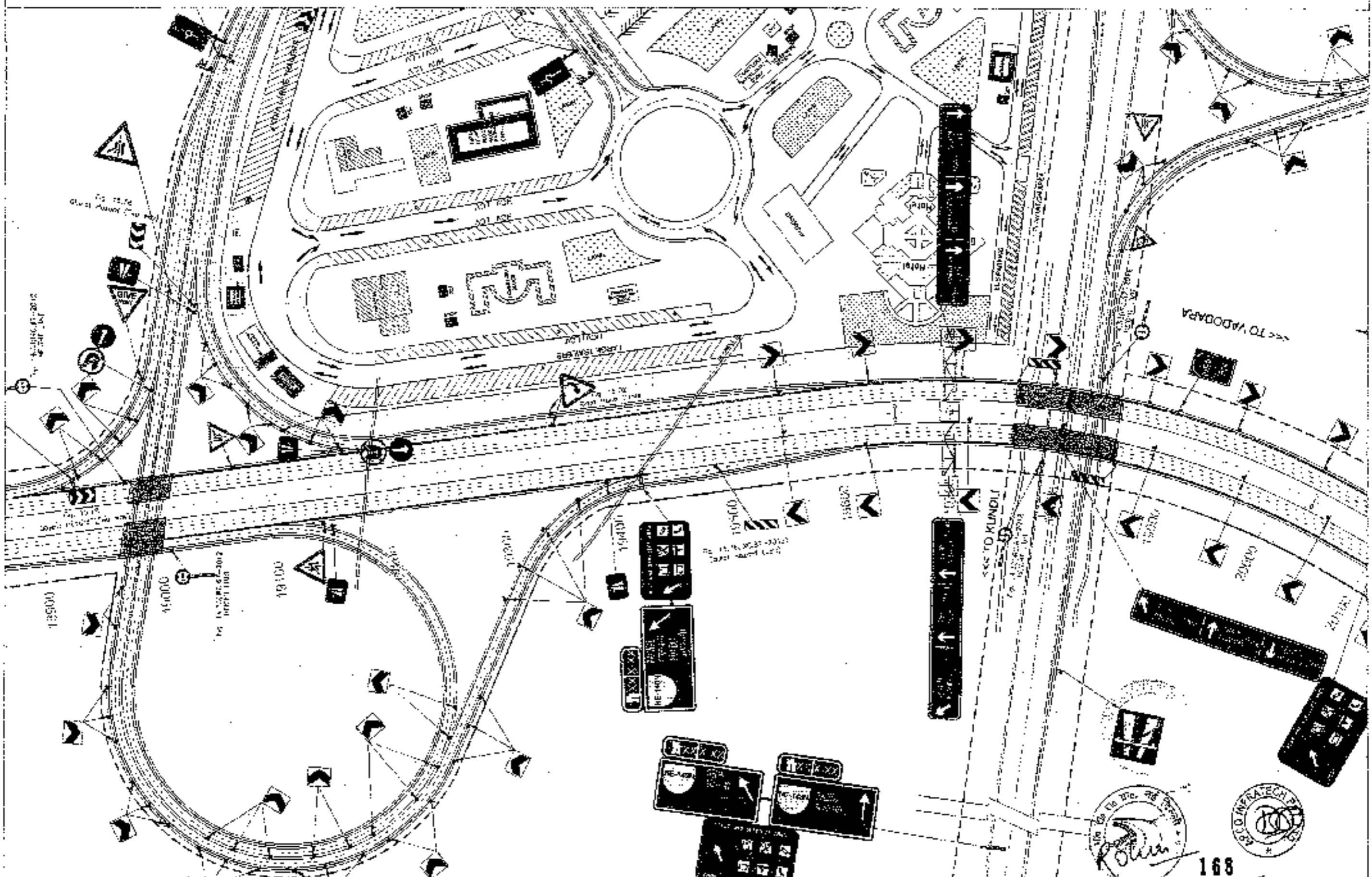



167




← TO SOHNA

TO FIROZPUR JHIRKA →



CLIENT -  

**National Highways Authority of India**  
 Office of Road, Transport & Highways, Dept. of Public Works, Ministry of Road Transport & Highways, Govt. of India

CONSULTANT -  

**Chaitanya Projects Consultancy Pvt. Ltd.**  
 G-5, 2ND FLOOR, J.K. TOWER PLOT NO. 21/32, SECTOR-4, VAISHALI, GHAZIABAD  
 P.N. 0120-3223610, 4120472. FAX: 0120-4110472

PROJECT -  
 Consultancy Service for the Preparation of Feasibility Report/DPR for Development of Economic Corridors, Inter Corridors and Feeder Routes to Improve the Efficiency of Freight Movement in India under Bharatmala Pariyojana (Lot-6/Package-4: Sohna - Firozpur Jhirka)

SCALE -  
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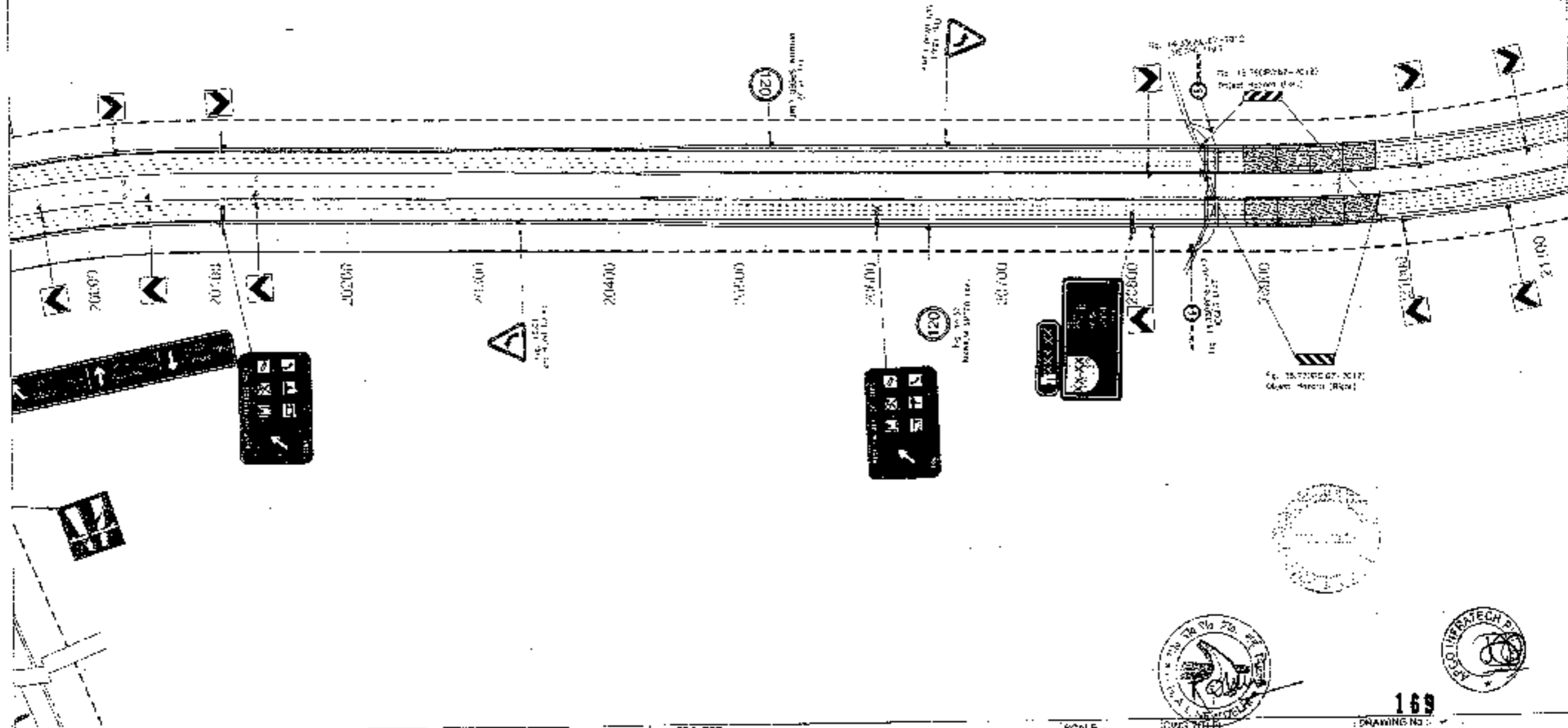
DWG TITLE -  
 PKCC ROAD SIGNAGE & MARKING PLAN  
 SOHNA - FIROZPUR JHIRKA  
 REG. 14-09-2017 TO 10-10-2017

DRAWING No -  
 168  
 DATE: SEPTEMBER 2017  
 SHEET: 01 OF 01  
 PROJECT: BHARATMALA  
 DRAWING: ROAD SIGNAGE & MARKING PLAN



← TO SOHNA

TO BIROZPUR JHIRKA →



CLIENT:



National Highways Authority of India



CONSULTANT:

Chaitanya Projects Consultancy Pvt. Ltd.  
C-4, 25th FLOOR, P.K. TOWER, PLOT NO.- 21-22,  
SECTOR-4, VAISHALI, GHAZIABAD  
PH: 0120-2224419, 4120472, FAX: 0120-4110472

PROJECT:

Consultancy Service for the Preparation for Feasibility Report (RFP) for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in Indo-Under Shreshthatala Partycjana (Lot-6) Package-4, Sonna - Birozpur Jhirka

SCALE:

1:2000



DATE:

ROAD SIGNAGE & MARKING PLAN  
SOHNA - BIROZPUR JHIRKA  
S.M. 20-472, P.K. 21-22

DRAWING NO.:

169

PROJECT: SOHNA - BIROZPUR JHIRKA

DATE: 20/07/2011

SCALE: 1:2000

PROJECT: SOHNA - BIROZPUR JHIRKA

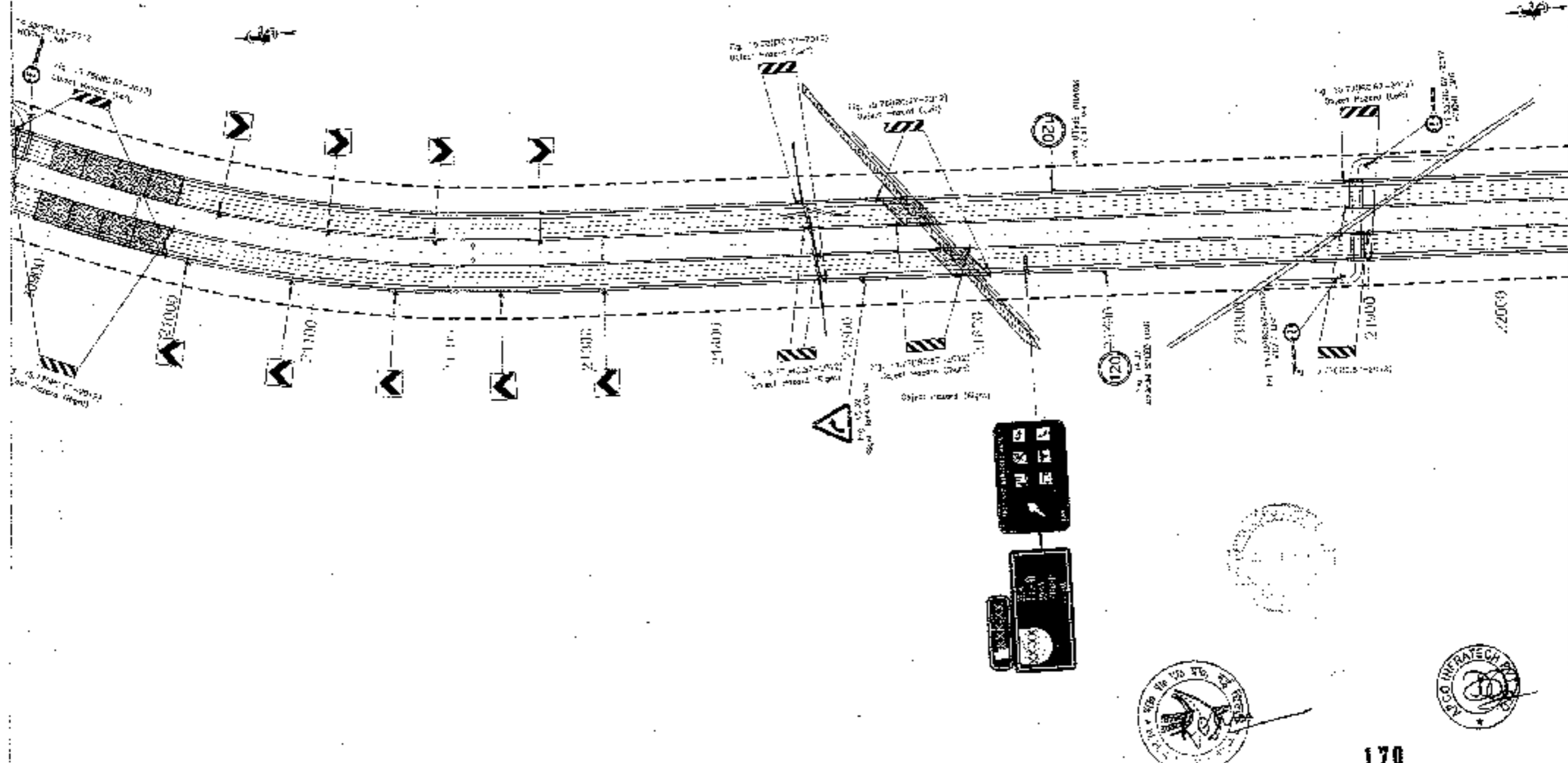
DATE: 20/07/2011

SCALE: 1:2000




← TO SOHNA

→ TO PIRAZPUR JIRKA



CLIENT -  

**National Highways Authority of India**  
 Ministry of Road Transport & Highways, Govt. of India

CONSULTANT -  

**Chaitanya Projects Consultancy Pvt. Ltd.**  
 G-8, 2ND FLOOR, R.K. TOWER, PLOT NO. 31-22, SECTOR-4, VASHTALI, GHAZIABAD  
 PHL: 0120-3223419, 4120472, FAX: 0120-4316472

PROJECT -  
 Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Inter-Quarters and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-4) Package-1: Sohna - Pirazpur Jirka

SCALE -  
 1:2000

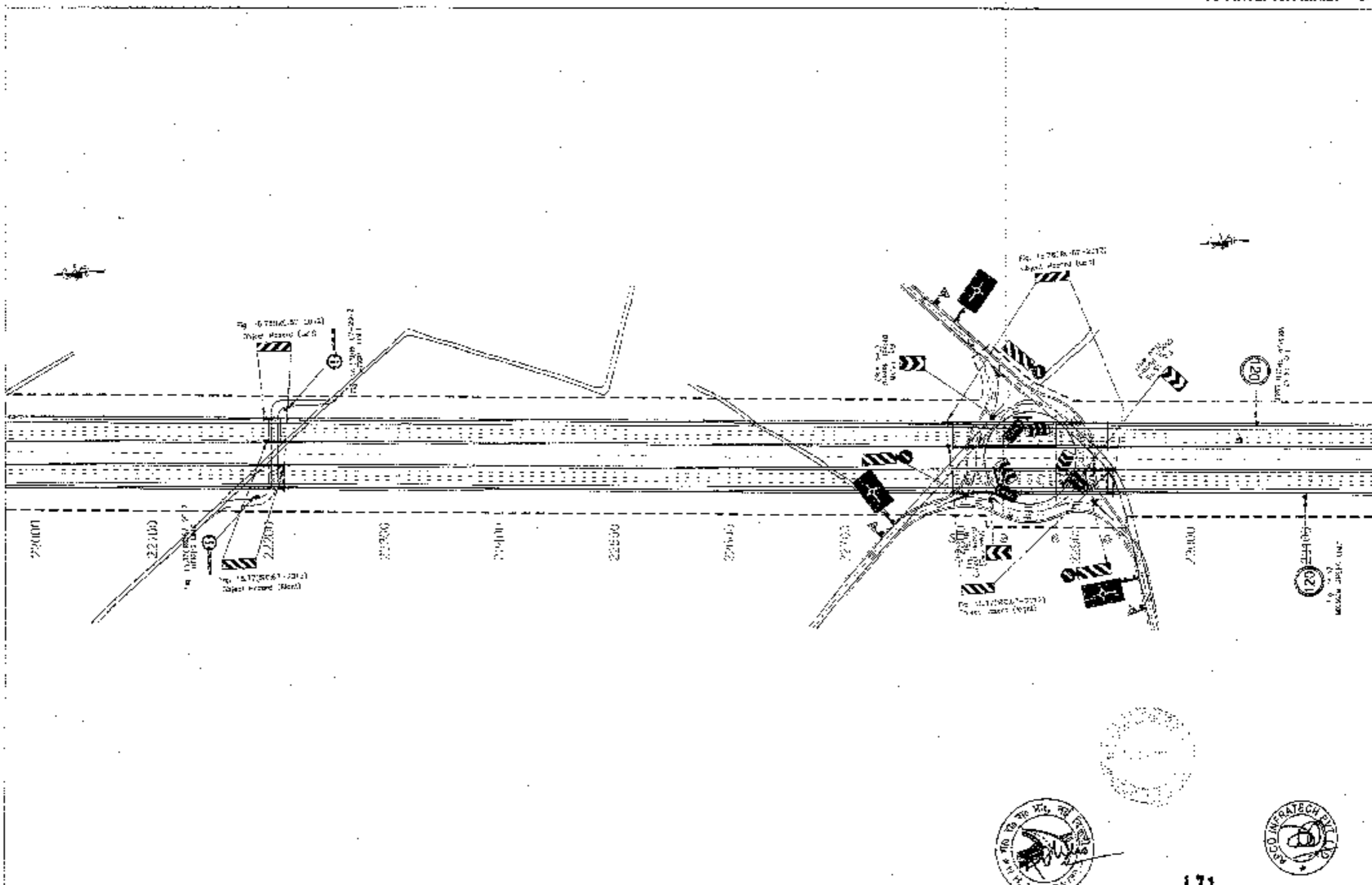
DRAWING TITLE -  
 ROAD SIGNAGE & MARKING PLAN  
 (SOHNA - PIRAZPUR JIRKA)  
 KM 21+00 TO KM 22+00

DRAWING No: 170  
 CDRP PIRAZPUR JIRKA  
 DATE: 08/12/2019  
 PREPARED BY: SANTOSH  
 CHECKED BY: P. K. SINGH  
 APPROVED BY: P. K. SINGH  
 TELUKAR



TO SOHNA

TO FIROZPUR JHIRKA



CLIENT -



National Highways Authority of India  
Ministry of Road Transport & Highways, Govt. of India



CONSULTANT -

Chalanya Projects Consultancy Pvt. Ltd.  
C-3, 2ND FLOOR, P.K. TOWER, PLOT NO. 21-22,  
SECTOR-4, VASHPALI, GHAZIABAD  
PH. 0120-2223410, 4120472, FAX: 0120-4110472

PROJECT -

Consultancy Service for the Preparation for Feasibility Report (DPR) for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-B/Package-4: Sohna - Firozpur Jhirka)

SCALE -

1:2000

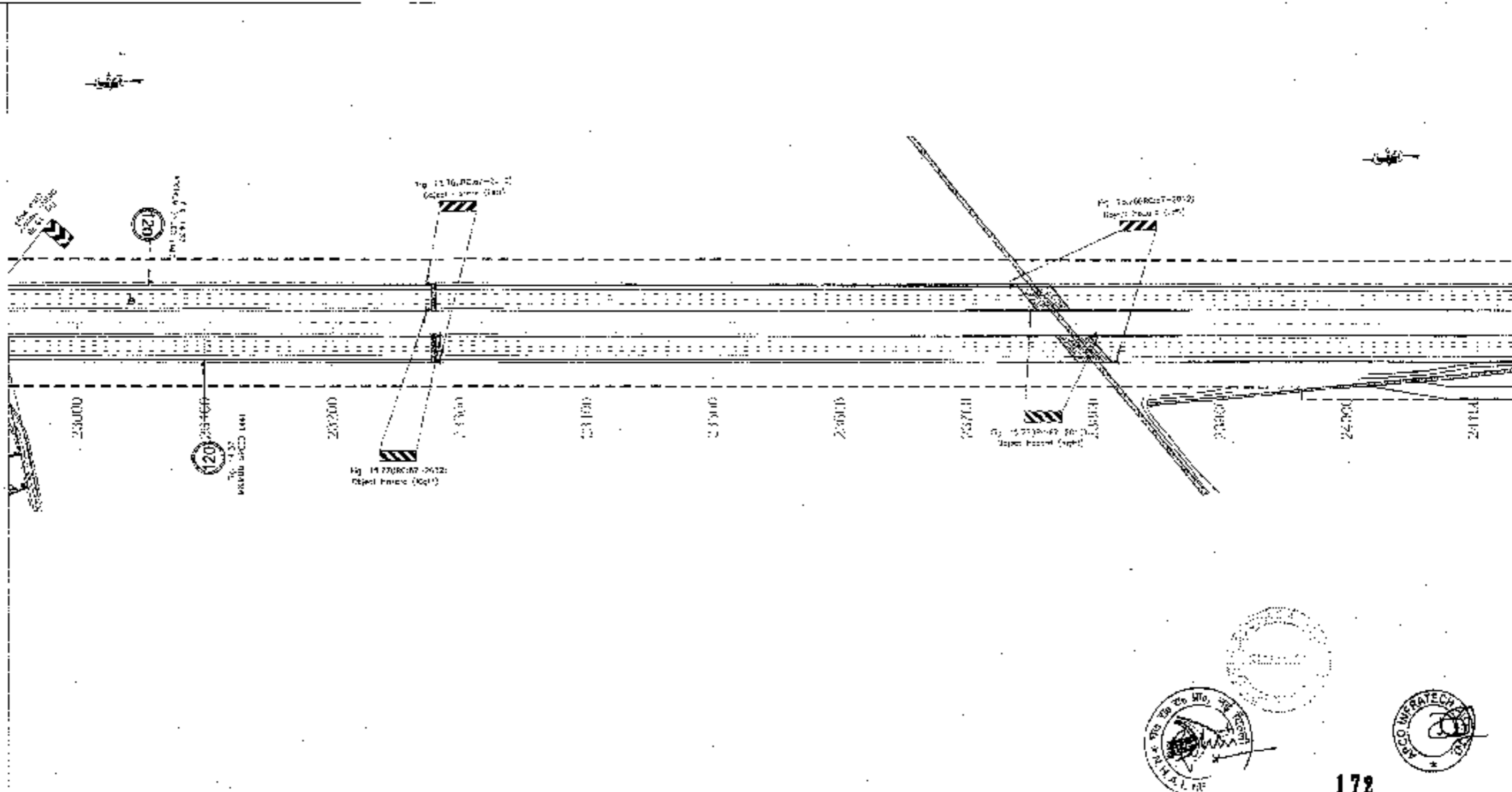
DWG. FILE -



2002  
ROAD ALIGNMENT & MARKING PLAN  
[SOHNA - FIROZPUR JHIRKA]  
[SCA 25100 TO KM. 221300]

DRAWING NO. -

DATE: SEPTEMBER 2013		REVISED BY:
DESIGNED BY:	DESIGNED BY:	APPROVED BY:
KIRAN	SANTOSH KUMAR SHARMA	SEANISHA
	TOLKAR	

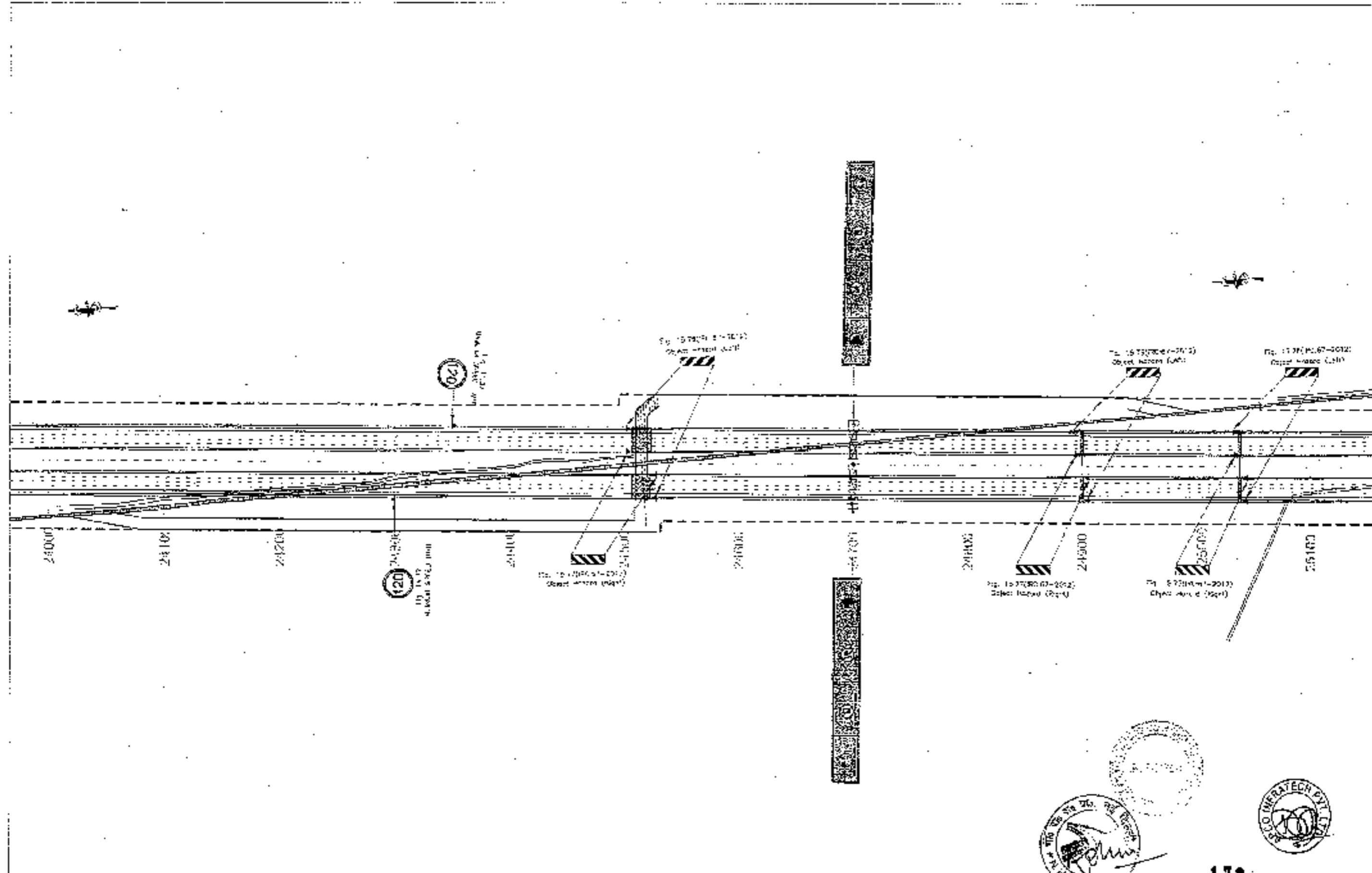






<b>CLIENT:</b>  <b>National Highways Authority of India</b> <small>Ministry of Road, Transport &amp; Highways, Govt. of India</small>	<b>CONSULTANT:</b>  <b>Chatanya Projects Consultancy Pvt. Ltd.</b> <small>G-5, 2ND FLOOR, P.K. TOWER, PLOT NO - 21-22, SECTOR-4, VAISHALI, GHAZIABAD</small> <small>Ph: 0120-3223418, 4420472, FAX: 0120-41-0472</small>	<b>PROJECT:</b> <small>Consultancy Service for the Preparation for Feasibility Report (FRR) for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6/Package-4: Solna - Ferozpur Jharkh)</small>	<b>SCALE:</b> <small>1:2000</small>	<b>DRAWING TITLE:</b> <small>ROAD SIGNAGE &amp; MARKING PLAN (SCHMA - FRR/CPOR/HR/PS/4) (LOT-6/PS/2 TO KAL-24/500)</small>	<b>DRAWING No:</b> <small>CPOR_SDR/HR/PS/FR/PS/RY/04</small> <table border="1"> <tr> <td>DATE: 20/08/2019</td> <td>Project: FRR</td> </tr> <tr> <td>Author: [Signature]</td> <td>Checked by: [Signature]</td> </tr> <tr> <td>Drawn by: [Signature]</td> <td>Approved by: [Signature]</td> </tr> <tr> <td>KAT: [Signature]</td> <td>SANJANA [Signature] / [Signature]</td> </tr> </table>	DATE: 20/08/2019	Project: FRR	Author: [Signature]	Checked by: [Signature]	Drawn by: [Signature]	Approved by: [Signature]	KAT: [Signature]	SANJANA [Signature] / [Signature]
DATE: 20/08/2019	Project: FRR												
Author: [Signature]	Checked by: [Signature]												
Drawn by: [Signature]	Approved by: [Signature]												
KAT: [Signature]	SANJANA [Signature] / [Signature]												

← TO SOHNA

TO PIROZPUR JHIRKA →



**CLIENT-**  

**National Highways Authority of India**  
 Ministry of Road Transport & Highways Govt. of India

**CONSULTANT-**  

**Chaitanya Projects Consultancy Pvt. Ltd.**  
 C-6, 2ND FLOOR, R.K. TOWER PLOT NO- 21-22, SECTOR-4, VAISHALI, GHAZIABAD  
 PH: 0120-3223418, 4120472, FAX: 0120-4110472

**PROJECT-**  
 Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Shashaktam Pariyojana (Lot-4) Package-4, Solana - Pirozpur Jhirka

**SCALE:-**  
 1:2000

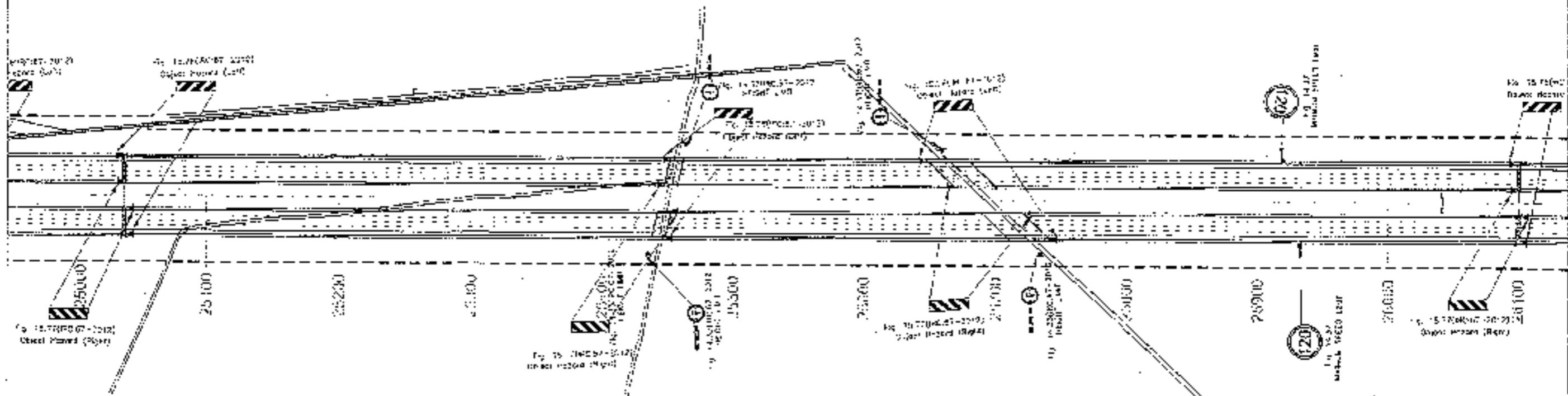
**DWG TITLE-**  
 206-2  
 ROAD SIGNAGE & MARKING PLAN  
 (SOHNA - PIROZPUR JHIRKA)  
 (KM 24.00 TO KM 24400)

**173**  
**DRAWING NO:-**  
 CHGT-JSUSWSP-FRSP/01/07  
 DATE: SEPTEMBER-2017  
 PREPARED BY:  **RAJESH BI**  
 CHECKED BY:  **CHETAN K**  
 RUSTI: **SANTOSH** **HIRENDRA** **SEKHRIA** **G.BAR**



← TO SONNA

TO FIROZPUR JIRKA →



174

CLIENT  
**National Highways Authority of India**  
Ministry of Road, Transport & Highways, Govt. of India

CONSULTANT  
**Charanya Projects Consultancy Pvt. Ltd.**  
 C-3, 2ND FLOOR, RLK TOWER, PLOT NO-21-22  
 SECTOR-4, VAIS-HALI, BHADRABAD  
 PH: 91-20-822341 R, 9120472, FAX: 9120-41-0472

PROJECT  
 Consultancy Service for the Preparation for Feasibility Report/IDR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot#Package-4: Sonna - Firozpur Jirka)

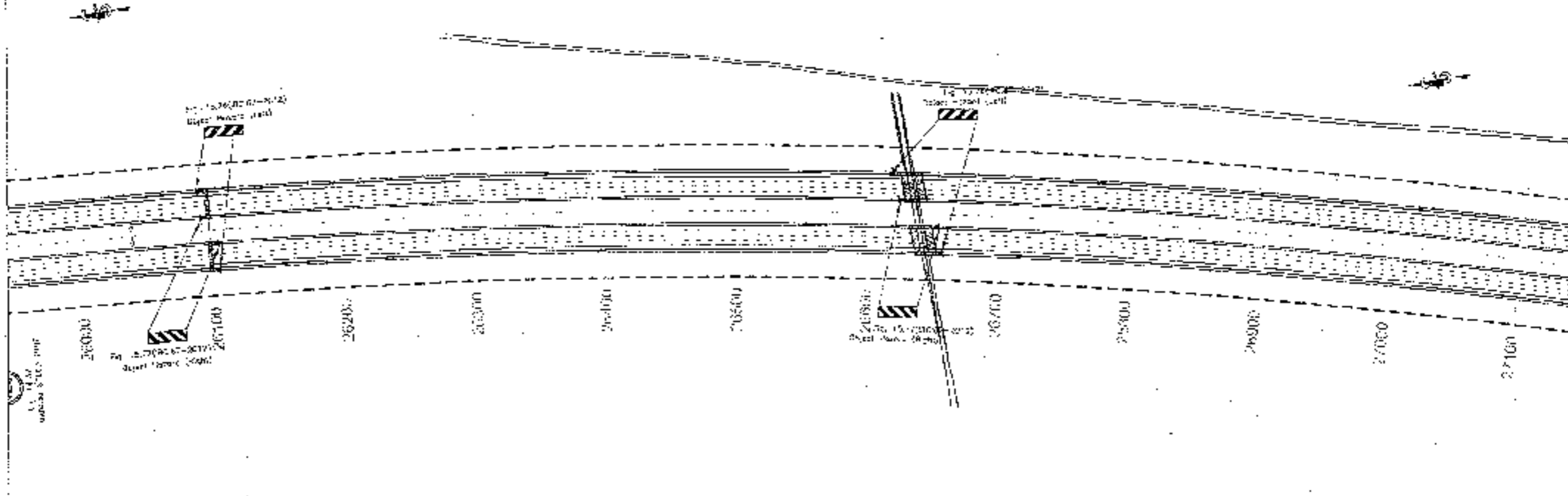
SCALE  
 1:2000

DWG TITLE  
 PRG-2  
 ROAD SKENADE & MARKING PLAN  
 (SONNA - FIROZPUR JIRKA)  
 (KM 15+240 TO KM 21+000)

DRAWING No -  
 CPM/ROAD/CON/P/PRG/PRG/174  
 DATE APPROVED FOR  
 15/06/2022  
 APPROVED BY  
 S. K. SINGH  
 TOLLEAF


← TO SOHNA

TO FIROZPUR JHIRKA →



CLIENT -  

**National Highways Authority of India**  
 (Regd. Office: Transport Building, C-1, I.I.T.D.)

CONSULTANT -  

**Challanya Projects Consultancy Pvt. Ltd.**  
 C-5, 2ND FLOOR, R.K. TOWER PLOT NO. - 21-22,  
 SECTOR-4, VAISHALI, DELHI/INDIA  
 PH: 011-263223419, 4322472, FAX: 011-264110472

PROJECT -  
 Consultancy Service for the Preparation for Feasibility Report/DPR for  
 Development of Economic Corridors, Intra Corridors and Feeder Routes,  
 to improve the efficiency of freight movement in India under Shramik  
 Pariyojana (Lot-8/Package-4: Sohna - Ferozpur Jhirka)

SCALE -  
 1:2000

DWG TITLE -  
 REG-2  
 ROAD SIGNAGE & MARKING PLAN  
 (SOHNA - FIROZPUR JHIRKA)  
 (SEE 26.000 TO 27.000)

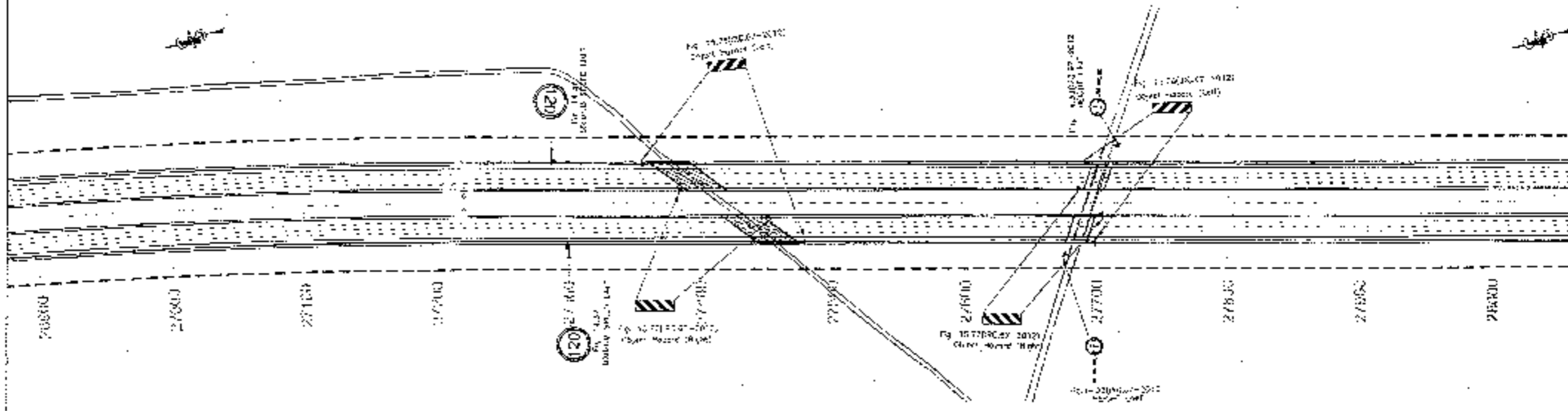


175  
 DRAWING No. -  
 CH-CP-ROADSIGN-MARKING-113  
 DATE: SEPTEMBER 2011  
 PROJECT: SOHNA - FIROZPUR JHIRKA  
 KMP: SOHNA  
 SGTORI: SOHNA  
 CHALLANYA CONSULTANCY PVT. LTD.  
 DELHI





← TO SOHNA

TO FIROZPUR JIRKA →

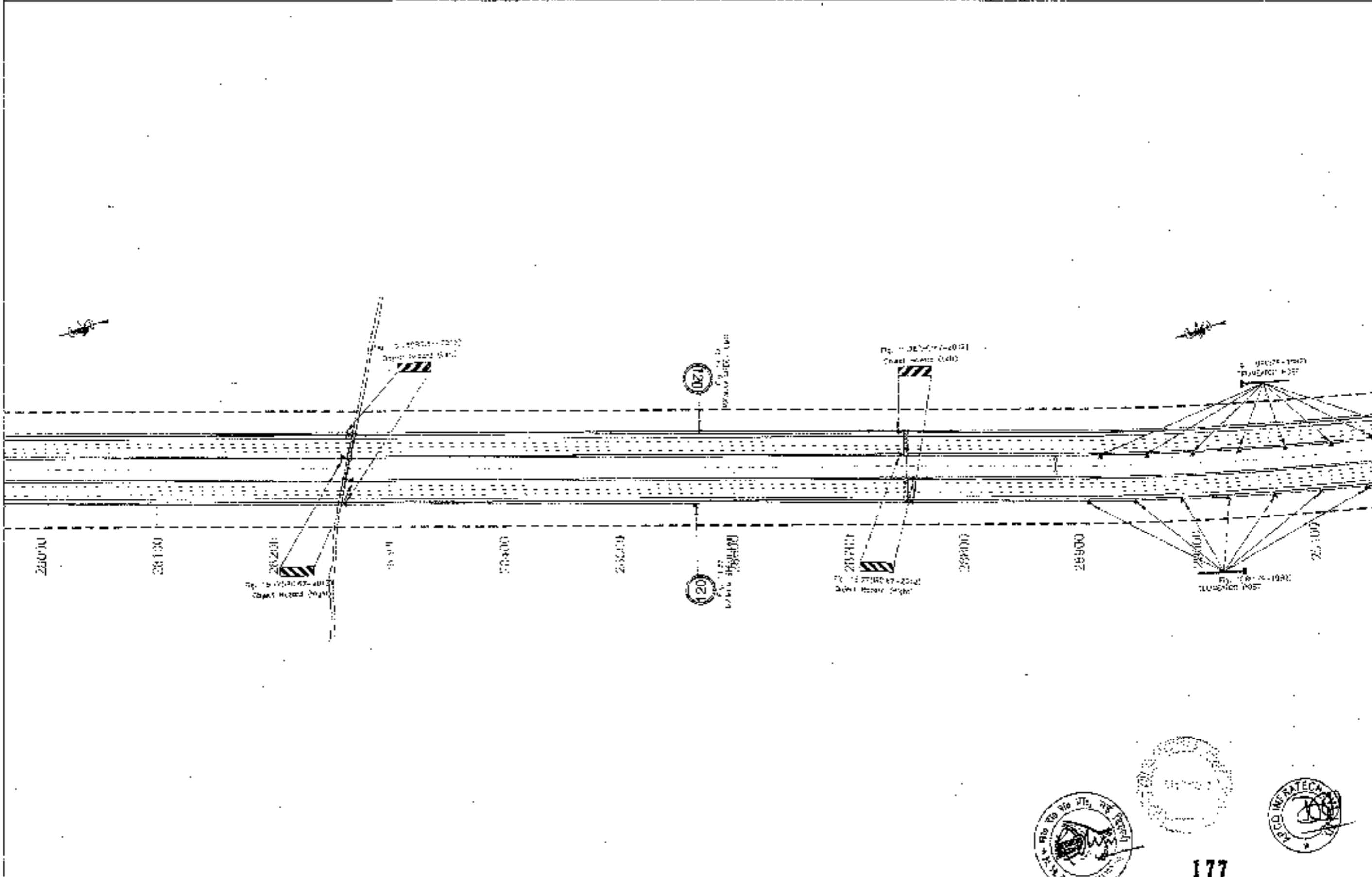


176

<b>CLIENT:</b>  <b>National Highways Authority of India</b> <small>3, Jharkhand Road, Transport &amp; Highways, New Delhi 110016</small>	<b>CONSULTANT:</b>  <b>Chaitanya Projects Consultancy Pvt. Ltd.</b> <small>G-5, 2ND FLOOR, P.K. TOWER PLOT NO. 21-22          SECTOR-4, VAISHALI GHAZABAD          P.L. 0120-322419, 4123477, FAX: 0120-4110472</small>	<b>PROJECT:</b> Consultancy Service for the Preparation for Feasibility Report/EPR for development of Economic Corridors, Intra Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot 6/Package-4: Sohna - Firozpur Jirka)	<b>SCALE:</b> 1:2000	<b>DWG TITLE:</b> FIG 2 ROAD MARKING & MARKING PLAN (SOHNA - FIROZPUR JIRKA) (KM 27420 TO KM 27800)	<b>DRAWING No.:</b> 2020-1520MEX/PT/RS/REV 10 <b>DATE:</b> SEPTEMBER 2018 <b>PROJECT:</b> RI <b>DESIGNED BY:</b> ANANDKUMAR <b>CHECKED BY:</b> SANTOSH <b>APPROVED BY:</b> SR. SENIA <b>TITLE:</b> JOURNAL
---	--	---	-------------------------	---	---

← TO SOHNA

TO FEROZPUR JIRKA →



CLIENT-



National Highways Authority of India  
Ministry of Road Transport and Highways, Government of India



CONSULTANT-

Chaitanya Projects Consultancy Pvt. Ltd.  
C-5, 2ND FLOOR, RAJENDRA PLOT NO.- 21-23,  
SECTOR-4, VAISHALI, GHAZIABAD  
PH: 0122-3223413, 423472, FAX: 0120-4190472

PROJECT-

Consultancy Service for the Preparation for Feasibility Report/SRR for development of Economic Corridors, Intra Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot 5/Fachng-4: Sohna - Ferozpur Jirka)

SCALE-

1:2000

DWG TITLE-

SK-1  
ROAD SIGNAGE & MARKING PLAN  
(SOHNA - FEROZPUR JIRKA)  
(KM. 28+00 TO KM. 32+00)

DRAWING NO. -

177

LPOP-162EMENP/RTS/MS/11

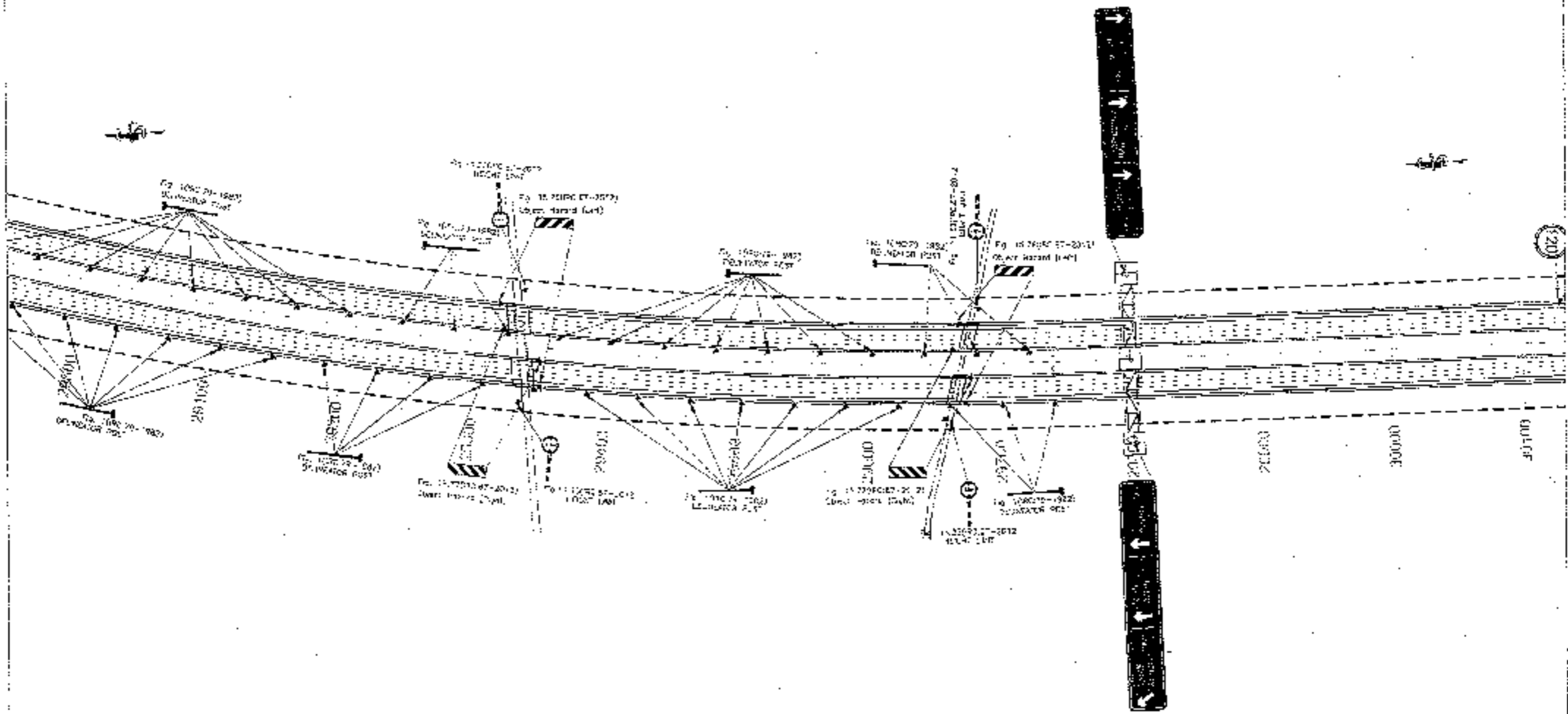
DATE: SEPTEMBER 2016

DESIGNED BY	CHECKED BY	APPROVED BY	DATE



← TO SOHNA


TO FEROZPUR JHIRKA →



178

CLIENT:  

**National Highways Authority of India**  
 Ministry of Road, Transport & Highways, Government of India

CONSULTANT:  

**Chaitanya Projects Consultancy Pvt. Ltd.**  
 G-8, 2ND FLOOR, FLK TOWER, PLOT NO. 24-27,  
 SECTOR-4, VAISHALI, BHAZIABAD  
 PH: 0120-3423419, 4120472, FAX: 0120-4110472

PROJECT:  
 Consultancy Services for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-5/Package-4: Sohna - Ferozpur Jhirka)

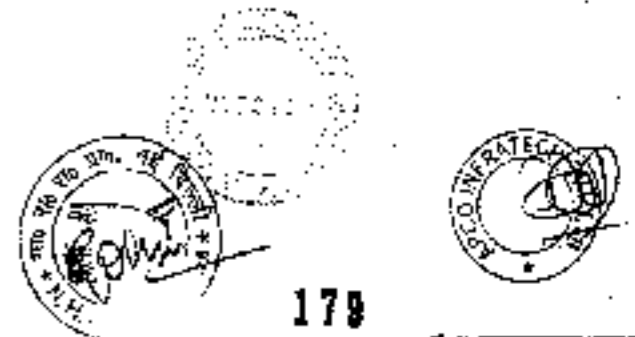
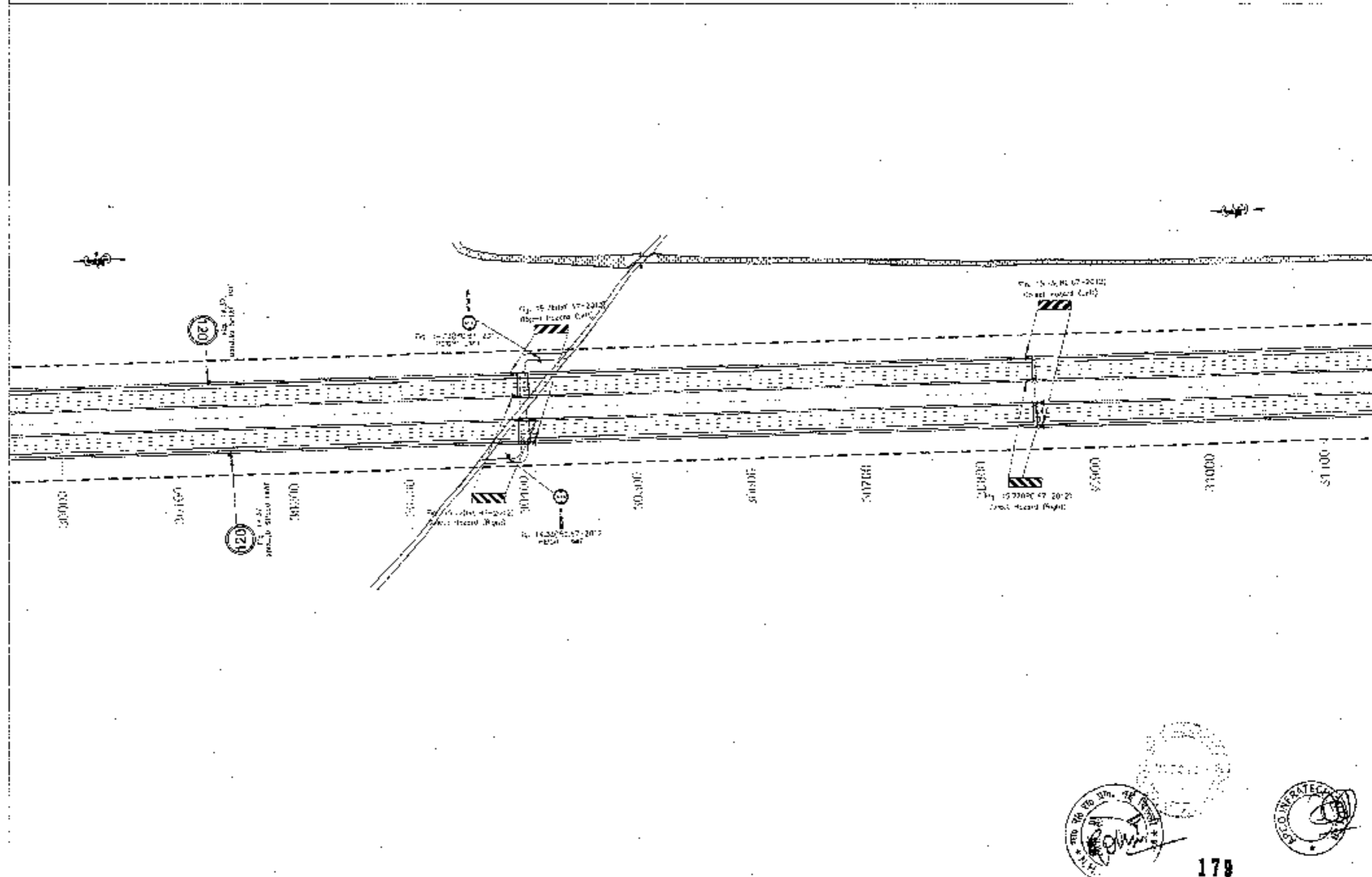
SCALE:  
 1:5000



DWG TITLE:  
 ROAD SIGNAGE & MARKING PLAN  
 (SOHNA - FEROZPUR JHIRKA)  
 (SHEET NO. 001 TO 004 OF 0004)

DRAWING NO.:		DATE:		SCALE:	
NO.	DATE	BY	DATE	BY	DATE
1	SEPTEMBER 2017	SAVITRI	15/09/2017	SAVITRI	15/09/2017
2					
3					
4					

← TO SOHNA

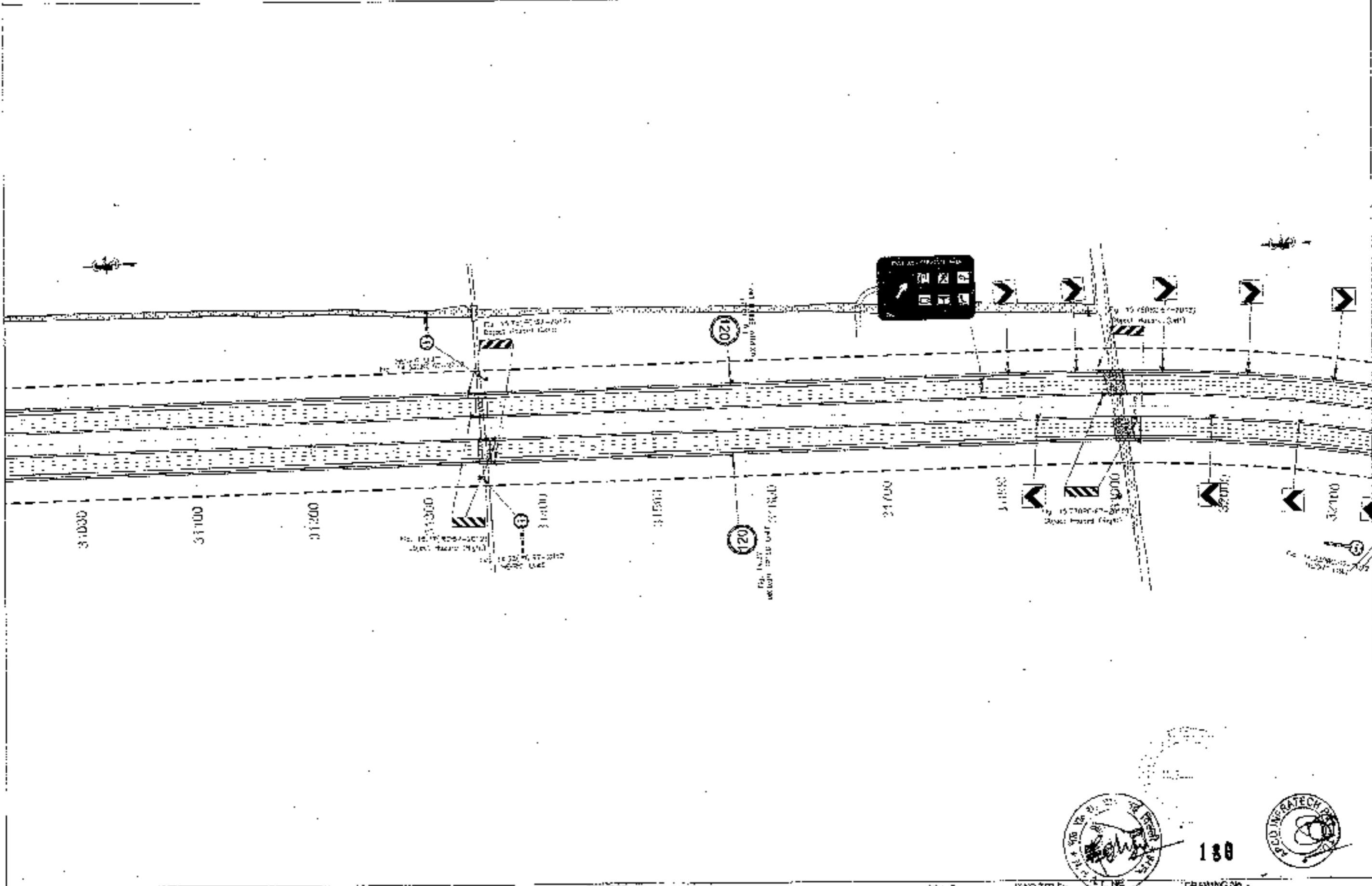
TO FEROZPUR JHIRKA →



<p>CLIENT:</p>  <p>National Highways Authority of India</p>	<p>CONSULTANT:</p>  <p>Chaitanya Projects Consultancy Pvt. Ltd. C-3, 3RD FLOOR, P.L.TOWER, PLOT NO-21-22, SECTOR-4, VAISHALI, GHAZIABAD PH: 6120-3223418 4120472 FAX: 6470-415172</p>	<p>PROJECT:</p> <p>Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridor, Link Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6) Package-4: Sohna - Ferozpur Jhirka</p>	<p>SCALE:</p> <p>1:2000</p>	<p>DRAWING NO.:</p> <p>CPCT-SSDWEA/PHYS/2017/31</p> <p>DATE: SEPTEMBER 2018</p> <p>DESIGNED BY: [Signature]</p> <p>CHECKED BY: [Signature]</p> <p>APPROVED BY: [Signature]</p>
--	--	--	-----------------------------	--

← TO SOHNA


TO FIROZPUR JHARKA →



180

CLIENT:  

**National Highways Authority of India**  
 Member of Road, Transport & Highways Deptt. of India  
 PUNJAB

CONSULTANT:  

**Chaitanya Projects Consultancy Pvt. Ltd.**  
 G-3, 2ND FLOOR, R.K. TOWER, PLOT NO. 24-23,  
 VICTORIA, VAIDYALI, CHAZWABAD  
 Ph: 0120-3223445, 4120472, FAX: 0120-4110472

PROJECT:  
 Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Intra Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6/Pakistan-Sohna - Firozpur Jhark)

SCALE:  
 1:2000

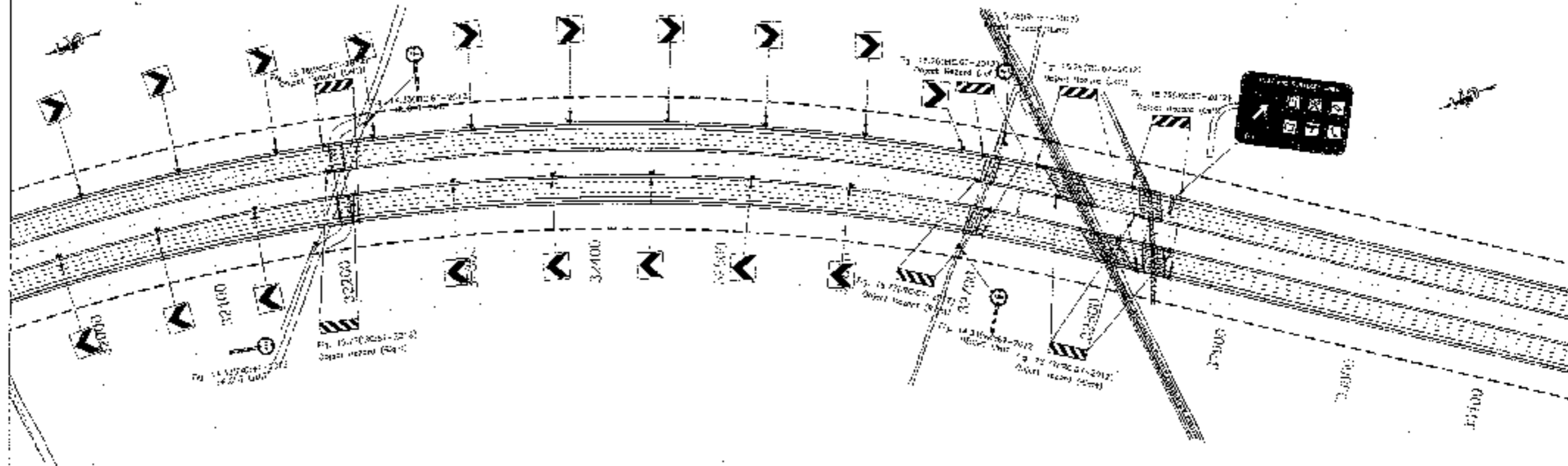
DWG TITLE:  
 ROAD SIGNAGE & MARKING PLAN  
 SOHNA - FIROZPUR JHARKA  
 (KM 31.030 TO KM 32.000)

DRAWING No. -  
 CPD-180/2012/1P-1/HRSSMP/14

DATE: 26/ FEBRUARY 2018	SCALE: 1:2000
REVISION: 01	DESIGNER: ANAND K
CHECKED: KUMAR	APPROVED: S. S. SINGH
	DATE: 26/ FEBRUARY 2018

← TO SOHNA

TO FIRROZPUR JIRKA →



CLIENT -



National Highways Authority of India  
Ministry of Road Transport & Highways, Government of India



CONSULTANT -



Charanya Projects Consultancy Pvt. Ltd.  
G-6, 2ND FLOOR, R.K. TOWER PLOT NO. 21-22,  
SECTOR-4, VASHPADA, GHAZIABAD  
PH: 0120-3223439, 4120472, FAX: 0120-4110472

PROJECT -

Consultancy Service for the Preparation for Feasibility Report/DPR for Development of Economic Corridors, Intra Corridor and Feeder Routes to Improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-8/Package-4: Sohna - Firrozpur Jirka)

SCALE -

1:2000

DWG TITLE -

FIG-2  
ROAD SIGNAGE & MARKING PLAN  
(SOHNA - FIRROZPUR JIRKA)  
(K.M. 32+00 TO K.M. 34+00)

DRAWING No. -

CPCL-152004EXP-01/HR/SLMP-11  
DATE: SEPTEMBER 29, 2019  
PREPARED BY: [Signature]  
CHECKED BY: [Signature]  
APPROVED BY: [Signature]

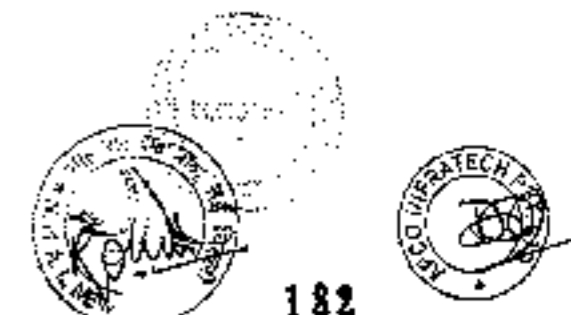
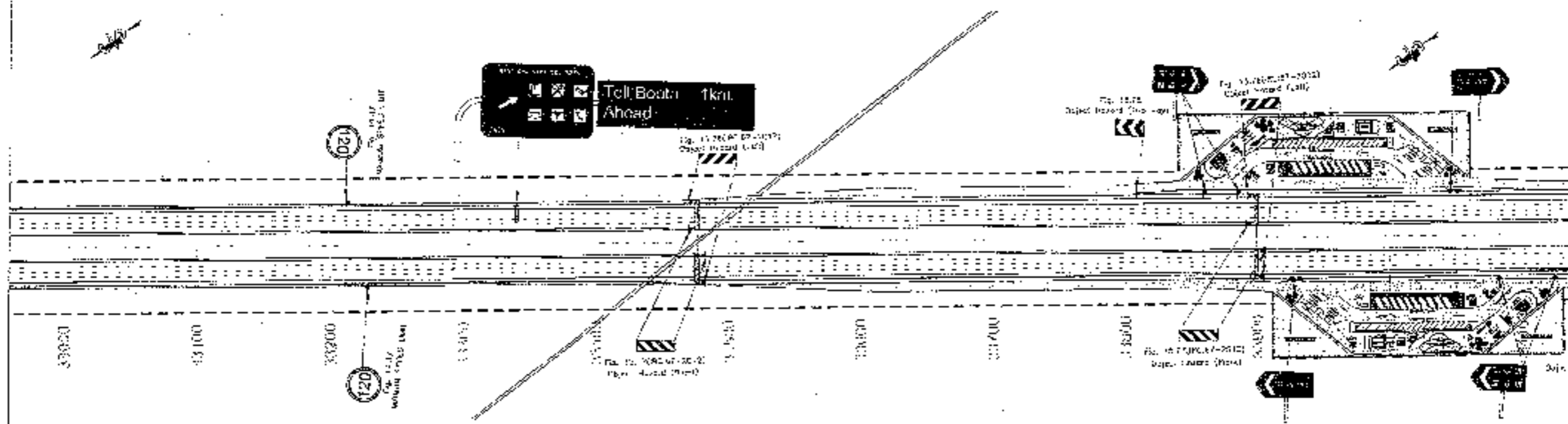


181





← TO SOHNA

TO FIROZPUR JHIRKA →

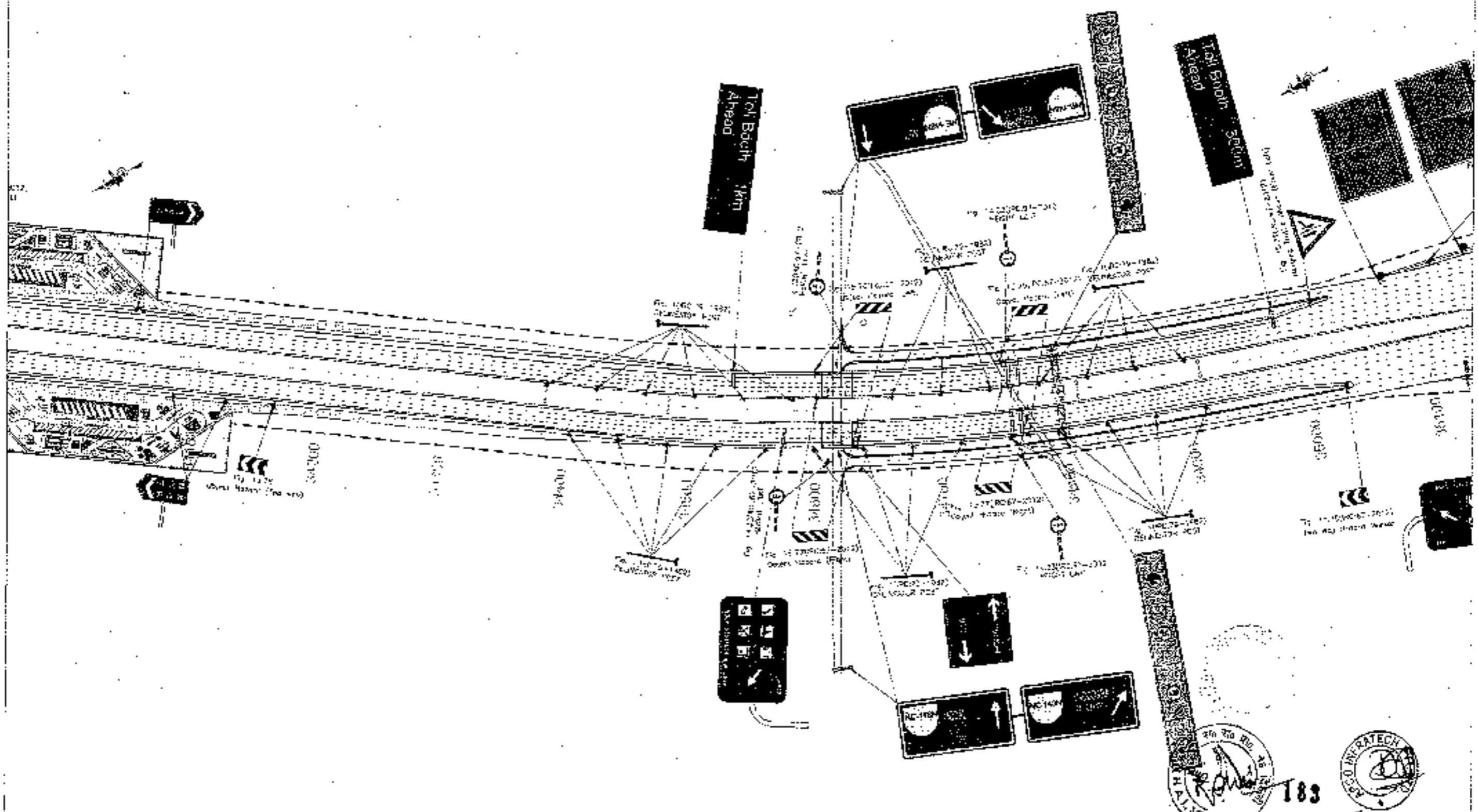


182

<p>C. ENT.:</p>  <p>National Highways Authority of India (Ministry of Road Transport &amp; Highways, Govt. of India)</p>	<p>CONSULTANT:</p>  <p>Chaitanya Projects Consultancy Pvt. Ltd. C-3, 2ND FLOOR, R.K.TOWER PLOT NO.- 21-22 SECTOR-4, VAISHALI, CHAPARAD PH. 0126-3223418, 4123472, FAX: 0123-4919472</p>	<p>PROJECT:</p> <p>Consultancy Service for the Preparation for Feasibility Report/DFR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala, Partyojana (Lot-6/Package-4: Sahasra - Firozpur Jhirka)</p>	<p>SCALE:</p> <p>1:2000</p>	<p>DWG TITLE:</p> <p>FIG. 4 ROAD SIGNAGE &amp; PARKING PLAN SOHNA - FIROZPUR JHIRKA (S.M. 33+00 TO S.M. 34+00)</p>	<p>DRAWING NO.:</p> <p>C/01-INVESTMENT/FIROZPUR 4</p> <table border="1"> <tr> <td>DATE OF PREPARATION</td> <td>SCALE</td> <td>REVISION</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </table> <p>APPROVED: [Signature]</p> <p>DATE: [Blank]</p>	DATE OF PREPARATION	SCALE	REVISION			
DATE OF PREPARATION	SCALE	REVISION									

← TO SOHNA

TO FIRAZPUR JHIRKA →



183

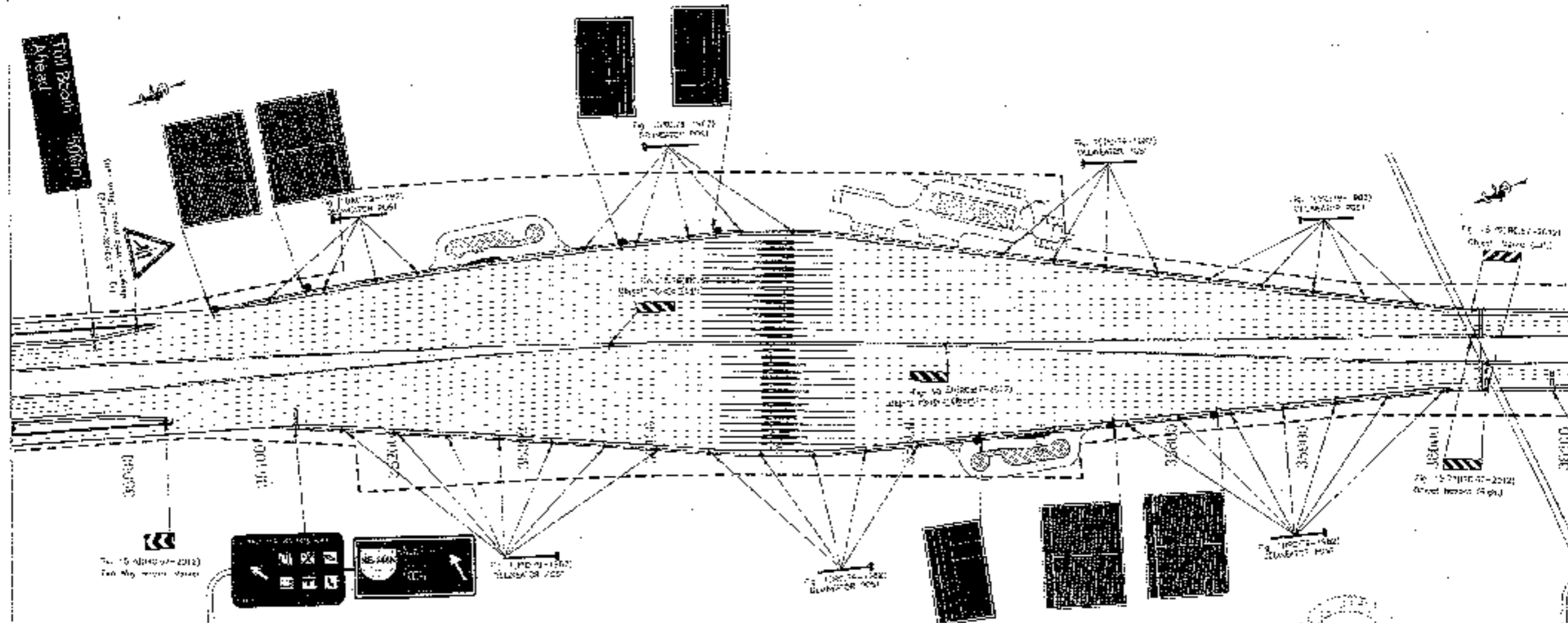
VAISHALI

CPCT/ISS/INDO/P/RES/2011/17



← TO SOHNA

TO FIROZPUR JIRKA →



CLIENT:-



National Highways Authority  
of India



CONSULTANT:-

Chaitanya Projects Consultancy Pvt. Ltd.  
C-4, 2ND FLOOR, P.K. TOWER PLOT NO. - 21/22,  
SECTOR-3, VAISHALI, SHAZIBAG,  
FH.: 0120-9223419, 4120472, FAX: 0120-4110472

PROJECT:-

Consultancy Service for the Preparation for Feasibility Report/DPR for  
development of Economic Corridor, Bypass Corridor and Feeder Routes  
to improve the efficiency of freight movement in India under Bharatmala  
Policy/Janm (Lot-4 Package-4, Sahra - Firozpur/Jirka)

SCALE:-

1:2000

DWG TITLE:-

FIG 2  
ROAD SERVICE & MARKING PLAN  
(SOHNA - FIROZPUR JIRKA)  
(KM 34+00 TO KM 36+00)

DRAWING NO:-

184

CPCL/ISD/SWEP/PROSAMPY/18

DATE: SEPTEMBER 2016

DESIGNED BY: [Signature]

CHECKED BY: [Signature]

DATE: 10/09/2016

SCALE: AS SHOWN

PROJECT: SAHRA - FIROZPUR JIRKA

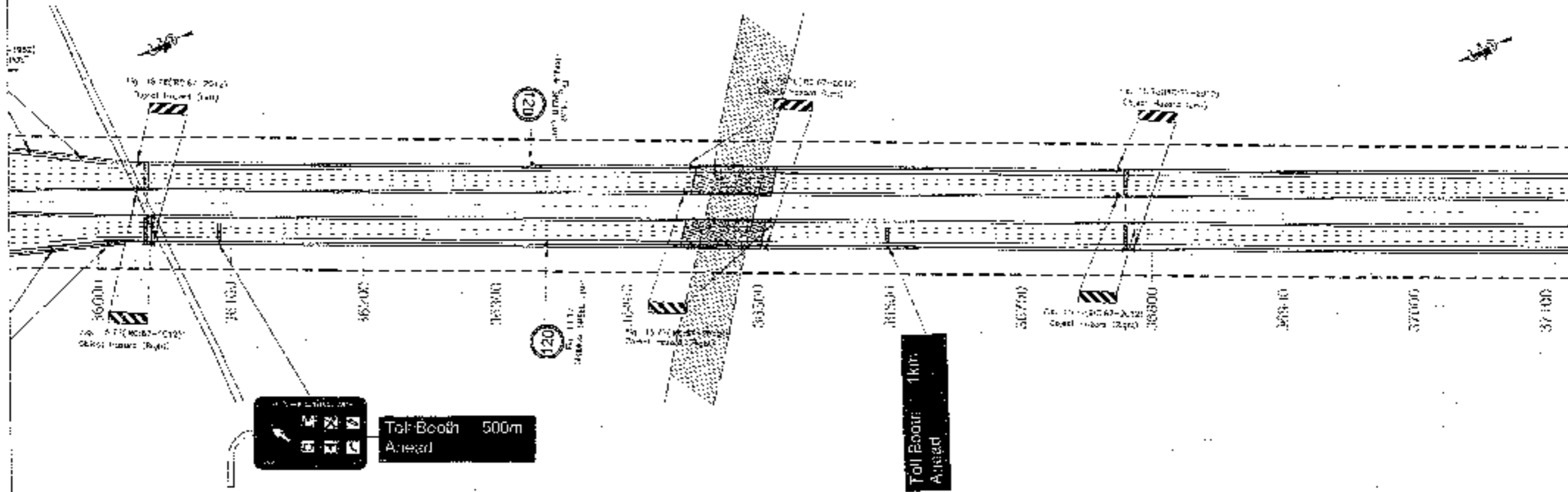
NO. OF SHEETS: 184


TOTAL SHEETS: 184



TO SOINA

TO FEROZPUR JHIRKA



CONSULTANT-  

**Chaitya Projects Consultancy Pvt. Ltd.**  
 G-6, 2ND FLOOR, P.K.TOWER PLOT NO.- 21-22,  
 SECTOR-4, VAISHALI, GHAZIABAD  
 PH: 0120-3223419, 4170472, FAX: 0120-4170472

PROJECT-  
 Consultancy Service for the Preparation of Feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6/Package-4; Sohna - Ferozpur Jhirka)

SCALE-  
 1:2000

DWG TITLE-  
 ROAD SIGNAGE & MARKINGS PLAN (SOHNA - FERUZPUR JHIRKA) (DM TO 026 TO 034 STATION)

DRAWING NO. -  
 CHCP/ISSB/EXP/CHK/ISS/19

DATE: SEPTEMBER 2015

DESIGNED BY: CHANDAN K. SINGH, TELUKA

CHECKED BY: CHANDAN K. SINGH, TELUKA

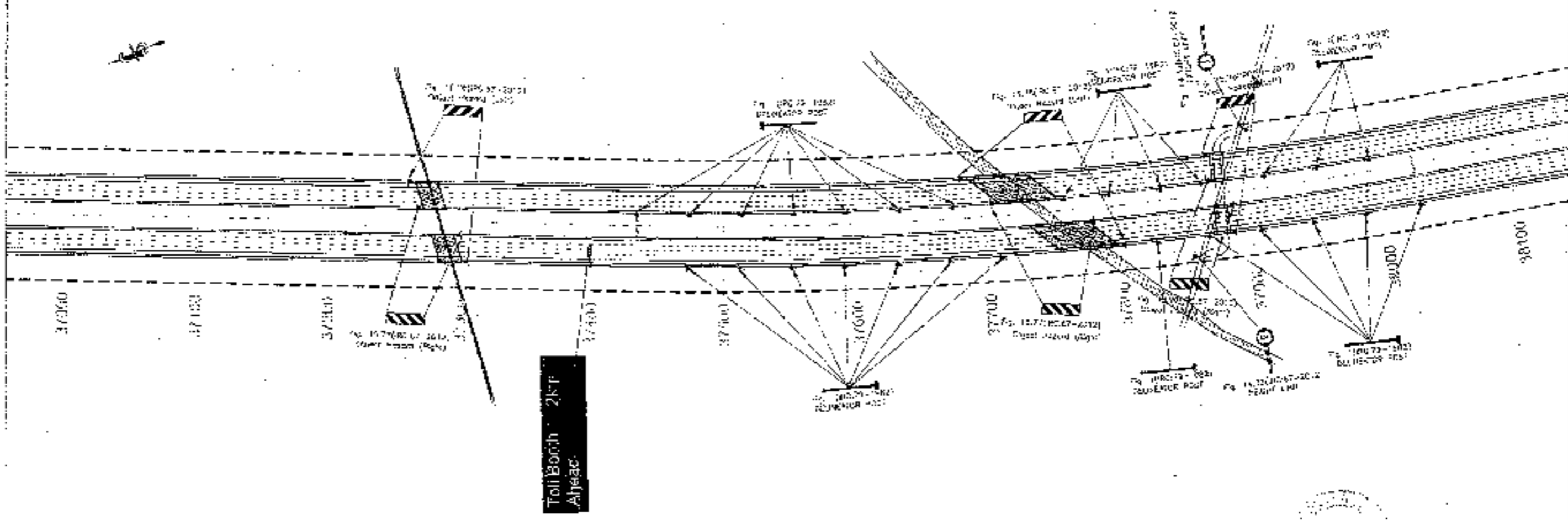
APPROVED BY: CHANDAN K. SINGH, TELUKA

185

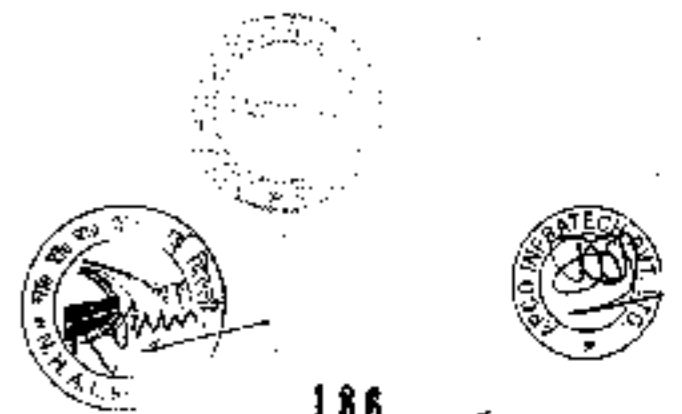


← TO SONNA


TO FIROZPUR JHERKA →




Toll Booth - 2Ktr  
Ahjeac



186

CLIENT:  

**National Highways Authority of India**  
 4th Floor, 11th Mile, 5th Cross, Old Mysore Road, Bangalore - 560075

CONSULTANT:  

**Chaitanya Projects Consultancy Pvt. Ltd.**  
 G-6, 2ND FLOOR, P.K.TOWER PLOT NO.- 21-22, SECTOR-4, VAISHALI, GANESHPUR, BANGALORE  
 Ph: 0120-3227479 8120472 FAX: 0120-4113472

PROJECT:  
 Consultancy Service for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Inlet Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6/Package-4: Sonna - Firozpur Jherka)

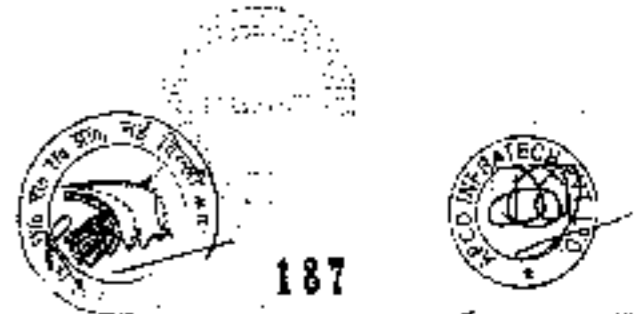
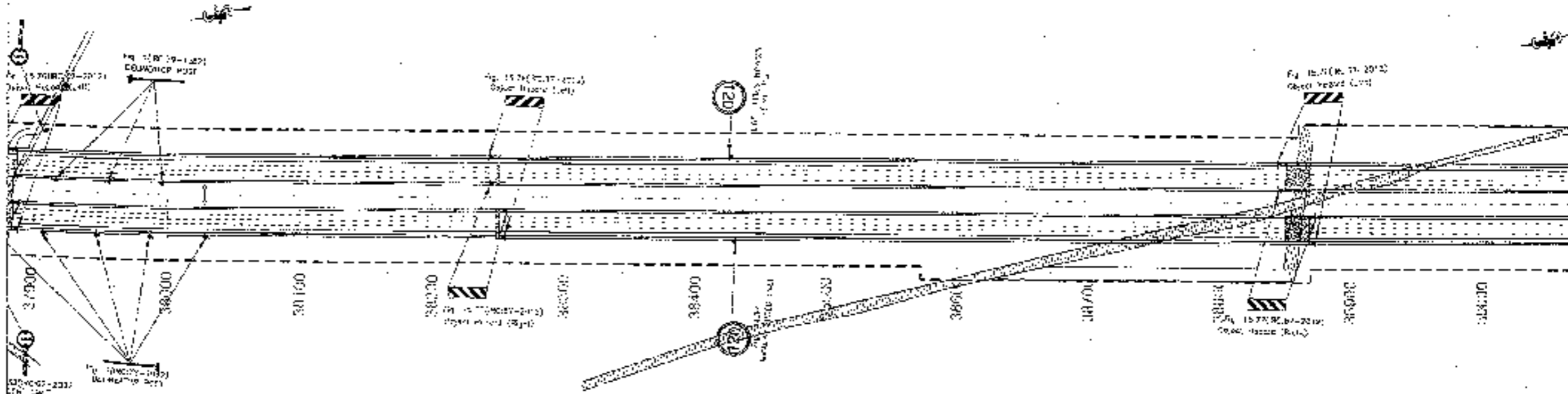
SCALE:  
 1:2000



DWG TITLE:  
 ROAD SIGNAGE & MARKING PLAN  
 (SONNA - FIROZPUR JHERKA)  
 (S.M. 2+000 TO K.M. 18+000)

DRAWING No.:  
 DATE: SEPTEMBER 23 '23  
 PREPARED BY: [Signature]  
 CHECKED BY: [Signature]  
 APPROVED BY: [Signature]

← TO SOHNA

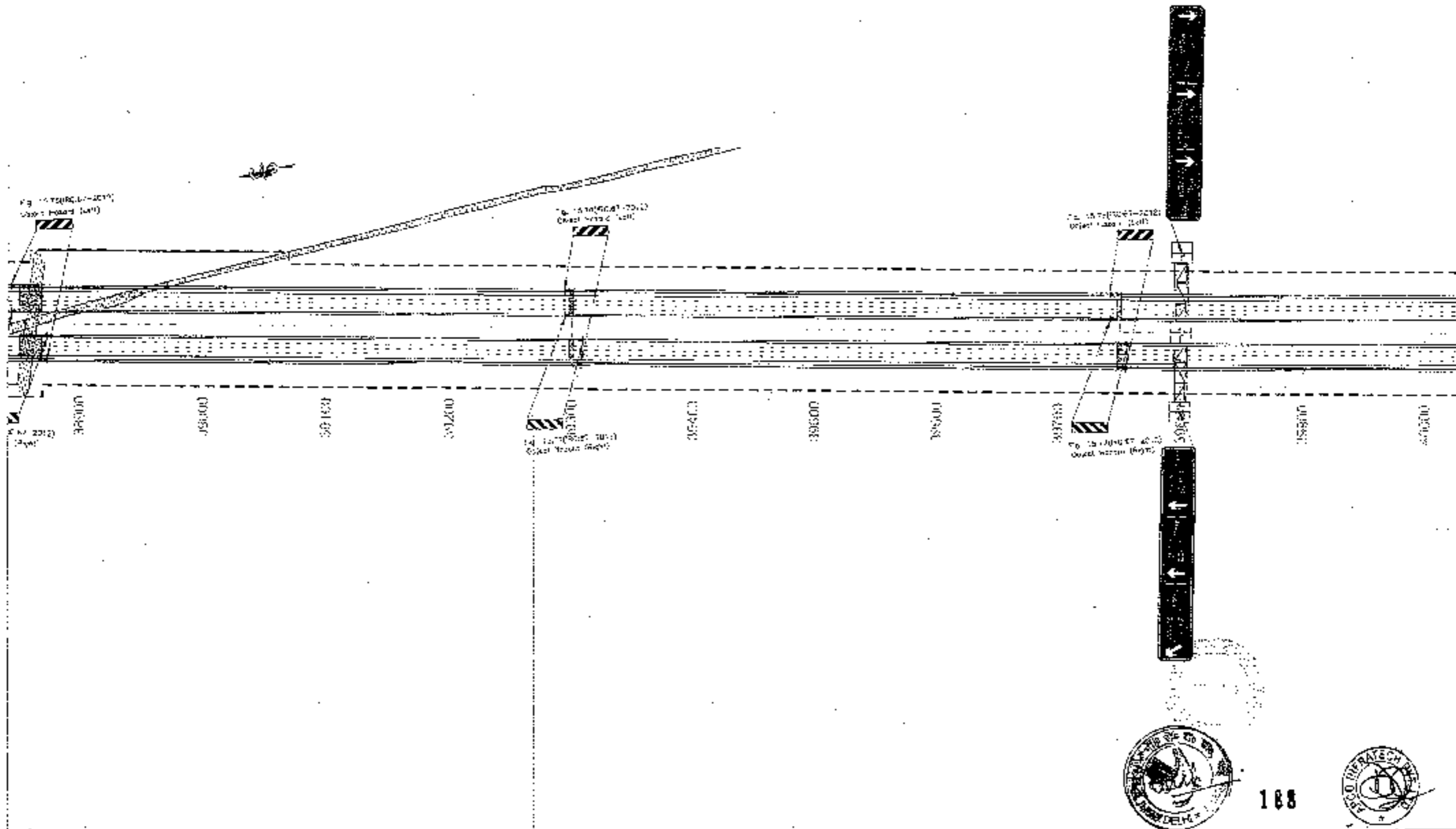
TO FIROZPUR JHIRKA →



<p>CLIENT -</p>  <p>National Highways Authority of India</p>	<p>CONSULTANT -</p>  <p>Chaitanya Projects Consultancy Pvt. Ltd. G-8, 2ND FLOOR, H.K. TOWER PLOT NO.-21-22, SECTOR-4 VAISHALI, GHAZIABAD PIN - 0120-3223415, 4120472, FAX: 0120-410477</p>	<p>PROJECT -</p> <p>Consultancy Services for the Preparation for Feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6/Package-4: Sohna - Firozpur Jhirka)</p>	<p>SCALE -</p> <p>1:2000</p>	<p>DWG TITLE -</p> <p>REG-2 ROAD SIGNAGE &amp; MARKING PLAN (SOHNA - FIROZPUR JHIRKA) (K.M. 15+00 TO 104.0000)</p>
		<p>DRAWING NO -</p> <p>CHOP-1408/MS/SP/FRS/SM/21</p>		
		<p>DATE: SEPTEMBER 2014</p> <p>DESIGNED BY: P. SINGH, CHECKED BY: A. SINGH</p>		
		<p>NO. 2</p> <p>SECTOR: GHAZIABAD, DISTRICT: GHAZIABAD</p>		


← TO SOHNA

TO FIROZPUR JHIRKA →



CLIENT:-  

**National Highways Authority of India**  
 2024-17 Road Transport & Highways, Con. Office

CONSULTANT:-  

**Charanya Projects Consultancy Pvt. Ltd.**  
 G-2, 2ND FLOOR, R.K. TOWER PLOT NO. 21-22,  
 SECTOR-4, VAISHALI, GHAZIABAD  
 PH: 0120-3223419, 4120472, FAX: 0120-4110472

PROJECT:-  
 Consultancy Service for the Preparation for Feasibility Report/DFR for  
 development of Economic Corridors, Intra Corridors and Feeder Routes  
 to improve the efficiency of freight movement in India under Bharatmala  
 Project (Lot-4/Package-4: Sohna - Firozpur Jhirka)

SCALE:-  
 1:2000

DWG TITLE:-  
 ROAD SIGNAGE & MARKING PLAN  
 (SOHNA - FIROZPUR JHIRKA)  
 (S.S. 20100 TO K.M. 45000)

DRAWING NO.:-  
 GGP/1028/EXP/PROJ/001/12  
 DATE: SEPTEMBER 2014  
 PROJECT: BHARATMALA  
 SHEET: 14-1028  
 DESIGNED BY: S.S. SINGH  
 CHECKED BY: TOLIKAR

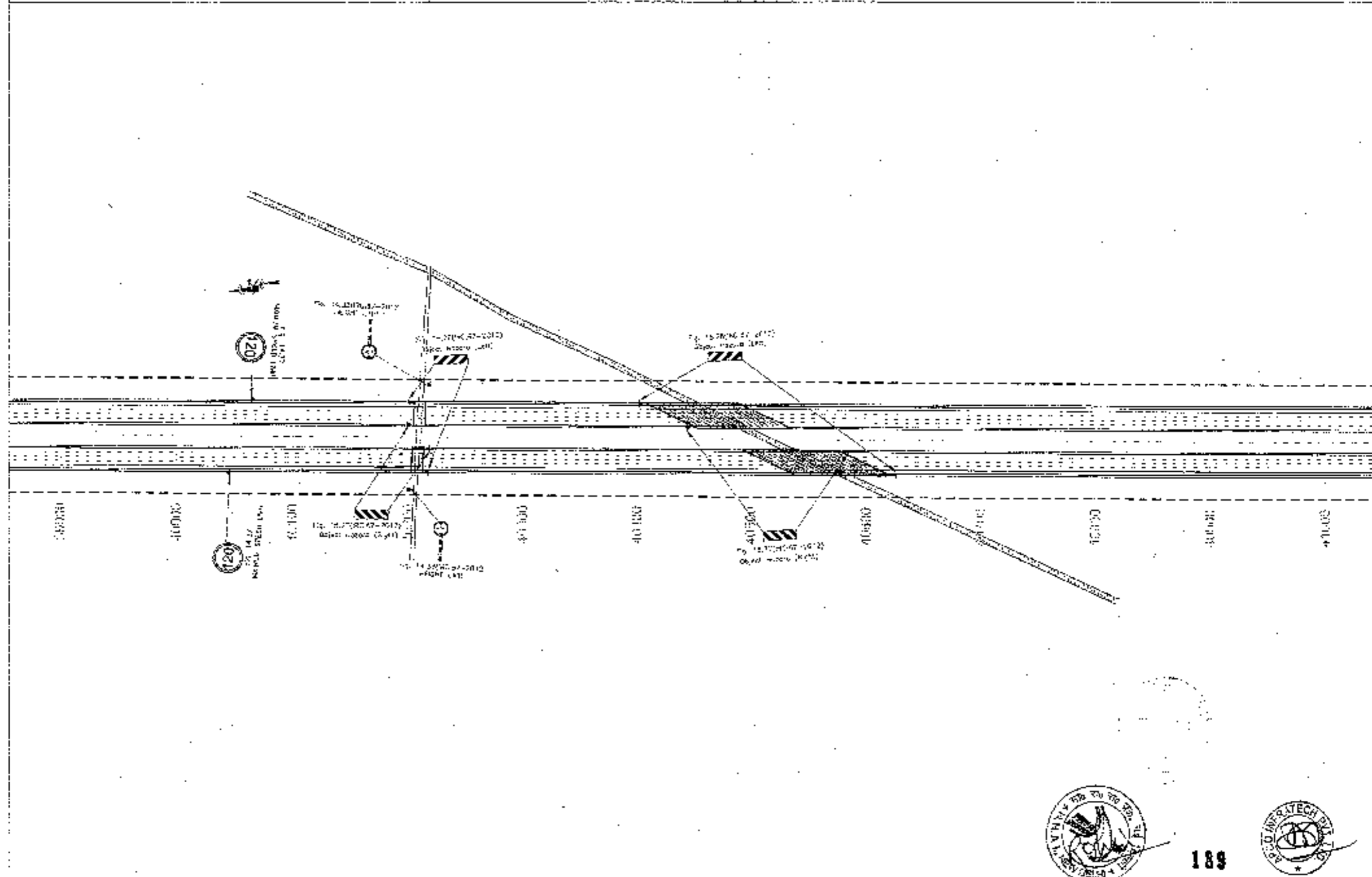


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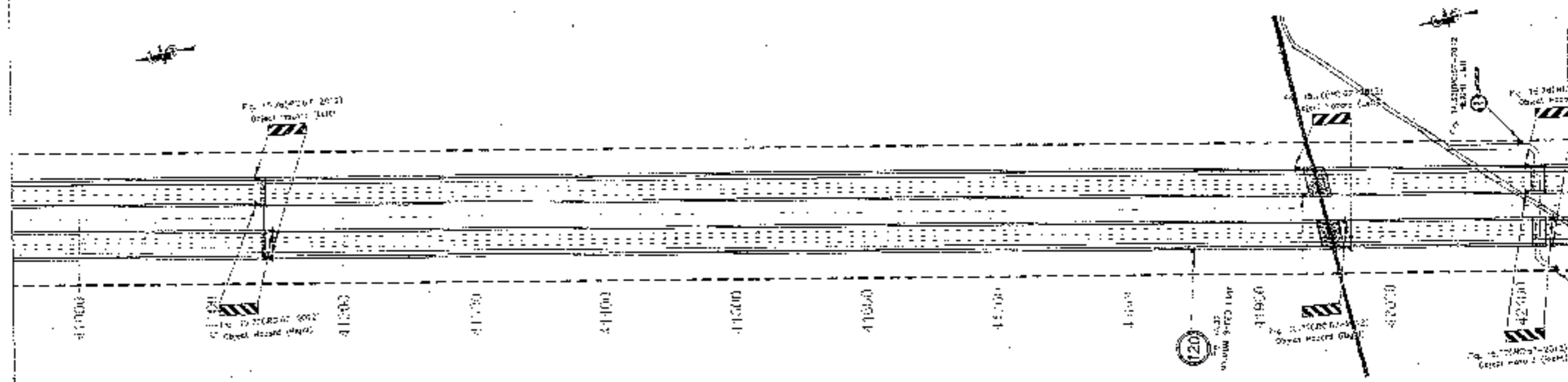
← TO SOHMA


TO FIROZPUR JHARKA →




189

<p>CLIENT:-</p>  <p><b>National Highways Authority of India</b> Ministry of Road Transport &amp; Highways, Government of India</p>	<p>CONSULTANT:-</p>  <p><b>Chaitanya Projects Consultancy Pvt. Ltd.</b> C-4, 2ND FLOOR, R.K. TOWER PLOT NO - 21-32, SECTOR-4 VAIGHALI, GHAZIABAD PH. 0120-5223419, 4120-072, FAX. 0120-4110472</p>	<p>PROJECT:-</p> <p>Consultancy Service for the Preparation for feasibility Report/DPR for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-II/Package-4: Sohma - Firozpur Jharka)</p>	<p>SCALE:-</p> <p>1:2000</p>	<p>DWG TITLE:-</p> <p>FIG-2 ROAD SIGNAGE &amp; MARKING PLAN ISOHMA - FIROZPUR JHARKA K.M. 40+000 TO 41+000</p>	<p>DRAWING NO:-</p> <p>GPCR/ISOHMA/FEASIBILITY/23 DATE: SEPTEMBER 2018 SCALE: RE M.N.T. SANTOSH JINDARWALA S.K. LALLA PUNJAB</p>
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**CLIENT -**  

**National Highways Authority of India**  
Ministry of Road Transport & Highways, Govt. of India

**CONSULTANT -**  

**Chaitanya Projects Consultancy Pvt. Ltd.**  
 G-3, 2ND FLOOR, P.K. TOWER PLOT NO.-21-22,  
 SECTOR 4, VASHTALI, GHAZIABAD  
 TEL. 0120-223419, 4171472. FAX: 0120-4116472

**PROJECT -**  
 Consultancy Service for the Preparation for Feasibility Report (DPR) for development of Economic Corridors, (near Corridors and Feeder Routes, to Improve the efficiency of freight movement) in India under Bharatmala (Banyan@L-01-3/Package-4; Sohna - Firozpur Jhirka)

**SCALE -**  
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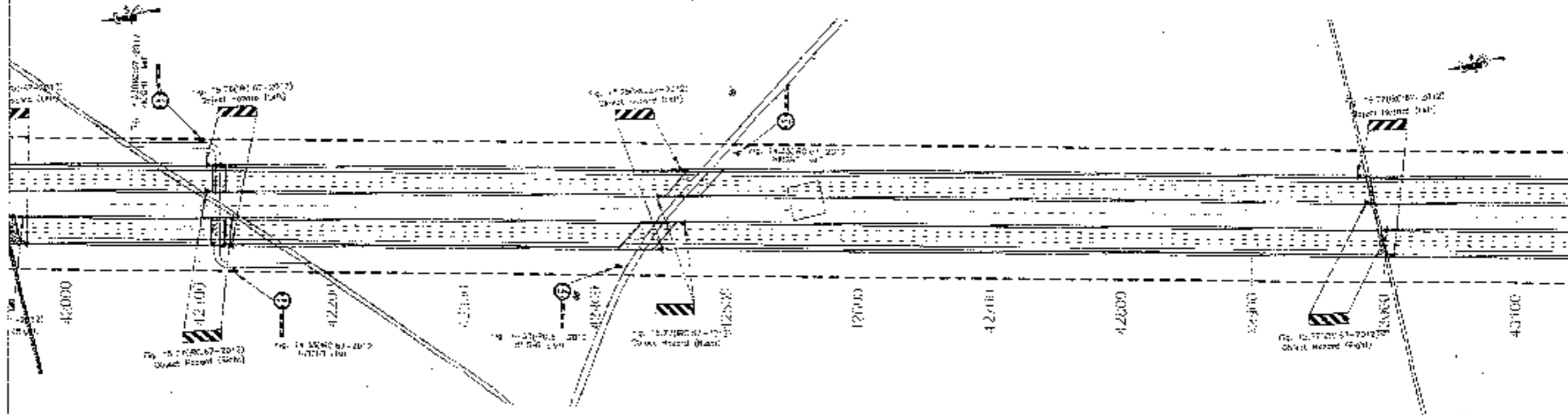
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 FIG.2  
 ROAD SIGNAGE & MARKING PLAN  
 (SOHNA - FIROZPUR JHIRKA)  
 (S.M. 41100 TO 42100)

**DRAWING NO. -**  
 EPC/CON/00000000/00000000/00  
 DATE: 20/05/2017  
 1 Page of 01  
 A.D.T. 54/1008 - DIAMANCHA 833/2004  
 10/04/04



← TO SOHNA

TO FIROZPUR JHIRKA →



191



CLIENT:-



National Highways Authority of India

1st Floor, 4th Road, Transport Building, Con. Extension



CONSULTANT:-

Ghatanya Projects Consultancy Pvt. Ltd.  
C-6, 2ND FLOOR, R.K.TOWER, PLOT NO.-21-22,  
SECTOR-4, VAIDYALI, GHAZIABAD  
PH.: 0120-3222419, 4120472, FAX: 0120-4310472

PROJECT:-

Consultancy Service for the Preparation for Feasibility Report/DPR for Development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-6) Package-4: Solna - Ferozpur Jhirka

SCALE:-

1:2000

WORK TITLE:-

PKC-2  
ROAD SIGNAGE & MARKING PLAN  
(SOHNA - FIROZPUR JHIRKA)  
(RFA 2/2011/11/2011-2012)

DRAWING No:-

CPWP-1528/WSP/HR/SA/RY/25

DATE: SEPTEMBER 2011

PROJECT NO: 1528/WSP/HR/SA/RY/25

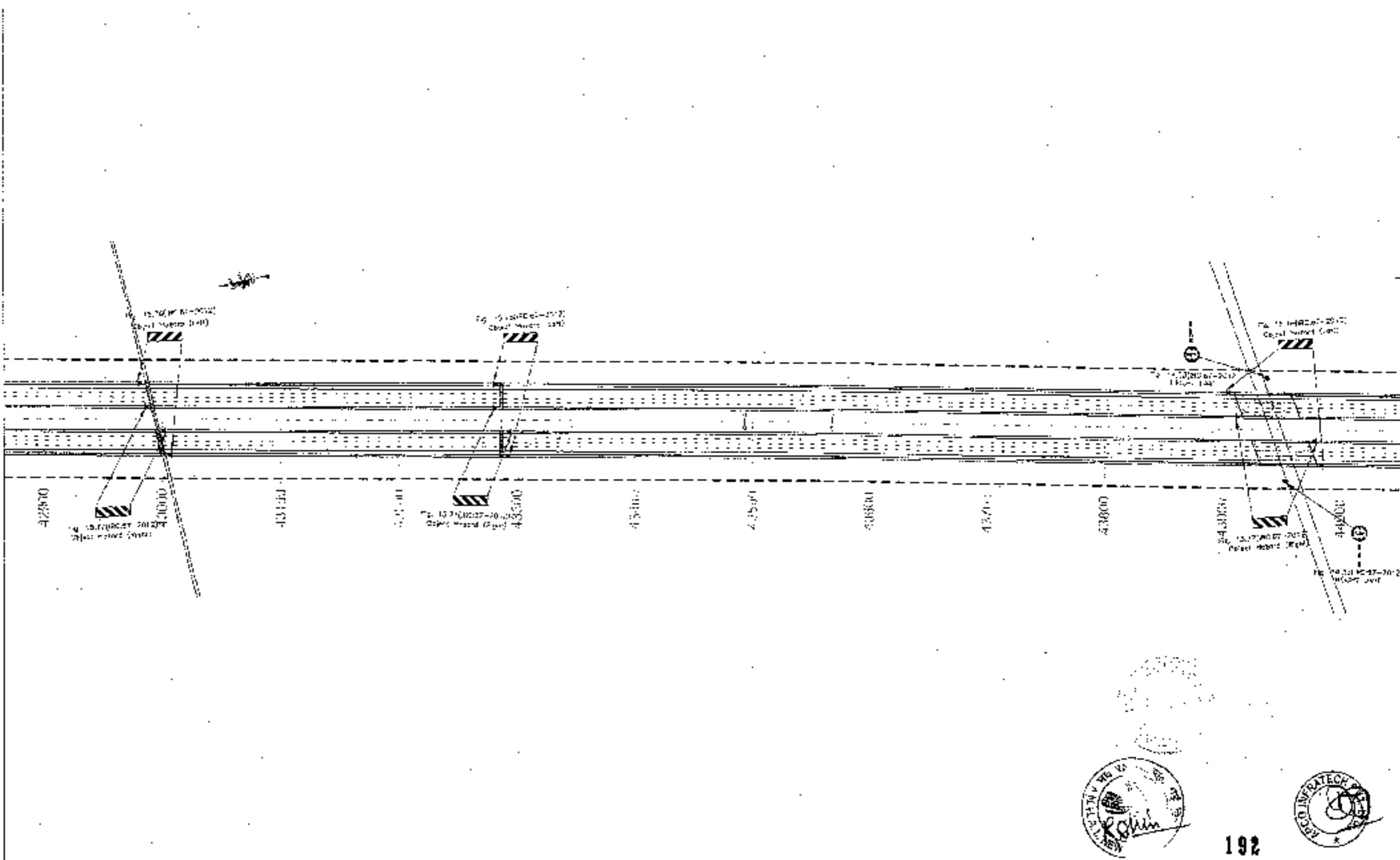
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DATE: 25/09/2011



BY: [Signature]

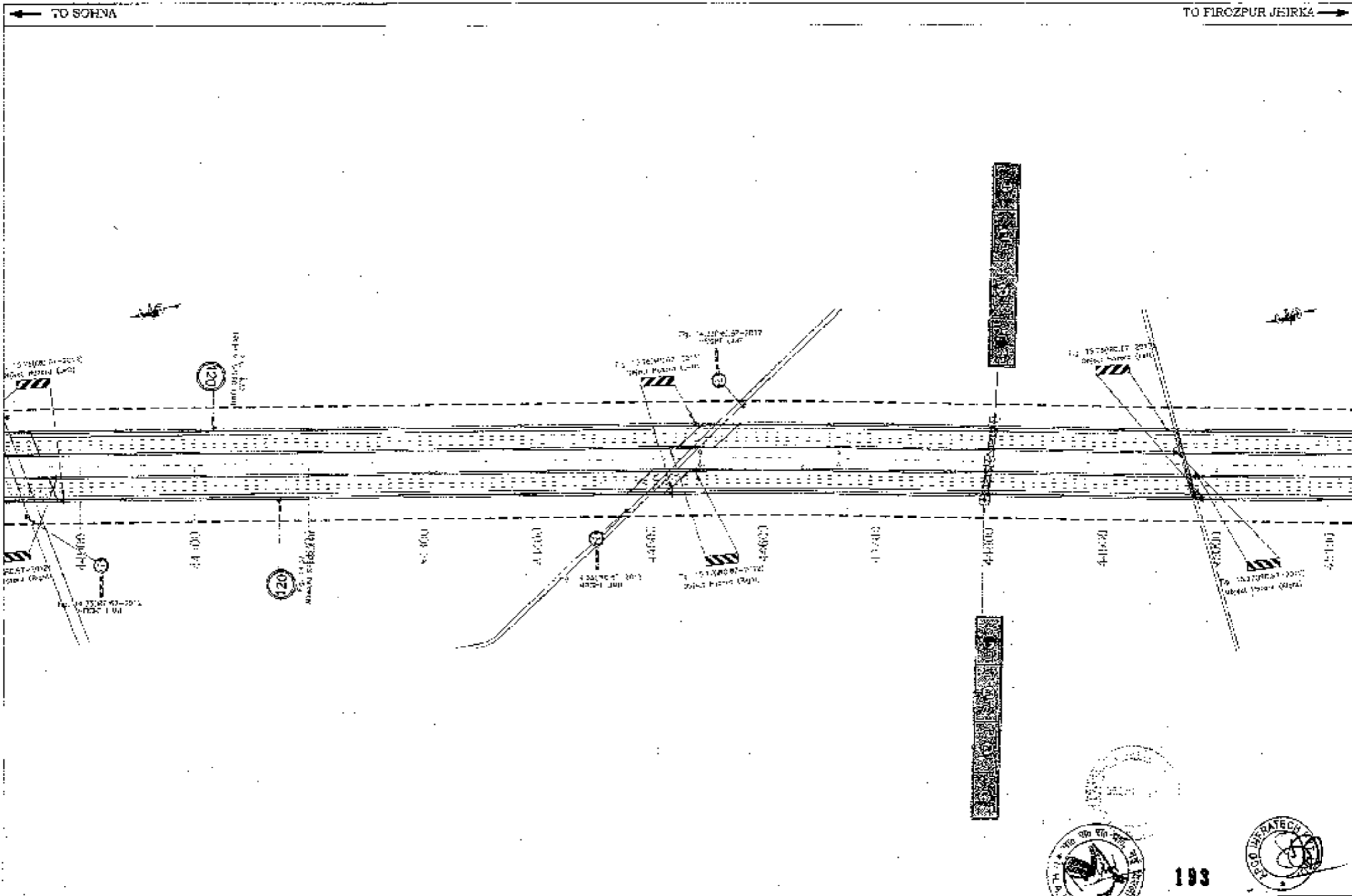
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192

<p>CLIENT -</p>  <p>National Highways Authority of India Ministry of Road Transport &amp; Highways, Govt. of India</p>	<p>CONSULTANT -</p>  <p>Chaitanya Projects Consultancy Pvt. Ltd. C/O: 2ND FLOOR, R.K. TOWER VI, D/NO.- 21-22, SECTOR-4, VAISHALI, GHAZIABAD PH: 0120-3225419, 4120472, FAX: 0120-4116472</p>	<p>PROJECT -</p> <p>Consultancy Service for the Preparation for Feasibility Report (DFR) for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-8 Package-4- Sohna - Firozpur Jhirka)</p>	<p>SCALE -</p> <p>1:2000</p>	<p>DWG TITLE:</p> <p>PKG-2 SOHNA - FIROZPUR JHIRKA (KM 43.00 TO KM 45.00)</p>	<p>DRAWING NO.:</p> <p>CPQP-202008-00000001-05</p> <p>DATE: 30/08/2020 REVISION: 1 DESIGNED BY: [Signature] CHECKED BY: [Signature] APPROVED BY: [Signature]</p>
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CLIENT:-



CONSULTANT:-

**Chaitanya Projects Consultancy Pvt. Ltd.**  
 C-5 2ND FLOOR, P.K TOWER, PLOT NO.-21-22,  
 SECTOR-4, VAISHALI, GHAZIABAD  
 PH: 0120-3222418 4120472 FAX: 0120-4110472

PROJECT:-

Consultancy Service for the Preparation of Feasibility Report (FPR) for development of Economic Corridors, Inter Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-4) Phase-4: Sohna - Ferozpur Jhirka

SCALE:-

1:2000

DWG TITLE:-

ROAD SIGNAGE & MARKING PLAN  
 (SOHNA - FIROZPUR JHIRKA)  
 (KM. 43+000 TO KM. 45+000)

DRAWING No.:

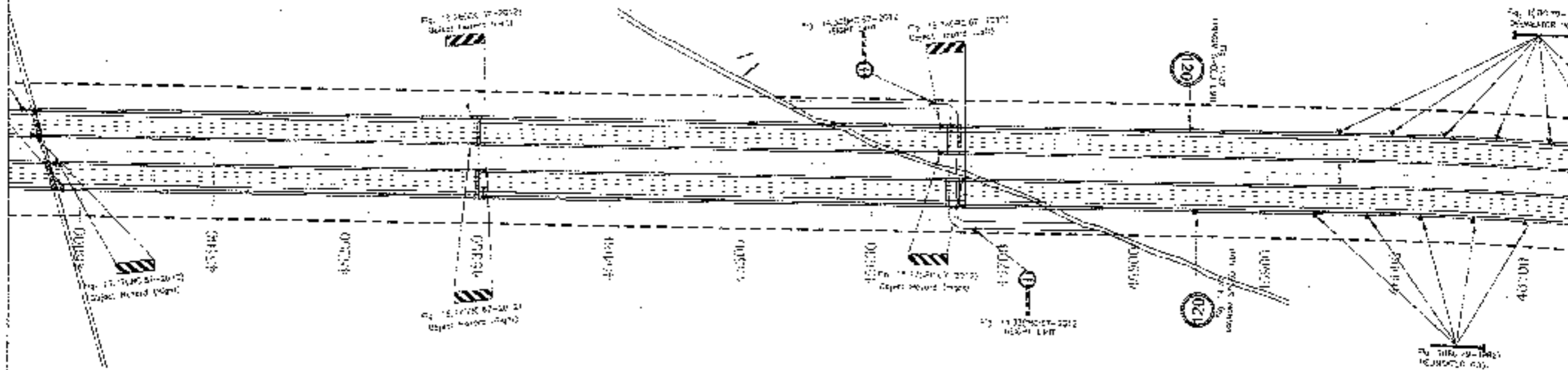
193

DATE: SEPTEMBER 2018	REVISION: R1
APPROVED: [Signature]	DESIGNED: [Signature]
DATE: [ ]	DATE: [ ]




← TO SOHNA

TO FIROZPUR JHIRKA →



CLIENT -  

**National Highways Authority of India**  
 Ministry of Road Transport & Highways, Govt. of India

CONSULTANT -  

**Challanya Projects Consultancy Pvt. Ltd.**  
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 SECTOR-4, VAHRIALI, GHAZIABAD  
 PH: 0120-3223615, 4426472, FAX: 0120-4110472

PROJECT -  
 Consultancy Service for the Preparation for Feasibility Report (RFP) for  
 development of Economic Corridors, Inter Corridors and Feeder Routes  
 to improve the efficiency of freight movement in India under Bharatmala  
 Programme (L1+P) Package-4: Sohna - Firozpur Jhirka

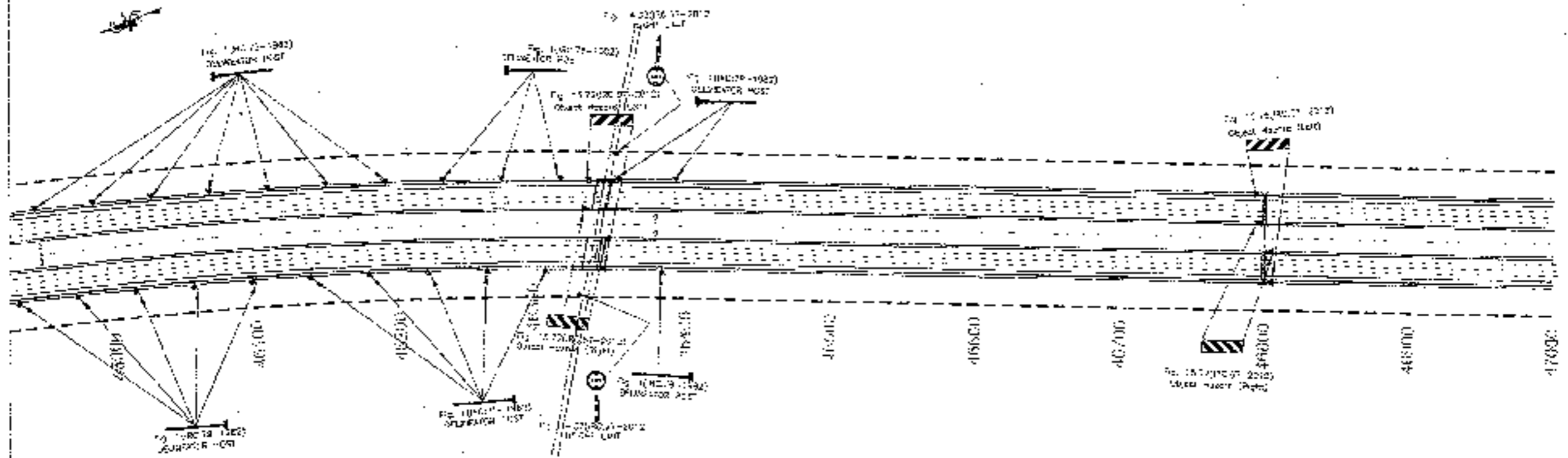
SCALE -  
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DRAW TITLE -  
 ROAD SIGNAGE & MARKING PLAN  
 (SOHNA - FIROZPUR JHIRKA)  
 (SHEET 15-00 TO 15-16-00)





DRAWING NO -  
**194**  
 SPEC. ISMNH/MS/REG/ANNY 23  
 DATE: SEPTEMBER 2011  
 PROJECT NO: 15-00-00  

SUNJ	SANTOSH	CHALANYA	S. SASTRI
		TOLKAP	



195

CLIENT-  

**National Highways Authority of India**  
 Ministry of Road Transport & Highways, Govt. of India

CONSULTANT-  

**Chaitanya Projects Consultancy Pvt. Ltd.**  
 C-5, 2ND FLOOR, R.K. TOWER, PLOT NO.-21-22,  
 SECTOR-4, VAISHALI, GHAZIABAD  
 PH.: 0120-3283449, 4120472, FAX: 0120-4110472

PROJECT-  
 Consultancy Service for the Preparation for Feasibility Report/DPR, for development of Economic Corridors, Intra-Corridors and Feeder Routes to improve the efficiency of freight movement in India under Bharatmala Pariyojana (Lot-8/Package-4: Sohna - Firozpur Jhirka)

SCALE-  
 1:2000

DWG TITLE-  
 ROAD SIGNAGE & MARKING PLAN  
 SOHNA - FIROZPUR JHIRKA  
 (Lot-8/Package-4: Sohna - Firozpur Jhirka)

DRAWING No.:  
 (CPD-155/BWP/RRS/2017/13)  
 DATE: SEPTEMBER 2018  
 DRAWN BY: [Signature]  
 CHECKED BY: [Signature]  
 APPROVED BY: [Signature]  
 TITLE: [Signature]