

50 mm ON ORIGINAL (A3)

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	


DRAWING NUMBER	DRAWING TITLE	REVISION
7061520-INDEX-PIII-001	DRAWING INDEX	A
7061520-LAP-001-012	PROJECT LOCATION MAP	A
7061520-TCS-002-002	TYPICAL CROSS SECTION (SHEET 2)	A
7061520-TCS-002-003	TYPICAL CROSS SECTION (SHEET 3)	A
7061520-TCS-002-004	TYPICAL CROSS SECTION (SHEET 4)	A
7061520-TCS-002-005	TYPICAL CROSS SECTION (SHEET 5)	A
7061520-TCS-002-005A	TYPICAL CROSS SECTION (SHEET 6)	A
7061520-TCS-002-006	TYPICAL CROSS SECTION (SHEET 7)	A
7061520-TCS-002-007	TYPICAL CROSS SECTION BRIDGE	A
7061520-TCS-002-011	TYPICAL WALL DETAIL	A
7061520-TCS-002-012	TYPICAL SECTION OF AVALANCHE PROTECTION MEASURES	A
7061520-TCS-002-013	TYPICAL CROSS SECTION SCHEDULE	A
7061520-APS-002-001	PRECAST ARCHED TYPE CUT & COVER TYPICAL CROSS SECTION & DETAILS	A
7061520-APS-002-002	FINAL LINING REINFORCEMENT CUT & COVER (OPTION) TYPICAL CROSS SECTION & DETAILS	A
7061520-APS-002-003	STRUT SUPPORTED SOLDIER PILES SECTIONS & DETAILS	A
7061520-APS-002-004	AVALANCHE PROTECTION STRUCTURE SNOW GALLERY IN STRAIGHT FOUNDATION PLAN & DETAIL	A
7061520-APS-002-005	AVALANCHE PROTECTION STRUCTURE SNOW GALLERY IN STRAIGHT BEAM LAYOUT PLAN & DETAIL	A
7061520-APS-002-006	AVALANCHE PROTECTION STRUCTURE SNOW GALLERY IN CURVE GRID LAYOUT PLAN	A
7061520-APS-002-007	AVALANCHE PROTECTION STRUCTURE SNOW GALLERY IN CURVE FOUNDATION PLAN & DETAIL	A
7061520-APS-002-008	AVALANCHE PROTECTION STRUCTURE SNOW GALLERY IN CURVE BEAM LAYOUT PLAN & DETAIL	A
7061520-APS-002-009	AVALANCHE PROTECTION STRUCTURE SNOW GALLERY CROSS SECTION DETAIL	A
PLAN AND PROFILE		
7061520-P&P-004-010A	PLAN AND PROFILE FROM KM. 9+760 TO 10+000	A
7061520-P&P-004-011	PLAN AND PROFILE FROM KM. 10+000 TO 11+000	A
7061520-P&P-004-012	PLAN AND PROFILE FROM KM. 11+000 TO 12+000	A
7061520-P&P-004-013	PLAN AND PROFILE FROM KM. 12+000 TO 13+000	A
7061520-P&P-004-014	PLAN AND PROFILE FROM KM. 13+000 TO 14+000	A
7061520-P&P-004-015	PLAN AND PROFILE FROM KM. 14+000 TO 15+000	A
7061520-P&P-004-016	PLAN AND PROFILE FROM KM. 15+000 TO 16+000	A
7061520-P&P-004-017	PLAN AND PROFILE FROM KM. 16+000 TO 17+000	A
7061520-P&P-004-018	PLAN AND PROFILE FROM KM. 17+000 TO 17+817	A
7061520-P&P-004-019	APPROACH ROAD 2 (MINAMARG) PLAN AND PROFILE FROM KM. 0+000 TO 0+660	A
7061520-P&P-004-020B	HORIZONTAL ALIGNMENT REPORT	A
7061520-P&P-004-021B	VERTICAL ALIGNMENT REPORT	A

CLIENT APPROVED

DATE

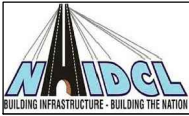
CONSULTANT SIGNATURE

DESIGNER



SMEC (India) Pvt Ltd. 1st Floor,
Novus Tower, West Wing, Plot Number -18,
Sector - 18, Gurgaon - 122015, Haryana

CLIENT



NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. PTI BUILDING . 4 PARLIAMENT STREET ,
SANSAD MARG AREA, NEW DELHI- 110001

DRAWN

DESIGN

CHECKED

APPROVED

BT

RK

MP

NA

APPROVED

DATE

PROJECT

CONSTRUCTION OF APPROACH ROADS TO EAST AND WEST PORTAL OF PROPOSED ZOJILA TUNNEL WITH AVALANCHE PROTECTION WORKS IN THE UT OF JAMMU & KASHMIR AND LADAKH

DRAWING STATUS

TENDER

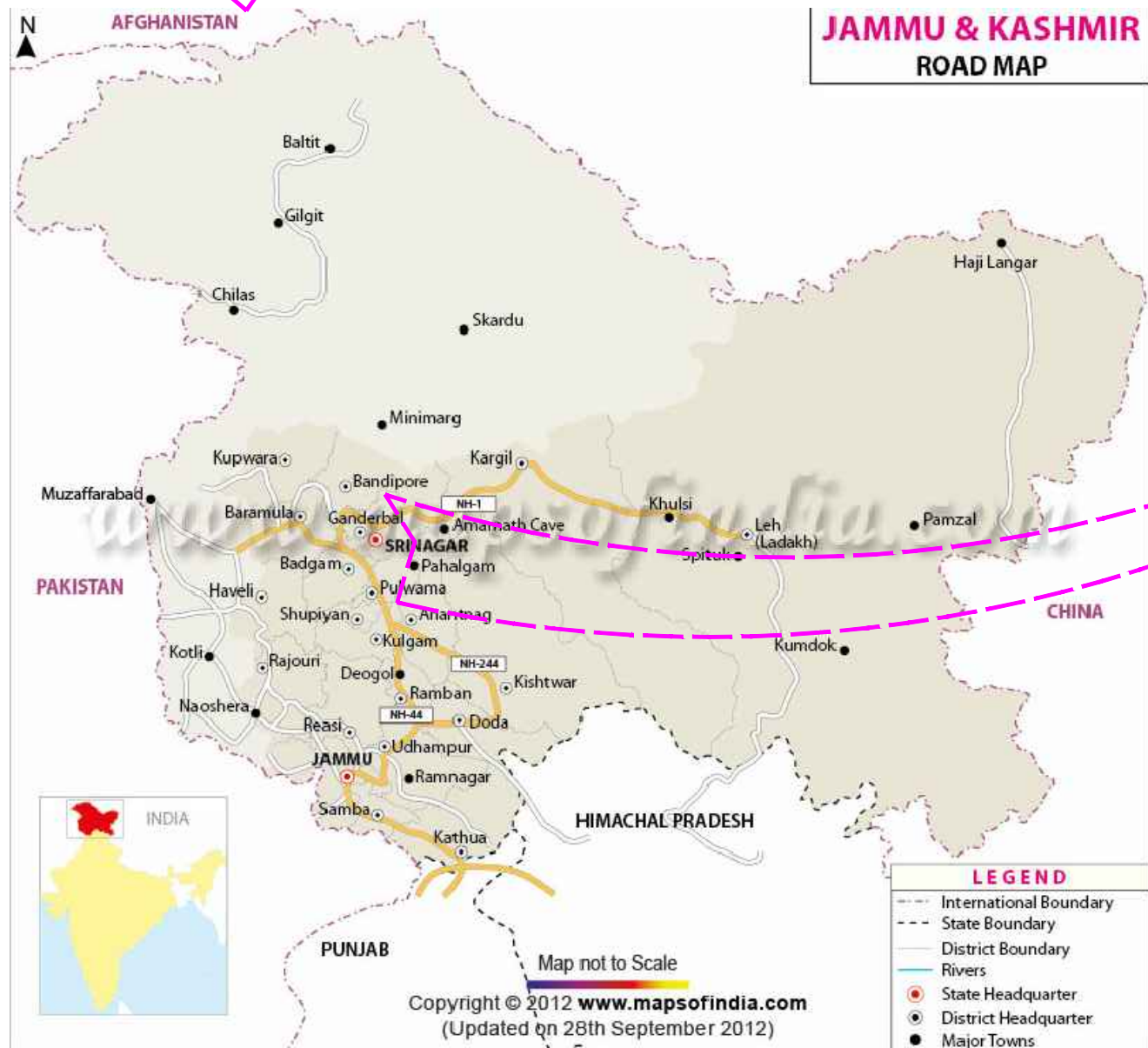
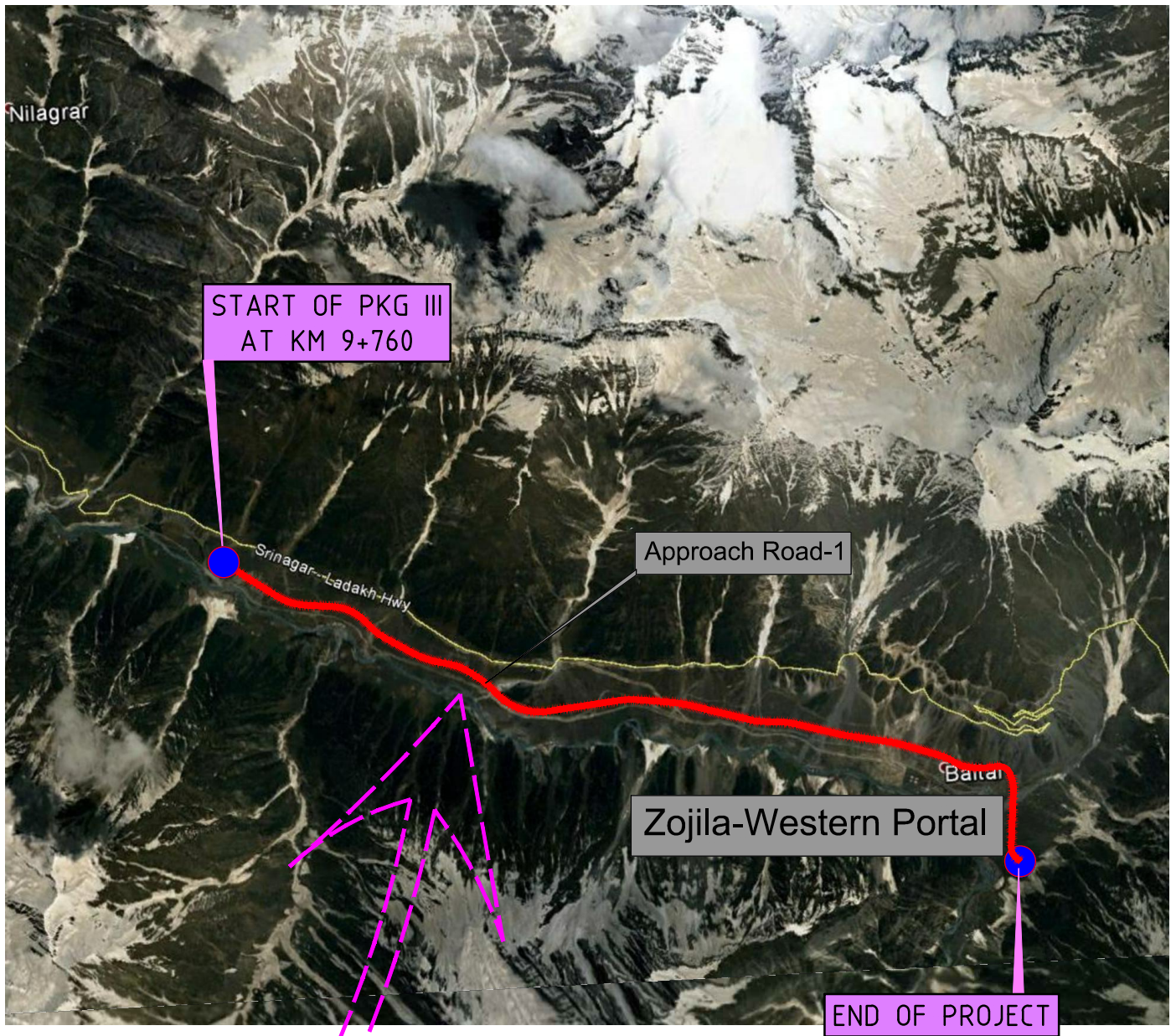
PROJECT / DRAWING No.

7061520-INDEX-PIII-001

ISSUE

A

DRAWING INDEX



50 mm ON ORIGINAL (A3)

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	

NOT TO SCALE

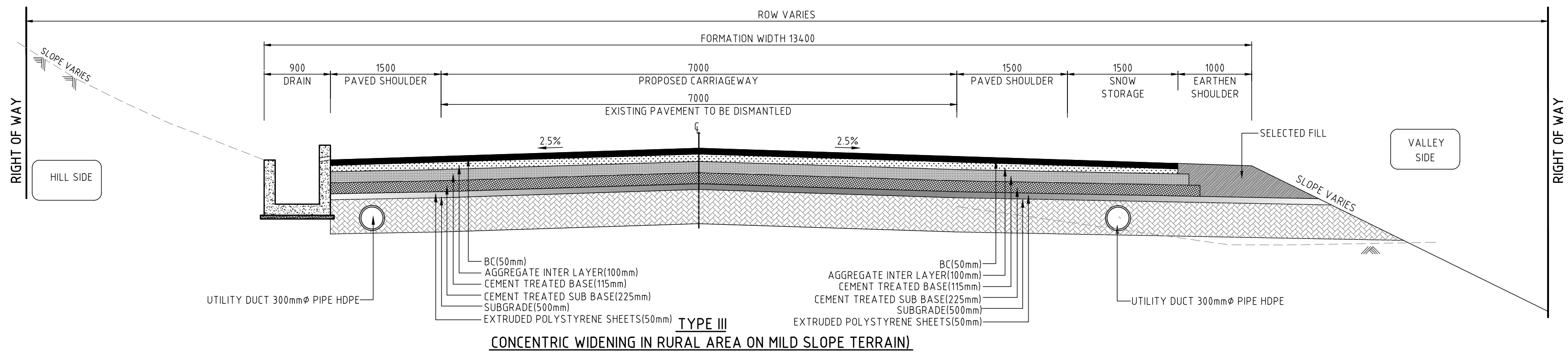
CLIENT APPROVED	DATE	CONSULTANT SIGNATURE

DESIGNER	BT	RK	MP	NA
SMC				
Member of the Surbana Jurong Group				
SMC (India) Pvt Ltd. 1st Floor,				
Novus Tower, West Wing, Plot Number -18,				
Sector - 18, Gurgaon - 122015, Haryana				

CLIENT	APPROVED	DATE
NHIDCL		
NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. P11 BUILDING, 4 PARLIAMENT STREET, SANSAD MARG AREA, NEW DELHI-110001		

PROJECT	CONSTRUCTION OF APPROACH ROADS TO EAST AND WEST PORTAL OF PROPOSED ZOJILA TUNNEL WITH AVALANCHE PROTECTION WORKS IN THE UT OF JAMMU & KASHMIR AND LADAKH
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PROJECT TITLE	PROJECT LOCATION MAP PACKAGE III
DRAWING STATUS	TENDER
PROJECT / DRAWING NO.	7061520-LAP-001-012
ISSUE	A



NOTES:-

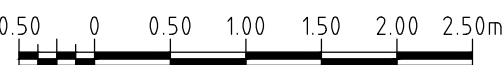
- EXTRA WIDENING SHALL BE REFERED AS PER IRC-SP 48 1998,IRC-SP 73 2015 & IRC 52 2001 AT CURVE LOCATIONS WITH RADIUS LESS THAN 300m.
- SLOPE TREATMENT SHOWN ON HILL/VALLEY SLOPES ARE INDICATIVE AND MAY VARY BASED ON CONFIRMATORY GEO TECHNICAL INVESTIGATION AND GEOLOGICAL STUDY
- THE TYPE OF PROTECTION MATERIAL FOR RETAINING WALL , BREAST WALL MAY BE CHANGED BASED ON SITE REQUIREMENT.
- AS PER IRC-SP 48 1998, CLAUSE NO 6.5.2(4), ON ROADS SUBJECTED TO HEAVY SNOWFALL, WHERE SNOW CLEARANCE IS DONE OVER LONG PERIODS, ROADWAY WIDTH MAY BE INCREASED BY 1.5M. HOWEVER THE REQUIREMENT OF SUCH WIDENING MAY BE EXAMINED WITH REFERENCE TO GROUND CONDITIONS IN EACH CASE CONSIDERING TERRAIN, TRAFFIC AND OTHER INFLUENCING CONDITIONS/FACTORS
- DEPTH OF CONSTRUCTION (PAVEMENT) SHOULD NOT BE LESS THAN DEPTH OF FROST PENETRATION AND SHOULD COMPOSE OF NON-FROST SUSCEPTIBLE MATERIAL, IN ANY CASE THE THICKNESS SHOULD NOT BE LESS THAN 45cm AS PER IRC-SP-48:1998.

50 mm ON ORIGINAL (A2)

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	

SCALES AT A2 SIZE DRAWING

HORIZ. 1:50



CLIENT APPROVED	DATE	CONSULTANT SIGNATURE

DESIGNER	DESIGN	CHECKED	APPROVED
BT	RK	MP	NA
SMEC (India) Pvt Ltd. 1st Floor, Novus Tower, West Wing, Plot Number -18, Sector - 18, Gurgaon - 122015, Haryana			

CLIENT	APPROVED	DATE
NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. PTI BUILDING . 4 PARLIAMENT STREET , SANSAD MARG AREA, NEW DELHI- 110003		

PROJECT	CONSTRUCTION OF APPROACH ROADS TO EAST AND WEST PORTAL OF PROPOSED ZOJILA TUNNEL WITH AVALANCHE PROTECTION WORKS IN THE UT OF JAMMU & KASHMIR AND LADAKH
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PROJECT TITLE	TYPICAL CROSS SECTION (SHEET 2)
DRAWING STATUS	TENDER
PROJECT / DRAWING No.	7061520-TCS-002-002
ISSUE	A

50 mm ON ORIGINAL (A3)

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	

SCALES AT A2 SIZE DRAWING
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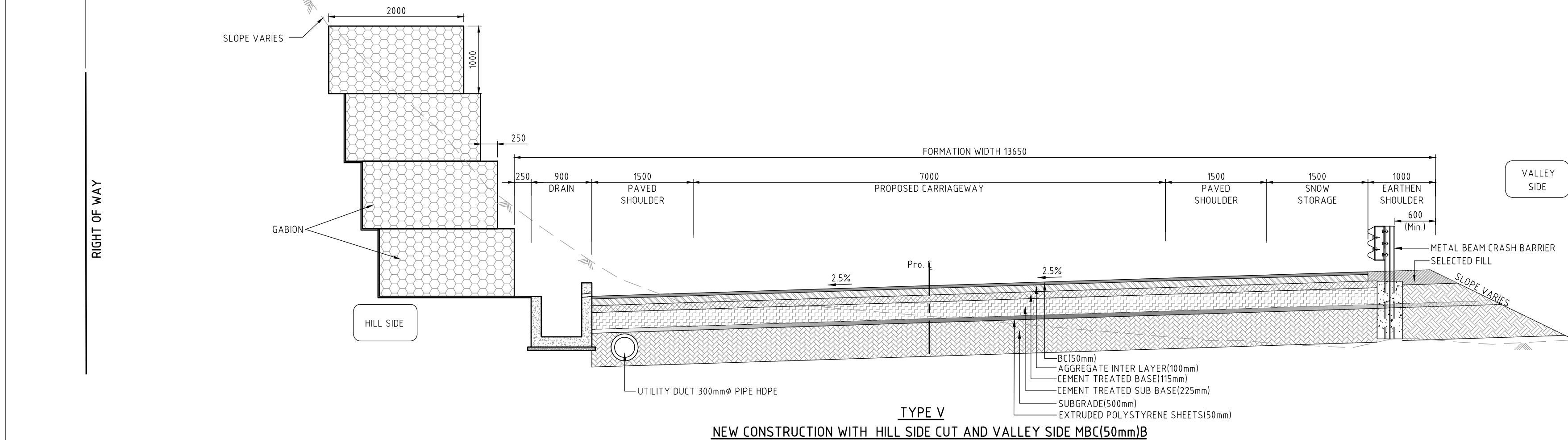
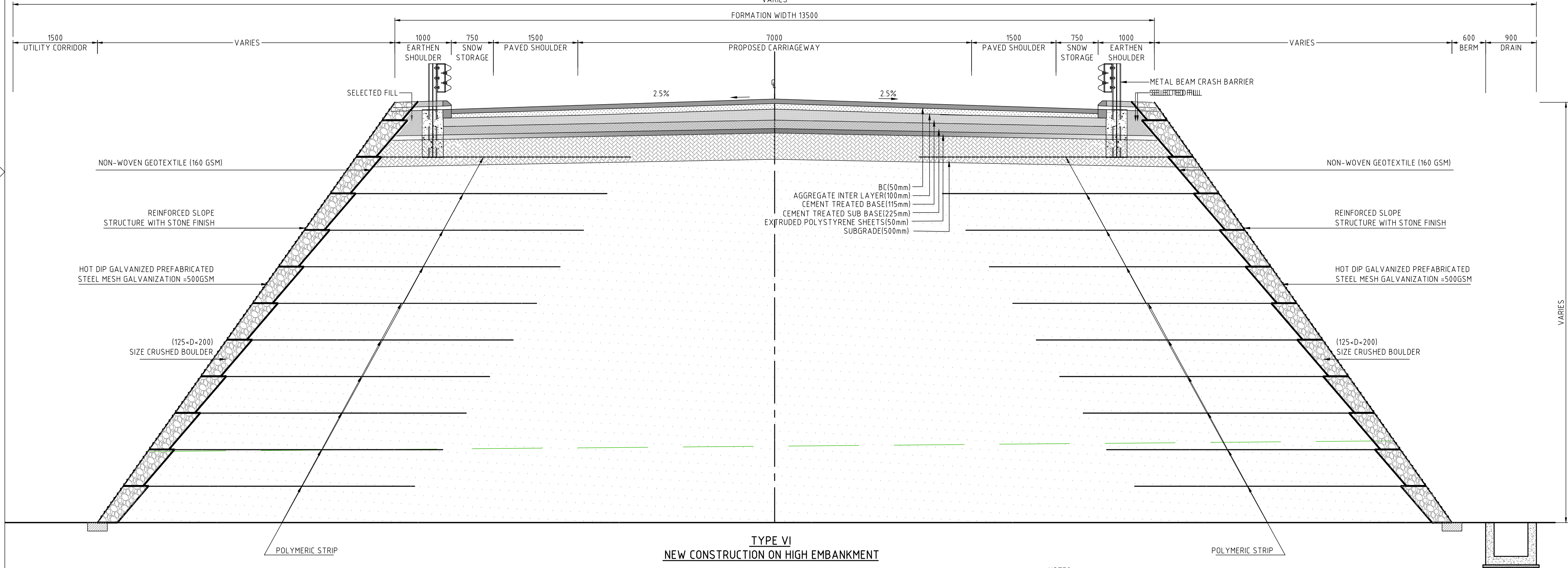
CLIENT APPROVED	DATE	CONSULTANT SIGNATURE

DESIGNER	DESIGN	CHECKED	APPROVED
BT	RK	MP	NA
SMEC (India) Pvt Ltd. 1st Floor, Novus Tower, West Wing, Plot Number -18, Sector - 18, Gurgaon - 122015, Haryana			

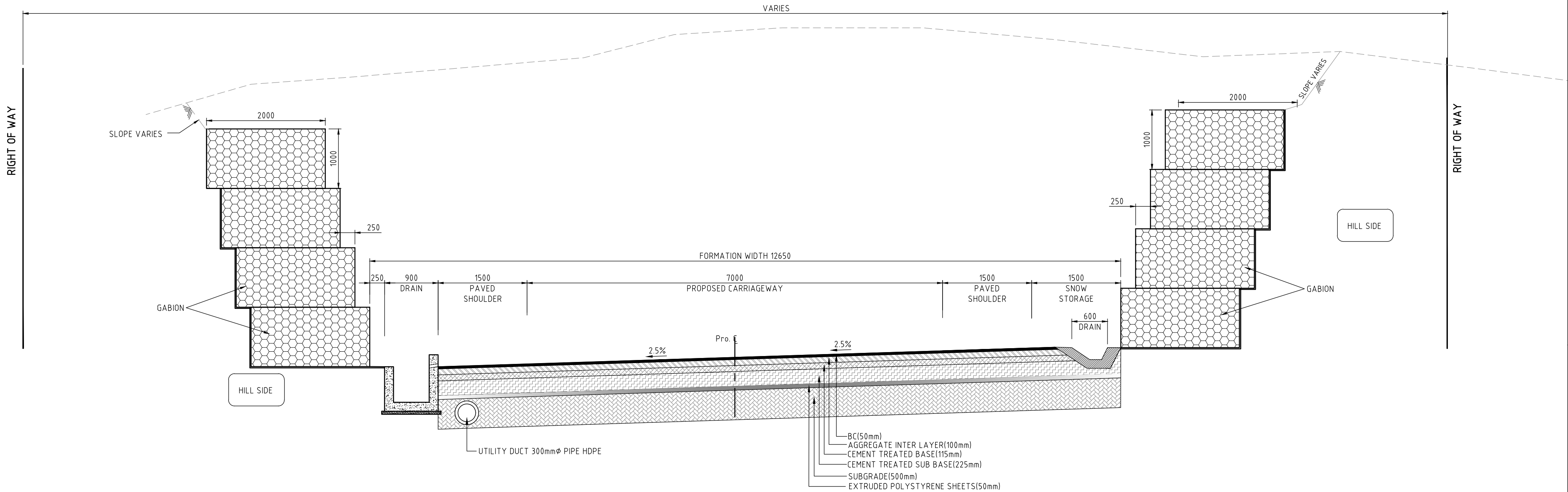
CLIENT	APPROVED	DATE
NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. P11 BUILDING, 4 PARLIAMENT STREET, SANSAD MARG AREA, NEW DELHI-110001		

PROJECT	PROJECT TITLE
	CONSTRUCTION OF APPROACH ROADS TO EAST AND WEST PORTAL OF PROPOSED ZOJILA TUNNEL WITH AVALANCHE PROTECTION WORKS IN THE UT OF JAMMU & KASHMIR AND LADAKH

DRAWING STATUS	PROJECT / DRAWING NO.	ISSUE
TENDER	7061520-TCS-002-003	A



- NOTES:-
- EXTRA WIDENING SHALL BE REFERED AS PER IRC-SP 48 1998, IRC-SP 73 2015 & IRC 52 2001 AT CURVE LOCATIONS WITH RADIUS LESS THAN 300m.
 - SLOPE TREATMENT SHOWN ON HILL/VALLEY SLOPES ARE INDICATIVE AND MAY VARY BASED ON CONFIRMATORY GEO TECHNICAL INVESTIGATION AND GEOLOGICAL STUDY
 - THE TYPE OF PROTECTION MATERIAL FOR RETAINING WALL, BREAST WALL MAY BE CHANGED BASED ON SITE REQUIREMENT.
 - AS PER IRC-SP 48 1998, CLAUSE NO 6.5.2(4), ON ROADS SUBJECTED TO HEAVY SNOWFALL, WHERE SNOW CLEARANCE IS DONE OVER LONG PERIODS, ROADWAY WIDTH MAY BE INCREASED BY 1.5M. HOWEVER THE REQUIREMENT OF SUCH WIDENING MAY BE EXAMINED WITH REFERENCE TO GROUND CONDITIONS IN EACH CASE CONSIDERING TERRAIN, TRAFFIC AND OTHER INFLUENCING CONDITIONS/FACTORS
 - DEPTH OF CONSTRUCTION (PAVEMENT) SHOULD NOT BE LESS THAN DEPTH OF FROST PENETRATION AND SHOULD COMPOSE OF NON-FROST SUSCEPTIBLE MATERIAL, IN ANY CASE THE THICKNESS SHOULD NOT BE LESS THAN 45cm AS PER IRC-SP:48:1998.



TYPE VIII
NEW CONSTRUCTION IN CUT WITH WALL

NOTES:-

- EXTRA WIDENING SHALL BE REFERED AS PER IRC-SP 48 1998,IRC-SP 73 2015 & IRC 52 2001 AT CURVE LOCATIONS WITH RADIUS LESS THAN 300m.
- SLOPE TREATMENT SHOWN ON HILL/VALLEY SLOPES ARE INDICATIVE AND MAY VARY BASED ON CONFIRMATORY GEO TECHNICAL INVESTIGATION AND GEOLOGICAL STUDY
- THE TYPE OF PROTECTION MATERIAL FOR RETAINING WALL , BREAST WALL MAY BE CHANGED BASED ON SITE REQUIREMENT.
- AS PER IRC-SP 48 1998, CLAUSE NO 6.5.2(4), ON ROADS SUBJECTED TO HEAVY SNOWFALL, WHERE SNOW CLEARANCE IS DONE OVER LONG PERIODS, ROADWAY WIDTH MAY BE INCREASED BY 1.5M. HOWEVER THE REQUIREMENT OF SUCH WIDENING MAY BE EXAMINED WITH REFERENCE TO GROUND CONDITIONS IN EACH CASE CONSIDERING TERRAIN, TRAFFIC AND OTHER INFLUENCING CONDITIONS/FACTORS
- DEPTH OF CONSTRUCTION (PAVEMENT) SHOULD NOT BE LESS THAN DEPTH OF FROST PENETRATION AND SHOULD COMPOSE OF NON-FROST SUSCEPTIBLE MATERIAL, IN ANY CASE THE THICKNESS SHOULD NOT BE LESS THAN 45cm AS PER IRC:SP:48:1998.


50 mm ON ORIGINAL (A3)

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	

SCALES AT A2 SIZE DRAWING

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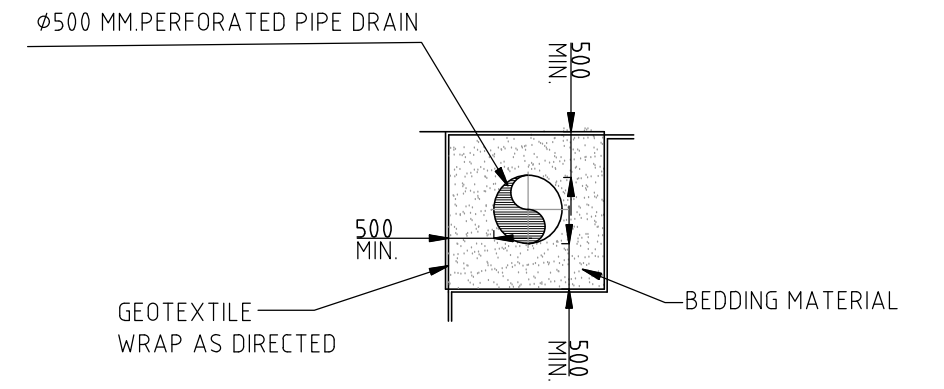
CLIENT APPROVED	DATE	CONSULTANT SIGNATURE

DESIGNER	 Member of the Surbana Jurong Group		
SMEC (India) Pvt Ltd. 1st Floor, Novus Tower, West Wing, Plot Number -18 Sector - 18, Gurgaon - 122015, Haryana			
DRAWN	DESIGN	CHECKED	APPROVED
PK	CA	MP	NA

CLIENT	NH&IDCL
NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. PTI BUILDING . 4 PARLIAMENT STREET , SANSAD MARG AREA, NEW DELHI- 110003	
APPROVED	DATE

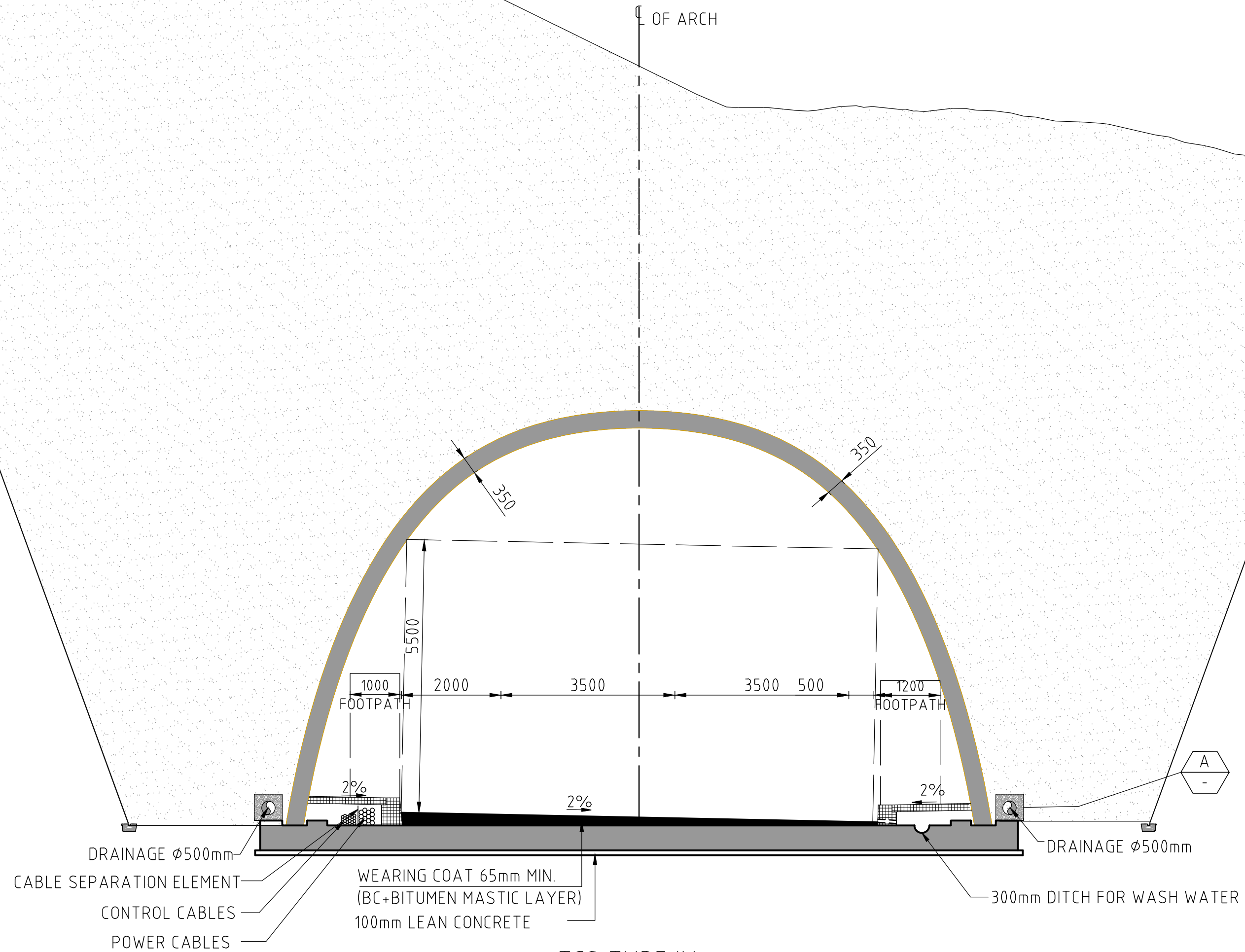
PROJECT	CONSTRUCTION OF APPROACH ROADS TO EAST AND WEST PORTAL OF PROPOSED ZOJILA TUNNEL WITH AVALANCHE PROTECTION WORKS IN THE UT OF JAMMU & KASHMIR AND LADAKH
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PROJECT TITLE	TYPICAL CROSS SECTION (SHEET 4)
DRAWING STATUS	TENDER
PROJECT / DRAWING No.	7061520-TCS-002-004
ISSUE	A



DETAIL
SCALE 1:NTS

A
-

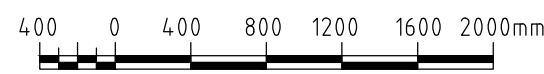


TCS TYPE IX
TYPICAL CUT & COVER TUNNEL SECTION

50 mm ON ORIGINAL (A2)

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	

SCALE 1 : 40



CLIENT APPROVED	DATE	CONSULTANT SIGNATURE

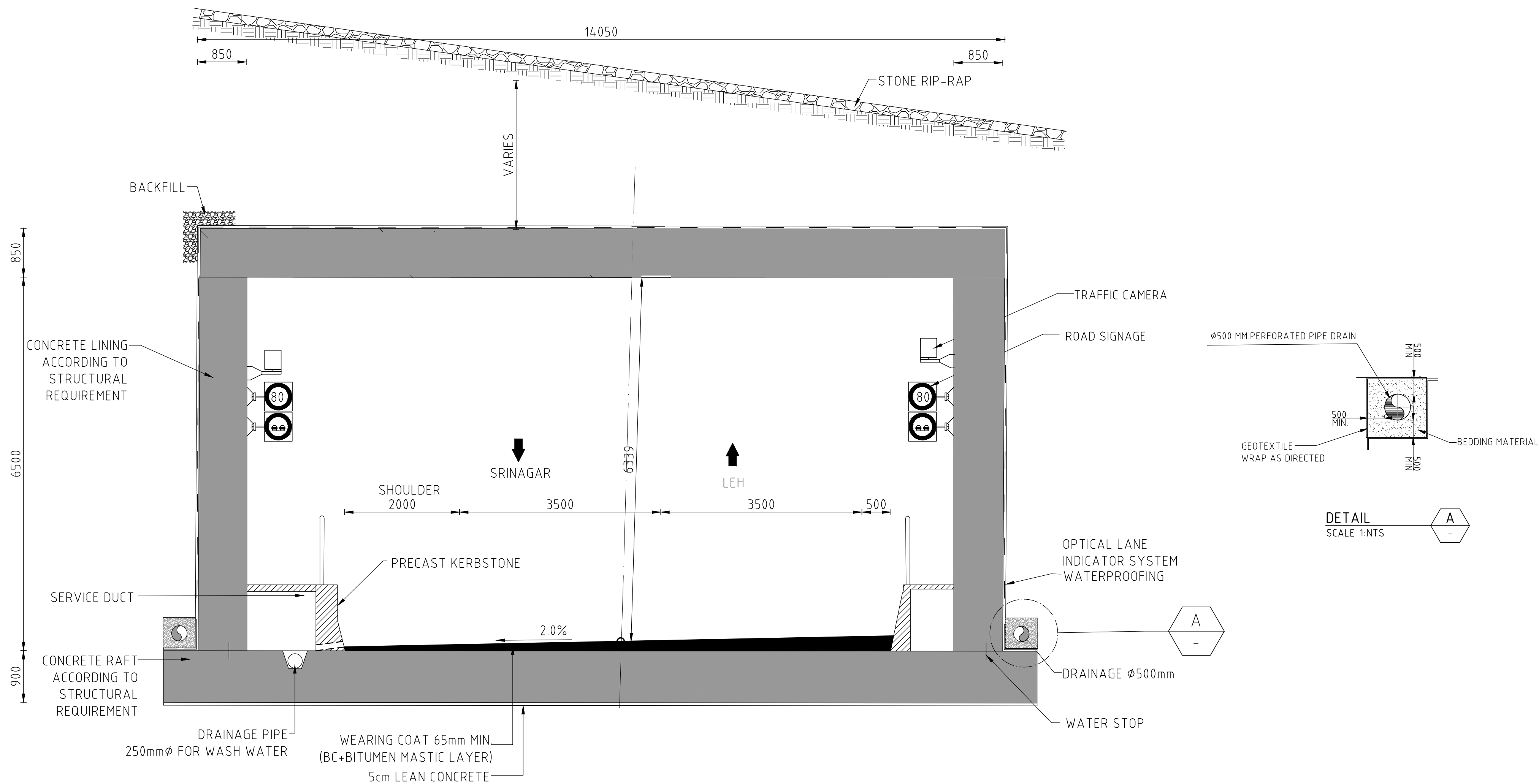
DESIGNER	BT	RK	MP	NA
DESIGN				

DESIGNER	BT	RK	MP	NA
DESIGN				

CLIENT	APPROVED	DATE

PROJECT	CONSTRUCTION OF APPROACH ROADS TO EAST AND WEST PORTAL OF PROPOSED ZOJILA TUNNEL WITH AVALANCHE PROTECTION WORKS IN THE UT OF JAMMU & KASHMIR AND LADAKH
PROJECT TITLE	TYPICAL CROSS SECTION (SHEET 5)

DRAWING STATUS	TENDER	PROJECT / DRAWING NO.	7061520-TCS-002-005	ISSUE	A
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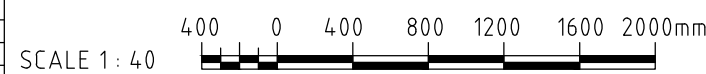


TYPICAL CUT & COVER TUNNEL SECTION (OPTION)

- NOTES:
- ALL DIMENSION ARE IN MILLIMETERS AND ELEVATIONS IN METER UNLESS NOTED OTHERWISE.

50 mm ON ORIGINAL (A2)

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	



CLIENT APPROVED DATE CONSULTANT SIGNATURE

DESIGNER	SMC
Member of the Sarbani Jurog Group	
Novus Tower, West Wing, Plot Number -18, Sector -18, Gurgaon - 122015, Haryana	
DRAWN	PK
DESIGN	CA
CHECKED	MP
APPROVED	NA

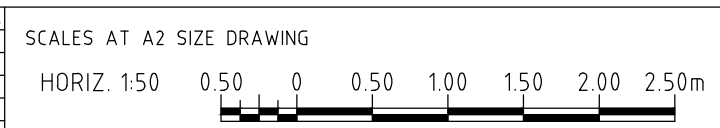
CLIENT	NH&IDCL
NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD, PTI BUILDING, 4 PARLIAMENT STREET, SANSAD MARG AREA, NEW DELHI- 110001	
APPROVED	DATE

PROJECT	CONSTRUCTION OF APPROACH ROADS TO EAST AND WEST PORTAL OF PROPOSED ZOJILA TUNNEL WITH AVALANCHE PROTECTION WORKS IN THE UT OF JAMMU & KASHMIR AND LADAKH
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PROJECT TITLE	TYPICAL CROSS SECTION (SHEET 6)
DRAWING STATUS	TENDER
PROJECT / DRAWING NO.	7061520-TCS-002-005A
ISSUE	A

50 mm ON ORIGINAL (A3)
20
10
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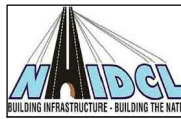
ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	



CLIENT APPROVED	DATE	CONSULTANT SIGNATURE

DESIGNER

SMEC (India) Pvt Ltd. 1st Floor,
Novus Tower, West Wing, Plot Number -18,
Sector - 18, Gurgaon - 122015, Haryana

DRAWN	DESIGN	CHECKED	APPROVED
PK	RK	MP	NA

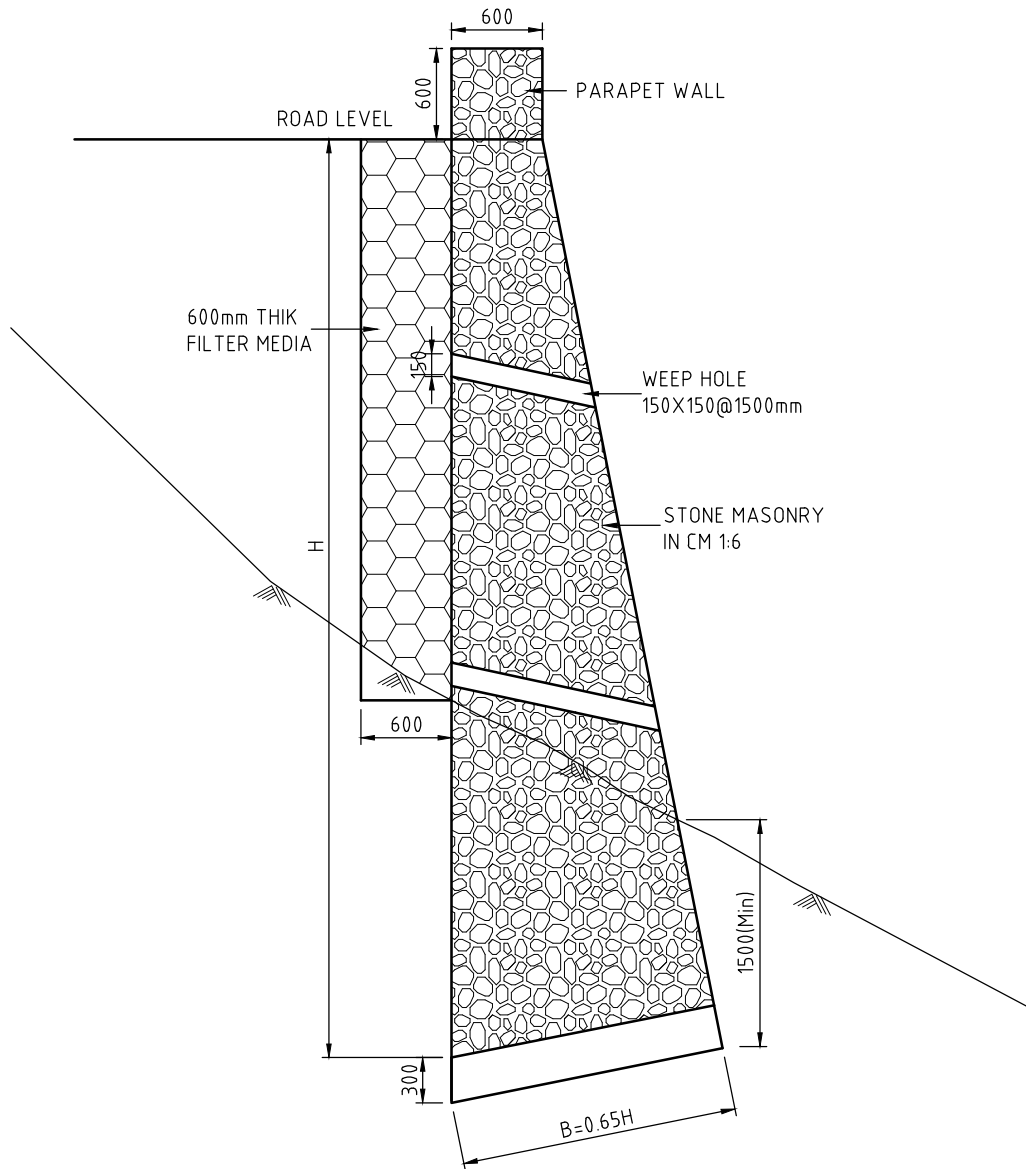
CLIENT

NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT
CORPORATION LTD. P11 BUILDING, 4 PARLIAMENT STREET,
SANSAD MARG AREA, NEW DELHI-110001

APPROVED	DATE

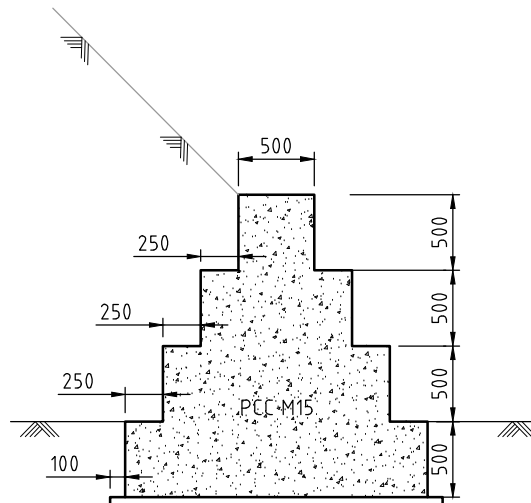
PROJECT
CONSTRUCTION OF APPROACH ROADS TO EAST AND
WEST PORTAL OF PROPOSED ZOJILA TUNNEL
WITH AVALANCHE PROTECTION WORKS
IN THE UT OF JAMMU & KASHMIR AND LADAKH

PROJECT TITLE	TYPICAL CROSS SECTION BRIDGE
DRAWING STATUS	TENDER
PROJECT / DRAWING No.	7061520-TCS-002-007
ISSUE	A

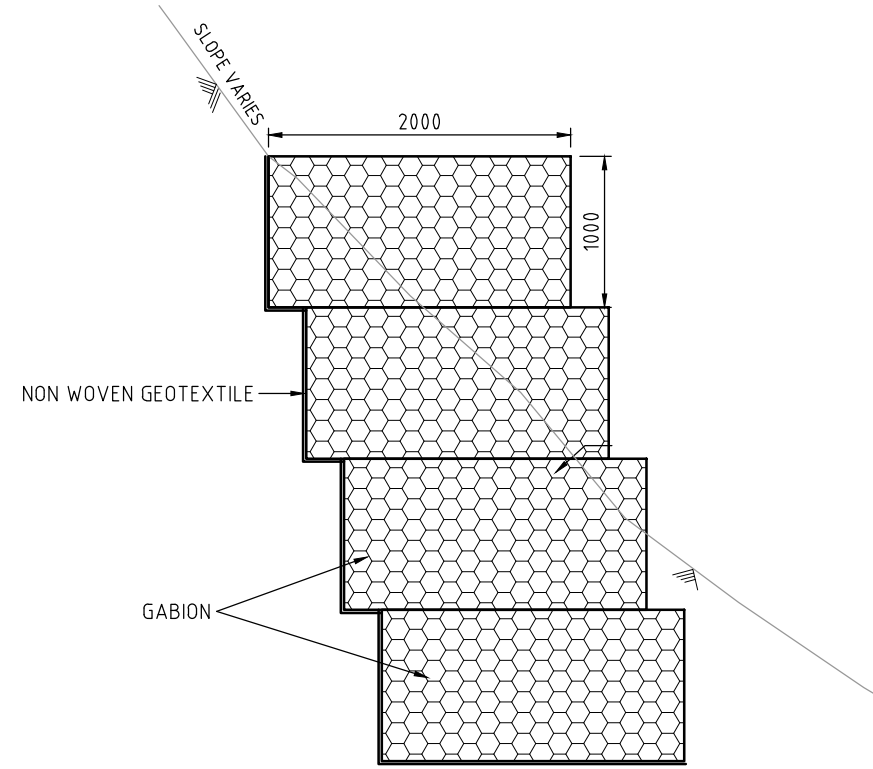
50 mm ON ORIGINAL (A3)



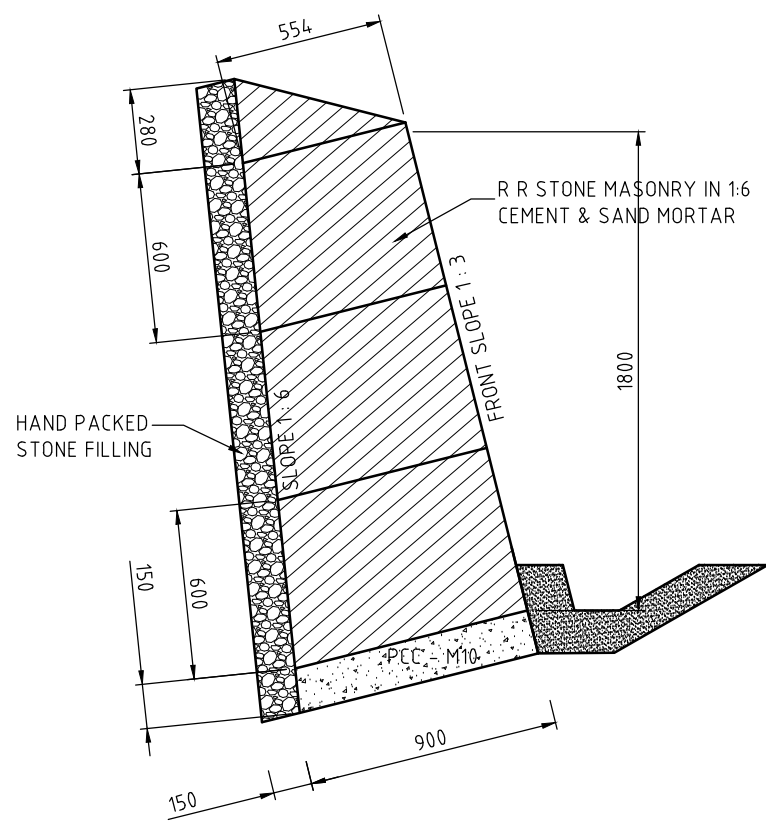
TYPICAL DETAIL FOR RETAINING WALL



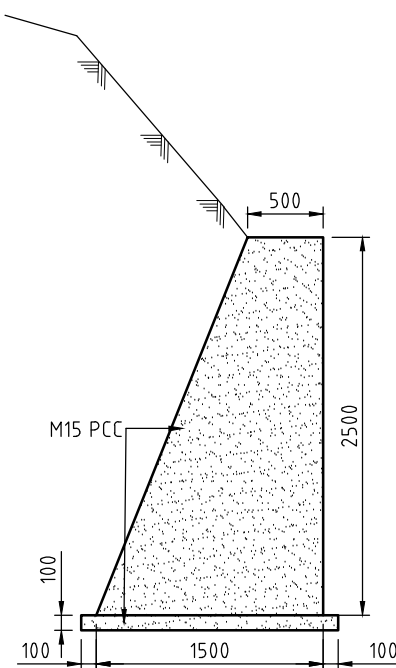
DETAILS OF PCC TOE WALL
(CUT HEIGHT 1.5m TO 4.0m)



(CUT HEIGHT >4.0m <8.0m)



TYPICAL BREAST WALL SECTION
(CUT HEIGHT 1.5m TO 4.0m)



TYPICAL TOE WALL

NOTES:-

- EXTRA WIDENING AS PER IRC-73 & IRC-52 PROPOSED AT CURVE LOCATIONS WITH RADIUS LESS THAN 300m.
- SLOPE TREATMENT SHOWN ON HILL/VALLEY SLOPES ARE INDICATIVE AND MAY VARY BASED ON CONFIRMATORY GEO TECHNICAL INVESTIGATION AND GEOLOGICAL STUDY
- THE TYPE OF PROTECTION MATERIAL FOR RETAINING WALL , BREAST WALL MAY BE CHANGED BASED ON SITE REQUIREMENT.
- FOR DETAILS OF GUARD RAIL / MBCB REFER STANDARD DRAWINGS
- MIN. CBR 15% (LESS CBR SHALL BE TREATED TO BE REPLACED WITH SELECTED EARTH WITH CBR >15%)

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	

SCALES AT A2 SIZE DRAWING
HORIZ. 1:50 0.50 0 0.50 1.00 1.50 2.00 2.50m

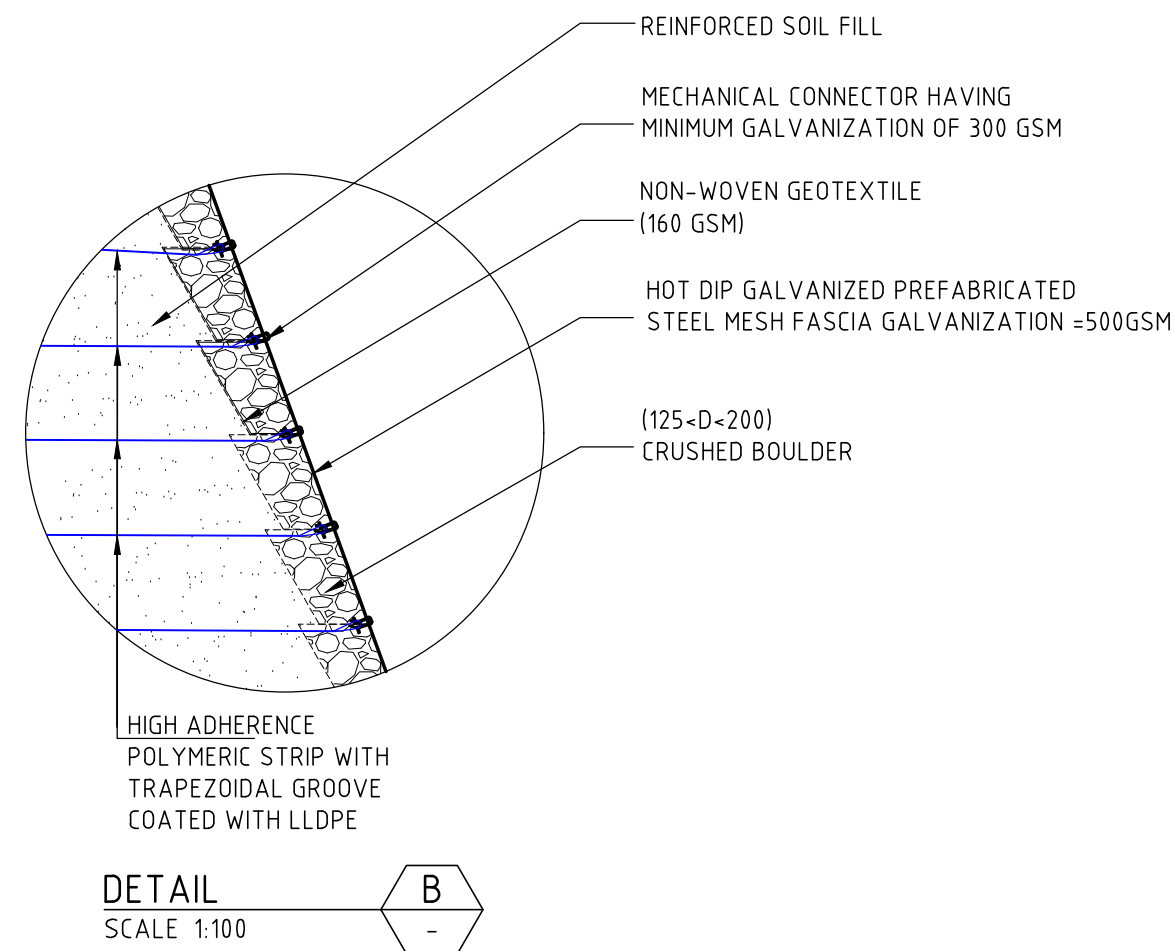
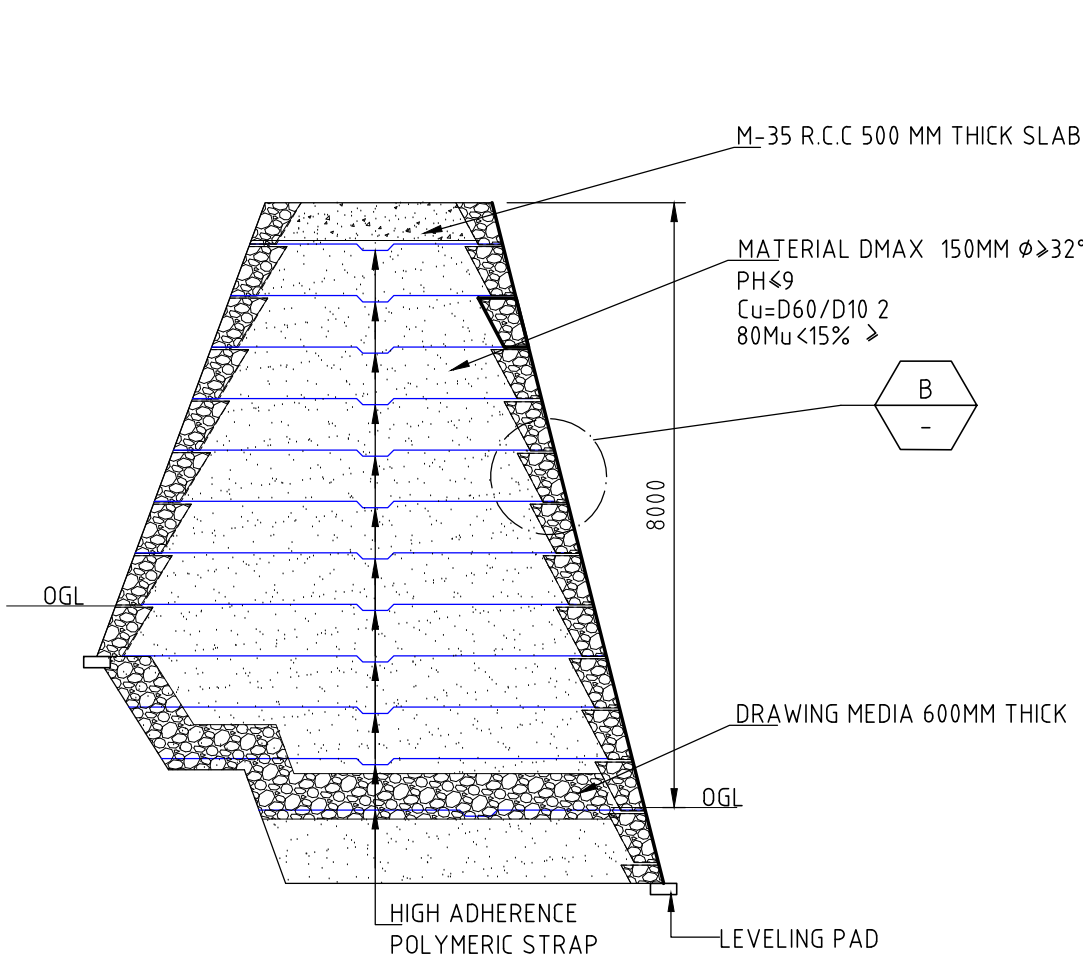
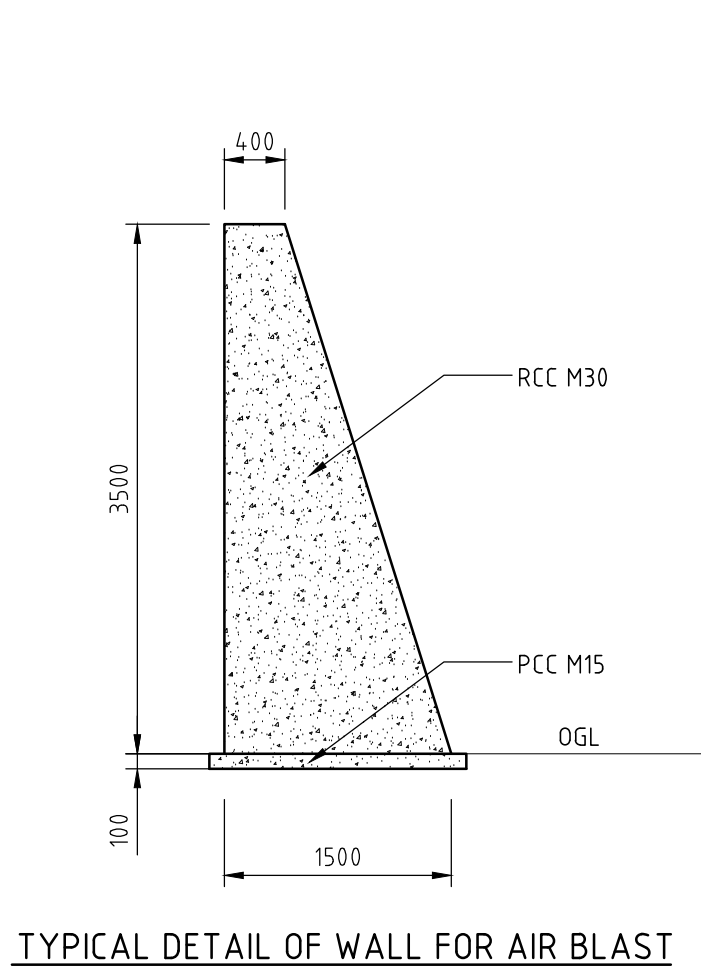
CLIENT APPROVED	DATE	CONSULTANT SIGNATURE

DESIGNER	DESIGN	CHECKED	APPROVED
PK	RK	MP	NA
SMEC (India) Pvt Ltd. 1st Floor, Novus Tower, West Wing, Plot Number -18, Sector - 18, Gurgaon - 122015, Haryana			

CLIENT	APPROVED	DATE
NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. PTI BUILDING , 4 PARLIAMENT STREET , SANSAD MARG AREA, NEW DELHI- 110003		

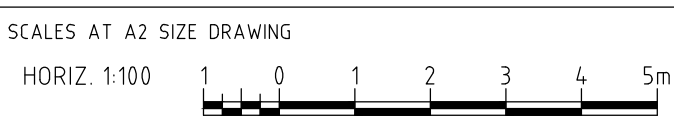
PROJECT	CONSTRUCTION OF APPROACH ROADS TO EAST AND WEST PORTAL OF PROPOSED ZOJILA TUNNEL WITH AVALANCHE PROTECTION WORKS IN THE UT OF JAMMU & KASHMIR AND LADAKH
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PROJECT TITLE	TYPICAL WALL DETAIL
DRAWING STATUS	TENDER
PROJECT / DRAWING NO.	7061520-TCS-002-011
ISSUE	A



NOTES:-
1). ALL DIMENSIONS ARE IN MM AND TAKEN FROM SASE REPORT.

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	



CLIENT APPROVED	DATE	CONSULTANT SIGNATURE

DESIGNER	BT	DESIGN	RK	CHECKED	MP	APPROVED	NA
SMEC (India) Pvt Ltd. 1st Floor, Novus Tower, West Wing, Plot Number -18, Sector - 18, Gurgaon - 122015, Haryana							

CLIENT	APPROVED	DATE
NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. PFI BUILDING . 4 PARLIAMENT STREET , SANSAD MARG AREA, NEW DELHI- 110001		

PROJECT	CONSTRUCTION OF APPROACH ROADS TO EAST AND WEST PORTAL OF PROPOSED ZOJILA TUNNEL WITH AVALANCHE PROTECTION WORKS IN THE UT OF JAMMU & KASHMIR AND LADAKH
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PROJECT TITLE	TYPICAL SECTION OF AVALANCHE PROTECTION MEASURES
DRAWING STATUS	TENDER
PROJECT / DRAWING NO.	7061520-TCS-002-012
ISSUE	A

50 mm ON ORIGINAL (A3)

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	

CLIENT APPROVED	DATE	CONSULTANT SIGNATURE

DESIGNER



SMEC
Member of the Saurbana Jansang Group
SMEC (India) Pvt Ltd. 1st Floor,
Novus Tower, West Wing, Plot Number -18,
Sector - 18, Gurgaon - 122015, Haryana

DRAWN

DESIGN

CHECKED

APPROVED


PK

SK

SR

NA

CLIENT



NHAI
NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. PTI BUILDING . 4 PARLIAMENT STREET ,
SANSAD MARG AREA, NEW DELHI- 110001

APPROVED

DATE

PROJECT

CONSTRUCTION OF APPROACH ROADS TO EAST AND WEST PORTAL OF PROPOSED ZOJILA TUNNEL WITH AVALANCHE PROTECTION WORKS IN THE UT OF JAMMU & KASHMIR AND LADAKH

PROJECT TITLE

TYPICAL CROSS SECTION SCHEDULE

DRAWING STATUS

TENDER

PROJECT / DRAWING NO.

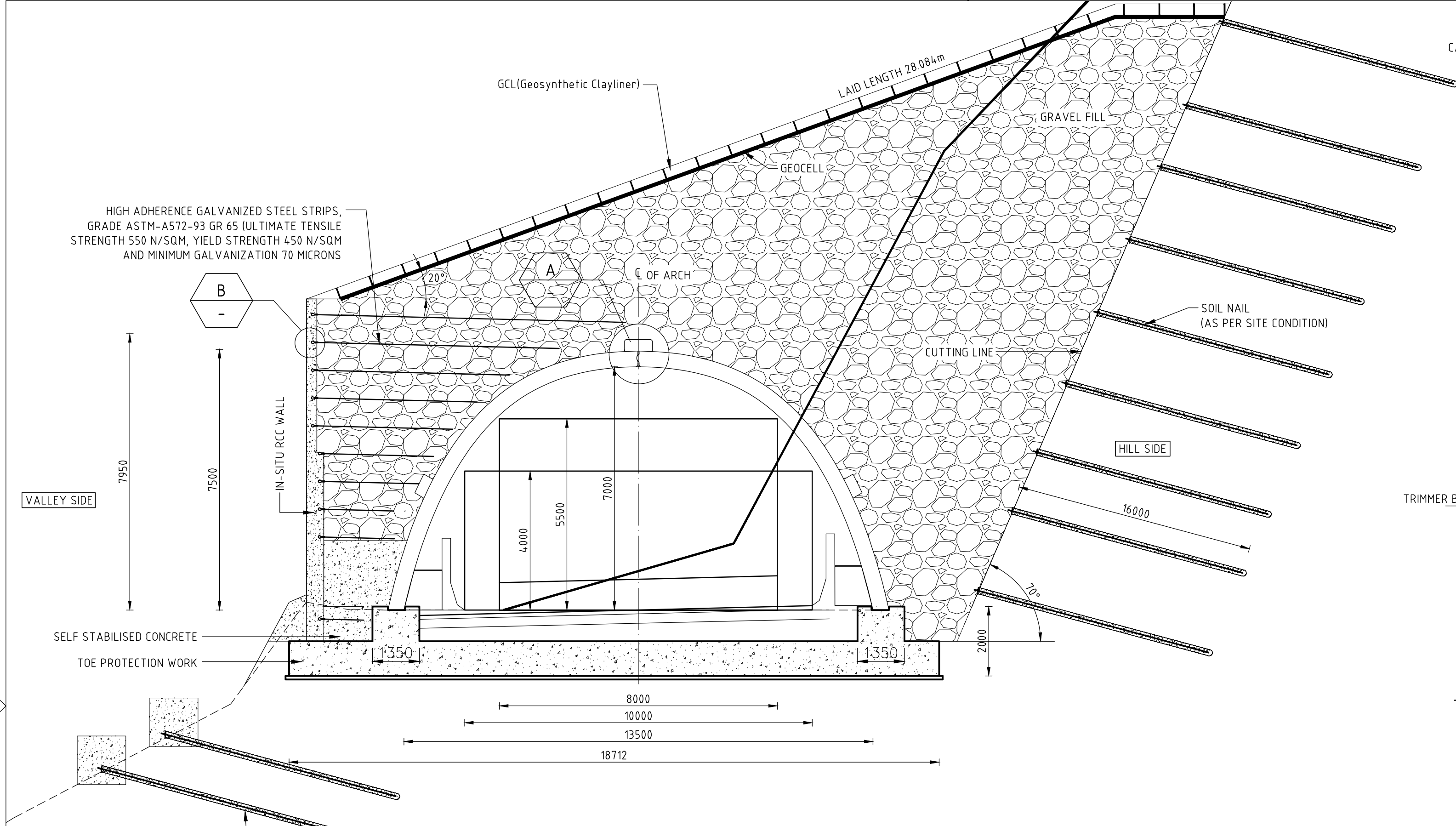
7061520-TCS-002-013

ISSUE

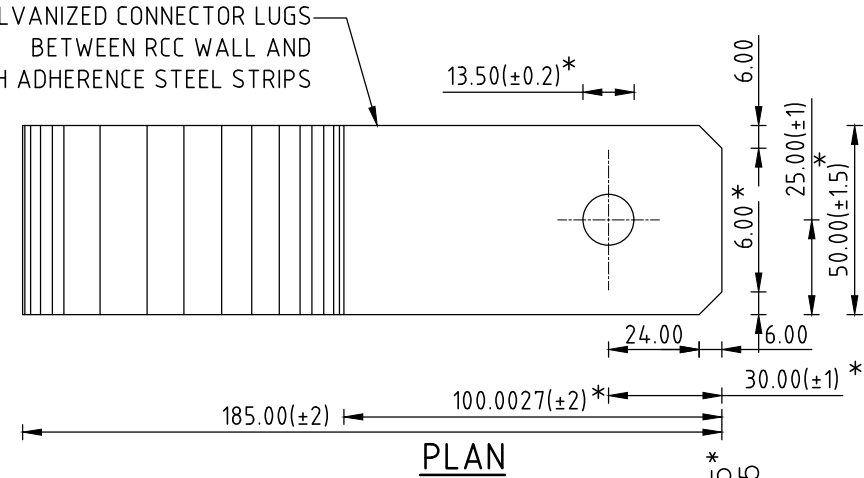
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S. No.	Design Chainage		Length (m)	Type of TCS
	From (km)	To (km)		
Approach Road-1				
1.00	9760.00	9796.00	36.00	TCS VIII
2.00	9796.00	10106.00	310.00	TCS IX
3.00	10106.00	10146.00	40.00	TCS VIII
4.00	10146.00	10276.00	130.00	TCS VI
5.00	10276.00	10506.00	230.00	TCS IX
6.00	10506.00	10566.00	60.00	TCS VIII
7.00	10566.00	11066.00	500.00	TCS VI
8.00	11066.00	11256.00	190.00	TCS VIII
9.00	11256.00	11506.00	250.00	TCS IX
10.00	11506.00	11586.00	80.00	TCS VIII
11.00	11586.00	12626.00	1040.00	TCS VI
12.00	12626.00	12806.00	180.00	TCS III
13.00	12806.00	13006.00	200.00	TCS VIII
14.00	13006.00	13406.00	400.00	TCS IX
15.00	13406.00	13486.00	80.00	TCS VIII
16.00	13486.00	13876.00	390.00	TCS VI
17.00	13876.00	13926.00	50.00	TCS V
18.00	13926.00	14006.00	80.00	TCS VIII
19.00	14006.00	14356.00	350.00	TCS IX
20.00	14356.00	14446.00	90.00	TCS VIII
21.00	14446.00	14586.00	140.00	TCS V
22.00	14586.00	14656.00	70.00	TCS VIII
23.00	14656.00	14856.00	200.00	TCS IX
24.00	14856.00	14946.00	90.00	TCS VIII
25.00	14946.00	15036.00	90.00	TCS III
26.00	15036.00	15156.00	120.00	TCS VI
27.00	15156.00	15206.00	50.00	TCS V
28.00	15206.00	15306.00	100.00	TCS VIII
29.00	15306.00	15766.00	460.00	TCS IX
30.00	15766.00	15906.00	140.00	TCS VIII
31.00	15906.00	16226.00	320.00	TCS III
32.00	16226.00	16356.00	130.00	TCS V
33.00	16356.00	16656.00	300.00	TCS X
34.00	16656.00	16806.00	150.00	TCS IX
35.00	16806.00	16956.00	150.00	TCS X
36.00	16956.00	17172.50	216.50	TCS VI
37.00	17172.50	17307.50	135.00	TCS XI
38.00	17307.50	17814.00	507.50	TCS VI
Approach Road-2				
1.00	0.00	660.00	600.00	TCS VI
Total			8714.00	

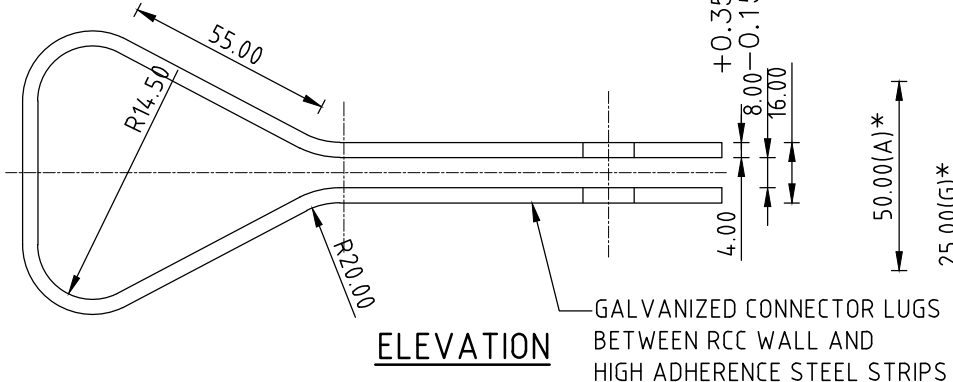
50 mm ON ORIGINAL (A3)



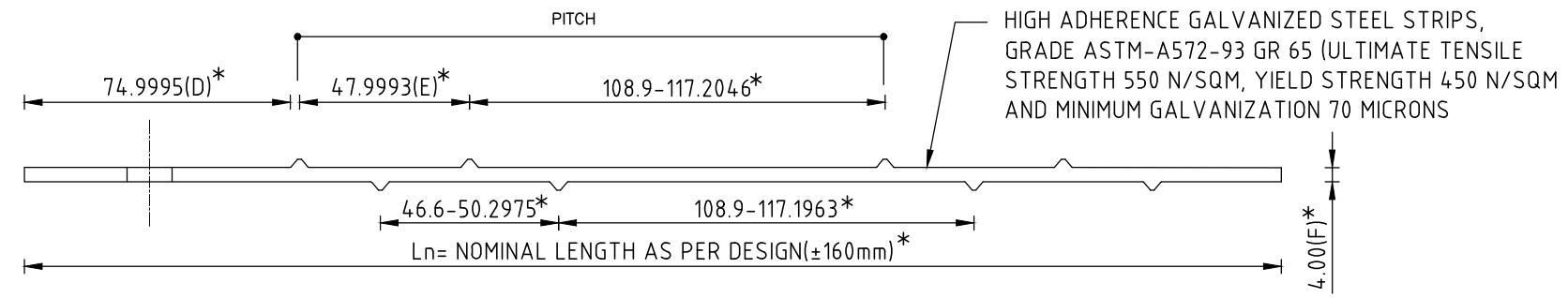
SECTION OF TECHSPAN
SCALE 1:100



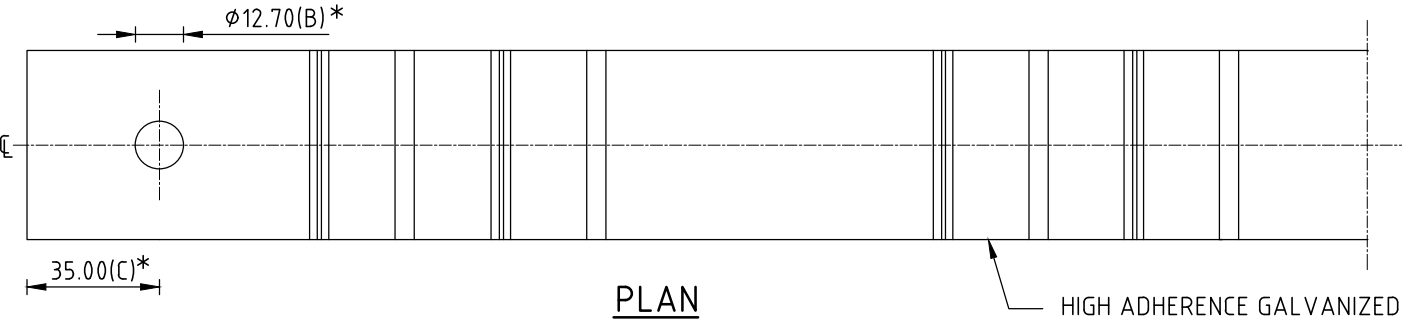
PLAN



ELEVATION

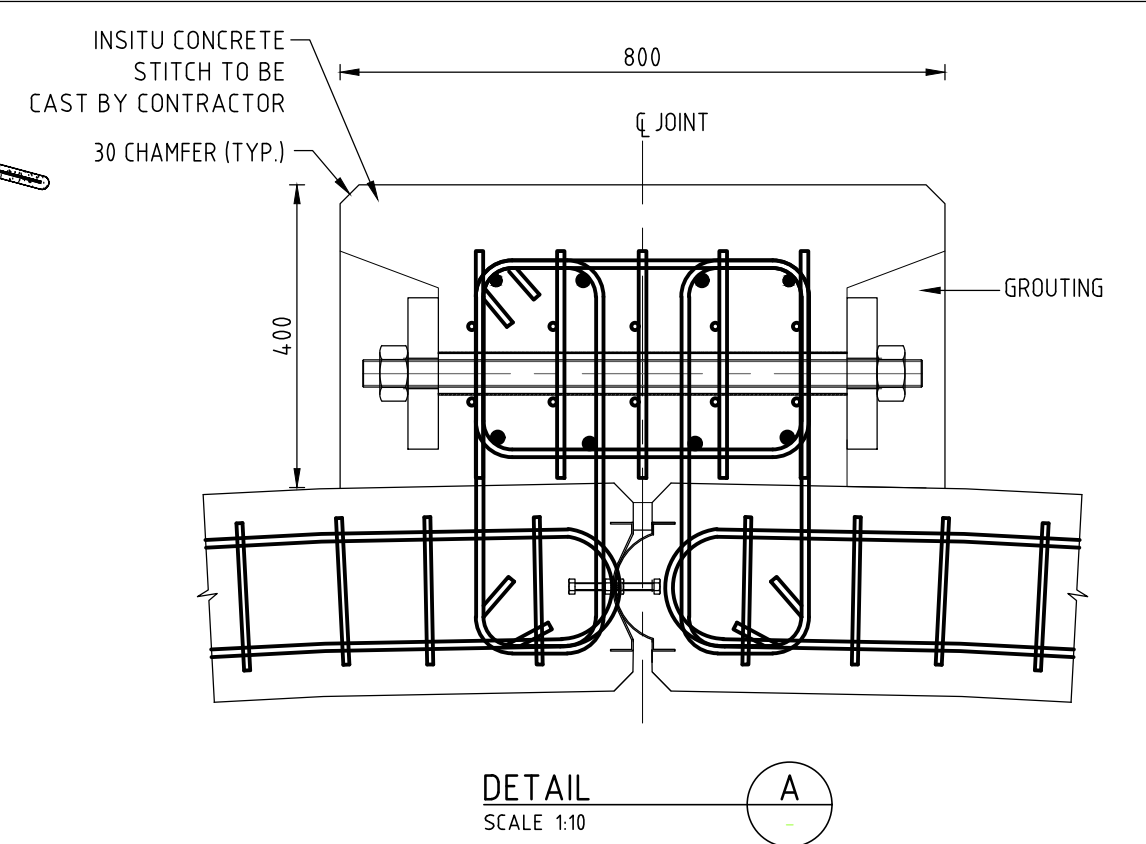


ELEVATION

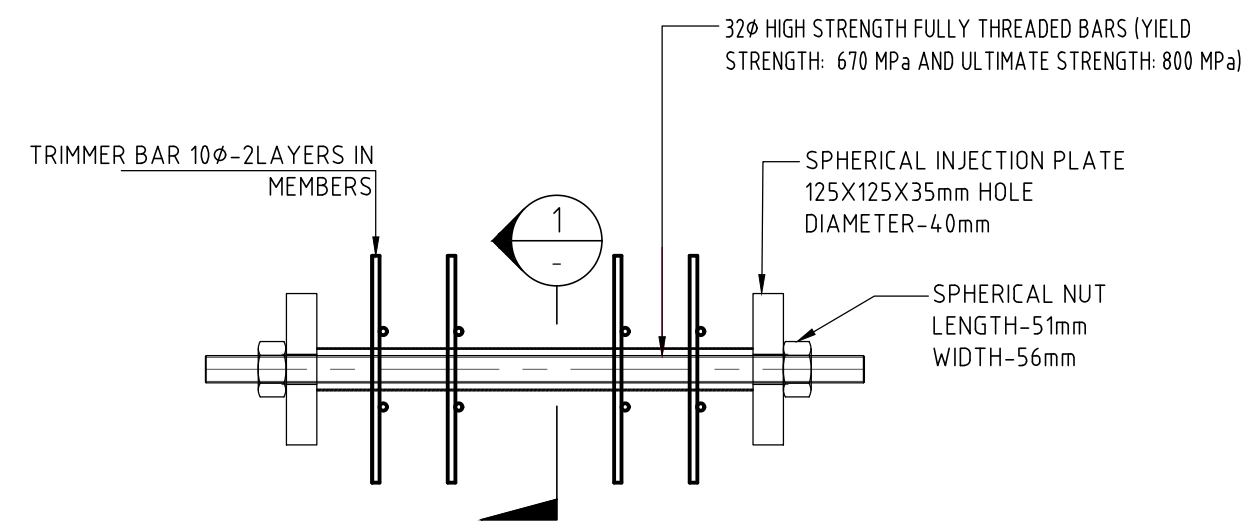


PLAN

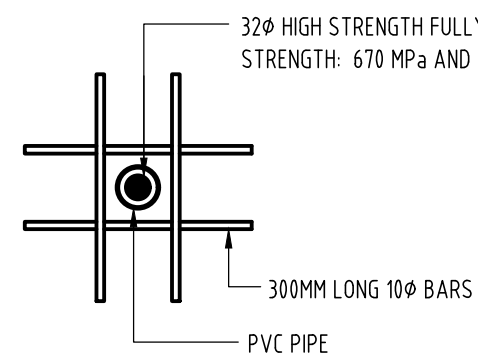
DETAIL B



DETAIL A
SCALE 1:10



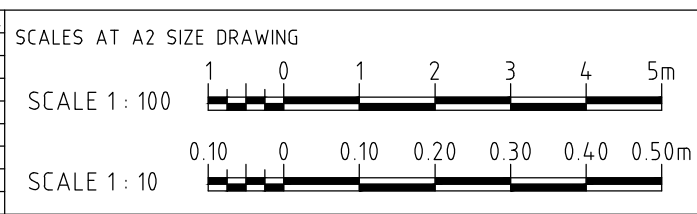
HIGH STRENGTH FULLY THREADED BAR DETAILS
SCALE 1 : 10



SECTION 1
SCALE 1:10

- NOTES:
- ALL DIMENSION ARE IN MILLIMETERS AND ELEVATIONS IN METER UNLESS NOTED OTHERWISE.

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	



CLIENT APPROVED	DATE	CONSULTANT SIGNATURE

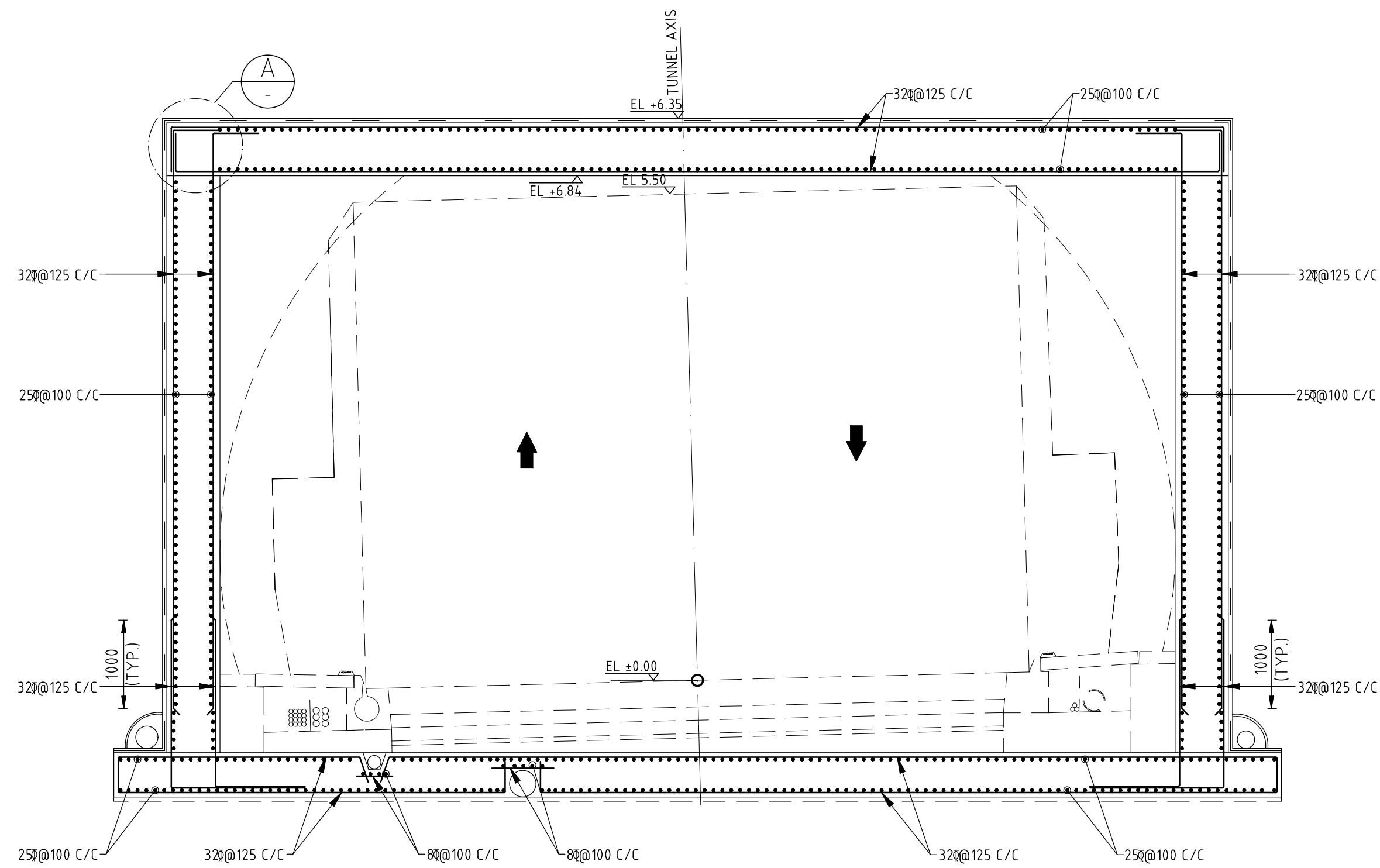
DESIGNER	BT	DESIGN	RK	CHECKED	MP	APPROVED	NA
SMEC (India) Pvt Ltd. 1st Floor, Novus Tower, West Wing, Plot Number -18, Sector - 18, Gurgaon - 122015, Haryana							

CLIENT	APPROVED	DATE

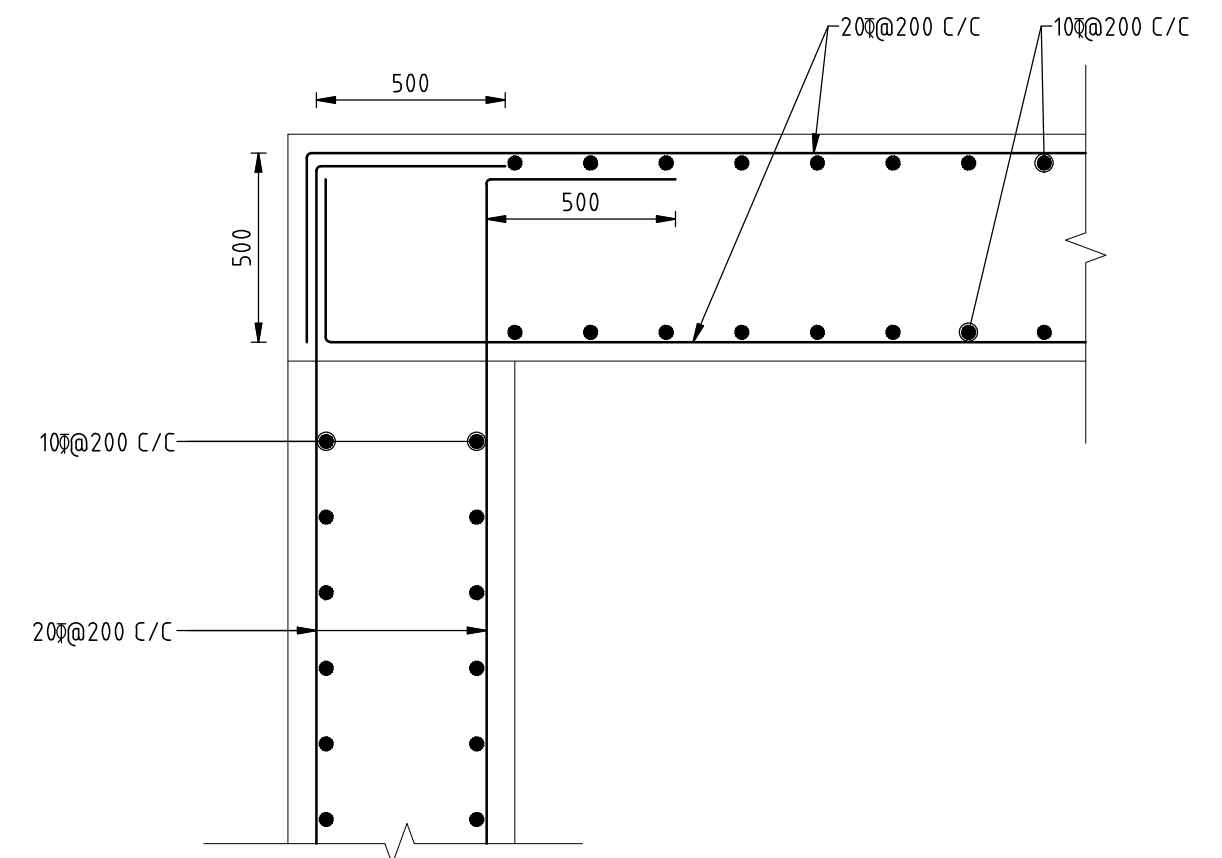
NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. P11 BUILDING . 4 PARLIAMENT STREET , SANSAD MARG AREA, NEW DELHI- 110003	
APPROVED	DATE

PROJECT TITLE	CONSTRUCTION OF APPROACH ROADS TO EAST AND WEST PORTAL OF PROPOSED ZOJILA TUNNEL WITH AVALANCHE PROTECTION WORKS IN THE UT OF JAMMU & KASHMIR AND LADAKH
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PROJECT TITLE	PRECAST ARCHED TYPE CUT & COVER TYPICAL CROSS SECTION & DETAILS
DRAWING STATUS	TENDER
PROJECT / DRAWING NO.	7061520-APS-002-001
ISSUE	A



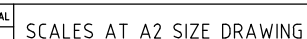
FINAL LINING REINFORCEMENT
TYPICAL CUT & COVER TUNNEL SECTION
SCALE 1:50




DETAIL
SCALE 1: 20

- NOTES:

1. CONCRETE LINING IS UNREINFORCED IN GENERAL. SHOWN REINFORCEMENT APPLIES TO FIRST 50m OF LINING FROM SOUTH & NORTH PORTAL.
2. FOR SETOUT DETAILS REFER DRG NO. 7061520-TCS-002-005A.
3. ALL LONGITUDINAL AND TRANSVERSE CONSTRUCTION JOINTS SHALL HAVE HYDROPHILIC WATER STOPS.
4. SURFACE OF CONSTRUCTION JOINTS SHALL BE CLEARED OF DEBRIS PRIOR TO PLACEMENT OF ADDITIONAL LINING CONCRETE.
5. FOR GROUND WATER DRAINAGE ARRANGEMENT DETAILS REFER DRAINAGE DRAWINGS.
6. ALL BACKFILL AND CAVITY GROUTING TO BE CARRIED OUT IN ACCORDANCE WITH SPECIFICATION.
7. MINIMUM COVER TO REINFORCEMENT SHALL BE AS FOLLOWS:
 - (i) EXTERNAL FACE - 50mm
 - (ii) INTERNAL FACE - 50mm
8. LAPS SHOWN ON DRAWING ARE INDICATIVE ONLY. ACTUAL BAR BENDING SCHEDULE SHALL BE DEVELOPED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
9. TYPICAL CHAIR DETAILS TO BE ADJUSTED IN FIELD AS REQUIRED.

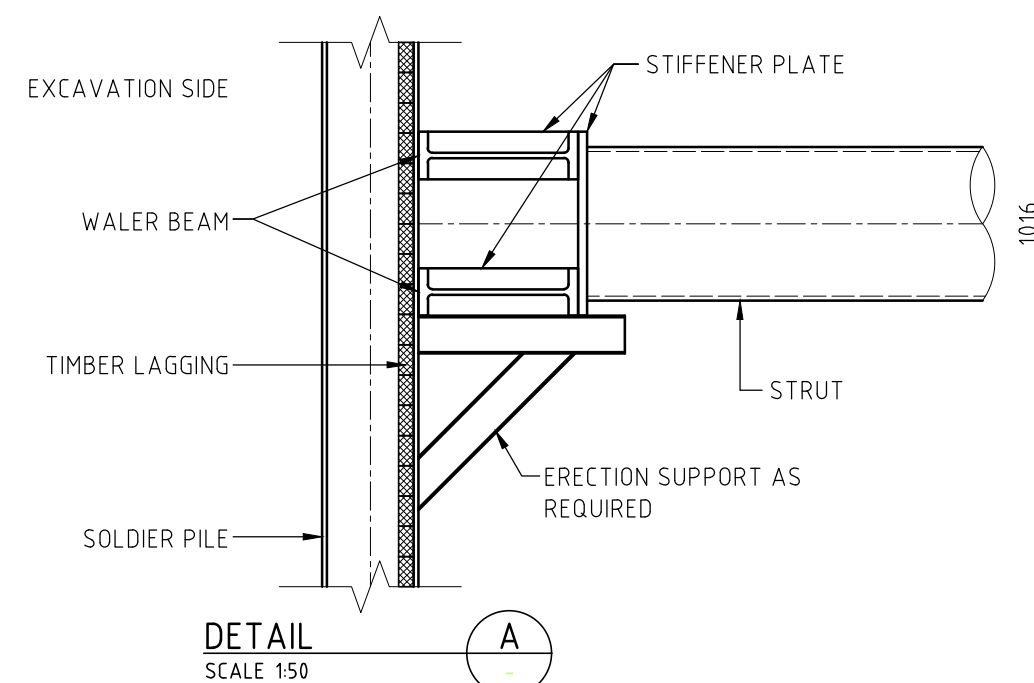
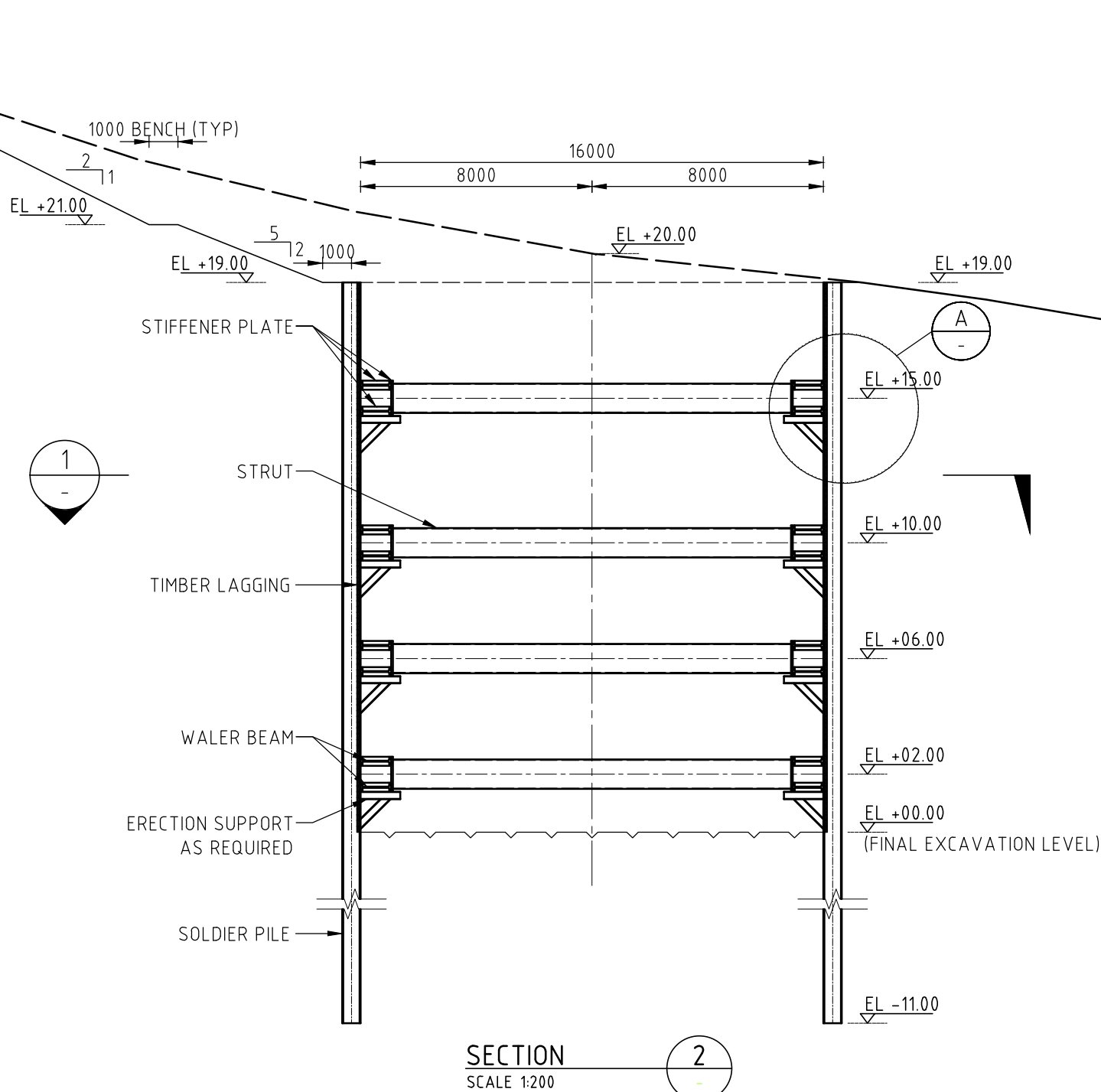
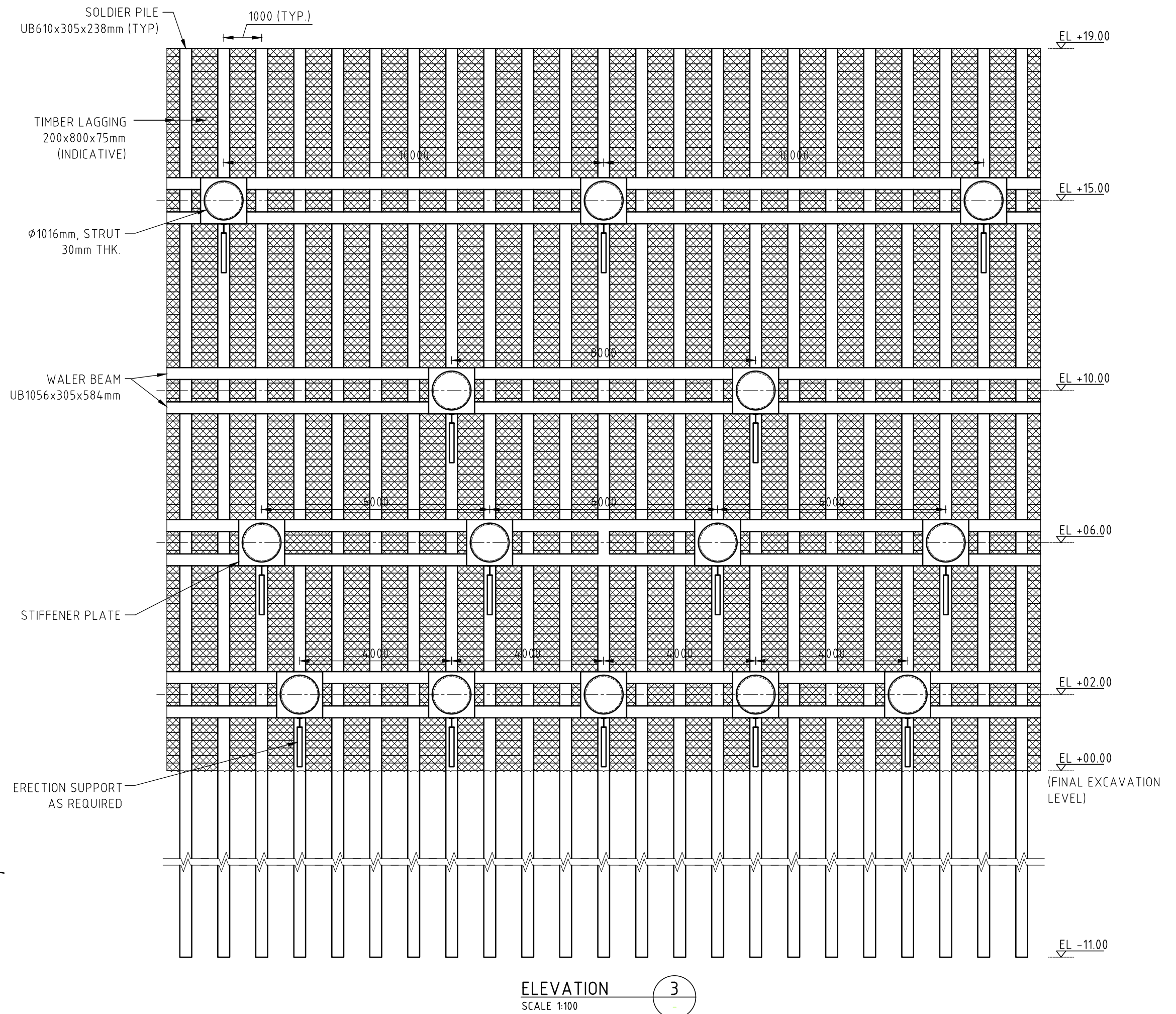
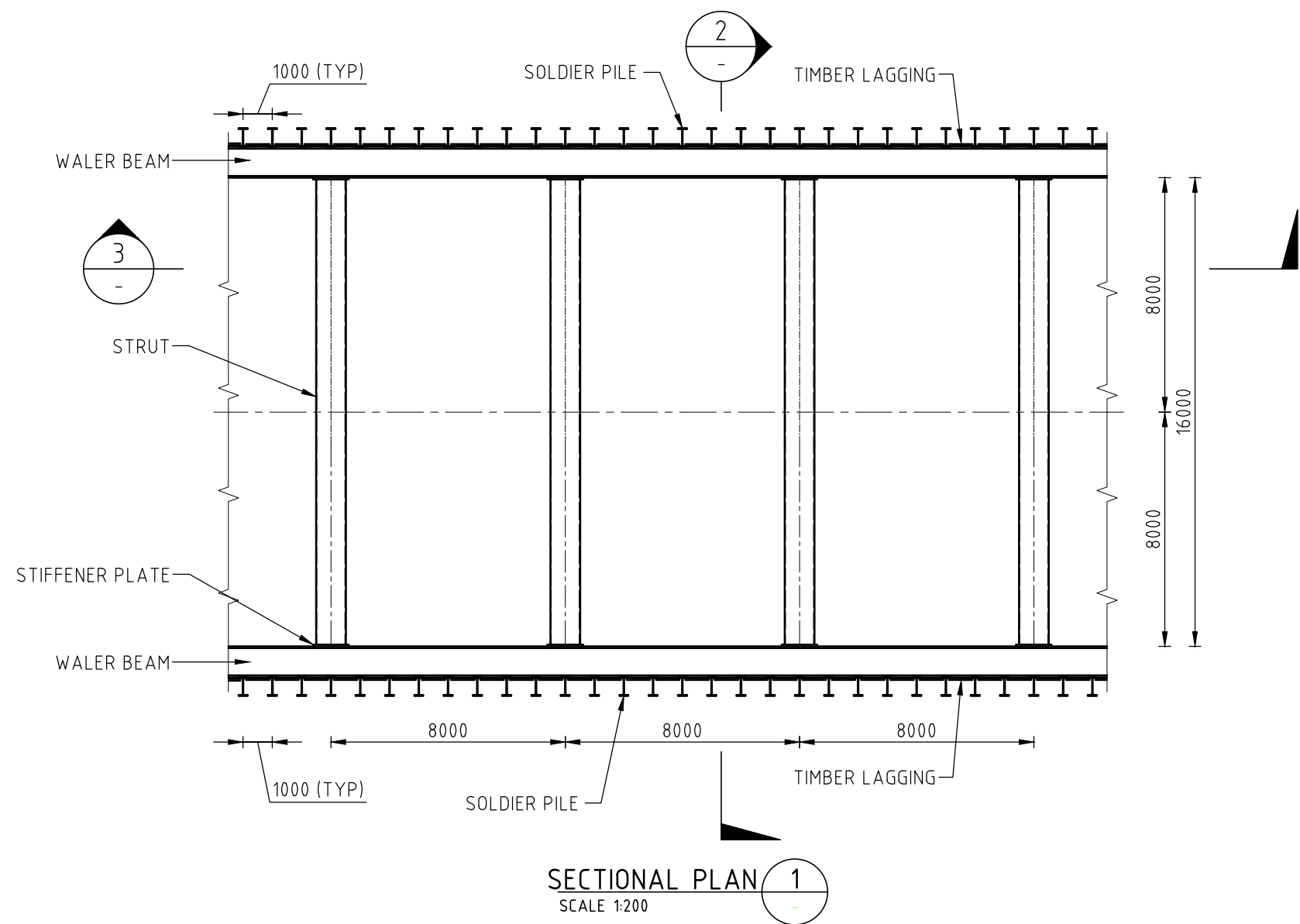
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CLEINT APPROVED	DATE	CONSULTANT SIGNATURE
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CLIENT	 <p>NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. PTI BUILDING, 4 PARLIAMENT STREET SANSAD MARG AREA, NEW DELHI- 110001</p>	
APPROVED		DATE

PROJECT
CONSTRUCTION OF APPROACH ROADS TO EAST AND
WEST PORTAL OF PROPOSED ZOJILA TUNNEL
WITH AVALANCHE PROTECTION WORKS
IN THE UT OF JAMMU & KASHMIR AND LADAKH

PROJECT TITLE		
<p style="text-align: center;">FINAL LINING REINFORCEMENT CUT & COVER (OPTION) TYPICAL CROSS SECTION & DETAILS</p>		
DRAWING STATUS	PROJECT / DRAWING No.	ISSUE
TENDER	7061520-APS-002-002	A



- NOTES:**
- ALL DIMENSION ARE IN MILLIMETERS AND ELEVATIONS IN METER UNLESS NOTED OTHERWISE. DIMENSION SHALL NOT BE SCALED OFF FROM THE DRAWING, ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
 - SOLDIER PILE DESIGNED BASED ON THE EXPLORATORY BOREHOLE TEST RESULT DATA HOWEVER DESIGN MAY BE REVISED AFTER RECEIPT OF DETAILED GEOTECHNICAL INVESTIGATION REPORT.
 - SOLDIER PILE (UB610x305x238mm), STRUTS Ø1016, 30mm THK., WALER BEAMS (UB1056x305x584mm), DETAILS ARE INDICATIVE ONLY, BEAMS, STRUTS OF EQUIVALENT SIZES CAN BE ADOPTED AS PER REQUIREMENT.
 - GROUND WATER TABLE WAS NOT ENCOUNTERED AT EXPLORATORY BOREHOLES. IF GROUND WATER ENCOUNTERED AT SITE, THE SAME SHALL BE NOTIFIED TO ENGINEER IN CHARGE.
 - LAGGING OF DIFFERENT SIZE AND MATERIALS CAN BE USED DEPENDING UPON AVAILABILITY OF MATERIAL AT SITE.

50 mm ON ORIGINAL (A3)

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	

SCALE 1:200	2 0 2 4 6 8 10m
SCALE 1:100	1 0 1 2 3 4 5m
SCALE 1:50	0.50 0 0.50 1.00 1.50 2.00 2.50m

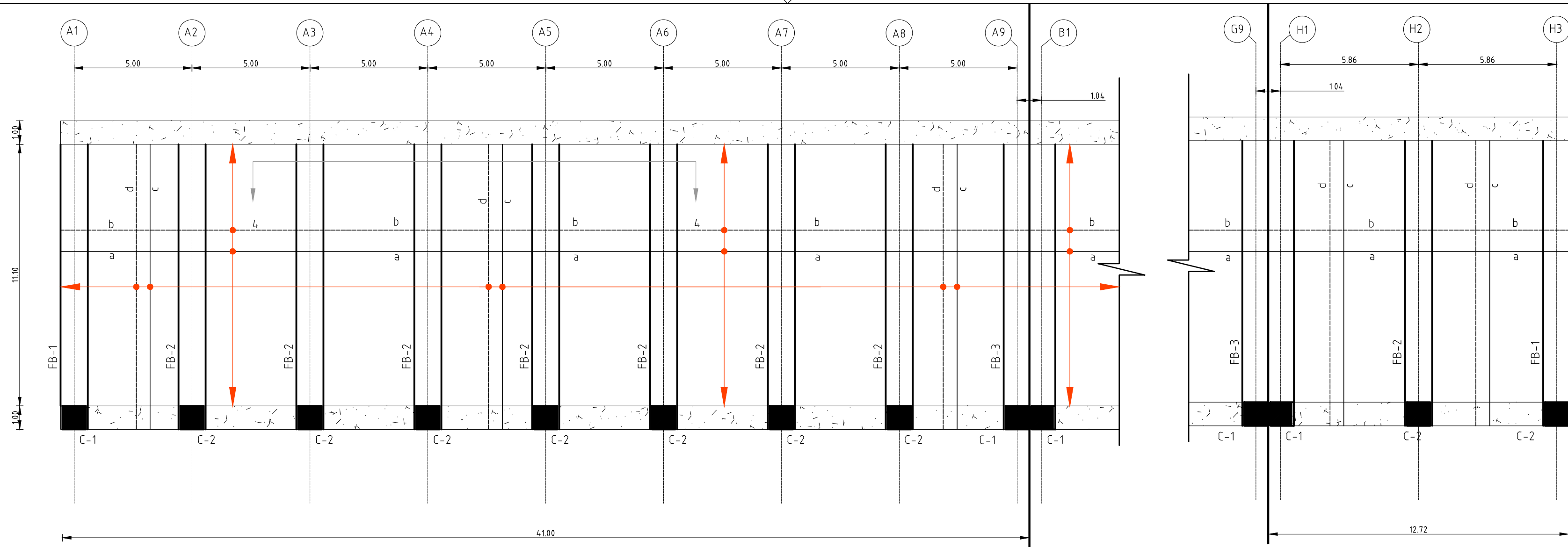
CLIENT APPROVED	DATE	CONSULTANT SIGNATURE

DESIGNER	BT
DESIGN	RK
CHECKED	MP
APPROVED	NA

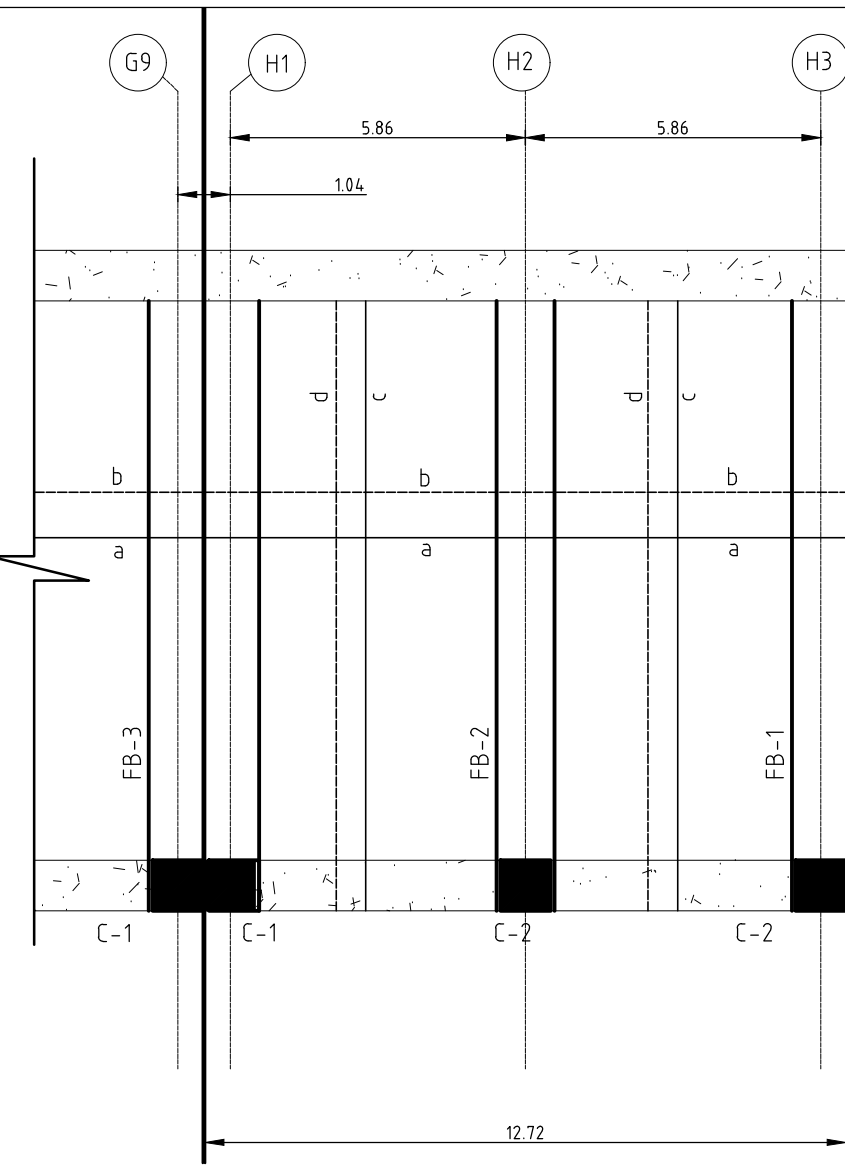
CLIENT	APPROVED	DATE

PROJECT	CONSTRUCTION OF APPROACH ROADS TO EAST AND WEST PORTAL OF PROPOSED ZOJILA TUNNEL WITH AVALANCHE PROTECTION WORKS IN THE UT OF JAMMU & KASHMIR AND LADAKH
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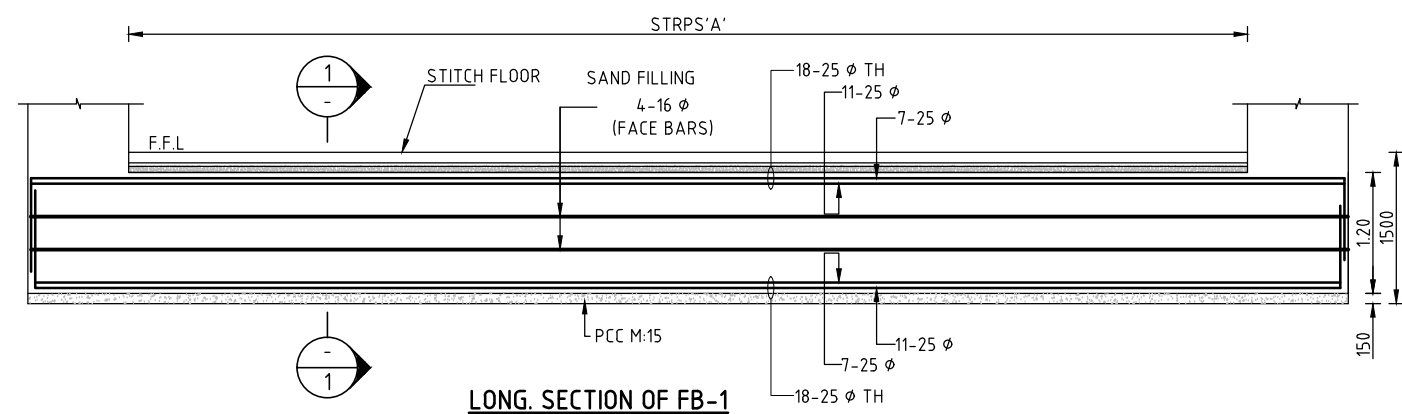
PROJECT TITLE	STRUT SUPPORTED SOLDIER PILES SECTIONS & DETAILS
DRAWING STATUS	TENDER
PROJECT / DRAWING NO.	7061520-APS-002-003
ISSUE	A



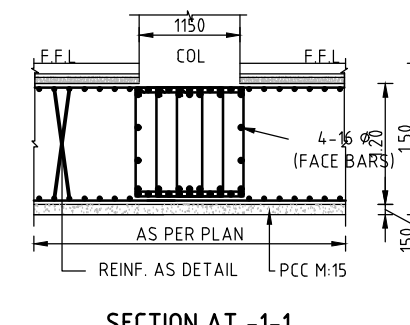
TYPICAL DETAIL OF FOUNDATION FOR
GRID 'A1' TO 'B1' & 'B2' TO 'C1' & 'C2' TO 'D1' & 'D2' TO 'E1' & 'E2' TO 'F1' & 'F2' TO 'G1', 'G2' TO 'H1'



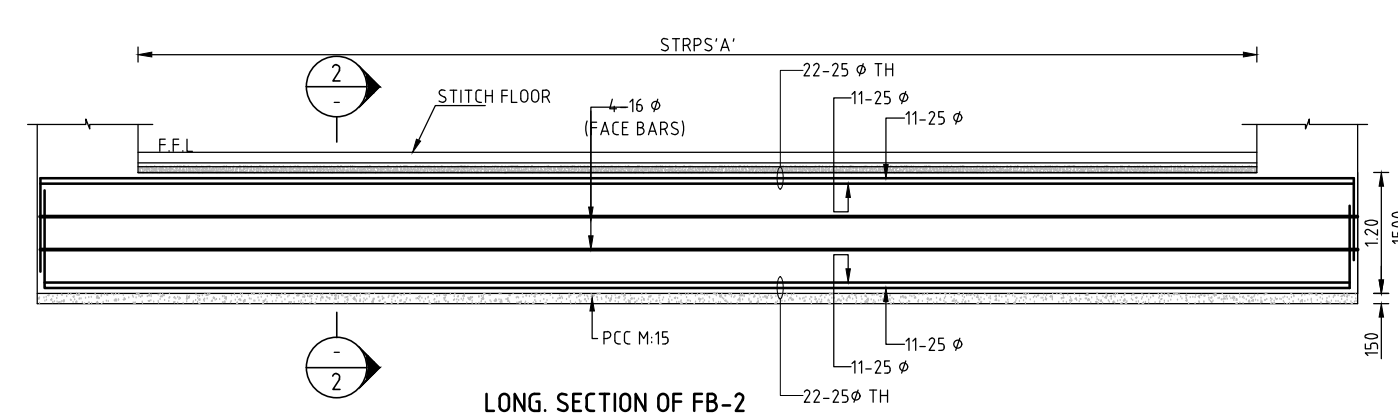
TYPICAL DETAIL OF FOUNDATION FOR
GRID 'H1' TO 'H3'



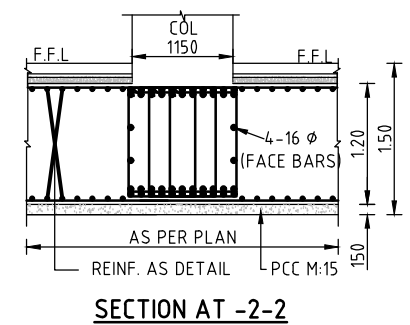
LONG. SECTION OF FB-1



SECTION AT -1-1

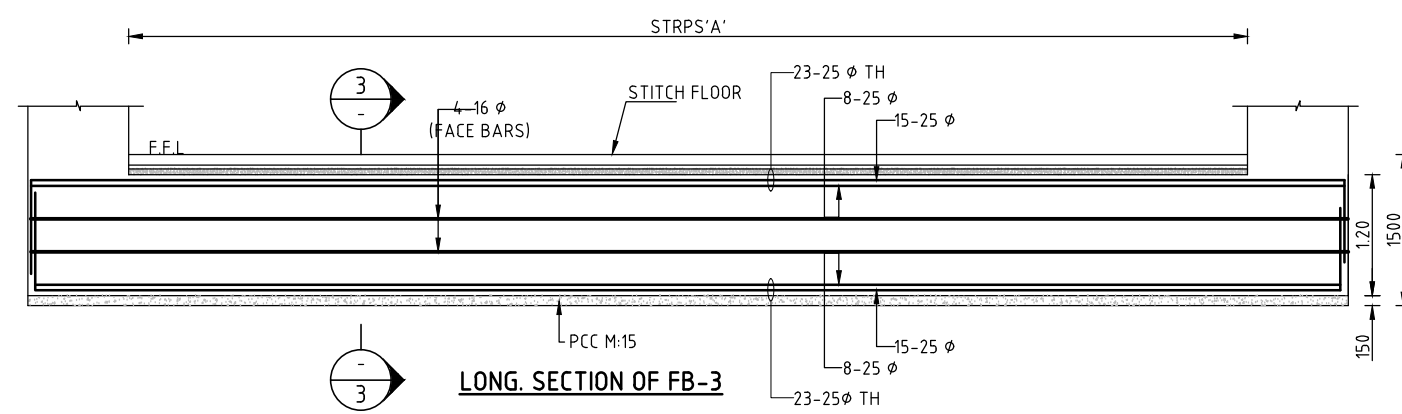


LONG. SECTION OF FB-2

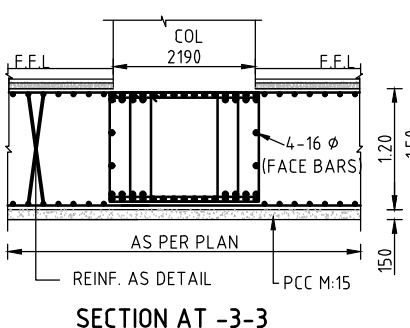


SECTION AT -2-2

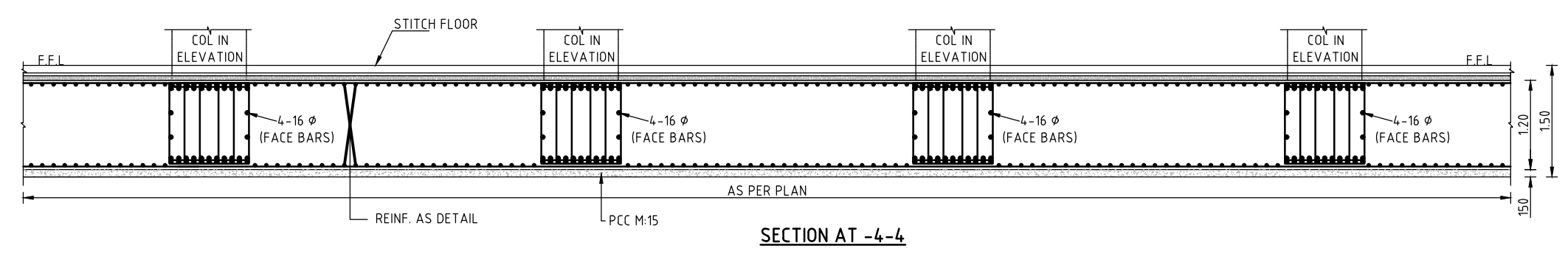
STRPS	BARS
'A'	10 Ø 6L @ 100 C/C UPTO L/4 FROM SUPPORTS + REST 150 C/C



LONG. SECTION OF FB-3



SECTION AT -3-3



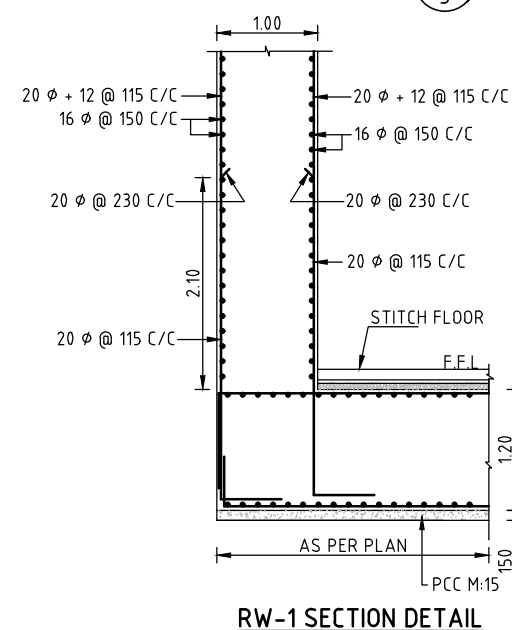
SECTION AT -4-4

NOTES:-

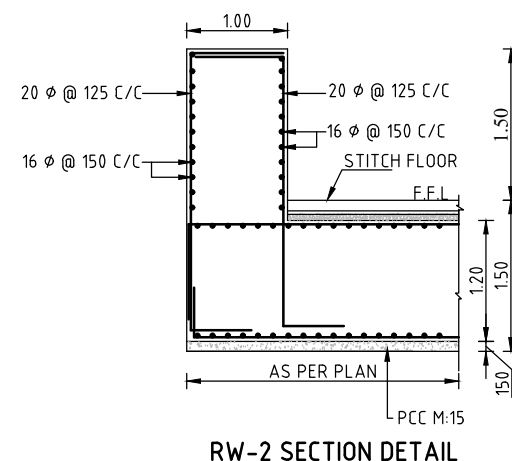
- CONTRACTOR TO CHECK & VERIFY ALL DIMENSIONS BEFORE EXECUTION OF THE WORK.
- FIGURED DIMENSIONS SHALL BE FOLLOWED.
- ALL DIMENSIONS ARE GIVEN IN FEET & INCHES
- BRICK USED IN MASONRY SHALL HAVE CRUSHING STRENGTH NOT LESS THAN 100KG/CM2.
- THE REINFORCEMENT SHALL BE OF HIGH STRENGTH DEFORMED BARS AS PER I.S.1786-1985 FE 500N/MM2.
- THE STRUCTURE DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARCHITECTURE DRAWINGS.
- IN CASE OF ANY AMBIGUITY IN STRUCTURE DRAWING CLARIFICATION MAY BE SORTED.
- CONC MIX RATIO TO BE USED AS FOLLOW:
 - M35 FOR FOOTING
 - M35 FOR COLUMN
 - M35 FOR PLINTH BEAMS & SLAB BEAMS
 - M35 FOR RETAINING WALLS & SHEAR WALLS
- MINIMUM NOMINAL COVER TO ALL LINKS IF ANY REINFORCEMENT I/C. SHALL BE AS PER IS 456-2000 AS UNDER:-
 - FOUN. = 50 MM.
 - COLUMN = 50 MM
 - BEAMS = 50 MM
 - SLABS = 25 MM
- LAP LENGTH / ANCHORAGE LENGTH 1) 50 D IN CASE OF FOUND., BEAM & SLAB 2) 50 D IN CASE OF COLUMN WHERE D IS DIA
- MIN. GAP BETWEEN TWO BARS = 32 MM.
- HOOKE FOR TIES/STIRRUPS = 10 X DIA OF TIE/STIRRUP
- ALL THE CONCRETING SHALL BE DONE BY WEIGH BATCHING RMC.
- THE FOUNDATION HAS BEEN DESIGNED FOR SBC AS 100 KN/SQM.

SLAB THICKNESS - 120MM THK.

a	25 Ø 150 MM C/C (BOTTOM)
b	25 Ø 150 MM C/C (TOP)
c	16 Ø 175 MM C/C (BOTTOM)
d	16 Ø 175 MM C/C (TOP)



RW-1 SECTION DETAIL



RW-2 SECTION DETAIL

	LONGER SPAN	LONGER SPAN
BASEMENT -2 ROOF SLAB TO FOUNDATION		
DIA & NO. OF BARS	38- 25 Ø	12-32 Ø (a)-26- 25 Ø
SIZE OF COLUMN	1000 x 1000	1000 x 1000
SHAPE OF TIES		
FLOOR LEVELS	SHAPE & REINFORCEMENT	SHAPE & REINFORCEMENT
COLUMNS	C-1 (M-35)	C-2 (M-35)

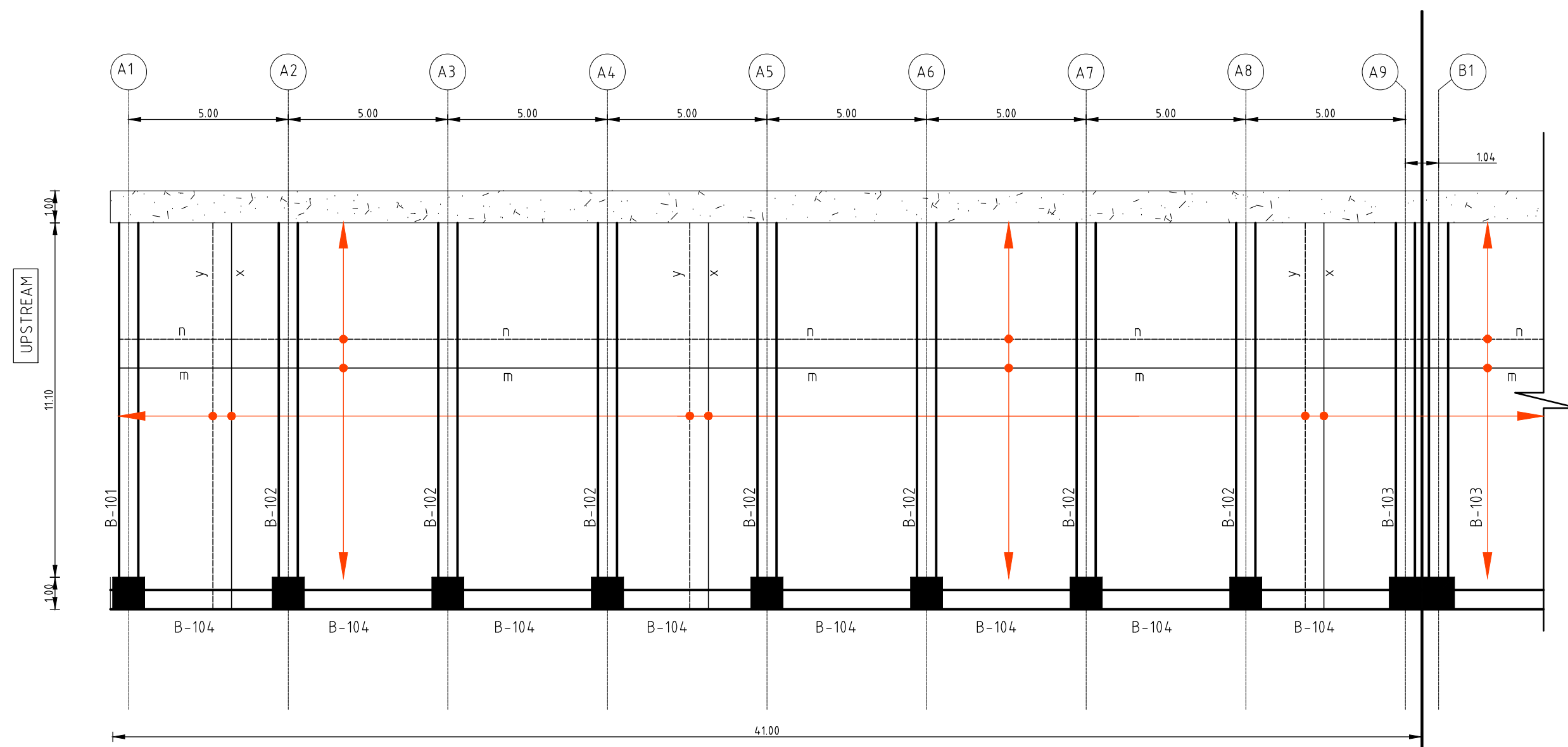
CLIENT APPROVED	DATE	CONSULTANT SIGNATURE

DESIGNER	SMC
SMC (India) Pvt Ltd. 1st Floor, Novus Tower, West Wing, Plot Number -18, Sector - 18, Gurgaon - 122015, Haryana	
DR	RK
MP	NA

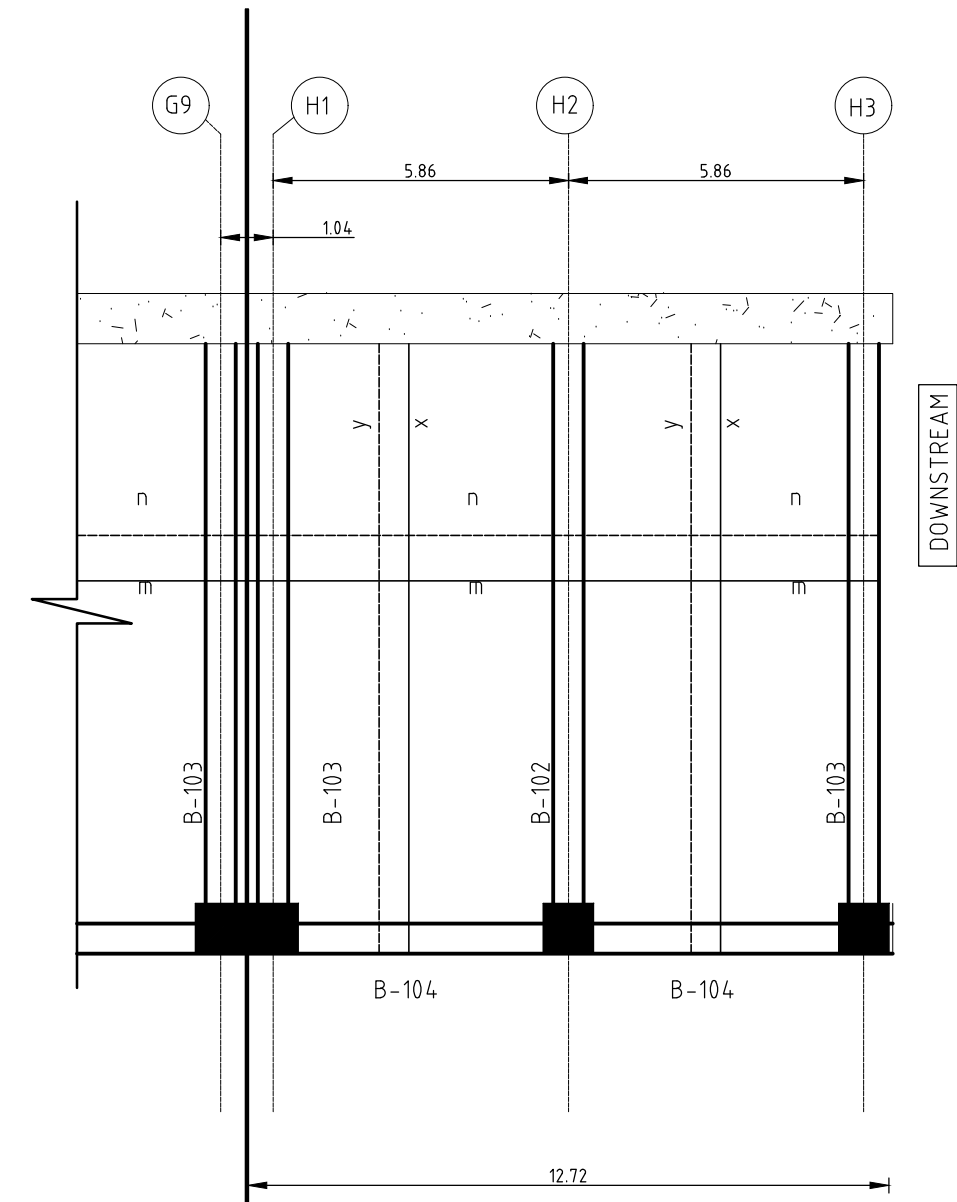
CLIENT	NADCL
NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. P11 BUILDING, 4 PARLIAMENT STREET, SANSAD MARG AREA, NEW DELHI-110001	
APPROVED	DATE

PROJECT	CONSTRUCTION OF APPROACH ROADS TO EAST AND WEST PORTAL OF PROPOSED ZOJILA TUNNEL WITH AVALANCHE PROTECTION WORKS IN THE UT OF JAMMU & KASHMIR AND LADAKH
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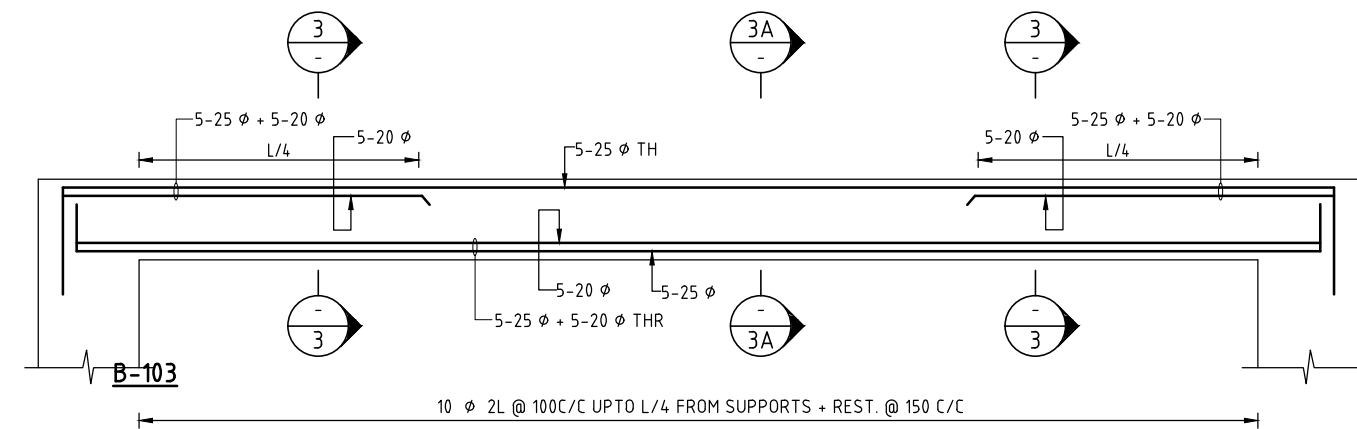
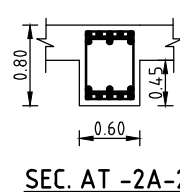
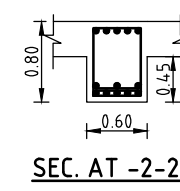
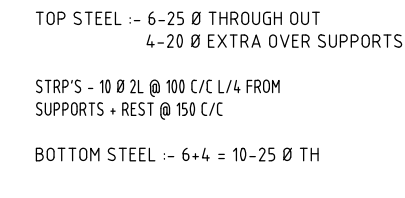
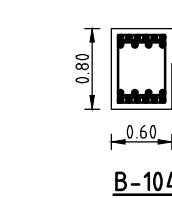
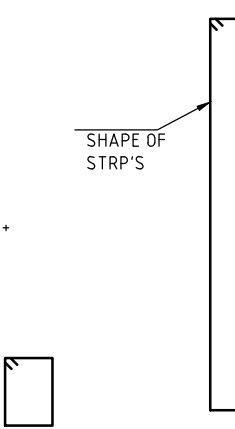
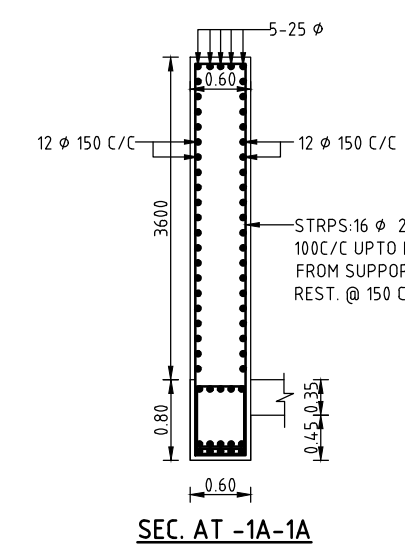
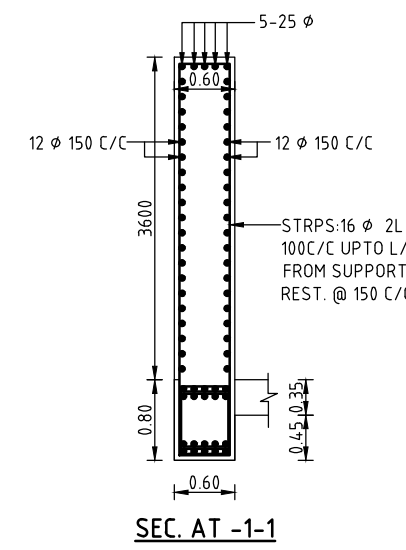
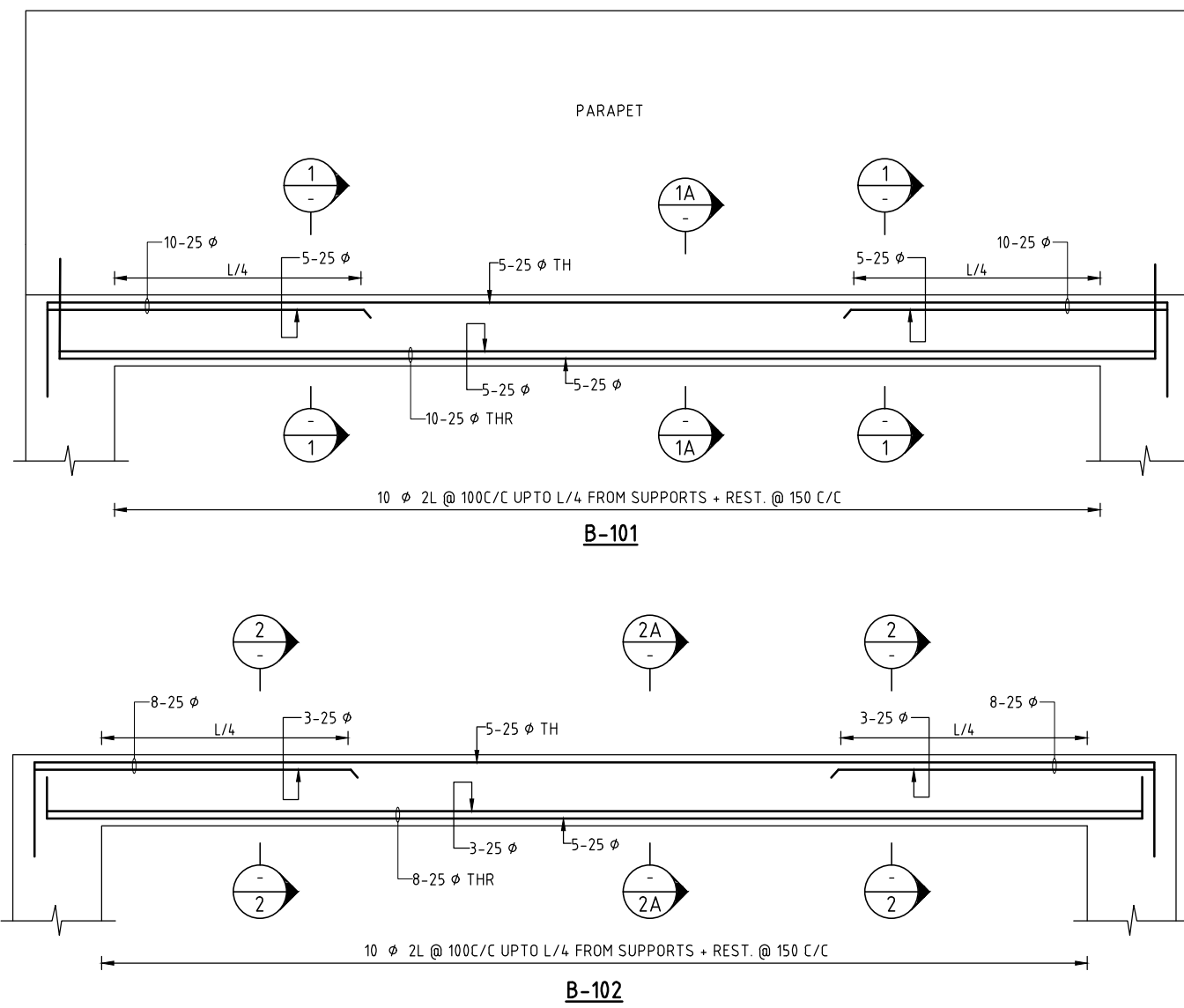
PROJECT TITLE	AVALANCHE PROTECTION STRUCTURE SNOW GALLERY IN STRAIGHT FOUNDATION PLAN & DETAIL
DRAWING STATUS	TENDER
PROJECT / DRAWING NO.	7061520-APS-002-004
ISSUE	A



TYPICAL DETAIL OF FOUNDATION FOR
GRID 'A1' TO 'B1'&'B2' TO 'C1'&'C2' TO 'D1'&'D2' TO 'E1'& 'E2' TO 'F1'& 'F2' TO 'G1','G2' TO 'H1'



TYPICAL DETAIL OF FOUNDATION FOR
GRID 'H1' TO 'H3'



NOTES:-

- CONTRACTOR TO CHECK & VERIFY ALL DIMENSIONS BEFORE EXECUTION OF THE WORK.
- FIGURED DIMENSIONS SHALL BE FOLLOWED.
- ALL DIMENSIONS ARE GIVEN IN FEET & INCHES
- BRICK USED IN MASONRY SHALL HAVE CRUSHING STRENGTH NOT LESS THAN 100KG/CM2.
- THE REINFORCEMENT SHALL BE OF HIGH STRENGTH DEFORMED BARS AS PER I.S.1786-1985 FE 500N/MM2.
- THE STRUCTURE DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARCHITECTURE DRAWINGS.
- IN CASE OF ANY AMBIGUITY IN STRUCTURE DRAWING CLARIFICATION MAY BE SORTED.
- CONC MIX RATIO TO BE USED AS FOLLOW:
 - M35 FOR FOOTING
 - M35 FOR COLUMN
 - M35 FOR PLINTH BEAMS & SLAB BEAMS
 - M35 FOR RETAINING WALLS & SHEAR WALLS
- MINIMUM NOMINAL COVER TO ALL LINKS IF ANY REINFORCEMENT I/C. SHALL BE AS PER IS 456-2000 AS UNDER:-
 - FOUN. = 50 MM.
 - COLUMN = 50 MM
 - BEAMS = 50 MM
 - SLABS = 25 MM
- LAP LENGTH / ANCHORAGE LENGTH
 - 50 D IN CASE OF FOUND., BEAM & SLAB
 - 50 D IN CASE OF COLUMN
 WHERE D IS DIA
- MIN. GAP BETWEEN TWO BARS = 32 MM.
- HOOKS FOR TIES/STIRRUPS = 10 X DIA OF TIE/STIRRUP
- ALL THE CONCRETING SHALL BE DONE BY WEIGH BATCHING RMC.
- THE FOUNDATION HAS BEEN DESIGNED FOR SBC AS 100 KN/SQM.
- THE FOUNDATION HAS BEEN DESIGNED FOR SBS AS 100 KN/SQM.

SLAB THICKNESS - 350MM THK.	
m - 12 ϕ 125 MM C/C (BOTTOM)	
n - 12 ϕ 125 MM C/C (TOP)	
x - 12 ϕ 175 MM C/C (BOTTOM)	
y - 12 ϕ 175 MM C/C (TOP)	

50 mm ON ORIGINAL (A3)

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	

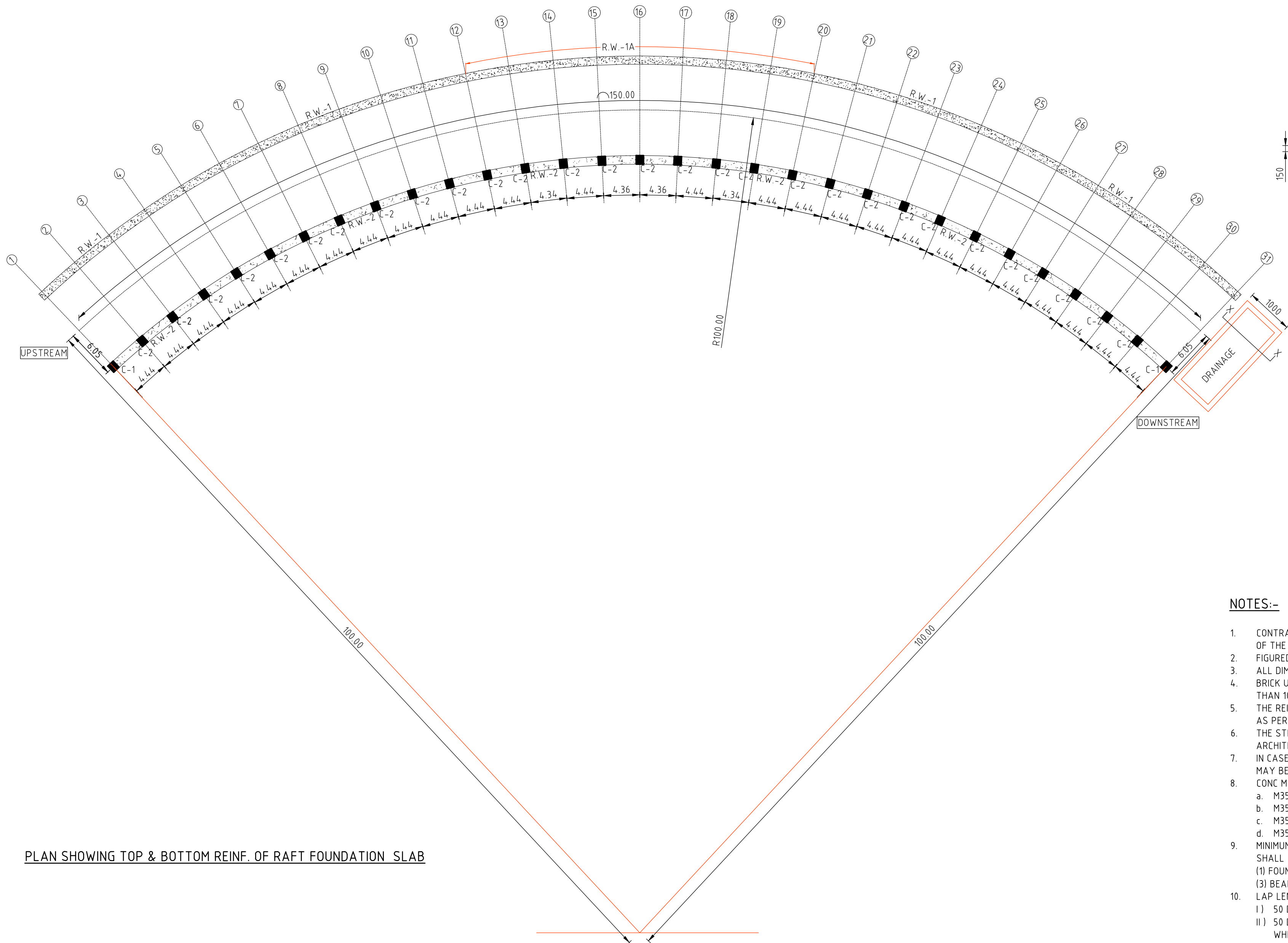
CLIENT APPROVED DATE CONSULTANT SIGNATURE

DESIGNER	DR	DESIGN	RK	CHECKED	MP	APPROVED	NA
SMEC (India) Pvt Ltd. 1st Floor, Novus Tower, West Wing, Plot Number -18, Sector - 18, Gurgaon - 122015, Haryana							

CLIENT	APPROVED	DATE
NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. PTI BUILDING . 4 PARLIAMENT STREET, SANSAD MARG AREA, NEW DELHI- 110003		

PROJECT	CONSTRUCTION OF APPROACH ROADS TO EAST AND WEST PORTAL OF PROPOSED ZOJILA TUNNEL WITH AVALANCHE PROTECTION WORKS IN THE UT OF JAMMU & KASHMIR AND LADAKH
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PROJECT TITLE	AVALANCHE PROTECTION STRUCTURE SNOW GALLERY IN STRAIGHT BEAM LAYOUT PLAN & DETAIL
DRAWING STATUS	TENDER
PROJECT / DRAWING NO.	7061520-APS-002-005
ISSUE	A



PLAN SHOWING TOP & BOTTOM REINF. OF RAFT FOUNDATION SLAB

NOTES:-


1. CONTRACTOR TO CHECK & VERIFY ALL DIMENSIONS BEFORE EXECUTION OF THE WORK.
2. FIGURED DIMENSIONS SHALL BE FOLLOWED.
3. ALL DIMENSIONS ARE GIVEN IN FEET & INCHES
4. BRICK USED IN MASONRY SHALL HAVE CRUSHING STRENGTH NOT LESS THAN 100KG/CM².
5. THE REINFORCEMENT SHALL BE OF HIGH STRENGTH DEFORMED BARS AS PER I.S.1786-1985 FE 500N/MM².
6. THE STRUCTURE DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARCHITECTURE DRAWINGS.
7. IN CASE OF ANY AMBIGUITY IN STRUCTURE DRAWING CLARIFICATION MAY BE SORTED.
8. CONC MIX RATIO TO BE USED AS FOLLOW:
 - a. M35 FOR FOOTING
 - b. M35 FOR COLUMN
 - c. M35 FOR PLINTH BEAMS & SLAB BEAMS
 - d. M35 FOR RETAINING WALLS & SHEAR WALLS
9. MINIMUM NOMINAL COVER TO ALL LINKS IF ANY REINFORCEMENT I/C. SHALL BE AS PER IS 456-2000 AS UNDER:-
 - (1) FOUN. = 50 MM.
 - (2) COLUMN = 50 MM
 - (3) BEAMS = 50 MM
 - (4) SLABS = 25 MM
10. LAP LENGTH / ANCHORAGE LENGTH
 - I) 50 D IN CASE OF FOUN., BEAM & SLAB
 - II) 50 D IN CASE OF COLUMNWHERE D IS DIA
11. MIN. GAP BETWEEN TWO BARS =32 MM.
12. HOOKES FOR TIES/STIRRUPS =10 X DIA OF TIE/STIRRUP
13. ALL THE CONCRETING SHALL BE DONE BY WEIGH BATCHING RMC.
14. THE FOUNDATION HAS BEEN DESIGNED FOR SBC AS 100 KN/SQM.

50 mm ON ORIGINAL (A3)

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	

CLIENT APPROVED	DATE	CONSULTANT SIGNATURE

DESIGNER


SMEC (India) Pvt Ltd. 1st Floor,
Novus Tower, West Wing, Plot Number -18,
Sector - 18, Gurgaon - 122015, Haryana

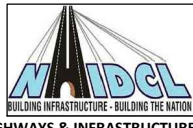
DR

RK

MP

NA

CLIENT


NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT
CORPORATION LTD. P11 BUILDING, 4 PARLIAMENT STREET,
SANSAD MARG AREA, NEW DELHI-110001

APPROVED

DATE

PROJECT

CONSTRUCTION OF APPROACH ROADS TO EAST AND
WEST PORTAL OF PROPOSED ZOJILA TUNNEL
WITH AVALANCHE PROTECTION WORKS
IN THE UT OF JAMMU & KASHMIR AND LADAKH

PROJECT TITLE

AVALANCHE PROTECTION STRUCTURE
SNOW GALLERY IN CURVE
GRID LAYOUT PLAN

DRAWING STATUS

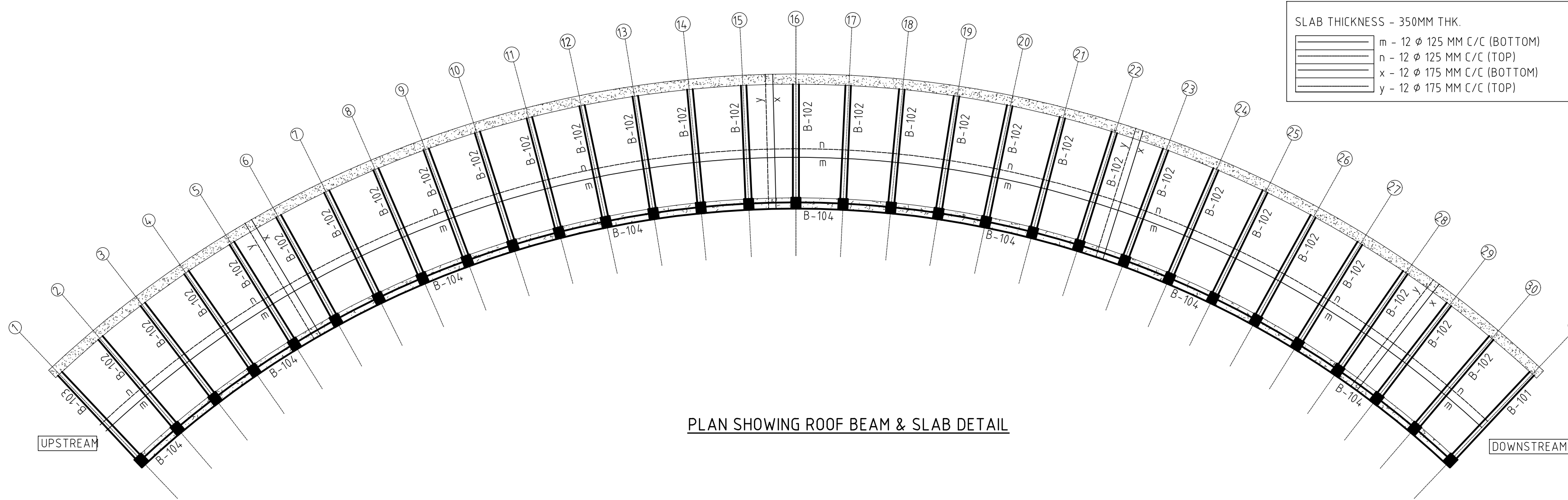
TENDER

PROJECT / DRAWING NO.

7061520-APS-002-006

ISSUE

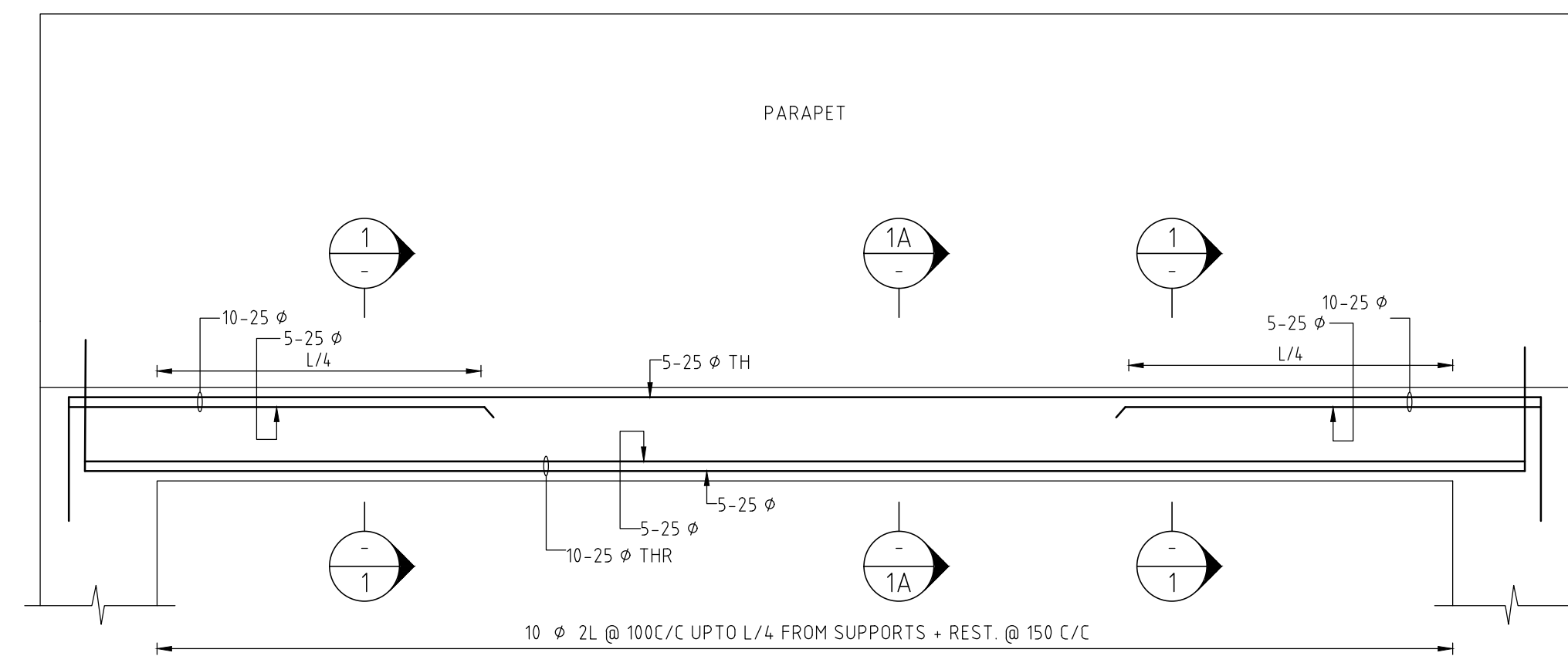
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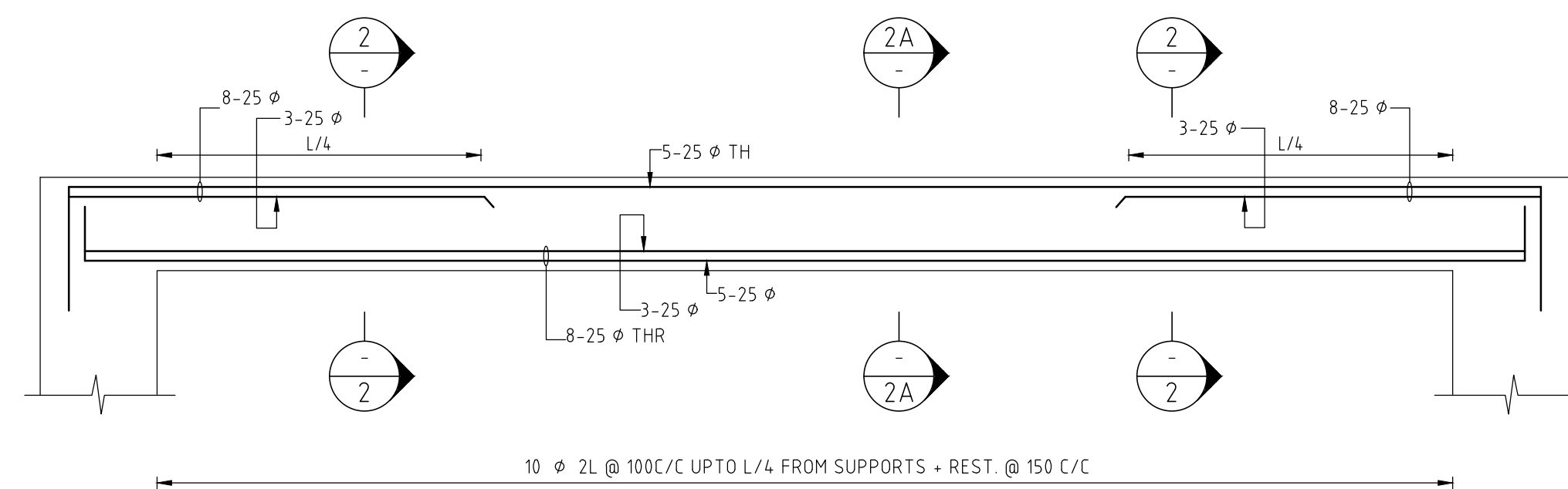
SLAB THICKNESS - 350MM THK.	
m	12 ϕ 125 MM C/C (BOTTOM)
n	12 ϕ 125 MM C/C (TOP)
x	12 ϕ 175 MM C/C (BOTTOM)
y	12 ϕ 175 MM C/C (TOP)

- NOTES:-
- CONTRACTOR TO CHECK & VERIFY ALL DIMENSIONS BEFORE EXECUTION OF THE WORK.
 - FIGURED DIMENSIONS SHALL BE FOLLOWED.
 - ALL DIMENSIONS ARE GIVEN IN FEET & INCHES
 - BRICK USED IN MASNOY SHALL HAVE CRUSHING STRENGTH NOT LESS THAN 100KG/CM2.
 - THE REINFORCEMENT SHALL BE OF HIGH STRENGTH DEFORMED BARS AS PER I.S.1786-1985 FE 500N/MM2.
 - THE STRUCTURE DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARCHITECTURE DRAWINGS.
 - IN CASE OF ANY AMBIGUITY IN STRUCTURE DRAWING CLARIFICATION MAY BE SORTED.
 - CONC MIX RATIO TO BE USED AS FOLLOW:
 - M35 FOR FOOTING
 - M35 FOR COLUMN
 - M35 FOR PLINTH BEAMS & SLAB BEAMS
 - M35 FOR RETAINING WALLS & SHEAR WALLS
 - MINIMUM NOMINAL COVER TO ALL LINKS IF ANY REINFORCEMENT I/C. SHALL BE AS PER IS 456-2000 AS UNDER:-
 - FOUN. = 50 MM.
 - COLUMN = 50 MM
 - BEAMS = 50 MM
 - SLABS = 25 MM
 - LAP LENGTH / ANCHORAGE LENGTH
 - 50 D IN CASE OF FOUND., BEAM & SLAB
 - 50 D IN CASE OF COLUMNWHERE D IS DIA
 - MIN. GAP BETWEEN TWO BARS = 32 MM.
 - HOOKEs FOR TIES/STIRRUPS = 10 X DIA OF TIE/STIRRUP
 - ALL THE CONCRETING SHALL BE DONE BY WEIGH BATCHING RMC.
 - THE FOUNDATION HAS BEEN DESIGNED FOR SBC AS 100 KN/SQM.

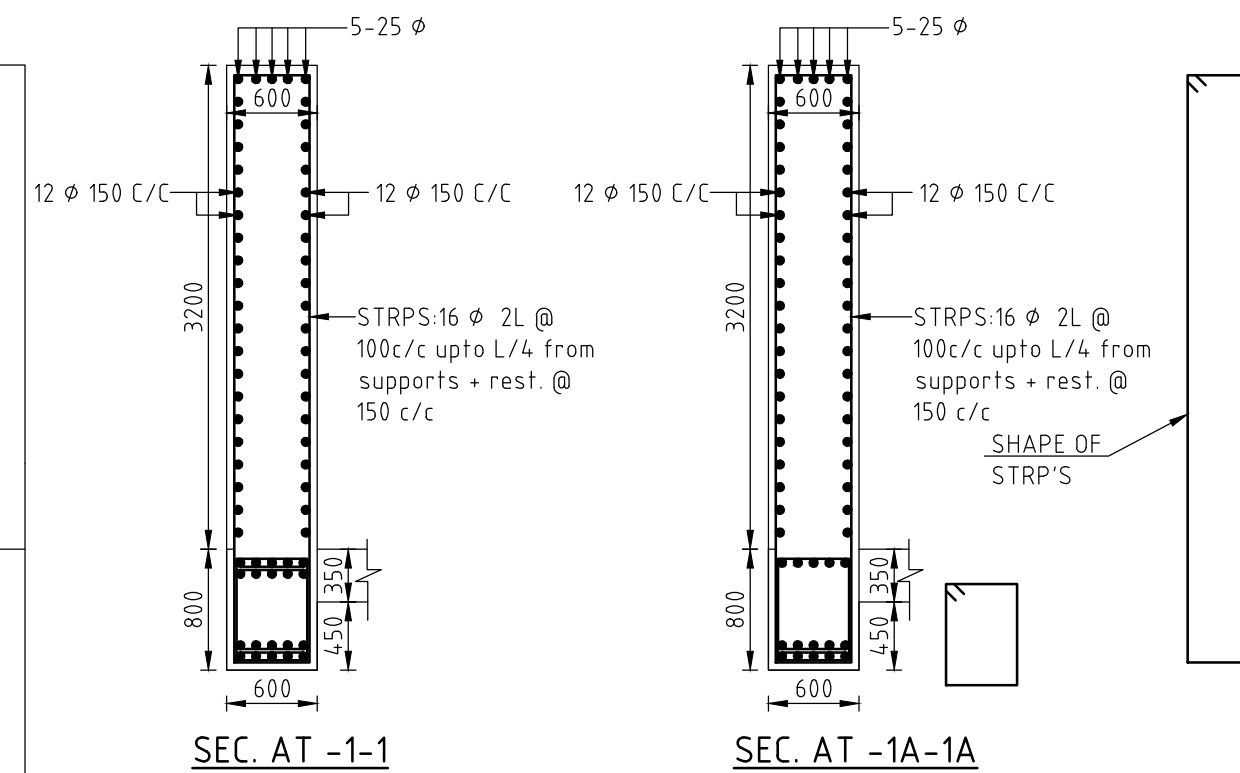
PLAN SHOWING ROOF BEAM & SLAB DETAIL



B-101

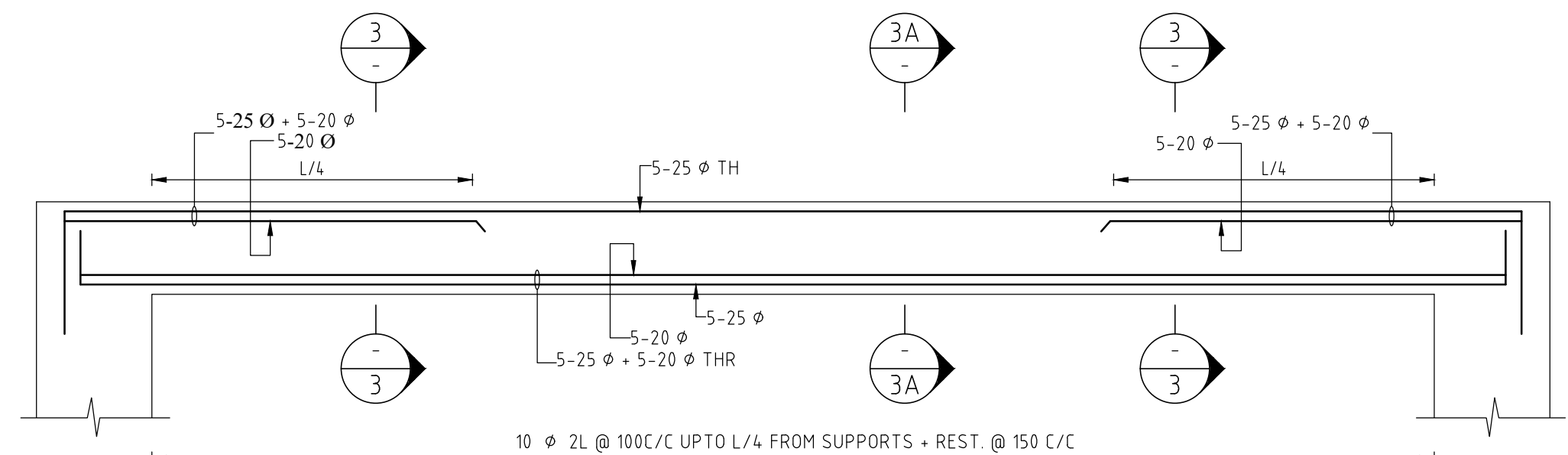
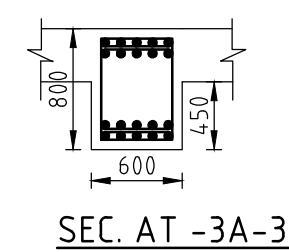
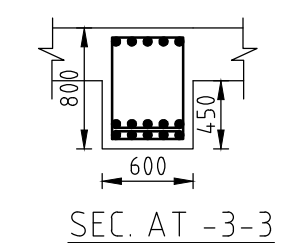
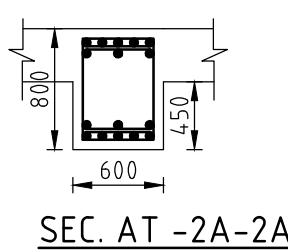
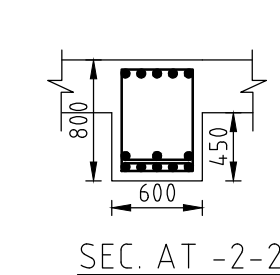
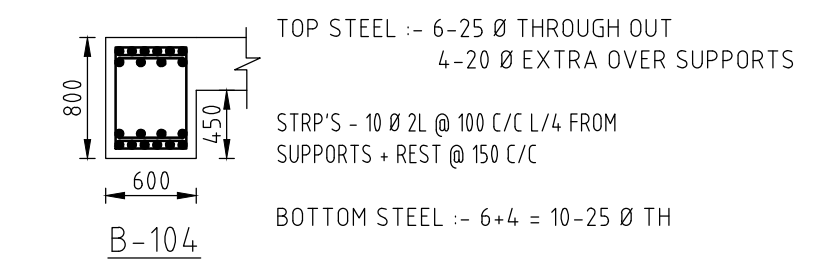


B-102



SEC. AT -1-1

SEC. AT -1A-1A



B-103

50 mm ON ORIGINAL (A3)

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	

SCALE 1 : 50

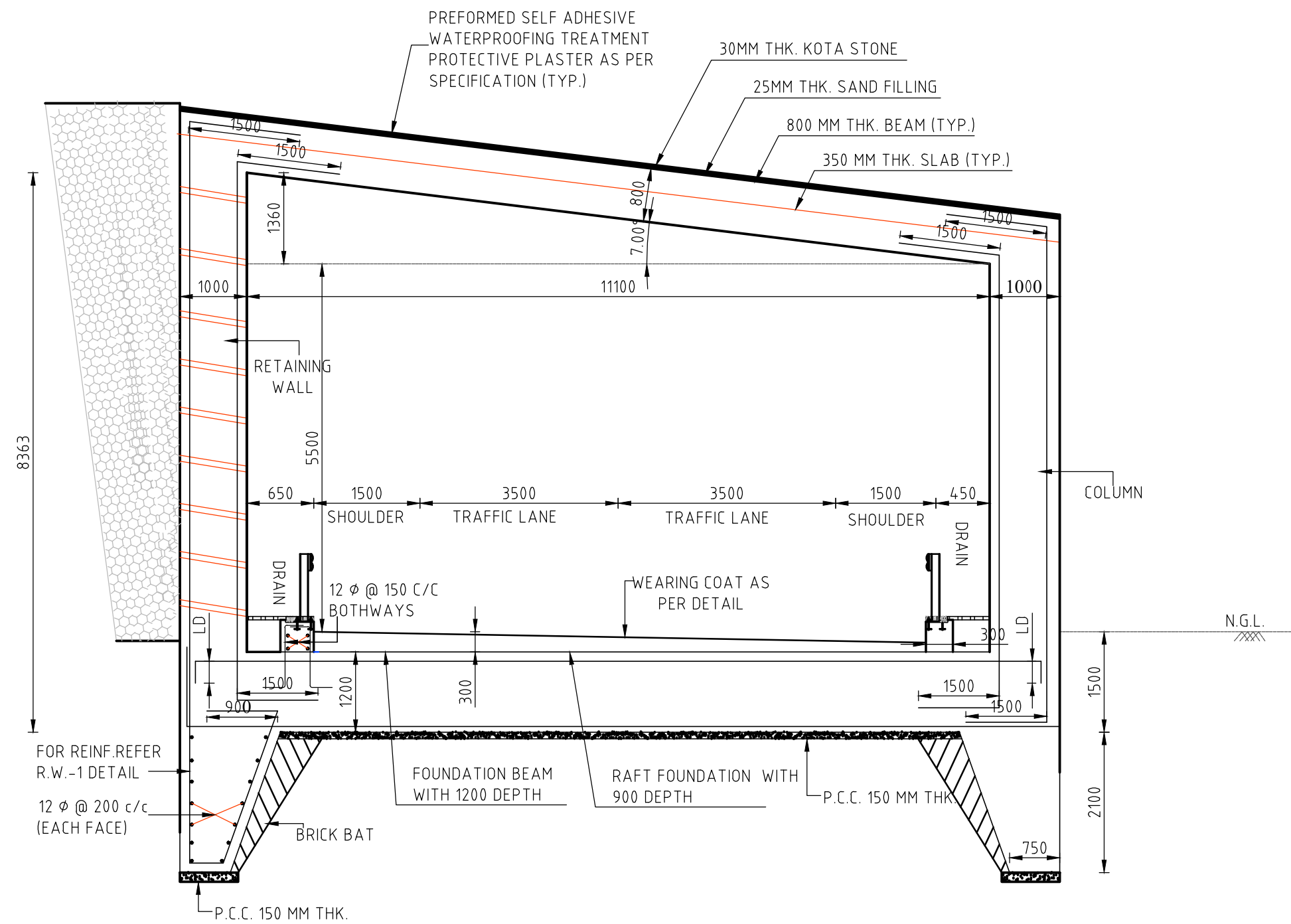
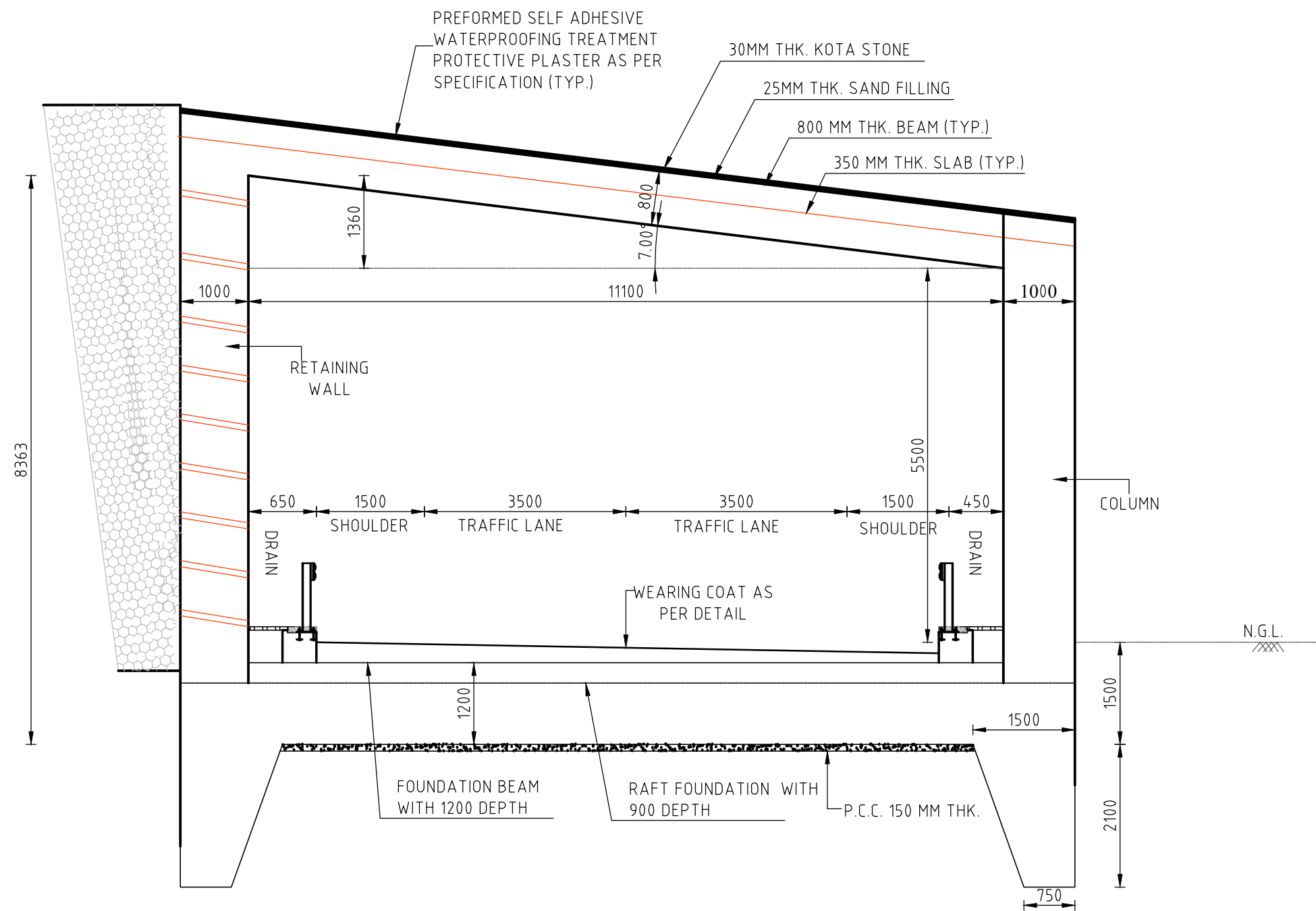
CLIENT APPROVED	DATE	CONSULTANT SIGNATURE

DESIGNER	DESIGN	CHECKED	APPROVED
DR	RK	MP	NA

CLIENT	APPROVED	DATE

PROJECT	CONSTRUCTION OF APPROACH ROADS TO EAST AND WEST PORTAL OF PROPOSED ZOJILA TUNNEL WITH AVALANCHE PROTECTION WORKS IN THE UT OF JAMMU & KASHMIR AND LADAKH
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PROJECT TITLE	AVALANCHE PROTECTION STRUCTURE SNOW GALLERY IN CURVE BEAM LAYOUT PLAN & DETAIL
DRAWING STATUS	TENDER
PROJECT / DRAWING NO.	7061520-APS-002-008
ISSUE	A



TYPICAL SECTION FOR SNOW GALLERY SL-46

NOTES:-

- Contractor to Check & verify all dimensions before execution of the work.
- Figured dimensions shall be followed.
- All dimensions are given in FEET & INCHES
- Brick used in masonry shall have Crushing strength not less than 100kg/Cm2.
- The reinforcement shall be of high strength deformed bars as per I.S.1786-1985 Fe 500N/mm2.
- The structure drawings should be read in Conjunction with the architecture drawings.
- In case of any ambiguity in structure drawing clarification may be sorted.
- Conc mix ratio to be used as follow:
 - M35 for FOOTING
 - M35 for COLUMN
 - M35 for plinth beams & slab beams
 - M35 for retaining walls & shear walls
- MINIMUM NOMINAL COVER TO ALL LINKS IF ANY REINFORCEMENT I/C. SHALL BE AS PER IS 456-2000 AS UNDER:-
 - FOUN. = 50 mm. (2) COLUMN = 50 mm (3) BEAMS = 50 mm (4) SLABS = 25 mm
- LAP LENGTH / ANCHORAGE LENGTH
 - 50 d IN CASE OF FOUND., BEAM & SLAB
 - 50 d IN CASE OF COLUMN WHERE d IS DIA
- MIN. GAP BETWEEN TWO BARS =32 MM.
- HOOKES FOR TIES/STIRRUPS =10 X DIA OF TIE/STIRRUP
- ALL THE CONCRETING SHALL BE DONE BY WEIGH BATCHING RMC.
- THE FOUNDATION HAS BEEN DESIGNED FOR SBC AS 100 KN/SQM.

50 mm ON ORIGINAL (A3)

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	

SCALE 1: 75

CLIENT APPROVED	DATE	CONSULTANT SIGNATURE

DESIGNER	DR
DESIGN	RK
CHECKED	MP
APPROVED	NA

CLIENT	APPROVED	DATE

PROJECT	CONSTRUCTION OF APPROACH ROADS TO EAST AND WEST PORTAL OF PROPOSED ZOJILA TUNNEL WITH AVALANCHE PROTECTION WORKS IN THE UT OF JAMMU & KASHMIR AND LADAKH
---------	--

PROJECT TITLE	AVALANCHE PROTECTION STRUCTURE SNOW GALLERY CROSS SECTION DETAIL
DRAWING STATUS	TENDER
PROJECT / DRAWING NO.	7061520-APS-002-009
ISSUE	A

← SRINAGAR

LEGEND:-

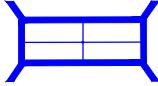
EXISTING ROAD

PROPOSED CENTER LINE

PROPOSED DRAIN

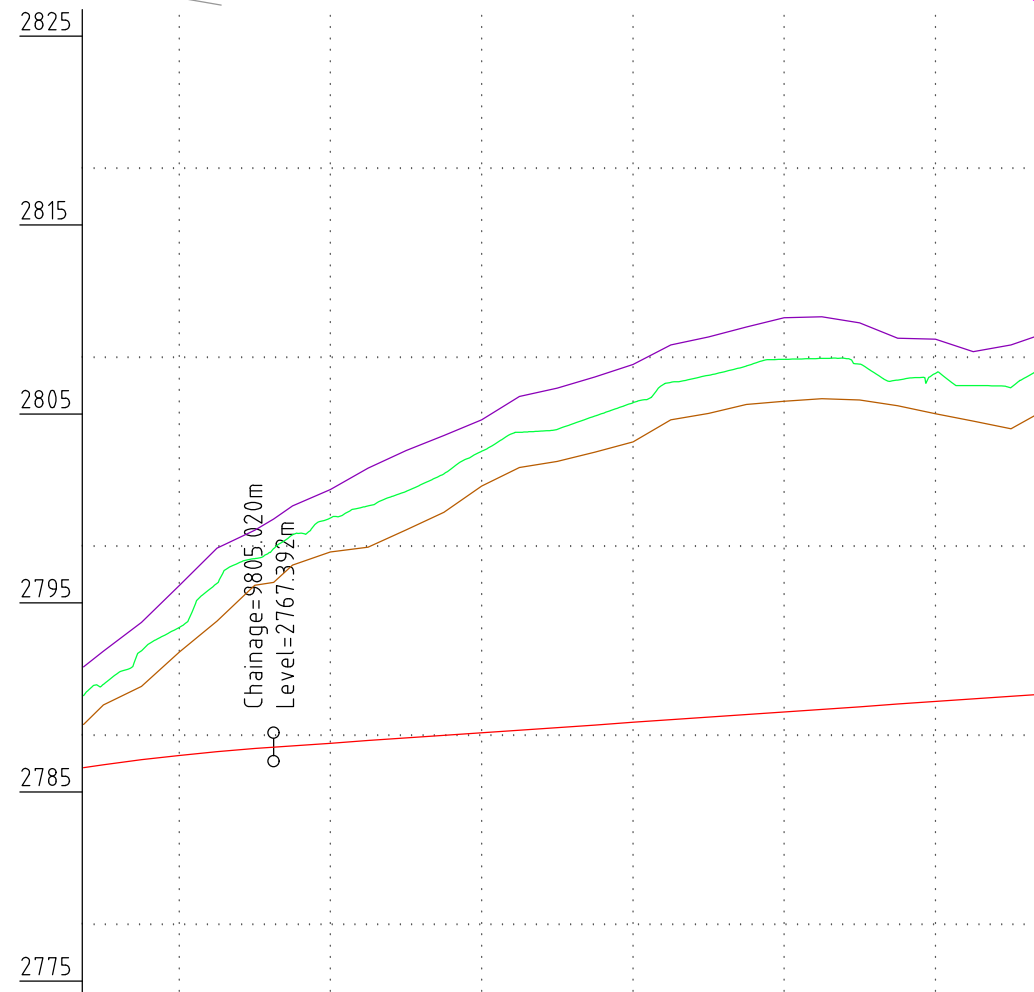
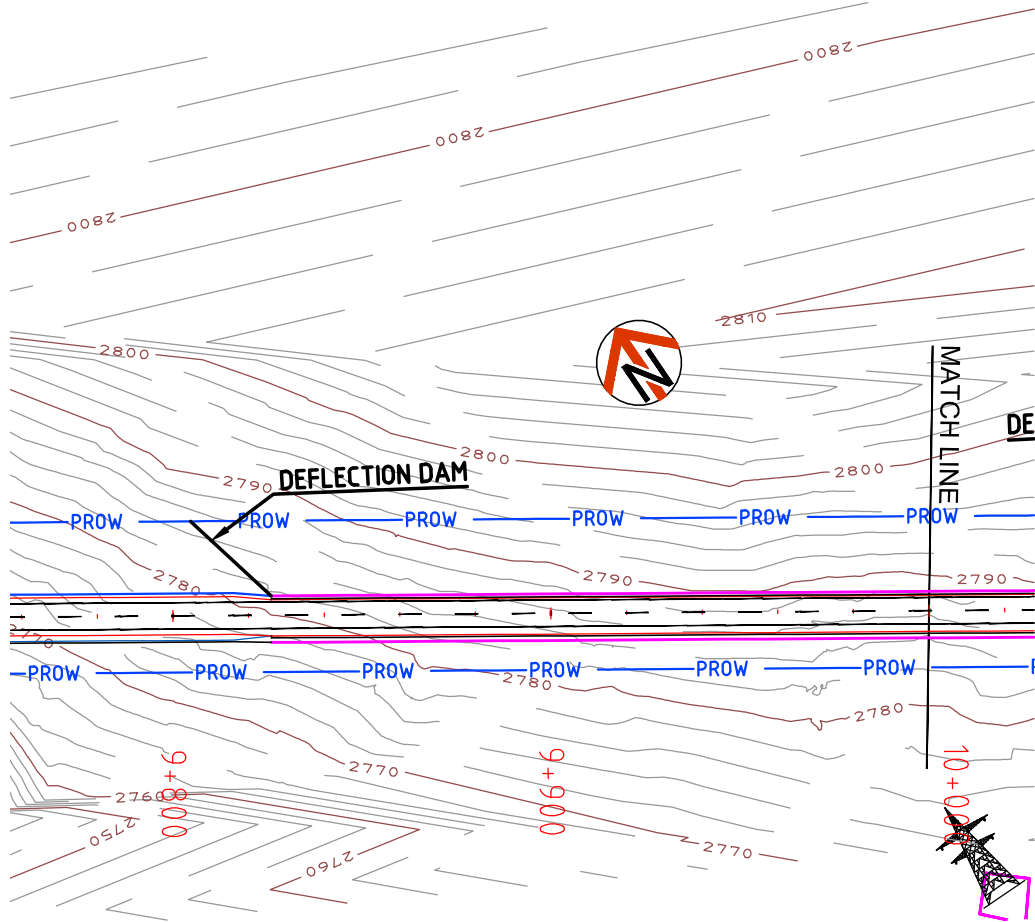
PROPOSED EARTHEN SHOULDER

PROPOSED BRIDGE/CULVERT



LEH →

PACKAGE III START FROM KM 9+760



DATUM LEVEL	2775
FINISHED ROAD LEVELS (m)	2766.465
GROUND LEVEL AT DESIGN CL (m)	2770.715
LEVEL DIFFERENCE (m)	-4.250
PROPOSED GROUND LEVEL AT 6M FROM CL LHS (m)	2772.462
PROPOSED GROUND LEVEL AT 6M FROM CL RHS (m)	2769.628
HORIZONTAL ALIGNMENT	L=1188.874m
VERTICAL ALIGNMENT	G=1.380
SUPERELEVATION	e=2.000
TYPICAL CROSS SECTION TYPE	TCS TYPE VIII
CHAINAGE (m)	9760

SCALE AT A2 SIZE DRAWING

HORIZ. 1:2000 20 0 20 40 60 80 100m

VERT. 1:400 4 0 4 8 12 16 20m

CLIENT APPROVED	DATE	CONSULTANT SIGNATURE

DESIGNER	BT	DESIGN	RK	CHECKED	MP	APPROVED	NA

CLIENT	APPROVED	DATE

PROJECT	CONSTRUCTION OF APPROACH ROADS TO EAST AND WEST PORTAL OF PROPOSED ZOJILA TUNNEL WITH AVALANCHE PROTECTION WORKS IN THE UT OF JAMMU & KASHMIR AND LADAKH

PROJECT TITLE	PLAN AND PROFILE FROM KM. 9+760 TO 10+000

DRAWING STATUS	PROJECT / DRAWING No.	ISSUE
TENDER	7061520-P&P-004-010A	A

50 mm ON ORIGINAL (A2)

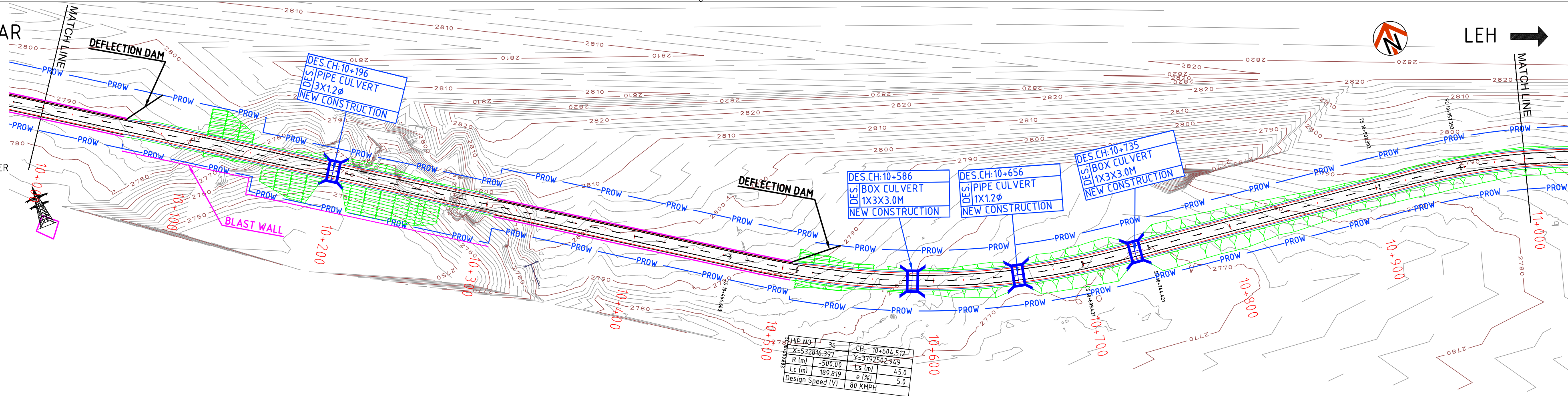
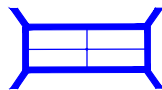
ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A			

← SRINAGAR

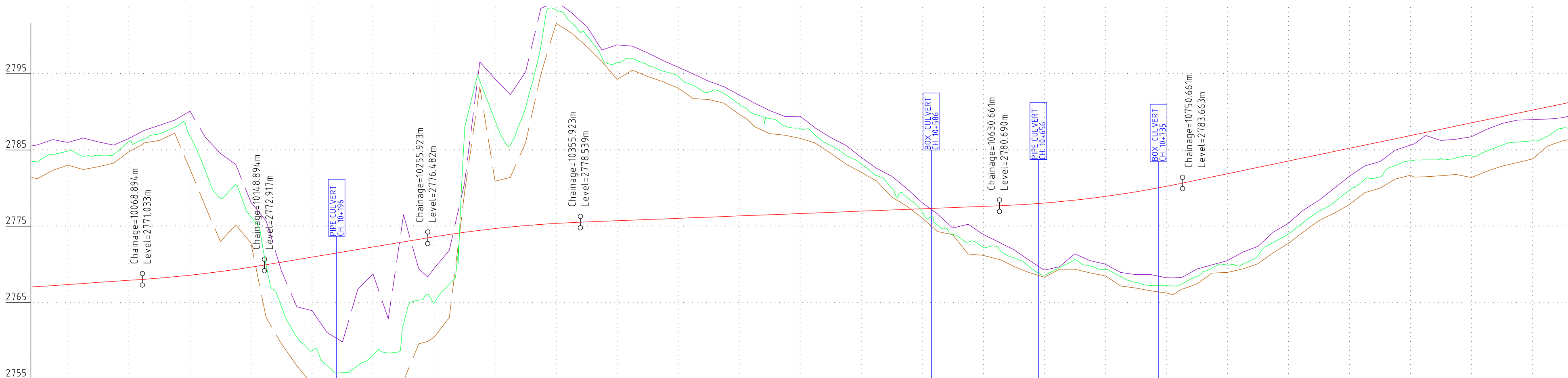
LEH →

LEGEND:-

- EXISTING ROAD
- PROPOSED CENTER LINE
- PROPOSED DRAIN
- PROPOSED EARTHEN SHOULDER
- PROPOSED BRIDGE/CULVERT



HIP NO.	36	CH.	10+604.512
X	532816.397	Y	3792502.949
R (m)	-500.00	Ls (m)	45.0
Lc (m)	189.819	e (%)	5.0
Design Speed (V)	80	KMPH	



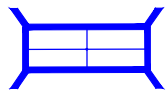
DATUM LEVEL	2755																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
FINISHED ROAD LEVELS (m)		2770.082	2770.358	2770.634	2770.910	2771.201	2771.580	2772.057	2772.631	2773.287	2773.953	2774.619	2775.285	2775.951	2776.615	2777.210	2777.702	2778.093	2778.382	2778.570	2778.727	2778.884	2779.040	2779.197	2779.354	2779.510	2779.667	2779.824	2779.980	2780.137	2780.293	2780.450	2780.607	2780.764	2781.041	2781.420	2781.912	2782.517	2783.235	2784.053	2784.887	2785.722	2786.556	2787.391	2788.225	2789.059	2789.894	2790.728	2791.563	2792.397	2793.232	2794.066																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
GROUND LEVEL AT DESIGN CL (m)		2786.418	2787.858	2787.313	2789.105	2790.142	2789.803	2788.167	2789.232	2790.441	2791.650	2792.888	2794.619	2796.1056	2797.145	2797.978	2799.509	2801.873	2803.527	2806.345	2808.035	2809.467	2810.159	2810.658	2811.399	2812.998	2814.510	2815.667	2816.592	2817.980	2819.003	2820.450	2821.607	2822.880	2824.159	2825.318	2826.318	2827.912	2829.917	2831.431	2832.918	2834.887	2836.722	2838.556	2840.391	2842.225	2844.059	2845.894	2847.728	2849.563	2851.397	2853.232	2855.066																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
LEVEL DIFFERENCE (m)		16.338	17.500	16.678	18.195	18.941	18.222	9.615	11.230	11.584	12.304	15.831	14.230	10.807	8.638	13.308	14.171	15.435	17.964	24.462	20.732	18.618	16.666	14.644	12.628	10.393	8.3518	6.768	5.0337	3.518	2.867	2.360	1.944	1.597	1.271	0.954	0.631	0.318	0.000	-0.318	-0.631	-0.954	-1.271	-1.597	-1.919	-2.242	-2.565	-2.888	-3.211	-3.534																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
PROPOSED GROUND LEVEL AT 6M FROM CL LHS (m)		2788.674	2788.988	2789.069	2789.518	2791.239	2793.090	2795.591	2798.142	2800.712	2803.302	2805.912	2808.542	2811.192	2813.862	2816.552	2819.272	2822.022	2824.802	2827.612	2830.452	2833.322	2836.222	2839.142	2842.082	2845.042	2848.022	2851.022	2854.042	2857.082	2860.142	2863.222	2866.322	2869.442	2872.582	2875.742	2878.922	2882.122	2885.342	2888.582	2891.842	2895.122	2898.422	2901.742	2905.082	2908.442	2911.822	2915.222	2918.642	2922.082	2925.542	2929.022	2932.522	2936.042	2939.582	2943.142	2946.722	2950.322	2953.942	2957.582	2961.242	2964.922	2968.622	2972.342	2976.082	2979.842	2983.622	2987.422	2991.242	2995.082	2998.942	3002.822	3006.722	3010.642	3014.582	3018.542	3022.522	3026.522	3030.542	3034.582	3038.642	3042.722	3046.822	3050.942	3055.082	3059.242	3063.422	3067.622	3071.842	3076.082	3080.342	3084.622	3088.922	3093.242	3097.582	3101.942	3106.322	3110.722	3115.142	3119.582	3124.042	3128.522	3133.022	3137.542	3142.082	3146.642	3151.222	3155.822	3160.442	3165.082	3169.742	3174.422	3179.122	3183.842	3188.582	3193.342	3198.122	3202.922	3207.742	3212.582	3217.442	3222.322	3227.222	3232.142	3237.082	3242.042	3247.022	3252.022	3257.042	3262.082	3267.142	3272.222	3277.322	3282.442	3287.582	3292.742	3297.922	3303.122	3308.342	3313.582	3318.842	3324.122	3329.422	3334.742	3340.082	3345.442	3350.822	3356.222	3361.642	3367.082	3372.542	3378.022	3383.522	3389.042	3394.582	3399.142	3404.722	3410.322	3415.942	3421.582	3427.242	3432.922	3438.622	3444.342	3450.082	3455.842	3461.622	3467.422	3473.242	3479.082	3484.942	3490.822	3496.722	3502.642	3508.582	3514.542	3520.522	3526.522	3532.542	3538.582	3544.642	3550.722	3556.822	3562.942	3569.082	3575.242	3581.422	3587.622	3593.842	3599.122	3605.422	3611.742	3618.082	3624.442	3630.822	3637.222	3643.642	3650.082	3656.542	3663.022	3669.522	3676.042	3682.582	3689.142	3695.722	3702.322	3708.942	3715.582	3722.242	3728.922	3735.622	3742.342	3749.082	3755.842	3762.622	3769.422	3776.242	3783.082	3789.942	3796.822	3803.722	3810.642	3817.582	3824.542	3831.522	3838.522	3845.542	3852.582	3859.642	3866.722	3873.822	3880.942	3888.082	3895.242	3902.422	3909.622	3916.842	3924.082	3931.342	3938.622	3945.922	3953.242	3960.582	3967.942	3975.322	3982.722	3990.142	3997.582	4005.042	4012.522	4020.022	4027.542	4035.082	4042.642	4050.222	4057.822	4065.442	4073.082	4080.742	4088.422	4096.122	4103.842	4111.582	4119.342	4127.122	4134.922	4142.742	4150.582	4158.442	4166.322	4174.222	4182.142	4190.082	4198.042	4206.022	4214.022	4222.042	4230.082	4238.142	4246.222	4254.322	4262.442	4270.582	4278.742	4286.922	4295.122	4303.342	4311.582	4319.842	4328.122	4336.422	4344.742	4353.082	4361.442	4369.822	4378.222	4386.642	4395.082	4403.542	4412.022	4420.522	4429.042	4437.582	4446.142	4454.722	4463.322	4471.942	4480.582	4489.242	4497.922	4506.622	4515.342	4524.082	4532.842	4541.622	4550.422	4559.242	4568.082	4576.942	4585.822	4594.722	4603.642	4612.582	4621.542	4630.522	4639.522	4648.542	4657.582	4666.642	4675.722	4684.822	4693.942	4703.082	4712.242	4721.422	4730.622	4739.842	4749.082	4758.342	4767.622	4776.922	4786.242	4795.582	4804.942	4814.322	4823.722	4833.142	4842.582	4852.042	4861.522	4871.022	4880.542	4890.082	4899.642	4909.222	4918.822	4928.442	4938.082	4947.742	4957.422	4967.122	4976.842	4986.582	4996.342	5006.122	5015.922	5025.742	5035.582	5045.442	5055.322	5065.222	5075.142	5085.082	5095.042	5105.022	5115.022	5125.042	5135.082	5145.142	5155.222	5165.322	5175.442	5185.582	5195.742	5205.922	5216.122	5226.342	5236.582	5246.842	5257.122	5267.422	5277.742	5288.082	5298.442	5308.822	5319.222	5329.642	5340.082	5350.542	5361.022	5371.522	5382.042	5392.582	5403.142	5413.722	5424.322	5434.942	5445.582	5456.242	5466.922	5477.622	5488.342	5499.082	5509.842	5520.622	5531.422	5542.242	5553.082	5563.942	5574.822	5585.722	5596.642	5607.582	5618.542	5629.522	5640.522	5651.542	5662.582	5673.642	5684.722	5695.822	5706.942	5718.082	5729.242	5740.422	5751.622	5762.842	5774.082	5785.342	5796.622	5807.922	5819.242	5830.582	5841.942	5853.322	5864.722	5876.142	5887.582	5899.042	5910.522	5922.022	5933.542	5945.082	5956.642	5968.222	5979.822	5991.442	6003.082	6014.742	6026.422	6038.122	6049.842	6061.582	6073.342	6085.122	6096.922	6108.742	6120.582	6132.442	6144.322	6156.222	6168.142	6180.082	6192.042	6204.022	6216.022	6228.042	6240.082	6252.142	6264.222	6276.322	6288.442	6300.582	6312.742	6324.922	6337.122	6349.342	6361.582	6373.842	6386.122	6398.422	6410.742	6423.082	6435.442	6447.822	6460.222	6472.642	6485.082	6497.542	6510.022	6522.522	6535.042	6547.582	6560.142	6572.722	6585.322	6597.942	6610.582	6623.242	6635.922	6648.622	6661.342	6674.082	6686.842	6699.622	6712.422	6725.242	6738.082	6750.942	6763.822	6776.722	6789.642	6802.582	6815.542	6828.522	6841.522	6854.542	6867.582	6880.642	6893.722	6906.822	6919.942	6933.082	6946.242	6959.422	6972.622	6985.842	6999.082	7012.342	7025.622	7038.922	7052.242	7065.582	7078.942	7092.322	7105.722	7119.142	7132.582	7146.042	7159.522	7173.022	7186.542	7199.082	7212.642	7226.222	7239.822	7253.442	7267.082	7280.742	7294.422	7308.122	7321.842	7335.582	7349.342	7363.122	7376.922	7390.742	7404.582	7418.442	7432.322	7446.222	7460.142	7474.082	7488.042	7502.022	7516.022	7530.042	7544.082	7558.142	7572.222	7586.322	7600.442	7614.582	7628.742	7642.922	7657.122	7671.342	7685.582	7699.842	7714.122	7728.422	7742.742	7757.082	7771.442	7785.822	7799.222	7813.642	7828.082	7842.542	7857.022	7871.522	7886.042	7900.582	7915.142	7929.722	7944.322	7958.942	7973.582	7988.242	8002.922	8017.622	8032.342	8047.082	8061.842	8076.622	8091.422	8106.242	8121.082	8135.942	8150.822	8165.722	8180.642	8195.582	8210.542	8225.522	8240.522	8255.542	8270.582	8285.642	8300.722	8315.822	8330.942	8346.082	8361.242	8376.422	8391.622	8406.842	8422.082	8437.342	8452.622	8467.922	8483.242	8498.582	8513.942	8529.322	8544.722	8560.142	8575.582	8591.042	8606.522	8622.022	8637.542	8653.082	8668.642	8684.222	8699.822	8715.442	8731.082	8746.742	8762.422	8778.122	8793.842	8809.582	8825.342	8841.122	8856.922	8872.742	8888.582	8904.442	8920.322	8936.222	8952.142	8968.082	8984.042	9000.022	9016.022	9032.042	9048.082	9064.142	9080.222	9096.322	9112.442	9128.582	9144.742	9160.922	9177.122	9193.342	9209.582	9225.842	9242.122	9258.422	9274.742	9291.082	9307.442	9323.822	9340.222	9356.642	9373.082	9389.542	9406.022	9422.522	944

← SRINAGAR

LEH →

LEGEND:-

- EXISTING ROAD
- PROPOSED CENTER LINE
- PROPOSED DRAIN
- PROPOSED EARTHEN SHOULDER
- PROPOSED BRIDGE/CULVERT

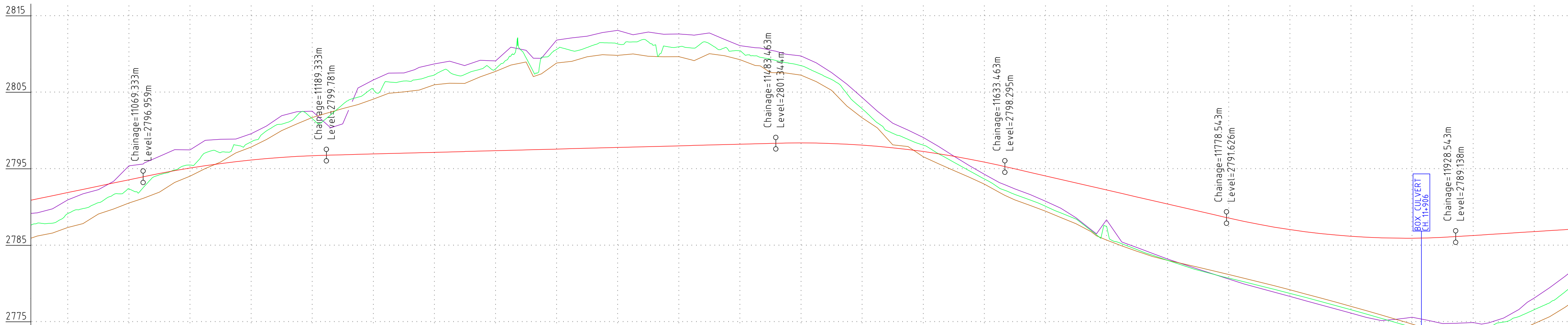
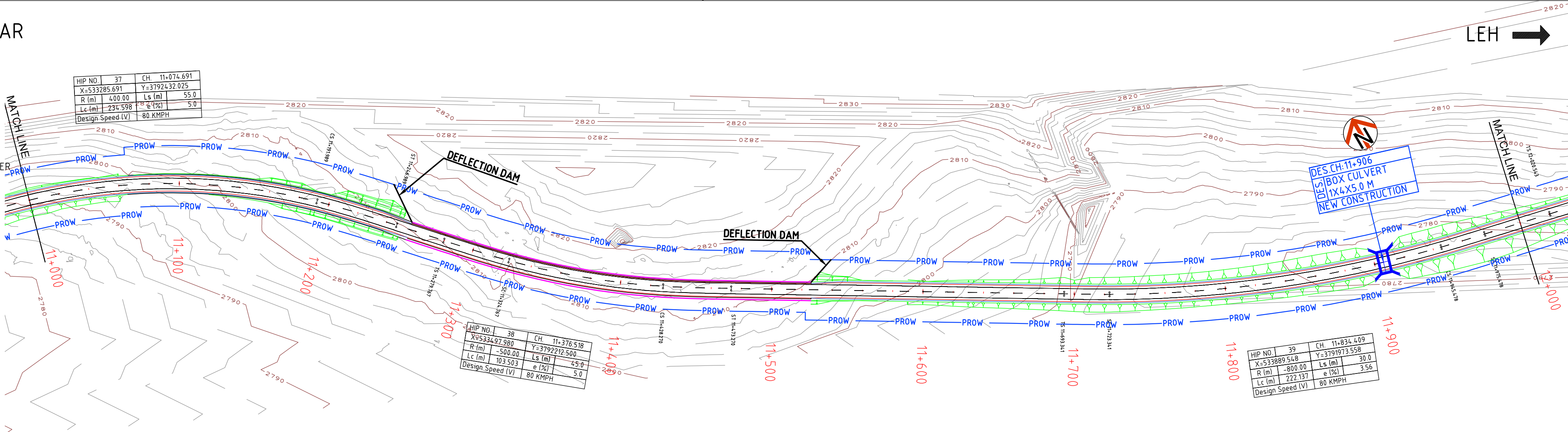


HIP NO.	37	CH	11+074.691
X=533285.691	Y=3792432.025		
R (m)	400.00	Ls (m)	55.0
Lc (m)	234.598	e (%)	5.0
Design Speed (V)	80 KMPH		

HIP NO.	38	CH	11+376.518
X=533497.980	Y=3792212.500		
R (m)	-500.00	Ls (m)	45.0
Lc (m)	103.503	e (%)	5.0
Design Speed (V)	80 KMPH		


HIP NO.	39	CH	11+834.409
X=533889.548	Y=3791973.558		
R (m)	-800.00	Ls (m)	30.0
Lc (m)	222.137	e (%)	3.56
Design Speed (V)	80 KMPH		


DES. CH. 11+906
BOX CULVERT
1X4X5.0 M
NEW CONSTRUCTION





DATUM LEVEL	
FINISHED ROAD LEVELS (m)	2789.066, 2794.000, 2794.900, 2795.735, 2796.569, 2797.386, 2798.096, 2798.683, 2799.149, 2799.494, 2799.718, 2799.837, 2799.944, 2800.050, 2800.156, 2800.263, 2800.369, 2800.475, 2800.581, 2800.688, 2800.794, 2800.900, 2801.006, 2801.113, 2801.219, 2801.325, 2801.385, 2801.309, 2801.098, 2800.749, 2800.264, 2799.641, 2798.883, 2797.994, 2797.075, 2796.156, 2795.236, 2794.317, 2793.398, 2792.479, 2791.560, 2790.641, 2789.730, 2788.821, 2787.912, 2787.003, 2786.094, 2785.185, 2784.276, 2783.367, 2782.458, 2781.549, 2780.640, 2779.731, 2778.822, 2777.913, 2777.004, 2776.095, 2775.186, 2774.277, 2773.368, 2772.459, 2771.550, 2770.641, 2769.732, 2768.823, 2767.914, 2767.005, 2766.096, 2765.187, 2764.278, 2763.369, 2762.460, 2761.551, 2760.642, 2759.733, 2758.824, 2757.915, 2757.006, 2756.097, 2755.188, 2754.279, 2753.370, 2752.461, 2751.552, 2750.643, 2749.734, 2748.825, 2747.916, 2747.007, 2746.098, 2745.189, 2744.280, 2743.371, 2742.462, 2741.553, 2740.644, 2739.735, 2738.826, 2737.917, 2737.008, 2736.099, 2735.190, 2734.281, 2733.372, 2732.463, 2731.554, 2730.645, 2729.736, 2728.827, 2727.918, 2727.009, 2726.100, 2725.191, 2724.282, 2723.373, 2722.464, 2721.555, 2720.646, 2719.737, 2718.828, 2717.919, 2717.010, 2716.101, 2715.192, 2714.283, 2713.374, 2712.465, 2711.556, 2710.647, 2709.738, 2708.829, 2707.920, 2707.011, 2706.102, 2705.193, 2704.284, 2703.375, 2702.466, 2701.557, 2700.648, 2699.739, 2698.830, 2697.921, 2697.012, 2696.103, 2695.194, 2694.285, 2693.376, 2692.467, 2691.558, 2690.649, 2689.740, 2688.831, 2687.922, 2687.013, 2686.104, 2685.195, 2684.286, 2683.377, 2682.468, 2681.559, 2680.650, 2679.741, 2678.832, 2677.923, 2677.014, 2676.105, 2675.196, 2674.287, 2673.378, 2672.469, 2671.560, 2670.651, 2669.742, 2668.833, 2667.924, 2667.015, 2666.106, 2665.197, 2664.288, 2663.379, 2662.470, 2661.561, 2660.652, 2659.743, 2658.834, 2657.925, 2657.016, 2656.107, 2655.198, 2654.289, 2653.380, 2652.471, 2651.562, 2650.653, 2649.744, 2648.835, 2647.926, 2647.017, 2646.108, 2645.199, 2644.290, 2643.381, 2642.472, 2641.563, 2640.654, 2639.745, 2638.836, 2637.927, 2637.018, 2636.109, 2635.200, 2634.291, 2633.382, 2632.473, 2631.564, 2630.655, 2629.746, 2628.837, 2627.928, 2627.019, 2626.110, 2625.201, 2624.292, 2623.383, 2622.474, 2621.565, 2620.656, 2619.747, 2618.838, 2617.929, 2617.020, 2616.111, 2615.202, 2614.293, 2613.384, 2612.475, 2611.566, 2610.657, 2609.748, 2608.839, 2607.930, 2607.021, 2606.112, 2605.203, 2604.294, 2603.385, 2602.476, 2601.567, 2600.658, 2599.749, 2598.840, 2597.931, 2597.022, 2596.113, 2595.204, 2594.295, 2593.386, 2592.477, 2591.568, 2590.659, 2589.750, 2588.841, 2587.932, 2587.023, 2586.114, 2585.205, 2584.296, 2583.387, 2582.478, 2581.569, 2580.660, 2579.751, 2578.842, 2577.933, 2577.024, 2576.115, 2575.206, 2574.297, 2573.388, 2572.479, 2571.570, 2570.661, 2569.752, 2568.843, 2567.934, 2567.025, 2566.116, 2565.207, 2564.298, 2563.389, 2562.480, 2561.571, 2560.662, 2559.753, 2558.844, 2557.935, 2557.026, 2556.117, 2555.208, 2554.299, 2553.390, 2552.481, 2551.572, 2550.663, 2549.754, 2548.845, 2547.936, 2547.027, 2546.118, 2545.209, 2544.300, 2543.391, 2542.482, 2541.573, 2540.664, 2539.755, 2538.846, 2537.937, 2537.028, 2536.119, 2535.210, 2534.301, 2533.392, 2532.483, 2531.574, 2530.665, 2529.756, 2528.847, 2527.938, 2527.029, 2526.120, 2525.211, 2524.302, 2523.393, 2522.484, 2521.575, 2520.666, 2519.757, 2518.848, 2517.939, 2517.030, 2516.121, 2515.212, 2514.303, 2513.394, 2512.485, 2511.576, 2510.667, 2509.758, 2508.849, 2507.940, 2507.031, 2506.122, 2505.213, 2504.304, 2503.395, 2502.486, 2501.577, 2500.668, 2499.759, 2498.850, 2497.941, 2497.032, 2496.123, 2495.214, 2494.305, 2493.396, 2492.487, 2491.578, 2490.669, 2489.760, 2488.851, 2487.942, 2487.033, 2486.124, 2485.215, 2484.306, 2483.397, 2482.488, 2481.579, 2480.670, 2479.761, 2478.852, 2477.943, 2477.034, 2476.125, 2475.216, 2474.307, 2473.398, 2472.489, 2471.580, 2470.671, 2469.762, 2468.853, 2467.944, 2467.035, 2466.126, 2465.217, 2464.308, 2463.399, 2462.490, 2461.581, 2460.672, 2459.763, 2458.854, 2457.945, 2457.036, 2456.127, 2455.218, 2454.309, 2453.400, 2452.491, 2451.582, 2450.673, 2449.764, 2448.855, 2447.946, 2447.037, 2446.128, 2445.219, 2444.310, 2443.401, 2442.492, 2441.583, 2440.674, 2439.765, 2438.856, 2437.947, 2437.038, 2436.129, 2435.220, 2434.311, 2433.402, 2432.493, 2431.584, 2430.675, 2429.766, 2428.857, 2427.948, 2427.039, 2426.130, 2425.221, 2424.312, 2423.403, 2422.494, 2421.585, 2420.676, 2419.767, 2418.858, 2417.949, 2417.040, 2416.131, 2415.222, 2414.313, 2413.404, 2412.495, 2411.586, 2410.677, 2409.768, 2408.859, 2407.950, 2407.041, 2406.132, 2405.223, 2404.314, 2403.405, 2402.496, 2401.587, 2400.678, 2399.769, 2398.860, 2397.951, 2397.042, 2396.133, 2395.224, 2394.315, 2393.406, 2392.497, 2391.588, 2390.679, 2389.770, 2388.861, 2387.952, 2387.043, 2386.134, 2385.225, 2384.316, 2383.407, 2382.498, 2381.589, 2380.680, 2379.771, 2378.862, 2377.953, 2377.044, 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
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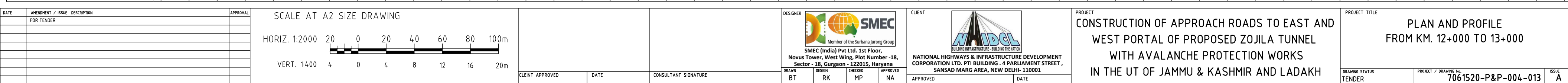
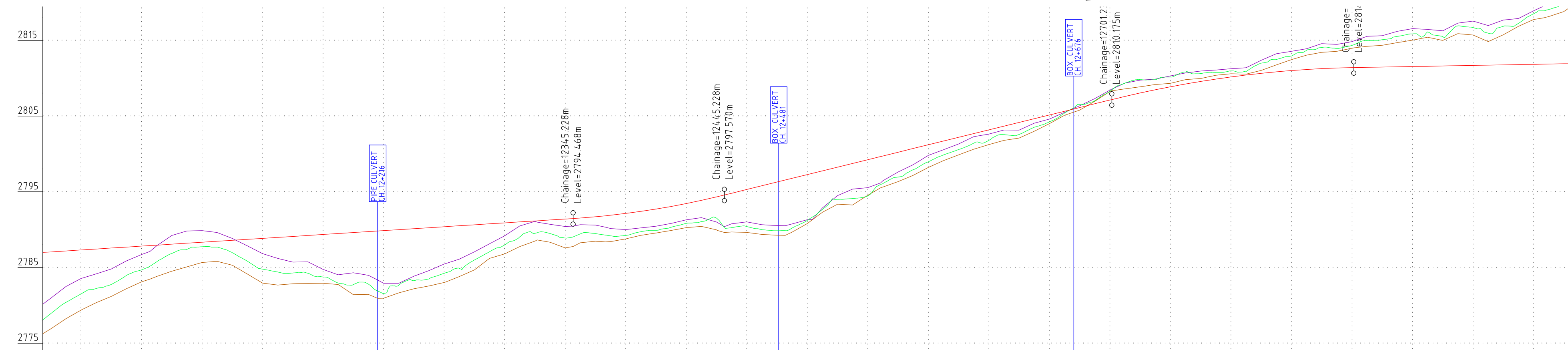
EXISTING ROAD


PROPOSED CENTER LINE


PROPOSED DRAIN


PROPOSED EARTHEN SHOULDER


PROPOSED BRIDGE/CULVERT


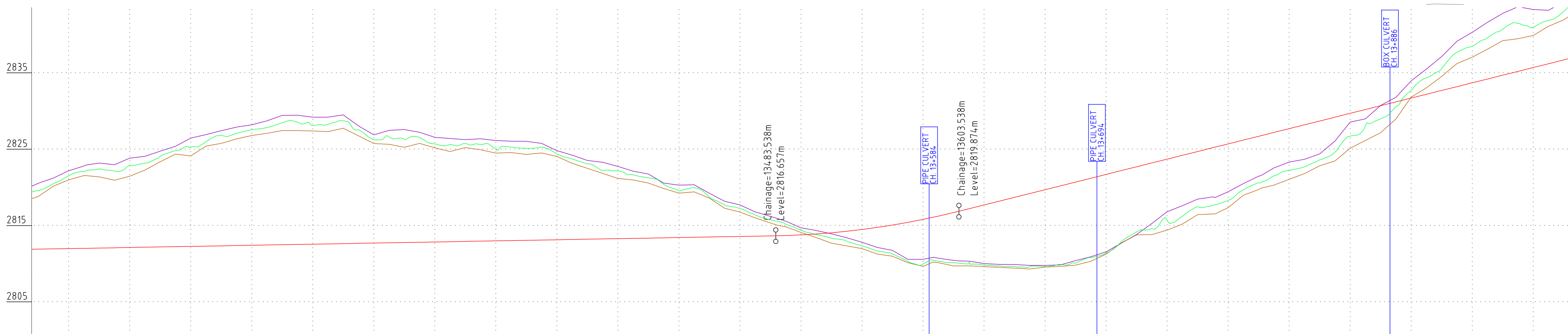
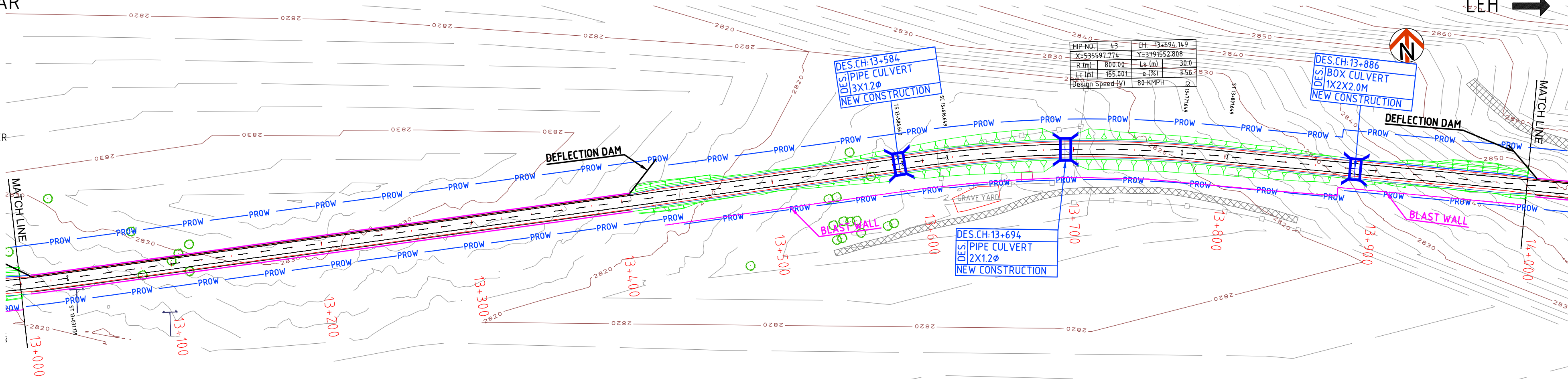
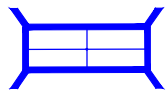


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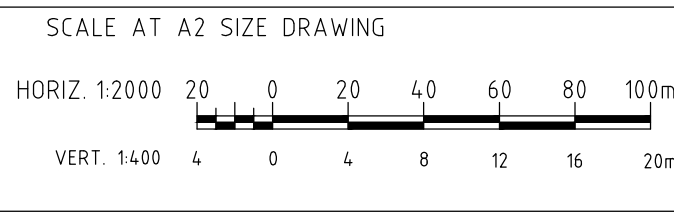
- EXISTING ROAD
- PROPOSED CENTER LINE
- PROPOSED DRAIN
- PROPOSED EARTHEN SHOULDER
- PROPOSED BRIDGE/CULVERT



DATUM LEVEL		FINISHED ROAD LEVELS (m)	GROUND LEVEL AT DESIGN CL (m)	LEVEL DIFFERENCE (m)	PROPOSED GROUND LEVEL AT 6M FROM CL LHS (m)	PROPOSED GROUND LEVEL AT 6M FROM CL RHS (m)	HORIZONTAL ALIGNMENT	VERTICAL ALIGNMENT	SUPERELEVATION	TYPICAL CROSS SECTION TYPE	CHAINAGE (m)
		2814.906	2822.574	-7.668	2823.529	2821.801	L=4.5m	G=0.362	e=2.000	TCS TYPE IX	13000
		2814.978	2824.510	-9.531	2825.172	2823.978		L=622.300m	e=2.500	TCS TYPE VII	13020
		2815.051	2825.407	-10.357	2825.407	2824.367			e=2.500	TCS TYPE VI	13040
		2815.123	2825.848	-10.725	2825.848	2824.466			e=3.600	TCS TYPE V	13060
		2815.196	2827.039	-11.843	2827.039	2826.352			e=2.500	TCS TYPE VIII	13080
		2815.268	2828.252	-12.984	2828.252	2827.117			e=2.500	TCS TYPE IX	13100
		2815.341	2829.787	-14.446	2829.787	2828.757			e=2.500	TCS TYPE VII	13120
		2815.413	2830.544	-15.131	2830.544	2829.789			e=3.600	TCS TYPE VI	13140
		2815.485	2831.463	-15.977	2831.463	2830.433			e=2.500	TCS TYPE VIII	13160
		2815.558	2831.112	-15.554	2831.112	2830.366			e=2.500	TCS TYPE IX	13180
		2815.630	2831.708	-16.078	2831.708	2830.742			e=2.500	TCS TYPE VII	13200
		2815.703	2829.270	-13.568	2829.270	2828.740			e=3.600	TCS TYPE VI	13220
		2815.775	2829.325	-13.550	2829.325	2828.260			e=2.500	TCS TYPE VIII	13240
		2815.847	2828.684	-12.837	2828.684	2828.183			e=2.500	TCS TYPE IX	13260
		2815.920	2828.763	-12.843	2828.763	2828.217			e=2.500	TCS TYPE VII	13280
		2815.992	2827.996	-12.003	2827.996	2827.495			e=3.600	TCS TYPE VI	13300
		2816.065	2828.114	-12.049	2828.114	2827.320			e=2.500	TCS TYPE VIII	13320
		2816.137	2827.384	-11.246	2827.384	2827.054			e=2.500	TCS TYPE IX	13340
		2816.209	2826.093	-9.883	2826.093	2825.497			e=2.500	TCS TYPE VII	13360
		2816.282	2825.163	-8.882	2825.163	2824.179			e=3.600	TCS TYPE VI	13380
		2816.354	2824.253	-7.899	2824.253	2823.569			e=2.500	TCS TYPE VIII	13400
		2816.427	2822.561	-6.134	2822.561	2822.237			e=2.500	TCS TYPE IX	13420
		2816.499	2821.710	-5.211	2821.710	2821.574			e=2.500	TCS TYPE VII	13440
		2816.572	2820.235	-3.663	2820.235	2819.778			e=3.600	TCS TYPE VI	13460
		2816.644	2818.736	-2.092	2818.736	2818.327			e=2.500	TCS TYPE VIII	13480
		2816.769	2817.388	-0.620	2817.388	2817.098			e=2.500	TCS TYPE IX	13500
		2817.046	2816.333	-0.712	2816.333	2815.696			e=2.500	TCS TYPE VII	13520
		2817.477	2815.342	-2.135	2815.342	2814.977			e=3.600	TCS TYPE VI	13540
		2818.063	2814.287	-3.777	2814.287	2813.974			e=2.500	TCS TYPE VIII	13560
		2818.804	2812.958	-5.846	2812.958	2812.644			e=2.500	TCS TYPE IX	13580
		2819.699	2813.125	-6.574	2813.125	2812.716			e=2.500	TCS TYPE VII	13600
		2820.697	2812.847	-7.850	2812.847	2812.601			e=3.600	TCS TYPE VI	13620
		2821.697	2812.643	-9.054	2812.643	2812.422			e=2.500	TCS TYPE VIII	13640
		2822.697	2812.627	-10.070	2812.627	2812.550			e=2.500	TCS TYPE IX	13660
		2823.697	2813.081	-10.615	2813.081	2812.806			e=2.500	TCS TYPE VII	13680
		2824.697	2814.387	-10.310	2814.387	2814.252			e=3.600	TCS TYPE VI	13700
		2825.697	2817.164	-8.532	2817.164	2816.773			e=2.500	TCS TYPE VIII	13720
		2826.697	2820.696	-8.001	2820.696	2817.401			e=2.500	TCS TYPE IX	13740
		2827.697	2824.433	-7.263	2824.433	2819.435			e=2.500	TCS TYPE VII	13760
		2828.697	2828.128	-7.407	2828.128	2820.343			e=3.600	TCS TYPE VI	13780
		2829.697	2832.587	-6.109	2832.587	2822.711			e=2.500	TCS TYPE VIII	13800
		2830.697	2836.197	-5.499	2836.197	2824.055			e=2.500	TCS TYPE IX	13820
		2831.697	2839.607	-5.090	2839.607	2825.832			e=2.500	TCS TYPE VII	13840
		2832.697	2843.714	-2.983	2843.714	2828.127			e=3.600	TCS TYPE VI	13860
		2833.697	2847.919	-1.717	2847.919	2830.168			e=2.500	TCS TYPE VIII	13880
		2834.697	2852.735	-1.038	2852.735	2834.816			e=2.500	TCS TYPE IX	13900
		2835.697	2858.572	-2.875	2858.572	2837.554			e=2.500	TCS TYPE VII	13920
		2836.697	2864.185	-4.788	2864.185	2840.046			e=3.600	TCS TYPE VI	13940
		2837.697	2869.717	-6.020	2869.717	2842.213			e=2.500	TCS TYPE VIII	13960
		2838.696	2874.056	-5.292	2874.056	2844.935			e=2.500	TCS TYPE IX	13980
		2839.696	2878.617	-6.359	2878.617	2847.731			e=2.500	TCS TYPE VII	14000

50 mm ON ORIGINAL (A3)

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	



CLIENT APPROVED

DATE

CONSULTANT SIGNATURE

DESIGNER
BT
SMC
SMC (India) Pvt Ltd. 1st Floor,
Novus Tower, West Wing, Plot Number -18,
Sector - 18, Gurgaon - 122015, Haryana

CHECKED
RK
MP

APPROVED
NA

CLIENT
NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. PFI BUILDING, 4 PARLIAMENT STREET, SANSAD MARG AREA, NEW DELHI - 110001

APPROVED

DATE

PROJECT
CONSTRUCTION OF APPROACH ROADS TO EAST AND WEST PORTAL OF PROPOSED ZOJILA TUNNEL WITH AVALANCHE PROTECTION WORKS IN THE UT OF JAMMU & KASHMIR AND LADAKH

PROJECT TITLE
PLAN AND PROFILE FROM KM. 13+000 TO 14+000

DRAWING STATUS
TENDER

PROJECT / DRAWING NO.
7061520-P&P-004-014

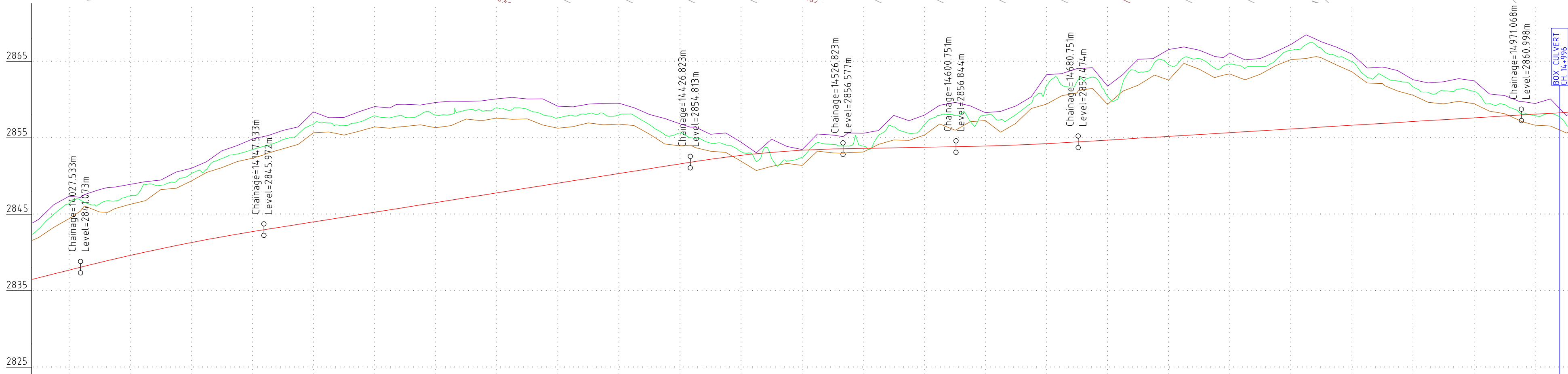
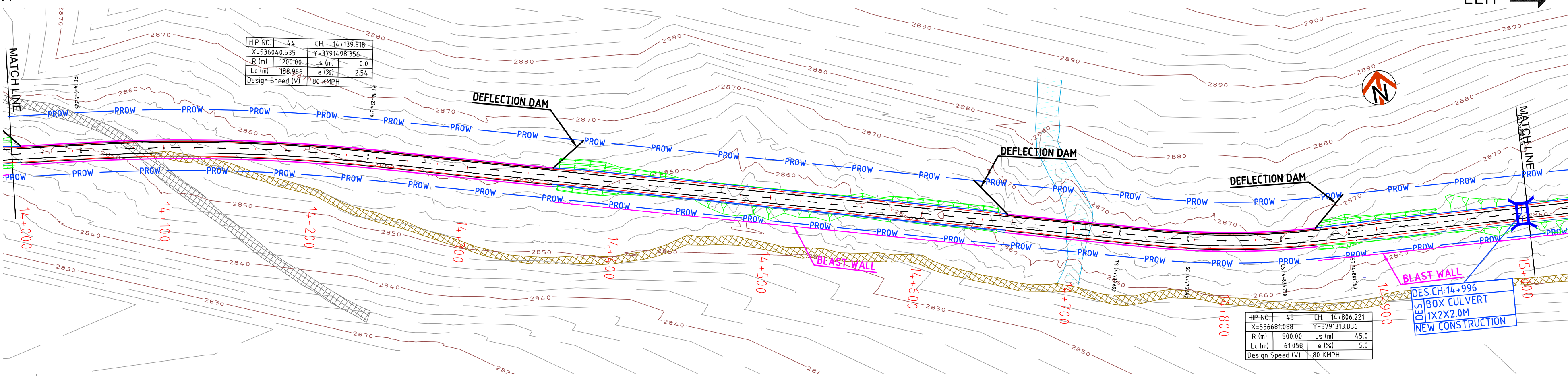
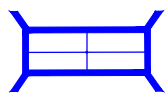
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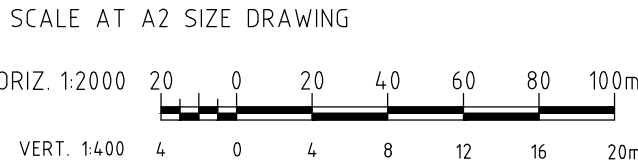
LEH →

LEGEND:-

- EXISTING ROAD
PROPOSED CENTER LINE
PROPOSED DRAIN
PROPOSED EARTHEN SHOULDER
PROPOSED BRIDGE/CULVERT



DATEM LEVEL	2825																								
FINISHED ROAD LEVELS (m)	2839.696 2840.696 2841.685 2842.616 2843.486 2844.295 2845.043 2845.730 2846.367 2847.000 2847.633 2848.266 2848.899 2849.532 2850.166 2850.799 2851.432 2852.065 2852.698 2853.331 2853.964 2854.597 2855.206 2855.709 2856.100 2856.379 2856.546 2856.625 2856.697 2856.769 2856.842 2856.934 2857.068 2857.246 2857.465 2857.708 2857.951 2858.193 2858.436 2858.679 2858.922 2859.164 2859.407 2859.650 2859.892 2860.135 2860.378 2860.621 2860.863 2861.103 2861.346																								
GROUND LEVEL AT DESIGN CL (m)	2846.056 2849.420 2849.348 2850.411 2851.799 2853.312 2855.299 2856.646 2857.770 2858.905 2859.595 2860.879 2860.680 2862.632 2861.638 2861.929 2861.742 2860.606 2861.209 2862.530 2860.983 2859.744 2858.629 2857.315 2856.190 2855.283 2855.456 2857.130 2856.906 2859.418 2859.704 2860.946 2860.975 2861.040 2862.251 2863.428 2864.566 2865.589 2866.375 2867.660 2868.352 2869.696 2869.954 2869.650 2869.892 2860.135 2860.378 2860.621 2860.863 2861.103 2861.346																								
LEVEL DIFFERENCE (m)	-6.359 -8.723 -7.663 -7.796 -8.314 -9.017 -10.257 -10.732 -11.404 -12.804 -11.962 -12.613 -11.780 -11.458 -11.473 -11.131 -10.310 -8.542 -8.512 -7.652 -5.780 -4.032 -2.108 -0.480 -0.817 0.922 -0.584 -0.281 -2.722 -2.935 -4.105 -4.041 -3.972 -7.504 -7.913 -8.615 -9.395 -9.939 -8.982 -8.431 -10.289 -8.305 -8.305 -6.258 -4.533 -3.772 -3.442 -1.482 -1.150 -1.150																								
PROPOSED GROUND LEVEL AT 6M FROM CL LHS (m)	2847.318 2850.362 2851.240 2851.919 2852.472 2854.019 2856.300 2857.840 2858.978 2861.392 2860.661 2862.095 2862.401 2862.632 2862.791 2863.110 2863.082 2862.143 2862.405 2862.530 2861.061 2859.840 2858.464 2857.315 2856.190 2855.283 2855.456 2857.130 2856.906 2859.418 2859.704 2860.946 2860.975 2861.040 2862.251 2863.428 2864.566 2865.589 2866.375 2867.660 2868.352 2869.696 2869.954 2869.650 2869.892 2860.135 2860.378 2860.621 2860.863 2861.103 2861.346																								
PROPOSED GROUND LEVEL AT 6M FROM CL RHS (m)	2844.953 2847.425 2848.292 2849.302 2850.472 2852.353 2854.091 2855.736 2856.573 2858.675 2858.363 2859.425 2860.502 2861.321 2862.466 2863.588 2864.488 2859.267 2859.962 2859.800 2858.482 2856.963 2856.242 2854.950 2854.270 2854.384 2856.033 2856.151 2857.722 2858.372 2859.015 2860.263 2860.913 2862.414 2863.889 2864.877 2865.559 2866.986 2866.361 2866.315 2868.241 2868.472 2866.635 2865.102 2863.585 2862.447 2862.454 2861.159 2859.649 2858.688																								
HORIZONTAL ALIGNMENT	R=1200m L=188.986m <																								



DESIGNER

BT

DESIGN

RK

CHECKED

MP

APPROVED

NA

DATE

06 Mar 2020

CONSULTANT SIGNATURE

CLIENT

NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. PFI BUILDING, 4 PARLIAMENT STREET, SANSAD MARG AREA, NEW DELHI-110001

PROJECT

CONSTRUCTION OF APPROACH ROADS TO EAST AND WEST PORTAL OF PROPOSED ZOJILA TUNNEL WITH AVALANCHE PROTECTION WORKS IN THE UT OF JAMMU & KASHMIR AND LADAKH

PROJECT TITLE

PLAN AND PROFILE FROM KM. 14+000 TO 15+000

DRAWING STATUS

TENDER

PROJECT / DRAWING NO.

7061520-P&P-004-015

ISSUE

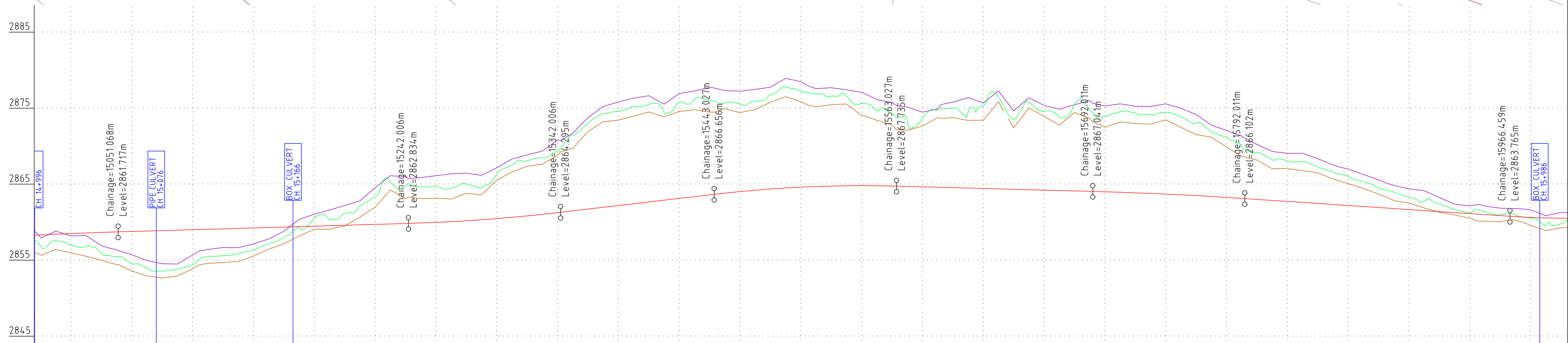
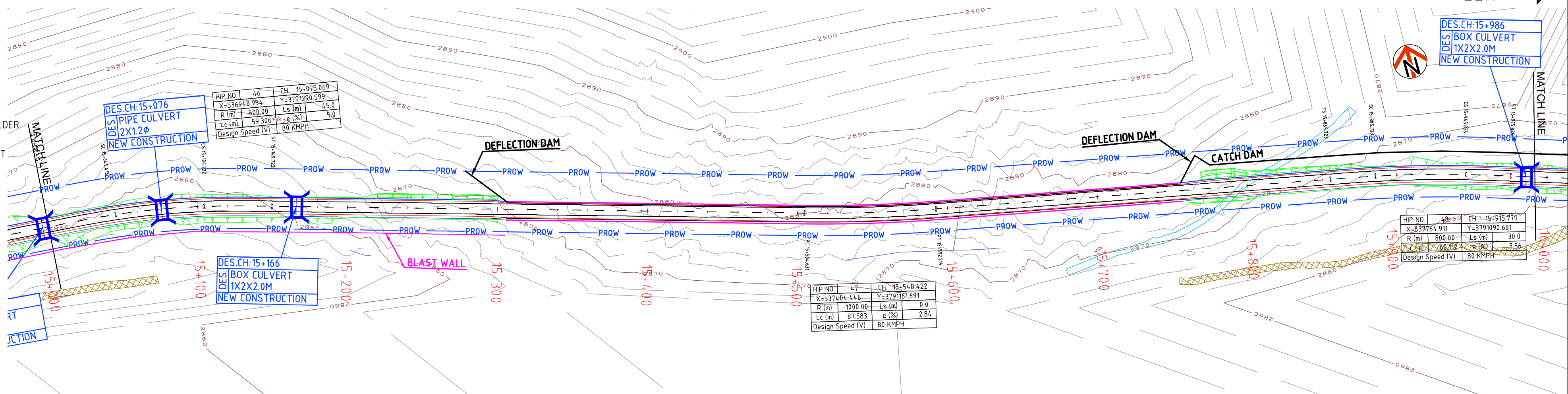
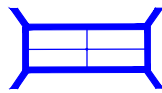
A

← SRINAGAR

LEH →

LEGEND:-

- EXISTING ROAD
PROPOSED CENTER LINE
PROPOSED DRAIN
PROPOSED EARTHEN SHOULDER
PROPOSED BRIDGE/CULVERT



DATUM LEVEL

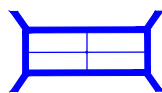
FINISHED ROAD LEVELS (m)	2861.316	2859.856	2861.497	2861.647	2861.769	2861.886	2862.003	2862.120	2862.237	2862.354	2862.471	2862.588	2862.705	2862.822	2862.939	2863.056	2863.173	2863.290	2863.407	2863.524	2863.641	2863.758	2863.875	2863.992	2864.109	2864.226	2864.343	2864.460	2864.577	2864.694	2864.811	2864.928	2865.045	2865.162	2865.279	2865.396	2865.513	2865.630	2865.747	2865.864	2865.981	2866.098	2866.215	2866.332	2866.449	2866.566	2866.683	2866.800	2866.917	2867.034	2867.151	2867.268	2867.385	2867.502	2867.619	2867.736	2867.853	2867.970	2868.087	2868.204	2868.321	2868.438	2868.555	2868.672	2868.789	2868.906	2869.023	2869.140	2869.257	2869.374	2869.491	2869.608	2869.725	2869.842	2869.959	2870.076	2870.193	2870.310	2870.427	2870.544	2870.661	2870.778	2870.895	2871.012	2871.129	2871.246	2871.363	2871.480	2871.597	2871.714	2871.831	2871.948	2872.065	2872.182	2872.299	2872.416	2872.533	2872.650	2872.767	2872.884	2872.999	2873.116	2873.233	2873.350	2873.467	2873.584	2873.701	2873.818	2873.935	2874.052	2874.169	2874.286	2874.403	2874.520	2874.637	2874.754	2874.871	2874.988	2875.105	2875.222	2875.339	2875.456	2875.573	2875.690	2875.807	2875.924	2876.041	2876.158	2876.275	2876.392	2876.509	2876.626	2876.743	2876.860	2876.977	2877.094	2877.211	2877.328	2877.445	2877.562	2877.679	2877.796	2877.913	2878.030	2878.147	2878.264	2878.381	2878.498	2878.615	2878.732	2878.849	2878.966	2879.083	2879.200	2879.317	2879.434	2879.551	2879.668	2879.785	2879.902	2880.019	2880.136	2880.253	2880.370	2880.487	2880.604	2880.721	2880.838	2880.955	2881.072	2881.189	2881.306	2881.423	2881.540	2881.657	2881.774	2881.891	2882.008	2882.125	2882.242	2882.359	2882.476	2882.593	2882.710	2882.827	2882.944	2883.061	2883.178	2883.295	2883.412	2883.529	2883.646	2883.763	2883.880	2883.997	2884.114	2884.231	2884.348	2884.465	2884.582	2884.699	2884.816	2884.933	2885.050	2885.167	2885.284	2885.401	2885.518	2885.635	2885.752	2885.869	2885.986	2886.103	2886.220	2886.337	2886.454	2886.571	2886.688	2886.805	2886.922	2887.039	2887.156	2887.273	2887.390	2887.507	2887.624	2887.741	2887.858	2887.975	2888.092	2888.209	2888.326	2888.443	2888.560	2888.677	2888.794	2888.911	2889.028	2889.145	2889.262	2889.379	2889.496	2889.613	2889.730	2889.847	2889.964	2890.081	2890.198	2890.315	2890.432	2890.549	2890.666	2890.783	2890.900	2891.017	2891.134	2891.251	2891.368	2891.485	2891.602	2891.719	2891.836	2891.953	2892.070	2892.187	2892.304	2892.421	2892.538	2892.655	2892.772	2892.889	2893.006	2893.123	2893.240	2893.357	2893.474	2893.591	2893.708	2893.825	2893.942	2894.059	2894.176	2894.293	2894.410	2894.527	2894.644	2894.761	2894.878	2894.995	2895.112	2895.229	2895.346	2895.463	2895.580	2895.697	2895.814	2895.931	2896.048	2896.165	2896.282	2896.399	2896.516	2896.633	2896.750	2896.867	2896.984	2897.101	2897.218	2897.335	2897.452	2897.569	2897.686	2897.803	2897.920	2898.037	2898.154	2898.271	2898.388	2898.505	2898.622	2898.739	2898.856	2898.973	2899.090	2899.207	2899.324	2899.441	2899.558	2899.675	2899.792	2899.909	2900.026	2900.143	2900.260	2900.377	2900.494	2900.611	2900.728	2900.845	2900.962	2901.079	2901.196	2901.313	2901.430	2901.547	2901.664	2901.781	2901.898	2902.015	2902.132	2902.249	2902.366	2902.483	2902.600	2902.717	2902.834	2902.951	2903.068	2903.185	2903.302	2903.419	2903.536	2903.653	2903.770	2903.887	2904.004	2904.121	2904.238	2904.355	2904.472	2904.589	2904.706	2904.823	2904.940	2905.057	2905.174	2905.291	2905.408	2905.525	2905.642	2905.759	2905.876	2905.993	2906.110	2906.227	2906.344	2906.461	2906.578	2906.695	2906.812	2906.929	2907.046	2907.163	2907.280	2907.397	2907.514	2907.631	2907.748	2907.865	2907.982	2908.099	2908.216	2908.333	2908.450	2908.567	2908.684	2908.801	2908.918	2909.035	2909.152	2909.269	2909.386	2909.503	2909.620	2909.737	2909.854	2909.971	2910.088	2910.205	2910.322	2910.439	2910.556	2910.673	2910.790	2910.907	2911.024	2911.141	2911.258	2911.375	2911.492	2911.609	2911.726	2911.843	2911.960	2912.077	2912.194	2912.311	2912.428	2912.545	2912.662	2912.779	2912.896	2913.013	2913.130	2913.247	2913.364	2913.481	2913.598	2913.715	2913.832	2913.949	2914.066	2914.183	2914.300	2914.417	2914.534	2914.651	2914.768	2914.885	2914.999	2915.116	2915.233	2915.350	2915.467	2915.584	2915.701	2915.818	2915.935	2916.052	2916.169	2916.286	2916.403	2916.520	2916.637	2916.754	2916.871	2916.988	2917.105	2917.222	2917.339	2917.456	2917.573	2917.690	2917.807	2917.924	2918.041	2918.158	2918.275	2918.392	2918.509	2918.626	2918.743	2918.860	2918.977	2919.094	2919.211	2919.328	2919.445	2919.562	2919.679	2919.796	2919.913	2920.030	2920.147	2920.264	2920.381	2920.498	2920.615	2920.732	2920.849	2920.966	2921.083	2921.200	2921.317	2921.434	2921.551	2921.668	2921.785	2921.902	2922.019	2922.136	2922.253	2922.370	2922.487	2922.604	2922.721	2922.838	2922.955	2923.072	2923.189	2923.306	2923.423	2923.540	2923.657	2923.774	2923.891	2924.008	2924.125	2924.242	2924.359	2924.476	2924.593	2924.710	2924.827	2924.944	2925.061	2925.178	2925.295	2925.412	2925.529	2925.646	2925.763	2925.880	2925.997	2926.114	2926.231	2926.348	2926.465	2926.582	2926.699	2926.816	2926.933	2927.050	2927.167	2927.284	2927.401	2927.518	2927.635	2927.752	2927.869	2927.986	2928.103	2928.220	2928.337	2928.454	2928.571	2928.688	2928.805	2928.922	2929.039	2929.156	2929.273	2929.390	2929.507	2929.624	2929.741	2929.858	2929.975	2930.092	2930.209	2930.326	2930.443	2930.560	2930.677	2930.794	2930.911	2931.028	2931.145	2931.262	2931.379	2931.496	2931.613	2931.730	2931.847	2931.964	2932.081	2932.198	2932.315	2932.432	2932.549	2932.666	2932.783	2932.900	2933.017	2933.134	2933.251	2933.368	2933.485	2933.602	2933.719	2933.836	2933.953	2934.070	2934.187	2934.304	2934.421	2934.538	2934.655	2934.772	2934.889	2935.006	2935.123	2935.240	2935.357	2935.474	2935.591	2935.708	2935.825	2935.942	2936.059	2936.176	2936.293	2936.410	2936.527	2936.644	2936.761	2936.878	2936.995	2937.112	2937.229	2937.346	2937.463	2937.580	2937.697	2937.814	2937.931	2938.048	2938.165	2938.282	2938.399	2938.516	2938.633	2938.750	2938.867	2938.984	2939.101	2939.218	2939.335	2939.452	2939.569	2939.686	2939.803	2939.920	2940.037	2940.154	2940.271	2940.388	2940.505	2940.622	2940.739	2940.856	2940.973	2941.090	2941.207	2941.324	2941.441	2941.558	2941.675	2941.792	2941.909	2942.026	2942.143	2942.260	2942.377	2942.494	2942.611	2942.728	2942.845	2942.962	2943.079	2943.196	2943.313	2943.430	2943.547	2943.664	2943.781	2943.898	2944.015	2944.132	2944.249	2944.366	2944.483	2944.600	2944.717	2944.834	2944.951	2945.068	2945.185	2945.302	2945.419	2945.536	2945.653	2945.770	2945.887	2946.004	2946.121	2946.238	2946.355	2946.472	2946.589	2946.706	2946.823	2946.940	2947.057	2947.174	2947.291	2947.408	2947.525	2947.642	2947.759	2947.876	2947.993	2948.110	2948.227	2948.344	2948.461	2948.578	2948.695	2948.812	2948.929	2949.046	2949.163	2949.280	2949.397	2949.514	2949.631	2949.748	2949.865	2949.982	2950.099	2950.216	2950.333	2950.450	2950.567	2950.684	2950.801	2950.918	2951.035	2951.152	2951.269	2951.386	2951.503	2951.620	2951.737	2951.854	2951.971	2952.088	2952.205	2952.322	2952.439	2952.556	2952.673	2952.790	2952.907	2953.024	2953.141	2953.258	2953.375	2953.492	2953.609	2953.726	2953.843	2953.960	2954.077	2954.194	2954.311	2954.428	2954.545	2954.662	2954.779	2954.896	2955.013	2955.130	2955.247	2955.364	2955.481	2955.598	2955.715	2955.832	2955.949	2956.066	2956.183	2956.300	2956.417	2956.534	2956.651	2956.768	2956.885	2956.999	2957.116	2957.233	2957.350	2957.467	2957.584	2957.701	2957.818	2957.935	2958.052	2958.169	2958.286	2958.403	2958.520	2958.637	2958.754	2958.871	2958.988	2959.105	2959.222	2959.339	2959.456	2959.573	2959.690	2959.807	2959.924	2960.041	2960.158	2960.275	2960.392
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LEGEND:-

PROPOSED DRAIN

PROPOSED EARTHEN SHOULDER

PROPOSED BRIDGE/CULVERT



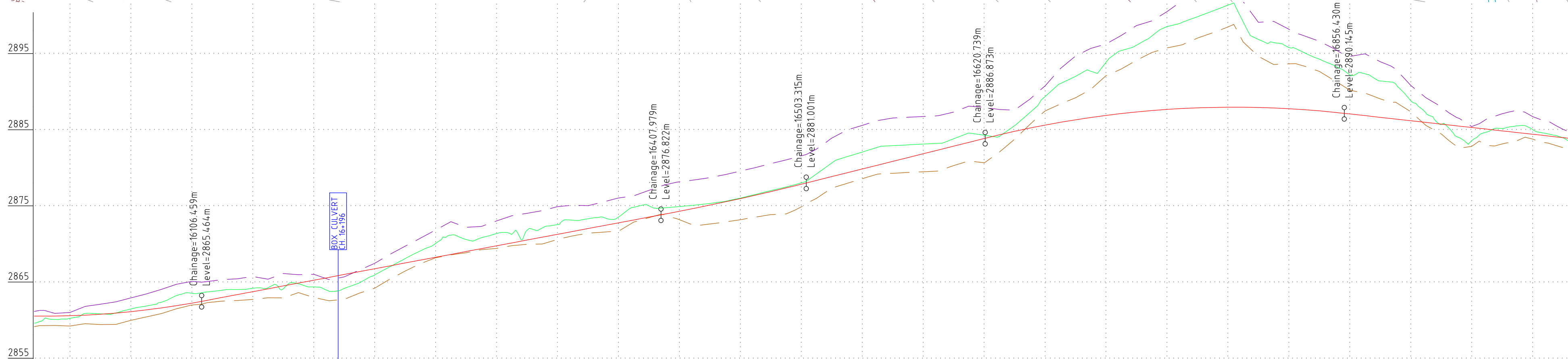
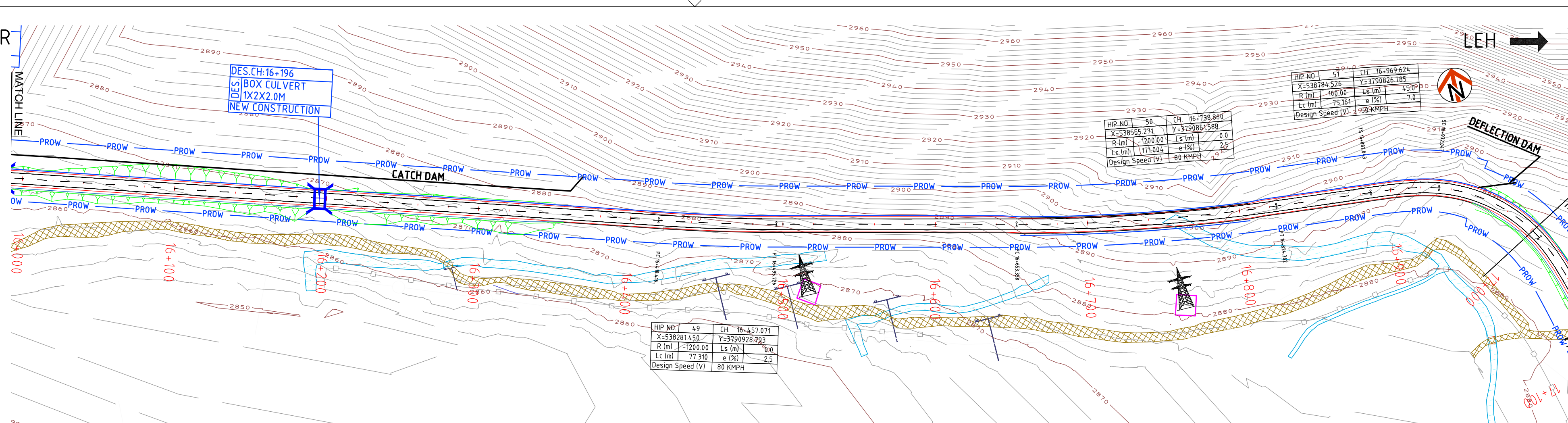
DES.CH:16+196
DES BOX CULVERT
1X2X2.0M
NEW CONSTRUCTION

HIP NO.	51	CH.	16.969.624
X=538784.526		Y=3790826.785	
R (m)	100.00	Ls (m)	459
Lc (m)	75.161	e (%)	7
Design Speed (V)	250	KMPH	

HIP NO.	50	CH.	16+738.860
X=538555.271		Y=3790864.588	
R (m)	-1200.00	Ls (m)	0.0
Lc (m)	171.004	e (%)	2.5
Design Speed (V)	80 KMPH		2.92

LEH →

DEFLECTION DAM


[illegible]

SCALE AT A2 SIZE DRAWING

HORIZ. 1:2000 20 0 20 40 60 80 100m

VERT. 1:400 4 0 4 8 12 16 20m

CLEINT APPROVED	DATE	CONSULTANT SIGNATURE
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DESIGNER  **SMEC**
Member of the Surlana Jurong Group
SMEC (India) Pvt Ltd. 1st Floor,

CLIENT



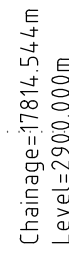
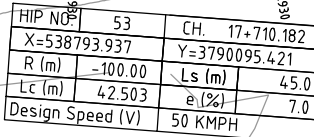

NIDCL
BUILDING INFRASTRUCTURE - BUILDING THE NATION

PROJECT
CONSTRUCTION OF APPROACH ROADS TO EAST AND
WEST PORTAL OF PROPOSED ZOJILA TUNNEL
WITH AVALANCHE PROTECTION WORKS
IN THE UT OF JAMMU & KASHMIR AND LADAKH

PROJECT TITLE	<p>PLAN AND PROFILE</p> <p>FROM KM. 16+000 TO 17+000</p>
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DRAWING STATUS TENDER	PROJECT / DRAWING No. 7061520 B&B 00/ 017	ISSUE A
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LEGEND:-




FINISHED ROAD LEVELS (m)	2885.953 2886.929 2886.953 2885.517 2886.509 2884.321 2886.064					
GROUND LEVEL AT DESIGN CL (m)	2888.036 2886.355 2884.632 2883.778 2883.093 2883.025 2885.180					
LEVEL DIFFERENCE (m)	-0.024 -0.992 -1.744 -12.527 -2883.093 -2883.025 -2885.180					
PROPOSED GROUND LEVEL AT 6M FROM CL LHS (m)	2885.636 2886.896 2883.712 2882.536 2882.536 2883.545 2885.180					
PROPOSED GROUND LEVEL AT 6M FROM CL RHS (m)	2885.636 2886.896 2883.712 2882.536 2882.536 2883.545 2885.180					
HORIZONTAL ALIGNMENT						
VERTICAL ALIGNMENT						
SUPERELEVATION						
TYPICAL CROSS SECTION TYPE	TCS TYPE VI TCS TYPE XI TCS TYPE VI					
CHAINAGE (m)	177000+ 177020+ 177040+ 177060+ 177080+ 177100+ 177120+ 177140+ 177160+ 177180+ 177200+ 177220+ 177240+ 177260+ 177280+ 177300+ 177320+ 177340+ 177360+ 177380+ 177400+ 177420+ 177440+ 177460+ 177480+ 177500+ 177520+ 177540+ 177560+ 177580+ 177600+ 177620+ 177640+ 177660+ 177680+ 177700+ 177720+ 177740+ 177760+ 177780+ 178000+ 178145+ 178144+					

SCALE AT A2 SIZE DRAWING

HORIZ. 1:2000 20 0 20 40 60 80 100m

VERT. 1:400 4 0 4 8 12 16 20m

CLEINT APPROVED	DATE	CONSULTANT SIGNATURE
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CLIENT	
NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. PTI BUILDING . 4 PARLIAMENT STREET , SANSAD MARG AREA, NEW DELHI- 110001	
APPROVED	DATE

PROJECT
CONSTRUCTION OF APPROACH ROADS TO EAST AND
WEST PORTAL OF PROPOSED ZOJILA TUNNEL
WITH AVALANCHE PROTECTION WORKS
IN THE UT OF JAMMU & KASHMIR AND LADAKH

PROJECT TITLE		
<p style="text-align: center;">PLAN AND PROFILE FROM KM. 17+000 TO 17+817</p>		
DRAWING STATUS	PROJECT / DRAWING No.	ISSUE
TENDER	7061520-P&P-004-018	A

← SRINAGAR

LEH →

LEGEND:-

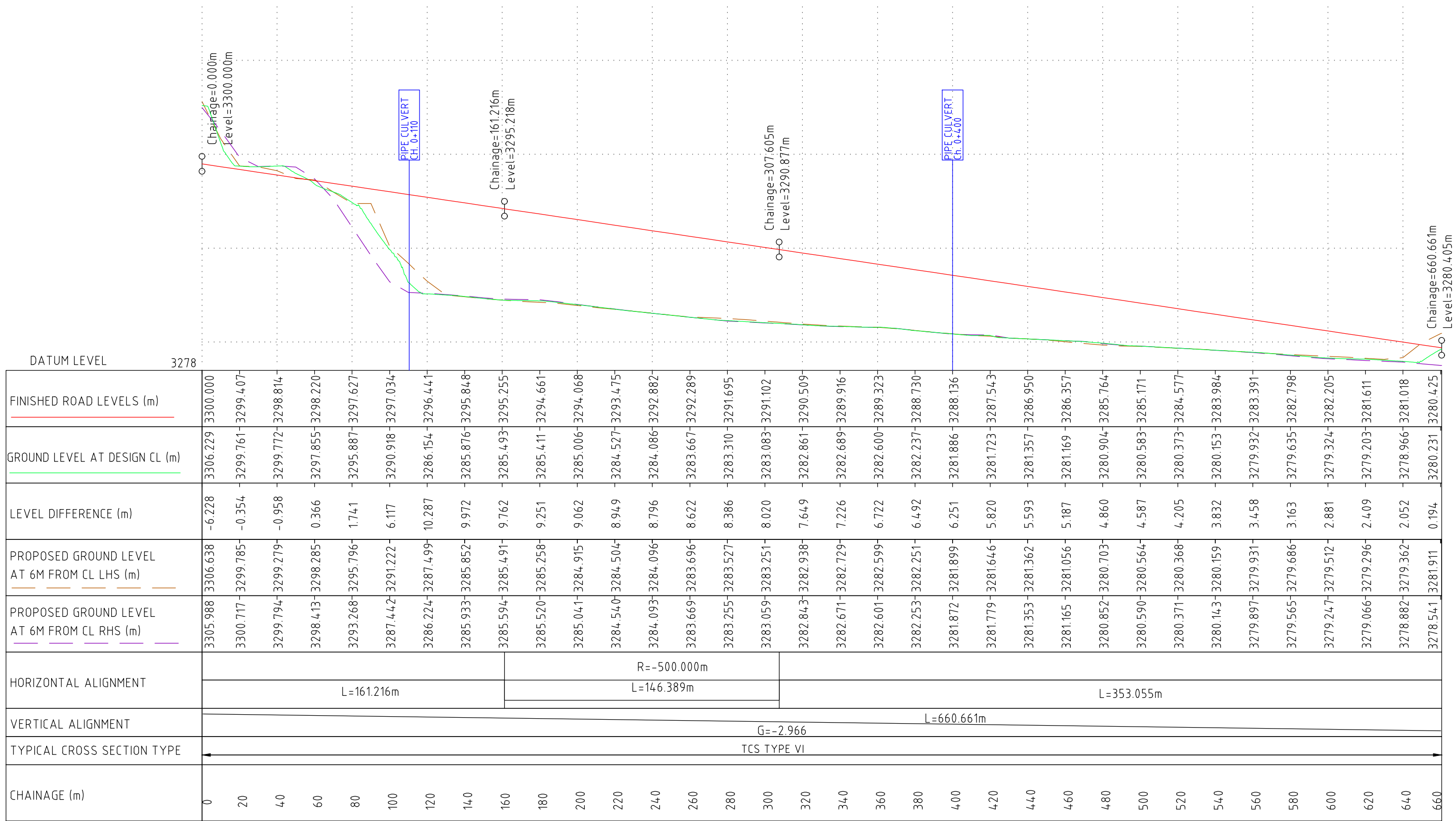
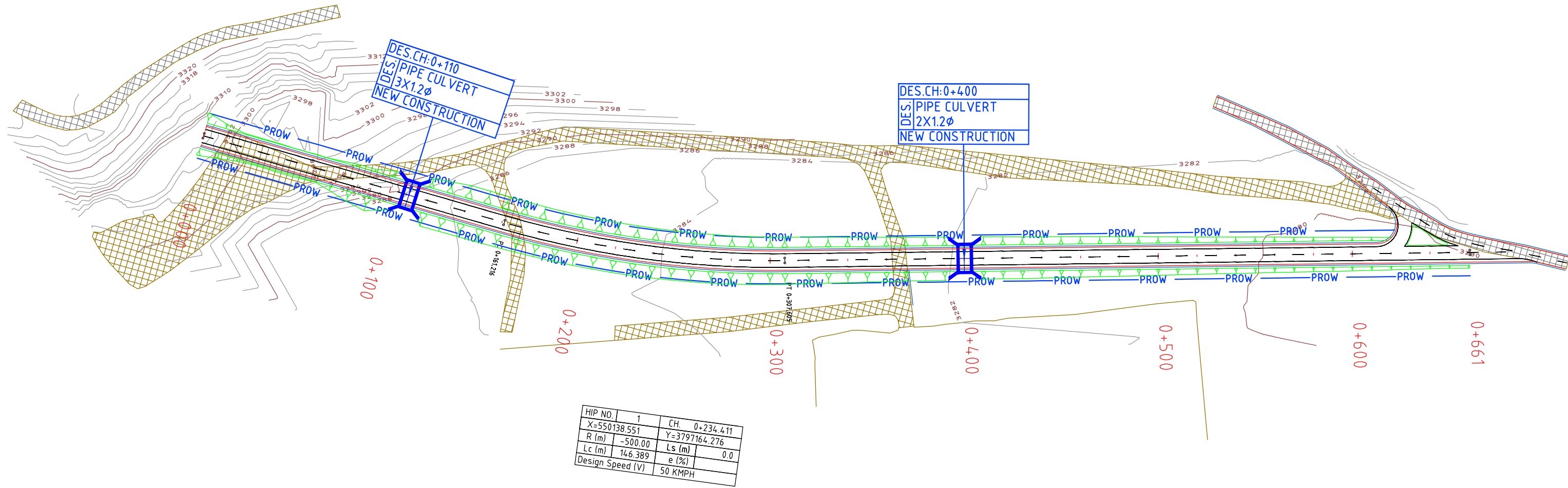
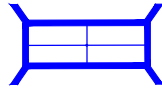
EXISTING ROAD

PROPOSED CENTER LINE

PROPOSED DRAIN

PROPOSED EARTHEN SHOULDER

PROPOSED BRIDGE/CULVERT



DATUM LEVEL	3278
FINISHED ROAD LEVELS (m)	3300.000
GROUND LEVEL AT DESIGN CL (m)	3306.229
LEVEL DIFFERENCE (m)	-6.228
PROPOSED GROUND LEVEL AT 6M FROM CL LHS (m)	3305.988
PROPOSED GROUND LEVEL AT 6M FROM CL RHS (m)	3305.988
HORIZONTAL ALIGNMENT	L=161.216m
VERTICAL ALIGNMENT	G=-2.966
TYPICAL CROSS SECTION TYPE	TCS TYPE VI
CHAINAGE (m)	0

SCALE AT A2 SIZE DRAWING

HORIZ. 1:2000

VERT. 1:400

CLIENT APPROVED	DATE	CONSULTANT SIGNATURE
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DESIGNER	BT
CHECKED	RK
APPROVED	MP
NA	

CLIENT	APPROVED	DATE
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PROJECT	CONSTRUCTION OF APPROACH ROADS TO EAST AND WEST PORTAL OF PROPOSED ZOJILA TUNNEL WITH AVALANCHE PROTECTION WORKS IN THE UT OF JAMMU & KASHMIR AND LADAKH
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PROJECT TITLE	APPROACH ROAD 2 (MINAMARG) PLAN AND PROFILE FROM KM. 0+000 TO 0+660
DRAWING STATUS	TENDER
PROJECT / DRAWING NO.	7061520-P&P-004-019
ISSUE	A

Curve Number	Chainage at H/P	Easting	Northing	Radius	∅c	∅s	∅ Total	Shift (s)	Ts	Es	Ls	Lc	L Total	Start of Transition	Start of Circular arc	End of Circular arc	End of Transition	Hand of Curve	Speed (V)
					Deflection angle(curve)	Deflection angle(Transition)	Total Deviation angle		Tangent length	External distance	Transition length	Arc length	Total curve length						
					(Radians)	(Radians)	(Radians)		(m)	(m)	(m)	(m)	(m)						(Kmph)
36	10604.512	532816.397	3792502.949	500	0.380	0.045	0.470	0.169	142.156	9.145	45.000	189.819	279.819	10464.603	10509.603	10699.421	10744.421	Left	80
37	11074.691	533285.691	3792432.025	400	0.586	0.069	0.724	0.315	179.093	17.837	55.000	234.598	344.598	10902.392	10957.392	11191.989	11246.989	Right	80
38	11376.518	533497.980	3792212.500	500	0.207	0.045	0.297	0.169	97.328	2.690	45.000	103.503	193.503	11279.767	11324.767	11428.270	11473.270	Left	80
39	11834.409	533889.548	3791973.558	800	0.278	0.019	0.315	0.047	142.130	7.773	30.000	222.137	282.137	11693.341	11723.341	11945.478	11975.478	Left	80
40	12140.832	534187.517	3791896.886	500	0.301	0.045	0.391	0.169	121.589	5.723	45.000	150.579	240.579	12020.543	12065.543	12216.122	12261.122	Right	80
41	12403.458	534402.343	3791744.922	500	0.148	0.045	0.238	0.169	82.283	1.371	45.000	73.960	163.960	12321.478	12366.478	12440.438	12485.438	Right	80
42	12767.286	534659.649	3791466.676	500	0.875	0.045	0.965	0.169	284.616	52.043	45.000	437.707	527.707	12503.432	12548.432	12986.139	13031.139	Left	80
43	13694.149	535597.774	3791552.808	800	0.194	0.019	0.231	0.047	107.920	3.769	30.000	155.001	215.001	13586.649	13616.649	13771.649	13801.649	Right	80
44	14139.818	536040.535	3791498.356	1200	0.157		0.195	0.000	132.368	3.730		188.986	188.986		14045.325	14234.310		Right	80
45	14806.221	536681.088	3791313.836	500	0.122	0.045	0.212	0.169	75.746	0.933	45.000	61.058	151.058	14730.692	14775.692	14836.750	14881.750	Left	80
46	15075.069	536948.954	3791290.599	500	0.119	0.045	0.209	0.169	74.861	0.881	45.000	59.306	149.306	15000.415	15045.415	15104.722	15149.722	Right	80
47	15548.422	537404.446	3791161.691	1000	0.088		0.178	0.000	111.533	0.960		87.583	87.583		15504.631	15592.214		Left	80
48	15915.779	537764.911	3791090.681	800	0.075	0.019	0.113	0.047	60.106	0.565	30.000	60.112	120.112	15855.723	15885.723	15945.835	15975.835	Right	80
49	16457.071	538281.450	3790928.793	1200	0.064		0.102	0.000	76.210	0.623		77.310	77.310		16418.416	16495.726		Left	80
50	16738.860	538555.271	3790861.588	1200	0.143		0.180	0.000	123.298	3.053		171.004	171.004		16653.358	16824.362		Left	80
51	16969.624	538784.526	3790826.785	100	0.752	0.225	1.202	0.844	91.610	7.502	45.000	75.161	165.161	16887.043	16932.043	17007.205	17052.205	Right	50
52	17121.669	538835.965	3790682.323	250	0.299	0.030	0.359	0.038	52.815	2.812	15.000	74.643	104.643	17069.348	17084.348	17158.991	17173.991	Right	50
53	17710.182	538793.937	3790095.421	100	0.425	0.225	0.875	0.844	69.670	2.301	45.000	42.503	132.503	17643.930	17688.930	17731.433	17776.433	Left	50


APPORACH ROAD TO (MINAMARG)

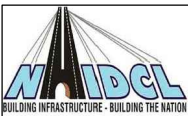
Curve Number	Chainage at H/P	Easting	Northing	Radius	∅c	∅s	∅Total	Shift (s)	Ts	Es	Ls	Lc	L Total	Start of Transition	Start of Circular arc	End of Circular arc	End of Transition	Hand of Curve	Speed (V)
					Deflection angle(curve)	Deflection angle(Transition)	Total Deviation angle		Tangent length	External distance	Transition length	Arc length	Total curve length						
					(Radians)	(Radians)	(Radians)		(m)	(m)	(m)	(m)	(m)						(Kmph)
1	234.411	550138.551	3797164.276	500	0.293		0.293	0.000	73.722	5.406		146.389	146.389		161.216	307.605		Left	50

50 mm ON ORIGINAL (A3)
20
10
0

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	

CLIENT APPROVED		DATE	CONSULTANT SIGNATURE

DESIGNER  SMEC (India) Pvt Ltd. 1st Floor, Novus Tower, West Wing, Plot Number -18, Sector - 18, Gurgaon - 122015, Haryana			
DRAWN BT	DESIGN RK	CHECKED MP	APPROVED NA

CLIENT  NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. PTI BUILDING . 4 PARLIAMENT STREET , SANSAD MARG AREA, NEW DELHI- 110003	
APPROVED	DATE

PROJECT CONSTRUCTION OF APPROACH ROADS TO EAST AND WEST PORTAL OF PROPOSED ZOJILA TUNNEL WITH AVALANCHE PROTECTION WORKS IN THE UT OF JAMMU & KASHMIR AND LADAKH
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PROJECT TITLE HORIZONTAL ALIGNMENT REPORT		
DRAWING STATUS TENDER	PROJECT / DRAWING No. 7061520-P&P-004-020B	ISSUE A

50 mm ON ORIGINAL (A3)


10
20
30
40
50

Curve Number	Chainage at PVI	Level of PVI	Length of curve	Type of curve	Grade IN	Grade OUT	Grade Difference	Radius (m)	Chainage (m)		Level (m)		K Value
	(m)	(m)	(m)		%	%	%		Start of curve	End of curve	Start of curve	End of curve	
44	9745.020	2766.564	120.000	Hog	5.000	1.380	-3.620	3314.915	9685.020	9805.020	2763.564	2767.392	33.149
45	10108.894	2771.585	80.000	Sag	1.380	3.330	1.951	4101.300	10068.894	10148.894	2771.033	2772.917	41.005
46	10305.923	2778.147	100.000	Hog	3.330	0.783	-2.547	3925.658	10255.923	10355.923	2776.482	2778.539	39.262
47	10690.661	2781.160	120.000	Sag	0.783	4.172	3.389	3540.860	10630.661	10750.661	2780.690	2783.663	35.409
48	11129.333	2799.462	120.000	Hog	4.172	0.531	-3.641	3295.952	11069.333	11189.333	2796.959	2799.781	32.958
49	11558.463	2801.742	150.000	Hog	0.531	-4.596	-5.128	2925.295	11483.463	11633.463	2801.344	2798.295	29.251
50	11853.543	2788.179	150.000	Sag	-4.596	1.279	5.876	2552.958	11778.543	11928.543	2791.626	2789.138	25.528
51	12395.228	2795.108	100.000	Sag	1.279	4.924	3.645	2743.823	12345.228	12445.228	2794.468	2797.570	27.435
52	12781.238	2814.114	160.000	Hog	4.924	0.362	-4.562	3507.507	12701.238	12861.238	2810.175	2814.404	35.072
53	13543.538	2816.874	120.000	Sag	0.362	5.000	4.638	2587.434	13483.538	13603.538	2816.657	2819.874	25.873
54	14087.533	2844.073	120.000	Hog	5.000	3.166	-1.834	6541.806	14027.533	14147.533	2841.073	2845.972	65.431
55	14476.823	2856.396	100.000	Hog	3.166	0.362	-2.804	3566.636	14426.823	14526.823	2854.813	2856.577	35.663
56	14640.751	2856.989	80.000	Sag	0.362	1.214	0.852	9391.758	14600.751	14680.751	2856.844	2857.474	93.897
57	15011.068	2861.483	80.000	Hog	1.214	0.585	-0.629	12724.097	14971.068	15051.068	2860.998	2861.717	127.186
58	15292.006	2863.126	100.000	Sag	0.585	2.337	1.752	5706.520	15242.006	15342.006	2862.834	2864.295	57.078
59	15503.027	2868.058	120.000	Hog	2.337	-0.538	-2.875	4173.449	15443.027	15563.027	2866.656	2867.735	41.739
60	15742.011	2866.772	100.000	Hog	-0.538	-1.340	-0.802	12473.744	15692.011	15792.011	2867.041	2866.102	124.688
61	16036.455	2862.827	140.000	Sag	-1.340	3.767	5.107	2741.445	15966.455	16106.455	2863.765	2865.464	27.413
62	16455.647	2878.618	95.000	Sag	3.767	5.000	1.233	7704.785	16408.147	16503.147	2876.829	2880.993	77.048
63	16738.584	2892.765	235.000	Hog	5.000	-2.223	-7.223	3253.464	16621.084	16856.084	2886.890	2890.153	32.535
64	17113.690	2884.426	80.000	Sag	-2.223	0.000	2.223	3598.627	17073.690	17153.690	2885.315	2884.426	35.987
65	17417.844	2884.426	100.000	Sag	0.000	3.926	3.926	2547.193	17367.844	17467.844	2884.426	2886.389	25.471

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVAL
A		FOR TENDER	

CLIENT APPROVED DATE CONSULTANT SIGNATURE

DESIGNER



SMEC (India) Pvt Ltd. 1st Floor,
Novus Tower, West Wing, Plot Number -18,
Sector - 18, Gurgaon - 122015, Haryana

DRAWN

BT

DESIGN

RK

CHECKED

MP

APPROVED

NA

CLIENT



NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. PTI BUILDING . 4 PARLIAMENT STREET, SANSAD MARG AREA, NEW DELHI- 110003

APPROVED

DATE

PROJECT

CONSTRUCTION OF APPROACH ROADS TO EAST AND WEST PORTAL OF PROPOSED ZOJILA TUNNEL WITH AVALANCHE PROTECTION WORKS IN THE UT OF JAMMU & KASHMIR AND LADAKH

PROJECT TITLE

VERTICAL ALIGNMENT REPORT

DRAWING STATUS

TENDER

PROJECT / DRAWING No.

7061520-P&P-004-021B

ISSUE

A