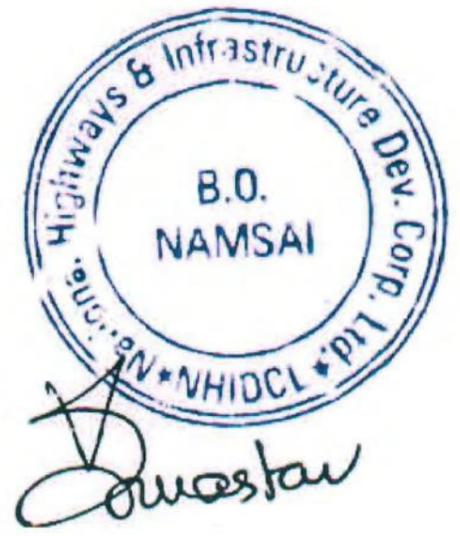
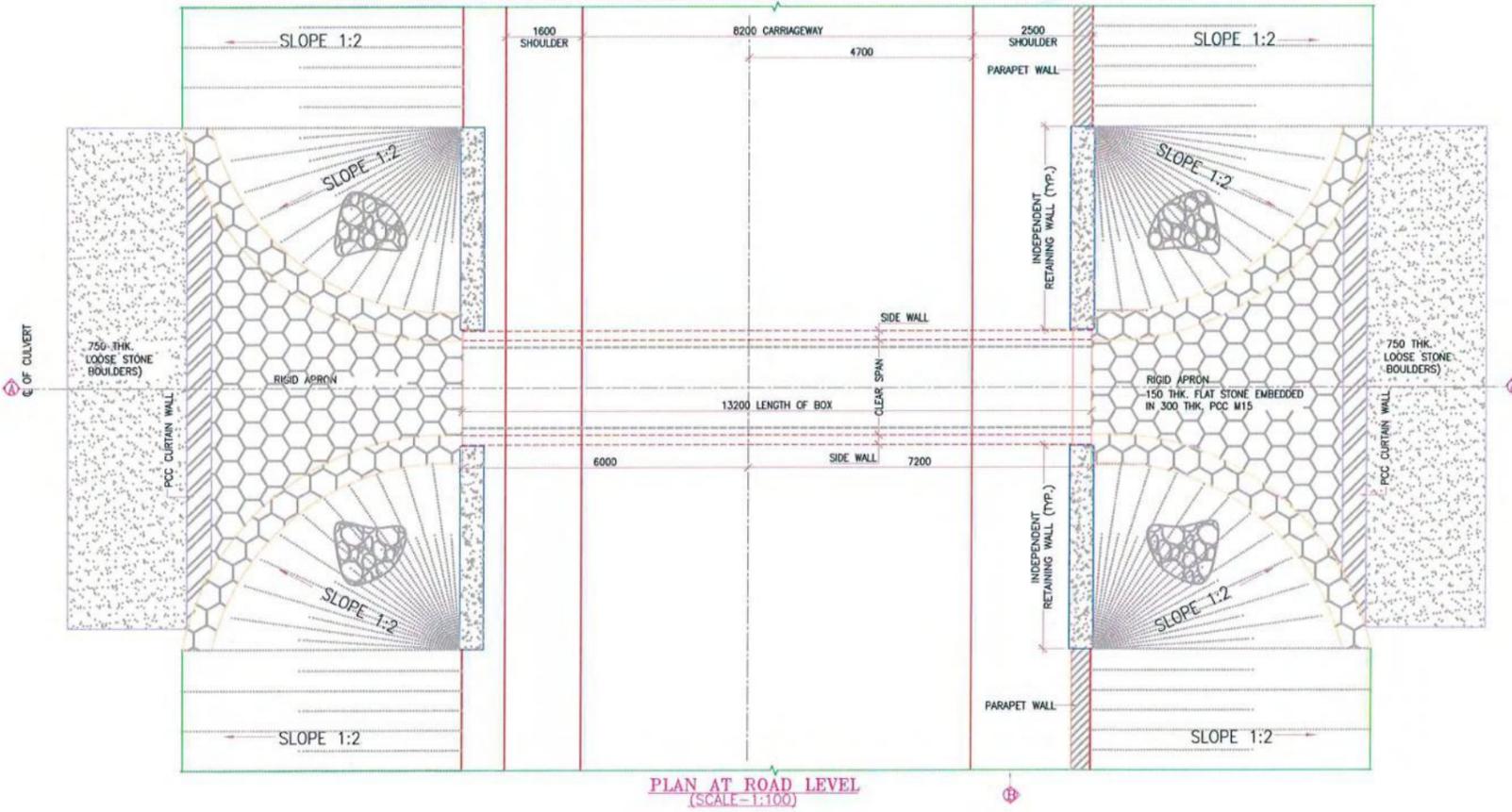
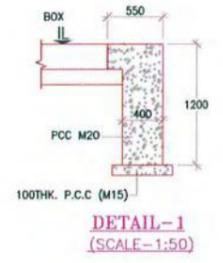
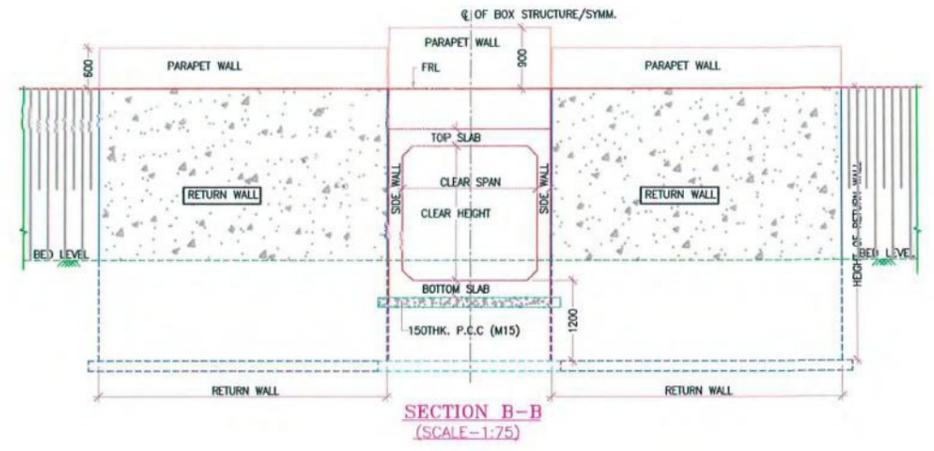
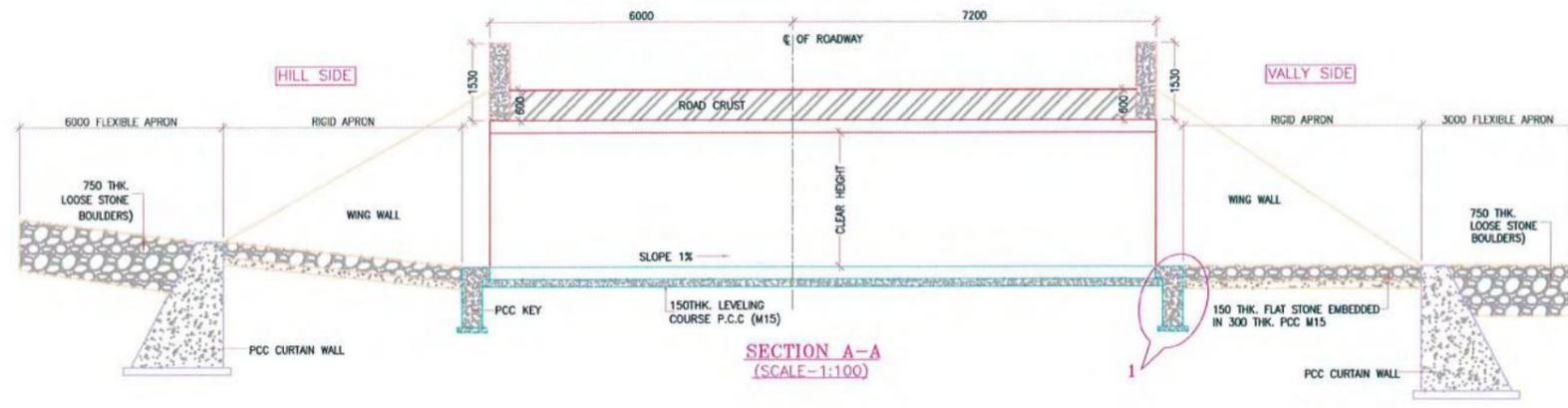


JORAM

KOLORIANG



- NOTES :**
1. ALL DIMENSIONS ARE IN MM. UNLESS OTHERWISE MENTIONED.
  2. GRADE OF CONCRETE :-  
BOX STRUCTURE - M30  
RETURN WALL - M30  
APPROACH SLAB - M30  
RAILING - M30  
CURTAIN WALL - M15  
LEVELING COURSE(P.C.C) - M15  
CRASH BARRIER - M40 & KERB-M30
  3. GRADE OF STEEL Fe-500 AS PER IS.-1786.
  4. LIFE LODE ANALYSIS HAS BEEN DONE FOR 3 LANE IN CONNECTION WITH THE RECOMMENDATION OF IRC: 6-2010 & WORST EFFECT HAS BEEN CONSIDERED FOR DESIGN.
  5. PROPERTIES OF BACKFILL SOIL  $\gamma=1.8/m^3$ ,  $\phi=30^\circ$
  6. FILTER MATERIAL BEHIND ABUTMENT AND RETURN WALL SHALL CONFORM TO CLAUSE 2504.2.2 OF MORTH SPECIFICATIONS TO A THICKNESS OF NOT LESS THAN 600mm. WITH SMALLER SIZE TOWARDS THE SOIL AND BIGGER SIZE TOWARDS THE WALL TO THE FULL HEIGHT.
  7. SOFT AND LOOSE PATCHES IN THE BEARING AREA ARE TO BE REPLACED BY COMPACTED GRANULAR FILLS WITH LAYERS NOT EXCEEDING 300mm.
  8. THE SOIL BELOW FOUNDATION LEVEL SHOULD BE WELL COMPACTED TO ACHIEVE MINIMUM BEARING CAPACITY OF 10t/SQM.

CLIENT :



National Highways & Infrastructure Development Corporation Ltd. (NHIDCL)

PROJECT :

TWO LANING OF JORAM - KOLORIANG ROAD (NH-713) FROM KM. 50.00 TO KM. 70.00 IN THE STATE OF ARUNACHAL PRADESH ON EPC MODE

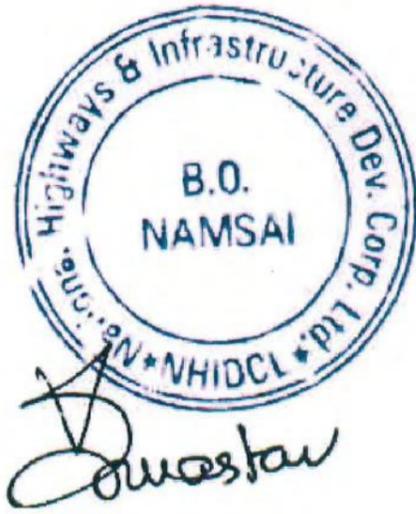
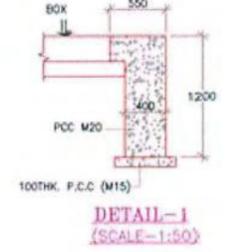
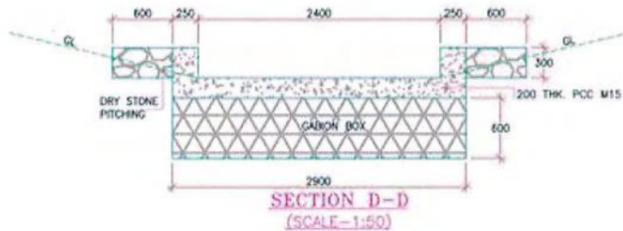
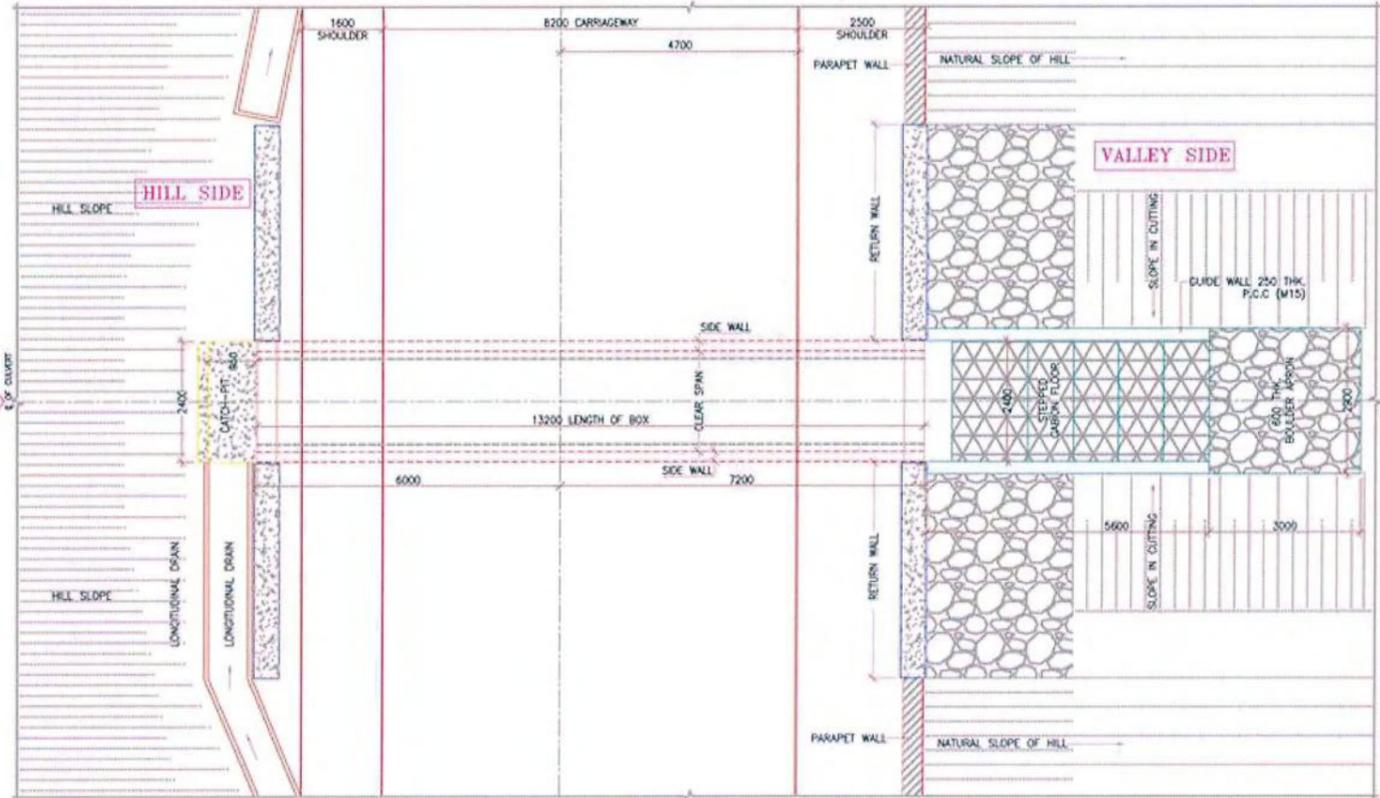
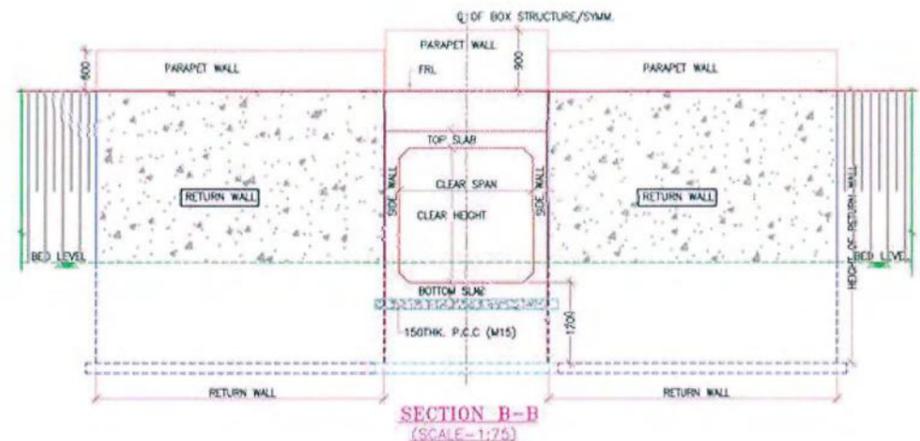
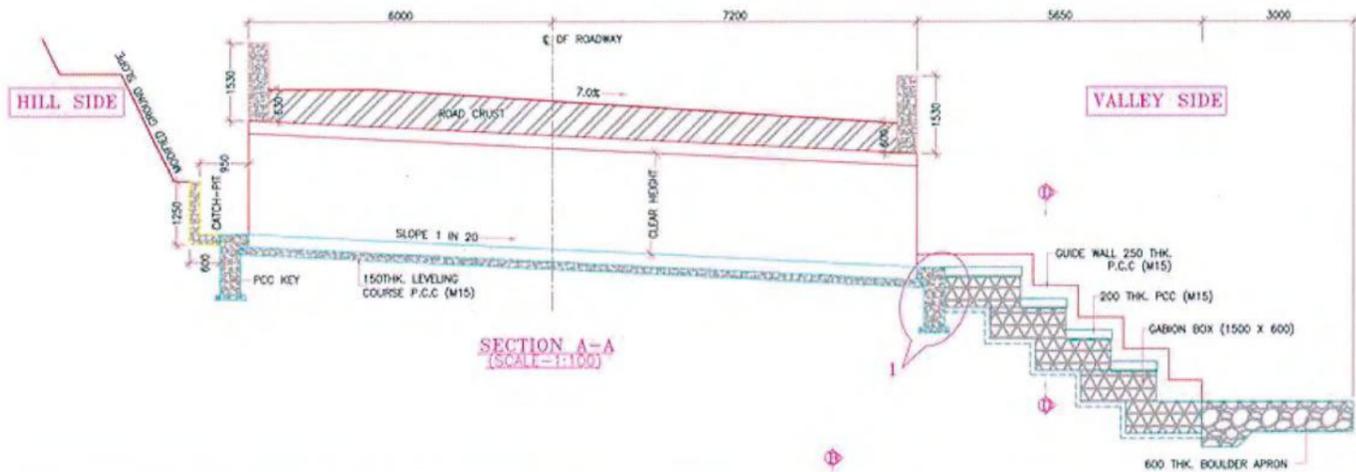
DESIGN CONSULTANT:



**Voyants Solutions Pvt Ltd.**  
403, 4th Floor, Park Centra,  
Sector-30, Opp. 32nd Milestone, NH-8  
Gurgaon-122002, Haryana  
CIN- U74140HR2004PTC046918  
Ph: 0124-4598200  
Fax: 0124-4019051  
E-mail: info@voyants.in, www.voyants.in

DRAWN BY :	PD	TITLE :	TYPICAL DRAWING OF BOX CULVERT TYPE-01
DESIGNED BY :	SG	DRG. NO. :	
APPROVED BY :	KG	REVISION : R0	SEPT 2016
SCALE :	AS SHOWN		

REV.	DATE	DESCRIPTION
R0	20/05/2016	



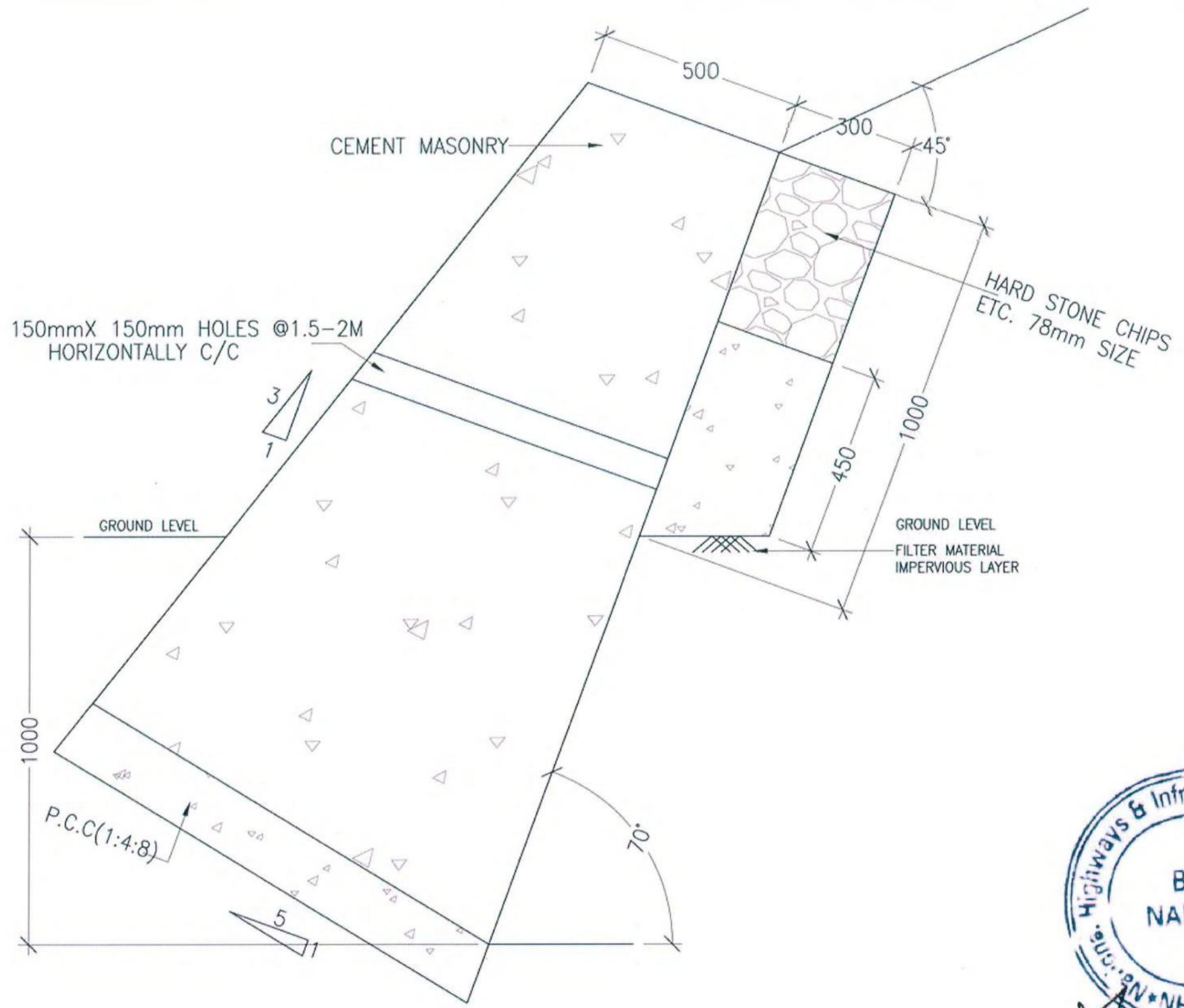
- NOTES :**
1. ALL DIMENSIONS ARE IN MM. UNLESS OTHERWISE MENTIONED.
  2. GRADE OF CONCRETE :-  
BOX STRUCTURE - M30  
RETURN WALL - M30  
APPROACH SLAB - M30  
RAILING - M30  
CURTAIN WALL - M15  
LEVELING COURSE(P.C.C) - M15  
CRASH BARRIER- M40 & KERB-M30
  3. GRADE OF STEEL Fe-500 AS PER IS-1786.
  4. LIFE LOADE ANALYSIS HAS BEEN DONE FOR 3 LANE IN CONNECTION WITH THE RECOMMENDATION OF IRC: 6-2010 & WORTH EFFECT HAS BEEN CONSIDERED FOR DESIGN.
  5. PROPERTIES OF BACKFILL SOIL  $\gamma=1.81/m^3$ ,  $\phi=30^\circ$
  6. FILTER MATERIAL BEHIND ABUTMENT AND RETURN WALL SHALL CONFORM TO CLAUSE 2504.2.2 OF MORTH SPECIFICATIONS TO A THICKNESS OF NOT LESS THAN 600mm. WITH SMALLER SIZE TOWARDS THE SOIL AND BIGGER SIZE TOWARDS THE WALL TO THE FULL HEIGHT.
  7. SOFT AND LOOSE PATCHES IN THE BEARING AREA ARE TO BE REPLACED BY COMPACTED GRANULAR FILLS WITH LAYERS NOT EXCEEDING 300mm.
  8. THE SOIL BELOW FOUNDATION LEVEL SHOULD BE WELL COMPACTED TO ACHIEVE MINIMUM BEARING CAPACITY OF 10t/50M.

CLIENT :   
National Highways & Infrastructure Development Corporation Ltd. (NHIDCL)

PROJECT :  
TWO LANE OF JORAM - KOLORIANG ROAD (NH-713) FROM KM. 50.00 TO KM. 70.00 IN THE STATE OF ARUNACHAL PRADESH ON EPC MODE

DESIGN CONSULTANT:  
  
**Voyants Solutions Pvt Ltd.**  
403, 4th Floor, Park Centra,  
Sector-30, Opp. 32nd Milestone, NH-8  
Gurgaon-122002, Haryana  
CIN- U74140HR2004PTC046918  
Ph: 0124-4598200  
Fax: 0124-4019051  
E-mail: info@voyants.in, www.voyants.in

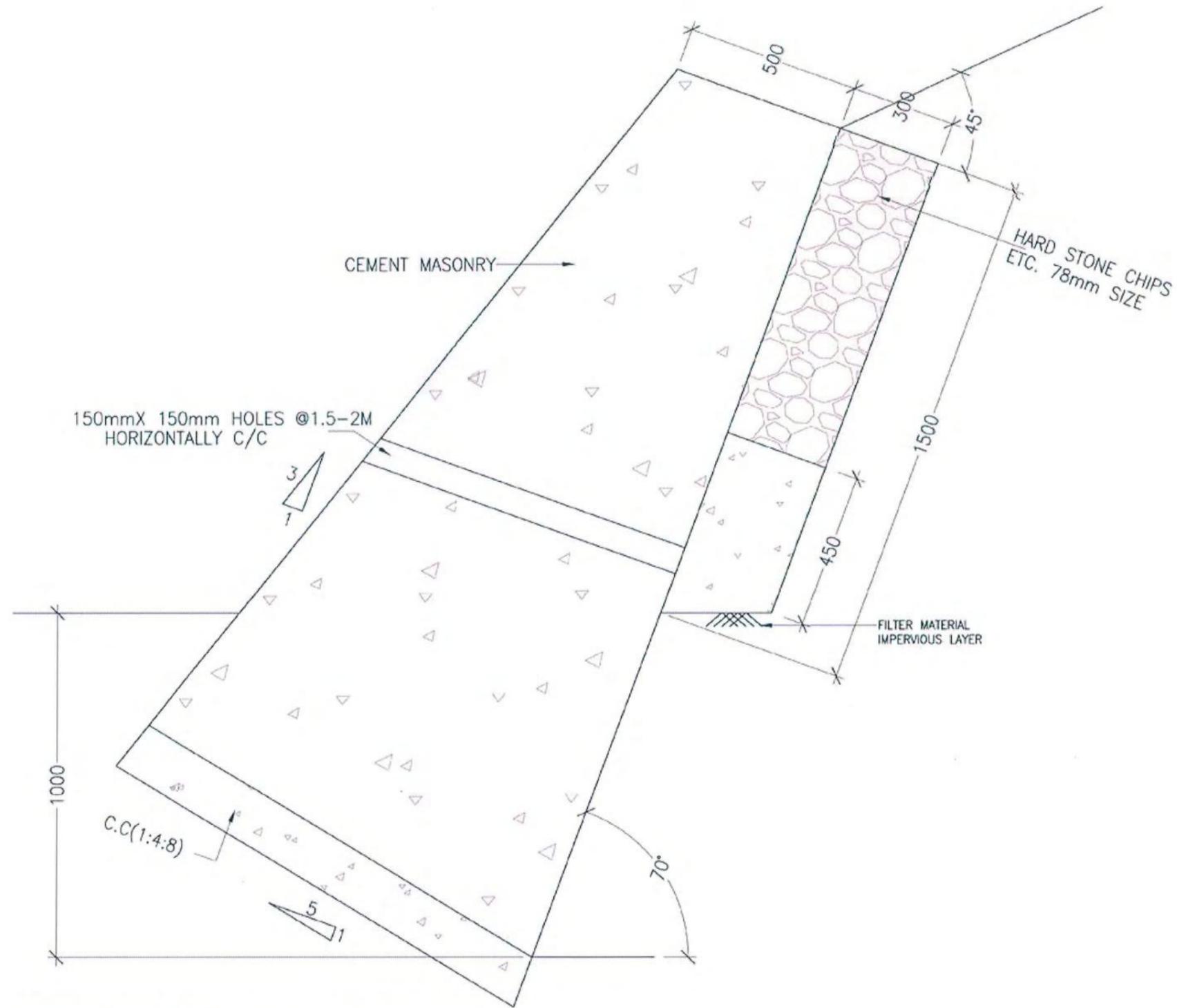
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DESIGNED BY : SG  
APPROVED BY : KG DRG. NO. :  
SCALE : AS SHOWN REVISION : R0  
REV. DATE DESCRIPTION  
R0 20/05/2016  
SEPT 2016



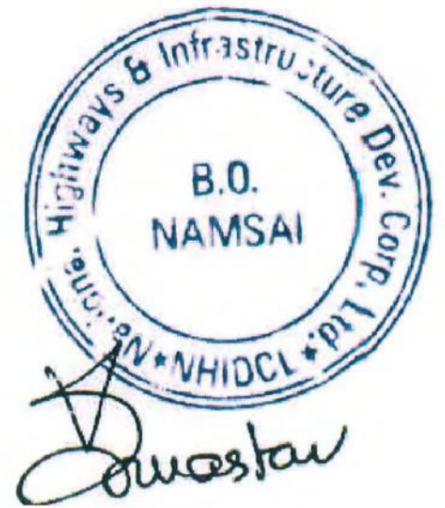
**BREAST WALL 1.0M HEIGHT**  
 (SCALE - 1:25)

Highways & Infrastructure Dev. Corp. Ltd. (NHIDCL)  
**B.O. NAMSAI**  
*[Signature]*

<p>CLIENT :           National Highways &amp; Infrastructure Development Corporation Ltd. (NHIDCL)</p>	<p>PROJECT :          TWO LANING OF JORAM - KOLORIANG ROAD (NH-713) FROM KM. 50.00 TO KM. 70.00 IN THE STATE OF ARUNACHAL PRADESH ON EPC MODE</p>	<p>DESIGN CONSULTANT:    <b>Voyants Solutions Pvt Ltd.</b>          403, 4th Floor, Park Centra, Sector-30, Opp. 32nd Milestone, NH-8 Gurgaon-122002, Haryana          CIN- U74140HR2004PTC046918          Ph: 0124-4598200          Fax: 0124-4019051          E-mail: info@voyants.in, www.voyants.in</p>	<p>REV. DATE DESCRIPTION          R0 14/09/2016</p>	<p>DRAWN BY : PD          DESIGNED BY : SG          APPROVED BY : KG DRG. NO. :          SCALE : AS SHOWN REVISION : R0          SEPTEMBER 2016</p>
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**BREAST WALL 1.5M HEIGHT**  
(SCALE-1:25)



CLIENT :



National Highways & Infrastructure Development Corporation Ltd. (NHIDCL)

PROJECT :

TWO LANING OF JORAM - KOLORIANG ROAD (NH-713) FROM KM. 50.00 TO KM. 70.00 IN THE STATE OF ARUNACHAL PRADESH ON EPC MODE

DESIGN CONSULTANT:



**Voyants Solutions Pvt Ltd.**  
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Sector-30, Opp. 32nd Milestone, NH-8  
Gurgaon-122002, Haryana  
CIN- U74140HR2004PTC046918  
Ph: 0124-4598200  
Fax: 0124-4019051  
E-mail: info@voyants.in, www.voyants.in

R0 14/09/2016

REV. DATE DESCRIPTION

DRAWN BY : PD

DESIGNED BY : SG

APPROVED BY : KG

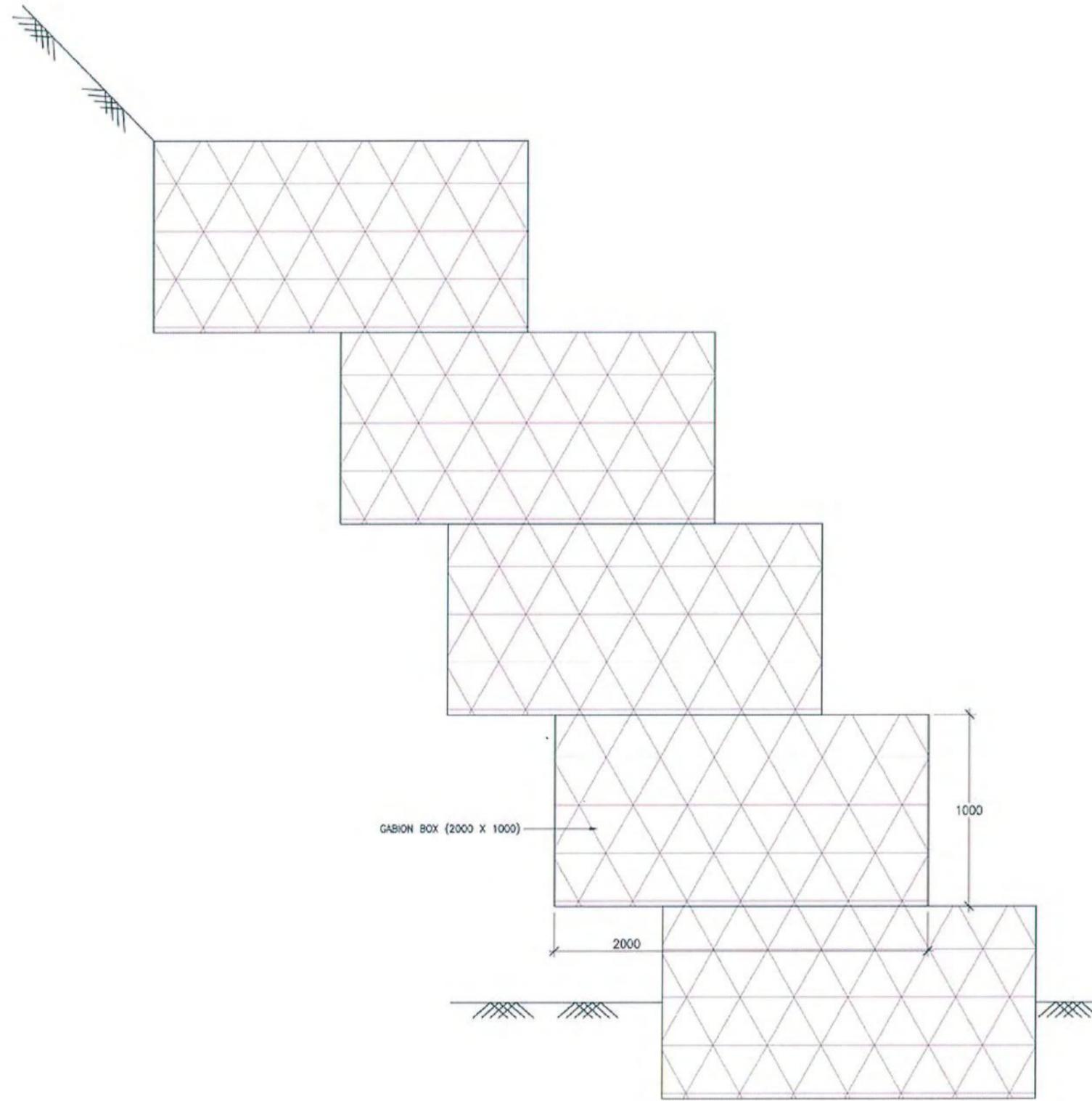
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DRG. NO. :

REVISION : R0

SEPTEMBER 2016



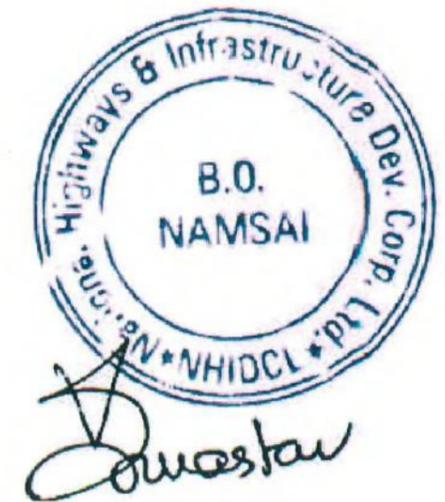


GABION BOX (2000 X 1000)

1000

2000

**GABION BOX**  
(SCALE-1:30)



CLIENT :



National Highways & Infrastructure Development Corporation Ltd. (NHIDCL)

PROJECT :

TWO LANING OF JORAM - KOLORIANG ROAD (NH-713) FROM KM. 50.00 TO KM. 70.00 IN THE STATE OF ARUNACHAL PRADESH ON EPC MODE

DESIGN CONSULTANT:



**Voyants Solutions Pvt Ltd.**  
 403, 4th Floor, Park Centra,  
 Sector-30, Opp. 32nd Milestone, NH-8  
 Gurgaon-122002, Haryana  
 CIN- U74140HR2004PTC046918  
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R0 14/09/2016

REV.	DATE	DESCRIPTION
R0	14/09/2016	

DRAWN BY : PD

DESIGNED BY : SG

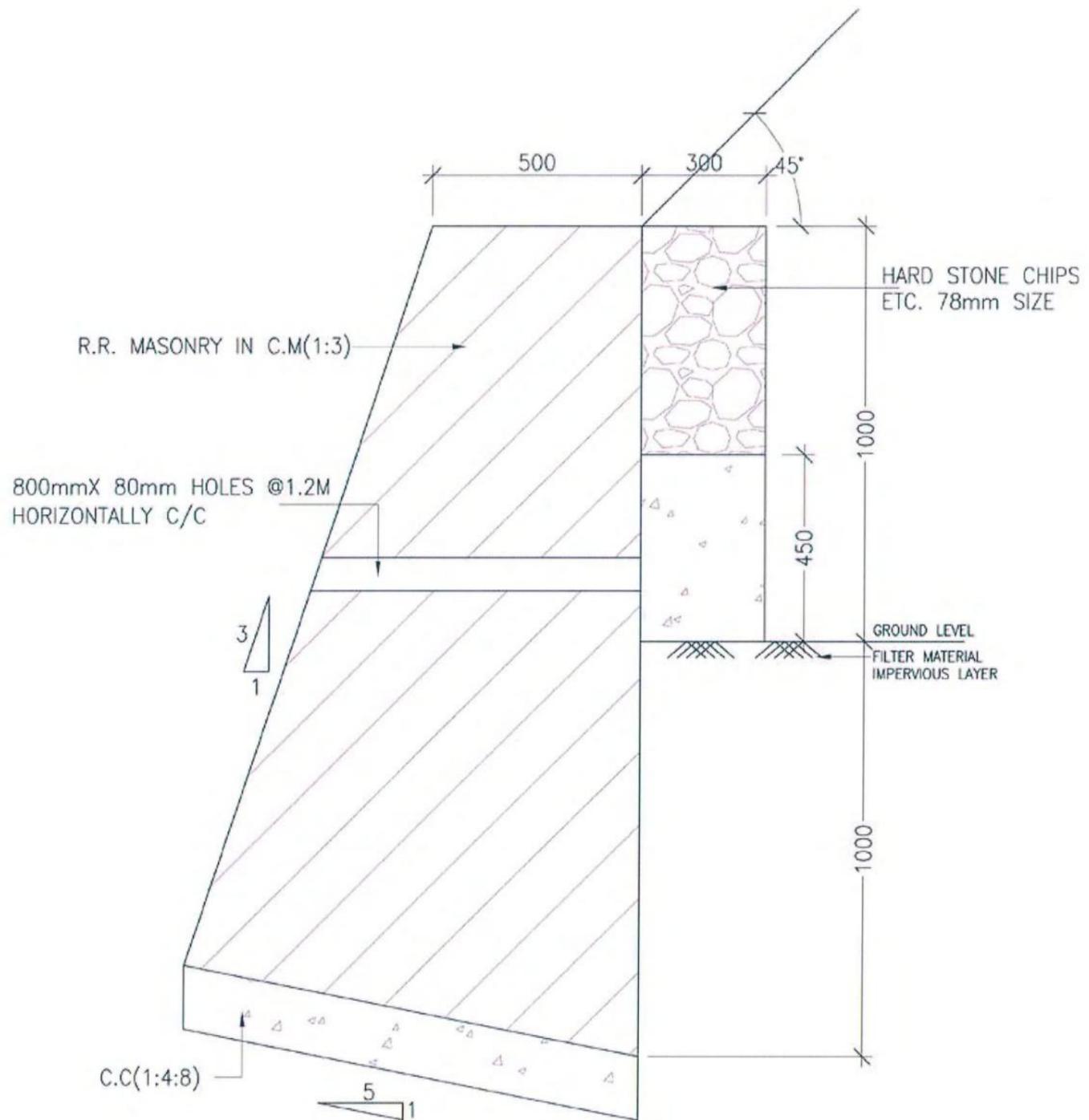
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SCALE : AS SHOWN

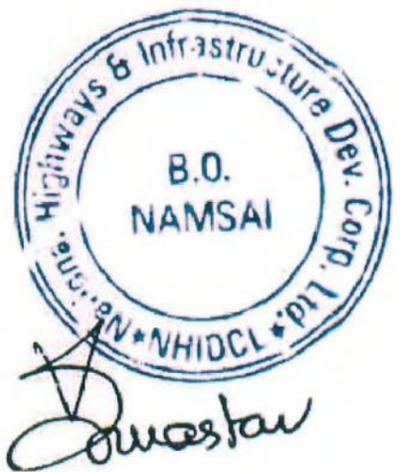
DRG. NO. :

REVISION : R0

SEPTEMBER 2016



**BREAST WALL 1.0M HEIGHT**  
 (SCALE-1:25)



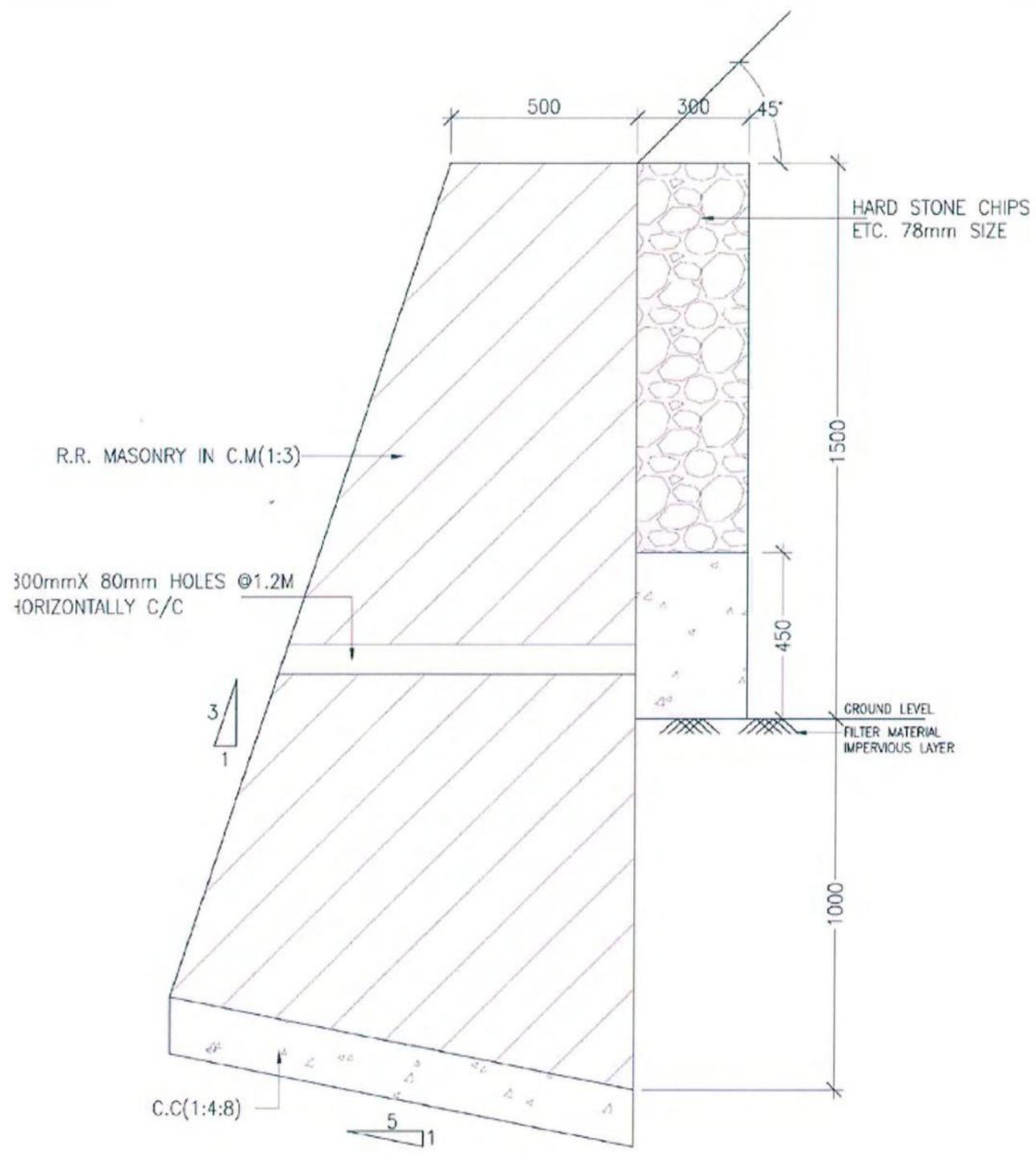
CLIENT :  
  
 National Highways & Infrastructure Development Corporation Ltd. (NHIDCL)

PROJECT :  
 TWO LANING OF JORAM - KOLORIANG ROAD (NH-713) FROM KM. 50.00 TO KM. 70.00 IN THE STATE OF ARUNACHAL PRADESH ON EPC MODE

DESIGN CONSULTANT:  
  
**Voyants Solutions Pvt Ltd.**  
 403, 4th Floor, Park Centre,  
 Sector-30, Opp. 32nd Milestone, NH-8  
 Gurgaon-122002, Haryana  
 CIN- U74140HR2004PTC046918  
 Ph: 0124-4598200  
 Fax: 0124-4019051  
 E-mail: info@voyants.in, www.voyants.in

REV.	DATE	DESCRIPTION
R0	14/09/2016	

DRAWN BY : PD  
 DESIGNED BY : SG  
 APPROVED BY : KG DRG. NO. :  
 SCALE : AS SHOWN REVISION : R0  
 SEPTEMBER 2016

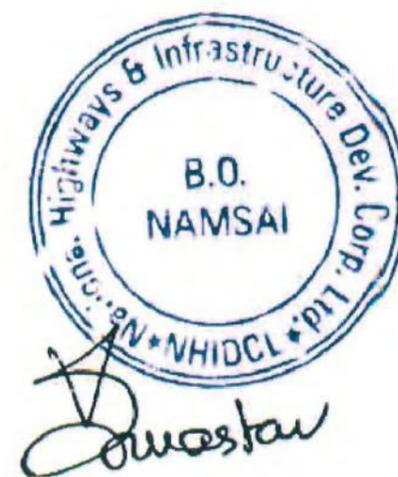
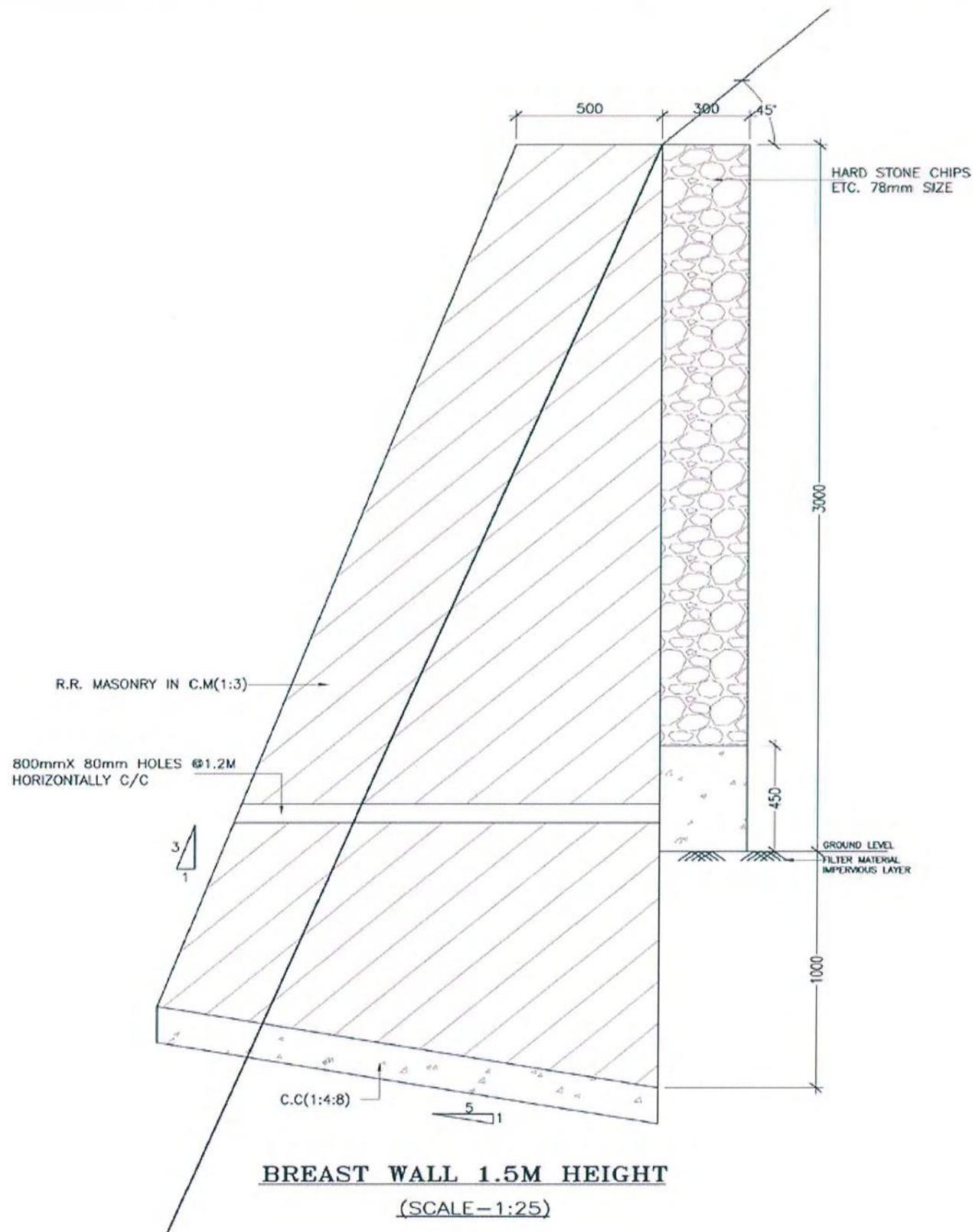


**BREAST WALL 1.5M HEIGHT**  
(SCALE-1:25)

Highways & Infrastructure Dev. Corp. Ltd. (NHIDCL) \* B.O. NAMSAI

*[Signature]*

<p>CLIENT :</p>  <p>National Highways &amp; Infrastructure Development Corporation Ltd. (NHIDCL)</p>	<p>PROJECT :</p> <p>TWO LANING OF JORAM - KOLORIANG ROAD (NH-713) FROM KM. 50.00 TO KM. 70.00 IN THE STATE OF ARUNACHAL PRADESH ON EPC MODE</p>	<p>DESIGN CONSULTANT:</p> <p><b>Voyants Solutions Pvt Ltd.</b> 403, 4th Floor, Park Centre, Sector-30, Opp. 32nd Milestone, NH-8 Gurgaon-122002, Haryana CIN- U74140HR2004PTC046918 Ph: 0124-4598200 Fax: 0124-4019051 E-mail: info@voyants.in, www.voyants.in</p> 	<p>DRAWN BY : PD</p> <p>DESIGNED BY : SG</p> <p>APPROVED BY : KG DRG. NO. :</p> <p>SCALE : AS SHOWN REVISION : R0</p> <p>REV. DATE DESCRIPTION</p> <p>R0 14/09/2016</p> <p>SEPTEMBER 2016</p>
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CLIENT :



National Highways & Infrastructure Development Corporation Ltd. (NHIDCL)

PROJECT :

TWO LANING OF JORAM - KOLORIANG ROAD (NH-713) FROM KM. 50.00 TO KM. 70.00 IN THE STATE OF ARUNACHAL PRADESH ON EPC MODE

DESIGN CONSULTANT:



Voyants Solutions Pvt Ltd.

403, 4th Floor, Park Centre, Sector-30, Opp. 32nd Milestone, NH-8 Gurgaon-122002, Haryana  
CIN- U74140HR2004PTC046918  
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R0 14/09/2016

REV. DATE DESCRIPTION

DRAWN BY : PD

DESIGNED BY : SG

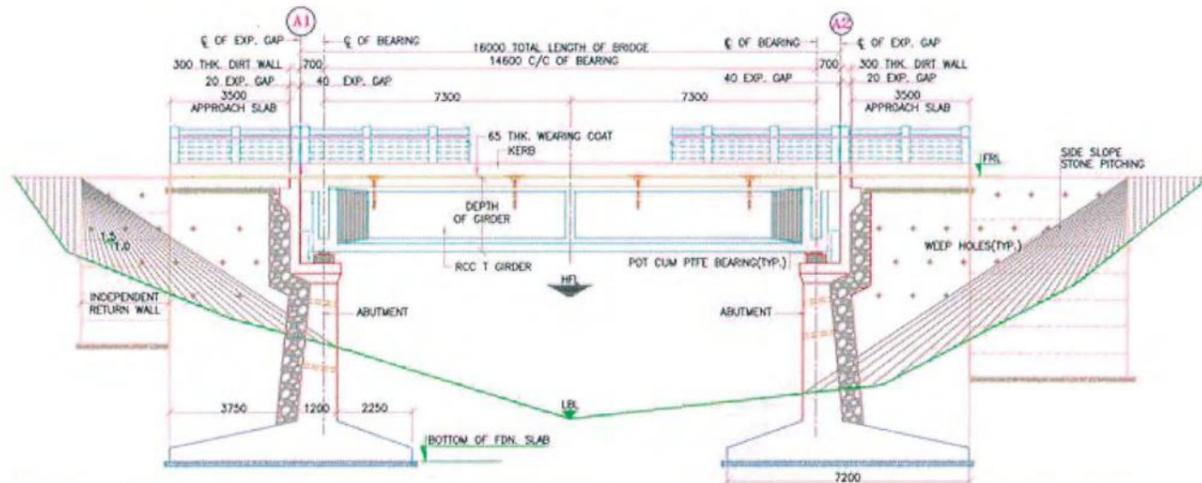
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SEPTEMBER 2016

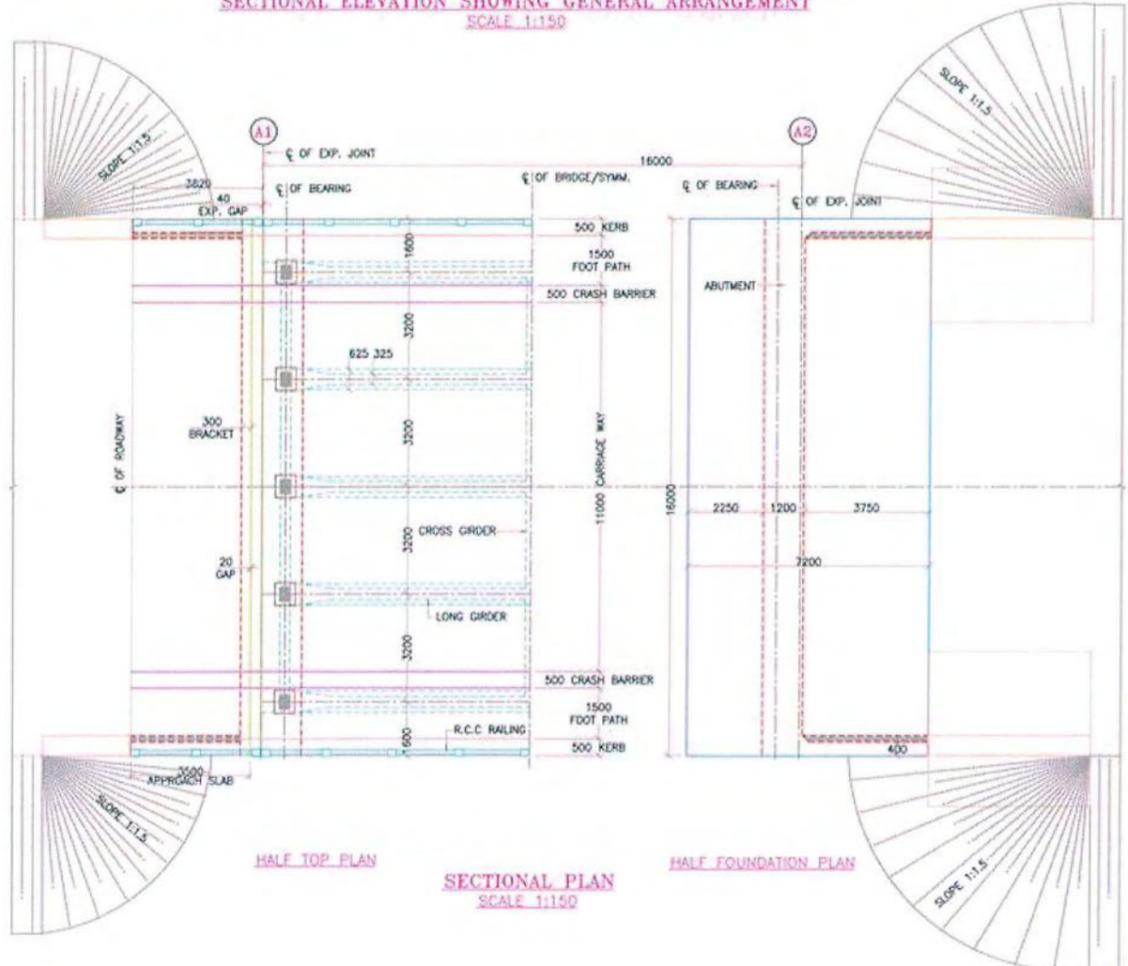
JORAM

KOLORIANG

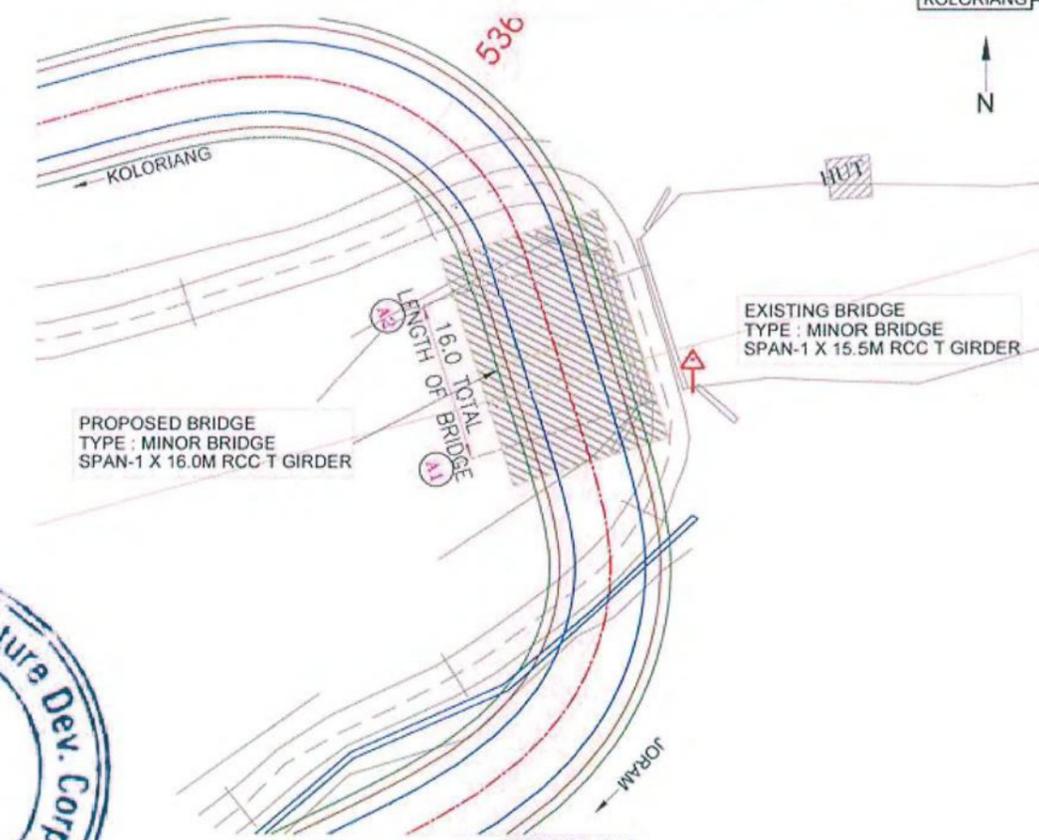


Deviation in Metre	1070	1071	1069	1068	1066	1067	1070
Offset in Metre	-16.2	-14.894	-10.056	-6.434	0.000	9.273	14.994

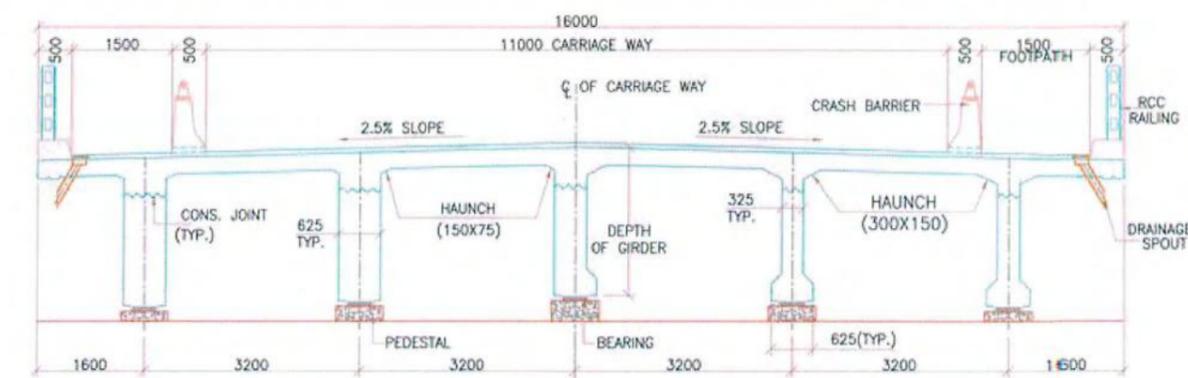
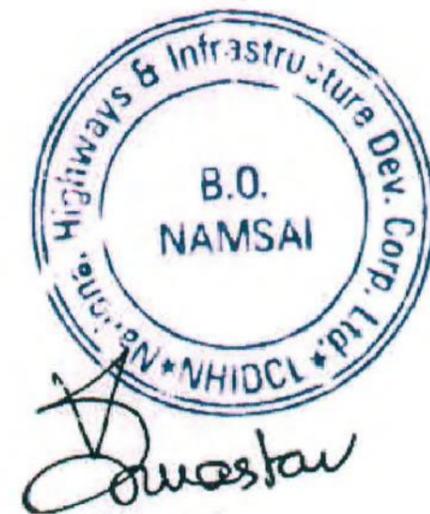
SECTIONAL ELEVATION SHOWING GENERAL ARRANGEMENT  
SCALE 1:150



SECTIONAL PLAN  
SCALE 1:150



KEY PLAN  
SCALE 1:500



HALF END VIEW / HALF CENTRE VIEW  
TYPICAL CROSS SECTION OF SUPER STRUCTURE  
SCALE 1:100

CLIENT :



National Highways & Infrastructure Development Corporation Ltd. (NHIDCL)

PROJECT :

TWO LANING OF JORAM - KOLORIANG ROAD (NH-713) FROM KM. 50.00 TO KM. 70.00 IN THE STATE OF ARUNACHAL PRADESH ON EPC MODE

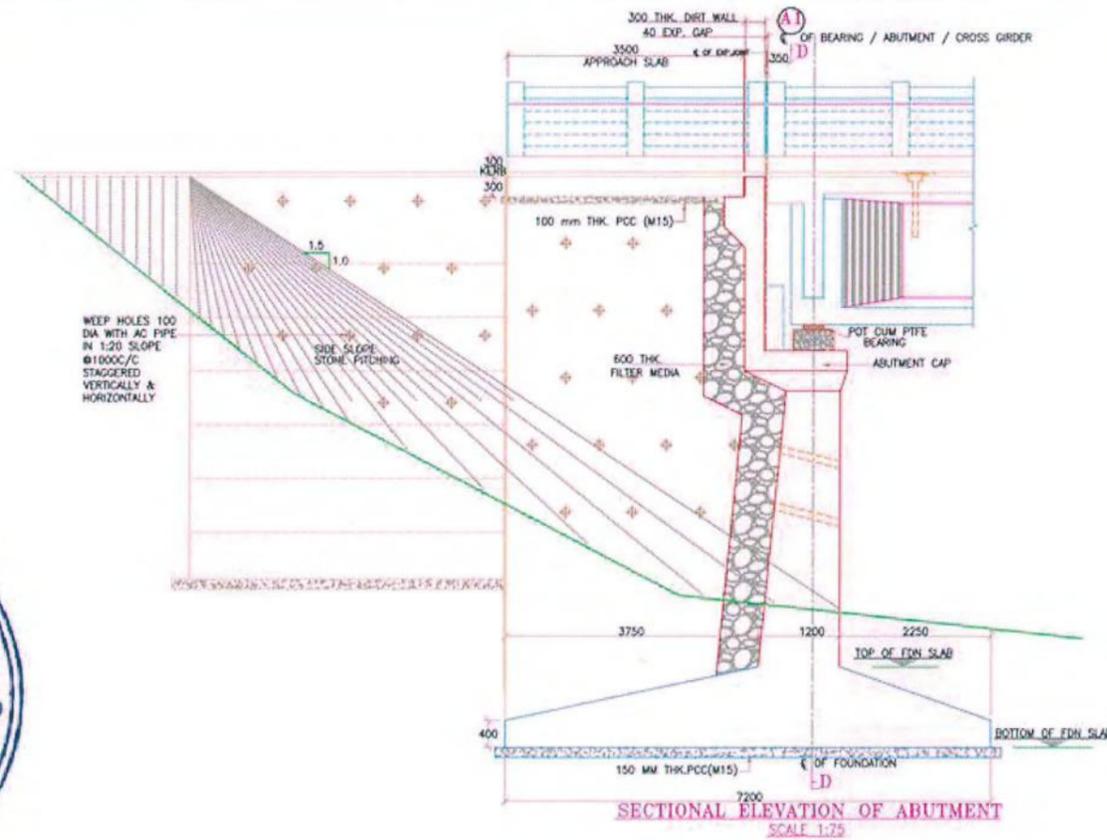
DESIGN CONSULTANT:



**Voyants Solutions Pvt Ltd.**  
403, 4th Floor, Park Centra,  
Sector-30, Opp. 32nd Milestone, NH-8  
Gurgaon-122002, Haryana  
CIN- U74140HR2004PTC046918  
Ph: 0124-4598200  
Fax: 0124-4019051  
E-mail: info@voyants.in, www.voyants.in

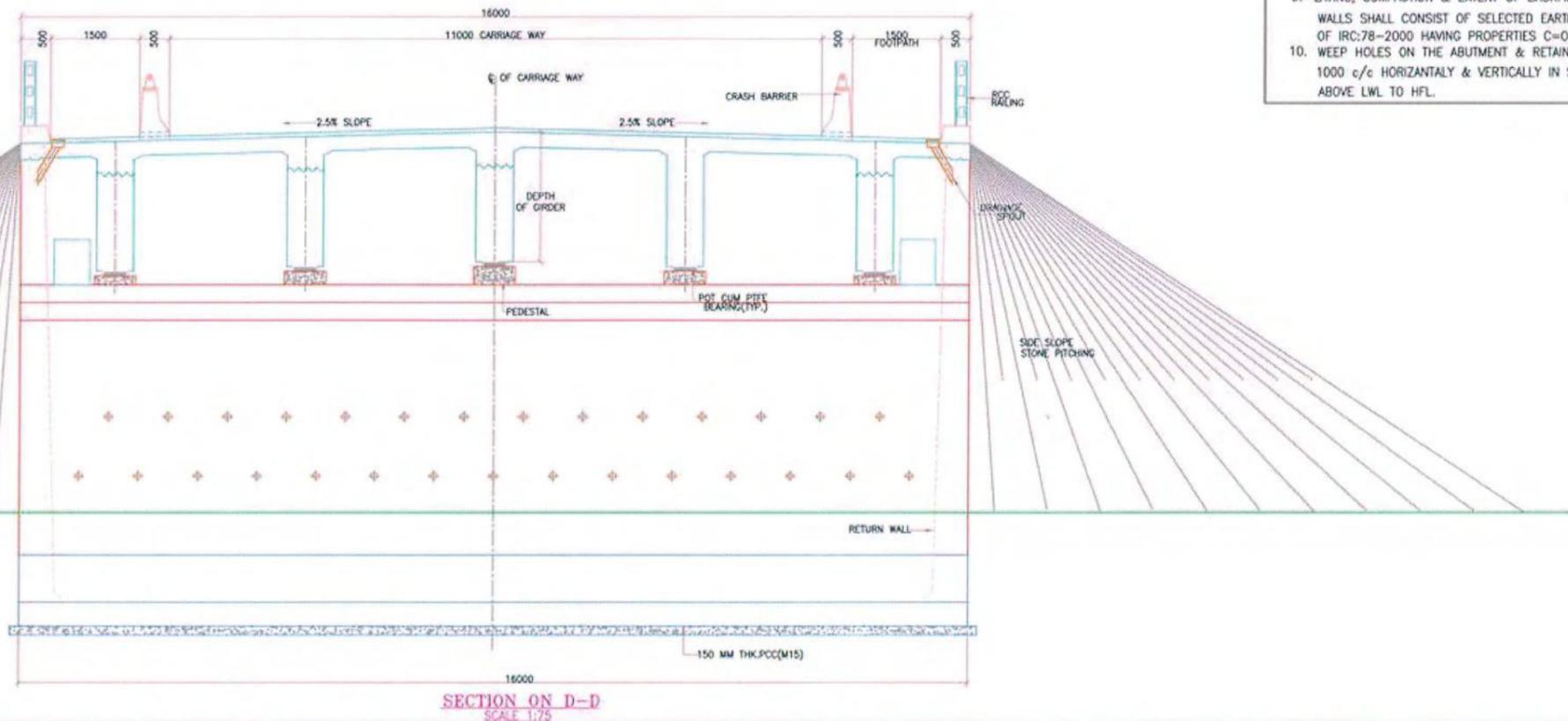
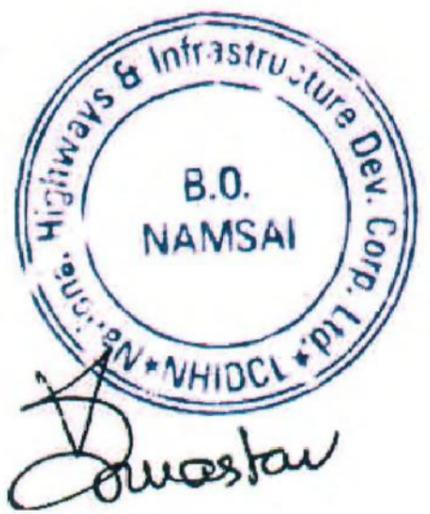
REV.	DATE	DESCRIPTION
	14/09/2016	

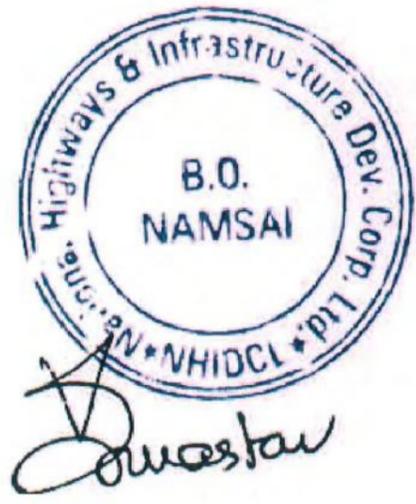
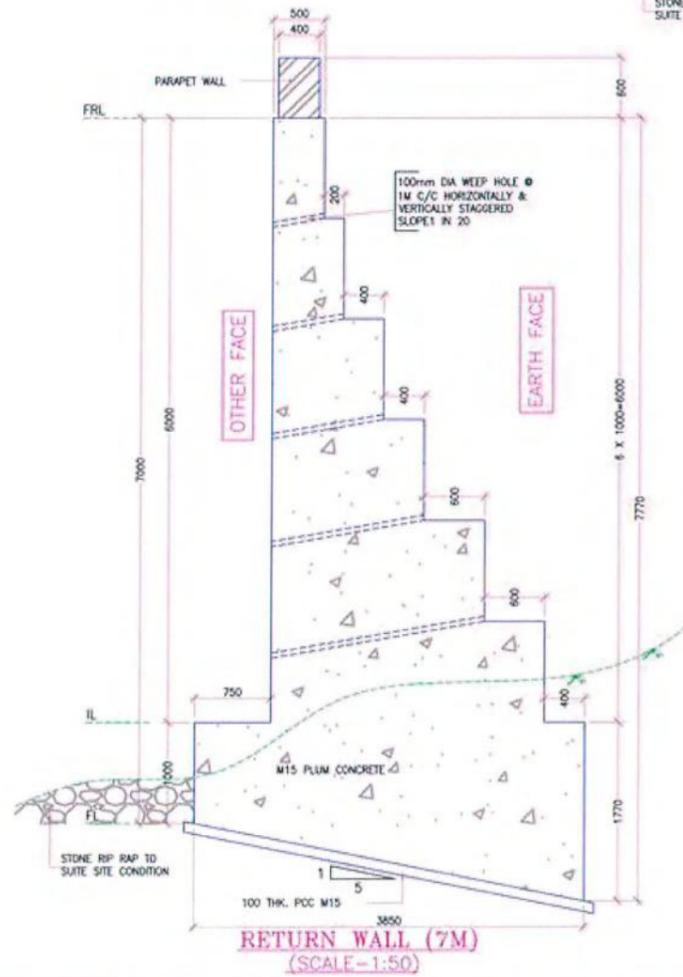
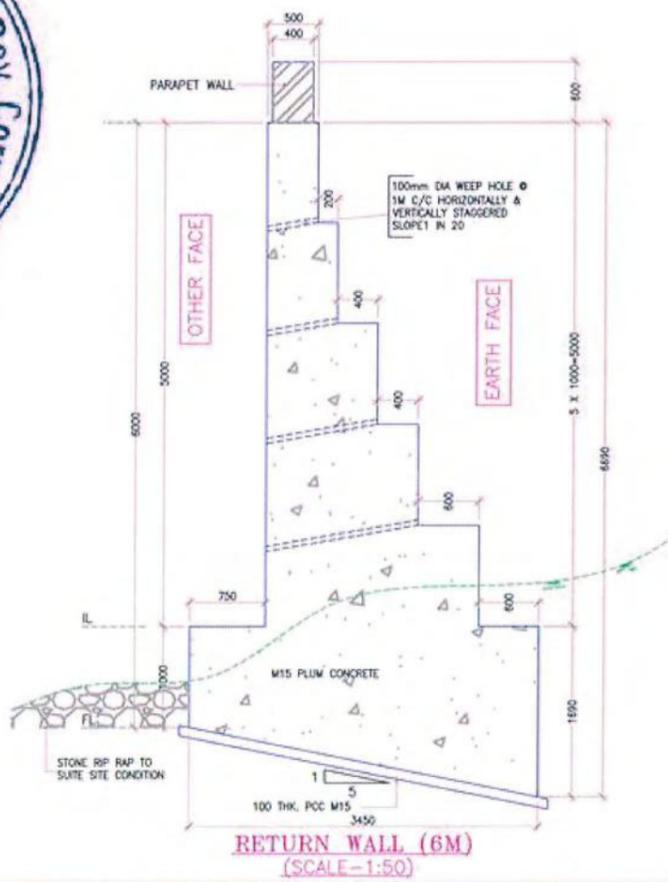
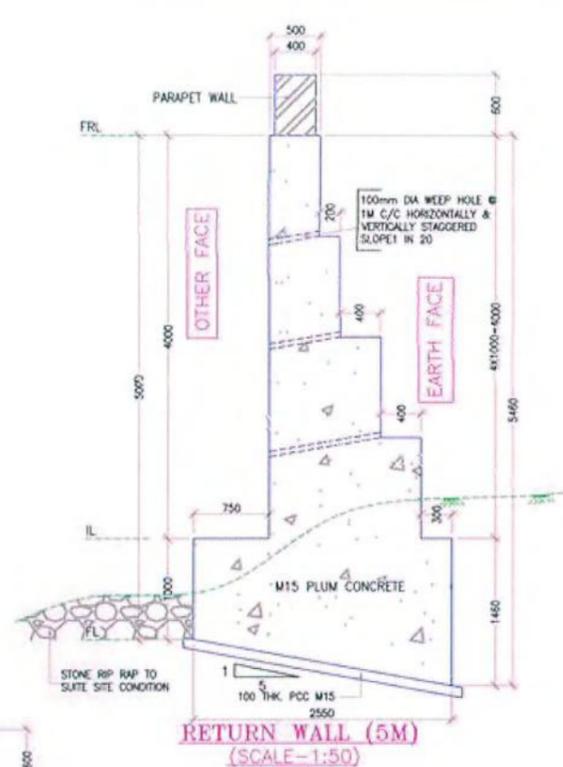
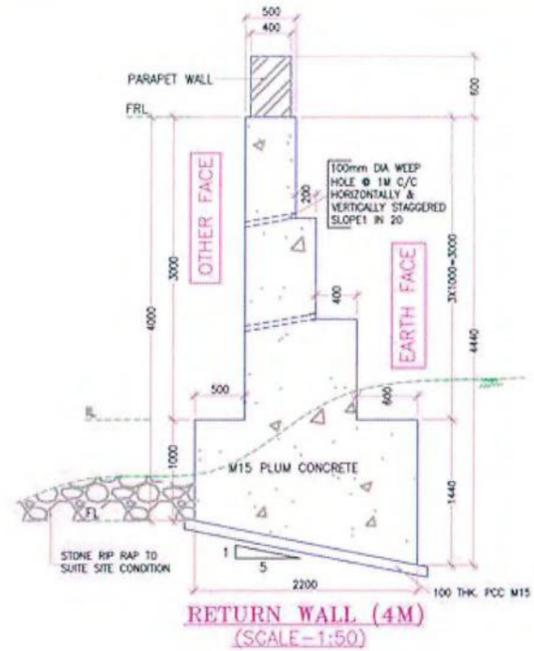
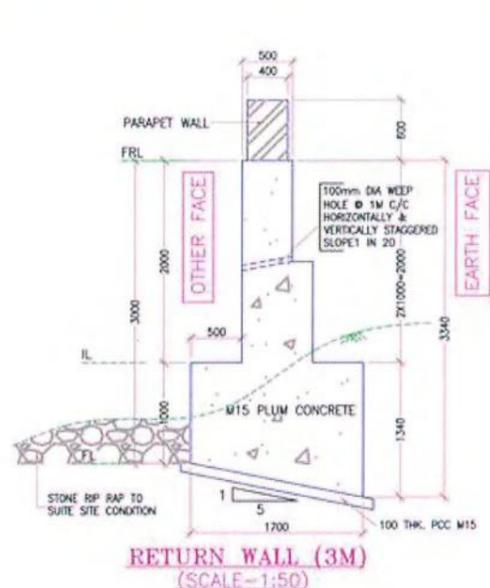
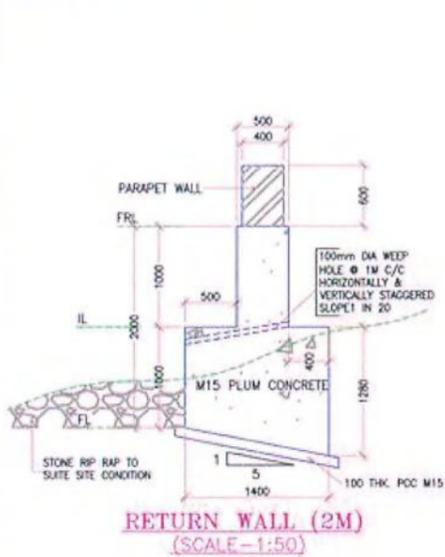
DRAWN BY :	PD	TITLE :	GENERAL ARRANGEMENT DRAWING
DESIGNED BY :	SG		MINOR BRIDGE AT
APPROVED BY :	KG		EXISTING CHAINAGE 62+900
			(DESIGN CHAINAGE 53+574)
SCALE :	AS SHOWN	DRG. NO. :	
		REVISION :	R0
			SEPTEMBER 2016



- NOTES :-**
- ALL DIMENSIONS ARE IN MM AND LEVELS ARE IN M UNLESS MENTIONED OTHERWISE.
  - DIMENSIONS ARE NOT TO BE SCALED, ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
  - THE LAYOUT OF THE MAJOR BRIDGE SHALL BE SET WITH RESPECT TO THE RELEVANT HIGHWAY PROFILE.
  - ALL CONCRETE SHALL BE DESIGN MIX & MINIMUM GRADE OF WHICH IN VARIOUS COMPONENTS SHALL BE AS FOLLOWS :-
 

RCC T-GIRDER	M35
RCC SLAB OVER RCC T-GIRDER	M35
RCC CRASH BARRIER AND PEDESTAL	M40
RCC SUBSTRUCTURE	M35
RCC PILE	M35
RCC PILE CAP	M35
RCC OPEN FOUNDATION	M35
APPROACH SLAB	M30
PCC LEVELING COURSE	M15
  - HIGH STRENGTH DEFORMED BARS SHALL BE OF GRADE Fe500 CONFORMING TO IS: 1786-1985
  - DESIGN OF BRIDGE IS BASED ON LIVE LOAD COMBINATION OF 4-LANES OF CLASS A OR 2-LANE OF 70R OR 2-LANE OF CLASS A + 1-LANE OF 70R WHICHEVER PRODUCE SEVER EFFECT.
  - THIS DRAWING SHALL BE READ IN CONJUNCTION WITH BORE LOG DETAILS REFER 2 OF 2 OF THIS DRAWING
  - THE FORMATION LEVEL GIVEN IN THIS DRAWING SHALL BE VERIFIED FROM THE RELEVANT HIGHWAY DRAWING. IN CASE OF ANY DISCREPANCY THE HIGHWAY DRAWING SHALL BE CONSIDERED CORRECT.
  - LAYING, COMPACTION & EXTENT OF BACKFILL BEHIND ABUTMENT & RETAINING WALLS SHALL CONSIST OF SELECTED EARTH CONFIRMING TO THE APPENDIX-6 OF IRC:78-2000 HAVING PROPERTIES  $C=0$ ,  $\phi=30^\circ$  & DENSITY= $20KN/m^3$
  - WEEP HOLES ON THE ABUTMENT & RETAINING WALLS SHALL BE SPACED 1000 c/c HORIZONTALLY & VERTICALLY IN STAGGERED MANNER FROM 500MM ABOVE LWL TO HFL.





**NOTES :**

1. ALL DIMENSIONS ARE IN MM, UNLESS OTHERWISE MENTIONED.
2. DIMENSIONS ARE NOT TO BE SCALED, ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. 100 DIA WEEP HOLES WITH SLOPE 1:20 SHALL BE PROVIDED AT SPACING OF 1000 C/C BOTH HORIZONTALLY & VERTICALLY (STAGGERED) IN FULL HEIGHT OF THE RETAINING WALL WITH BOTTOM MOST ROW 150mm ABOVE G.L.
4. BACK FILLING AND FILTER MEDIA BEHIND THE RETAINING WALL SHALL BE PROVIDED WITH SELECTED EARTH CONFORMING TO APPENDIX 6 OF IRC:78-2000 HAVING PROPERTIES  $\phi=35^\circ$ ,  $C=0$ ,  $\gamma=24/m^3$
5. ALL FACE OF WALL SHALL BE PROVIDED WITH A MINIMUM STEEL OF 250mm<sup>2</sup> IN EACH DIRECTION. SPACING OF THESE BARS SHALL NOT EXCEED 300mm.
6. THESE DRAWING ARE APPLICABLE FOR M15 PCC OR M15 GRADE CONCRETE WITH PLUM. REFER SPECIFICATIONS FOR PLUM CONCRETE GIVEN IN THIS DRAWING.

**PLUM CONCRETE SPECIFICATIONS:**  
THE SIZE OF STONE PLUMS MAY BE FROM 150-300MM. THE MAXIMUM DIMENSION OF THESE STONES OR PLUMS SHALL NOT EXCEED 2/3 THE LEAST DIMENSION OF THE MEMBERS.

**MATERIAL:**  
ALL PLUMS SHALL BE HARD, DURABLE, CLEAN AND FREE FROM SOFT MATERIALS OR LOOSEPIECES OR DELETERIOUS SUBSTANCE IN THEM & SHALL NOT HAVE SHARP.

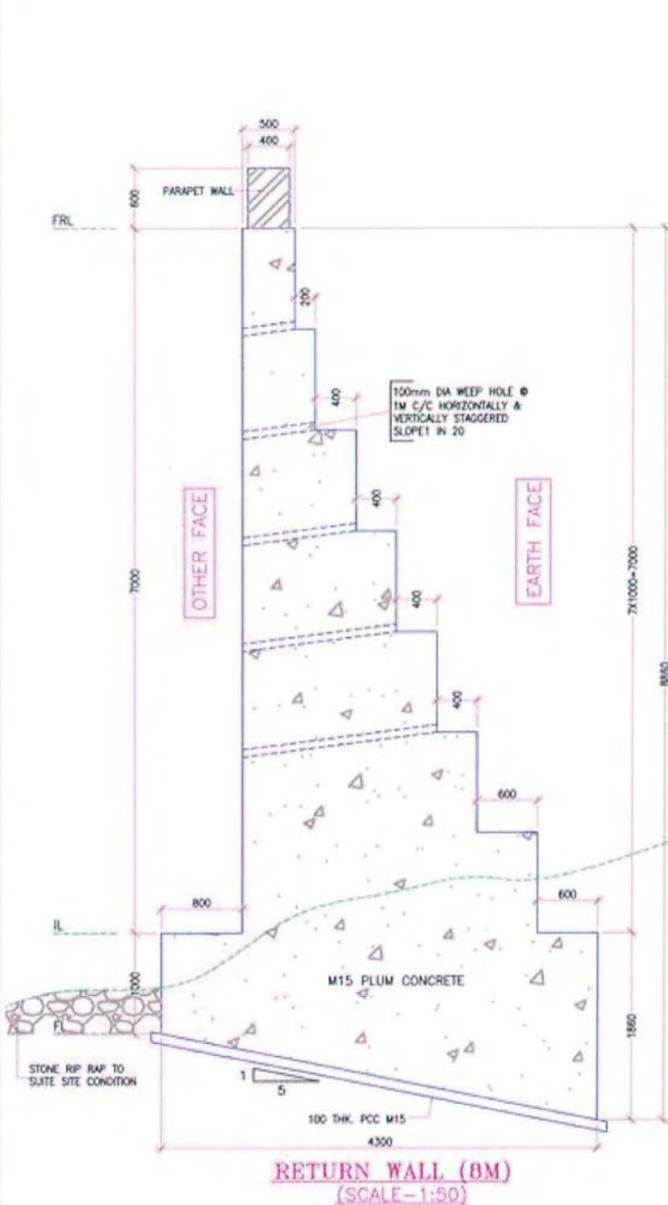
**CONSTRUCTION OPERATIONS:**  
DURING CONCRETING THE FIRST LAYER OF CONCRETE OF THE SPECIFIED MIX SHALL BE LAID TO A THICKNESS OF THE MAXIMUM SIZE OF THE PLUMS TO BE USED. THE PLUMS SHALL BE LAID WHILE THE TOP PORTION OF THIS CONCRETE IS STILL GREEN BUT SUFFICIENTLY STIFF TO PREVENT COMPLETE SUBMERSION OF THE PLUM UNDER THEIR OWN WEIGHT. THESE PLUMS SHALL BE ABOUT HALF EMBEDDED IN THE CONCRETE & THE REMAINING PART EXPOSED 150 AS TO FORM A KEY WITH THE NEXT LAYER OF THE CONCRETE. NO PLUM SHALL BE USED FOR CONCRETE LAID UNDER WATER.

WHILE PLACING THE PLUMS, CARE SHALL BE TAKEN TO SEE THAT THE CLEAR DISTANCE BETWEEN ANY TWO PLUMS IS NOT LESS THAN EITHER THE WIDTH OR THICKNESS OF EITHER OF THE PLUMS. THE DISTANCE FROM THE PLUMS TO THE OUTER SURFACE FROM ANY STEEL REINFORCEMENT SHALL BE EQUAL TO GREATEST WIDTH OF PLUMS. IF PLUMS OF STRATIFIED STONE ARE USED THEY SHALL BE LAID ON THEIR NATURAL BED. STONES WITH CONCAVE FACES SHALL BE LAID WITH THE CONCAVE UPWARD THE THICKNESS OF THE NEXT AND SUCCESSIVE LAYERS OF CONCRETE SHALL BE AT LEAST TWICE THAT OF THE LARGEST PLUM.

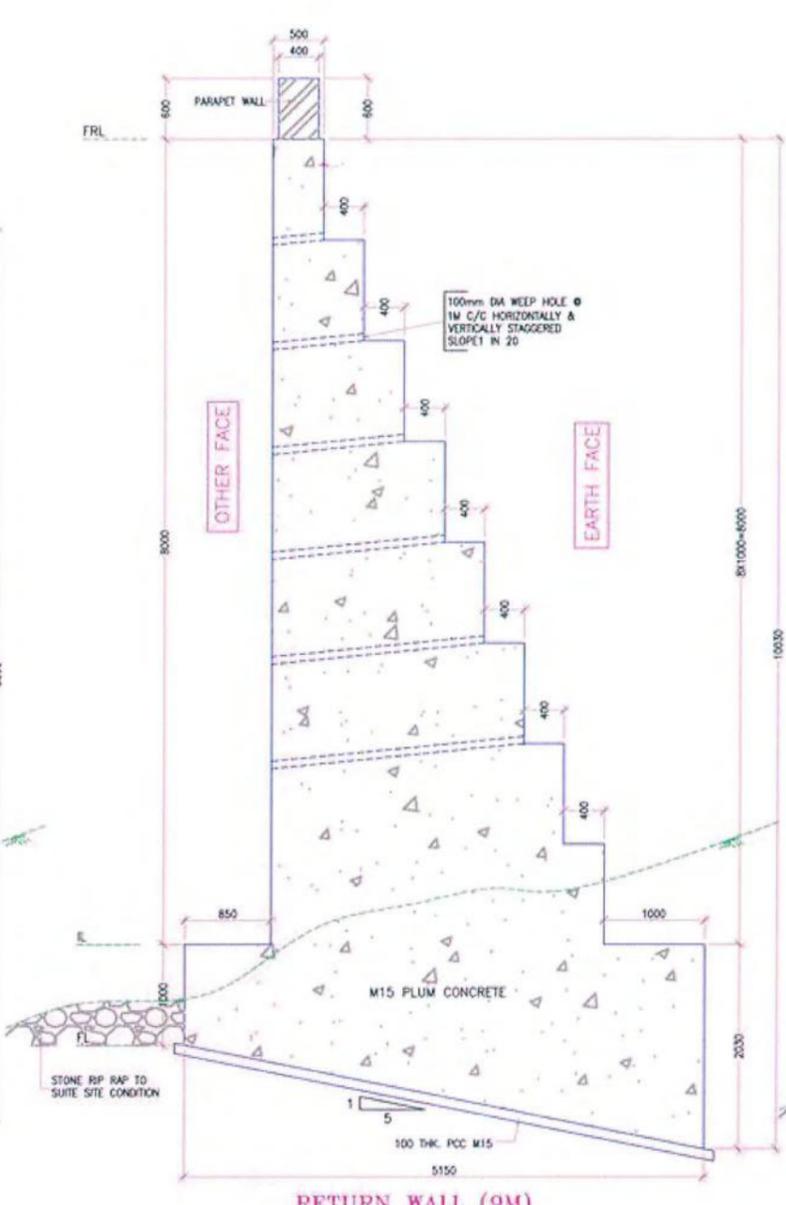
**QUALITY OF PLUM:**  
THE TOTAL VOLUME OF PLUMS SHALL NOT EXCEED 15% OF THE VOLUME OF THE FINISHED CONCRETE.

**MIX OF CONCRETE:**  
PLUM CONCRETE 1:2:4 (1 CEMENT, 2 SAND, 4 GRADED STONE AGGREGATE 40 MM NORMAL SIZE) WITH 15% PLUMS.

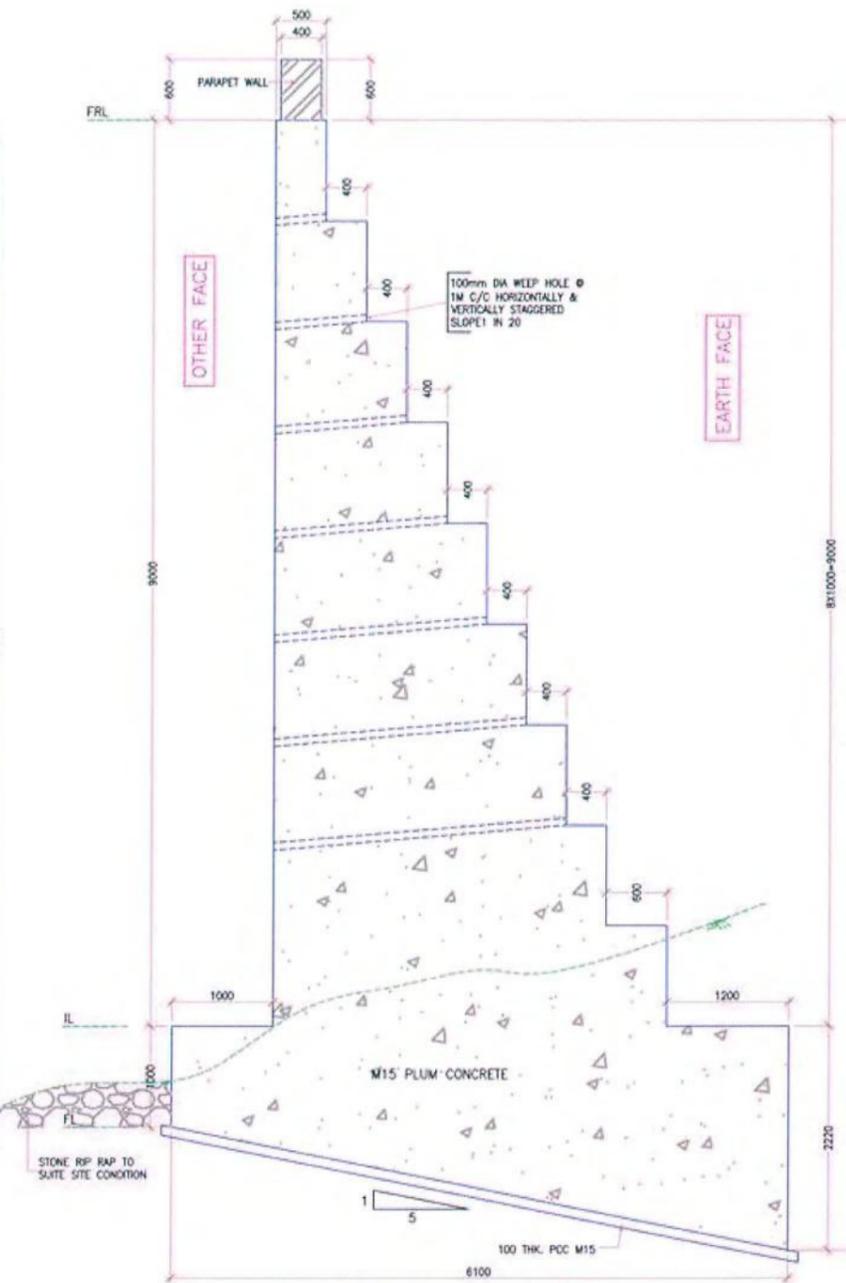
CLIENT :	PROJECT :	DESIGN CONSULTANT :	DRAWN BY :	PD	TITLE :
	TWO LANING OF JORAM - KOLORIANG ROAD (NH-713) FROM KM. 50.00 TO KM. 70.00 IN THE STATE OF ARUNACHAL PRADESH ON EPC MODE	 Voyants Solutions Pvt Ltd. 403, 4th Floor, Park Centra, Sector-30, Opp. 32nd Milestone, NH-8 Gurgaon-122002, Haryana CIN- U74140HR2004PTC046918 Ph: 0124-4598200 Fax: 0124-4019051 E-mail: info@voyants.in, www.voyants.in	DESIGNED BY :	SG	DETAILS OF RETURN WALL
National Highways & Infrastructure Development Corporation Ltd. (NHIDCL)			APPROVED BY :	KG	DRG. NO. :
			SCALE :	AS SHOWN	REVISION : R0
			REV. DATE DESCRIPTION		SEPT 2016



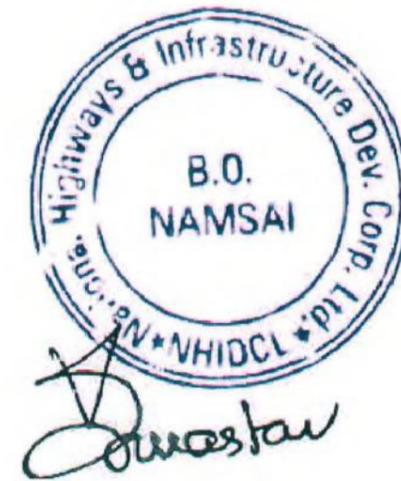
RETURN WALL (8M)  
(SCALE=1:50)



RETURN WALL (9M)  
(SCALE=1:50)



RETURN WALL (10M)  
(SCALE=1:50)



- NOTES :**
1. ALL DIMENSIONS ARE IN MM, UNLESS OTHERWISE MENTIONED.
  2. DIMENSIONS ARE NOT TO BE SCALED. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
  3. 100 DA WEEP HOLES WITH SLOPE 1 | 20 SHALL BE PROVIDED AT SPACING OF 1000 C/C BOTH HORIZONTALLY & VERTICALLY (STAGGERED) IN FULL HEIGHT OF THE RETAINING WALL WITH BOTTOM MOST ROW 150mm ABOVE G.L.
  4. BACK FILLING AND FILTER MEDIA BEHIND THE RETAINING WALL SHALL BE PROVIDED WITH SELECTED EARTH CONFORMING TO APPENDIX 6 OF IRC:78-2000 HAVING PROPERTIES  $\phi=30^\circ$ ,  $C=0.7$   $\gamma=21/m^3$
  5. ALL FACE OF WALL SHALL BE PROVIDED WITH A MINIMUM STEEL OF 250mm<sup>2</sup> IN EACH DIRECTION. SPACING OF THESE BARS SHALL NOT EXCEED 300mm.
  6. THESE DRAWING ARE APPLICABLE FOR M15 PCC OR M15 GRADE CONCRETE WITH PLUM. REFER SPECIFICATIONS FOR PLUM CONCRETE GIVEN IN THIS DRAWING.
- PLUM CONCRETE SPECIFICATIONS:**  
THE SIZE OF STONE PLUMS MAY BE FORM 150-300MM. THE MAXIMUM DIMENSION OF THESE STONES OR PLUMS SHALL NOT EXCEED 1/3 RD THE LEAST DIMENSION OF THE MEMBERS.
- MATERIAL:**  
ALL PLUMS SHALL BE HARD, DURABLE, CLEAN AND FREE FROM SOFT MATERIALS OR LOOSEPIECES OR DELETERIOUS SUBSTANCE IN THEM & SHALL NOT HAVE SHARP.
- CONSTRUCTION OPERATIONS:**  
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- WHILE PLACING THE PLUMS, CARE SHALL BE TAKEN TO SEE THAT THE CLEAR DISTANCE BETWEEN ANY TWO PLUMS IS NOT LESS THAN EITHER THE WIDTH OR THICKNESS, OF EITHER OF THE PLUMS. THE DISTANCE FROM THE PLUMS TO THE OUTER SURFACE FROM ANY STEEL REINFORCEMENT SHALL BE EQUAL TO GREATEST WIDTH OF PLUMS. IF PLUMS OF STRATIFIED STONE ARE USED THEY SHALL BE LAID ON THEIR NATURAL BED. STONES WITH CONCAVE FACES SHALL BE LAID WITH THE CONCAVE UPWARD THE THICKNESS OF THE NEXT AND SUCCESSIVE LAYERS OF CONCRETE SHALL BE AT LEAST TWICE THAT OF THE LARGEST PLUM.
- QUALITY OF PLUM:**  
THE TOTAL VOLUME OF PLUMS SHALL NOT EXCEED 15% OF THE VOLUME OF THE FINISHED CONCRETE.
- MIX OF CONCRETE:**  
PLUM CONCRETE 1:2:4 ( 1 CEMENT, 2 SAND, 4 GRADED STONE AGGREGATE 40 MM NORMAL SIZE) WITH 15% PLUMS.

CLIENT :



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DESIGN CONSULTANT:



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E-mail: info@voyants.in, www.voyants.in

R0 20/05/2016

REV. DATE DESCRIPTION

DRAWN BY :

PD

TITLE :

DETAILS OF RETURN WALL

DESIGNED BY :

SG

APPROVED BY :

KG

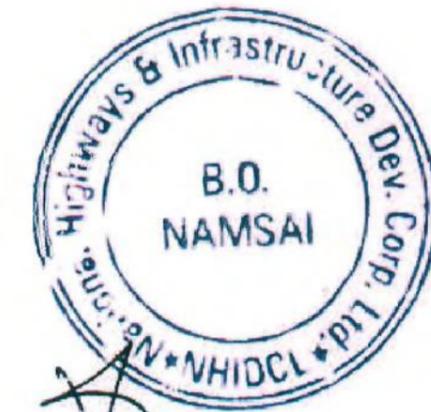
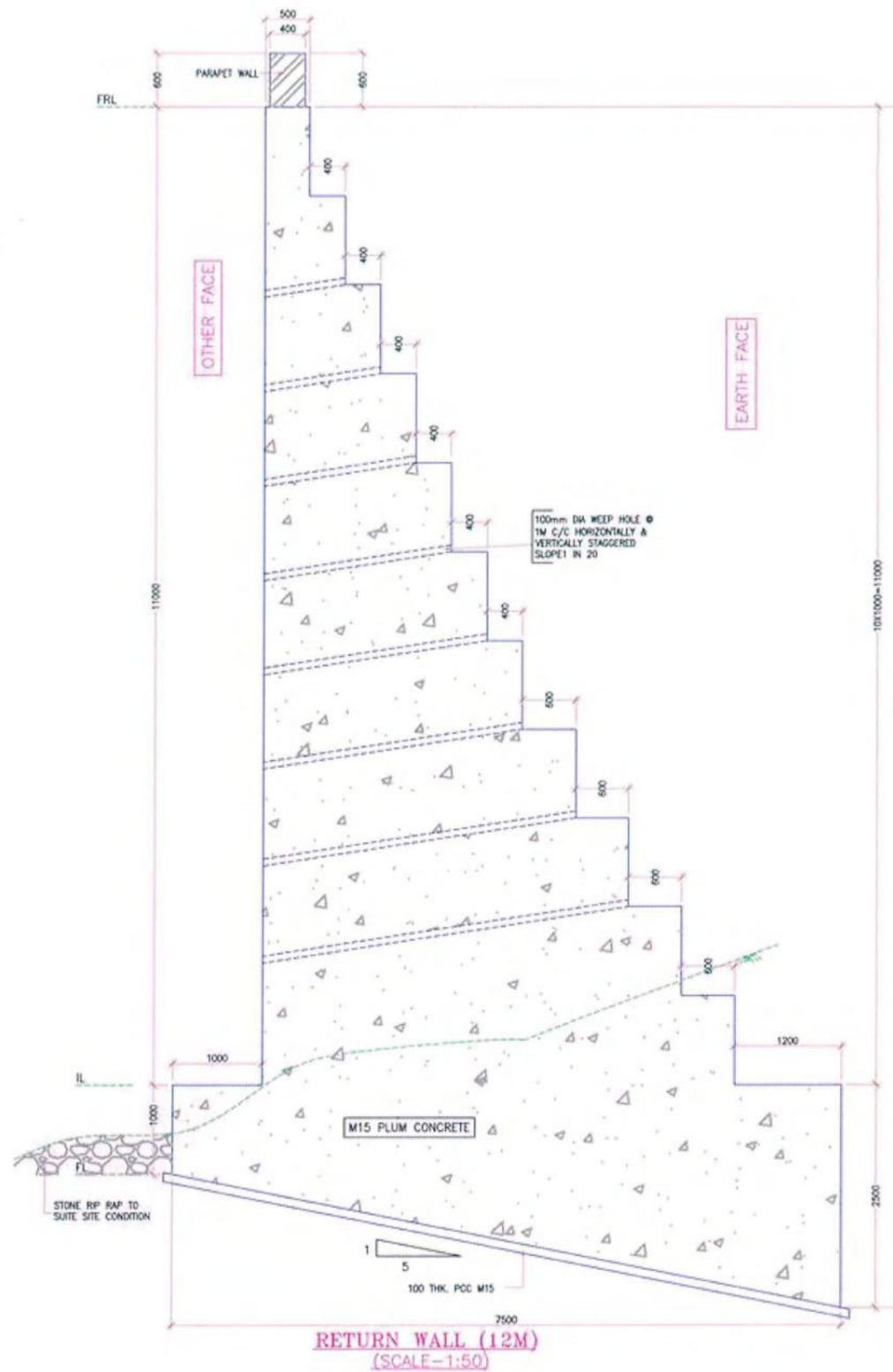
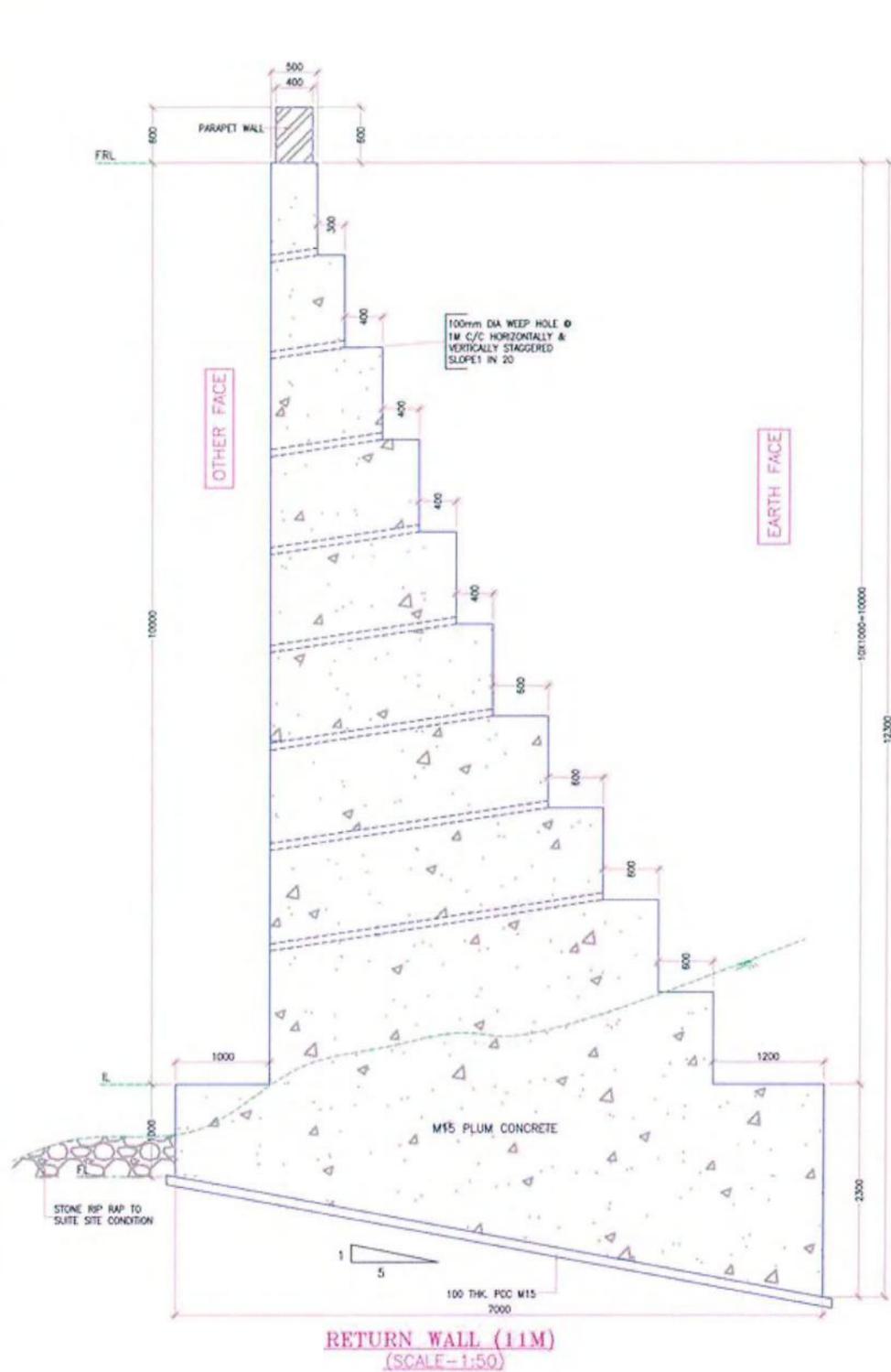
DRG. NO. :

SCALE :

AS SHOWN

REVISION : R0

SEPT 2016



**NOTES:**

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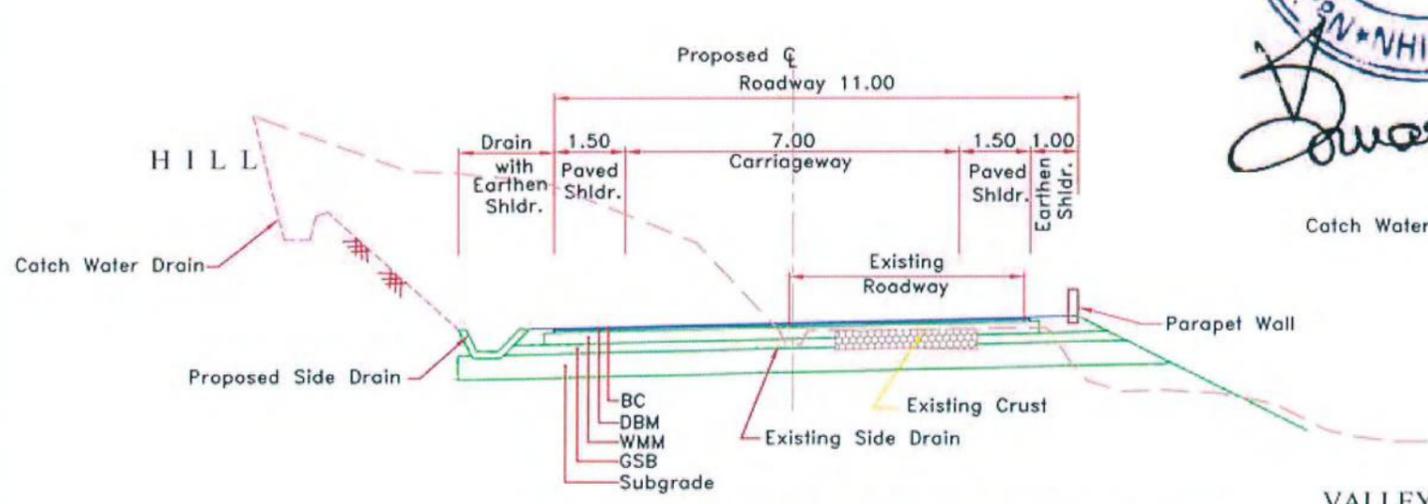
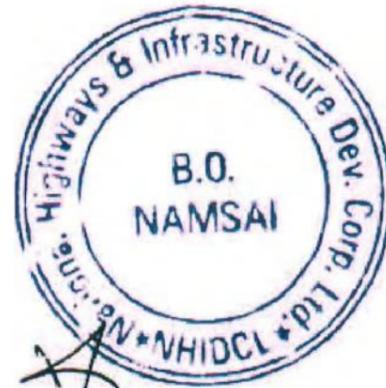
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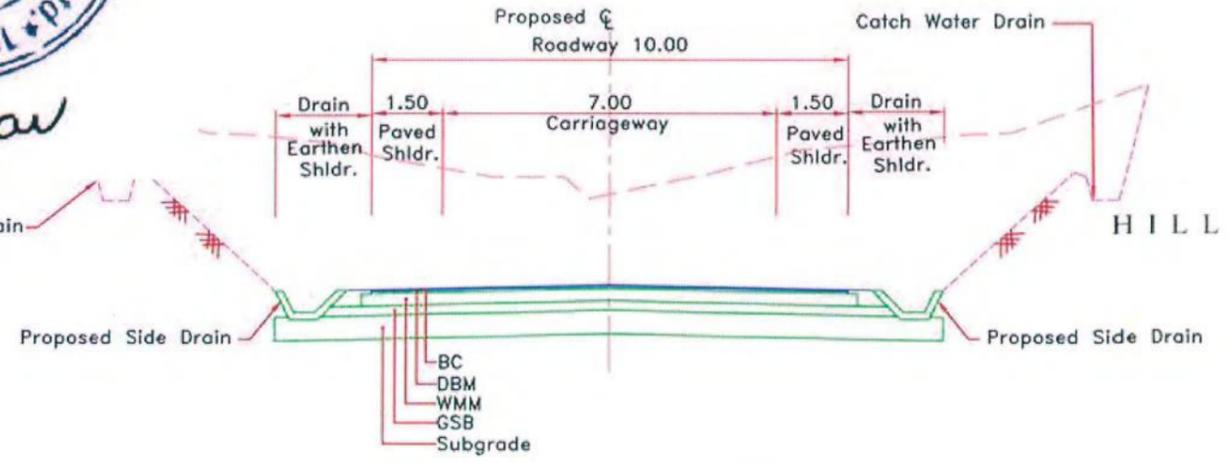
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REVISION : R0

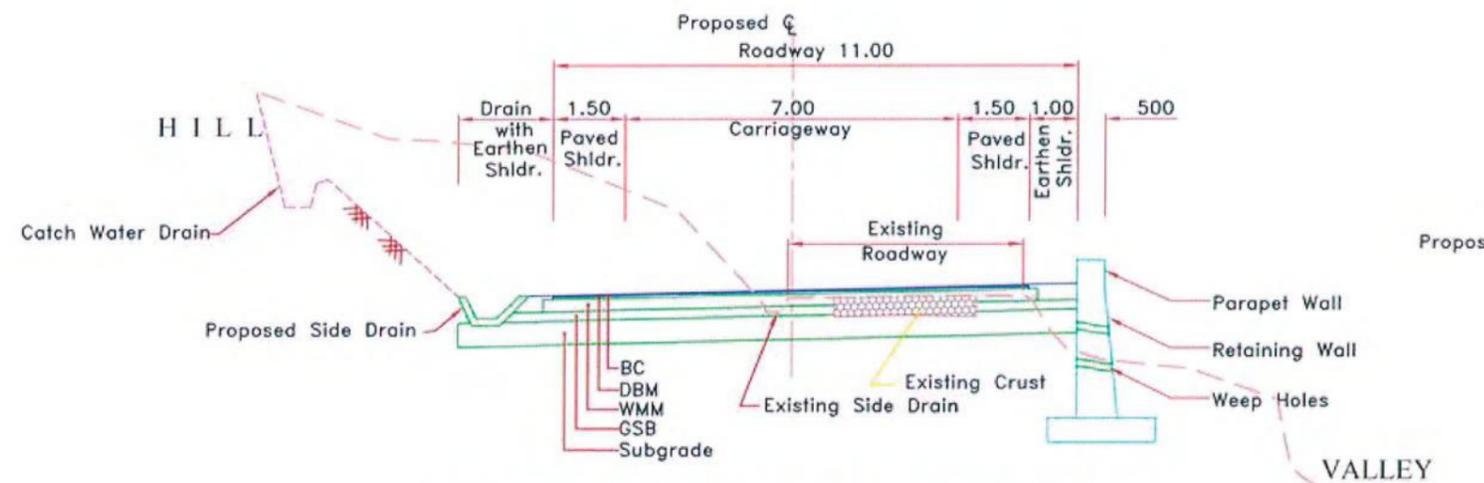
SEPT 2016



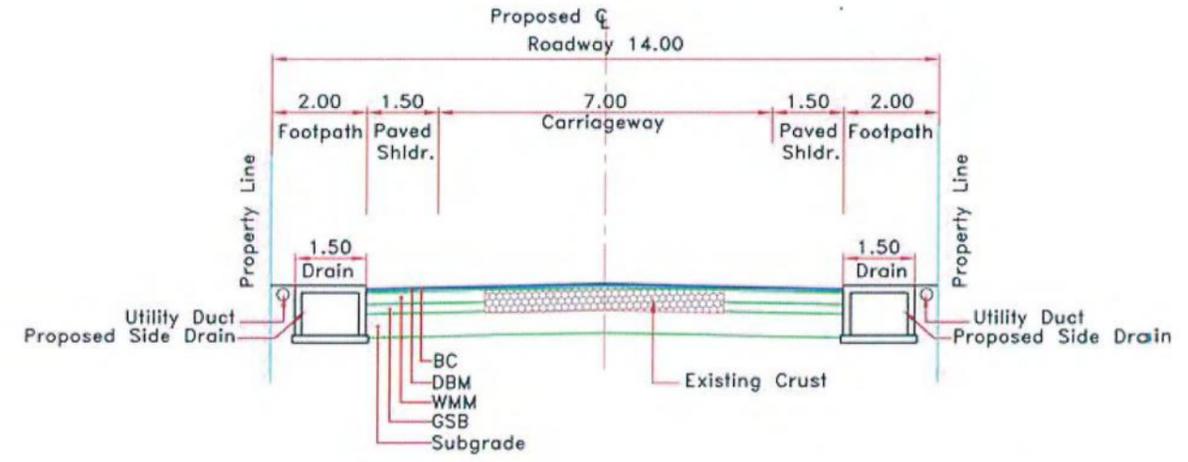
TYPE - 2 : TYPICAL CROSS SECTION OF 2 LANE CARRIAGEWAY  
( Mountainous Terrain without retaining wall)



TYPE - 3 : TYPICAL CROSS SECTION OF REALIGNMENT BY HILL CUTTING



TYPE - 1 : TYPICAL CROSS SECTION OF 2 LANE CARRIAGEWAY  
( Mountainous Terrain with retaining wall and parapet)



TYPE - 4 : TYPICAL CROSS SECTION OF PAVEMENT IN BUILT-UP AREA

Note:  
1. Breast Wall to be considered at the hill side cut section as required.