

Package -6

Sl. No.	Land Slide Zone No.	Road Marking (KM)	Design Chainage (KM)	Number of Bore-holes
1	C13	255+500	255+165	2
2	C22	262+205	261+480	1
3	C17	278+500	276+720	3



**Bore Log and Core Sample
Photographs
LS-C13**

Project Name :	Consultancy Services for additional Topographical, Geotechnical Survey for widening and upgradation of NH-54 from km 8.00 to km 380.00 in the State of Mizoram.	BPC Consultant INDIA (P) Ltd.  2 nd Floor, NATARAJ BHAWAN, Haripal, Hooghly, 712405. (WB) www.bpci.com
Client Name :	M/s National Highways and Infrastructure Development Corporation Limited. (NHIDCL), Delhi.	
Work Order No. :	NHIDCL/NH-54/DPR-Add. Survey/2016/168 dated on 16.12.2016	

BORE / CORE LOG DATA SHEET

Job Code - P160


Chainage (km)	255+500	Sliding Zone	LS_C13	No. of Core (C)	15
Borehole No.	1	Commencement Date	13.08.2017	No. of SP Test (S)	3
Ground Elevation (m)	725.1139	Completion Date	15.08.2017	No. of Undisturbed (U)	0
Method of Boring	Rotary Drilling	Standing Water Level	Not Found	No. of Disturbed (D)	2 (D - 0 & S - 2)
Borehole Diameter	75 mm	Termination Depth	15.00 M BELOW G.L.	No. of Water Sample (W)	0

Description of Soil Stratum & Rock Methology	Stratum Elevation As per R.L (m)		Hatching Pattern	Elevation As per R.L (m)		Run Length (m)	Type of Sample	SPT Values (Blows for every 15 cm penetration)			N Values IS-2131	Corrected N*	Total Core Length (cm)	TCR (%)	RQD (%)	Colours of return Water	Water Loss	Angle of Fracture
	From	To		From	To			15cm	15cm	15cm								
Highly Weathered, Light Brownish, Soft Sandy Shale / Shaley Sandstone. 0.00 m to 7.00 m	725.1139	718.1139		725.1139	724.1139	1.00	R1	-	-	-	-	-	22	22	NIL	FULL WATER LOSS		**
	724.1139			724.0539	-	S	6cm / 61B	Re	Re	>100	96	-	-	-				
	724.1139			723.1139	1.00	R2	-	-	-	-	-	22	22	NIL				
	723.1139			723.0139	-	S	10cm / 68B	Re	Re	>100	85	-	-	-				
	723.1139			722.1139	1.00	R3	-	-	-	-	-	25	25	NIL				
	722.1139			722.0639	-	S	5cm / 54B	Re	Re	>100	78	-	-	-				
	722.1139			721.1139	1.00	R4	-	-	-	-	-	20	20	NIL				
	721.1139			720.1139	1.00	R5	-	-	-	-	-	19	19	NIL				
	720.1139			719.1139	1.00	R6	-	-	-	-	-	28	28	20				
	719.1139			718.1139	1.00	R7	-	-	-	-	-	27	27	NIL				
Highly Weathered, Dark Greyish / Brownish, Fine grained moderately strong Sandstone. 7.00 m to 15.00 m Note - Some layer highly fracture Weak Sandstone observed.	718.1139	710.1139		718.1139	717.1139	1.00	R8	-	-	-	-	-	45	45	34	FULL WATER LOSS		*
	717.1139			716.1139	1.00	R9	-	-	-	-	-	36	36	NIL				
	716.1139			715.1139	1.00	R10	-	-	-	-	-	39	39	16				
	715.1139			714.1139	1.00	R11	-	-	-	-	-	34	34	NIL				
	714.1139			713.1139	1.00	R12	-	-	-	-	-	35	35	NIL				
	713.1139			712.1139	1.00	R13	-	-	-	-	-	25	25	NIL				
	712.1139			711.1139	1.00	R14	-	-	-	-	-	25	25	NIL				
	711.1139			710.1139	1.00	R15	-	-	-	-	-	30	30	NIL				

Re: Refusal R: Run RQD : Rock Quality Designation TCR : Total Core Recovery U* : UDS Could not be Collected (Slipped)



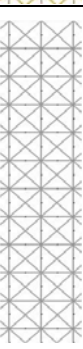
Slip Plane - 7 m

** Measurement not possible due to heavy broken small pieces.

Project Name :	Consultancy Services for additional Topographical, Geotechnical Survey for widening and upgradation of NH-54 from km 8.00 to km 380.00 in the State of Mizoram.	BPC Consultant INDIA (P) Ltd.  2 nd Floor, NATARAJ BHAWAN, Haripal, Hooghly, 712405. (WB) www.bpci.pl
Client Name :	M/s National Highways and Infrastructure Development Corporation Limited. (NHIDCL), Delhi.	
Work Order No. :	NHIDCL/NH-54/DPR-Add. Survey/2016/168 dated on 16.12.2016	

BORE / CORE LOG DATA SHEET

Job Code - P160

Chainage (km)	255+500		Sliding Zone	LS_C13			No. of Core (C)		20																	
Borehole No.	2		Commencement Date	13.08.2017			No. of SP Test (S)		3																	
Ground Elevation (m)	748.4688		Completion Date	15.08.2017			No. of Undisturbed (U)		0																	
Method of Boring	Rotary Drilling		Standing Water Level	Not Found			No. of Disturbed (D)		3 (D - 0 & S - 3)																	
Borehole Diameter	75 mm		Termination Depth	20.00 M BELOW G.L.			No. of Water Sample (W)		0																	
Description of Soil Stratum & Rock Methology	Stratum Elevation As per R.L (m)		Hatching Pattern	Elevation As per R.L (m)		Run Length (m)	Type of Sample	SPT Values (Blows for every 15 cm penetration)			N Values IS-2131	Corrected N"	Total Core Length (cm)		TCR (%)	ROD (%)	Colours of return Water	Water Loss	Angle of Fracture							
	From	To		From	To			15cm	15cm	15cm			11	11						NIL						
Highly Weathered, Yellowish / Brownish, fine grained Weak Sandstone with shale observed. 0.00 m to 3.00 m	748.4688	745.4688		748.4688	747.4688	1.00	R1	-	-	-	-	-	11	11	NIL	FULL WATER LOSS	-	:	45°							
	747.4688			747.3788	-	S	9cm / 61B	Re	Re	>100	96	-	-	-												
	747.4688			746.4688	1.00	R2	-	-	-	-	-	17	17	NIL												
	746.4688			746.4088	-	S	6cm / 51B	Re	Re	>100	85	-	-	-												
	746.4688			745.4688	1.00	R3	-	-	-	-	-	13	13	NIL												
Brownish, Fine grained highly fracture moderately Strong Sandstone. 3.00 m to 12.00 m	745.4688	736.4688		745.4688	745.3988	-	S	7cm / 55B	Re	Re	>100	78	-	-	-	FULL WATER LOSS	-	:	60°							
	745.4688			744.4688	1.00	R4	-	-	-	-	-	17	17	NIL												
	744.4688			743.4688	1.00	R5	-	-	-	-	-	15	15	NIL												
	743.4688			742.4688	1.00	R6	-	-	-	-	-	21	21	NIL												
	742.4688			741.4688	1.00	R7	-	-	-	-	-	30	30	NIL												
	741.4688			740.4688	1.00	R8	-	-	-	-	-	22	22	10												
	740.4688			739.4688	1.00	R9	-	-	-	-	-	25	25	NIL												
	739.4688			738.4688	1.00	R10	-	-	-	-	-	27	27	NIL												
	738.4688			737.4688	1.00	R11	-	-	-	-	-	29	29	15												
	737.4688			736.4688	1.00	R12	-	-	-	-	-	33	33	NIL												
	Dark Greyish, highly fracture Weak to moderately Strong Shale. 12.00 m to 20.00 m			736.4688	728.4688		736.4688	735.4688	1.00	R13	-	-	-	-	-					39	39	NIL	FULL WATER LOSS	-	:	50°
				735.4688			734.4688	1.00	R14	-	-	-	-	-	33					33	NIL					
734.4688		733.4688	1.00	R15			-	-	-	-	-	30	30	NIL												
733.4688		732.4688	1.00	R16			-	-	-	-	-	35	35	NIL												
732.4688		731.4688	1.00	R17			-	-	-	-	-	31	31	NIL												
731.4688		730.4688	1.00	R18			-	-	-	-	-	46	46	NIL												
730.4688		729.4688	1.00	R19			-	-	-	-	-	39	39	NIL												
729.4688		728.4688	1.00	R20			-	-	-	-	-	46	46	NIL												

Re: Refusal R : Run RQD : Rock Quality Designation TCR : Total Core Recovery U* : UDS Could not be Collected (Slipped)

Slip Plane - 12 m

** Measurement not possible due to heavy broken small pieces

➤ LS-C13 (BH-1 & BH-2) at CHAINAGE(km)- 255+500



PICTURE 1: BH-1 (Depth-0.00 to 1.00m)



PICTURE 2: BH-1 (Depth-1.00 to 2.00m)



PICTURE 3: BH-1 (Depth-2.00 to 3.00m)



PICTURE 4: BH-1 (Depth-3.00 to 4.00m)



PICTURE 5: BH-1 (Depth-4.00 to 5.00m)



PICTURE 6: BH-1 (Depth-5.00 to 6.00m)



PICTURE 7: BH- 1 (Depth-6.00 to 7.00m)



PICTURE 8: BH-1 (Depth-7.00 to 8.00m)



PICTURE 9: BH-1 (Depth-8.00 to 9.00m)



PICTURE 10: BH-1 (Depth-9.00 to 10.00m)



PICTURE 11: BH-1 (Depth-10.00 to 11.00m)



PICTURE 12: BH-1 (Depth-11.00 to 12.00m)



PICTURE 13: BH- 1 (Depth-12.00 to 13.00m)



PICTURE 14: BH-1 (Depth-13.00 to 14.00m)



PICTURE 15: BH-1 (Depth-14.00 to 15.00m)



PICTURE 16: BH-2 (Depth-0.00 to 1.00m)



PICTURE 17: BH-2 (Depth-1.00 to 2.00m)



PICTURE 18: BH-2 (Depth-2.00 to 3.00m)



PICTURE 19: BH-2 (Depth-3.00 to 4.00m)



PICTURE 20: BH-2 (Depth-4.00 to 5.00m)



PICTURE 21: BH-2 (Depth-5.00 to 6.00m)



PICTURE 22: BH-2 (Depth-6.00 to 7.00m)



PICTURE 23: BH-2 (Depth-7.00 to 8.00m)



PICTURE 24: BH-2 (Depth-8.00 to 9.00m)



PICTURE 25: BH-2 (Depth-9.00 to 10.00m)



PICTURE 26: BH-2 (Depth-10.00 to 11.00m)



PICTURE 27: BH-2 (Depth-11.00 to 12.00m)



PICTURE 28: BH-2 (Depth-12.00 to 13.00m)



PICTURE 29: BH-2 (Depth-13.00 to 14.00m)



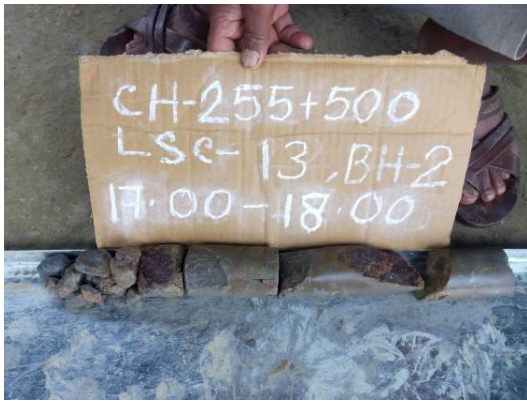
PICTURE 30: BH-2 (Depth-14.00 to 15.00m)



PICTURE 31: BH- 2 (Depth-15.00 to 16.00m)



PICTURE 32: BH-2 (Depth-16.00 to 17.00m)



PICTURE 33: BH-2 (Depth-17.00 to 18.00m)




PICTURE 34: BH-2 (Depth-18.00 to 19.00m)



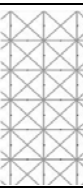
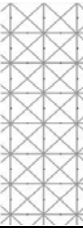

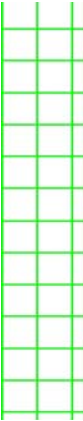
PICTURE 35: BH-2 (Depth-19.00 to 20.00m)

**Bore Log and Core Sample
Photographs
LS-C22**

Project Name :	Consultancy Services for additional Topographical, Geotechnical Survey for widening and upgradation of NH-54 from km 8.00 to km 380.00 in the State of Mizoram.	BPC Consultant INDIA (P) Ltd.  2 nd Floor, NATARAJ BHAWAN, Haripal, Hooghly, 712405. (WB) www.bpcipl.com
Client Name :	M/s National Highways and Infrastructure Development Corporation Limited. (NHIDCL), Delhi.	
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BORE / CORE LOG DATA SHEET

Job Code - P160

Chainage (km)	262+205		Sliding Zone	LS_C22		No. of Core (C)											19							
Borehole No.	1		Commencement Date	13.08.2017		No. of SP Test (S)											9							
Ground Elevation (m)	915.5415		Completion Date	17.08.2017		No. of Undisturbed (U)											0							
Method of Boring	Rotary Drilling		Standing Water Level	Not Found		No. of Disturbed (D)											6 (D - 0 & S - 6)							
Borehole Diameter	75 mm		Termination Depth	25.02 M BELOW G.L.		No. of Water Sample (W)											1							
Description of Soil Stratum & Rock Methology	Stratum Elevation As per R.L (m)		Hatching Pattern	Elevation As per R.L (m)		Run Length (m)	Type of Sample	SPT Values (Blows for every 15 cm penetration)			N Values (S-2131)	Corrected N"	Total Core Length (cm)	TCR (%)	ROD (%)	Colours of return Water	Water Loss	Angle of Fracture						
	From	To		From	To			15cm	15cm	15cm														
Highly Weathered, Greyish / Brownish, Soft Shale with sandy Shale observed. 0.00 m to 3.00 m	915.5415	912.5415		915.5415	914.5415	1.00	R1	-	-	-	-	-	12	12	NIL			**						
	914.5415			914.4615	-	S	8cm / 45B	Re	Re	>100	96	-	-	-										
	914.5415			913.5415	1.00	R2	-	-	-	-	-	20	20	NIL										
	913.5415			913.4915	-	S	5cm / 59B	Re	Re	>100	85	-	-	-										
	913.5415			912.5415	1.00	R3	-	-	-	-	-	21	21	NIL										
Moderately Weathered, Greyish / Dark greyish, fine grained moderately strong Shale with joints infilling Sandy Siltstone. 3.00 m to 9.00 m	912.5415	906.5415		912.5415	912.4615	-	S	8cm / 36B	Re	Re	>100	78	-	-	-			66° 70° 60° 70° 75° 80° 62° 80°						
	912.5415			911.5415	1.00	R4	-	-	-	-	-	30	30	NIL										
	911.5415			910.5415	1.00	R5	-	-	-	-	-	44	44	NIL										
	910.5415			909.5415	1.00	R6	-	-	-	-	-	41	41	NIL										
	909.5415			908.5415	1.00	R7	-	-	-	-	-	49	49	NIL										
	908.5415			907.5415	1.00	R8	-	-	-	-	-	39	39	10										
	907.5415			906.5415	1.00	R9	-	-	-	-	-	28	28	NIL										
	Greyish / Light Brownish, highly vertical to sub vertical fracture Poor Sandstone. 9.00 m to 20.00 m			906.5415	895.5415		906.5415	905.5415	1.00	R10	-	-	-	-	-				72	72	15			* 85° * 85° *
				905.5415			904.5415	1.00	R11	-	-	-	-	-	33				33	NIL				
904.5415		903.5415	1.00	R12			-	-	-	-	-	43	43	NIL										
903.5415		902.5415	1.00	R13			-	-	-	-	-	21	21	NIL										
902.5415		901.5415	1.00	R14			-	-	-	-	-	25	25	NIL										
901.5415		900.5415	1.00	R15			-	-	-	-	-	19	19	NIL										
900.5415		899.5415	1.00	R16			-	-	-	-	-	16	16	NIL										
899.5415		898.5415	1.00	R17			-	-	-	-	-	23	23	NIL										
898.5415		897.5415	1.00	R18			-	-	-	-	-	20	20	10										
897.5415		896.5415	1.00	R19			-	-	-	-	-	19	19	NIL										
896.5415		895.5415	1.00	R20			-	-	-	-	-	NIL	NIL	NIL										
Compacted, Light Brownish, Clayey Silt with some broken soft siltstone pieces. (CL) 20.00 m to 25.00 m	895.5415	890.5415		895.5415	895.4115	-	S	13cm / 65B	Re	Re	>100	47	-	-	-			Soil						
	895.5415			894.5415	1.00	R21	-	-	-	-	-	NIL	NIL	NIL										
	894.5415			894.4515	-	S	9cm / 51B	Re	Re	>100	46	-	-	-										
	894.5415			893.5415	1.00	R22	-	-	-	-	-	NIL	NIL	NIL										
	893.5415			893.4315	-	S	11cm / 57B	Re	Re	>100	45	-	-	-										
	893.5415			892.5415	1.00	R23	-	-	-	-	-	NIL	NIL	NIL										
	892.5415			892.4715	-	S	7cm / 48B	Re	Re	>100	44	-	-	-										
	892.5415			891.5415	1.00	R24	-	-	-	-	-	NIL	NIL	NIL										
	891.5415			891.4915	-	S	5cm / 45B	Re	Re	>100	44	-	-	-										
	891.5415			890.5415	1.00	R25	-	-	-	-	-	NIL	NIL	NIL										
	890.5415			890.5215	-	S	2cm / 39B	Re	Re	>100	43	-	-	-										

Re: Refusal R : Run RQD : Rock Quality Designation TCR : Total Core Recovery U* : UDS Could not be Collected (Slipped)

Slip Plane - 9 m

** Measurement not possible due to heavy broken small pieces.

➤ LS-C22 (BH-1) at CHAINAGE(km)- 262+205



PICTURE 36: BH- 1 (Depth-0.00 to 1.00m)



PICTURE 37: BH-1 (Depth-1.00 to 2.00m)



PICTURE 39: BH-1 (Depth-2.00 to 3.00m)



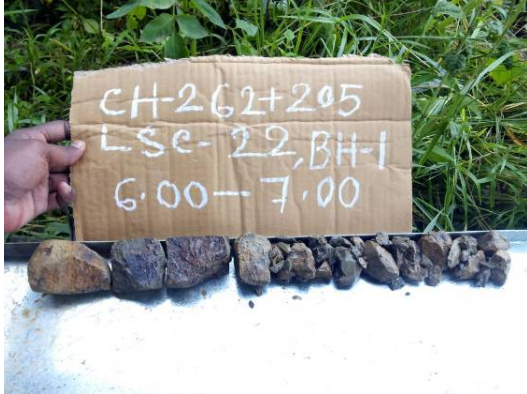
PICTURE 40: BH-1 (Depth-3.00 to 4.00m)



PICTURE 41: BH-1 (Depth-4.00 to 5.00m)



PICTURE 42: BH-1 (Depth-5.00 to 6.00m)



PICTURE 43: BH- 1 (Depth-6.00 to 7.00m)



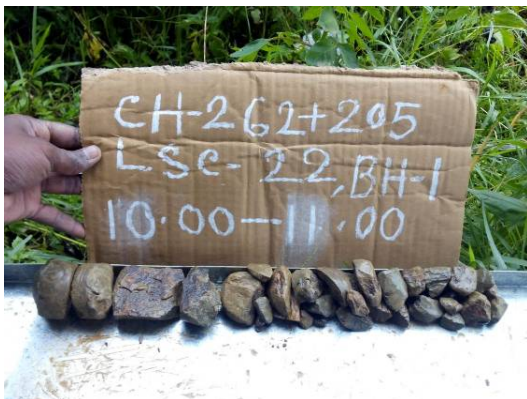
PICTURE 44: BH-1 (Depth-7.00 to 8.00m)



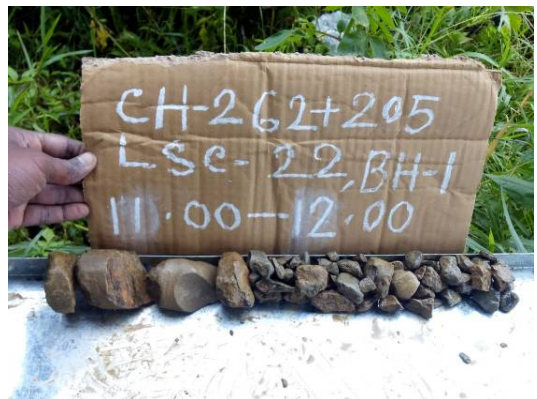
PICTURE 45: BH-1 (Depth-8.00 to 9.00m)



PICTURE 46: BH-1 (Depth-9.00 to 10.00m)



PICTURE 47: BH-1 (Depth-10.00 to 11.00m)



PICTURE 48: BH-1 (Depth-11.00 to 12.00m)



PICTURE 49: BH- 1 (Depth-12.00 to 13.00m)



PICTURE 50: BH-1 (Depth-13.00 to 14.00m)



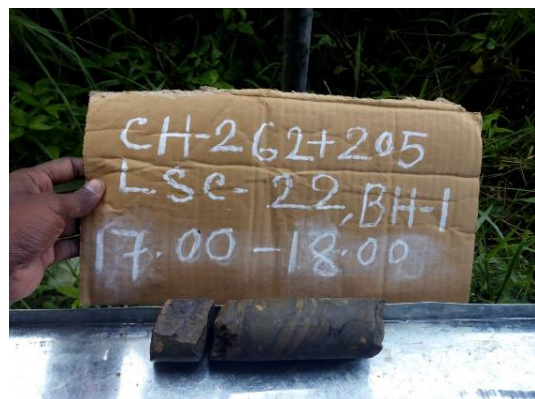
PICTURE 51: BH-1 (Depth-14.00 to 15.00m)



PICTURE 52: BH-1 (Depth-15.00 to 16.00m)



PICTURE 53: BH-1 (Depth-16.00 to 17.00m)



PICTURE 54: BH-1 (Depth-17.00 to 18.00m)



PICTURE 55: BH-1 (Depth-18.00 to 19.00m)

**Bore Log and Core Sample
Photographs
LS-C17**

Project Name :	Consultancy Services for additional Topographical, Geotechnical Survey for widening and upgradation of NH-54 from km 8.00 to km 380.00 in the State of Mizoram.	BPC Consultant INDIA (P) Ltd.  2 nd Floor, NATARAJ BHAWAN, Haripal, Hooghly, 712405. (WB) www.bpci.com
Client Name :	M/s National Highways and Infrastructure Development Corporation Limited. (NHIDCL), Delhi.	
Work Order No. :	NHIDCL/NH-54/DPR-Add. Survey/2016/168 dated on 16.12.2016	

BORE / CORE LOG DATA SHEET


Job Code - P160

Chainage (km)	278+500	Sliding Zone	LS_C17	No. of Core (C)	17												
Borehole No.	1	Commencement Date	14.08.2017	No. of SP Test (S)	14												
Ground Elevation (m)	1070.5343	Completion Date	20.08.2017	No. of Undisturbed (U)	1												
Method of Boring	Rotary Drilling	Standing Water Level	Not Found	No. of Disturbed (D)	12 (D - 1 & S - 11)												
Borehole Diameter	150 mm & 75 mm	Termination Depth	30.00 M BELOW G.L.	No. of Water Sample (W)	0												
Description of Soil Stratum & Rock Methology	Stratum Elevation As per R.L (m)		Elevation As per R.L (m)	Run Length (m)	Type of Sample	SPT Values (Blows for every 15 cm penetration)			N Values (S-2131)	Corrected N*	Total Core Length (cm)	TCR (%)	RQD (%)	Colours of return Water	Water Loss	Angle of Fracture	
	From	To				From	To	15cm									15cm
Stiff to Very Stiff, Yellowish, Silty Clay with little broken claystone pieces. (CI) 0.00 m to 5.00 m	1070.5343		1070.0343	-	D	-	-	-	-	-	-	-	-	Yellowish	Soil		
			1069.5343	1069.0843	-	S	3	5	7	12	-	-	-				-
			1068.5343	1068.0843	-	S	6	9	14	23	-	-	-				-
			1067.5343	1067.0843	-	U	-	-	-	-	-	-	-				-
			1066.5343	1066.0843	-	S	10	13	16	29	-	-	-				-
Hard, Yellowish, Silty Clay with little stone dust / broken claystone pieces. (CI) 5.00 m to 13.00 m	1065.5343		1065.5343	1065.0843	-	S	12	13	18	31	-	-	-	Yellowish	Soil		
			1064.5343	1064.0843	-	S	12	14	19	33	-	-	-				-
			1063.5343	1063.0843	-	S	10	12	17	29	-	-	-				-
			1062.5343	1062.0843	-	S	11	14	24	38	-	-	-				-
			1061.5343	1061.0843	-	S	12	18	30	48	-	-	-				-
			1060.5343	1060.0843	-	S	13	19	30	49	-	-	-				-
			1059.5343	1059.0843	-	S	12	21	27	48	-	-	-				-
			1058.5343	1058.0843	-	S	14	17	32	49	-	-	-				-
Light Yellowish / Light Greyish, fracture Weak to Moderately Strong Sandy Shale. 13.00 m to 30.00 m	1057.5343		1057.5343	1057.5143	-	S	2cm / 34B	Re	Re	>100	54	-	-	Yellowish / Greyish	Partial		
			1057.5343	1056.5343	1.00	R1	-	-	-	-	-	26	26				NIL
			1056.5343	1056.5343	-	S	Hummer Rebound	>100	-	-	-	-	-				-
			1056.5343	1055.5343	1.00	R2	-	-	-	-	-	20	20				NIL
			1055.5343	1055.5343	-	S	Hummer Rebound	>100	-	-	-	-	-				-
			1055.5343	1054.5343	1.00	R3	-	-	-	-	-	16	16				NIL
			1054.5343	1053.5343	1.00	R4	-	-	-	-	-	21	21				11
			1053.5343	1052.5343	1.00	R5	-	-	-	-	-	18	18				NIL
			1052.5343	1051.5343	1.00	R6	-	-	-	-	-	26	26				NIL
			1051.5343	1050.5343	1.00	R7	-	-	-	-	-	30	30				NIL
			1050.5343	1049.5343	1.00	R8	-	-	-	-	-	20	20				NIL
			1049.5343	1048.5343	1.00	R9	-	-	-	-	-	23	23				NIL
			1048.5343	1047.5343	1.00	R10	-	-	-	-	-	26	26				NIL
			1047.5343	1046.5343	1.00	R11	-	-	-	-	-	18	18				NIL
			1046.5343	1045.5343	1.00	R12	-	-	-	-	-	20	20				NIL
			1045.5343	1044.5343	1.00	R13	-	-	-	-	-	18	18				NIL
			1044.5343	1043.5343	1.00	R14	-	-	-	-	-	22	22				NIL
	1043.5343	1042.5343	1.00	R15	-	-	-	-	-	21	21	NIL					
	1042.5343	1041.5343	1.00	R16	-	-	-	-	-	20	20	NIL					
	1041.5343	1040.5343	1.00	R17	-	-	-	-	-	30	30	NIL					

Re: Refusal R : Run RQD : Rock Quality Designation TCR : Total Core Recovery U* : UDS Could not be Collected (Slipped)



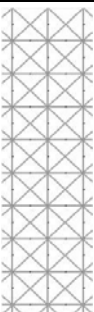
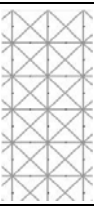
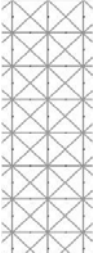
Slip Plane - 13 m

**** Mesurement not possible due to heavy broken small pieces.**

Project Name :	Consultancy Services for additional Topographical, Geotechnical Survey for widening and upgradation of NH-54 from km 8.00 to km 380.00 in the State of Mizoram.	BPC Consultant INDIA (P) Ltd.  2 nd Floor, NATARAJ BHAWAN, Haripal, Hooghly, 712405. (WB) www.bpci.com
Client Name :	M/s National Highways and Infrastructure Development Corporation Limited. (NHIDCL), Delhi.	
Work Order No. :	NHIDCL/NH-54/DPR-Add. Survey/2016/168 dated on 16.12.2016	

BORE / CORE LOG DATA SHEET

Job Code - P160

Chainage (km)	278+500		Sliding Zone	LS_C17		No. of Core (C)	20													
Borehole No.	2		Commencement Date	06.08.2017		No. of SP Test (S)	11													
Ground Elevation (m)	1084.8304		Completion Date	13.08.2017		No. of Undisturbed (U)	1													
Method of Boring	Rotary Drilling		Standing Water Level	21.70 M BELOW G.L.		No. of Disturbed (D)	9 (D - 1 & S - 8)													
Borehole Diameter	150 mm & 75 mm		Termination Depth	30.00 M BELOW G.L.		No. of Water Sample (W)	1													
Description of Soil Stratum & Rock Methology	Stratum Elevation As per R.L (m)		Hatching Pattern	Elevation As per R.L (m)		Run Length (m)	Type of Sample	SPT Values (Blows for every 15 cm penetration)			N Values (S-2131)	Corrected N*	Total Core Length (cm)	TCR (%)	RQD (%)	Colours of return Water	Water Loss	Angle of Fracture		
	From	To		From	To			15cm	15cm	15cm										
Stiff to Very Stiff, Greyish / Yellowish, Silty Clay with traces of broken claystone. (CI) 0.00 m to 6.00 m	1084.8304	1078.8304		1084.3304	-	D	-	-	-	-	-	-	-	-	-	-	-	-		
	1083.8304			1083.3804	-	S	4	6	6	12	-	-	-	-	-	-	-	-	-	
	1082.8304			1082.3804	-	S	5	8	10	18	-	-	-	-	-	-	-	-	-	-
	1081.8304			1081.3804	-	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1080.8304			1080.3804	-	S	7	12	14	26	-	-	-	-	-	-	-	-	-	-
Hard, Light Greyish / Light Yellowish, Silty Clay with traces of broken claystone. (CI) 6.00 m to 10.00 m	1078.8304	1074.8304		1078.8304	1079.3804	-	S	8	10	14	24	-	-	-	-	-	-	-		
	1078.8304			1078.3804	-	S	7	15	17	32	-	-	-	-	-	-	-	-		
	1077.8304			1077.3804	-	S	10	14	20	34	-	-	-	-	-	-	-	-		
	1076.8304			1076.3804	-	S	13	20	18	38	-	-	-	-	-	-	-	-		
Light Yellowish / Greyish, highly fracture Poor Sandy Shale. 10.00 m to 16.00 m	1074.8304	1068.8304		1074.8304	1075.3804	-	S	14	20	22	42	-	-	-	-	-	-			
	1074.8304			1074.7904	-	S	4cm / 38B	Re	Re	>100	54	-	-	-	-	-	-	-		
	1074.8304			1073.8304	1.00	R1	-	-	-	-	-	28	28	NIL	Yellowish	Partial	Full water loss	*		
	1073.8304			1073.8304	-	S	Hummer Rebound			>100	-	-	-							
	1073.8304			1072.8304	1.00	R2	-	-	-	-	-	34	34	NIL						
	1072.8304			1072.8304	-	S	Hummer Rebound			>100	-	-	-							
	1072.8304			1071.8304	1.00	R3	-	-	-	-	-	25	25	NIL						
	1071.8304			1070.8304	1.00	R4	-	-	-	-	-	25	25	NIL						
	1070.8304			1069.8304	1.00	R5	-	-	-	-	-	34	34	NIL						
	1069.8304			1068.8304	1.00	R6	-	-	-	-	-	48	48	NIL						
	1068.8304			1067.8304	1.00	R7	-	-	-	-	-	34	34	11						
1067.8304	1066.8304	1.00	R8	-	-	-	-	-	30	30	NIL									
1066.8304	1065.8304	1.00	R9	-	-	-	-	-	75	75	27									
Greyish, Moderately Strong Sandy Shale. 16.00 m to 22.00 m	1065.8304	1062.8304		1065.8304	1064.8304	1.00	R10	-	-	-	-	-	76	76	12	20° 40° 27°				
	1064.8304			1063.8304	1.00	R11	-	-	-	-	-	82	82	16						
	1063.8304			1062.8304	1.00	R12	-	-	-	-	-	72	72	10						
	1062.8304			1061.8304	1.00	R13	-	-	-	-	-	26	26	NIL						
	1061.8304			1060.8304	1.00	R14	-	-	-	-	-	37	37	NIL						
Light Greyish, Fracture moderately Strong Sandy Shale. 22.00 m to 30.00 m	1060.8304	1054.8304		1060.8304	1059.8304	1.00	R15	-	-	-	-	-	40	40	23	30° 35°				
	1059.8304			1058.8304	1.00	R16	-	-	-	-	-	20	20	NIL						
	1058.8304			1057.8304	1.00	R17	-	-	-	-	-	24	24	NIL						
	1057.8304			1056.8304	1.00	R18	-	-	-	-	-	16	16	NIL						
	1056.8304			1055.8304	1.00	R19	-	-	-	-	-	19	19	NIL						
	1055.8304			1054.8304	1.00	R20	-	-	-	-	-	16	16	NIL						
	1054.8304			1054.8304	1.00	R20	-	-	-	-	-	16	16	NIL						
	1054.8304			1054.8304	1.00	R20	-	-	-	-	-	16	16	NIL						

Re: Refusal R : Run RQD : Rock Quality Designation TCR : Total Core Recovery U* : UDS Could not be Collected (Slipped)

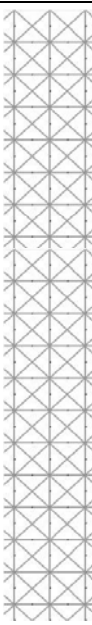
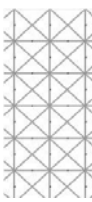

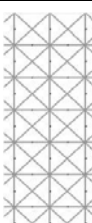
Slip Plane - 15 m

** Mesurement not possible due to heavy broken small pieces.

Project Name :	Consultancy Services for additional Topographical, Geotechnical Survey for widening and upgradation of NH-54 from km 8.00 to km 380.00 in the State of Mizoram.	BPC Consultant INDIA (P) Ltd.  2 nd Floor, NATARAJ BHAWAN, Haripal, Hooghly, 712405. (WB) www.bpci.com
Client Name :	M/s National Highways and Infrastructure Development Corporation Limited. (NHIDCL), Delhi.	
Work Order No. :	NHIDCL/NH-54/DPR-Add. Survey/2016/168 dated on 16.12.2016	

BORE / CORE LOG DATA SHEET

Job Code - P160

Chainage (km)	278+500		Sliding Zone	LS_C17		No. of Core (C)	30											
Borehole No.	3		Commencement Date	08.08.2017		No. of SP Test (S)	3											
Ground Elevation (m)	1109.7862		Completion Date	20.08.2017		No. of Undisturbed (U)	0											
Method of Boring	Rotary Drilling		Standing Water Level	Not Found		No. of Disturbed (D)	1 (D - 1 & S - 0)											
Borehole Diameter	75 mm		Termination Depth	30.00 M BELOW G.L.		No. of Water Sample (W)	0											
Description of Soil Stratum & Rock Methology	Stratum Elevation As per R.L (m)		Hatching Pattern	Elevation As per R.L (m)		Run Length (m)	Type of Sample	SPT Values (Blows for every 15 cm penetration)			N Values (S-2131)	Corrected N*	Total Core Length (cm)	TCR (%)	RQD (%)	Colours of return Water	Water Loss	Angle of Fracture
	From	To		From	To			15cm	15cm	15cm								
Greyish / Light Brownish, highly fracture Poor Sandy Shale. 0.00 m to 14.00 m	1109.7862			1109.4862		-	D	-	-	-	-	-	-	-	Yellowish	Partial	**	
				1109.4862	1109.4462	-	S	4cm / 32B	Re	Re	>100	116	-	-				
				1109.4862	1108.7862	0.70	R1	-	-	-	-	-	16	16				NIL
				1108.7862	1108.7862	-	S	2cm / 26B	Re	Re	>100	97	-	-				-
				1108.7862	1107.7862	1.00	R2	-	-	-	-	-	20	20				NIL
				1107.7862	1107.7862	-	S	Hummer Rebound			>100	-	-	-				-
				1107.7862	1106.7862	1.00	R3	-	-	-	-	-	26	26				NIL
				1106.7862	1105.7862	1.00	R4	-	-	-	-	-	46	46				NIL
				1105.7862	1104.7862	1.00	R5	-	-	-	-	-	34	34				NIL
				1104.7862	1103.7862	1.00	R6	-	-	-	-	-	40	40				NIL
				1103.7862	1102.7862	1.00	R7	-	-	-	-	-	43	43				NIL
				1102.7862	1101.7862	1.00	R8	-	-	-	-	-	27	27				NIL
				1101.7862	1100.7862	1.00	R9	-	-	-	-	-	32	32				NIL
				1100.7862	1099.7862	1.00	R10	-	-	-	-	-	35	35				12
		1099.7862	1098.7862	1.00	R11	-	-	-	-	-	34	34	NIL					
		1098.7862	1097.7862	1.00	R12	-	-	-	-	-	32	32	NIL					
		1097.7862	1096.7862	1.00	R13	-	-	-	-	-	50	50	NIL					
		1096.7862	1095.7862	1.00	R14	-	-	-	-	-	26	26	NIL					
Dark Greyish, fracture Poor Shale / Sandy Shale. 14.00 m to 21.00 m	1095.7862			1095.7862	1094.7862	1.00	R15	-	-	-	-	24	24	NIL	Full water loss	-	45°	
				1094.7862	1093.7862	1.00	R16	-	-	-	-	28	28	NIL				
				1093.7862	1092.7862	1.00	R17	-	-	-	-	22	22	NIL				
				1092.7862	1091.7862	1.00	R18	-	-	-	-	23	23	NIL				
				1091.7862	1090.7862	1.00	R19	-	-	-	-	29	29	11				
				1090.7862	1089.7862	1.00	R20	-	-	-	-	37	37	NIL				
Fresh, Greyish, Strong Sandy Shale. 21.00 m to 23.00 m	1088.7862			1088.7862	1087.7862	1.00	R22	-	-	-	-	75	75	52	-	-	-	
				1087.7862	1086.7862	1.00	R23	-	-	-	-	72	72	43				
Greyish, highly fracture Poor Sandy Shale. 23.00 m to 30.00 m	1086.7862			1086.7862	1085.7862	1.00	R24	-	-	-	-	27	27	NIL	-	-	-	
				1085.7862	1084.7862	1.00	R25	-	-	-	-	25	25	NIL				
				1084.7862	1083.7862	1.00	R26	-	-	-	-	28	28	NIL				
				1083.7862	1082.7862	1.00	R27	-	-	-	-	25	25	NIL				
				1082.7862	1081.7862	1.00	R28	-	-	-	-	29	29	NIL				
				1081.7862	1080.7862	1.00	R29	-	-	-	-	24	24	NIL				
				1080.7862	1079.7862	1.00	R30	-	-	-	-	54	54	NIL				

Re: Refusal R : Run RQD : Rock Quality Designation TCR : Total Core Recovery U* : UDS Could not be Collected (Slipped)

Slip Plane - 13 m

** Mesurement not possible due to heavy broken small pieces.

➤ LS- C17 (BH-1,BH-2 & BH-3) & CHAINAGE(km)- 278+500



PICTURE 56: BH-1 (Depth-13.00 to 14.00m)



PICTURE 57: BH-1 (Depth-14.00 to 15.00m)



PICTURE 58: BH-1 (Depth-13.50 to 15.00m)



PICTURE 59: BH-1 (Depth-16.00 to 17.00m)



PICTURE 60: BH- 1 (Depth-17.00 to 18.00m)



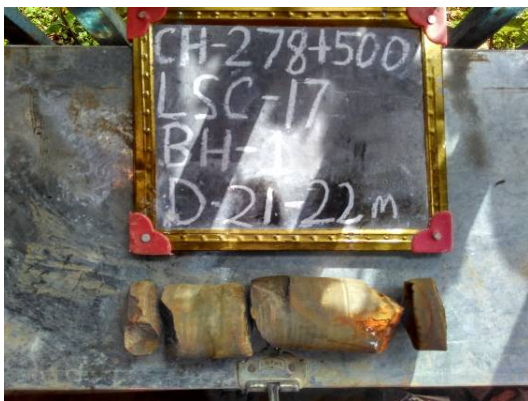
PICTURE 61: BH- 1 (Depth-18.00 to 19.00m)



PICTURE 62: BH-1 (Depth-19.00 to 20.00m)



PICTURE 63: BH-1 (Depth-20.00 to 21.00m)



PICTURE 64: BH-1 (Depth-21.00 to 22.00m)



PICTURE 65: BH-1 (Depth-22.00 to 23.00m)



PICTURE 66: BH-1 (Depth-23.00 to 24.00m)



PICTURE 67: BH-1 (Depth-24.00 to 25.00m)



PICTURE 68: BH-1 (Depth-25.00 to 26.00m)



PICTURE 69: BH-1 (Depth-26.00 to 27.00m)



PICTURE 70: BH-1 (Depth-27.00 to 28.00m)



PICTURE 71 BH-1 (Depth-28.00 to 29.00m)



PICTURE 72: BH- 1 (Depth-29.00 to 30.00m)



PICTURE 73: BH-2 (Depth-10.00 to 11.00m)



PICTURE 74: BH-2 (Depth-11.00 to 12.00m)



PICTURE 75: BH-2 (Depth-12.00 to 13.00m)



PICTURE 76: BH-2 (Depth-13.00 to 14.00m)



PICTURE 77: BH-2 (Depth-14.00 to 15.00m)



PICTURE 78: BH-2 (Depth-15.00 to 16.00m)



PICTURE 79: BH-2 (Depth-16.00 to 17.00m)



PICTURE 80: BH-2 (Depth-17.00 to 18.00m)



PICTURE 81: BH-2 (Depth-18.00 to 19.00m)



PICTURE 82: BH-2 (Depth-19.00 to 20.00m)



PICTURE 83: BH-2 (Depth-20.00 to 21.00m)



PICTURE 84: BH-2 (Depth-21.00 to 22.00m)



PICTURE 85: BH-2 (Depth-22.00 to 23.00m)



PICTURE 86: BH-2 (Depth-22.00 to 23.00m)



PICTURE 87: BH-2 (Depth-23.00 to 24.00m)



PICTURE 88: BH-2 (Depth-24.00 to 25.00m)



PICTURE 89: BH-2 (Depth-25.00 to 26.00m)



PICTURE 90: BH-2 (Depth-26.00 to 27.00m)



PICTURE 91: BH-2 (Depth-27.00 to 28.00m)



PICTURE 92: BH-2 (Depth-28.00 to 29.00m)



PICTURE 93: BH-2 (Depth-29.00 to 30.00m)



PICTURE 94: BH-3 (Depth-0.30 to 1.00m)



PICTURE 95: BH-3 (Depth-1.00 to 2.00m)



PICTURE 96: BH-3 (Depth-2.00 to 3.00m)



PICTURE 97: BH-3 (Depth-3.00 to 4.00m)



PICTURE 98: BH-3 (Depth-4.00 to 5.00m)



PICTURE 99: BH-3 (Depth-5.00 to 6.00m)



PICTURE 100: BH-3 (Depth-6.00 to 7.00m)



PICTURE 101: BH-3 (Depth-7.00 to 8.00m)



PICTURE 102: BH-3 (Depth-8.00 to 9.00m)



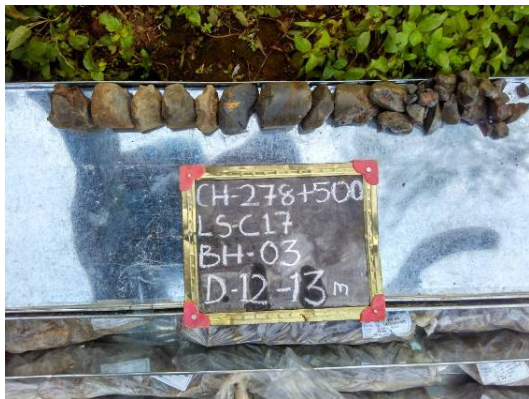
PICTURE 103: BH-3 (Depth-9.00 to 10.00m)



PICTURE 104: BH-3 (Depth-10.00 to 11.00m)



PICTURE 105: BH-3 (Depth-11.00 to 12.00m)



PICTURE 106: BH-3 (Depth-12.00 to 13.00m)



PICTURE 107: BH-3 (Depth-13.00 to 14.00m)



PICTURE 108: BH-3 (Depth-16.00 to 17.00m)



PICTURE 109: BH-3 (Depth-17.00 to 18.00m)



PICTURE 110: BH-3 (Depth-18.00 to 19.00m)



PICTURE 111: BH-3 (Depth-19.00 to 20.00m)



PICTURE 112: BH-3 (Depth-20.00 to 21.00m)



PICTURE 113: BH-3 (Depth-21.00 to 22.00m)



PICTURE 114: BH- 3 (Depth-22.00 to 23.00m)



PICTURE 115: BH-3 (Depth-23.00 to 24.00m)



PICTURE 116: BH-3 (Depth-24.00 to 25.00m)



PICTURE 117: BH-3 (Depth-25.00 to 26.00m)



PICTURE 118: BH-3 (Depth-26.00 to 27.00m)



PICTURE 119: BH-3 (Depth-27.00 to 28.00m)



PICTURE 120: BH-3 (Depth-28.00 to 29.00m)



PICTURE 121: BH-3 (Depth-29.00 to 30.00m)
