IMPROVEMENT TO 2-LANE WITH PAVED SHOULDER/4-LANING OF NH-40 BETWEEN SHILLONG TO DAWKI ROAD UPTO BANGLADESH BORDER INCLUDING DAWKI BRIDGE IN THE STATE OF MEGHALAYA FOR EXECUTION OF EPC MODE UNDER JICAQ FUNDING FOR KM 37+500 TO CH KM 45+760 DESIGN LENGTH 7.760 KM (PACKAGE-III).

FINAL DETAILED PROJECT REPORT (DPR)

VOLUME-IX (DRAWING'S)

PART – I

TYPICAL CROSS SECTIONS (TCS), PLAN & PROFILE , GAD'S OF STRUCTURES & MISCELLANEOUS

Name of Road: - Improvement To 2-Lane With Paved Shoulder/4-Laning of NH-40 Between Shillong To Dawki Road

PYNURSLA BYPASS

(Total Design Length- 7.760 km.)



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

Consultants: Global Infra-Solutions In JV with Dhruv Consultancy Services Limited and association with Infycons Creative Software Pvt. Ltd. F-2, E-8/11A, Sukhsagar Apartment Trilanga, Bhopal (MP) -462039 Tele/Fax- 0755-4045216 E-Mail- globalinfrasolutions@gmail.com web: globalinfrasolutions.org

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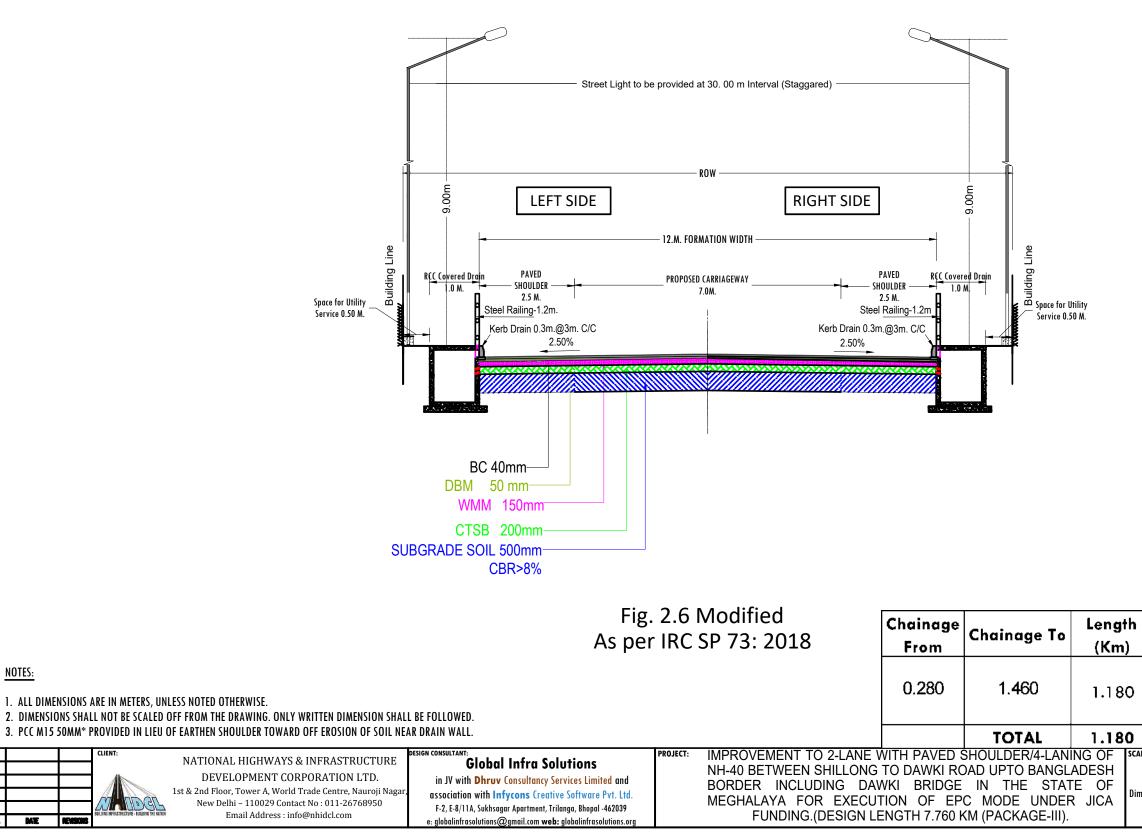
INDEX

- 1. TYPICAL CROSS SECTIONS
- 2. PLAN & PROFILE
- **3. GAD OF STRUCTURES**
- 4. MISCELLANEOUS

(in)

TYPICAL CROSS SECTIONS

TYPE - 01 RECONSTRUCTION OF EXISTING TWO - LANE CARRIAGEWAY TO TWO - LANE WITH PAVED SHOULDER WITH DRAIN IN **BUILT-UP AREA**



NOTES:

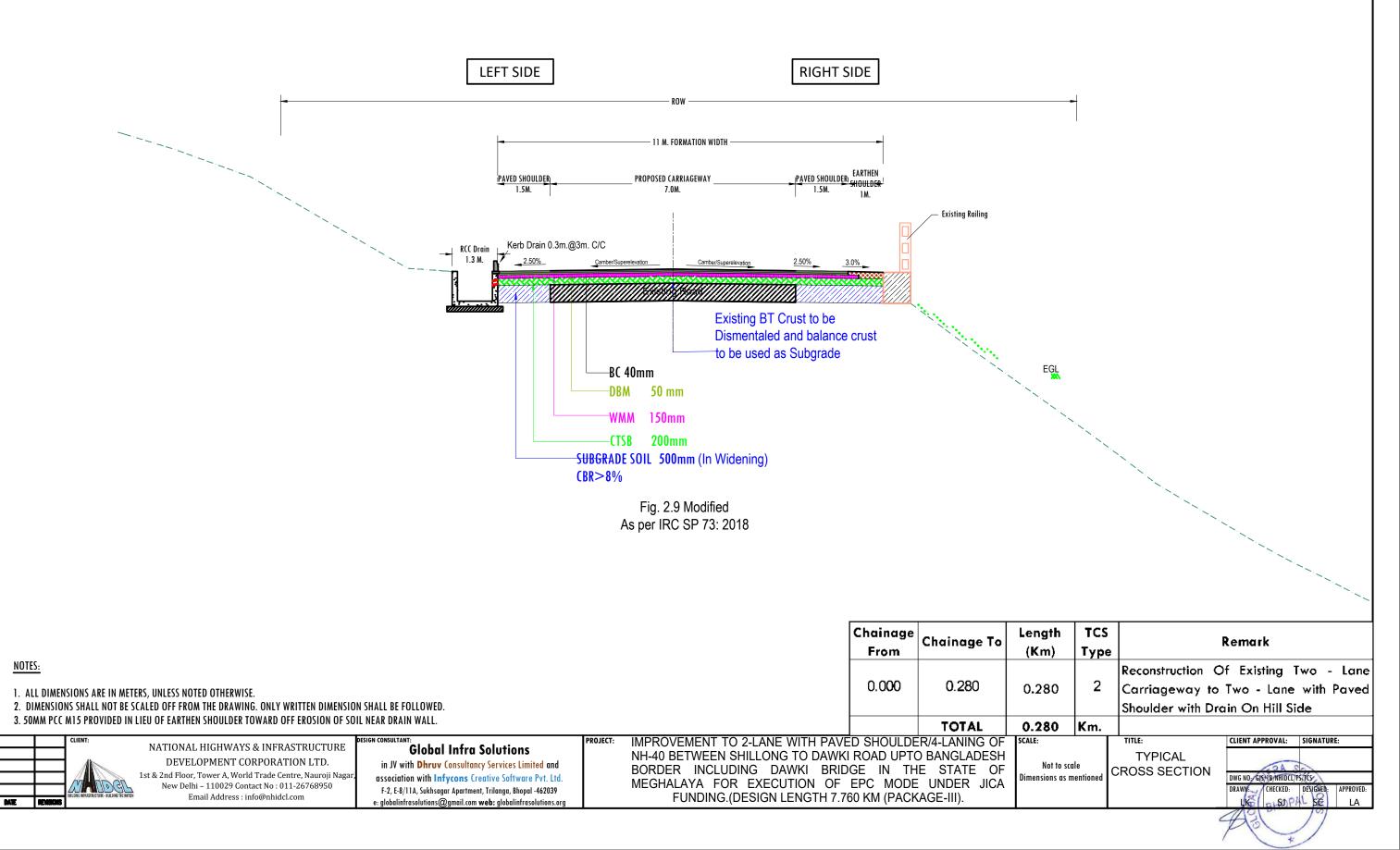
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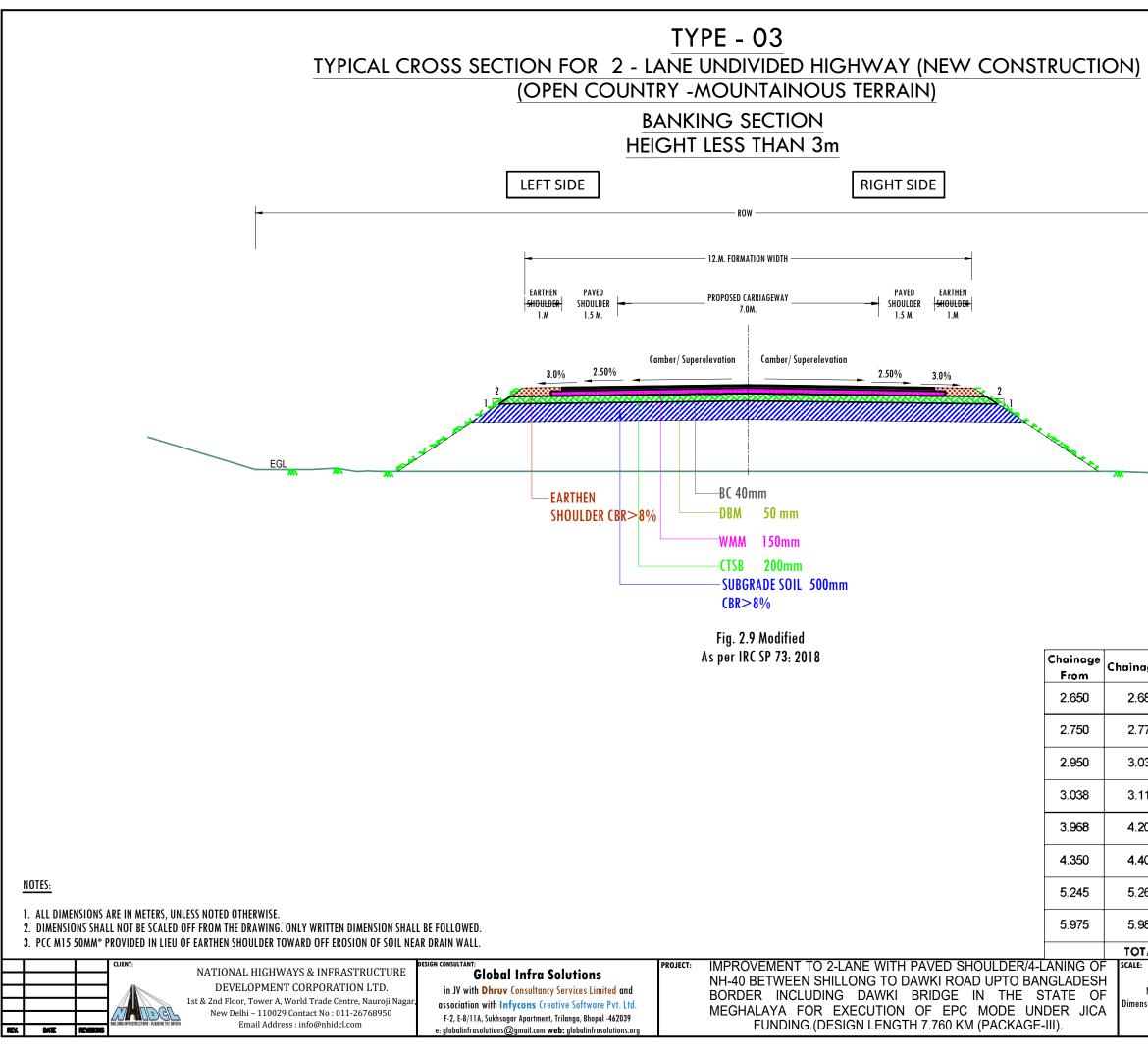
	TCS Type		Re	mark	
	1	C	econstruction Of arriageway to Ty poulder	-	
	Km.				
LE:			TITLE:	CLIENT APPROVAL:	SIGNATURE:
	Not to scale sions as mentio	ned	TYPICAL CROSS SECTION	DWG NO:; GIS/18/NHIDCL/ DRAWN. CHECKED: EK BHOSJ	
				Hele +)

TYPE - 02

RECONSTRUCTION OF EXISTING TWO - LANE CARRIAGEWAY TO TWO - LANE WITH PAVED SHOULDER WITH DRAIN ON HILL SIDE (OPEN COUNTRY - MOUNTAINOUS TERRAIN)

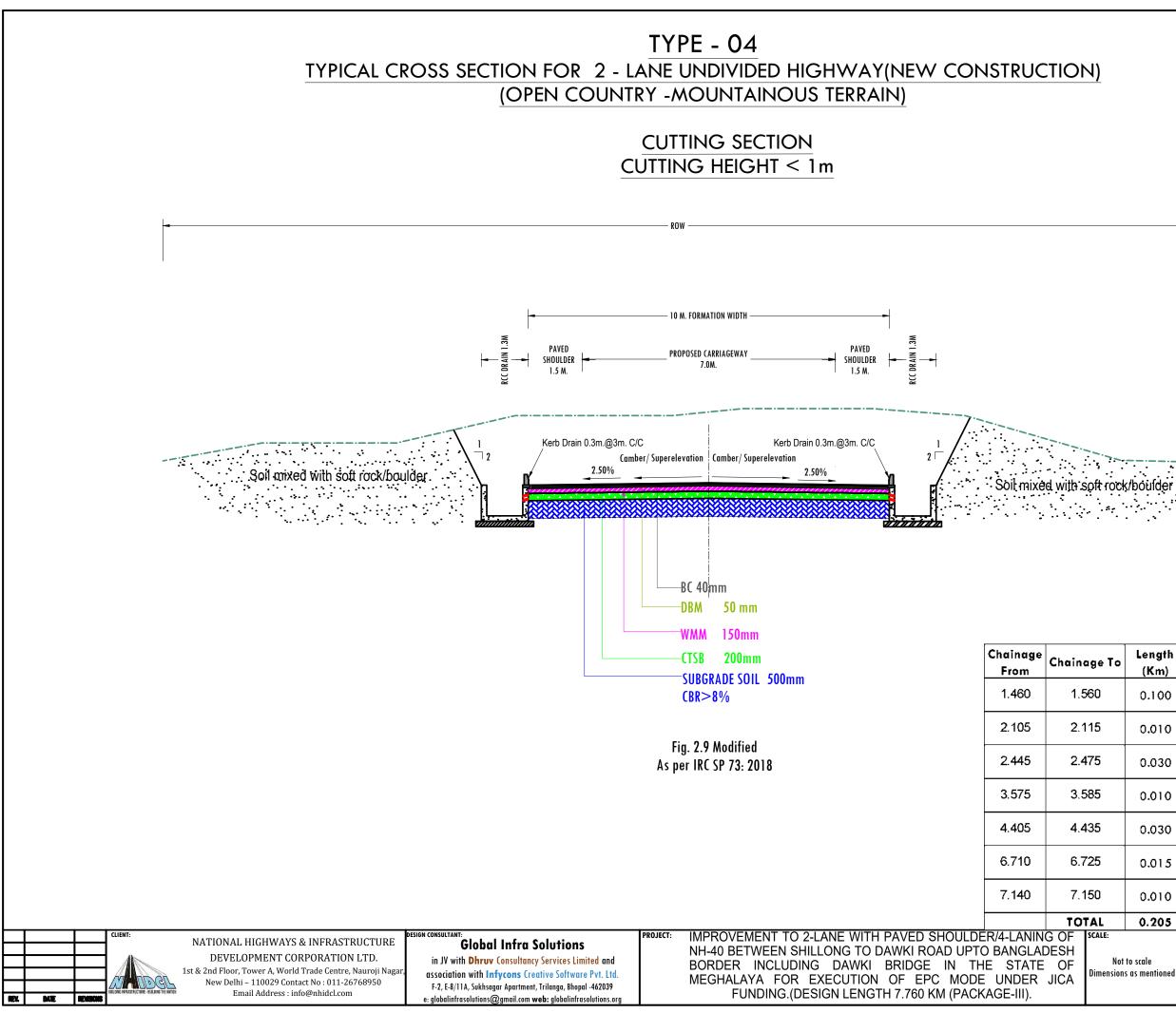


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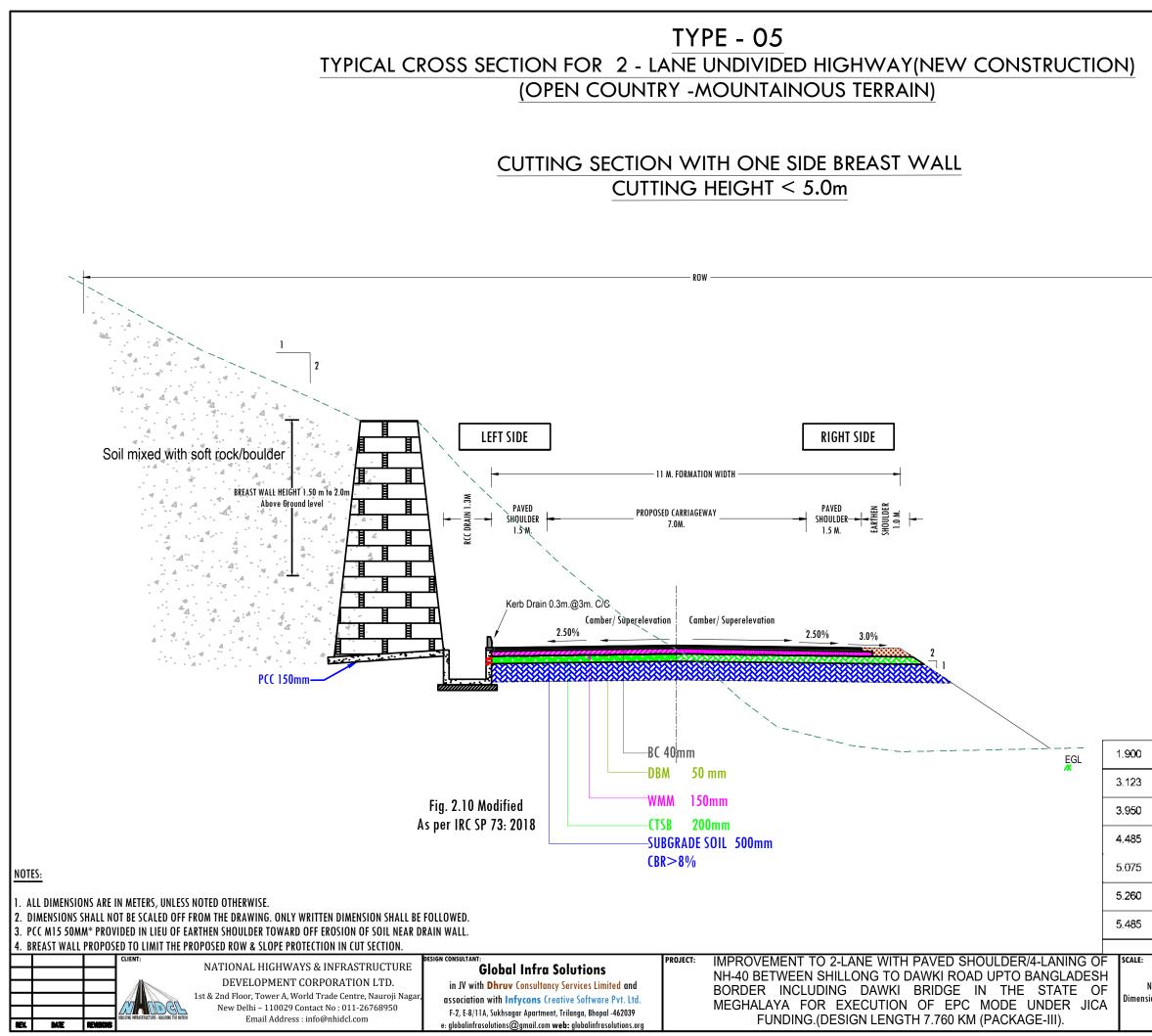
EGL

age To	Leng (Kn		TCS Type		Remark		
685	0.03	35	3	2 - Lane + F New-constru	S (Banking Sec ction	tion <3	m)
775	0.02	25	3		PS (Banking Sec	tion <3:	m)
)33	0.08	33	3	2 - Lane + P New-constru	S (Banking Sec	tion <3;	m)
118	0.08	30	3		S (Banking Sec	tion <3	m)
200	0.23	32	3	2 - Lane + F New-constru	S (Banking Sec ction	tion <3:	m)
405	0.03	55	3	2 - Lane + P New-constru	'S (Banking Sec ction	tion <3	m)
260	0.01	5	3	2 - Lane + F New-constru	'S (Banking Sec ction	tion <3	m)
985	0.01	0	3	2 - Lane + F New-constru	PS (Banking Sec ction	tion <3;	m)
TAL	0.53		Km.				
: Not to sca nsions as m			TYPI(OSS S	CAL ECTION	CLIENT APPROVAL:	DESIGNED:	E: APPROVED: LA
				C	Azl	11	



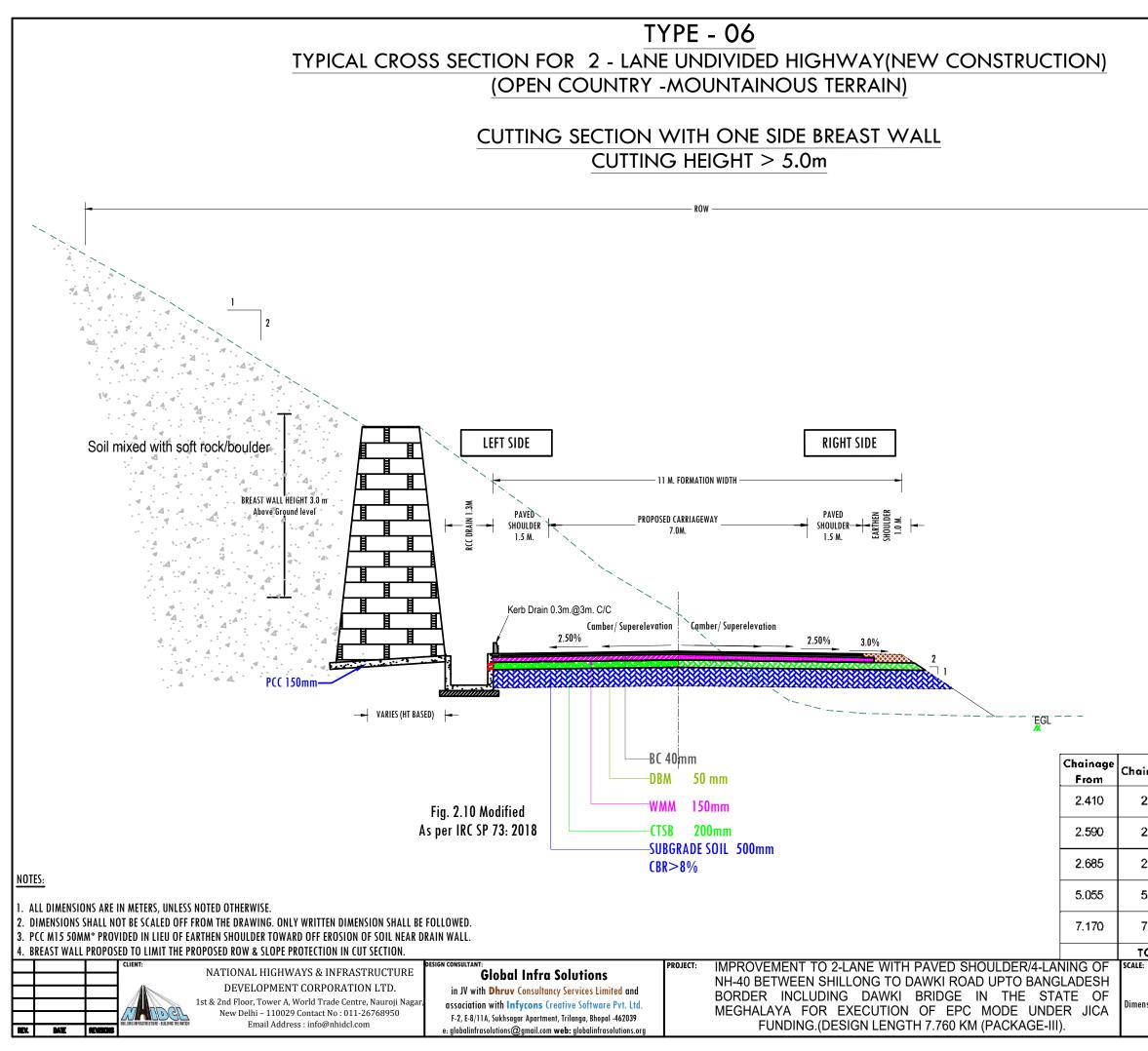


- 1										
Τo	Length (Km)	TCS Type	Remark							
	0.100	4	2 - Lane + PS (Cutting<1m)							
			New-construction							
	0.010	4	2 - Lane + PS (Cutting<1m)							
			New-construction							
	0.030	4	2 - Lane + PS (Cutting<1m)							
			New-construction							
	0.010	4	2 - Lane + PS (Cutting<1m)							
			New-construction							
	0.030	4	2 - Lane + PS (Cutting<1m)							
	0.030		New-construction							
	0.015	4	2 - Lane + PS (Cutting<1m)							
	0.015		New-construction							
	0.010	4	2 - Lane + PS (Cutting<1m)							
	0.010	- T	New-construction							
	0.205	Km.								
:		TITLE:	CLIENT APPROVAL: SIGNATURE:							
		ΤY	PICAL							
	to scale		SECTION							
nsion	s as mentioned	01000	DWG NO:- GIS/TB/NHIDCL/FS/CCS							
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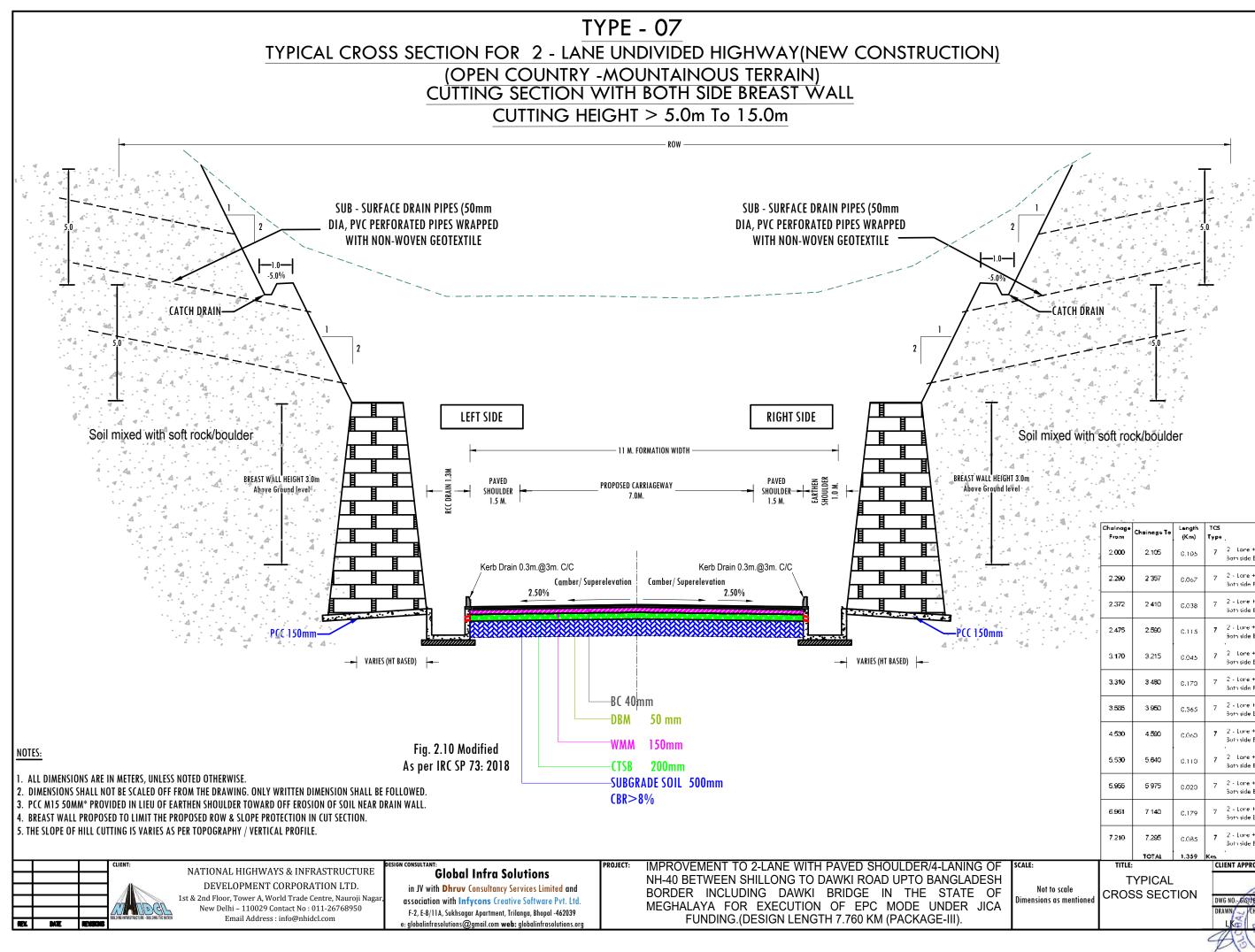


				4421						
				DRAWN: CHECKED: DESIGNED. APPROVED:						
	ot to scale ns as mentioned	CROSS	SECT	DWG NO- GIS/JB/NHIDCL/FS/TCS						
N.		TYP	ICAL	24 2						
:		TITLE:		CLIENT APPROVAL: SIGNATURE:						
	TOTAL	0.285	Km.							
	0.000	0.045	5	side Stone Breast wall- New-construction						
	5,530	0.045	5	2 - Lane + PS (Cutting< 5m) with One						
	5 200	0.020		side Stone Breast wall- New-construction						
	5 280	0.000	5	2 - Lane + PS (Cutting< 5m) with One						
	5.090	0.015	5	side Stone Breast wall- New-construction						
	5.000		5	2 - Lane + PS (Cutting< 5m) with One						
	4.530	0.045		side Stone Breast wall- New-construction						
	4 500		5	2 - Lane + PS (Cutting< 5m) with One						
	3.963	0.013	5	side Stone Breast wall- New-construction						
			6	2 - Lone + PS (Cutting< 5m) with One						
	3.170	0.047	5	side Stone Breast wall- New-construction						
	A (3A		-	2 - Lane + PS (Cutting< 5m) with One						
2.000		0.100	5	side Stone Breast wall- New-construction						
	0.000			12 - Lane + PS (Cutting< Sm) with One)						

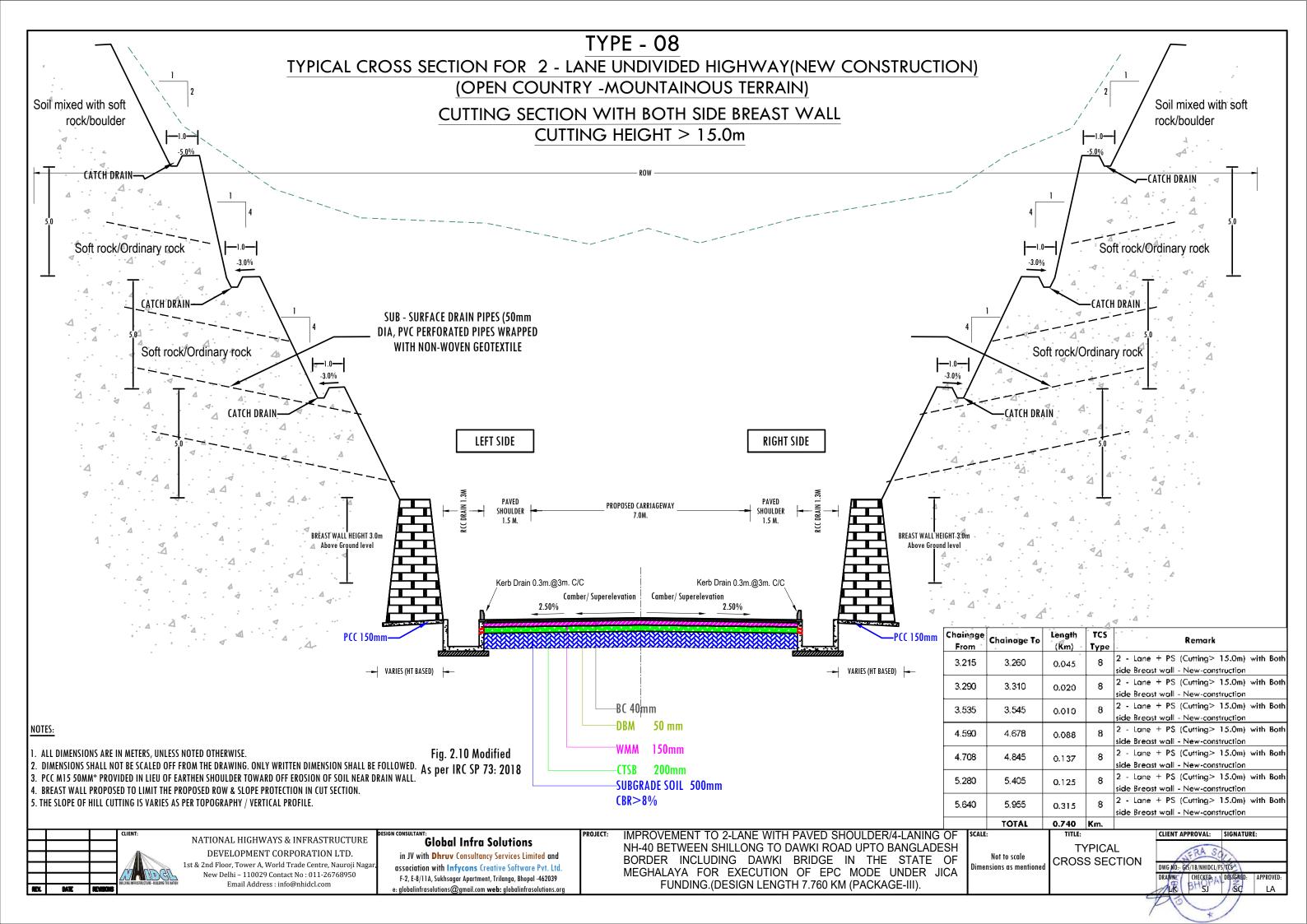
- 2 - Lane + PS (Cutting < 5m) with On

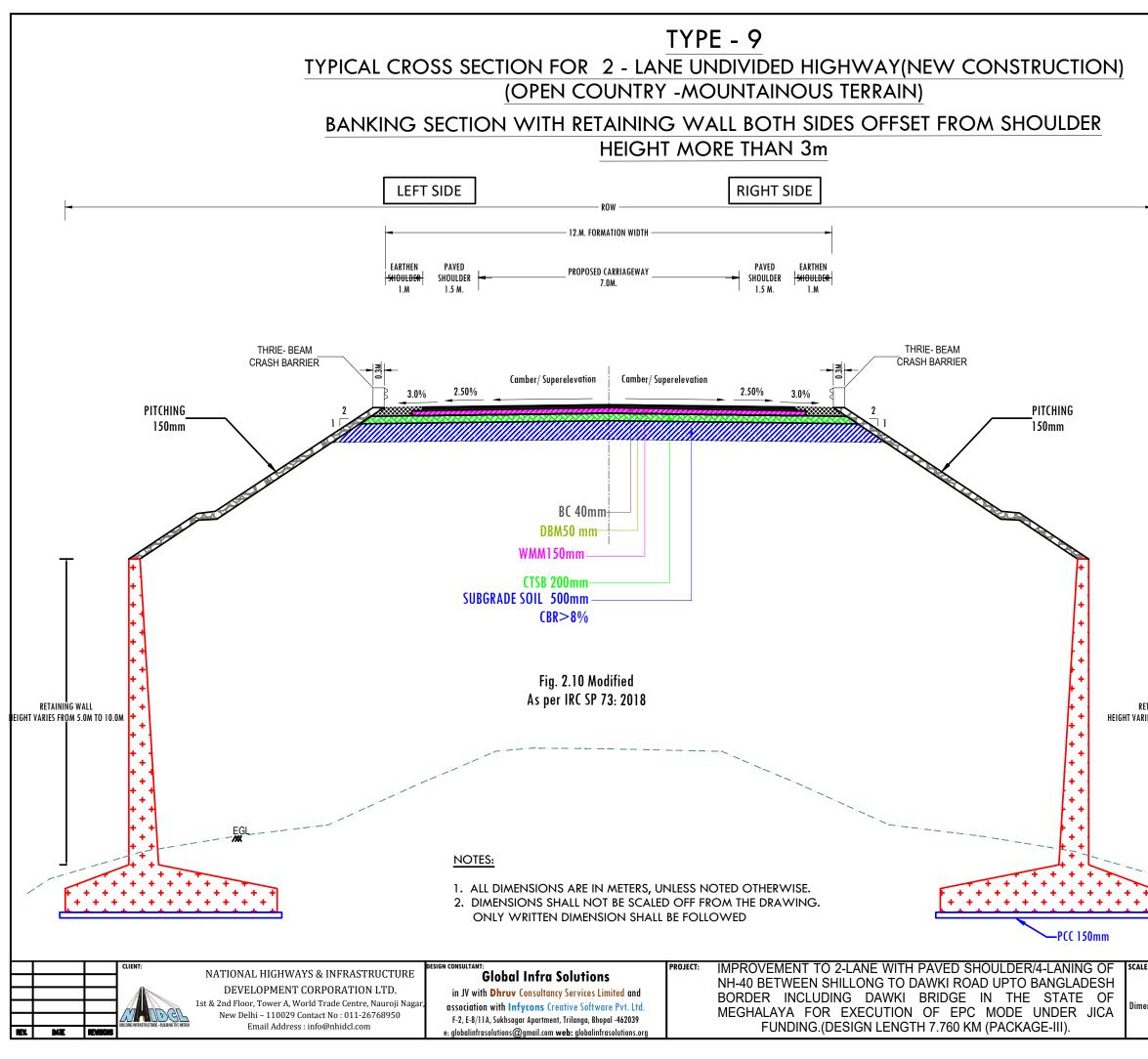


inage To		ngth (m)	TCS Type	Remark
2.445	0.	035	6	2 - Lane + PS (Cutting> 5m) with One side Stone Breast wall- New-construction
2.613	0.	023	6	2 - Lane + PS (Cutting> 5m) with One side Stone Breast wall- New-construction
2.750	0.	065	6	2 - Lane + PS (Cutting> 5m) with One side Stone Breast wall- New-construction
5.075	0.	020	6	2 - Lane + PS (Cutting> 5m) with One side Stone Breast wall- New-construction
7.210	0.	040	6	2 - Lane + PS (Cutting> 5m) with One side Stone Breast wall- New-construction
OTAL	0.	183	Km.	
:		TITI	E:	CLIENT APPROVAL: SIGNATURE:
Not to scale nsions as ment	ioned		TYPIC. ISS SE	AL CTION DWG NO: BIS/18/NHIDCL/FS/TCS DRAWA CHECKED: DESIGNED: APPROVED: LA
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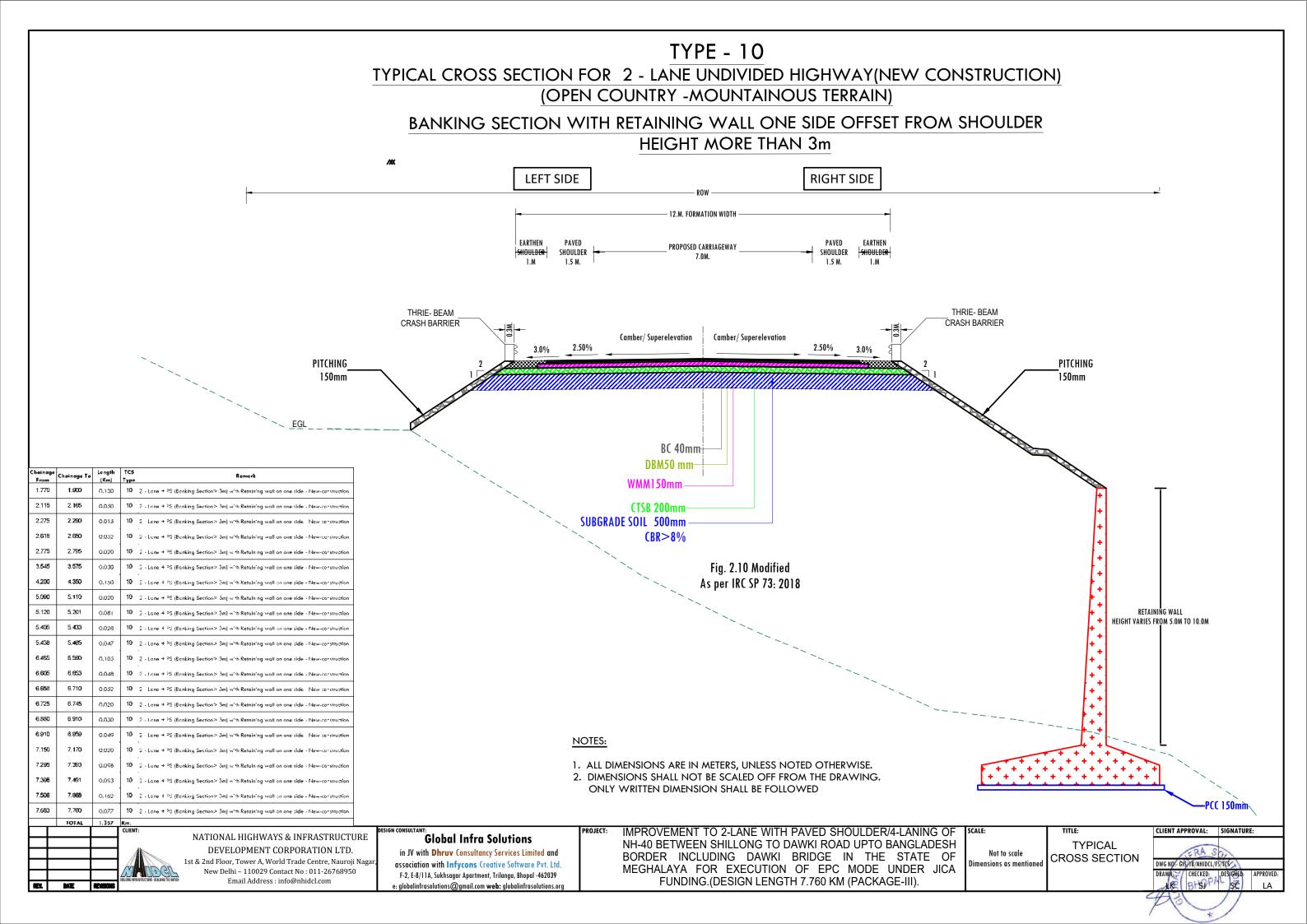


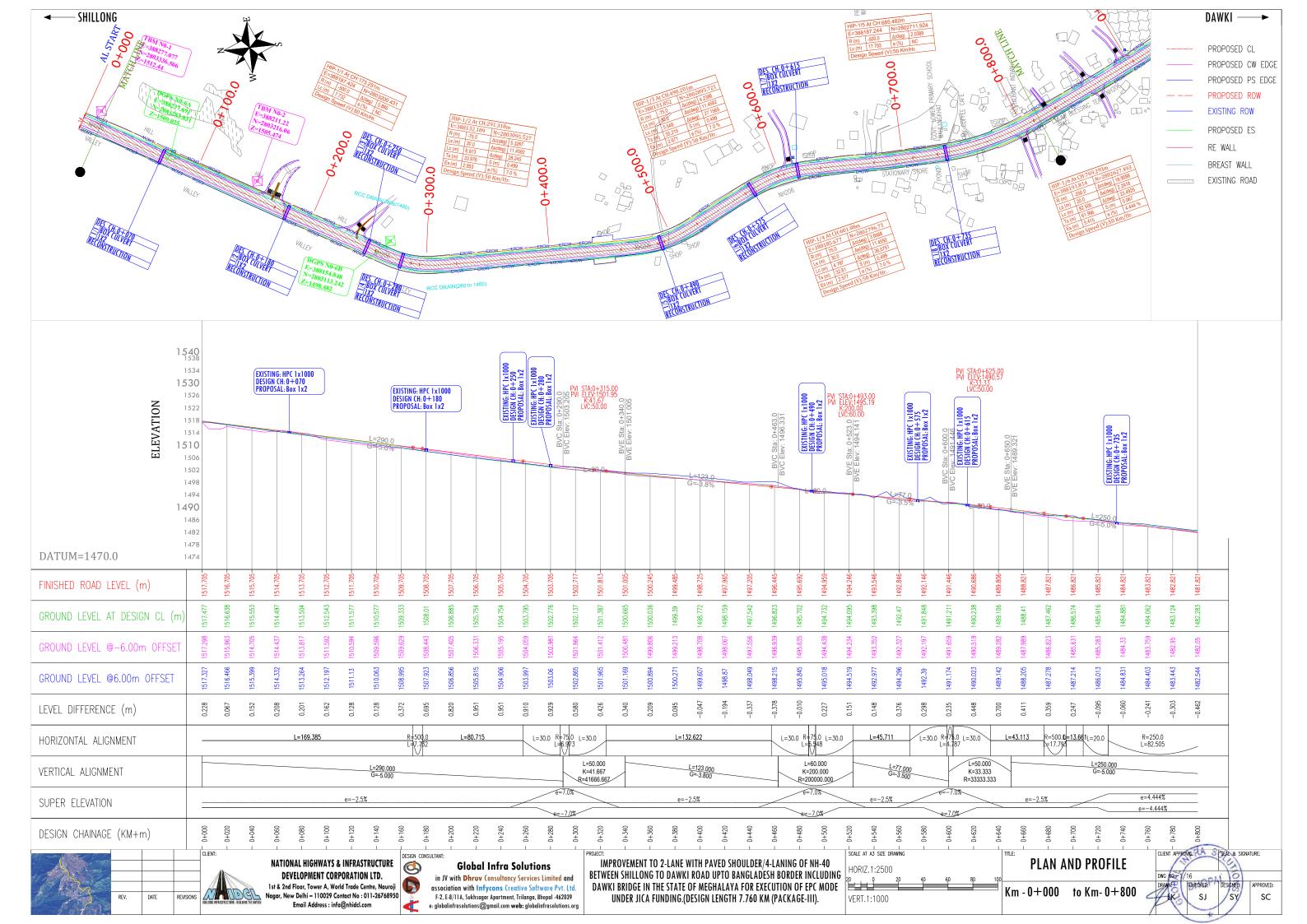
	Chainage From	Chainage Te	Langth (Km)	TCS Type	Remark
A	2.000	2.105	0.105	7	2 Lone + PS (Cutting> 5.0m to 1.5.0m) with Both side Breast wall - New-construction
4	2.290	2 357	0.067	7	2 - Lane + PS (Cutting> 5.0m to 15.0m) with Both side Breast wall - New-construction
	2.372	2 410	C.038	7	Z - Lane F PS (Cutting≥ 5.0m to 1.5.0m) with Both side Breast wall - New-construction
44	2.475	2.590	C.115	7	2 - Lone + FS (Cotting> 5.0m to 15.0m) with Both side Breast wall - New-construction
° A	3.170	3.215	0.045	7	2 Lone + PS (Cutting> 5.0m to 1.5.0m) with Both side Breast wall - New-construction
	3.310	3 490	0.170	7	2 - Lane + PS (Cutting> 5.0m to 15.0m) with Both side Breast wall - New-construction
	3.585	3 950	C.365	7	Z - Lane → PS (Cutting≥ 5.0m to 1.5.0m) with Both side Breast wall - New-construction
	4.530	4.590	0.060	7	2 - Lone + PS (Cotting> 5.0m to 15.0m) with Bath side Breast wall - New-construction
	5.530	5.640	0.110	7	2 Lone + PS (Cutting> 5.0m to 1.5.0m) with Bath side Breast wall - New construction
	5.955	5 975	0.020	7	2 - Lane + PS (Cutting> 5.0m to 1.5.0m) with Both side Breast wall - New-construction
	6.961	7 140	C.179	7	Z - Lane F PS (Cutting≥ 5.0m to 1.5.0m) with Both side Breast wall - New-construction
	7.210	7.295	0.085	7	2 - Lone + FS (Cotting> 5.0m to 1.5.0m) with Both side Breast wall - New-construction
		TOTAL	1,359	Km	
:	TITLE:			a	ENT APPROVAL: SIGNATURE:
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ensions as mentioned	CROS	SS SEC	ΓΙΟΝ	DWI	G NO: GISYTB/NHIDCL/FS/TCS
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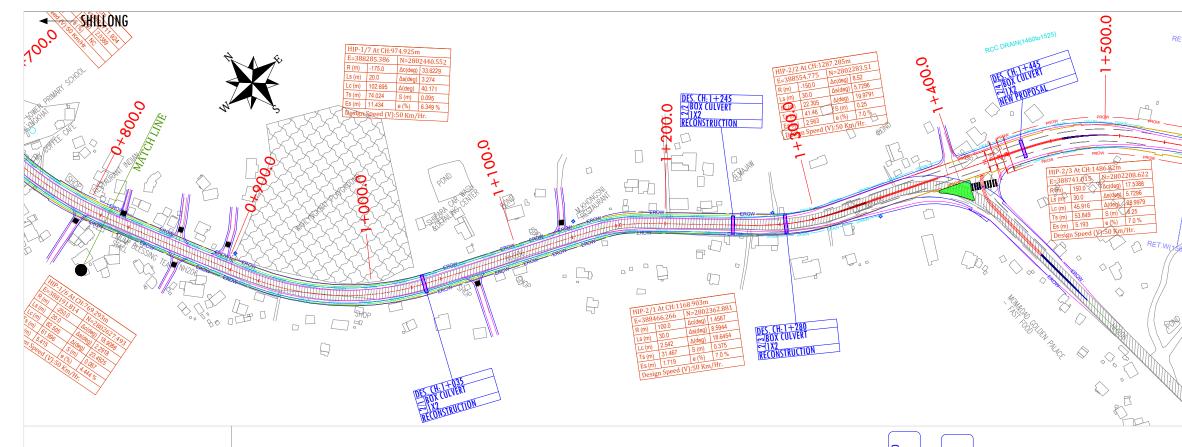




	Chainage From	Chainage To	Lengih (Km)	ТС5 Тур•	Remark
	1.560	1 590	0.030	9	 Lone + PS (Banking Section> 3m) with Retaining wall on Both side - New- construction
	1.740	1.770	0.030	9	2 - Lone + PS (Banking Section> 3m with Retaining wall on Both side - New- construction
TAINING WALL	2.165	2.202	0.037	9	 Lane + PS (Banking Section> 3m with Retaining wall on Both side - New construction
IES FROM 5.0M TO 10.0M	2.242	2 275	0.033	9	 Lane + PS (Banking Section> 3m with Retaining wall on Both side - New construction
	2.835	2 950	0,115	9	2 - Lone + PS (Banking Section> 3m) with Retaining wall on Both side - New- construction
	3.480	3.535	0.055	9	2 - Lane 1 PS (Banking Section> Sm) with Retaining wall on Both side - New- construction
	4.435	4 475	0.040	9	 Lane + PS (Banking Section> 3m with Retaining wall on Both side - New construction
	4.845	4 923	0.078	9	 Lane + PS (Banking Section> Sm with Retaining wall on Both side - New construction
	4.938	4 993	0.055	9	 Lane + PS (Banking Section> 3m with Retaining wall on Both side New construction
	5.003	5.055	0.052	9	2 - Lane 1 PS (Banking Section> 3m with Retaining wall on Both side New construction
	5.211	5 245	0.034	9	2 - Lone + PS (Banking Section> 3m will Retaining wall on Bolt side - New construction
-		TOTAL	0.559	Km.	
E: Not to scale				CLIENT	APPROVAL: SIGNATURE:
ensions as mentioned	CRUSS	SECTIO	N	DWG NO DRAWN	
			1	A	

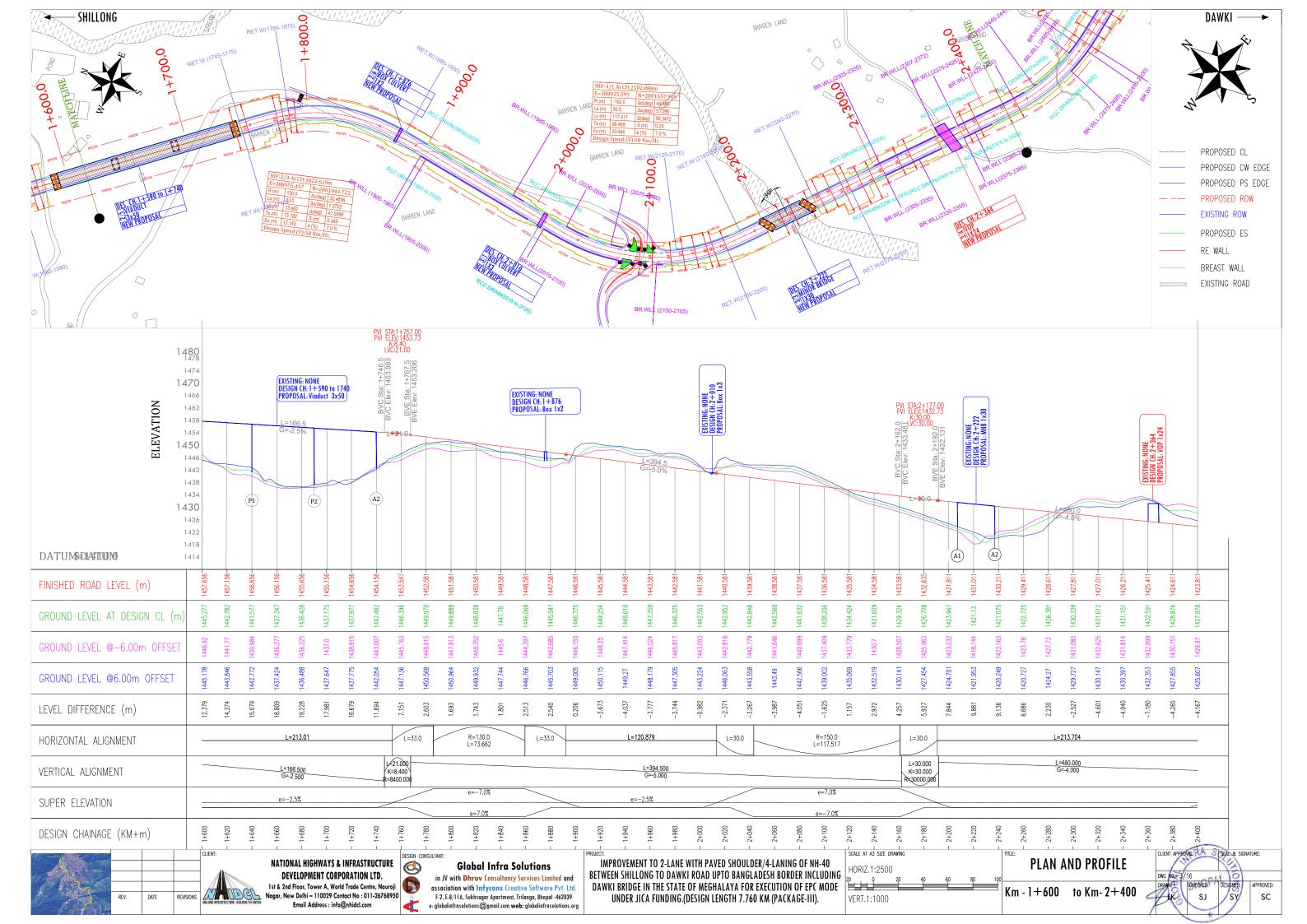


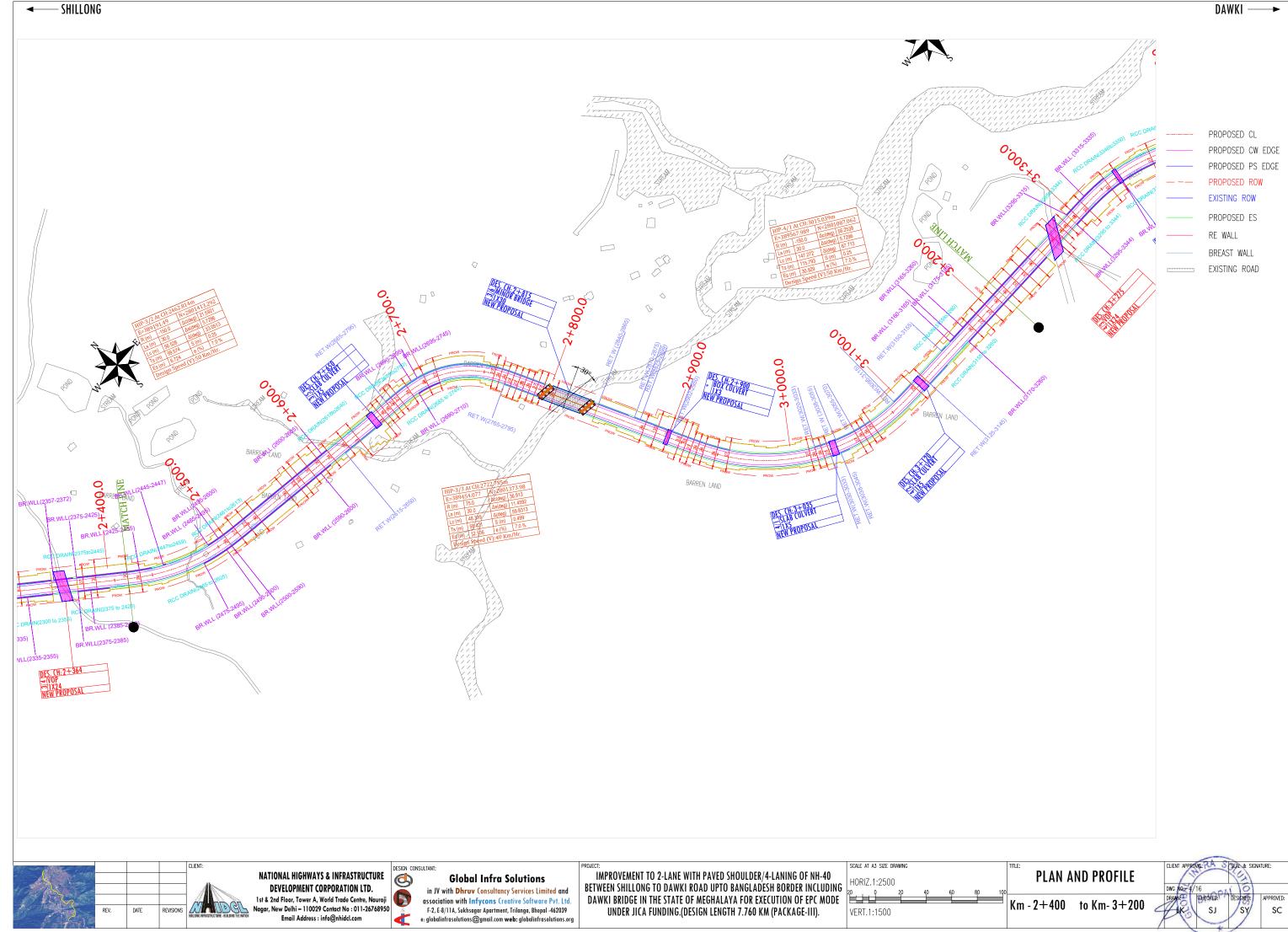




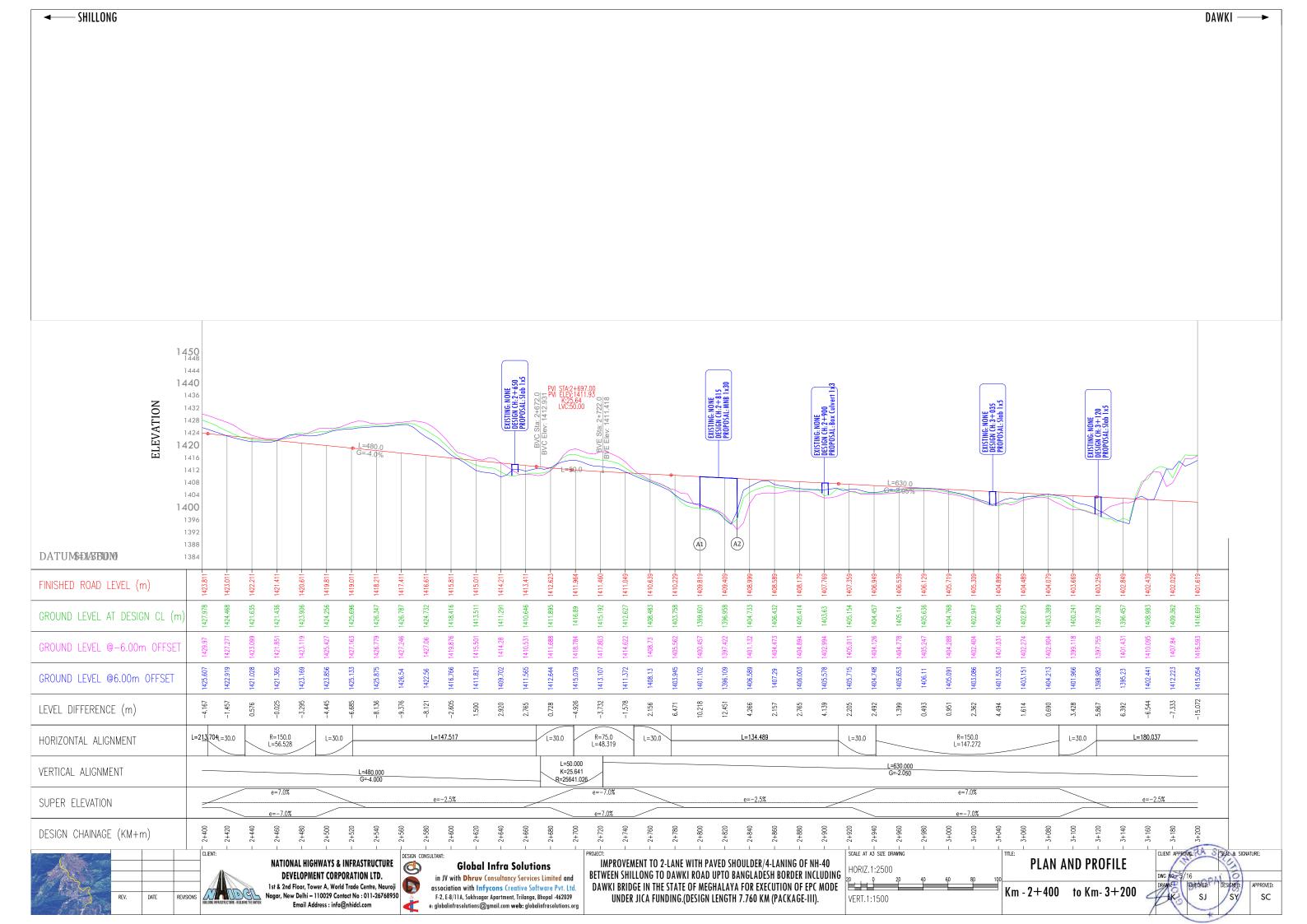
ELEVATION	5000 1498 1494 490 1486 1482 1478 1474 470 1466 1462 1458 1454 1454		6 =-	250.0 5.0%		BVC Star 0+900.0 BVC Elev: 1476.821	STA:0+1 I ELEV:14 K:10.4 LVC:50.	925.00 475.57 20 00 10.0	BVE Elev: 1475.521		l	DESIGN C	: HPC 1x10 HP: 1+035 L: Box 1x2		BVC Sta: 1+080.0 BVC Elev: 1475.261	VI STA:1 VI ELEV K:26 LVC:5	Sta: 1	BVE Elev: 1474.686			e	<u>L=22</u> G=-2	C C C C C C C C C C C C C C C C C C C		DESIGN CH: 1 + 280 PESIGN CH: 1 + 280 PROPOSAL: Box 1 x2			<u> </u>	BVC Elev: 14355.0 BVC Elev: 1469.961	2VI STA:1+ VI ELE-14 K:153 LVC:60.	20	BVE Star 14415.0 BVE Elev: 1467.531
	1446 1442																															
FINISHED ROAD LEVEL (m)	1481.821	1480.821-	1479.821-	1478.821-	1477.821-	1476.821-	1476.013-	1475.589-	1475.501-	1475.461-	1475.421-	1475.381-	1475.341-	1475.301-	1475.261-	1475.145-	1474.877-	1474.476-	1474.056-	1473.636-	1473.216-	1472.796-	1472.376-	1471.956-	1471.536-	1471.116-	1470.696-	1470.276-	1469.847-	1469.232-	1468.358-	1467.231-
GROUND LEVEL AT DESIGN CL (m)	1482.283	1481.325	1480.265	1479.16	1477.811	1476.713	1475.91	1475.412	1475.335	1475.113	1474.938	1474.746	1474.912	1474.965	1474.981	1474.984	1474.806	1474.622	1473.905	1473.302	1472.656	1472.11	1471.59	1470.86	1470.343	1470.41	1470.016	1469.833	1469.616	1469.075	1468.384	1467.162
GROUND LEVEL @-6.00m OFFSET	1482.05	1480.864	1480.251	1478.773	1477.488	1476.614	1475.882	1475.31	1474.981	1474.709	1474.658	1474.665	1473.714	1474.484	1474.53	1474.805	1475.02	1474.71	1474.315	1473.118	1472.488	1471.774	1471.194	1471.229	1469.656	1470.171	1469.444	1469.63	1469.967	1469.236	1468.393	1467.181
GROUND LEVEL @6.00m OFFSET	1482.544	1481.343	1480.491	1480.074	1477.448	1476.834	1475.877	1475.585	1475.176	1475.12	1474.998	1474.83	1474.836	1474.889	1475.122	1474.998	1474.921	1474.971	1473.698	1472.9	1472.392	1471.694	1471.445	1470.849	1470.692	1470.631	1470.078	1469.957	1469.21	1468.727	1468.348	1466.703
LEVEL DIFFERENCE (m)	-0.462	-0.504	-0.444	-0.339	0.010	0.108	0.103	0.177	0.166	0.348	0.483	0.635	0.429	0.336	0.280	0.161	0.071	-0.146	0.151	0.334	0.560	0.686	0.786	1.096	1.193	0.706	0.680	0.443	0.231	0.157	-0.026	0.069
HORIZONTAL ALIGNMENT	R=25 L=82:	00L=20.0		L=73	.031	L=	20.0		R= L=	=175.0 102.695			L=20.0		L=	91.36		1	=30.0 R=10 L=2.5	0.0L=30.0 542		L=45.95	8	L=30.0	R=150	0.0 L- 305	.=30.0			L=105.424	:4	
VERTICAL ALIGNMENT			L=2 G=-	<u>50.000</u> -5.000			L=50.00 K=10.4 R=10416.	17			L= Gi	=130.000 =-0.200				L=50 K=26 R=263	.316						L=225.000 G=-2.100)						L=60.00 K=15.38 R=15384.	85	
SUPER ELEVATION	e= <u>4.4</u>			e=-	2.5%			•		6.349% -6.349%					e=-	-2.5%			e=-7 e=7.			e=-2.55	%		e=7.0			_		e=-2.5%	6	
DESIGN CHAINAGE (KM+m)	- 0+800	- 0+820	- 0+840	- 0+860	- 0+880	- 0+900	- 0+920	- 0+940	- 0+960	- 0+980	- 1+000	- 1+020	- 1+040	- 1+060	- 1+080	- 1+100	- 1+120	- 1+140	- 1+160	- 1+180	- 1+200	- 1+220	- 1+240	- 1+260	- 1+280	- 1+300	- 1+320	- 1+340	- 1+360	- 1+380	- 1+400	- 1+420
REV. DATE REV	ISIONS BUILDIN		DCTL UILDING THE NATION	D 1 st & 2r	EVELOPN nd Floor, To lew Delhi -	GHWAYS & IENT CORP ower A, World - 110029 Con ddress : info(ORATIO d Trade Co ntact No :	N LTD. entre, Nauro 011-267689	E 🥑	ii as: F	G 1 JV with sociation -2, E-8/11A	Dhruv with Inf	Infra S Consultance Tycons Cre ar Apartment Ogmail.com v	y Service ative So , Trilanga	es Limited oftware Pv 1, Bhopal -46	t. Ltd. 2039	BETWE DAWK	EN SHIL I Brid(ENT TO 2 Long to Ge in the Jica fun	DAWKI State (ROAD U DF MEGH	JPTO B <i>i</i> Halaya	ANGLADÍ A FOR Exi	ESH BOI Ecutio	RDER IN N OF EP	CLUDIN PC MODE		RIZ.1:25	20	40	60	80

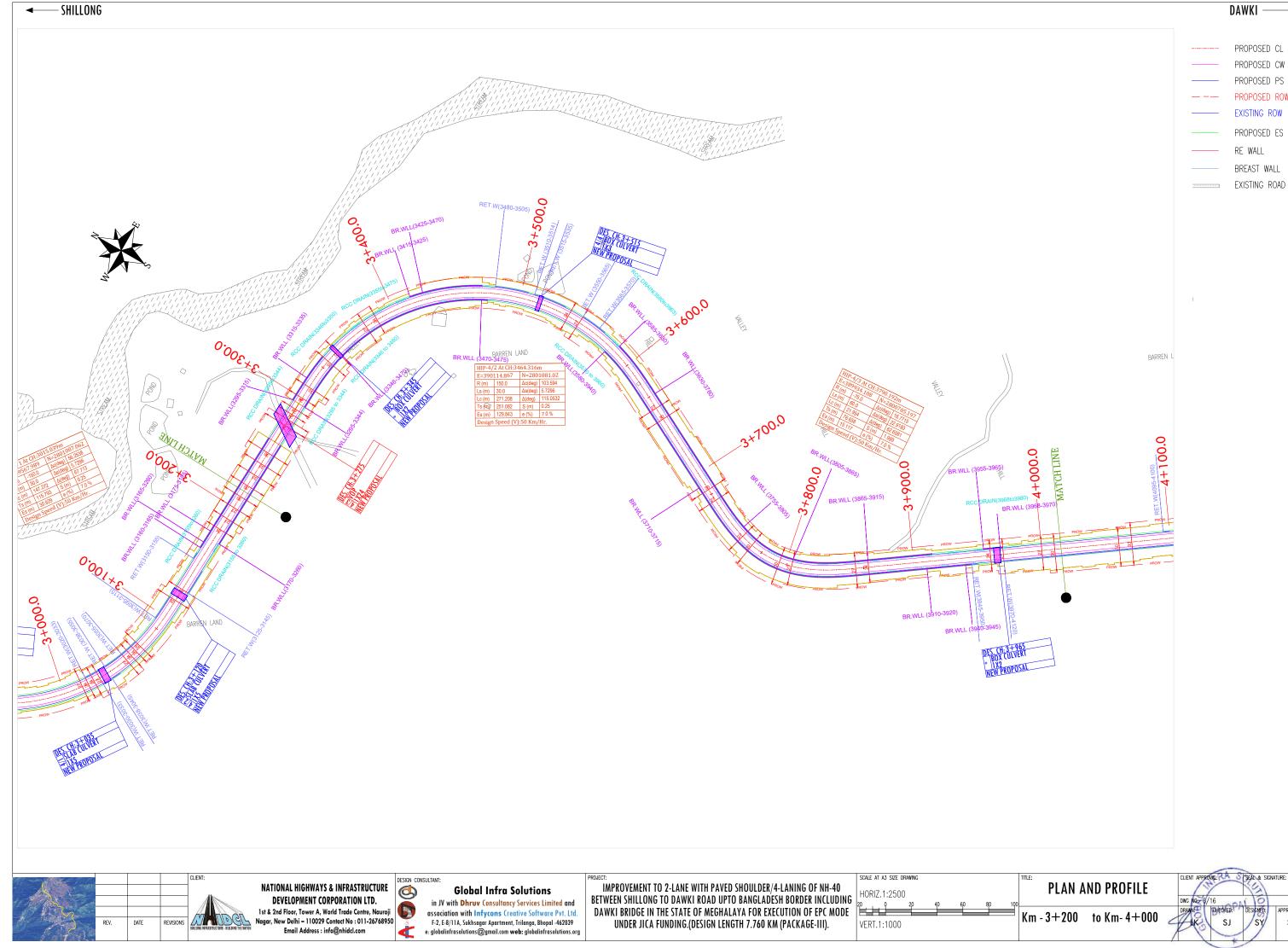






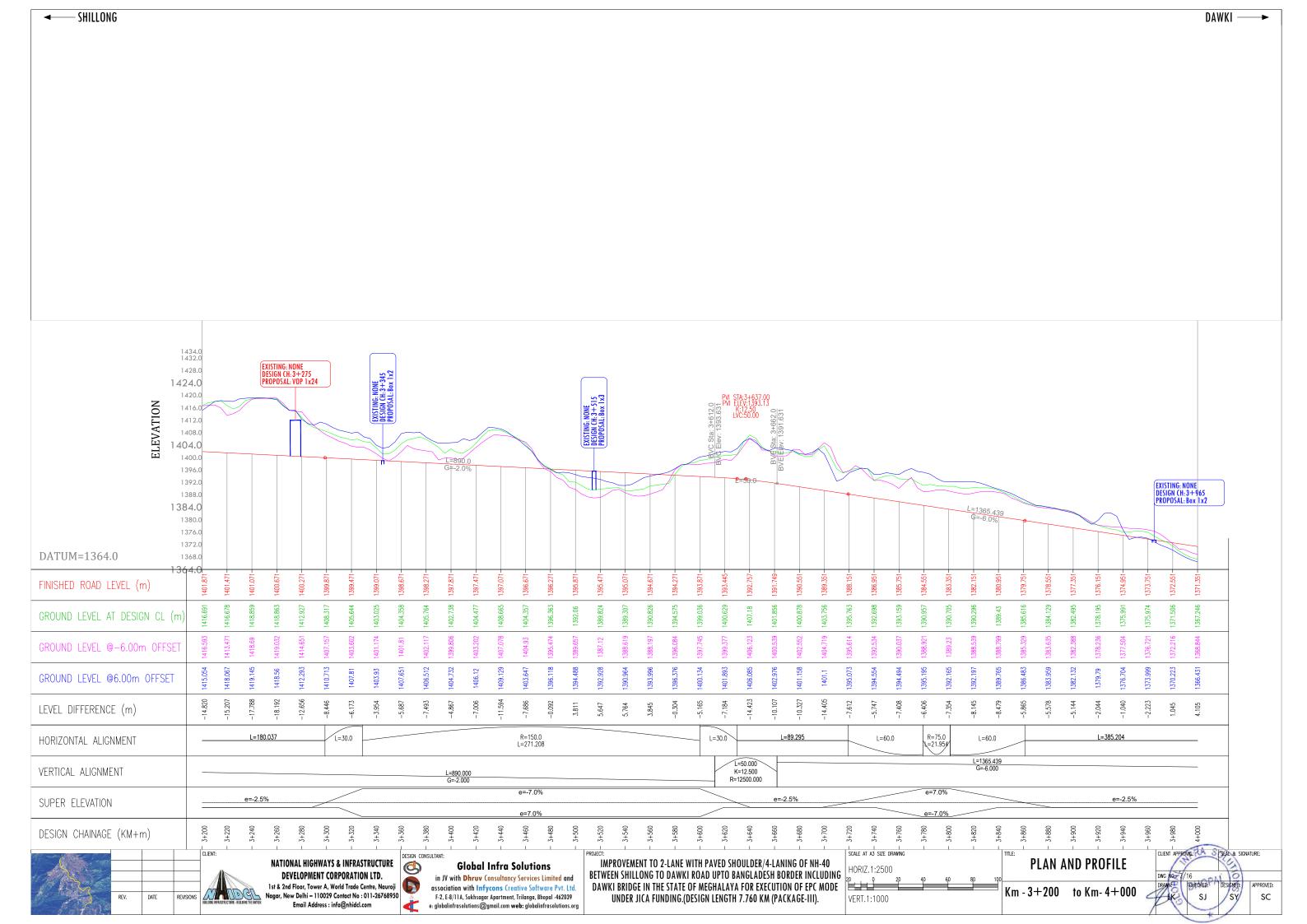
 PROPOSED CL
 PROPOSED CW EDGE
 PROPOSED PS EDGE
 PROPOSED ROW
 EXISTING ROW
 PROPOSED ES
 RE WALL
 BREAST WALL
 EXISTING ROAD

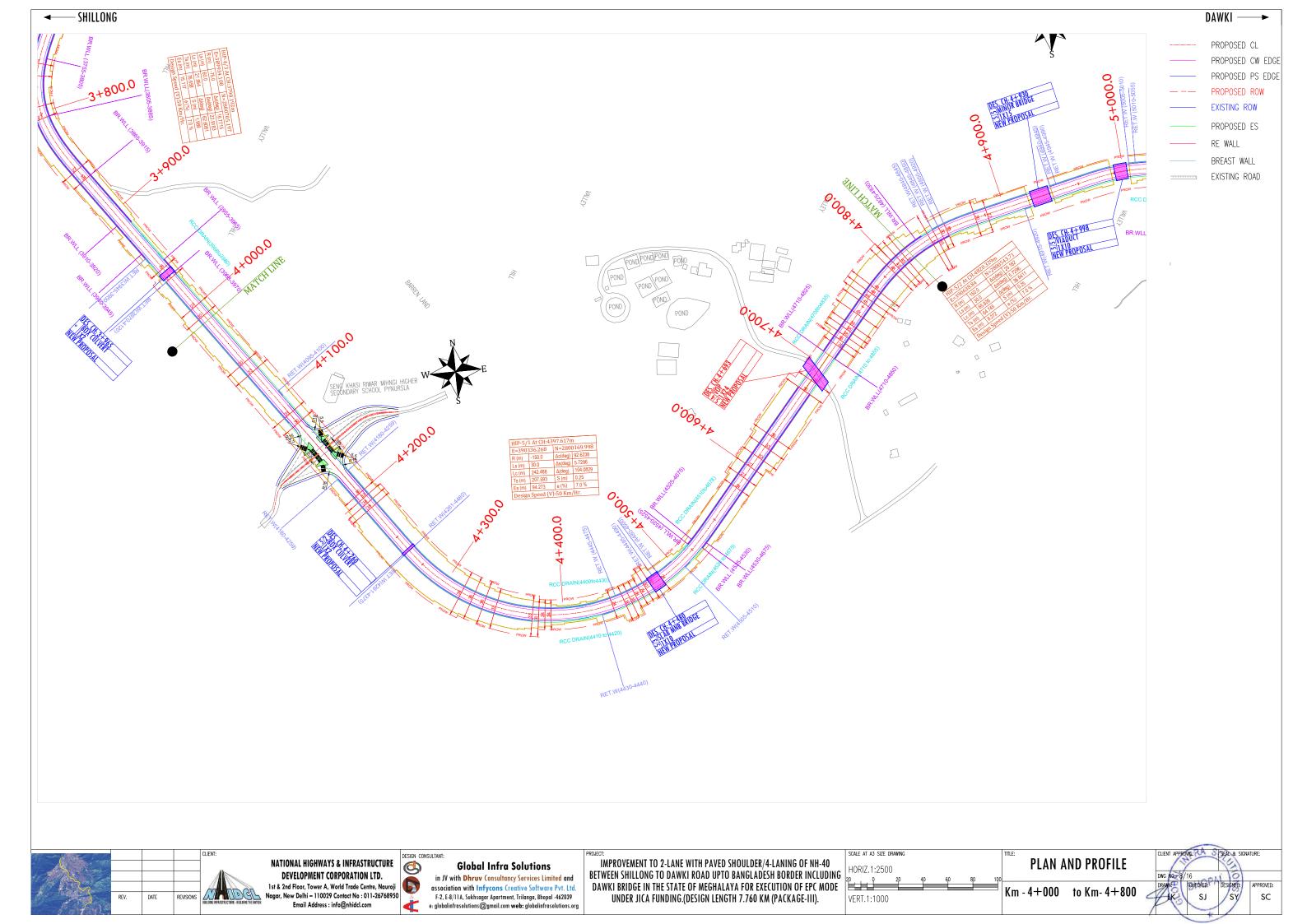


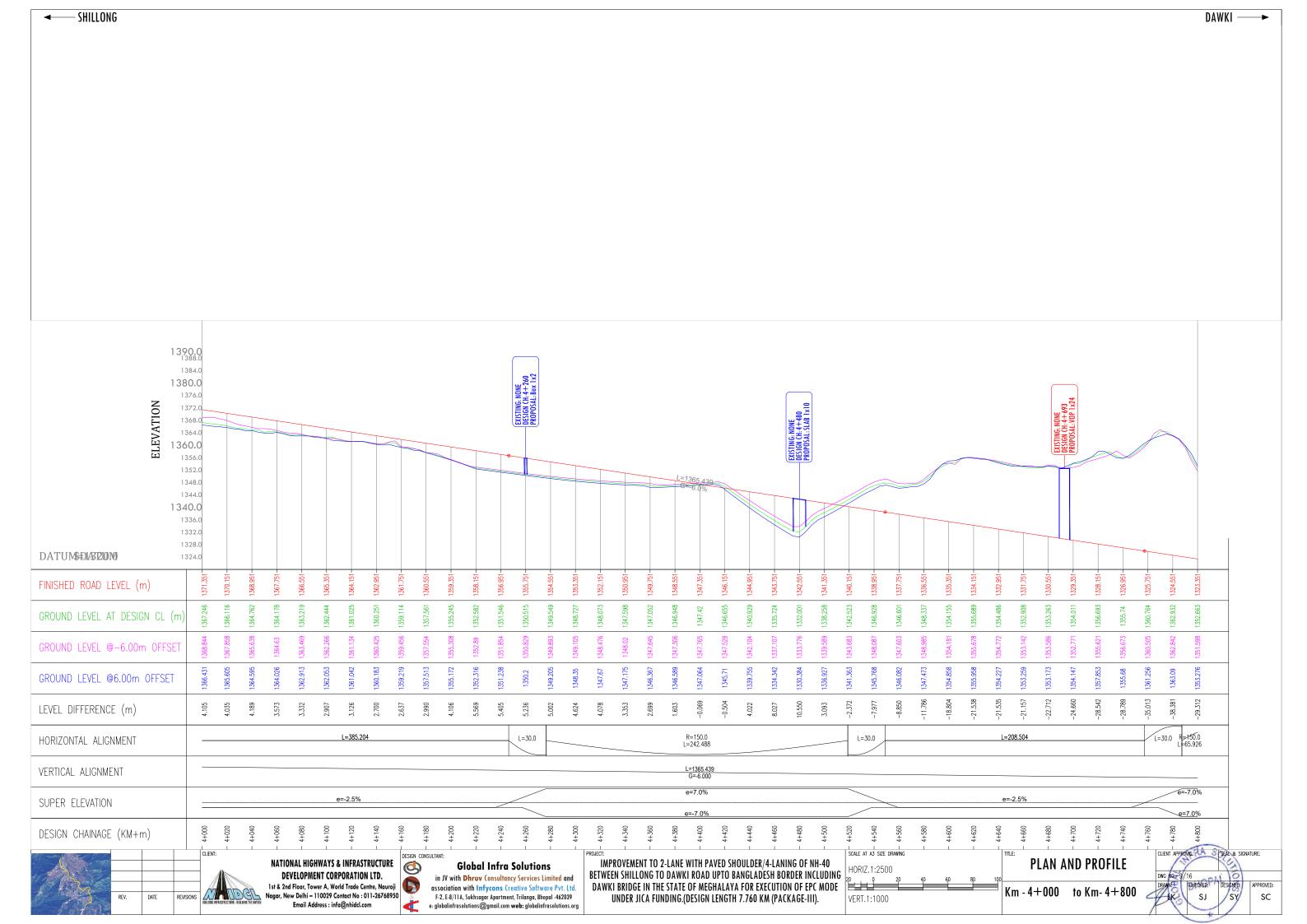


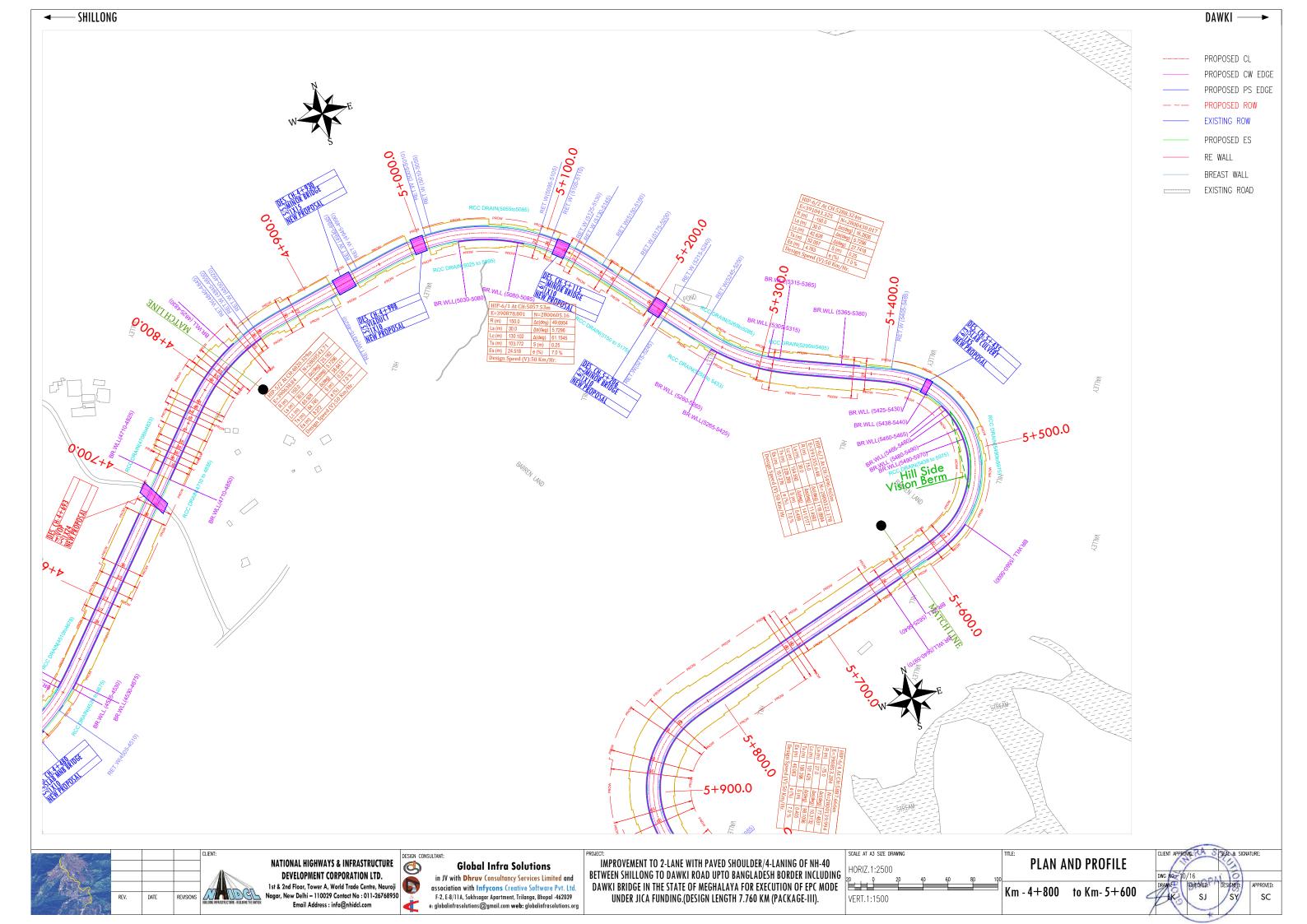
	DAWKI ——►
	PROPOSED CL
	PROPOSED CW EDG
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MON	PROPOSED ROW
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	PROPOSED ES
	RE WALL
	BREAST WALL
	EXISTING ROAD

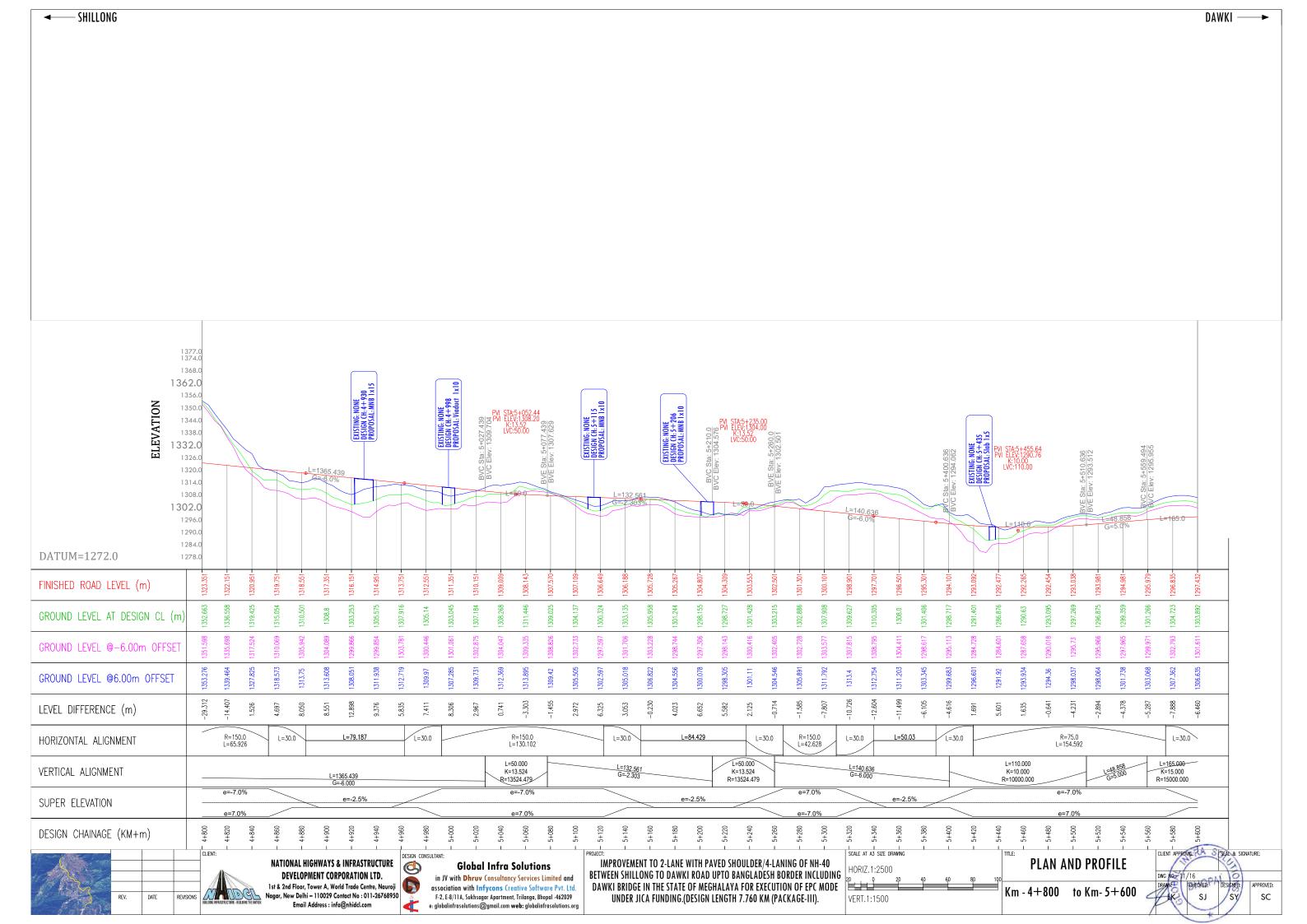
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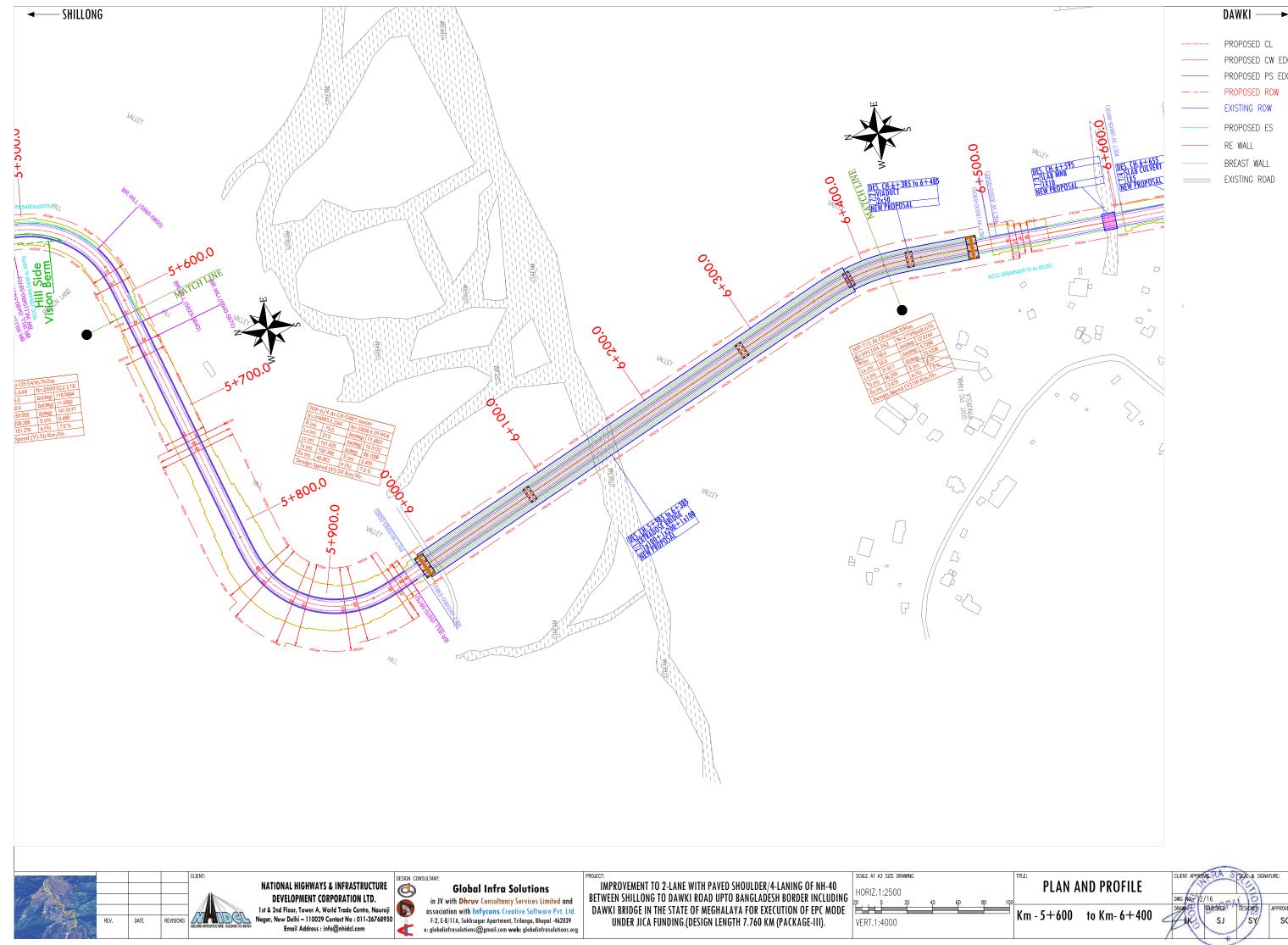








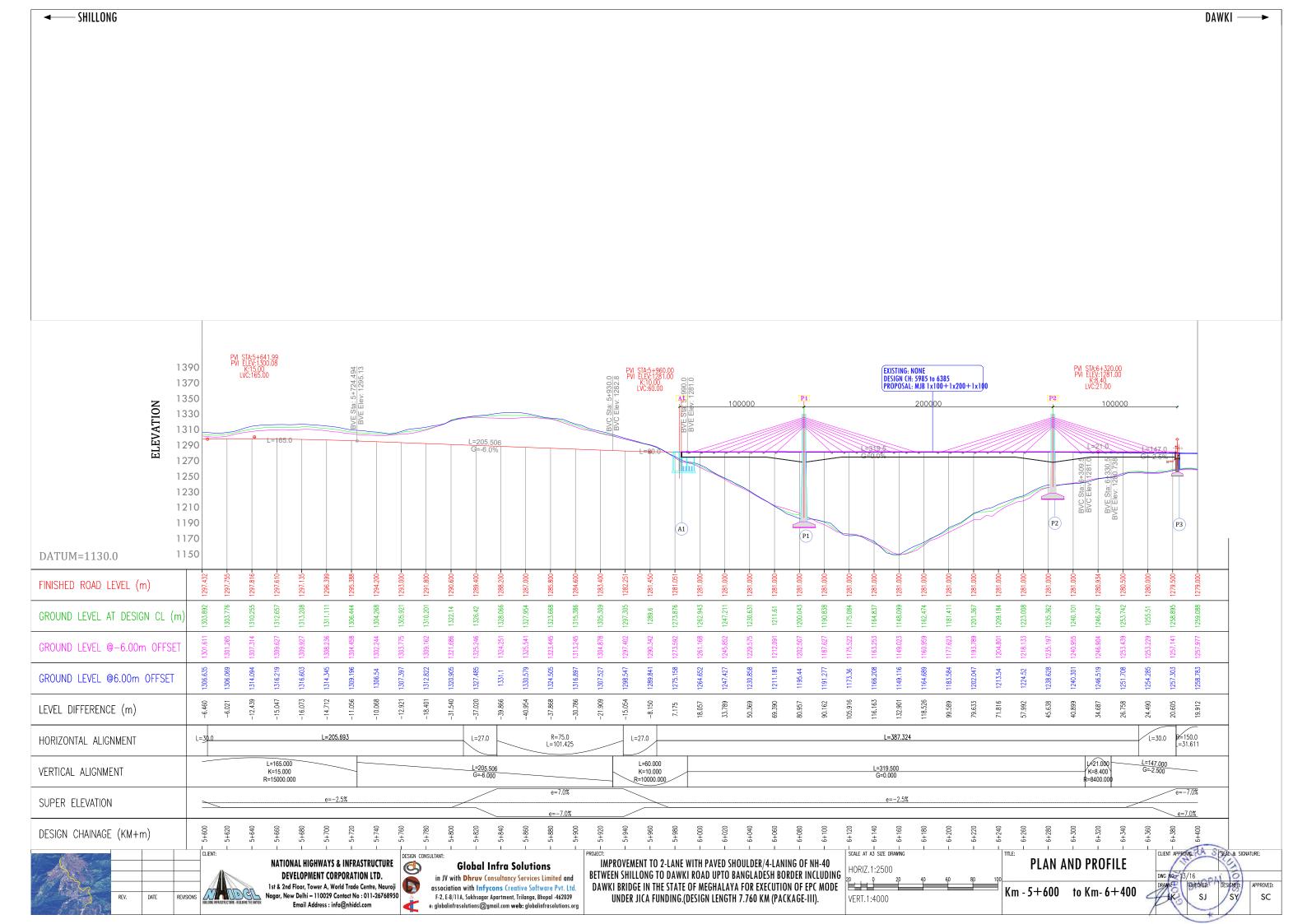


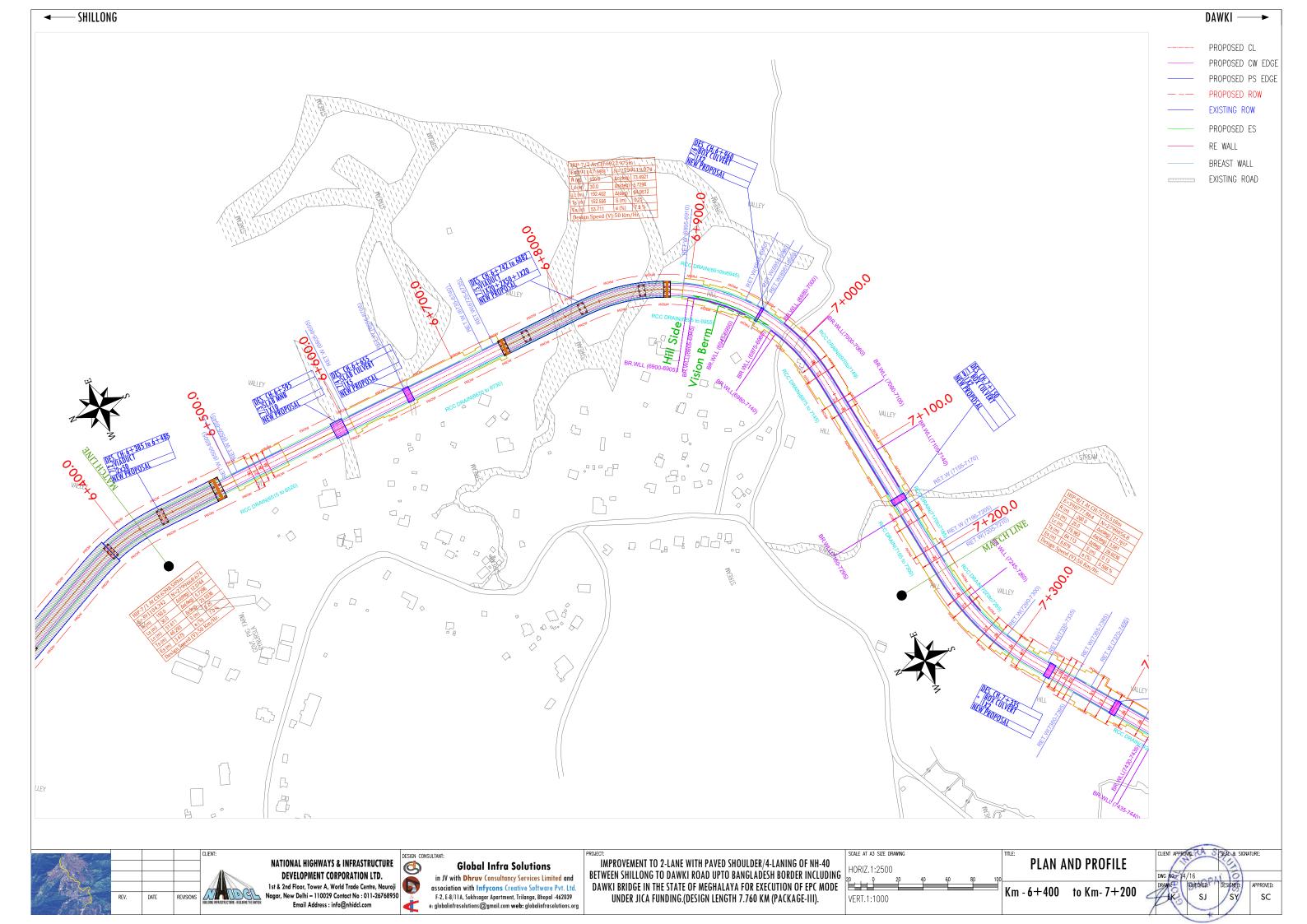


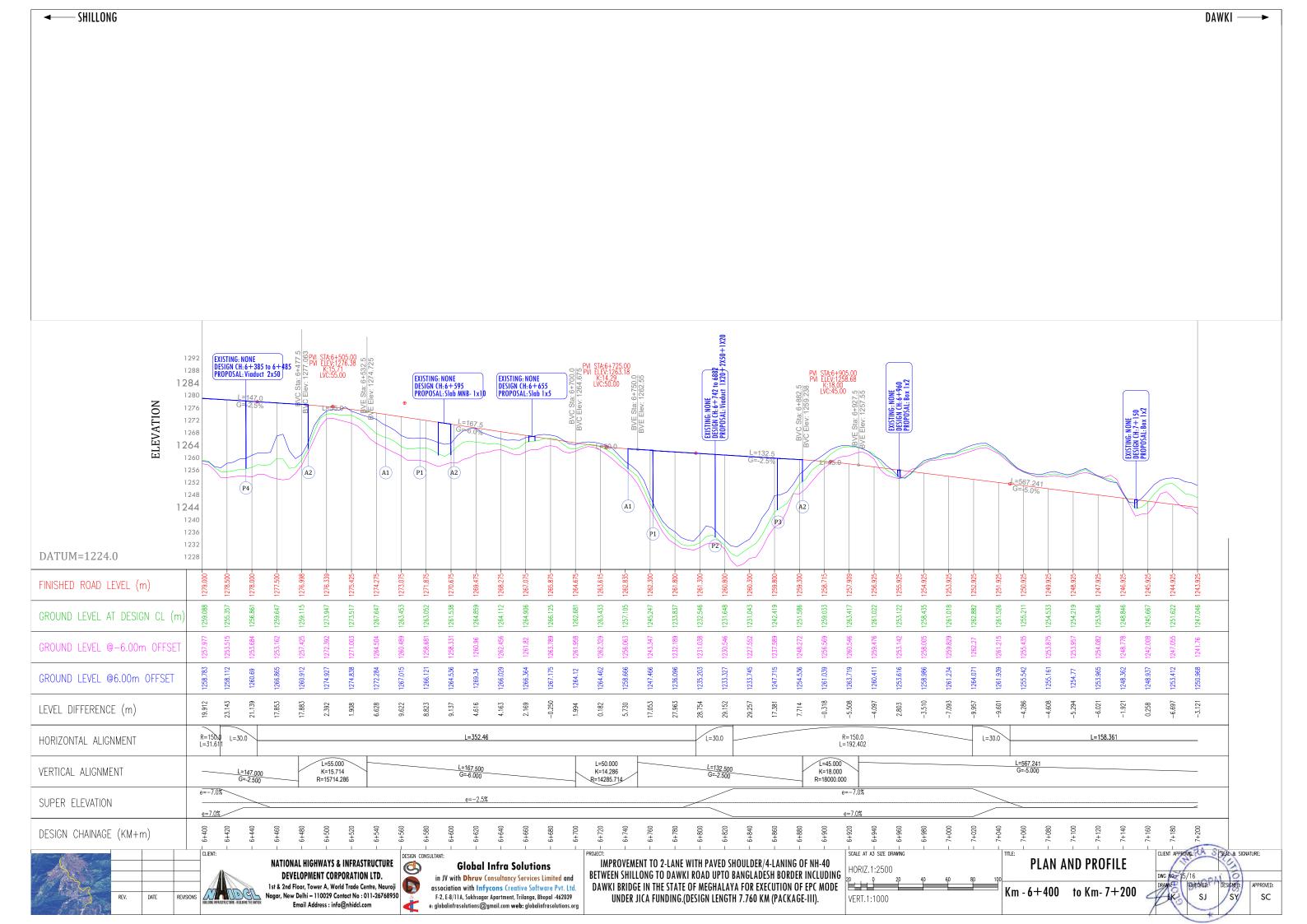
PROPOSED CL PROPOSED CW EDGE PROPOSED PS EDGE PROPOSED ROW EXISTING ROW PROPOSED ES

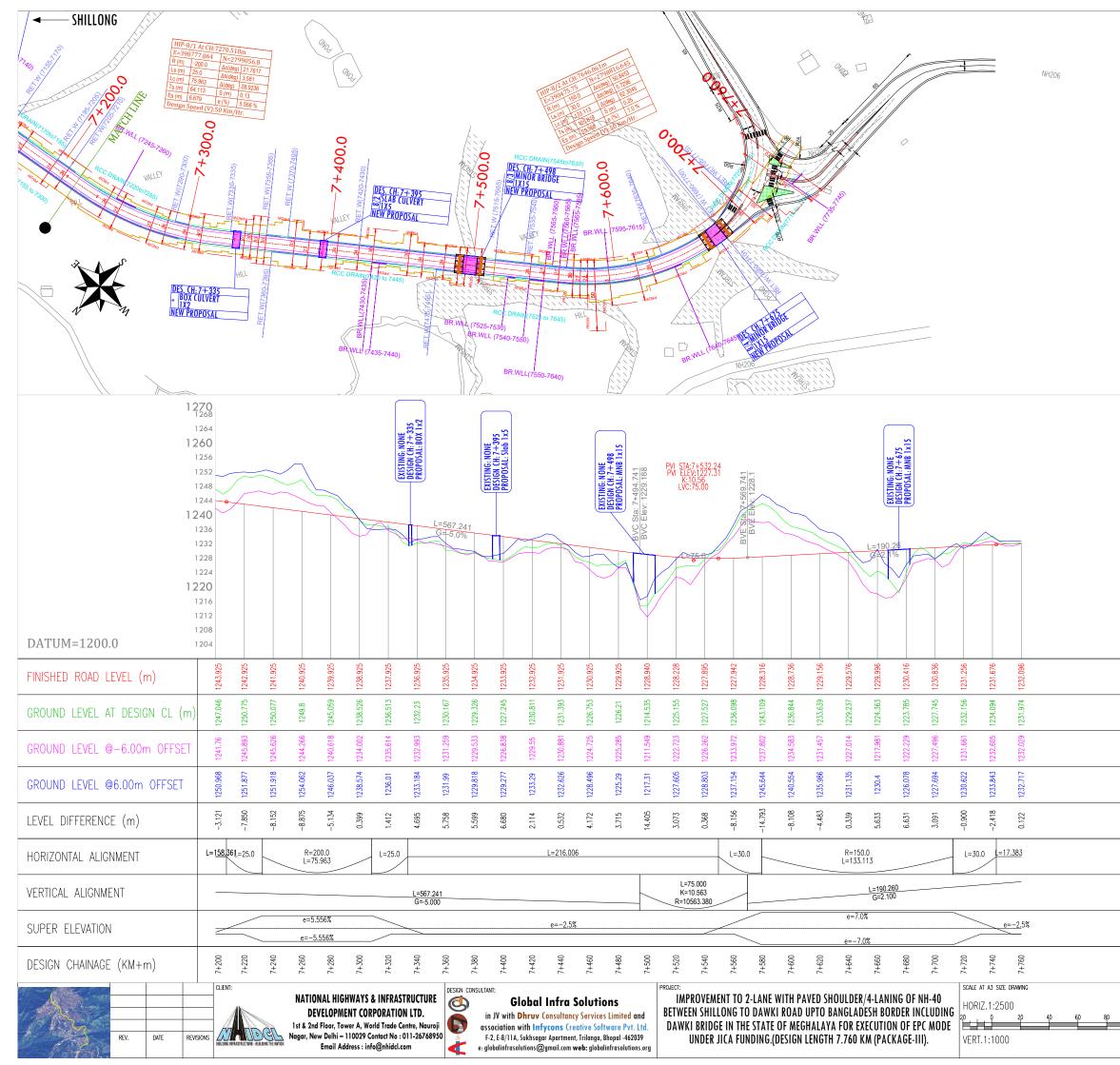
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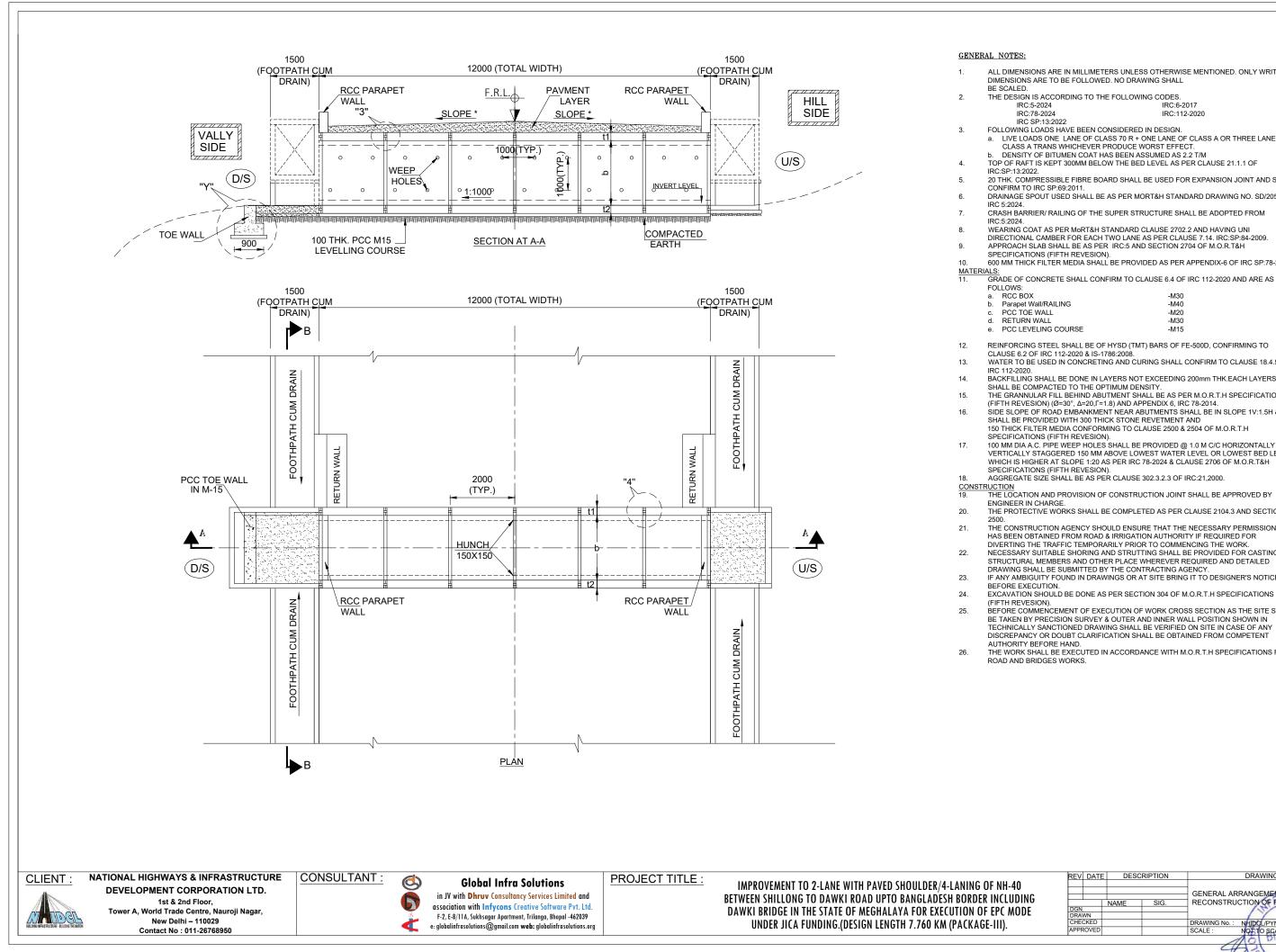




	DAWKI ——►
	DAWKI PROPOSED CL PROPOSED CW EDGE PROPOSED PS EDGE PROPOSED ROW EXISTING ROW PROPOSED ES RE WALL BREAST WALL EXISTING ROAD
PLAN AND PROFILE Km - 7+200 to Km- 7+565	CLIENT APPROVAL: SIGNATURE: DWG NO 16/16 DRAWN: COLEOKED: DESIGNED: APPROVED: DKC SJ SY SC

GAD'S OF STRUCTURES

(in)



ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED. NO DRAWING SHALL

THE DESIGN IS ACCORDING TO THE FOLLOWING CODES.

IRC:6-2017 IRC:112-2020

FOLLOWING LOADS HAVE BEEN CONSIDERED IN DESIGN.

a. LIVE LOADS ONE LANE OF CLASS 70 R + ONE LANE OF CLASS A OR THREE LANE OF CLASS A TRANS WHICHEVER PRODUCE WORST EFFECT.

b. DENSITY OF BITUMEN COAT HAS BEEN ASSUMED AS 2.2 T/M TOP OF RAFT IS KEPT 300MM BELOW THE BED LEVEL AS PER CLAUSE 21.1.1 OF

20 THK. COMPRESSIBLE FIBRE BOARD SHALL BE USED FOR EXPANSION JOINT AND SHALL

DRAINAGE SPOUT USED SHALL BE AS PER MORT&H STANDARD DRAWING NO. SD/205 &

CRASH BARRIER/ RAILING OF THE SUPER STRUCTURE SHALL BE ADOPTED FROM

WEARING COAT AS PER MORT&H STANDARD CLAUSE 2702.2 AND HAVING UNI DIRECTIONAL CAMBER FOR EACH TWO LANE AS PER CLAUSE 7.14. IRC:SP:84-2009. APPROACH SLAB SHALL BE AS PER IRC:5 AND SECTION 2704 OF M.O.R.T&H SPECIFICATIONS (FIFTH REVESION).

600 MM THICK FILTER MEDIA SHALL BE PROVIDED AS PER APPENDIX-6 OF IRC SP:78-2024.

L	-M20 -M30
IG COURSE	-M15

REINFORCING STEEL SHALL BE OF HYSD (TMT) BARS OF FE-500D, CONFIRMING TO CLAUSE 6.2 OF IRC 112-2020 & IS-1786:2008. WATER TO BE USED IN CONCRETING AND CURING SHALL CONFIRM TO CLAUSE 18.4.5 OF

BACKFILLING SHALL BE DONE IN LAYERS NOT EXCEEDING 200mm THK.EACH LAYERS

SHALL BE COMPACTED TO THE OPTIMUM DENSITY. THE GRANNULAR FILL BEHIND ABUTMENT SHALL BE AS PER M.O.R.T.H SPECIFICATIONS (FIFTH REVESION) (\emptyset =30°, Δ =20, Γ =1.8) AND APPENDIX 6, IRC 78-2014.

SIDE SLOPE OF ROAD EMBANKMENT NEAR ABUTMENTS SHALL BE IN SLOPE 1V:1.5H & SHALL BE PROVIDED WITH 300 THICK STONE REVETMENT AND 150 THICK FILTER MEDIA CONFORMING TO CLAUSE 2500 & 2504 OF M.O.R.T.H SPECIFICATIONS (FIFTH REVESION).

100 MM DIA A.C. PIPE WEEP HOLES SHALL BE PROVIDED @ 1.0 M C/C HORIZONTALLY & VERTICALLY STAGGERED 150 MM ABOVE LOWEST WATER LEVEL OR LOWEST BED LEVEL WHICH IS HIGHER AT SLOPE 1:20 AS PER IRC 78-2024 & CLAUSE 2706 OF M.O.R.T&H SPECIFICATIONS (FIFTH REVESION).

AGGREGATE SIZE SHALL BE AS PER CLAUSE 302.3.2.3 OF IRC:21,2000.

CONSTRUCTION 19. THE LOCATION AND PROVISION OF CONSTRUCTION JOINT SHALL BE APPROVED BY

THE PROTECTIVE WORKS SHALL BE COMPLETED AS PER CLAUSE 2104.3 AND SECTION

THE CONSTRUCTION AGENCY SHOULD ENSURE THAT THE NECESSARY PERMISSIONS HAS BEEN OBTAINED FROM ROAD & IRRIGATION AUTHORITY IF REQUIRED FOR DIVERTING THE TRAFFIC TEMPORARILY PRIOR TO COMMENCING THE WORK. NECESSARY SUITABLE SHORING AND STRUTTING SHALL BE PROVIDED FOR CASTING OF STRUCTURAL MEMBERS AND OTHER PLACE WHEREVER REQUIRED AND DETAILED DRAWING SHALL BE SUBMITTED BY THE CONTRACTING AGENCY IF ANY AMBIGUITY FOUND IN DRAWINGS OR AT SITE BRING IT TO DESIGNER'S NOTICE

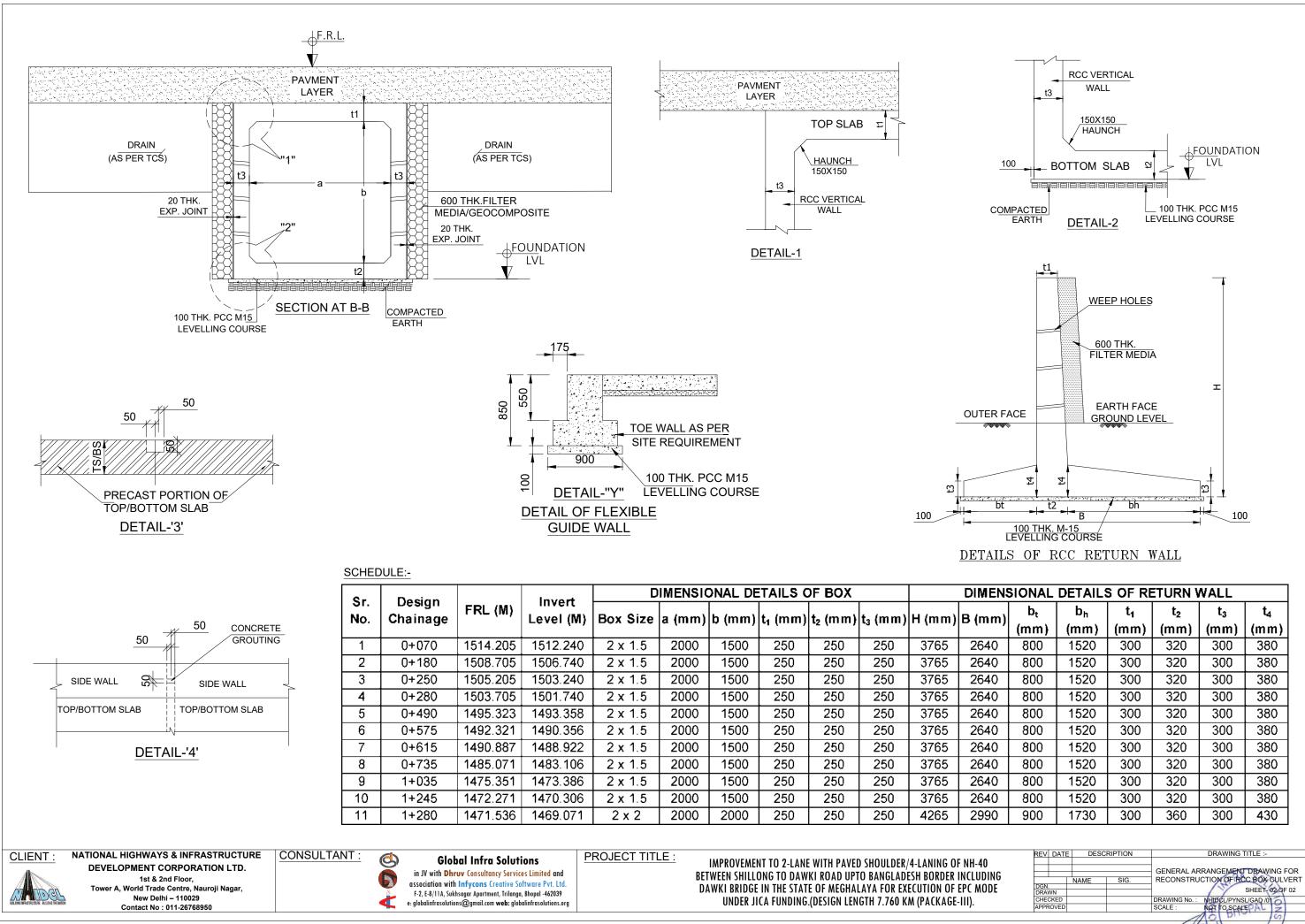
EXCAVATION SHOULD BE DONE AS PER SECTION 304 OF M.O.R.T.H SPECIFICATIONS

BEFORE COMMENCEMENT OF EXECUTION OF WORK CROSS SECTION AS THE SITE SHALL

BE TAKEN BY PRECISION SURVEY & OUTER AND INNER WALL POSITION SHOWN IN TECHNICALLY SANCTIONED DRAWING SHALL BE VERIFIED ON SITE IN CASE OF ANY DISCREPANCY OR DOUBT CLARIFICATION SHALL BE OBTAINED FROM COMPETENT

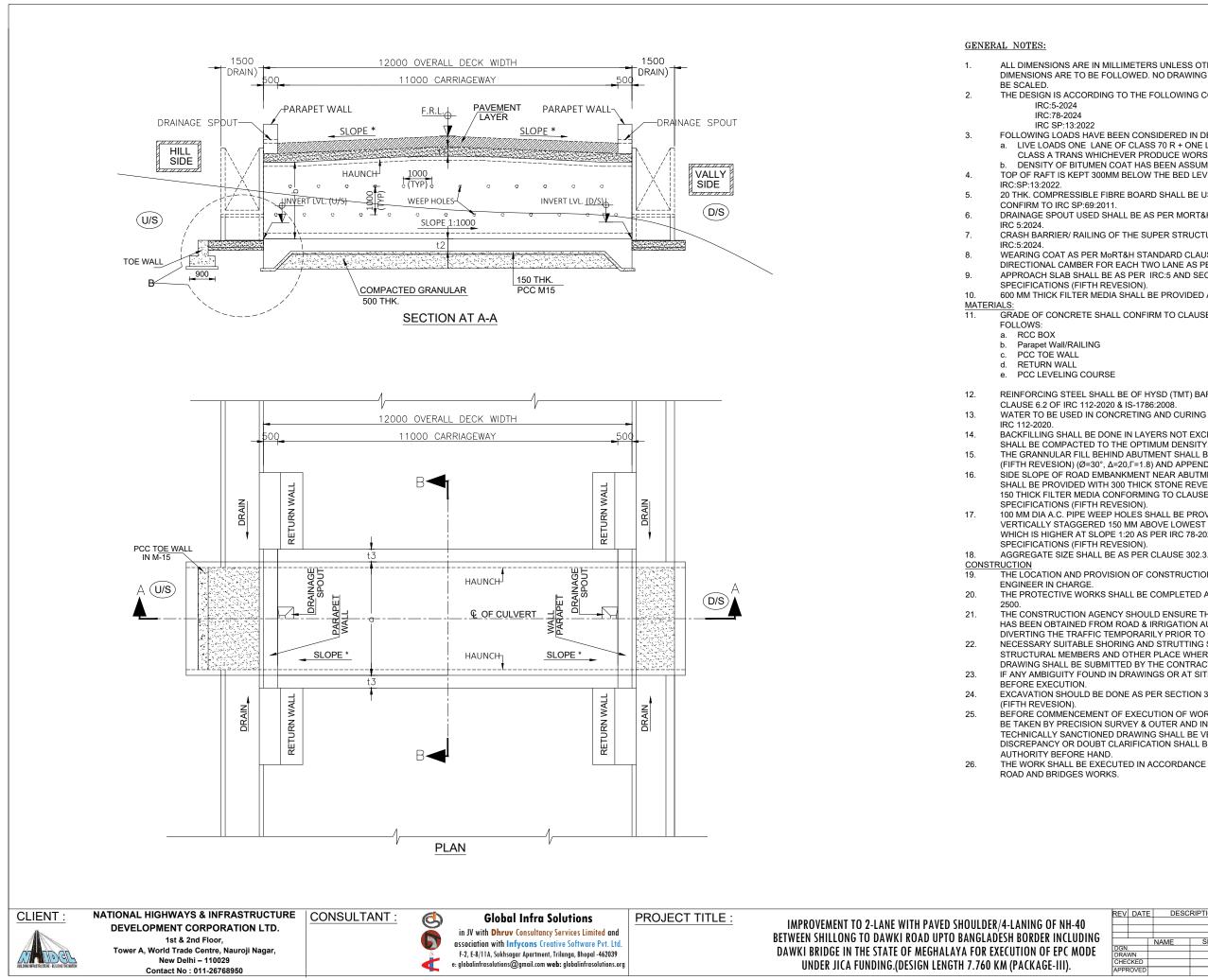
THE WORK SHALL BE EXECUTED IN ACCORDANCE WITH M.O.R.T.H SPECIFICATIONS FOR

REV	DATE	DESC	RIPTION	DRAWING TITLE :-
DGN		NAME	SIG.	GENERAL ARRANGEMENT DRAWING FOR RECONSTRUCTION OF RCC BOX CULVERT SHEET-01 OF 02
	CKED			DRAWING No.: NHIDCL/PYNSL/GAD./01
APPF	ROVED			SCALE : NOT TO SCALE PAL
				A C BID IS



IONAL DETAILS OF RETURN WALL									
b _t	Ե _հ	t1	t ₂	t ₃	t4				
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)				
800	1520	300	320	300	380				
800	1520	300	320	300	380				
800	1520	300	320	300	380				
800	1520	300	320	300	380				
800	1520	300	320	300	380				
800	1520	300	320	300	380				
800	1520	300	320	300	380				
800	1520	300	320	300	380				
800	1520	300	320	300	380				
800	1520	300	320	300	380				
900	1730	300	360	300	430				

REV	DATE	DESCRIPTION		DRAWING TITLE :-		
			GENERAL ARRANGEMENT DRAWING FOR			
		NAME	SIG.	RECONSTRUCTION OF RCC BOX CULVERT		
		INAIVIE	310.	RECONCINCIENCI NOC BOR COLVERT		
DGN.				SHEET-02 OF 02		
DRAV	VN			SHEET-02/0F 02		
CHEC	KED			DRAWING No. : NHIDCL/PYNSL/GAD /01		
APPR	OVED			SCALE : NOT TO SCALE		
				MOLDING 161		



ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED. NO DRAWING SHALL

THE DESIGN IS ACCORDING TO THE FOLLOWING CODES

IRC:6-2017 IRC:112-2020

FOLLOWING LOADS HAVE BEEN CONSIDERED IN DESIGN.

LIVE LOADS ONE LANE OF CLASS 70 R + ONE LANE OF CLASS A OR THREE LANE OF CLASS A TRANS WHICHEVER PRODUCE WORST EFFECT. DENSITY OF BITUMEN COAT HAS BEEN ASSUMED AS 2.2 T/M

TOP OF RAFT IS KEPT 300MM BELOW THE BED LEVEL AS PER CLAUSE 21.1.1 OF

20 THK. COMPRESSIBLE FIBRE BOARD SHALL BE USED FOR EXPANSION JOINT AND SHALL

DRAINAGE SPOUT USED SHALL BE AS PER MORT&H STANDARD DRAWING NO. SD/205 &

CRASH BARRIER/ RAILING OF THE SUPER STRUCTURE SHALL BE ADOPTED FROM

WEARING COAT AS PER MoRT&H STANDARD CLAUSE 2702.2 AND HAVING UNI DIRECTIONAL CAMBER FOR EACH TWO LANE AS PER CLAUSE 7.14. IRC:SP:84-2009. APPROACH SLAB SHALL BE AS PER IRC:5 AND SECTION 2704 OF M.O.R.T&H

600 MM THICK FILTER MEDIA SHALL BE PROVIDED AS PER APPENDIX-6 OF IRC SP:78-2024.

GRADE OF CONCRETE SHALL CONFIRM TO CLAUSE 6.4 OF IRC 112-2020 AND ARE AS

NG	-M30 -M40
	-M20
	-M30
DURSE	-M15

REINFORCING STEEL SHALL BE OF HYSD (TMT) BARS OF FE-500D, CONFIRMING TO

WATER TO BE USED IN CONCRETING AND CURING SHALL CONFIRM TO CLAUSE 18.4.5 OF

BACKFILLING SHALL BE DONE IN LAYERS NOT EXCEEDING 200mm THK.EACH LAYERS

THE GRANNULAR FILL BEHIND ABUTMENT SHALL BE AS PER M.O.R.T.H SPECIFICATIONS (FIFTH REVESION) (Ø=30°, Δ=20,Γ=1.8) AND APPENDIX 6, IRC 78-2014.

SIDE SLOPE OF ROAD EMBANKMENT NEAR ABUTMENTS SHALL BE IN SLOPE 1V:1.5H & SHALL BE PROVIDED WITH 300 THICK STONE REVETMENT AND

150 THICK FILTER MEDIA CONFORMING TO CLAUSE 2500 & 2504 OF M.O.R.T.H

100 MM DIA A.C. PIPE WEEP HOLES SHALL BE PROVIDED @ 1.0 M C/C HORIZONTALLY & VERTICALLY STAGGERED 150 MM ABOVE LOWEST WATER LEVEL OR LOWEST BED LEVEL WHICH IS HIGHER AT SLOPE 1:20 AS PER IRC 78-2024 & CLAUSE 2706 OF M.O.R.T&H

AGGREGATE SIZE SHALL BE AS PER CLAUSE 302.3.2.3 OF IRC:21,2000.

THE LOCATION AND PROVISION OF CONSTRUCTION JOINT SHALL BE APPROVED BY

THE PROTECTIVE WORKS SHALL BE COMPLETED AS PER CLAUSE 2104.3 AND SECTION

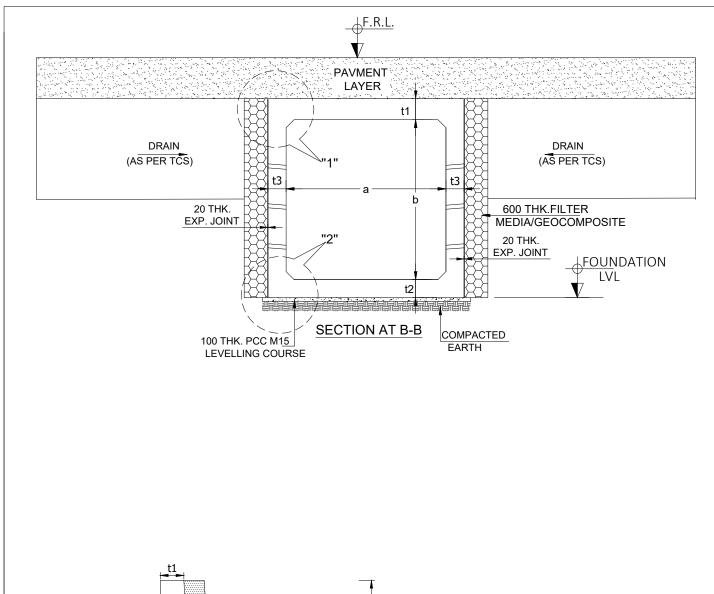
THE CONSTRUCTION AGENCY SHOULD ENSURE THAT THE NECESSARY PERMISSIONS HAS BEEN OBTAINED FROM ROAD & IRRIGATION AUTHORITY IF REQUIRED FOR DIVERTING THE TRAFFIC TEMPORARILY PRIOR TO COMMENCING THE WORK NECESSARY SUITABLE SHORING AND STRUTTING SHALL BE PROVIDED FOR CASTING OF STRUCTURAL MEMBERS AND OTHER PLACE WHEREVER REQUIRED AND DETAILED DRAWING SHALL BE SUBMITTED BY THE CONTRACTING AGENCY. IF ANY AMBIGUITY FOUND IN DRAWINGS OR AT SITE BRING IT TO DESIGNER'S NOTICE

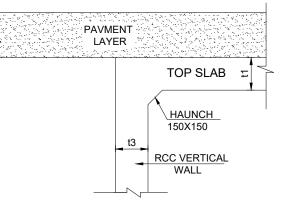
EXCAVATION SHOULD BE DONE AS PER SECTION 304 OF M.O.R.T.H SPECIFICATIONS

BEFORE COMMENCEMENT OF EXECUTION OF WORK CROSS SECTION AS THE SITE SHALL BE TAKEN BY PRECISION SURVEY & OUTER AND INNER WALL POSITION SHOWN IN TECHNICALLY SANCTIONED DRAWING SHALL BE VERIFIED ON SITE IN CASE OF ANY DISCREPANCY OR DOUBT CLARIFICATION SHALL BE OBTAINED FROM COMPETENT

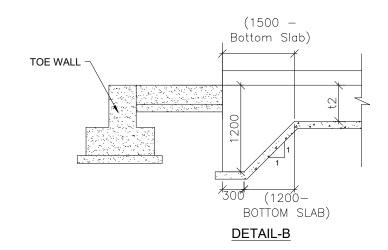
THE WORK SHALL BE EXECUTED IN ACCORDANCE WITH M.O.R.T.H SPECIFICATIONS FOR

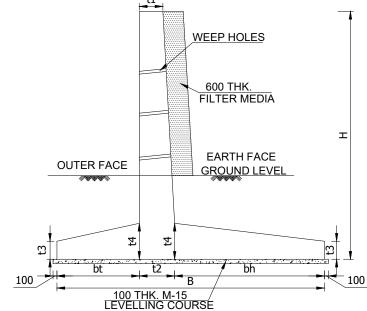
	REV	DATE	DESC	RIPTION	DRAWING TITLE :-
NG De	DGN. DRAW		NAME	SIG.	GENERAL ARRANGEMENT DRAWING FOR NEW PROPOSED OF RCC BOX OULVERT SHEET, 61 OF 02
	CHEC				DRAWING No. : NHIDCL/PYNSL/GAD./02
	APPRO	DVED			SCALE : NOT TO SCALE PAL





DETAIL-1





<u>SCHEDULE:-</u>

Sr.	Design		Invert	ENSIONAL DETAILS OF BOX			DIMENSIONAL DETAILS OF RETURN WALL										
No.	Chainage	FRL (M)	Level (M)	Box Size	a	b	t ₁	t ₂	t ₃	н	В	b _t	b _h	t ₁	t ₂	t ₃	t ₄
	onamage				(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
1	1+445	1465.731	1463.766	2 x 1.5	2000	1500	250	250	250	3765	2640	800	1520	300	320	300	380
2	2+010	1441.081	1439.066	3 x 1.5	3000	1500	300	300	300	3815	2680	810	1550	300	320	300	390
3	3+345	1398.971	1397.006	2 x 1.5	2000	1500	250	250	250	3765	2640	800	1520	300	320	300	380
4	3+965	1373.451	1371.486	2 x 1.5	2000	1500	250	250	250	3765	2640	800	1520	300	320	300	380
5	6+960	1255.925	1252.960	2 x 2	2000	2000	250	250	250	4765	3340	1010	1930	300	400	300	480



NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. 1st & 2nd Floor,

1st & 2nd Floor, Tower A, World Trade Centre, Nauroji Nagar, New Delhi – 110029 Contact No : 011-26768950

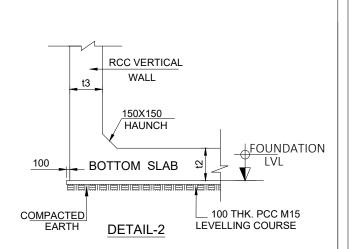
DETAILS OF RCC RETAINING WALL



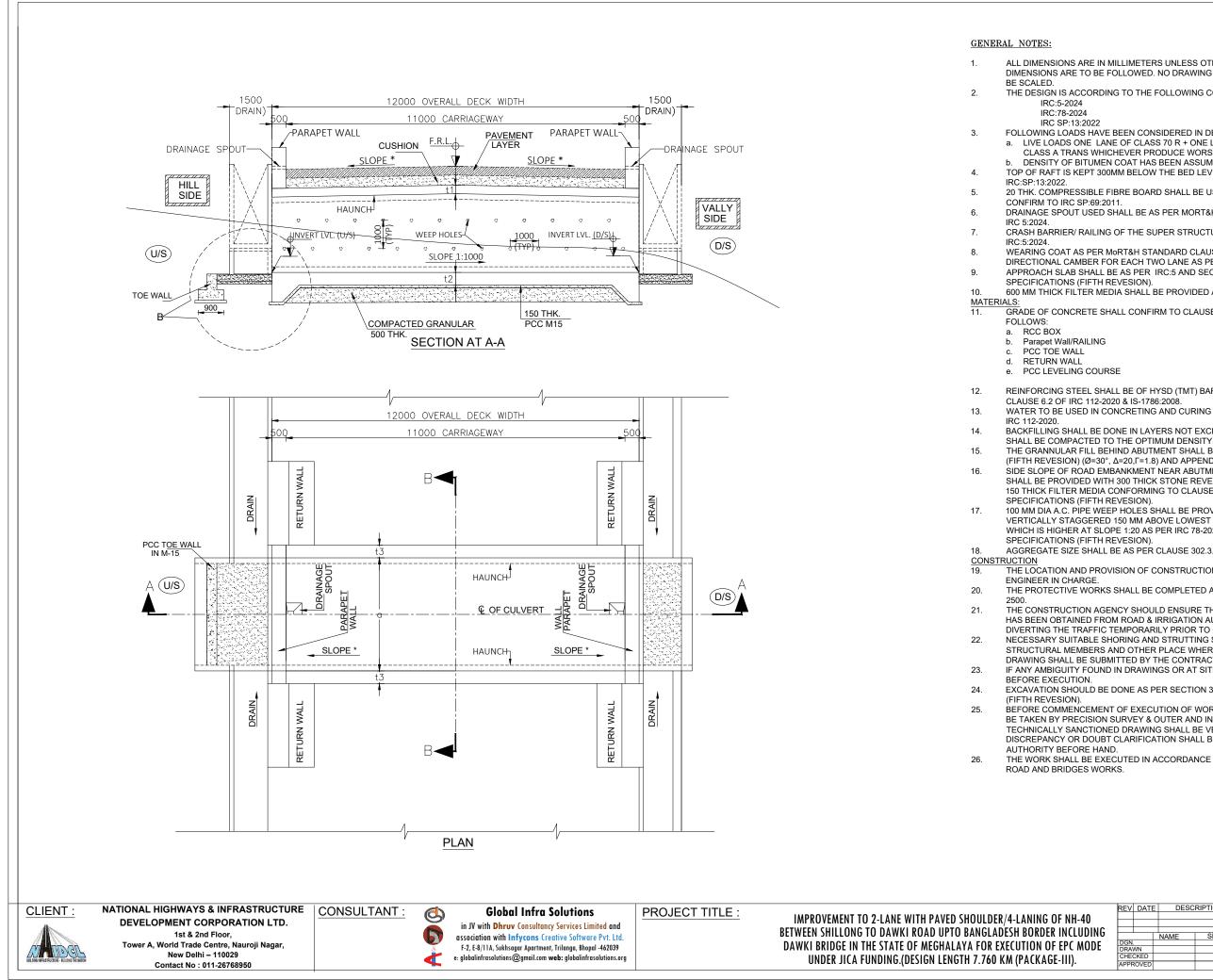
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Global Infra Solutions in JV with Dhruy Consultancy Services Limited and accountion with Infraore Creative Software Put 1td PROJECT TITLE :

association with Infycons Creative Software Pvt. Ltd. F-2, E-8/11A, Sukhsagar Apartment, Trilanga, Bhopal -462039 e: globalinfrasolutions@gmail.com web: globalinfrasolutions.org IMPROVEMENT TO 2-LANE WITH PAVED SHOULDER/4-LANING OF NH-40 Between Shillong to Dawki road upto Bangladesh Border includi Dawki Bridge in the state of meghalaya for execution of EPC mod Under Jica Funding.(Design Length 7.760 km (Package-III).



	REV	DATE	DES	CRIPTION	DRAWING TITLE :-
ING De	DGN. DRAWN		SIG.	GENERAL ARRANGEMENT DRAWING FOR NEW PROPOSED OF RCC BOX OULVERT SHEET-02 OF 02	
		CKED ROVED			DRAWING No. : NAIDCL/PYNSL/GAD /02 SCALE : NOT TO SCALE
	_				AG BHU IG
					All



ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED. NO DRAWING SHALL

THE DESIGN IS ACCORDING TO THE FOLLOWING CODES

IRC:6-2017 IRC:112-2020

FOLLOWING LOADS HAVE BEEN CONSIDERED IN DESIGN.

LIVE LOADS ONE LANE OF CLASS 70 R + ONE LANE OF CLASS A OR THREE LANE OF CLASS A TRANS WHICHEVER PRODUCE WORST EFFECT. DENSITY OF BITUMEN COAT HAS BEEN ASSUMED AS 2.2 T/M

TOP OF RAFT IS KEPT 300MM BELOW THE BED LEVEL AS PER CLAUSE 21.1.1 OF

20 THK. COMPRESSIBLE FIBRE BOARD SHALL BE USED FOR EXPANSION JOINT AND SHALL

DRAINAGE SPOUT USED SHALL BE AS PER MORT&H STANDARD DRAWING NO. SD/205 &

CRASH BARRIER/ RAILING OF THE SUPER STRUCTURE SHALL BE ADOPTED FROM

WEARING COAT AS PER MoRT&H STANDARD CLAUSE 2702.2 AND HAVING UNI DIRECTIONAL CAMBER FOR EACH TWO LANE AS PER CLAUSE 7.14. IRC:SP:84-2009. APPROACH SLAB SHALL BE AS PER IRC:5 AND SECTION 2704 OF M.O.R.T&H

600 MM THICK FILTER MEDIA SHALL BE PROVIDED AS PER APPENDIX-6 OF IRC SP:78-2024.

GRADE OF CONCRETE SHALL CONFIRM TO CLAUSE 6.4 OF IRC 112-2020 AND ARE AS

NG	-M30 -M40
	-M20
	-M30
DURSE	-M15

REINFORCING STEEL SHALL BE OF HYSD (TMT) BARS OF FE-500D, CONFIRMING TO

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BACKFILLING SHALL BE DONE IN LAYERS NOT EXCEEDING 200mm THK.EACH LAYERS

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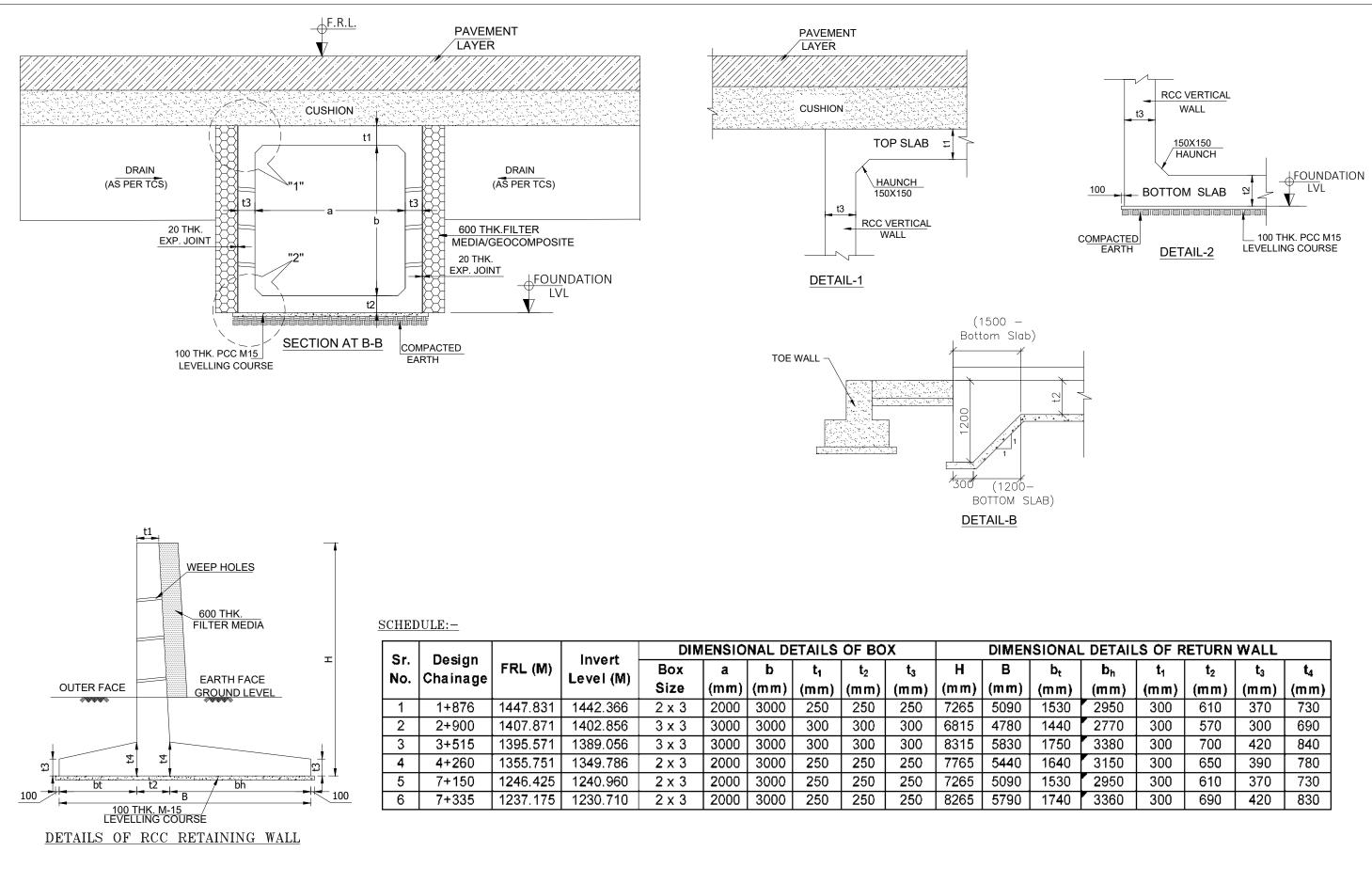
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THE WORK SHALL BE EXECUTED IN ACCORDANCE WITH M.O.R.T.H SPECIFICATIONS FOR

	REV	DATE	DESC	RIPTION	DRAWING TITLE :-
NG De	G			GENERAL ARRANGEMENT DRAWING FOR NEW PROPOSED WITH CUSHION OF	
	DGN		NAME	SIG.	RCC BOX CULVERT
	DRAWN				SHEET- 01 OF 02
	CHE	CKED			DRAWING No. : NHIDCL/PYNSL/GAD /03
	APPF	ROVED			SCALE : NOT TO SCALE PAL



PROJECT TITLE :

CLIENT :

NATIONAL HIGHWAYS & INFRASTRUCTURE CONSULTANT : DEVELOPMENT CORPORATION LTD. 1st & 2nd Floor, Tower A, World Trade Centre, Nauroji Nagar,

New Delhi - 110029 Contact No : 011-26768950 (d)

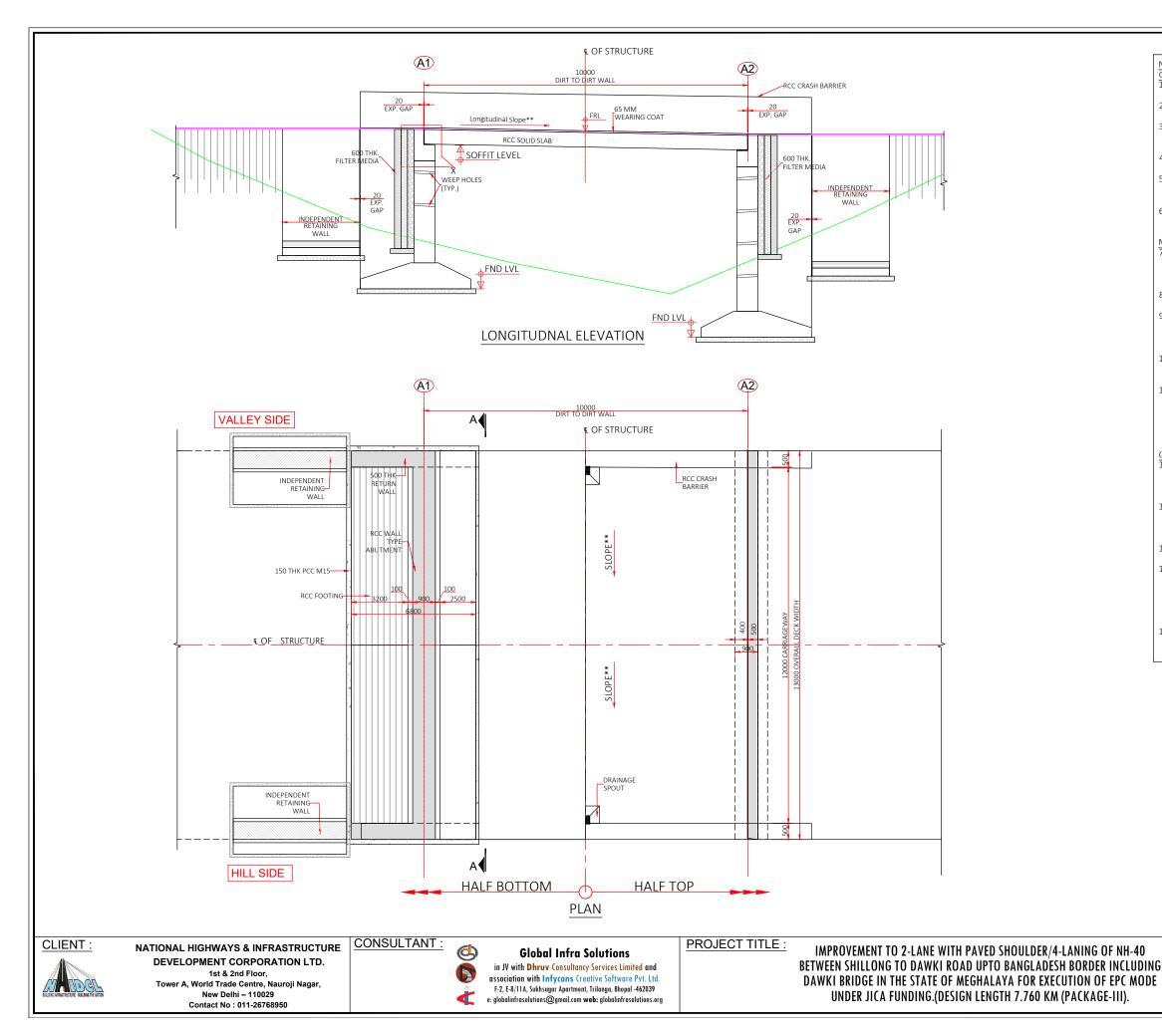
Global Infra Solutions in JV with **Dhruv** Consultancy Services Limited and association with Infycons Creative Software Pvt. Ltd. F-2, E-8/11A, Sukhsagar Apartment, Trilanga, Bhopal -462039 e: globalinfrasolutions@gmail.com web: globalinfrasolutions.org

IMPROVEMENT TO 2-LANE WITH PAVED SHOULDER/4-LANING OF NH-40 BETWEEN SHILLONG TO DAWKI ROAD UPTO BANGLADESH BORDER INCLUDI DAWKI BRIDGE IN THE STATE OF MEGHALAYA FOR EXECUTION OF EPC MOD UNDER JICA FUNDING.(DESIGN LENGTH 7.760 KM (PACKAGE-III).

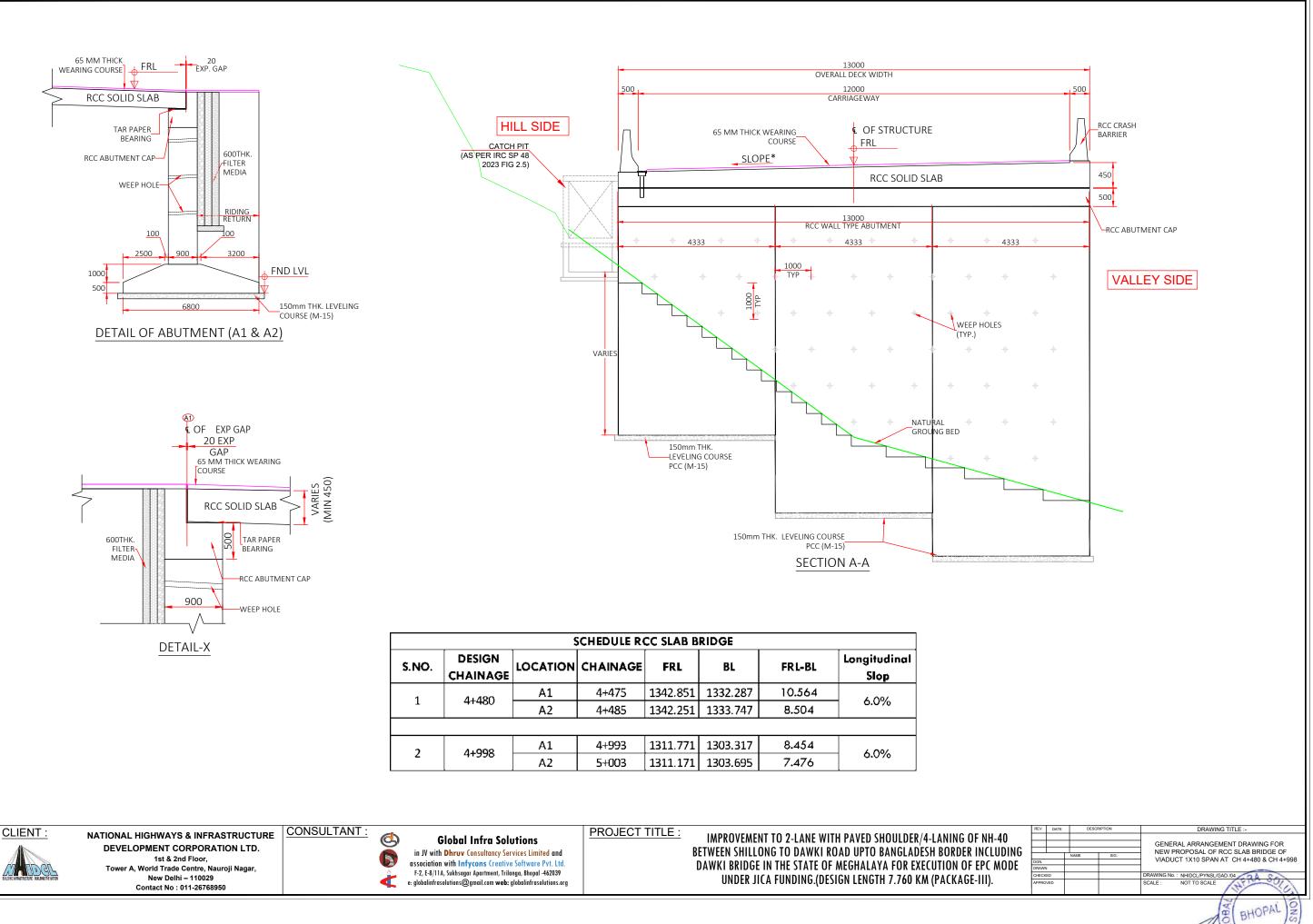
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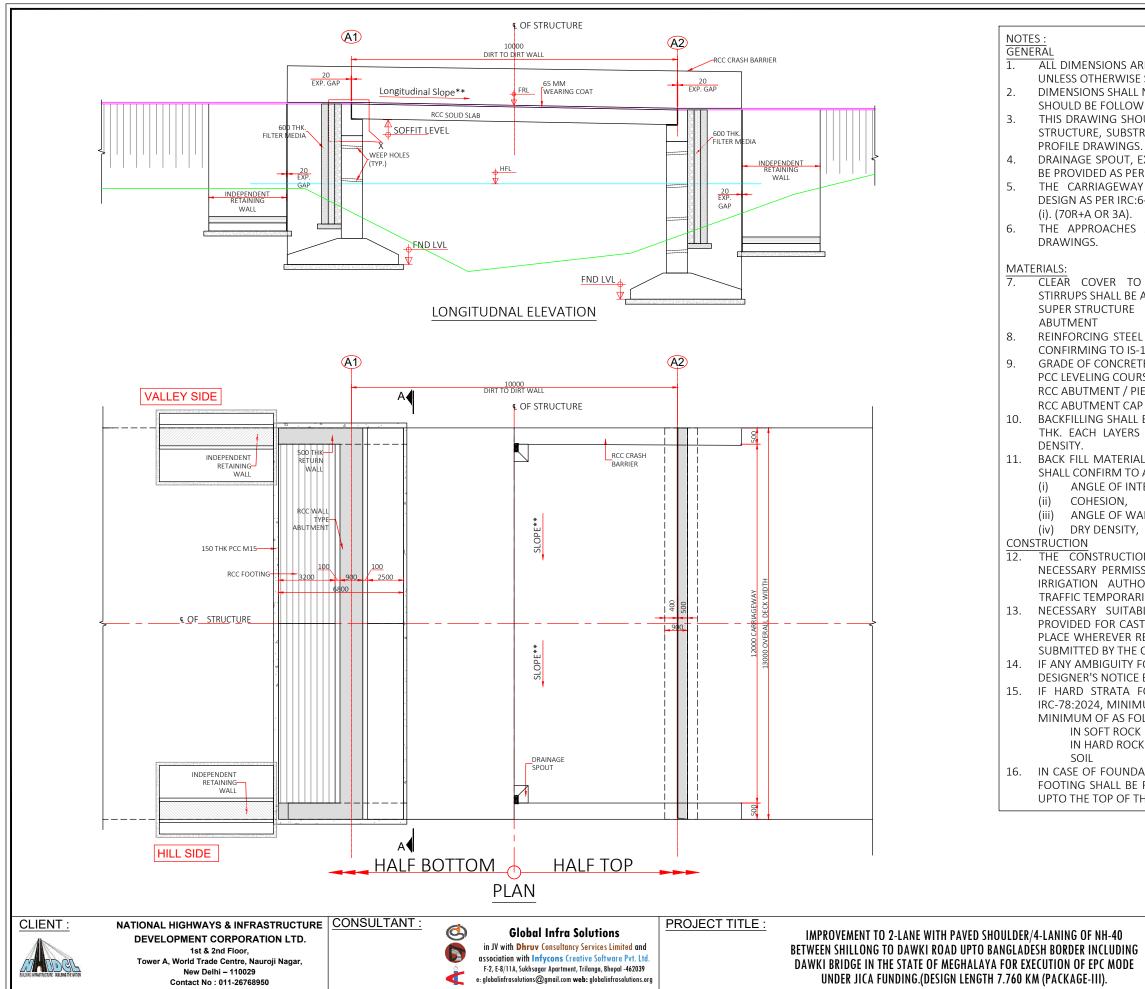
IAL	AL DETAILS OF RETURN WALL									
	b _h	t ₁	t ₂	t₃	t4					
1)	(mm)	(mm)	(mm)	(mm)	(mm)					
0	2950	300	610	370	730					
0	2770	300	570	300	690					
0	3380	300	700	420	840					
0	3150	300	650	390	780					
0	2950	300	610	370	730					
0	3360	300	690	420	830					

	REV DATE		DESC	CRIPTION	DRAWING TITLE :-
			GENERAL ARRANGEMENT DRAWING FOR NEW PROPOSED WITH CUSHION OF		
ING De	DGN.		NAME	SIG.	RCC BOX CULVERT
	DRAWN				SHEET-02 OF 02
	CHE	CKED			DRAWING No. : NHIDCL/PYNSL/GAD /03
	APPF	ROVED			SCALE : NOT TO SCALE PAL
					NO DITO IS
					4421



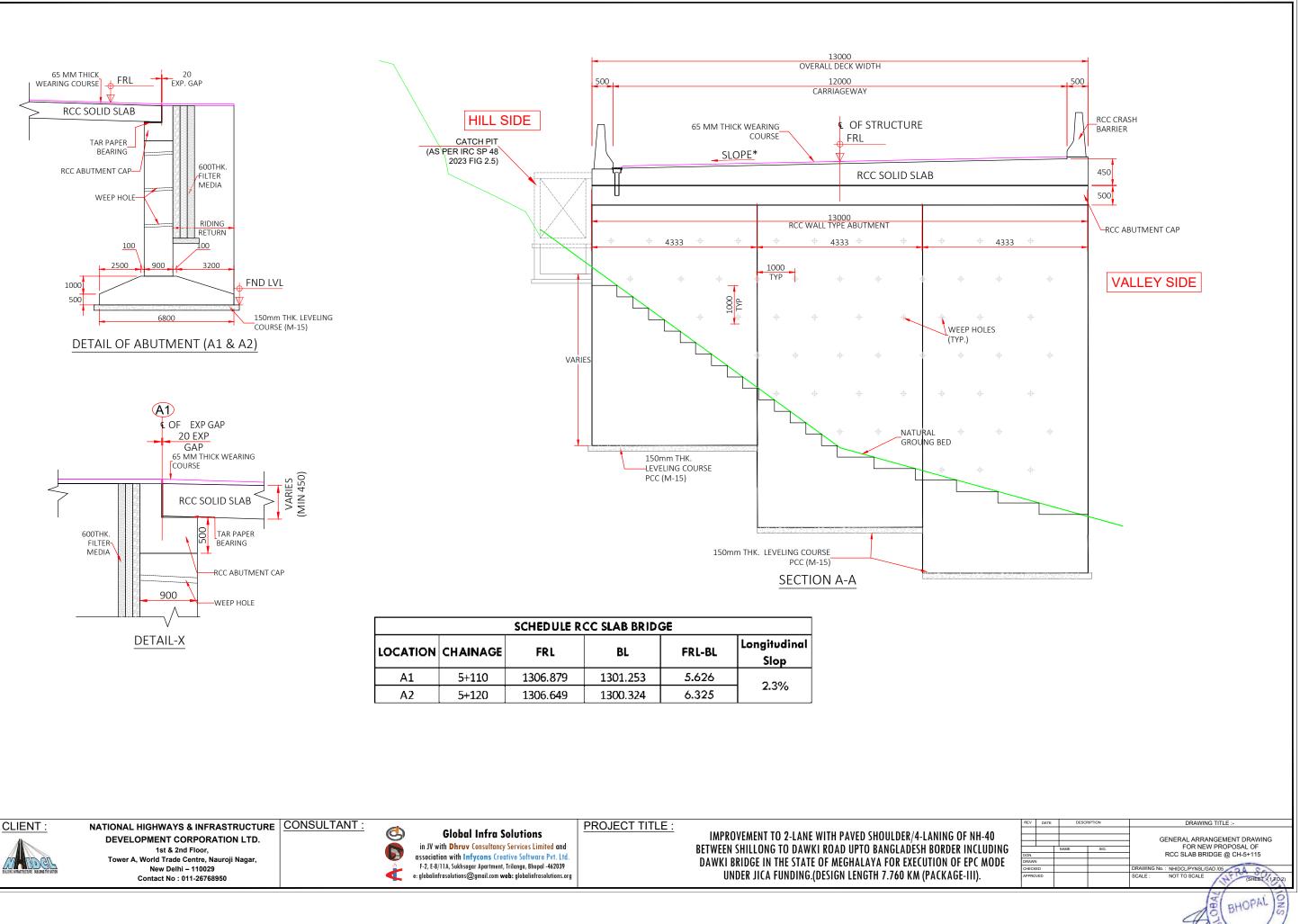
NOTE GENE	
1.	ALL DIMENSIONS ARE IN MILLIMETER AND LEVELS ARE IN METER UNLESS OTHERWISE SPECIFIED.
2.	DIMENSIONS SHALL NOT BE SCALED, ONLY WRITTEN DIMENSIONS
3.	SHOULD BE FOLLOWED. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH SUPER
5.	STRUCTURE, SUBSTRUCTURE DRAWINGS AND HIGHWAY PLAN &
4.	PROFILE DRAWINGS. DRAINAGE SPOUT, EXPANSION JOINT & WEARING COAT SHOULD
	BE PROVIDED AS PER THE SPECIFICATIONS AND DRAWINGS.
5.	THE CARRIAGEWAY OF PROPOSED BOX CULVERT SHALL BE DESIGN AS PER IRC:6-2017.
	(i). (70R+A OR 3A).
6.	THE APPROACHES ARE IN RCC/PCC WALLS AS PER DETAIL DRAWINGS.
MATI 7.	ERIALS: CLEAR COVER TO ALL REINFORCEMENT BARS INCLUDING
	STIRRUPS SHALL BE AS FOLLOWS:
	SUPER STRUCTURE 45 mm PIER 45 mm ABUTMENT 75 mm FOUNDATION 75 mm
8.	REINFORCING STEEL SHALL BE OF HYSD (TMT) BARS OF FE-500,
9.	CONFIRMING TO IS-1786. GRADE OF CONCRETE SHALL BE AS FOLLOWS:
	PCC LEVELING COURSE M15 PCC TOE WALL M20
	RCC ABUTMENT / PIER M30 RCC SOLID SLAB M30 RCC ABUTMENT CAP / PIER CAP M30 RCC CRASH BARRIER M40
10.	BACKFILLING SHALL BE DONE IN LAYERS NOT EXCEEDING 200MM
	THK. EACH LAYERS SHALL BE COMPACTED TO THE OPTIMUM DENSITY.
11.	BACK FILL MATERIAL BEHIND ABUTMENT AND RETAINING WALL
	SHALL CONFIRM TO APPENDIX:6, IRC-78:2000 AND AS FOLLOW: (i) ANGLE OF INTERNAL FRICTION, ϕ = 30°
	(ii) COHESION, $C = 0 T/M^2$.
	(iii) ANGLE OF WALL FRICTION, $\Delta = 20^{\circ}$ (iv) DRY DENSITY, YD = 2.50 T/M ³ .
	STRUCTION
12.	THE CONSTRUCTION AGENCY SHOULD ENSURE THAT THE NECESSARY PERMISSIONS HAS BEEN OBTAINED FROM ROAD &
	IRRIGATION AUTHORITY IF REQUIRED FOR DIVERTING THE
13.	TRAFFIC TEMPORARILY PRIOR TO COMMENCING THE WORK. NECESSARY SUITABLE SHORING AND STRUTTING SHALL BE
	PROVIDED FOR CASTING OF STRUCTURAL MEMBERS AND OTHER
	PLACE WHEREVER REQUIRED AND DETAILED DRAWING SHALL BE SUBMITTED BY THE CONTRACTING AGENCY.
14.	IF ANY AMBIGUITY FOUND IN DRAWINGS OR AT SITE BRING IT TO
15.	DESIGNER'S NOTICE BEFORE EXECUTION. IF HARD STRATA FOUND AT SITE, ACC. TO CLAUSE 705.2.2,
	IRC-78:2024, MINIMUM EMBEDMENT OF FOUNDATION SHALL BE MINIMUM OF AS FOLLOW OR SHOWN IN DRAWINGS:
	IN SOFT ROCK 1.5 m
	IN HARD ROCK 0.6 m SOIL 2.0 m
16.	IN CASE OF FOUNDATION IN ROCK, THE TRENCHES AROUND THE
	FOOTING SHALL BE FILLED UP WITH M-15 GRADE OF CONCRETE UPTO THE TOP OF THE ROCK.
RE	EV DATE DESCRIPTION DRAWING TITLE :-
Ē	GENERAL ARRANGEMENT DRAWING FOR
βĘ	
	NN. VIADOUT INTO STATUATION AND A CITATIST
	PROVED SCALE NOT TO SCALE
	AB BHOPAL

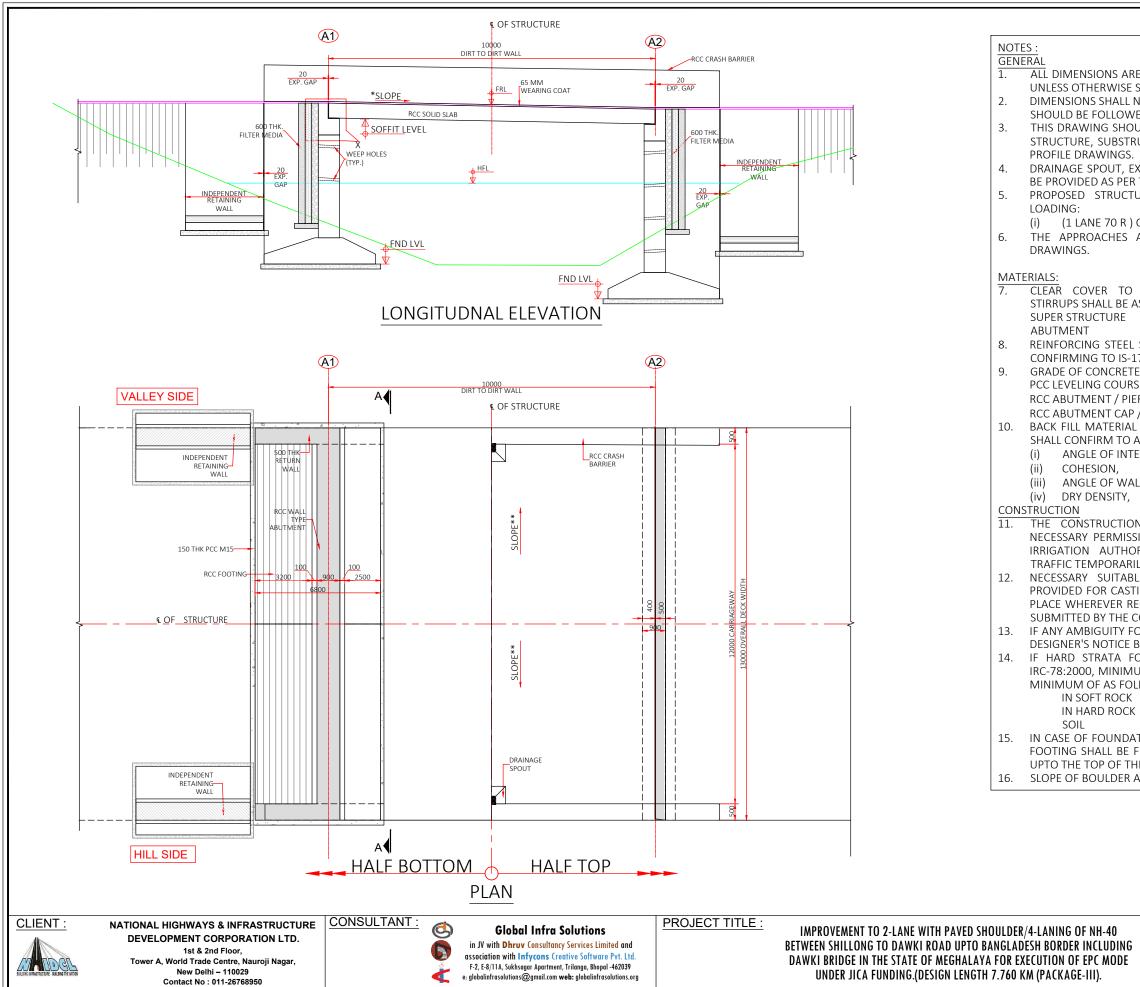




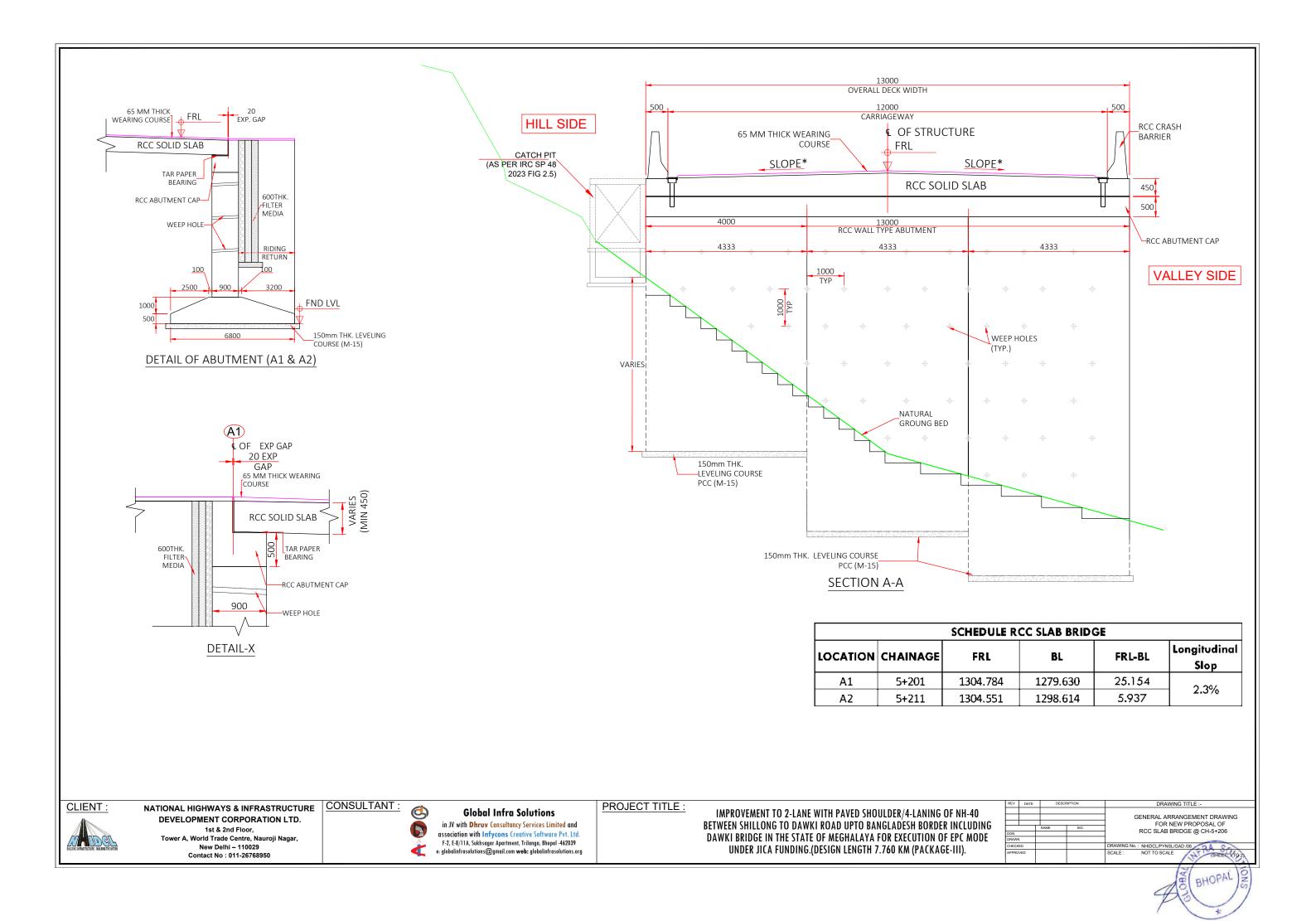
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	IN MILL		r and le	VELS ARE IN METER	
L NO	OT BE SC D.	ALED,		RITTEN DIMENSIONS	
				ICTION WITH SUPER D HIGHWAY PLAN &	
'ER T AY	THE SPEC	IFICAT	IONS ANI	RING COAT SHOULD D DRAWINGS. CULVERT SHALL BE	
SA	RE IN	RCC/P	CC WALI	LS AS PER DETAIL	
E AS E EL S S-17 ETE JRSE PIER AP / L BE	FOLLOV 45 mm 75 mm 6HALL BE 86. SHALL BI SHALL BI E PIER CAI E DONE I	VS: PIER FOUN E OF H E AS FC M15 M30 P M30 IN LAYI	IDATION YSD (TM DLLOWS: 5 PCC TC 5 RCC SC 0 RCC CF ERS NOT	T) BARS OF FE-500, DE WALL M20 DLID SLAB M30 RASH BARRIER M40 EXCEEDING 200MM	
ial I O Ai	BEHIND	ABUTN :6, IRC	/IENT AN -78:2000	TO THE OPTIMUM D RETAINING WALL AND AS FOLLOW:	
VALI Y,	FRICTIC	DN,	$C = 0 T/f$ $\Delta = 20^{\circ}$ $YD = 2.5$		
ISSI HOR ARIL ABLE ASTIN REC E CC FO E BI FO CE BI FO MUI CK CK	ONS HAS ITY IF Y PRIOR S SHORI NG OF S QUIRED A ONTRACT UND IN I FFORE EA UND AT M EMBE OW OR S	S BEEN REQUI TO COI ING A TRUCT AND D TING A DRAWI KECUTI SITE, DMEN SHOW 1.5 m 0.6 m 2.0 m	N OBTAIN IRED FO MMENCII ND STR URAL ME ETAILED GENCY. INGS OR ON. ACC. T T OF FOU N IN DRA	NSURE THAT THE IED FROM ROAD & R DIVERTING THE NG THE WORK. UTTING SHALL BE MBERS AND OTHER DRAWING SHALL BE AT SITE BRING IT TO O CLAUSE 705.2.2, JNDATION SHALL BE WINGS:	
E FI				RADE OF CONCRETE	
	REV DATE	DESCR	IPTION		-
c	UATE			GENERAL ARRANGEN	IENT DRAWING
G E	DGN. DRAWN CHECKED	NAME	SIG.	FOR NEW PRC RCC SLAB BRIDGE (DRAWING No. : NHIDCL/PYNSL/GAD /05	
	APPROVED			SCALE : NOT TO SCALE	(SHEET : 1701)

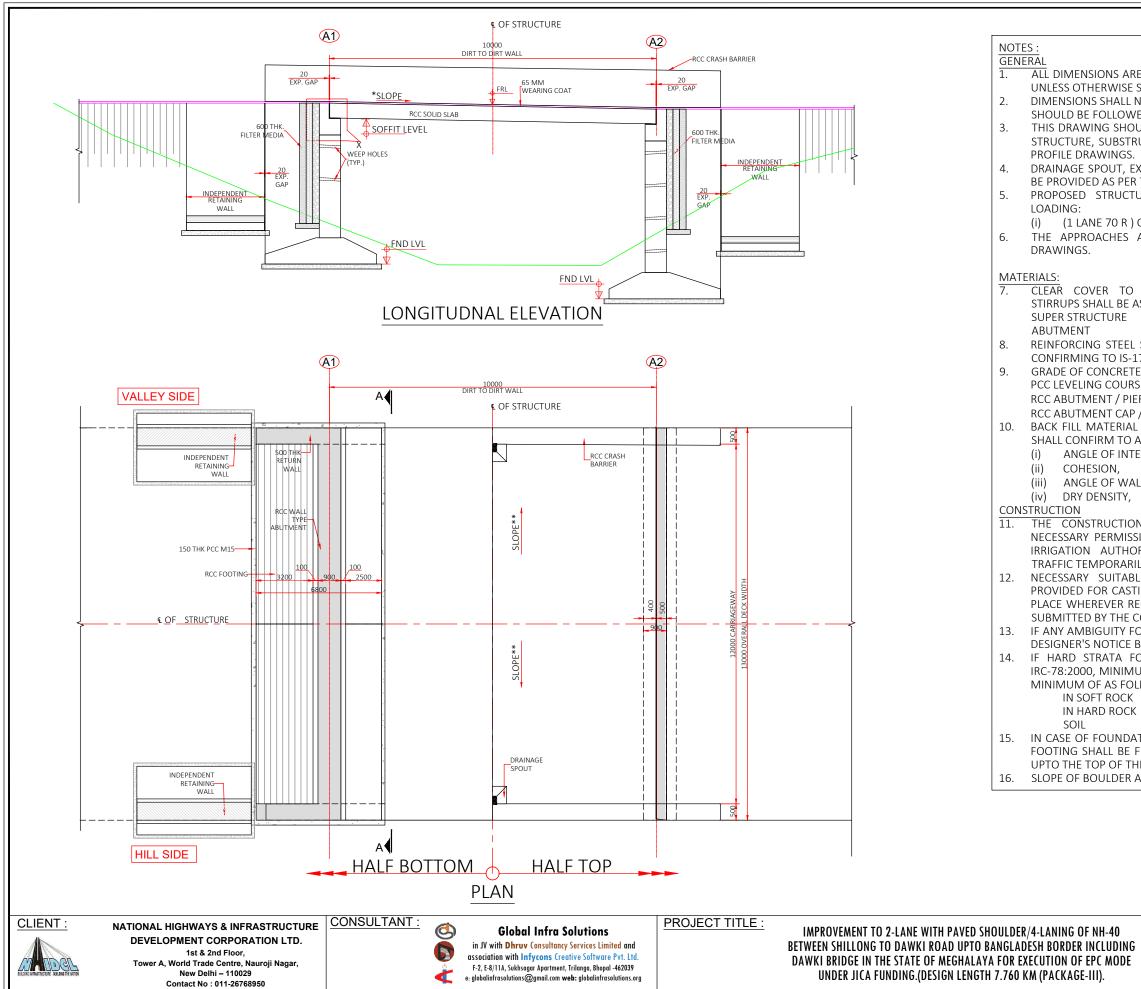
BHOPAL



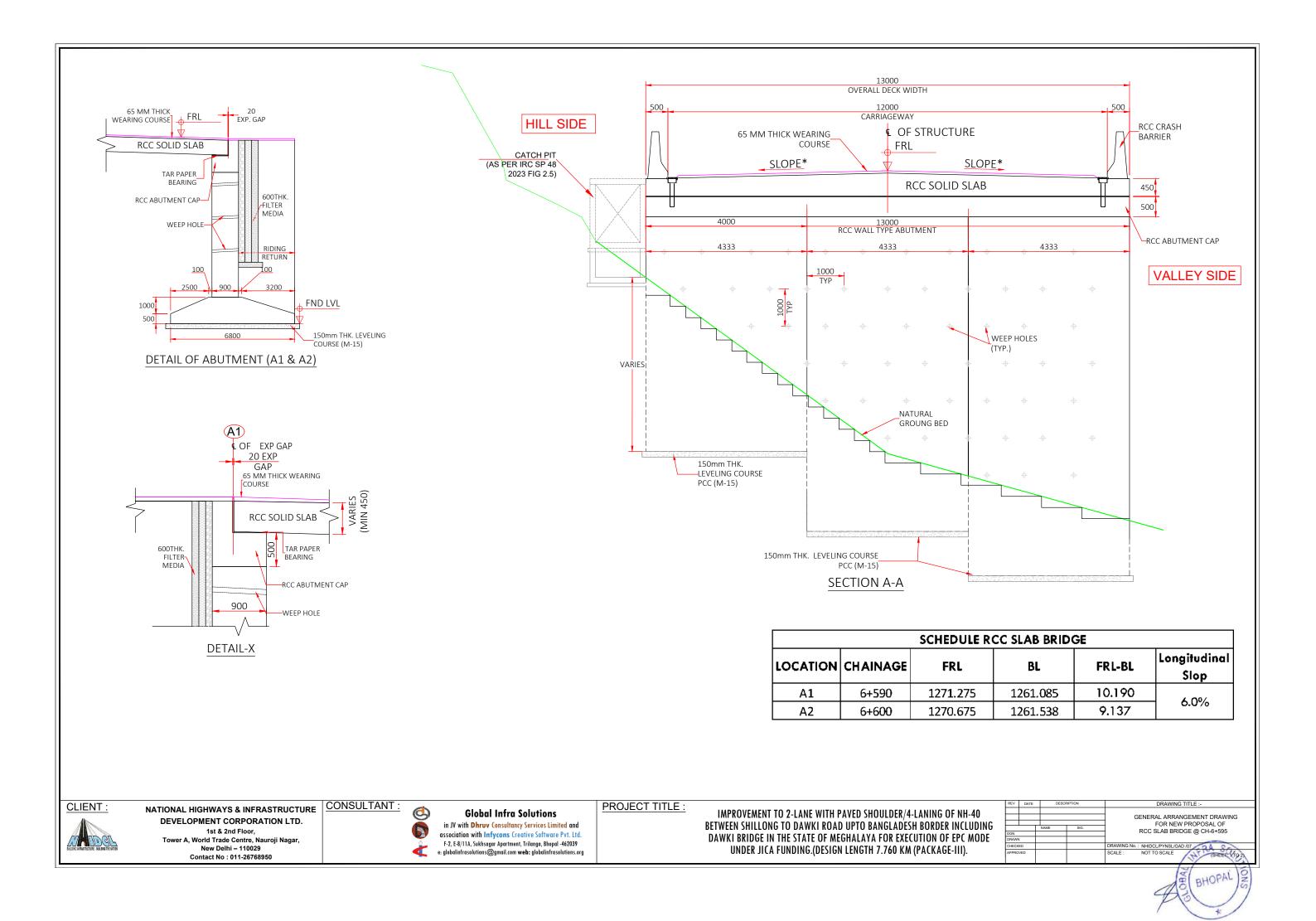


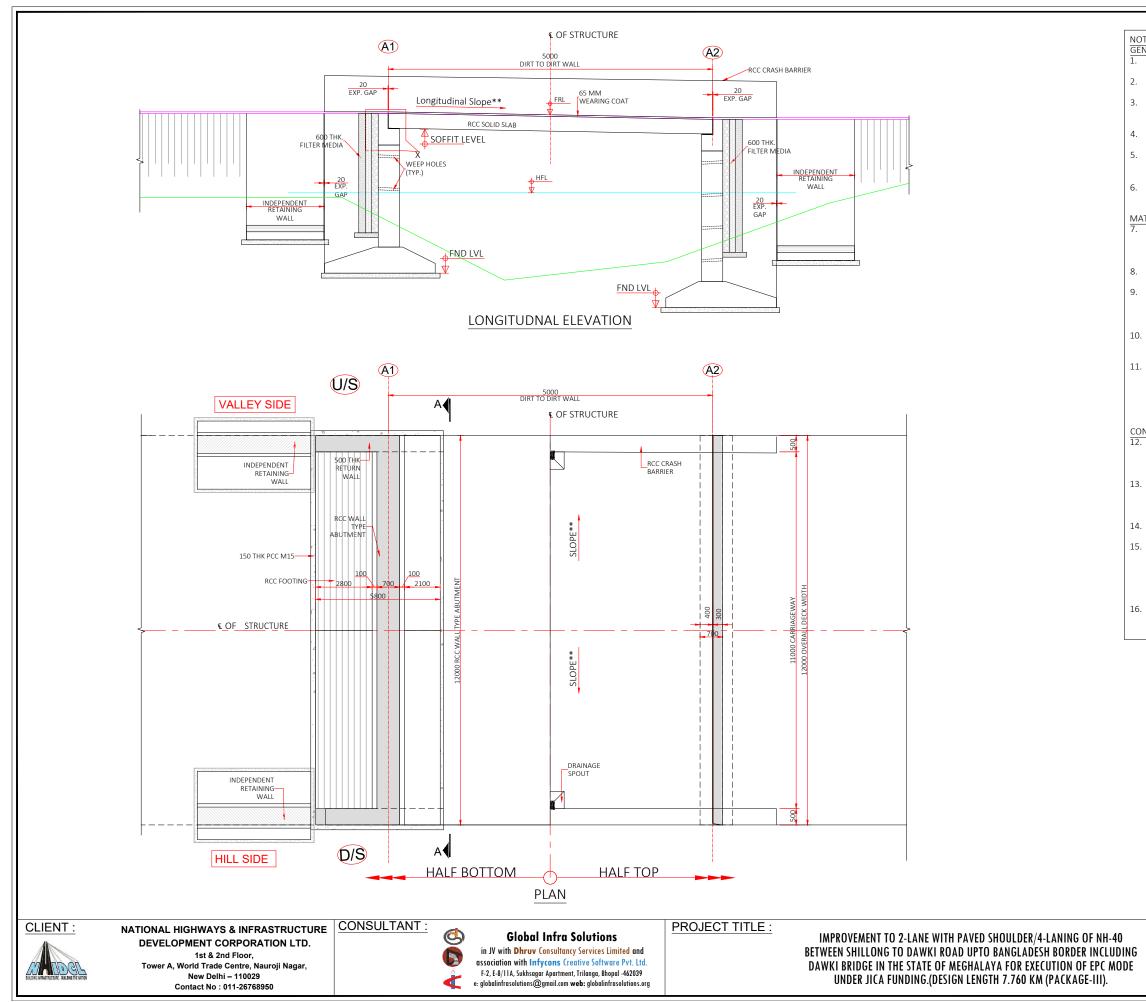
RE IN MILLIMETER AND LEV SPECIFIED. NOT BE SCALED, ONLY WRI VED. DULD BE READ IN CONJUNC RUCTURE DRAWINGS AND EXPANSION JOINT & WEARI R THE SPECIFICATIONS AND FURE IS DESIGNED FOR OR (2 LANE CLASS A) ARE IN RCC/PCC WALLS	TTEN DIMENSIONS TION WITH SUPER HIGHWAY PLAN & NG COAT SHOULD DRAWINGS. FOLLOWING IRC
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ON AGENCY SHOULD EN SIONS HAS BEEN OBTAINE DRITY IF REQUIRED FOR HILY PRIOR TO COMMENCIN BLE SHORING AND STRU TING OF STRUCTURAL MEN REQUIRED AND DETAILED D CONTRACTING AGENCY. FOUND IN DRAWINGS OR A BEFORE EXECUTION. FOUND AT SITE, ACC. TO IUM EMBEDMENT OF FOUN OLLOW OR SHOWN IN DRAW (0.6 m 2.0 m ATION IN ROCK, THE TRENC FILLED UP WITH M-15 GR/ HE ROCK. APPRON TO MATCH NATUF	ED FROM ROAD & DIVERTING THE G THE WORK. TTING SHALL BE ABERS AND OTHER RAWING SHALL BE T SITE BRING IT TO CLAUSE 705.2.2, NDATION SHALL BE /INGS: CHES AROUND THE ADE OF CONCRETE
REV DATE DESCRIPTION	DRAWING TITLE :- GENERAL ARRANGEMENT DRAWING FOR NEW PROPOSAL OF
NAME SIG. DGN. DRVMN DRVMN DRCVED APPROVED	RCC SLAB BRIDGE @ CH-5+206
	BHUPPE S



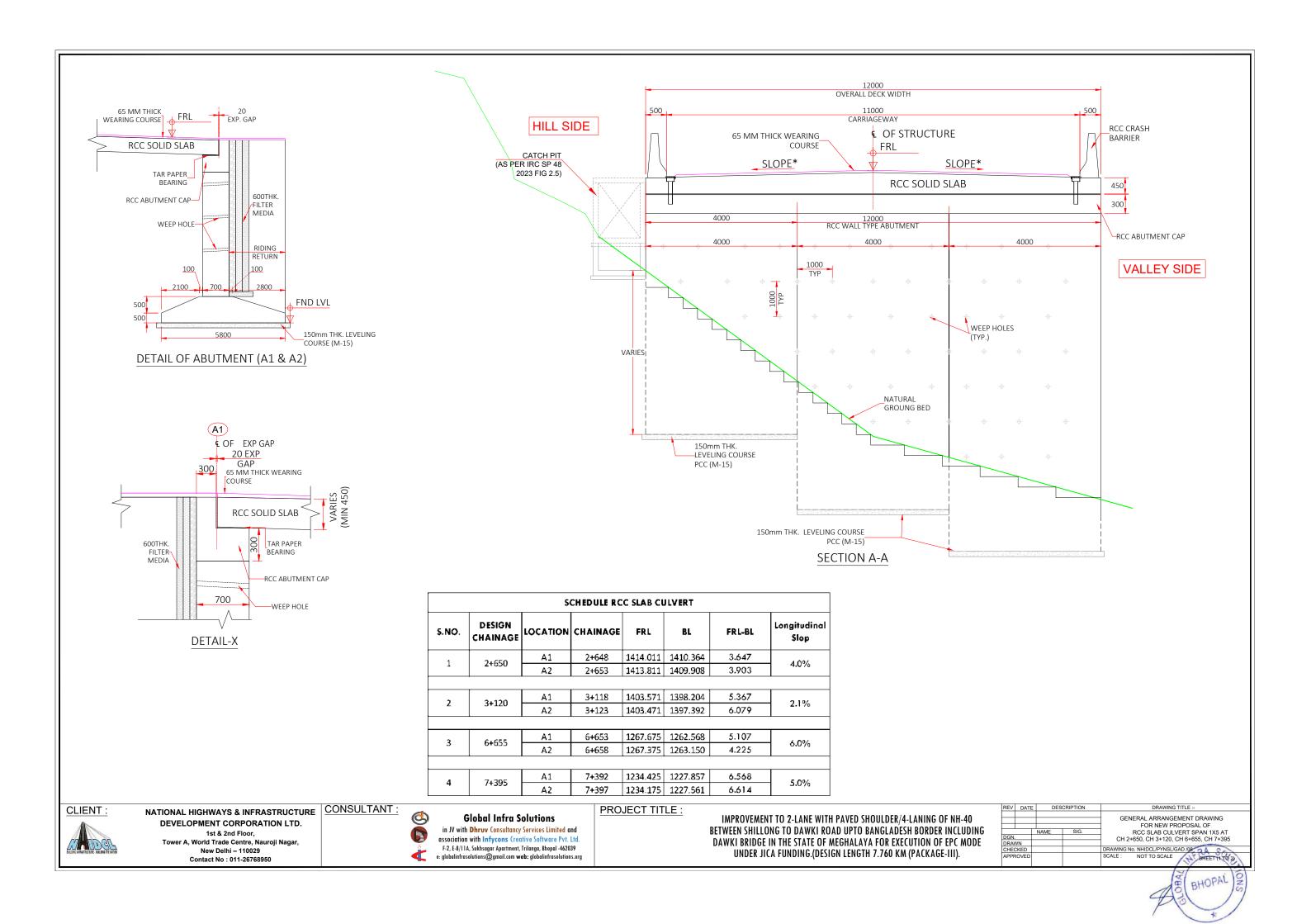


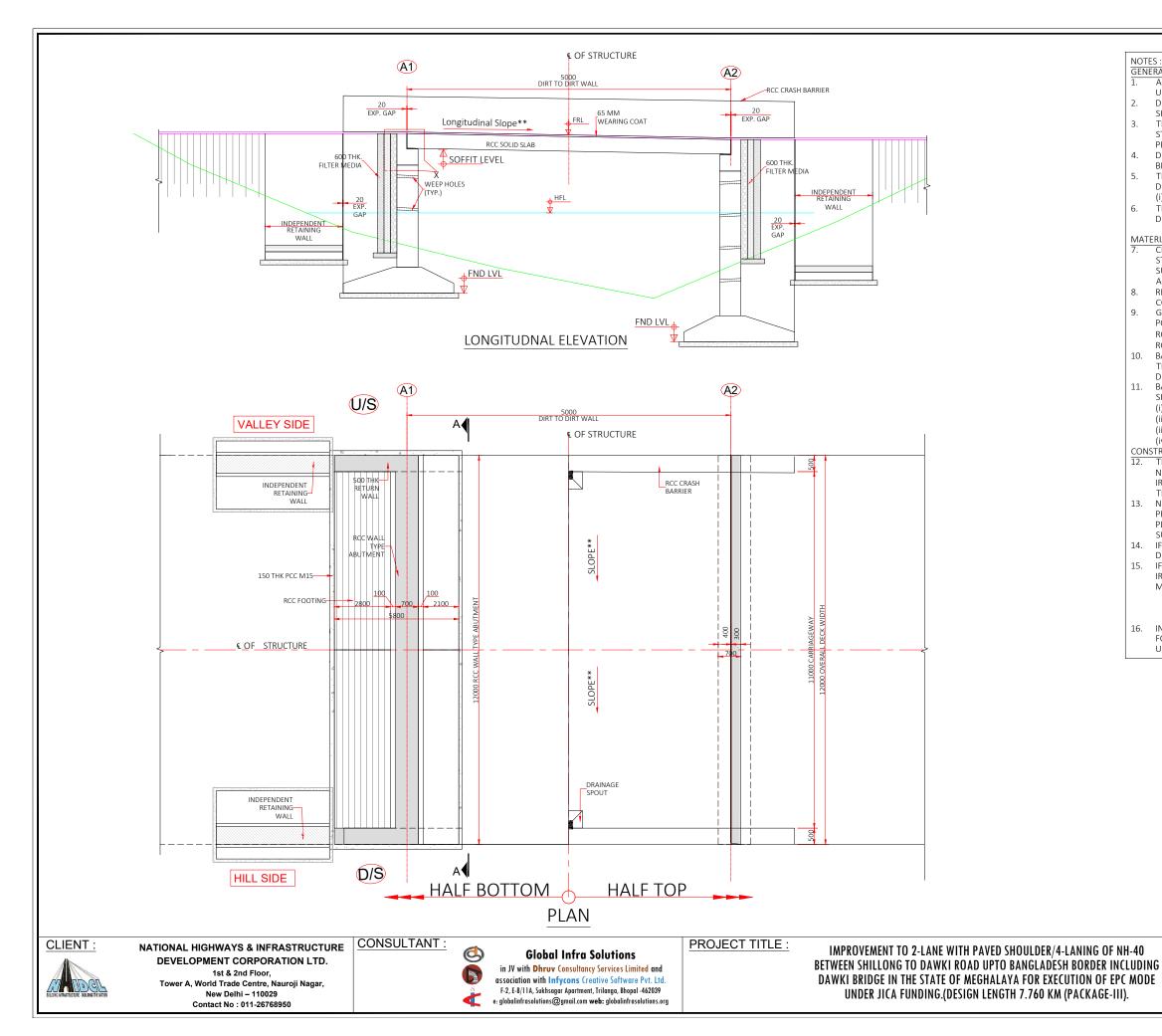
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OR (2 LANE CLASS A) ARE IN RCC/PCC WALLS	AS PER DETAIL
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C 0.6 m 2.0 m	
ATION IN ROCK, THE TRENC FILLED UP WITH M-15 GRA HE ROCK. APPRON TO MATCH NATUR	DE OF CONCRETE
REV DATE DESCRIPTION	DRAWING TITLE :-
DGN. DRAWN	FOR NEW PROPOSAL OF RCC SLAB BRIDGE @ CH-6+595
	DRAWING NO.: NHIDCL/PYNSL/GAD /07 SCALE: NOT TO SCALE (SHEEK: 170 1)
	BHOPAL ON





INTERAL ALL DIMENSIONS ARE IN MILLIMETER AND LEVELS ARE IN METER UNLESS OTHERWISE SPECIFIED. DIMENSIONS SHALL NOT BE SCALED, ONLY WRITTEN DIMENSIONS SHOULD BE FOLLOWED. THIS DRAWINGS, SHOULD BE READ IN CONJUNCTION WITH SUPER STRUCTURE, SUBSTRUCTURE DRAWINGS AND HIGHWAY PLAN & PROFILE DRAWINGS. DRAINAGE SPOUT, EXPANSION JOINT & WEARING COAT SHOULD BE PROVIDED AS PER THE SPECIFICATIONS AND DRAWINGS. THE CARRIAGEWAY OF PROPOSID BOX CULVERT SHALL BE DESIGN ASPER IR.CG-2017. (I). (70R+A OR 3A). THE APPROACHES ARE IN RCC/PCC WALLS AS PER DETAIL DRAWINGS. ATERIALS: CLEAR COVER TO ALL REINFORCEMENT BARS INCLUDING STIRRUPS SHALL BE AS FOLLOWS: SUPER STRUCTURE 45 AM PIER 45 mm ABUTMENT 75 mm FOUNDATION 75 mm REINFORCING STELL SHALL BE OF HYSD (TMT) BARS OF FE-500, CONFRIMING TO 15-1786. GRADE OF CONCRETE SHALL BE OF HYSD (TMT) BARS OF FE-500, CONFRIMING TO 15-1786. GRADE OF CONCRETE SHALL BE OF HYSD (TMT) BARS OF FE-500, CONFRIMING TO 15-1786. GRADE OF CONCRETE SHALL BE CONPERTED TO THE OPTIMUM DENSITY. BACKFILLING SHALL BE LONDE IN LAYERS NOT EXCEEDING 200MM THK EACH LAYERS SHALL BE CONPERTED TO THE OPTIMUM DENSITY. BACKFILL MATERNAL BEIND ABUTMENT AND RETAINING WALL SHALL CONFIRM TO APPENDIX6, IRC-78:2000 AND AS FOLLOW: (I) ANGLE OF WALL FRICTION, A = 20° (III) CONESION, MALL RECITON, APPENDIXE, IRC-78:2000 AND AS FOLLOW: (III) ANGLE OF MALL FRICTION, A = 20° (]
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(iv) DRY DENSITY, YD = 2.50 T/M ³ . INSTRUCTION AGENCY SHOULD ENSURE THAT THE NECESSARY PERMISSIONS HAS BEEN OBTAINED FROM ROAD & IRRIGATION AUTHORITY IF REQUIRED FOR DIVERTING THE TRAFFIC TEMPORARILY PRIOR TO COMMENCING THE WORK. . NECESSARY SUITABLE SHORING AND STRUTTING SHALL BE PROVIDED FOR CASTING OF STRUCTURAL MEMBERS AND OTHER PLACE WHEREVER REQUIRED AND DETAILED DRAWING SHALL BE SUBMITTED BY THE CONTRACTING AGENCY. . IF ANY AMBIGUITY FOUND IN DRAWINGS OR AT SITE BRING IT TO DESIGNER'S NOTICE BEFORE EXECUTION. . IF HARD STRATA FOUND AT SITE, ACC. TO CLAUSE 705.2.2, IRC-78:2024, MINIMUM EMBEDMENT OF FOUNDATION SHALL BE MINIMUM OF AS FOLLOW OR SHOWN IN DRAWINGS: IN SOFT ROCK . IF HARD STRATA FOUND AT SITE, ACC. TO CLAUSE 705.2.2, IRC-78:2024, MINIMUM EMBEDMENT OF FOUNDATION SHALL BE MINIMUM OF AS FOLLOW OR SHOWN IN DRAWINGS: IN SOFT ROCK . IF ARS OF FOUNDATION IN ROCK, THE TRENCHES AROUND THE FOOTING SHALL BE FILLED UP WITH M-15 GRADE OF CONCRETE UPTO THE TOP OF THE ROCK.	REINFORCING STEEL SHALL BE CONFIRMING TO IS-1786. GRADE OF CONCRETE SHALL BE PCC LEVELING COURSE RCC ABUTMENT / PIER RCC ABUTMENT CAP / PIER CAF BACKFILLING SHALL BE DONE I THK. EACH LAYERS SHALL BE DENSITY. BACK FILL MATERIAL BEHIND / SHALL CONFIRM TO APPENDIX: (i) ANGLE OF INTERNAL FRIM (ii) COHESION,	OF HYSD (TMT) BARS OF FE-500, AS FOLLOWS: M15 PCC TOE WALL M20 M30 RCC SOLID SLAB M30 M30 RCC CRASH BARRIER M40 N LAYERS NOT EXCEEDING 200MM COMPACTED TO THE OPTIMUM ABUTMENT AND RETAINING WALL 6, IRC-78:2000 AND AS FOLLOW: CTION, ϕ = 30° C = 0 T/M ² .
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IF HARD STRATA FOUND AT SITE, ACC. TO CLAUSE 705.2.2, IRC-78:2024, MINIMUM EMBEDMENT OF FOUNDATION SHALL BE MINIMUM OF AS FOLLOW OR SHOWN IN DRAWINGS: IN SOFT ROCK 1.5 m IN HARD ROCK 0.6 m SOIL 2.0 m IN CASE OF FOUNDATION IN ROCK, THE TRENCHES AROUND THE FOOTING SHALL BE FILLED UP WITH M-15 GRADE OF CONCRETE UPTO THE TOP OF THE ROCK. IN THE TOP OF THE ROCK. GENERAL ARRANGEMENT DRAWING TITLE :- GENERAL ARRANGEMENT DRAWING FOR NEW PROPOSAL OF RCC SLAB CULVERT SPAN UN SA DOM	 INSTRUCTION THE CONSTRUCTION AGENC NECESSARY PERMISSIONS HAS IRRIGATION AUTHORITY IF TRAFFIC TEMPORARILY PRIOR 1 NECESSARY SUITABLE SHORI PROVIDED FOR CASTING OF ST PLACE WHEREVER REQUIRED A SUBMITTED BY THE CONTRACT 	Y SHOULD ENSURE THAT THE BEEN OBTAINED FROM ROAD & REQUIRED FOR DIVERTING THE TO COMMENCING THE WORK. NG AND STRUTTING SHALL BE RUCTURAL MEMBERS AND OTHER IND DETAILED DRAWING SHALL BE ING AGENCY.
GENERAL ARRANGEMENT DRAWING FOR NEW PROPOSAL OF RCC SLAB CULVERT SPAN 1X5 A CH 24550 CH 24120 CH 6455 CH 7432	 IF HARD STRATA FOUND AT IRC-78:2024, MINIMUM EMBEI MINIMUM OF AS FOLLOW OR S IN SOFT ROCK IN HARD ROCK SOIL IN CASE OF FOUNDATION IN R FOOTING SHALL BE FILLED UP 	SITE, ACC. TO CLAUSE 705.2.2, DMENT OF FOUNDATION SHALL BE HOWN IN DRAWINGS: 1.5 m 0.6 m 2.0 m OCK, THE TRENCHES AROUND THE
GENERAL ARRANGEMENT DRAWING FOR NEW PROPOSAL OF RCC SLAB CULVERT SPAN 1X5 A CH 24550 CH 24120 CH 6455 CH 7432		
GENERAL ARRANGEMENT DRAWING FOR NEW PROPOSAL OF RCC SLAB CULVERT SPAN 1X5 A CH 24550 CH 24120 CH 6455 CH 7432		
DGN. FOR NEW PROPOSAL OF RCC SLAB CULVERT SPAN 1X5 A CH 24550 CH 34120 CH 34120 CH 34120 CH	REV DATE DESCRIPTION	
DGN. CH 2+650 CH 3+120 CH 6+655 CH 7+30		FOR NEW PROPOSAL OF
IDRAWN		RCC SLAB CULVERT SPAN 1X5 AT CH 2+650, CH 3+120, CH 6+655, CH 7+395
CHECKED DRAWING No. NHIDCL/PYNSL/GAD /08 0 4 0	CHECKED	
APPROVED SCALE : NOT TO SCALE SHEET (1)	AFFROVED	SCALE : NOT TO SCALE SHEET (1. TO

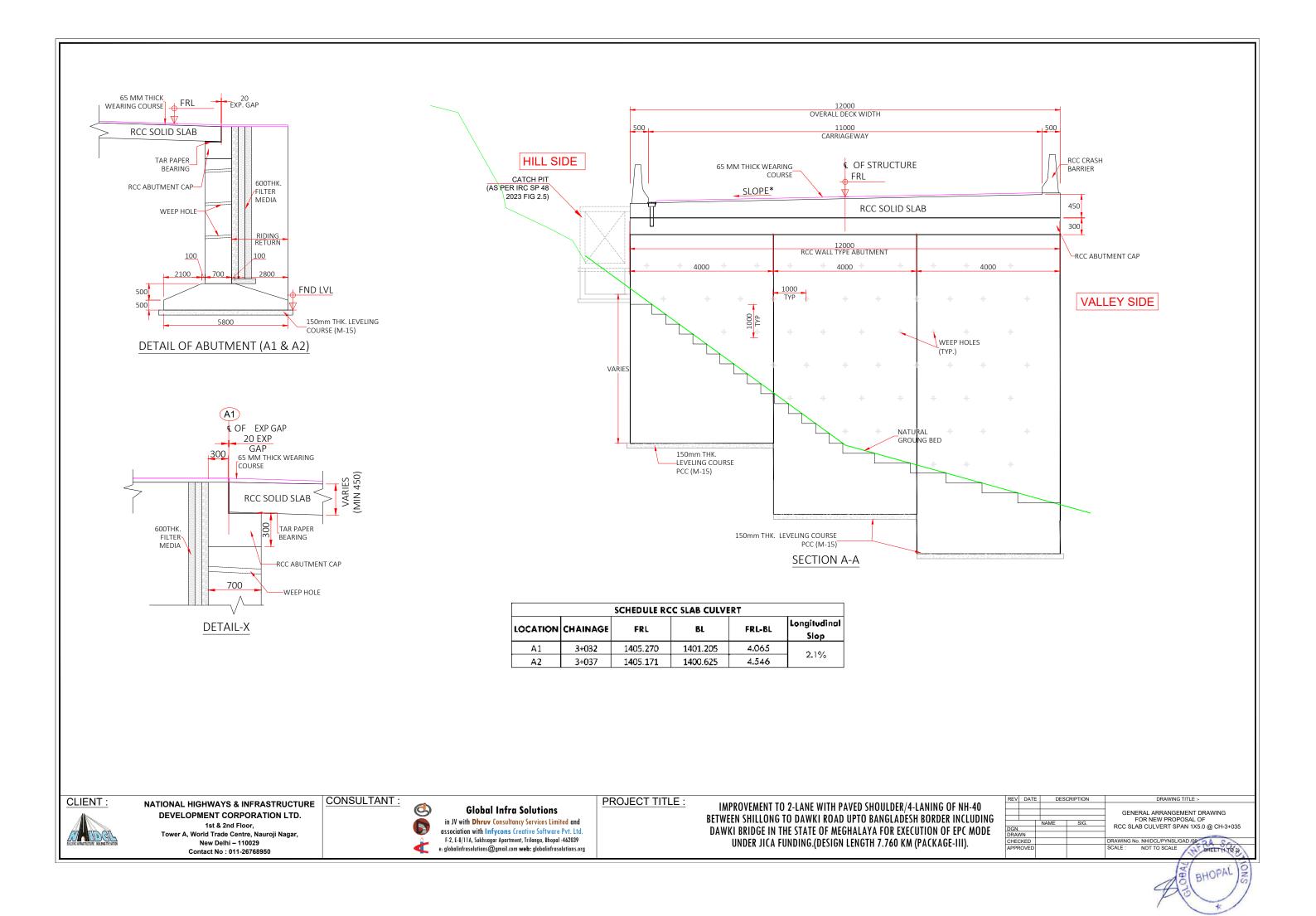


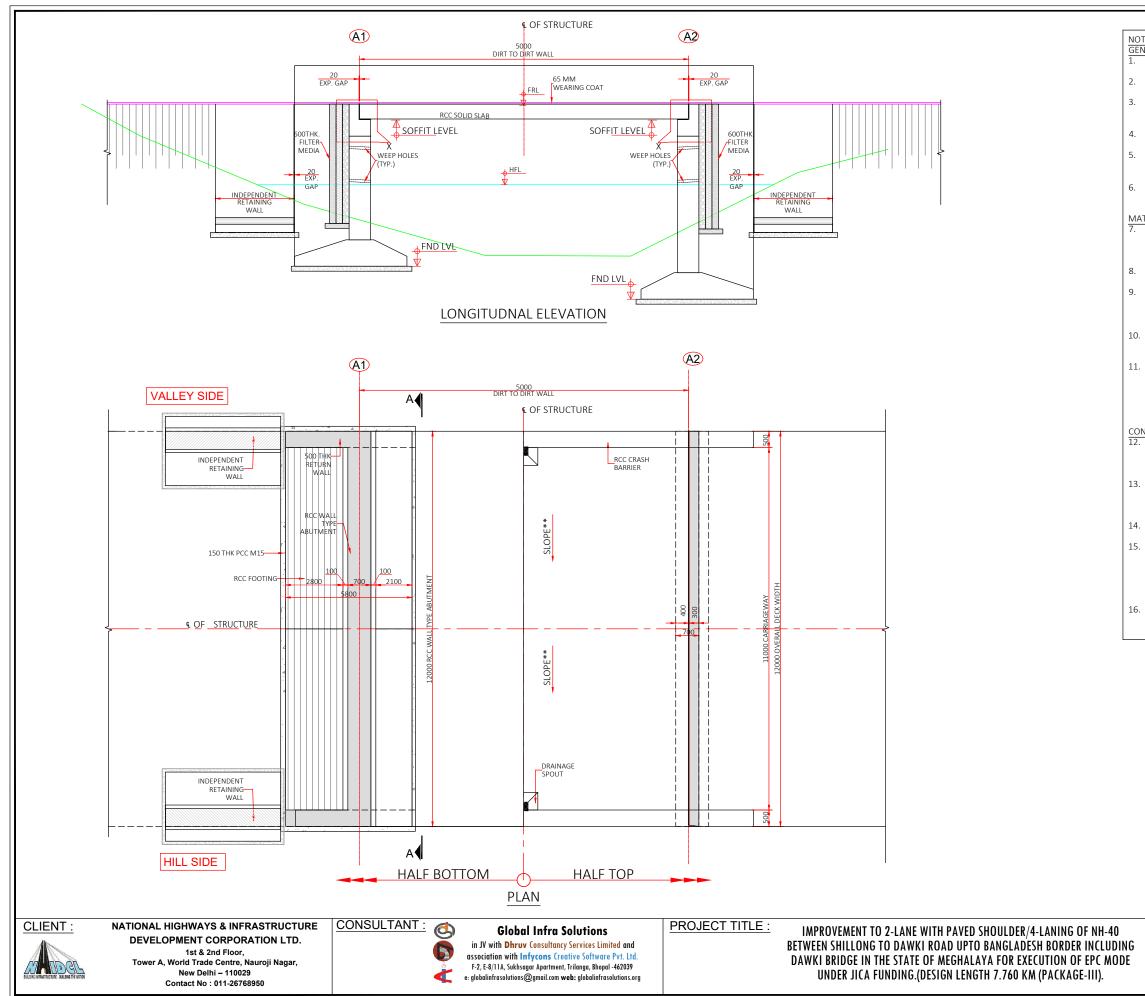


ALL TAL TAL TAL TAL LIL DIMENSIONS ARE IN MILLIMETER AND LEVELS ARE IN METER UNLESS OTHERWISE SPECIFIED. DIMENSIONS SHALL NOT BE SCALED, ONLY WRITTEN DIMENSIONS SHOULD BE FOLLOWED. THIS DRAWINGS SHOULD BE READ IN CONJUNCTION WITH SUPER STRUCTURE, SUBSTRUCTURE DRAWINGS AND HIGHWAY PLAN & PROFILE DRAWINGS. DRAINAGE SPOUT, EXPANSION JOINT & WEARING COAT SHOULD BE PROVIDED AS PER THE SPECIFICATIONS AND DRAWINGS. THE CARRIAGEWAY OF PROPOSED BOX CULVERT SHALL BE DESIGN AS PER IRC.6-2017. (i). (70R+A OR 3A). THE APPROACHES ARE IN RCC/PCC WALLS AS PER DETAIL DRAWINGS. STIREUPS SHALL BE AS FOLLOWS: SUPER STRUCTURE 45 mm PIER 45 mm REINFORCING STEEL SHALL BE OF HYSD (TMT) BARS OF FE-500, CONFIRMING TO IS-1786. GRADE OF CONCRETE SHALL BE AS FOLLOWS: PCC LEVELING COURSE M15 PCC TOE WALL M20 RCC ABUTMENT / PIER M30 RCC SOLID SLAB M30 RCC ABUTMENT CAP / PIER CAP M30 RCC SOLID SLAB M30 RCC ABUTMENT CAP / PIER CAP M30 RCC CRASH BARRIER M40 BACKFILLING SHALL BE ONE IN LAYERS NOT EXCEDING 200MM RCA BUT	TALALLDIMENSIONS ARE IN MILLIMETER AND LEVELS ARE IN METERALLDIMENSIONS SHALL NOT BE SCALED, ONLY WRITTEN DIMENSIONSDIMENSIONS SHALL NOT BE SCALED, ONLY WRITTEN DIMENSIONSSHOULD BE FOLLOWED.THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH SUPERSTRUCTURE, SUBSTRUCTURE DRAWINGS AND HIGHWAY PLAN &PROFILE DRAWINGS.DRAINAGE SPOUT, EXPANSION JOINT & WEARING COAT SHOULDBE PROVIDED AS PER THE SPECIFICATIONS AND DRAWINGS.THE CARRIAGEWAY OF PROPOSED BOX CULVERT SHALL BEDESIGN AS PER IRC:6-2017.(i). (70R+A OR 3A).THE APROACHES ARE IN RCC/PCC WALLS AS PER DETAILDRAWINGS.RIALS:CLEAR COVER TO ALL REINFORCEMENT BARS INCLUDINGSTIRRUPS SHALL BE AS FOLLOWS:SUPER STRUCTURE 45 mmREINFORCING STEEL SHALL BE OF HYSD (TMT) BARS OF FE-500,CONFIRMING TO IS-1786.GRADE OF CONCRETE SHALL BE AS FOLLOWS:PCC LEVELING COURSEPCC LEVELING COURSEMCC ABUTMENT / PIERM30 RCC SOLID SLABM30RCC ABUTMENT CAP / PIER CAP M30 RCC CRASH BARRIER M40BACK FILL MATERIAL BEHIND ABUTMENT AND RETAINING WALLSHALL CONFIRM TO APPENDIX:6, IRC-78:2000 AND AS FOLLOW:(i)ANGLE OF INTERNAL FRICTION, $\Delta = 20^{\circ}$ (iii)CHESION, C = 0 T/M ² .(iiii)ANGLE OF WALL FRICTION, $\Delta = 20^{\circ}$ (iii)ANGLE OF WALL FRICTION, $\Delta = 20^{\circ}$ (iii)ANGLE OF WALL FRICTION, $\Delta = 20^{\circ}$ (iii)ANGLE OF WALL FRICTION, $\Delta = 20^{\circ}$ (iiii)ANGLE OF WALL FRICTION, $\Delta = 20^{\circ}$ <	TAL ALL DIMENSIONS ARE IN MILLIMETER AND LEVELS ARE IN METER UNLESS OTHERWISE SPECIFIED. DIMENSIONS SHALL NOT BE SCALED, ONLY WRITTEN DIMENSIONS SHOULD BE FOLLOWED. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH SUPER STRUCTURE, SUBSTRUCTURE DRAWINGS AND HIGHWAY PLAN & PROFILE DRAWINGS. DRAINAGE SPOUT, EXPANSION JOINT & WEARING COAT SHOULD BE PROVIDED AS PER THE SPECIFICATIONS AND DRAWINGS. THE CARRIAGEWAY OF PROPOSED BOX CULVERT SHALL BE
CLEARCOVERTOALLREINFORCEMENTBARSINCLUDINGSTIRRUPSSHALL BE AS FOLLOWS:SUPERSTURUCTURE45 mmPIER45 mmABUTMENT75 mmFOUNDATION75 mmREINFORCINGSTEEL SHALL BE OF HYSD (TMT)BARS OF FE-500,CONFIRMING TO IS-1786.GRADE OF CONCRETE SHALL BE AS FOLLOWS:PCC LEVELINGCOURSEM15PCC TOE WALLM20RCC ABUTMENT/PIERM30RCC SOLID SLABM30RCC ABUTMENT CAP / PIER CAPM30RCC CASH BARRIERM40BACKFILLING SHALL BE DONE IN LAYERS NOT EXCEEDING 200MMTHK.EACH LAYERS SHALL BE COMPACTED TO THE OPTIMUMDENSITY.BACK FILL MATERIAL BEHIND ABUTMENT AND RETAINING WALLSHALL CONFIRM TO APPENDIX:6, IRC-78:2000 AND AS FOLLOW:(i)ANGLE OF INTERNAL FRICTION, $\varphi = 30^{\circ}$ (iii)ANGLE OF WALL FRICTION, $\Delta = 20^{\circ}$ (iv)DRY DENSITY,YD = 2.50 T/M ³ .(FUCTIONTHECOMMENCING THE WORK.NECESSARY PERMISSIONS HAS BEEN OBTAINED FROM ROAD &IRRIGATION AUTHORITY IF REQUIRED FOR DIVENTING THETRAFFIC TEMPORARILY PRIOR TO COMMENCING THE WORK.NECESSARY SUITABLE SHORING AND STRUTTING SHALL BESUBMITTED BY THE CONTRACTING AGENCY.IF AND AMBIGUITY FOUND IN DRAWINGS OR AT SITE BRING IT TODESIGNER'S NOTICE BEFORE EXECUTION.IF HARD STRATA FOUND AT SITE, ACC. TO CLAUSE 705.2.2,IRC-78:2024, MINIMUM EMBEDMENT OF FOUNDATION SHALL BEMINIMUM OF AS FOLLOW OR SHOWN IN DRAWINGS:IN NO	CLEARCOVERTOALLREINFORCEMENTBARSINCLUDINGSTIRRUPSSHALL BE AS FOLLOWS:SUPERSTURUCTURE45 mmPIER45 mmABUTMENT75 mmFOUNDATION75 mmREINFORCING STEEL SHALL BE OF HYSD (TMT)BARS OF FE-500,CONFIRMING TO IS-1786.GRADE OF CONCRETE SHALL BE AS FOLLOWS:PCC LEVELING COURSEM15 PCC TOE WALLM20RCC ABUTMENT / PIERM30 RCC SOLID SLABM30RCC ABUTMENT CAP / PIER CAPM30 RCC CASH BARRIERM40BACKFILLING SHALL BE DONE IN LAYERS NOT EXCEEDING 200MMTHK. EACH LAYERS SHALL BE COMPACTED TO THE OPTIMUMDENSITY.BACK FILL MATERIAL BEHIND ABUTMENT AND RETAINING WALLSHALL CONFIRM TO APPENDIX:6, IRC-78:2000 AND AS FOLLOW:(i)ANGLE OF INTERNAL FRICTION, $\phi = 30^{\circ}$ (ii)COHESION,C = 0 T/M2.(iii)ANGLE OF WALL FRICTION, $\Delta = 20^{\circ}$ (iv)DRY DENSITY,YD = 2.50 T/M3.RUCCTIONTHE CONSTRUCTION AGENCY SHOULD ENSURE THAT THENECESSARY PERMISSIONS HAS BEEN OBTAINED FROM ROAD &IRRIGATION AUTHORITY IF REQUIRED FOR DIVERTING THETRAFFIC TEMPORARILY PRIOR TO COMMENCING THE WORK.NECESSARY SUITABLE SHORING AND STRUTTING SHALL BEPLOVIDED FOR CASTING OF STRUCTURAL MEMBERS AND OTHERPLACE WHEREVER REQUIRED AND DETAILED DRAWING SHALL BESUBMITTED BY THE CONTRACTING AGENCY.IF ANY AMBIGUITY FOUND IN DRAWINGS OR AT SITE BRING IT TODESIGNER'S NOTICE BEFORE EXECUTION.IF AND STRATA FOUND AT SITE, ACC. TO CLAUSE 705.2.2,<	(i). (70R+A OR 3A). THE APPROACHES ARE IN RCC/PCC WALLS AS PER DETAIL
SHALL CONFIRM TO APPENDIX:6, IRC-78:2000 AND AS FOLLOW:(i)ANGLE OF INTERNAL FRICTION, $\varphi = 30^{\circ}$ (ii)COHESION,C = 0 T/M².(iii)ANGLE OF WALL FRICTION, $\Delta = 20^{\circ}$ (iv)DRY DENSITY,YD = 2.50 T/M³.FRUCTIONTHE CONSTRUCTION AGENCY SHOULD ENSURE THAT THENECESSARY PERMISSIONS HAS BEEN OBTAINED FROM ROAD &IRRIGATION AUTHORITY IF REQUIRED FOR DIVERTING THETRAFFIC TEMPORARILY PRIOR TO COMMENCING THE WORK.NECESSARY SUITABLE SHORING AND STRUTTING SHALL BEPROVIDED FOR CASTING OF STRUCTURAL MEMBERS AND OTHERPLACE WHEREVER REQUIRED AND DETAILED DRAWING SHALL BESUBMITTED BY THE CONTRACTING AGENCY.IF ANAY AMBIGUITY FOUND IN DRAWINGS OR AT SITE BRING IT TODESIGNER'S NOTICE BEFORE EXECUTION.IF HARD STRATA FOUND AT SITE, ACC. TO CLAUSE 705.2.2,IRC-78:2024, MINIMUM EMBEDMENT OF FOUNDATION SHALL BEMINIMUM OF AS FOLLOW OR SHOWN IN DRAWINGS:IN SOFT ROCK1.5 mIN HARD ROCK0.6 mSOIL2.0 m	SHALL CONFIRM TO APPENDIX:6, IRC-78:2000 AND AS FOLLOW:(i)ANGLE OF INTERNAL FRICTION, $\varphi = 30^{\circ}$ (ii)COHESION,C = 0 T/M².(iii)ANGLE OF WALL FRICTION, $\Delta = 20^{\circ}$ (iv)DRY DENSITY,YD = 2.50 T/M³.TRUCTIONTHE CONSTRUCTION AGENCY SHOULD ENSURE THAT THENECESSARY PERMISSIONS HAS BEEN OBTAINED FROM ROAD &IRRIGATION AUTHORITY IF REQUIRED FOR DIVERTING THETRAFFIC TEMPORARILY PRIOR TO COMMENCING THE WORK.NECESSARY SUITABLE SHORING AND STRUTTING SHALL BEPROVIDED FOR CASTING OF STRUCTURAL MEMBERS AND OTHERPLACE WHEREVER REQUIRED AND DETAILED DRAWING SHALL BESUBMITTED BY THE CONTRACTING AGENCY.IF ANY AMBIGUITY FOUND IN DRAWINGS OR AT SITE BRING IT TODESIGNER'S NOTICE BEFORE EXECUTION.IF HARD STRATA FOUND AT SITE, ACC. TO CLAUSE 705.2.2,IRC-78:2024, MINIMUM EMBEDMENT OF FOUNDATION SHALL BEMINIMUM OF AS FOLLOW OR SHOWN IN DRAWINGS:IN NARD ROCK0.6 mSOIL2.0 mIN CASE OF FOUNDATION IN ROCK, THE TRENCHES AROUND THEFOOTING SHALL BE FILLED UP WITH M-15 GRADE OF CONCRETE	CLEAR COVER TO ALL REINFORCEMENT BARS INCLUDING STIRRUPS SHALL BE AS FOLLOWS: SUPER STRUCTURE 45 mm PIER 45 mm SUPER STRUCTURE 45 mm FOUNDATION 75 mm FOUNDATION 75 mm REINFORCING STEEL SHALL BE OF HYSD (TMT) BARS OF FE-500, CONFIRMING TO IS-1786. GRADE OF CONCRETE SHALL BE AS FOLLOWS: PCC LEVELING COURSE M15 PCC TOE WALL M20 RCC ABUTMENT / PIER M30 RCC SOLID SLAB M30 RCC ABUTMENT / PIER M30 RCC ASH BARRIER M40 BACKFILLING SHALL BE DONE IN LAYERS NOT EXCEEDING 200MM THK. EACH LAYERS SHALL BE COMPACTED TO THE OPTIMUM
IN HARD ROCK 0.6 m SOIL 2.0 m	IN HARD ROCK 0.6 m SOIL 2.0 m IN CASE OF FOUNDATION IN ROCK, THE TRENCHES AROUND THE FOOTING SHALL BE FILLED UP WITH M-15 GRADE OF CONCRETE	BACK FILL MATERIAL BEHIND ABUTMENT AND RETAINING WALL SHALL CONFIRM TO APPENDIX:6, IRC-78:2000 AND AS FOLLOW: (i) ANGLE OF INTERNAL FRICTION, ϕ = 30° (ii) COHESION, C = 0 T/M ² . (iii) ANGLE OF WALL FRICTION, Δ = 20° (iv) DRY DENSITY, YD = 2.50 T/M ³ . (iv) DRY DENSITY, YD = 2.50 T/M ³ . (FUCTION THE CONSTRUCTION AGENCY SHOULD ENSURE THAT THE NECESSARY PERMISSIONS HAS BEEN OBTAINED FROM ROAD & IRRIGATION AUTHORITY IF REQUIRED FOR DIVERTING THE TRAFFIC TEMPORARILY PRIOR TO COMMENCING THE WORK. NECESSARY SUITABLE SHORING AND STRUTTING SHALL BE PROVIDED FOR CASTING OF STRUCTURAL MEMBERS AND OTHER PLACE WHEREVER REQUIRED AND DETAILED DRAWING SHALL BE SUBMITTED BY THE CONTRACTING AGENCY. IF ANY AMBIGUITY FOUND IN DRAWINGS OR AT SITE BRING IT TO DESIGNER'S NOTICE BEFORE EXECUTION. IF HARD STRATA FOUND AT SITE, ACC. TO CLAUSE 705.2.2, IRC-78:2024, MINIMUM EMBEDMENT OF FOUNDATION SHALL BE MINIMUM OF AS FOLLOW OR SHOWN IN DRAWINGS:
FOOTING SHALL BE FILLED UP WITH M-15 GRADE OF CONCRETE		IN HARD ROCK 0.6 m SOIL 2.0 m IN CASE OF FOUNDATION IN ROCK, THE TRENCHES AROUND THE FOOTING SHALL BE FILLED UP WITH M-15 GRADE OF CONCRETE

REV [DATE	DES	CRIPTION	DRAWING TITLE :-
DGN.		NAME SIG.		GENERAL ARRANGEMENT DRAWING FOR NEW PROPOSAL OF RCC SLAB CULVERT SPAN 1X5.0 @ CH-3+035
CHECK	ED			DRAWING No. NHIDCL/PYNSL/GAD /09 7 1
APPRO	VED			SCALE : NOT TO SCALE SHEET (1 TO 1)

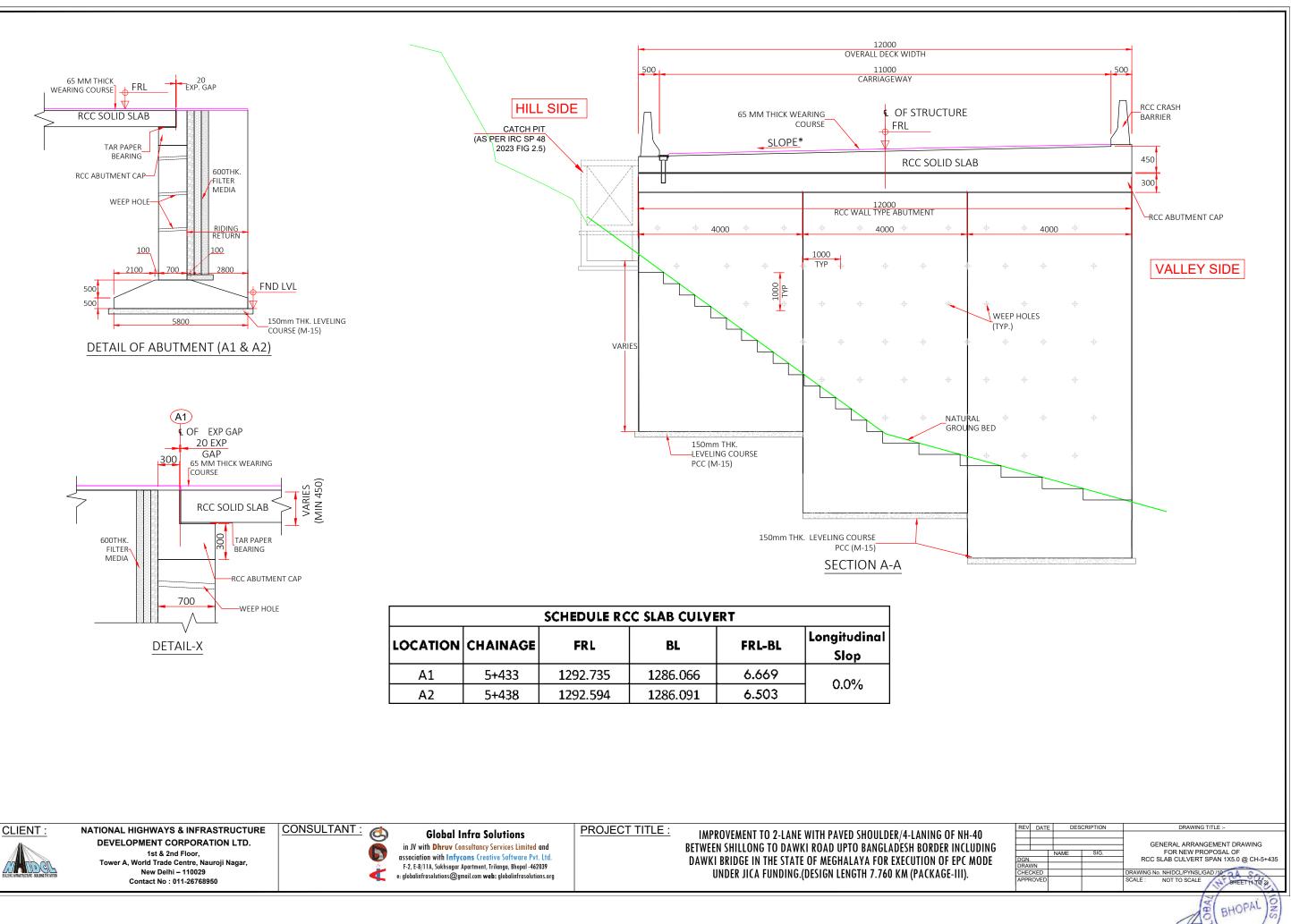
BHOPAL



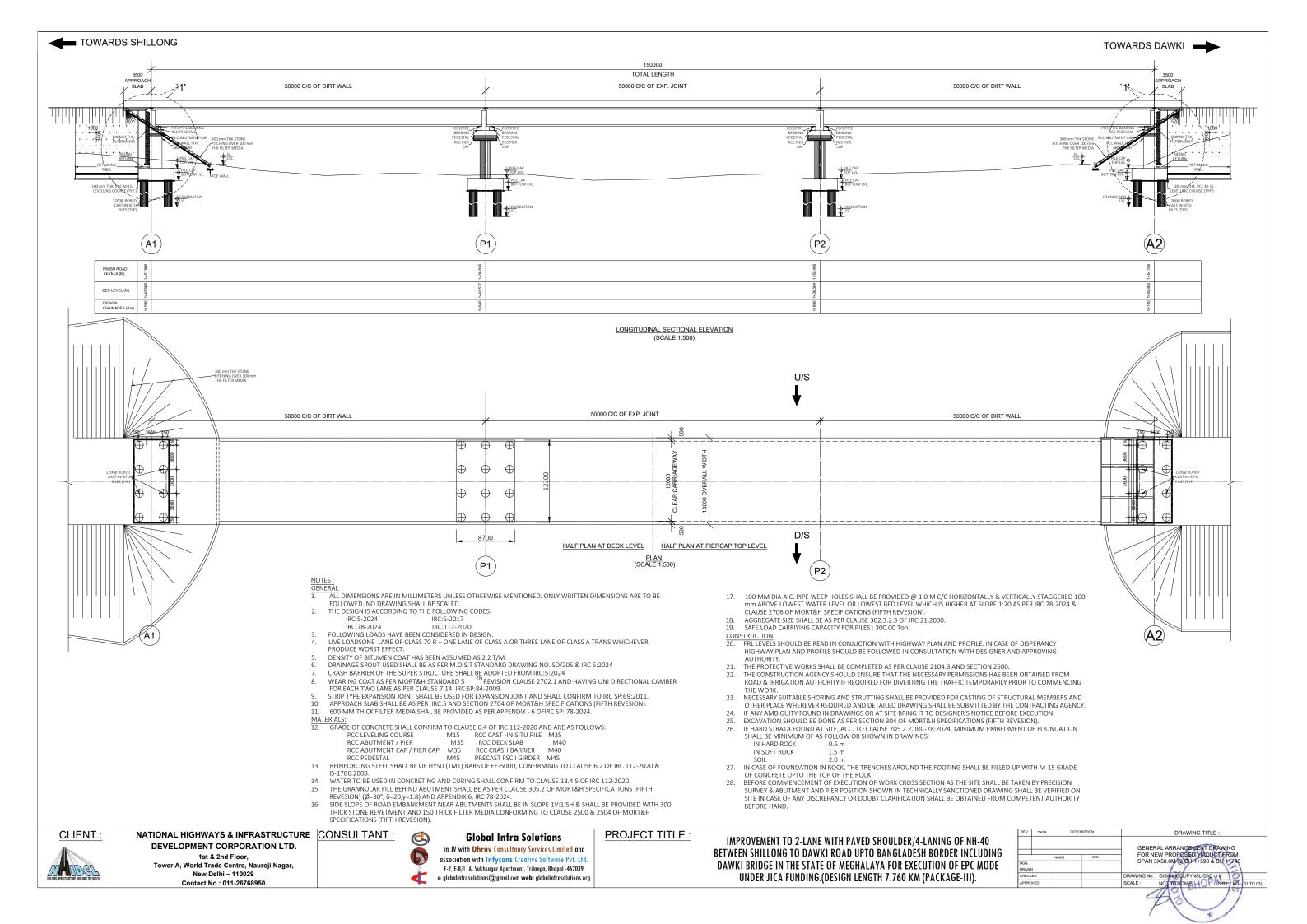


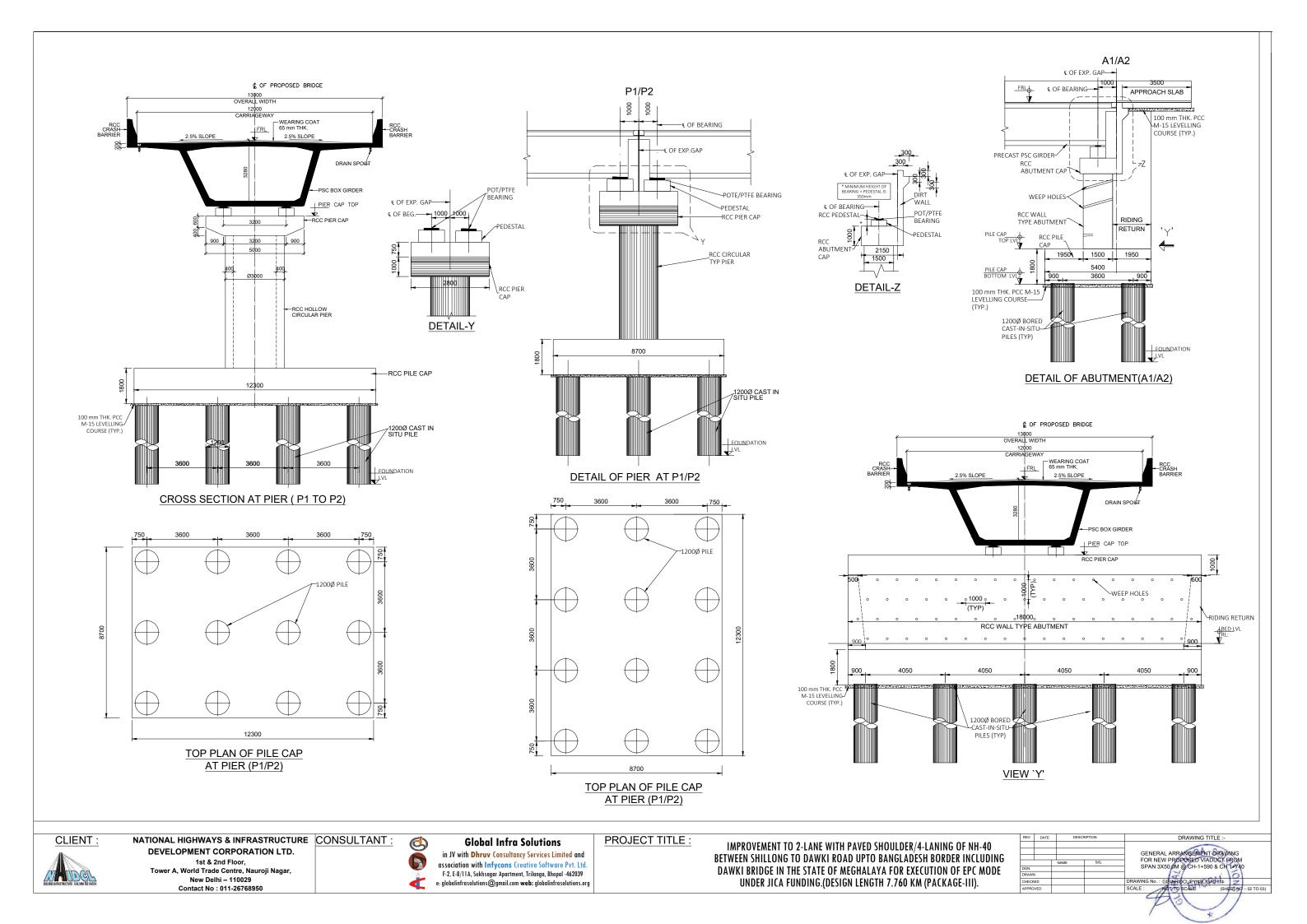
	S : RAL								
	ALL DIN UNLESS DIMENS SHOUL THIS DI STRUCT PROFIL	S OTH SION D BE RAW FURE E DR	IERWISE S SHALL FOLLOW ING SHO , SUBSTF AWINGS.	ULD BE RI RUCTURE	Caled, I Ead in Drawii	ONLY WF CONJUN NGS ANE	RITTEN I ICTION ' D HIGHV	DIMENS WITH SI VAY PL	UPER AN &
	THE C DESIGN (i). (70F	ARRI I AS F R+A C PPRC	AGEWAY PER IRC:6 DR 3A).	R THE SPEC OF PRC -2017. ARE IN	POSED	BOX C	CULVER	r shal	
	STIRRU SUPER ABUTM REINFC CONFIF GRADE PCC LE ^V RCC AB RCC AB BACKFI	PS SI STRU IENT RCIN MIN OF C VELIN UTM UTM	IG STEEL G TO IS-1 CONCRET IG COUR ENT / PIE ENT CAP G SHALL	E SHALL B	VS: PIER FOUN E OF H E AS FC M15 M30 P M30 N LAYE	DATION YSD (TM PLLOWS: PCC TC RCC SC RCC CF RCC CF	45 mn 75 mn T) BARS DE WALI DLID SLA RASH BA EXCEED	n 5 OF FE - B .RRIER VING 200	-500, M20 M30 M40 0MM
	DENSIT BACK F SHALL ((i) 4 (ii) (Y. ILL N CONF ANGL COHE	ATERIAI FIRM TO E OF INT SION,	L BEHIND APPENDIX ERNAL FRI	ABUTN :6, IRC- CTION,	1ENT AN 78:2000	D RETA AND AS	INING \	WALL
			E OF WA ENSITY,			Δ = 20 YD = 2.5	0 T/M³.		
NS	TRUCTION THE C		TRUCTIO	N AGEN	CY SH	DULD E	NSURE	THAT	THE
	NECESS IRRIGA TRAFFI NECESS PROVIE	ARY TION C TEI ARY DED F	PERMISS AUTHC MPORAR SUITAB OR CAST	Sions Hat Drity IF Ily Prior Le Shor Ting of S Equired	5 BEEN REQUI TO CON ING A TRUCTU	OBTAIN RED FO MMENCII ND STR JRAL ME	IED FRO R DIVE NG THE UTTING MBERS	DM ROA RTING WORK. SHALI AND O	AD & THE L BE THER
	SUBMI IF ANY DESIGN	tted AMB IER'S	BY THE O IGUITY F NOTICE	CONTRACT OUND IN BEFORE EX	TING AC DRAWI (ECUTI)	GENCY. NGS OR / ON.	AT SITE	BRING	ІТ ТО
	IRC-78: MINIM II	2024 UM (N SO	, MINIM		DMEN	l of fol	JNDATIO	ON SHA	5.2.2, LL BE
	IN CASI FOOTIN	e of Ig Sł	HALL BE	ATION IN F FILLED UP HE ROCK.	ОСК, Т				
	REV D	DATE	DESCI	RIPTION			DRAWING	TITI F -	
		01E	DEGU			GENERA			DRAWING

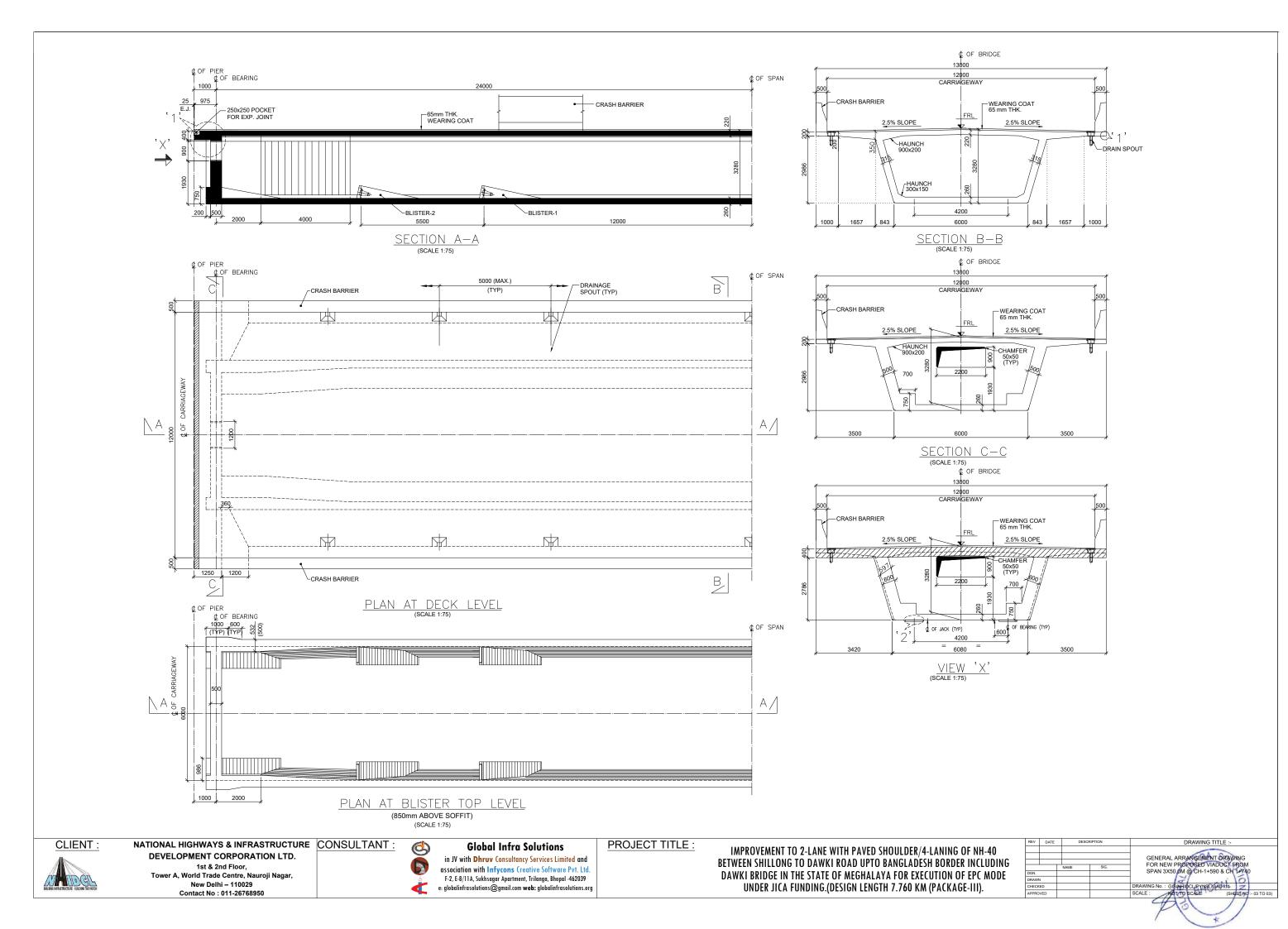
DGN. DRAWN	NAME	SIG.	GENERAL ARRANGEMENT DRAWING FOR NEW PROPOSAL OF RCC SLAB CULVERT SPAN 1X5.0 @ CH-5+435
CHECKED APPROVED			DRAWING No. NHIDCL/PYNSL/GAD /19 SCALE : NOT TO SCALE SHEET (1.101)
			BHOPAL ONS

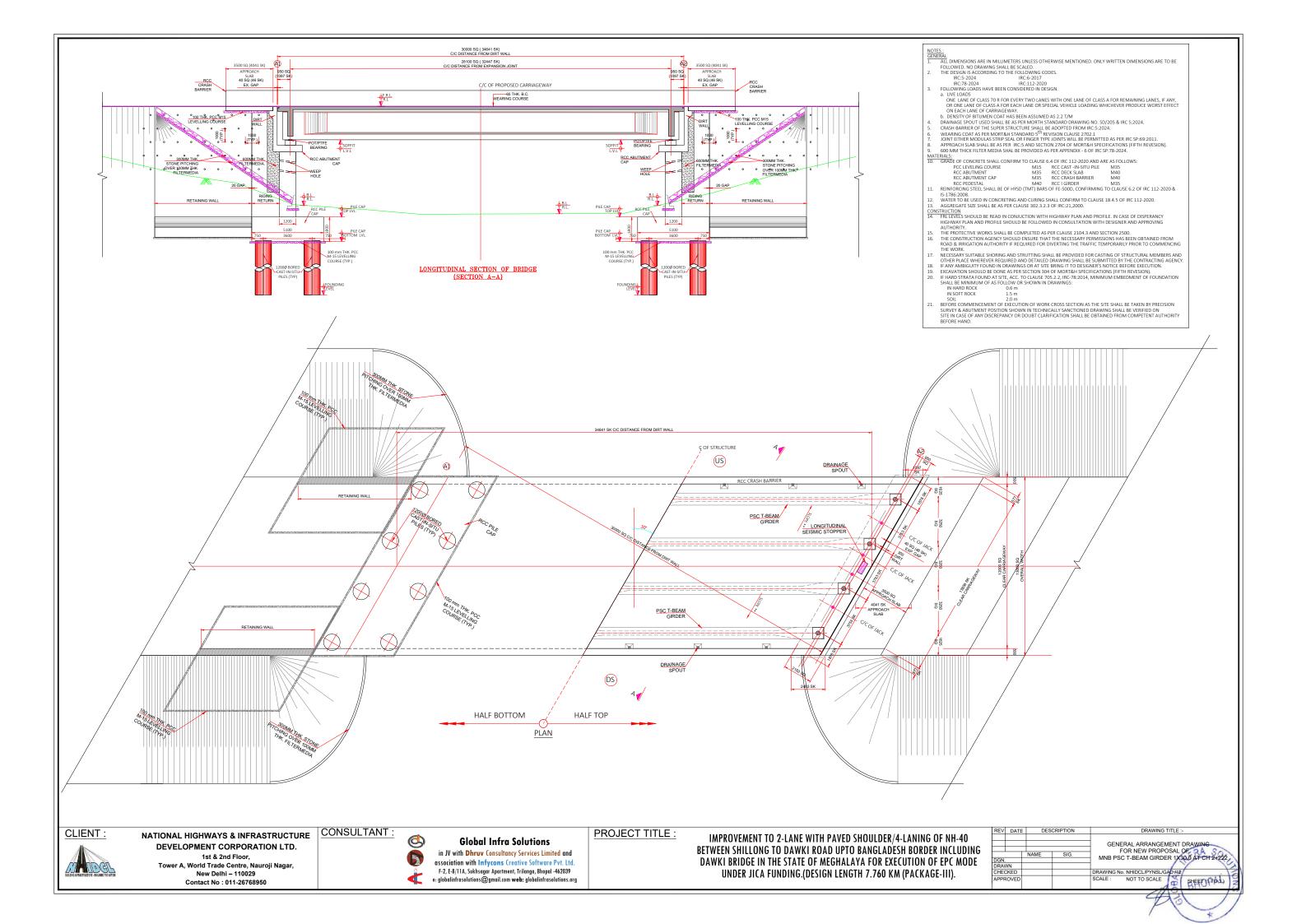


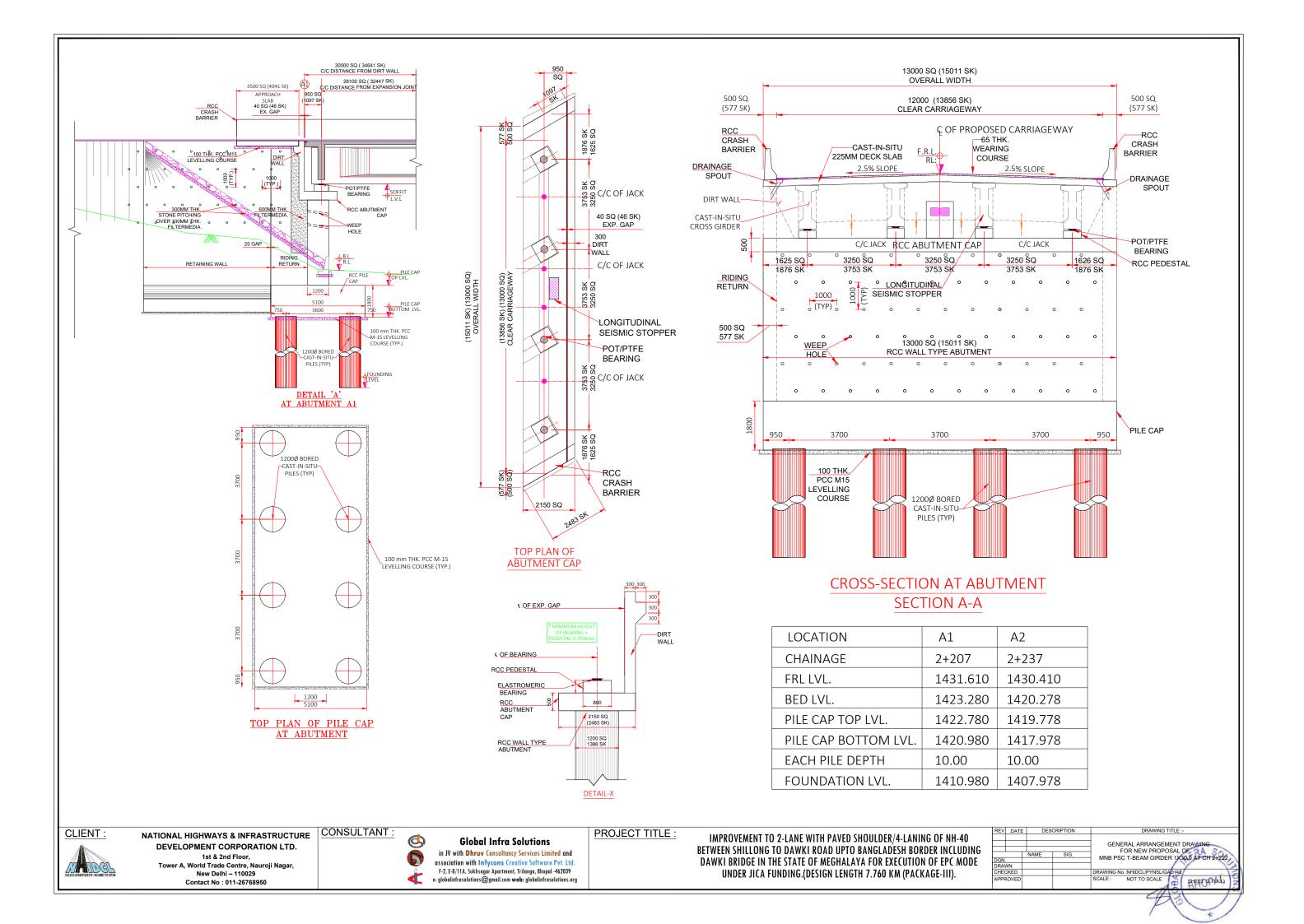


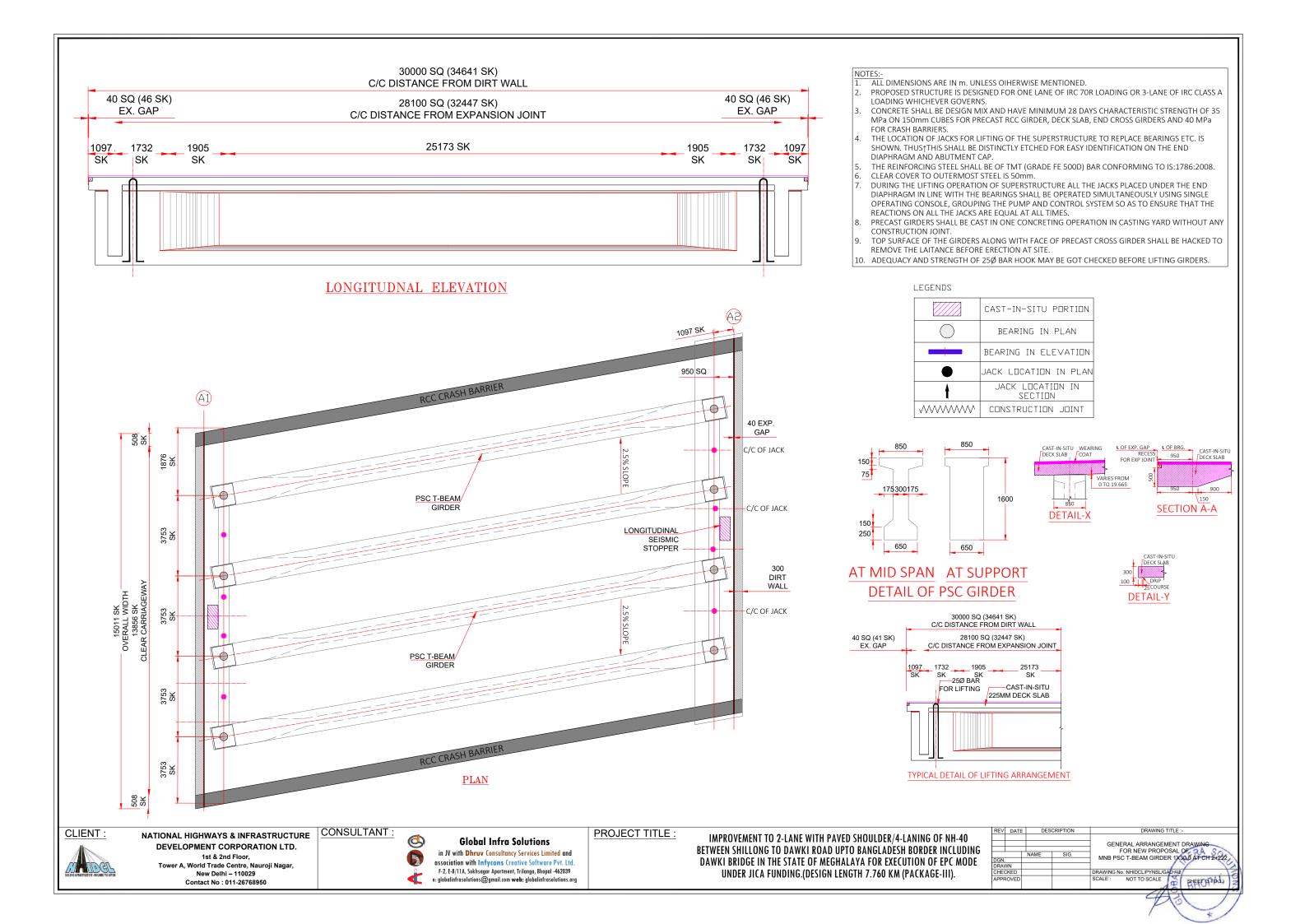


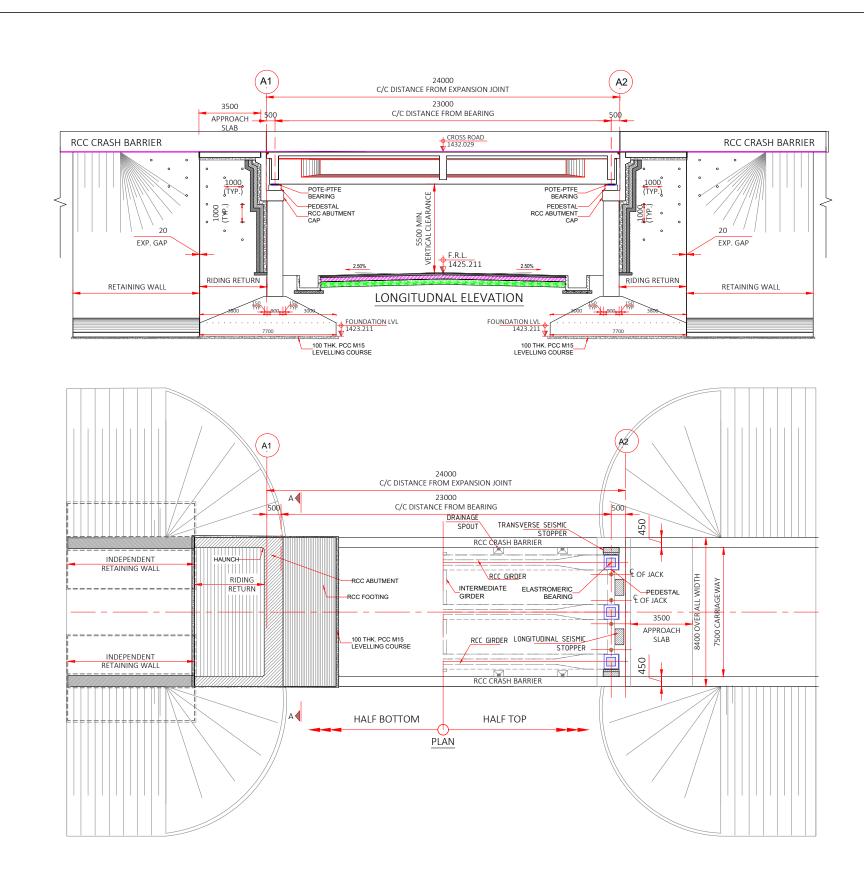














CLIENT :

NATIONAL HIGHWAYS & INFRASTRUCTURE CONSULTANT : **DEVELOPMENT CORPORATION LTD.**

1st & 2nd Floor, Tower A, World Trade Centre, Nauroji Nagar, New Delhi - 110029 Contact No : 011-26768950

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Global Infra Solutions

in JV with Dhruv Consultancy Services Limited and association with Infycons Creative Software Pvt. Ltd. F-2, E-8/11A, Sukhsagar Apartment, Trilanga, Bhopal -462039 e: globalinfrasolutions@gmail.com web: globalinfrasolutions.org **PROJECT TITLE :**

IMPROVEMENT TO 2-LANE WITH PAVED SHOULDER/4-LANING OF NH-40 BETWEEN SHILLONG TO DAWKI ROAD UPTO BANGLADESH BORDER INCLUDING DAWKI BRIDGE IN THE STATE OF MEGHALAYA FOR EXECUTION OF EPC MODE UNDER JICA FUNDING.(DESIGN LENGTH 7.760 KM (PACKAGE-III).

NOTES : <u>GENERAL</u> <u>I.</u> ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS ARE TO BE <u>I.</u> ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS ARE TO BE ALL DIMENSIONS ARE IN MILLIME LESS OTHERW FOLLOWED. NO DRAWING SHALL BE SCALED.
 THE DESIGN IS ACCORDING TO THE FOLLOWING CODES. IRC:52024 IRC:62017 IRC:78-2024 IRC:112-2020

IRC.78-2024 IRC.112-2020 FOLLOWING LOADS HAVE BEEN CONSIDERED IN DESIGN. LIVE LOADS ONE LANE OF CLASS 70 R + ONE LANE OF CLASS A OR THREE LANE OF CLASS A TRANS WHICHEVER PRODUCE WORSITY OF BITUMEN COAT HAS BEEN ASSUMED AS 2.2 T/M DRAINAGE SPOUT USED SHALL BE AS PER M.O.S.T STANDARD DRAWING NO. SD/205 & IRC 5:2024 CRASH BARRIER OF THE SUPER STRUCTURE SHALL BE ADOPTED FROM IRC:5:2024 WEARING COAT AS PER MORT&H STANDARD Sth REVISION CLAUSE 2702.1 AND HAVING UNI DIRECTIONAL CAMBER FOR RACH TWO LANE AS PER CLAUSE 7.14. IRC:SP:84-2009. STRIP TYPE EXPANSION LOINT SHALL BE AS PER NO.52 CHON STRIP TYPE EXPANSION IDIT SHALL BE USE DOR EXPANSION IDIT AND SHALL CONFIRM TO IRC SP:69:2011. APPROACH SLAB SHALL BE AS PER IRC:S AND SECTION 2704 OF MORT&H SPECIFICATIONS (FIFTH REVESION). . 600 MM THICK FILTER MEDIA SHAL BE PROVIDED AS PER APPENDIX - 6 OFIRC SP: 78-2024. ATERIALS:

MAT	ERIALS:			
12.	GRADE OF CONCRETE SHALL CONFIRM TO	CLAUSE 6	5.4 OF IRC 112-2020 AND AF	RE AS FOLLOWS:
	PCC LEVELING COURSE	M15	RCC CAST -IN-SITU PILE	M35
	RCC ABUTMENT / PIER	M35	RCC DECK SLAB	M40
	RCC ABUTMENT CAP / PIER CAP	M35	RCC CRASH BARRIER	M40
	RCC PEDESTAL	M45	PRECAST PSC I GIRDER	M45

13. REINFORCING STEEL SHALL BE OF HYSD (TMT) BARS OF FE-500D, CONFIRMING TO CLAUSE 6.2 OF IRC 112-2020 &

15-1786:2008.
 WATER TO BE USED IN CONCRETING AND CURING SHALL CONFIRM TO CLAUSE 18.4.5 OF IRC 112-2020.

 WATER TO BE USED IN CONCRETING AND CURING SHALL CONFIRM TO CLAUSE 18.4 S OF IRC 112-2020.
 THE GRANNULAR FILL BEHIND ABUTMENT SHALL BE AS PER CLAUSE 305.2 OF MORT&H SPECIFICATIONS (FIFTH REVESION) (Ø=30°, 6=20,9=1.8) AND APPENDIK 6, IRC 78-2024.
 SIDE SLOPE OF ROAD EMBANKMENT NEAR ABUTMENTS SHALL BE IN SLOPE 1V:1.5H & SHALL BE PROVIDED WITH 300 THICK STONE REVERTMENT AND 15O THICK FILTER MEDIA CONFORMING TO CLAUSE 2500 & 2504 OF MORT&H SPECIFICATIONS (FIFTH REVESION).
 100 MM DIA AC. PIPE WEEP HOLES SHALL BE PROVIDED @ 1.0 M C/C HORIZONTALLY & VERTICALLY STAGGERED 100 mm ABOVE LOWEST WATER LEVEL OR LOWEST BED LEVEL WHICH IS HIGHER AT SLOPE 1:20 AS PER IRC 78-2024 & CLAUSE 2706 OF MORT&H SPECIFICATIONS (FIFTH REVESION).
 AGGREGATE SYES FAMIL BE AS PER CLAUSE 30 OF INC 712 2000 AGGREGATE SIZE SHALL BE AS PER CLAUSE 302.3.2.3 OF IRC:21,2000. SAFE LOAD CARRIYING CAPACITY FOR PILES : 300.00 Ton.

CONSTRUCTION 20. FRL LEVELS SHOULD BE READ IN CONJUCTION WITH HIGHWAY PLAN AND PROFILE. IN CASE OF DISPERANCY HIGHWAY PLAN AND PROFILE SHOULD BE FOLLOWED IN CONSULTATION WITH DESIGNER AND APPROVING

AUTHORITY. THE PROTECTIVE WORKS SHALL BE COMPLETED AS PER CLAUSE 2104.3 AND SECTION 2500. THE CONSTRUCTION AGENCY SHOULD ENSURE THAT THE NECESSARY PERMISSIONS HAS BEEN OBTAINED FROM ROAD & IRRIGATION AUTHORITY IF REQUIRED FOR DIVERTING THE TRAFFIC TEMPORARILY PRIOR TO COMMENCING

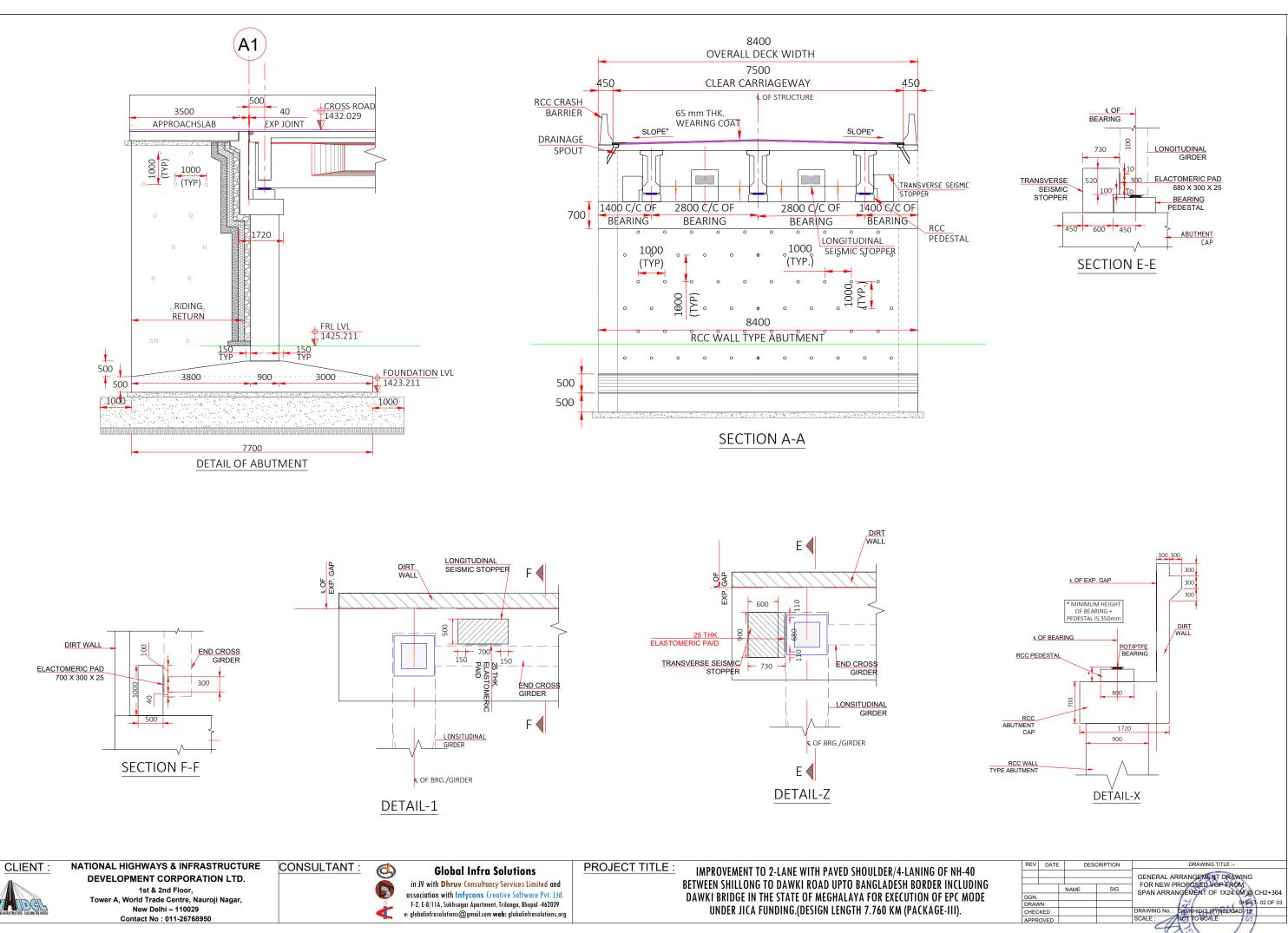
 NECESSARY SUITABLE SHORING AND STRUTTING SHALL BE PROVIDED FOR CASTING OF STRUCTURAL MEMBERS AND OTHER PLACE WHEREVER REQUIRED AND DETAILED DRAWING SHALL BE SUBMITTED BY THE CONTRACTING AGENCY. IF ANY AMBIGUITY FOUND IN DRAWINGS OR AT SITE BRING IT TO DESIGNER'S NOTICE BEFORE EXECUTION. IF ANY AWARDED TO SOME IN EXAMPLE AS PER SECTION 304 OF MORT&H SPECIFICATION STOLED LIFE ALCO HON. EXCAVATION SHOULD BE DONE AS PER SECTION 304 OF MORT&H SPECIFICATIONS (FITH REVESION). IF HARD STRATA FOUND AT SITE, ACC. TO CLAUSE 705.2.2, IRC-78:2024, MINIMUM EMBEDMENT OF FOUNDATION SHALL BE MINIMUM OF AS FOLLOW OR SHOWN IN DRAWINGS:

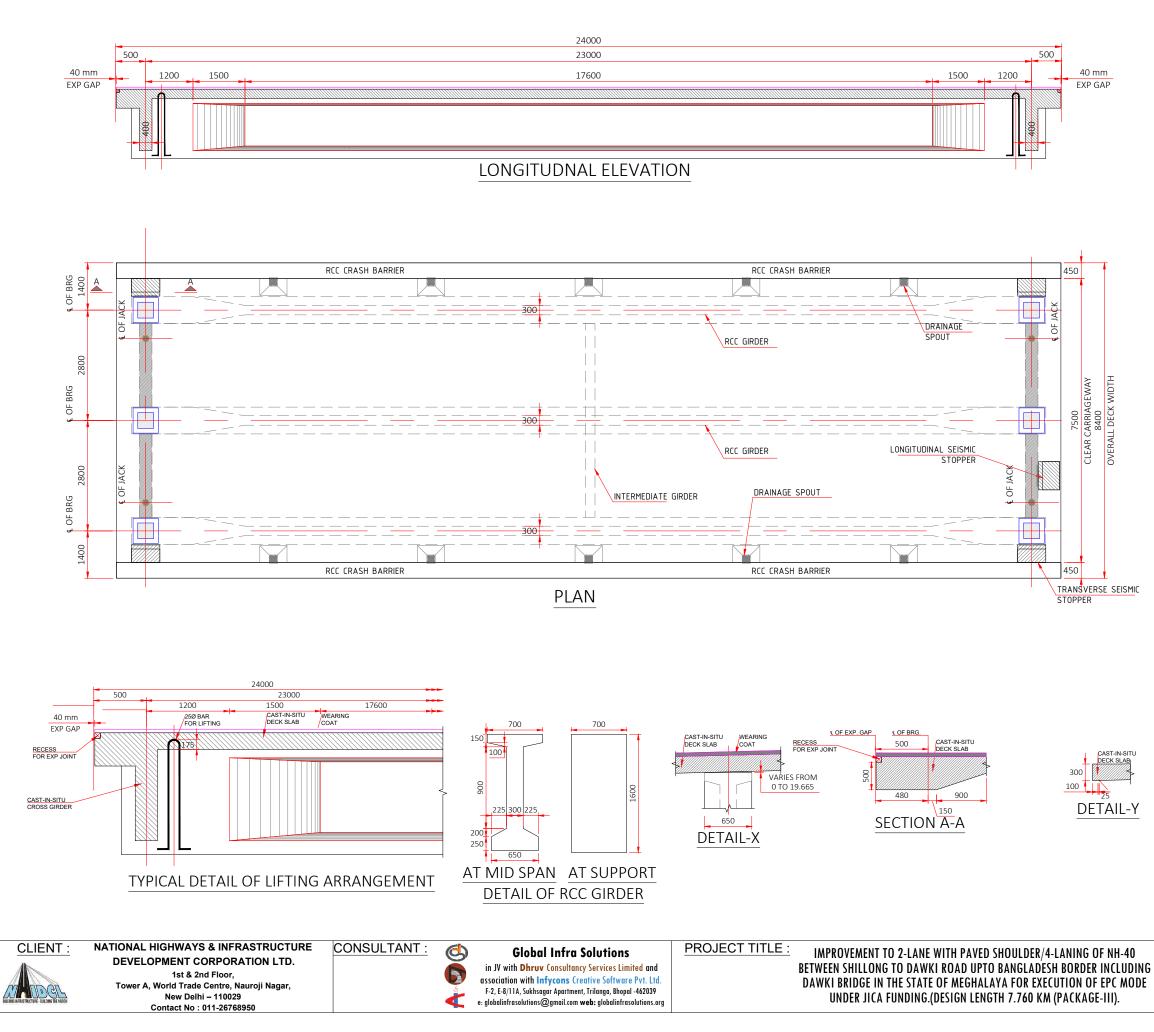
DCK	0.6 m
CK	1.5 m

		2.0	m

SOIL 2.0 m 2.0 m 2.7. IN CASE OF FOUNDATION IN ROCK, THE TRENCHES AROUND THE FOOTING SHALL BE FILLED UP WITH M-15 GRADE OF CONCRETE UPTO THE TOP OF THE ROCK. 28. BEFORE COMMENCEMENT OF EXECUTION OF WORK CROSS SECTION AS THE SITE SHALL BE TAKEN BY PRECISION SURVEY & ABUTTENT AND PIER POSITION SHOWN IN TECHNICALLY SANCTIONED DRAWING SHALL BE VERIFIED ON SURVEY & ABUTTENT AND PIER POSITION SHOWN IN TECHNICALLY SANCTIONED DRAWING SHALL BE VERIFIED ON SITE IN CASE OF ANY DISCREPANCY OR DOUBT CLARIFICATION SHALL BE OBTAINED FROM COMPETENT AUTHORITY DEFORE LAND.

	REV	DATE	DES	CRIPTION	DRAWING TITLE :-
_					GENERAL ARRANGEMENT DRAWING
G			NAME	SIG.	FOR NEW PROPOSED VOP FROM SPAN ARRANGEMENT OF 1X24.0M @ CH2+364
	DGN. DRAV	VNI			SHEET-01 OF 03
	CHEC				DRAWING No. : GIS/NHIDCL/RYNSL/GAD/13
	APPR	OVED			SCALE : NOT TO SCALE
					AC

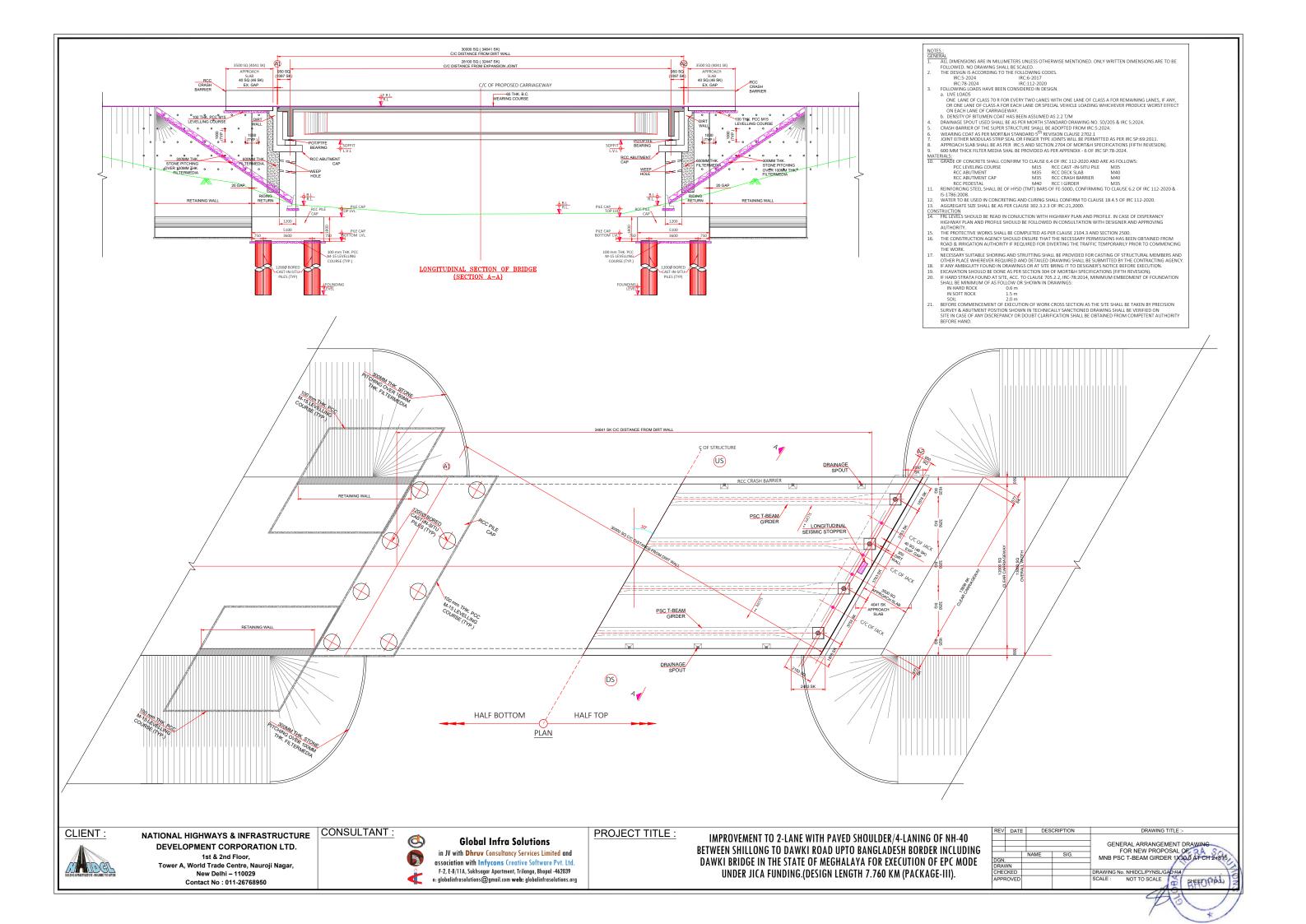


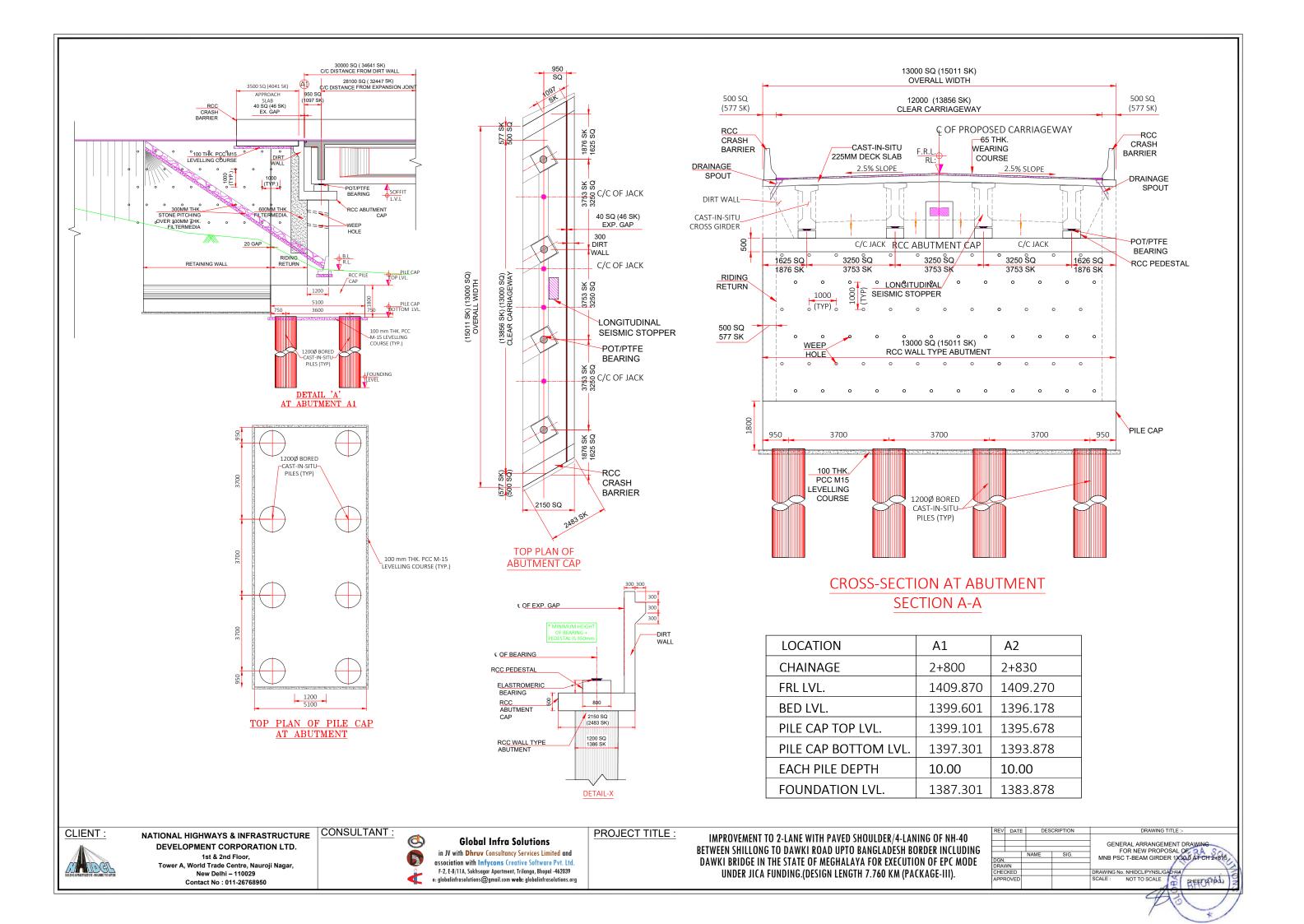


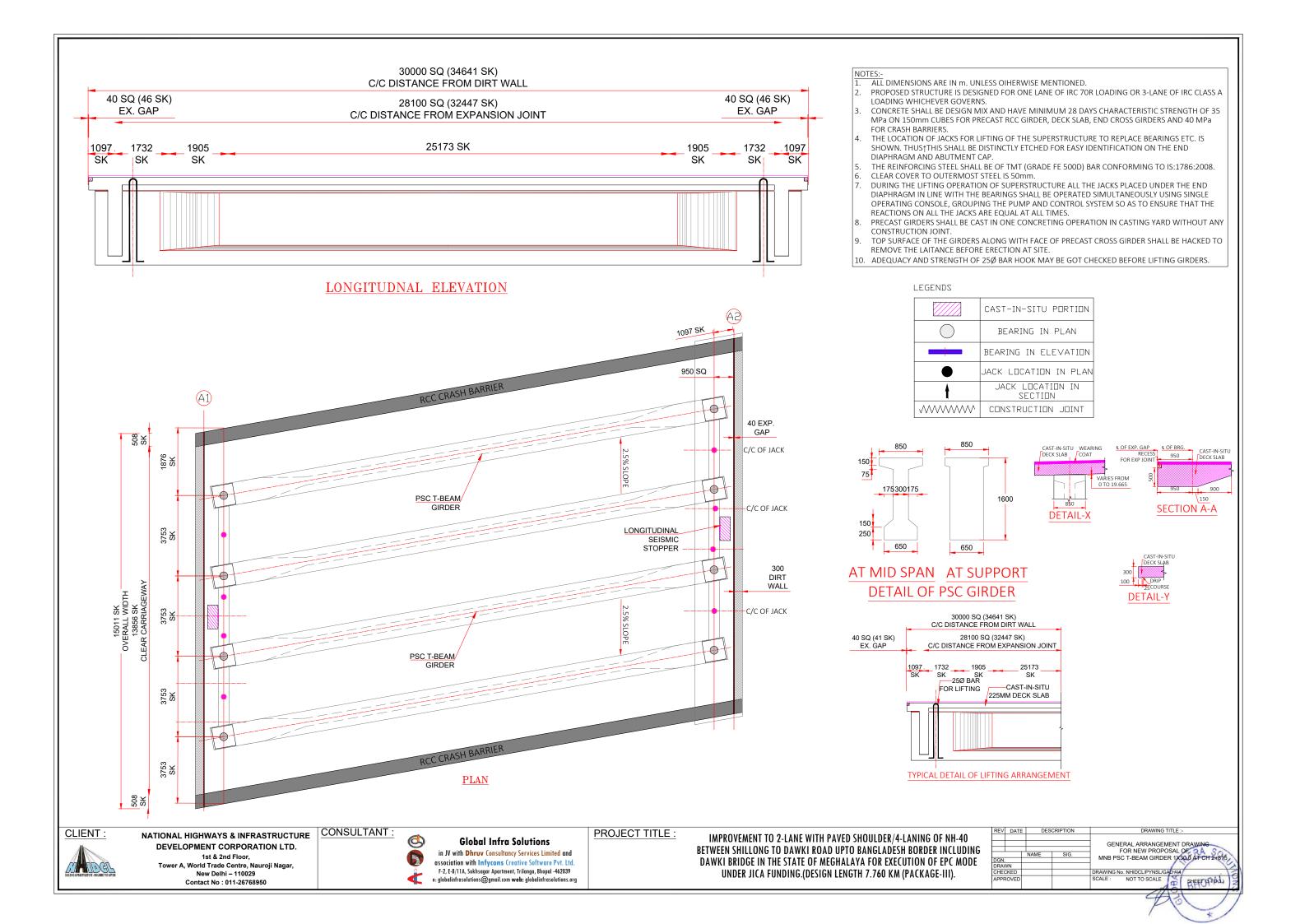
- JTES:-ALL DIMENSIONS ARE IN m. UNLESS OHERWISE MENTIONED. PROPOSED STRUCTURE IS DESIGNED FOR ONE LANE OF I CLASS 70+R ONE LANE OF CLASS A TRANS WITCHEVER PRODUCE WORST EFFECT. CONCRETE SHALL BE DESIGN MIX AND HAVE MINIMUM 28 DAYS CHARACTERISTIC STRENGTH OF 35 MPa ON 150mm CUBES FOR PRECAST PSC GIRDER, DECK SLAB, END CROSS GIRDERS AND 40 MPa FOR CRASH BARRIERS.
- FOR CRASH BARRIERS. THE LOCATION OF JACKS FOR LIFTING OF THE SUPERSTRUCTURE TO REPLACE BEARINGS ETC. IS SHOWN. THUSTTHIS SHALL BE DISTINCTLY ETCHED FOR EASY IDENTIFICATION ON THE END DIAPHRAGM AND ABUTMENT CAP. THE REINFORCING STEEL SHALL BE OF TMT (GRADE FE 500D) BAR CONFORMING TO IS:1786:2008. CLEAR COVER TO OUTERMOST STEEL IS 50mm.
- LLEAR COVER TO OUTERMOST STEEL IS SOmm. DURING THE LIFTING OPERATION OF SUPERSTRUCTURE ALL THE JACKS PLACED UNDER THE END DIAPHRAGM IN LINE WITH THE BEARINGS SHALL BE OPERATED SIMULTANEOUSLY USING SINGLE OPERATING CONSOLE, GROUPING THE PUMP AND CONTROL SYSTEM SO AS TO ENSURE THAT THE REACTIONS ON ALL THE JACKS ARE EQUAL AT ALL TIMES. PRECAST GIRDERS SHALL BE CAST IN ONE CONCRETING OPERATION IN CASTING YARD WITHOUT ANY CONSTRUCTION IONT
- CONSTRUCTION JOINT.
- TOP SURFACE OF THE GIRDERS ALONG WITH FACE OF PRECAST CROSS GIRDER SHALL BE HACKED TO REMOVE THE LAITANCE BEFORE ERECTION AT SITE. ADEQUACY AND STRENGTH OF 25Ø BAR HOOK MAY BE GOT CHECKED BEFORE LIFTING GIRDERS.

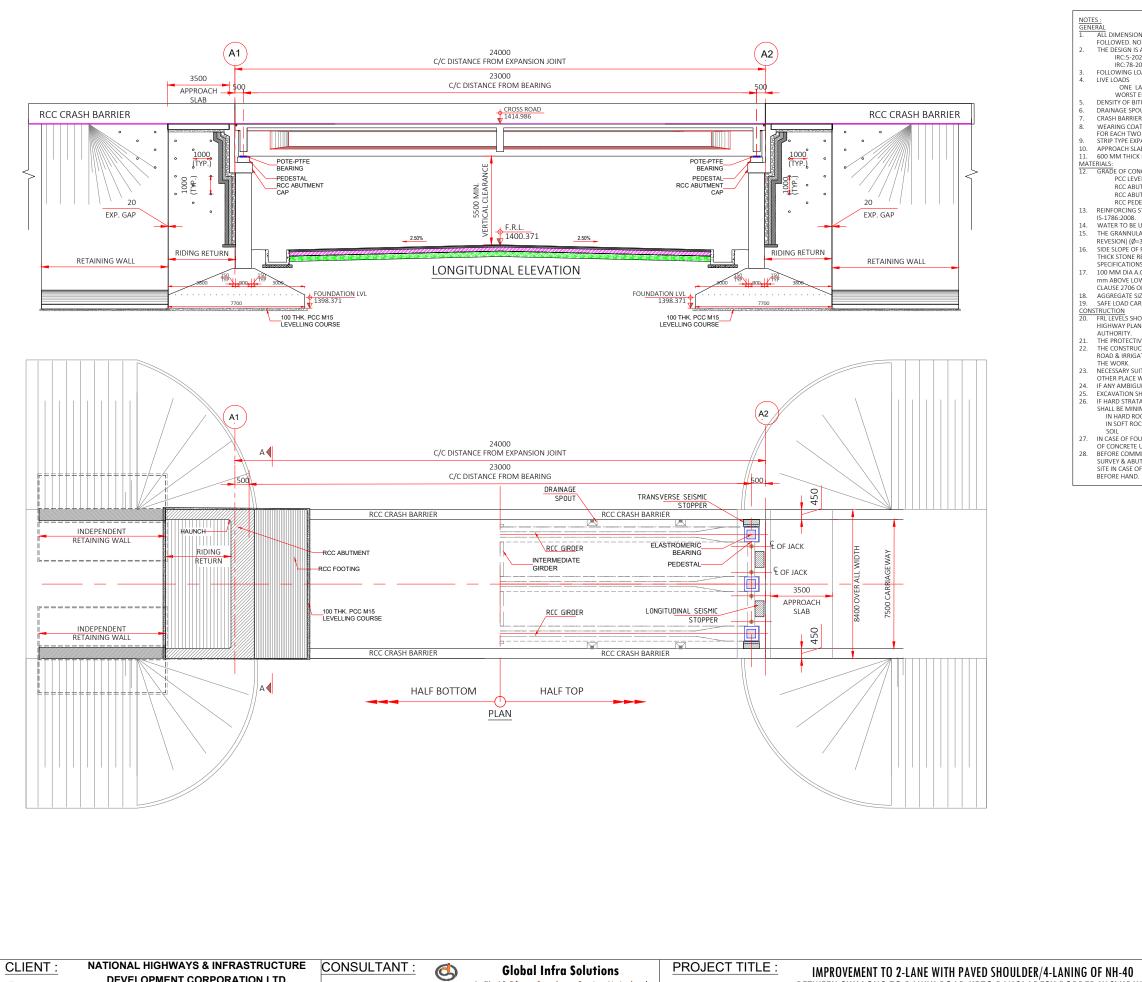
	CAST-IN-SITU PORTION
\bigcirc	BEARING IN PLAN
	BEARING IN ELEVATION
	JACK LOCATION IN PLAN
t	JACK LOCATION IN SECTION
\swarrow	CONSTRUCTION JOINT

	REV	DATE	DES	CRIPTION	DRAWING TITLE :-
					GENERAL ARRANGEMENT DRAWING
1			NAME	SIG.	FOR NEW PROPOSED VOP FROM SPAN ARRANGEMENT OF 1X24.0M @ CH2+364
	DGN.				
	DRAW	/N			SHEET- 03 OF 03
	CHEC	KED			DRAWING No. : GIS/NHIDCL/RYNSL/GAD /13
	APPR	OVED			SCALE : NOT TO SCALE
					A









DEVELOPMENT CORPORATION LTD. 1st & 2nd Floor, Tower A, World Trade Centre, Nauroji Nagar New Delhi – 110029 Contact No : 011-26768950

in JV with Dhruv Consultancy Services Limited and 6 association with Infycons Creative Software Pvt. Ltd. F-2, E-8/11A, Sukhsagar Apartment, Trilanga, Bhopal -462039 < e: globalinfrasolutions@gmail.com web: globalinfrasolutions.org

IMPROVEMENT TO 2-LANE WITH PAVED SHOULDER/4-LANING OF NH-40 BETWEEN SHILLONG TO DAWKI ROAD UPTO BANGLADESH BORDER INCLUDI DAWKI BRIDGE IN THE STATE OF MEGHALAYA FOR EXECUTION OF EPC MO UNDER JICA FUNDING.(DESIGN LENGTH 7.760 KM (PACKAGE-III).

NOTES : <u>GENERAL</u> <u>I.</u> ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS ARE TO BE <u>I.</u> ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS ARE TO BE ALL DIMENSIONS ARE IN MILLIME LESS OTHERW FOLLOWED. NO DRAWING SHALL BE SCALED.
 THE DESIGN IS ACCORDING TO THE FOLLOWING CODES. IRC:52024 IRC:62017 IRC:78-2024 IRC:112-2020

FOLLOWING LOADS HAVE BEEN CONSIDERED IN DESIGN

FOLLOWING LOADS HAVE BEEN CONSIDERED IN DESIGN.
 LIVE LOADS
 ONE LANE OF CLASS 70 R + ONE LANE OF CLASS A OR THREE LANE OF CLASS A TRANS WHICHEVER PRODUCE WORST EFFECT.
 DENSITY OF RITUMEN COAT HAS BEEN ASSUMED AS 2.2 T/M
 DRAINAGE SPOUT USED SHALL BE AS PER M.O.S.T STANDARD DRAWING NO. SD/205 & IRC 5:2024
 CRASH BARRIER OF THE SUPER STRUCTURE SHALL BE ADOPTED FROM IRC:5:2024
 WEARING COAT AS PER MORTAH STANDARD S¹¹h REVISION CLAUSE 2702.1 AND HAVING UNI DIRECTIONAL CAMBER FOR EACH TWO LANE AS PER CLAUSE 7.14, IRC:SP:84-2009.
 STRIP TYPE EXPANSION JOINT SHALL BE USED FOR EXPANSION JOINT AND SHALL CONFIRM TO IRC SP:69:2011.
 APPROACH SLAB SHALL BE AS PER IRC:S AND SECTION 2704 OF MORT&H SPECIFICATIONS (FIFTH REVESION).
 GOD MM THICK FILTER IMEDIA SHAL BE PROVIDED AS PER APPENDIX - 6 OFIRC SP: 78-2024.

MAT	ERIALS:			
12.	GRADE OF CONCRETE SHALL CONFIRM TO	CLAUSE	5.4 OF IRC 112-2020 AND AR	E AS FOLLOWS:
	PCC LEVELING COURSE	M15	RCC CAST -IN-SITU PILE	M35
	RCC ABUTMENT / PIER	M35	RCC DECK SLAB	M40
	RCC ABUTMENT CAP / PIER CAP	M35	RCC CRASH BARRIER	M40
	RCC PEDESTAL	M45	PRECAST PSC I GIRDER	M45
4.0	DENISORONIO STEEL SULLU DE OFUNSO (T	A 4T) D 4 D 0	OF FE FOOD CONFIDENCE	

13. REINFORCING STEEL SHALL BE OF HYSD (TMT) BARS OF FE-500D, CONFIRMING TO CLAUSE 6.2 OF IRC 112-2020 &

WATER TO BE USED IN CONCRETING AND CURING SHALL CONFIRM TO CLAUSE 18.4.5 OF IRC 112-2020.

 WATER TO BE USED IN CONCRETING AND CURING SHALL CONFIRM TO CLAUSE 18.4 S OF IRC 112-2020.
 THE GRANNULAR FILL BEHIND ABUTMENT SHALL BE AS PER CLAUSE 305.2 OF MORT&H SPECIFICATIONS (FIFTH REVESION) (Ø=30°, 6=20,9=1.8) AND APPENDIK 6, IRC 78-2024.
 SIDE SLOPE OF ROAD EMBANKMENT NEAR ABUTMENTS SHALL BE IN SLOPE 1V:1.5H & SHALL BE PROVIDED WITH 300 THICK STONE REVERTMENT AND 15O THICK FILTER MEDIA CONFORMING TO CLAUSE 2500 & 2504 OF MORT&H SPECIFICATIONS (FIFTH REVESION).
 100 MM DIA AC. PIPE WEEP HOLES SHALL BE PROVIDED @ 1.0 M C/C HORIZONTALLY & VERTICALLY STAGGERED 100 mm ABOVE LOWEST WATER LEVEL OR LOWEST BED LEVEL WHICH IS HIGHER AT SLOPE 1:20 AS PER IRC 78-2024 & CLAUSE 2706 OF MORT&H SPECIFICATIONS (FIFTH REVESION).
 AGGREGATE SYES FAMIL BE AS PER CLAUSE 30 OF INC 712 2000 AGGREGATE SIZE SHALL BE AS PER CLAUSE 302.3.2.3 OF IRC:21,2000. SAFE LOAD CARRIYING CAPACITY FOR PILES : 300.00 Ton.

CONSTRUCTION 20. FRL LEVELS SHOULD BE READ IN CONJUCTION WITH HIGHWAY PLAN AND PROFILE. IN CASE OF DISPERANCY HIGHWAY PLAN AND PROFILE SHOULD BE FOLLOWED IN CONSULTATION WITH DESIGNER AND APPROVING

AUTHORITY. THE PROTECTIVE WORKS SHALL BE COMPLETED AS PER CLAUSE 2104.3 AND SECTION 2500. THE CONSTRUCTION AGENCY SHOULD ENSURE THAT THE NECESSARY PERMISSIONS HAS BEEN OBTAINED FROM ROAD & IRRIGATION AUTHORITY IF REQUIRED FOR DIVERTING THE TRAFFIC TEMPORARILY PRIOR TO COMMENCING

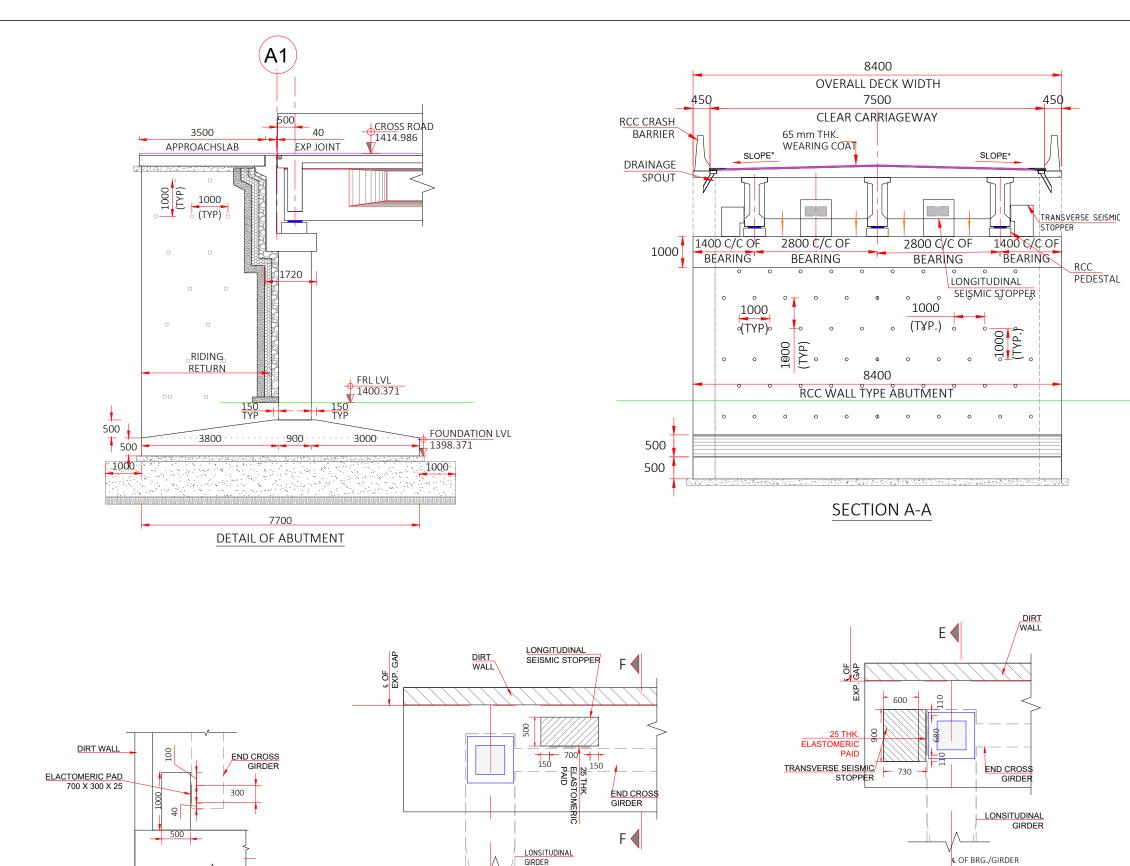
 NECESSARY SUITABLE SHORING AND STRUTTING SHALL BE PROVIDED FOR CASTING OF STRUCTURAL MEMBERS AND OTHER PLACE WHEREVER REQUIRED AND DETAILED DRAWING SHALL BE SUBMITTED BY THE CONTRACTING AGENCY. IF ANY AMBIGUITY FOUND IN DRAWINGS OR AT SITE BRING IT TO DESIGNER'S NOTICE BEFORE EXECUTION. IF ANY AWARDED TO SOME IN EXAMPLE AS PER SECTION 304 OF MORT&H SPECIFICATION STOLED LIFE ALCO HON. EXCAVATION SHOULD BE DONE AS PER SECTION 304 OF MORT&H SPECIFICATIONS (FITH REVESION). IF HARD STRATA FOUND AT SITE, ACC. TO CLAUSE 705.2.2, IRC-78:2024, MINIMUM EMBEDMENT OF FOUNDATION SHALL BE MINIMUM OF AS FOLLOW OR SHOWN IN DRAWINGS:

ICK	0.6 m
CK	1.5 m
	20~

20 III 2.0 IIII 2.0 III 2.0 II

In Case of pointamont model, the Rock.
 BEFORE COMMENCEMENT OF EXECUTION OF WORK CROSS SECTION AS THE SITE SHALL BE TAKEN BY PRECISION SURVEY & ABUTMENT AND PIER POSITION SHOWN IN TECHNICALLY SANCTIONED DRAWING SHALL BE VERIFIED ON SITE IN CASE OF ANY DISCREPANCY OR DOUBT CLARIFICATION SHALL BE OBTAINED FROM COMPETENT AUTHORITY

	REV	DATE	DES	CRIPTION	
D DING DDE	DGN. DRAV	VN	NAME	SIG.	GENERAL ARRANGEMENT DRAWING FOR NEW PROPOSED VOP FROM SPAN ARRANGEMENT OF 1X24.000 CH-3+275 SHEET- 01 OF 03
	CHEC				DRAWING No. GIS/NHIDCL/PYNSL/GAD 15
	APPF	OVED			SCALE : NOT TO SCALE ()
					4721 11



DETAIL-Z

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DETAIL-1

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€ OF BRG./GIRDER

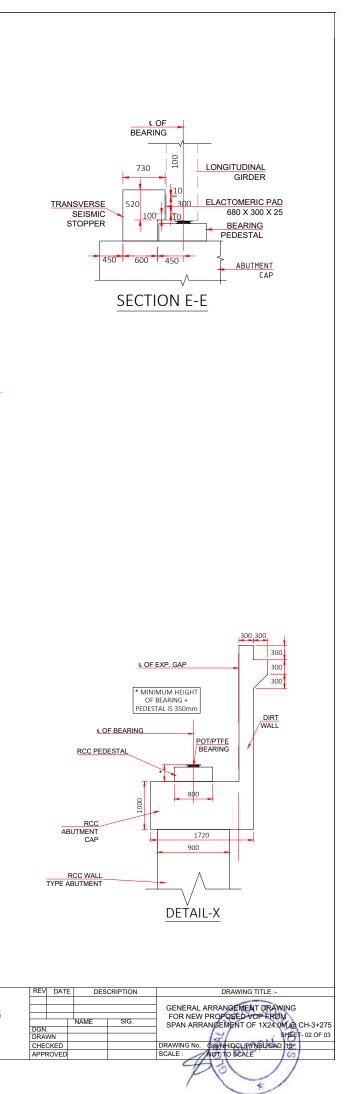
SECTION F-F

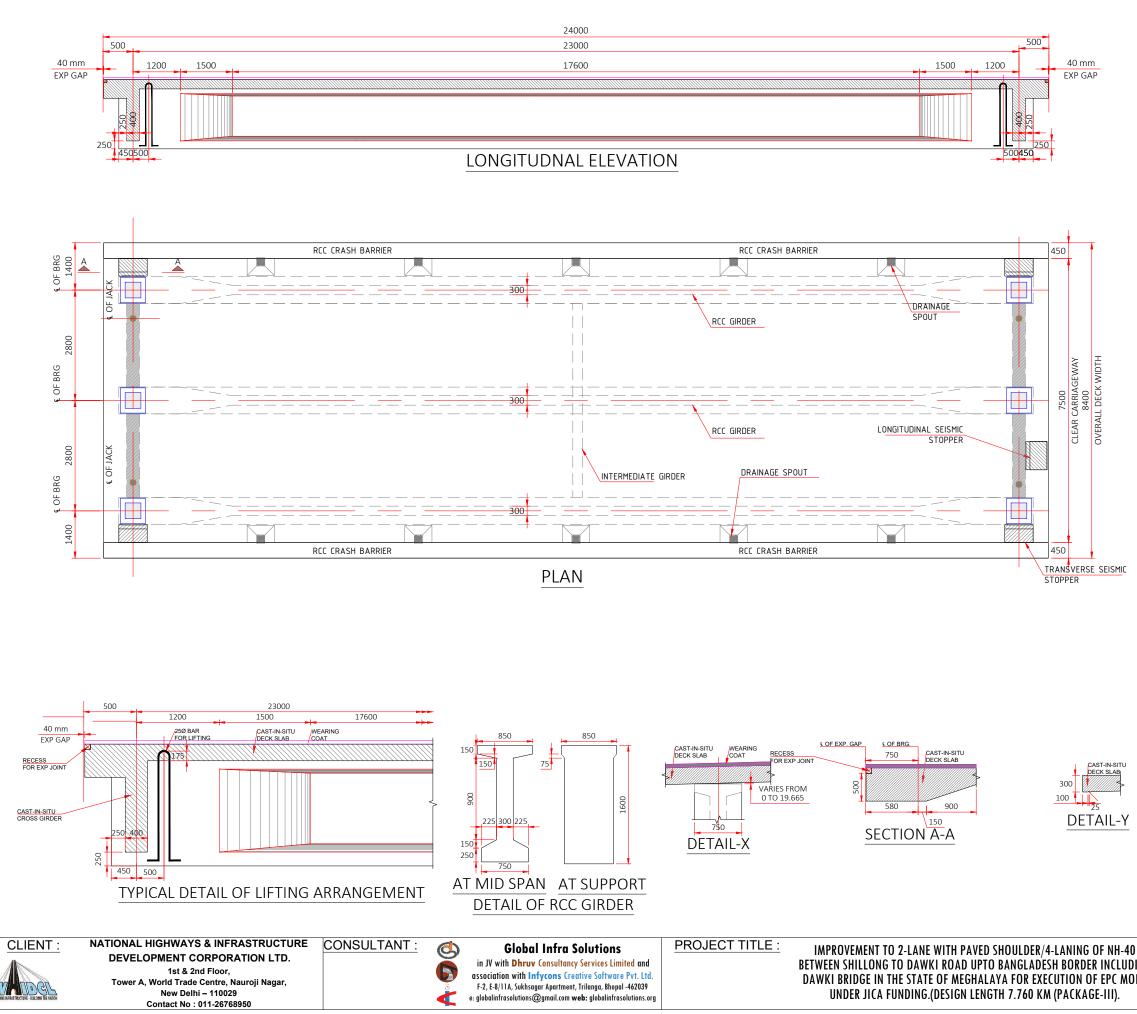
NATIONAL HIGHWAYS & INFRASTRUCTURE CONSULTANT : CLIENT :

DEVELOPMENT CORPORATION LTD. 1st & 2nd Floor, Tower A, World Trade Centre, Nauroji Nagar New Delhi – 110029 Contact No : 011-26768950

Ø **Global Infra Solutions** in JV with **Dhruv** Consultancy Services Limited and association with Infycons Creative Software Pvt. Ltd. F-2, E-8/11A, Sukhsagar Apartment, Trilanga, Bhopal -462039 e: globalinfrasolutions@gmail.com web: globalinfrasolutions.org

PROJECT TITLE : IMPROVEMENT TO 2-LANE WITH PAVED SHOULDER/4-LANING OF NH-40 BETWEEN SHILLONG TO DAWKI ROAD UPTO BANGLADESH BORDER INCLUDING DAWKI BRIDGE IN THE STATE OF MEGHALAYA FOR EXECUTION OF EPC MODE UNDER JICA FUNDING.(DESIGN LENGTH 7.760 KM (PACKAGE-III).



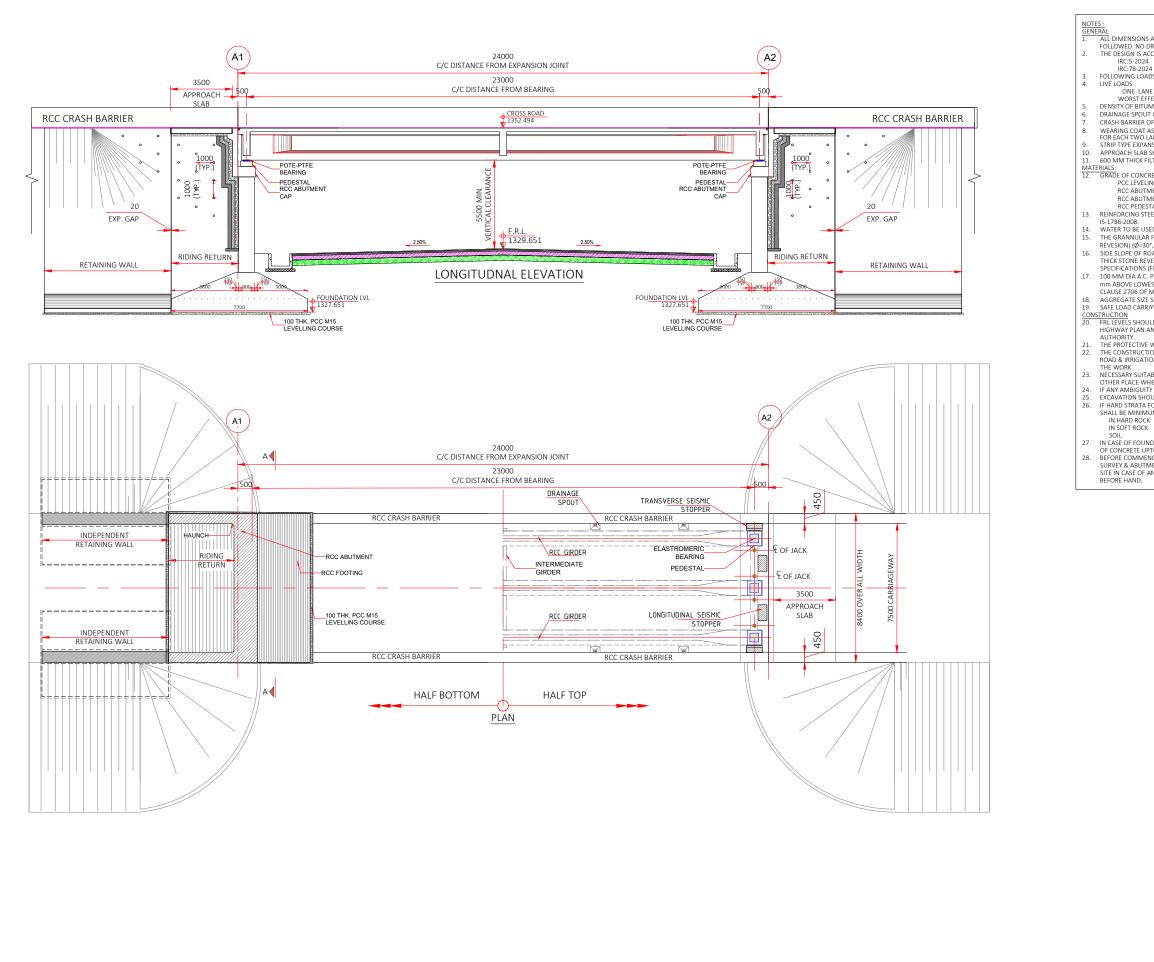


- OTES:-ALL DIMENSIONS ARE IN m. UNLESS OIHERWISE MENTIONED. PROPOSED STRUCTURE IS DESIGNED FOR ONE LANE OF I CLASS 70+R ONE LANE OF CLASS A TRANS WITCHEVER PRODUCE WORST EFFECT. CONCRETE SHALL BE DESIGN MIX AND HAVE MINIMUM 28 DAYS CHARACTERISTIC STRENGTH OF 35 MPa ON 150mm CUBES FOR PRECAST PSC GIRDER, DECK SLAB, END CROSS GIRDERS AND 40 MPa FOR CRASH BARRIERS.

- FOR CRASH BARRIERS. THE LOCATION OF JACKS FOR LIFTING OF THE SUPERSTRUCTURE TO REPLACE BEARINGS ETC. IS SHOWN. THUS THIS SHALL BE DISTINCTLY ETCHED FOR EASY IDENTIFICATION ON THE END DIAPHRAGM AND ABUTMENT CAP. THE REINFORCING STEEL SHALL BE OF TMT (GRADE FE 500D) BAR CONFORMING TO IS:1786:2008. CLEAR COVER TO OUTERMOST STEEL IS 50mm. DURING THE LIFTING OPERATION OF SUPERSTRUCTURE ALL THE JACKS PLACED UNDER THE END DIAPHRAGM IN LINE WITH THE BEARINGS SHALL BE OPERATED SIMULTANEOUSLY USING SINGLE OPERATING CONSOLE, GROUPING THE PUMP AND CONTROL SYSTEM SO AS TO ENSURE THAT THE REACTIONS ON ALL THE JACKS ARE EQUAL AT ALL TIMES. PRECAST GIRDERS SHALL BE CAST IN ONE CONCRETING OPERATION IN CASTING YARD WITHOUT ANY CONSTRUCTION JOINT.
- CONSTRUCTION JOINT. TOP SURFACE OF THE GRDERS ALONG WITH FACE OF PRECAST CROSS GIRDER SHALL BE HACKED TO REMOVE THE LATTANCE BEFORE ERECTION AT SITE.

	CAST-IN-SITU PORTION
\bigcirc	BEARING IN PLAN
	BEARING IN ELEVATION
•	JACK LOCATION IN PLAN
t	JACK LOCATION IN SECTION
	CONSTRUCTION JOINT

	REV	DATE			
))ING	REV	DATE	DE	SCRIPTION	DRAWING TITLE :- GENERAL ARRANGEMENT DRAWING FOR NEW PROPOSED VOP FROM
DDE	DGN DRAV		NAME	SIG.	SPAN ARRANGEMENT OF 1X24:0M @ CH-3+275 SHEET- 03 OF 03
	-	CKED ROVED			DRAWING No. CIS/NHIDCL/PYNSL/GAD 15 SCALE : NOT TO SCALE ()
					A Cont



CLIENT :

NATIONAL HIGHWAYS & INFRASTRUCTURE CONSULTANT : DEVELOPMENT CORPORATION LTD.

1st & 2nd Floor, Tower A, World Trade Centre, Nauroji Nagar, New Delhi - 110029 Contact No : 011-26768950

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Global Infra Solutions in JV with Dhruv Consultancy Services Limited and association with Infycons Creative Software Pvt. Ltd. F-2, E-8/11A, Sukhsagar Apartment, Trilanga, Bhopal -462039

e: globalinfrasolutions@gmail.com **web:** globalinfrasolutions.org

PROJECT TITLE :

IMPROVEMENT TO 2-LANE WITH PAVED SHOULDER/4-LANING OF NH-40 BETWEEN SHILLONG TO DAWKI ROAD UPTO BANGLADESH BORDER INCLUDI DAWKI BRIDGE IN THE STATE OF MEGHALAYA FOR EXECUTION OF EPC MOD UNDER JICA FUNDING.(DESIGN LENGTH 7.760 KM (PACKAGE-III).

NOTES : <u>GENERAL</u> <u>I.</u> ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS ARE TO BE <u>I.</u> ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS ARE TO BE ALL DIMENSIONS ARE IN MILLIME LESS OTHERW FOLLOWED. NO DRAWING SHALL BE SCALED.
 THE DESIGN IS ACCORDING TO THE FOLLOWING CODES. IRC:52024 IRC:62017 IRC:78-2024 IRC:112-2020

FOLLOWING LOADS HAVE BEEN CONSIDERED IN DESIGN

FOLLOWING LOADS HAVE BEEN CONSIDERED IN DESIGN.
 LIVE LOADS
 ONE LANE OF CLASS 70 R + ONE LANE OF CLASS A OR THREE LANE OF CLASS A TRANS WHICHEVER PRODUCE WORST EFFECT.
 DENSITY OF BITUMEN COAT HAS BEEN ASSUMED AS 2.2 T/M
 DRANITOF BITUMEN COAT HAS BEEN ASSUMED AS 2.2 T/M
 DRAININGE SPOUT USED SHALL BE AS PER M.O.S.T STANDARD DRAWING NO. SD/205 & IRC 5:2024
 CRASH BARRIER OF THE SUPER STRUCTURE SHALL BE ADOPTED FROM IRC:5:2024
 WEARING COAT AS PER MORT&H STANDARD S^{UN} REVISION CLAUSE 2702.1 AND HAVING UNI DIRECTIONAL CAMBER FOR EACH TWO LANE AS PER CLAUSE 7.14. IRC:59:84-2009.
 STRIP TYPE EXPANSION JOINT SHALL BE USE DOR EXPANSION JOINT AND SHALL CONFIRM TO IRC 5P:69:2011.
 APPROACH SLAB SHALL BE AS PER IRC:5 AND SECTION 2704 OF MORT&H SPECIFICATIONS (FIFTH REVESION).
 600 MM THICK FILTER MEDIA SHAL BE PROVIDED AS PER APPENDIX - 6 OFIRC SP: 78-2024.

MATERIALS: 12. GRADE OF CONCRETE SHALL CONFIRM TO CLAUSE 6.4 OF IRC 112-2020 AND ARE AS FOLLOWS: MATERIALS: 12. GRADE OF CONCRETE SHALL CONFIRM TO CLAUSE 6.4 OF IRC 112-2020 AND ARE AS FOLLOWS: 13. GRADE OF CONCRETE SHALL CONFIRM TO CLAUSE 6.4 OF IRC 112-2020 AND ARE AS FOLLOWS: 14. GRADE OF CONCRETE SHALL CONFIRM TO CLAUSE 6.4 OF IRC 112-2020 AND ARE AS FOLLOWS: 14. GRADE OF CONCRETE SHALL CONFIRM TO CLAUSE 6.4 OF IRC 112-2020 AND ARE AS FOLLOWS: 14. GRADE OF CONCRETE SHALL CONFIRM TO CLAUSE 6.4 OF IRC 112-2020 AND ARE AS FOLLOWS: 14. GRADE OF CONCRETE SHALL CONFIRM TO CLAUSE 6.4 OF IRC 112-2020 AND ARE AS FOLLOWS: 14. GRADE OF CONCRETE SHALL CONFIRM TO CLAUSE 6.4 OF IRC 112-2020 AND ARE AS FOLLOWS: 14. GRADE OF CONCRETE SHALL CONFIRM TO CLAUSE 6.4 OF IRC 112-2020 AND ARE AS FOLLOWS: 14. GRADE OF CONCRETE SHALL CONFIRM TO CLAUSE 6.4 OF IRC 112-2020 AND ARE AS FOLLOWS: 14. GRADE OF CONCRETE SHALL CONFIRM TO CLAUSE 6.4 OF IRC 112-2020 AND ARE AS FOLLOWS: 14. GRADE OF CONCRETE SHALL CONFIRM TO CLAUSE 6.4 OF IRC 112-2020 AND ARE AS FOLLOWS: 14. GRADE OF CONCRETE SHALL CONFIRM TO CLAUSE 6.4 OF IRC 112-2020 AND ARE AS FOLLOWS: 14. GRADE OF CONCRETE SHALL CONFIRM TO CLAUSE 6.4 OF IRC 112-2020 AND ARE AS FOLLOWS: 14. GRADE OF CONCRETE SHALL CONFIRM TO CLAUSE 6.4 OF IRC 112-2020 AND ARE AS FOLLOWS: 14. GRADE OF CONCRETE SHALL CONFIRM TO CLAUSE FOLLOWS: 14. GRADE OF CONCRETE SHALL CONFIRM TO CLAUSE FOLLOWS: 14. GRADE OF CONCRETE SHALL CONFIRM TO CLAUSE FOLLOWS: 14. GRADE OF CONCRETE SHALL CONFIRM TO CLAUSE FOLLOWS: 14. GRADE OF CONCRETE SHALL CONFIRM TO CLAUSE FOLLOWS: 14. GRADE OF CONCRETE SHALL CONFIRM TO CLAUSE FOLLOWS: 14. GRADE OF CONCRETE SHALL CONFIRM TO CLAUSE FOLLOWS: 14. GRADE OF CONCRETE SHALL CONFIRM TO CLAUSE FOLLOWS: 14. GRADE OF CONFIRM TO

/ELING COURSE	M15	RCC CAST -IN-SITU PILE	M35
UTMENT / PIER	M35	RCC DECK SLAB	M40
UTMENT CAP / PIER CAP	M35	RCC CRASH BARRIER	M40
DESTAL	M45	PRECAST PSC I GIRDER	M45

13. REINFORCING STEEL SHALL BE OF HYSD (TMT) BARS OF FE-500D, CONFIRMING TO CLAUSE 6.2 OF IRC 112-2020 &

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 100 MM DIA AC. PIPE WEEP HOLES SHALL BE PROVIDED @ 1.0 M C/C HORIZONTALLY & VERTICALLY STAGGERED 100 mm ABOVE LOWEST WATER LEVEL OR LOWEST BED LEVEL WHICH IS HIGHER AT SLOPE 1:20 AS PER IRC 78-2024 & CLAUSE 2706 OF MORT&H SPECIFICATIONS (FIFTH REVESION).
 AGGREGATE SYES FAMIL BE AS PER CLAUSE 30 CHAUSE 30 CHAU

AGGREGATE SIZE SHALL BE AS PER CLAUSE 302.3.2.3 OF IRC:21,2000. SAFE LOAD CARRIYING CAPACITY FOR PILES : 300.00 Ton.

CONSTRUCTION 20. FRL LEVELS SHOULD BE READ IN CONJUCTION WITH HIGHWAY PLAN AND PROFILE. IN CASE OF DISPERANCY HIGHWAY PLAN AND PROFILE SHOULD BE FOLLOWED IN CONSULTATION WITH DESIGNER AND APPROVING

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 NECESSARY SUITABLE SHORING AND STRUTTING SHALL BE PROVIDED FOR CASTING OF STRUCTURAL MEMBERS AND NECESSARY SUITABLE SHORING AND STRUTTING SHALL BE PROVIDED FOR CASTING OF STRUCTURAL MEMBERS AND OTHER PLACE WHEREVER REQUIRED AND DETAILED DRAWING SHALL BE SUBMITTED BY THE CONTRACTING AGENCY. IF ANY AMBIGUITY FOUND IN DRAWINGS OR AT SITE BRING IT TO DESIGNER'S NOTICE BEFORE EXECUTION. EXCAVATION SHOULD BE DONE AS PER SECTION 304 OF MORT&H SPECIFICATIONS (FIFTH REVESION). IF HARD STRATA FOUND AT SITE, ACC. TO CLAUSE 705.2.2, IRC-78:2024, MINIMUM EMBEDMENT OF FOUNDATION SHALL BE MINIMUM OF AS FOLLOW OR SHOWN IN DRAWINGS:

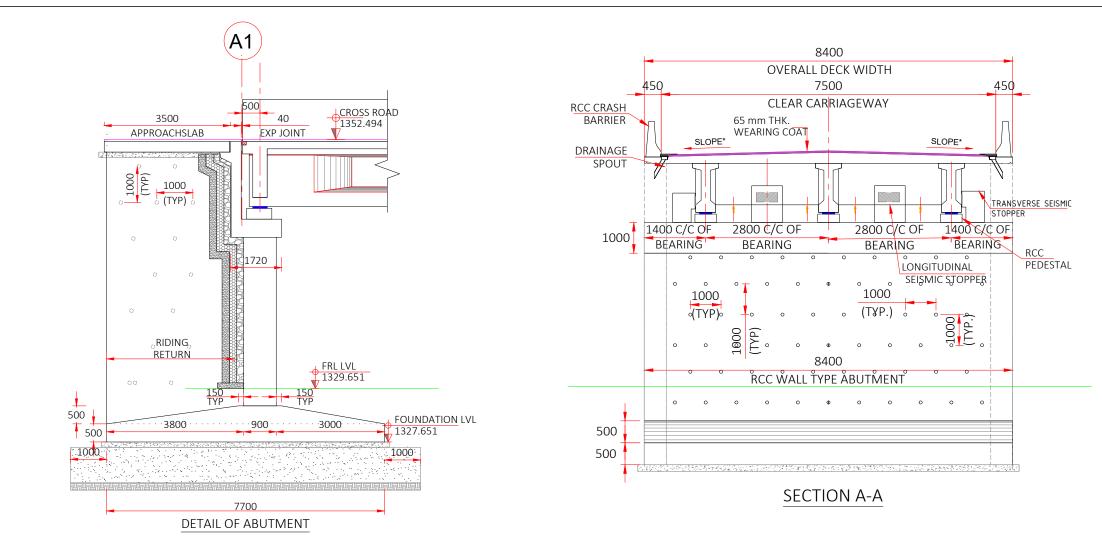
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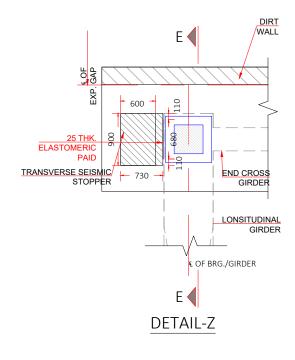
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CK	1.5 r
	2.0 r

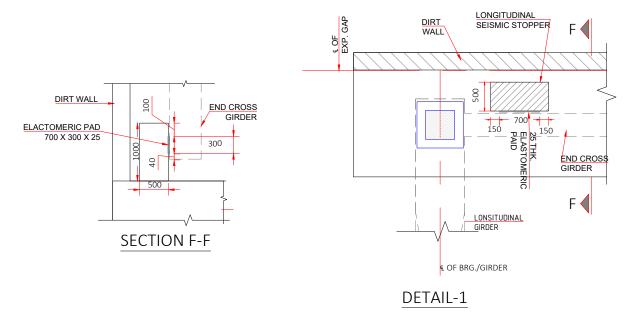
SUIL 2.0 m 27. IN CASE OF FOUNDATION IN ROCK, THE TRENCHES AROUND THE FOOTING SHALL BE FILLED UP WITH M-15 GRADE

In Case of pointain on the top of the Rock.
 BEFORE COMMENCEMENT OF EXECUTION OF WORK CROSS SECTION AS THE SITE SHALL BE TAKEN BY PRECISION SURVEY & ABUTINENT AND PIER POSITION SHOWN IN TECHNICALLY SANCTIONED DRAWING SHALL BE VERIFIED ON SITE IN CASE OF ANY DISCREPANCY OR DOUBT CLARIFICATION SHALL BE OBTAINED FROM COMPETENT AUTHORITY

	REV	0.175		000071011	DRAWING TITLE :-
	REV	DATE	DES	CRIPTION	GENERAL ARRANGEMENT DRAWING
NG		-		1	FOR NEW PROPOSED VOP FROM
NU			NAME	SIG.	SPAN ARRANGEMENT OF 1X24.0M @ CH-4+693
DE	DGN.				
	DRAW	/N			SHEET- 01 OF 03
	CHEC	KED			DRAWING No. : GIS/NHIDCL/RYNSL/GAD /18
	APPR	OVED			SCALE : NOT TO SCALE
	·				All







CONSULTANT :

NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD.

CLIENT :

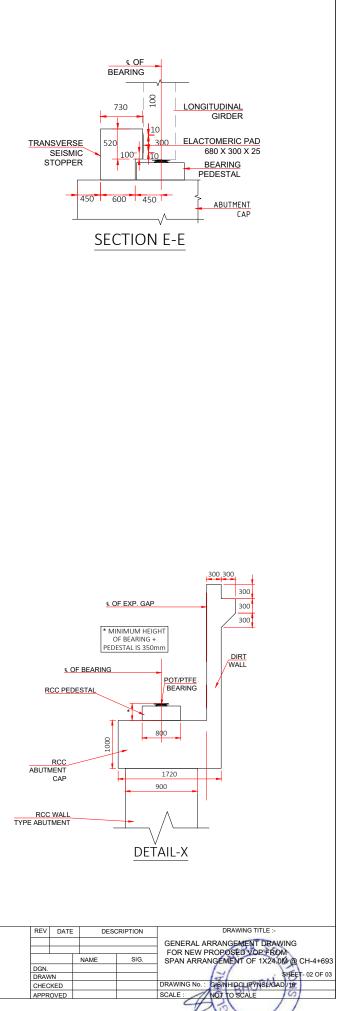
1st & 2nd Floor, Tower A, World Trade Centre, Nauroji Nagar, New Delhi – 110029 Contact No : 011-26768950

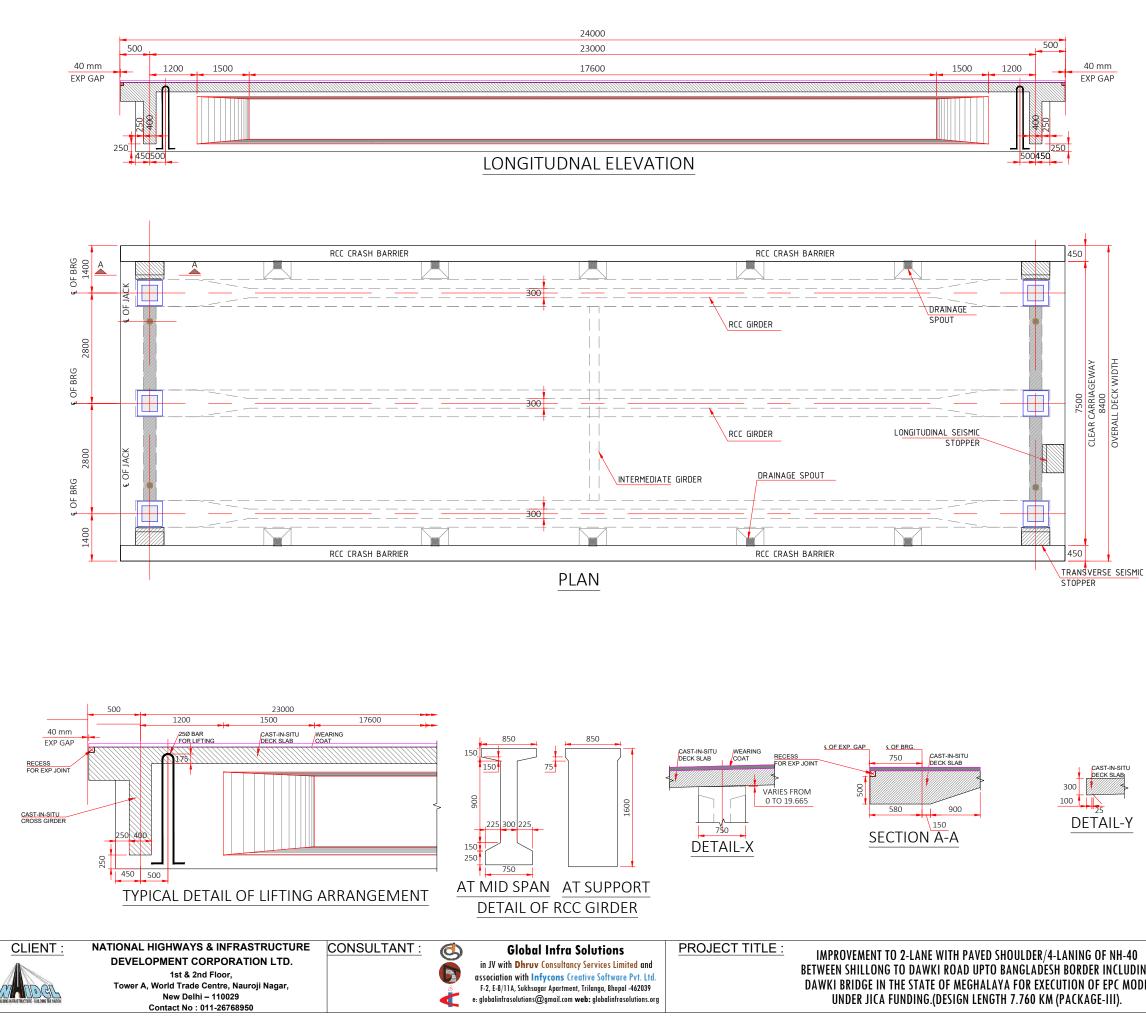
Ø **Global Infra Solutions** in JV with Dhruv Consultancy Services Limited and 5 association with Infycons Creative Software Pvt. Ltd. F-2, E-8/11A, Sukhsagar Apartment, Trilanga, Bhopal -462039 Č

e: globalinfrasolutions@gmail.com web: globalinfrasolutions.org

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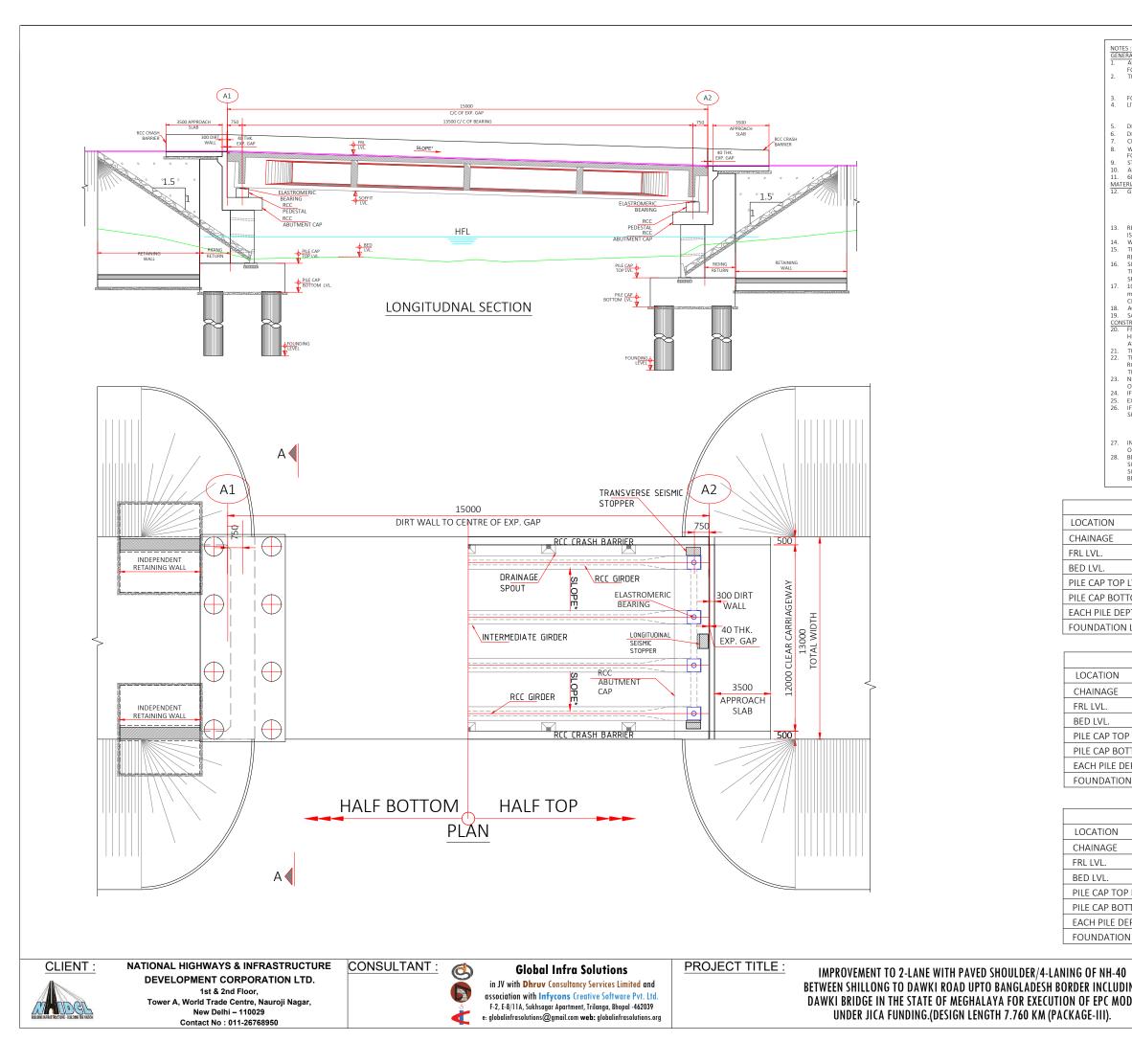


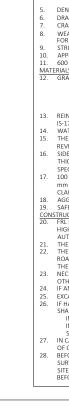
- TES:-ALL DIMENSIONS ARE IN m. UNLESS OIHERWISE MENTIONED. PROPOSED STRUCTURE IS DESIGNED FOR ONE LANE OF I CLASS 70+R ONE LANE OF CLASS A TRANS WITCHEVER PRODUCE WORST EFFECT. CONCRETE SHALL BE DESIGN MIX AND HAVE MINIMUM 28 DAYS CHARACTERISTIC STRENGTH OF 35
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- CONSTRUCTION JOINT.
- TOP SURFACE OF THE GIRDERS ALONG WITH FACE OF PRECAST CROSS GIRDER SHALL BE HACKED TO REMOVE THE LAITANCE BEFORE ERECTION AT SITE. ADEQUACY AND STRENGTH OF 25Ø BAR HOOK MAY BE GOT CHECKED BEFORE LIFTING GIRDERS.

	CAST-IN-SITU PORTION
\bigcirc	BEARING IN PLAN
	BEARING IN ELEVATION
•	JACK LOCATION IN PLAN
t	JACK LOCATION IN SECTION
	CONSTRUCTION JOINT

	REV	DATE	DES	CRIPTION	DRAWING TITLE :-
					GENERAL ARRANGEMENT DRAWING FOR NEW PROPOSED VOP FROM
NG			NAME	SIG.	SPAN ARRANGEMENT OF 1X24.0M @ CH-4+693
DE	DGN.				SHEET- 03 OF 03
	DRAW				IT I IIII
	CHEC	KED			DRAWING No. : GIS/NHIDCL/RYNSL/GAD/18
	APPR	OVED			SCALE : NOT TO SCALE
					All





CHANAGE: 4+930						
LOCATION	A1	A2				
CHAINAGE	4+923	4+938				
FRL LVL.	1316.001	1315.101				
BED LVL.	1303.383	1305.119				
PILE CAP TOP LVL.	1302.883	1304.619				
PILE CAP BOTTOM LVL.	1301.083	1302.819				
EACH PILE DEPTH	10.00	10.00				
FOUNDATION LVL.	1291.083	1292.819				

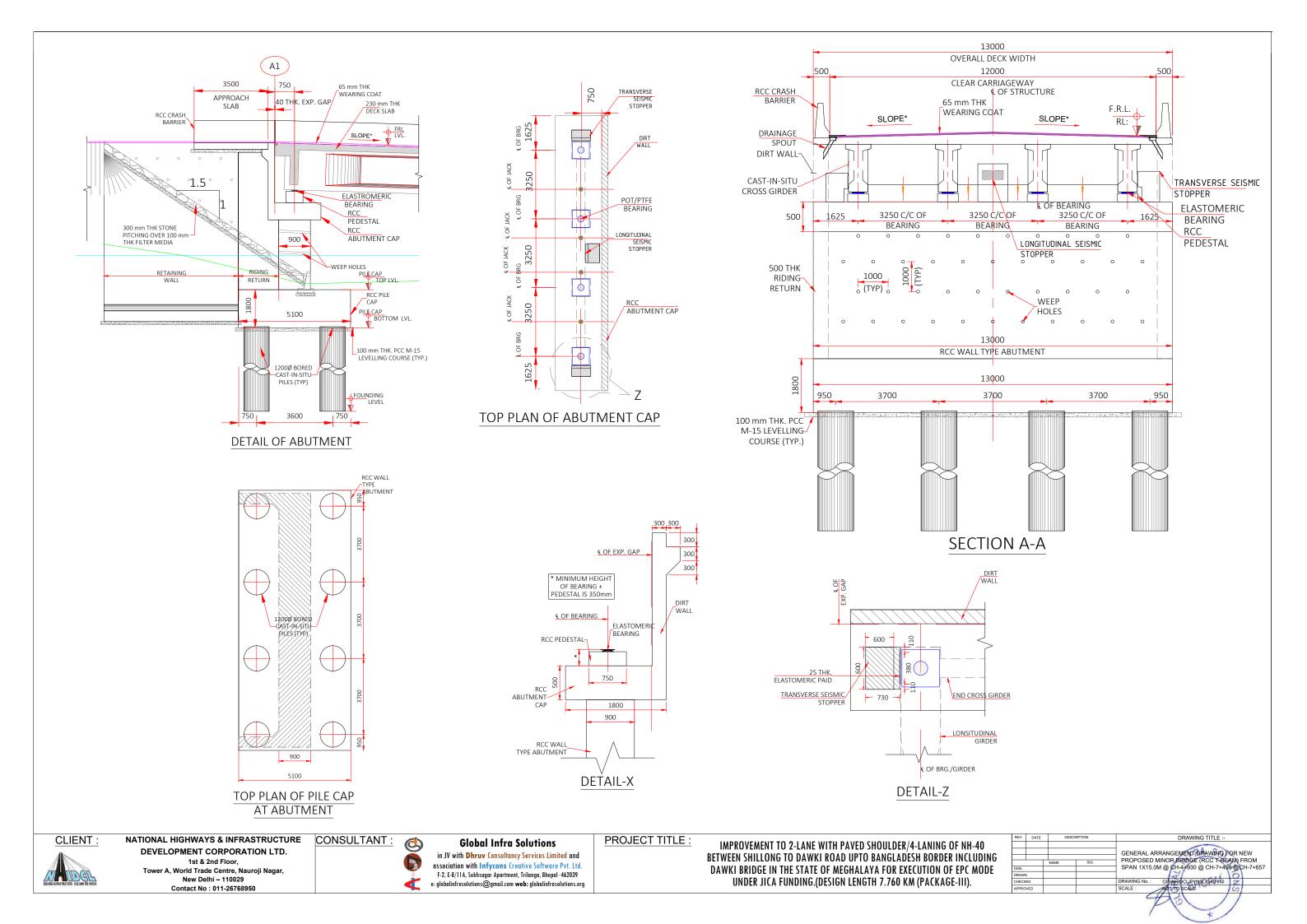
CHAN	AGE: 7+498	
LOCATION	A1	A2
CHAINAGE	7+491	7+506
FRL LVL.	1229.425	1228.726
BED LVL.	1221.007	1217.919
PILE CAP TOP LVL.	1220.507	1217.419
PILE CAP BOTTOM LVL.	1218.707	1215.619
EACH PILE DEPTH	10.00	10.00
FOUNDATION LVL.	1208.707	1205.619

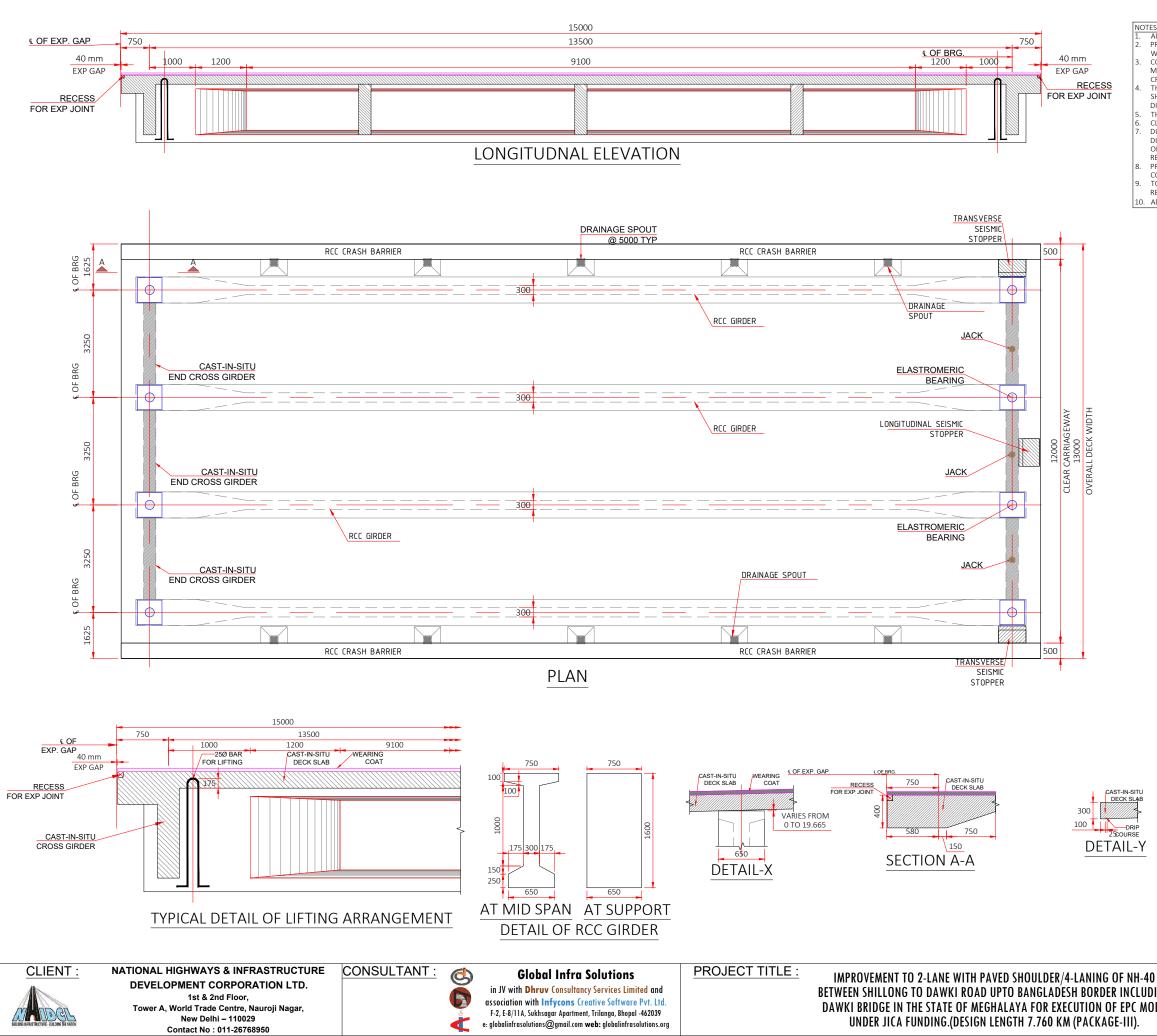
CHAN	AGE: 7+657	
LOCATION	A1	A2
CHAINAGE	7+668	7+683
FRL LVL.	1230.206	1230.521
BED LVL.	1221.040	1229.039
PILE CAP TOP LVL.	1220.54	1228.539
PILE CAP BOTTOM LVL.	1218.74	1226.739
EACH PILE DEPTH	10.00	10.00
FOUNDATION LVL.	1208.74	1216.739

NOT	FC ·
1	ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS ARE TO BE
1.	FOLLOWED, NO DRAWING SHALL BE SCALED.
2.	THE DESIGN IS ACCORDING TO THE FOLLOWING CODES.
	IRC:5-2024 IRC:6-2017
	IRC:78-2024 IRC:112-2020
3.	FOLLOWING LOADS HAVE BEEN CONSIDERED IN DESIGN.
4.	LIVE LOADS
	ONE LANE OF CLASS 70 R + ONE LANE OF CLASS A OR THREE LANE OF CLASS A TRANS WHICHEVER PRODUCE
	WORST EFFECT.
5.	DENSITY OF BITUMEN COAT HAS BEEN ASSUMED AS 2.2 T/M
6.	DRAINAGE SPOUT USED SHALL BE AS PER M.O.S.T STANDARD DRAWING NO. SD/205 & IRC 5:2024
7.	CRASH BARRIER OF THE SUPER STRUCTURE SHALL BE ADOPTED FROM IRC:5:2024
8.	WEARING COAT AS PER MORT&H STANDARD 5 th REVISION CLAUSE 2702.1 AND HAVING UNI DIRECTIONAL CAMBER
	FOR EACH TWO LANE AS PER CLAUSE 7.14. IRC:SP:84-2009.
9.	STRIP TYPE EXPANSION JOINT SHALL BE USED FOR EXPANSION JOINT AND SHALL CONFIRM TO IRC SP:69:2011.
10.	
11.	
	FERIALS:
12.	GRADE OF CONCRETE SHALL CONFIRM TO CLAUSE 6.4 OF IRC 112-2020 AND ARE AS FOLLOWS:
	PCC LEVELING COURSE M15 RCC CAST -IN-SITU PILE M35
	RCC ABUTMENT / PIER M35 RCC DECK SLAB M40
	RCC ABUTMENT CAP / PIER CAP M35 RCC CRASH BARRIER M40
	RCC PEDESTAL M45 PRECAST PSC I GIRDER M45
13.	
	IS-1786:2008.
14.	
15.	THE GRANNULAR FILL BEHIND ABUTMENT SHALL BE AS PER CLAUSE 305.2 OF MORT&H SPECIFICATIONS (FIFTH
	REVESION) (Ø=30°, δ=20,γ=1.8) AND APPENDIX 6, IRC 78-2024.
16.	SIDE SLOPE OF ROAD EMBANKMENT NEAR ABUTMENTS SHALL BE IN SLOPE 1V:1.5H & SHALL BE PROVIDED WITH 300
	THICK STONE REVETMENT AND 150 THICK FILTER MEDIA CONFORMING TO CLAUSE 2500 & 2504 OF MORT&H
	SPECIFICATIONS (FIFTH REVESION).
17.	100 MM DIA A.C. PIPE WEEP HOLES SHALL BE PROVIDED @ 1.0 M C/C HORIZONTALLY & VERTICALLY STAGGERED 100
	mm ABOVE LOWEST WATER LEVEL OR LOWEST BED LEVEL WHICH IS HIGHER AT SLOPE 1:20 AS PER IRC 78-2024 &
	CLAUSE 2706 OF MORT&H SPECIFICATIONS (FIFTH REVESION).
18.	
19.	
CON	ISTRUCTION

AGGREGATE SIZE SHALL BE AS PER CLAUSE 302.3.2.3 OF IRC212,2000.
 SAFE LOAD CARRING CAPACITY FOR PILES : 300.00 TON. CONSTRUCTION
 CONSTRUCTION
 FRELEVETS SHOULD BE READ IN CONJUCTION WITH HIGHWAY PLAN AND PROFILE. IN CASE OF DISPERANCY HIGHWAY PLAN AND PROFILE SHOULD BE FOLLOWED IN CONSULTATION WITH DESIGNER AND APPROVING AUTHORITY.
 THE FROTECTIVE WORKS SHALL BE COMPLETED AS PER CLAUSE 210.4.3 AND SECTION 2500.
 THE CONSTRUCTION AUTHORITY IF REQUIRED FOR DIVERTING THE TRAFFIC TEMPORARILY PRIOR TO COMMENCING THE WORK.
 NECESSARY SUITABLE SHORING AND STRUTTING SHALL BE PROVIDED FOR CASTING OF STRUCTURAL MEMBERS AND OTHER PLACE WHEREVER REQUIRED AND DISTULTIONE DAMAUNG SHALL BE SUBMITTED BY THE CONTRACTING AGENCY.
 IF ANY AMBIGUITY FOUND IN DRAWINGS OR AT SITE BRING IT TO DESIGNER'S NOTICE BEFORE EXECUTION.
 EXCAVATION SHOULD A STER, ACC. TO CLAUSE 702.2.2. (R-78:202.4, MINIMUM EMBEDMENT OF FOUNDAT SITE, ACC. TO CLAUSE 702.2.2.1. (R-78:202.4, MINIMUM EMBEDMENT OF FOUNDATION SHALL BE MINIMUM OF AS FOLLOW OR SHOWN IN DRAWINGS: IN HARD ROCK
 IN CASE OF FOUNDATION IN ROCK, THE TRENCHES AROUND THE FOOTING SHALL BE FILED UP WITH M-15 GRADE OF CONCRETE UPTO THE TOP OF THE ROCCHES AROUND THE FOOTING SHALL BE FILED UP WITH M-15 GRADE OF CONCRETE UPTO THE FOR OF THE RECK.
 BEFORE COMMENCEMENT OF DEZUTION OF WORK CROSS SECTION AS THE SHALL BE FILED UP WITH M-15 GRADE OF CONCRETE UPTO THE ROCCHES AROUND IN TECHNICALLY SANCTIONED RAWING SHALL BE VERIFIED ON SURVEY & ABUTTENT AND PIER POSITION SHOWN IN TECHNICALLY SANCTIONED DRAWING SHALL BE VERIFIED ON SURVEY & ABUTTENT AND PIER POSITION SHOWN IN TECHNICALLY SANCTIONED DRAWING SHALL BE VERIFIED ON SURVEY & ABUTTENT AND PIER POSITION SHOWN IN TECHNICALLY SANCTIONED RAWING SHALL BE VERIFIED ON SURVEY & ABUTTENT AND PIER POSITION SHOWN IN TECHNICALLY SANCTIONED RAWING SHALL BE VERIFIED ON SURVEY & ABUTTENT AND PIER POSITION SHOWN IN TECHNICALLY SAN

	REV	DATE	DES	CRIPTION	DRAWING TITLE :-
ING De			NAME SIG.		GENERAL ARRANGEMENT DRAWING FOR NEW PROPOSED MINOR BRIDGE (RCC T-BEAM) FROM
	DGN.		NAME	313.	SPAN 1X15.0M @ CH-4+930 @ CH-7+498 @CH-7+657
	DRAWN				II III
	CHECKED				DRAWING No. : GIS/NHIDCL/PYNSL/GAD 17
	APPROVED				SCALE NOT TO SCALE
					AB





TLL. ALL DIMENSIONS ARE IN m. UNLESS OIHERWISE MENTIONED. PROPOSED STRUCTURE IS DESIGNED FOR ONE LANE OF I CLASS 70+R ONE LANE OF CLASS A TRANS WITCHEVER PRODUCE WORST FEFECT

CONCRETE SHALL BE DESIGN MIX AND HAVE MINIMUM 28 DAYS CHARACTERISTIC STRENGTH OF 35 MPa ON 150mm CUBES FOR RCC T-BEAM GIRDER, DECK SLAB, END CROSS GIRDERS AND 40 MPa FOF CRASH BARRIERS

THE LOCATION OF JACKS FOR LIFTING OF THE SUPERSTRUCTURE TO REPLACE BEARINGS ETC. IS SHOWN. THUSTTHIS SHALL BE DISTINCTLY ETCHED FOR EASY IDENTIFICATION ON THE END DIAPHRAGM AND ABUTMENT CAP.

THE REINFORCING STEEL SHALL BE OF TMT (GRADE FE 500D) BAR CONFORMING TO IS:1786:2008. CLEAR COVER TO OUTERMOST STEEL IS 50mm. DURING THE LIFTING OPERATION OF SUPERSTRUCTURE ALL THE JACKS PLACED UNDER THE END

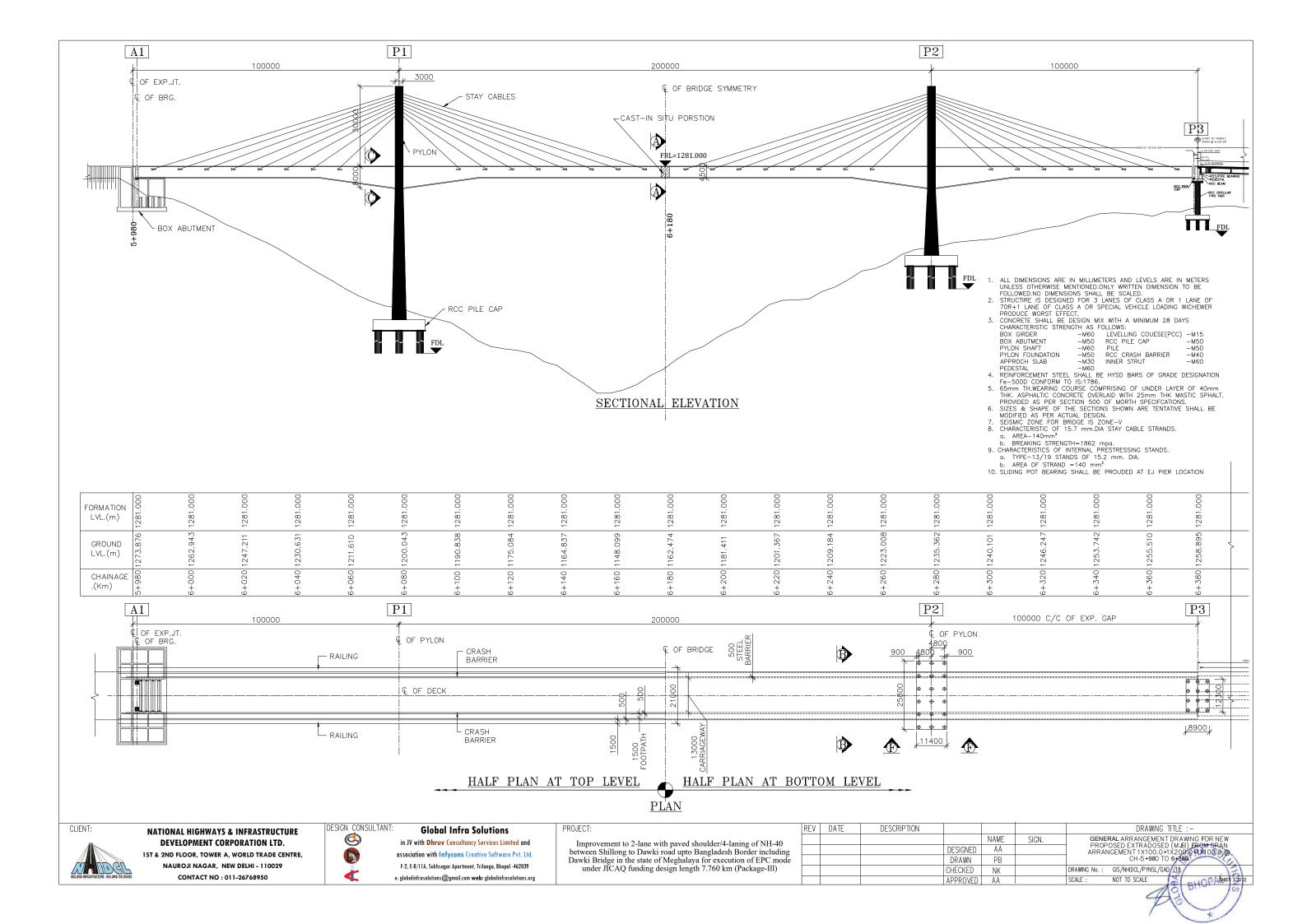
DIAPHRAGM IN LINE WITH THE BEARINGS SHALL BE OPERATED SIMULTANEOUSLY USING SINGLE OPERATING CONSOLE, GROUPING THE PUMP AND CONTROL SYSTEM SO AS TO ENSURE THAT THE REACTIONS ON ALL THE JACKS ARE EQUAL AT ALL TIMES.

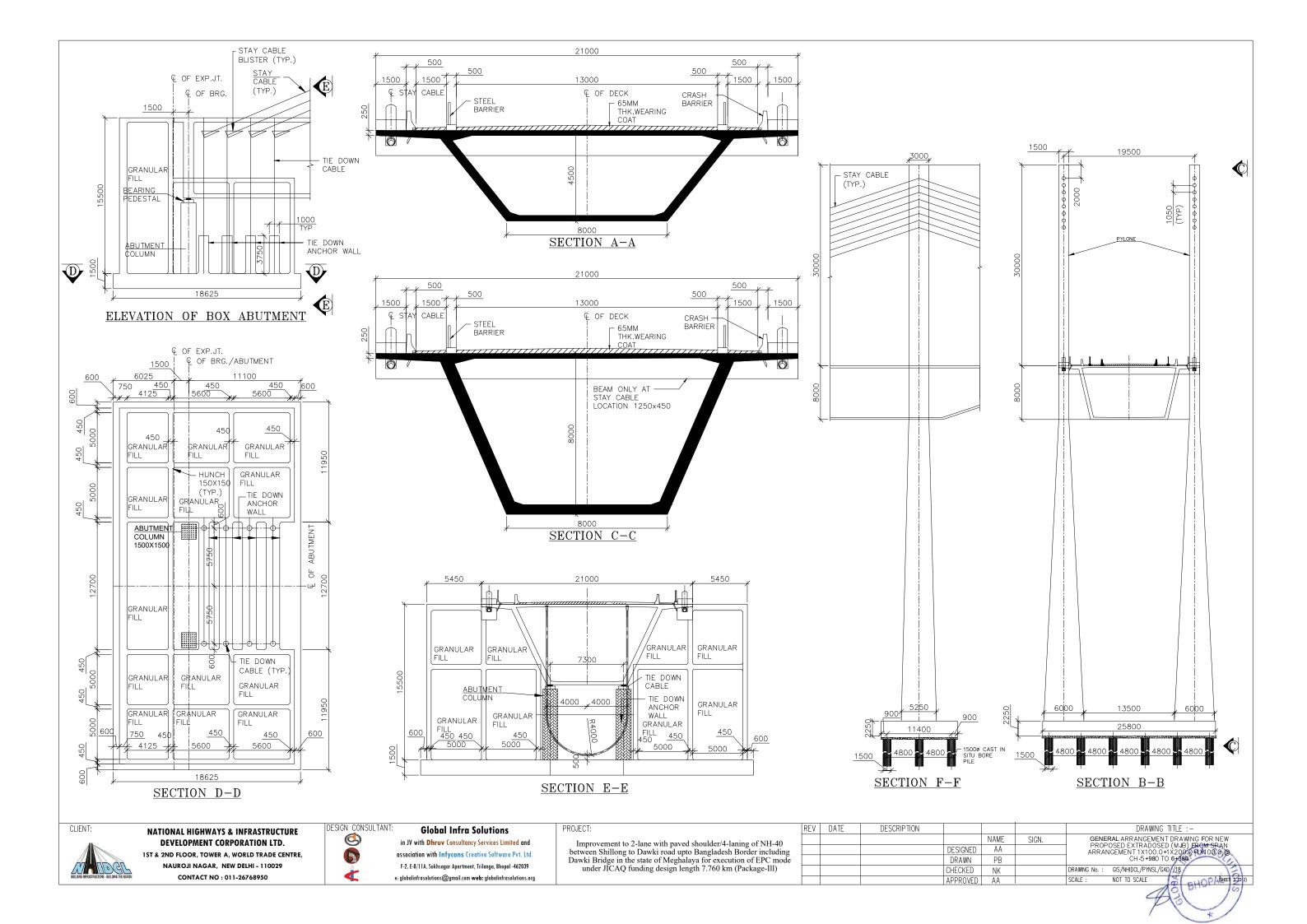
PRECAST GROERS SHALL BE CAST IN ONE CONCRETING OPERATION IN CASTING YARD WITHOUT ANY CONSTRUCTION JOINT. TOP SURFACE OF THE GIRDERS ALONG WITH FACE OF PRECAST CROSS GIRDER SHALL BE HACKED TO

REMOVE THE LAITANCE BEFORE ERECTION AT SITE. 10. ADEQUACY AND STRENGTH OF 25Ø BAR HOOK MAY BE GOT CHECKED BEFORE LIFTING GIRDERS.

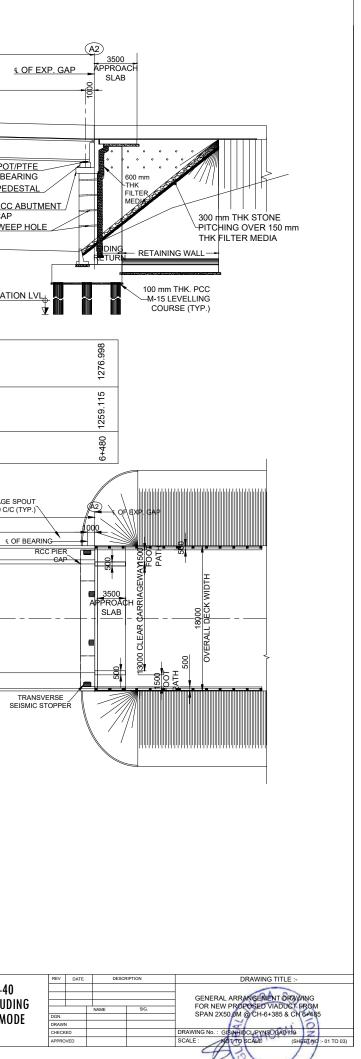
	CAST-IN-SITU PORTION
\bigcirc	BEARING IN PLAN
" <u>,</u> "	BEARING IN ELEVATION
	JACK LOCATION IN PLAN
t	JACK LOCATION IN SECTION
~~~~~	CONSTRUCTION JOINT

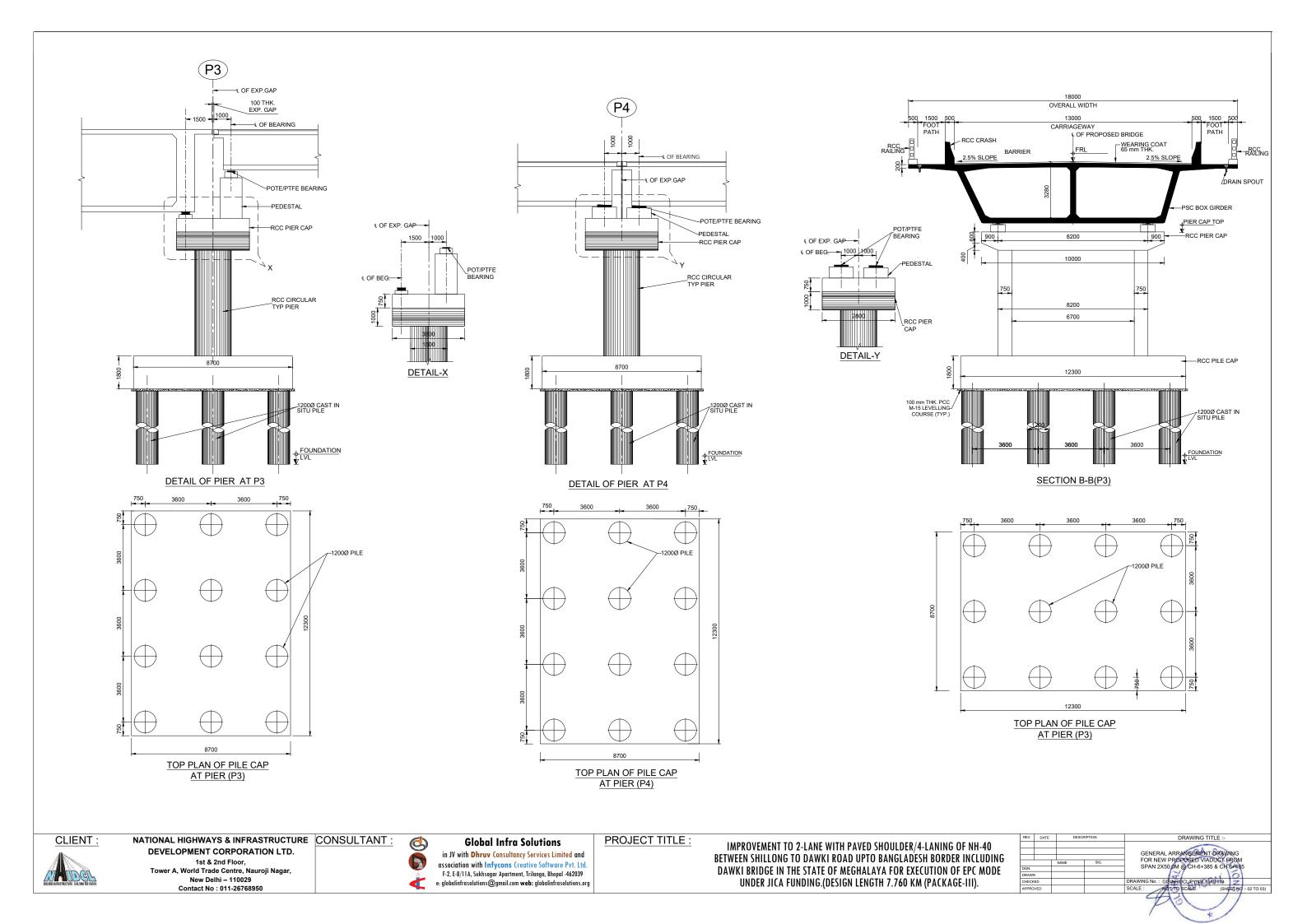
	REV	DATE	DESCRIPTION		DRAWING TITLE :-	
j	DGN.	N	NAME	SIG.	GENERAL ARRANGEMENT DRAWING FOR NEW PROPOSED MINOR BRIDGE (RCC T-BEAM) FROM SPAN 1X15.0M @ CH-4+930 @ CH-7+498 @CH-7+65	
	CHECKED				DRAWING No. : GIS/NHIDCL/PYNSL/GAD 117 Z	
	APPROVED				SCALE : NOT TO SCALE	

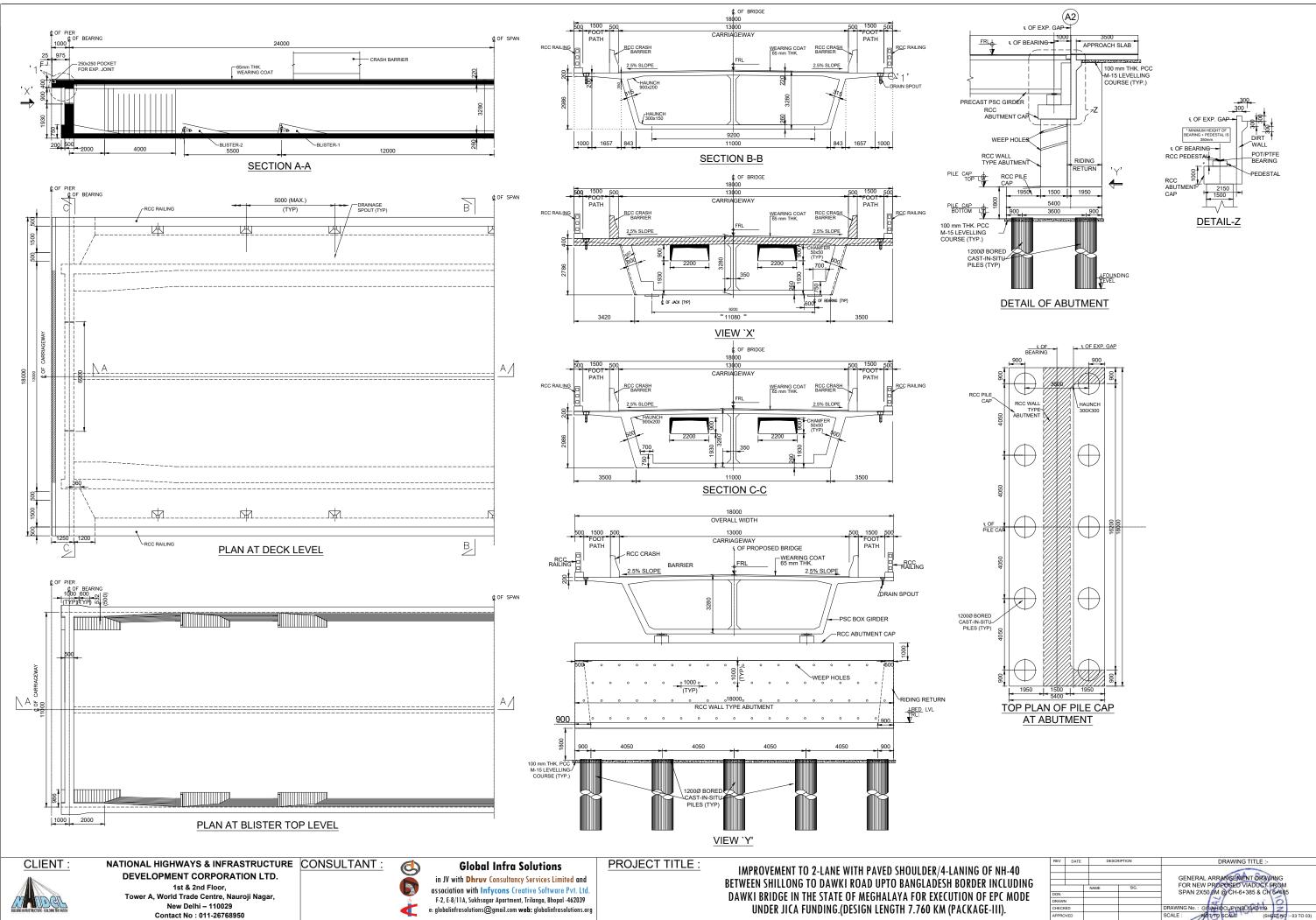




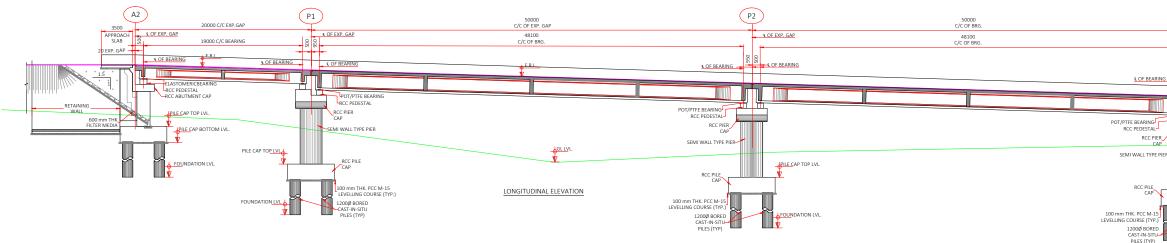
		(P3) START @ 6+43	OF VIADUCT 2X50.0 5 KM 50000 C/C OF EXP. GA		P4	
	100000 C/C OF EXP. GAP	<u>€ OF E&gt;</u> 1818		 	<u>_ € OF EXP. GAP</u>	
			2	€ OF BEARING		48000 C/C OF BRG.
			BEARING SLOPE **		COF BEARING	SLOPE **
			OT/PTFE BEARING			
			EDESTAL CC BEAM		POT/PTFE BEARING	PO BE
		CAPRC	CC CIRCULAR	CAP		PEL
		TY	PE PIER		RCC CIRCULAR TYPE PIER	RCC CAF WE
				Ţ.		L
			FOUNDATION LVL			FOUNDAT
			Ζ			
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1281.000	1281.000	1281.000	1279.000	1278.500	1278.C	1277.500
742	510	302 302	88	357		
1253.	1255.	1258.895	1259.088	1255.357	1256.	1259.647
6+340	6+360	6+380	6+400	6+420	6+440	6+460
<u></u>	۵	Ű	۵	Ű	Ű	ω
					(P4)	DRAINAGE
8000 CC OF EXP. GAP		P3	50000 CENTER/CENTRE OF E 48000 C/C OF BRG.	EXP. GAP		50000 CENTER/CENTRE OF EXP. GAP @ 5000 C// 48000 C/C OF BRG.
				€ OF EXP. GAP	COF BEARING	RCC RAILING
		$\bigcirc \bigcirc \bigcirc \bigcirc \bigcirc$				
<u>&gt;</u>		8700	!			
NOTES :						RCC RAILING
GENERAL 1. ALL DIMENSIONS AR	E IN MILLIMETERS UNLESS OTHERWISE MENTIONED. C WING SHALL BE SCALED.	ONLY WRITTEN DIMENSIONS ARE TO BE		<u>F</u> BE PROVIDED @ 1.0 M C/C HORIZONTALLY & VI EST BED LEVEL WHICH IS HIGHER AT SLOPE 1	ERTICALLY STAGGERED 100	
	RDING TO THE FOLLOWING CODES. IRC:6-2017 IRC:112-2020		CLAUSE 2706 OF MORT&H SPECIFICATIONS 18. AGGREGATE SIZE SHALL BE AS PER CLAUS 19. SAFE LOAD CARRIYING CAPACITY FOR PILE	(FIFTH REVESION). E 302.3.2.3 OF IRC:21,2000.		
<ol> <li>FOLLOWING LOADS H</li> </ol>	HAVE BEEN CONSIDERED IN DESIGN. NE OF CLASS 70 R + ONE LANE OF CLASS A OR THREE I	LANE OF CLASS A TRANS WHICHEVER	CONSTRUCTION 20. FRL LEVELS SHOULD BE READ IN CONJUCT	ON WITH HIGHWAY PLAN AND PROFILE. IN CA OLLOWED IN CONSULTATION WITH DESIGNER		
<ol><li>DRAINAGE SPOUT US</li></ol>	N COAT HAS BEEN ASSUMED AS 2.2 T/M SED SHALL BE AS PER M.O.S.T STANDARD DRAWING N THE SUPER STRUCTURE SHALL BE ADOPTED FROM IR		AUTHORITY. 21. THE PROTECTIVE WORKS SHALL BE COMPL	ETED AS PER CLAUSE 2104.3 AND SECTION 25 URE THAT THE NECESSARY PERMISSIONS HA	500.	
FOR EACH TWO LANE	PER MORT&H STANDARD 5 th REVISION CLAUSE 2702.1 A E AS PER CLAUSE 7.14. IRC:SP:84-2009. ION JOINT SHALL BE USED FOR EXPANSION JOINT ANE		ROAD & IRRIGATION AUTHORITY IF REQUIR THE WORK.	ED FOR DIVERTING THE TRAFFIC TEMPORARIL TTING SHALL BE PROVIDED FOR CASTING OF	LY PRIOR TO COMMENCING	
	IALL BE AS PER IRC:5 AND SECTION 2704 OF MORT&H R MEDIA SHAL BE PROVIDED AS PER APPENDIX - 6 OFI		OTHER PLACE WHEREVER REQUIRED AND 24. IF ANY AMBIGUITY FOUND IN DRAWINGS OR	DETAILED DRAWING SHALL BE SUBMITTED BY AT SITE BRING IT TO DESIGNER'S NOTICE BE CTION 304 OF MORT&H SPECIFICATIONS (FIFT)	THE CONTRACTING AGENCY. FORE EXECUTION.	
12. GRADE OF CONCRET PCC LEVELING RCC ABUTMEN	T / PIER M35 RCC DECK SLAB			LAUSE 705.2.2, IRC-78:2024, MINIMUM EMBEDM		
RCC PEDESTAL 13. REINFORCING STEEL			IN SOFT ROCK 1.5 m SOIL 2.0 m	NCHES AROUND THE FOOTING SHALL BE FILL	LED UP WITH M-15 GRADE	
15. THE GRANNULAR FIL	IN CONCRETING AND CURING SHALL CONFIRM TO CLA L BEHIND ABUTMENT SHALL BE AS PER CLAUSE 305.2		OF CONCRETE UPTO THE TOP OF THE ROC 28. BEFORE COMMENCEMENT OF EXECUTION (		L BE TAKEN BY PRECISION	
16. SIDE SLOPE OF ROA THICK STONE REVET	=20,γ=1.8) AND APPENDIX 6, IRC 78-2024. D EMBANKMENT NEAR ABUTMENTS SHALL BE IN SLOP MENT AND 150 THICK FILTER MEDIA CONFORMING TO		SITE IN CASE OF ANY DISCREPANCY OR DO	UBT CLARIFICATION SHALL BE OBTAINED FRC		
SPECIFICATIONS (FIF		CONSULTANT :	Global Infra Solutions	PROJECT TITLE :		
	VELOPMENT CORPORATION LTD. 1st & 2nd Floor,	CONSULTANT:	in JV with <b>Dhruv</b> Consultancy Services Limited and			EWITH PAVED SHOULDER/4-LANING OF NH-40 KI ROAD UPTO BANGLADESH BORDER INCLUD
Tow	ver A, World Trade Centre, Nauroji Nagar, New Delhi – 110029	6	association with Infycons Creative Software Pvt. Ltd. F-2, E-8/11A, Sukhsagar Apartment, Trilanga, Bhopal -462039 e: globalinfrasolutions@gmail.com web: globalinfrasolutions.org		DAWKI BRIDGE IN THE STAT	E OF MEGHALAYA FOR EXECUTION OF EPC MC .(DESIGN LENGTH 7.760 KM (PACKAGE-III).
and and and the court of a subset of a 241 KW	Contact No : 011-26768950	L	. g. sanni a soionon segman.com mes. giobanni a soionons.org			UPESION LENGTH 7.700 KM (I ACKAOL-III).



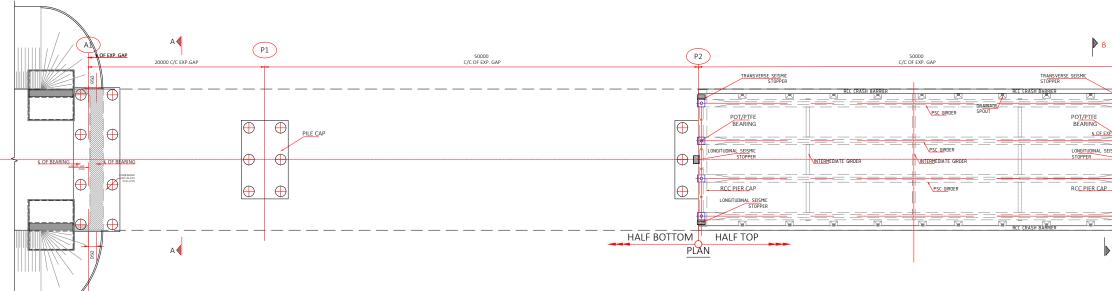




CLIPYNSDGAD X19



LOCATION	A1	Ρ1	P2
CHAINAGE	6+767	6+787	6+837
FRL LVL.	1262.175	1261.675	1260.425
BED LVL.	1241.690	1232.071	1229.643
PILE CAP TOP LVL.	1241.19	1231.571	1229.143
PILE CAP BOTTOM LVL.	1239.39	1229.771	1227.343
EACH PILE DEPTH	20.00	20.00	20.00
FOUNDATION LVL.	1219.39	1209.771	1207.342





NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD.

1st & 2nd Floor, Tower A, World Trade Centre, Nauroji Nagar, New Delhi - 110029 Contact No : 011-26768950

CONSULTANT :  $\bigcirc$ 

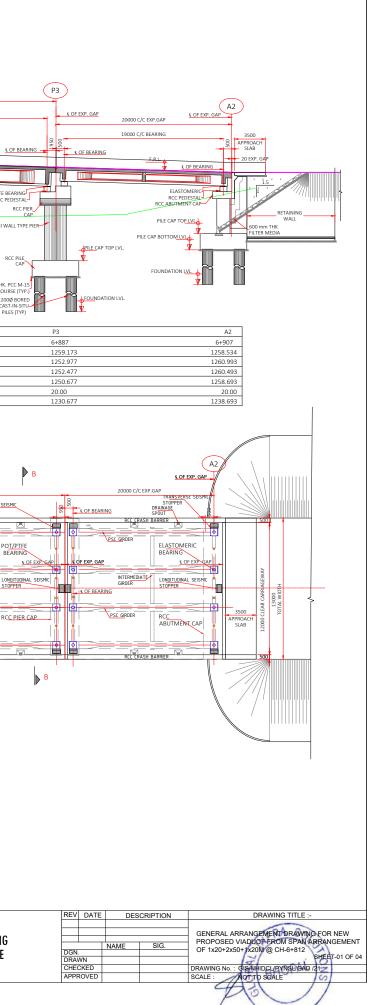
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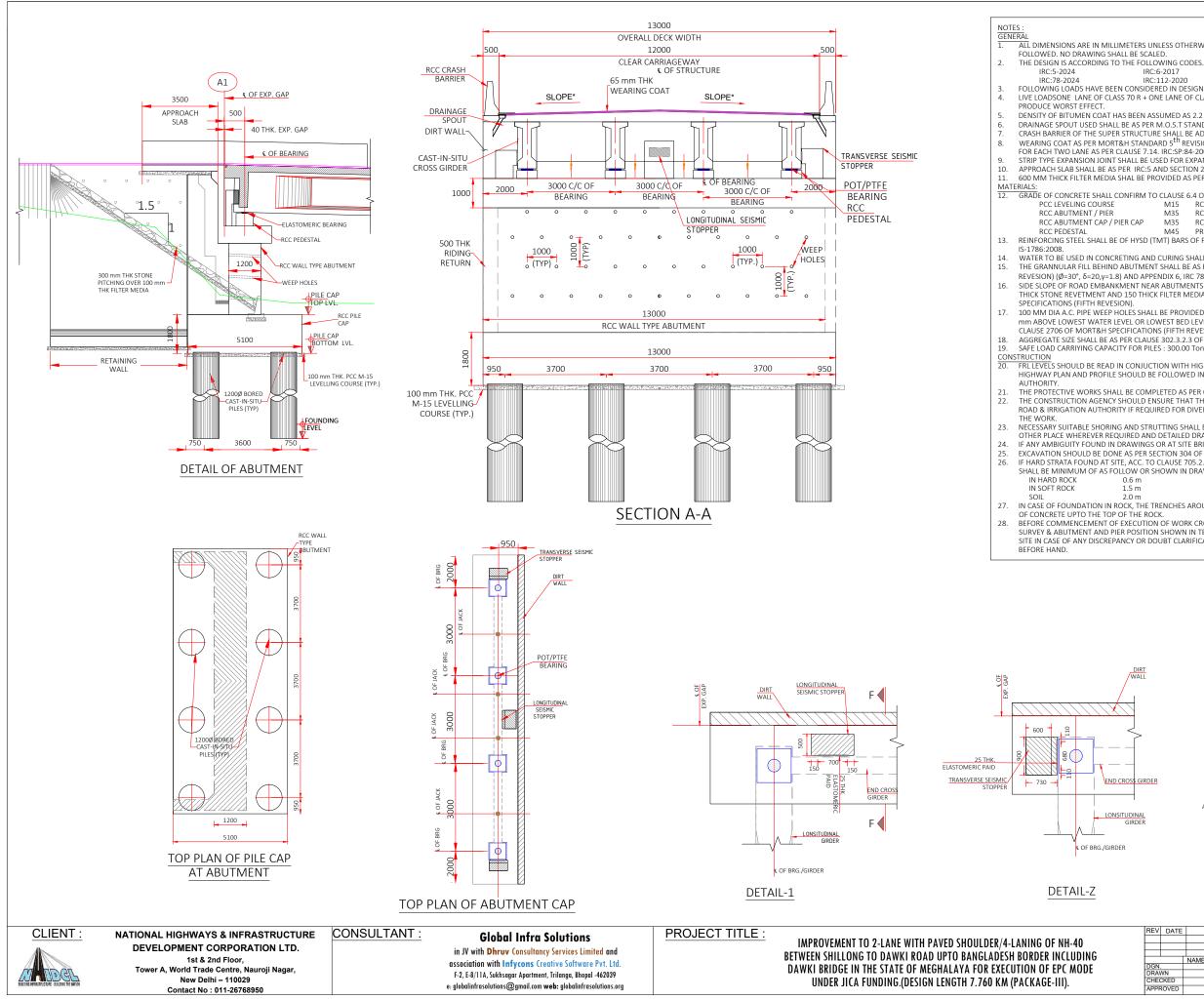
**Global Infra Solutions** 

in JV with **Dhruv** Consultancy Services Limited and association with Infycons Creative Software Pvt. Ltd. F-2, E-8/11A, Sukhsagar Apartment, Trilanga, Bhopal -462039 e: globalinfrasolutions@gmail.com **web:** globalinfrasolutions.org Č

PROJECT TITLE :

IMPROVEMENT TO 2-LANE WITH PAVED SHOULDER/4-LANING OF NH-40 BETWEEN SHILLONG TO DAWKI ROAD UPTO BANGLADESH BORDER INCLUDING DAWKI BRIDGE IN THE STATE OF MEGHALAYA FOR EXECUTION OF EPC MODE UNDER JICA FUNDING.(DESIGN LENGTH 7.760 KM (PACKAGE-III).



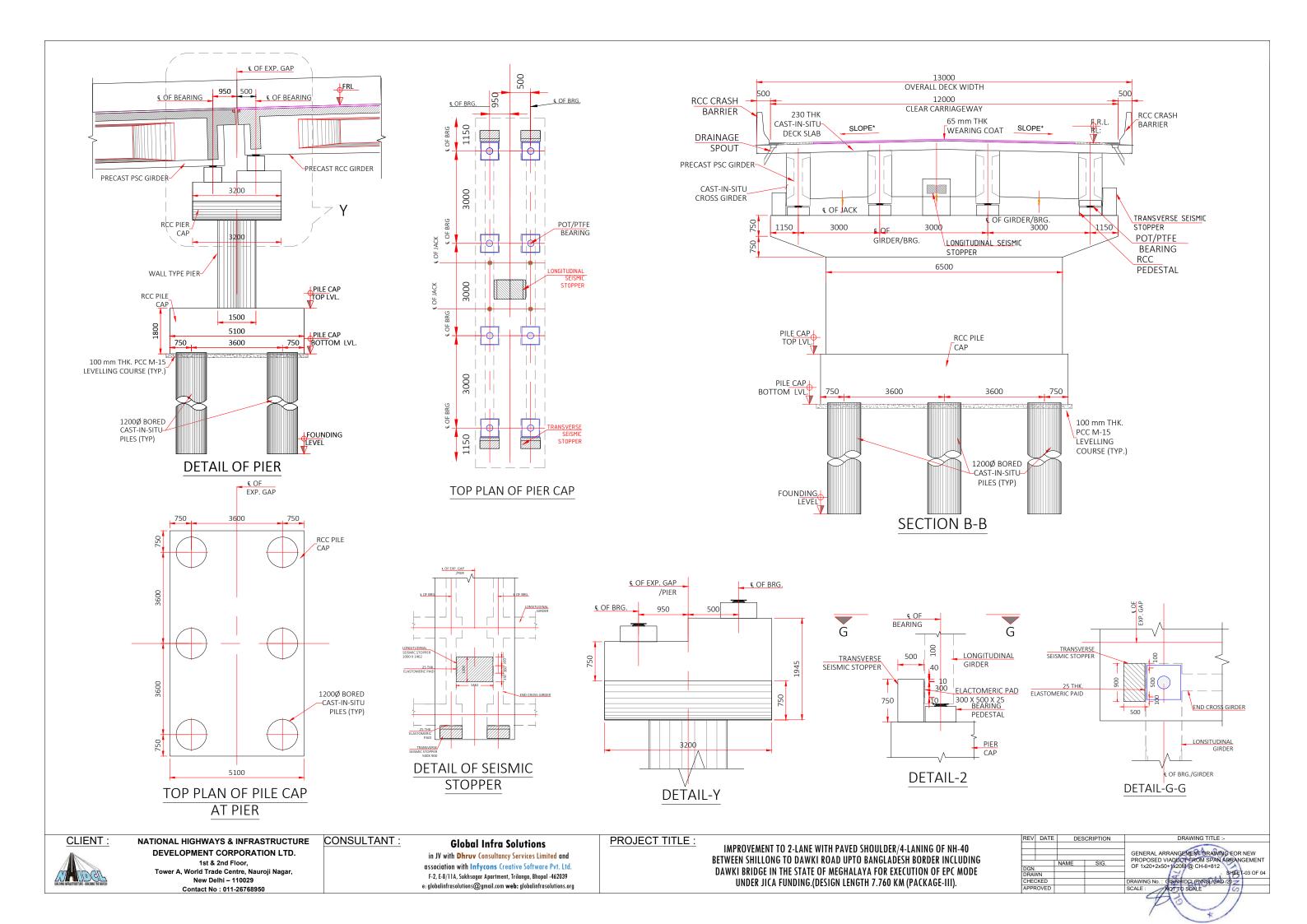


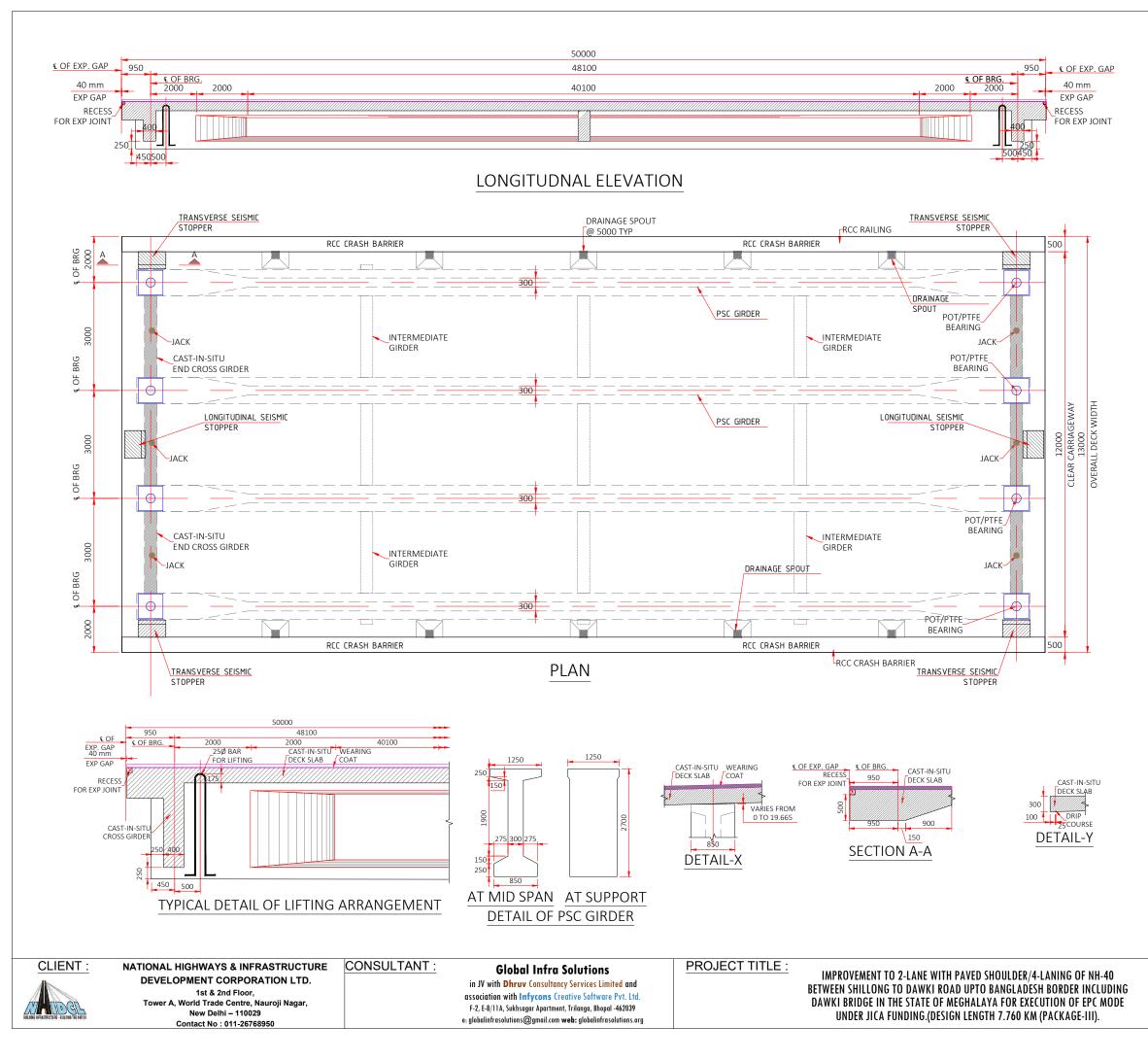
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS ARE TO BE IRC:6-2017 IRC·112-2020 FOLLOWING LOADS HAVE BEEN CONSIDERED IN DESIGN. LIVE LOADSONE LANE OF CLASS 70 R + ONE LANE OF CLASS A OR THREE LANE OF CLASS A TRANS WHICHEVER DENSITY OF BITUMEN COAT HAS BEEN ASSUMED AS 2.2 T/M DRAINAGE SPOUT USED SHALL BE AS PER M.O.S.T STANDARD DRAWING NO. SD/205 & IRC 5:2024 CRASH BARRIER OF THE SUPER STRUCTURE SHALL BE ADOPTED FROM IRC:5:2024 WEARING COAT AS PER MORT&H STANDARD STh REVISION CLAUSE 2702.1 AND HAVING UNI DIRECTIONAL CAMBER FOR EACH TWO LANE AS PER CLAUSE 7.14. IRC:SP:84-2009. STRIP TYPE EXPANSION JOINT SHALL BE USED FOR EXPANSION JOINT AND SHALL CONFIRM TO IRC SP:69:2011. APPROACH SLAB SHALL BE AS PER IRC:S AND SECTION 2704 OF MORT&H SPECIFICATIONS (FIFTH REVESION). 600 MM THICK FILTER MEDIA SHAL BE PROVIDED AS PER APPENDIX - 6 OFIRC SP: 78-2024. 12. GRADE OF CONCRETE SHALL CONFIRM TO CLAUSE 6.4 OF IRC 112-2020 AND ARE AS FOLLOWS M15 RCC CAST -IN-SITU PILE M35 RCC DECK SLAB M35 M40 M35 RCC CRASH BARRIER M40 M45 PRECAST PSC I GIRDER M45 13. REINFORCING STEEL SHALL BE OF HYSD (TMT) BARS OF FE-500D, CONFIRMING TO CLAUSE 6.2 OF IRC 112-2020 & IS-1786:2008. WATER TO BE USED IN CONCRETING AND CURING SHALL CONFIRM TO CLAUSE 18.4.5 OF IRC 112-2020. THE GRANNULAR FILL BEHIND ABUTMENT SHALL BE AS PER CLAUSE 305.2 OF MORT&H SPECIFICATIONS (FIFTH REVESION) ( $\phi$ =30°,  $\delta$ =20, $\gamma$ =1.8) AND APPENDIX 6, IRC 78-2024. SIDE SLOPE OF ROAD EMBANKMENT NEAR ABUTMENTS SHALL BE IN SLOPE 1V:1.5H & SHALL BE PROVIDED WITH 300 THICK STONE REVETMENT AND 150 THICK FILTER MEDIA CONFORMING TO CLAUSE 2500 & 2504 OF MORT&H 100 MM DIA A.C. PIPE WEEP HOLES SHALL BE PROVIDED @ 1.0 M C/C HORIZONTALLY & VERTICALLY STAGGERED 100 mm ABOVE LOWEST WATER LEVEL OR LOWEST BED LEVEL WHICH IS HIGHER AT SLOPE 1:20 AS PER IRC 78-2024 & CLAUSE 2706 OF MORT&H SPECIFICATIONS (FIFTH REVESION). AGGREGATE SIZE SHALL BE AS PER CLAUSE 302.3.2.3 OF IRC:21,2000. SAFE LOAD CARRIVING CAPACITY FOR PILES : 300.00 Ton. 
 CONSTRUCTION

 20.
 FRL LEVELS SHOULD BE READ IN CONJUCTION WITH HIGHWAY PLAN AND PROFILE. IN CASE OF DISPERANCY HIGHWAY PLAN AND PROFILE SHOULD BE FOLLOWED IN CONSULTATION WITH DESIGNER AND APPROVING
 THE PROTECTIVE WORKS SHALL BE COMPLETED AS PER CLAUSE 2104.3 AND SECTION 2500. THE CONSTRUCTION AGENCY SHOULD ENSURE THAT THE NECESSARY PERMISSIONS HAS BEEN OBTAINED FROM ROAD & IRRIGATION AUTHORITY IF REQUIRED FOR DIVERTING THE TRAFFIC TEMPORARILY PRIOR TO COMMENCING THE WORK. 23. NECESSARY SUITABLE SHORING AND STRUTTING SHALL BE PROVIDED FOR CASTING OF STRUCTURAL MEMBERS AND OTHER PLACE WHEREVER REQUIRED AND DETAILED DRAWING SHALL BE SUBMITTED BY THE CONTRACTING AGENCY IF ANY AMBIGUITY FOUND IN DRAWINGS OR AT SITE BRING IT TO DESIGNER'S NOTICE BEFORE EXECUTION. EXCAVATION SHOULD BE DONE AS PER SECTION 304 OF MORT&H SPECIFICATIONS (FIFTH REVESION). IF HARD STRATA FOUND AT SITE, ACC. TO CLAUSE 705.2.2, IRC-78:2024, MINIMUM EMBEDMENT OF FOUNDATION SHALL BE MINIMUM OF AS FOLLOW OR SHOWN IN DRAWINGS 0.6 m 1.5 m 2 0 m 27. IN CASE OF FOUNDATION IN ROCK, THE TRENCHES AROUND THE FOOTING SHALL BE FILLED UP WITH M-15 GRADE BEFORE COMMENCEMENT OF EXECUTION OF WORK CROSS SECTION AS THE SITE SHALL BE TAKEN BY PRECISION SURVEY & ABUTMENT AND PIER POSITION SHOWN IN TECHNICALLY SANCTIONED DRAWING SHALL BE VERIFIED ON SITE IN CASE OF ANY DISCREPANCY OR DOUBT CLARIFICATION SHALL BE OBTAINED FROM COMPETENT AUTHORITY € OF EXP. GAP MINIMUM HEIG OF BEARING + PEDESTAL IS 350 DIRT € OF BEARING RCC PEDESTA END CRO GIRDER ABUTMENT CA 2150 1200 RCC WALL TYPE ABUTMENT DETAIL-X DRAWING TITLE REV DATE DESCRIPTION GENERAL ARRANGEMENT DRAWING FOR NEW PROPOSED VIADUCT FROM SPAN ARRANGEMENT OF 1x20+2x50+1x20M @CH-6+812 NAME SIG DGN. DRAWN CHECKED SHEET 02 OF RAWING No. : GIS/NHIDCL/PYNSL/GAD /20 CALE : NOT TO SCALE

SCALE

PROVED





- TESSE ALL DIMENSIONS ARE IN m. UNLESS OIHERWISE MENTIONED. PROPOSED STRUCTURE IS DESIGNED FOR ONE LANE OF I CLASS 70+R ONE LANE OF CLASS A TRANS WITCHEVER PRODUCE WORST EFFECT.
- CONCRETE SHALL BE DESIGN MIX AND HAVE MINIMUM 28 DAYS CHARACTERISTIC STRENGTH OF 35 MPa ON 150mm CUBES FOR PRECAST PSC GIRDER, DECK SLAB, END CROSS GIRDERS AND 40 MPa FOR CRASH BARRIERS.

- FOR CRASH BARRIERS. THE LOCATION OF JACKS FOR LIFTING OF THE SUPERSTRUCTURE TO REPLACE BEARINGS ETC. IS SHOWN. THUSTTHIS SHALL BE DISTINCTLY ETCHED FOR EASY IDENTIFICATION ON THE END DIAPHRAGM AND ABUTMENT CAP. THE REINFORCING STEEL SHALL BE OF TMT (GRADE FE 500D) BAR CONFORMING TO IS:1786:2008. CLEAR COVER TO OUTERMOST STEEL IS SOmm. DURING THE UIFTING OPERATION OF SUPERSTRUCTURE ALL THE JACKS PLACED UNDER THE END DIAPHRAGM IN LINE WITH THE BEARINGS SHALL BE OPERATED SIMULTANEOUSLY USING SINGLE OPERATING CONSOLE, GROUPING THE PUMP AND CONTROL SYSTEM SO AS TO ENSURE THAT THE REACTIONS ON ALL THE JACKS ARE EQUAL AT ALL TIMES. PRECAST GIRDERS SHALL BE CAST IN ONE CONCRETING OPERATION IN CASTING YARD WITHOUT ANY CONSTRUCTION JOINT.
- CONSTRUCTION JOINT. TOP SURFACE OF THE GIRDERS ALONG WITH FACE OF PRECAST CROSS GIRDER SHALL BE HACKED TO
- REMOVE THE LAITANCE BEFORE ERECTION AT SITE. ADEQUACY AND STRENGTH OF 25Ø BAR HOOK MAY BE GOT CHECKED BEFORE LIFTING GIRD

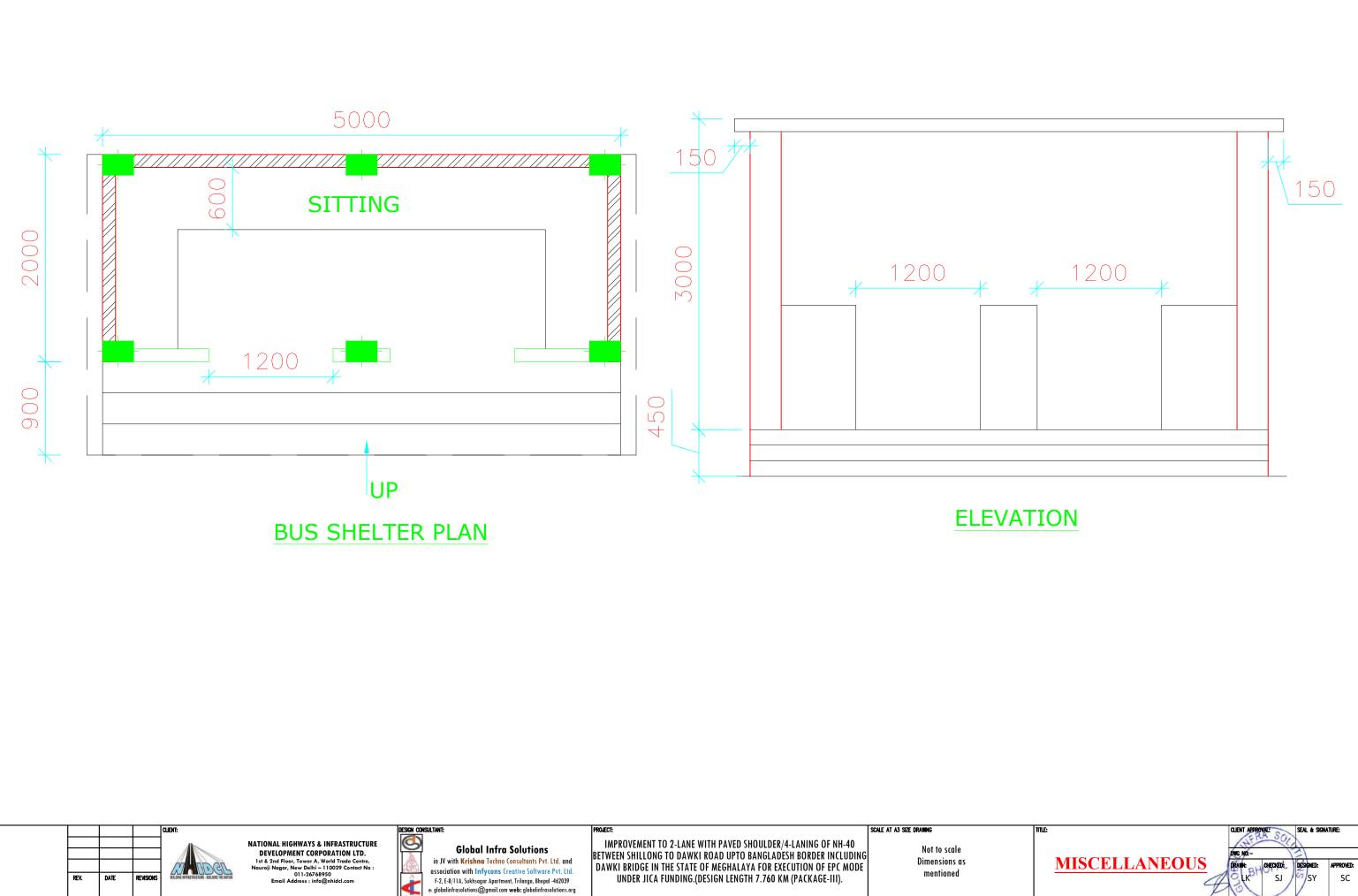
LEGENDS

	CAST-IN-SITU PORTION
$\bigcirc$	BEARING IN PLAN
	BEARING IN ELEVATION
•	JACK LOCATION IN PLAN
ŧ	JACK LOCATION IN SECTION
	CONSTRUCTION JOINT

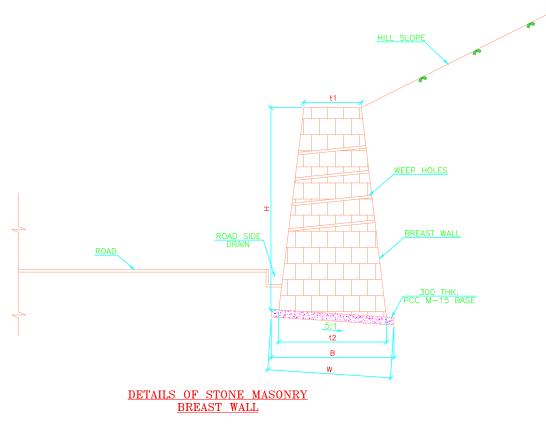
REV	DATE	DESCRIPTION		DRAWING TITLE :-
DGN. DRAV	WN	NAME	SIG.	GENERAL ARRANGEMENT DRAWING FOR NEW PROPOSED VIADUCT FROM SPANARRANGEMENT OF 1x20+2x50+1x20// @ CH-6+812 SHEET-04 0F 04
CHEC	CKED			DRAWING No. : GIS/NHIDCL/PYNSL/GAD /20
APPF	ROVED			SCALE : NOT TO SCALE
				CHARLE II

# **MISCELLANEOUS**

(in)







S	OF	STONE	MAS

	Wall		123	Di	Inclined
Height (mm)	Top Width (mm)	Bottom Width (mm)	Base Width (mm)	Dip Slope of Base	Base Width (mm)
(H)	(t1)	(t2)	(B)		(W)
1000	300	700	1300	5:1	1326
1500	400	1000	1600	5:1	1632
2000	500	1300	1900	5:1	1938
2500	600	1700	2300	5:1	2346
3000	650	1910	2510	5:1	2560
3500	700	2500	3100	5:1	3161
4000	750	3200	3800	5:1	3875
4500	800	4100	4700	5:1	4793
5000	850	5000	5600	5:1	5711
5500	900	6100	6700	5:1	6833
6000	1000	8410	9010	5:1	9188

CLIENT: REV. DATE REVISIONS

NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. 1st & 2nd Floor, Tower A, World Trade Centre, Nauroji Nagar, New Delhi – 110029 Contact No : 011-26768950 Email Address : info@nhidcl.com



association with Infycons Creative Software Pvt. Ltd. F-2, E-8/11A, Sukhsagar Apartment, Trilanga, Bhopal -462039 e: globalinfrasolutions@gmail.com **web:** globalinfrasolutions.org

PROJECT

IMPROVEMENT TO 2-LANE WITH PAVED SHOULDER/4-LANING OF NH-40 BETWEEN SHILLONG TO DAWKI ROAD UPTO BANGLADESH BORDER INCLUDING DAWKI BRIDGE IN THE STATE OF MEGHALAYA FOR EXECUTION OF EPC MODE UNDER JICA FUNDING.(DESIGN LENGTH 7.760 KM (PACKAGE-III).

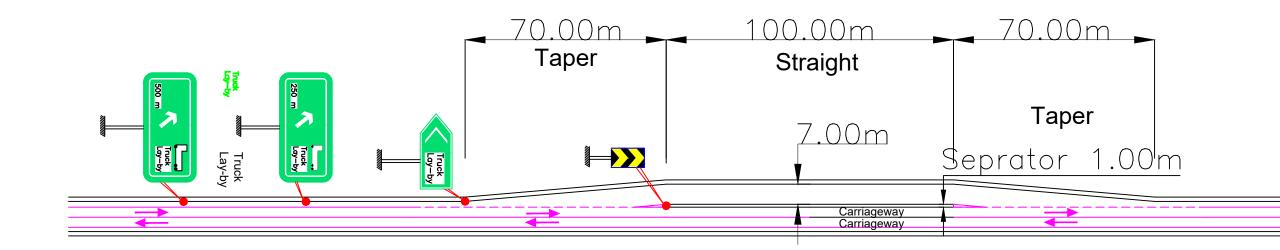
SCALE AT A3 SIZE DRAWING

Not to scale Dimensions as mentioned



- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED. LEVELS ARE IN METERS.
   MIN. 600 MM THK. FILTER MEDIA SHALL BE PROVIDED BEHIND BREAST WALL ABOVE GROUND LEVEL.
   100 Ø WEEP HOLES WITH A.C. PIPE @ 1.0 M C/C VERTICALLY & HORIZONTALLY STAGGERED SHALL BE PROVIDED ABOVE G.L.
   WALL GEOMETRY: FRONT FACE INCLINED, BACK FACE INCLINED, BASE INCLINED WITH HILL.
   BACKFILL TOP: INCLINED WITH SURCHARGE





Typical Layout of Truck Lay Bye





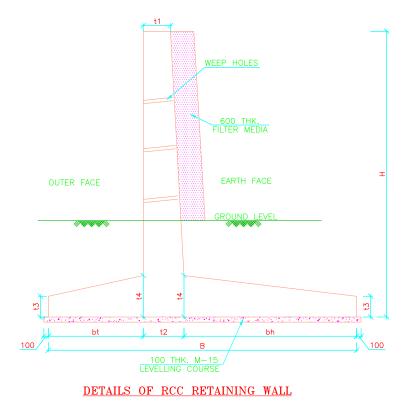
**Global Infra Solutions** in JV with Krishna Techno Consultants Pvt. Ltd. and association with Infycons Creative Software Pvt. Ltd. ROJECT

IMPROVEMENT TO 2-LANE WITH PAVED SHOULDER/4-LANING OF NH-40 Between Shillong to dawki road upto bangladesh border including DAWKI BRIDGE IN THE STATE OF MEGHALAYA FOR EXECUTION OF EPC MODE UNDER JICA FUNDING.(DESIGN LENGTH 7.760 KM (PACKAGE-III).

SCALE AT A3 SIZE DRAWING

Not to scale Dimensions as mentioned





DIMENSIONAL DETAILS OF RETAINING WALL							
H (mm)	B (mm)	b _t (mm)	b _h (mm)	t ₁ (mm)	t ₂ (mm)	t ₃ (mm)	t ₄ (mm)
2000	1400	420	810	170	170	300	200
2500	1750	530	1010	210	210	300	250
3000	2100	630	1220	250	250	300	300
3500	2450	740	1410	300	300	300	350
4000	2800	840	1620	300	340	300	400
4500	3150	950	1820	300	380	300	450
5000	3500	1050	2030	300	420	300	500
5500	3850	1160	2230	300	460	300	550
6000	4200	1260	2440	300	500	300	600
6500	4550	1370	2630	300	550	300	650
7000	4900	1470	2840	300	590	300	700
7500	5250	1580	3040	300	630	380	750
8000	5600	1680	3250	300	670	400	800
8500	5950	1790	3450	300	710	430	850
9000	6300	1890	3660	300	750	450	900
9500	6650	2000	3850	300	800	480	950
10000	7000	2100	4060	300	840	500	1000
10500	7350	2210	4260	300	880	530	1050
11000	7700	2310	4470	300	920	550	1100
11500	8050	2420	4670	300	960	580	1150
12000	8400	2520	4880	300	1000	600	1200
12500	8750	2630	5070	300	1050	630	1250
13000	9100	2730	5280	300	1090	650	1300

CLIENT: REV. DATE REVISIONS

NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. 1st & 2nd Floor, Tower A, World Trade Centre, Nauroji Nagar, New Delhi – 110029 Contact No : 011-26768950 Email Address : info@nhidcl.com



**Global Infra Solutions** in JV with Krishna Techno Consultants Pvt. Ltd. and association with Infycons Creative Software Pvt. Ltd.

F-2, E-8/11A, Sukhsagar Apartment, Trilanga, Bhopal -462039

PROJECT:

IMPROVEMENT TO 2-LANE WITH PAVED SHOULDER/4-LANING OF NH-40 Between Shillong to Dawki Road upto Bangladesh Border Including DAWKI BRIDGE IN THE STATE OF MEGHALAYA FOR EXECUTION OF EPC MODE UNDER JICA FUNDING.(DESIGN LENGTH 7.760 KM (PACKAGE-III).

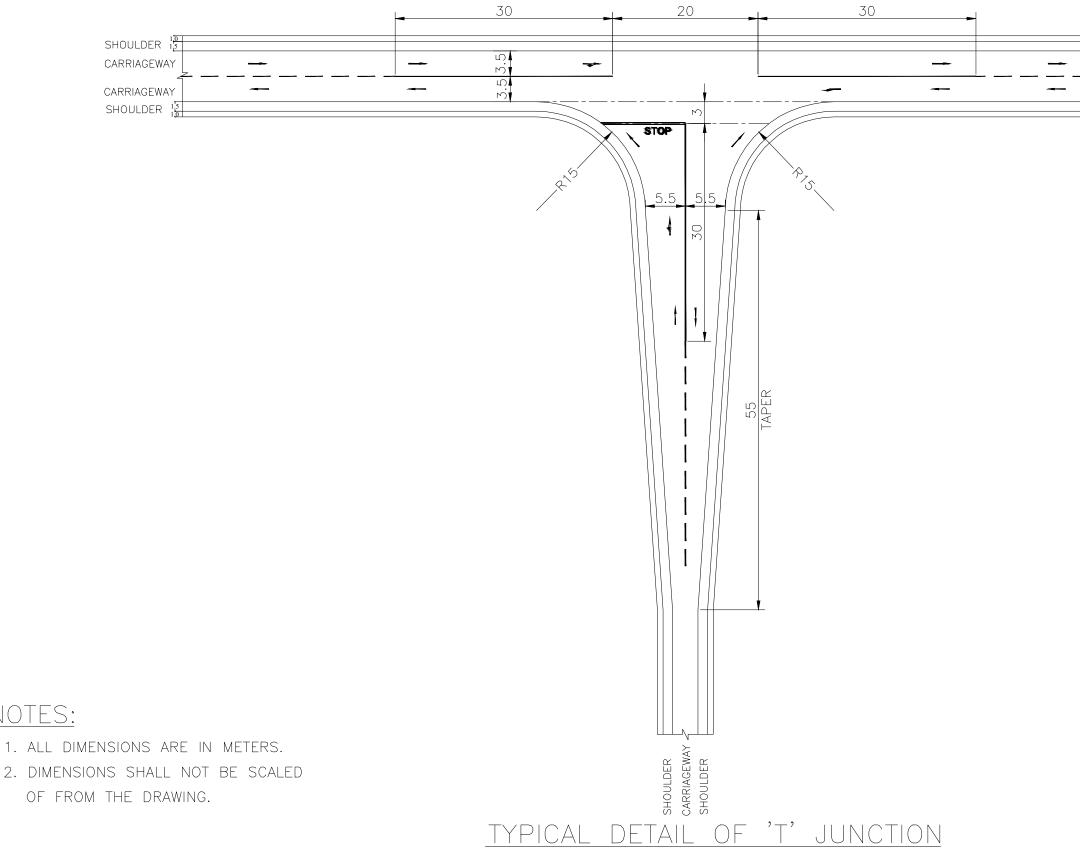
### SCALE AT A3 SIZE DRAWING

Not to scale Dimensions as mentioned

NOTES:

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED. LEVELS ARE IN METERS.
   MIN. 600 MM THK. FILTER MEDIA SHALL BE PROVIDED BEHIND BREAST WALL ABOVE GROUND LEVEL.
   BACKFILLING BEHIND BOX SHALL CONSIST OF SELECTED EARTH CONFORMING TO APPENDIX 6 OF IRC: 78-2014 HAVING PROPERTIES DENSITY=2 T/CUM, PHI=30, DELTA=15
   100 Ø WEEP HOLES WITH A.C. PIPE @ 1.0 M C/C VERTICALLY & HORIZONTALLY STAGGERED SHALL BE PROVIDED ABOVE G.L.





## NOTES:

CLIEN

REV. DATE REVISIONS

- 2. DIMENSIONS SHALL NOT BE SCALED
  - OF FROM THE DRAWING.

NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. 1st & 2nd Floor, Tower A, World Trade Centre, Nauroji Nagar, New Delhi – 110029 Contact No : 011-26768950 Email Address : info@nhidcl.com

**Global Infra Solutions** in JV with **Dhruv** Consultancy Services Limited and 6 association with Infycons Creative Software Pvt. Ltd.
 F-2, E-8/11A, Sukhsagar Apartment, Trilanga, Bhopal - 462039
 e: globalinfrasolutions@gmail.com web: globalinfrasolutions.org PROJECT:

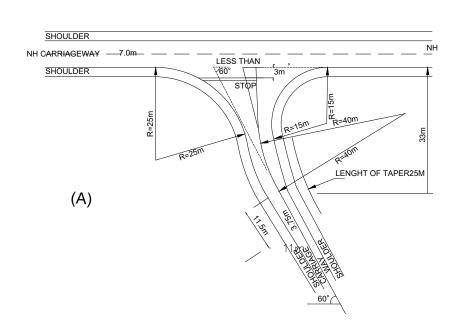
IMPROVEMENT TO 2-LANE WITH PAVED SHOULDER/4-LANING OF NH-40 BETWEEN SHILLONG TO DAWKI ROAD UPTO BANGLADESH BORDER INCLUDING DAWKI BRIDGE IN THE STATE OF MEGHALAYA FOR EXECUTION OF EPC MODE UNDER JICA FUNDING.(DESIGN LENGTH 7.760 KM (PACKAGE-III).

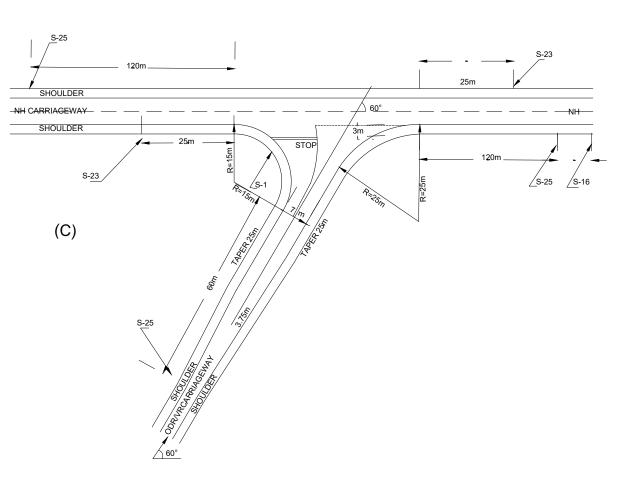
SCALE AT A3 SIZE DRAWING

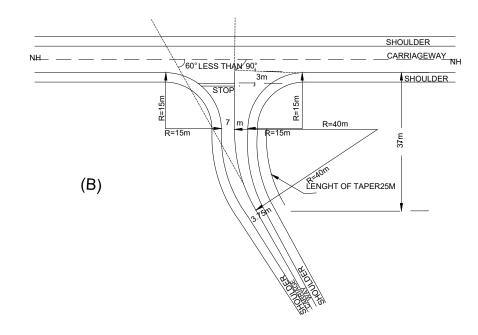
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Junction









### NOTES:

CLIEN

REV. DATE REVISIONS

- 1. ALL DIMENSIONS ARE IN METERS.
- 2. DIMENSIONS SHALL NOT BE SCALED OF FROM THE DRAWING.

NATIONAL HIGHWAYS & INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. 1st & 2nd Floor, Tower A, World Trade Centre, Nauroji Nagar, New Delhi – 110029 Contact No : 011-26768950 Email Address : info@nhidcl.com

DESIGN CONSULTANT: Global Infra Solutions in JV with Dhruv Consultancy Services Limited and association with Infycons Creative Software Pvt. Ltd. F-2, F-8/11A, Sukhsagar Apartment, Trilanga, Bhopal -462039 e: globalinfrasolutions@gmail.com web: globalinfrasolutions.org PROJECT:

IMPROVEMENT TO 2-LANE WITH PAVED SHOULDER/4-LANING OF NH-40 Between Shillong to dawki road upto bangladesh border including Dawki Bridge in the state of meghalaya for execution of EPC mode Under Jica Funding.(design length 7.760 km (package-III). SCALE AT A3 SIZE DRAWING

Junction	G
	DWC

GNATURE:				
1				
sc/2024/				
SIGNED:	APPROVED:			
SC	LA			

GLOBAL/NHIDCL

