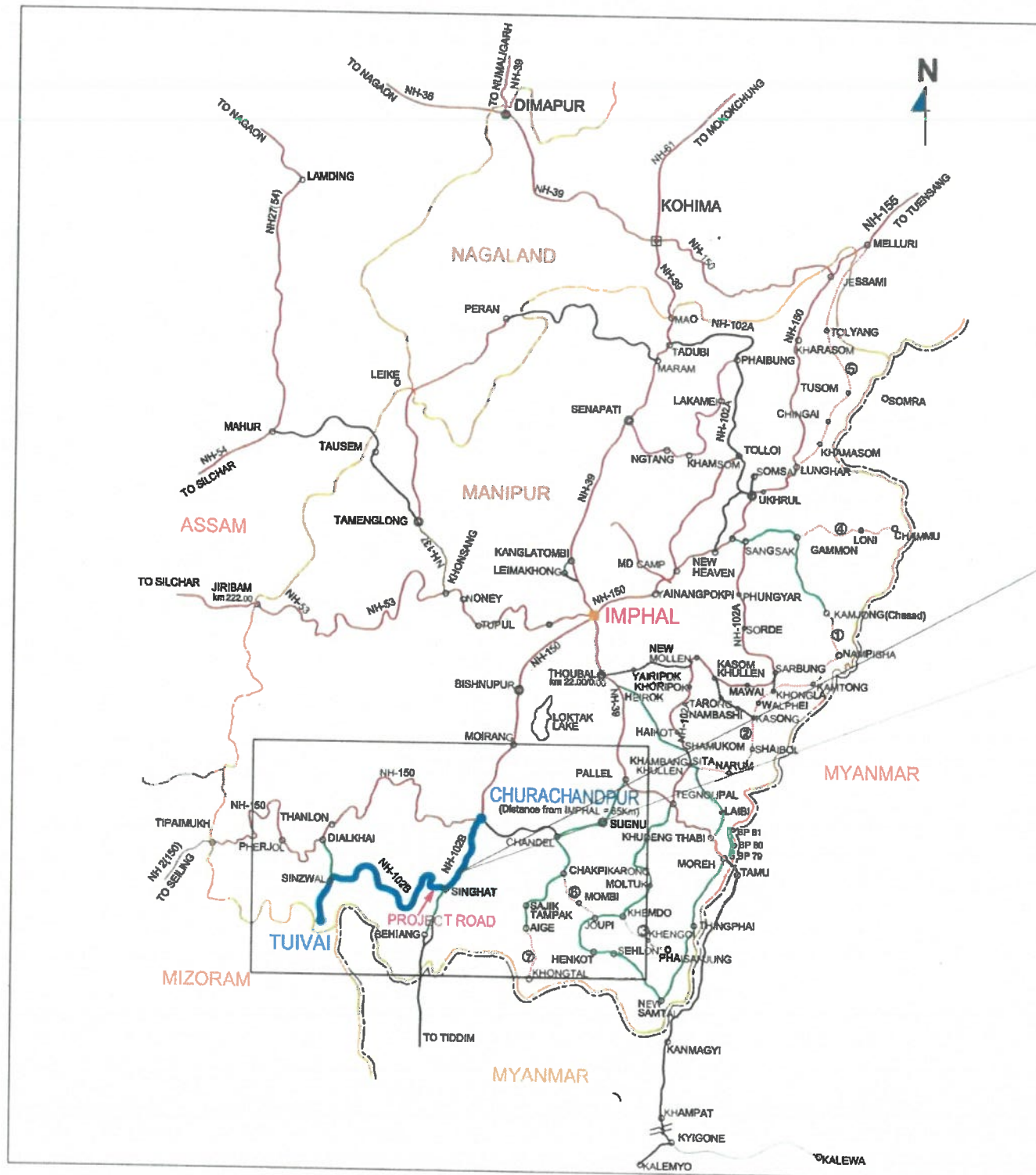


Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction mode.



PLAN & LONGITUDINAL PROFILE

PACKAGE - 4B

(Km. 130+000 to Km. 141+166.964)

MARCH - 2022



EPC CONTRACTOR:

GPT

JC - 25, Sector - III, Salt Lake,
Kolkata - 700098.

DESIGN CONSULTANT:



SPS Technocrats Pvt. Ltd.

638 & 641, JMD Megapolis, Sector 48,
Gurgaon, Haryana - 122018.
Website : www.spstpl.com
Email: info@spstpl.com

CONTENT SHEET

SR. NO.	DRAWING NAME	DRAWING NO	NO OF SHEETS
01	LIST OF DRAWINGS	GPT/CCT/4B/HW/GEN/LOD/01	01
02	LEGENDS & ABBREVIATIONS	GPT/CCT/4B/HW/GEN/LEGEND/01	01
03	HORIZONTAL ALIGNMENT REPORT	GPT/CCT/4B/HW/GEN/HOR/01 TO 05	05
04	VERTICAL ALIGNMENT REPORT	GPT/CCT/4B/HW/GEN/VER/01	01
05	TYPICAL CROSS SECTION	GPT/CCT/4B/HW/GEN/TCS/01 TO 09	09
06	PLAN & LONGITUDINAL PROFILE	GPT/CCT/4B/HW/PPNP/01 TO 22	44



Shambhavi Techno Solutions Pvt. Ltd

Managing Director

[Signature]



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROJECT CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	DESIGNED:	CHECKED:	DATE:	TITLE:	SCALE:	DWG. NO:	REV:
				GPT JC - 25, Sector - III, Salt Lake, Kolkata - 700098.	 IWS CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES C-5/2ND FLOOR, RK TOWER, SECTOR 4 VAISHALI, GHANABAD-201010.	 PP-97, Tankapuri Road, BBSR-16, Odisha	 SHAMBHAVI TECHNO SOLUTIONS PVT. LTD. E-82, Rajesh Kumar Path, S.K. Park, Boring Road, Patna-800001	 SPS Technocrats Pvt. Ltd. # 838 & 841, JMD Megapole, Sector 48, Gurgaon, Haryana - 122018. Website : www.spspl.com Email : info@spspl.com	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuival section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADIEP	DHEERESH	VIPUL	MAR - 2022	LIST OF DRAWINGS	AS SHOWN	GPT/CCT/4B/HW/GEN/LOD/01	RO

LEGENDS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
LEGEND FOR PLAN			
	BUILDING (P, SP, K, UC)		COVERED DRAIN
	CULVERT, BRIDGE		11KV ELECTRIC LINE
	GATE		33KV ELECTRIC LINE
	TELEPHONE POLE		TOILET
	ELECTRIC POLE		EXISTING CARRIAGEWAY
	TEMPORARY BENCH MARK		REFERENCE PILLAR
	SIDE ROAD		GPS PILLAR
	NALA & RIVER		SLAB CULVERT
	TRANSFORMER		PROPOSED CARRIAGEWAY EDGE
	KILOMETER POST		PROPOSED HS EDGE
	TREE		PROPOSED CENTER LINE
	VILLAGE NAME		PROPOSED SHOULDER EDGE
	BOUNDARY WALL		PROPOSED RIGHT - OF - WAY
	SURVEY STATION		CONTOUR LINE
	FENCING		PROPOSED TOE LINE
	AGRICULTURAL FIELD		CUTTING TOE LINE
	LAMP POST		FILLING TOE LINE
	RETAINING WALL		EARTHEN SHOULDER
	GARDEN		HOR. TANGENT POINT
	WALL		VER. TANGENT POINT
	TEMPLE		PROP. BOX CULVERT

ABBREVIATIONS

SYMBOL	DESCRIPTION
$\triangle$	TOTAL DEVIATION ANGLE OF CURVE
R	RADIUS OF CIRCULAR CURVE
Ts	TANGENT LENGTH
Es	APEX DISTANCE
Lc	LENGTH OF CIRCULAR CURVE
e	SUPER ELEVATION
Ls	LENGTH OF TRANSITION CURVE
$\triangle_s$	DEVIATION ANGLE OF TRANSITION CURVE
$\triangle_c$	DEVIATION OR CENTRAL ANGLE OF CIRCULAR CURVE
L	TOTAL LENGTH OF CURVE
S	SHIFT
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
TS	POINT OF CHANGE FROM TANGENT TO SPIRAL
SC	POINT OF CHANGE FROM SPIRAL TO CIRCULAR CURVE
CS	POINT OF CHANGE FROM CIRCULAR CURVE TO SPIRAL
ST	POINT OF CHANGE FROM SPIRAL TO TANGENT
IL	INVERT LEVEL OF CULVERT
PVI	POINT OF VERTICAL INTERSECTION
Lvs	LENGTH OF VALLEY CURVE
Lsc	LENGTH OF SUMMIT CURVE
HIP	HORIZONTAL INTERSECTION POINT



Shambhavi Techno Solutions Pvt. Ltd.

Managing Director



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROJECT CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	CHECKED:	TITLE:
				 JC - 25, Sector - III, Salt Lake, Kolkata - 700098.	 IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES C-52ND FLOOR, RK TOWER, SECTOR-4, VAISHALI, GHANASAD-201010.	 PP-87, Tankapuri Road, BBSR-18, Odisha	 E-82, Rajesh Kumar Path, S.K.Puri, Boring Road, Patna-800001	 # 638 & 641, JMD Megapole, Sector 48, Gurgaon, Haryana - 122018, Website : www.spspl.com Email : info@spstpl.com	Widening to 2 (Two) Lane with Hard shoulder of Churuchandpur to Tuihal section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADEEP	CHEERESH	LEGENDS & ABBREVIATIONS
										VIPUL		SCALE: AS SHOWN
										DATE: MAR - 2022		REV: RO
												DRG. NO: GPT/CCT/4B/HWIGEN/LEGEND/01

REFERENCE PILLAR DETAILS

REFERENCE PILLAR DETAILS

TBM No.	Easting (m)	Northing (m)	R.L. (m)
GPS-4	529855.861	2662576.336	6.482
C-4A	529855.251	2662576.344	804.457
TBM-C26	529538.901	2662577.268	763.61
TBM-C28	527962.501	2660613.890	19.517
TBM C30	527756.043	2660343.712	813.728
TBM-C31	527599.916	2660138.127	804.675
TBM-C32	527594.668	2660135.282	804.33
TBM-B20	527455.012	2659744.816	794.574
TBM B19	527423.001	2659741.124	794.692
TBM-B16	527012.997	2659721.165	805.642
TBM B15	527007.371	2659766.831	766.527
GPS-5	526974.616	2659627.979	756.879
GPS-5A	526936.732	2659594.215	756.889
GPS-6	526199.953	2657484.206	9.023
C-6A	526207.521	2657447.180	526.974

APPROVED



Shambhavi Techno Solutions Pvt. Ltd.

Managing Director

Handwritten signature



Rev.	Date	Description



EPC CONTRACTOR:

GPT

JC - 25, Sector - III, Salt Lake,
Kolkata - 700096.

AUTHORITY ENGINEER:

M/S CHAITANYA PROJECTS
CONSULTANCY PVT.LTD.
IN ASSOCIATION WITH MSPARK
FUTURISTICS AND ASSOCIATES
C-2ND FLOOR, R.K.TOWER,
SECTOR-4, VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT:

SUVADRA
CONSULTANTS
PP-87, Tanikapani Road,
BBSR-18, Odisha

PROJECT CONSULTANT:

**SHAMBHAVI TECHNO
SOLUTIONS PVT.LTD.**
E-82, Rajesh Kumar Path,
S.K.Puri, Boring Road,
Patna-800001

DESIGN CONSULTANT:

SPS Technocrats Pvt. Ltd.
638 & 641, JMD Mega-pole, Sector 48,
Gurgaon, Haryana - 122018.
Website : www.spspl.com
Email : info@spstpl.com

PROJECT:

Widening to 2 (Two) Lane with Hard
shoulder of Churachandpur to Tuival section
of NH 102B from Km 130.000 to Km 141.029
(Package-4B) in the State of Manipur on
Engineering, Procurement & Construction
(EPC) mode.

DRAWN	PRADIEP
DESIGNED	DHEERESH
CHECKED	VIPUL
DATE:	MAR - 2022

TITLE:	REFERENCE PILLAR DETAILS
SCALE:	AS SHOWN
REV:	RO
DRG. NO:	GPT/CCT4B/NW/GEN/REF.PILLAR/01

ALIGNMENT REPORT

HORIZONTAL ALIGNMENT REPORT

HIP / Curve No.	HIP		Deflection Angle			Element	Start			End			Length (m)	Bearing (dd mm ss)	Hand of Arc	Design Speed (KM/H)	Radius (m)	Superelevation (%)
	Easting (m)	Northing (m)	Deg	Min	Sec		Chainage (m)	Easting (m)	Northing (m)	Chainage (m)	Easting (m)	Northing (m)						
1	529877.805	2663023.385	31	57	31.3	Start	130000	529887.09	2663056.401	130012.431	529883.725	2663044.434	12.431					
						Transition	130012.431	529883.725	2663044.434	130027.431	529878.952	2663030.230	15.000					
						Arc	130027.431	529878.952	2663030.23	130040.320	529872.200	2663019.292	12.889	Right	20.00	50	3.56%	
						Transition	130040.32	529872.2	2663019.292	130055.320	529861.641	2663008.659	15.000					
2	529837.519	2662986.684	286	6	3.6	Straight	130055.32	529861.641	2663008.659	130055.741	529861.330	2663008.376	0.421	227 39 58				
						Transition	130055.741	529861.33	2663008.376	130075.741	529849.116	2662992.820	20.000					
						Arc	130075.741	529849.116	2662992.82	130088.517	529848.959	2662980.260	12.776	Left	20.00	-20	7.00%	
						Transition	130088.517	529848.959	2662980.26	130108.517	529860.780	2662964.403	20.000					
3	529882.398	2662943.696	326	16	32.3	Straight	130108.517	529860.78	2662964.403	130113.210	529864.169	2662961.157	4.693	133 46 1.6				
						Transition	130113.21	529864.169	2662961.157	130133.210	529879.474	2662948.338	20.000					
						Arc	130133.21	529879.474	2662948.338	130142.840	529887.871	2662944.077	9.430	Left	30.00	-50	7.00%	
						Transition	130142.84	529887.871	2662944.077	130162.640	529907.254	2662938.294	20.000					
4	529931.535	2662934.994	63	51	15	Straight	130162.64	529907.254	2662938.294	130164.405	529908.992	2662938.988	1.785	100 2 34				
						Transition	130164.405	529908.992	2662938.988	130184.405	529927.628	2662932.361	20.000					
						Arc	130184.405	529927.628	2662932.361	130186.694	529929.329	2662930.831	2.289	Right	20.00	20	7.00%	
						Transition	130186.694	529929.329	2662930.831	130206.694	529937.885	2662912.968	20.000					
5	529952.245	2662863.257	105	53	22.1	Straight	130206.694	529937.885	2662912.968	130220.968	529941.844	2662899.285	14.274	163 53 48.9				
						Transition	130220.968	529941.844	2662899.285	130240.968	529944.109	2662879.636	20.000					
						Arc	130240.968	529944.109	2662879.636	130257.930	529934.240	2662866.464	16.962	Right	20.00	20	7.00%	
						Transition	130257.93	529934.24	2662866.464	130277.930	529914.746	2662863.117	20.000					
6	529874.458	2662862.967	12	3	12.7	Straight	130277.93	529914.746	2662863.117	130294.877	529897.800	2662863.054	16.947	269 47 11				
						Transition	130294.877	529897.8	2662863.054	130309.877	529882.803	2662863.248	15.000					
						Arc	130309.877	529882.803	2662863.248	130326.433	529866.341	2662864.924	16.556	Right	40.00	150	4.74%	
						Transition	130326.433	529866.341	2662864.924	130341.433	529851.612	2662867.756	15.000					
7	529769.749	2662884.918	23	5	40.3	Straight	130341.433	529851.612	2662867.756	130366.916	529807.096	2662877.089	45.483	281 50 23.7				
						Transition	130366.916	529807.096	2662877.089	130401.916	529792.470	2662860.410	15.000					
						Arc	130401.916	529792.47	2662860.41	130447.378	529750.903	2662898.387	45.482	Right	40.00	150	4.74%	
						Transition	130447.378	529750.903	2662898.387	130462.378	529738.466	2662906.769	15.000					
8	529689.36	2662941.07	30	56	47.7	Straight	130462.378	529738.466	2662906.769	130495.324	529711.456	2662925.636	32.948	304 56 4				
						Transition	130495.324	529711.456	2662925.636	130515.324	529695.729	2662937.952	20.000					
						Arc	130515.324	529695.729	2662937.952	130528.272	529687.492	2662947.911	12.948	Right	30.00	61	6.56%	
						Transition	130528.272	529687.492	2662947.911	130548.272	529678.346	2662965.670	20.000					
9	529682.928	2663000.107	275	13	25.3	Straight	130548.272	529678.346	2662965.67	130549.042	529678.032	2662966.373	0.770	335 52 51.7				
						Transition	130549.042	529678.032	2662966.373	130584.042	529670.870	2662979.511	15.000					
						Arc	130584.042	529670.87	2662979.511	130596.390	529642.451	2662991.884	32.348	Left	20.00	-32	5.56%	
						Transition	130596.39	529642.451	2662991.884	130611.390	529627.959	2662988.138	15.000					
10	529500.306	2662944.444	297	33	19.6	Straight	130611.39	529627.959	2662988.138	130690.252	529553.346	2662962.599	78.862	251 6 17				
						Transition	130690.252	529553.346	2662962.599	130705.252	529539.319	2662967.302	15.000					
						Arc	130705.252	529539.319	2662967.302	130777.441	529494.584	2662903.768	72.189	Left	30	-80	5.00%	
						Transition	130777.441	529494.584	2662903.768	130792.441	529491.865	2662889.022	15.000					
11	529482.278	2662826.08	331	28	41.5	Straight	130792.441	529491.865	2662889.022	130810.469	529489.150	2662871.200	18.028	188 39 36.6				
						Transition	130810.469	529489.15	2662871.2	130825.469	529487.139	2662856.338	15.000					
						Arc	130825.469	529487.139	2662856.338	130885.138	529492.925	2662797.343	59.869	Left	40.00	-150	4.74%	
						Transition	130885.138	529492.925	2662797.343	130900.138	529497.784	2662783.154	15.000					
12	529569.478	2662584.688	119	23	32.9	Straight	130900.138	529497.784	2662783.154	131051.808	529549.314	2662640.507	151.670	160 8 18				
						Transition	131051.808	529549.314	2662640.507	131086.808	529553.208	2662626.064	15.000					
						Arc	131086.808	529553.208	2662626.064	131114.322	529525.855	2662593.274	47.514	Right	20.00	30	5.93%	
						Transition	131114.322	529525.855	2662593.274	131129.322	529510.948	2662594.515	15.000					
13	529417.312	2662610.236	35	26	8	Straight	131129.322	529510.948	2662594.515	131194.702	529448.471	2662805.340	65.380	279 31 50.9				
						Transition	131194.702	529448.471	2662606.34	131214.702	529426.980	2662609.719	20.000					
						Arc	131214.702	529426.98	2662609.719	131232.428	529411.276	2662617.806	17.726	Right	30.00	61	6.56%	
						Transition	131232.428	529411.276	2662617.806	131252.428	529398.393	2662631.131	20.000					
14	529354.242	2662673.232	251	21	36.9	Straight	131252.428	529398.393	2662631.131	131286.317	529386.568	2662640.946	13.889	314 57 58.9				
						Transition	131286.317	529386.568	2662640.946	131286.317	529370.777	2662652.980	20.000					
						Arc	131286.317	529370.777	2662652.98	131313.720	529345.072	2662648.756	27.403	Left	20.00	-25	7.00%	
						Transition	131313.72	529345.072	2662648.756	131333.720	529333.980	2662632.284	20.000					
15	529280.389	2662523.98	313	57	2.2	Straight	131333.72	529333.98	2662632.284	131383.285	529311.999	2662587.861	49.585	206 19 37.8				
						Transition	131383.285	529311.999	2662587.861	131398.285	529305.572	2662574.309	15.000					
						Arc	131398.285	529305.572	2662574.309	131503.842	529299.616	2662471.088	105.557	Left	40.00	-150	4.74%	
						Transition	131503.842	529299.616	2662471.088	131518.842	529304.441	2662456.887	15.000					
16	529339.771	2662358.335	131	25	27.6	Straight	131518.842	529304.441	2662456.887	131545.866	529313.561	2662431.448	27.024	160 18 40				
						Transition	131545.866	529313.561	2662431.448	131565.866	529318.160	2662412.086	20.000					
						Arc	131565.866	529318.16	2662412.086	131614.680	529286.799	2662381.790	48.814	Right	20.00	30	5.93%	
						Transition	131614.68	529286.799	2662381.79	131634.680	529287.607	2662387.056	20.000					
17	529158.312	2662430.554	239	26	54.8	Straight	131634.68	529287.607	2662387.056	131672.611	529232.364	2662401.082	37.931	291 42 7.6				
						Transition	131672.611	529232.364	2662401.082	131687.611	529218.137	2662405.762	15.000					
						Arc	131687.611	529218.137	2662405.762	131758.876	529189.175	2662366.713	71.265	Left	20.00	-41	4.34%	
						Transition	131758.876	529189.175	2662366.713	131773.876	529170.573	2662351.801	15.000					
18	529194.330	2662199.210	75	37	17	Straight	131773.876	529170.573	2662351.801	131787.281	529168.785	2662247.670	105.385	171 9 2.3				
						Transition	131787.281	529168.785	2662247.67	131899.281	529188.536	2662227.783	20.000					
						Arc	131899.281	529188.536	2662227.783	131945.253	529167.043	2662188.946	45.992	Right	30</			

HORIZONTAL ALIGNMENT REPORT

HIP / Curve No.	HIP		Deflection Angle			Element	Start			End			Length (m)	Bearing (dd mm ss)	Hand of Arc	Design Speed (KM/H)	Radius (m)	Superelevation (%)
	Easting (m)	Northing (m)	Deg	Min	Sec		Chainage (m)	Easting (m)	Northing (m)	Chainage (m)	Easting (m)	Northing (m)						
21	529047.179	2661946.972	53	2	50.6	Transition	132212.92	529036.44	2662045.372	132232.920	529039.658	2662025.669	20.000	174 32 28	Right	30	41	7.00%
						Straight	132232.92	529039.658	2662025.669	132278.735	529044.017	2661980.062	45.815					
						Transition	132278.735	529044.017	2661980.062	132303.735	529043.861	2661955.165	25.000					
						Arc	132303.735	529043.861	2661955.165	132316.695	529039.222	2661943.122	12.960					
22	528958.873	2661866.305	29	26	12.3	Transition	132316.695	529039.222	2661943.122	132341.695	529022.637	2661924.553	25.000	227 35 18.6	Right	40	101	7.00%
						Straight	132341.695	529022.637	2661924.553	132391.487	528985.874	2661890.971	49.792					
						Transition	132391.487	528985.874	2661890.971	132411.487	528970.678	2661877.982	20.000					
						Arc	132411.487	528970.678	2661877.982	132443.378	528942.557	2661863.223	31.891					
23	528884.430	2661849.153	329	54	22.3	Transition	132443.378	528942.557	2661863.223	132463.378	528923.235	2661858.094	20.000	257 1 30.8	Left	40	-101	7.00%
						Straight	132463.378	528923.235	2661858.094	132486.007	528920.673	2661857.504	2.629					
						Transition	132486.007	528920.673	2661857.504	132486.007	528901.351	2661852.375	20.000					
						Arc	132486.007	528901.351	2661852.375	132519.056	528872.306	2661836.917	33.049					
24	528831.506	2661799.682	54	39	28.7	Transition	132519.056	528872.306	2661836.917	132539.056	528857.259	2661823.755	20.000	226 55 53.1	Right	30	41	7.00%
						Straight	132539.056	528857.259	2661823.755	132540.332	528856.327	2661822.884	1.276					
						Transition	132540.332	528856.327	2661822.884	132565.332	528836.509	2661807.814	25.000					
						Arc	132565.332	528836.509	2661807.814	132579.445	528822.993	2661804.004	14.113					
25	528739.687	2661818.512	255	51	52.4	Transition	132579.445	528822.993	2661804.004	132604.445	528798.222	2661806.508	25.000	281 35 21.8	Left	30	-33	7.00%
						Straight	132604.445	528798.222	2661806.508	132605.512	528797.176	2661806.722	1.067					
						Transition	132605.512	528797.176	2661806.722	132635.512	528767.49	2661808.238	30.000					
						Arc	132635.512	528767.49	2661808.238	132665.490	528745.463	2661789.440	29.978					
26	528743.176	2661740.048	21	17	10.2	Transition	132665.49	528745.463	2661789.44	132695.490	528742.294	2661759.884	30.000	177 27 14.2	Right	30	61	6.56%
						Straight	132695.49	528742.294	2661759.884	132696.357	528742.332	2661759.018	0.867					
						Transition	132696.357	528742.332	2661759.018	132711.357	528742.384	2661744.028	15.000					
						Arc	132711.357	528742.384	2661744.028	132719.020	528741.306	2661738.447	7.663					
27	528720.018	2661671.788	9	9	7.9	Transition	132719.020	528741.306	2661738.447	132734.020	528737.075	2661722.086	15.000	198 44 24.4	Right	40	150	4.74%
						Straight	132734.020	528737.075	2661722.086	132767.603	528726.286	2661690.264	33.583					
						Transition	132767.603	528726.286	2661690.264	132782.603	528721.231	2661676.143	15.000					
						Arc	132782.603	528721.231	2661676.143	132791.583	528717.685	2661667.915	8.960					
28	528678.506	2661593.360	21	0	22.6	Transition	132791.583	528717.685	2661667.915	132806.583	528710.891	2661654.544	15.000	207 53 32.3	Right	40	101	7.00%
						Straight	132806.583	528710.891	2661654.544	132847.037	528681.957	2661618.772	40.474					
						Transition	132847.037	528681.957	2661618.772	132867.037	528682.027	2661601.421	20.000					
						Arc	132867.037	528682.027	2661601.421	132884.067	528671.462	2661588.090	17.030					
29	528521.172	2661456.102	23	55	22.3	Transition	132884.067	528671.462	2661588.09	132904.067	528656.840	2661574.458	20.000	228 53 54.9	Right	40	101	7.00%
						Straight	132904.067	528656.84	2661574.458	133052.677	528544.855	2661476.763	148.810					
						Transition	133052.677	528544.855	2661476.763	133072.677	528529.385	2661464.125	20.000					
						Arc	133072.677	528529.385	2661464.125	133094.848	528510.039	2661453.351	22.171					
30	528406.464	2661420.641	302	18	51.1	Transition	133094.848	528510.039	2661453.351	133114.848	528491.145	2661446.819	20.000	252 49 17.2	Left	40.00	-101	7.00%
						Straight	133114.848	528491.145	2661446.819	133137.772	528469.244	2661440.049	22.824					
						Transition	133137.772	528469.244	2661440.049	133157.772	528450.350	2661433.517	20.000					
						Arc	133157.772	528450.35	2661433.517	133239.459	528395.180	2661376.324	81.887					
31	528381.062	2661252.789	290	33	55.7	Transition	133239.459	528395.16	2661376.324	133259.459	528389.306	2661357.209	20.000	195 8 8.3	Left	30.00	-33	7.00%
						Straight	133259.459	528389.306	2661357.209	133329.088	528371.126	2661289.996	69.629					
						Transition	133329.088	528371.126	2661289.996	133359.088	528367.777	2661280.460	30.000					
						Arc	133359.088	528367.777	2661280.46	133369.079	528371.112	2661251.082	9.991					
32	528468.532	2661178.998	117	51	17.7	Transition	133389.079	528371.112	2661251.082	133399.079	528392.362	2661230.286	30.000	125 42 4	Right	30	45	7.00%
						Straight	133399.079	528392.362	2661230.286	133402.309	528394.985	2661228.412	3.230					
						Transition	133402.309	528394.985	2661228.412	133427.309	528413.788	2661212.065	25.000					
						Arc	133427.309	528413.788	2661212.065	133494.872	528408.833	2661150.872	67.563					
33	528304.167	2661096.244	25	29	55.6	Transition	133494.872	528408.833	2661150.872	133519.872	528387.646	2661137.763	25.000	243 33 21.8	Right	40	180	3.95%
						Straight	133519.872	528387.646	2661137.763	133564.867	528347.359	2661117.726	44.995					
						Transition	133564.867	528347.359	2661117.726	133579.867	528333.838	2661111.234	15.000					
						Arc	133579.867	528333.838	2661111.234	133644.974	528270.926	2661095.904	65.107					
34	528202.337	2661084.564	312	36	42.2	Transition	133644.974	528270.926	2661095.904	133659.974	528255.934	2661095.448	15.000	269 3 17.3	Left	30	-41	7.00%
						Straight	133659.974	528255.934	2661095.448	133682.861	528233.050	2661095.071	22.887					
						Transition	133682.861	528233.05	2661095.071	133707.861	528208.327	2661092.139	25.000					
						Arc	133707.861	528208.327	2661092.139	133716.748	528200.264	2661088.443	8.887					
35	528138.814	2661023.267	292	15	19.9	Transition	133716.748	528200.264	2661088.443	133741.748	528181.903	2661071.829	25.000	221 41 59.5	Left	30	-61	6.56%
						Straight	133741.748	528181.903	2661071.829	133755.399	528172.622	2661061.436	13.651					
						Transition	133755.399	528172.622	2661061.436	133775.399	528160.367	2661045.816	20.000					
						Arc	133775.399	528160.367	2661045.816	133827.523	528153.482	2660995.736	52.124					
36	528206.477	2660884.811	324	34	20.9	Transition	133827.523	528153.482	2660995.736	133847.523	528161.260	2660977.337	20.000	153 57 19.4	Left	30	-50	7.00%
						Straight	133847.523	528161.26	2660977.337	133920.945	528193.497	2660911.371	73.422					
						Transition	133920.945	528193.497	2660911.371	133940.945	528203.235	2660893.929	20.000					
						Arc	133940.945	528203.235	2660893.929	133958.663	528215.446	2660881.177	17.718					
37	528336.313	2660814.234	148	33	54	Transition	133958.663	528215.446	2660881.177	133978.663	528232.450	2660870.693	20.000	118 31 40.3	Right	20	20	7.00%
						Straight	133978.663	528232.45	2660870.693	134012.958	528262.581	2660854.314	34.295					
						Transition	134012.958	528262.581	2660854.314	134032.958	528278.155	2660842.121	20.000					
						Arc	134032.958	528278.155	2660842.121	134064.817	528271.814	2660814.237	31.859					
38	528151.367	2660804.842	333	11	39.7	Transition	134064.817	528271.814	2660814.237	134084.817	528252.500	2660809.978	20.000	267 5 34.4	Left	40.00	-101	7.00%
						Straight	134084.817	528252.5	2660809.978	134151.977	528185.428	2660806.572	67.160					
						Transition	134151.977	528185.426	2660806.572	134171.977	528165.505	2660804.899	20.000					
						Arc	134171.977	528165.505	2660804.899	134199.230	528139.428	2660797.289	27.253					
39	528022.987	2660731.566	311	59	43.2	Transition	134199.23	528139.428	2660797.289	134219.230	528121.748	2660787.939	20.000	240 17 14	Left	30.00	-50	7.00%
						Straight	134219.23	528121.748	2660787.939	134300.566	528051.106	2660747.625	81.336					
						Transition	134300.566	528051.106	2660747.625	134320.566	528034.464	2660736.596	20.000					
						Arc	134320.566	528034.464	2660736.596	134342.458	528021.811	2660719.090	21.892					
						Transition	134342.458	528021.811	2660719.09	134362.458	528016.075	2660699.909	20.000	192 16 57.2				
						Straight	134362.458	528016.075	2660699.909	134407.577	528006.476	2660655.823	45.119					
						Transition	134407.577	528006.476	2660655.823	134422.577	528002.766	2660641.297	15.000					

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H/P / Curve No.	H/P		Deflection Angle			Element	Start			End			Length (m)	Bearing (dd mm ss)	Hand of Arc	Design Speed (KMH)	Radius (m)	Superelevation (%)
	Easting (m)	Northing (m)	Deg	Min	Sec		Chainage (m)	Easting (m)	Northing (m)	Chainage (m)	Easting (m)	Northing (m)						
40	528000.82	2660629.842	30	27	24.1	Arc	134422.577	528002.766	2660641.297	134444.787	527992.550	2660621.681	22.210		Right	30	70	5.71%
						Transition	134444.787	527992.55	2660621.681	134459.787	527982.775	2660610.313	15.000					
						Straight	134459.787	527982.775	2660610.313	134488.633	527963.198	2660589.127	28.846	222 44 21.3				
						Transition	134488.633	527963.198	2660589.127	134503.633	527953.204	2660577.944	15.000					
41	527936.052	2660559.750	335	33	34.8	Arc	134503.633	527953.204	2660577.944	134552.617	527928.439	2660535.933	48.984		Left	40	-150	4.74%
						Transition	134552.617	527928.439	2660535.933	134567.617	527923.493	2660521.773	15.000					
						Straight	134567.617	527923.493	2660521.773	134612.202	527909.495	2660479.443	44.585	198 17 56.2				
						Transition	134612.202	527909.495	2660479.443	134632.202	527901.978	2660460.948	20.000					
42	527902.007	2660456.801	30	47	42.6	Arc	134632.202	527901.978	2660460.948	134639.076	527898.167	2660455.234	6.874		Right	30.00	50	7.00%
						Transition	134639.076	527898.167	2660455.234	134659.076	527883.983	2660441.185	20.000					
						Straight	134659.076	527883.983	2660441.185	134671.746	527874.407	2660432.888	12.670	229 5 38.8				
						Transition	134671.746	527874.407	2660432.888	134686.746	527863.434	2660422.673	15.000					
43	527855.747	2660416.721	332	27	9.9	Arc	134686.746	527863.434	2660422.673	134705.401	527852.680	2660407.496	18.655		Left	30.00	-70	5.71%
						Transition	134705.401	527852.68	2660407.496	134720.401	527846.880	2660393.757	15.000					
						Straight	134720.401	527846.88	2660393.757	134734.824	527841.382	2660380.342	14.423	201 32 48.7				
						Transition	134734.824	527841.382	2660380.342	134754.824	527832.830	2660362.302	20.000					
44	527825.706	2660340.64	66	1	4.9	Arc	134754.824	527832.83	2660362.302	134792.436	527802.908	2660341.001	37.812		Right	30.00	50	7.00%
						Transition	134792.436	527802.908	2660341.001	134812.436	527783.060	2660338.826	20.000					
						Straight	134812.436	527783.06	2660338.826	134883.454	527612.196	2660331.560	171.018	267 33 53.6				
						Transition	134883.454	527612.196	2660331.56	135003.454	527592.847	2660327.460	20.000					
45	527575.65	2660330.006	255	59	15.8	Arc	135003.454	527592.847	2660327.46	135019.761	527583.624	2660314.558	16.307		Left	20.00	-20	7.00%
						Transition	135019.761	527583.624	2660314.558	135039.761	527586.007	2660294.924	20.000					
						Straight	135039.761	527586.007	2660294.924	135092.211	527600.857	2660244.620	52.450	163 33 9.4				
						Transition	135092.211	527600.857	2660244.62	135117.211	527605.449	2660220.151	25.000					
46	527611.526	2660208.481	62	24	42.9	Arc	135117.211	527605.449	2660220.151	135138.872	527600.489	2660201.320	19.661		Right	30.00	41	7.00%
						Transition	135138.872	527600.489	2660201.32	135161.872	527584.437	2660182.289	25.000					
						Straight	135161.872	527584.437	2660182.289	135181.264	527570.496	2660168.809	19.392	225 57 52.3				
47	527528.903	2660128.594	4	25	3.5	Arc	135181.264	527570.496	2660168.809	135286.917	527484.336	2660091.702	115.653		Right	40	1500	2.50%
						Straight	135286.917	527484.336	2660091.702	135341.907	527449.680	2660063.013	44.990	230 22 55.8				
						Transition	135341.907	527449.68	2660063.013	135381.907	527433.619	2660051.135	20.000					
48	527428.609	2660045.571	31	38	30	Arc	135381.907	527433.619	2660051.135	135375.594	527421.122	2660045.623	13.687		Right	30.00	61	6.56%
						Transition	135375.594	527421.122	2660045.623	135395.594	527401.520	2660041.775	20.000					
						Straight	135395.594	527401.52	2660041.775	135412.549	527384.730	2660039.423	16.955	262 1 25.8				
						Transition	135412.549	527384.73	2660039.423	135432.549	527365.187	2660035.342	20.000					
49	527356.255	2660035.433	319	6	18.7	Arc	135432.549	527365.187	2660035.342	135448.236	527351.447	2660027.908	15.687		Left	30.00	-50	7.00%
						Transition	135448.236	527351.447	2660027.908	135468.236	527337.343	2660013.776	20.000					
						Straight	135468.236	527337.343	2660013.776	135565.205	527273.561	2659940.736	96.969	221 7 44.5				
						Transition	135565.205	527273.561	2659940.736	135585.205	527259.620	2659926.429	20.000					
50	527232.686	2659893.928	80	48	17.7	Arc	135585.205	527259.62	2659926.429	135651.234	527197.452	2659917.173	68.029		Right	30	81	6.56%
						Transition	135651.234	527197.452	2659917.173	135671.234	527179.948	2659926.798	20.000					
						Straight	135671.234	527179.948	2659926.798	135696.126	527158.823	2659939.964	24.892	301 56 2.2				
						Transition	135696.126	527158.823	2659939.964	135716.126	527141.215	2659949.373	20.000					
51	527109.296	2659970.833	272	16	31.2	Arc	135716.126	527141.215	2659949.373	135772.680	527088.784	2659938.297	56.554		Left	30.00	-50	7.00%
						Transition	135772.68	527088.784	2659938.297	135792.680	527076.485	2659922.570	20.000					
						Straight	135792.68	527076.485	2659922.57	135881.170	527026.734	2659849.390	88.480	214 12 33.4				
						Transition	135881.17	527026.734	2659849.39	135896.170	527019.084	2659836.513	15.000					
52	527013.709	2659830.23	318	21	48.7	Arc	135896.17	527019.084	2659836.513	135910.965	527015.676	2659822.199	14.795		Left	20.00	-41	4.34%
						Transition	135910.965	527015.676	2659822.199	135925.965	527016.704	2659807.257	15.000					
						Straight	135925.965	527016.704	2659807.257	135943.396	527018.957	2659789.971	17.431	172 34 22.1				
						Transition	135943.396	527018.957	2659789.971	135958.396	527019.650	2659775.029	15.000					
53	527022.188	2659765.187	60	1	32	Arc	135958.396	527018.957	2659775.029	135974.826	527013.419	2659760.048	16.430		Right	20.00	30	5.93%
						Transition	135974.826	527013.419	2659760.048	135989.826	527002.333	2659750.006	15.000					
						Straight	135989.826	527002.333	2659750.006	136016.191	526981.389	2659733.992	26.385	232 35 54.1				
						Transition	136016.191	526981.389	2659733.992	136031.191	526970.135	2659724.115	15.000					
54	526936.898	2659699.974	255	2	17.2	Arc	136031.191	526970.135	2659724.115	136083.972	526970.036	2659675.697	52.781		Left	20.00	-37	4.80%
						Transition	136083.972	526970.036	2659675.697	136098.972	526966.774	2659665.774	15.000					
						Straight	136098.972	526966.774	2659665.774	136099.571	526961.723	2659605.408	0.589	127 38 11.3				
						Transition	136099.571	526961.723	2659605.408	136114.571	526962.768	2659655.320	15.000					
55	527031.96	2659626.67	123	6	30.8	Arc	136114.571	526962.768	2659655.32	136184.031	526965.733	2659611.840	49.480		Right	20.00	30	5.93%
						Transition	136184.031	526965.733	2659611.84	136179.031	526972.071	2659605.750	15.000					
						Straight	136179.031	5269605.75	2659605.75	136328.475	526830.987	2659556.487	149.444	250 44 42				
						Transition	136328.475	526830.987	2659556.487	136358.475	526804.448	2659542.953	30.000					
56	526726.248	2659519.88	223	11	12.3	Arc	136358.475	526804.448	2659542.953	136418.825	526802.306	2659490.508	58.350		Left	30.00	-37	7.00%
						Transition	136418.825	526802.306	2659490.508	136446.825	526827.655	2659474.875	30.215	113 55 54.3				
						Straight	136446.825	526827.655	2659474.875	136477.040	526855.272	2659462.618	30.215					
						Transition	136477.040	526855.272	2659462.618	136492.040	526868.749	2659456.051	15.000					
57	526895.282	2659444.857	54	42	50.6	Arc	136492.040	526868.749	2659456.051	136543.886	526900.437	2659416.514	51.846		Right	30.00	70	5.71%
						Transition	136543.886	526900.437	2659416.514	136558.886								

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HIP / Curve No.	HIP		Deflection Angle			Element	Start			End			Length (m)	Bearing (dd mm ss)	Hand of Arc	Design Speed (KM/H)	Radius (m)	Superelevation (%)
	Easting (m)	Northing (m)	Deg	Min	Sec		Chainage (m)	Easting (m)	Northing (m)	Chainage (m)	Easting (m)	Northing (m)						
61	526641.764	2659043.893	4	34	39.1	Transition	136949.61	526660.57	2659185.736	136984.610	526653.651	2659151.541	35.000	186 18 4.4	Right	40.00	600	2.50%
						Straight	136984.61	526653.651	2659151.541	137068.932	526644.396	2659067.729	84.322					
						Arc	137068.932	526644.396	2659067.729	137116.867	526637.238	2659020.343	47.935					
62	526619.464	2658927.859	336	58	57.6	Straight	137116.867	526637.238	2659020.343	137129.600	526634.835	2659007.839	12.733	190 52 43.5	Left	40	-400	2.50%
						Arc	137129.6	526634.835	2659007.839	137290.292	526636.590	2658848.236	160.692					
						Straight	137290.292	526636.59	2658848.236	137308.817	526640.485	2658830.125	18.525					
63	526678.866	2658651.681	160	42	1.7	Transition	137308.817	526640.485	2658830.125	137333.817	526642.053	2658805.395	25.000	167 51 41.1	Right	20	28	6.35%
						Arc	137333.817	526642.053	2658805.395	137387.350	526599.576	2658788.416	53.533					
						Transition	137387.35	526599.576	2658788.416	137412.350	526583.665	2658807.412	25.000					
64	526512.475	2658923.866	304	31	20.7	Straight	137412.35	526583.665	2658807.412	137512.385	526531.489	2658892.762	100.035	328 33 42.8	Left	30	-50	7.00%
						Transition	137512.385	526531.489	2658892.762	137532.385	526519.965	2658909.065	20.000					
						Arc	137532.385	526519.965	2658909.065	137560.798	526495.892	2658923.428	28.413					
65	526287.527	2658935.987	225	49	14.9	Transition	137560.798	526495.892	2658923.428	137580.798	526476.072	2658925.828	20.000	273 5 3.5	Left	20	-20	7.00%
						Straight	137580.798	526476.072	2658925.828	137710.423	526348.635	2658932.802	129.625					
						Transition	137710.423	526348.635	2658932.802	137730.423	526326.982	2658930.582	20.000					
66	526355.043	2658858.578	98	7	4.5	Arc	137730.423	526326.982	2658930.582	137757.260	526316.082	2658908.229	26.837	138 54 18.4	Right	20	30	5.93%
						Transition	137757.26	526316.082	2658908.229	137777.260	526326.436	2658891.377	20.000					
						Straight	137777.26	526326.436	2658891.377	137778.355	526327.156	2658890.552	1.095					
67	526234.390	2658780.294	258	49	4	Transition	137778.355	526327.156	2658890.552	137793.355	526336.016	2658878.500	15.000	237 1 23	Left	20	-30	5.93%
						Arc	137793.355	526336.016	2658878.500	137829.730	526331.279	2658844.643	36.375					
						Straight	137829.73	526331.279	2658844.643	137844.730	526319.452	2658835.485	15.000					
68	526364.703	2658646.099	138	31	39.8	Transition	137844.73	526319.452	2658835.485	137901.753	526271.616	2658804.447	57.023	135 50 27	Right	20	30	5.93%
						Arc	137901.753	526271.616	2658804.447	137916.753	526259.788	2658795.290	15.000					
						Transition	137916.753	526259.788	2658795.290	137954.732	526255.812	2658760.020	37.979					
69	526108.569	2658665.666	270	22	11.1	Straight	137954.732	526255.812	2658760.020	137969.732	526265.304	2658748.459	15.000	274 22 6.8	Left	30	-41	7.00%
						Transition	137969.732	526265.304	2658748.459	138024.863	526303.711	2658708.908	55.131					
						Arc	138024.863	526303.711	2658708.908	138039.863	526313.203	2658697.347	15.000					
70	526100.927	2658573.469	27	52	42.8	Transition	138039.863	526313.203	2658697.347	138097.396	526292.366	2658652.873	57.533	184 44 17.8	Right	40	80	7.00%
						Arc	138097.396	526292.366	2658652.873	138112.396	526277.408	2658652.768	15.000					
						Straight	138112.396	526277.408	2658652.768	138227.900	526162.239	2658661.566	115.504					
71	525999.538	2658415.034	230	10	39.5	Transition	138227.9	526162.239	2658661.566	138252.900	526137.350	2658660.936	25.000	212 37 0.6	Left	20.00	-30	5.93%
						Arc	138252.9	526137.350	2658660.936	138292.038	526108.684	2658636.499	39.138					
						Transition	138292.038	526108.684	2658636.499	138317.038	526104.123	2658612.023	25.000					
72	526127.398	2658431.199	125	27	14.5	Straight	138317.038	526104.123	2658612.023	138323.298	526103.606	2658605.785	6.260	82 47 40.1	Right	20	20	7.00%
						Transition	138323.298	526103.606	2658605.785	138348.298	526100.250	2658581.039	25.000					
						Arc	138348.298	526100.250	2658581.039	138362.224	526095.796	2658567.863	13.928					
73	526074.535	2658332.810	251	29	44.2	Straight	138362.224	526095.796	2658567.863	138387.224	526083.448	2658546.156	25.000	99 44 38.8	Left	20	-25	7.00%
						Transition	138387.224	526083.448	2658546.156	138470.670	526038.469	2658475.870	83.446					
						Arc	138470.67	526038.469	2658475.870	138485.670	526031.482	2658462.643	15.000					
74	526189.352	2658313.093	126	43	51.1	Transition	138485.67	526031.482	2658475.870	138538.645	526056.249	2658423.458	52.975	226 28 29.8	Right	20	20	7.00%
						Straight	138538.645	526056.249	2658423.458	138553.645	526071.194	2658424.093	15.000					
						Transition	138553.645	526071.194	2658424.093	138559.983	526077.482	2658424.888	6.338					
75	526095.615	2658224.062	38	50	44.4	Transition	138559.983	526077.482	2658424.888	138579.983	526097.244	2658424.086	20.000	265 19 14.3	Right	30	50	7.00%
						Arc	138579.983	526097.244	2658424.086	138603.775	526109.932	2658405.610	23.792					
						Transition	138603.775	526109.932	2658405.610	138623.775	526103.585	2658386.878	20.000					
76	526002.313	2658216.425	46	45	52.9	Straight	138623.775	526103.585	2658386.878	138639.555	526096.116	2658372.977	15.780	312 5 7.2	Left	20	-20	7.00%
						Transition	138639.555	526096.116	2658372.977	138659.555	526089.123	2658354.391	20.000					
						Arc	138659.555	526089.123	2658354.391	138686.899	526100.523	2658331.022	27.344					
77	525942.465	2658270.474	236	21	33.1	Transition	138686.899	526100.523	2658331.022	138706.899	526119.475	2658325.093	20.000	188 26 40.3	Right	30	-50	7.00%
						Straight	138706.899	526119.475	2658325.093	138726.356	526138.651	2658321.800	19.457					
						Arc	138726.356	526138.651	2658321.800	138746.356	526157.321	2658315.271	20.000					
78	525920.935	2658125.453	37	21	5.2	Transition	138746.356	526157.321	2658321.800	138770.593	526163.940	2658293.473	24.237	226 28 29.8	Left	20	-20	7.00%
						Straight	138770.593	526163.940	2658293.473	138790.593	526152.052	2658277.696	20.000					
						Transition	138790.593	526152.052	2658277.696	138840.695	526115.724	2658243.162	50.102					
79	525814.057	2658021.504	307	27	6.8	Transition	138840.695	526115.724	2658243.162	138860.695	526100.365	2658230.407	20.000	265 19 14.3	Right	30	50	7.00%
						Arc	138860.695	526100.365	2658230.407	138874.594	526087.718	2658224.750	13.899					
						Transition	138874.594	526087.718	2658224.750	138894.594	526087.973	2658221.799	20.000					
80	525830.873	2857879.472	338	15	15.6	Straight	138894.594	526087.973	2658221.799	138928.725	526033.958	2658219.015	34.131	173 14 52.3	Left	30.00	-50	7.00%
						Transition	138928.725	526033.956	2658219.015	138948.725	526013.984	2658218.715	20.000					
						Arc	138948.725	526013.984	2658218.715	138969.535	525994.425	2658225.340	20.810					
81	525814.057	2857879.472	338	15	15.6	Transition	138969.535	525994.425	2658225.340	138989.535	525978.750	2658237.705	20.000	173 14 52.3	Right	30	50	7.00%
						Straight	138989.535	525978.750	2658237.705	138999.637	525978.675	2658237.773	0.102					
						Transition	138999.637	525978.675	2658237.773	139009.637	525962.004	2658248.416	20.000					
82	525814.057	2857879.472	338	15	15.6	Arc	139009.637	525962.004	2658248.416	139032.795	525941.403	2658241.026	23.158	188 26 40.3	Left	20	-20	7.00%
						Transition	139032.795	525941.403	2658241.026	139052.795	525935.300	2658222.212	20.000					
						Straight	139052.795	525935.300	2658222.212	139123.616	525924.800	2658152.160	70.821					
83	525814.057	2857879.472	338	15	15.6	Transition	139123.616	525924.800	2658152.160	139143.616	525920.660	2658132.651	20.000	225 47 45.4	Right	30	50	7.00%
						Arc	139143.616	525920.660	2658132.651	139156.211	525914.933	2658121.470	12.595					
						Transition	139156.211	525914.933	2658121.470	139176.211	525901.580	2658106.628	20.000					
84	525814.057	2857879.472	338	15	15.6	Straight	139176.211	525901.580	2658106.628	139263.468	525839.028	2658045.791	87.257	173 14 52.3	Left	30.00	-50	7.00%
						Transition	139263.468	525839.028	2658045.791	139283.468	525825.675	2658030.949	20.000					
						Arc	139283.468	525825.675	2658030.949	139309.325	525817.131	2658006.850	25.857					
85	525814.057	2857879.472	338	15	15.6	Transition	139309.325	525817.131	2658006.850	139329.325	525818.153	2657986.911	20.000	173 14 52.3	Right	30	50	7.00%
						Straight	139329.325	525818.153	2657986.911	139408.087	525827.413	2657908.696	78.762					
						Transition	139408.087	525827.413	2657908.696	139428.087	525830.417	2657888.932	20.000					
86	525814.057	2857879.472	338	15	15.6	Arc	139428.087	525830.417	2657888.932	139446.419	525835.961	2657871.484						

HORIZONTAL ALIGNMENT REPORT

HIP / Curve No.	HIP		Deflection Angle			Element	Start			End			Length (m)	Bearing (dd mm ss)	Hand of Arc	Design Speed (KM/H)	Radius (m)	Superelevation (%)
	Easting (m)	Northing (m)	Deg	Min	Sec		Chainage (m)	Easting (m)	Northing (m)	Chainage (m)	Easting (m)	Northing (m)						
81	525874.198	2657799.87	49	42	27.1	Arc	139521.271	525869.947	2657804.893	139532.297	525870.643	2657793.950	11.026		Right	20	30	5.93%
						Transition	139532.297	525870.643	2657793.95	139547.297	525868.411	2657779.603	15.000					
						Straight	139547.297	525868.411	2657779.603	139625.908	525837.971	2657706.317	78.611	201 12 35				
						Transition	139625.908	525837.971	2657706.317	139665.908	525828.645	2657687.712	40.000					
82	525810.555	2657635.671	265	7	44.4	Arc	139665.908	525828.645	2657687.712	139708.698	525848.983	2657630.487	42.790		Left	40	-50	7.00%
						Transition	139708.698	525848.983	2657630.487	139748.698	525883.274	2657614.353	40.000					
						Straight	139748.698	525883.274	2657614.353	139918.831	526046.537	2657566.492	170.133	106 20 19.4				
						Transition	139918.831	526046.537	2657566.492	139938.831	526065.371	2657559.834	20.000					
83	526073.335	2657558.636	32	37	49.5	Arc	139938.831	526065.371	2657559.834	139953.571	526077.751	2657551.900	14.740		Right	30.00	61	6.56%
						Transition	139953.571	526077.751	2657551.9	139973.571	526091.668	2657537.57	20.000					
						Straight	139973.571	526091.668	2657537.57	139997.913	526107.647	2657519.208	24.342	138 58 8.8				
						Transition	139997.913	526107.647	2657519.208	140017.913	526121.727	2657505.054	20.000					
84	526126.736	2657497.272	318	27	17.9	Arc	140017.913	526121.727	2657505.054	140034.168	526135.990	2657497.407	16.255		Left	30.00	-50	7.00%
						Transition	140034.168	526135.99	2657497.407	140054.168	526155.571	2657493.515	20.000					
						Straight	140054.168	526155.571	2657493.515	140067.788	526169.077	2657491.755	13.620	97 25 26.7				
						Transition	140067.788	526169.077	2657491.755	140097.788	526197.638	2657483.516	30.000					
85	526214.415	2657485.847	84	10	30.6	Arc	140097.788	526197.638	2657483.516	140116.270	526209.482	2657469.644	18.482		Right	30.00	33	7.00%
						Transition	140116.27	526209.482	2657469.644	140146.270	526213.139	2657440.144	30.000					
						Straight	140146.27	526213.139	2657440.144	140246.472	526210.342	2657325.063	100.202	181 35 57.4				
						Transition	140246.472	526210.342	2657325.063	140261.472	526209.013	2657325.063	15.000					
86	526209.626	2657314.391	47	25	27.7	Arc	140261.472	526209.013	2657325.063	140280.408	526200.989	2657308.096	18.936		Right	20.00	41	4.34%
						Transition	140280.408	526200.989	2657308.096	140295.408	526190.3	2657285.174	15.000					
						Straight	140295.408	526190.3	2657285.174	140314.363	526175.990	2657274.480	18.955	229 1 25.1				
						Transition	140314.363	526175.99	2657285.174	140329.363	526165.552	2657262.404	15.000					
87	526156.752	2657270.202	306	17	28.5	Arc	140329.363	526165.552	2657274.46	140342.485	526160.640	2657247.446	13.122		Left	20.00	-30	5.93%
						Transition	140342.485	526160.64	2657262.404	140357.485	526161.673	2657234.568	15.000					
						Straight	140357.485	526160.617	2657247.446	140370.406	526161.673	2657234.568	12.921	175 18 51.6				
						Transition	140370.406	526161.673	2657234.568	140390.406	526161.975	2657214.606	20.000					
88	526163.676	2657207.686	37	17	43.9	Arc	140390.406	526161.975	2657214.606	140402.952	526158.956	2657202.462	12.546		Right	30.00	50	7.00%
						Transition	140402.952	526158.956	2657202.462	140422.952	526149.340	2657184.966	20.000					
						Straight	140422.952	526149.34	2657184.966	140428.607	526148.293	2657180.202	5.655	212 36 35.5				
						Transition	140428.607	526148.293	2657180.202	140443.607	526138.421	2657167.435	15.000					
89	526132.812	2657159.131	348	41	7.3	Arc	140443.607	526138.421	2657167.435	140463.465	526129.738	2657149.593	19.858		Left	40.00	-150	4.74%
						Transition	140463.465	526129.738	2657149.593	140478.465	526124.546	2657135.522	15.000					
						Straight	140478.465	526124.546	2657135.522	140573.507	526093.141	2657045.818	95.042	199 17 42.9				
						Transition	140573.507	526093.141	2657045.818	140588.507	526088.326	2657031.612	15.000					
90	526083.072	2657017.058	349	30	5.2	Arc	140588.507	526088.326	2657031.612	140619.316	526080.854	2657001.744	30.809		Left	40.00	-250	2.84%
						Transition	140619.316	526080.854	2657001.744	140634.316	526078.412	2656986.945	15.000					
						Straight	140634.316	526078.412	2656986.945	140641.279	526077.347	2656980.063	6.963	188 47 48.1				
						Transition	140641.279	526077.347	2656980.063	140656.279	526074.888	2656965.270	15.000					
91	526071.455	2656941.988	17	38	0.3	Arc	140656.279	526074.888	2656965.27	140702.831	526060.814	2656921.000	46.552		Right	40.00	200	3.56%
						Transition	140702.831	526060.814	2656921	140717.831	526054.306	2656907.487	15.000					
						Straight	140717.831	526054.306	2656907.487	140894.424	525975.703	2656749.352	176.593	206 25 48.4				
						Transition	140894.424	525975.703	2656749.352	140909.424	525987.954	2656736.557	15.000					
92	525956.846	2656711.414	98	1	9.9	Arc	140909.424	525987.954	2656736.557	140945.747	525934.906	2656727.974	36.323		Right	20.00	30	5.93%
						Transition	140945.747	525934.906	2656727.974	140960.747	525921.910	2656719.580	15.000					
						Straight	140960.747	525921.91	2656719.580	141070.704	525831.236	2656704.286	109.957	304 28 58.3				
						Transition	141070.704	525831.236	2656704.286	141090.704	525813.679	2656680.951	20.000					
93	525800.946	2656818.359	277	33	14.1	Arc	141090.704	525813.679	2656804.286	141113.873	525791.24	2656791.083	23.169		Left	20.00	-30	5.93%
						Transition	141113.873	525791.24	2656804.286	141133.873	525776.366	2656766.473	20.000	222 0 12.4				
						Straight	141133.873	525776.366	2656791.083	141166.964	525754.222	2656754.222	33.091					

APPROVED



Shambhavi Techno Solutions Pvt. Ltd.

Managing Director



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROJECT CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	CHECKED:	DATE:	TITLE:	SCALE:	REV:
			M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES	GPT JC - 25, Sector - III, Salt Lake, Kolkata - 700098.	M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES C-2ND FLOOR, RJK TOWER, SECTOR-4, VAISHALI, GHAZIABAD-201016	SUVADRA CONSULTANTS PP-97, Tankapuri Road, BBSR-15, Odisha	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD. E-62, Rajesh Kumar Path, S.K.Puri, Boring Road, Patna-800001	SPS Technocrats Pvt. Ltd. # 638 & 641, JMD Megapole, Sector 48, Gurgaon, Haryana - 122018. Website : www.spspl.com Email : info@spspl.com	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuival section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADIEP	DHEERESH	MAR - 2022	HORIZONTAL ALIGNMENT REPORT	AS SHOWN	RO

VERTICAL ALIGNMENT REPORT

S.No.	Vertical Intersection Points			Element	Vertical Tangent Points				Grade (%)	Radius (m)	M Value	K Value	Length of Element (m)
	Chainage (m)	Level (m)	%Grade Diff.		Start Chainage (m)	Level (m)	End Chainage (m)	Level (m)					
1				Grade	130000.000	826.172	130189.904	815.589	-5.573				189.904
2	130219.904	813.917	-0.417	Hog Curve	130189.904	815.589	130249.904	812.120		-14377	-0.696	143.767	60.000
3				Grade	130249.904	812.120	131017.567	766.138	-5.990				767.663
4	131117.567	760.148	12.319	Sag Curve	131017.567	766.138	131217.567	766.476		1624	6.159	16.236	200.000
5				Grade	131217.567	766.476	131257.324	768.992	6.329				39.757
6	131307.324	772.156	-4.320	Hog Curve	131257.324	768.992	131357.324	773.160		-2315	-4.320	23.146	100.000
7				Grade	131357.324	773.160	131517.438	776.376	2.008				160.114
8	131547.438	776.978	-0.820	Hog Curve	131517.438	776.376	131577.438	777.335		-7313	-1.367	73.133	60.000
9				Grade	131577.438	777.335	131869.516	780.804	1.188				292.078
10	131969.516	781.992	-7.986	Hog Curve	131869.516	780.804	132069.516	775.194		-2504	-3.993	25.044	200.000
11				Grade	132069.516	775.194	132163.311	768.817	-6.798				93.795
12	132263.312	762.019	7.522	Sag Curve	132163.311	768.817	132363.311	762.743		2659	3.761	26.589	200.000
13				Grade	132363.311	762.743	132520.006	763.877	0.724				156.695
14	132595.006	764.420	1.105	Sag Curve	132520.006	763.877	132670.006	765.792		13571	0.737	135.709	150.000
15				Grade	132670.006	765.792	132719.886	766.704	1.829				49.880
16	132749.886	767.253	2.899	Sag Curve	132719.886	766.704	132779.886	768.671		2070	4.832	20.697	60.000
17				Grade	132779.886	768.671	133186.917	787.916	4.728				407.031
18	133216.917	789.334	-1.232	Hog Curve	133186.917	787.916	133246.917	790.383		-4871	-2.053	48.710	60.000
19				Grade	133246.917	790.383	133429.735	796.775	3.496				182.818
20	133459.735	797.824	-5.494	Hog Curve	133429.735	796.775	133489.735	797.224		-1092	-9.157	10.920	60.000
21				Grade	133489.735	797.224	133760.136	791.822	-1.998				270.401
22	133860.136	789.823	7.060	Sag Curve	133760.136	791.822	133960.136	794.885		2833	3.530	28.330	200.000
23				Grade	133960.136	794.885	134431.512	818.745	5.062				471.376
24	134461.512	820.263	-6.548	Hog Curve	134431.512	818.745	134491.512	819.817		-916	-10.913	9.164	60.000
25				Grade	134491.512	819.817	134781.036	815.515	-1.486				289.524
26	134811.036	815.069	-3.058	Hog Curve	134781.036	815.515	134841.036	813.706		-1962	-5.097	19.620	60.000
27				Grade	134841.036	813.706	134997.895	806.578	-4.544				156.859
28	135027.895	805.215	1.736	Sag Curve	134997.895	806.578	135057.895	804.373		3457	2.893	34.567	60.000
29				Grade	135057.895	804.373	135434.192	793.805	-2.808				376.297
30	135464.192	792.963	-2.136	Hog Curve	135434.192	793.805	135494.192	781.479		-2808	-3.561	28.084	60.000
31				Grade	135494.192	791.479	136429.898	745.211	-4.945				935.706
32	136459.898	743.728	-0.918	Hog Curve	136429.898	745.211	136489.898	741.969		-6539	-1.529	65.386	60.000
33				Grade	136489.898	741.969	137301.526	694.388	-5.862				811.628
34	137331.526	692.630	3.402	Sag Curve	137301.526	694.388	137361.526	691.892		1763	5.671	17.634	60.000
35				Grade	137361.526	691.892	137475.605	689.085	-2.460				114.079
36	137575.605	686.625	-4.540	Hog Curve	137475.605	689.085	137675.605	679.625		-4405	-2.270	44.052	200.000
37				Grade	137675.605	679.625	137712.396	677.050	-7.000				36.791
38	138112.396	649.050	0.597	Sag Curve	137712.396	677.050	138512.396	623.438		134024	0.075	1340.303	800.000
39				Grade	138512.396	623.438	138587.634	618.620	-6.403				75.238
40	138617.634	616.699	0.433	Sag Curve	138587.634	618.620	138647.634	614.908		13854	0.722	138.541	60.000
41				Grade	138647.634	614.908	138773.672	607.384	-5.970				126.038
42	139123.672	586.489	-1.030	Hog Curve	138773.672	607.384	139473.672	561.989		-67961	-0.147	679.625	700.000
43				Grade	139473.672	561.989	139504.155	559.855	-7.000				30.483
44	139829.155	537.105	2.712	Sag Curve	139504.155	559.855	140154.155	523.168		23971	0.417	239.705	650.000
45				Grade	140154.155	523.168	140292.609	517.230	-4.288				138.454
46	140392.609	512.942	-1.987	Hog Curve	140292.609	517.230	140492.609	508.667		-10065	-0.994	100.650	200.000
47				Grade	140492.609	508.667	140585.000	500.869	-6.275				92.391
48	140660.000	496.162	1.729	Sag Curve	140585.000	500.869	140735.000	492.752		8677	1.152	86.772	150.000
49				Grade	140735.000	492.752	140913.003	484.659	-4.547				178.003
50	140943.003	483.295	4.547	Sag Curve	140913.003	484.659	140973.003	483.295		1320	7.578	13.196	60.000
51				Grade	140973.003	483.295	141166.964	483.295	0.000				193.961



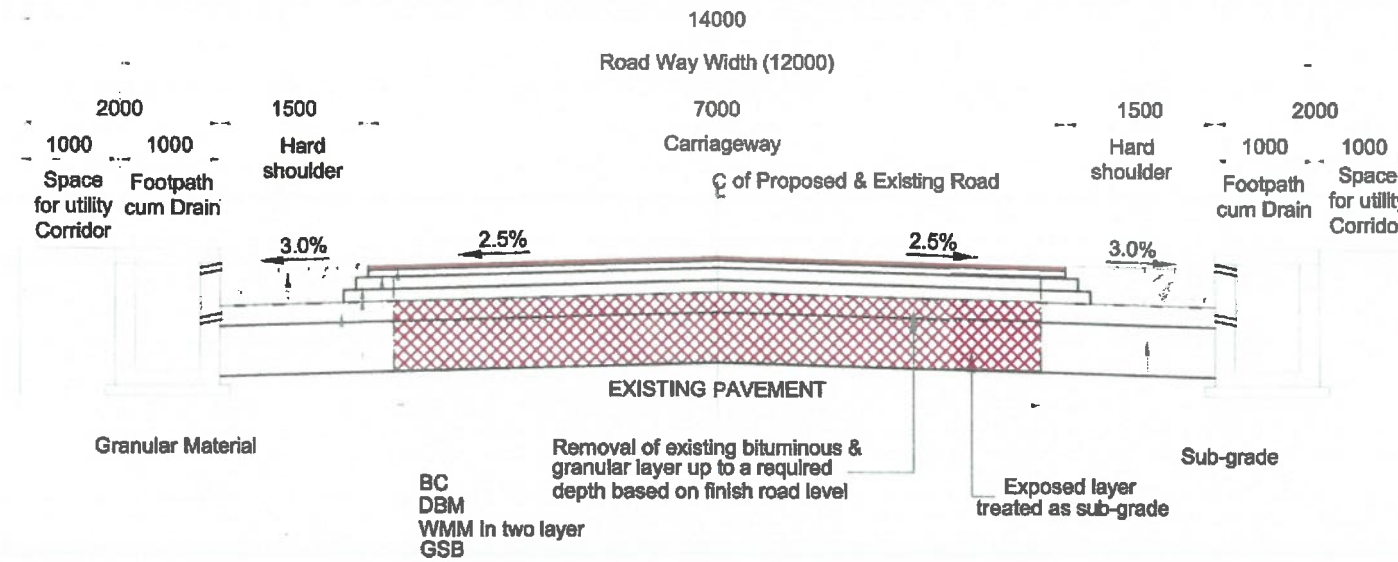
Shambhavi Techno Solutions Pvt. Ltd

Managing Director



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	CHECKED:	DATE:	TITLE:	SCALE:	REV:
			M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES	GPT JC - 25, Sector - III, Salt Lake, Kolkata - 700098.	M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES C-3, 2ND FLOOR, R.K. TOWER, SECTOR-4, VAISHALI, GHAZIABAD-201010.	SUYADRA CONSULTANTS PP-97, Tankapuri Road, BBSR-18, Odisha	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD. E-62, Rajesh Kumar Path, S.K. Park, Boring Road, Patna-800001	SPS Technocrats Pvt. Ltd. # 638 & 641, MID Megapole, Sector 48, Gurgaon, Haryana - 122018. Website : www.spspl.com Email : info@spspl.com	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuval section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADEEP	DHEERESH	MAR - 2022	VERTICAL ALIGNMENT REPORT	AS SHOWN	R0

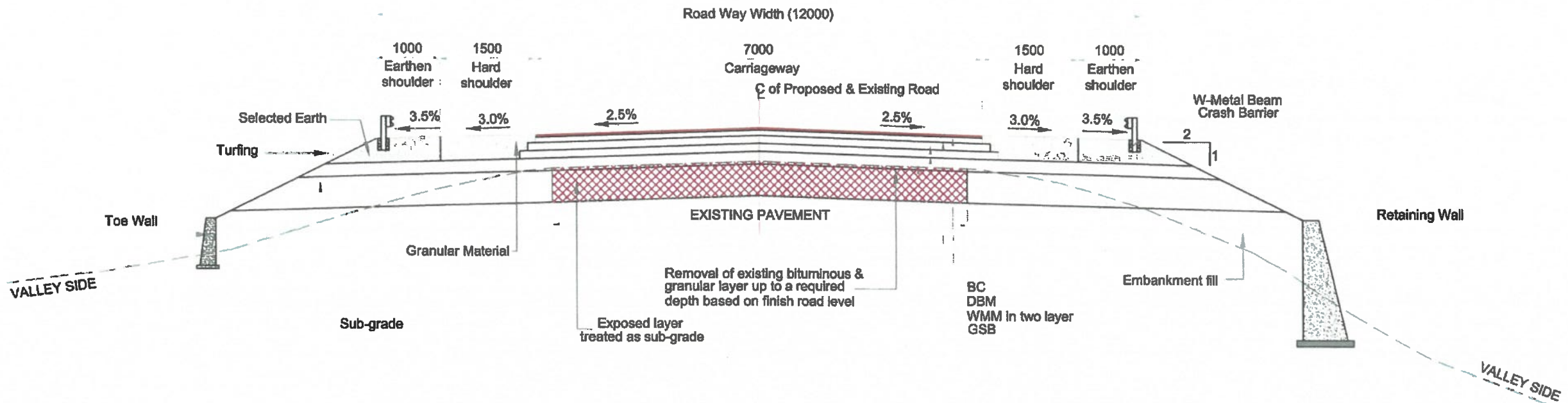
TYPICAL CROSS SECTION



**TCS-1 :- TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER IN BUILT UP AREA WITH BOTH SIDE FOOTPATH CUM RCC RECTANGULAR DRAIN
(RECONSTRUCTION OF EXISTING PAVEMENT)**



Shambhavi Techno Solutions Pvt. Ltd.
Managing Director

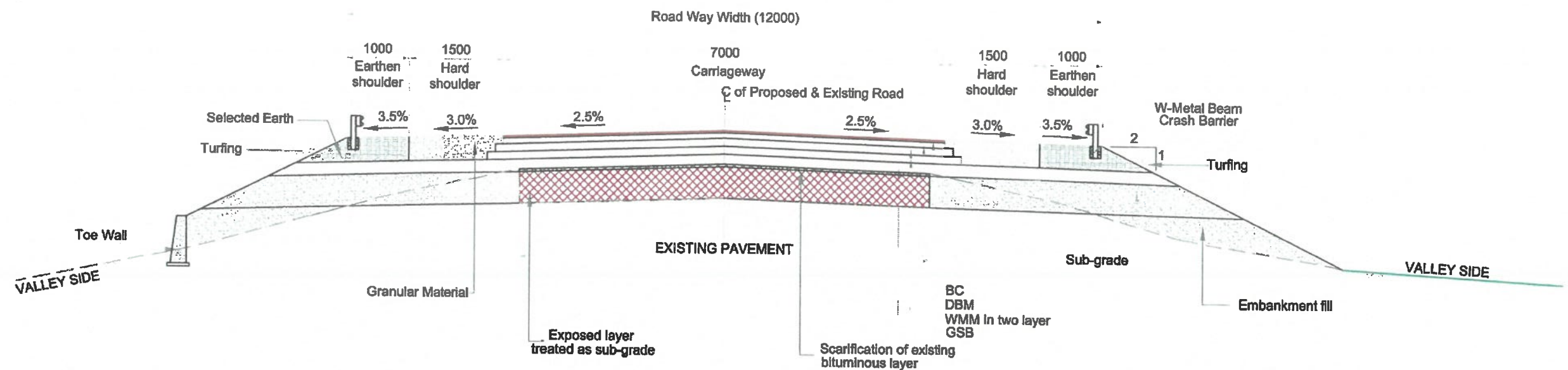


**TCS-2 :- TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY IN RURAL AREA WITH HARD SHOULDER IN RURAL AREA WITH ONE SIDE TOE WALL AND OPPOSITE SIDE RETAINING WALL
(RECONSTRUCTION OF EXISTING PAVEMENT)**

NOTES:

- PAVEMENT THICKNESS AS PER PAVEMENT DESIGN REPORT.

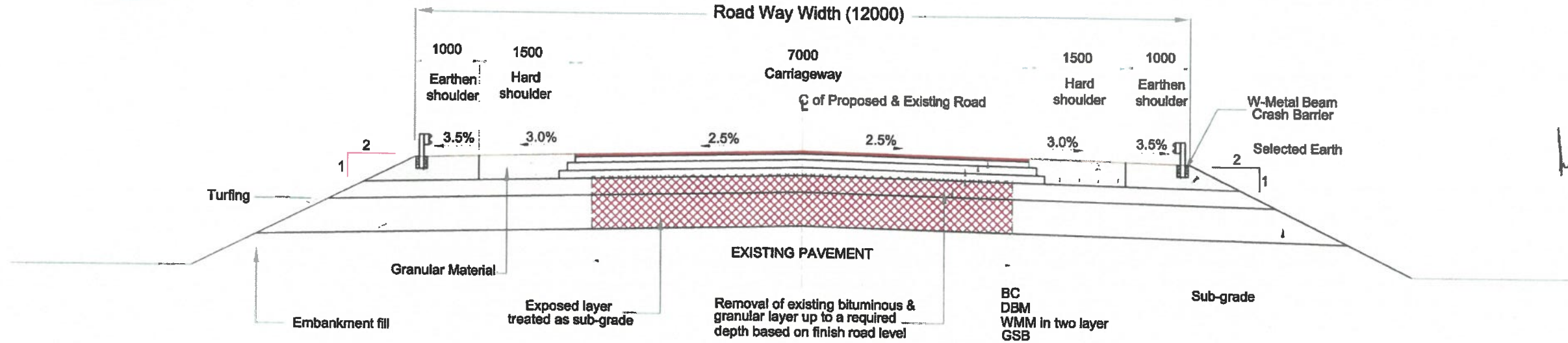
Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROJECT CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	CHECKED:	DATE:	TITLE:	SCALE:	REV:
			M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES	GPT	M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES	SUVADRA CONSULTANTS	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD.	SPS Technocrats Pvt. Ltd.	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADIEP	DHEERESH	MAR - 2022	TYPICAL CROSS SECTION	AS SHOWN	R0



**TCS-3 :-TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER IN RURAL AREA WITH ONE SIDE TOE WALL
(RECONSTRUCTION OF EXISTING PAVEMENT)**



Shambhavi Techno Solutions Pvt. Ltd.
Managing Director



**TCS-4 :-TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER IN RURAL AREA
(RECONSTRUCTION OF EXISTING PAVEMENT)**

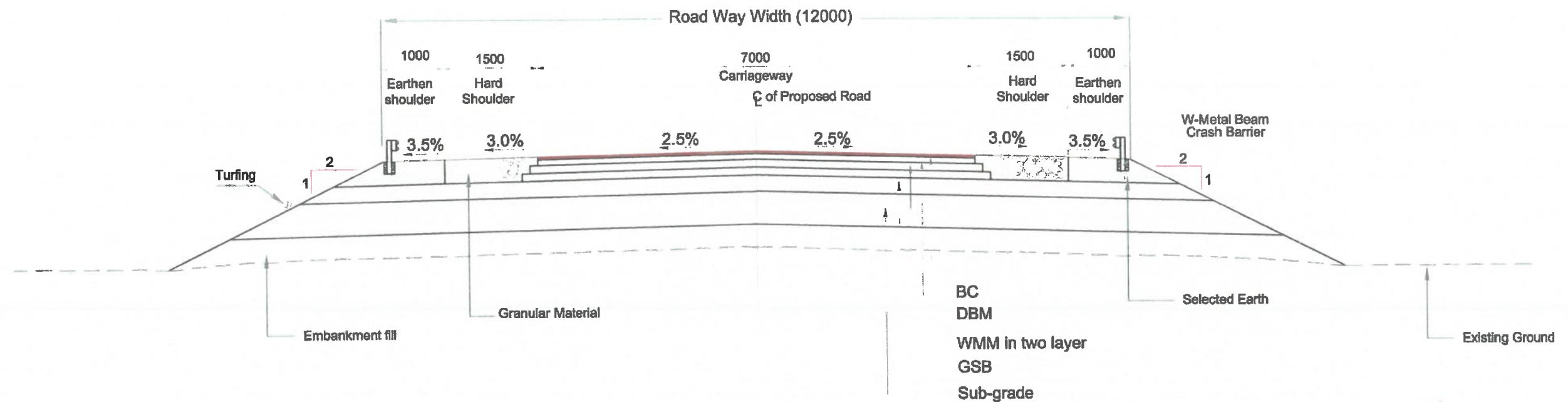
Shambhavi Techno Solutions Pvt. Ltd.
Managing Director



NOTES:

1. PAVEMENT THICKNESS AS PER PAVEMENT DESIGN REPORT.

Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	DESIGNED:	CHECKED:	DATE:	TITLE:	SCALE:	REV:
			MAIDCL	GPT	M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES	SUVADRA CONSULTANTS	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD.	SPS Technocrats Pvt. Ltd.	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipal on Engineering, Procurement & Construction (EPC) mode.	PRADDEEP	DHEERESH	VIPUL	MAR - 2022	TYPICAL CROSS SECTION	AS SHOWN	R0



**TCS- 4A :-TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER AT REALIGNMENT STRETCH IN RURAL AREA
(NEW CONSTRUCTION)**

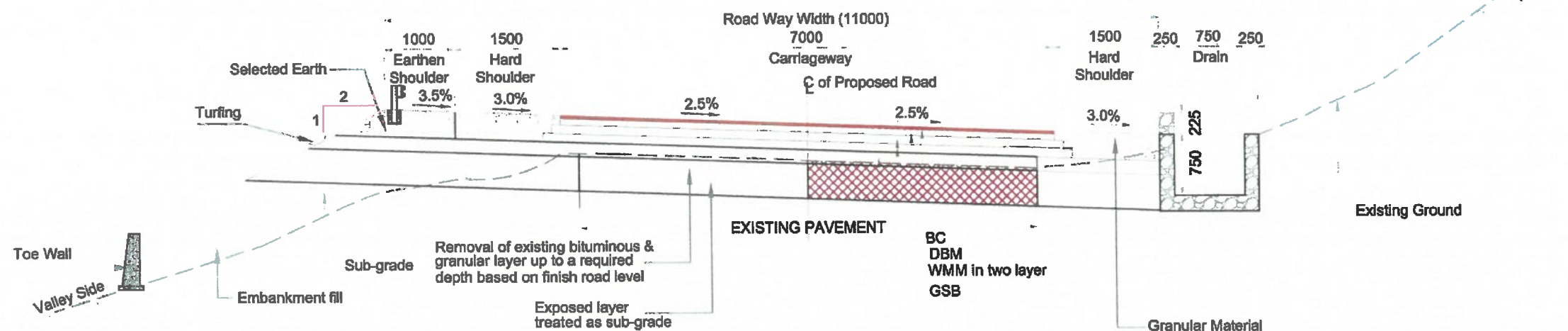
DESIGN DIRECTOR

Managing Director

Regd. No. 11/2004-05

GPT Infraprojects Limited

CHAITANYA PROJECTS CONSULTANCY PVT. LTD.



**TCS-5 :-TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER IN RURAL AREA WITH TOE WALL ON VALLEY SIDE & OPEN TRAPEZOIDAL DRAIN ON HILL SIDE
(RECONSTRUCTION OF EXISTING PAVEMENT)**

NOTES:

- PAVEMENT THICKNESS AS PER PAVEMENT DESIGN REPORT.

Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROJECT CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	DESIGNED:	CHECKED:	DATE:	TITLE:	SCALE:	REV:
			NAIDCL	GPT	M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD.	SUVADRA CONSULTANTS	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD.	SPS Technocrats Pvt. Ltd.	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADIP	DHEERESH	VIPUL	MAR - 2022	TYPICAL CROSS SECTION	AS SHOWN	R0
				JC - 25, Sector - III, Salt Lake, Kolkata - 700098.	IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES	PR-97, Tanuspani Road, BBSR-18, Odisha	E-82, Rajesh Kumar Path, S.K.Puri, Boring Road, Patna-800001	S 838 & 841, JMD Megapole, Sector 48, Gurugram, Haryana - 122018, Website : www.spspl.com Email : info@spstpl.com						DRG. NO: GPT/CCT/4B/HW/GEN/TC5/03		

Handwritten Signature
DESIGN DIRECTOR

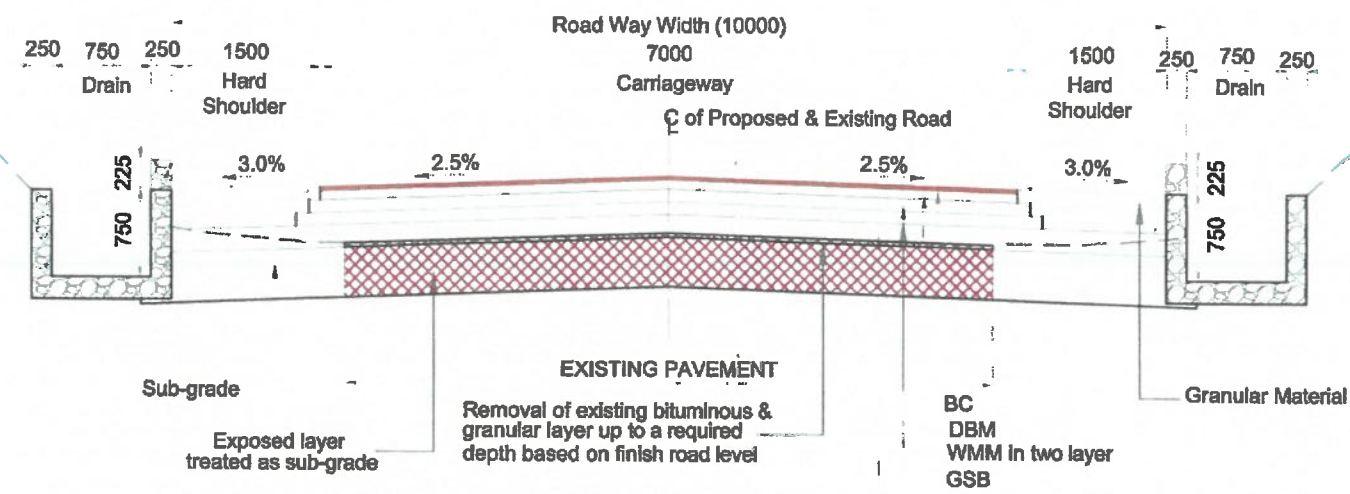
Shambhavi Techno Solutions Pvt. Ltd.
Handwritten Signature
Managing Director



APPROVED

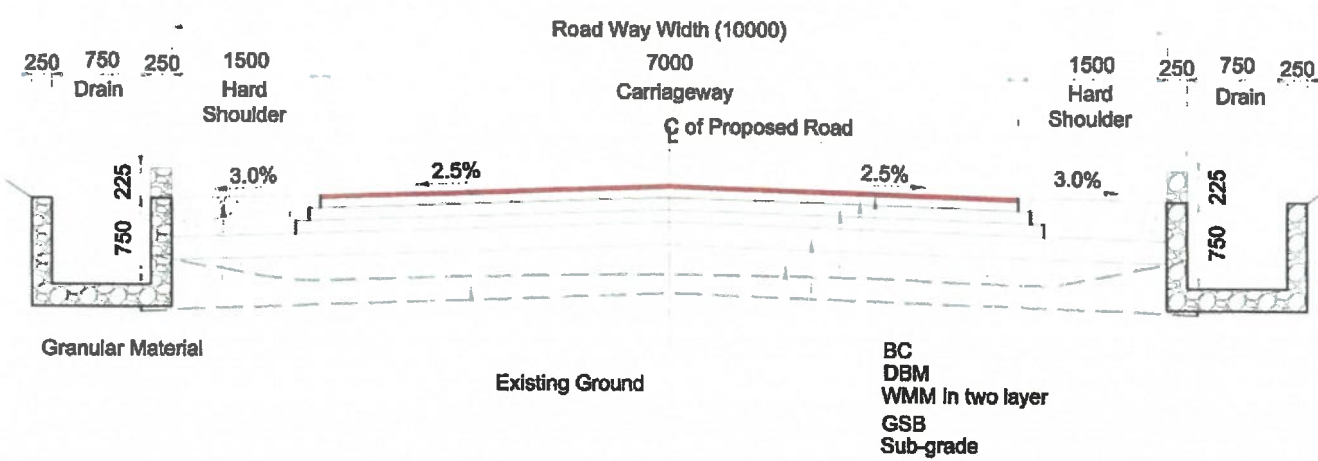


Hill Side



TCS-6 :-TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER IN RURAL AREA WITH BOTH SIDE OPEN TRAPEZOIDAL DRAIN ON HILL SECTION
(RECONSTRUCTION OF EXISTING PAVEMENT)

Hill Side



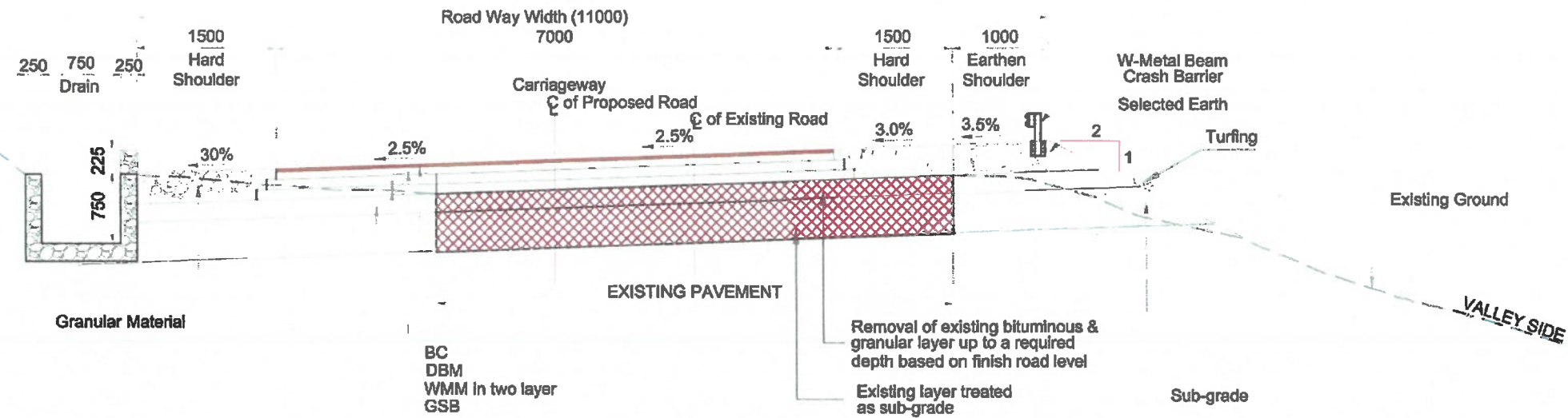
TCS-6A :-TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER AT REALIGNMENT STRETCH IN RURAL AREA WITH BOTH SIDE OPEN TRAPEZOIDAL DRAIN ON HILL SECTION
(NEW CONSTRUCTION)

NOTES:

1. PAVEMENT THICKNESS AS PER PAVEMENT DESIGN REPORT.

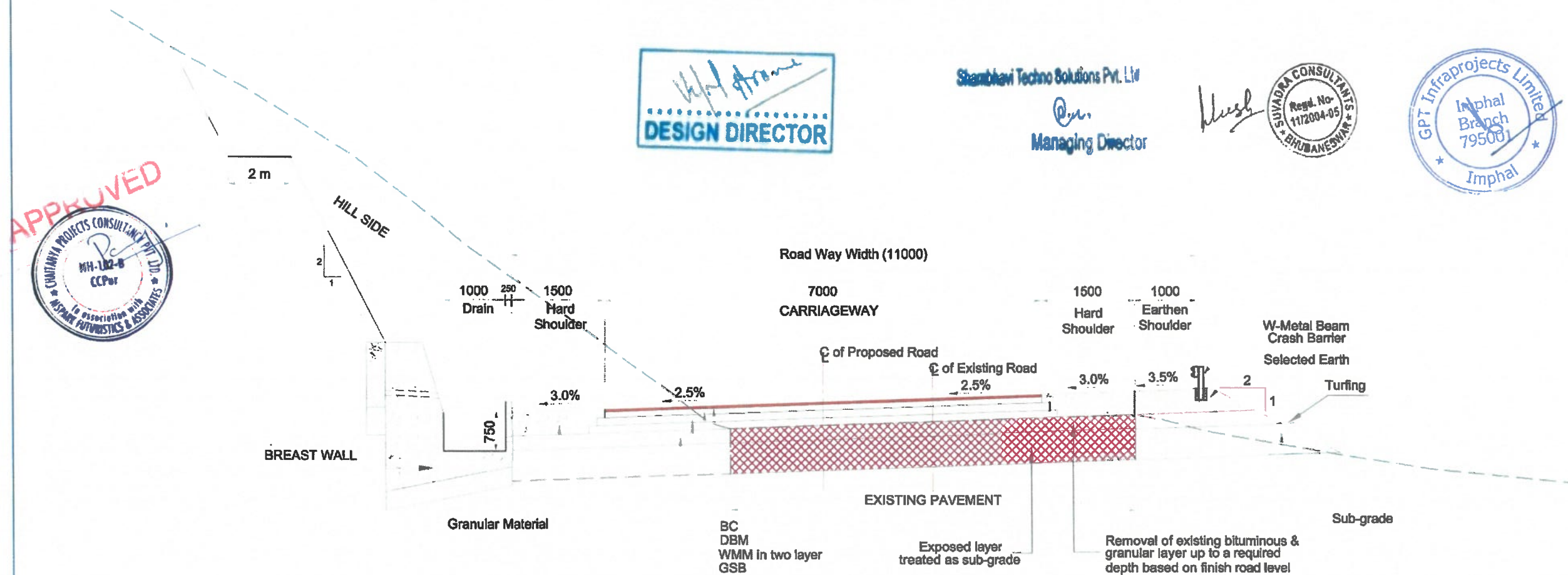
Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	DESIGNED:	CHECKED:	DATE:	TITLE:	SCALE:	DRS. NO:	REV:
				GPT JC - 25, Sector - III, Salt Lake, Kolkata - 700098.	 M/S CHATANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURESTICS AND ASSOCIATES C-2ND FLOOR, RK TOWER, SECTOR-4 VAISHALI, GHAZIABAD-201010.	 PP-97, Tankapuri Road, BBSR-18, Odisha	 E-82, Rajesh Kumar Path, S.K.Puri, Boring Road, Patna-800001	 # 638 & 641, JMD Megapole, Sector 46, Gurugram, Haryana - 125018. Website : www.spspl.com Email : info@spspl.com	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuival section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADDEEP	CHEERESH	VIPUL	MAR - 2022	TYPICAL CROSS SECTION	AS SHOWN	GPT/CCT/4B/HW/GEN/TCS/04	RO

Hill Side



TCS-7 : TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER IN RURAL AREA WITH OPEN TRAPEZOIDAL DRAIN ON HILL SIDE AND EARTHEN SHOULDER ON VALLEY SIDE

(RECONSTRUCTION OF EXISTING PAVEMENT)



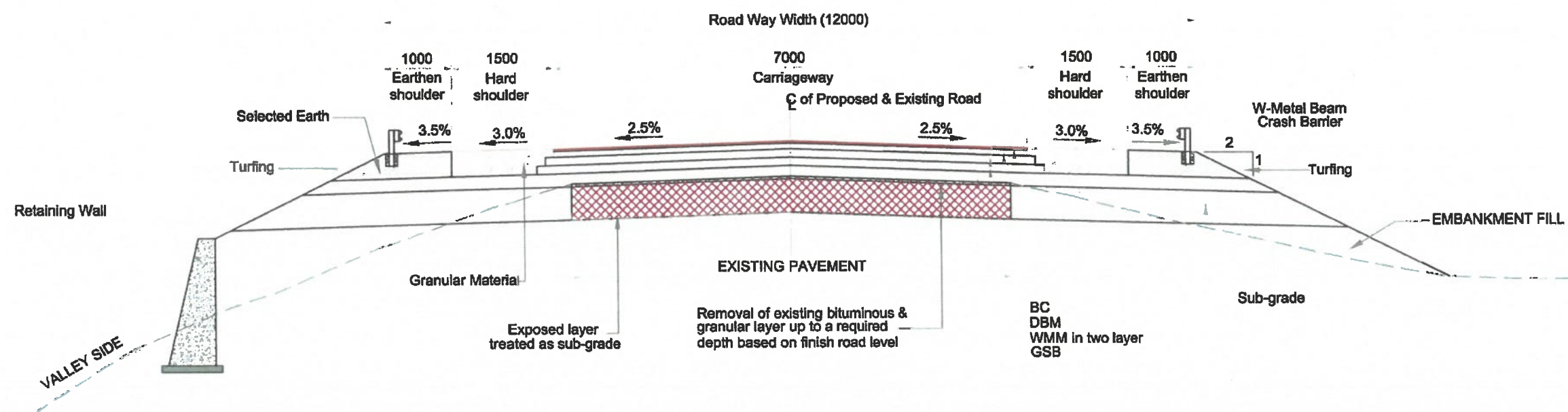
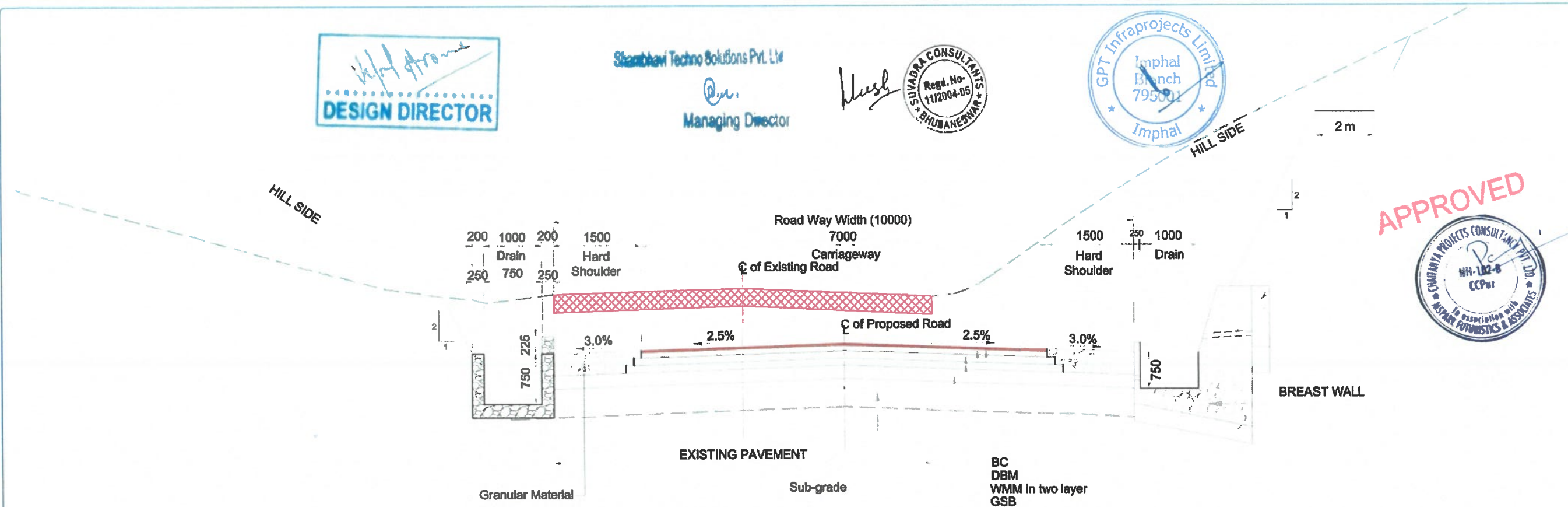
TCS-8 :- TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOILDER IN RURAL AREA WITH BREAST WALL ON HILL SIDE

(RECONSTRUCTION OF EXISTING PAVEMENT)

NOTES:

1. PAVEMENT THICKNESS AS PER PAVEMENT DESIGN REPORT.

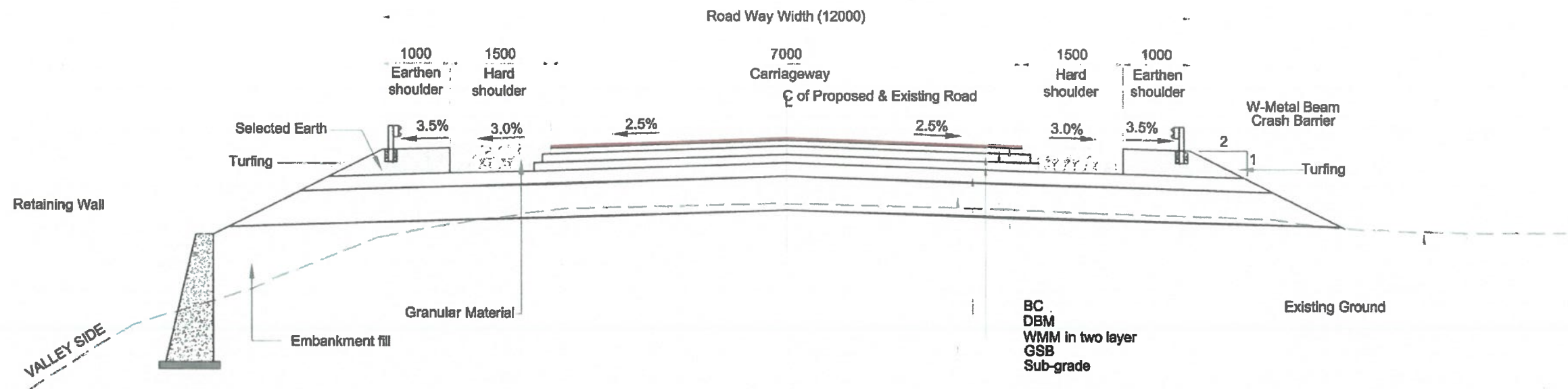
Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROJECT CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	DESIGNED:	CHECKED:	DATE:	TITLE:	SCALE:	DRS. NO:	REV:
				 JC - 25, Sector - III, Salt Lake, Kolkata - 700098.		 PP-97, Tenkapani Road, BBSR-18, Odisha	 E-62, Rejesh Kumar Path, S.S.Puri, Boring Road, Patna-800001	 # 838 & 841, JMD Megapole, Sector 45, Gurgaon, Haryana - 122018. Website : www.spspt.com Email : info@spspt.com	Widening to 2 (Two) Lane with Hard shoulder of Churehandpur to Tuhal section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADIEP	DHEERESH	VIPUL	MAR - 2022	TYPICAL CROSS SECTION	AS SHOWN	GPT/CCT/48/HW/GEN/TCS/05	RD



NOTES:

1. PAVEMENT THICKNESS AS PER PAVEMENT DESIGN REPORT.

Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	PRADEEP	TITLE:	TYPICAL CROSS SECTION	REV:
				 JC - 25, Sector - III, Salt Lake, Kolkata - 700098.	 M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES C-42ND FLOOR, 6X TOWER, SECTOR-4, VASIKHALI, GHADAABAD-201010.	 PP-97, Tankapani Road, Patna-800001	 E-82, Rajesh Kumar Path, S.K.Puri, Forging Road, Patna-800001	 E-83B & 84-1, MID Megapolis, Sector 48, Gurgaon, Haryana - 122015. Website : www.spspl.com Email : info@spspl.com	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tulsi section of NH 102B from Km 138.00 to Km 141.02B (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	CHECKED:	VIPUL	SCALE:	AS SHOWN	RO
										DATE:	MAR - 2022	DWG. NO:	GPT/CCT/4B/HW/GEN/TC8/06	



TCS-10A :-TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER AT REALIGNMENT STRETCH IN RURAL AREA WITH RETAINING WALL ON VALLEY SIDE (NEW CONSTRUCTION)

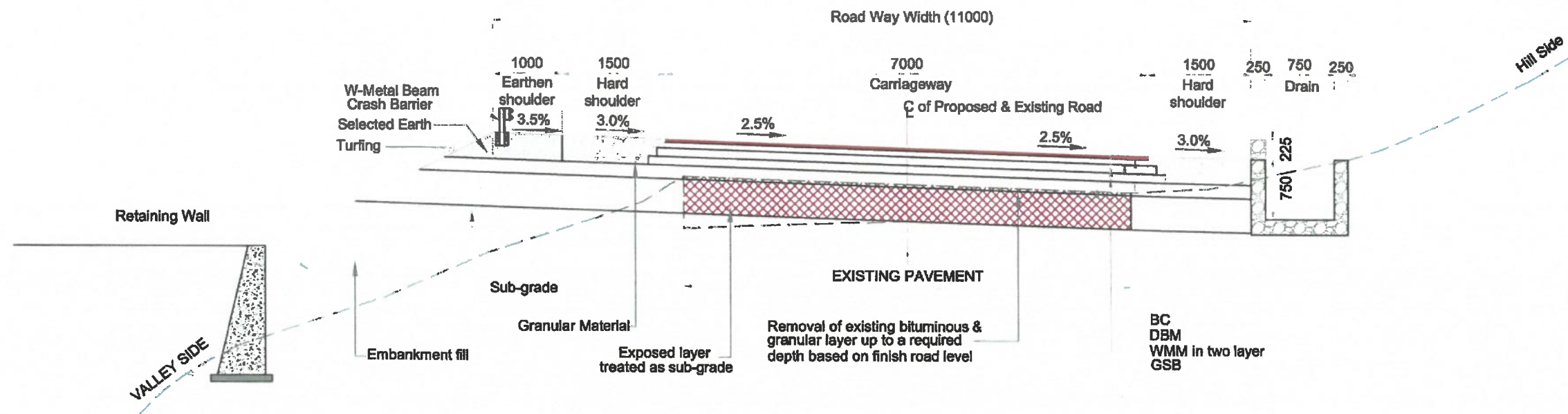
[Signature]
DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.
[Signature]
Managing Director

[Signature]
SUVADRA CONSULTANTS
Regd. No. 11/2004-05
SHUBANESWAR

GPT Infraprojects Limited
Imphal Branch
795001

APPROVED
CHAITANYA PROJECTS CONSULTANCY PVT. LTD.
MH-102-B
CCPur
In Association with
MSPARK FUTURESTICS & ASSOCIATES



TCS-11 :-TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER IN RURAL AREA WITH RETAINING WALL ON VALLEY SIDE AND OPEN TRAPEZOIDAL DRAIN ON HILL SIDE (RECONSTRUCTION OF EXISTING PAVEMENT)

NOTES:

1. PAVEMENT THICKNESS AS PER PAVEMENT DESIGN REPORT.

Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	DESIGNED:	CHECKED:	DATE:	TITLE:	SCALE:	REV:
			MAIDCL BUILDING INFRASTRUCTURE BUILDING THE NATION	GPT JC - 25, Sector - III, Salt Lake, Kolkata - 700098.	M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURESTICS AND ASSOCIATES C-5, 2ND FLOOR, RK TOWER, SECTOR-4, VAISHALI, GHANASHYAM-201010.	SUVADRA CONSULTANTS PP-97, Tankapuri Road, BBSR-18, Odisha	SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. E-82, Rajesh Kumar Path, S.K.Puri, Boring Road, Patna-800001	SPS Technocrats Pvt. Ltd. # 838 & 841, MID Megapole, Sector 48, Gurugram, Haryana - 122015. Website : www.spspl.com Email : info@spspl.com	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuival section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADEEP	DHEERESH	VIPUL	MAR - 2022	TYPICAL CROSS SECTION	AS SHOWN	R0

DRS.ND: GPT/CCT/4B/HW/GEN/TCS/07

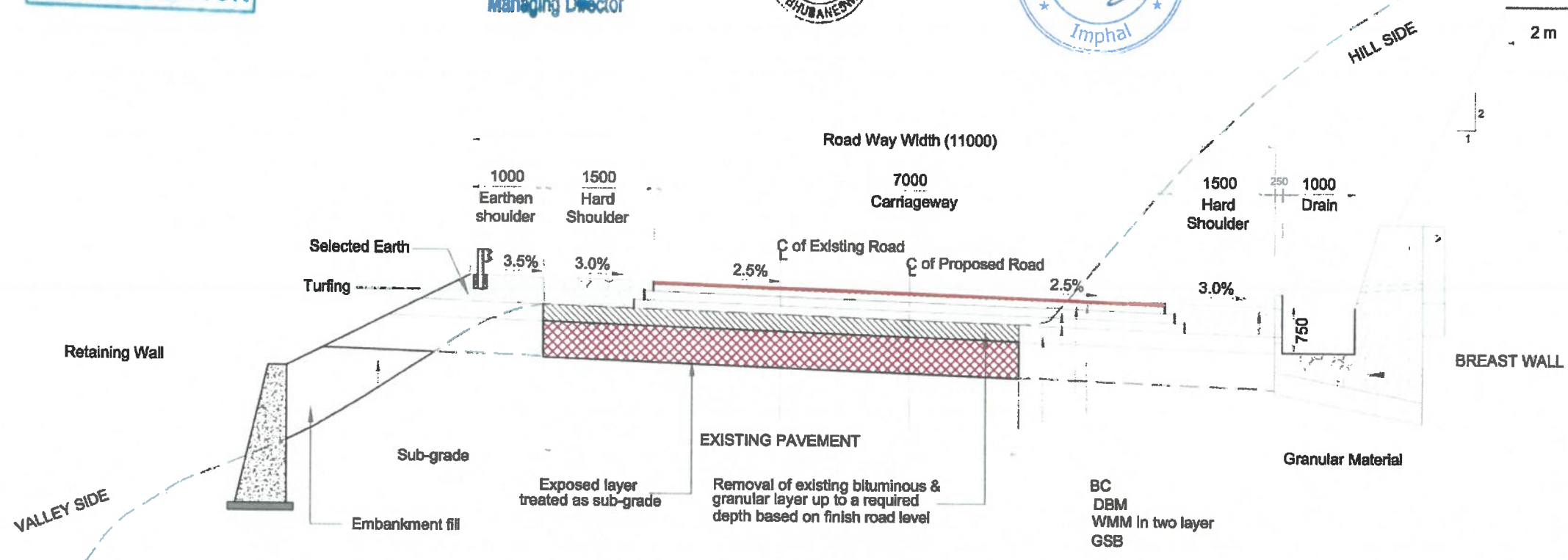
Vipul Arora
DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.
P. S.
Managing Director

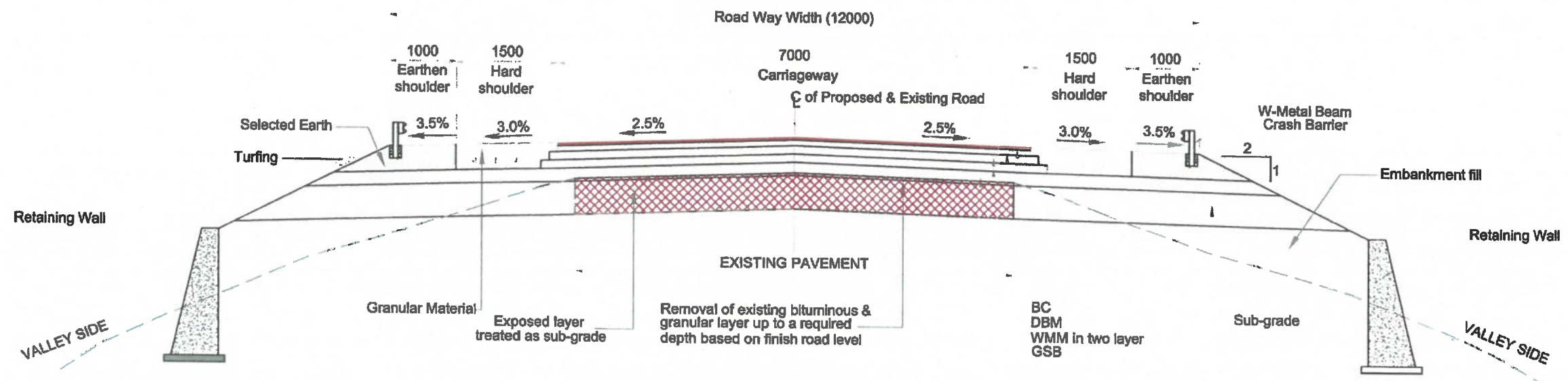
Kush
SUVADRA CONSULTANTS
Regd. No. 11/2004-05
Bhubaneswar

GPT Infraprojects Limited
Kaphal Branch
795001
Imphal

APPROVED
CHAITANYA PROJECTS CONSULTANCY PVT. LTD.
M.H. 102-B
CCPur
In association with
MSPARK FUTURISTICS & ASSOCIATES



TCS-12 :-TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER AT RECONSTRUCTION STRETCH IN RURAL AREA WITH RETAINING WALL ON VALLEY SIDE AND BREAST WALL ON HILL SIDE (RECONSTRUCTION OF EXISTING PAVEMENT)

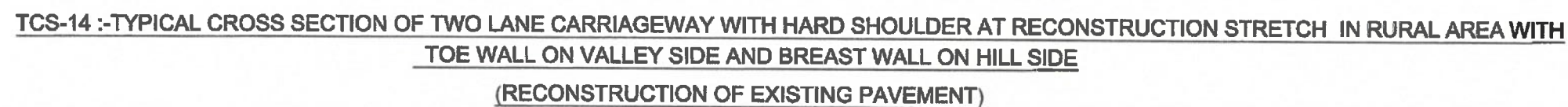


TCS-13 :-TYPICAL CROSS SECTION OF TWO LANE CARRIAGEWAY WITH HARD SHOULDER IN RURAL AREA WITH BOTH SIDE RETAINING WALL ON VALLEY SIDE (RECONSTRUCTION OF EXISTING PAVEMENT)

NOTES:

1. PAVEMENT THICKNESS AS PER PAVEMENT DESIGN REPORT.

Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	DESIGNED:	CHECKED:	DATE:	TITLE:	SCALE:	REV:
			MIDCL BUILDING INFRASTRUCTURE - BUILDING THE NATION	GPT JC - 25, Sector - III, Salt Lake, Kolkata - 700098.	M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES C-52ND FLOOR, RKTOWER, SECTOR-4, VAISHALI, GHAZIABAD-201010.	SUVADRA CONSULTANTS PP-97, Tanikapani Road, BBSR-18, Odisha	SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. E-82, Rajesh Kumar Path, S.K.Puri, Boring Road, Patna-800091	SPS Technocrats Pvt. Ltd. # 638 & 641, JMD Megapolla, Sector 48, Gurgaon, Haryana - 122016. Website : www.spspl.com Email : info@spspl.com	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADDEEP	DHEERESH	VIPUL	MAR - 2022	TYPICAL CROSS SECTION	AS SHOWN	R0



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	PRACREP:	TITLE:	TYPICAL CROSS SECTION	REV
			 Naidel BUILDING INFRASTRUCTURE. BUILDING THE NATION	 GPT JC - 25, Sector - III, Salt Lake, Kolkata - 700098.	 M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES C-2ND FLOOR, RK TOWER, SECTOR-4, VAISHALI, GUWAHATI-781018.	 SUVADRA CONSULTANTS ESTD 2008 PP-97, Tanpanski Road, BBSR-18, Odisha	 SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. E-32, Rajesh Kumar Path, S.K.Puri, Boring Road, Patna-800001	 SPS Technocrats Pvt. Ltd. # 63B & 64, JMD Megapole, Sector 48, Gurgaon, Haryana - 122018. Website : www.spspl.com Email : info@spspl.com	PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuwei section of NH 1028 from Km 130.00 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	DRAWN DESIGNED CHECKED DATE: MAR - 2022	PRACREP DHREESH VIPLU DRG.NO: GPT/CCT/48/HW/GEN/TCS/09	TITLE: TYPICAL CROSS SECTION SCALE: AS SHOWN	REV	

PLAN AND LONGITUDINAL PROFILE

LEGEND :

EXISTING PLAN :

EXIST. ROAD
 K-I/R : KACHA RESIDENTIAL
 K-I/C : KACHA COMMERCIAL
 SP-I/R : SEMI PUCCA RESI.
 SP-I/C : SEMI PUCCA COMM.
 P-I/R : PUCCA RESIDENTIAL
 P-I/C : PUCCA COMMERCIAL
 1000 CONTOUR

PROPOSED PLAN :

TOE LINE
 ES EDGE
 HS EDGE
 C/W EDGE
 CEN.LINE
 C/W EDGE
 HS EDGE
 ES EDGE
 TOE LINE
 HOR. TANGENT POINT
 PROW PROPOSED ROW
 CULVERT
 BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
 EXIS. ROAD LEVEL
 LEFT 5M LEVEL
 EXIST. LEVEL
 AT PRO. CL
 RIGHT 5M LEVEL
 VER. TANGENT POINT
 GRID LINE
 BOX CULVERT

CHURACHANDPUR

APPROVED



Shambhavi Techno Solutions Pvt. Ltd.

Managing Director



DESIGN DIRECTOR



HP NO. 8 @ CH. 13021.796
 X(m) = 528952.241 Y(m) = 268283.297
 R (m) = 20.000
 Lc(m) = 48.5535(m)
 Dc(deg) = 6.3651(deg)
 Tc(m) = 27.8085(m)
 Eo(m) = 14.9735(m)
 Design Speed (V): 20 kmph

HP NO. 9 @ CH. 13024.647
 X(m) = 529153.153 Y(m) = 268283.297
 R (m) = 20.000
 Lc(m) = 48.5535(m)
 Dc(deg) = 6.3651(deg)
 Tc(m) = 27.8085(m)
 Eo(m) = 14.9735(m)
 Design Speed (V): 20 kmph

HP NO. 10 @ CH. 13027.507
 X(m) = 529354.153 Y(m) = 268283.297
 R (m) = 20.000
 Lc(m) = 48.5535(m)
 Dc(deg) = 6.3651(deg)
 Tc(m) = 27.8085(m)
 Eo(m) = 14.9735(m)
 Design Speed (V): 20 kmph

Rev.	Date	Description

CLIENT:



EPC CONTRACTOR:



JC - 25, Sector - III, Salt Lake,
 Kolkata - 700098.

AUTHORITY ENGINEER:



M/S CHAITANYA PROJECTS
 CONSULTANCY PVT. LTD.
 IN ASSOCIATION WITH MSPARK
 FUTURISTICS AND ASSOCIATES
 C-52ND FLOOR, RKTOWER,
 SECTOR-4, VASIHALLI, GHAZIABAD-201015

SAFETY CONSULTANT:



PP-87, Tankapuri Road,
 BBSR-18, Odisha

PROOF CONSULTANT:



SHAMBHAVI TECHNO
 SOLUTIONS PVT. LTD.
 E-82, Rajesh Kumar Path,
 S.K.Puri, Boring Road,
 Patna-800001

DESIGN CONSULTANT:



SPS Technocrats Pvt. Ltd.
 # 638 & 641, JMD Mega Plaza, Sector 48,
 Gurugram, Haryana - 122018.
 Website: www.spspl.com
 Email: info@spstpl.com

PROJECT:

Widening to 2 (Two) Lane with Hard
 shoulder of Churachandpur to Tuwai section
 of NH 102B from Km 130.000 to Km 141.029
 (Package-4B) in the State of Manipur on
 Engineering, Procurement & Construction
 (EPC) mode.

DRAWN: PRADEEP

DESIGNED: OHEERESH
 CHECKED: VIPUL

DATE: MAR - 2022

TITLE: Plan & Longitudinal Profile

(From Km 130+000 to Km 130+500)
 SCALE: (HORIZ - 1:1000; VERT - 1:100 at A3 Size Sheet)
 VER. 1:100

DRG. NO: GPT/CCT/4B/HW/PP/01

REV:

R0

LEGEND :

EXISTING PLAN :

EXIST. ROAD
K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL
1000 CONTOUR

PROPOSED PLAN :

TOE LINE
EB EDGE
HS EDGE
C/W EDGE
DEN. LINE
C/W EDGE
HS EDGE
EB EDGE
TOE LINE
HOR. TANGENT POINT
PROW PROPOSED ROW
CULVERT
BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT
GRID LINE
BOX CULVERT

CHURACHANDPUR

TUIVAI

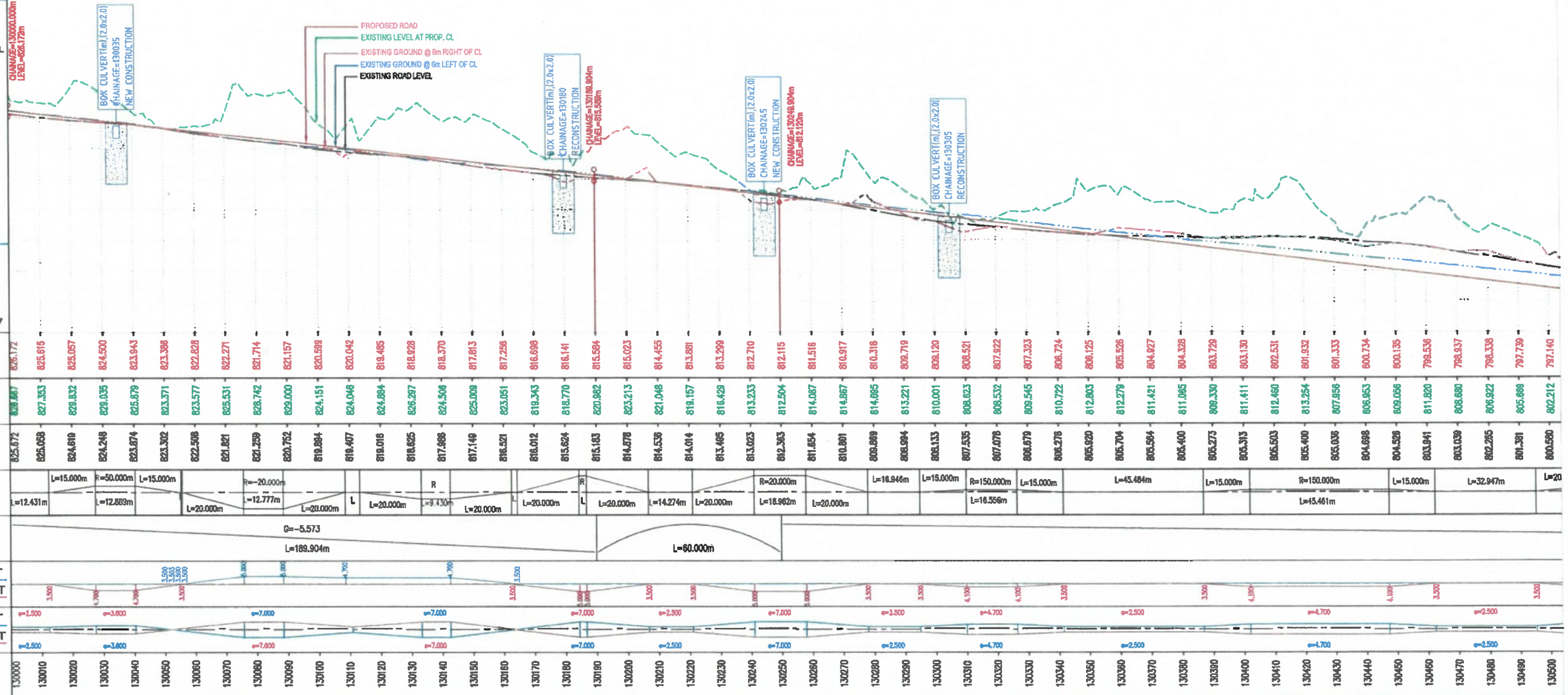
APPROVED



DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.

Managing Director



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	DESIGNED:	CHECKED:	DATE:	TITLE:	SCALE:	DRG. NO:	REV:
			NAIDCL	GPT	M/S CHARTANYA PROJECTS CONSULTANCY PVT. LTD.	SUVADRA CONSULTANTS	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD.	SPS Technocrats Pvt. Ltd.	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADDEEP	DHEERESH	VIPUL	MAR - 2022	Plan & Longitudinal Profile (From Km 130+000 to Km 130+500)	1:1000	GPT/CCT/4B/HW/PNP/01a	RD

LEGEND :

EXISTING PLAN :

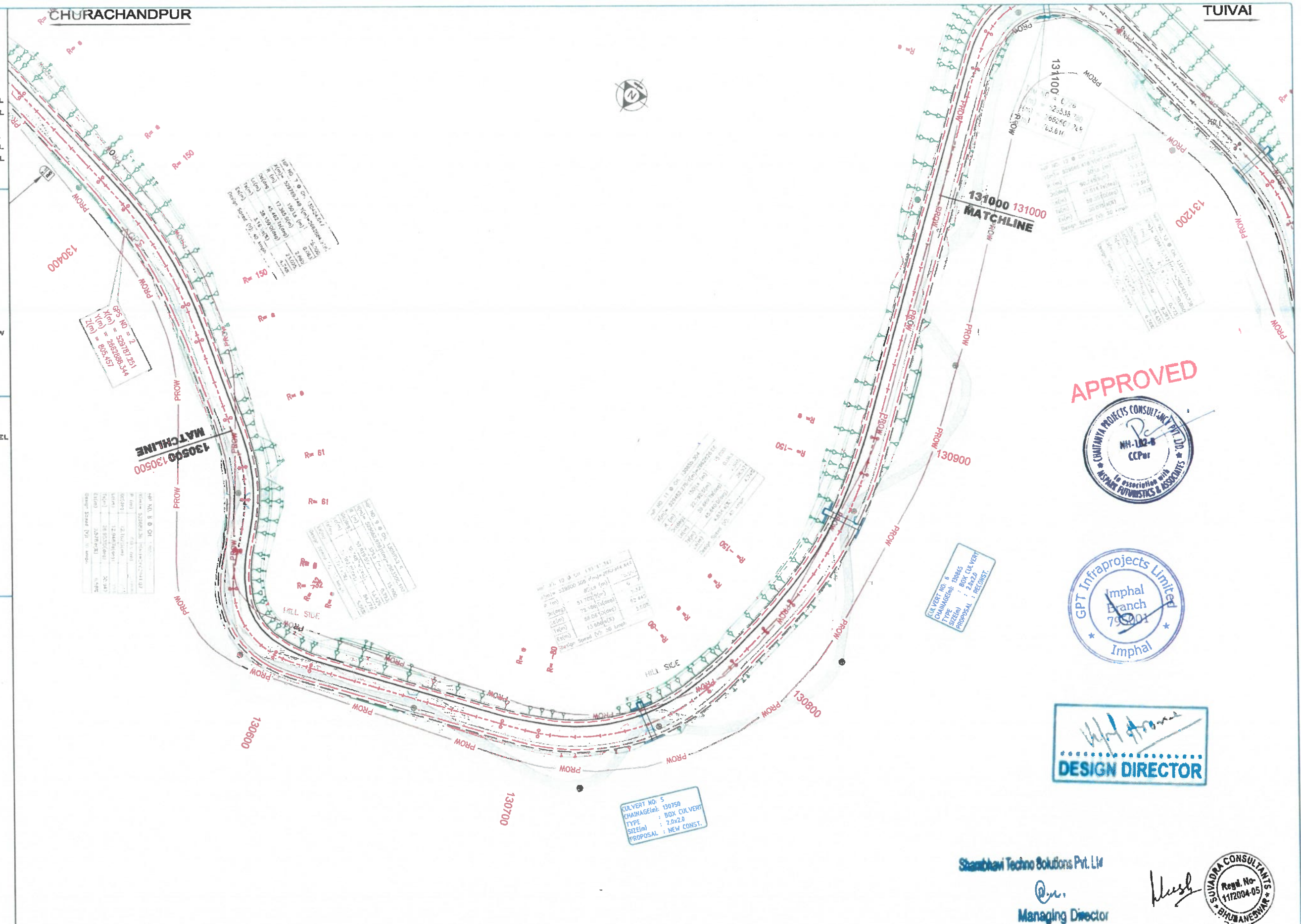
EXIST. ROAD
K-1/R : KACHA RESIDENTIAL
K-1/C : KACHA COMMERCIAL
SP-1/R : SEMI PUGGA RESI.
SP-1/C : SEMI PUGGA COMM.
P-1/R : PUGGA RESIDENTIAL
P-1/C : PUGGA COMMERCIAL
1000 CONTOUR

PROPOSED PLAN :

TOE LINE
ES EDGE
HS EDGE
C/W EDGE
CEN. LINE
C/W EDGE
HS EDGE
ES EDGE
TOE LINE
HOR. TANGENT POINT
PROW PROPOSED ROW
CULVERT
BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL
AT PRD. CL
RIGHT 6M LEVEL
VER. TANGENT POINT
GRID LINE
BOX CULVERT



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	POOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN	PRADSEEP	TITLE:	REV:
				 GPT JC - 25, Sector - III, Salt Lake, Kolkata - 700099	 M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH SPARK FUTURISTICS AND ASSOCIATES C-2ND FLOOR, RK TOWER, SECTOR-19, WARDHALL GHAZIABAD-201013	 SUVADRA CONSULTANTS 1, NEW MARKET, NEW DELHI-110002 PP-97, Tankapoor Road, BSR-18, Odisha	 SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. E-82, Rajesh Kumar Path, S.K.Puri, Boring Road, Patna-800001	 SPS Technocrats Pvt. Ltd. # 636 & 641, JMD Megapole, Sector 48, Gurugram, Haryana - 122018. Website : www.spspl.com Email : info@spspl.com	PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tulvi section of NH 102B from Km 130.00 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	DESIGNED	DHEERESH	Plan & Longitudinal Profile (From Km 130+500 to Km 131+000)	
										CHECKED	VIPUL	SCALE: HORIZONTAL : 1"=1000' VERTICAL : 1"=100' (at 2nd Street)	
										DATE:	MAR - 2022	DRG. NO: GPT/CCT/48/HW/PNP/02a	R0

LEGEND :

EXISTING PLAN :

EXIST. ROAD
K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL
1000 CONTOUR

PROPOSED PLAN :

TOE LINE
ES EDGE
HS EDGE
O/W EDGE
CEN. LINE
O/W EDGE
HS EDGE
ES EDGE
TOE LINE
HDR. TANGENT POINT
PROW PROPOSED ROW
CULVERT
BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT
GRID LINE
BOX CULVERT

CHURACHANDPUR

TUVAI

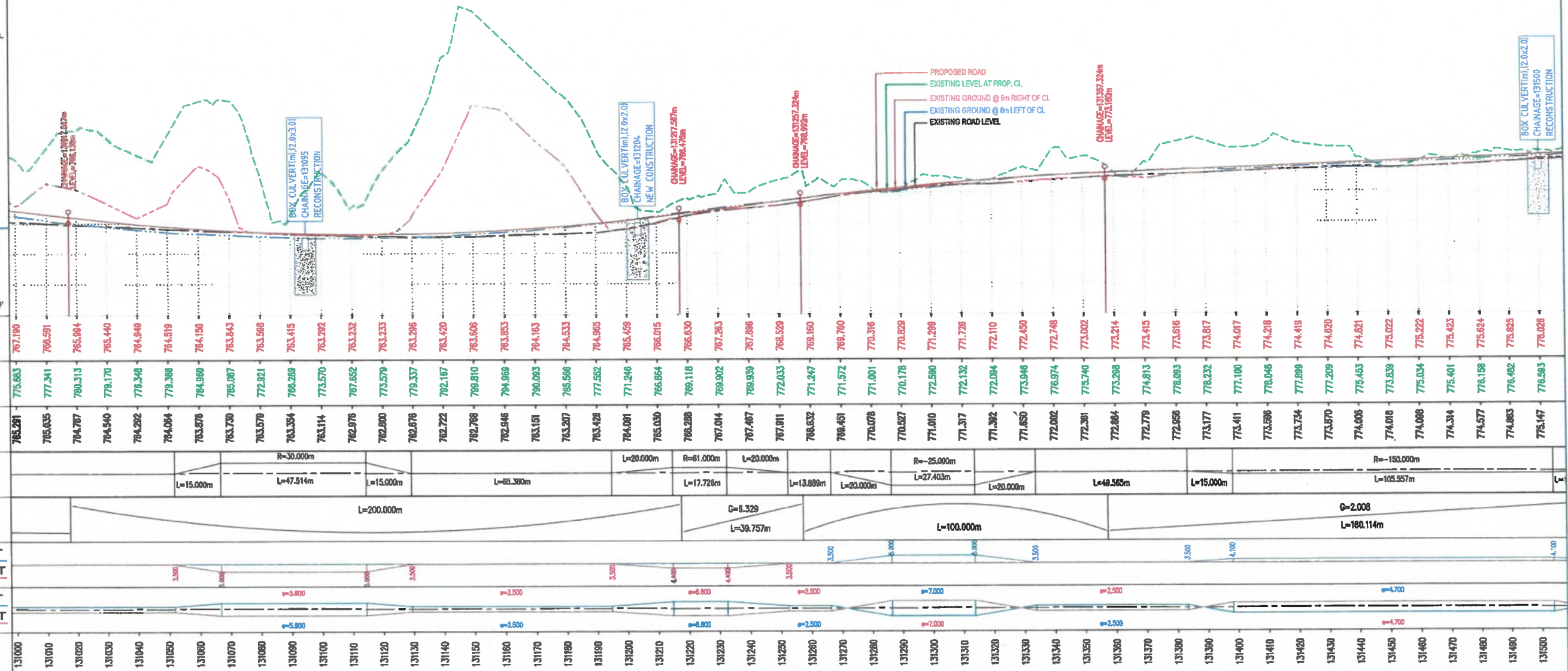
APPROVED



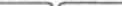
DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.
Managing Director

SUVADRA CONSULTANTS
Regd. No. 1112004-05
BHUBANESHWAR



REV.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	CHECKED:	DATE:	TITLE:	SCALE:	DRG. NO:	REV:
			M/S. CHAITANYA PROJECTS CONSULTANCY PVT. LTD.	GPT	M/S. CHAITANYA PROJECTS CONSULTANCY PVT. LTD.	SUVADRA	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD.	SPS Technocrats Pvt. Ltd.	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuwai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADDEEP	DHEERESH	MAR - 2022	Plan & Longitudinal Profile (From Km 131+000 to Km 131+500)	1:1000 (HORIZ.) 1:100 (VERT.)	GPT/CCT/4B/HW/PNP/03a	R0

Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN	DATE	PRACED	TITLE:	REV:
				 JC - 25, Sector - III, Salt Lake, Kolkata - 700098.	 M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES C-6,2ND FLOOR, FLK TOWER, SECTOR-9 VASAHAL, GHANABAD-201010.	 PP-97, Tankapuri Road, BBSR-18, Odisha	 SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. E-82, Rajesh Kumar Path, S.K.Puri, Boring Road, Patna-800001	 SPS Technocrats Pvt. Ltd. # 838 & 841, JMD Megapoles, Sector 48, Gurugram, Haryana - 122018. Website : www.spspl.com Email : info@spspl.com	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tulval section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the case of Manipur on Engineering, Procurement & Construction (EPC) mode.	DESIGNED CHECKED	MAR - 2022	DHEERESH VI/PUL	Plan & Longitudinal Profile (From X _m 131+500 to X _m 132+000) SCALE: HORIZ 1:1000, VERT - 1:100 (AS PER DRAWING) ORG. NO: GPT/CCT/4B/HW/PNP/04	R0

LEGEND :

EXISTING PLAN :

- EXIST. ROAD
 K-1/R : KADHA RESIDENTIAL
 K-1/C : KADHA COMMERCIAL
 SP-1/R : SEMI PUCCA RESI.
 SP-1/C : SEMI PUCCA COMM.
 P-1/R : PUCCA RESIDENTIAL
 P-1/C : PUCCA COMMERCIAL
 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
 ES EDGE
 HS EDGE
 D/W EDGE
 GEN. LINE
 C/W EDGE
 HS EDGE
 ES EDGE
 TOE LINE
 HOR. TANGENT POINT
 PROW PROPOSED ROW
 CULVERT
 BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
 EXIS. ROAD LEVEL
 LEFT 6M LEVEL
 EXIST. LEVEL
 AT PRO. CL
 RIGHT 6M LEVEL
 VER. TANGENT POINT
 GRID LINE
 BOX CULVERT

Level Datum = 750(m)

PROP. ROAD LEVELS (m)

EXIST LEVELS
AT PROP. CL (m)EXISTING ROAD
LEVEL (m)HORIZONTAL
SCHEMATIC (L,R=m)VERTICAL
SCHEMATIC (G=%)
(L,R=m)WIDENING
SCHEMATIC (m)
LEFT
RIGHTSUPERELEVATION
SCHEMATIC (e in %)
LEFT
RIGHT

CHAINAGE (m)

Rev.	Date	Description

CLIENT:



EPC CONTRACTOR:


 JC - 25, Sector - III, Salt Lake,
Kolkata - 700098.

AUTHORITY ENGINEER:


 M/S CHAITANYA PROJECTS
CONSULTANCY PVT. LTD.
IN ASSOCIATION WITH MSPARK
FUTURISTICS AND ASSOCIATES
C-5, 2ND FLOOR, RK TOWER,
SECTOR-4, VAISHALI, GHAZIABAD-201010.

SAFETY CONSULTANT:


 PP-87, Tankapuri Road,
BBSR-18, Odisha

PROOF CONSULTANT:


 SHAMBHAVI TECHNO
SOLUTIONS PVT. LTD.
E-82, Rajesh Kumar Path,
S.K.Puri, Boring Road,
Patna-800001

DESIGN CONSULTANT:


 SPS Technocrats Pvt. Ltd.
838 & 841, JMD Megapolis, Sector 48,
Gurgaon, Haryana - 122015.
Website : www.spspl.com
Email : info@spspl.com

PROJECT:

 Widening to 2 (Two) Lane with Hard
shoulder of Churachandpur to Tuivai section
of NH 102B from Km 130.000 to Km 141.029
(Package-4B) in the State of Manipur on
Engineering, Procurement & Construction
(EPC) mode.

DRAWN

 DESIGNED
CHECKED

DATE: MAR - 2022

TITLE:

Plan & Longitudinal Profile

(From Km 131+500 to Km 132+000)

SCALE:

 HORIZ. 1:10000 VERT. 1:1000 (H&V Box Sheet)
 WORK 10 0 10 20
 VER. 0 5 10

DRG. NO: GPT/CCT/4B/HW/PNP/04a

REV:

R0

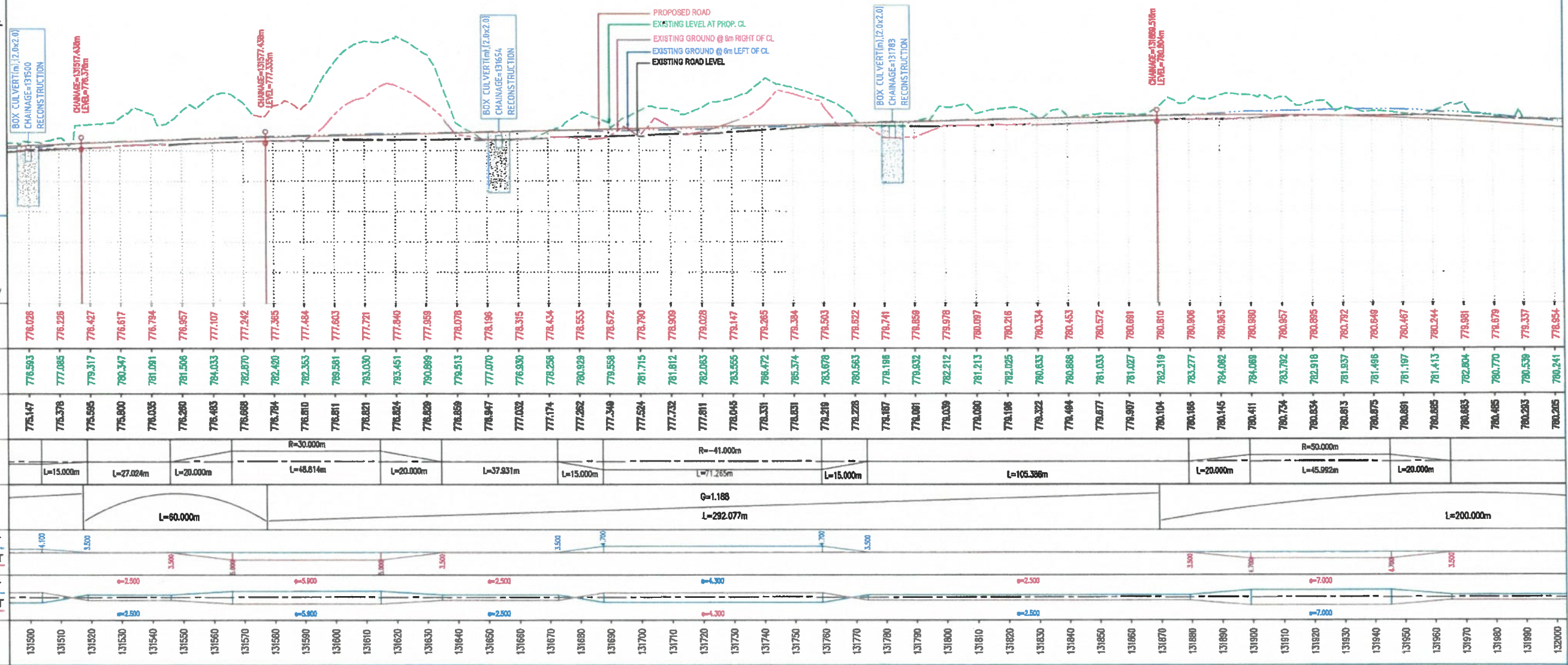
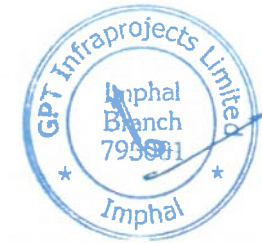
APPROVED



DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.

Managing Director



LEGEND :

EXISTING PLAN :

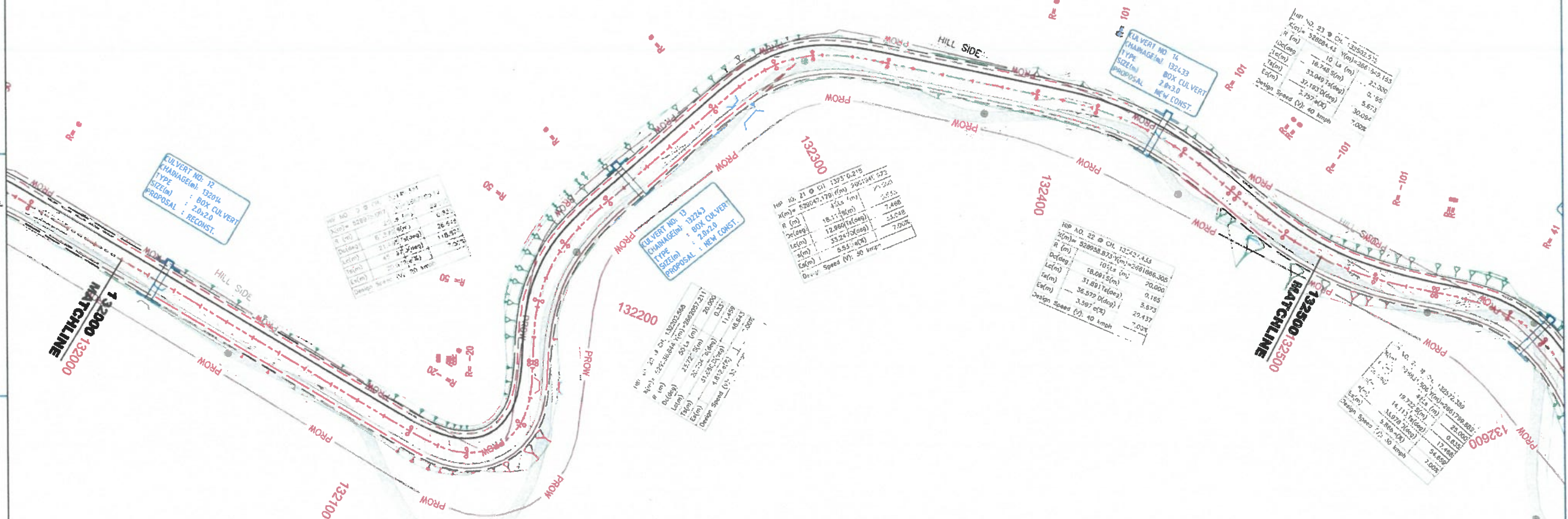
EXIST. ROAD
 K-I/R : KACHA RESIDENTIAL
 K-I/C : KACHA COMMERCIAL
 SP-I/R : SEMI PUCCA RESI.
 SP-I/C : SEMI PUCCA COMM.
 P-I/R : PUCCA RESIDENTIAL
 P-I/C : PUCCA COMMERCIAL
 1000 CONTOUR

PROPOSED PLAN :

TOE LINE
 ES EDGE
 HS EDGE
 C/W EDGE
 DEN. LINE
 C/W EDGE
 HS EDGE
 ES EDGE
 TOE LINE
 HOR. TANGENT POINT
 PROW PROPOSED ROW
 GULVERT
 BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
 EXIS. ROAD LEVEL
 LEFT 6M LEVEL
 EXIST. LEVEL
 AT PRO. CL
 RIGHT 6M LEVEL
 VER. TANGENT POINT
 GRID LINE
 BOX CULVERT



APPROVED



DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.

Managing Director



Rev.	Date	Description

CLIENT:



EPC CONTRACTOR:

GPT

JC - 25, Sector - III, Salt Lake,
 Kolkata - 700098.

AUTHORITY ENGINEER:



M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD.
 IN ASSOCIATION WITH MSPARK
 FUTURISTICS AND ASSOCIATES
 C-5, 2ND FLOOR, RKT TOWER,
 SECTOR-4, VAISHALI, GHAZIABAD-201015

SAFETY CONSULTANT:



PP-97, Tankapani Road,
 BBSR-18, Odisha

PROOF CONSULTANT:



SHAMBHAVI TECHNO
 SOLUTIONS PVT. LTD.
 E-52, Rajesh Kumar Path,
 S.K. Puri, Boring Road,
 Patna-800001

DESIGN CONSULTANT:



SPS Technocrats Pvt. Ltd.
 # 539 & 541, JMD Megacolle, Sector 48,
 Gurugram, Haryana - 122016.
 Website : www.spspl.com
 Email : info@spspl.com

PROJECT:

Widening to 2 (Two) Lane with Hard
 shoulder of Churachandpur to Tuivai section
 of NH 102B from Km 130.000 to Km 141.029
 (Package-4B) in the State of Manipur on
 Engineering, Procurement & Construction
 (EPC) mode.

DRAWN: PRADEEP

DESIGNED: DHEERESH
 CHECKED: VIPUL

DATE: MAR - 2022

TITLE: Plan & Longitudinal Profile

(From K# 132+000 to K# 132+500)

SCALE: HORIZONTAL: 1:10000 VERTICAL: 1:1000
 (AS SHOWN)

DRG. NO: GPT/CCT/48/HW/PNP/05

REV:

R0

LEGEND :

EXISTING PLAN :

EXIST. ROAD
K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUDDA RESI.
SP-I/C : SEMI PUDDA COMM.
P-I/R : PUDDA RESIDENTIAL
P-I/C : PUDDA COMMERCIAL
1000 CONTOUR

PROPOSED PLAN :

TOE LINE
ES EDGE
HS EDGE
C/W EDGE
GEN. LINE
C/W EDGE
HS EDGE
ES EDGE
TOE LINE
HOR. TANGENT POINT
PROW PROPOSED ROW
CULVERT
BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT
GRID LINE
BOX CULVERT

CHURACHANDPUR

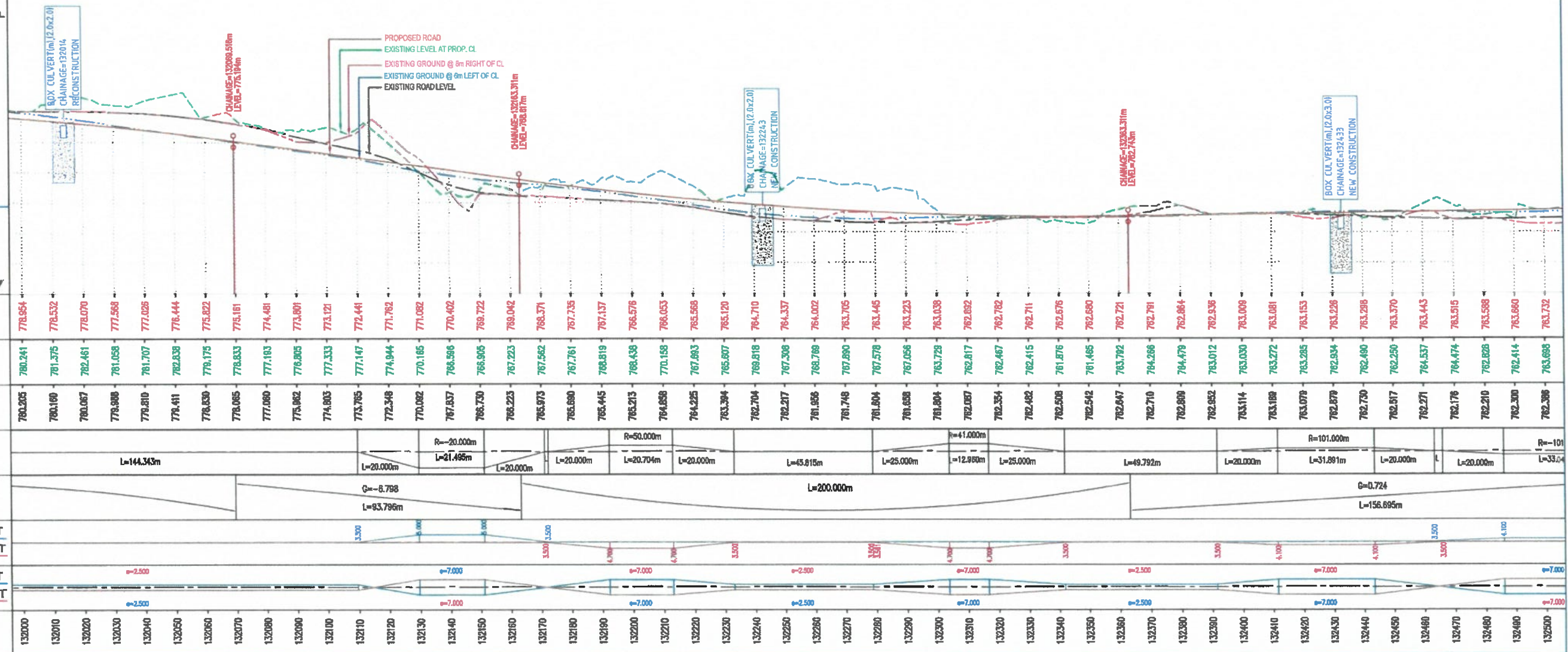
TUIVAI

APPROVED



Shambhavi Techno Solutions Pvt. Ltd.

Managing Director



Rev.	Date	Description	CLIENT:	EPD CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	DESIGNED:	CHECKED:	DATE:	TITLE:	SCALE:	DRG. NO:	REV:
			NAIDCL	GPT	MS CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES	SUVADRA CONSULTANTS	SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.	SPS Technocrats Pvt. Ltd.	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.028 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADDEEP	DHEERESH	VIPUL	MAR - 2022	Plan & Longitudinal Profile (From Km 132+000 to Km 132+500)	1:100	GPT/CCT/4B/HW/PP/05a	R0

LEGEND :

EXISTING PLAN :

EXIST. ROAD
K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL
1000 CONTOUR

PROPOSED PLAN :

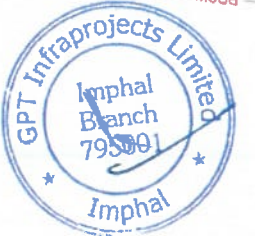
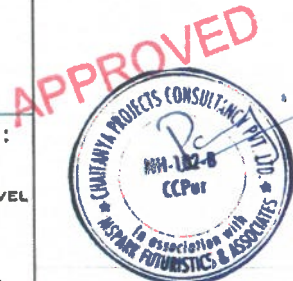
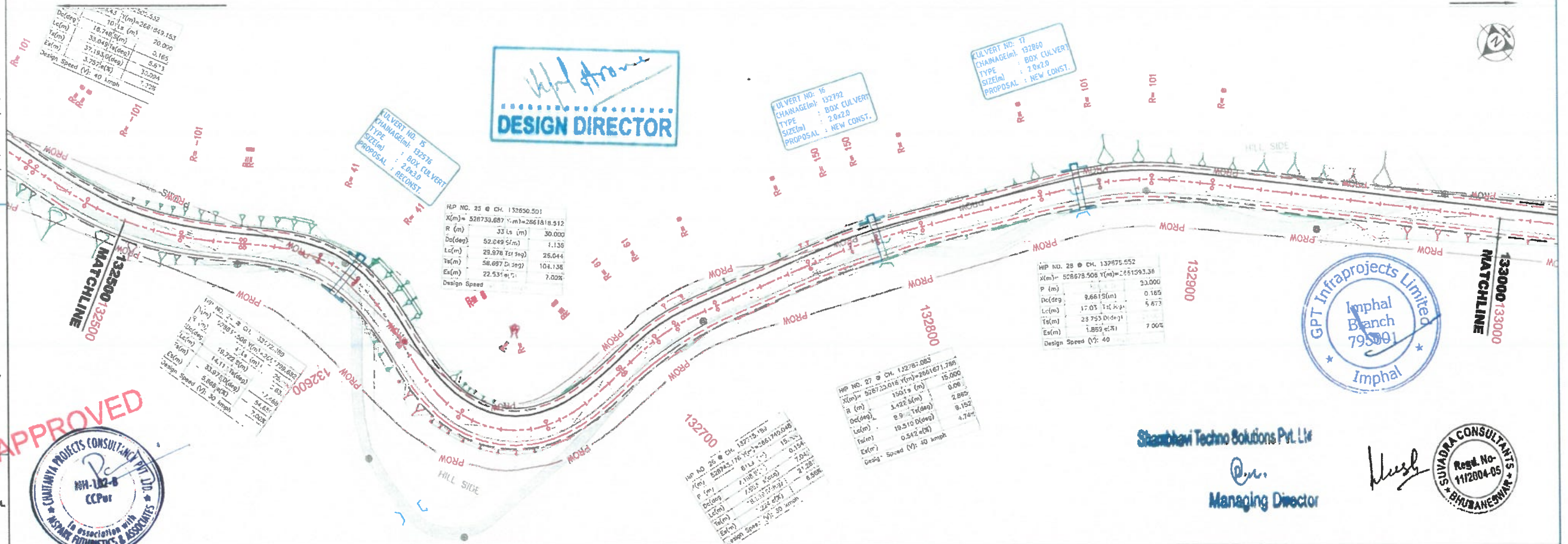
TDE LINE
ES EDGE
HS EDGE
C/W EDGE
CEN. LINE
C/W EDGE
HS EDGE
ES EDGE
TOE LINE
HOR. TANGENT POINT
PROW PROPOSED ROW
CULVERT
BRIDGE

PROPOSED PROFILE :

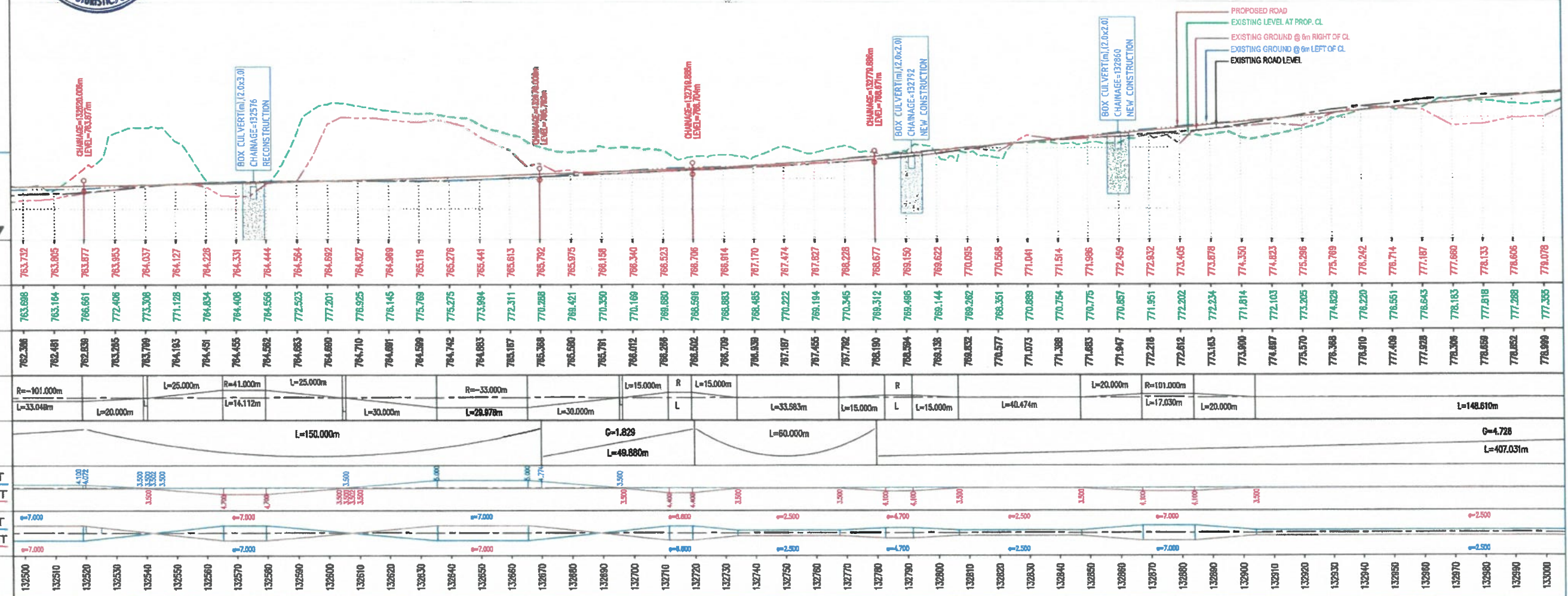
PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT
GRID LINE
BOX CULVERT

CHURACHANDPUR

TUIVAI



Shambhavi Techno Solutions Pvt. Ltd.
Managing Director



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	CHECKED:	DATE:	TITLE:	SCALE:	REV:
			NAIDCL	GPT	M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD.	SUVADRA CONSULTANTS	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD.	SPS Technocrats Pvt. Ltd.	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 132+500 to Km 133+000 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADIP	DHEERESH	MAR - 2022	Plan & Longitudinal Profile (From Km 132+500 to Km 133+000)	1:1000 (H) 1:100 (V)	RO

LEGEND :

EXISTING PLAN :

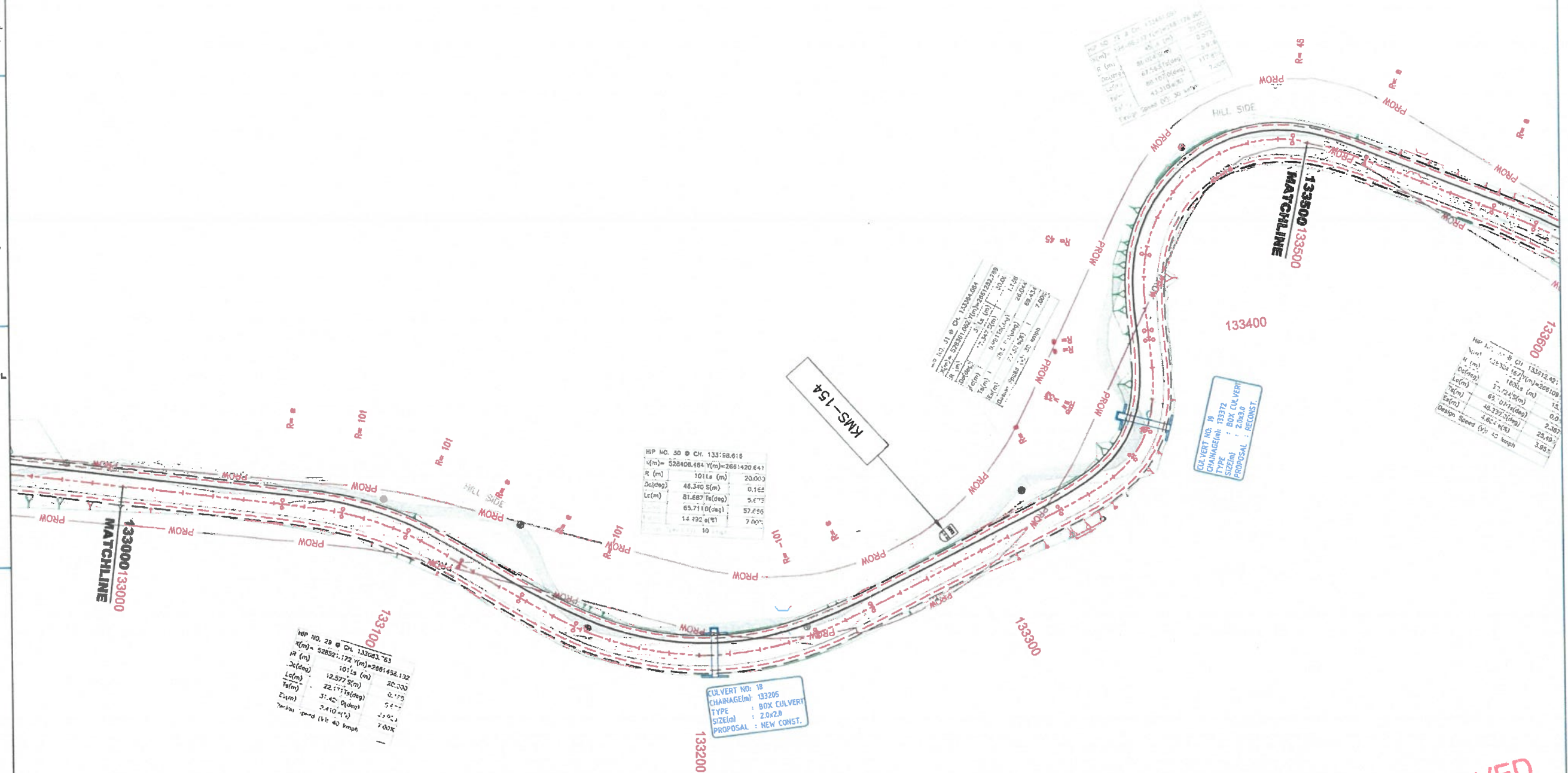
- EXIST. ROAD
- K-1/R : KACHA RESIDENTIAL
K-1/C : KACHA COMMERCIAL
SP-1/R : SEMI PUCCA RESI.
SP-1/C : SEMI PUCCA COMM.
P-1/R : PUCCA RESIDENTIAL
P-1/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
ES EDGE
HS EDGE
C/W EDGE
DEN. LINE
C/W EDGE
HS EDGE
ES EDGE
TOE LINE
- HOR. TANGENT POINT
- PROW PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
- EXIS. ROAD LEVEL
- LEFT 6M LEVEL
- EXIST. LEVEL AT PRO. GL
- RIGHT 6M LEVEL
- VER. TANGENT POINT
- GRID LINE
- BOX CULVERT



DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.

Managing Director

SPS Technocrats Pvt. Ltd.

GPT Infraprojects Limited

APPROVED

Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	DESIGNED:	CHECKED:	DATE:	TITLE:	SCALE:	DRG. NO:	REV:
			MIDCL	GPT	M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES	SUVADRA CONSULTANTS	SHAMBHAVI TECHNO SOLUTIONS PVT.LTD.	SPS Technocrats Pvt. Ltd.	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 1028 from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADIEP	DHEERESH	VIPUL	MAR - 2022	Plan & Longitudinal Profile (From Km 133+000 to Km 133+500)	1:1000	GPT/CCT/4B/HW/PNP/07	RO

LEGEND :

EXISTING PLAN :

EXIST. ROAD
K-I/R : KADHA RESIDENTIAL
K-I/C : KADHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL
1000 CONTOUR

PROPOSED PLAN :

TDE LINE
ES EDGE
HS EDGE
C/W EDGE
DEN. LINE
C/W EDGE
HS EDGE
ES EDGE
TDE LINE
HOR. TANGENT POINT
PROW PROPOSED ROW
CULVERT
BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT
GRID LINE
BOX CULVERT

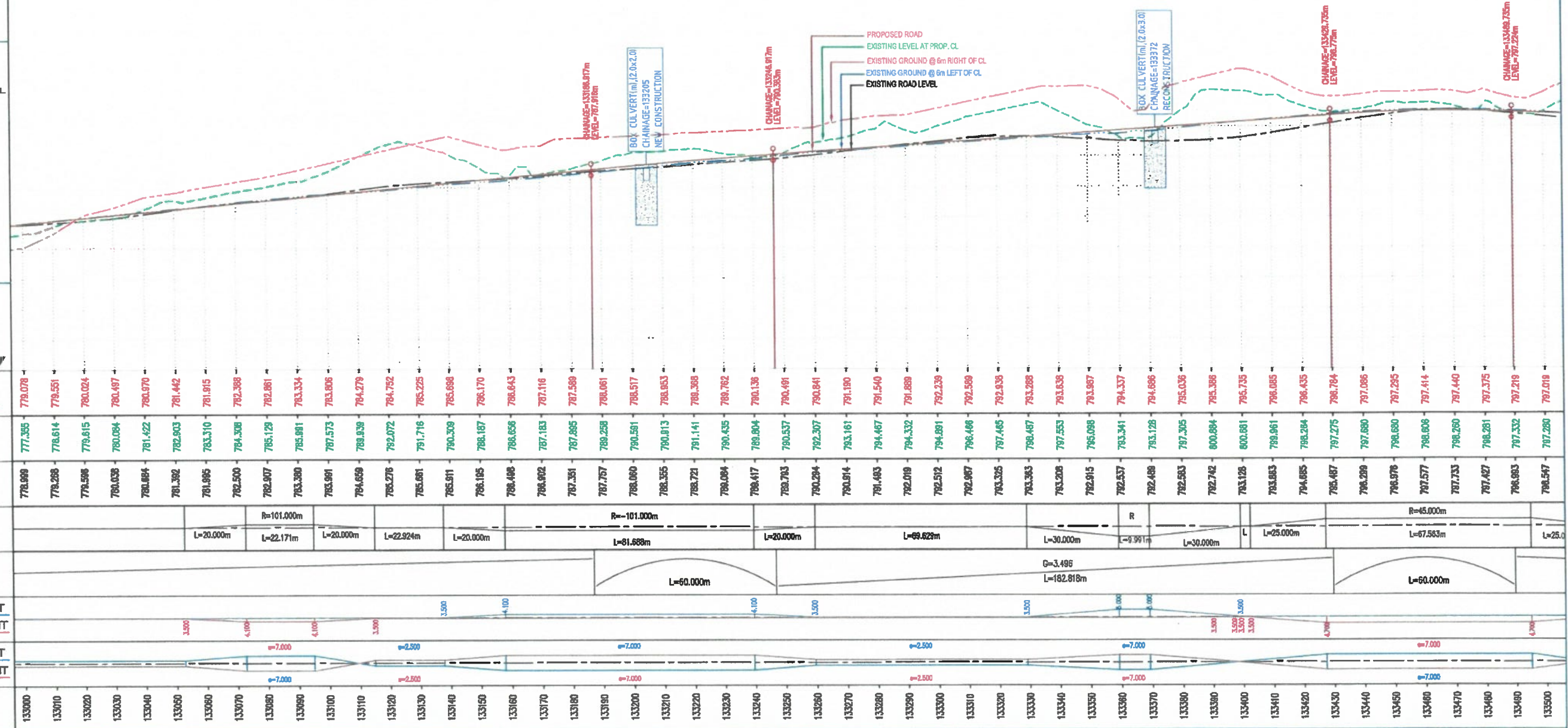
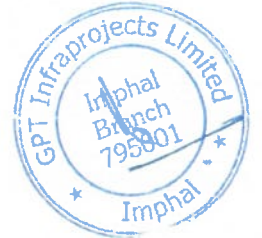
CHURACHANDPUR

TUVAI

APPROVED



Shambhavi Techno Solutions Pvt. Ltd.
Managing Director



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	DESIGNED:	CHECKED:	DATE:	TITLE:	SCALE:	DRG. NO.:	REV:
			MSPARK	GPT	M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES	SUVADRA	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD.	SPS Technocrats Pvt. Ltd.	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuwai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipal on Engineering, Procurement & Construction (EPC) mode.	PRADEEP	DHEERESH	VIPUL	MAR - 2022	Plan & Longitudinal Profile (From Km 133+000 to Km 133+500)	1:1000	GPT/CCT/4B/HW/PNP/07a	R0

LEGEND :

EXISTING PLAN :

EXIST. ROAD
K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUGGA RESI.
SP-I/C : SEMI PUGGA COMM.
P-I/R : PUGGA RESIDENTIAL
P-I/C : PUGGA COMMERCIAL
1000 CONTOUR

PROPOSED PLAN :

TOE LINE
ES EDGE
HS EDGE
C/W EDGE
CEN. LINE
C/W EDGE
HS EDGE
ES EDGE
TOE LINE
HOR. TANGENT POINT
PROW PROPOSED ROW
CULVERT
BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT
GRID LINE
BOX CULVERT

CHURACHANDPUR

TUIVAI

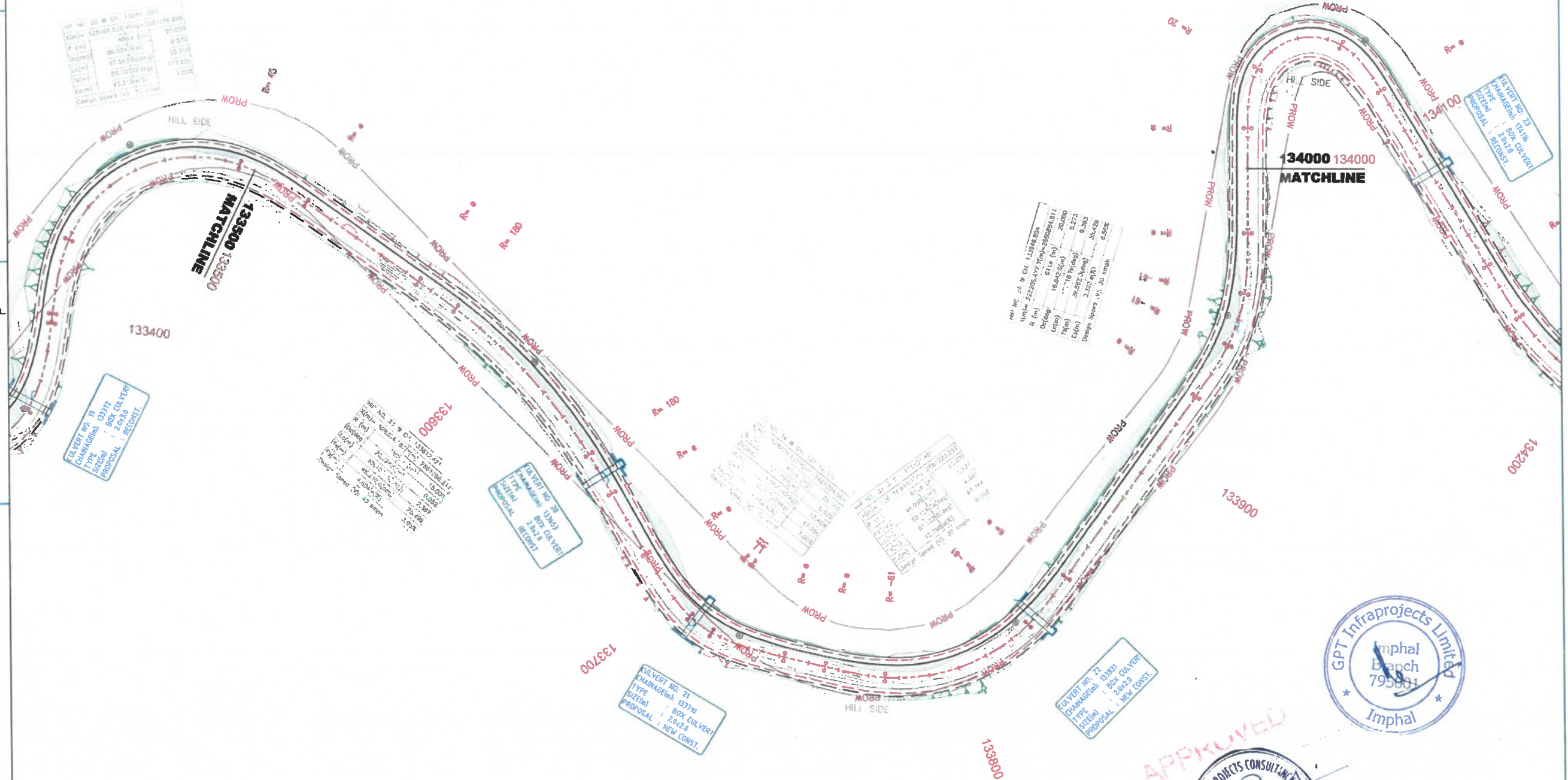
DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd

Managing Director

SUVADRA CONSULTANTS
Regd. No. 11/2004-05
SHUBANESWAR

HP No. 37 @ Ch. 134018.888
Ymin = 57.8526 313 Y(m) = 260.0814.234
P (m) = 20 Ls (m) = 0.833
D (m) = 31.7175 (m) = 23.641
L (m) = 31.859 Td (deg) = 143.565
T (m) = 63.045 D (deg) = 7.096
Cp (m) = 56.808 (m) = 7.096
Design Speed (V): 20 kmph



GPT Infraprojects Limited
Imphal Branch
795001
Imphal

CHAITANYA PROJECTS CONSULTANCY PVT. LTD.
NH-142-B
CCPur
In association with
MSPARK FUTURISTICS & ASSOCIATES

APPROVED

CULVERT NO. 22
CHAMARAGHAT : BOX CULVERT
TYPE : 2.0x2.0
PROPOSAL : NEW CONST.

CULVERT NO. 21
CHAMARAGHAT : BOX CULVERT
TYPE : 2.0x2.0
PROPOSAL : NEW CONST.

CULVERT NO. 20
CHAMARAGHAT : BOX CULVERT
TYPE : 2.0x2.0
PROPOSAL : RECONST.

CULVERT NO. 19
CHAMARAGHAT : BOX CULVERT
TYPE : 2.0x2.0
PROPOSAL : RECONST.

Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	PRACED:	TITLE:	SCALE:	DATE:	REV:
			M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES	GPT JC - 25, Sector - III, Salt Lake, Kolkata - 700098.	M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES C-62ND FLOOR, R.K. TOWER, SECTOR-4, VAISHALI, GHANABAD-201016	SUVADRA CONSULTANTS PP-97, Tankapani Road, BBSR-18, Odisha	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD. E-82, Rajesh Kumar Path, S.K. Puri, Boring Road, Patna-800001	SPS Technocrats Pvt. Ltd. # 638 & 641, JMD Megapole, Sector 43, Gurugram, Haryana - 122018. Website: www.spspl.com Email: info@spstpl.com	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	DESIGNED: OHEERESH CHECKED: VIPUL	OHEERESH	Plan & Longitudinal Profile (From Km 133+500 to Km 134+000)	1:1000 VER. 1:1000 (at 20m Scale)	MAR - 2022	NO

LEGEND :

EXISTING PLAN :

- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
ES EDGE
HS EDGE
C/W EDGE
DEN. LINE
C/W EDGE
HS EDGE
ES EDGE
TOE LINE
- HOR. TANGENT POINT
- PROW PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT
- GRID LINE
- BOX CULVERT

CHURACHANDPUR

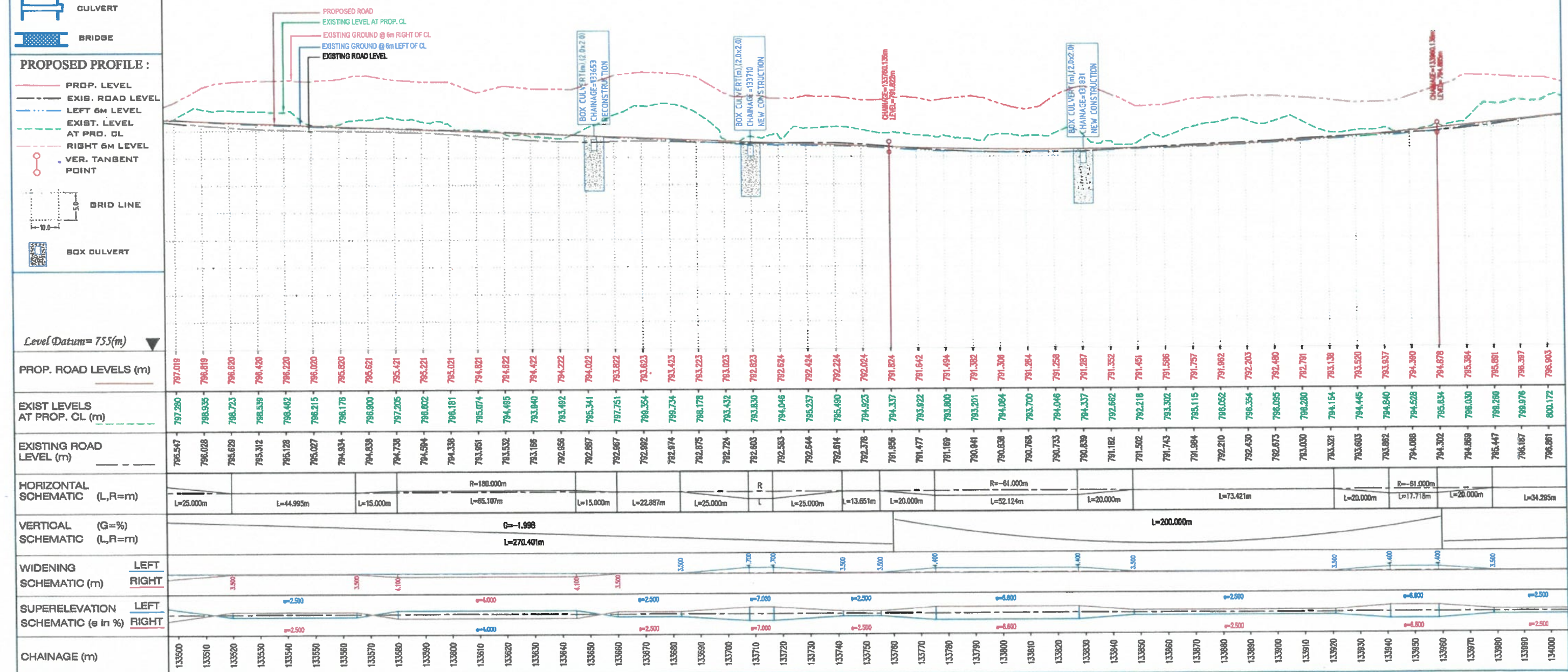
APPROVED



DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.

Managing Director



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROJECT CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	CHECKED:	DATE:	TITLE:	SCALE:	REV:
			MIDCL	GPT	M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD.	SUVADRA	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD.	SPS Technocrats Pvt. Ltd.	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADIEP	DHEERESH	MAR - 2022	Plan & Longitudinal Profile (From Km 133+500 to Km 134+000)	1:1000	R0

LEGEND :

EXISTING PLAN :

- EXIST. ROAD
- K-1/R : KADHA RESIDENTIAL
K-1/C : KADHA COMMERCIAL
SP-1/R : SEMI PUCCA RESI.
SP-1/C : SEMI PUCCA COMM.
P-1/R : PUCCA RESIDENTIAL
P-1/C : PUCCA COMMERCIAL
- 1000 CONTOUR

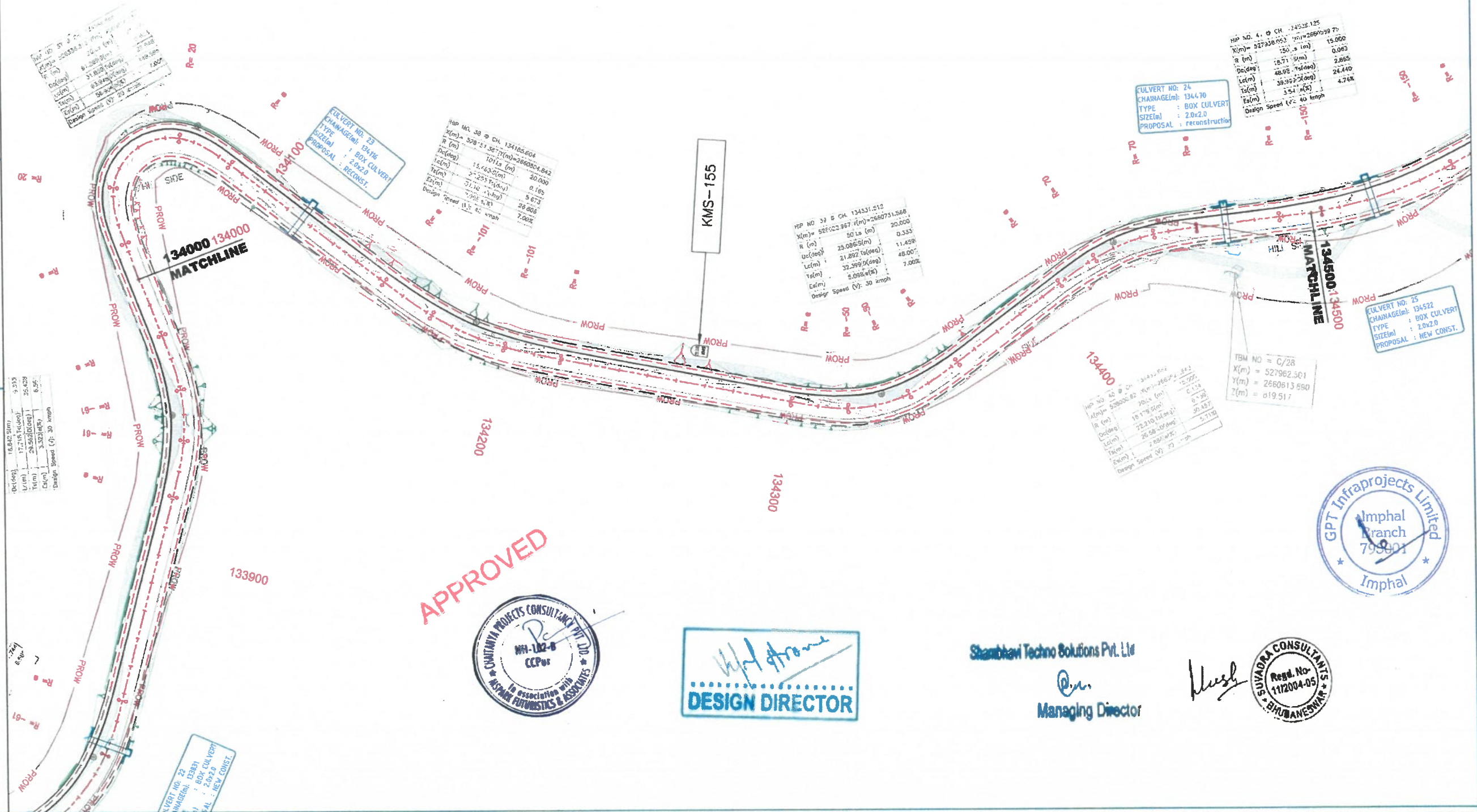
PROPOSED PLAN :

- TOE LINE
ES EDGE
HS EDGE
C/W EDGE
DEN. LINE
C/W EDGE
HS EDGE
ES EDGE
TOE LINE
- HOR. TANGENT POINT
- PROW PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL
AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT
- GRID LINE
- BOX CULVERT

CHURACHANDPUR



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	DESIGNED:	CHECKED:	DATE:	TITLE:	SCALE:	DRG. NO.:	REV:
			MIDEL	GPT	M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD.	SUVADRA CONSULTANTS	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD.	SPS Technocrats Pvt. Ltd.	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH-102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADIEP	DHEERESH	VIPUL	MAR - 2022	Plan & Longitudinal Profile (From Km 134+000 to Km 134+500)	1:1000	GPT/CCT/4B/HW/PNP/09	R0

CHURACHANDPUR

TUIVAI

LEGEND :

EXISTING PLAN :

- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TDE LINE
ES EDGE
HS EDGE
C/W EDGE
GEN. LINE
C/W EDGE
HS EDGE
ES EDGE
TDE LINE
- HOR. TANGENT POINT
- PROW PROPOSED ROW
- GULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL
AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT
- GRID LINE
- BOX CULVERT

Level Datum = 790(m)

PROP. ROAD LEVELS (m)

EXIST LEVELS
AT PROP. CL (m)EXISTING ROAD
LEVEL (m)HORIZONTAL
SCHEMATIC (L,R=m)VERTICAL
SCHEMATIC (G=%)

SCHEMATIC (L,R=m)

WIDENING
SCHEMATIC (m)

LEFT

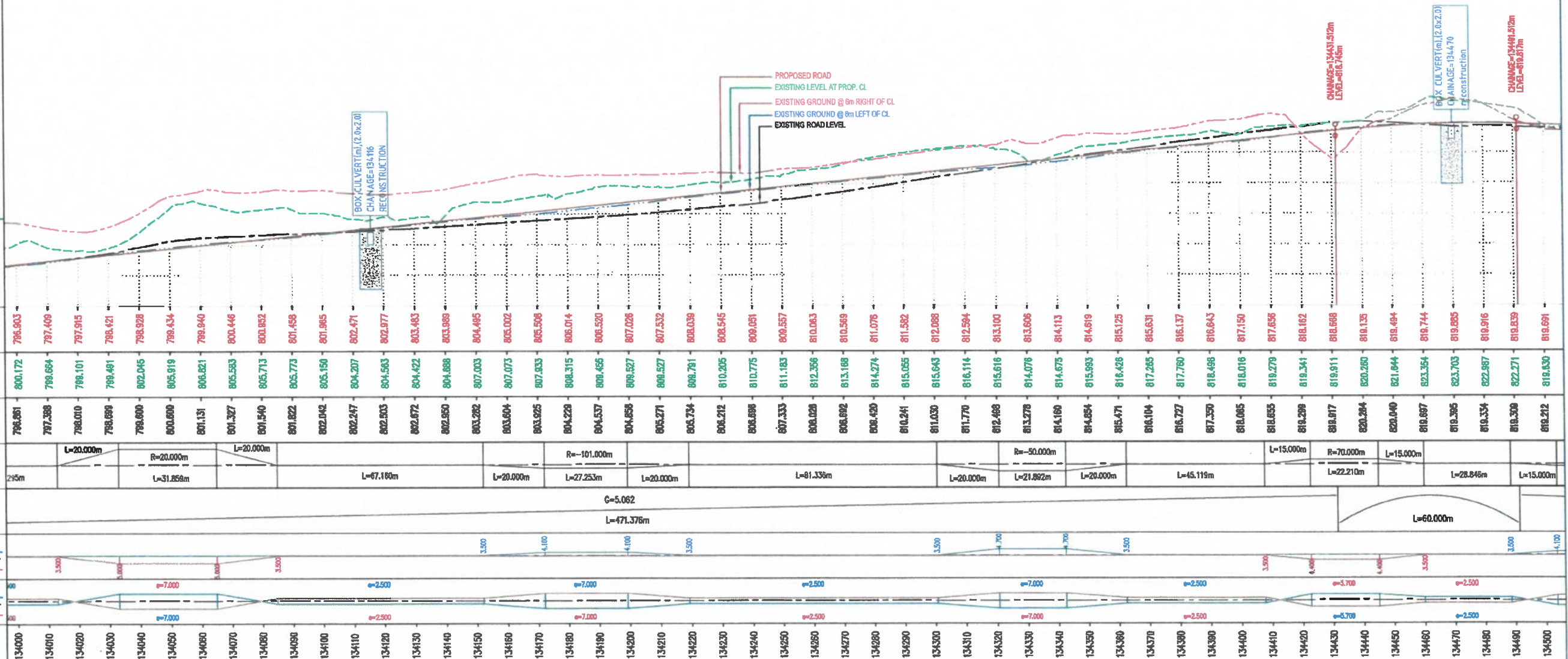
RIGHT

SUPERELEVATION
SCHEMATIC (e in %)

LEFT

RIGHT

CHAINAGE (m)



APPROVED



Shambhavi Techno Solutions Pvt. Ltd.

Managing Director



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	DESIGNED:	CHECKED:	DATE:	TITLE:	SCALE:	DRG. NO.:	REV:
									Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur Engineering, Procurement & Construction (EPC) mode.	PRADIEP	ONEERESH	VIPUL	MAR - 2022	Plan & Longitudinal Profile (From 134+000 to 134+500)	1:1000 (HORIZ.) 1:100 (VERT.)	GPT/CCT/4B/HW/PNP/09	R0

LEGEND :

EXISTING PLAN :

EXIST. ROAD
K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL
1000 CONTOUR

PROPOSED PLAN :

TOE LINE
ES EDGE
HS EDGE
C/W EDGE
CEN.LINE
C/W EDGE
HS EDGE
ES EDGE
TOE LINE
HOR. TANGENT POINT
PROW PROPOSED ROW
CULVERT
BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL
AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT
GRID LINE
BOX CULVERT

CHURACHANDPUR

TUVAI

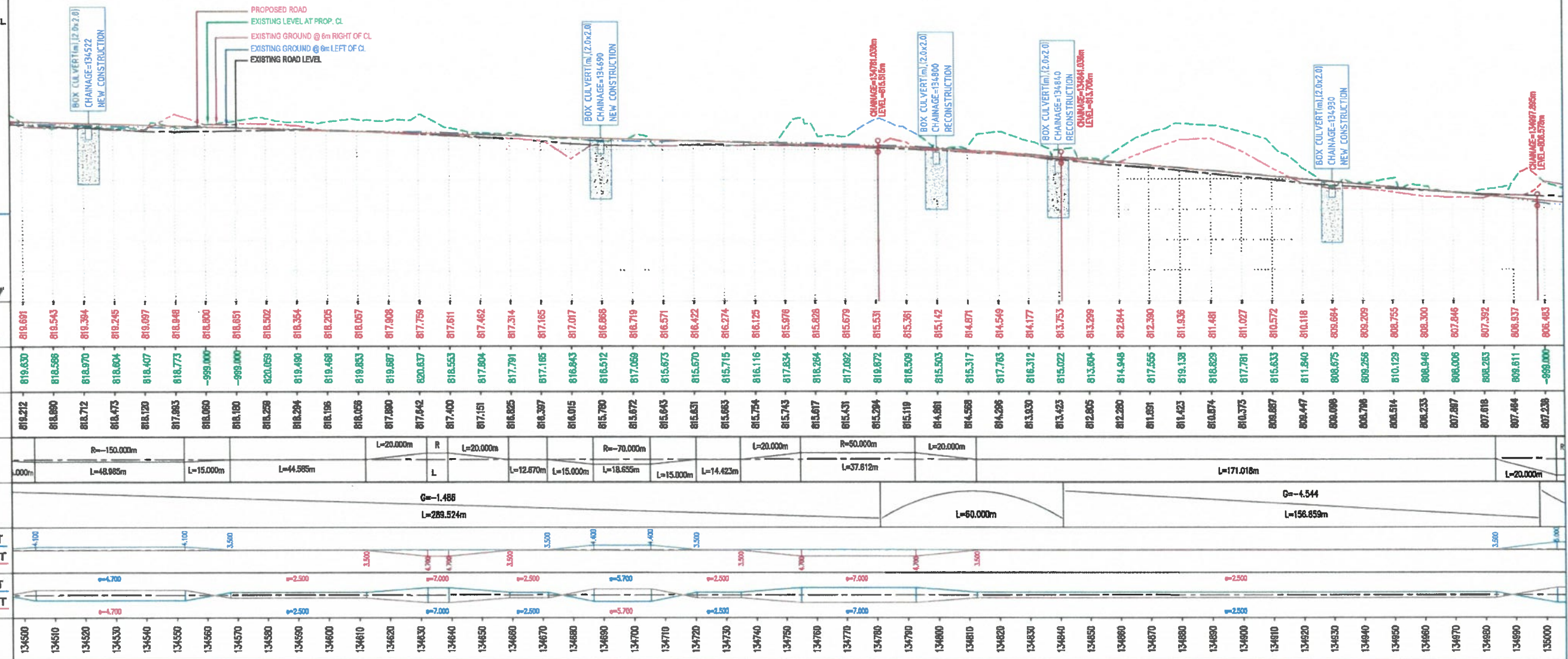
APPROVED



DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.

Managing Director



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	CHECKED:	DATE:	TITLE:	SCALE:	DRG. NO:	REV:
			M/S CHATANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES C-52ND FLOOR, RKTOWER, SECTOR-4, VAISHALI, GHATAKABAD-201013.	GPT JC - 26, Sector - III, Salt Lake, Kolkata - 700088.	M/S CHATANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES C-52ND FLOOR, RKTOWER, SECTOR-4, VAISHALI, GHATAKABAD-201013.	SUVADRA CONSULTANTS PP-97, Tenkapanti Road, BBSR-18, Odisha.	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD. E-82, Rajesh Kumar Path, S.K.Puri, Boring Road, Patna-800001.	SPS Technocrats Pvt. Ltd. # 638 & 641, JMD Megapole, Sector 48, Gurugram, Haryana - 122018. Website: www.spspl.com Email: info@spspl.com	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuwai section of NH 102B from Km 134.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADIEP	DHEERESH	MAR - 2022	Plan & Longitudinal Profile (From Km 134+000 to Km 141+000)	1:1000	GPT/CCT/48/HW/PNP/10a	R0

LEGEND :

EXISTING PLAN :

EXIST. ROAD

K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL

1000 CONTOUR

PROPOSED PLAN :

TOE LINE
ES EDGE
HS EDGE
C/W EDGE
DEN. LINE
C/W EDGE
HS EDGE
ES EDGE
TOE LINE

HOR. TANGENT POINT

PROW PROPOSED ROW

CULVERT

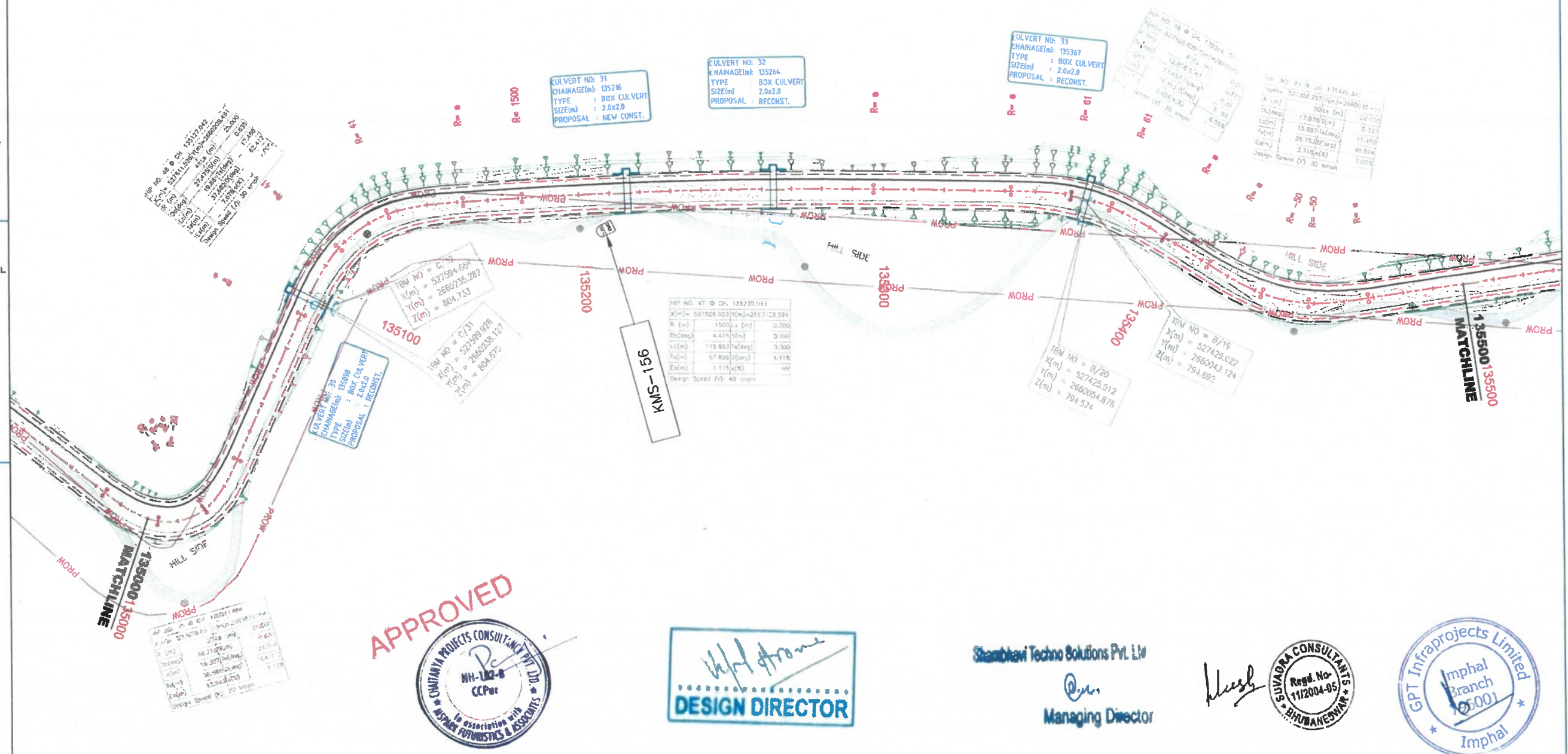
BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 5M LEVEL
EXIST. LEVEL AT PRO. CL
RIGHT 5M LEVEL
VER. TANGENT POINT

GRID LINE

BOX CULVERT



APPROVED



DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.

Managing Director



Rev.	Date	Description

CLIENT:



EPC CONTRACTOR:



JC - 26, Sector - III, Salt Lake,
Kolkata - 700098.

AUTHORITY ENGINEER:



M/S CHAITANYA PROJECTS
CONSULTANCY PVT. LTD.
IN ASSOCIATION WITH MSPARK
FUTURISTICS AND ASSOCIATES
C-8, 2ND FLOOR, RKTOWER,
SECTOR-4, VAISHALI, GHANASIA-701010.

SAFETY CONSULTANT:



PP-67, Tankarani Road,
BBSR-18, Odisha

PROJECT CONSULTANT:



SHAMBHAVI TECHNO
SOLUTIONS PVT. LTD.
E-82, Rajesh Kumar Path,
S.K. Park, Boring Road,
Patna-800001

DESIGN CONSULTANT:



SPS Technocrats Pvt. Ltd.
636 & 641, MID Megapole, Sector 48,
Gurgaon, Haryana - 122018.
Website : www.apetpl.com
Email : info@apetpl.com

PROJECT:

Widening to 2 (Two) Lane with Hard
shoulder of Churachandpur to Tuivai section
of NH 102B from Km 130,000 to Km 141,029
(Package-4B) in the State of Manipur on
Engineering, Procurement & Construction
(EPC) mode.

DRAWN:

DESIGNED: DHEERESH

CHECKED: VIPUL

DATE: MAR - 2022

TITLE:

Plan & Longitudinal Profile

(From Kms 135+000 to Kms 135+500)

SCALE:

HOR: 1:10000

VER: 1:1000

DRG. NO: GPT/CCT/4B/HW/PPN/11

Rev:

R0

LEGEND :

EXISTING PLAN :

EXIST. ROAD
 K-I/R : KACHA RESIDENTIAL
 K-I/C : KACHA COMMERCIAL
 SP-I/R : SEMI PUDGA RESI.
 SP-I/C : SEMI PUDGA COMM.
 P-I/R : PUDGA RESIDENTIAL
 P-I/C : PUDGA COMMERCIAL
 1000 CONTOUR

PROPOSED PLAN :

TOE LINE
 ES EDGE
 HS EDGE
 C/W EDGE
 GEN. LINE
 C/W EDGE
 HS EDGE
 ES EDGE
 TOE LINE
 HOR. TANGENT POINT
 PROW PROPOSED ROW
 CULVERT
 BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
 EXIS. ROAD LEVEL
 LEFT 6M LEVEL
 EXIST. LEVEL AT PRO. CL
 RIGHT 6M LEVEL
 VER. TANGENT POINT
 BRID LINE
 BOX CULVERT

CHURACHANDPUR

APPROVED



DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.

Managing Director



Level Datum = 780(m)

PROP. ROAD LEVELS (m)

EXIST LEVELS AT PROP. CL (m)

EXISTING ROAD LEVEL (m)

HORIZONTAL SCHEMATIC (L,R=m)

VERTICAL SCHEMATIC (G=%) (L,R=m)

WIDENING SCHEMATIC (m)

SUPERELEVATION SCHEMATIC (e in %)

CHAINAGE (m)

Rev.	Date	Description



EPC CONTRACTOR:
GPT
 JC - 25, Sector - III, Salt Lake,
 Kolkata - 700098.

AUTHORITY ENGINEER:
 M/S CHAITANYA PROJECTS
 CONSULTANCY PVT. LTD.
 IN ASSOCIATION WITH MSPARK
 FUTURESTICS AND ASSOCIATES
 C-62ND FLOOR, R.K. TOWER,
 SECTOR-4, VAISHALI, GHANASHYAM-201010.

SAFETY CONSULTANT:
SUVADRA
 CONSULTANTS
 PP-97, Tankapali Road,
 BBSR-18, Odisha

PROOF CONSULTANT:
SHAMBHAVI TECHNO
SOLUTIONS PVT. LTD.
 E-82, Rajesh Kumar Path,
 S.K. Puri, Boring Road,
 Patna-800001

DESIGN CONSULTANT:
SPS Technocrats Pvt. Ltd.
 8/508 & 541, JMD Megapolis, Sector 48,
 Gurugram, Haryana - 122018.
 Website : www.spsstpl.com
 Email : info@spsstpl.com

PROJECT:
 Widening to 2 (Two) Lane with Hard
 shoulder of Churachandpur to Tuwai section
 of NH 102B from Km 130.000 to Km 141.029
 (Package-4B) in the State of Manipur on
 Engineering, Procurement & Construction
 (EPC) mode.

DRAWN: PRADEEP
 DESIGNED: DHEERESH
 CHECKED: VIPUL
 DATE: MAR - 2022

TITLE: **Plan & Longitudinal Profile**
 (From Km 135+000 to Km 135+500)
 SCALE: 1:10000 (PLAN) 1:1000 (LONGITUDINAL)
 DRG. NO: **GPT/CCT/4B/HW/PNP/11a**
 REV: **R0**

LEGEND :

EXISTING PLAN :

EXIST. ROAD
K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL
1000 CONTOUR

PROPOSED PLAN :

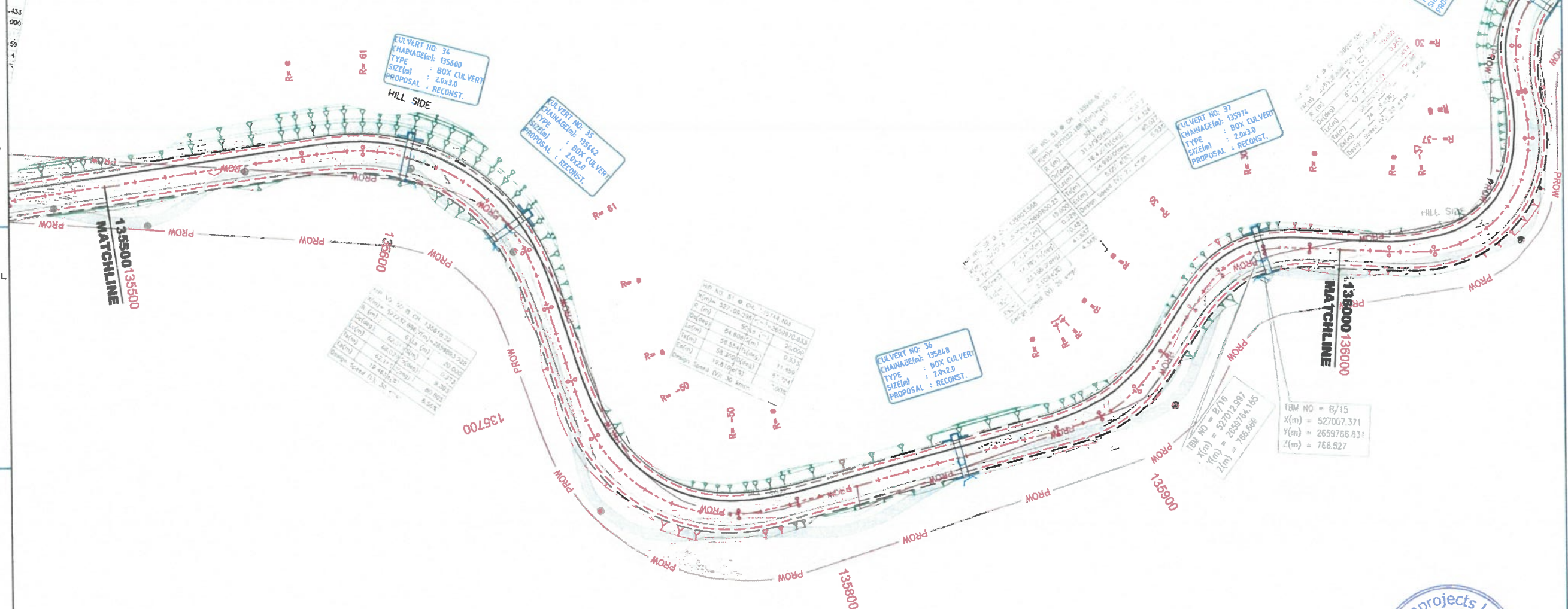
TOE LINE
ES EDGE
HS EDGE
C/W EDGE
CEN. LINE
C/W EDGE
HS EDGE
ES EDGE
TOE LINE
HDR. TANGENT POINT
PROW
CULVERT
BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT
GRID LINE
BOX CULVERT

CHURACHANDPUR

TUIVAL



APPROVED



Utpal Arora
DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.

Q. M.
Managing Director



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	CHECKED:	DATE:	TITLE:	SCALE:	DRG. NO.	REV:
			MAIDEL BUILDING INFRASTRUCTURE - BUILDING THE NATION	GPT JC - 25, Sector - III, Salt Lake, Kolkata - 700098.	M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES C-52ND FLOOR, RIK TOWER, SECTOR-4, VAIBHAWI, GHAZIABAD-201010.	SUVADRA CONSULTANTS PP-67, Tankapuri Road, BBSR-18, Odisha	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD. E-82, Rajesh Kumar Path, S.K. Puri, Boring Road, Patna-800001	SPS Technocrats Pvt. Ltd. # 638 & 641, JMD Megapole, Sector 46, Gurgaon, Haryana - 122018. Web site: www.spspl.com Email: info@spstpl.com	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuival section of NH 102B from Km 130.000 to Km 141.028 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADIEP DHEERESH	VIPUL	MAR - 2022	Plan & Longitudinal Profile (From Km 135+500 to Km 136+000)	1:1000 1:1000 1:1000	GPT/CCT/4B/HW/PNP/12	R0

LEGEND :

EXISTING PLAN :

EXIST. ROAD
 K-1/R : KACHA RESIDENTIAL
 K-1/C : KACHA COMMERCIAL
 SP-1/R : SEMI PUDDA RESI.
 SP-1/C : SEMI PUDDA COMM.
 P-1/R : PUDDA RESIDENTIAL
 P-1/C : PUDDA COMMERCIAL
 1000 CONTOUR

PROPOSED PLAN :

TOE LINE
 ES EDGE
 HS EDGE
 C/W EDGE
 GEN. LINE
 C/W EDGE
 HS EDGE
 ES EDGE
 TOE LINE
 HOR. TANGENT POINT
 PROW PROPOSED ROW
 CULVERT
 BRIDGE

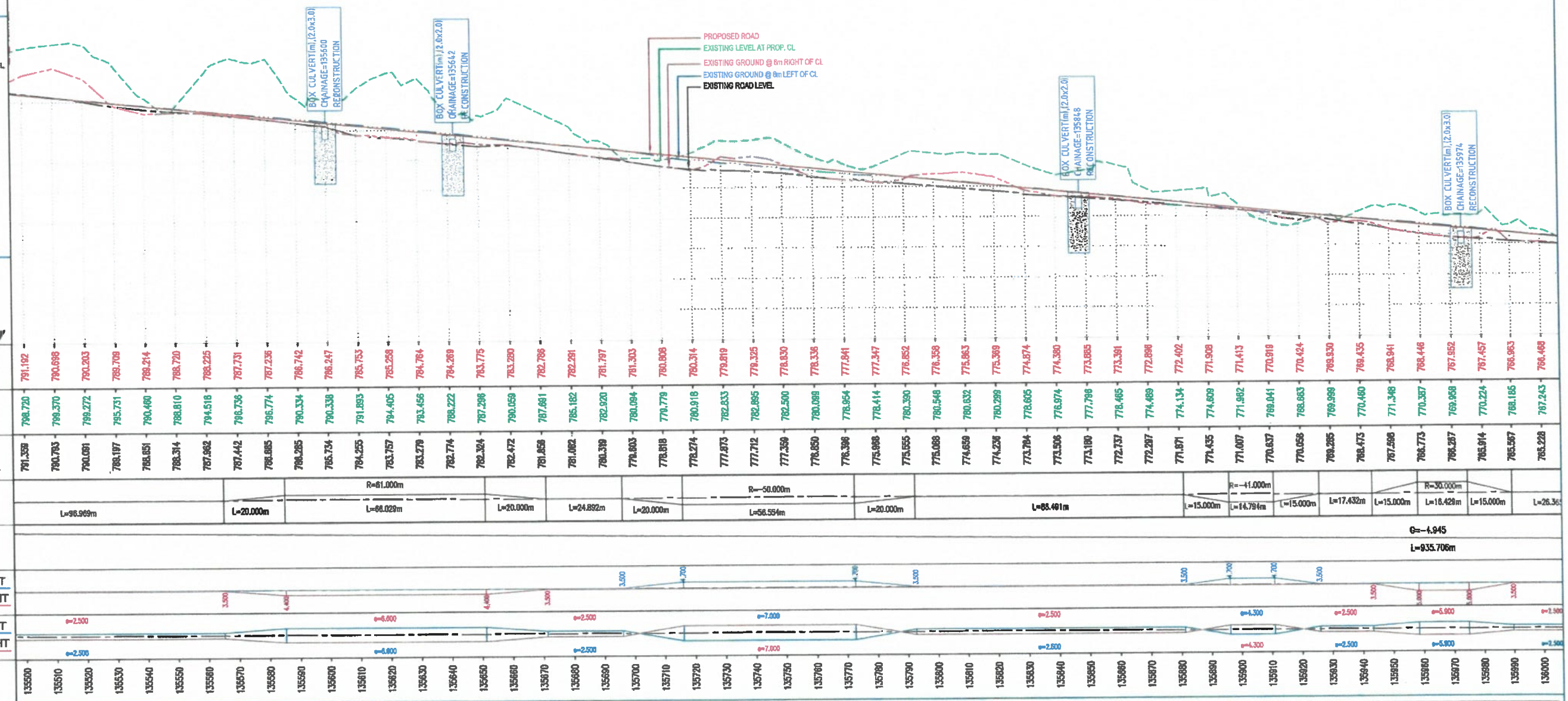
PROPOSED PROFILE :

PROP. LEVEL
 EXIS. ROAD LEVEL
 LEFT 6M LEVEL
 EXIST. LEVEL AT PRO. CL
 RIGHT 6M LEVEL
 VER. TANGENT POINT
 GRID LINE
 BOX CULVERT

CHURACHANDPUR



Shambhavi Techno Solutions Pvt. Ltd.
 Managing Director



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	PRADER:	TITLE:	SCALE:	DATE:	REV:
			M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS & ASSOCIATES	GPT	M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS & ASSOCIATES	SUVADRA CONSULTANTS	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD.	SPS Technocrats Pvt. Ltd.	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 135.500 to Km 136.000 (Package-48) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADEEP	DHEERESH	Plan & Longitudinal Profile (From Km 135.500 to Km 136.000)	1:1000 (PLAN) 1:1000 (LONG)	MAR - 2022	R0
			JC - 25, Sector - III, Salt Lake, Kolkata - 700096.		PP-97, Tankapuri Road, BBSR-18, Odisha		E-42, Rajesh Kumar Path, S.K. Park, Boring Road, Patna-800001	# 838 & 841, MID Megapole, Sector 48, Gurugram, Haryana - 122018. Website: www.spspl.com Email: info@spspl.com				Scale: 1:1000 (PLAN) 1:1000 (LONG)			

LEGEND :

EXISTING PLAN :

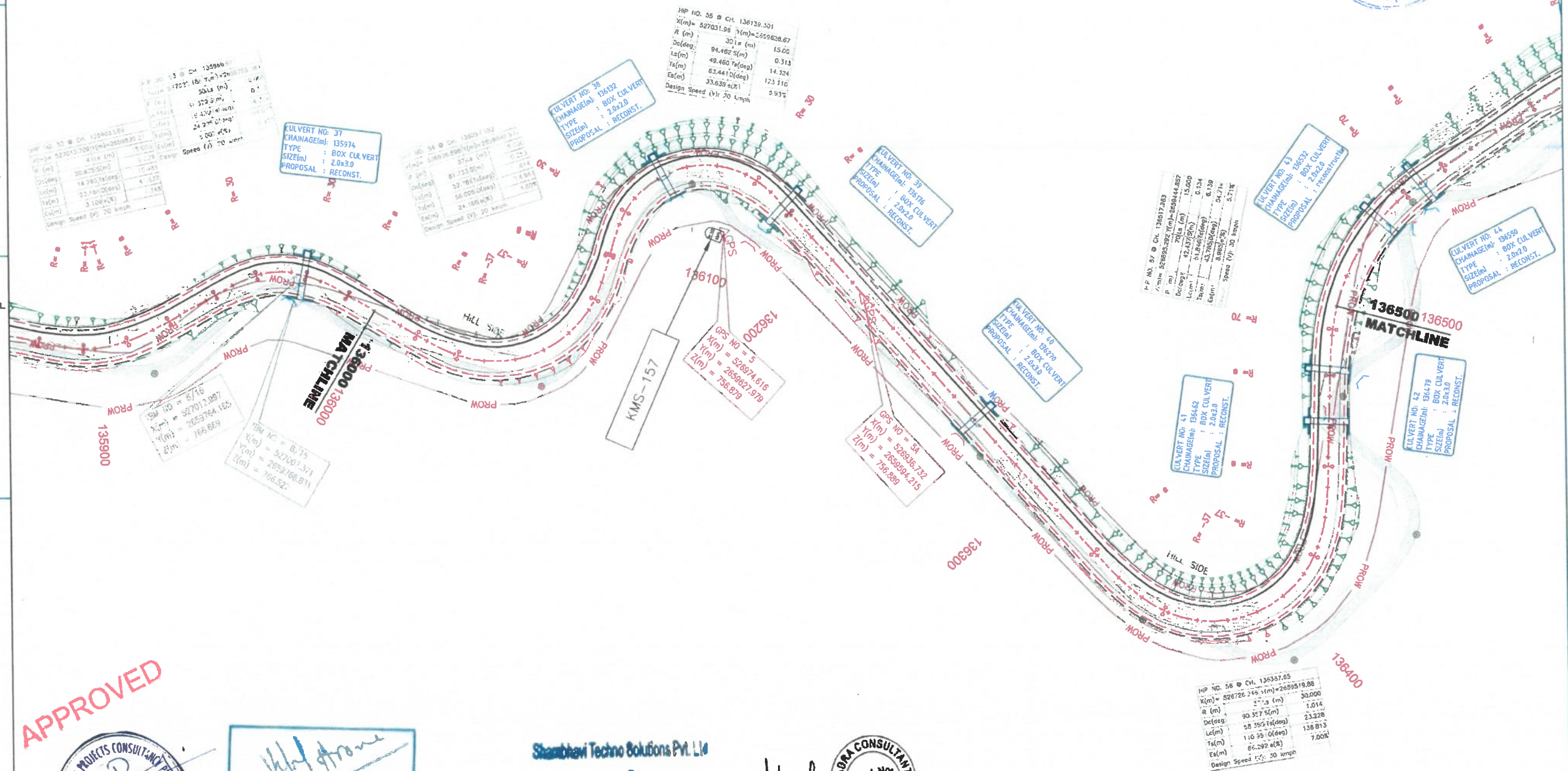
- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUGGA RESI.
SP-I/C : SEMI PUGGA COMM.
P-I/R : PUGGA RESIDENTIAL
P-I/C : PUGGA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
ES EDGE
HS EDGE
C/W EDGE
DEN.LINE
C/W EDGE
HS EDGE
ES EDGE
TOE LINE
- HOR. TANGENT POINT
- PROW PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT
- GRID LINE
- BOX CULVERT



APPROVED



Upl Arone
DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.

En.
Managing Director



Rev.	Date	Description

CLIENT:



EPC CONTRACTOR:



JC - 25, Sector - III, Salt Lake,
Kolkata - 700098.

AUTHORITY ENGINEER:



M/S CHAITANYA PROJECTS
CONSULTANCY PVT. LTD.
IN ASSOCIATION WITH MSPARK
FUTURISTICS AND ASSOCIATES
C-62ND FLOOR, R.K. TOWER,
SECTOR-4, VAISHALI, GHANASHYAM-201010.

SAFETY CONSULTANT:



PP-97, Tankapani Road,
BBSR-16, Odisha

PROOF CONSULTANT:



SHAMBHAVI TECHNO
SOLUTIONS PVT. LTD.
E-82, Rajesh Kumar Path,
S.K. Puri, Boring Road,
Patna-800001

DESIGN CONSULTANT:



SPS Technocrats Pvt. Ltd.
638 & 641, JMD Megapolls, Sector-48,
Gurgaon, Haryana - 122018.
Website: www.spspl.com
Email: info@spspl.com

PROJECT:

Widening to 2 (Two) Lane with Hard
shoulder of Churachandpur to Tuivai section
of NH 102B from Km 130.000 to Km 141.029
(Package-4B) in the State of Manipur on
Engineering, Procurement & Construction
(EPC) mode.

DRAWN: PRADEEP

DESIGNED: DHEERESH

CHECKED: VIJUL

DATE: MAR - 2022

TITLE: Plan & Longitudinal Profile

(From Km 136+000 to Km 136+500)

SCALE: (HORIZ: 1:1000; VERT: 1:100 at 1/2"=1'-0")

DRS. NO: GPT/GCT/4B/HW/PNP/13

REV:

R0

LEGEND :

EXISTING PLAN :

EXIST. ROAD
K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL
1000 CONTOUR

PROPOSED PLAN :

TOE LINE
ES EDGE
HS EDGE
Q/W EDGE
GEN. LINE
Q/W EDGE
HS EDGE
ES EDGE
TOE LINE
HOR. TANGENT POINT
PROW PROPOSED ROW
CULVERT
BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT
GRID LINE
BOX CULVERT

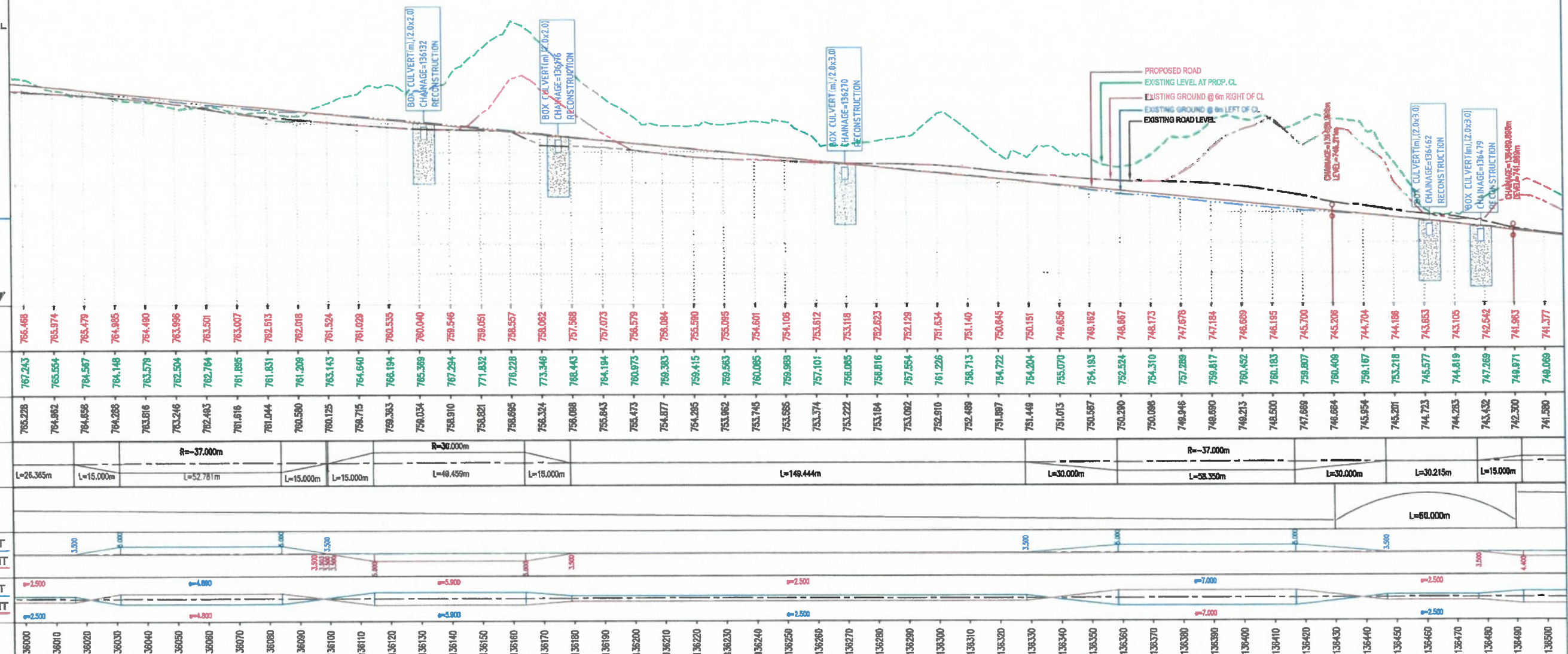
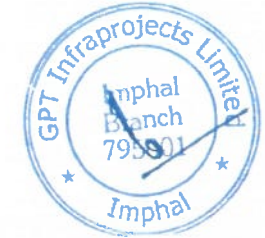
CHURACHANDPUR

APPROVED



Shambhavi Techno Solutions Pvt. Ltd.

Managing Director



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	DESIGNED:	CHECKED:	DATE:	TITLE:	SCALE:	DRG. NO:	REV:
			M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD.	GPT	M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD.	SUVADRA CONSULTANTS	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD.	SPS Technocrats Pvt. Ltd.	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADEEP	DHEERESH	VIJUL	MAR - 2022	Plan & Longitudinal Profile (From Km 136+000 to Km 136+500)	1:1000 (HORIZ.) 1:100 (VERT.)	GPT/CCT/4B/HW/PP/13a	R0

LEGEND :

EXISTING PLAN :

EXIST. ROAD

K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL

1000 CONTOUR

PROPOSED PLAN :

TOE LINE
ES EDGE
HS EDGE
C/W EDGE
DEN. LINE
C/W EDGE
HS EDGE
ES EDGE
TOE LINE

HOR. TANGENT POINT

PROW PROPOSED ROW

CULVERT

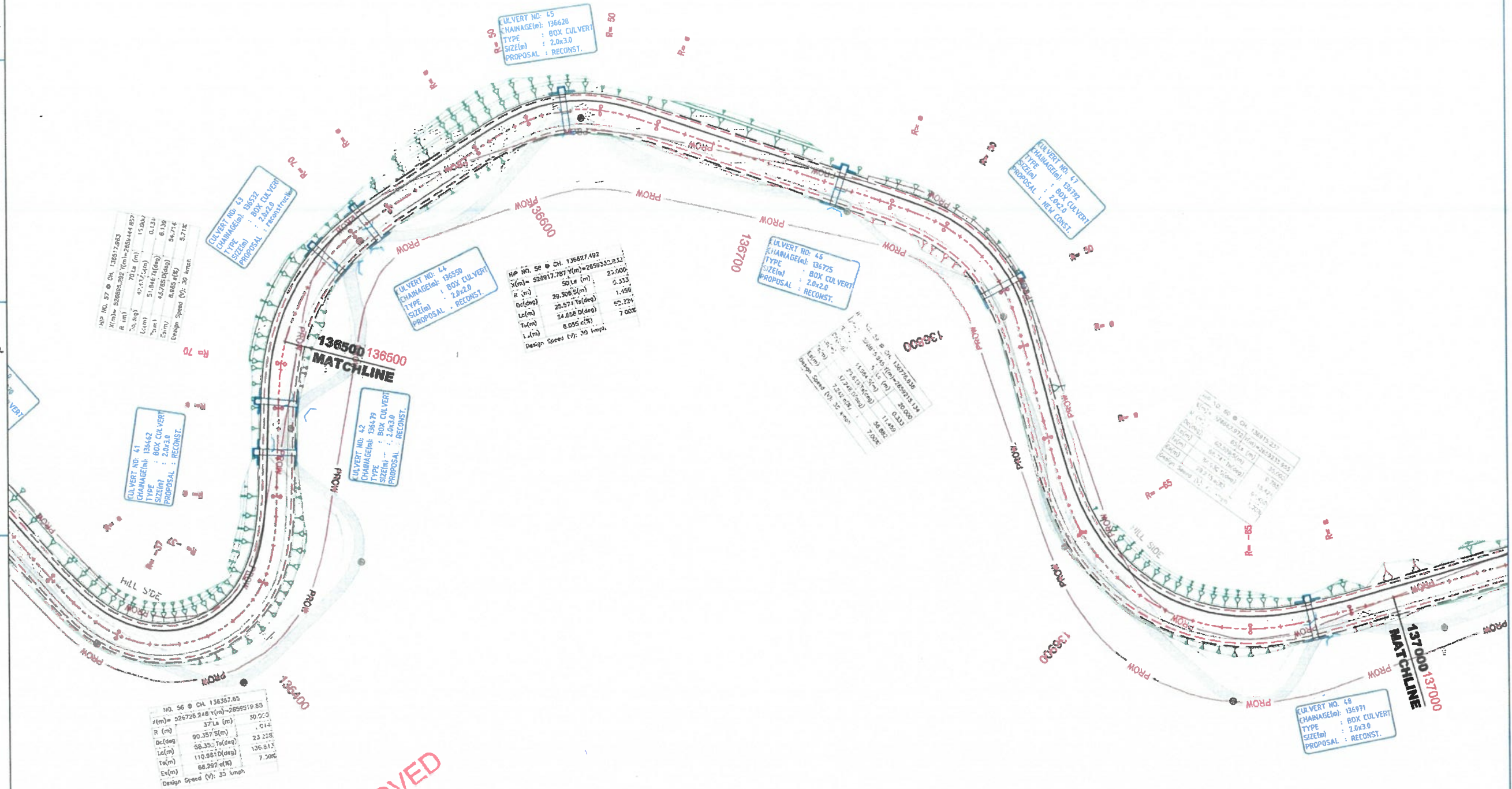
BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL
AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT

GRID LINE

BOX CULVERT



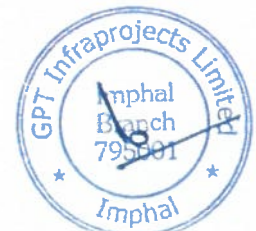
APPROVED



DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.

Managing Director



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	DESIGNED:	CHECKED:	DATE:	TITLE:	SCALE:	REV:
			NAIDCL	GPT	M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES	SUVADRA CONSULTANTS	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD.	SPS Technocrats Pvt. Ltd.	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADIEP	DHEERESH	VIPUL	MAR - 2022	Plan & Longitudinal Profile (From Km 136+500 to Km 137+000)	1:1000	R0

LEGEND :

EXISTING PLAN :

EXIST. ROAD
 K-I/R : KACHA RESIDENTIAL
 K-I/C : KACHA COMMERCIAL
 SP-I/R : SEMI PUCCA RESI.
 SP-I/C : SEMI PUCCA COMM.
 P-I/R : PUCCA RESIDENTIAL
 P-I/C : PUCCA COMMERCIAL
 1000 CONTOUR

PROPOSED PLAN :

TOE LINE
 ES EDGE
 HS EDGE
 C/W EDGE
 CEN. LINE
 C/W EDGE
 HS EDGE
 ES EDGE
 TOE LINE
 HOR. TANGENT POINT
 PROW PROPOSED ROW
 CULVERT
 BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
 EXIS. ROAD LEVEL
 LEFT 6M LEVEL
 EXIST. LEVEL AT PRO. CL
 RIGHT 6M LEVEL
 VER. TANGENT POINT
 GRID LINE
 BOX CULVERT

CHURACHANDPUR

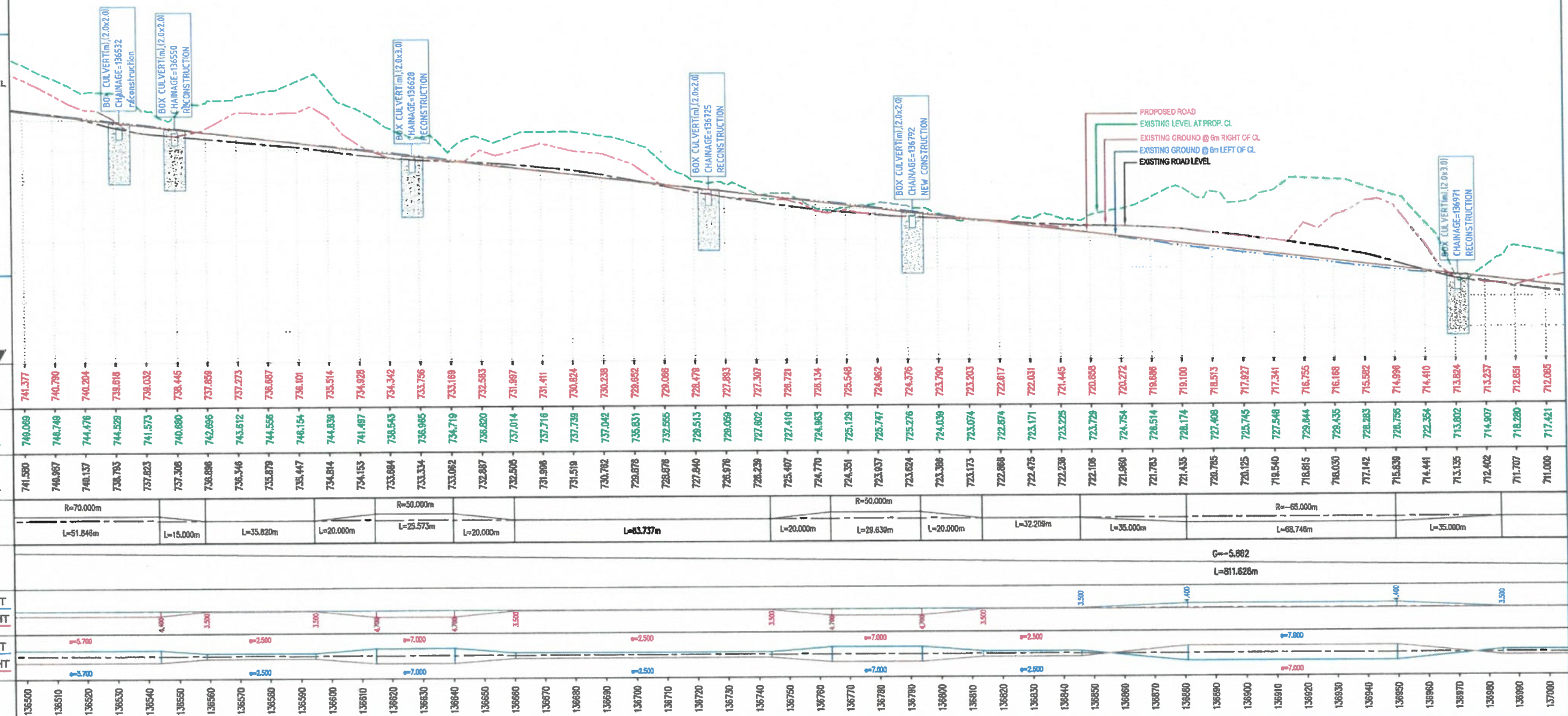
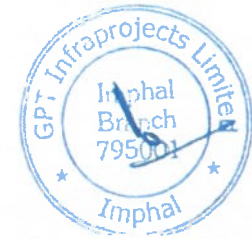
APPROVED



DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.

Managing Director



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	DESIGNED:	CHECKED:	DATE:	TITLE:	SCALE:	DRS. NO:	REV:
			MAIDCL	GPT	M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES	SUVADRA CONSULTANTS	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD.	SPS Technocrats Pvt. Ltd.	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 136.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADIEP	DHEERESH	VIPUL	MAR - 2022	Plan & Longitudinal Profile (From Km 136+000 to Km 137+000)	1:1000 (VER. 1:100 in AD. Plan View)	GPT/CCT/4B/HW/PPN/14a	RO

LEGEND :

EXISTING PLAN :

- EXIST. ROAD
- K-1/R : KACHA RESIDENTIAL
K-1/C : KACHA COMMERCIAL
SP-1/R : SEMI PUCCA RESI.
SP-1/C : SEMI PUCCA COMM.
P-1/R : PUCCA RESIDENTIAL
P-1/C : PUCCA COMMERCIAL
- 1000 CONTOUR

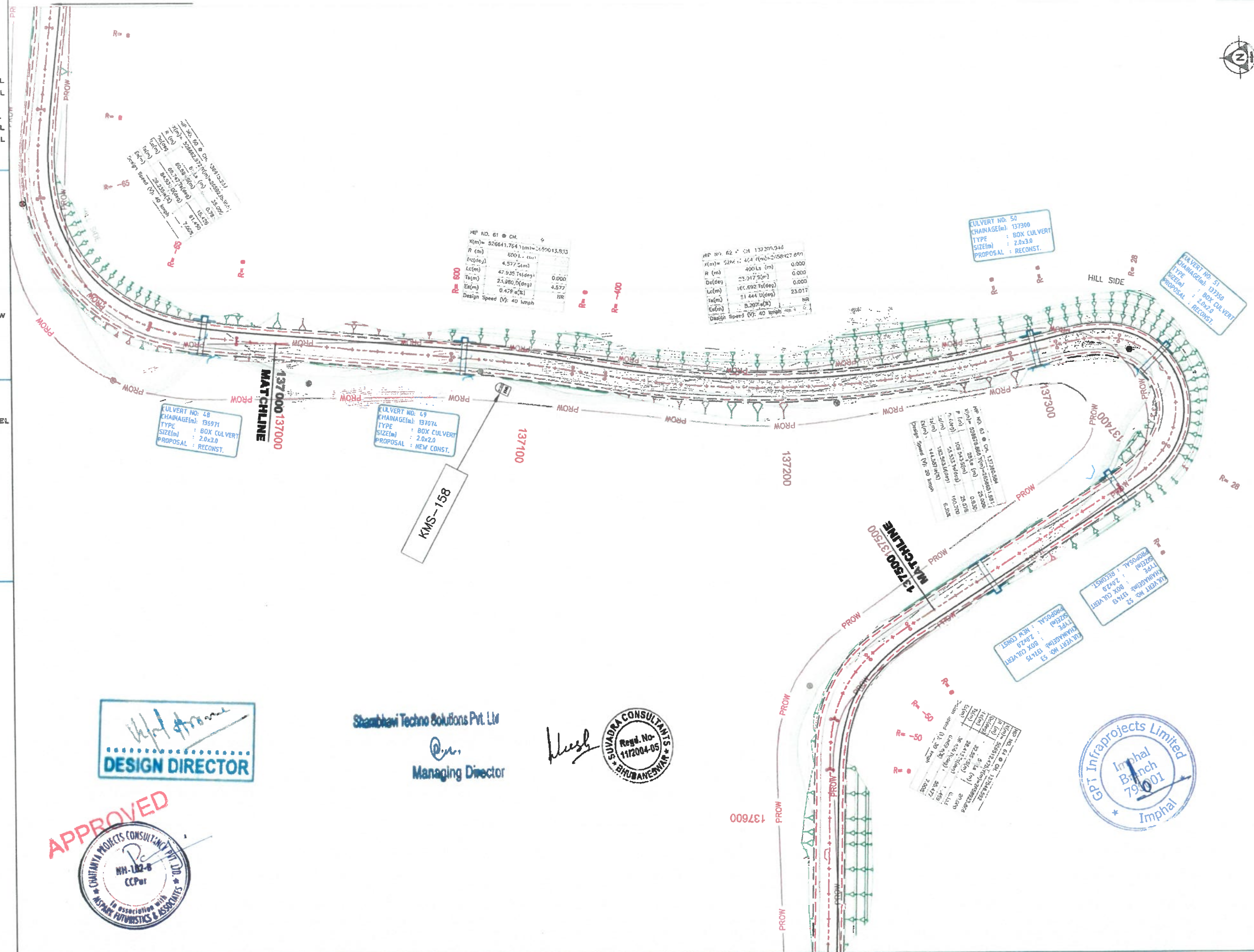
PROPOSED PLAN :

- TOE LINE
ES EDGE
HS EDGE
Q/W EDGE
GEN. LINE
Q/W EDGE
HS EDGE
ES EDGE
TOE LINE
- HOR. TANGENT POINT
- PROW PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL
AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT
- GRID LINE
- BOX CULVERT

CHURACHANDPUR



DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd

Managing Director



APPROVED



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	DESIGNED:	CHECKED:	DATE:	TITLE:	SCALE:	DRG. NO:	REV:
			MIDCL	GPT	M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES	SUVADRA CONSULTANTS	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD.	SPS Technocrats Pvt. Ltd.	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.028 (Package-4B) in the State of Manipal on Engineering, Procurement & Construction (EPC) mode.	PRADEEP	DHEERESH	VIPUL	MAR - 2022	Plan & Longitudinal Profile (From Km 137+000 to Km 137+500)	1:1000 (H/W) 1:100 (P/L)	GPT/CCT/4B/HW/PNP/15	R0

LEGEND :

EXISTING PLAN :

- EXIST. ROAD
- K-I/R : KADHA RESIDENTIAL
K-I/C : KADHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

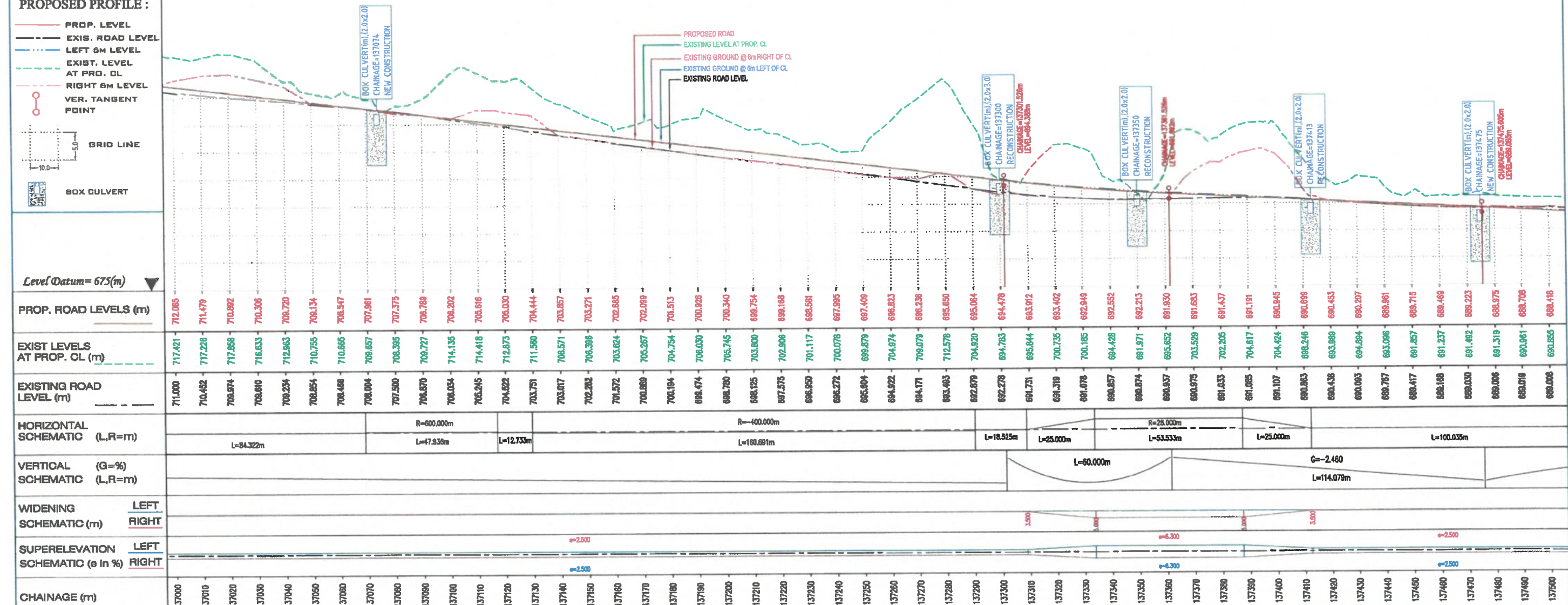
PROPOSED PLAN :

- TDE LINE
ES EDGE
HS EDGE
C/W EDGE
CEN. LINE
C/W EDGE
HS EDGE
ES EDGE
TDE LINE
- HOR. TANGENT POINT
- PROW PROPOSED ROW
- DULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT
- GRID LINE
- BOX CULVERT

Level Datum = 675(m)



LEGEND :

EXISTING PLAN :

EXIST. ROAD
 K-1/R : KACHA RESIDENTIAL
 K-1/C : KACHA COMMERCIAL
 SP-1/R : SEMI PUCCA RESI.
 SP-1/C : SEMI PUCCA COMM.
 P-1/R : PUCCA RESIDENTIAL
 P-1/C : PUCCA COMMERCIAL
 1000 CONTOUR

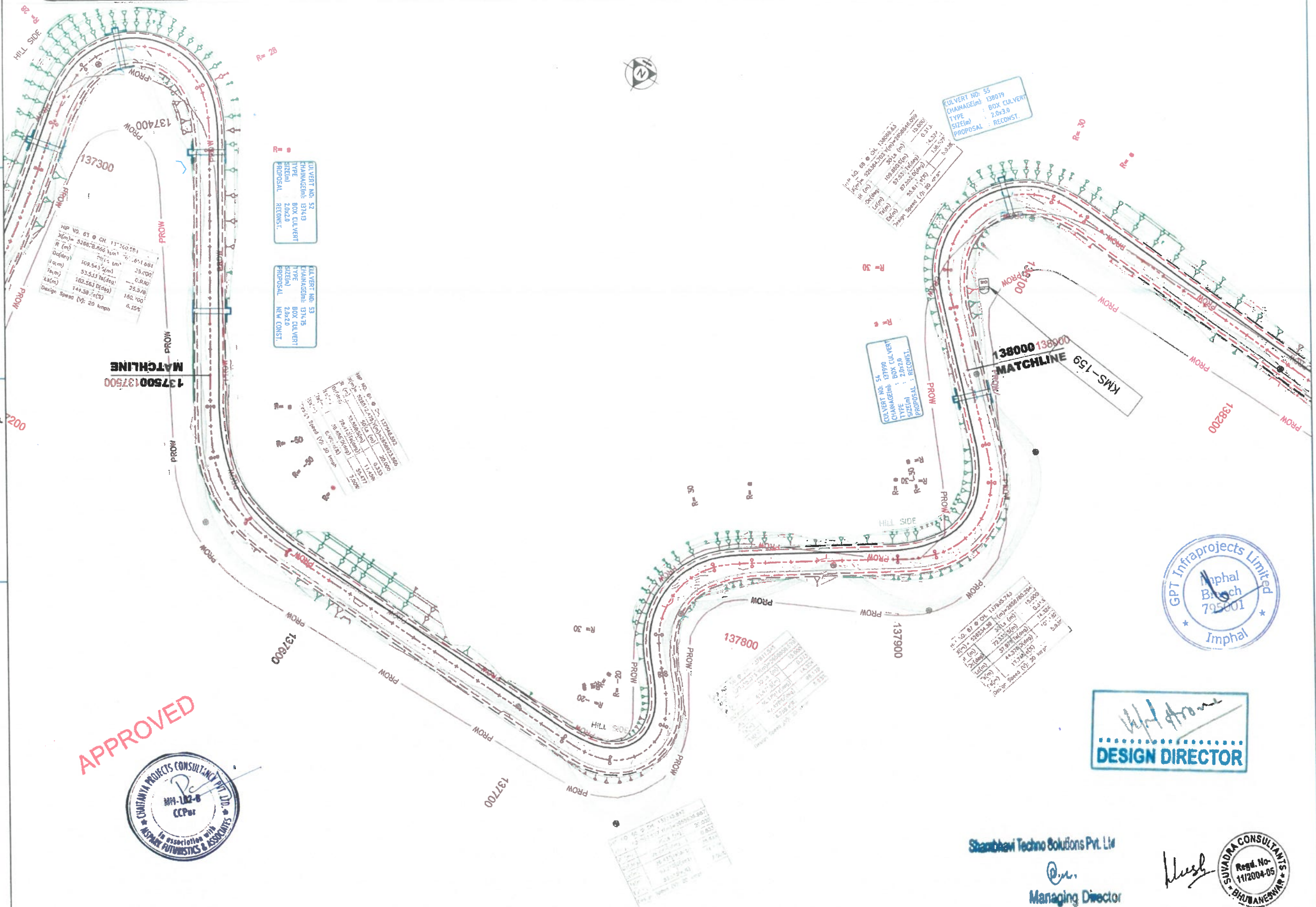
PROPOSED PLAN :

TOE LINE
 ES EDGE
 HS EDGE
 C/W EDGE
 GEN. LINE
 C/W EDGE
 HS EDGE
 ES EDGE
 TOE LINE
 HOR. TANGENT POINT
 PROW
 PROPOSED ROW
 CULVERT
 BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
 EXIS. ROAD LEVEL
 LEFT 5M LEVEL
 EXIST. LEVEL
 AT PRO. CL
 RIGHT 5M LEVEL
 VER. TANGENT POINT
 GRID LINE
 BOX CULVERT

CHURACHANDPUR



APPROVED



DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.

Managing Director



Rev.	Date	Description

CLIENT:



EPC CONTRACTOR:

GPT

JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER:

M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD.
 IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES
 C-62ND FLOOR, IJK TOWER, SECTOR-4, VASHPALI, GHAZIABAD-201010.

SAFETY CONSULTANT:

SUVADRA CONSULTANTS
 PP-07, Tankapuri Road, BBSR-18, Odisha

PROOF CONSULTANT:

SHAMBHAVI TECHNO SOLUTIONS PVT. LTD.
 E-82, Rajesh Kumar Path, S.K. Puri, Boring Road, Patna-800001

DESIGN CONSULTANT:

SPS Technocrats Pvt. Ltd.
 # 638 & 641, MID Megapolis, Sector 48, Gurugram, Haryana - 122018.
 Website : www.spspl.com
 Email : info@spspl.com

PROJECT:

Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipal on Engineering, Procurement & Construction (EPC) mode.

DRAWN: PRADEEP

DESIGNED: CHEERESH

CHECKED: VIPUL

DATE: MAR - 2022

TITLE:

Plan & Longitudinal Profile

(From Km 137+500 to Km 138+000)

SCALE: 1:10000 (PLAN) 1:1000 (PROFILE)

DRE. NO: GPT/CCT/4B/HWP/PP/16

REV:

R0

LEGEND :

EXISTING PLAN :

- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
ES EDGE
HS EDGE
C/W EDGE
CEN. LINE
C/W EDGE
HS EDGE
ES EDGE
TOE LINE
- HOR. TANGENT POINT
- PROW PROPOSED ROW
- GULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT
- GRID LINE
- BOX GULVERT

CHURACHANDPUR

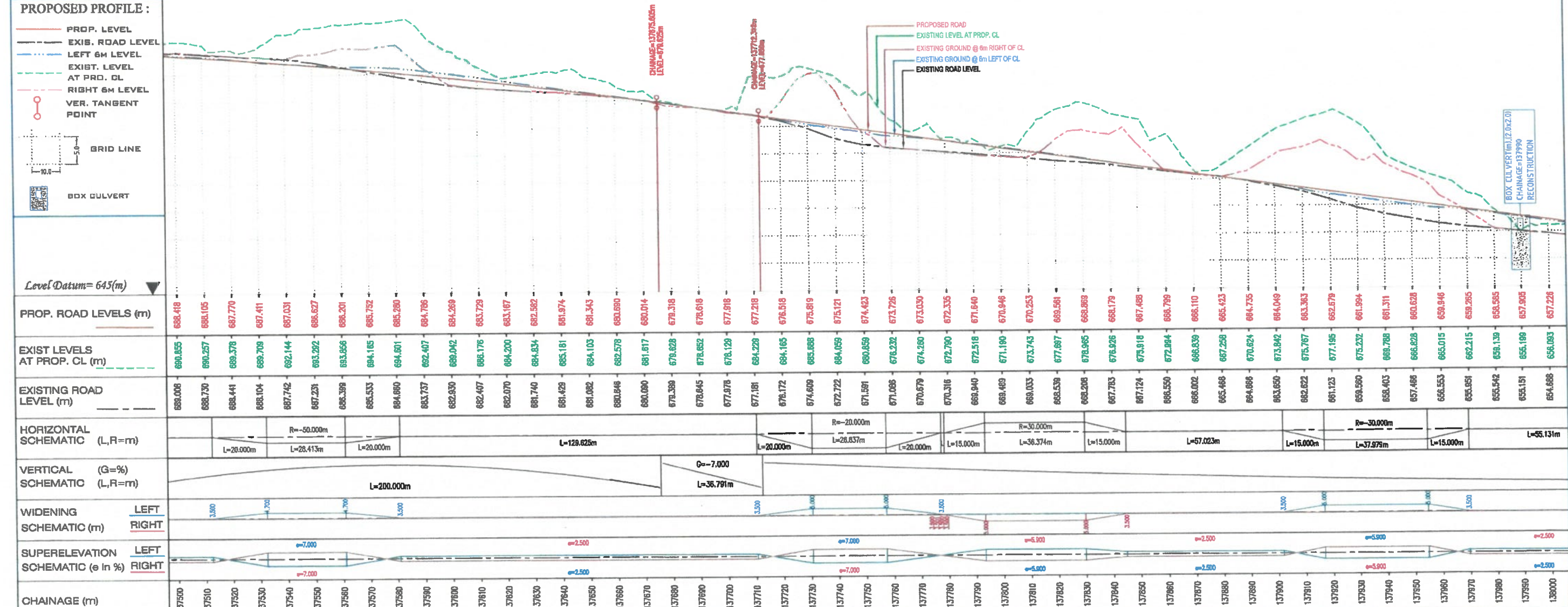
APPROVED



Shambhavi Techno Solutions Pvt. Ltd.

Managing Director

Hush



Rev.	Date	Description

CLIENT:



EPC CONTRACTOR:



JC - 25, Sector - III, Salt Lake, Kolkata - 700098.

AUTHORITY ENGINEER:



M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES C-5, 2ND FLOOR, RK TOWER, SECTOR-14, VAIDYANATH, GHATAKABAD-201010.

SAFETY CONSULTANT:



PP-97, Tankapani Road, BBSR-18, Odisha

PROOF CONSULTANT:



SHAMBHAVI TECHNO SOLUTIONS PVT. LTD. E-82, Rajesh Kumar Path, S.K. Puri, Boring Road, Patna-800001

DESIGN CONSULTANT:



SPS Technocrats Pvt. Ltd. # 830 & 841, JMD Megapole, Sector 48, Gurugram, Haryana - 122015. Website : www.spspl.com Email : info@spspl.com

PROJECT:

Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuwai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) In the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN: PRADEEP

DESIGNED: DHEERESH

CHECKED: VIPUL

DATE: MAR - 2022

TITLE: Plan & Longitudinal Profile

(From Km 137+500 to Km 138+000)

SCALE: (HORIZ - 1:10000; VERT - 1:1000 @ A2 Size Sheet)

DRG. NO: GPT/CCT/4B/HWP/16a

REV:

R0

LEGEND :

EXISTING PLAN :

EXIST. ROAD
K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL
1000 CONTOUR

PROPOSED PLAN :

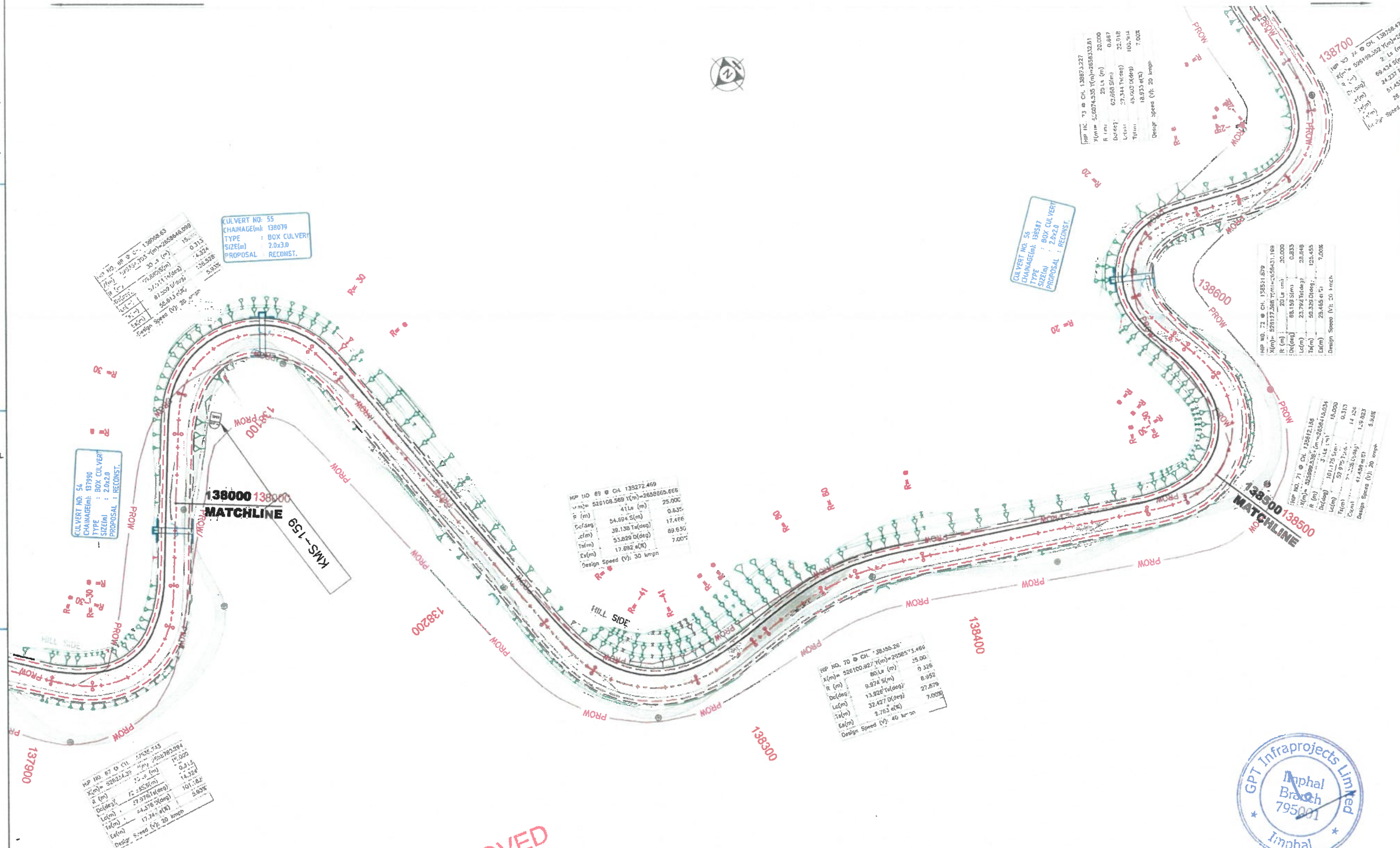
TOE LINE
ES EDGE
HS EDGE
Q/W EDGE
GEN. LINE
Q/W EDGE
HS EDGE
ES EDGE
TOE LINE
HOR. TANGENT POINT
PROW
CULVERT
BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 5M LEVEL
EXIST. LEVEL
AT PRO. CL
RIGHT 5M LEVEL
VER. TANGENT POINT
GRID LINE
BOX CULVERT

CHURACHANDPUR

TUVAI



APPROVED



DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.
Managing Director

SUVADRA CONSULTANTS
Regd. No. 11/2004-05
BHUBANESHWAR

Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROJECT CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	DESIGNED:	CHECKED:	DATE:	TITLE:	SCALE:	DRS. NO:	REV:
			MAIDCL	GPT	M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES	SUVADRA CONSULTANTS	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD.	SPS Technocrats Pvt. Ltd.	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuwai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADDEEP	DHEERESH	VIPUL	MAR - 2022	Plan & Longitudinal Profile (From Km 138+000 to Km 138+500)	1:1000	GPT/CCT/4B/HW/PNP/17	RO

CHURACHANDPUR

TUIVAI

LEGEND :

EXISTING PLAN :

- EXIST. ROAD
- K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL
- 1000 CONTOUR

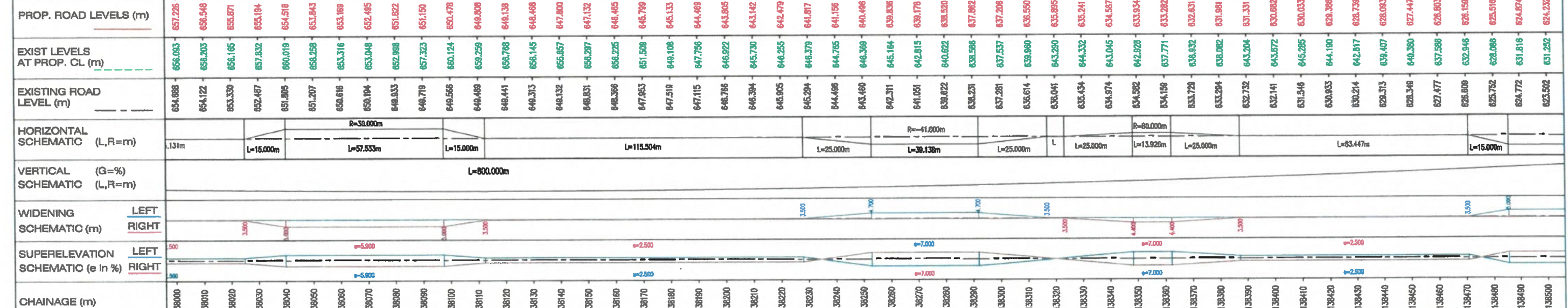
PROPOSED PLAN :

- TOE LINE
ES EDGE
HS EDGE
G/W EDGE
GEN. LINE
G/W EDGE
HS EDGE
ES EDGE
TOE LINE
- HOR. TANGENT POINT
- PROW PROPOSED ROW
- GULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL AT PROP. CL
RIGHT 6M LEVEL
VER. TANGENT POINT
- GRID LINE
- BOX CULVERT

Level Datum = 610(m)



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	DESIGNED:	CHECKED:	DATE:	TITLE:	SCALE:	DRG. NO.:	REV:
			MAIDCL	GPT	M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD.	SUVADRA CONSULTANTS	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD.	SPS Technocrats Pvt. Ltd.	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 1029 from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADDEEP	DHEERESH	VIRUL	MAR - 2022	Plan & Longitudinal Profile (From Km 138+000 to Km 138+500)	1:1000 (HORIZ) 1:100 (VERT)	OPT/CCT/4B/HW/PNP/17a	RO

LEGEND :

EXISTING PLAN :

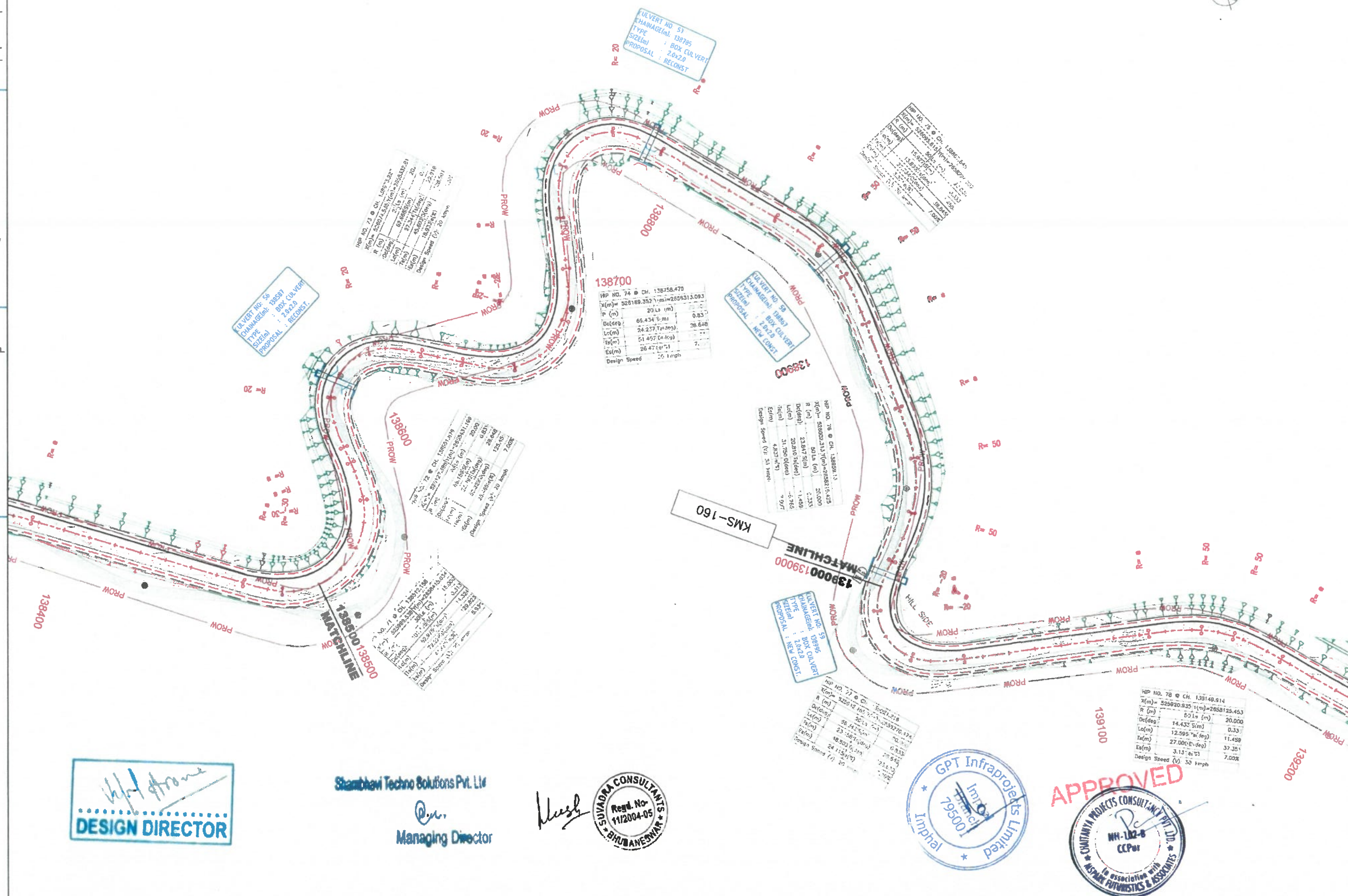
EXIST. ROAD
 K-I/R : KACHA RESIDENTIAL
 K-I/C : KACHA COMMERCIAL
 SP-I/R : SEMI PUCCA RESI.
 SP-I/C : SEMI PUCCA COMM.
 P-I/R : PUCCA RESIDENTIAL
 P-I/C : PUCCA COMMERCIAL
 1000 CONTOUR

PROPOSED PLAN :

TOE LINE
 ES EDGE
 HS EDGE
 C/W EDGE
 GEN. LINE
 C/W EDGE
 HS EDGE
 ES EDGE
 TOE LINE
 HOR. TANGENT POINT
 PROW PROPOSED ROW
 CULVERT
 BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
 EXIS. ROAD LEVEL
 LEFT 6M LEVEL
 EXIST. LEVEL
 AT PRO. CL
 RIGHT 6M LEVEL
 VER. TANGENT POINT
 GRID LINE
 BOX CULVERT



DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.
 Managing Director



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	DESIGNED:	CHECKED:	DATE:	TITLE:	SCALE:	DRG. NO.:	REV:
			NAIDCL	GPT	M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES	SUVADRA CONSULTANTS	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD.	SPS Technocrats Pvt. Ltd.	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADEEP	DHEERESH	VIPUL	MAR - 2022	Plan & Longitudinal Profile (From Km 138+500 to Km 139+000)	1:1000 (Plan) 1:100 (Profile)	GPT/CCT/4B/HW/PNP/18	R0

LEGEND :

EXISTING PLAN :

EXIST. ROAD
K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL
1000 CONTOUR

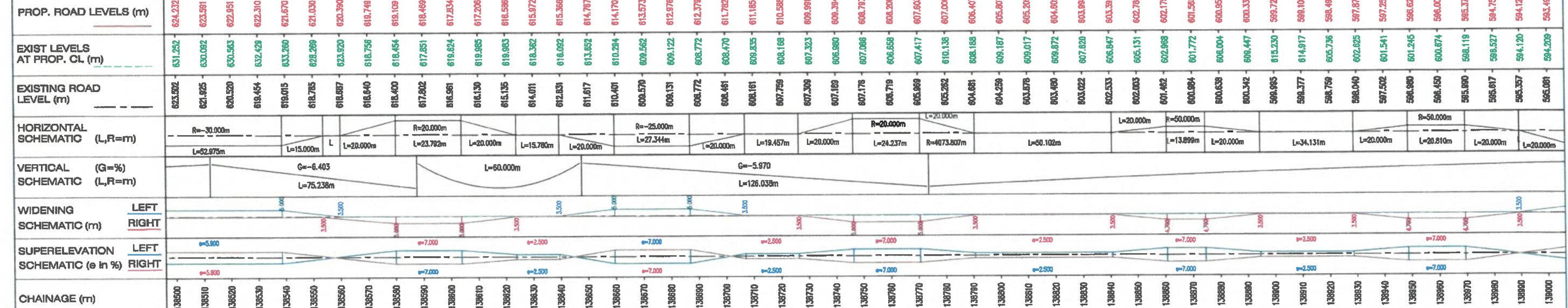
PROPOSED PLAN :

TOE LINE
ES EDGE
HS EDGE
D/W EDGE
D/W LINE
D/W EDGE
HS EDGE
ES EDGE
TOE LINE
HOR. TANGENT POINT
PROW PROPOSED ROW
CULVERT
BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT
GRID LINE
BOX CULVERT

Level Datum = 580(m)



Rev.	Date	Description



CLIENT: M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD.
EPC CONTRACTOR: GPT
JC - 25, Sector - III, Salt Lake, Kolkata - 700096.

AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS & ASSOCIATES
C-5, 2ND FLOOR, RK TOWER, SECTOR-4, VAISHALI, GHANABAD-201010

SAFETY CONSULTANT: SUVADRA CONSULTANTS
PP-97, Tenkapali Road, BBSR-18, Odisha

PROOF CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT. LTD.
E-82, Rajesh Kumar Path, S.K.Puri, Boring Road, Patna-800031

DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd.
638 & 641, JMD Megapole, Sector-48, Gurgaon, Haryana - 122015, Website: www.spspl.com, Email: info@spspl.com

PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 138.000 to Km 141.028 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.

DRAWN: PRADEEP	DESIGNED: DHEERESH	CHECKED: VIPUL	DATE: MAR - 2022	TITLE: Plan & Longitudinal Profile (From Km 138+500 to Km 139+000)	SCALE: (HORIZ: 1:1000; VERT: 1:100 MAXIMUM SCALE)	DRG. NO: GPT/CCT/4B/MW/PNP/18a	REV: R0
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CHURACHANDPUR

APPROVED



DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.

Managing Director



LEGEND :

EXISTING PLAN :

EXIST. ROAD
K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL

1000 CONTOUR

PROPOSED PLAN :

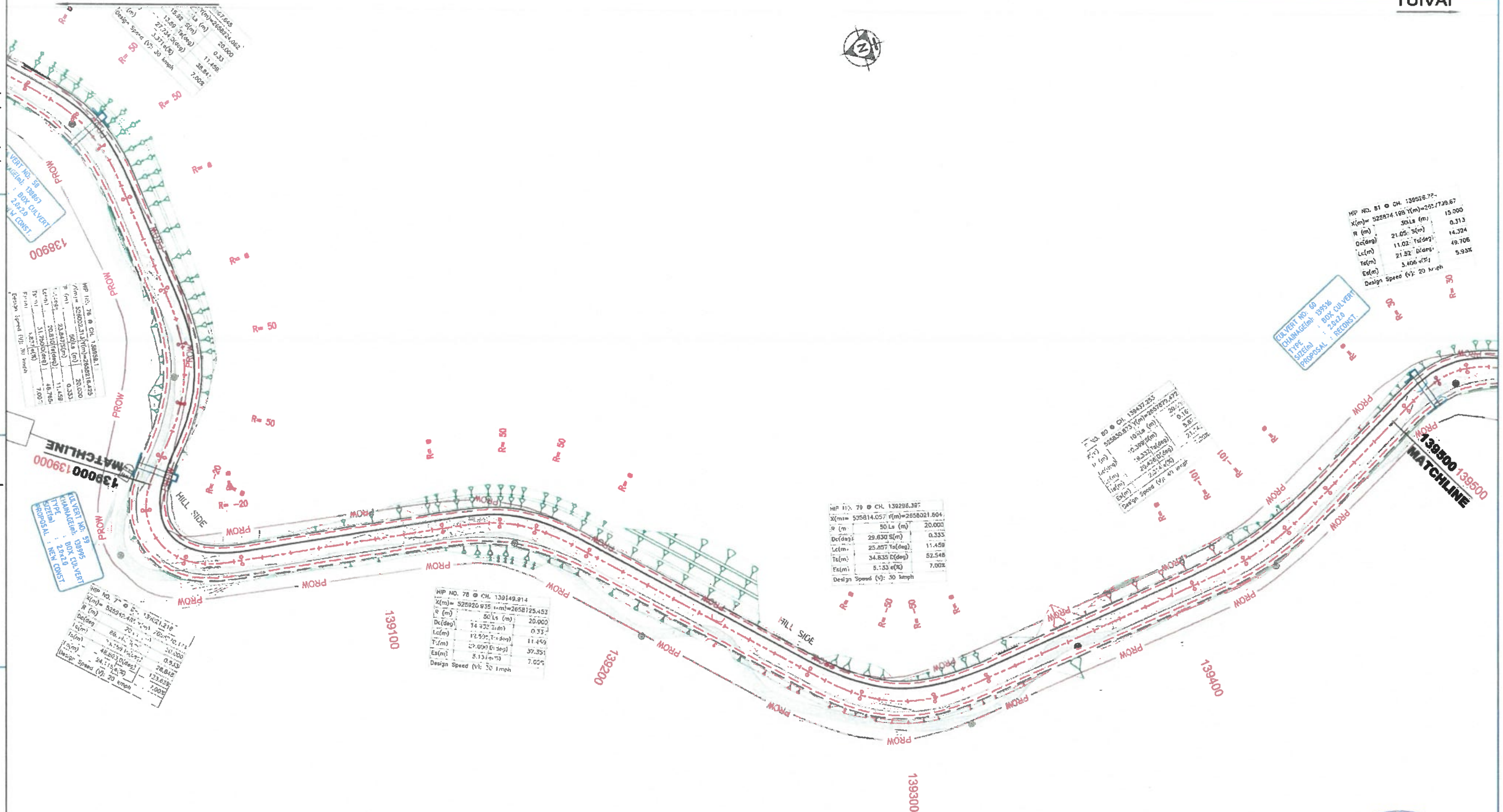
TOE LINE
SS EDGE
HS EDGE
C/W EDGE
GEN.LINE
C/W EDGE
HS EDGE
SS EDGE
TOE LINE
HOR. TANGENT POINT
PROW PROPOSED ROW
CULVERT
BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL
AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT
GRID LINE
BOX CULVERT

CHURACHANDPUR

TUIVAI



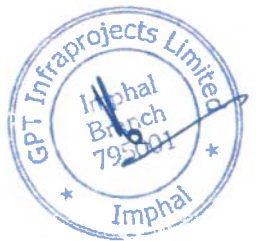
APPROVED



DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.

Managing Director



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	DESIGNED:	CHECKED:	DATE:	TITLE:	SCALE:	REV:
			MIDEL	GPT	M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD.	SUVADRA CONSULTANTS	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD.	SPS Technocrats Pvt. Ltd.	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADEEP	DHEERESH	VIPUL	MAR - 2022	Plan & Longitudinal Profile (From Km 139+000 to Km 139+500)	1:1000	R0

 PROP. LEVEL
 EXIS. ROAD LEVEL
 LEFT 6M LEVEL
 EXIST. LEVEL
 AT PRO. CL
 RIGHT 6M LEVEL
 VER. TANGENT POINT
 GRID LINE
 BOX CULVERT

The drawing is a technical plan view of a road alignment. It shows a proposed road layout with multiple curves, matchlines, and various engineering data tables. The drawing includes stationing markers such as 139500, 139600, 139700, 139800, 139900, 140000, and 140100. It also features several data tables for curve geometry, including stationing, radius, length, and design speed. A large circular stamp in the bottom right corner reads "GPT Infraprojects Limited" and "Imphal Branch 795001". The drawing is labeled "KMS-161" and "APPROVED".

Curve Data Tables:

Station	Radius (m)	Length (m)	Design Speed (km/h)
139500	1000	100	30
139600	1000	100	30
139700	1000	100	30
139800	1000	100	30
139900	1000	100	30
140000	1000	100	30
140100	1000	100	30

Matchlines:

139500 MATCHLINE

140000 MATCHLINE

Other Labels:

HILL SIDE

PROW

KMS-161

APPROVED

GPT Infraprojects Limited
Imphal Branch
795001

.....
DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.
Managing Director



Rev.	Date	Description	CLIENT:  BUILDING INFRASTRUCTURE BUILDING THE NATION	EPC CONTRACTOR:  JC - 2S, Sector - III, Salt Lake, Kolkata - 700098.	AUTHORITY ENGINEER:  M/S CHAITANYA PROJECTS CONSULTANCY PVT.LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES C-6,2ND FLOOR, R K TOWER, SECTOR 4,VASIHALLI, GHAZIABAD-201010,	SAFETY CONSULTANT:  PP-97, Tanikapani Road, BBSR-18, Odisha	PROOF CONSULTANT:  SHAMBHAVI TECHNO SOLUTIONS PVT.LTD. E-82, Rajesh Kumar Path, SikPuri, Boring Road, Patna-800001	DESIGN CONSULTANT:  SPS Technocrats Pvt. Ltd. # 638 & 641, JMD Megapole, Sector 48, Gurgaon, Haryana - 122018. Website : www.spspl.com Email : info@spstpl.com	PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churuchandpur to Tulvi section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	<table><tr><td>DRAWN</td><td>PRADEEP</td><td rowspan="3">TITLE: Plan & Longitudinal Profile (From X/a 139+500 to X/m 140+000)</td><td rowspan="3">REV: NO</td></tr><tr><td>DESIGNED</td><td>OHEERESH</td></tr><tr><td>CHECKED</td><td>VIPUL</td></tr><tr><td colspan="2">DATE: MAR - 2022</td><td>DWG. NO: GPT/CCT/4B/HWP/NP/20</td><td></td></tr></table>	DRAWN	PRADEEP	TITLE: Plan & Longitudinal Profile (From X/a 139+500 to X/m 140+000)	REV: NO	DESIGNED	OHEERESH	CHECKED	VIPUL	DATE: MAR - 2022		DWG. NO: GPT/CCT/4B/HWP/NP/20	
DRAWN	PRADEEP	TITLE: Plan & Longitudinal Profile (From X/a 139+500 to X/m 140+000)	REV: NO																			
DESIGNED	OHEERESH																					
CHECKED	VIPUL																					
DATE: MAR - 2022		DWG. NO: GPT/CCT/4B/HWP/NP/20																				

LEGEND :

EXISTING PLAN :

EXIST. ROAD

K-I/R : KACHA RESIDENTIAL
K-I/O : KACHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/O : PUCCA COMMERCIAL

1000 CONTOUR

PROPOSED PLAN :

TOE LINE
ES EDGE
HS EDGE
G/W EDGE
CEN. LINE
G/W EDGE
HS EDGE
ES EDGE
TOE LINE

HOR. TANGENT POINT

PROW PROPOSED ROW

CULVERT

BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL
AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT

GRID LINE

BOX CULVERT

CHURACHANDPUR

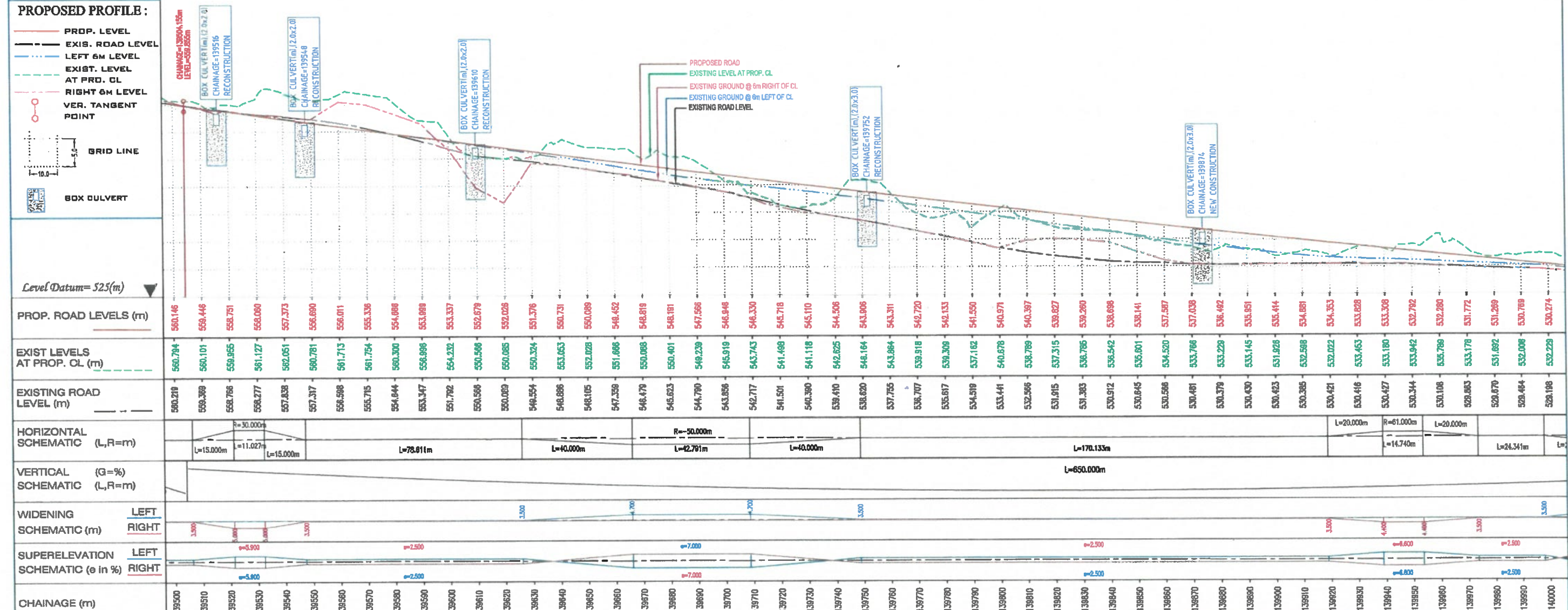
APPROVED

CHAITANYA PROJECTS CONSULTANCY PVT. LTD.
HW-102-B
CCP-01

DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.

Managing Director



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DATE:	REV:
			MIDCL	GPT	M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS AND ASSOCIATES C-3RD FLOOR, RK TOWER, SECTOR-4, VASHTAL, CHANDIGARH-160101	SUVADRA CONSULTANTS 2ND FLOOR, BBSR-18, Odisha	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD. E-82, Rajesh Kumar Path, S.K.Puri, Boring Road, Patna-800001	SPS Technocrats Pvt. Ltd. # 638 & 641, JMD Megapolis, Sector 48, Gurugram, Haryana - 122018. Website: www.spspt.com Email: info@spspt.com	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) In the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	MAR - 2022	R0

TITLE:	Plan & Longitudinal Profile (From Km 139+500 to Km 140+000)
SCALE:	HOR: 1:10000; VER: 1:1000 (at 40m Chainage)
DATE:	MAR - 2022
REV:	R0

LEGEND :

EXISTING PLAN :

EXIST. ROAD

K-1/R : KACHA RESIDENTIAL
K-1/O : KACHA COMMERCIAL
SP-1/R : SEMI PUDDA RESI.
SP-1/O : SEMI PUDDA COMM.
P-1/R : PUDDA RESIDENTIAL
P-1/O : PUDDA COMMERCIAL

1000 CONTOUR

PROPOSED PLAN :

TOE LINE
ES EDGE
HS EDGE
C/W EDGE
DEN. LINE
C/W EDGE
HS EDGE
ES EDGE
TOE LINE

HOR. TANGENT POINT

PROW PROPOSED ROW

CULVERT

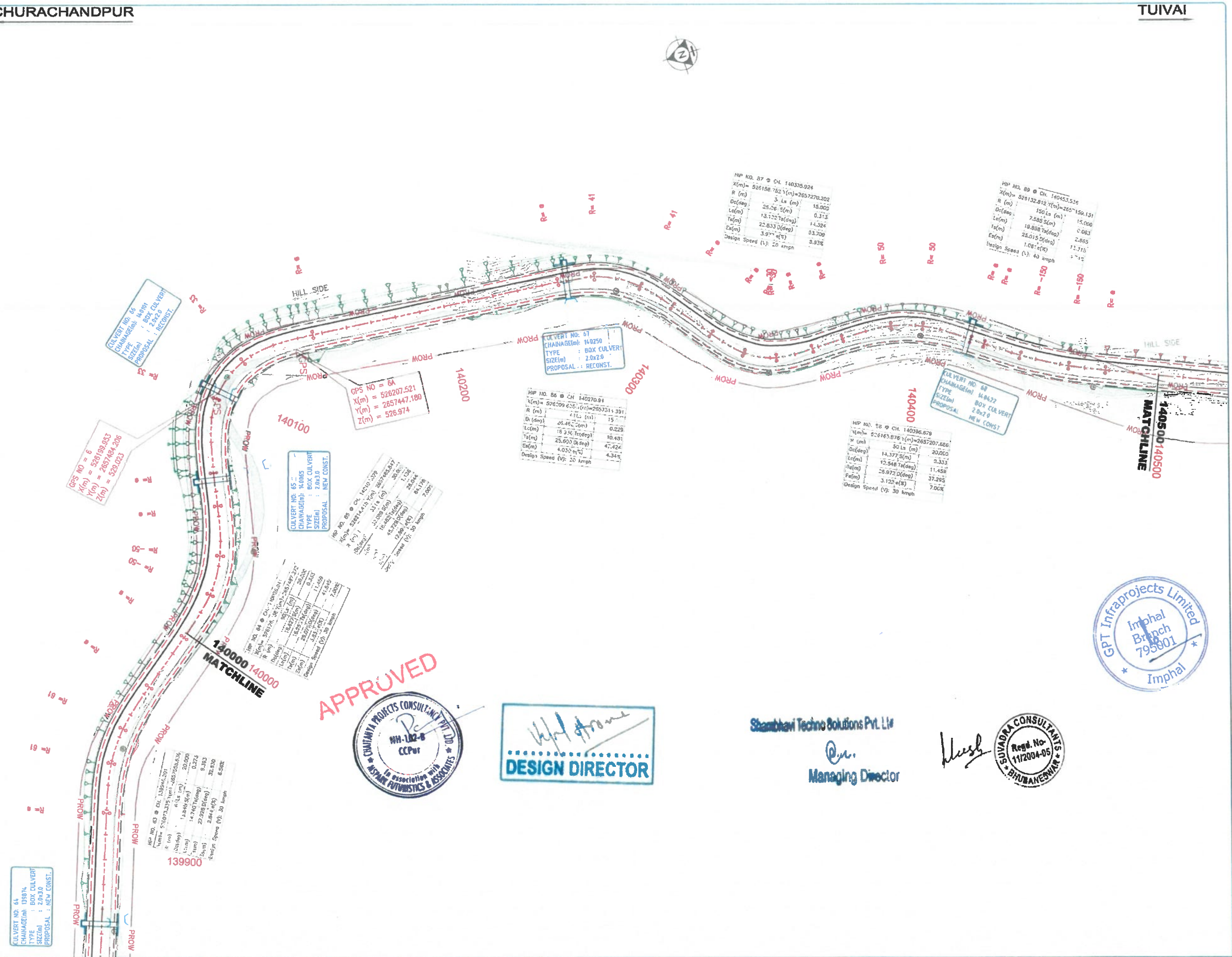
BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
EXIST. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL
AT PRD. CL
RIGHT 6M LEVEL
VER. TANGENT POINT

GRID LINE

BOX CULVERT



APPROVED



DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.

Managing Director



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROOF CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	DESIGNED:	CHECKED:	DATE:	TITLE:	SCALE:	DRG. NO.:	REV:
			MIDCL	GPT	M/S CHAITANYA PROJECTS CONSULTANT PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS & ASSOCIATES	SUVADRA CONSULTANTS	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD.	SPS Technocrats Pvt. Ltd.	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	PRADDEEP	DHEERESH	VIPUL	MAR - 2022	Plan & Longitudinal Profile (From Km 140+000 to Km 140+500)	1:1000	GPT/CCT/4B/HW/PP/21	R0

LEGEND :

EXISTING PLAN :

- EXIST. ROAD
- K-1/R : KACHA RESIDENTIAL
K-1/C : KACHA COMMERCIAL
SP-1/R : SEMI PUCCA RESI.
SP-1/C : SEMI PUCCA COMM.
P-1/R : PUCCA RESIDENTIAL
P-1/C : PUCCA COMMERCIAL
- 1000 CONTOUR

PROPOSED PLAN :

- TOE LINE
ES EDGE
HS EDGE
D/W EDGE
DEN. LINE
D/W EDGE
HS EDGE
ES EDGE
TOE LINE
- HOR. TANGENT POINT
- PROW PROPOSED ROW
- CULVERT
- BRIDGE

PROPOSED PROFILE :

- PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT
- GRID LINE
- BOX CULVERT

CHURACHANDPUR

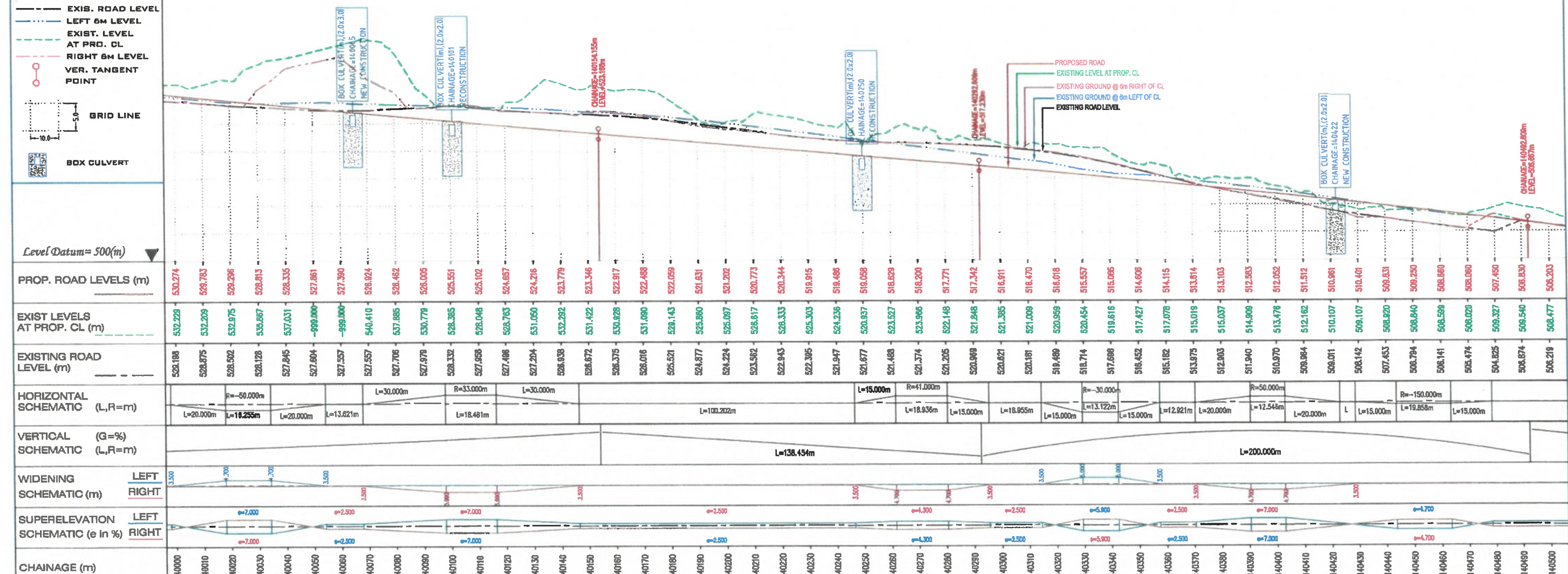
APPROVED



Shambhavi Techno Solutions Pvt. Ltd.

Managing Director

Hush



Rev.	Date	Description	CLIENT:	EPC CONTRACTOR:	AUTHORITY ENGINEER:	SAFETY CONSULTANT:	PROJECT CONSULTANT:	DESIGN CONSULTANT:	PROJECT:	DRAWN:	PRAPDEEP	TITLE:	SCALE:	DATE:	REV:
			MAIDCL	GPT	M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURISTICS & ASSOCIATES	SUVADRA CONSULTANTS	SHAMBHAVI TECHNO SOLUTIONS PVT. LTD.	SPS Technocrats Pvt. Ltd.	Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	DHEERESH	VIPUL	Plan & Longitudinal Profile (From Km 140+000 to Km 140+500)	1:1000	MAR - 2022	R0

LEGEND :

EXISTING PLAN :

EXIST. ROAD

K-1/R : KACHA RESIDENTIAL
K-1/G : KACHA COMMERCIAL
SP-1/R : SEMI PUCCA RESI.
SP-1/G : SEMI PUCCA COMM.
P-1/R : PUCCA RESIDENTIAL
P-1/G : PUCCA COMMERCIAL

1000 CONTOUR

PROPOSED PLAN :

TOE LINE
ES EDGE
HS EDGE
Q/W EDGE
GEN. LINE
Q/W EDGE
HS EDGE
ES EDGE
TOE LINE

HOR. TANGENT POINT

PROW PROPOSED ROW

CULVERT

BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL
AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT

GRID LINE

BOX CULVERT

CHURACHANDPUR

HIP NO. 90 @ CH. 140803.912
X(m) = 526032.072 Y(m) = 2657017.056
P (m) 250 Ls (m) 15.700
Dc(deg) 1.081 S(m) 0.028
Lc(m) 30.500 Tc(deg) 1.719
Tc(m) 47.2 Lc(deg) 10.493
Design Speed 40 kmph

CULVERT NO. 69
CHAINAGE(m) 140634
TYPE : BOX CULVERT
SIZE(m) : 2.0x2.0
PROPOSAL : RECONST.

HIP NO. 21 @ CH. 140679.555
X(m) = 526071.455 Y(m) = 2656841.980
P (m) 200 Ls (m) 15.000
Dc(deg) 1.336 S(m) 0.047
Lc(m) 46.522 Tc(deg) 2.146
Tc(m) 38.529 Lc(deg) 17.633
Lc(m) 2.430 Lc(deg) 3.568
Design Speed (V): 40 kmph

Vijay Sharma
DESIGN DIRECTOR

Shambhavi Techno Solutions Pvt. Ltd.

Manish
Managing Director



APPROVED



CHAINAGE	ABUTMENT/PIER	CO-ORDINATES	
		X	Y
140950	A1	525931.017	2656729.689
140993	P1	525895.313	2656753.625
141036	P2	525859.854	2656777.949
141060	A2	525840.063	2656791.525



Rev.	Date	Description

CLIENT:
MAIDCL
BUILDING INFRASTRUCTURE BUILDING THE NATION

EPC CONTRACTOR:
GPT
JC - 25, Sector - III, Salt Lake,
Kolkata - 700098.

AUTHORITY ENGINEER:
M/S CHAITANYA PROJECTS
CONSULTANCY PVT.LTD.
IN ASSOCIATION WITH MSPARK
FUTURESTICS AND ASSOCIATES
C-2ND FLOOR, RIX TOWER,
SECTOR-4, VAISHALI, GHANABAD-201019.

SAFETY CONSULTANT:
SUVADRA
CONSULTANTS
PP-97, Tankapani Road,
BBSR-18, Odisha

PROOF CONSULTANT:
SHAMBHAVI TECHNO
SOLUTIONS PVT.LTD.
E-82, Rajesh Kumar Path,
S.K.Puri, Boring Road,
Patna-800001

DESIGN CONSULTANT:
SPS Technocrats Pvt. Ltd.
638 & 641, JMD Megapole, Sector 48,
Gurgaon, Haryana - 122015.
Website : www.spspl.com
Email : info@spspl.com

PROJECT:
Widening to 2 (Two) Lane with Hard
shoulder of Churachandpur to Tuivai section
of NH 102B from Km 130.000 to Km 141.029
(Package-4B) in the State of Manipur on
Engineering, Procurement & Construction
(EPC) mode.

DRAWN : PRADEEP
DESIGNED : DHIRESH
CHECKED : VIPUL
DATE: MAR - 2022

TITLE: **Plan & Longitudinal Profile**
(From Km 140+500 to Km 141+166.964)
SCALE: (HORIZONTAL: 1:1000; VERTICAL: 1:100 at 25m level)
DRG. NO: **GPT/CCT/48/HW/PNP/22**

REV:
R0

LEGEND :

EXISTING PLAN :

EXIST. ROAD
K-I/R : KACHA RESIDENTIAL
K-I/C : KACHA COMMERCIAL
SP-I/R : SEMI PUCCA RESI.
SP-I/C : SEMI PUCCA COMM.
P-I/R : PUCCA RESIDENTIAL
P-I/C : PUCCA COMMERCIAL
1000 CONTOUR

PROPOSED PLAN :

TOE LINE
ES EDGE
HS EDGE
G/W EDGE
CEN. LINE
C/W EDGE
HS EDGE
ES EDGE
TOE LINE
HOR. TANGENT POINT
PROW PROPOSED ROW
DULVERT
BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
EXIS. ROAD LEVEL
LEFT 6M LEVEL
EXIST. LEVEL AT PRO. CL
RIGHT 6M LEVEL
VER. TANGENT POINT
GRID LINE
BOX CULVERT

CHURACHANDPUR

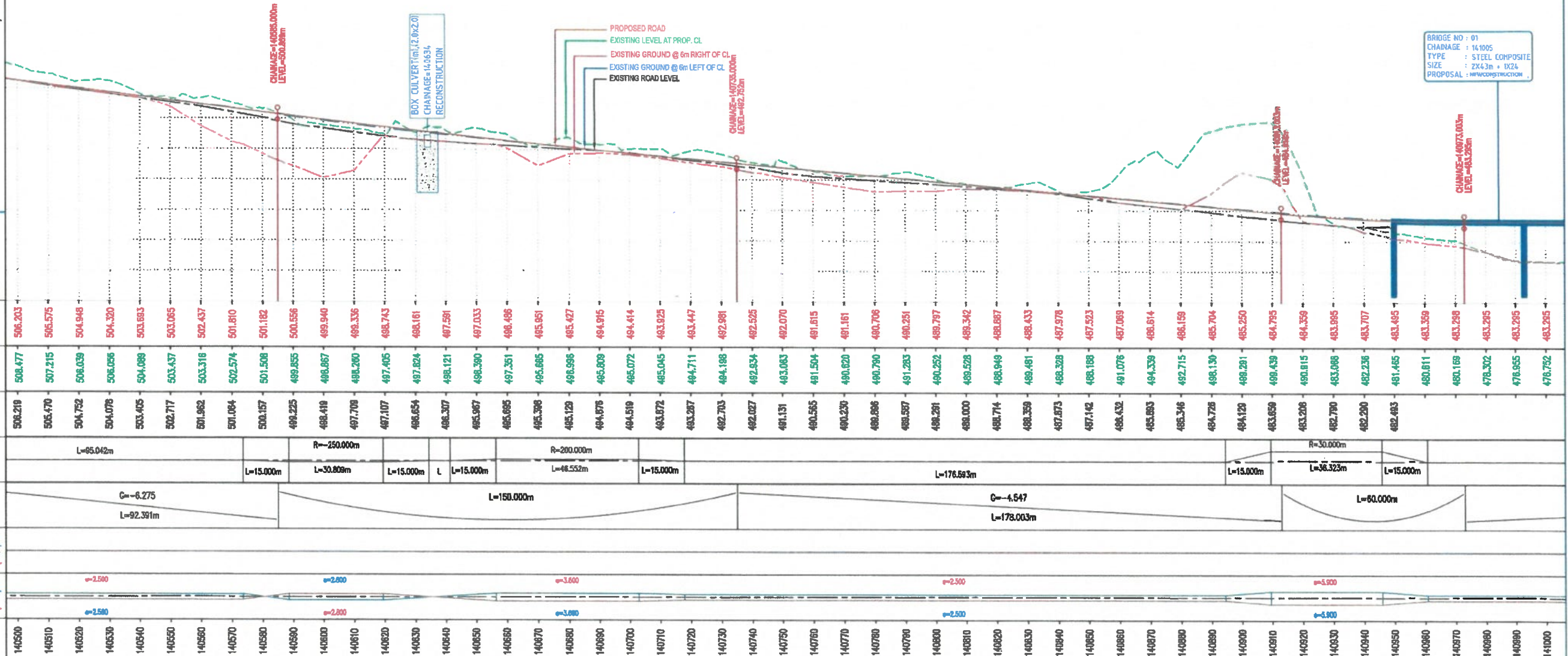
TUIVAI

APPROVED



Shambhavi Techno Solutions Pvt. Ltd.
Managing Director

Handwritten signature.



Rev.	Date	Description

CLIENT: BUILDING INFRASTRUCTURE BUILDING THE NATION	EPC CONTRACTOR: JC - 25, Sector - III, Salt Lake, Kolkata - 700098.	AUTHORITY ENGINEER: M/S CHAITANYA PROJECTS CONSULTANCY PVT. LTD. IN ASSOCIATION WITH MSPARK FUTURESTICS AND ASSOCIATES C-5, 2ND FLOOR, RK TOWER, SECTOR-4, VAISHALI, GHAZIABAD-201010.	SAFETY CONSULTANT: SUVADRA CONSULTANTS PP-97, Tankapuri Road, BBSR-16, Odisha.	PROJECT CONSULTANT: SHAMBHAVI TECHNO SOLUTIONS PVT. LTD. E-82, Rajesh Kumar Path, S.K. Puri, Boring Road, Patna-800001.	DESIGN CONSULTANT: SPS Technocrats Pvt. Ltd. #836 & 841, MID Megapole, Sector 48, Gurugram, Haryana - 120018. Website: www.spspl.com Email: info@spspl.com	PROJECT: Widening to 2 (Two) Lane with Hard shoulder of Churachandpur to Tuivai section of NH 102B from Km 130.000 to Km 141.029 (Package-4B) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode.	DRAWN: DHEERESH CHECKED: VIPUL DATE: MAR - 2022	TITLE: Plan & Longitudinal Profile (From Km 140+500 to Km 141+000) SCALE: (HOR 1:1000, VER 1:100 @ 42.5m Scale) DRS. NO: GPT/CCT/4B/HW/PNP/22a	Rev: R0
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LEGEND :

EXISTING PLAN :

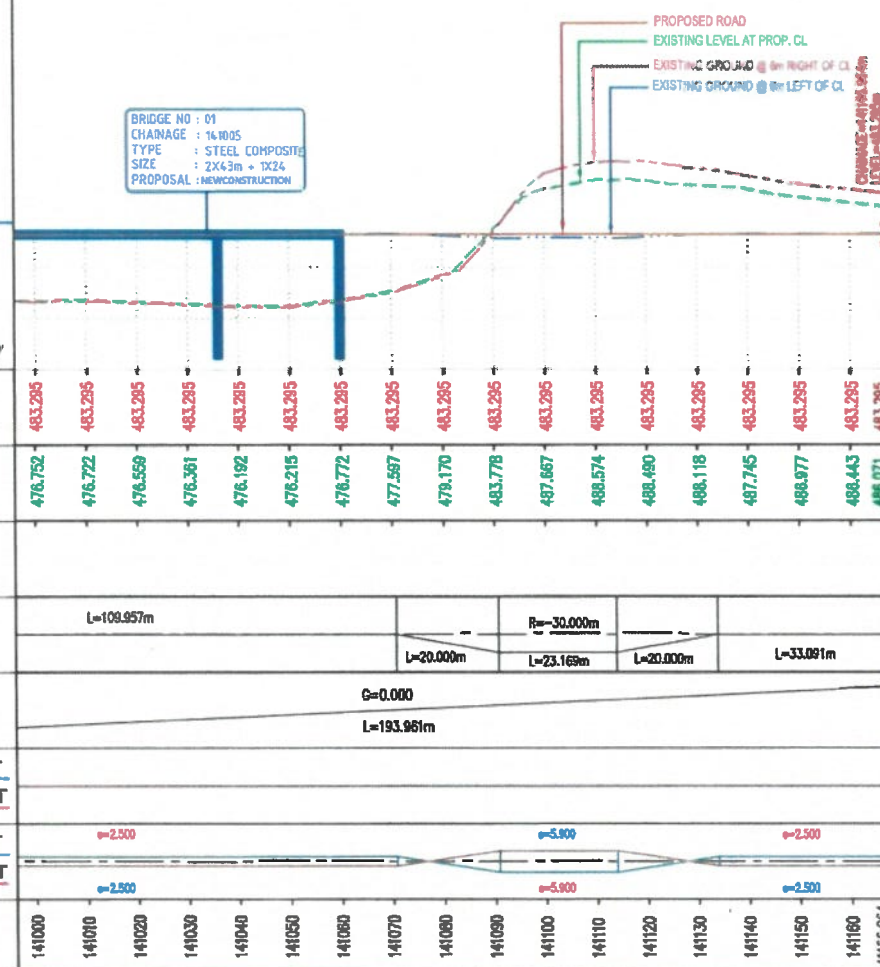
EXIST. ROAD
 K-I/R : KACHA RESIDENTIAL
 K-I/C : KACHA COMMERCIAL
 SP-I/R : SEMI PUCCA RESI.
 SP-I/C : SEMI PUCCA COMM.
 P-I/R : PUCCA RESIDENTIAL
 P-I/C : PUCCA COMMERCIAL
 1000 CONTOUR

PROPOSED PLAN :

TDE LINE
 ES EDGE
 HS EDGE
 D/W EDGE
 DEN. LINE
 D/W EDGE
 HS EDGE
 ES EDGE
 TDE LINE
 HOR. TANGENT POINT
 PROW
 PROPOSED ROW
 CULVERT
 BRIDGE

PROPOSED PROFILE :

PROP. LEVEL
 EXIS. ROAD LEVEL
 LEFT 6M LEVEL
 EXIST. LEVEL AT PRO. CL
 RIGHT 6M LEVEL
 VER. TANGENT POINT
 GRID LINE
 BOX CULVERT



APPROVED



Shambhavi Techno Solutions Pvt. Ltd.

Managing Director



Rev.	Date	Description



EPC CONTRACTOR:
GPT
 JC - 25, Sector - III, Salt Lake,
 Kolkata - 700088.

AUTHORITY ENGINEER:
 M/S CHAITANYA PROJECTS
 CONSULTANCY PVT.LTD.
 IN ASSOCIATION WITH MSPARK
 FUTURISTICS AND ASSOCIATES
 C-8, 2ND FLOOR, RK TOWER,
 SECTOR-4, VAISHALI, GHANABAD-201019.

SAFETY CONSULTANT:
SUVADRA
 CONSULTANTS
 PP-97, Tanikapani Road,
 BBSR-18, Odisha

PROOF CONSULTANT:
SHAMBHAVI TECHNO
SOLUTIONS PVT.LTD.
 E-82, Rajesh Kumar Path,
 S.K.Puri, Boring Road,
 Patna-800001

DESIGN CONSULTANT:
SPS Technocrats Pvt. Ltd.
 # 638 & 641, JMD Megapolis, Sector 46,
 Gurugram, Haryana - 122018.
 Website : www.spspl.com
 Email : info@spspl.com

PROJECT:
 Widening to 2 (Two) Lane with Hard
 shoulder of Churachandpur to Tuivai section
 of NH 102B from Km 130.000 to Km 141.028
 (Package-4B) in the State of Manipur on
 Engineering, Procurement & Construction
 (EPC) mode.

DRAWN: PRADEEP
 DESIGNED: DHEERESH
 CHECKED: VIPUL
 DATE: MAR - 2022

TITLE: **Plan & Longitudinal Profile**
 (From Km 141+000 to Km 141+266.964)
 SCALE: (HORIZ: 1:10000; VERT: 1:1000; PLAN: 1:1000)
 DRG. NO: **GPT/CCT/4B/HW/PNP/22b**

 Rev:
 R0