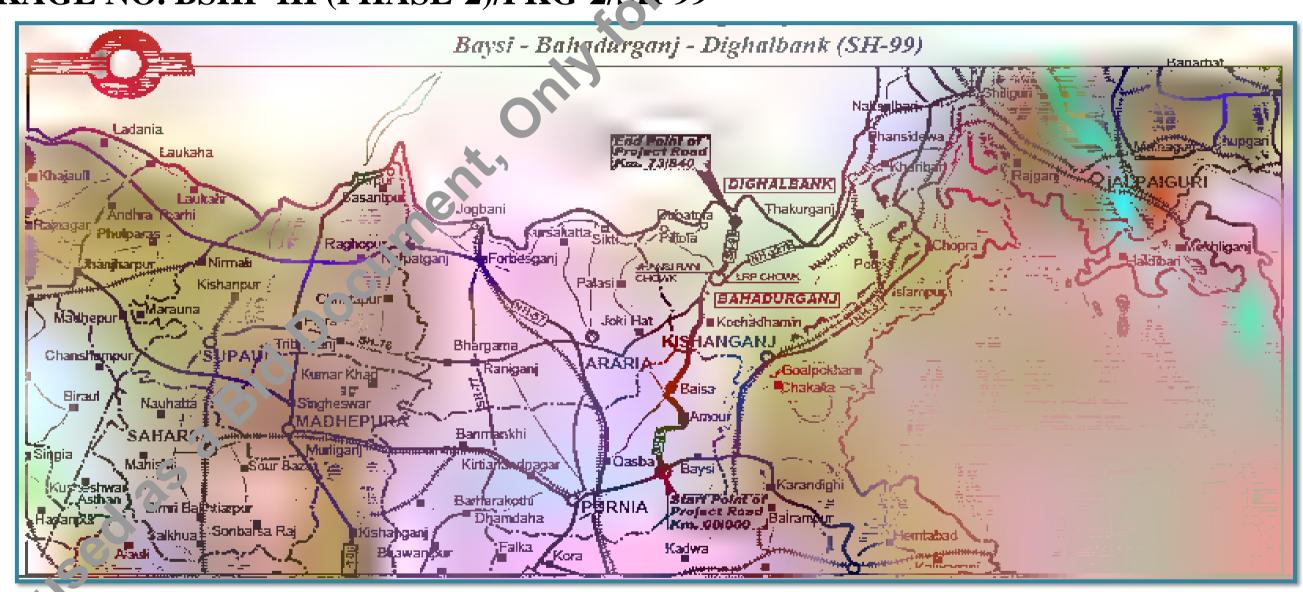


Volume – IV

IMPROVEMENT/UPGRADATION, WIDENING AND STRENGTHENING OF BAYSI BAHADURGANJ-DIGHALBANK ROAD (SH. UNDER CIVIL WORKS CONTRACT PACKAGE NO. BSHP-III (PHASE-2)/PKG-2/SH-99



BIHAR STATE ROAD DEVELOPMENT CORPORATION LIMITED

RCD Central Mechanical Workshop Campus (Near Patna Airport)
Sheikhpura, Patna-800014, Bihar, India
Phone- 91+-612-2226711

Fax: +91-612-2226723



Bihar State Road Development Corporation Ltd.

(A Government of Bihar Undertaking)

IMPROVEMENT/UPGRADATION, WIDENING AND STRENGTHENING OF BAYSI BAHADURGANJ - DICHALBANK ROAD (SH-99) UNDER CIVIL WORKS CONTRACT PACKAGE NO. BSHP-III (PHASE-2)/PKG-2/SH-99

Volume – IV : DRAWINGS (PLAN & PROFILE)

BIHAR STATE ROAD DEVELOPMENT CORPORATION LIMITED RCD Mech. Workshop Campus, Sheikhpura,
Patna - 800 014, BIHAR

January, 2022

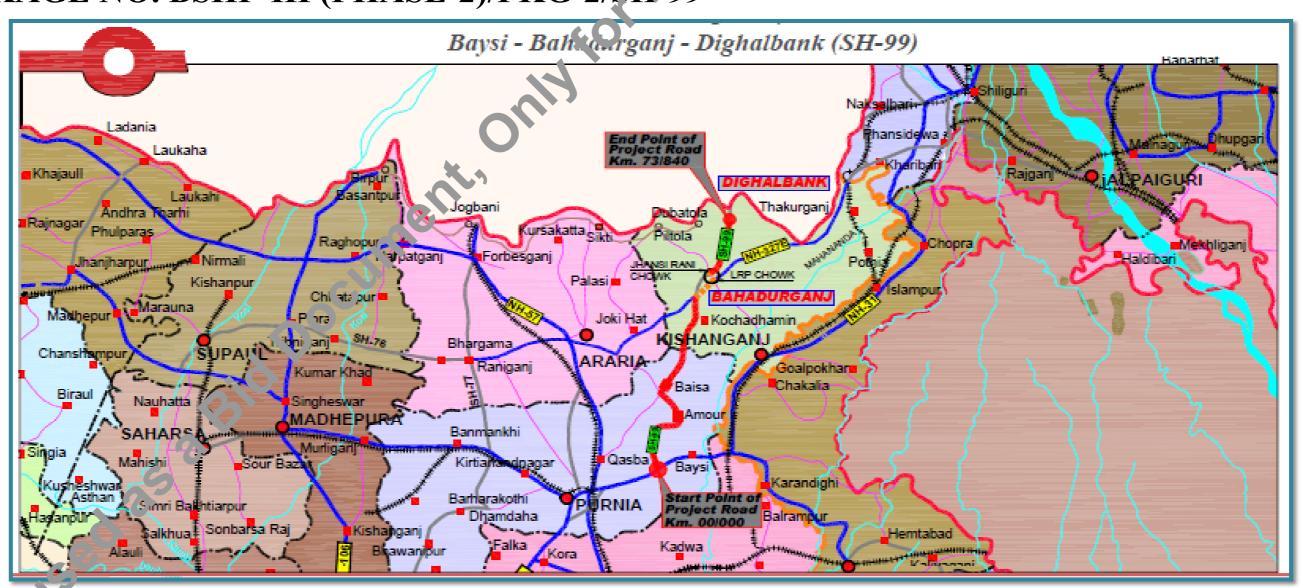
INDEX

Sr. No.	Particulars	Page No.
1.	Horizontal Curve Detail	2-5
2.	Vertical Curve Detail	6-8
3.	Plan Profile	9-75
	sed as a Bid Document.	



Volume – IV

IMPROVEMENT/UPGRADATION, WIDENING AND STRENGTHENING OF BAYSI BAHADURGANJ-DIGHALBANK ROAD (SH-59) UNDER CIVIL WORKS CONTRACT PACKAGE NO. BSHP-III (PHASE-2)/PKG-2/SK-99



BIHAR STATE ROAD DEVELOPMENT CORPORATION LIMITED

RCD Central Mechanical Workshop Campus (Near Patna Airport) Sheikhpura, Patna-800014, Bihar, India Phone- 91+-612-2226711

Fax: +91-612-2226723



Bihar State Road Development Corporation Ltd.

(A Government of Bihar Undertaking)

IMPROVEMENT/UPGRAD TION, WIDENING AND STRENGTHENING OF BAYSI BAHADURGANJ - DICHALBANK ROAD (SH-99) UNDER **CIVIL** CONTRACT PACKACE NO. BSHP-III (PHASE-2)/PKG-2/SH-99

Volume – IV: DRAWINGS (PLAN & PROFILE)

BIHAR STATE ROAD DEVELOPMENT CORPORATION LIMITED RCD Mech. Workshop Campus, Sheikhpura, Patna - 800 014. RILLAT

INDEX

Sr. No.	Particulars	Page No.
1. Horizontal Curve Detail	604	2-5
2. Vertical Curve Detail		6-8
3. Plan Profile	0	9-75
3. Plan Profile		

1.70	
3.7	,
-00	· - [2]
Ciri	-

Sr.								110	TIZOTILAT O	ırve Details										
No.	HIP No.	HIP Chainage	Easting	Northing	Radius	Transitio n Length	Transition Start	Circular Start	Circular End	Transition End	Speed	Deltä	Lċ		Shift(S)	Theta_s	Es	k	Ts(m)	ë
\sqcup											<u> </u>			1						
	4741	m	571000 1010	0004050 4000	m	m	m	-m	m	m	kmph	Degre	7	Degree	iii	Degree	m	m	m.	%
2	1/1L 1/2R	165.754 355.314	574963.4810 574983.2360	2861053.1090 2861242.1580	5500 190	30	202 420	122.586	208.922	407 400	40	0.00	86.3	0.90	0.00	0.0	0.2	0.00	43,17	- 2.74
3	1/3L .	828.412	575208.8040	2861659.5640	400	40	303.138 735.675	333.138 775.675	377,490 881,148	407.490 921.148	40 65	2 4	44.4 105.5	13.37	0.20	4.5 2.9	3.9 6.9	15.00	52.69 93.58	3.74 4.69
4	2/1R	1302.273	575271.1730	2862130,1550	2800	0.	100.010	1258.515	1346.031	.521,140	80_	1.79	87.5	1.79	0.00	0.0	0.3	0.00	43.76	4.09.
5	2/2L	1572.654	575315,0580	2862396:9640	2800	0		1512.481	1632.826		1 0	2,46	120.3	2.46	0.00	0.0	0.6	0.00	60.18	-
6	2/3R	1942.595	575359.3600	2862764.2520	5000	-0		1931.898	1953.291		1	0.25	21.4	0.25	0.00	0.0	0.0	0.00	10.70	-
7	3/1L	2113.442	575380.5460	2862933.7910	2500	0		2055:379	2171.504		70	2.66	116,1	2.66	0.00	0.0	0.7	0.00	58.07	-
8	3/2R	2408.223	575403.7290	2863230,8960	180	70	2309.233	2379.233	2437.213	2507.217	ზა	40.74	58.0	18.46	1.13	11.1	13.2	34.96	102.20	7.00
9	3/3L	2782.779	575675,2540	2863500.5420	500	45	2608.457	2653.457	2912.100	250, 00	80	34.79	258.6	29.64	0.17	2.6	24.1	22,50	179.22	5.69
10	4/1L	3309.535	575771.2630	2864023.4530	7000	0		3301,211	3317,858		80	0.14	16.6	0.14	0.00	0.0	0.0	0.00	8:32	-
11	4/2L 4/3R	3502.555	575805,6710	2864213.3980	008	0;		3471.568	3533.542		65	4.44	62.0	4.44	0.00	0.0	0,6	0.00	31,00	-
13	4/3K	3636.052 3863.956	575819.2330 575860.8970	2864346.2380 2864571.7820	800 310	75	3755.226	3603:681 3830.226	3668.423 3897.680	3972,686	65 80	26.33	67.5	12.47	0:00	6.9	0.7 9.1	0.00 37.48	32:39 110:17	7:00
14	5/1R	4093.166	575797.8480	2864793.6460	2800	0	3139.220	4082.563	4103 7 2	3972,000	80	0.43	21.2	0.43	0.00	0.0	0.0	0.00	10.60	7:00
15	5/2L	4355,322	575728,0570	2865046.4990	450	40	4291,520	4331,520	437 .123	-4419.123	65	11,15	47.6	6.06	0.15	2:5.	2.3	20.00	63.95	4.17
16	5/3R	4583.252	575625.9870	2865250.4690	2500	0	12011020	4577.059	585.	77103720	80	0.28	12.4	0.28	0.00	0.0	0.0	0.00	6.19	
17	5/4L	4890.246	575489.9660	2865525.6840	5500	0		4880.182	45 1,309		100	0.21	20.1	0.21	0.00	0.0	0.0	0.00	10,06	-
18	6/1R	5257:599	575325.9950	2865854,4160	2500	0		5215.29	5299.905		100	1.94	84.6	1.94	0.00	0.0	0.4	0.00	42.31	-:
19	6/2L	5374.502	575277.3730	2865960.7570	2000	0:		1306 .24	5439.529		100	3.73	130.1	3.73	0.00	0.0	1,1	0.00	65.05	-
20	6/3R	5500:206	575217.7730	2866071.4630	2500	0.		54 151	5539.260		80.	1.79	78.1	1.79	0.00	0.0	0.3	0.00	39.06	-
21	7/1R	6114.123	57,4943.3760	2866621.6610	400.	55	.6012.774	°67. ₹4	6160.472	6215.472	65	21.16	92.7	13:28	0.32	3.9	7.2	27.50	102.26	4:69
22	7/2R	6619.744	574895.5030	2867132:8390	105	55	6535.565	65. 565	6648.922	6703.922	40	61.86	58:4	31.84	1.20	15:0	18:8:	27.44	91.07	6.77
23	7/3L 8/1R	6831.062 7009.487	575084,3330 575055,1900	2867257.7960 2867442.1580	105 2000	-0	.674″ 000	798:555 6995:043	6863.568 7023,931	6918.568	40 65	65.49 0.83	65.0 28.9	35.48 0.83	1:20 0:00	15.0	21.3	0.00	95.73 14.44	6:77
25	8/2L	7500.649	574986.9690	2867918.2280	320	50	7365 315	7419.515	7581,783	7631.783	65.	38.01	162.3	29.05	0.33	4.5	0.1 18.8	24.99	135.31	5.87
26	8/3L	7707.315	574836.2120	2868087.5240	230	.0	7505	7621.818	7792,812	7031,703,	65	42.60	171.0	42.60	0.00	0.0	16.9	0.00	89.67	7.00
27	8/4R	7849.311	574690.7750	2868102.0870	. 1700	0		7834.216	7864.405	-	50	1.02	30.2	1.02	0.00	0.0	0.1	0.00	15.09	-
28	9/1R	8219.862	574322.1790	2868145.6200	200	:0.	T. 1	8178.387	8261.337		40	23,76	82.9	23.76	0.00	0.0	4.4	0.00	42.08	3.56
29	9/2L	8351,598	574206,9660	2868213:4840	290			8281.894	8421.301		40	27.54	139.4	27.54	0.00	0,0	8.6	0:00	71.08	-
30	9/,3L	8505.815	574050.9650	2868221.5390	290			8452.258	8559.372		40.	21.16	107:1	21.16	0.00	0.0	5.0	0.00	54.17	
31	9/4R	8621.776	573939.8850	2868185.0050	110,	0		8598.457	8645.095		40	24.29	46.6	.24.29	0.00	0.0	2.5	0.00	23.67	6.46
32	10/1L	9162.312	573402.0410	2868242.3470	6000			9154.190	9170.434		65	0.16	16,2	0.16	0.00	0.0	0,0	0,00	8.12	-
33	10/2R	9569:433	572993.6550	2868284,7690	81 0.	0		9382.768	9756.098		65	26.74	373.3	26.74	0.00	0.0	22,3	0.00	190,13	-
34	10/3R 11/1R	9901.489	572704.8410	2868469,9590	1206	0.		9776.142	10026 835		40	47.09	250.7	47.09	0.00	0.0	27:7	0.00	132.92	-
36	11/2L	10159.545 10502.177	572657 6200 572632 5170	2869075.481c	200	. 0		10096.034	10223.055 10665.101		50 50	6.06 23,34	127.0 325.8	6.06	0.00	0.0	1.7 16.9	0.00	63.57 165.21	
37	11/3R	10856.483	572466:5410	2869394. 70		60	10772.915	10832.915	10880.050	10940.050	50	40.92	47.1	18,00	1,00	11.5	11.2	29.96	86.30	7.00
38	12/11	11398.901	572593.1130	2869 24.9716	200	60	11332.506	11392.506	11405.295	11465,295	65	20.85	12.8	3,66	0.75	8.6	4,1	29:98	66.92	7.00
39,	12/2R	11631.231	572564:7790	2870 11.9 30	180	70	11504.366	11574.366	11688.095	11758.095	50	58.48	113.7	36.20	1.13	11.1	27.6	34.96	136.36	6.17
40	12/3L	11758.55	572674.9210	_o, ?/a.6550	180	.0		11734.588	11782.511		50	15.25	47.9	15.25	0.00	0.0	1.6	0,00	24.10	6.17
41	13/1L	12696.677	572891,7200	787 76.2780	17.0	70	12574.254	12644.254	12749.100	12819.100	65	58.93	104,8	35.34	1.20	11.8	26.6	34:95	131.67	7.00
42	13/2R	12974.36	57268 .3640	2071378.1390	200.	45	12910.646	12955,646	12993.074	13038.074	50	.23.61	37.4	10.72	0.42	6.4	4.8	22.49	64.39	5,56
43	14/1L	13096.215	57264 900	2871492.0320	250	35	13050,114	13085.114	13107.316	13142.316	50	13.11	22.2	5.09	0.20	4.0	1,8,	17.50	46.25	4,44
44	14/2L 14/3R	13320.447 13441.639	72519.1	2871667.0150 2871693.0070	160 125	.55 0.	13215.601	13270.601	13370.292 13472.576	13425.292	50 40	55.39 28.36	99.7 61.9	35.70	0.79	9.8	21.6 3.9	27.47	111.88	6.94
46	14/4R	13935:552	5724 36920	2872066.2870	200	60	13839.161	13899.161	13971.943	14031:943	65	38.04	72.8	28.36	0.75	8.6	12.3	0.00 29.98	31.59 99.18	5.69 7.00
47	15/1L	14381.745	100 45.0900	2872521.6140	230	55	14256.907	14311.907	14451.583	14506.583	65	48:50	139:7	34.79	0.75	6.9	22.9	27.49	131.33	7.00
48	15/2R	146 4.		2872670.8740	200	60	14511.313	14571:313	14638.287	14698.287	65	36:38	67.0	19:19	0.75	8.6	11.3	29.98	95.93	7.00
49		15. 97 101	571710.8760	2873319.1840	500	45.	15212.002	15257.002	15281.488	15326.488	80	7.96	24.5	2.81	0.17	2.6	1.4	22.50	57:31	5.69
50		1555 43		2873601 3780	250	.90	15449.112	15539.112	15563.774	15653:774	80	26,28	24,7	5.65	1.35	10.3	8.1	44.95	103.62	7.00
51		15737.722	571584.0060	2873760.6280	3000	0		15727:511	15747.933		80	0.39	20.4	0.39	0.00	0.0	0.0	0;00	10.21	
52		996.111	571500.4640	2873896,9190	350	65	15784.739	15849.739	15942.483	16007.483	80	25.82	92.7	15:18	0:50	5.3	9.6	32.49	112.84	7.00
53		1f z06.231	571469,5190	2874207.8420	250	55.	16126.470	16181.470	16230.992	16285.992	65	23.95	49.5	11.35	0.50	6.3	6:1	27.49	80.63	7.00
		16664,473	571242.4770 571110.9350	2874606.8870	12500	0		16656.582	16672,364		80	0.07	15.8	0.07	0:00	0,0	0.0	0.00	7.89	
_		16931.063 17050.476	571050.8040	2874838.7630 2874942.6450	2500 240	60	16976.026	16920.198 17036.026	16941.927 17064.925	17124.925	. 80 65	0.50 21.22	21.7	0.50 6.90	0.00	7.2	0.0 4.8	0.00 29.98	10.86 75.07	7.00
		17413.666	570766:9290	2875170.1770	6000	0	100/0.020	17398.759	17428.573	17 124.525	65	0.28	29.8	0.28	0.00	0.0	0.0	0.00	14.91	7.00
6		17870.663	570408.2780	2875454.7280	250	55	17791:916	17846.916	17894.409	17949.409	65	23.49	47.5	10.88	0.50	6.3	5:9	27.49	79.57	7.00
59		18213.282	570063,9850	2875546.5840	200	60 。	18073.718	18133.718	18292.846	18352.846	65	62.78	159.1	45.59	0.75	8.6	35.2	29.98	152.46	7.00
60		18474 072	570005,3050	2875816.0270	200	60:	18384.083	18444.083	18504.061	18564.061	65	34.37	60.0	17.18	0.75	8.6	10.1	29.98	92.06	7.00
		19375.473	569339,1970	2876444 6720	250	9,0:	19204.915	19294.915	19456.030	19546:030	65	57.55	161.1	36:92	1.35	1.0.3	36.8	44.95	182.99	7:00
		20034.509	569467,1190	2877109.3400	200	60	19921.668	19981.668	20087.350	20147.350	65	47.46	105.7	30,28	0.75	8,6	19.3	29.98	118.24	7.00
_		20564_357	569926.1750	2877392.2150	190	65	20460.002	20525.002	20603.712	20668.712	65	43.34	78.7	23.74	0.93	9.8	15.4	32.47	108.33	7.00
		20828.849	569995.9950	2877652.3940	5500	0	00044	20818.994	20838.704	0.4000	-65	0.21	19.7	0.21	0.00	0.0	0.0	0.00	9.86	-
65 .		21075.323	570063.8730	2877901.7650	290	50	20911.078	20961.078		21239.567	65	55.02	228.5	45.14	0.36	4.9	37.4	24.99	176.22	6.48
		21349.574	570334.9420	2877999.0980	230	55	21258.733	21313.733	21385.415	21440.415	65	31.56	71.7	17.86	0.55	6.9	9.6	27.49	92.63	7.00
66		21640.837	570518.9760	2878228.8890	310	50	21544,742	21594.742	24,000,004	21736.931	65	26.28	92.2	17.04	0.34	4.6	8.7	24.99	97.44	6.06

D. G. M. (Tech.)

Bihar State Road Development Corporation
Limited (BSRDCL)

(A Government of Bihar Undertaking)

(A Government of Bihar Undertaking)

(BSRDCL)

(BS



CONSULTANTS:

Ŀtd.	PE PE	10/04/14 26/02/14 13/11/13 29/08/13	ISSUED WI
	REV.	DATE	
gth			

DRAWN BY: R.K.) TITLE: CHECKED BY : A.S. PPROVED BY : J.B. SIGN ISSUED BY : R.H.

BAYSI - RAUTA (PÁCKAGE:I). HORIZONTAL ALIGNMENT DETAIL

SAI-213007/DPR/C/H/HAD - 01 REVISION : PG

SAI Consulting Engineers Pyt. An ISO 9001 Certified Company

SCALE : HONE

												•								
								Ho	rizontal C	urve Details	-									
Sr. No.	HIP No.	HIP Chainage	Easting	Northing	Radius	Transitio n Length	Transition Start	Circular Start	Circular End	Transition End	Speed	D. 5	Lc	Dc	Shift(S)	Theta_s	Es	k	Ts(m)	e
_		m				m	m	m	m	iii.	4	Dograia	1	Danishad		D. mra h				- 101
1	23/1R	22428.487	570688.6160	2878999,8070	430	55	.22344.298	22399.298	22457.676	22512.676	<u>n</u>	Degree 15.11	58.4	Degree 7:78	m 0.29	Degree 3,7	m 4.1	27.50	m 84:55	6.61
2	23/2L	22627.273	570780 6330	2879176,4390	2000	0	.22344.290	22576.168	22678:377	22312:010	86	2,93	102.2	2.93	0.00	0.0	0:7	0.00	51.12	1-0.0
3	23/3R	22820,198	570857.8930	2879345.2750	800	.30	22703:815	22733.815	22906,580	221 - 586		14.52	172.8	12,37	0,05	1,1	6:5	15.00	116.93	3.56
4	23/4R	22992.382	570973.8850	2879493.5400	800	0	22100.010	22944.099	23040,665	27 5. 100	65	6,92	,96.6	6.92	0.00	0.0	1.5	0.00	48.34	
5	24/1R	23455.238	571301,4160	2879809.5330	4500	10.		23451.907	23458.569		80	0.08	6.7	0.08	0.00	0.0	0,0	0.00	3:33	-
6	24/2R	23784.705	571540.9110	2880037.5070	120	40	23729.546	23769.546	23799.863	2383. 363	40	33.57	30.3	14.48	0.56	9.5	5.9	19.98	56.35	5.93
7	24/3L	23957:372	571721.8560	2880068.1900	150	.0		23874.336	24040.40		40	63:43	166.1	63.43	0.00	0.0	26.3	0.00	92.70	4.74
8	25/1R	24163.076	571784.8700	2880275,0650	110	45	24111.337	24156.337	24169 ~ 5	24214:815	40	30.46	13.5	7.02	0.77	11.7	4.8	22.47	52.63	6,46
9	25/2L	24269.655	571863.9770	2880347.8070	650	0		24254:584	2421 .72t		40	2.66	30,1	2.66	0.00	0.0	0.2	0.00	15.07	-
10	25/3L	24349.306	571920.1030	2880404_4380	400	55	24291.423	24346.423	352.	24407.189	80	8.70	5.8	0.83	0.32	3.9	1.5	27.50	57.96	7.00
11	25/4L	24717.651	572136,8610	2880702.3490	2500.	.0		24712.552	24. 2.749		100	0.23	10.2	0.23	0.00	0.0	0.0	0.00	5.10	
12	26/1R	25059.851	572337.0610	2880979.8760	2000	0		25053.77	25065.930		100	0.35	12:2	0.35	0.00	0.0	0:0	.0.00	6.08	-
13	26/2L	25290,541	572473.1580	2881166.1430	2000	.0		2528/276	25296,712		100	0.35	12.3	-0.35	0,00	0,0,	0.0	0.00	6.17	-
14	26/3R	25541.596	572620.0160	2881369.7640	2500	0		25, 2,49	25550.701		80	0.42	18,2	0.42	0,00	0.0	0.0	0.00	9.11	-
15	26/4R	25875 184	572817 1380	2881638.9240	700	40	25819.596	955 96	25890.772	25930.772	65	5.83	31.2	2.55	0.10	1.6	1.0	20.00	55.62	2.68
16	27/1R	26337,072	573128.0030	2881983 6470	200	45	26251.871	262 5.871	26377.273	26422:273	50	35.93	80.4	23.03	0.42	6.4	10.7	22.49	87.47	5.56
17	27/2L	26647.099	573447.8470	2882051.8170	200	45	2650" 026	3554.926	26739.272	26784.272	50	65.70	184.3	52:81	0.42	6.4	38.6	22.49	151.91	5.56
18	27/3R	26956.259	573516,6550	2882368.3180	2000	. 0		26953.244	26959.273		65	0.17	6.0	0.17	0.00	0.0	0.0	0.00	3,01	
19	28/1L	27201.584	573569.4950	2882607.8860	2000	0		27198.619	27204.549		65	0.17	5.9	0.17	0.00	0.0	0.0	0.00	2.97	-
20	28/2R	27547.742	573643.0690	2882946.2280	2000	Ö		27444.806	27650.678		65	5:90	205.9	5.90	0.00	0.0	2.7	0.00	103.03	
21	28/3R	27826.922	573730,1900	2883211.7360	200	0:		27799.903	27853.941		40	15.48	54.0.	15.48	0.00 .	0.0	1.8	0.00	27,18	3.56
22	28/4L	27903.116	573772.5180	2883275.3320	290	0.		27882.539	27923.692		40	8.13	41.2	8.13	0.00	0.0	0.7	0:00	20.61	
23	29/1L. 29/2L	28039 182 28348 18	573831.1490	2883398.1640	590	-0	20107.010	28019.456	28058.907	07400000	40	3:83	39.5	3.83	0:00	0.0	0.3	0.00	19,73	-
25	29/3R	28905.624	573945.6430 574004.8100	2883686,0930	1000 2500		28197.016	28227.016	28469.343	28499.343	65	15,60	242.3	13,88	0.04	0/9	9:4	15.00	152:02	-
26	30/1L	29289.522	574087:9430	2884241.3930 2884616.7290	500	0	29202.017	28765.845 29247.017	29045.402	20277 020	80	6.41	279,6	6.41	0,00	0.0	3.9	0.00	139,92	
27	30/1E	29520.903	574078.1950	2884848.4510	5f J	40	29202.017	29489.935	29332.026	29377.026 29591.870	80	14.90 10.62	85,0 61,9	9.74 6.45	0.17	2:6	4.4	22:50	87.89	5.69
28	31/1L	30006.073	574147:5660	2885329.2660	77	100	29885.962	29985.962	30026.184	30126,184	100	14.61	40.2	4.19	0.12	2.1 5.2	2.5 5,3	20.00 49.99	71:12 120:58	5.17 7.00
29	32/1R	3 106.002	574024.8860	2886423.4080	450	105	30987.501	31092.501	31119.502	31224.502	100	16,81	27.0	3.44	. 1.02	6.7	5,9	52.48	119,10	7.00
30	32/2R	31816.684	574153.4050	2887123.010	2 00	0	30307.301	31741.330	31892.038	3/1224.302	80	3.45	150.7	3.45	0.00	0.0	1.1	0.00	75.38	7.00
31	32/3L	31972.526	574190.9040	2887274.5 30		60	31903,322	31963:322	31981.730	32041.730	65	22.46	18.4	5.27	- 0.75	8.6	4.7	29.98	69.84	7.00
32	33/1R	32466.046	574116.9910	288774b.	400	55.	32395.739	32450.739	32481.352	32536.352	.80	12.26	30.6	4.38	0.32	3.9	2.6	27.50	70.50	7.00
33	33/2L	32902.386	574144.8920	2888 79.3 80	1210	0	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	32889.765	32915.007	02000.002	80	1:20	25.2	1.20	0:00	0.0	0.1	0.00	12.62	-
34	34/1R	33064,24	574151.8660	351,1080	1790	0		33011.042	33117,438		-80	3.41	106.4	3.41	0.00	0.0	0.8	0.00	53.21	-
35	34/2R	33412.452	574187.8670	288 10.9930	325	70	33277.075	33347.075	33477,828	33547,828	80-	35.39	130.8	23,05	0.63	6.2.	16.8	34.99	138.88	7,00
36	34/3L	33903.964	574515 5720	2009084.4520	250	90	33793,704	33883.704	33924.223	34014.223	80	29.91	40.5	9.29	1.35	10.3	10.2	44.95	112.10	7.00
37	35/1L	34632.263	57465. 2790	2889800.1540	2500	0		34589.146	34675.379		.80	1,98	86,2	1.98	0.00	0.0	0.4	0.00	43:12:	
38	36/1R	35380.951	574781.2. 10	2890538.9120	1200	. 0		35313:329	35448,572		80	6:46	135.2	6.46	00,00	0.0	1.9	0,00	67,69	
39	36/2L	35644.994	5. 1853.3500	2890793.0210	1250	0		35603.304	35686.684		80	3.82	83.4	3.82	0.00	0.0	0.7	0.00	41.71	-
40	36/3L	35860,663	5744 3,2400	2891003.9810	1850	0		35858:857	35862.468		100	0.11	3.6	0.11	0.00	0:0	0:0	0.00	1,81	
41	37/1R	36140.884	34° 36.0270	2891278.1790	10000	0		36110.817	36170.951		100	.0:34	60.1	0.34	0.00	0.0	0.0	0.00	30.07	-
42	37/2L	3652 7	575039.3880	2891662.2610	2500	0		36461.572	36606.202		100	3:31	144,6	3:31	0.00	0,0	1.0	0.00	72:34	
43	37/3L	3E 19.7 4	575057.3690	2891776.6840	2500	0		36644.498	36654.890		.80	0.24	10,4	0.24	0.00	0.0	0.0	0.00	5.20	-
44	37/4L	3695 195	575110.2810	2892122.7630	2000	0		36985.919	37013.671		65	0,80	27.8	0.80	0.00	0.0	0.0	0:00	13.88	-
45		37581.5. (575193.0280	2892719.2700	115	55	37470.229	.37525.229	37638.612	37693.612	40	83.89	113.4	56.49	1.10	13.7	41.1	27.45	131.79	6.18
46	39/11	379,865	576052,4090	2892692.4120	380	60	38103.569	38163.569	38596.160	38656.160	65	74.27	432.6	65.23	0.39	4.5	97.2	29.99	318.06	4.94
47		31 .37,385	576202.6960	2893168.5420	5000	0		38823.796	38850.974		65	0:31	27.2	0.31	00:00	0.0	0.0	0.00	13.59	
48	40/1R	59142,592	576297.1100	2893462.0880	360	45	39015.107	39060.107	39225.077	39270.077	65	33.42	165.0	26.26	0.23	3.6	16.1	22.50	130.63	5.22
49	NUISE	39782.753	576799.0100	2893864.9480	1500	-0		39659,993	39905.512		80	9.38	245.5	9.38	0.00	0.0	5.0	0.00	123.03	<u></u>
										+951.459=39	+950									
F	41/1L	40573,435	577328.0080	2894455 1690	2000	0		40445.629	40701,241		80 .	7.32	255.6	7.32	0.00	0.0	4.1	0.00	127.98	-
1	42/1L	41043.392	577594.9800	2894842.9460	350	45	40960.001	41005.001	41081.783	41126.783	65	19.94	76.8	12.57	0.24	3.7	5.6	22.50	84.05	5.37

D. G. M. (Tech.) BSRDCL

Piu-Katihar PROJECT:

2895942.6410

577452.2240 2897400.4970 350 80 577621.9030 2897761.4890 350 65

350

350

.45

Bihar State Road Development Corporation
Limited (BSRDCL)
Consultancy Services for Preparation of Detailed Project
Report of different State Highway in Bihar Baysi - Bahadurganj - Dighalbank (SH-99)

42999:703

41513.123 41543.123 41934.636

42085.555 42130.555 42305.386

42793.218 42838.218 42869.636

43547.186 43627.186 43721.396

43982.519 44047.519 44093.698

43039.703 43071.658



41964.636

42914.636

43801.396 65

43111.658

44158,698

SAI Consulting Engineers Pvt. Ltd An ISO 9001 Certified Company REV. DATE

28.62

0.24

 12.51
 31.4
 5.14
 0.24
 3.7
 2.3
 22.50
 60.88

 6.87
 32.0
 3.05
 0.11
 1.9
 1.2
 20.00
 56.03

 28.52
 '94.2
 15.42
 0.76
 6.5
 11.9
 39.98
 129.12

 18.20
 46.2
 7.56
 0.50
 5.3
 5:0
 32.49
 88.63

 12.03
 108:0
 7.73
 0.19
 2.1
 4.6
 30.00
 114:33

	PG	31:/07/10	GOOD FOR CONSTRUCTION	(DEMECT)	nap)
	ll PF	177/12/1B	GOOD FOR CONSTRUCTION	(DPR)	
	P.F.				
	II BE	10/04/14	GOOD: FOR CONSTRUCTION	(DYK)	
	PD.	26/02/14	ISSUED WITH FINAL DOPR		
	PD.				
.	PC	13/11/13	ISSUED WITH DDPR		
J					
1.	PB	29/08/13	ISSUED WITH FFR		

DESCRIPTION

DRAWN BY : RK. CHECKED BY :: A.S. APPROVED BY : J.D.

HORIZONTAL ALIGNMENT DETAIL

DRG. NO. : SAI-213007/DPR/C/H/HAD - 01 REVISION : PG



(A Government of Bihar Undertaking)

43/1R 42217.971

44/1R 43055.681

45/1L 44070.609

54 43/2L 42853:927

CONSULTANTS:



65 48.30 391.5 44.86 35.99 174.8 12.51 31.4

SCALE : NONE

								Нc	orizontal C	Curve Deta	ails									
Sr. No	HIP No.	HIP Chainag e	Easting	Northing	Radius	Transition Length	Transitio n Start	Circular Start	Circular End	Transition End	Speed	Delta	Lç	De	Shift(S)	Theta_s	Es	k	Ts(m)	e.
	-	m			m	m	m	m	m'	- m	kmph	Degree	m	Degree	m	Degree	m	m	m	%
1	53/1R			2903213.5760	400	0			52166,295		40	4,87	4.0	4.87	0,00	0.0	0.4	0.00	17.02	-
2	53/2L			2903253,5790	550	0	50004 0:10		52207.149	50058 100	40	3.14	7.1	3.14	0,00	0.0	0.2	0.00	15.06	
3 4	53/3L 53/4L			2903373.8650	260 780	25	52291.340		52331.138 52370.462	52356.138	40	8.77 0° o	14.8	3.26 0.86	0,10	0.0	0.9	12.50	32.44 5.83	2.74
5	53/5R			2903448.1510	2000	O O			52421.286		40	F (#)	17.5	0.50	0.00	0.0	0.0	0.00	8.76	-
6	53/6L			2903537.5600	1000	Q.		52511.465	52527.175		40	0.90	15,7	0.90	0.00	0.0	0.0	0.00	7.86	-
7	53/7R			2903579.0670	4700	-0			52587,632		0	0.44	36.4	0.44	0.00	0.0	0,0	0.00	18.22	-
8	53/8R 53/9L			2903851,7450	3000 1300	0			52912,677 52947,989		10	0.61	31.7 11.7	0.61 0.52	0.00	0.0;	0.0	0.00	15.87 5.87	-
9 10.	54/1R			2903889.7470 2903989.0860	3000	. 0	•		53081.820		40	0.78	41.1	0.78	0.00	0.0	0.0	0.00	20.55	-
11	54/2R			2904081.3830	300	0			53206:309		40	13.55	71.0	13:55	0.00	0.0	2.1	0.00	35.65	-
12	54/3L			2904233,3370	970	0			53336.925		40	0.64	10.8	0.64	0.00	0:0	0.0	0.00	5.38	
13.	54/4R			2904321.8150	1000	0			53445.31		40	2:26	39.5	2.26	0.00	0.0	0.2	0.00	19.73	7
14	54/5R 54/6R			2904464 4910 2904618 0410	335 1350	0			53 P 7 2		40	29:24 1.29	170.9 30.4	29,24 1.29	0.00	0.0	11.2 0.1	0.00	87.37 15.22	-
16:	54/7R			2904703.1640	350	0			53839.7		40	7.93	48.5	7:93	0.00	0.0	0.1	0.00	24.27	-
17	54/8L			2904779.6130	420	. 0		53878.888	3915.747		:40	5.03	36.9	5:03	0.00	0.0	'0.4	0.00	18.44	-,
18	54/9R			2904854.2740	1400	. 0			990.713		.40	1.29	31.6	1.29	0.00	0.0	0.1	0.00	15.79	-
19	55/1R			2904963.0630	110	45	54033 314		54 97.030	54142.030	.40	33:19	18.7	9.75	0.77	11.7	5;6	0.00	55,48 15,44	6:46
20	55/2R 55/3R			2905008.7230 2905087.1450	520 500	0.0			54173.547 54311.763		.40 .40	3.40 4.82	30.9 42.0	3,40 4,82	0,00	0.0	0.2	0.00	21.02	
22	55/4L	54328.76	1 1 1 1 1 1 1 1 1 1	2905087.1450	400	0			54343.978		40	4.36	30.4	4.36	0.00	0.0	0.3	0.00	15.23	-
23	55/5L	54395.93		2905146.4510	230.	25	54. 3.725		54420.136	54445.136	40	18.29	48.4	12:06	0,11	3.1	3.1	12.50	49.54	3.09
24	55/6L			2905207.2100	700	.0			54489.041		40	3.01	36.8	3,01	0.00	0.0	0.2	0.00	18.42	-
25	55/7L	54512.92		2905242,7260	500	0			54528 194		40	3:50	30.5	3:50	0,00	0.0	0.2	0.00	15.28	=
26 27	55/8L 55/9L	54556.37 54629.76		2905280.6140	290. 150	0.	45,7,627		54577.617 54631.897	54671.897	40	8:39 16:91	42.5	8,39 1,63	0.00	0.0 7.6	2.1	0.00 19.99	21.28 42.35	4.74
28	55/10L	54752:3		2905471,7930	1150	O.	4301,021		54767 855	3407 1.007	40	1.55	31.1	1,55	0.00	0.0	0.1	0.00	15.56	. 4.14
29	55/11L			2905524,4920	1000				54821.992		40	1.94	33.9	1.94	0.00	0,0	0.1	0.00	16.95	-
30	56/1R-	55005.64		2905725.0750	2000	0:			55010.649		40	0.29	10.0	0.29	0,00	0.0	0.0	0.00	5.01	-
31	56/2R	55071.1		2905790,5360	17	0		100 100 1	55097 492		40	2.52	52.8	2,52 1.96	0,00	0.0	0.3	0.00	26.39	-
32	56/3R 56/4L	55228.39 55440.21		2905947.5460 2906158,7730	30.	50	55371 781		55248.915 55458.636	55508 636	40 50	1.96 16.32	41.1 36.9	6,92	0.34	4.7	3.5	24:99	68.77	3.64
34	56/5R			2906336,433	95:	30			55642.313		50	13.79	43.4	8.15	0.12	2.8	2.3	15.00	51.88	3.64
35	56/6L			2906481. 190	200	45			55790.278		_50	27.62	51.4	14.73	0.42	6.4	6.4	22.49	71.75	5.56-
36	56/7R		582702.9800		600	25	55888.471			56067.741	65	14.73	129.3	12.34	0.04	1.2	5.0	12,50	90.07	3.13
37	57/1L			290 196, 700	3500 500	0	ECE 27 224		56406.203 56635.586	EGGGE GOG	80 65	0.07	78.3	0.07 8.97	0,00	0.0	0.0 3.0	0.00 15.00	2.02 .69.35	3.76
38	57/2R 57/3L			290 532,1540	2000	30	20221.334		56930.765	3,0003;300	80	5.07	176.8	5.07	0.00	0.0	2.0	0.00	88.47	3.70
40	58/1R			2007757,4320	500	3,0	57003.077		57102.245	57132.245	65	11.36	69.2	7.93	0.08	1.7	2.5	15,00	64.75	3.76
41	58/2L			2907906.8680	500	. 30			57244.348		65	9.35	51.6	5.92	0.08	1,7	1.8:	15:00	55.92	3.76
42	58/3R			2908245.5660	350	45 .	57444.796			57665.615	65.	28.78	130.8	21.42	0.24	3.7	11.6	22.50	112.36	5,37
43 .	58/4L 59/1R			2908496.4140 2908662.0080	900 800	.0:			57911.280 58058.087		-65 65	9.42	148.0 92.6	9.42 6.63	0:00	0.0	3.1 1.3	0,00	74.18 46.37	-
45.		582 3.1	2908.6080	2908889 4390		0	-		58281.678		80	1.18	37.0	1.18	0:00	0.0	0.1	0.00	18:52	-
46	59/3P	, 365b. 3	583066 3930	2909242,8230	2800	0		58637.180	58663:144		100	0.53	26.0	0.53	0.00	0.0	0,0	0.00	12.98	-
47				2909553,3210	2000	. 0			58999.531	E0040 045	100	0.45	15.8	0.45	0.00	0:0	0.0	0.00	7.90	-
48	60/1L 60/2L			2909750,8130 2910081,6380	1000 800	30 30			59213:018 59691.378		-80 -80	2,29	9.9 256.9	0.57 18.40	0.04	0.9	0.2 13.1	15.00 15.00	34.97 160.03	2.84 3,56
50	6 . 1.			2910081.6380	500	30			59901.773		65	14.49	96.5	11.05	0.08	1.7	4.1	15.00	78.58	3.76
51	7 Î			2910581.9760	1800	0.			60091.656		80	1.59	49.9	1.59	0.00	0.0	0.2	0.00	24,97	-
52	61/2R	60256.13	583339.2620	2910765.1460	5200	0.			60265.546		80	0.21	18.8	0.21	0.00	0.0	0.0	0.00	9.42	
	61/3R			2910969.7970	1200	0			60538.764		65:	6.81	142.5	6.81	0.00	0.0	2.1	0.00	71.35	-
54	61/4R 61/5R			2911099.3510 2911361.3520	800 525	30	60731 627		60643.539 60955,171	60985 171	65 65	6.51 24.40	90.8	6.51 21,12	0.00	0.0 1.6	1.3	0,00	45.47 128.51	3.58
56	62/1R			2911676.5370	400			P 10 0 0 0	61221.549		65	12.12	44.6	6.39	0,17	2.9	2.4	20.00	62.49	4.69
57	62/2L			2911885.2210	2200	,O.			61475,635		80	1,09	42.0	1.09	0.00	0.0	0.1	0.00	21.01	-
58	62/3R			2912010,0880	2000	,O			61622,796		80	0.99	34.5	0.99	0.00	0.0	0.1	0.00	17:27	-
59	62/4L			2912219:5160	700				61918.015		65	11.31	113.1	9.26	0.04	1.0	3.5	12:50	81.80	2.68
60	63/1L 63/2L			2912633,6370 2913144,7020	500 2000	30	02213,058		62383.211 62863.155	p2413,211	65 80	19.50	140.2 76.7	16.06	0.00	1.7 0.0	7.4 0.4	15.00	100.92 38.33	3.76
62	64/1L			2913144.7020	2000	0			63182.855		.80.	0.50	17.5	0.50	0100	0.0	0.0	0.00	8.77	-
63	64/2R			2913739 5400	2000	0			63501.894		65	4.69	163.9	4.69	0.00	0:0	1.7	0.00	81.98	-
64	64/3L			2913976.8150	175	35	63607.118		63674.247	63709.247	40	21.98	32.1	10:52	0.29	5.7	3.6	17:49	51.53	.4.06
65	6474R	63730.00	584025.98	2914046.43	1000	0		63719.37	63740,63	_	65	1.218	21.252	1.218	0.000.	0.000	0_056	0.000	10.626	

D. G.M. (Tech.)
BSRDCL
PIU-Katihar

Bihar State Road Development Corporation Consultancy Services for Preparation of Detailed Project Report of different State Highway in Bihar Baysi - Bahadurganj - Dighalbank (SH-99)



CONSULTANTS:

SAI Consulting Engineers Pvt. Ltd. An ISO 9001 Certified Company

PF PE P∂	17/12/18: 10/04/14 26/02/14	GOOD FOR CONSTRUCTION (REVISED DER) GOOD FOR CONSTRUCTION (DER) GOOD FOR CONSTRUCTION (DER) ISSUED, WITH FINAL DODER	PR)
-PC		ISSUED WITH DOPR	

APRRÔVED BY : J.D. PB 29/08/13 ISSUED WITH FFE REV. DATE

HORIZONTAL ALIGNMENT DETAIL

SAL-213007/DPR/C/H/HAD - 01 REVISION : PG

Limited (BSRDCL) (A Government of Bihar Undertaking)

SCALE : NONE

C		3
	*	

Second Color Col					_				Но	rizontal (Curve Deta	ails)							
Research		HIP No.	1	Easting	Northing	Radius	Transition	Transitio	Circular			Speed	Delta	Lc	De	Shift(S)	Theta_s	Es	k	Ts(m)	e
March Marc	No.	İ	Chainag				Length	n Start	Start	End	End	4. 7							}		
66 64/6L 638/9.44 58398.87 4 2914/91.17 1000 0 63856.18 63902.71 655 2.666 46.535 2.666 0.000 0.000 0.071 0.000 23.772 - 67 05/18 6405.06 58395.184 2814311.25 1000 0 63892.42 6407.71 655 1.449 25.283 1.449 0.000 0.000 0.000 0.000 1.2642 - 68 65/2R 64/136.78 583916.24 2914/38.41 250 55 64071.50 64126.50 64147.02 47 80 17.307 12.518 4.702 0.500 6.303 3.385 72.489 6.514 7.00 69 65/3L 64627.14 584093.5250 2914/90.4170 2000 0 64551.365 64702.911 80 4.34 151.5 4.34 0.00 0.0 1.4 0.00 75.81 - 70 65/4R 64810.48 64810.48 64910.48 64910.48 64910.49 10.00 0.0 1.4 0.00 75.84 - 71 66/1L 65/20.74 584038.5250 2914/90.4170 2000 0 64551.365 64702.911 80 4.91 107.2 4.91 0.00 0.0 1.2 0.00 53.64 - 71 66/1L 65/20.74 58438.9890 2915/37.4550 1.550 0 6456.8913.6913.6938 85264. 16539.894 80 19.86 128.3 14.70 0.17 2.6 7.8 22.50 110.09 5.69 110.09 5.																					2/
67	00	0.0251		500000 74	00011010117			m			m						$\overline{}$				%
68				1													4			_	
99			41 1					0.4074 50			210 -25								_		
70 65/4R 64810,48 584105,5440 2915073 2550 1250 0 64756.877 64864.01 65303.894 80 19.86 128.3 14.70 0.17 2.6 7.8 22.50 110.05 6.69 7.8 6670.74 564287.3570 29157649.6310 500 4.5 65091.583 65136.583 65264.4 65303.894 80 19.86 128.3 14.70 0.17 2.6 7.8 22.50 110.05 6.69 7.8 6670.33 584370.7320 2916034.5100 2000 0 65573.502 6 5.64. 100 0.29 10.1 0.29 0.00 0.0 0.0 0.0 0.0 0.0 5.07 -1.3 6670.33 584370.7320 2916034.5100 2000 0 6577.3 5 6 633.32 100 2.46 85.9 2.46 0.00 0.0 0.0 0.0 0.0 42.96 7.8 7.8 7.8 7.8 7.8 7.8 7.8 7.8 7.8 7.8								64071.50	-	1	4										7,00
71 66/1L 65207.74 584287.3570 2915419.6310 500 45 65091.583 66136.583 65264.1 65309.894 80 19.86 128.3 14.70 0.17 2.6 7.8 22.50 110.05 5.60 17.2 66/7L 65578.57 584383.8980 2915794.8340 2000 0 65573.502 [6 3.4 100 0.29 10.1 0.29 0.00 0.0 0.0 0.0 0.0 0.0 5.07 -									1			5		1	-						-
72 66/21 65578.57 584338.980 2915794.8340 2000 0 55573.507 6 4. 100 0.29 10.1 0.29 0.00 0.0 0.0 0.0 0.0 5.07 - 73 66/31 65620.33 584370.7320 2916034.5100 2000 0 65777.3 16 363 32 100 2.46 85.9 2.46 0.00 0.0 0.5 0.00 42.96 - 74 67/18 68355.33 584418.1402 2916557.4130 3500 0 663578.8 66.0.774 100 0.96 58.9 0.96 0.00 0.0 0.0 0.1 0.00 29.44 - 75 67/21 66630.49 584447.1330 2916841.0500 5000 0 68526.8 66.0.774 100 0.96 58.9 0.96 0.00 0.0 0.1 0.00 103.82 - 76 68718 7077.54 584457.7339 2917287.2060 5200 0 6698.715 67168.354 100 2.00 181.6 2.00 0.00 0.0 0.0 1.1 0.00 103.82 - 78 68/21 67605.11 584527.8640 2917812.2060 5200 0 6698.715 67168.354 100 0.99 8.99 0.99 0.00 0.0 0.0 0.0 0.0 44.94 - 79 68/18 68/18 67781.03 584542.2170 2917987.5420 3000 0 7695.9 67792.745 100 0.99 8.99 0.99 0.00 0.0 0.0 0.0 0.0 11.72 - 80 69/21 68652.3 584661.8550 2918779.1850 3500 0 68954.847 69150.750 100 0.45 23.4 0.45 0.00 0.0 0.0 0.0 0.0 11.72 - 80 69/21 68552.3 584661.8550 2918779.1850 3500 0 88539.550 88624.941 100 1.40 85.3 1.40 0.00 0.0 0.0 3.7 0.00 11.72 - 81 70/11 69052.8 584762.1900 2919338.8930 3500 0 68954.847 69150.750 100 3.21 19559 3.21 0.00 0.0 3.7 0.00 191.42 - 83 71/11 70308.94 585030.6600 2920455.590 5000 0 68954.847 69150.750 100 3.21 19559 3.21 0.00 0.0 3.7 0.00 191.42 - 84 71/22 70547.67 585097.8320 2920797.5280 5000 0 70219.383 70389.513 100 2.05 179.2 2.05 0.00 0.0 0.0 0.0 191.42 - 85 72/11 77124.7 58524.64010 2913554.7410 290 30 70984.030 71014.030 71414.518 71444.518 80 3.83 8.2.7 4.38 0.00 0.0 0.0 0.0 0.0 191.42 - 87 72/31 71549.65 585103.3950 2921679.5180 5500 0 70628.168 70667.180 100 0.34 39.0 0.34 0.00 0.0 0.0 0.0 0.0 19.51 - 87 72/11 771549.65 585103.3950 2921679.5180 5500 0 70628.168 70667.180 100 0.34 39.0 0.0 0.0 0.0 0.0 0.0 19.51 - 88 73/14 77549.55 585103.3950 2921679.5180 5500 0 70628.168 70667.180 100 0.34 39.0 0.0 0.0 0.0 0.0 0.0 0.1 10.00 35.53 - 88 73/18 72793.53 5848778.0480 2922777.5750 15 550 0 71717.458 77785.515 71611.781 80 0.0 0.7 124.3 1.29 0.00 0.0 0.0 0.0 0.0 13.575 - 89 73/28 72693.55 584661.8				·		: .		05064 FB0			05000 004					 	1				
73 66/31 65820.33 584370.7320 2916034.5100 2000 0 65777.5 6 66/3 32 100 2.46 85.9 2.46 0.00 0.0 0.0 0.5 0.00 42.96 - 74 67/1R 66355.33 584418.1420 2916567.4130 3500 0 66325.81 66.0-774 100 0.96 58.9 0.96 0.00 0.0 0.1 0.00 29.44 - 75 67/21 66630.49 584447.1330 2916841.0500 5000 0 66325.81 66.0-774 100 0.96 58.9 0.96 0.00 0.0 11 0.00 13.82 - 76 68/1R 67077.54 584475.7390 2917287.2060 5200 0 6698.715 67168.354 100 2.00 181.6 2.00 0.00 0.0 0.0 0.8 0.00 99.83 - 77 68/21 67605.11 584527.8640 2917812.2060 5200 0 6698.715 67168.354 100 2.00 181.6 2.00 0.00 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0								65091.583			65309.894										5.69
74 67/1R 66356:33 584418.1420 2916567.4130 3500 0 68325.8 66		.1												-							-
75 67/2L 66630.49 58447.1330 2916841.0500 5000 0 66526.678 734.295 100 2.38 207.6 2.38 0.00 0.0 1.1 0.00 103.82 - 76 88/1R 67077.54 584475.7390 2917287.2066 5200 0 6685.678 0.74 5716.8354 100 2.00 181.6 2.00 0.00 0.0 0.0 0.8 0.00 99.83 - 77 68/2L 6765.11 584527.8840 2917812.2080 5200 0 6.1 6.6 67650.047 100 0.39 89.9 0.99 0.00 0.0 0.0 0.2 0.00 44.94 - 78 68/3R 67781.03 584542.2170 2917987.5420 3000 0 768.3 9 67792.745 100 0.45 23.4 0.45 0.00 0.0 0.0 0.0 0.0 0.0 11.72 - 79 69/1R 68/102.48 584570.9800 2918307.8820 4000 0 6.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.																					-
76 68/1R 67077.54 584475.7390 2917287.2060 5200 0 6698.715 67168.354 100 2.00 161.6 2.00 0.00 0.0 0.0 0.8 0.00 90.83 - 77 68/2L 67605.11 584527.8640 2917812.2060 5200 0 6.4 65 67650.047 100 0.99 89.9 0.99 0.00 0.0 0.0 0.2 0.00 44.94 - 78 68/3R 67781.03 584542.2170 2917987.5420 3000 0 7698.9 67792.745 100 0.45 23.4 0.45 0.00 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.72 - 79 69/1R 68102.48 584570.9600 2918307.8820 4000 0 6.4 0.0 1.76 100 5.79 404.1 5.79 0.00 0.0 5.1 0.00 202.24 - 80 69/2R 68582.3 584661.8550 2918779.1850 3500 0 88539.650 88624.941 100 1.40 85.3 1.40 0.00 0.0 0.0 5.1 0.00 202.24 - 81 70/1L 69052.8 584762.1900 2919238.8930 3500 0 68954.847 69150.750 100 3.21 195.9 3.21 0.00 0.0 1.4 0.00 97.98 - 82 70/2R 69380.71 584814.1010 2919562.7920 5000 0 69189.385 69572.039 100 4.38 382.7 4.38 0.00 0.0 3.7 0.00 191.42 - 83 71/1L 70308.94 585030.6600 2920465.5090 5000 0 70219.363 70398.513 100 2.05 179.2 2.05 0.00 0.0 0.0 0.8 0.0 88.58 - 84 71/2R 70647.67 585097.8320 2920797.5280 6500 0 70628.168 70667.180 100 0.34 39.0 0.34 0.00 0.0 0.0 0.0 19.51 - 85 72/1L 71214.27 585214.6110 2921357.4410 800 30 70984.030 71014.030 71414.518 71444.518 80 30.83 400.5 28.68 0.05 1.1 29.9 15.00 235.61 3.56 86 72/2R 71549.65 585103.3950 2921679.5180 5500 0 71417.458 71788.512 80 0.74 71.1 0.74 0.00 0.0 0.0 0.4 0.00 35.53 - 86 73/1R 72180.23 584905.8280 2922778.5750 500 0 72043.021 72317.432 65 14.44 274.4 4.14 0.00 0.0 0.0 0.4 0.00 35.53 - 87 74/2L 73522.81 58504.3840 2922777.5750 50 0 73144.513 7174.822 65 0.05 0.0 0.0 0.0 0.0 0.0 0.1 0.00 137.27 - 89 73/1R 72180.23 584905.8280 2922777.5750 50 57261.848 72673.438 72713.615 72768.615 50 36.35 40.2 15.35 0.00 0.0 0.0 0.1 0.00 137.27 - 89 73/1R 72180.23 584905.8380 2922277.5750 50 0 73144.513 73174.822 65 0.05 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0																					-
77 68/2L 67605.11 584527.8640 2917812.2060 5200 0 6.0 65 67650.047 100 0.99 89.9 0.99 0.00 0.0 0.0 0.2 0.00 44.94 - 78 68/3R 67781.03 584542.2170 2917987.5420 3000 0 7693.9 67792.745 100 0.45 23.4 0.45 0.00 0.0 0.0 0.0 0.0 11.72 - 79 69/1R 68102.48 584570.9800 2918307.8820 4000 0 6.0 0.0 0 6.0 0.0 0.0 0.0 0.0 0.0																					-
78 68/3R 67781.03 584542.2170 2917987.5420 3000 0 769.9 67792.745 100 0.45 23.4 0.45 0.00 0.0 0.0 0.0 0.0 11.72 - 79 68/1R 68102.48 584570.9600 2918307.8820 4000 0 6.0 0.0 6.0 0.0 6.0 0.0 0.0 0.0 0.													_								-
79 69/1R 68/102:48 584570:9600 2918307.8820 4000 0 67/302:48 100 5,79 404.1 5,79 0.00 0.0 5,1 0,00 202.24 - 80 69/2R 68582,3 584661.8550 2918779.1850 3500 0 38539.650 68624,941 100 1.40 85,3 1.40 0.00 0.0 0.3 0.00 42:65 - 81 70/1L 69052.8 584762.1900 2919562.7920 5000 0 68954.847 69150.750 100 3.21 195:9 3.21 0.00 0.0 1.4 0.00 97.98 - 82 70/2R 6938071 584814.1010 2919562.7920 5000 0 69189.385 69572.039 100 4.38 382.7 4.38 0.00 0.0 3.7 0.00 191.42 - 83 71/1L 70308.94 585030.6600 2920797.5280 6500 0 70228.168 70398.513																					
80 69/2R 68582.3 584661.8550 2918779.1850 3500 0 58539.650 68624.941 100 1.40 85.3 1.40 0.00 0.0 0.3 0.00 42.65 - 81 70/1L 68952.8 584762.1900 2919238.8930 3500 0 68954.847 69150.750 100 3.21 195.9 3.21 0.00 0.0 1.4 0.00 97.98 - 82 70/2R 69380.71 584814.1010 2919562.7920 5000 0 69189.385 69572.039 100 4.38 382.7 4.38 0.00 0.0 3.7 0.00 191.42 - 83 71/1L 70308.94 585030.6600 2920465.5690 5000 0 70628.168 70667.180 100 0.34 39.0 0.34 0.00 0.0 0.8 0.00 89.58 - 84 71/2R 70647.67 585097.8320 2920797.5280 6500 0 70628.168 70667.180 100 0.34 39.0 0.34 0.00 0.0 0.0 0.0 0.0 19.51 - 85 72/1L 71214.27 585214.6110 2921357.4410 800 30 70984.030 71014.030 71414.518 71444.518 80 30.83 400.5 28.68 0.05 1.1 29.9 15.00 235.61 3.56 - 86 72/2R 71549.65 585103.3950 2921679.5180 5500 0 71487.515 71611.781 80 1.29 124.3 1.29 0.00 0.0 0.0 0.0 0.0 0.0 0.2 35.61 3.56 - 87 72/3L 71752.99 585041.3840 2922787.5750 0 71717.458 71788.512 80 0.74 71.1 0.74 0.00 0.0 0.0 0.0 0.3 5.53 - 88 73/1R 72180.23 584905.8280 2922278.4020 300 0 72043.021 72317.432 65 4.14 274.4 4.14 0.00 0.0 0.0 0.0 0.3 5.53 - 89 73/2R 72693.53 584778.0480 2922777.5750 15 55 72618.438 72673.438 72673.438 72713.615 72768.615 50 36.35 40.2 15:35 0.84 10.5 8.8 27.47 77.00 7.00 - 90 74/1R 73159.67 584953.3880 2922271.5532 2 0 0 73449.039 73555.588 80 1.88 65.5 1.88 0.00 0.0 0.0 0.3 0.00 32.78 -							1.														
81 70/1L 69052.8 584762:1900 2919238.8930 3500 0 68954.847 69150.750 100 3.21 195:9 3.21 0.00 0.0 1.4 0.00 97.98 - 82 70/2R 69380:71 584814.1010 2919562.7920 5000 0 69189.385 69572.039 100 4.38 382.7 4.38 0.00 0.0 3.7 0.00 191.42 - 83 71/1L 70308.94 585030:6600 2920465.5090 5000 0 70219.363 70398.543 100 2.05 179.2 2.05 0.00 0.0 0.8 0.00 89.58 - 84 71/2R 70647.67 585097.8320 2920797.5280 6500 0 70628.168 70667.180 100 0.34 39.0 0.34 0.00 0.0 0.0 0.0 0.0 19.51 - 85 72/1L 71214.27 585214.6110 2921357.4410 800 30 70984.030 71014.030 71414.518 71444.518 80 30.83 400.5 28.68 0.05 1.1 29.9 15.00 235.61 3.56 - 86 72/2R 71649.66 585103.3950 2921679.5180 5500 0 71447.515 71611.781 80 1.29 124.3 1.29 0.00 0.0 0.0 0.0 0.0 0.1 0.00 62.14 - 87 72/3L 71752.99 585041.3840 2921873.1720 5500 0 77043.021 72317.432 65 4.14 274.4 4.14 0.00 0.0 0.0 2.5 0.00 35.53 - 88 73/1R 72180.23 584905.8280 2922278.4020 3800 0 72043.021 72317.432 65 4.14 274.4 4.14 0.00 0.0 0.0 2.5 0.00 137.27 - 89 73/2R 72693.53 584778.0480 292278.4020 3800 0 73449.039 73655.588 80 1.88 65.5 1.88 0.00 0.0 0.0 0.3 0.00 32.78 -																					-
82 70/2R 69380;71 584814.1010 2919562.7920 5000 0 69189.385 69572.039 100 4;38 382.7 4;38 0.00 0.0 3.7 0.00 191,42 - 83 71/1L 70308.94 585030;6600 2920465;5090 5000 0 70219.363, 70398.543 100 2.05 179.2 2.05 0.00 0.0 0.8 0.00 89.58 - 84 71/2R 70647.67 585097.8320 2920797.5280 6500 0 70628.168 70667.180 100 0.34 39.0 0.34 0.00 0.0 0.0 0.0 0.0 19.51 - 85 72/1L 71214.27 585214.6110 2921357.4410 800 30 70984.030 71014.030 71414.518 71444.518 80 30.83 400.5 28.68 0.05 1.1 29.9 15.00 235.61 3.56 86 72/2R 71549.65 585103.3950 2921679.5180 5500 71447.515 71611.781 80 1.29 124.3 1.29 0.00 0.0 0.4 0.00 62.14 - 87 72/3L 74752.99 585041.3840 2921873.1720 5500 0 77177.458 71788.512 80 0.74 71.1 0.74 0.00 0.0 0.0 1.1 0.00 35.53 - 88 73/1R 72180.23 584905;8280 2922278.4020 3800 0 72043.021 72317.432 65 4.14 274.4 4.14 0.00 0.0 0.2 2.5 0.00 137.27 - 89 73/2R 72693.53 584778.0480 2922777.5750 15 55 72618.438 72673.438 72713.615 72768.615 50 36.35 40.2 15.35 0.84 10.5 8.8 27.47 77.00 7.00 - 90 74/1R 73159.67 584953.3580 2923211.5530 0 73449.039 73555.588 80 1.88 65.5 1.88 0.00 0.0 0.0 0.3 0.00 32.78 -		25. 25		* 1 1 1			- 11														
83 71/1L 70308.94 585030.6600 2920465.5090 5000 0 70219.363 70398.513 100 2.05 179.2 2.05 0.00 0.0 0.8 0.00 89.58 - 84 71/2R 70647.67 585097.8320 2920797.5280 6500 0 70628.168 70667.180 100 0.34 39.0 0.34 0.00 0.0 0.0 0.0 0.0 19.51 - 85 72/1L 71214.27 585214.6110 2921357.4410 800 30 70984.030 71014.030 71414.518 71444.518 80 30.83 400.5 28.68 0.05 1.1 29.9 15.00 235.61 3.56 86 72/2R 71549.65 585103.3950 2921679.5180 5500 0 71487.515 71611.781 80 1.29 124.3 1.29 0.00 0.0 0.4 0.00 62.14 - 87 72/3L 71752.99 585041.3840 2921873.1720 5500 0 771717.458 71788.512 80 0.74 71.1 0.74 0.00 0.0 0.1 0.00 35.53 - 88 73/1R 72180.23 584905.8280 2922278.4020 3900 0 72043.021 72317.432 0.55 4.14 274.4 4.14 0.00 0.0 0.0 2.5 0.00 137.27 - 89 73/2R 72693.53 584778 0480 2922777.5750 15 55 72618.438 72673.438 72713.615 72768.615 50 36.35 40.2 15.35 0.84 10.5 8.8 27.47 77.00 7.00 - 90 74/1R 73159.67 584953.3580 2923211.553 2 0 0 73449.039 73555.588 80 1.88 65.5 1.88 0.00 0.0 0.0 0.3 0.00 32.78 -					10 * 1				9 7 17 1 1 1 1	1 1 1011 2 2				200 00 00		2.0					-
84 71/2R 70647.67 585097.8320 2920797.5280 6500 0 70628.168 70667.180 100 0.34 39.0 0.34 0.00 0.0 0.0 0.0 0.0 0.0 19.51 - 85 72/1L 71214.27 585214.6110 2921357.4410 800 30 70984.030 71014.030 71414.518 71444.518 80 30.83 400.5 28.68 0.05 1.1 29.9 15.00 235.61 3.56 86 72/2R 71549.65 585103.3950 2921679.5180 5500 0 71487.515 71611.781 80 1.29 124.3 1.29 0.00 0.0 0.4 0.00 62.14 - 87 72/3L 71752.99 585041.3840 2921873.1720 5500 0 71717.458 71788.512 80 0.74 71.1 0.74 0.00 0.0 0.1 0.00 35.53 - 88 73/1R 72180.23 584905.8280 2922278.4020 3900 0 72043.021 72317.432 65 4.14 274.4 4.14 0.00 0.0 0.0 2.5 0.00 137.27 - 89 73/2R 72693.53 584778.0480 2922777.5750 15 55 72618.438 72673.438 72713.615 72768.615 50 36.35 40.2 15:35 0.84 10.5 8.8 27.47 77.00 7.00 - 90 74/1R 73159.67 584953.3580 2923211.5532 2 0 0 73449.039 73555.588 80 1.88 65.5 1.88 0.00 0.0 0.0 0.3 0.00 32.78 -										2 4 11 41 4			27.7							7 517.	
85 72/1L 71214.27 585214.6110 2921357.4410 800 30 70984.030 71014.030 71414.518 80 30.83 400.5 28.68 0.05 1.1 29.9 15.00 235.61 3.56 86 72/2R 71649.65 585103.3950 2921679.5180 5500 0 71487.515 71611.781 80 1.28 124.3 1.29 0.00 0.0 0.4 0.00 62.14 - 72/3L 71752.99 585041.3840 2921873.1720 5500 0 71717.458 71788.512 80 0.74 71.1 0.74 0.00 0.0 0.1 0.00 35.53 - 88 73/1R 72180.23 584905.8280 2922278.4020 3800 0 72043.021 72317.432 65 4.14 274.4 4.14 0.00 0.0 2.5 0.00 137.27 - 89 73/2R 72693.53 584778.0480 2922777.5750 15 55 72618.438 72673.438 72713.615 72768.615 50 36.35 40.2 15:35 0.84 10.5 8.8 27.47 77.00 7.00 90 74/1R 73159.67 584953.3580 2922371.553 2 0 0 73444.513 73174.822 65 0.87 30.3 0.87 0.00 0.0 0.1 0.00 15.15 - 91 74/2L 73522.81 585094.640 2923546.10 0 000 0 73490.039 73555.588 80 1.88 65.5 1.88 0.00 0.0 0.0 0.3 0.00 32.78 -		2 11 1 =											1 1 111								-
86 72/2R 71649.66 585103.3950 2921679.5180 5500 71487.515 71611.781 80 1.29 124.3 1.29 0.00 0.0 0.4 0.00 62.14 87 72/3L 71752.99 585041.3840 2921873.1720 5500 0 71717.458 71788.512 80 0.74 71.1 0.74 0.00 0.0 0.0 0.1 0.00 35.53 88 73/1R 72180.23 584905.8280 2922278.4020 3900 0 72043.021 72317.432 65 4.14 274.4 4.14 0.00 0.0 0.0 2.5 0.00 137.27 89 73/2R 72693.53 584778.0480 2922777.5750 15 55 72618.438 72673.438 72713.615 72768.615 50 36.35 40.2 15.35 0.84 10.5 8.8 27.47 77.00 7.00 90 74/1R 73159.67 584953.3580 2922271.553								70084 030		2,1, 11, 11	71.143 519	1 121					1 1 1 1			1257111	3.66
87 72/31 71752.99 585041.3840 2921873.1720 5500 0 771717.458 71788.512 80 0.74 71.1 0.74 0.00 0.0 0.0 0.1 0.00 35.53 - 88 73/1R 72180.23 584905.8280 2922278.4020 300 0 72043.021 72317.432 65 4.14 274.4 4.14 0.00 0.0 0.0 2.5 0.00 137.27 - 89 73/2R 72693.53 584778.0480 2922777.5750 15 55 72618.438 72673.438 72713.615 72768.615 50 36.35 40.2 15:35 0.84 10.5 8.8 27.47 77.00 7.00 - 90 74/1R 73159.67 584953.3580 2923211.5530 200 0 73144.513 73174.822 65 0.87 30.3 0.87 0.00 0.0 0.1 0.00 15.15 - 91 74/2L 73522.81 585094.4640 2923546.10 0 000 0 73490.039 73555.588 80 1.88 65.5 1.88 0.00 0:0 0.3 0.00 32.78 -								10004,000			1.1949.0.10					_					0.00
88 73/1R 72180.23 584905.8280 292278.4020 300 0 72043.021 72317.432 65 4.14 274.4 4.14 0.00 0.0 2.5 0.00 137.27 - 89 73/2R 72693.53 584778.0480 292277.5750 15 55 72618.438 72673.438 72713.615 72768.615 50 36.35 40.2 15.35 0.84 10.5 8.8 27.47 77.00 7.00 90 74/1R 73159.67 584953.3580 2923211.5530 0 73144.513 73174.822 65 0.87 30.3 0.87 0.00 0.0 0.1 0.00 15.15 - 91 74/2L 73522.81 585094.4640 2923546.16 0 000 0 73490.039 73555.588 80 1.88 65.5 1.88 0.00 0.0 0.0 0.3 0.00 32.78 -						4 25															
89 73/2R 72693.53 584778.0480 2922777.5750 15 55 72618.438 72673.438 72713.615 72768.615 50 36.35 40.2 15.35 0.84 10.5 8.8 27.47 77.00 7.00 90 74/1R 73159.67 584953.3580 2923211.5530 0 73144.513 73174.822 65 0.87 30.3 0.87 0.00 0.0 0.1 0.00 15.15 91 74/2L 73522.81 585094.4640 2923546.10 0 00 0 73490.039 73555.588 80 1.88 65.5 1.88 0.00 0.0 0.0 0.3 0.00 32.78 -																					
.90 74/1R 73159.67 584953.3580 2923211.5530 0 73144.513 73174.822 65 0.87 30.3 0.87 0.00 0.0 0.1 0.00 15.15 - 91 74/2L 73522.81 585094.4640 2923546.10 000 0 73490.039 73555.588 80 1.88 65.5 1.88 0.00 0:0 0.3 0.00 32.78 -							-	72618 438			72768-615										
91 74/2L 73522.81 585094.4640 2923546.16 2 000 0 73490.039 73555.588 80 1.88 65.5 1.88 0.00 0.0 0.3 0.00 32.78 -				2 2 3 5 5 5				. 2010.400			12100.010									_	7.00
				,																	_
	92	74/3R				2000	0					100	0.84	29.3	0.84	0.00	0.0	0.1	0.00	14.67	

D. G. M. (Tech.) BSRDCL PIU-Katihar



CHECKED BY : A.S.:

TITLE: LRP.CHOWK(BAHADURGÁN)
-DIGHALBANK (PAÇKAGE-III)
HORIZONTAL
ALIGNMENT-DETAIL

Bihar State Road Development Corporation | Consultancy Services for Preparation of Detailed Project Limited (BSRDCL)
(A Government of Bihar Undertaking)

PROJECT:

Report of different State Highway in Bihar Baysi - Bahadurganj - Dighalbank (SH-99)



SAI Consulting Engineers Pyt. Ltd. An ISO 9001 Certified Company

APPROVED BY : J.D.

SAI-213007/DPR/C/H/HAD - 02 REVISION : PG

			vertical	Curve Detail			
Sr.	VIP Chainage	Level (m)	Gradient (%)	% Change in	Type of	Curve	K Value
No.	_	, ,	' '	grade	Curve	Length (m)	
	İ		-	3. 555	1 20.00	3 (,	İ
1	0.000	35:966				0.000	
2	56.119	34.563	-2.500	-2.641	Valley	50.000	18,9
3	155.933	34.704	0.141	-1.358	Valley	60:000	44.2
4	254.686	36.185	1.500	3,000	Summit	100.000	33.3
5	388:838	34.173	-1.500	-1.652	Valley	60.000	36.3
6	792.612	34.788	0.152	0.292	Summit	200,000	684.3
7	1378.758	33,969	-0.140	-0.240	Valley	300.000	1250.4
8	1646.208	34.236	0.100	0.250	Summit	70.000	279.6
9	1921.477	33:823	-0.150	-0.305	Valley.	60.000	196:8
10	2313.749	34.429	0.155	0:394	Summit	60.000	152.1
11	2461.905	34.074	-0.240	-0.642	Valley	60.000	93.5
12	2700.992	35,035	0.402	0.240	Summit	100.000	416.0
13	2912.101	35:377	0.162	0.670	Summit	100.000	149.2
14	3128.536	34:276	-0.509	-0.409	Välley	60.000	146.8
15	3414.238	33:990	-0,100	-1.183	Valley	200,000	169.1
16	3670.196	36,762	1.083	1.829	Summit	200,000	109.4
17	3971.041	34.519	-0.746	-0.565	Valley	60.000	106.3
18	4265.849	33.984	-0.181	-0.379	Valley	60,000	158.2
19	4415.346	34.281	0.198	0.351	Summit	60.000	170.8
20	4593.083	34:008	-0.153	-0.308	Valley	60.000	194.6
21	4934.759	34.539	0.155	0,262	Summit	100.000	381:3
22	5085.981	34.377	-0.107	-0:263	Valley	60,000	228.1
23	5247.710	34.629	0,156	0.421	Summit	60.000	142.4
24	5531.485	33.876	-0.265	-0.443	Valley	60,000	135.5
25	5771.938	34.302	0.177	0.347	Summit	60.000	172.7
26	5945.822	34,006	-0.170	-0.380	Valley	60.000	158:0
27	6163.460	34.462	0.210	0.412	Summit	60.000	145.6
28.	6545.112	33,689	-0.202	-0.302	Valley	60.000	198.4
29	6746.641	33:891	0,100	0.200	Summit	60,000	300.0
30	6901.728	33.736	-0.100	-0.202	Valley	60:000	29
31	7025.094	33.862	0.102	0.307	Summit	60.000	15 6
32	7186,493	33.531	-0.205	-0.313	Valley	60.000	91
33 34	7500.844	33,873	0.109	0.209	Summit	60,000	20.7:2
35	7665.081 7813.885	33.708 36.201	-0.100 1.676	-1.776 3.372	Válley Summit	65.000 175 00	36.6 51.9
36	7971:440	33.529	-1,696	-2.345	Valley	172 00	29.9
37	8194.214	34.974	0.649	-1.860	Valley	100 30	53.8
38	8435.881	41.038	2.509	5,079	Summ		33:5
39	8635.091	35.919	-2.570	-1.723	Valley	60.000	34.8
40	8831.589	34.254	-0.847	-0.605	/ allb	100.000	165,3
41	9011.787	33.818	-0.242	-0.363	Alls -	60.000	165.4
42	9206.161	34.053	0.121	0.370	ummit	60.000	161,9
43	9373:567	33.635	-0.250		√alleÿ	100.000	282.8
44	10530,666	34.837	0.104	0.324	Summit	60.000	268.0
45	10917.730	34.373	-0.120	1.4)	Valley	60.000	125.7
46	11104.357	35.039	0.357	30	Summit	60.000	87.6
47	11332.515	34.291	-0.328	1,449	Valley	150.000	334.3
48	11577.204	34.586	0.12,	0.377	Summit	60.000	159.3
49	12020.488	33.452	-0.256	-0.434	Valley	100.000	230.5
50	12451.249	34.218	r-178	0.298	Summit	100.000	335.8
51	12668.349	33.957	.0 12	0.106	Summit	60.000	566.0
52	12997.452	33.213	-06	-2.726	Valley	60.000	22.0
53	13104.919	35.900	2.500	2,500	Summit	50.000	20.0
54	13241.967	35,900	0.000	2.500	Summit	50.000	20.0
55	13352.168	33 (4)	-2.500	-2.686	Valley	60.000	22.3
56	13614.640	33.6 7	0.186	0.347	Şummit	100.000	287.8
57	13803.713	33.328	0,161	0.381	Summit	60.000	157.3
58	13898,955	2.811	-0.543	-1,049	Valley	60,000	57.2
59	14031.5 70	33.481	0.506	0.287	Summit	60.000	208.9

				Vertical (Curve Detail			
	Sr.	VIP Chainage	Level (m)	Gradient (%)	% Change in	Type of	Curve	K Value
	No.				gra de	Curve	Length (m)	
	61	14373.981	34.829	1.001	1:479	Summil	60:000	40.6
	62	14533.097	34.06	-0:477	0.032	Summit	60.000	1861.4
	63	14660,820	33 18	-0.510	-0.296	Valley	60.000	202.6
	64	14876.940	3 95	-0.213	-0.492	Valley	60.000	121,9
	65	15134,380	33.000	0.279	0.158	Summit	60.000	379.6
	66	15426.844	3-,028	0.121	0,311	Summit	60,000	193,0
	67	15656.8 0	33,590	-0.190	-0.050	Valley	60.000	1211.2
	68	1591 3	33.227	0.141	-0.264	Valley	60,000	227.3
	69.	162 , 410	33.595	0.123	0.257	Summit	60.000	233:5
	7.0	16 45.744	33.284	-0.134	-0.237	Valley	60,000	253.6
	71	2.382	33,518	0.103	0.220	Summit	60.000	273.1
	70:	16984,100	33.153	-0.117	-0.212	Valley	60.000	282.4
	7/	18042.091	34.165	0.096	0.236	Summit	60:000	254.0
	1.	18500.219	33.521	-0.141	-0.240	Valley	60.000	250.4
	/5	18851.037	33.868	0.099	0.499	Summit	100.000	200.6
	76	19055.622	33.051	-0.400	-0.500	Valley	125.000	250.2
	77	19337.178	33.332	0.100	-0.062	Valley	60.000	975.0
- 1	78	19818.391	34.110	0.162	0.261	Summit	60.000	229:5
	79.	20002.729	33.926	-0.100	0.041	Summit	60.000	1458.9
	80	20171.204	33.688	-0.141	-0.243	Valley	60.000	247.4
	81	20377.055	33.897	0.102	-0.231	Valley	60.000	260.0
	82	20653.603	34.816	0.332	0.491	Summit	100.000	203.7
	83	20910.496	34.408	-0.159	0.155	Summit	60.000	386.5
	84	21090.953	33:841	-0.314	-2.712	Valley	150.000	55.3
	85	21240.753	37.433	2.398	-0,383	Valley	60.000	156.8
	86	21477.650	44.020	2.780	5.667	Summit	250.000	44.1
	87	21705.870	37.432	-2.887	-1.540	Valley	60:000	39.0
	88	21901.128	34.802	-1.347	-1.133	Valley	60.000	53:0

D. G. W. (Tech.)
BSRDCL
PIII-Katihar

Bihar State Road Development Corporation Consultancy Services for Preparation of Detailed Project Report of different State Highway in Bihar

CONSULTANTS:

SAI Consulting Engineers Pvt. Ltd. An ISO 9001 Certified Company

	PC PB		GOOD FOR CONSTRUCTION (REVISED GOOD FOR CONSTRUCTION (OPR) GOOD FOR CONSTRUCTION (OPR) ISSUED WITH FINAL DEPR ADDENDUM OF DEPR ISSUED WITH ODPR.
1	DEV	DATE	DESCRIPTION

SCALE : NONE

DRAWN BY: R.K. CHECKED BY : A.S. APPROVED BY : J.D.

BAYSI - RAUTĀ (PAÇKĀĢE-I) VERTICĀL - ALIGNMENT DETAIL TITLE:

DRG. NO. :

SAI-213007/DPR/C/H/VAD - 01: REVISION : PG

Limited (BSRDCL)
(A Government of Bihar Undertaking)

Baysi - Bahadurganj - Dighalbank (SH-99)

V
1

Cr.	Vertical Curve Detail Sr. VIP Chainage Level (m) Gradient (%) % Change in Type of Curve K Value											
Si. No.	vir Cilamage	Level (m)	Gradient (%)	· ·	1		n value					
	22048 664	04 400	0.544	grade	Curve	Length (m)	100.0					
1	22048.664	34.486	-0.214	-0.312	Valley	60,000	192.0					
2	22311.675	34.745	0,099	0.199	Summit	100.000	503.6					
3	22528.298	34.529	-0:100	-1.680	Valley	60.000	35.7					
4	22634.701	36.210	1.580	2.274	Summit	75.000	33:0					
5	22866.366	34.602	-0.694	-0.594	Valley	60.000	101.0					
6	22985.124	34.483	-0.100	-0.388	Valley	60.000	154.5					
7	23127.981	34,895	0.288	0.567	Summit	60,000	105.8					
8	23252.583	34.547	-0.279	-0.533	Valley	60,000	112.6					
9	23409.805	34.947	0.254	0.354	Summit	60,000	169.5					
10·	23605.480	34.751	-0.100	-0.285	Valley	60.000	210.8					
11	23865.676	35.231	0.185	-1.261	Valley	60.000	47:6					
12	24008.744	37.300	1.446	1.446	Summit	60.000	41.5					
13	24151.322	37.300	0,000	1.513	Summit	60,000	39.7					
14	24325.124	34.671	-1.513	-1.613	Valley	60,000	1 m					
15	24639.509	34.986	0.100	-1.045	Valley	60,000	- 74					
16	24861.841	37.532	1.145	1.868	Summit	80.000	12.8					
17	25022.551	36.371	-0.722	-1.522	Valley	60,000	39.4					
18.	25177.427	37.610	0.800	1.600	Summit	100,000	62.5					
19	25369.069	36.077	-0.800	-0.630	Valley	1 0.00	158.7					
20	25752.909	35.425	-0.170	-0.069	Valley	70.6	875.0					
21	26081.275	35.093	-0.101	-0.232	Valley	100.000	430.3					
22	26274.841	35,347	0.131	0.449	Sumn t	30.000	133.6					
23	26497.808	34.639	-0.318	-1.718	V-"ey	200.000	116.4					
24	26742.341	38.062	1.400	1.400	mr. t	60.000	42.9					
25	27084.841	38.062	0.000	1.400	Süranit	60,000	42.9					
26	27259.841	35.612	-1.400	-1.300	valley	60.000	46.2					
27	27414.827	35.457	-0.100	-0.200	Valley	60.000	300.0					
28	27776.915	35.819	0.100	-1. 01	Valley	60.000	54.5					
29	27957.699	37.990	1.201	£ '00	Summit	100.000	41.7					
30	28199.311	35.093	-1.199	-1 57	Valley	60.000	41.2					
31	28710.994.	36.411	0.258	0.145	Summit	100.000	690.3					
32	28948.954	36.679	0,113	0.220	Summit	60.000	272.3					

8 2	VIP Chainage	Level (m)	Gradient (%)	% Change in	Type of	Curve	K Value
63	on onamage	10.70. (11)	Gradieni (se,	grade	Curve	Length (m)	*** ***********************************
33	29545.773	36.036	-0.108	-0.608	Valley	60.000	98.7
34	29824.898	37.432	0.500	1,000	Summit	60.000	60.0
35	29992.797	36.593	-0.500	-0.681	Valley	60.000	88.1
36	30288.123	37.127	0.181	0.338	Summit	100,000	295.8
37	30680.889	36.510	-0.157	-0.733	Valley	60.000	81.9
38	30880,632	37.660	0.575	0.685	Summit	60.000	87.6
39	31271.539	37.231	-0,110	-0.251	Valley	60.000	238.8
40	31552.505	37.629	0.142	0.426	Summit	100.000	234.7
41	31916.951	36.593	-0.284	-0.574	Valley	60.000	104.5
42	32088.676	37.091	0.290	0.190	Summit	60.000	315.8
43	32910.673	37.913	0.100	0.204	Summit	100.000	491.3
44	33404.929	37.401	-0.104	-0.226	Valley	60.000	265.0
45	33740.951	37.814	0.123	-0,648	Valley	60.000	92.7
46	33841.547	38.589	0.770	1.692	Summit	60.000	35.5
47	33949.373	37.596	-0.922	-1.178	Valley	60,000	50.9
48	34295.223	38.484	0.257	0.421	Summit	60.000	142.5
49	34785.855	37.678	-0.164	-0.778	Valley	100.000	128.5
50	35006.386	39.031	0.614	0.492	Summit	75.000	152.4
51	35602.684	39.756	0.122	-1.878	Valley	70.000	37.3
52	35755.223	42.807	2.000	4.000	Summit	150.000	37.5
53	35939.695	39.118	-2.000	-2.308	Válley	100,000	43.3
54	36180.223	39.860	0.308	1.489	Summit	60.000	40.3
55	36311.472	38,310	-1, 181	-1.611	Valley	60,000	37.3
56	36478.907	39,029	0:430	0.329	Summit	60.000	182.6
57	36644.098	39.196	0.101	-0.464	Valley	60.000	129.3
58	36845.724	40.335	0.565	0.804	Summit	60.000	74.6
59	37207.052	39.472	-0.239	0.018	Summit	60.000	3294.2
60	37435,333	38.885	-0.257	-2.007	Valley	100:000	49.8
61	37674.504	43.070	1,750	1.750	Summit	60,000	34.3
62	37827.723	43.070	0.000	1.000	Summit	60.000	60.0
63	38222.504	39.122	-1,000	-1.142	Valley	100.000	87.6
64	38935.126	40.135	0.142	0.245	Summit	100.000	408.1
65	39103.198	39.962	-0.103	0.135	Summit	60,000	444.6
66	39260.841	39.587	-0.238	-0.338	Valley	60,000	177.7
67	39514.313	39,840	0.100	-0.323	Valley	60.000	185.6
68	39690.168	40.584	0.423	0.528	Summit	60.000	113.5
69	39857.228	40.408	-0.105	-0.204	Valley	60.000	294.8
				: 39+951.459=3			
70 Î	40724.978	41.260	0.098	0.198	Summit	100.000	504.7
71	40954.597	41.030	-0.100	-0.210	Valley	100.000	476.2
72	41754.080	41.910	0.110	0.291	Summit	150.000	515.2
73	42270.846	40.973	-0.181	-0.323	Valley	60.000	185.9
74	42938.589	41.920	0.142	0.431	Summit	100.000	232.3
7.5	43133.794	41.356	-0.289	-0.826	Valley	100.000	121.1
76	43324.579	42.380	0.537	0.348	Summit	60.000	172.4
							474:3
							238.8
							163.2
							303.1
							0.0
77 78 79 80 81	43574.217 43986.083 44185.624 44627.890 45405.056	42.851 42.210 43.154 42.535 42.985	0.189 -0.155 0.473 -0.140 0.058	0.344 -0.628 0.613 -0.198 -0.037	Summit Välley Summit Valley Valley	60.000 150.000 100.000 60.000 0.000	23 16 30

Vertical Curve Detail

Phy-Kathar

p. G. M. (Tech.) BSRDCL PIII-Katihar

PROJECT:

Bihar State Road Development Corporation | Consultancy Services for Preparation of Detailed Project Report of different State Highway in Bihar Baysi - Bahadurganj - Dighalbank (SH-99)



SAI Consulting Engineers Pvt. Ltd. An ISO 9001 Certified Company

18 GOOD FOR CONSTRUCTION (OPR) 14 GOOD FOR CONSTRUCTION (OPR).

REV. DATE

SCALE : NONE

CHECKED BY : A.S. PPROVED BY : J.D.

GRAWN BY : R.K. TITLE : HAUTA-MAHADEV DIGHI CHOW VERTICAL ALIGNMENT DETAIL

SAI-213007/DPR/C/H/VAD - 01 REVISION: PG

Limited (BSRDCL)
(A Government of Bihar Undertaking)

Vertical Curve Detail									
Sr.	VIP	Level (m)	Gradient	%	Type of	Сигче	K Value		
No.	Chainage		(%)	Change	Curve	Length			
				in grade		(m)			
1	52115.000	47.117	<u>.</u>			0.000			
2	52204.135	46.421	-0.781	-0.877	Valley	50,000	57.0		
3	52771.056	46.969	0.097	0.193	Summit	45.000	232.8		
4	53048.197	46.701	-0.097	-0.266	Valley	30.000	112.8		
5	53340 966	47.196	0.169	-0.055	Valley	20.000	365.3		
6	53611.367	47.802	0.224	0.331	Summit	30.000	90.6		
7	53849.376	47.547	-0.107	-0.572	Valley	40.000	69:9		
8	54025 000	48.364	0.465	0.706	Summit	25,000	35.4		
9	54262.770	47.792	-0.241	-0.537	Valley	25,000	46.6		
10	54584.791	48.746	0.296	0.408	Summit	30.000	73.5		
11	55033.498	48.243	-0.112	-0.371	Valley	30.000	80.9		
12	55587.614	49.677	0.259	0.544	Summit	200.000	367:4		
13	55866.364	48.880	-0.286	-0.405	Vailey	100,000	247.2		
14	56492.610	49.625	0.119	-1.631	Valley	80.000	49.0		
15	56678.020	52.870	1.750	3.500	Summit	150.000	42.9		
16	56857.290	49.733	-1.750	-1.878	Valley	80.000	42.€		
17	57151.228	50.109	0.128	0.286	Summit	60.000	79,		
18	57385.888	49.738	-0.158	-0.411	Vailey	60.000	14 8		
19	57819.062	50.836	0.253	0.678	Summit	60.000	8r 5		
20	58003:373	50:053	-0.425	-0.844	Valley	60,000	71:1		
21	58154.446	50.686	0.419	0.314	Summit	.000	191.0		
22	58386:036	50.929	0.105	-0.254	Valley	66 300	236.1		
23	58604,179	51.712	0.359	0.526	Summ**	2,000	114.0		
24	58791.352	51.399	-0.167	-0.269	Vallay	60,000	223.4		
25	59236,001	51.849	0.101	0.324	St mail	60.000	185,0		
26	59392.950	51,499	-0.223	-0.407	alley	60.000	147.5		
27	59512.742	51.719	0.184	0.376	Summit	60,000	159,4		
28	59644,219	51.466	-0.193	-0.74	Valley	60,000	80.8		
29	59791.020	52.273	0.550	111 7	Summit	90.000	81.8		
30	59928.448	51.517	-0.550	- n' 8	Valley	60,000	56.2		
31	60109.931	52.458	0,518	0.643	Summit	60.000	93.3		
32	60304.206	52.216	-0-5	-0.318	Valley	60.000	188.9		
33	60599.556	52.786	193	0.310	Summit	100.000	322.6		
34	60802,687	52.5 s	0.117	-0.557	Valley	60.000	107.6		
35	60996.709	53.40	.440	-0.860	Valley	60.000	69.8		
36	61158.020	\$5:500	1.300	2.600	Summit	150,000	57.7		
37	61370,466	738	-1.300	-1.615	Valley	100.000	61.9		
38	61699,366	53 /6	0.315	0.596	Summit	100.000	167.9		
39	62′ 08	52:881	-0.280	-0.397	Valley	100,000	251.7		
40	37 7	53.235	0,117	0.018	Summit	60.000	3319.4		
41	63 3 7 1	53.958	0.099	-0.022	Valley	60.000	2777.7		
42	63426.255	54.407	0.120	0.599	Summit	60.000	100.2		
43	3545.070	53,839	-0.478	-1.138	Valley:	60.000	52.7		

Sr.	VIP	Le. T(m)	Gradient	%	Type of	Curve	K Value
No.	Chainag		(%)	Change	Curve	Length	
			(70)	in grade	, 44.70	(m)	
44	63034.10	54.428	0.660	0.786	Summit	60.000	76.4
45	(17)1 201	54.281	-0.126	-0.416	Valley	60.000	144.1
46	635.J.801	54.745	0.291	0.408	Summit	60.000	147.1
4	024.302	54.612	-0.117	-0.381	Valley	60.000	157.4
	64393.493	55,587	0.264	0.613	Summit	60,000	97.8
49	64525.503	55.126	-0.349	-0.692	Valley	80.000	115,5
50	64707.654	55:751	0.343	0.443	Summit	100.000	225.6
51	64935, 133	55.524	-0.100	0.098	Summit	60,000	615.1
52	65067.577	55.262	-0:198	-0.938	Välley	100.000	106.6
53	65181.020	56.102	0.740	0.531	Summit	60,000	113.0
54	65304.739	56.361	0.210	0.370	Summit	60.000	162.0
55	65557.056	55/955	-0.161	-0.649	Valley	60.000	92.5
56	65750,722	56.900	0.488	0.591	Summit	60.000	101.5
57	65903.859	56.742	-0.103	-0.402	Valley	60,000	149.2
58:	66194.086	57.609	0.299	0.443	Summit	60.000	135.3
59	66372:735	57.351	-0.145	-0.281	Valley	60.000	213.8
60	66660.198	57.743	0.136	0.244	Summit	60.000	245.7
61	66816.054	57.574	-0.108	-0.494	Valley	125.000	253.3
62	67022.524	58:370	0.385	0.498	Summit	100.000	200.9
63	67407.670	57.937	-0.112	-0.227	Valley	60.000	264.2
64	68070.584	58.698	0.115	0:227	Summit	100.000	440.4
65	68297.182	58.443	-0.112	-0.536	Valley	60.000	112.0
66	68441.097	59.053	0.423	0.306	Summit	60.000	195.8
67	68857.035	59.539	0.117	-0.094	Valley	60,000	639.2
68	69149.425	60.156	0.211	0.322	Summit	100.000	310.5
69	69302.932	59.985	-0.111	-0.317	Valley	60.000	189.4.
70	69868.614	61.148	0.206	0.306	Summit	100.000	327.2
71	70091,425	60.926	-0.100	-0.333	Valley	60.000	180.3
72	70450.352	61.761	0,233	0.133	Summit	200.000	1507.3
73	70966.472	62.277	0.100	0.251	Summit	60.000	238:7
74	71185.776	61.945	-0.151	-0.315	Valley	60,000	190.4
75	71672.459	62.742	0.164	0.458	Summit	60.000	131,1
76	71836,817	62.259	-0.294	-0.520	Valley	100.000	192.2
77	72041.020	62.721	0.226	0.116	Summit	100.000	859.5
.78	72218,408	62.916	0.110	0.311	Summit	60.000	192.7
79	72366.398	62.618	-0.201	-0.443	Valley	60.000	135.5
80	72645.790	63:292	0.241	0.349	Summit	60:000	171.8
81_	72881.980	63.037	-0.108	-0.108	Valley	60.000	555.7
82	73173.729	64.025	0.339	0.786	Summit	100,000	127.3
83	73341.133	63.277	-0.447	-1.947	Valley	100.000	51.4
84	73575 318	66.790	1.500	3.000	Summit	150.000	50.0
85	73761.224	64.001	-1.500	-1.698	Valley	75,000	44.2
86	73812.000	64.102	0.198	0.198	Summit	0.000	0.0

ger (Tech.) MU-Katihar

D. G. M. (Tech.)

BSRDCL

PIU-Katihar

Bihar State Road Development Corporation Consultancy Services for Preparation of Detailed Project Report of different State Highway in Bihar Baysi - Bahadurganj - Dighalbank (SH-99)



SAI Consulting Engineers Pvt. Ltd. An ISO 9001 Certified Company

PF: 17/	12/18 G00D	FOR CONSTRUCTION FOR CONSTRUCTION FOR CONSTRUCTION	(DPR)	DPR)
PC 01/	01/14 ADDEN	D WITH FINAL DOPR DUM OF DOPR D WITH DOPR		

RAWN BY : R:K. APPROVED BY : J.D. SIGN ISSUED BY : R.H.

TITLE: LRP CHOWK (BAHADURGAN.)
-DIĞHALBANK (PACKAGE III).
VERTIÇAL
ALIGNMENT DETAIL

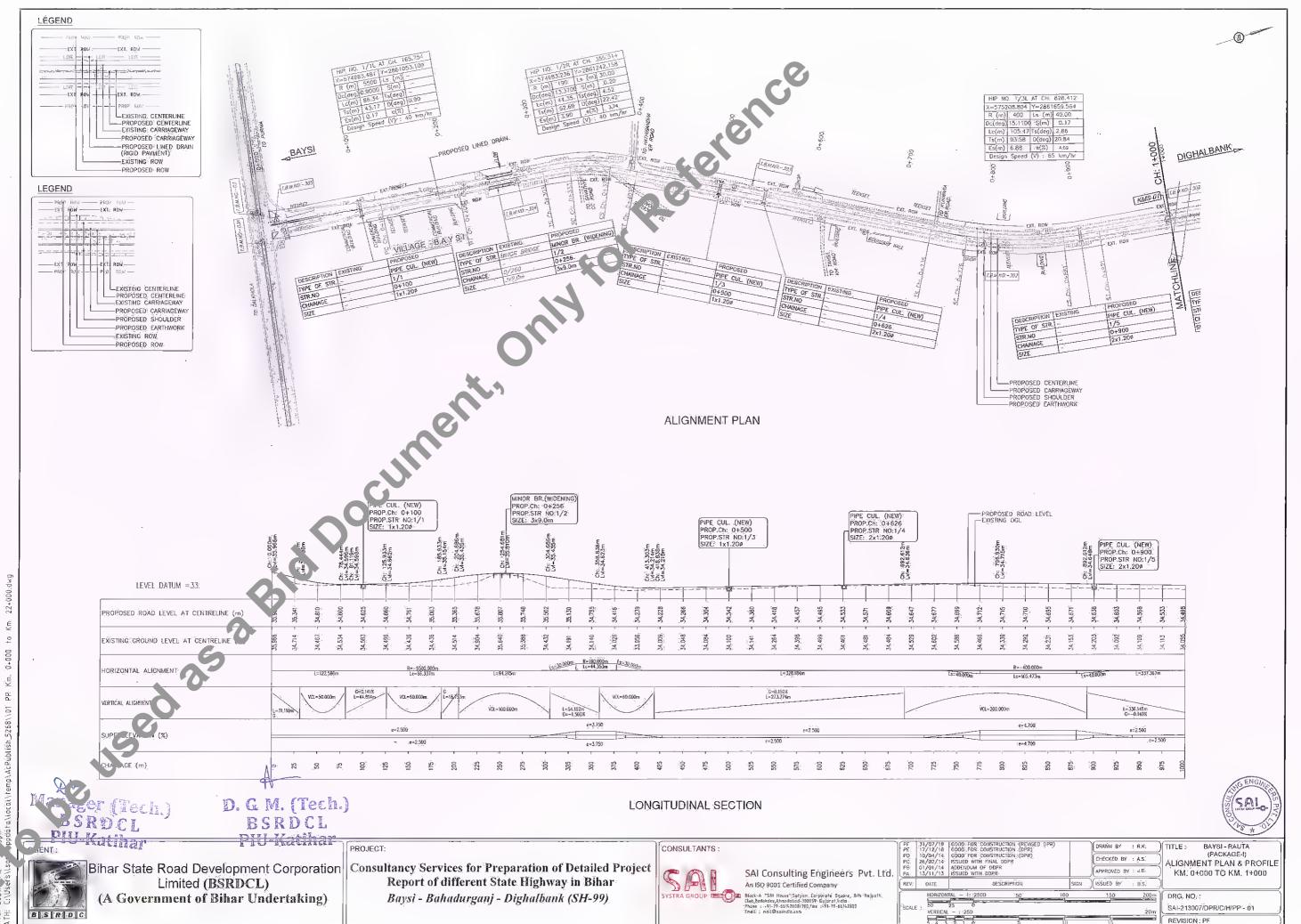
SCALE : NONE

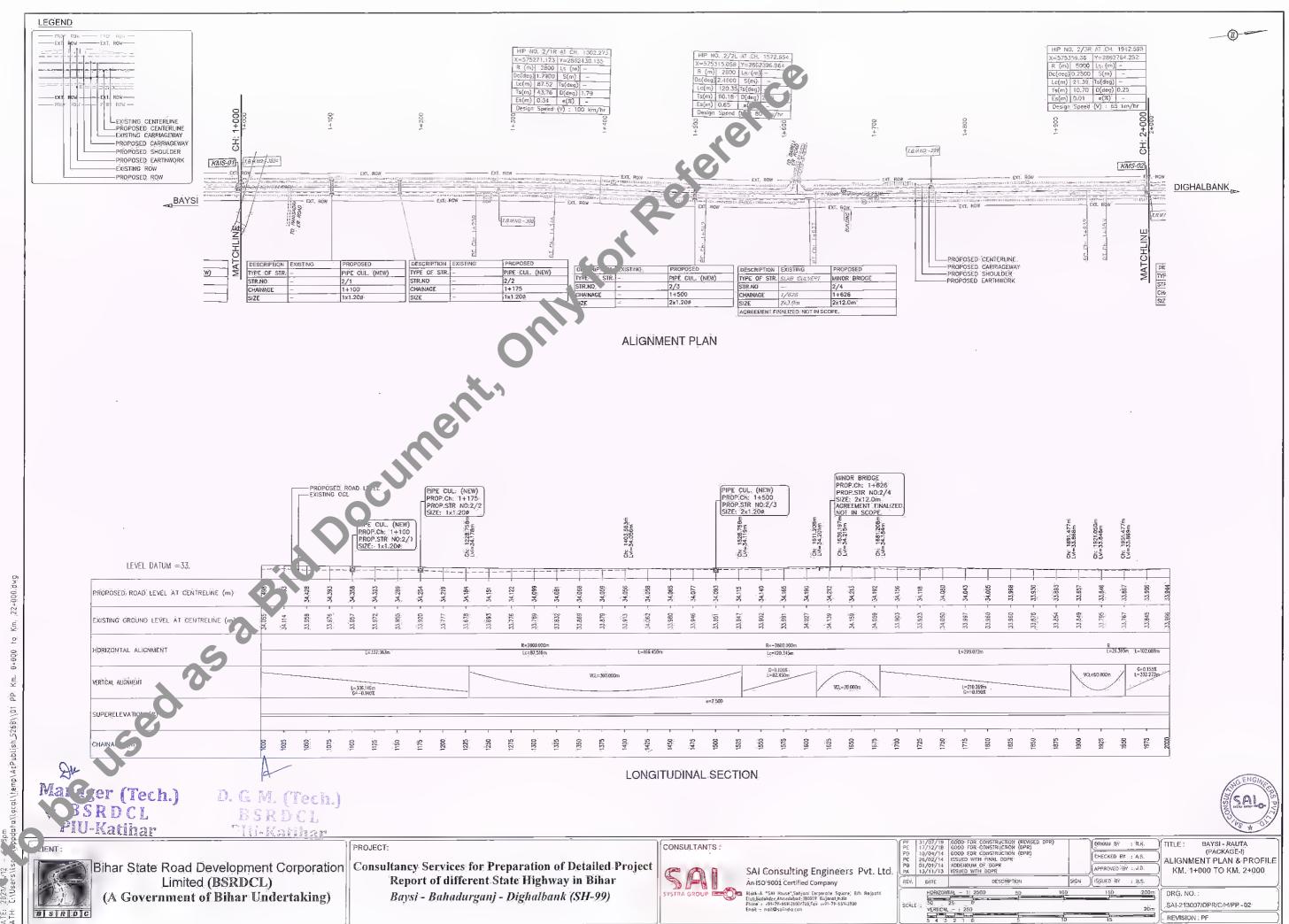
DRG. NO. : SAÌ-213007/DPR/C/H/VAD - 01 REVISION : PG

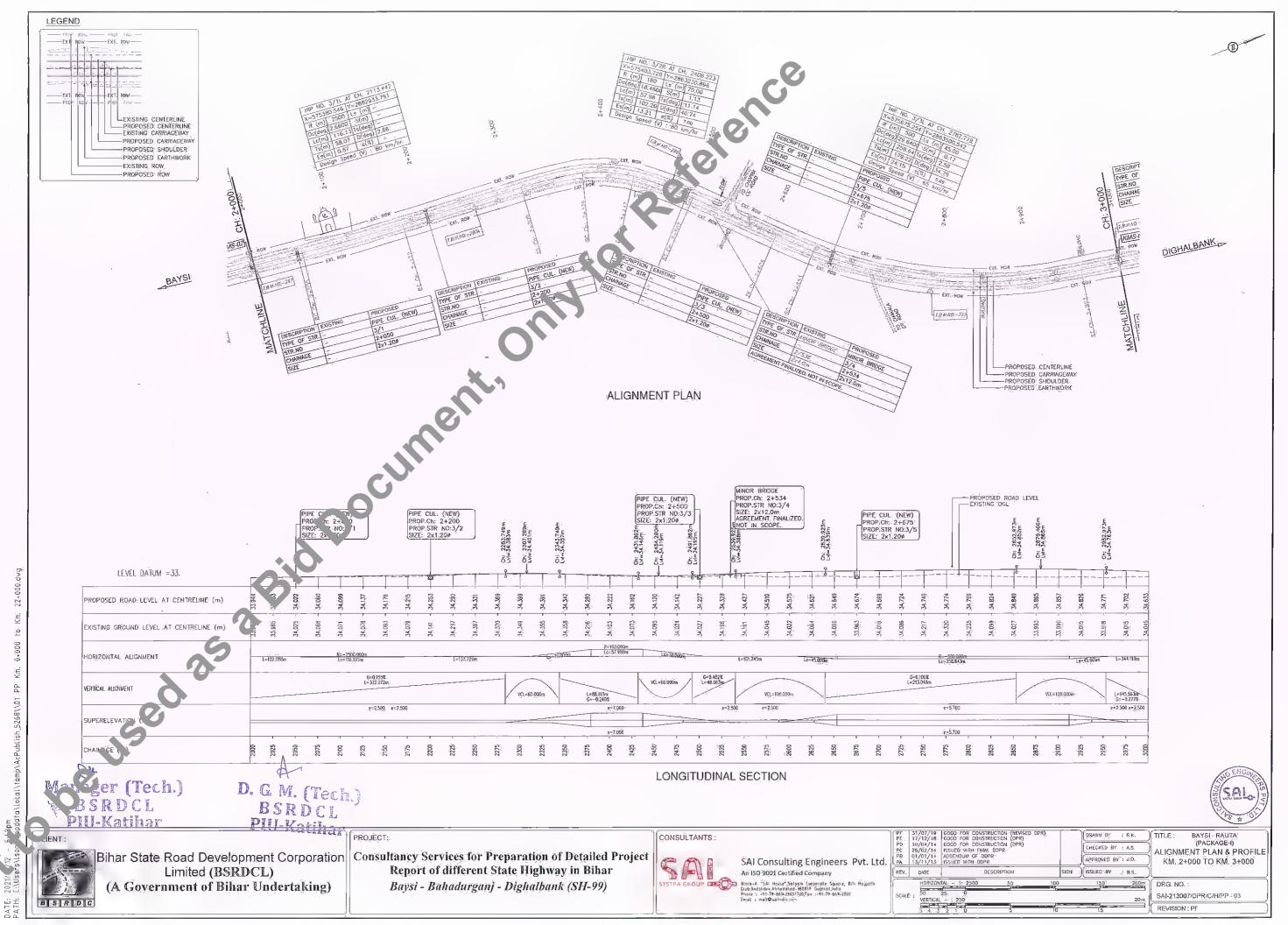


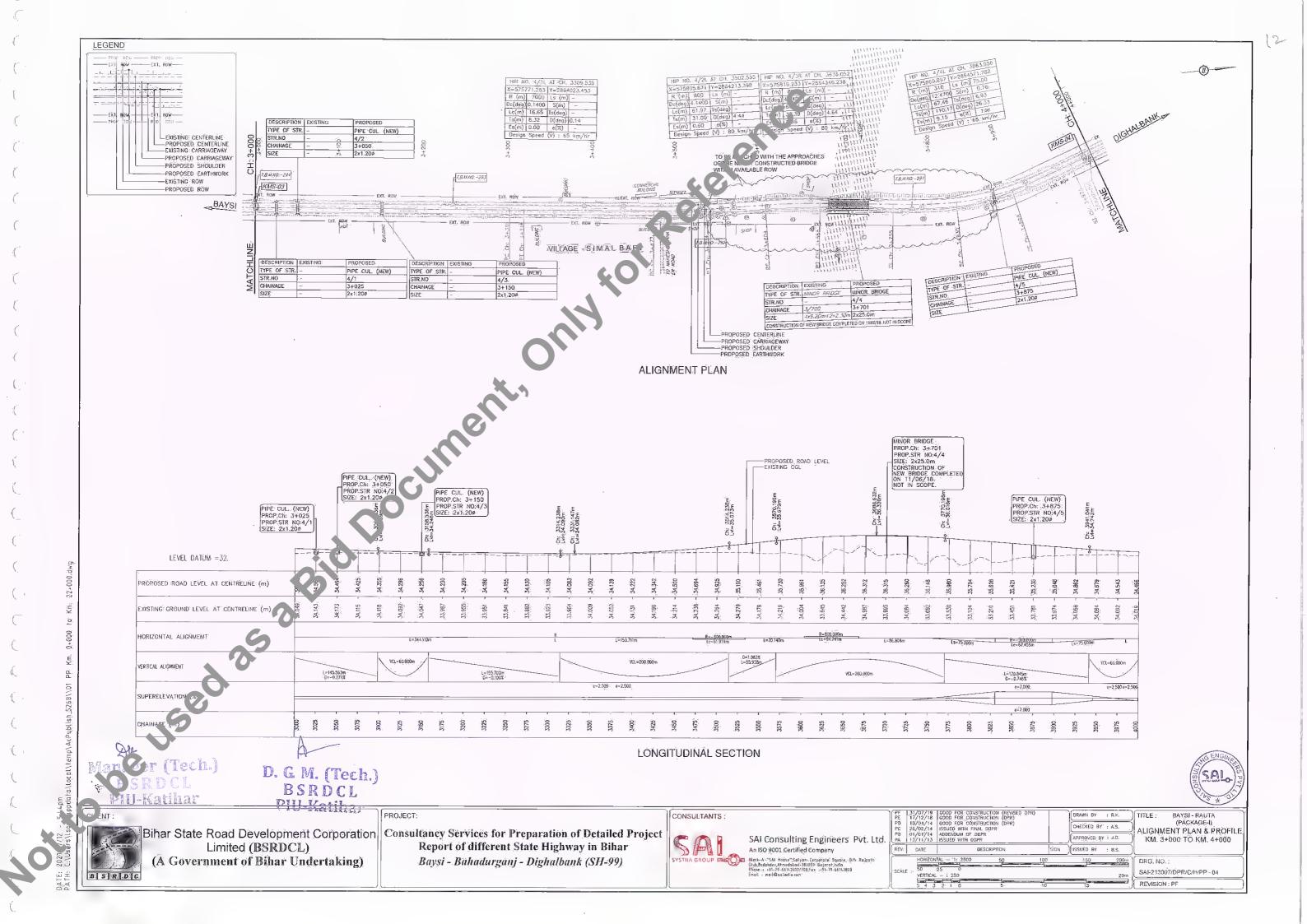
Limited (BSRDCL)
(A Government of Bihar Undertaking)

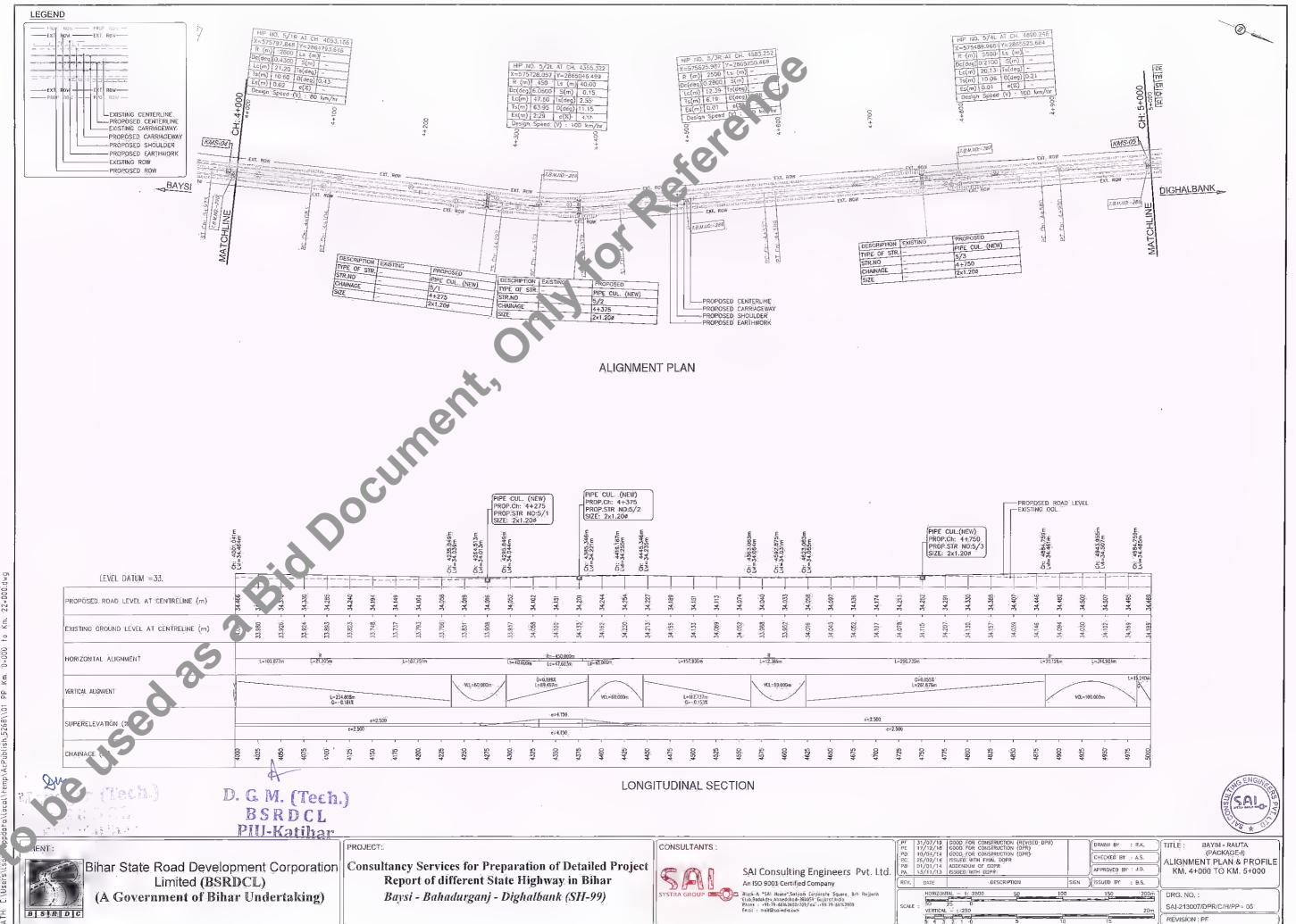




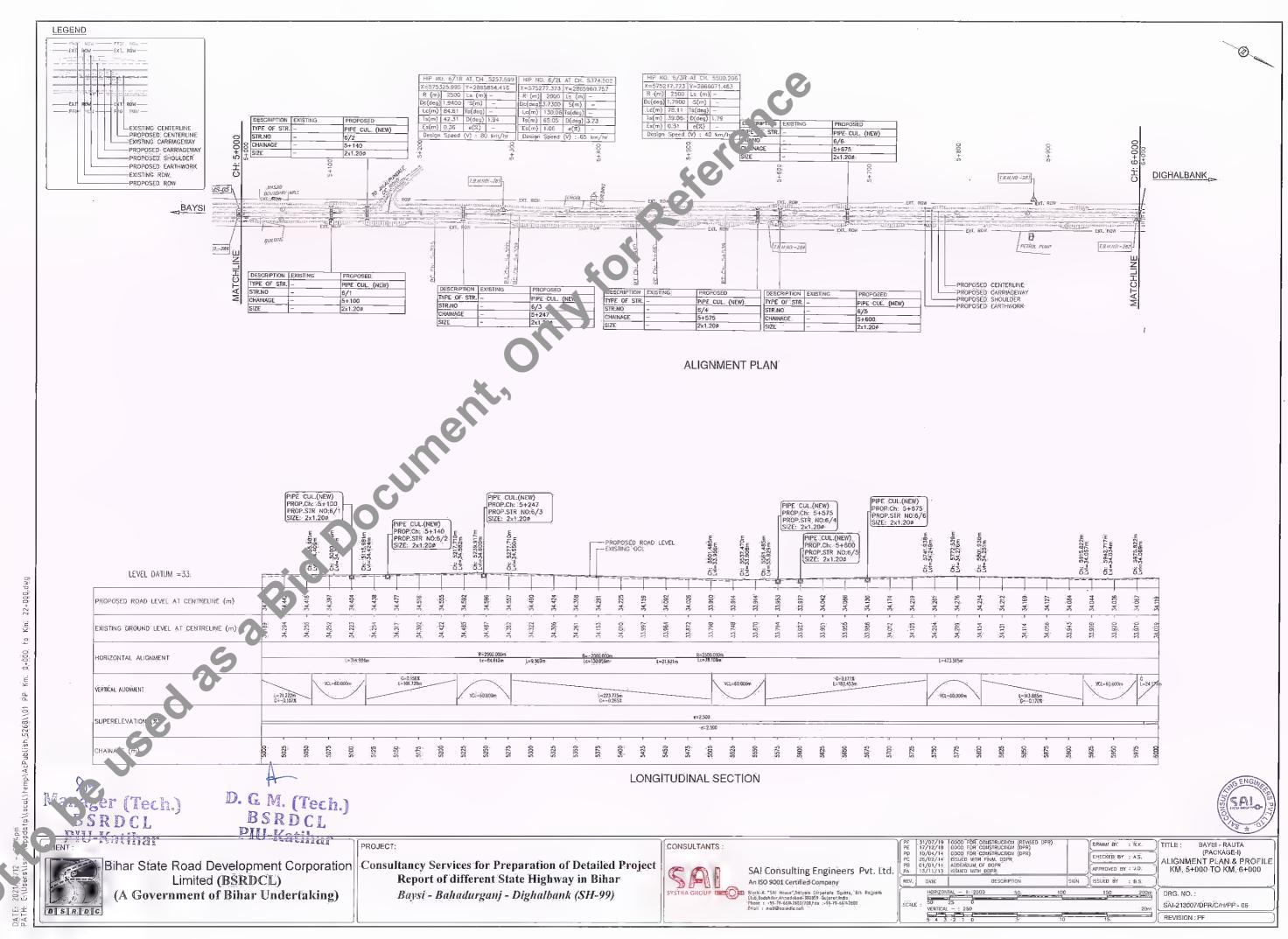


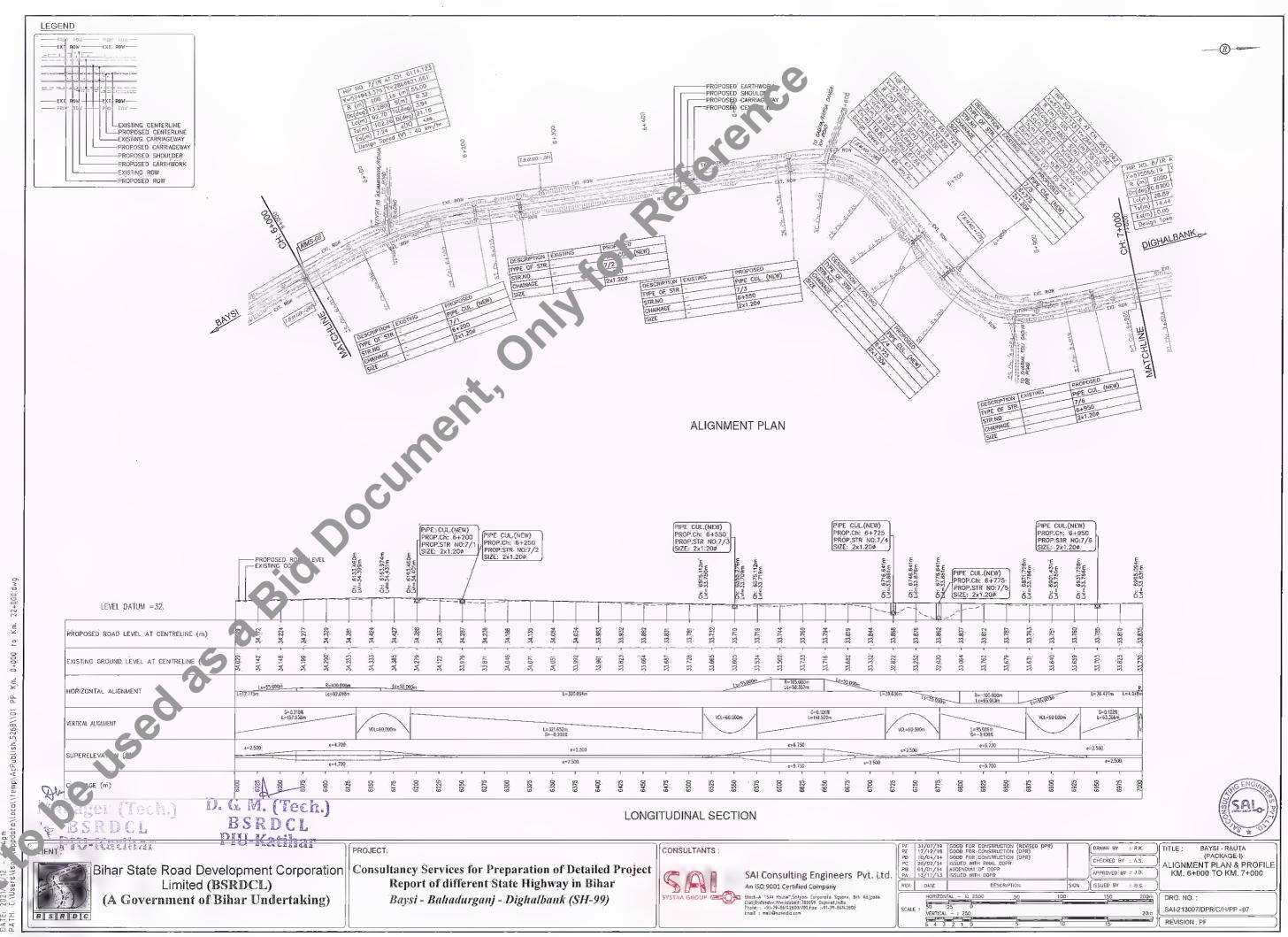


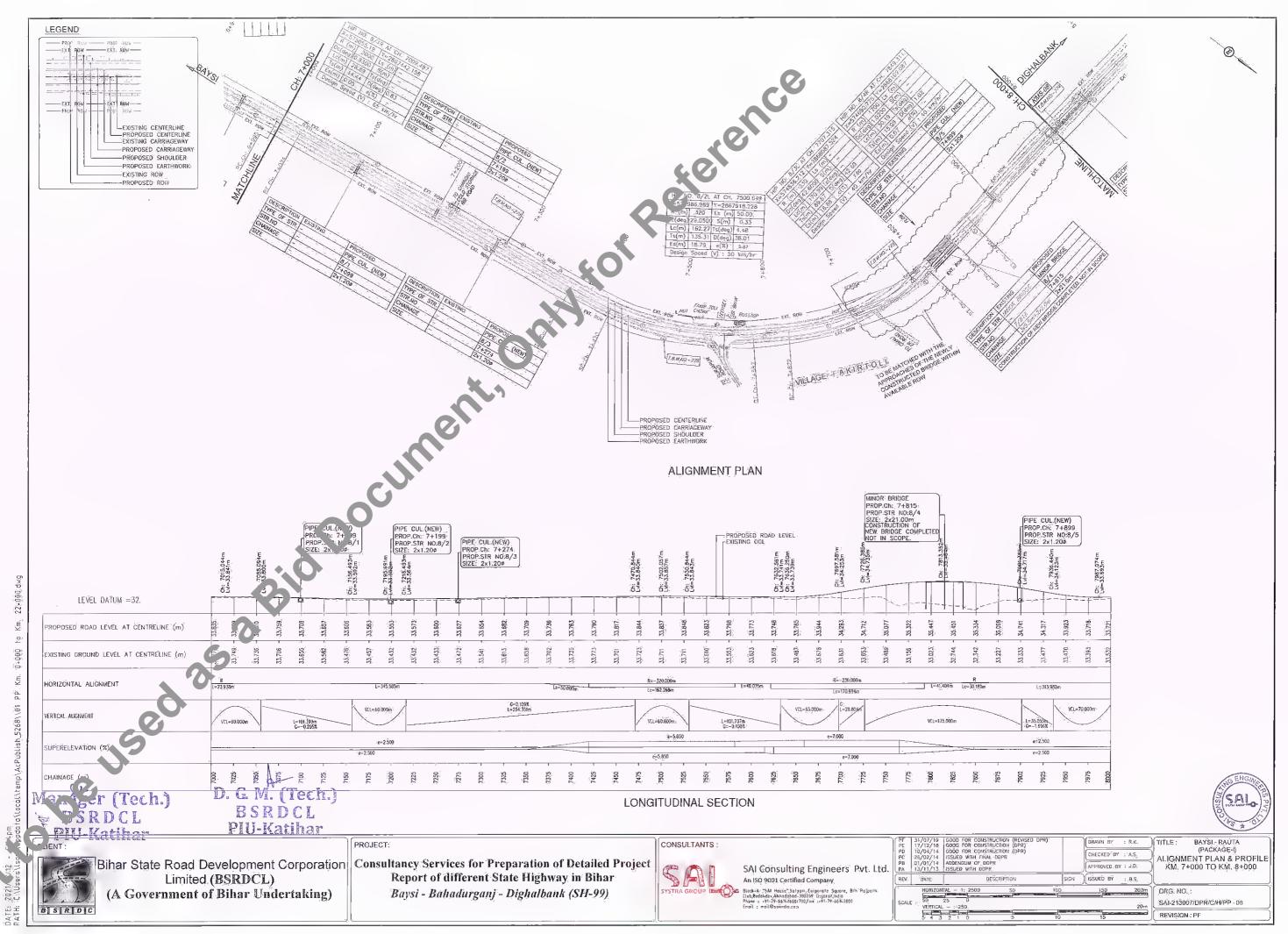




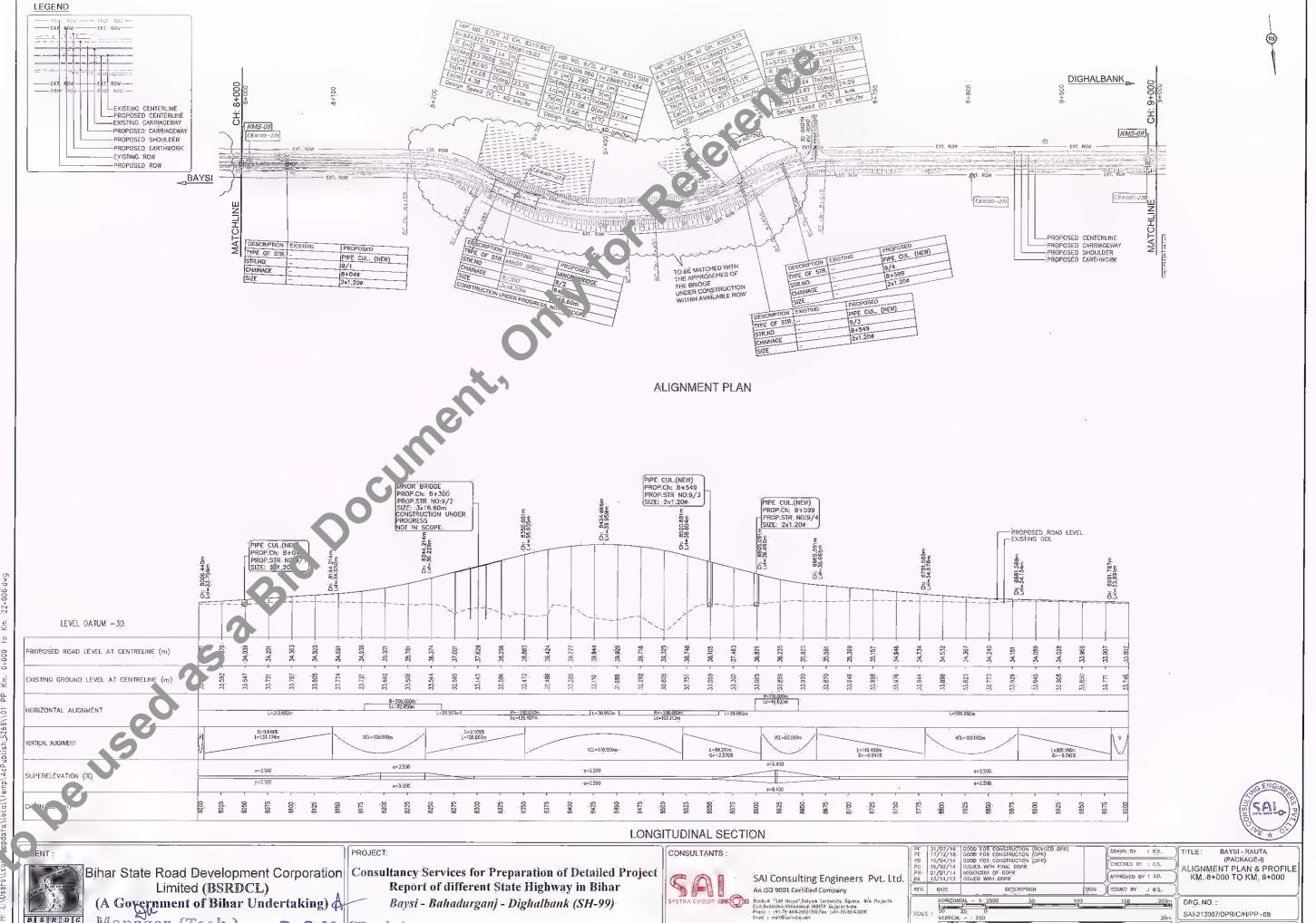
(/12 - 6-14pm







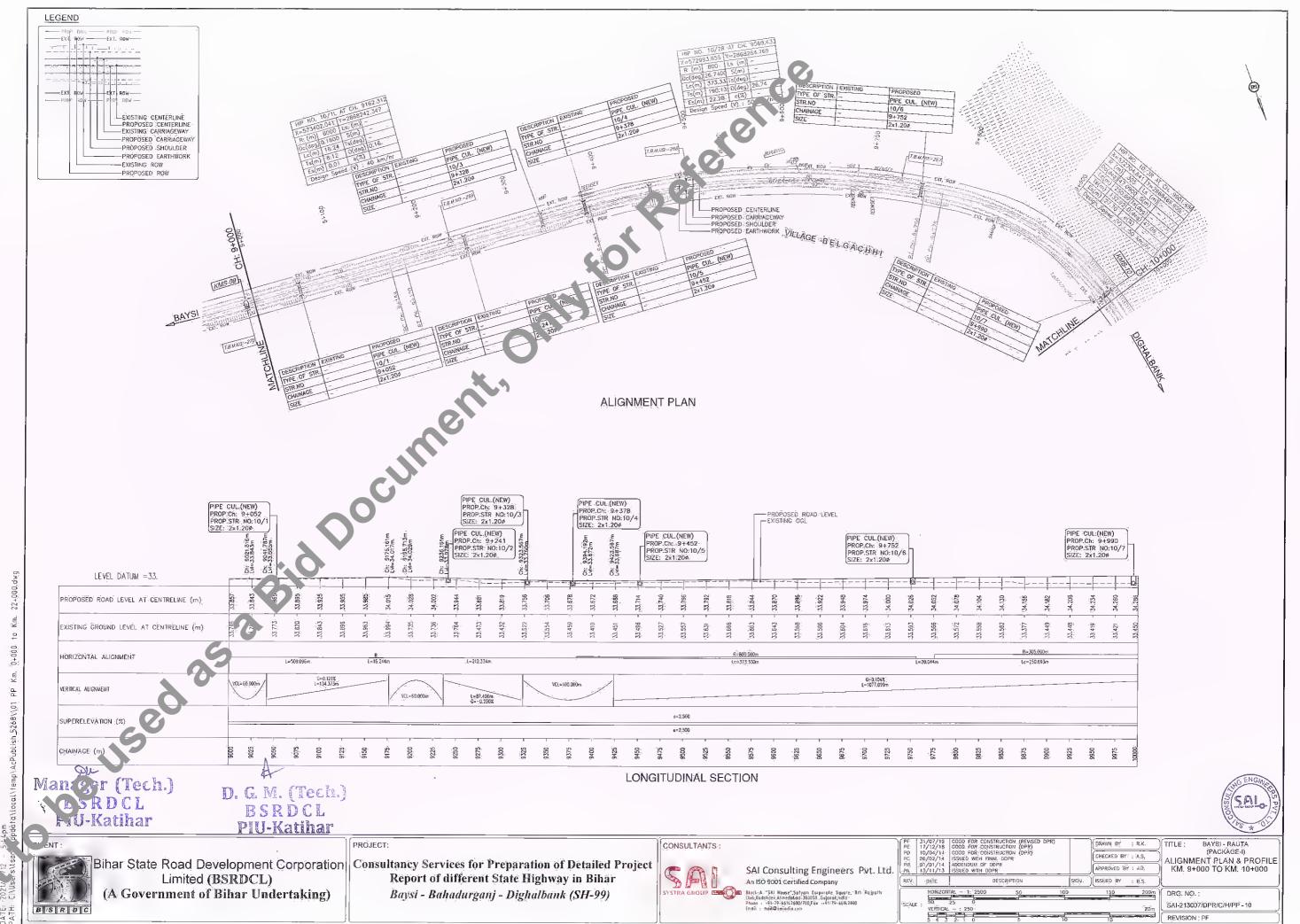
REVISION : PF

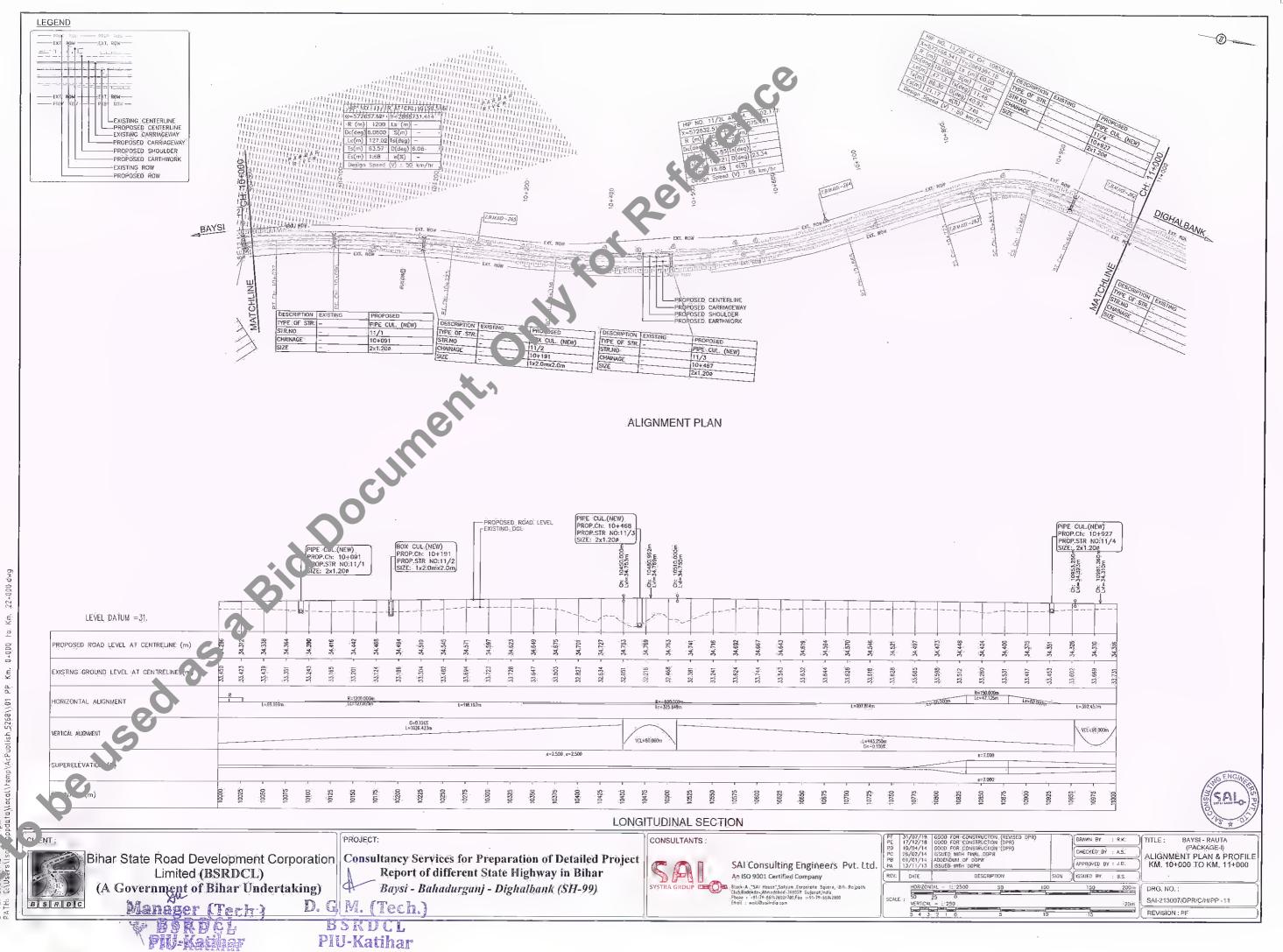


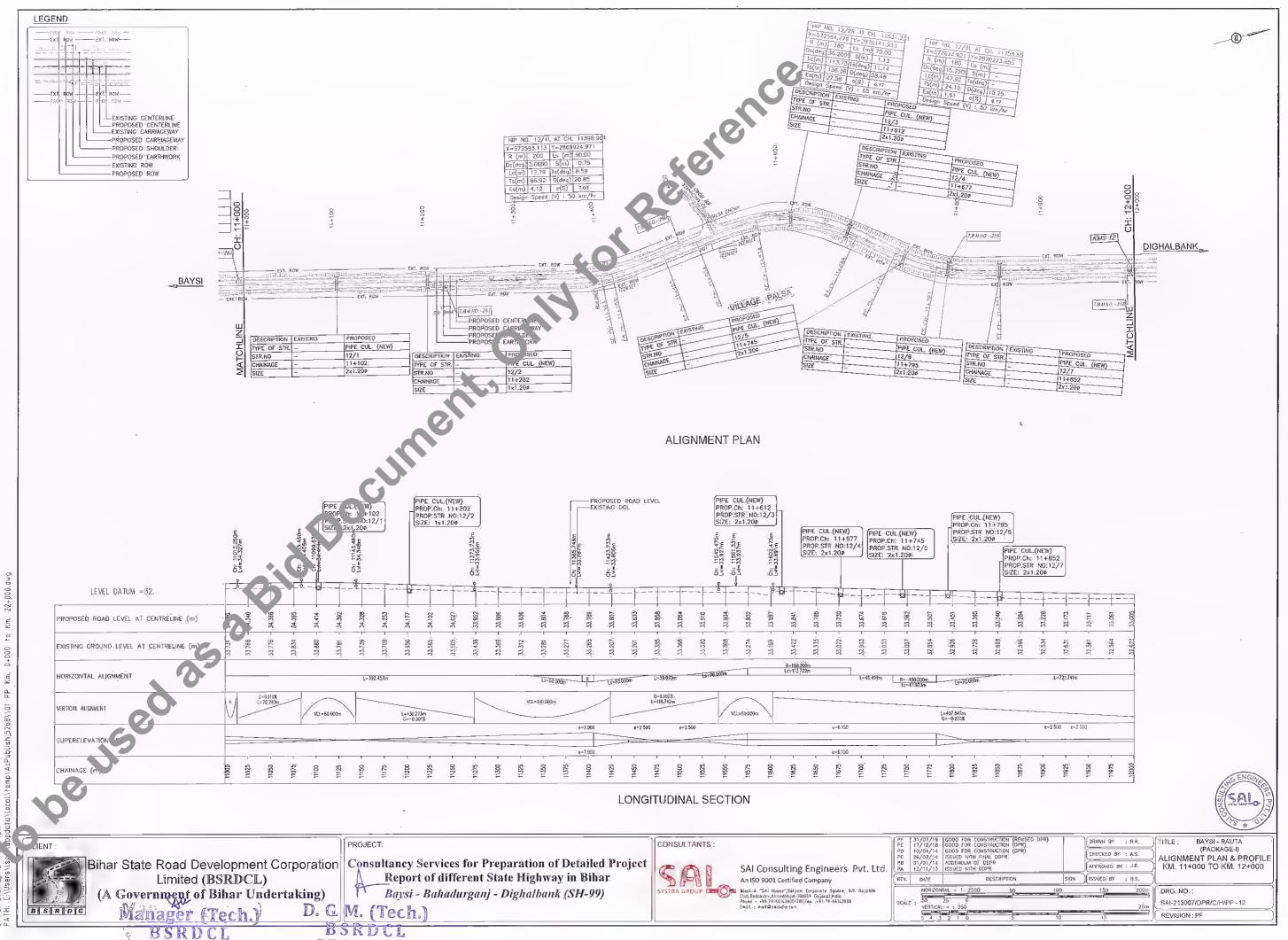
W BSRDCL

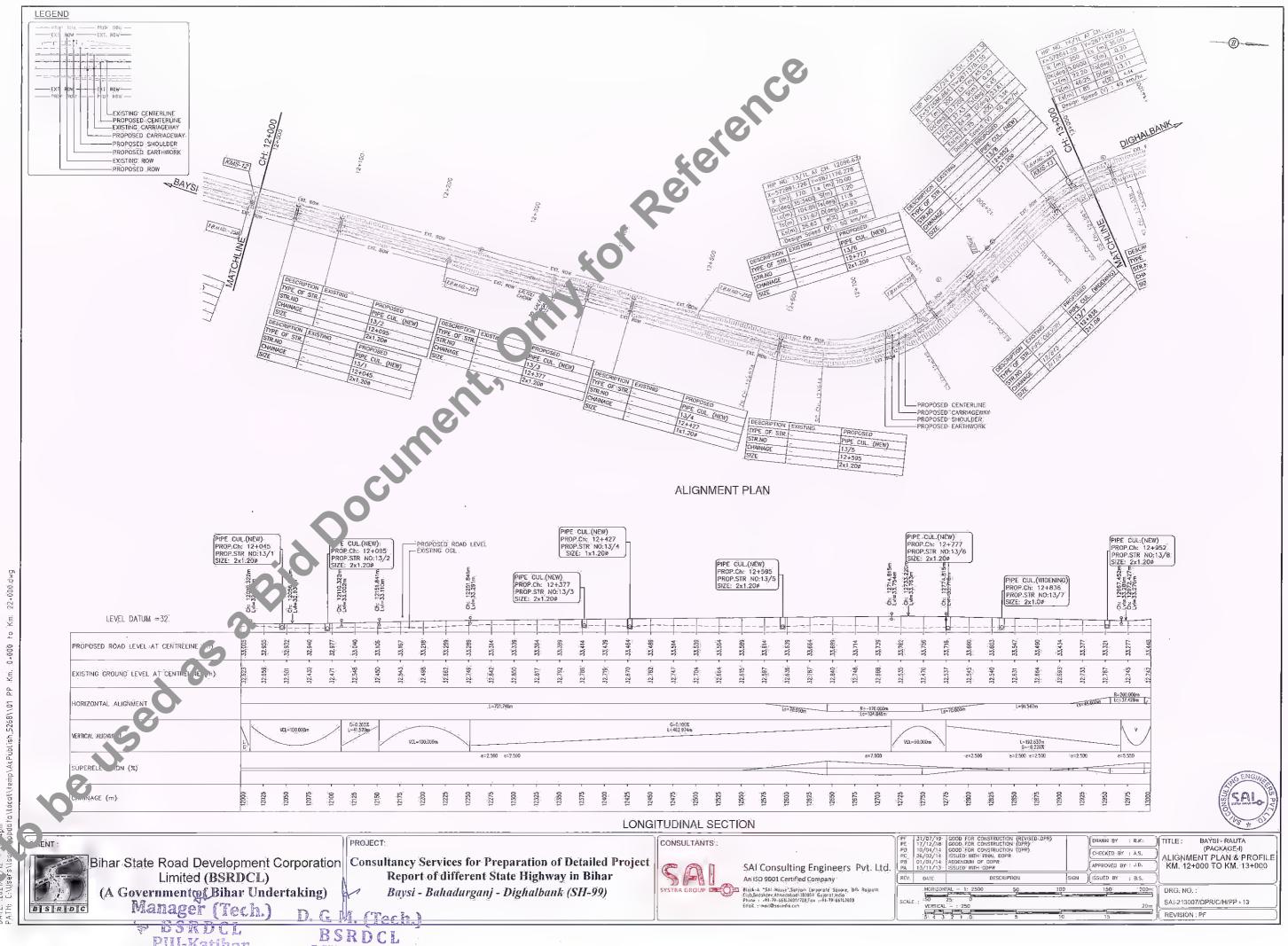
PIU-Katihar

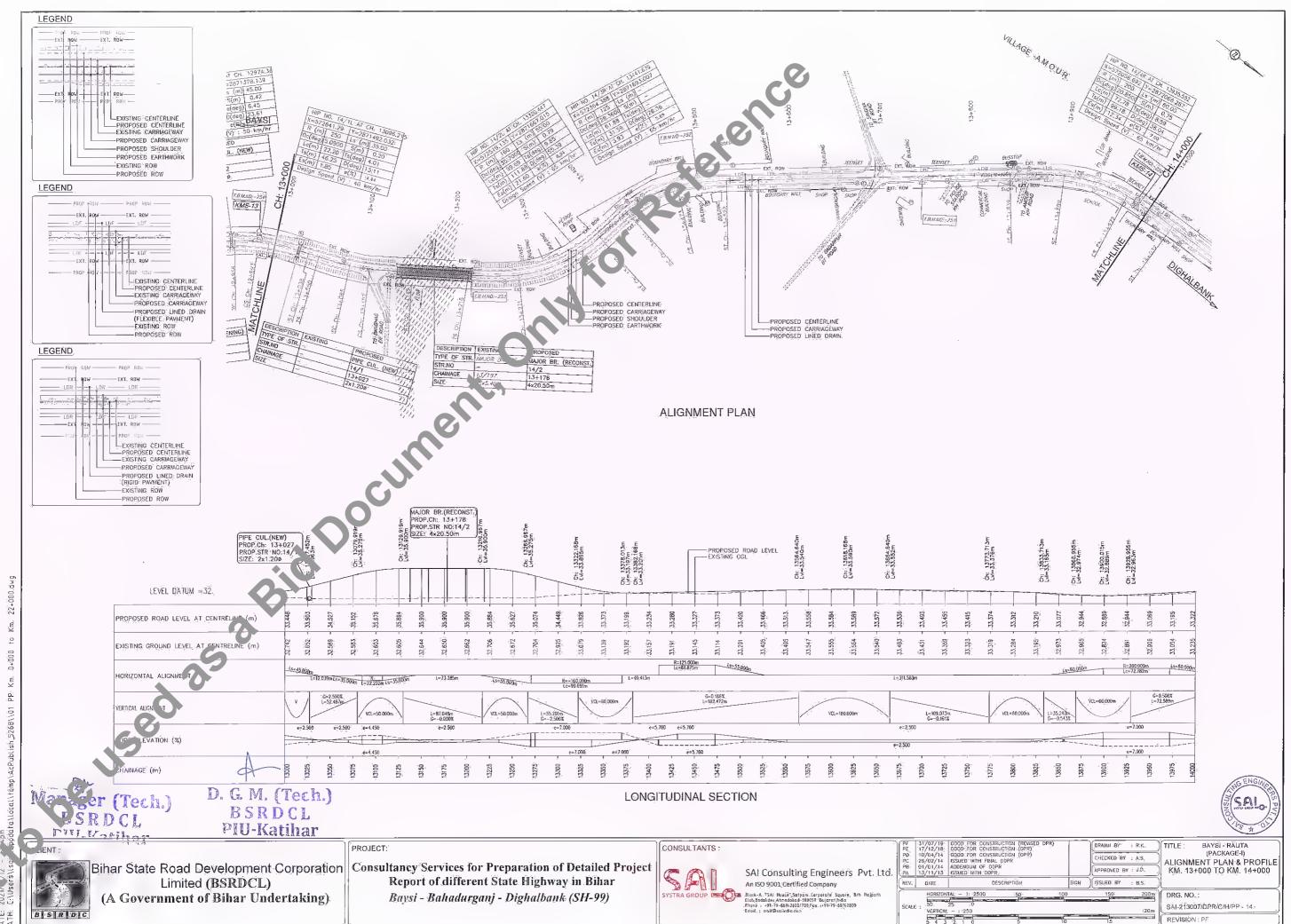
BSRDCL PIU-Katihar

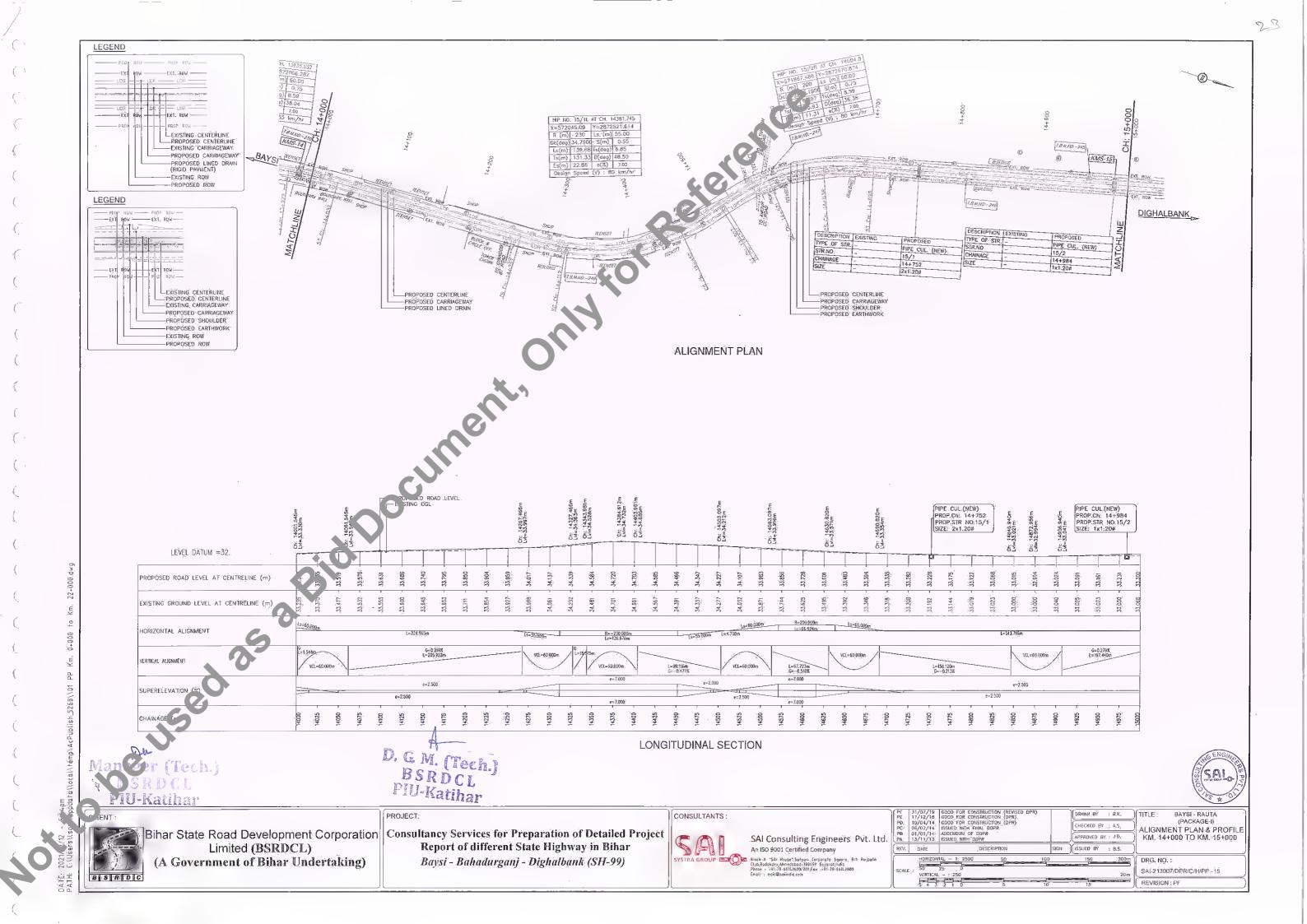


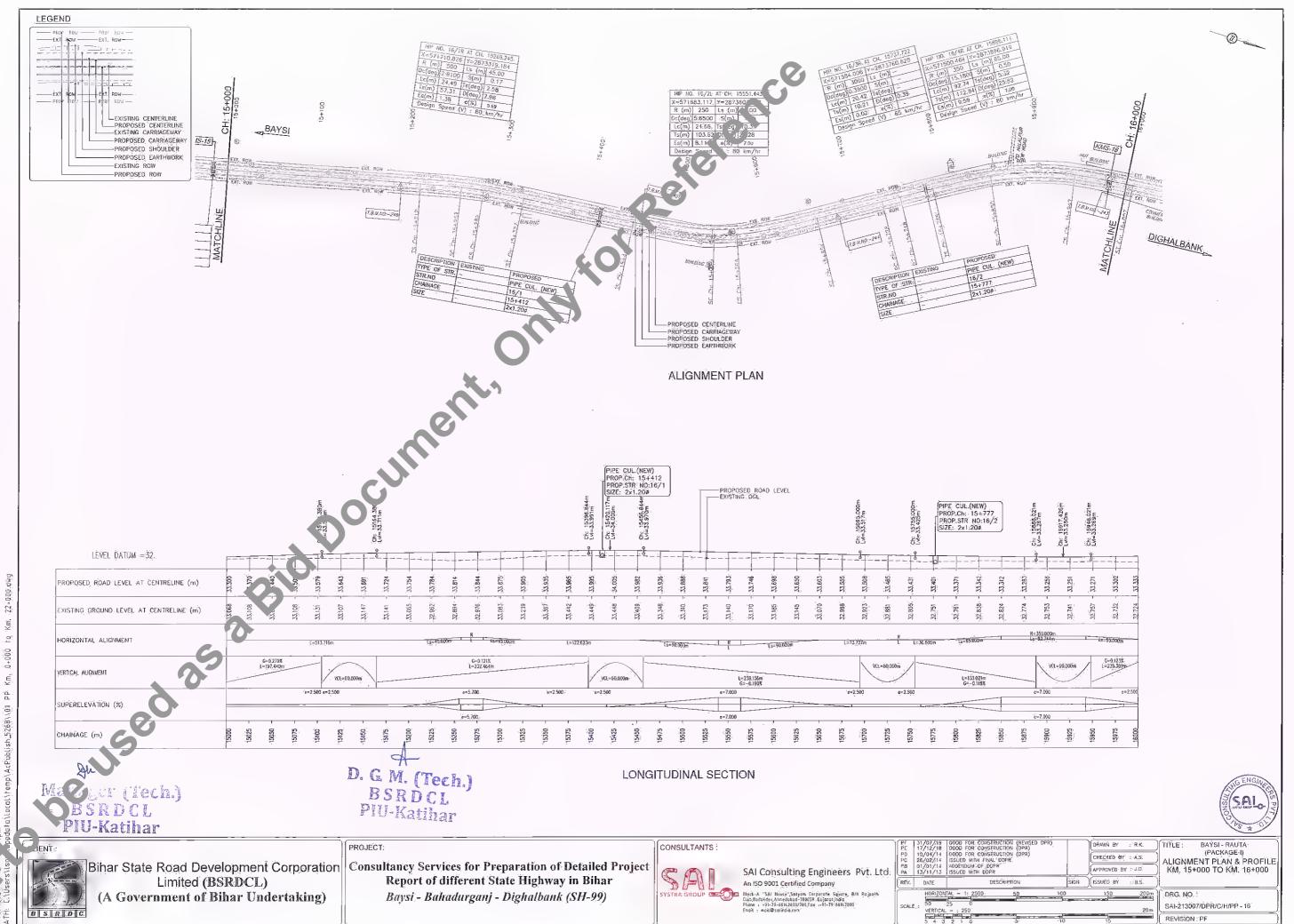


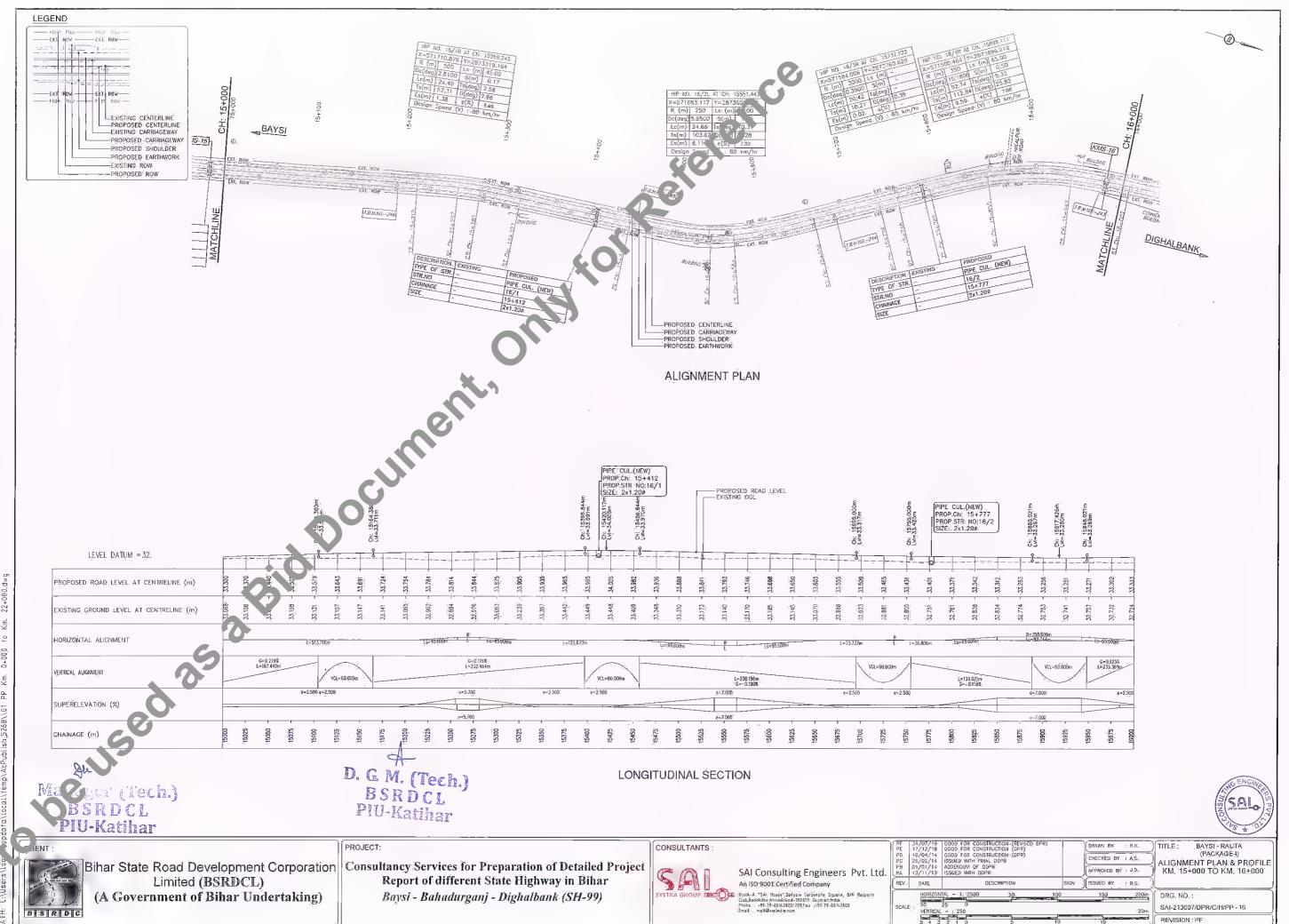


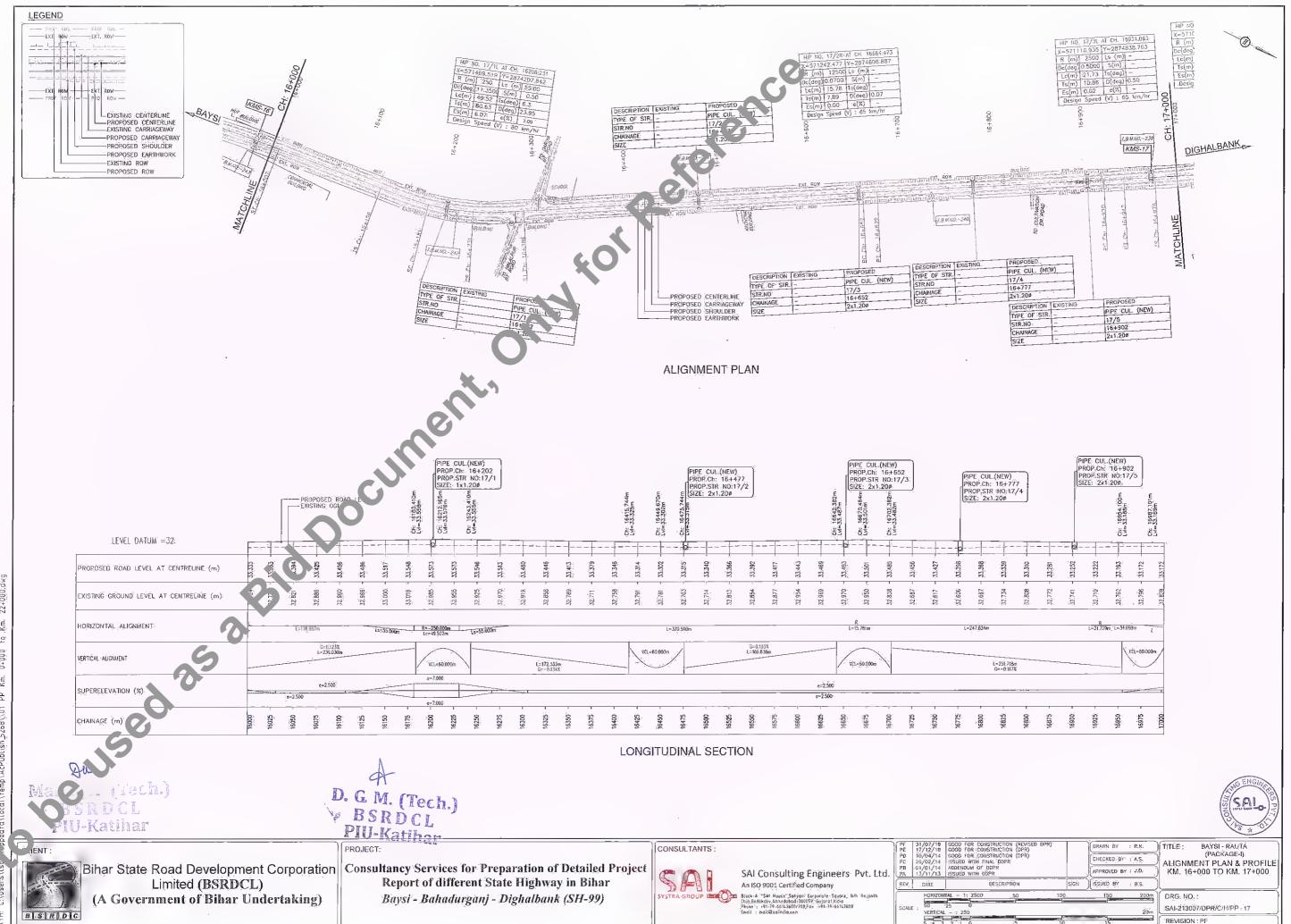




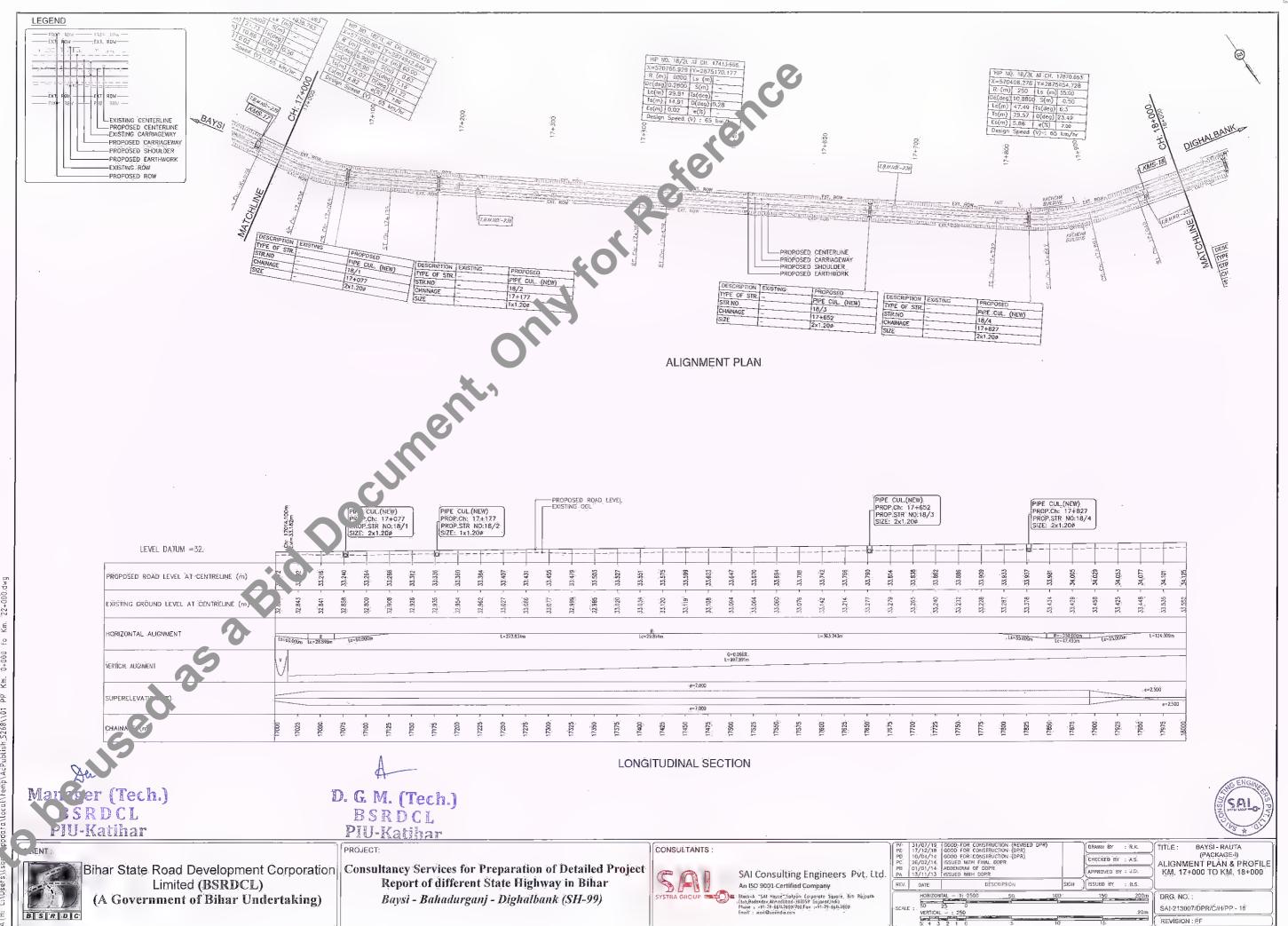


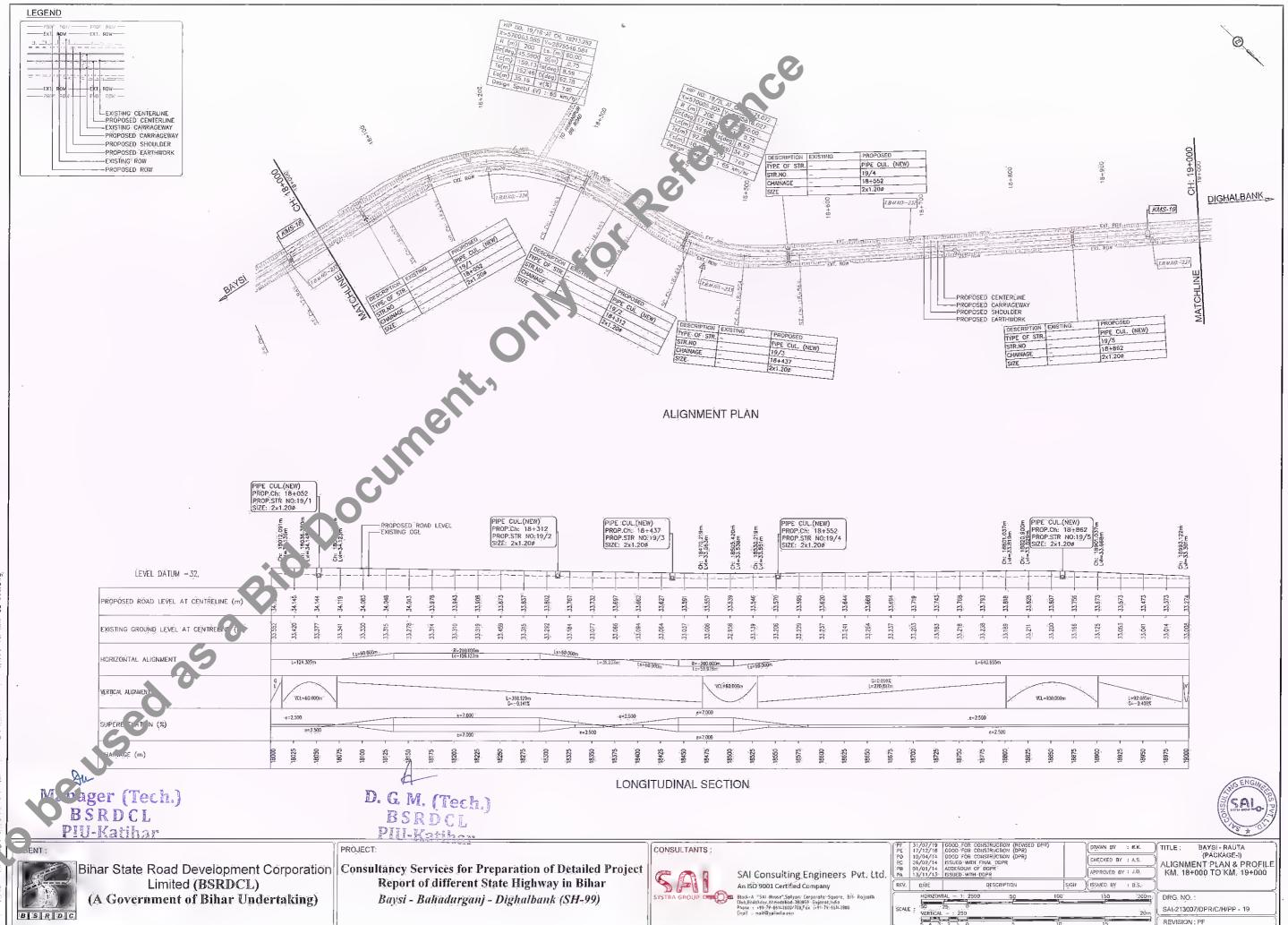


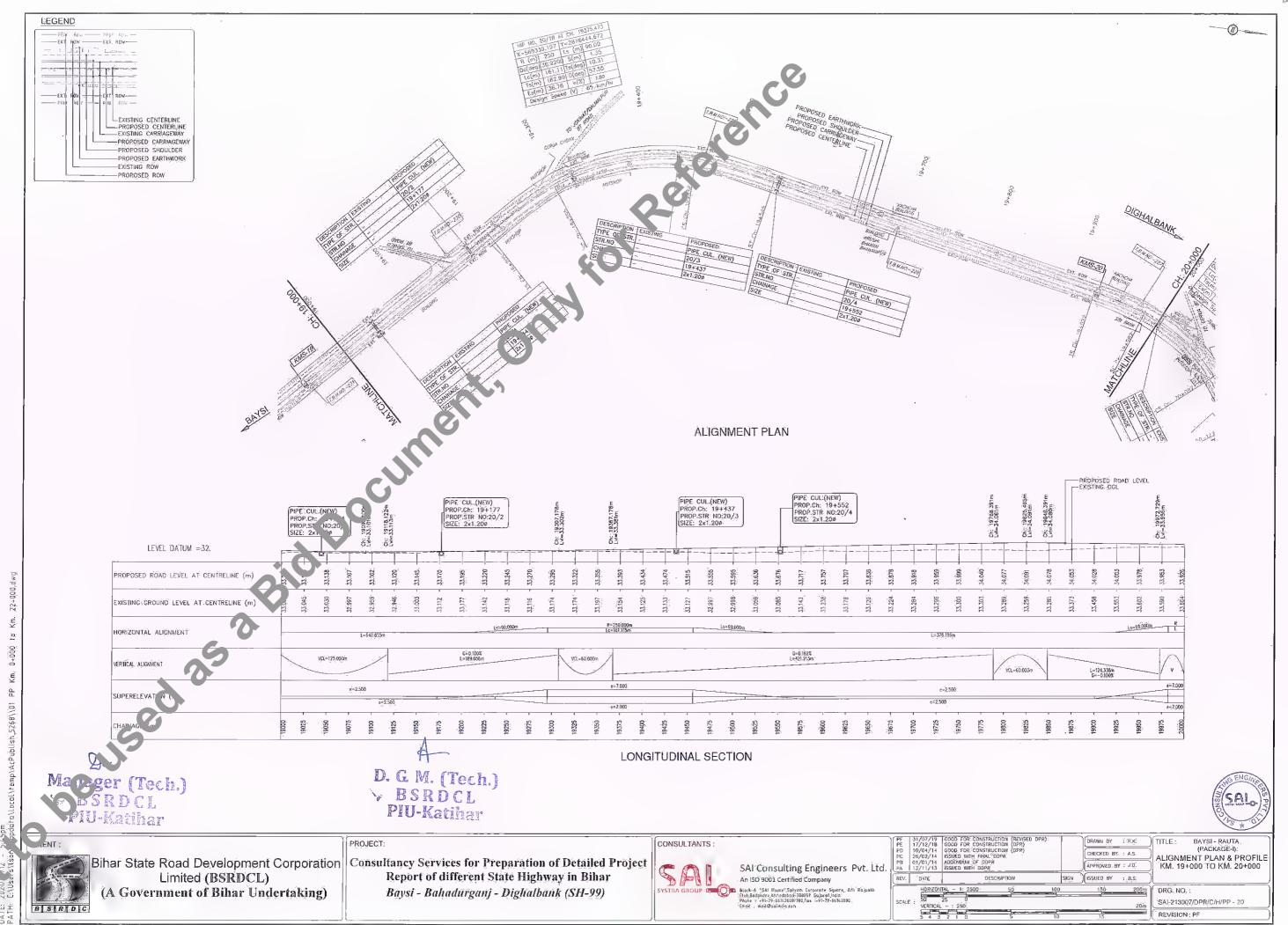


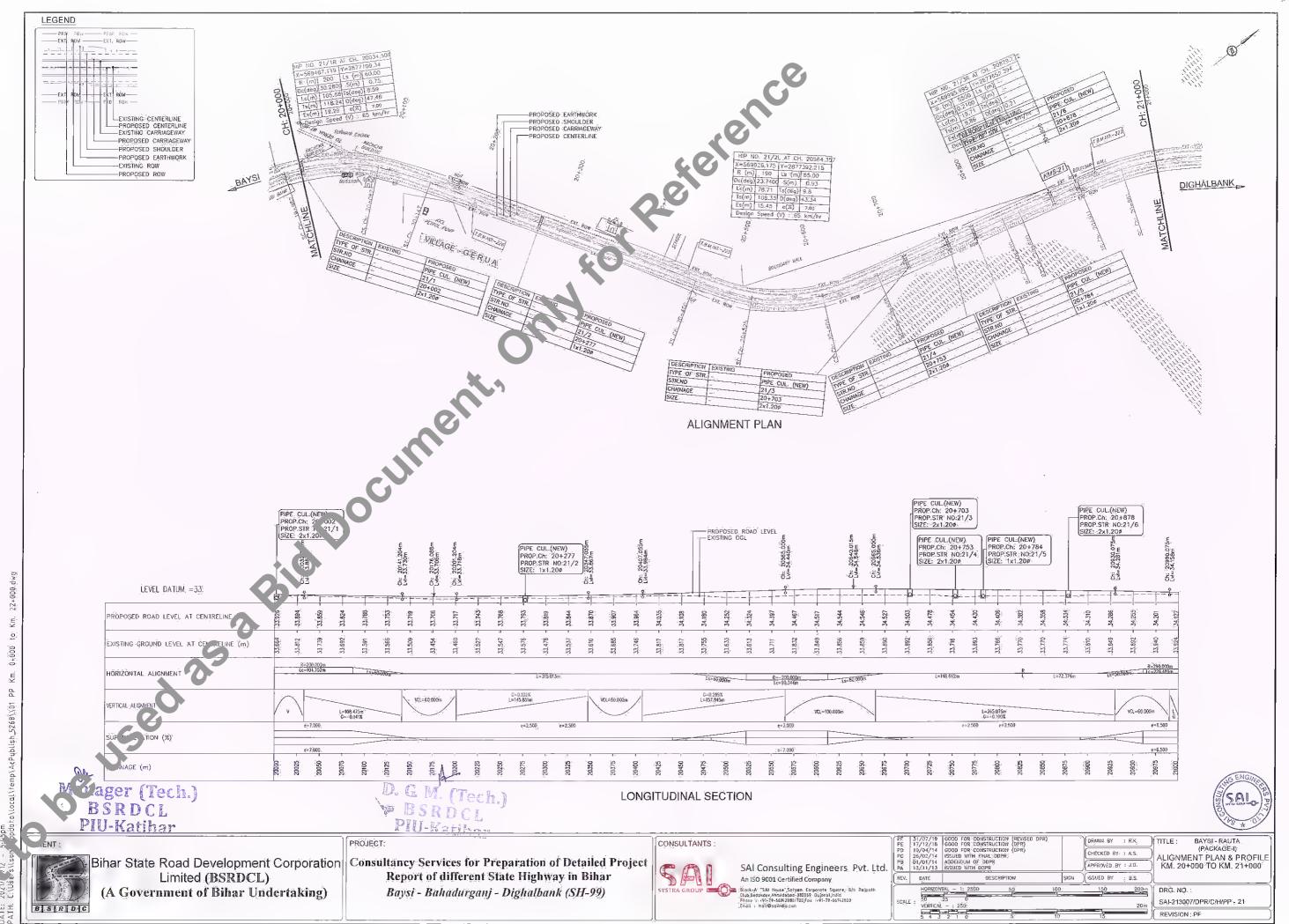


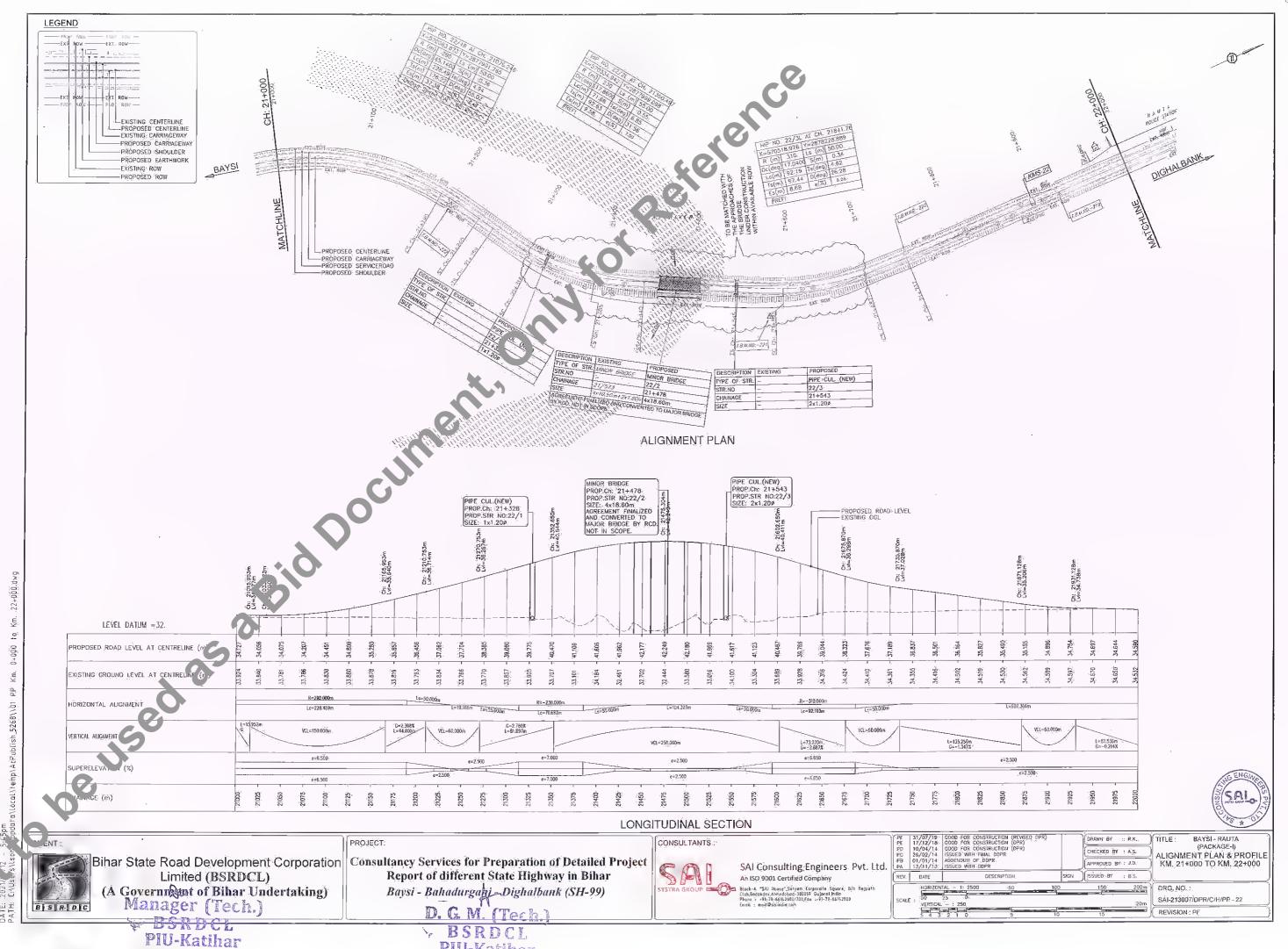
ATÉ: 2021/ VIZ - FEY

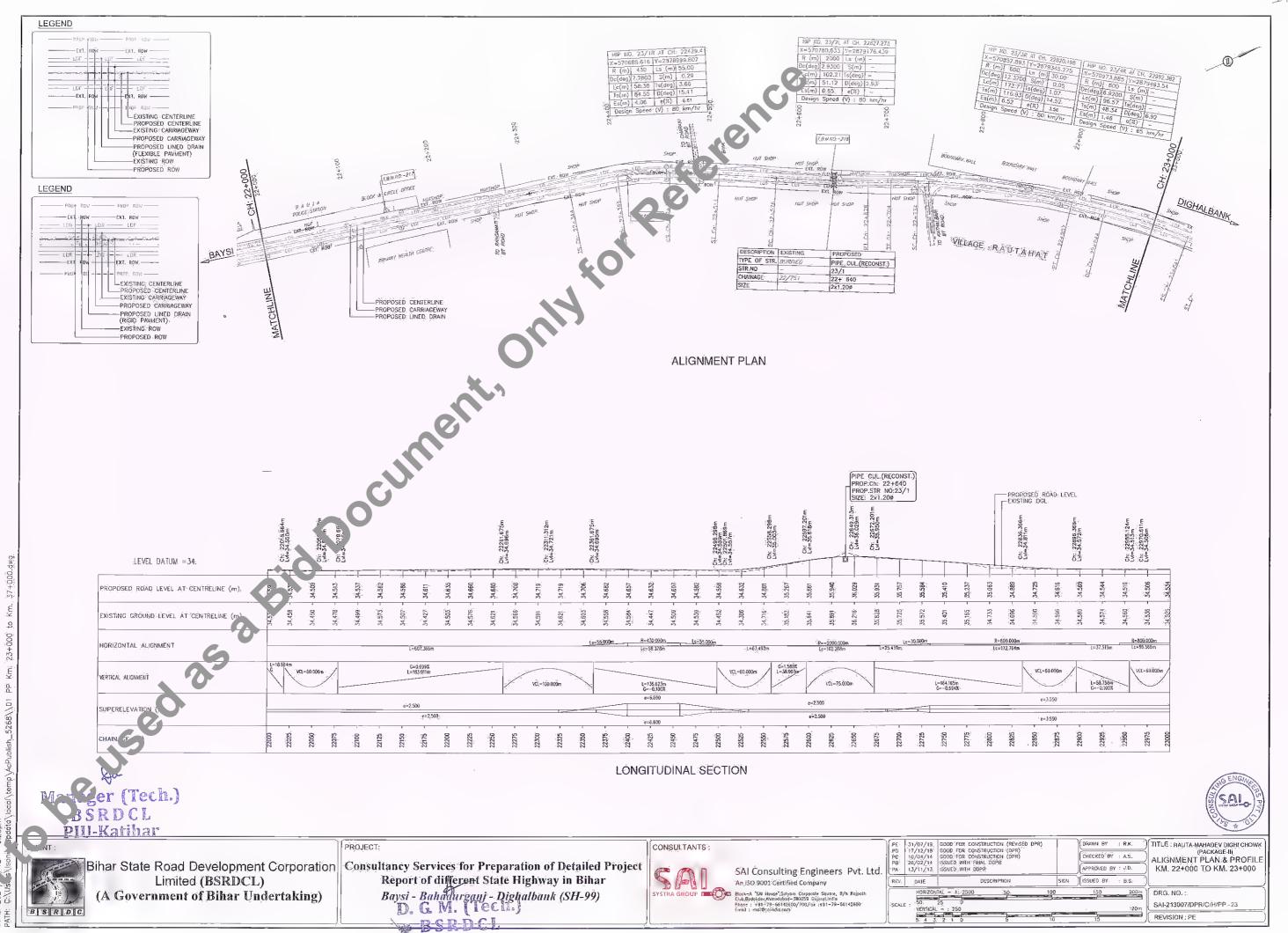


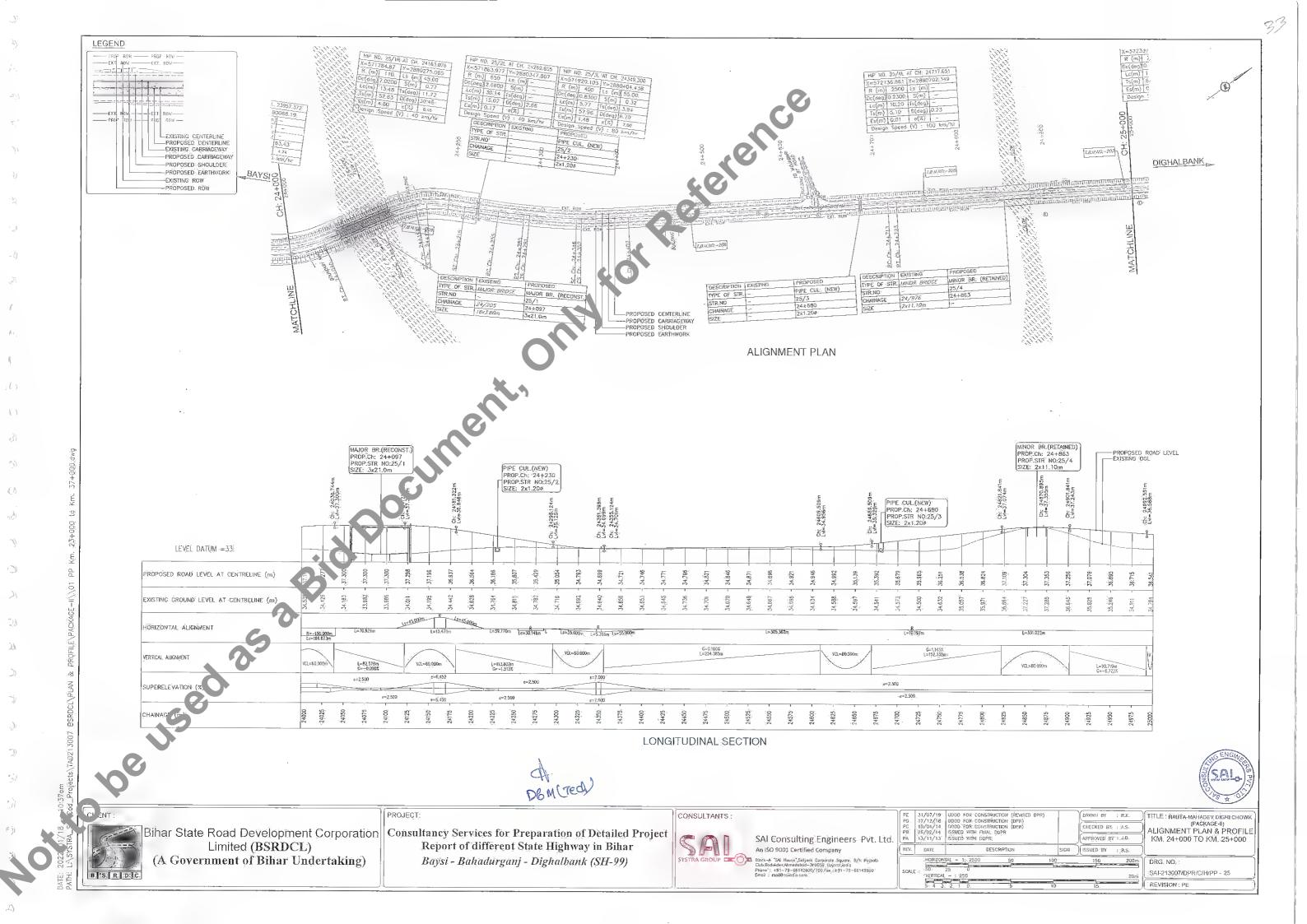


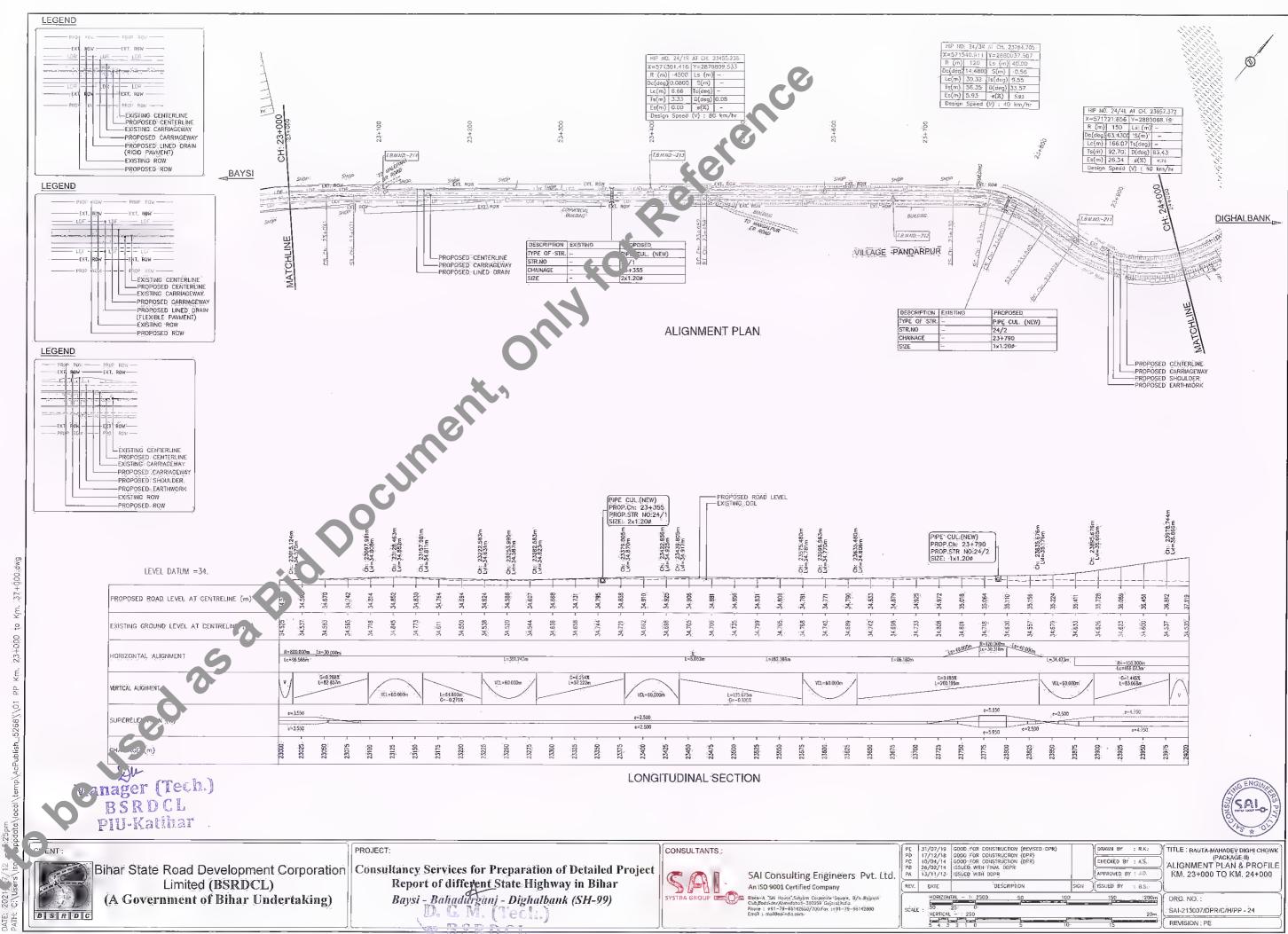












REVISION: PF

