

**A16-7**

***Earthwork Volume Data of Gwalior Bypass***



## Earthwork Volume Data of Gwalior Bypass

Volume Output report

Station (m)	Cut Area (m <sup>2</sup> )	Fill Area (m <sup>2</sup> )	Cut Volume (m <sup>3</sup> )	Fill Volume (m <sup>3</sup> )	Total Cut Volume (m <sup>3</sup> )	Total Fill Volume (m <sup>3</sup> )	Mass Ordinate (m <sup>3</sup> )	Remark
+0.000	0.000	4.543						
+100.000	0.000	0.000	0.000	227.145	0.000	227.145	-227.145	
+200.000	0.000	0.000	0.000	0.000	0.000	227.145	-227.145	
+300.000	0.000	26.746	0.000	1337.320	0.000	1564.465	-1564.465	
+400.000	0.000	73.633	0.000	5018.970	0.000	6583.435	-6583.435	
+500.000	0.000	169.610	0.000	12162.160	0.000	18745.595	-18745.595	
+600.000	0.000	143.729	0.000	15666.950	0.000	34412.545	-34412.545	
+700.000	0.000	85.317	0.000	11452.265	0.000	45864.810	-45864.810	
+750.000	0.000	52.842	0.000	3453.968	0.000	49318.778	-49318.778	
+800.000	0.000	45.147	0.000	2449.720	0.000	51768.498	-51768.498	
+900.000	0.000	44.248	0.000	4469.710	0.000	56238.208	-56238.208	
1+000.000	0.000	102.927	0.000	7358.710	0.000	63596.918	-63596.918	
1+050.000	0.000	117.181	0.000	5502.690	0.000	69099.608	-69099.608	
1+100.000	0.000	160.361	0.000	6938.545	0.000	76038.153	-76038.153	
1+200.000	0.000	146.811	0.000	15358.590	0.000	91396.743	-91396.743	
1+300.000	0.000	99.297	0.000	12305.420	0.000	103702.163	-103702.163	
1+400.000	0.000	39.733	0.000	6951.525	0.000	110653.688	-110653.688	
1+500.000	0.000	14.672	0.000	2720.265	0.000	113373.953	-113373.953	
1+540.000	0.000	14.672	0.000	586.888	0.000	113960.841	-113960.841	
1+600.000	0.000	7.590	0.000	667.866	0.000	114628.707	-114628.707	
1+700.000	0.000	44.731	0.000	2616.065	0.000	117244.772	-117244.772	
1+800.000	0.000	109.228	0.000	7697.965	0.000	124942.737	-124942.737	
1+866.667	0.000	109.228	0.000	7281.870	0.000	132224.607	-132224.607	
1+900.000	0.000	125.446	0.000	3911.231	0.000	136135.838	-136135.838	
2+000.000	0.000	93.599	0.000	10952.270	0.000	147088.108	-147088.108	
2+100.000	0.000	33.360	0.000	6347.955	0.000	153436.063	-153436.063	
2+200.000	0.000	14.324	0.000	2384.175	0.000	155820.238	-155820.238	
2+300.000	0.000	47.361	0.000	3085.250	0.000	158905.488	-158905.488	
2+400.000	0.000	125.068	0.000	8622.460	0.000	167527.948	-167527.948	
2+500.000	0.000	162.885	0.000	14397.630	0.000	181925.578	-181925.578	
2+600.000	0.000	133.935	0.000	14840.995	0.000	196766.573	-196766.573	
2+700.000	0.000	62.677	0.000	9830.625	0.000	206597.198	-206597.198	
2+758.807	0.000	62.677	0.000	3685.858	0.000	210283.056	-210283.056	
2+800.000	0.000	18.540	0.000	1672.800	0.000	211955.856	-211955.856	
2+900.000	0.000	3.760	0.000	1114.985	0.000	213070.841	-213070.841	
3+000.000	0.000	5.007	0.000	438.345	0.000	213509.186	-213509.186	
3+100.000	0.000	8.811	0.000	690.695	0.000	214200.081	-214200.081	
3+185.474	0.000	8.811	0.000	753.065	0.000	214953.146	-214953.146	
3+200.000	0.000	19.475	0.000	205.440	0.000	215158.586	-215158.586	
3+300.000	0.000	33.258	0.000	2636.625	0.000	217795.211	-217795.211	
3+400.000	0.000	78.411	0.000	5583.470	0.000	223378.681	-223378.681	
3+500.000	0.000	145.557	0.000	11158.406	0.000	234577.086	-234577.086	
3+600.000	0.000	159.608	0.000	15258.220	0.000	249835.306	-249835.306	
3+700.000	0.000	139.468	0.000	14953.765	0.000	264789.071	-264789.071	
3+800.000	0.000	78.813	0.000	10914.025	0.000	275703.096	-275703.096	
3+900.000	0.000	34.846	0.000	5682.930	0.000	281386.026	-281386.026	
4+000.000	0.000	22.814	0.000	2882.965	0.000	284268.991	-284268.991	
4+100.000	0.000	28.899	0.000	2585.650	0.000	286854.641	-286854.641	
4+200.000	0.000	66.414	0.000	4765.660	0.000	291620.301	-291620.301	
4+245.883	0.000	66.414	0.000	3047.231	0.000	294667.532	-294667.532	
4+300.000	0.000	134.690	0.000	5441.607	0.000	300109.138	-300109.138	
4+400.000	0.000	173.414	0.000	15405.155	0.000	315514.293	-315514.293	
4+500.000	0.000	199.281	0.000	18634.740	0.000	334149.033	-334149.033	
4+600.000	0.000	186.155	0.000	19271.790	0.000	353420.823	-353420.823	
4+672.549	0.000	186.155	0.000	13505.360	0.000	366926.184	-366926.184	
4+700.000	0.000	154.711	0.000	4678.511	0.000	371604.695	-371604.695	
4+800.000	0.000	130.107	0.000	14240.880	0.000	385845.575	-385845.575	
4+900.000	0.000	89.684	0.000	10989.520	0.000	396835.095	-396835.095	
5+000.000	0.000	49.007	0.000	6934.535	0.000	403769.630	-403769.630	
5+100.000	0.000	25.418	0.000	3721.270	0.000	407490.900	-407490.900	
5+200.000	0.000	14.355	0.000	1988.675	0.000	409479.575	-409479.575	
5+300.000	0.000	11.357	0.000	1285.620	0.000	410765.195	-410765.195	
5+352.700	0.000	11.357	0.000	598.524	0.000	411363.718	-411363.718	
5+400.000	0.000	11.693	0.000	545.118	0.000	411908.837	-411908.837	
5+500.000	0.000	10.114	0.000	1090.300	0.000	412999.137	-412999.137	
5+600.000	0.000	4.755	0.000	743.425	0.000	413742.562	-413742.562	
5+700.000	0.000	4.706	0.000	473.065	0.000	414215.627	-414215.627	

Station (m)	Cut Area (m2)	Fill Area (m2)	Cut Volume (m3)	Fill Volume (m3)	Total Cut Volume (m3)	Total Fill Volume (m3)	Mass Ordinate (m3)	Remark
5+800.000	0.000	2.667	0.000	368.655	0.000	414584.282	-414584.282	
5+900.000	0.000	5.866	0.000	426.635	0.000	415010.917	-415010.917	
6+000.000	0.000	18.931	0.000	1239.845	0.000	418250.762	-418250.762	
6+100.000	0.000	51.965	0.000	3544.805	0.000	419795.567	-419795.567	
6+186.034	0.000	51.965	0.000	4470.750	0.000	424266.317	-424266.317	
6+200.000	0.000	103.305	0.000	1084.276	0.000	425350.593	-425350.593	
6+300.000	0.000	124.823	0.000	11406.395	0.000	436756.988	-436756.988	
6+400.000	0.000	107.064	0.000	11594.320	0.000	448351.308	-448351.308	
6+500.000	0.000	57.789	0.000	8242.620	0.000	456593.928	-456593.928	
6+600.000	0.000	24.059	0.000	4092.375	0.000	460686.303	-460686.303	
6+700.000	0.000	6.500	0.000	1527.925	0.000	462214.228	-462214.228	
6+800.000	0.000	4.082	0.000	529.060	0.000	462743.288	-462743.288	
6+900.000	0.000	15.244	0.000	966.260	0.000	463709.548	-463709.548	
7+000.000	0.000	16.974	0.000	1610.870	0.000	465320.418	-465320.418	
7+019.367	0.000	16.974	0.000	328.732	0.000	465649.150	-465649.150	
7+100.000	0.000	28.895	0.000	1849.269	0.000	467498.419	-467498.419	
7+200.000	0.000	37.098	0.000	3299.630	0.000	470798.049	-470798.049	
7+300.000	0.000	63.554	0.000	5032.555	0.000	475830.604	-475830.604	
7+400.000	0.000	90.661	0.000	7710.705	0.000	483541.309	-483541.309	
7+500.000	0.000	100.241	0.000	9545.085	0.000	493086.394	-493086.394	
7+529.929	0.000	100.241	0.000	3000.106	0.000	496086.500	-496086.500	
7+600.000	0.000	77.010	0.000	6210.079	0.000	502296.579	-502296.579	
7+700.000	0.000	29.939	0.000	5347.450	0.000	507644.029	-507644.029	
7+800.000	0.000	26.034	0.000	2798.660	0.000	510442.689	-510442.689	
7+900.000	0.000	155.678	0.000	9085.575	0.000	519528.264	-519528.264	
8+000.000	0.000	127.842	0.000	14180.990	0.000	533709.254	-533709.254	
8+100.000	0.000	134.989	0.000	13146.565	0.000	546855.819	-546855.819	
8+200.000	0.000	280.677	0.000	20763.310	0.000	567639.129	-567639.129	
8+300.000	0.000	311.351	0.000	29601.410	0.000	597240.539	-597240.539	
8+363.262	0.000	311.351	0.000	19696.756	0.000	616937.295	-616937.295	
8+400.000	0.000	147.586	0.000	8430.175	0.000	625367.470	-625367.470	
8+500.000	0.000	110.811	0.000	12919.845	0.000	638287.315	-638287.315	
8+600.000	0.000	75.862	0.000	9333.615	0.000	647620.930	-647620.930	
8+700.000	0.000	20.123	0.000	4799.210	0.000	652420.140	-652420.140	
8+800.000	0.000	6.665	0.000	1339.350	0.000	653759.490	-653759.490	
8+900.000	0.000	2.491	0.000	457.775	0.000	654217.265	-654217.265	
9+000.000	0.000	21.758	0.000	1212.435	0.000	655429.700	-655429.700	
9+100.000	0.000	91.246	0.000	5650.170	0.000	661079.870	-661079.870	
9+200.000	0.000	90.505	0.000	9087.525	0.000	670167.395	-670167.395	
9+221.867	0.000	90.505	0.000	1979.050	0.000	672146.446	-672146.446	
9+300.000	0.000	169.175	0.000	10144.807	0.000	682291.252	-682291.252	
9+371.867	0.000	169.175	0.000	12158.066	0.000	694449.318	-694449.318	
9+400.000	0.000	176.722	0.000	4865.593	0.000	699314.912	-699314.912	
9+500.000	0.000	214.954	0.000	19583.815	0.000	718898.727	-718898.727	
9+600.000	0.000	92.435	0.000	15369.475	0.000	734268.202	-734268.202	
9+700.000	0.000	111.086	0.000	10176.040	0.000	744444.242	-744444.242	
9+800.000	0.000	28.532	0.000	6980.885	0.000	751425.127	-751425.127	
9+900.000	90.711	0.000	4535.565	1426.600	4535.565	752851.727	-748316.162	
10+000.000	413.349	0.000	25203.610	0.000	29738.575	752851.727	-723113.152	
10+040.157	413.349	0.000	16598.728	0.000	46337.303	752851.727	-706514.424	
10+100.000	399.633	0.000	24325.760	0.000	70663.063	752851.727	-682188.664	
10+190.157	399.633	0.000	36029.592	0.000	106692.655	752851.727	-646159.071	
10+200.000	12.864	6.330	2030.167	31.155	108722.822	752882.881	-644160.059	
10+300.000	0.931	16.575	689.745	1145.235	109412.567	754028.116	-644815.549	
10+400.000	2.082	5.319	150.650	1094.665	109563.217	755122.781	-645559.564	
10+500.000	104.323	0.000	5320.260	265.935	114883.477	755388.716	-640505.239	
10+600.000	45.096	0.000	7470.915	0.000	122354.392	755388.716	-633034.324	
10+700.000	139.729	0.000	9241.225	0.000	131595.617	755388.716	-623793.099	
10+800.000	89.361	0.000	11454.490	0.000	143050.107	755388.716	-612338.609	
10+900.000	0.000	24.256	4468.040	1212.810	147518.147	756601.526	-609083.379	
11+000.000	0.000	52.453	0.000	3835.465	147518.147	760436.991	-612918.844	
11+100.000	1.139	1.938	56.965	2719.535	147575.112	763156.526	-615581.414	
11+200.000	0.000	7.306	56.965	462.185	147632.077	763618.711	-615986.634	
11+300.000	0.000	132.843	0.000	7007.455	147632.077	770626.166	-622994.089	
11+400.000	0.000	61.760	0.000	9730.170	147632.077	780356.336	-632724.259	
11+500.000	0.000	21.511	0.000	4163.565	147632.077	784519.901	-636887.824	
11+559.423	0.000	21.511	0.000	1278.240	147632.077	785798.141	-638166.064	
11+600.000	0.099	17.609	2.009	793.690	147634.086	786591.831	-638957.745	
11+700.000	3.104	3.453	160.165	1053.120	147794.251	787644.951	-639850.700	
11+800.000	34.151	0.000	1862.765	172.660	149657.016	787817.611	-638160.595	
11+900.000	63.602	0.000	4887.665	0.000	154544.681	787817.611	-633272.930	

Station (m)	Cut Area (m2)	Fill Area (m2)	Cut Volume (m3)	Fill Volume (m3)	Total Cut Volume (m3)	Total Fill Volume (m3)	Mass Ordinate (m3)	Remark
12+000.000	10.209	10.104	3690.575	505.220	158235.256	788322.831	-630087.575	
12+100.000	0.000	90.274	510.460	5018.925	158745.716	793341.756	-634596.040	
12+200.000	0.000	107.144	0.000	9870.905	158745.716	803212.661	-644466.945	
12+259.288	0.000	107.144	0.000	6352.300	158745.716	809564.961	-650819.245	
12+300.000	0.000	63.256	0.000	3468.701	158745.716	813033.662	-654287.946	
12+400.000	24.199	0.000	1209.935	3162.790	159955.651	816196.452	-656240.801	
12+500.000	0.000	54.894	1209.935	2744.715	161165.586	818941.167	-657775.581	
12+600.000	2.257	0.187	112.835	2754.040	161278.421	821695.207	-660416.786	
12+695.000	0.000	115.385	107.193	5489.637	161385.614	827184.844	-665799.230	
12+745.000	0.000	115.385			161385.614	827184.844	-665799.230	Bridge
12+800.000	0.000	33.650	0.000	4098.449	161385.614	831283.293	-669897.678	
12+900.000	0.000	133.717	0.000	8368.310	161385.614	839651.603	-678265.988	
13+000.000	13.702	27.834	685.120	8077.530	162070.734	847729.133	-685658.398	
13+100.000	221.992	0.000	11784.740	1391.705	173855.474	849120.838	-675265.363	
13+200.000	174.358	0.000	19817.520	0.000	193672.994	849120.838	-655447.843	
13+300.000	93.831	0.000	13409.430	0.000	207082.424	849120.838	-642038.413	
13+400.000	52.805	0.000	7331.780	0.000	214414.204	849120.838	-634706.633	
13+500.000	39.616	0.000	4621.060	0.000	219035.264	849120.838	-630085.573	
13+600.000	0.000	9.367	1980.810	468.360	221016.074	849589.198	-628573.123	
13+700.000	0.000	62.239	0.000	3580.330	221016.074	853169.528	-632153.453	
13+800.000	0.000	105.433	0.000	8383.620	221016.074	861553.148	-640537.073	
13+900.000	0.000	156.463	0.000	13094.780	221016.074	874647.928	-653631.853	
14+000.000	0.000	142.851	0.000	14965.685	221016.074	889613.613	-668597.538	
14+100.000	0.000	121.514	0.000	13218.255	221016.074	902831.868	-681815.793	
14+200.000	0.000	68.730	0.000	9512.190	221016.074	912344.058	-691327.983	
14+300.000	0.000	43.548	0.000	5613.880	221016.074	917957.938	-696941.863	
14+400.000	0.000	25.492	0.000	3451.985	221016.074	921409.923	-700393.848	
14+447.409	0.000	25.492	0.000	1208.548	221016.074	922618.471	-701602.396	
14+500.000	0.000	31.197	0.000	1490.555	221016.074	924109.126	-703093.051	
14+600.000	0.000	36.458	0.000	3382.755	221016.074	927491.881	-706475.806	
14+700.000	0.000	42.731	0.000	3959.465	221016.074	931451.346	-710435.271	
14+800.000	0.000	35.275	0.000	3900.315	221016.074	935351.661	-714335.586	
14+900.000	0.002	15.207	0.115	2524.130	221016.189	937875.791	-716859.601	
15+000.000	0.000	12.196	0.120	1370.165	221016.309	939245.956	-718229.646	
15+100.000	0.000	47.882	0.005	3003.885	221016.314	942249.841	-721233.526	
15+200.000	0.000	432.081	0.000	23998.125	221016.314	966247.966	-745231.651	
15+300.000	0.000	195.037	0.000	31355.880	221016.314	997603.846	-776587.531	
15+400.000	0.000	25.506	0.000	11027.115	221016.314	1008630.961	-787614.646	
15+500.000	0.005	7.646	0.245	1657.555	221016.559	1010288.516	-789271.956	
15+600.000	8.782	0.000	439.345	382.280	221455.904	1010670.796	-789214.891	
15+700.000	5.067	0.025	692.445	1.270	222148.349	1010672.066	-788523.716	
15+800.000	0.077	7.468	257.205	374.665	222405.554	1011046.731	-788641.176	
15+900.000	0.000	15.158	3.860	1131.295	222409.414	1012178.026	-789768.611	
16+000.000	0.000	7.756	0.000	1145.715	222409.414	1013323.741	-790914.326	
16+100.000	0.067	8.164	3.355	796.035	222412.769	1014119.776	-791707.006	
16+200.000	0.195	7.894	13.125	802.925	222425.894	1014922.701	-792496.806	
16+300.000	0.000	19.229	9.770	1356.135	222435.664	1016278.836	-793843.171	
16+400.000	0.000	22.305	0.000	2076.670	222435.664	1018355.506	-795919.841	
16+500.000	0.000	34.038	0.000	2817.155	222435.664	1021172.661	-798736.996	
16+600.000	0.000	49.150	0.000	4159.405	222435.664	1025332.066	-802896.401	
16+700.000	0.000	46.112	0.000	4763.080	222435.664	1030095.146	-807659.481	
16+800.000	0.000	31.248	0.000	3867.975	222435.664	1033963.121	-811527.456	
16+900.000	0.000	25.375	0.000	2831.125	222435.664	1036794.246	-814358.581	
17+000.000	0.000	163.596	0.000	9448.530	222435.664	1046242.776	-823807.111	
17+100.000	0.000	157.305	0.000	16045.075	222435.664	1062287.851	-839852.186	
17+200.000	0.000	102.469	0.000	12988.735	222435.664	1075276.586	-852840.921	
17+300.000	0.000	69.000	0.000	8573.465	222435.664	1083850.051	-861414.386	
17+400.000	0.000	32.638	0.000	5081.930	222435.664	1088931.981	-866496.316	
17+426.031	0.000	32.638	0.000	849.621	222435.664	1089781.601	-867345.937	
17+500.000	0.000	16.101	0.000	1802.600	222435.664	1091584.201	-869148.537	
17+600.000	0.000	14.920	0.000	1551.050	222435.664	1093135.251	-870699.587	
17+700.000	0.000	22.356	0.000	1863.785	222435.664	1094999.036	-872563.372	
17+800.000	0.000	52.733	0.000	3754.465	222435.664	1098753.501	-876317.837	
17+900.000	0.000	73.081	0.000	6290.705	222435.664	1105044.206	-882608.542	
18+000.000	0.000	93.019	0.000	8304.965	222435.664	1113349.171	-890913.507	
18+100.000	0.000	130.307	0.000	11166.285	222435.664	1124515.456	-902079.792	
18+200.000	0.000	139.132	0.000	13471.935	222435.664	1137987.391	-915551.727	
18+300.000	0.000	132.503	0.000	13581.745	222435.664	1151569.136	-929133.472	
18+400.000	0.000	73.013	0.000	10275.835	222435.664	1161844.971	-939409.307	
18+500.000	0.000	41.016	0.000	5701.465	222435.664	1167546.436	-945110.772	

Station (m)	Cut Area (m2)	Fill Area (m2)	Cut Volume (m3)	Fill Volume (m3)	Total Cut Volume (m3)	Total Fill Volume (m3)	Mass Ordinate (m3)	Remark
18+600.000	0.000	37.254	0.000	3913.475	222435.664	1171459.911	-949024.247	
18+700.000	0.000	17.929	0.000	2759.110	222435.664	1174219.021	-951783.357	
18+800.000	0.000	35.181	0.000	2655.500	222435.664	1176874.521	-954438.857	
18+900.000	0.000	21.832	0.000	2850.660	222435.664	1179725.181	-957289.517	
19+000.000	0.240	14.336	12.020	1808.395	222447.684	1181533.576	-959085.892	
19+100.000	0.000	29.331	12.020	2183.325	222459.704	1183716.901	-961257.197	
19+200.000	0.000	57.467	0.000	4339.860	222459.704	1188056.761	-965597.057	
19+210.852	0.000	57.467	0.000	623.629	222459.704	1188680.390	-966220.686	
19+300.000	0.000	86.371	0.000	6411.404	222459.704	1195091.794	-972632.089	
19+400.000	0.000	57.033	0.000	7170.185	222459.704	1202261.979	-979802.274	
19+500.000	0.000	44.990	0.000	5101.145	222459.704	1207363.124	-984903.419	
19+600.000	0.000	42.049	0.000	4351.935	222459.704	1211715.059	-989255.354	
19+700.000	0.000	52.119	0.000	4708.400	222459.704	1216423.459	-993963.754	
19+800.000	0.000	19.662	0.000	3589.040	222459.704	1220012.499	-997552.794	
19+900.000	37.955	0.000	1897.760	983.085	224357.464	1220995.584	-996538.119	
20+000.000	73.856	0.000	5590.580	0.000	229948.044	1220995.584	-991047.539	
20+100.000	19.136	0.000	4649.600	0.000	234597.644	1220995.584	-986397.939	
20+200.000	0.000	64.618	956.780	3230.920	235554.424	1224226.504	-988672.079	
20+300.000	0.000	52.524	0.000	5857.140	235554.424	1230083.644	-994529.219	
20+400.000	0.000	22.306	0.000	3741.540	235554.424	1233825.184	-998270.759	
20+500.000	0.000	19.311	0.000	2080.870	235554.424	1235906.054	-1000351.629	
20+600.000	0.000	24.743	0.000	2202.705	235554.424	1238108.759	-1002554.334	
20+700.000	49.490	0.000	2474.475	1237.155	238028.899	1239345.914	-1001317.014	
20+800.000	78.498	0.000	6399.350	0.000	244428.249	1239345.914	-994917.694	
20+900.000	0.000	43.728	3924.875	2186.385	248353.124	1241532.299	-993179.174	
21+000.000	0.000	123.372	0.000	8354.975	248353.124	1249887.274	-1001534.149	
21+100.000	70.564	0.000	3528.190	6168.590	251881.314	1256055.864	-1004174.549	
21+200.000	14.155	3.689	4235.920	184.445	256117.234	1256240.309	-1000123.074	
21+300.000	0.507	2.836	733.100	326.225	256850.334	1256566.534	-999716.199	
21+400.000	0.000	20.981	25.370	1190.820	256875.704	1257757.354	-1000881.649	
21+430.492	0.000	20.981	0.000	639.747	256875.704	1258397.100	-1001521.396	
21+500.000	0.000	45.698	0.000	2317.369	256875.704	1260714.469	-1003838.785	
21+600.000	0.000	50.670	0.000	4818.430	256875.704	1265532.899	-1008657.195	
21+700.000	0.000	14.142	0.000	3240.615	256875.704	1268773.514	-1011897.810	
21+800.000	63.587	0.000	3179.345	707.105	260065.049	1269480.619	-1009425.570	
21+900.000	135.398	0.000	9949.250	0.000	270004.299	1269480.619	-999476.320	
22+000.000	86.121	0.000	11075.950	0.000	281080.249	1269480.619	-988400.370	
22+100.000	4.989	3.705	4555.500	185.240	285635.749	1269665.859	-984030.110	
22+200.000	0.023	6.538	250.615	512.130	285886.364	1270177.989	-984291.625	
22+300.000	0.000	22.384	1.180	1446.070	285887.524	1271624.059	-985736.535	
22+400.000	0.000	119.295	0.000	7083.905	285887.524	1278707.564	-992820.440	
22+500.000	0.000	79.262	0.000	9927.840	285887.524	1288635.804	-1002748.280	
22+600.000	0.222	23.297	11.100	5123.460	285898.624	1293759.264	-1007660.640	
22+700.000	0.000	36.930	11.100	3006.845	285909.724	1296766.109	-1010856.385	
22+800.000	0.000	27.212	0.000	3207.105	285909.724	1299973.214	-1014063.490	
22+900.000	1.132	5.184	56.575	1619.800	285966.299	1301593.014	-1015626.715	
23+000.000	9.572	1.720	535.150	345.195	286501.449	1301938.209	-1015436.760	
23+100.000	284.349	0.000	14696.015	86.000	301197.464	1302024.209	-1000826.745	
23+200.000	345.689	0.000	31501.880	0.000	332699.344	1302024.209	-969324.865	
23+300.000	4.334	4.680	17501.155	234.010	350200.499	1302258.219	-952057.720	
23+400.000	0.554	5.482	244.430	508.110	350444.929	1302766.329	-952321.400	
23+500.000	2.710	0.666	163.220	307.410	350608.149	1303073.739	-952465.590	
23+600.000	0.000	28.809	135.505	1373.760	350743.654	1304447.499	-953703.845	
23+700.000	0.000	78.464	0.000	5263.670	350743.654	1309711.169	-958967.515	
23+800.000	0.000	147.363	0.000	11291.345	350743.654	1321002.514	-970258.860	
23+900.000	0.000	232.595	0.000	18997.885	350743.654	1340000.399	-989256.745	
24+000.000	0.000	209.106	0.000	22085.080	350743.654	1362085.479	-1011341.825	
24+100.000	0.000	165.400	0.000	18725.315	350743.654	1380810.794	-1030067.140	
24+200.000	0.000	121.967	0.000	14368.350	350743.654	1395179.144	-1044435.490	
24+300.000	0.000	74.145	0.000	9805.620	350743.654	1404984.764	-1054241.110	
24+400.000	0.000	33.674	0.000	5390.940	350743.654	1410375.704	-1059632.050	
24+471.149	0.000	33.674	0.000	2395.836	350743.654	1412771.540	-1062027.886	
24+500.000	0.023	4.714	0.333	553.753	350743.988	1413325.293	-1062581.306	
24+600.000	0.994	2.173	50.850	344.320	350794.838	1413669.613	-1062874.776	
24+700.000	0.001	6.107	49.755	414.000	350844.593	1414083.613	-1063239.021	
24+800.000	0.000	22.529	0.060	1431.810	350844.653	1415515.423	-1064670.771	
24+900.000	0.000	40.269	0.000	3139.880	350844.653	1418655.303	-1067810.651	
25+000.000	0.000	83.882	0.000	6207.525	350844.653	1424862.828	-1074018.176	
25+049.273	0.000	83.882	0.000	4133.138	350844.653	1428995.966	-1078151.314	
25+100.000	0.000	137.106	0.000	5604.993	350844.653	1434600.960	-1083756.307	
25+200.000	0.000	113.475	0.000	12529.035	350844.653	1447129.995	-1096285.342	

Station (m)	Cut Area (m2)	Fill Area (m2)	Cut Volume (m3)	Fill Volume (m3)	Total Cut Volume (m3)	Total Fill Volume (m3)	Mass Ordinate (m3)	Remark
25+300.000	0.000	145.229	0.000	12985.195	350844.653	1460115.190	-1109270.537	
25+400.000	0.000	170.138	0.000	15818.340	350844.653	1475933.530	-1125088.877	
25+500.000	0.000	176.901	0.000	17351.950	350844.653	1493285.480	-1142440.827	
25+600.000	0.000	178.229	0.000	17756.515	350844.653	1511041.995	-1160197.342	
25+700.000	0.000	202.405	0.000	19031.685	350844.653	1530073.680	-1179229.027	
25+800.000	0.000	182.581	0.000	19249.310	350844.653	1549322.990	-1198478.337	
25+845.068	0.000	182.581	0.000	8226.698	350844.653	1557549.687	-1206705.035	
25+900.000	0.000	259.680	0.000	12149.418	350844.653	1569699.106	-1218854.453	
26+000.000	0.000	300.904	0.000	28029.170	350844.653	1597728.276	-1246883.623	
26+100.000	0.000	255.219	0.000	27806.125	350844.653	1625534.401	-1274689.748	
26+200.000	0.000	209.440	0.000	23232.950	350844.653	1648767.351	-1297922.698	
26+300.000	0.000	158.414	0.000	18392.715	350844.653	1667160.066	-1316315.413	
26+335.644	0.000	158.414	0.000	5646.509	350844.653	1672806.574	-1321961.922	
26+400.000	0.000	98.840	0.000	8277.903	350844.653	1681084.477	-1330239.825	
26+497.182	0.000	5.865	0.000	5087.721	350844.653	1686172.199	-1335327.546	

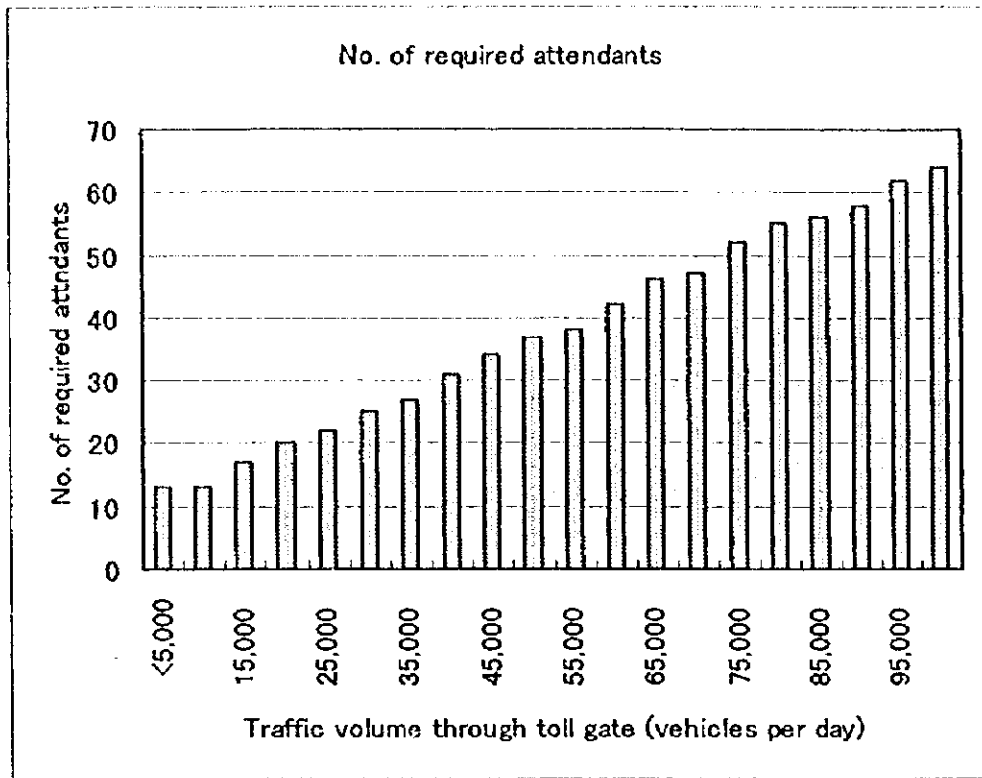
*Appendix 20*

*Cost Estimates*



A20 Cost Estimates

A20-1 No. of required attendants at a toll gate and traffic volume through it



Method of toll collection : Manual handling

Type of toll rates : Flat rates

Source: Manual on Viability Investigation for Ordinary Toll Roads, Japan Highway Public Corporation, 1983

*Appendix 21*

*Economic and Financial Analysis*

A21-1

*Profit/Loss Statement and Cash Flow  
of the SPV for Bareilly Bypass*



### 1. Profit/Loss Statement of the SPV for Bareilly Bypass (Grant 40% Case)

Bareilly-Grant 40% Case		(Unit Rs. million)													
Fiscal Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Revenue</b>	255.50	287.35	364.13	400.43	502.43	544.25	669.21	716.88	874.18	928.72	1,074.02	1,074.02	1,257.17	1,257.17	1,445.60
<b>Operating Expenditure</b>	155.80	157.70	159.94	162.09	164.70	204.49	207.50	210.28	213.77	216.94	222.59	244.89	248.75	252.87	257.28
(Toll Collection/Administration)	16.95	18.50	20.35	22.10	24.27	26.25	28.76	31.00	33.93	36.48	41.48	44.38	47.49	50.81	54.37
(Routine Maintenance)	5.08	5.44	5.82	6.22	6.66	7.12	7.62	8.16	8.73	9.34	9.99	10.69	11.44	12.24	13.10
(Depreciation)	133.77	133.77	133.77	133.77	133.77	171.12	171.12	171.12	171.12	171.12	171.12	189.82	189.82	189.82	189.82
<b>Operating Profit/Loss</b>	99.69	129.64	204.19	238.34	337.73	339.77	461.71	506.60	660.40	711.78	851.44	829.13	1,008.42	1,004.30	1,188.31
Government Grant (+)	292.00	146.00													
Interest Payment (-)	329.81	296.39	273.93	260.30	238.07	210.72	194.92	168.57	147.50	126.43	105.36	84.29	63.22	42.14	21.07
(Long-term loan)	316.08	295.01	273.93	252.86	231.79	210.72	189.65	168.57	147.50	126.43	105.36	84.29	63.22	42.14	21.07
(Short-term loan)	13.74	1.38	0.00	7.44	6.28	0.00	5.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Net Profit/Loss before Tax</b>	61.88	-20.74	-69.74	-21.96	99.66	129.05	266.80	338.03	512.90	585.35	746.08	744.85	945.21	962.15	1,167.24
Corporate Tax	21.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	143.41	182.79	182.49	231.58	235.73	408.53
<b>Net Profit/Loss after Tax</b>	40.23	-20.74	-69.74	-21.96	99.66	129.05	266.80	338.03	512.90	441.94	563.29	562.36	713.63	726.43	758.71
Assumptions:	Inflation: 7%	Equity: 33%	Loan: 67%	Long-term Loan Interest: 20%	Short-term Loan Interest: 18%	GOI Grants: 40%									
Fiscal Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
<b>Revenue</b>	1,445.60	1,649.16	1,649.16	1,919.32	1,919.32	2,178.93	2,178.93	2,489.42	2,489.42	2,876.25	2,876.25	3,268.76	3,268.76	3,779.99	3,779.99
<b>Operating Expenditure</b>	262.01	267.06	300.53	306.32	312.51	185.36	192.45	200.03	250.26	258.95	268.24	278.18	288.81	300.19	375.58
(Toll Collection/Administration)	58.18	62.25	66.61	71.27	76.26	81.59	87.31	93.42	99.96	106.95	114.44	122.45	131.02	140.19	150.01
(Routine Maintenance)	14.01	15.00	16.05	17.17	18.37	19.66	21.03	22.50	24.08	25.77	27.57	29.50	31.56	33.77	36.14
(Depreciation)	189.82	189.82	217.88	217.88	217.88	84.11	84.11	84.11	126.23	126.23	126.23	126.23	126.23	126.23	189.43
<b>Operating Profit/Loss</b>	1,183.59	1,382.10	1,348.63	1,613.00	1,606.81	1,993.57	1,986.48	2,289.39	2,239.15	2,617.31	2,608.02	2,990.58	2,979.94	3,479.80	3,404.42
Government Grant (+)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest Payment (-)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(Long-term loan)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(Short-term loan)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Net Profit/Loss before Tax</b>	1,183.59	1,382.10	1,348.63	1,613.00	1,606.81	1,993.57	1,986.48	2,289.39	2,239.15	2,617.31	2,608.02	2,990.58	2,979.94	3,479.80	3,404.42
Corporate Tax	414.26	483.74	472.02	564.55	562.38	697.75	695.27	801.29	783.70	916.06	912.81	1,046.70	1,042.98	1,217.93	1,191.55
<b>Net Profit/Loss after Tax</b>	769.33	898.37	876.61	1,048.45	1,044.43	1,295.82	1,291.21	1,488.10	1,455.45	1,701.25	1,695.21	1,943.88	1,936.96	2,261.87	2,212.87



### 3. Profit/Loss Statement of the SPV for Bareilly Bypass (Long-term Loan Interest 15% Case)

Bareilly-Long-term Interest 15% Case		(Unit Rs. million)													
Fiscal Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Revenue</b>	255.50	287.35	364.13	400.43	502.43	544.25	669.21	716.88	874.18	928.72	1,074.02	1,074.02	1,257.17	1,257.17	1,445.60
<b>Operating Expenditure</b> (Toll Collection/Administration)	128.66	130.56	132.80	134.95	137.56	177.35	180.35	183.13	186.63	189.79	195.44	217.75	221.60	225.73	230.14
(Routine Maintenance)	16.95	18.50	20.35	22.10	24.27	26.25	28.76	31.00	33.93	36.48	41.48	44.38	47.49	50.81	54.37
(Depreciation)	5.08	5.44	5.82	6.22	6.66	7.12	7.62	8.16	8.73	9.34	9.99	10.69	11.44	12.24	13.10
<b>Operating Profit/Loss</b>	106.63	106.63	106.63	106.63	106.63	143.97	143.97	143.97	143.97	143.97	143.97	162.67	162.67	162.67	162.67
Interest Payment	126.84	156.79	231.33	265.49	364.87	366.91	488.86	533.75	687.55	738.92	878.58	856.28	1,035.56	1,031.44	1,215.45
(Long-term loan)	228.63	230.81	227.99	211.24	185.34	152.42	137.18	121.94	106.69	91.45	76.21	60.97	45.73	30.48	15.24
(Short-term loan)	228.63	213.39	198.15	182.91	167.66	152.42	137.18	121.94	106.69	91.45	76.21	60.97	45.73	30.48	15.24
<b>Net Profit/Loss before Tax</b>	0.00	17.42	29.84	28.34	17.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corporate Tax	-101.80	-74.02	3.34	54.24	179.54	214.49	351.68	411.81	580.85	647.47	802.37	795.31	989.84	1,000.96	1,200.21
<b>Net Profit/Loss after Tax</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.89	142.31	158.63	196.58	194.85	346.44	350.53	420.07
Corporate Tax	-101.80	-74.02	3.34	54.24	179.54	214.49	351.68	310.92	439.54	488.84	605.79	600.46	643.40	650.62	780.14
<b>Assumptions</b>	Inflation: 7%	Equity : 93%	Loan : 67%	Long-term Loan Interest: 15%	Short-term Loan Interest: 18%	GOI Grants: 0%									

Fiscal Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
<b>Revenue</b>	1,445.60	1,649.16	1,649.16	1,919.32	1,919.32	2,178.93	2,178.93	2,489.42	2,489.42	2,876.25	2,876.25	3,268.76	3,268.76	3,779.99	3,779.99
<b>Operating Expenditure</b> (Toll Collection/Administration)	234.86	239.92	273.39	279.17	285.36	185.36	192.45	200.03	250.26	258.95	268.24	278.18	288.81	300.19	375.58
(Routine Maintenance)	58.18	62.25	66.61	71.27	76.26	81.59	87.31	93.42	99.96	106.95	114.44	122.45	131.02	140.19	150.01
(Depreciation)	14.01	15.00	16.05	17.17	18.37	19.66	21.03	22.50	24.08	25.77	27.57	29.50	31.56	33.77	36.14
<b>Operating Profit/Loss</b>	162.67	162.67	190.74	190.74	190.74	84.11	84.11	84.11	126.23	126.23	126.23	126.23	126.23	126.23	189.43
Interest Payment	1,210.73	1,409.24	1,375.77	1,640.14	1,633.95	1,993.57	1,986.48	2,289.39	2,239.15	2,617.31	2,608.02	2,990.58	2,979.94	3,479.80	3,404.42
(Long-term loan)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(Short-term loan)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Net Profit/Loss before Tax</b>	1,210.73	1,409.24	1,375.77	1,640.14	1,633.95	1,993.57	1,986.48	2,289.39	2,239.15	2,617.31	2,608.02	2,990.58	2,979.94	3,479.80	3,404.42
Corporate Tax	423.76	493.23	481.52	574.05	571.88	697.75	695.27	801.29	783.70	916.06	912.81	1,046.70	1,042.98	1,217.93	1,191.55
<b>Net Profit/Loss after Tax</b>	786.98	916.01	894.25	1,066.09	1,062.07	1,295.82	1,291.21	1,488.10	1,455.45	1,701.25	1,695.21	1,943.88	1,956.96	2,261.87	2,212.87





**5. Profit/Loss Statement of the SPV for Bareilly Bypass (Long-term Loan Interest 10% Case)**

(Unit Rs. million)															
Bareilly-Long-term Interest 10% Case															
Fiscal Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Revenue</b>	255.50	287.35	364.13	400.43	502.43	544.25	669.21	716.88	874.18	928.72	1,074.02	1,074.02	1,257.17	1,257.17	1,445.60
<b>Operating Expenditure</b>	122.80	124.70	126.94	129.09	131.70	171.49	174.50	177.28	180.77	183.94	189.59	211.89	215.75	219.87	224.28
(Toll Collection/Administration)	16.95	18.50	20.35	22.10	24.27	26.25	28.76	31.00	33.93	36.48	41.48	44.38	47.49	50.81	54.37
(Routine Maintenance)	5.08	5.44	5.82	6.22	6.66	7.12	7.62	8.16	8.73	9.34	9.99	10.69	11.44	12.24	13.10
(Depreciation)	100.77	100.77	100.77	100.77	100.77	138.12	138.12	138.12	138.12	138.12	138.12	156.82	156.82	156.82	156.82
<b>Operating Profit/Loss</b>	132.69	162.64	237.19	271.34	370.73	372.76	494.71	539.60	693.40	744.78	884.44	862.13	1,041.42	1,037.30	1,221.31
Interest Payment	140.71	131.51	121.95	112.57	103.18	93.80	84.42	75.04	65.66	56.28	46.90	37.52	28.14	18.76	9.38
(Long-term loan)	140.71	131.33	121.95	112.57	103.18	93.80	84.42	75.04	65.66	56.28	46.90	37.52	28.14	18.76	9.38
(Short-term loan)	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Net Profit/Loss before Tax</b>	-8.01	31.13	115.25	158.78	267.54	278.96	410.29	464.56	627.74	688.50	837.53	824.61	1,013.28	1,018.54	1,211.93
Corporate Tax	0.00	0.00	0.00	0.00	0.00	0.00	100.52	113.82	153.80	168.68	205.20	288.61	354.65	356.49	424.18
<b>Net Profit/Loss after Tax</b>	-8.01	31.13	115.25	158.78	267.54	278.96	309.77	350.74	473.94	519.81	632.34	536.00	658.63	662.05	787.76
Assumptions	Inflation: 7%	Equity: 33%	Loan: 67%	Long-term Loan Interest 10%	Short-term Loan Interest 18%	GOI Grants: 0%									

Fiscal Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
<b>Revenue</b>	1,445.60	1,649.16	1,649.16	1,919.32	1,919.32	2,178.93	2,178.93	2,489.42	2,489.42	2,876.25	2,876.25	3,268.76	3,268.76	3,779.99	3,779.99
<b>Operating Expenditure</b>	229.01	294.06	267.53	273.32	279.51	185.36	192.45	200.03	250.26	258.95	268.24	278.18	288.81	300.19	375.58
(Toll Collection/Administration)	58.18	62.25	66.61	71.27	76.26	81.59	87.31	93.42	99.96	106.95	114.44	122.45	131.02	140.19	150.01
(Routine Maintenance)	14.01	15.00	16.05	17.17	18.37	19.66	21.03	22.50	24.08	25.77	27.57	29.50	31.56	33.77	36.14
(Depreciation)	156.82	156.82	184.88	184.88	184.88	84.11	84.11	84.11	126.23	126.23	126.23	126.23	126.23	126.23	189.43
<b>Operating Profit/Loss</b>	1,216.59	1,415.10	1,381.63	1,646.00	1,639.81	1,993.57	1,986.48	2,289.39	2,239.15	2,617.31	2,608.02	2,990.58	2,979.94	3,479.80	3,404.42
Interest Payment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(Long-term loan)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(Short-term loan)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Net Profit/Loss before Tax</b>	1,216.59	1,415.10	1,381.63	1,646.00	1,639.81	1,993.57	1,986.48	2,289.39	2,239.15	2,617.31	2,608.02	2,990.58	2,979.94	3,479.80	3,404.42
Corporate Tax	425.81	495.28	483.57	576.10	573.93	697.75	695.27	801.29	783.70	916.06	912.81	1,046.70	1,042.98	1,217.93	1,191.55
<b>Net Profit/Loss after Tax</b>	790.78	919.81	898.06	1,069.90	1,065.88	1,295.82	1,291.21	1,488.10	1,455.45	1,701.25	1,695.21	1,943.88	1,936.96	2,261.87	2,212.87



**7. Profit/Loss Statement of the SPV for Bareilly Bypass (Toll Rate +20% Case)**

Bareilly-Toll Rate+20% Case													(Unit: Rs. million)											
Fiscal Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016									
<b>Revenue</b>	297.84	336.93	428.83	473.43	595.97	647.32	797.75	856.27	1,046.03	1,112.96	1,288.83	1,288.83	1,508.60	1,508.60	1,734.72									
<b>Operating Expenditure</b>	135.69	137.65	139.98	142.19	144.92	184.79	187.95	190.80	194.49	197.74	203.70	226.11	230.07	234.31	238.85									
(Toll Collection/Administration)	17.17	18.77	20.72	22.52	24.82	26.87	29.53	31.86	34.97	37.61	42.92	45.92	49.14	52.58	56.26									
(Routine Maintenance)	5.08	5.44	5.82	6.22	6.66	7.12	7.62	8.15	8.73	9.34	9.99	10.69	11.44	12.24	13.10									
(Depreciation)	113.45	113.45	113.45	113.45	113.45	150.79	150.79	150.79	150.79	150.79	150.79	169.49	169.49	169.49	169.49									
<b>Operating Profit/Loss</b>	162.15	199.29	288.85	331.24	451.05	462.53	609.81	665.46	851.54	915.22	1,085.12	1,062.72	1,278.53	1,274.29	1,495.87									
Interest Payment	332.11	340.07	342.78	329.85	306.97	258.40	252.63	177.13	154.99	132.84	110.70	88.56	66.42	44.28	22.14									
(Long-term loan)	332.11	309.97	287.83	265.69	243.55	221.41	199.27	177.13	154.99	132.84	110.70	88.56	66.42	44.28	22.14									
(Short-term loan)	0.00	30.10	54.95	64.16	63.42	36.99	33.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00									
<b>Net Profit/Loss before Tax</b>	-169.97	-140.78	-53.93	1.38	144.08	204.13	377.17	488.34	696.55	782.37	974.42	974.16	1,212.11	1,230.01	1,473.73									
Corporate Tax	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	170.66	191.68	238.73	238.67	296.97	430.50	515.80									
<b>Net Profit/Loss after Tax</b>	-169.97	-140.78	-53.93	1.38	144.08	204.13	377.17	488.34	525.90	590.69	735.69	735.49	915.14	799.51	957.92									
Assumptions													Inflation: 7%		Equity: 33%		Loan: 67%		Long-term Loan Interest: 20%		Short-term Loan Interest: 18%		GOI Grants: 0%	
Fiscal Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031									
<b>Revenue</b>	1,734.72	1,978.99	1,978.99	2,303.18	2,303.18	2,614.72	2,614.72	2,987.30	2,987.30	3,451.50	3,451.50	3,922.51	3,922.51	4,535.99	4,535.99									
<b>Operating Expenditure</b>	243.70	248.90	282.52	288.47	294.83	188.20	195.48	203.28	253.74	262.66	272.21	282.43	293.37	305.07	380.79									
(Toll Collection/Administration)	60.20	64.41	68.92	73.75	78.91	84.43	90.34	96.66	103.43	110.67	118.42	126.71	135.58	145.07	155.22									
(Routine Maintenance)	14.01	15.00	16.05	17.17	18.37	19.66	21.03	22.50	24.08	25.77	27.57	29.50	31.56	33.77	36.14									
(Depreciation)	169.49	169.49	197.56	197.56	197.56	84.11	84.11	84.11	126.23	126.23	126.23	126.23	126.23	126.23	189.43									
<b>Operating Profit/Loss</b>	1,491.01	1,730.09	1,696.47	2,014.71	2,008.35	2,426.52	2,419.23	2,784.02	2,733.56	3,188.84	3,179.29	3,640.07	3,629.14	4,230.93	4,155.20									
Interest Payment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00									
(Long-term loan)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00									
(Short-term loan)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00									
<b>Net Profit/Loss before Tax</b>	1,491.01	1,730.09	1,696.47	2,014.71	2,008.35	2,426.52	2,419.23	2,784.02	2,733.56	3,188.84	3,179.29	3,640.07	3,629.14	4,230.93	4,155.20									
Corporate Tax	521.85	605.53	593.76	705.15	702.92	849.28	846.73	974.41	956.75	1,116.09	1,112.75	1,274.03	1,270.20	1,480.82	1,454.32									
<b>Net Profit/Loss after Tax</b>	969.16	1,124.56	1,102.71	1,309.56	1,305.43	1,577.24	1,572.50	1,809.61	1,776.82	2,072.75	2,066.54	2,366.05	2,358.94	2,750.10	2,700.88									
Assumptions													Toll Rate: +20%											



**9. Profit/Loss Statement of the SPV for Bareilly Bypass (Grant X% Case)**

Bareilly-Grant X% Case	(Unit Rs. million)															
	Fiscal Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Revenue</b>	255.50	287.35	364.13	400.43	502.43	544.25	669.21	716.88	874.18	928.72	1,074.02	1,074.02	1,074.02	1,257.17	1,257.17	1,445.60
<b>Operating Expenditure</b>	143.95	145.85	148.08	150.23	152.84	192.63	195.64	198.42	201.92	205.08	210.73	293.03	293.03	296.89	241.01	245.43
(Toll Collection/Administration)	16.95	18.50	20.35	22.10	24.27	26.25	28.76	31.00	33.93	36.48	41.48	44.38	44.38	47.49	50.81	54.37
(Routine Maintenance)	5.08	5.44	5.82	6.22	6.66	7.12	7.62	8.16	8.73	9.34	9.99	10.69	10.69	11.44	12.24	13.10
(Depreciation)	121.91	121.91	121.91	121.91	121.91	159.26	159.26	159.26	159.26	159.26	159.26	177.96	177.96	177.96	177.96	177.96
<b>Operating Profit/Loss</b>	111.55	141.50	216.05	250.20	349.58	351.62	473.57	518.46	672.26	723.64	863.29	840.99	840.99	1,020.28	1,016.15	1,200.17
Government Grant (+)	98.55	49.28														
Interest Payment (-)	333.14	331.12	332.22	328.96	318.97	289.30	287.53	223.15	155.46	133.26	111.05	88.84	88.84	66.63	44.42	22.21
(Long-term loan)	333.14	310.93	288.72	266.51	244.30	222.09	199.88	177.67	155.46	133.26	111.05	88.84	88.84	66.63	44.42	22.21
(Short-term loan)	0.00	20.19	43.50	62.45	74.67	67.21	87.64	45.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Net Profit/Loss before Tax</b>	-123.04	-140.34	-116.17	-78.76	30.61	62.32	186.04	295.31	516.79	590.38	752.25	752.15	752.15	953.65	971.73	1,177.96
Corporate Tax	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	184.30	184.28	184.28	233.64	238.07	412.29
<b>Net Profit/Loss after Tax</b>	-123.04	-140.34	-116.17	-78.76	30.61	62.32	186.04	295.31	516.79	445.74	567.95	567.87	567.87	720.01	733.66	765.67
Assumptions		Inflation: 7%	Equity: 33%	Loan: 67%	Long-term Loan Interest: 20%	Short-term Loan Interest: 18%										GOI Grants: 13.5%

Fiscal Year	2017	2018	2019	2020	2021
<b>Revenue</b>	1,445.60	1,649.16	1,649.16	1,919.32	1,919.32
<b>Operating Expenditure</b>	250.15	255.20	288.68	294.46	300.65
(Toll Collection/Administration)	58.18	62.25	66.61	71.27	76.26
(Routine Maintenance)	14.01	15.00	16.05	17.17	18.37
(Depreciation)	177.96	177.96	206.02	206.02	206.02
<b>Operating Profit/Loss</b>	1,195.44	1,393.96	1,360.48	1,624.86	1,618.67
Government Grant (+)					
Interest Payment (-)	0.00	0.00	0.00	0.00	0.00
(Long-term loan)	0.00	0.00	0.00	0.00	0.00
(Short-term loan)	0.00	0.00	0.00	0.00	0.00
<b>Net Profit/Loss before Tax</b>	1,195.44	1,393.96	1,360.48	1,624.86	1,618.67
Corporate Tax	418.41	487.88	476.17	568.70	566.53
<b>Net Profit/Loss after Tax</b>	777.04	906.07	884.32	1,056.16	1,052.13

### 10. Cash Flow of the SPV for Bareilly Bypass (Grant X% Case)

Bareilly-Grant X% Case	(Unit Rs. million)																			
	Fiscal Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
<b>Cash In</b>																				
(Equity)	336.11	851.58	1,102.77	-1.12	-18.43	5.74	43.15	152.52	221.58	345.50	454.57	676.05	605.00	727.21	745.84	897.97	911.62	943.63		
(Long-term Loan)	336.11	190.10	1,004.22																	
(Government Grants)		661.47	1,004.22																	
(Net Profit after Tax)			98.55	-123.04	-140.34	-116.17	-78.76	30.61	62.32	186.04	295.31	516.79	445.74	567.95	567.87	720.01	733.66	765.67		
(+ Depreciation)				121.91	121.91	121.91	121.91	121.91	159.26	159.26	159.26	159.26	159.26	159.26	177.96	177.96	177.96	177.96		
<b>Cash Out</b>	336.11	851.58	1,102.77	111.05	223.22	352.69	458.00	525.89	708.49	597.95	363.69	111.05	111.05	111.05	111.05	447.52	111.05	111.05	111.05	111.05
(Initial Investment)	336.11	719.28	769.63																	
(Capitalised Interest)		132.29	333.14																	
(Overlay)				111.05	111.05	111.05	111.05	111.05	111.05	111.05	111.05	111.05	111.05	111.05	111.05	111.05	111.05	111.05	111.05	111.05
(Principal Payment of Long-term Loan)				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(Repayment of Short-term Loan)				0.00	112.17	241.65	346.95	414.84	414.84	373.37	486.90	252.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Cash In-Cash Out</b>	0.00	0.00	0.00	-112.17	-241.65	-346.95	-414.84	-373.37	-486.90	-252.65	90.88	565.01	493.95	493.95	616.16	298.51	786.92	800.57	832.59	832.59
Short-term Loan	0.00	0.00	0.00	112.17	241.65	346.95	414.84	373.37	486.90	252.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Net Cash Flow</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Cumulative Cash Flow</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cash Flow for Return on Equity	-336.11	-190.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Assumptions  
Equity: 33%    Loan: 67%    Long-term Loan Interest: 20%    Short-term Loan Interest: 18%    COI Grants: 13.5%

	Fiscal Year					
	2017	2018	2019	2020	2021	2021
<b>Cash In</b>	955.00	1,084.03	1,090.34	1,262.18	1,258.16	
(Equity)						
(Long-term Loan)						
(Government Grants)	777.04	906.07	884.32	1,056.16	1,052.13	
(Net Profit after Tax)	177.96	177.96	206.02	206.02	206.02	
(+ Depreciation)	0.00	0.00	504.66	0.00	0.00	
<b>Cash Out</b>						
(Initial Investment)						
(Capitalised Interest)			504.66			
(Overlay)						
(Principal Payment of Long-term Loan)	0.00	0.00	0.00	0.00	0.00	
(Repayment of Short-term Loan)	0.00	0.00	0.00	0.00	0.00	
<b>Cash In-Cash Out</b>	955.00	1,084.03	585.68	1,262.18	1,258.16	
Short-term Loan	0.00	0.00	0.00	0.00	0.00	
<b>Net Cash Flow</b>	955.00	1,084.03	585.68	1,262.18	1,258.16	
<b>Cumulative Cash Flow</b>	5,439.59	6,523.62	7,109.30	8,371.48	9,629.64	
Cash Flow for Return on Equity	955.00	1,084.03	585.68	1,262.18	1,258.16	

FIRR-KOE    20.0%

### 11. Profit/Loss Statement of the SPV for Bareilly Bypass (Concession X years Case)

(Unit Rs. million)

Bareilly-Concession X years Case	Fiscal Year											
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>Revenue</b>	255.50	287.35	364.13	400.43	502.43	544.25	669.21	716.88	874.18	928.72	1,074.02	1,074.02
<b>Operating Expenditure</b>	155.80	157.70	159.94	162.09	164.70	204.49	207.50	210.28	213.77	216.94	222.59	244.89
(Toll Collection/Administration)	16.95	18.50	20.35	22.10	24.27	26.25	28.76	31.00	33.93	36.48	41.48	44.38
(Routine Maintenance)	5.08	5.44	5.82	6.22	6.66	7.12	7.62	8.16	8.73	9.34	9.99	10.69
(Depreciation)	133.77	133.77	133.77	133.77	133.77	171.12	171.12	171.12	171.12	171.12	171.12	189.82
<b>Operating Profit/Loss</b>	99.69	129.64	204.19	238.34	337.73	339.77	461.71	506.60	660.40	711.78	851.44	829.13
Government Grant (+)	292.00	146.00										
Interest Payment (-)	329.81	296.39	273.93	260.30	238.07	210.72	194.92	168.57	147.50	126.43	105.36	84.29
(Long-term loan)	316.08	295.01	273.93	252.86	231.79	210.72	189.65	168.57	147.50	126.43	105.36	84.29
(Short-term loan)	13.74	1.38	0.00	7.44	6.28	0.00	5.27	0.00	0.00	0.00	0.00	0.00
<b>Net Profit/Loss before Tax</b>	61.88	-20.74	-69.74	-21.96	99.66	129.05	266.80	338.03	512.90	585.35	746.08	744.85
Corporate Tax	21.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	143.41	182.79	182.49
<b>Net Profit/Loss after Tax</b>	40.23	-20.74	-69.74	-21.96	99.66	129.05	266.80	338.03	512.90	441.94	563.29	562.36
Assumptions	Inflation: 7%		Equity: 33%	Loan: 67%			Long-term Loan Interest: 20%			Short-term Loan Interest: 18%		GOI Grants: 40%





**A21-2**

***Profit/Loss Statement and Cash Flow  
of the SPV for Gwalior Bypass***



### 13. Profit/Loss Statement of the SPV for Gwalior Bypass (Grant 40% Case)

		(Unit Rs. million)														
Gwalior-Grant 40% Case		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Fiscal Year	Fiscal Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Revenue</b>		186.70	205.44	255.72	277.11	341.47	365.93	448.56	476.61	575.91	607.81	729.85	729.85	831.32	831.32	949.31
<b>Operating Expenditure</b>		115.35	116.40	117.66	118.86	120.34	154.71	156.45	158.00	160.01	161.79	164.47	183.09	185.32	187.72	190.28
(Toll Collection/Administration)		8.93	9.64	10.54	11.35	12.41	13.33	14.59	15.64	17.10	18.30	20.35	21.78	23.30	24.93	26.68
(Routine Maintenance)		4.84	5.18	5.54	5.93	6.34	6.78	7.26	7.77	8.31	8.89	9.52	10.18	10.89	11.56	12.47
(Depreciation)		101.58	101.58	101.58	101.58	101.58	134.60	134.60	134.60	134.60	134.60	134.60	151.13	151.13	151.13	151.13
<b>Operating Profit/Loss</b>		71.35	89.04	138.06	158.25	221.13	211.22	292.12	318.61	415.90	446.03	565.38	546.76	645.99	643.60	759.03
Government Grant (+)		220.52	110.26									80.31	64.25	48.19	32.13	16.06
Interest Payment (-)		249.70	224.88	209.59	202.58	190.66	165.29	166.84	128.50	112.44	96.38	80.31	64.25	48.19	32.13	16.06
(Long-term loan)		240.94	224.88	208.82	192.75	176.69	160.63	144.57	128.50	112.44	96.38	80.31	64.25	48.19	32.13	16.06
(Short-term loan)		8.76	0.00	0.78	9.82	13.97	4.66	22.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Net Profit/Loss before Tax</b>		42.17	-25.58	-71.53	-44.32	30.47	45.94	125.28	190.11	303.46	349.65	485.07	482.51	597.80	611.47	742.96
Corporate Tax		14.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	85.66	118.84	118.21	146.46	149.81	260.04
<b>Net Profit/Loss after Tax</b>		27.41	-25.58	-71.53	-44.32	30.47	45.94	125.28	190.11	303.46	263.99	366.23	364.29	451.34	461.66	482.93
Assumptions		Inflation: 7%	Equity : 33%	Loan : 67%	Long-term Loan Interest: 20%	Short-term Loan Interest: 18%	COI Grants: 40%									
<b>Revenue</b>		949.31	1,093.89	1,093.89	1,255.23	1,255.23	1,431.21	1,431.21	1,649.15	1,649.15	1,883.24	1,883.24	2,161.06	2,161.06	2,466.98	2,466.98
<b>Operating Expenditure</b>		193.02	195.95	223.90	227.25	230.85	133.11	137.22	141.62	183.56	188.60	193.99	199.76	205.93	212.54	275.47
(Toll Collection/Administration)		28.55	30.55	32.68	34.97	37.42	40.04	42.84	45.84	49.05	52.48	56.16	60.09	64.29	68.80	73.61
(Routine Maintenance)		13.35	14.28	15.28	16.35	17.49	18.72	20.03	21.43	22.93	24.54	26.25	28.09	30.06	32.16	34.41
(Depreciation)		151.13	151.13	175.93	175.93	175.93	74.35	74.35	74.35	111.58	111.58	111.58	111.58	111.58	111.58	167.45
<b>Operating Profit/Loss</b>		756.29	897.94	869.99	1,027.98	1,024.39	1,298.10	1,293.99	1,507.53	1,465.59	1,694.64	1,689.25	1,961.30	1,955.12	2,254.45	2,191.51
Government Grant (+)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest Payment (-)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(Long-term loan)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(Short-term loan)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Net Profit/Loss before Tax</b>		756.29	897.94	869.99	1,027.98	1,024.39	1,298.10	1,293.99	1,507.53	1,465.59	1,694.64	1,689.25	1,961.30	1,955.12	2,254.45	2,191.51
Corporate Tax		264.70	314.28	304.50	359.79	358.54	454.34	452.90	527.64	512.96	593.12	591.24	686.45	684.29	789.06	767.03
<b>Net Profit/Loss after Tax</b>		491.59	583.66	565.49	668.19	665.85	843.77	841.09	979.89	952.63	1,101.52	1,098.01	1,274.84	1,270.83	1,465.39	1,424.48

### 14. Cash Flow of the SPV for Gwalior Bypass (Grant 40% Case)

Gwalior-Grant 40% Case	(Unit: Rs. million)																		
	Fiscal Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Cash In</b>																			
(Equity)	253.84	673.56	773.50	128.99	76.01	30.05	57.26	132.05	180.53	259.87	324.70	438.05	398.58	500.82	515.42	602.47	612.79	634.05	
(Long-term Loan)	253.84	21.82	552.97																
(Government Grants)																			
(Net Profit after Tax)				27.41	-25.58	-71.53	-44.32	30.47	45.94	125.28	190.11	303.46	263.99	366.23	364.29	451.34	461.66	482.93	
(+ Depreciation)				101.58	101.58	101.58	101.58	101.58	134.60	134.60	134.60	134.60	134.60	134.60	151.13	151.13	151.13	151.13	
<b>Cash Out</b>																			
(Initial Investment)	253.84	673.56	822.18	128.99	80.31	84.62	134.88	157.94	304.27	204.05	80.31	80.31	80.31	80.31	80.31	80.31	80.31	80.31	
(Capitalised Interest)	253.84	543.21	581.23																
(Overlay)																			
(Principal Payment of Long-term Loan)				80.31	80.31	80.31	80.31	80.31	80.31	80.31	80.31	80.31	80.31	80.31	80.31	80.31	80.31	80.31	
(Repayment of Short-term Loan)				48.68	0.00	4.31	54.57	77.62	25.89	123.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Cash In-Cash Out</b>				0.00	-4.31	-54.57	-77.62	-25.89	-123.74	55.82	244.39	357.74	318.27	420.51	137.86	522.15	532.47	553.74	
Short-term Loan				0.00	0.00	4.31	54.57	77.62	25.89	123.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Net Cash Flow				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Cumulative Cash Flow</b>				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Cash Flow for Return on Equity	-253.84	-21.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Assumptions	Equity: 30%	Loan: 67%	Long-term Loan Interest: 20%	Short-term Loan Interest: 18%	COI Grants: 40%														

Fiscal Year	FIRR-ROE														
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
<b>Cash In</b>	642.71	734.78	741.43	844.12	841.78	918.11	915.44	1,054.24	1,064.21	1,213.09	1,209.59	1,386.42	1,382.41	1,576.97	1,591.91
(Equity)															
(Long-term Loan)															
(Government Grants)															
(Net Profit after Tax)	491.59	583.66	565.49	668.19	665.85	843.77	841.09	979.89	952.63	1,101.52	1,098.01	1,274.84	1,270.83	1,465.39	1,424.48
(+ Depreciation)	151.13	151.13	175.93	175.93	175.93	74.35	74.35	74.35	111.58	111.58	111.58	111.58	111.58	111.58	167.45
<b>Cash Out</b>	0.00	0.00	446.09	0.00	0.00	0.00	0.00	0.00	669.46	0.00	0.00	0.00	0.00	0.00	1,004.68
(Initial Investment)															
(Capitalised Interest)															
(Overlay)															
(Principal Payment of Long-term Loan)															
(Repayment of Short-term Loan)															
<b>Cash In-Cash Out</b>	642.71	734.78	295.34	944.12	841.78	918.11	915.44	1,054.24	394.75	1,213.09	1,209.59	1,386.42	1,382.41	1,576.97	587.25
Short-term Loan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Net Cash Flow</b>	642.71	734.78	295.34	844.12	841.78	918.11	915.44	1,054.24	394.75	1,213.09	1,209.59	1,386.42	1,382.41	1,576.97	587.25
<b>Cumulative Cash Flow</b>	3,785.66	4,520.44	4,815.78	5,659.90	6,503.68	7,419.80	8,335.24	9,389.48	9,784.23	10,997.32	12,206.91	13,593.33	14,975.74	16,552.71	17,739.96
Cash Flow for Return on Equity	642.71	734.78	295.34	844.12	841.78	918.11	915.44	1,054.24	394.75	1,213.09	1,209.59	1,386.42	1,382.41	1,576.97	587.25

**15. Profit/Loss Statement of the SPV for Gwalior Bypass (Long-term Loan Interest 15% Case)**

		(Unit: Rs. million)															
		Gwalior-Long-term Interest 15% Case															
Fiscal Year		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
<b>Revenue</b>		186.70	205.44	255.72	277.11	341.47	365.93	448.56	476.61	575.91	607.81	729.95	729.85	831.32	831.32	949.31	
<b>Operating Expenditure</b>		94.29	95.34	96.61	97.80	99.28	133.65	135.39	136.94	138.95	140.73	143.41	162.03	164.27	166.66	169.22	
(Toll Collection/Administration)		8.93	9.64	10.54	11.35	12.41	13.33	14.59	15.64	17.10	18.30	20.35	21.78	23.30	24.93	26.68	
(Routine Maintenance)		4.84	5.18	5.54	5.93	6.34	6.78	7.26	7.77	8.31	8.89	9.52	10.18	10.89	11.66	12.47	
(Depreciation)		80.53	80.53	80.53	80.53	80.53	113.54	113.54	113.54	113.54	113.54	113.54	130.07	130.07	130.07	130.07	
<b>Operating Profit/Loss</b>		92.41	110.10	159.12	179.31	242.19	232.28	313.17	339.67	436.96	467.08	586.44	567.82	667.05	664.66	780.09	
Interest Payment		172.66	174.92	174.39	164.95	150.17	121.42	118.98	92.09	80.58	69.07	57.55	46.04	34.53	23.02	11.51	
(Long-term loan)		172.66	161.15	149.64	138.13	126.62	115.11	103.60	92.09	80.58	69.07	57.55	46.04	34.53	23.02	11.51	
(Short-term loan)		0.00	13.77	24.75	26.82	23.55	6.31	15.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Net Profit/Loss before Tax</b>		-80.26	-64.82	-15.28	14.36	92.01	110.86	194.19	247.58	356.38	398.02	528.88	521.77	632.52	641.63	768.57	
Corporate Tax		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	87.31	97.51	129.58	127.83	154.97	224.57	269.00	
<b>Net Profit/Loss after Tax</b>		-80.26	-64.82	-15.28	14.36	92.01	110.86	194.19	247.58	269.07	300.50	399.31	393.94	477.55	417.06	499.57	
<b>Assumptions</b>		Inflation: 7%		Equity: 33%		Loan: 67%		Long-term Loan Interest: 15%		Short-term Loan Interest: 18%		GOI Grants: 0%					
Fiscal Year		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	
<b>Revenue</b>		949.31	1,093.89	1,093.89	1,255.23	1,255.23	1,431.21	1,431.21	1,649.15	1,649.15	1,883.24	1,883.24	2,161.06	2,161.06	2,466.98	2,466.98	
<b>Operating Expenditure</b>		171.96	174.89	202.84	206.20	209.79	133.11	137.22	141.62	183.56	188.60	193.99	199.76	205.93	212.54	275.47	
(Toll Collection/Administration)		28.55	30.55	32.68	34.97	37.42	40.04	42.84	45.84	49.05	52.48	56.16	60.09	64.29	68.80	73.61	
(Routine Maintenance)		13.35	14.28	15.28	16.35	17.49	18.72	20.03	21.43	22.93	24.54	26.25	28.09	30.06	32.16	34.41	
(Depreciation)		130.07	130.07	154.87	154.87	154.87	74.35	74.35	74.35	111.58	111.58	111.58	111.58	111.58	111.58	167.45	
<b>Operating Profit/Loss</b>		777.34	918.99	891.05	1,049.04	1,045.45	1,298.10	1,293.99	1,507.53	1,465.59	1,694.64	1,689.25	1,961.30	1,955.12	2,254.45	2,191.51	
Interest Payment		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
(Long-term loan)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
(Short-term loan)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Net Profit/Loss before Tax</b>		777.34	918.99	891.05	1,049.04	1,045.45	1,298.10	1,293.99	1,507.53	1,465.59	1,694.64	1,689.25	1,961.30	1,955.12	2,254.45	2,191.51	
Corporate Tax		272.07	321.65	311.87	367.16	365.91	454.34	452.90	527.64	512.96	593.12	591.24	686.45	684.29	789.06	767.03	
<b>Net Profit/Loss after Tax</b>		505.27	597.35	579.18	681.87	679.54	843.77	841.09	979.89	952.63	1,101.52	1,098.01	1,274.84	1,270.83	1,465.39	1,424.48	

**16. Cash Flow of the SPV for Gwalior Bypass (Long-term Loan Interest 15% Case)**

Gwalior-Long-term Interest: 15% Case	(Unit Rs. million)																			
	Fiscal Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
<b>Cash In</b> (Equity)	253.84	602.79	753.90	0.27	15.71	65.25	94.88	172.54	324.40	307.73	361.12	382.60	414.04	512.85	524.01	607.62	547.13	629.64		
(Long-term Loan)	253.84	205.59	753.90																	
(Government Grants)																				
(Net Profit after Tax)																				
(+ Depreciation)																				
<b>Cash Out</b>	253.84	602.79	753.90	76.74	153.21	214.25	225.74	207.59	309.87	162.21	76.74	76.74	76.74	76.74	76.74	373.99	76.74	76.74		
(Initial Investment)	253.84	543.21	581.23																	
(Capitalised Interest)		59.58	172.66																	
(Overlay)				76.74	76.74	76.74	76.74	76.74	198.07						297.25					
(Principal Payment of Long-term Loan)				76.47	137.51	149.00	149.00	130.85	35.06	85.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
(Repayment of Short-term Loan)				76.47	137.51	149.00	130.85	35.06	35.06	85.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
<b>Cash In-Cash Out</b>	0.00	0.00	0.00	-76.47	-137.51	-149.00	-130.85	-35.06	-85.47	145.52	284.38	305.86	337.30	436.11	150.02	530.88	470.39	552.90		
Short-term Loan	0.00	0.00	0.00	76.47	137.51	149.00	130.85	35.06	85.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
<b>Net Cash Flow</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	145.52	284.38	305.86	337.30	436.11	150.02	530.88	470.39	552.90		
<b>Cumulative Cash Flow</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	145.52	429.90	735.76	1,073.07	1,509.17	2,190.07	2,660.46	3,213.36			
Cash Flow for Return on Equity	-253.84	-205.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	145.52	284.38	305.86	337.30	436.11	150.02	530.88	470.39	552.90		
Assumptions	Equity: 33%	Loan: 67%	Long-term Loan Interest: 15%	Short-term Loan Interest: 18%												GOI Grants: 0%				

Fiscal Year	FIRR-ROE														
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
<b>Cash In</b> (Equity)	635.34	727.41	734.06	836.75	834.41	918.11	915.44	1,054.24	1,064.21	1,213.09	1,209.59	1,386.42	1,382.41	1,576.97	1,591.93
(Long-term Loan)															
(Government Grants)															
(Net Profit after Tax)	505.27	597.35	579.18	681.87	679.54	843.77	841.09	979.89	952.63	1,101.52	1,098.01	1,274.84	1,270.83	1,465.39	1,424.48
(+ Depreciation)	130.07	130.07	154.87	154.87	154.87	74.35	74.35	74.35	111.58	111.58	111.58	111.58	111.58	111.58	167.45
<b>Cash Out</b>	0.00	0.00	446.09	0.00	0.00	0.00	0.00	0.00	669.46	0.00	0.00	0.00	0.00	0.00	1,004.68
(Initial Investment)															
(Capitalised Interest)															
(Overlay)			446.09						669.46						
(Principal Payment of Long-term Loan)															
(Repayment of Short-term Loan)															
<b>Cash In-Cash Out</b>	635.34	727.41	287.97	836.75	834.41	918.11	915.44	1,054.24	394.75	1,213.09	1,209.59	1,386.42	1,382.41	1,576.97	587.25
Short-term Loan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Net Cash Flow</b>	635.34	727.41	287.97	836.75	834.41	918.11	915.44	1,054.24	394.75	1,213.09	1,209.59	1,386.42	1,382.41	1,576.97	587.25
<b>Cumulative Cash Flow</b>	3,848.70	4,576.12	4,864.08	5,700.83	6,535.25	7,453.36	8,368.80	9,423.04	9,817.79	11,030.89	12,240.48	13,626.90	15,009.30	16,586.27	17,173.52
Cash Flow for Return on Equity	635.34	727.41	287.97	836.75	834.41	918.11	915.44	1,054.24	394.75	1,213.09	1,209.59	1,386.42	1,382.41	1,576.97	587.25

**17. Profit/Loss Statement of the SPV for Gwalior Bypass (Long-term Loan Interest 10% Case)**

		(Unit: Rs. million)																
		Gwalior-Long-term Interest 10% Case																
Fiscal Year		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016		
<b>Revenue</b>		186.70	205.44	255.72	277.11	341.47	365.93	448.56	476.61	575.91	607.81	729.85	729.85	831.32	831.32	949.31		
<b>Operating Expenditure</b>		89.87	90.92	92.18	93.38	94.86	129.23	130.97	132.52	134.53	136.31	138.98	157.61	159.84	162.24	164.80		
(Toll Collection/Administration)		8.93	9.64	10.54	11.35	12.41	13.33	14.59	15.64	17.10	18.30	20.35	21.78	23.30	24.93	26.68		
(Routine Maintenance)		4.84	5.18	5.54	5.93	6.34	6.78	7.26	7.77	8.31	8.89	9.52	10.18	10.89	11.66	12.47		
(Depreciation)		76.10	76.10	76.10	76.10	76.10	109.11	109.11	109.11	109.11	109.11	109.11	125.64	125.64	125.64	125.64		
<b>Operating Profit/Loss</b>		96.83	114.52	163.54	183.73	246.61	236.70	317.60	344.09	441.38	471.51	590.86	572.24	671.47	669.08	784.51		
Interest Payment		106.26	99.98	92.09	85.01	77.93	70.84	63.76	56.67	49.59	42.51	35.42	28.34	21.25	14.17	7.08		
(Long-term loan)		106.26	99.18	92.09	85.01	77.93	70.84	63.76	56.67	49.59	42.51	35.42	28.34	21.25	14.17	7.08		
(Short-term loan)		0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
<b>Net Profit/Loss before Tax</b>		-9.43	14.59	71.45	98.72	168.68	165.86	253.84	287.42	391.79	429.00	555.44	543.90	650.22	654.91	777.42		
Corporate Tax		0.00	0.00	0.00	0.00	0.00	0.00	62.19	70.42	95.99	105.11	136.08	190.37	227.58	229.22	272.10		
<b>Net Profit/Loss after Tax</b>		-9.43	14.59	71.45	98.72	168.68	165.86	191.65	217.00	295.80	323.90	419.36	353.54	422.64	425.69	505.33		
Assumptions		Inflation: 7%	Equity: 33%	Loan: 67%	Long-term Loan Interest: 10%	Short-term Loan Interest: 18%	GOI Grants: 0%											

		(Unit: Rs. million)																
		Gwalior-Long-term Interest 10% Case																
Fiscal Year		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031		
<b>Revenue</b>		949.31	1,093.89	1,093.89	1,255.23	1,255.23	1,431.21	1,431.21	1,649.15	1,649.15	1,883.24	1,883.24	2,161.06	2,161.06	2,466.98	2,466.98		
<b>Operating Expenditure</b>		167.54	170.47	198.42	201.77	205.37	133.11	137.22	141.62	139.56	188.60	193.99	199.76	205.93	212.54	275.47		
(Toll Collection/Administration)		28.55	30.55	32.68	34.97	37.42	40.04	42.84	45.84	49.05	52.48	56.16	60.09	64.29	68.80	73.61		
(Routine Maintenance)		13.35	14.28	15.28	16.35	17.49	18.72	20.03	21.43	22.93	24.54	26.25	28.09	30.06	32.16	34.41		
(Depreciation)		125.64	125.64	150.45	150.45	150.45	74.35	74.35	74.35	111.58	111.58	111.58	111.58	111.58	111.58	167.45		
<b>Operating Profit/Loss</b>		781.77	923.42	895.47	1,053.46	1,049.87	1,298.10	1,293.99	1,507.53	1,465.59	1,694.64	1,689.25	1,961.30	1,955.12	2,254.45	2,191.51		
Interest Payment		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
(Long-term loan)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
(Short-term loan)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
<b>Net Profit/Loss before Tax</b>		781.77	923.42	895.47	1,053.46	1,049.87	1,298.10	1,293.99	1,507.53	1,465.59	1,694.64	1,689.25	1,961.30	1,955.12	2,254.45	2,191.51		
Corporate Tax		273.62	323.20	313.42	368.71	367.45	454.34	452.90	527.64	512.96	593.12	591.24	686.45	684.29	789.06	767.03		
<b>Net Profit/Loss after Tax</b>		508.15	600.22	582.06	684.75	682.41	843.77	841.09	979.89	952.63	1,101.52	1,098.01	1,274.84	1,270.83	1,465.39	1,424.48		

### 18. Cash Flow of the SPV for Gwalior Bypass (Long-term Loan Interest 10% Case)

Gwalior-Long-term Interest 10% Case	(Unit: Rs. million)																		
	Fiscal Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Cash In</b> (Equity)	253.84	580.72	687.50	66.67	90.69	147.55	174.83	244.79	274.96	300.76	326.11	404.92	433.01	528.47	479.18	548.29	551.34	630.97	
(Long-term Loan)	253.84	580.72	687.50																
(Government Grants)				-9.43	14.59	71.45	98.72	168.68	165.86	191.65	217.00	295.80	373.90	419.36	353.54	422.64	425.69	505.33	
(Net Profit after Tax)				76.10	76.10	76.10	76.10	76.10	109.11	109.11	109.11	109.11	109.11	109.11	125.64	125.64	125.64	125.64	
(+ Depreciation)				70.84	75.02	70.84	70.84	70.84	268.91	70.84	70.84	70.84	70.84	70.84	368.09	70.84	70.84	70.84	
<b>Cash Out</b>	253.84	580.72	687.50	70.84	75.02	70.84	70.84	70.84	268.91	70.84	70.84	70.84	70.84	70.84	368.09	70.84	70.84	70.84	
(Initial Investment)	253.84	543.21	581.23																
(Capitalised Interest)		37.51	106.26																
(Overlay)				70.84	70.84	70.84	70.84	70.84	198.07	70.84	70.84	70.84	70.84	70.84	297.25	70.84	70.84	70.84	
(Principal Payment of Long-term Loan)				70.84	70.84	70.84	70.84	70.84	70.84	70.84	70.84	70.84	70.84	70.84	70.84	70.84	70.84	70.84	
(Repayment of Short-term Loan)				4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Cash In-Cash Out</b>	0.00	0.00	0.00	-4.17	15.68	76.71	103.98	173.94	6.07	229.92	255.27	334.07	362.17	457.63	111.09	477.45	480.49	560.13	
Short-term Loan	0.00	0.00	0.00	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Net Cash Flow</b>	0.00	0.00	0.00	0.00	15.68	76.71	103.98	173.94	6.07	229.92	255.27	334.07	362.17	457.63	111.09	477.45	480.49	560.13	
<b>Cumulative Cash Flow</b>	0.00	0.00	0.00	0.00	15.68	92.39	196.37	370.31	376.38	606.30	861.57	1,195.65	1,557.82	2,015.45	2,126.54	2,603.98	3,084.48	3,644.61	
Cash Flow for Return on Equity	-253.84	-205.59	0.00	0.00	15.68	76.71	103.98	173.94	6.07	229.92	255.27	334.07	362.17	457.63	111.09	477.45	480.49	560.13	
Assumptions	Equity: 33%	Loan: 67%	Long-term Loan Interest: 10%	Short-term Loan Interest: 18%										COI Grants: 0%					

Fiscal Year	(Unit: Rs. million)																
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031		
<b>Cash In</b> (Equity)	633.79	725.87	732.51	835.20	832.87	918.11	915.44	1,054.24	1,064.21	1,213.09	1,209.59	1,386.42	1,392.41	1,576.97	1,591.93		
(Long-term Loan)																	
(Government Grants)	508.15	600.22	582.06	684.75	682.41	843.77	841.09	979.89	952.63	1,101.52	1,098.01	1,274.84	1,270.83	1,465.39	1,424.48		
(Net Profit after Tax)	125.64	125.64	150.45	150.45	150.45	74.35	74.35	74.35	111.58	111.58	111.58	111.58	111.58	111.58	167.45		
(- Depreciation)	0.00	0.00	446.09	0.00	0.00	0.00	0.00	0.00	669.46	0.00	0.00	0.00	0.00	0.00	1,004.68		
<b>Cash Out</b>	633.79	725.87	732.51	835.20	832.87	918.11	915.44	1,054.24	1,064.21	1,213.09	1,209.59	1,386.42	1,392.41	1,576.97	1,591.93		
(Initial Investment)																	
(Capitalised Interest)			446.09														
(Overlay)																	
(Principal Payment of Long-term Loan)																	
(Repayment of Short-term Loan)																	
<b>Cash In-Cash Out</b>	0.00	0.00	286.42	835.20	832.87	918.11	915.44	1,054.24	394.75	1,213.09	1,209.59	1,386.42	1,392.41	1,576.97	587.25		
Short-term Loan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
<b>Net Cash Flow</b>	633.79	725.87	286.42	835.20	832.87	918.11	915.44	1,054.24	394.75	1,213.09	1,209.59	1,386.42	1,392.41	1,576.97	587.25		
<b>Cumulative Cash Flow</b>	4,278.40	5,004.27	5,290.68	6,125.88	6,958.75	7,876.87	8,792.31	9,846.55	10,241.30	11,454.39	12,663.98	14,050.40	15,432.81	17,009.78	17,597.03		
Cash Flow for Return on Equity	633.79	725.87	286.42	835.20	832.87	918.11	915.44	1,054.24	394.75	1,213.09	1,209.59	1,386.42	1,392.41	1,576.97	587.25		
FIRR-ROE	23.1%																



**19. Profit/Loss Statement of the SPV for Gwalior Bypass (Toll Rate +20% Case)**

Gwalior-Toll Rate+20% Case		(Unit Rs. million)														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Revenue</b>	Fiscal Year	224.04	246.53	306.87	332.53	409.76	439.12	538.28	571.93	691.09	729.38	875.82	875.82	997.58	997.58	1,139.17
<b>Operating Expenditure</b>		99.63	100.69	102.01	103.22	104.77	139.17	140.99	142.57	144.68	146.49	149.29	167.96	170.25	172.70	175.33
(Toll Collection/Administration)		9.12	9.84	10.80	11.62	12.75	13.70	15.04	16.12	17.68	18.91	21.08	22.56	24.14	25.83	27.64
(Routine Maintenance)		4.84	5.18	5.54	5.93	6.34	6.78	7.26	7.77	8.31	8.89	9.52	10.18	10.89	11.66	12.47
(Depreciation)		85.68	85.68	85.68	85.68	85.68	118.69	118.69	118.69	118.69	118.69	118.69	135.22	135.22	135.22	135.22
<b>Operating Profit/Loss</b>		124.41	145.83	204.86	229.31	304.99	299.95	397.29	429.36	546.41	582.89	726.53	707.86	827.33	824.88	963.84
Interest Payment		250.81	256.47	259.30	252.00	238.99	210.02	206.45	149.06	117.05	100.33	83.60	66.88	50.16	33.44	16.72
(Long-term loan)		250.81	234.09	217.37	200.65	183.93	167.21	150.49	133.77	117.05	100.33	83.60	66.88	50.16	33.44	16.72
(Short-term loan)		0.00	22.38	41.92	51.35	55.06	42.81	55.96	15.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Net Profit/Loss before Tax</b>		-126.40	-110.64	-54.44	-22.70	66.00	89.93	190.84	280.30	429.37	482.57	642.92	640.97	777.17	791.44	947.12
Corporate Tax		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	118.23	157.52	157.04	190.41	193.90	331.49
<b>Net Profit/Loss after Tax</b>		-126.40	-110.64	-54.44	-22.70	66.00	89.93	190.84	280.30	429.37	364.34	485.41	483.94	586.76	597.53	615.63
Assumptions		Inflation: 7%			Equity : 33%			Long-term Loan Interest: 20%			Short-term Loan Interest: 18%			GOI Grants: 0%		
Gwalior-Toll Rate+20% Case		(Unit Rs. million)														
Fiscal Year		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
<b>Revenue</b>		1,139.17	1,312.67	1,312.67	1,506.28	1,506.28	1,717.45	1,717.45	1,978.98	1,978.98	2,259.89	2,259.89	2,593.27	2,593.27	2,960.38	2,960.38
<b>Operating Expenditure</b>		178.13	181.14	209.16	212.60	216.28	134.54	138.76	143.27	185.32	190.48	196.00	201.91	208.24	215.00	278.11
(Toll Collection/Administration)		29.57	31.64	33.86	36.23	38.76	41.48	44.38	47.48	50.81	54.37	58.17	62.24	66.60	71.26	76.25
(Routine Maintenance)		13.35	14.28	15.28	16.35	17.49	18.72	20.03	21.43	22.93	24.54	26.25	28.09	30.06	32.16	34.41
(Depreciation)		135.22	135.22	160.02	160.02	160.02	74.35	74.35	74.35	111.58	111.58	111.58	111.58	111.58	111.58	167.45
<b>Operating Profit/Loss</b>		961.03	1,131.53	1,103.51	1,293.68	1,290.00	1,582.91	1,578.69	1,835.72	1,793.66	2,069.41	2,063.88	2,391.35	2,385.03	2,745.38	2,682.27
Interest Payment		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(Long-term loan)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(Short-term loan)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Net Profit/Loss before Tax</b>		961.03	1,131.53	1,103.51	1,293.68	1,290.00	1,582.91	1,578.69	1,835.72	1,793.66	2,069.41	2,063.88	2,391.35	2,385.03	2,745.38	2,682.27
Corporate Tax		336.36	396.03	386.23	452.79	451.50	554.02	552.54	642.50	627.78	724.29	722.36	836.97	834.76	960.88	938.79
<b>Net Profit/Loss after Tax</b>		624.67	735.49	717.28	840.89	838.50	1,028.89	1,026.15	1,193.21	1,165.88	1,345.11	1,341.52	1,554.38	1,550.27	1,784.50	1,743.47
Assumptions		Toll Rate: +20%														

## 20. Cash Flow of the SPV for Gwalior Bypass (Toll Rate +20% Case)

Gwalior-Toll Rate+20% Case	(Unit: Rs. million)																			
	Fiscal Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
<b>Cash In</b>																				
(Equity)	253.84	627.61	832.05	-40.73	-24.97	31.24	62.98	151.67							604.09	619.15	721.98	732.75	750.84	
(Long-term Loan)	253.84	205.59	832.05																	
(Government Grants)																				
(Net Profit after Tax)				-126.40	-110.64	-54.44	-22.70	66.00		89.93	190.84	280.30	429.37	364.34	485.41	483.94	586.76	597.53	615.63	
(+ Depreciation)				85.68	85.68	85.68	85.68	85.68		118.69	118.69	118.69	118.69	118.69	118.69	135.22	135.22	135.22	135.22	
<b>Cash Out</b>	253.84	627.61	832.05	83.60	207.94	316.51	368.88	369.51		519.51	394.49	168.57	83.60	83.60	83.60	380.85	83.60	83.60	83.60	
(Initial Investment)	253.84	543.21	581.23																	
(Capitalised Interest)		84.40	250.81																	
(Overlay)										198.07						297.25				
(Principal Payment of Long-term Loan)				83.60	83.60	83.60	83.60	83.60		83.60	83.60	83.60	83.60	83.60	83.60	83.60	83.60	83.60	83.60	
(Repayment of Short-term Loan)				124.33	232.91	285.28	305.90	305.90		237.84	310.89	84.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Cash In-Cash Out</b>				-124.33	-232.91	-285.28	-305.90	-237.84		-310.89	-84.97	230.42	464.45	399.42	520.49	238.30	638.37	649.15	667.24	
Short-term Loan				0.00	0.00	0.00	0.00	0.00		310.89	84.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Net Cash Flow</b>				124.33	232.91	285.28	305.90	237.84		0.00	0.00	230.42	464.45	399.42	520.49	238.30	638.37	649.15	667.24	
<b>Cumulative Cash Flow</b>				0.00	0.00	0.00	0.00	0.00		0.00	0.00	230.42	694.86	1,094.28	1,614.77	1,853.07	2,491.44	3,140.59	3,807.83	
Cash Flow for Return on Equity	-253.84	-205.59	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	230.42	464.45	399.42	520.49	238.30	638.37	649.15	667.24	
Assumptions: Equity: 30%    Loan: 67%    Long-term Loan Interest: 20%    Short-term Loan Interest: 18%    COI Grants: 0%    Toll Rate: +20%																				
<b>Cash In</b>	Fiscal Year																			
(Equity)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031					
(Long-term Loan)	759.89	870.71	877.30	1,000.92	998.52	1,103.24	1,100.50	1,267.56	1,277.46	1,456.69	1,453.10	1,665.96	1,661.85	1,896.07	1,910.92					
(Government Grants)																				
(Net Profit after Tax)	624.67	735.49	717.28	840.89	838.50	1,028.89	1,026.15	1,193.21	1,165.88	1,345.11	1,341.52	1,554.38	1,550.27	1,784.50	1,743.47					
(+Depreciation)	135.22	135.22	160.02	160.02	160.02	74.35	74.35	74.35	111.58	111.58	111.58	111.58	111.58	111.58	167.45					
<b>Cash Out</b>	0.00	0.00	446.09	0.00	0.00	0.00	0.00	0.00	669.46	0.00	0.00	0.00	0.00	0.00	1,006.68					
(Initial Investment)																				
(Capitalised Interest)																				
(Overlay)			446.09						669.46											
(Principal Payment of Long-term Loan)																				
(Repayment of Short-term Loan)																				
<b>Cash In-Cash Out</b>	759.89	870.71	431.21	1,000.92	998.52	1,103.24	1,100.50	1,267.56	608.00	1,456.69	1,453.10	1,665.96	1,661.85	1,896.07	906.24					
Short-term Loan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
<b>Net Cash Flow</b>	759.89	870.71	431.21	1,000.92	998.52	1,103.24	1,100.50	1,267.56	608.00	1,456.69	1,453.10	1,665.96	1,661.85	1,896.07	906.24					
<b>Cumulative Cash Flow</b>	4,567.71	5,438.42	5,869.64	6,870.55	7,869.08	8,972.32	10,072.82	11,340.38	11,948.38	13,405.07	14,858.17	16,524.13	18,185.97	20,062.05	20,988.29					
Cash Flow for Return on Equity	759.89	870.71	431.21	1,000.92	998.52	1,103.24	1,100.50	1,267.56	608.00	1,456.69	1,453.10	1,665.96	1,661.85	1,896.07	906.24					
															FIRR-ROE					
															21.5%					

**21. Profit/Loss Statement of the SPV for Gwalior Bypass (Grant X% Case)**

(Unit Rs. million)

Gwalior Grant X% Case	Fiscal Year														
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Revenue</b>	186.70	205.44	255.72	277.11	341.47	365.93	448.56	476.61	575.91	607.81	729.85	729.85	831.32	831.32	949.31
<b>Operating Expenditure</b>	113.18	114.23	115.50	116.69	118.17	152.54	154.28	155.83	157.84	159.62	162.30	180.92	183.15	185.55	188.11
(Toll Collection/Administration)	8.93	9.64	10.54	11.35	12.41	13.33	14.59	15.64	17.10	18.30	20.35	21.78	23.30	24.93	26.68
(Routine Maintenance)	4.84	5.18	5.54	5.93	6.34	6.78	7.26	7.77	8.31	8.89	9.52	10.18	10.89	11.66	12.47
(Depreciation)	99.41	99.41	99.41	99.41	99.41	132.43	132.43	132.43	132.43	132.43	132.43	148.96	148.96	148.96	148.96
<b>Operating Profit/Loss</b>	73.52	91.21	140.23	160.42	223.30	213.39	294.29	320.78	418.07	448.20	567.55	548.93	648.16	645.77	761.20
Government Grant (+)	159.88	79.94									84.16	67.33	50.50	33.66	16.83
Interest Payment (-)	252.48	236.34	228.49	224.80	216.81	196.07	203.08	161.15	117.82	100.99	84.16	67.33	50.50	33.66	16.83
(Long-term loan)	252.48	235.65	218.82	201.98	185.15	168.32	151.49	134.66	117.82	100.99	84.16	67.33	50.50	33.66	16.83
(Short-term loan)	0.00	0.69	9.68	22.82	31.66	27.75	51.59	26.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Net Profit/Loss before Tax</b>	-19.08	-65.19	-88.26	-64.38	6.48	17.32	91.20	159.63	300.24	347.20	483.39	481.60	597.67	612.10	744.36
Corporate Tax	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	85.07	118.43	117.99	146.43	149.97	260.53
<b>Net Profit/Loss after Tax</b>	-19.08	-65.19	-88.26	-64.38	6.48	17.32	91.20	159.63	300.24	262.14	364.96	363.61	451.24	462.14	483.84
<b>Assumptions</b>	Inflation: 7%	Equity : 33%	Loan : 67%	Long-term Loan Interest: 20%	Short-term Loan Interest: 18%	GOI Grants: 29.0%									

Fiscal Year	2017	2018	2019	2020	2021
<b>Revenue</b>	949.31	1,098.89	1,093.89	1,255.23	1,255.23
<b>Operating Expenditure</b>	190.85	193.78	221.73	225.09	228.68
(Toll Collection/Administration)	28.55	30.55	32.68	34.97	37.42
(Routine Maintenance)	13.35	14.28	15.28	16.35	17.49
(Depreciation)	148.96	148.96	173.76	173.76	173.76
<b>Operating Profit/Loss</b>	758.46	900.11	872.16	1,030.15	1,026.56
Government Grant (+)	0.00	0.00	0.00	0.00	0.00
Interest Payment (-)	0.00	0.00	0.00	0.00	0.00
(Long-term loan)	0.00	0.00	0.00	0.00	0.00
(Short-term loan)	0.00	0.00	0.00	0.00	0.00
<b>Net Profit/Loss before Tax</b>	758.46	900.11	872.16	1,030.15	1,026.56
Corporate Tax	265.46	315.04	305.26	360.55	359.29
<b>Net Profit/Loss after Tax</b>	493.00	585.07	566.90	669.60	667.26



**23. Profit/Loss Statement of the SPV for Gwalior Bypass (Concession X years Case)**

Gwalior-Concession X years Case	(Unit Rs. million)															
	Fiscal Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Revenue</b>	186.70	205.44	255.72	277.11	341.47	365.93	448.56	476.61	575.91	607.81	729.85	729.85	831.32	831.32	831.32	949.21
<b>Operating Expenditure</b>	115.35	116.40	117.67	118.86	120.34	154.71	156.45	158.00	160.01	161.79	164.47	183.09	185.32	187.72	187.72	190.28
(Toll Collection/Administration)	8.93	9.64	10.54	11.35	12.41	13.33	14.59	15.64	17.10	18.30	20.35	21.78	23.30	24.93	24.93	26.68
(Routine Maintenance)	4.84	5.18	5.54	5.93	6.34	6.78	7.26	7.77	8.31	8.89	9.52	10.18	10.89	11.66	11.66	12.47
(Depreciation)	101.59	101.59	101.59	101.59	101.59	134.60	134.60	134.60	134.60	134.60	134.60	151.13	151.13	151.13	151.13	151.13
<b>Operating Profit/Loss</b>	71.35	89.04	138.06	158.25	221.13	211.22	292.11	318.61	415.90	446.03	565.38	546.76	645.99	645.99	645.99	759.03
Government Grant (+)	220.52	110.26														
Interest Payment (-)	249.71	224.88	209.60	202.58	190.67	165.30	166.85	128.50	112.44	96.38	80.32	64.25	48.19	32.13	32.13	16.06
(Long-term loan)	240.95	224.88	208.82	192.76	176.69	160.63	144.57	128.50	112.44	96.38	80.32	64.25	48.19	32.13	32.13	16.06
(Short-term loan)	8.76	0.00	0.78	9.82	13.98	4.67	22.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Net Profit/Loss before Tax</b>	42.17	-25.58	-71.54	-44.33	30.46	45.93	125.27	190.10	303.45	349.65	485.06	482.51	597.80	597.80	611.47	742.96
Corporate Tax	14.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	85.66	118.84	118.21	146.46	149.81	149.81	260.04
<b>Net Profit/Loss after Tax</b>	27.41	-25.58	-71.54	-44.33	30.46	45.93	125.27	190.10	303.45	263.98	366.22	364.29	451.34	451.34	461.66	482.93
Assumptions	Inflation: 7%		Equity: 33%		Loan: 67%		Long-term Loan Interest: 20%			Short-term Loan Interest: 18%					GOI Grant: 40%	











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