

Name of work : Widening and Strengthening of Lunawada-Santrampur Road Km 130+010 to 163+800  
(SH-002 section)

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Item No.		DESCRIPTION	Unit	Quantity	ESTIMATE		Amount	Ketan Construction AHMEDABAD	
					Unit Rate			Unit Rates	Amount
					Figures	Words			
<b>1</b>		<b>GENERAL ITEMS</b>							
1.02		Supply of master CD / DVD's of important site activities with four copies complete as per Technical Specifications clause 126	Set	12	<b>10000.000</b>		1,20,000	3000.00	36000.00
1.03		Construction of temporary diversion for passage of traffic, complete as per Technical Specifications Section Clause 112.3. (separate items are given for CD/ bridge work diversions)	Lm	2500	<b>3726.000</b>		93,15,000	500.00	1250000.00
		<b>Total General Items carried to Grand Summary</b>					<b>94,35,000</b>		<b>1286000.00</b>
<b>2</b>		<b>SITE CLEARANCE AND DISMANTLING</b>							
2.01		Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned complete as per technical specification clause 201 or as directed by the Engineer.	ha	52.34	<b>29520.000</b>		15,44,986	10000.00	523400.00
2.02		Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, disposal of unserviceable as well serviceable material with all leads and lifts beyond the ROW complete as per technical specification clause 202.							
	a)	Plain cement concrete	Cum	10	<b>261.000</b>		2,610	50.00	500.00
	b)	Reinforced cement concrete	Cum	10	<b>416.000</b>		4,160	50.00	500.00
	c)	Stone / Brick masonry structures	Cum	10	<b>180.000</b>		1,800	50.00	500.00
	d)	Guide/Hand rails / Fencing / kerb / NP3 Pipes / NP4 Pipes	Lm	50	<b>144.000</b>		7,200	25.00	1250.00
	e)	Kilometre stone	Nr	27	<b>129.000</b>		3,483	25.00	675.00
	f)	5 km stone	Nr	7	<b>214.000</b>		1,498	25.00	175.00
	g)	Hectometre / Boundary stones	Nr	135	<b>26.000</b>		3,510	25.00	3375.00
	h)	Utilities	Nr	10	<b>101.000</b>		1,010	25.00	250.00
	i)	Bituminous Pavement	Cum	28321.02	<b>157.000</b>		44,46,400	25.00	708025.50
	j)	Non- Bituminous Pavement	Cum	41223.28	<b>307.000</b>		1,26,55,547	25.00	1030582.00
2.03		Cutting of trees from 300mm and above girth size, the work shall consist of cutting of all such trees as per the direction of the Engineer and further as per duly approved plan by the Forest Department. This shall include duly approved stacking, transport and final handing over to Forest Department with all leads and lifts. Work to comply strictly in accordance with Technical Specifications Clause 201.							
	a)	above 300mm to 600mm girth	Nr	317	<b>156.000</b>		49,452	25.00	7925.00
	b)	above 600mm to 900mm girth	Nr	633	<b>278.000</b>		1,75,974	25.00	15825.00
	c)	above 900mm to 1800mm girth	Nr	554	<b>542.000</b>		3,00,268	500.00	277000.00
	d)	above 1800m	Nr	79	<b>1029.000</b>		81,291	1000.00	79000.00

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount	Unit Rates		Amount
				Figures	Words		Figures		
2.04	Removal of tree stumps and roots, disposal and filling of pits complete as per Technical Specifications Clause 201. The work shall follow the directions of the Engineer and further approval of plan by the Forest Department, where necessary. This shall include all leads and lifts.								
	a) above 300mm to 600mm girth	Nr	317	307.000		97,319	25.00	7925.00	
	b) above 600mm to 900mm girth	Nr	633	519.000		3,28,527	25.00	15825.00	
	c) above 900mm to 1800mm girth	Nr	554	777.000		4,30,458	500.00	277000.00	
	d) above 1800mm	Nr	79	2052.000		1,62,108	1000.00	79000.00	
	<b>Total Site Clearance and Dismantling carried to Grand Summary</b>					<b>2,02,97,602</b>		<b>3028732.50</b>	
<b>3</b>	<b>EARTH WORKS</b>								
3.01	Roadway excavation necessary for construction of roadway including cutting and loading in tipper, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location within all leads and lifts upto 1000 m complete as per technical specification clause 301 and 305.								
	b) Ordinary soil / Hard soil	Cum	262010.05	28.000		73,36,281	30.00	7860301.50	
	e) Loosening and re-compacting the original ground/ sub-grade up to the required depths as directed by the Engineer and as per Technical Specifications Clause 301 & 305	Cum	6000	43.000		2,58,000	25.00	150000.00	
3.02	Construction of embankment with approved material obtained from borrow area with all lifts and leads, transporting to site, spreading, grading to required slope and compacting complete as per drawings and technical specification clause 305.	Cum	50159.06	142.000		71,22,587	40.00	2006362.40	
3.04	Construction of subgrade and Earthen shoulder with approved material obtained from borrow area with all lifts & leads, transporting to site, spreading, grading to required slope and compacted complete as per drawings and technical specification clause 305.	Cum	266755.09	167.000		4,45,48,100	75.00	20006631.75	
3.08	Construction of Median and Island above road level with approved material deposited at site from roadway cutting and excavation for drain and foundation of other structures, spread, graded and compacted complete as per drawings and technical specification clause 407.	Cum	597	121.000		72,237	50.00	29850.00	
	<b>Total Earth Works carried to Grand Summary</b>					<b>5,93,37,205</b>		<b>30053145.65</b>	
<b>4</b>	<b>SUB-BASE, BASE COURSES (NON-BITUMINOUS) AND SHOULDERS</b>								
4.01	Constructing Hard shoulder with Naturally obtained Granular sub-base (GSB) complete as per drawings and Technical Specification Clause 401 (Grading I, Table 400-1)	Cu.m.	90918.61	581.000		5,28,23,712	175.00	15910756.75	
4.02	Construction of granular sub-base with crushed stone aggregated only, by mixing material in a mechanical mix plant at OMC, carriage of mixed Material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per technical specification clause 401								
	a) As per Table 400-1, Close-Graded Grading I	Cum	69954.16	642.000		4,49,10,572	580.00	40573412.80	
	b) As per Table 400-2, Coarse- Graded Grading I	Cum	74043.37	580.000		4,29,45,156	580.00	42945154.60	
4.03	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver in sub- base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per drawing and technical specification clause 406.								

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount	Unit Rates		Amount
				Figures	Words		Figures		
a)	Mechanically laid base (Spread by motor grader) including profile corrective course and access roads if applicable	Cum	19328.97	<b>733.000</b>		1,41,68,139		750.00	14496727.50
b)	Mechanically laid base (laid by Electronic Sensor Paver)	Cum	50867.21	<b>746.000</b>		3,79,46,942		760.00	38659079.60
	<b>Total Sub-Base, Base Courses (Non-Bituminous) and Shoulders carried to Grand Summary</b>					<b>19,27,94,520</b>			<b>152585131.25</b>
<b>5</b>	<b>BASE AND SURFACE COURSES (BITUMINOUS)</b>								
5.01	Providing and applying primer coat with bitumen emulsion on prepared surface of granular Base including clearing of road surface and spraying primer at the rate of 0.60 kg/sqm using mechanical means complete as per drawings and technical specification clause 502.	Sqm	268642	<b>26.000</b>		69,84,692		22.00	5910124.00
5.02	Providing surface dressing with aggregate using Bitumen over primed water bound macadam/ wet mix macadam complete as per Technical Specifications Clause 510								
b)	Second Coat Surface Dressing	Sqm	12000	<b>56.000</b>		6,72,000		10.00	120000.00
5.03	Providing and applying tack coat with bitumen complete as per drawings and Technical Specification clause 503.								
a)	@ 2.0 to 2.5 kg/10m2 on bituminous surface	Sqm	344447	<b>9.000</b>		31,00,023		10.00	3444470.00
b)	@ 2.5 to 3.0 kg/10m2 on granular surface treated with primer/hungry bituminous surface.	Sqm	268642	<b>11.000</b>		29,55,062		15.00	4029630.00
5.06	Providing and laying dense bituminous macadam with 100-120 TPH batch type HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder (VG-30) as per the approved mixed design, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction complete as per drawings and technical specification clause 507.	Cum	21876.04	<b>5956.000</b>		13,02,93,694		5800.00	126881032.00
5.08	Providing and laying semi dense bituminous concrete with 100-120 TPH batch type HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder (VG-30) as per approved mixed design, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction complete as per drawings and Technical Specification clause 508.	Cum	7375.03	<b>6474.000</b>		4,77,45,944		7150.00	52731464.50
5.10	Variation of quantity of VG 30 grade bitumen in bituminous courses as per Technical Specification Clause 507.9 and 509.9	MT	136.94	<b>39534.310</b>		54,87,698		10.00	1369.40
5.11	Variation of quantity of rapid emulsion in Tack coat as per Technical Specification Clause 503.								
a)	0.5 kg extra for normal bituminous surface	MT	16.50	<b>34958.310</b>		6,02,064		10.00	165.00
b)	0.5 kg extra for Granular Surface	MT	13.19	<b>34958.310</b>		4,69,564		10.00	131.90
5.12	Variation of quantity of slow emulsion for prime coat as per Technical Specification clause 502.	MT	26.38	<b>33793.510</b>		9,07,836		10.00	263.80

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount	Unit Rates		Amount
				Figures	Words		Figures		
5.13	Removal of all failed material, trimming of completed excavation to provide firm vertical faces, cleaning of surface, painting of tack coat on the sides and base of excavation as per clause 503, back filling the pot holes with hot bituminous material of grading I as per clause 504, compacting, trimming and finishing the surface to form a smooth continuous surface, all as per clause 3004.2	sqm	2937.83	267.000		7,84,399		80.00	235026.40
5.14	Providing and applying low viscosity bitumen emulsion for sealing cracks less than 3 mm wide or incipient fretting or disintegration in an existing bituminous surfacing.	sqm	5875.65	35.000		2,05,648		30.00	176269.50
5.15	Providing and laying slurry seal consisting of a mixture of fine aggregates, portland cement filler, bituminous emulsion and water on a road surface including cleaning of surface, mixing of slurry seal in a suitable mobile plant, laying and compacting to provide even riding surface	sqm	8813.47	54.000		4,75,928		30.00	264404.10
5.16	Full depth repair of section in case of poor pavement complete as per drawings or as directed by the engineer	sqm	822.59	1253.881		10,31,431		2500.00	2056475.00
	<b>Rigid Pavement</b>					-			
	<b>Total Base and Surface Courses (Bituminous) carried to Grand Summary</b>					<b>20,17,15,983</b>			<b>195850825.60</b>
<b>6</b>	<b>STRUCTURES</b>								
6A	<b>CULVERTS:</b>								
6A02	Excavation of foundation for culverts including preparation of foundation bed complete as per drawing and Technical Specifications Clause 304 in the following strata								
	a) Ordinary soil / Hard soil	Cum	1124.31	32.000		35,978		60.00	67458.60
	b) Ordinary rock / Soft rock	Cum	299.82	40.000		11,993		60.00	17989.20
	c) Hard Rock (Blasting Prohibited)	Cum	74.95	254.000		19,038		250.00	18737.50
6A03	Providing and laying granular material for pipe bedding of Hume Pipe culverts and replacement of soft and loose patches in the bearing area of the Box structure with layers not exceeding 300 mm as per drawing and Technical Specifications Clause 2904	Cum	241.56	378.000		91,311		200.00	48312.00
6A04	Plain cement concrete in levelling course in open foundation, concrete pipe bedding and apron complete as per drawing and Technical Specifications Section 1500 and 1700								
	a) M15 grade	Cum	97.41	3400.000		3,31,192		3000.00	292230.00
6A05	Structural concrete, for foundation slab, walls, deck slab, wing walls (single/Multiple), complete as per drawings and Technical Specifications section 1500 and 1700								
	a) M20 grade	Cum	65.91	3585.000		2,36,280		3500.00	230685.00
	c) M30 grade	Cum	111.82	3991.000		4,46,270		3700.00	413734.00
6A06	Plain cement concrete M20 grade in Wing wall complete as per drawing and Technical Specifications Section 1500 and 1700	Cum	87.61	3914.000		3,42,905		3500.00	306635.00
6A08	Providing and laying concrete M-15 in levelling course below approach slab as per section 1700 of Technical specifications.	Cum	61.95	3400.000		2,10,630		3000.00	185850.00
6A09	Structural concrete M-30 in approach slab as per section 1700 and 2700 of Technical specifications	Cum	123.90	7191.000		8,90,965		4000.00	495600.00
6A10	Providing and fixing in position Thermo mechanically treated (TMT) Fe-500 grade reinforcement bars as per drawings and Technical Specification Section 1000 and 1600.								
	a) Foundation	MT	5.92	64359.000		3,81,149		53500	316720.00
	b) Substructure	MT	4.60	64449.000		2,96,250		53500.00	246100.00

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				Figures	Words			
	c)	Superstructure	MT	1.41	<b>65124.000</b>	91,639	53500.00	75435.00
6A12		Supplying and providing Tar paper bearing for slab including rubbing down as per Technical Specification	Sqm	15.40	<b>51.000</b>	785	25.00	385.00
6A13		Providing and fixing filler type expansion joint with 2mm thick copper plate, 20mm thick compressible fiber board, 20mm thick premoulded joint filler in expansion joint and filling joint sealant compound complete as per drawings and Technical specification section 2600.	Lm	216.31	<b>1618.000</b>	3,49,984	200.00	43262.00
6A14		Back filling behind abutments, wing walls and return walls with selected granular material of approved quality complete as per drawing and Technical Specifications Clause 305	Cum	97.90	<b>303.000</b>	29,664	100.00	9790.00
6A15		Filter material behind abutment, wing walls and return walls complete as per drawing and Technical Specifications Clause 305	Cum	111.02	<b>318.000</b>	35,305	100.00	11102.00
6A16		Providing, laying and jointing RCC. NP-4 machine finish Hume Pipes for culverts or equivalent pipes under IS:458-1988, approved by the Engineer complete as per Technical Specifications section 2900						
	e)	Diameter 900mm	Lm	10	<b>2445.000</b>	24,450	3000.00	30000.00
	e)	Diameter 1200mm	Lm	268.20	<b>3841.000</b>	10,30,156	4500.00	1206900.00
6A17		Plain cement concrete grade M-20 in Headwall of Access Road Culverts complete as per drawing and Technical Specifications Clause 1500 and 1700	Cum	593.52	<b>3830.000</b>	22,73,167	3500.00	2077320.00
6A18		Painting of culvert reference number complete as per Technical Specifications section 800 or as directed by the Engineer.	Nr	20.00	<b>57.000</b>	1,140	75.00	1500.00
6A20		Providing 25 mm thick mastic asphalt over the top of the deck after applying prime coat underneath wearing course complete as per Technical Specifications Clause 2702, 503 and 515 (Cost of Prime Coat Included)	Sqm	105.60	<b>409.000</b>	43,190	750.00	79200.00
6A21		Providing 40 mm thick Bituminous concrete in one layer in wearing course complete as directed by the Engineer and as per Technical Specifications Clause 2702/509 (Cost of Tack Coat Included)	Cu m	4.22	<b>6627.000</b>	27,992	7000.00	29540.00
6A22		Geo textiles filter membrane underneath pitching complete as per drawings and technical specification clause 2504 and as directed by the Engineer.	Sqm	543.30	<b>659.000</b>	3,58,038	300.00	162990.00
6A23		Filter media beneath the pitching/revetment on slopes for protection of embankment as per drawings and Technical Specifications clause 2504 and as directed by the Engineer	Cum	81.50	<b>416.000</b>	33,902	100.00	8150.00
6A24		Pitching/revetment on slopes with Cement Concrete blocks in M15 grade conforming to Section 1700 complete as per drawings Technical Specifications 2504 and as directed by the Engineer.	Cum	162.99	<b>3468.000</b>	5,65,254	3500.00	570465.00
6A25		Providing weep holes in brick masonry / plain / reinforced concrete abutments, wing walls / return walls etc. with 100mm dia A.C. pipe, extending through the full width of structure with slope of IV:20H towards draining face including porous concrete blocks complete as per drawing and Technical Specifications clause 2706.	Nr	68	<b>78.000</b>	5,304	75.00	5100.00
6A27		750 thick flexible stone apron as per Clause No. 2503.1 of Technical Specification and as directed by the Engineer	Cum	262.41	<b>845.000</b>	2,21,739	250.00	65602.50
6A28		Curtain wall of M15 grade Plain Cement Concrete complete as per drawings and Technical Specifications section 1500 & 1700 or as directed by the Engineer	Cum	34.46	<b>3400.000</b>	1,17,168	3000.00	103380.00
6A29		Construction and fixing of PCC Pillar with M15 grade of concrete of size 400 x 400 x 1000 mm for inscribing Structure Number as per drawing and Technical Specification section 1500, 1700 or as directed by the Engineer	Nr	40	<b>116.000</b>	4,640	500.00	20000.00

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount	Unit Rates		Amount
				Figures	Words		Figures		
6A30	Providing cement concrete crash barrier in M-40 grade including safety kerb, reinforcement and G.I. pipe complete as per drawing and Technical Specifications sections 1500, 1600, 1700, 2200 & clause 809.	Lm	91.60	3251.000		2,97,792		4500.00	412200.00
	<b>Total Culverts carried to Grand Summary</b>					<b>88,05,273</b>			<b>7552372.80</b>
<b>6B</b>	<b>BRIDGES</b>								
	<b>Foundation</b>								
6B03	Earthwork in excavation of foundations for structures including all leads and lifts complete as per drawings and Technical specifications clause 304.								
	a) In all types of soil	Cum	1560.49	32.000		49,936		75.00	117036.75
	b) In soft/ordinary rock	Cum	416.13	40.000		16,645		75.00	31209.75
	c) In hard rock (Blasting Prohibited)	Cum	104.03	254.000		26,424		250.00	26007.50
6B05	Providing & laying Plain cement concrete levelling course in foundation and fill around foundation to protect from erosion including form work but excluding the cost of reinforcement complete as per drawing and Technical Specifications sections 1500, 1700 and 2100.								
	a) M-15 grade	Cum	186.08	3400.000		6,32,673		3000.00	558240.00
	b) M-20 grade	Cum	1191.36	3585.000		42,71,037		4000.00	4765440.00
6B17	Supplying, placing and fixing TMT Fe 500 bar reinforcement complete as per drg. and Technical specifications section 1600.								
	a) For Foundation	MT	38.01	64359.000		24,46,149		53500.00	2033535.00
	b) For sub-structure	MT	19.94	64449.000		12,84,850		53500.00	1066790.00
	c) For super-structure	MT	16.61	65124.000		10,81,755		53500.00	888635.00
	<b>Sub-Structure</b>								
6B19	Providing & laying Reinforced Cement Concrete in sub-structure including form work but excluding the cost of reinforcement complete as per drg. and Technical specifications sections 1500, 1700 & 2200.								
	a) M-20 grade	Cum	2514.05	3931.000		98,82,727		3500.00	8799175.00
	<b>Bearing</b>								
6B20	Supply & fixing of bearings complete as per drg. and Technical specifications section 2000.								
	a) Tar paper bearing	Sqm	46.29	51.000		2,361		25.00	1157.25
6B22	Providing & fixing of expansion joints complete as per drg. and Technical specifications section 2600								
	a) Providing and fixing filler type expansion joint with 2mm thick copper plate, 20mm thick compressible fiber board, 20mm thick premoulded joint filler in expansion joint and filling joint sealant compound complete as per drawings and Technical specification section 2600.	Lm	264	1618.000		4,27,152		100.00	26400.00
	<b>Super Structure</b>								
6B23	Providing & laying Reinforced Cement Concrete in super-structure including form work but excluding the cost of reinforcement complete as per drg. and Technical specifications sections 1500, 1700 & 2300.								
	a) Solid slab								
	ii) M-30 grade	Cum	159.06	4823.000		7,67,122		5500.00	874830.00
6B26	Providing 25 mm thick mastic asphalt over the top of the deck after applying prime coat underneath wearing course complete as per Technical Specifications Clause 2702, 503 and 515 (Cost of Prime Coat Included)	Sqm	1789.78	409.000		7,32,020		750.00	1342335.00
6B27	Providing 40 mm thick Bituminous concrete in one layer in wearing course complete as directed by the Engineer and as per Technical Specifications Clause 2702/509 (Cost of Tack Coat Included)	Cum	89.49	6810.000		6,09,420		7000.00	626430.00

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				Figures	Words		Figures		
6B29	Providing cement concrete crash barrier in M-40 grade including safety kerb, reinforcement and G.I. pipe complete as per drawing & Technical Specifications sections 1500, 1600, 1700, 2200 & clause 809.	Lm	328.40	3251.000		10,67,628		4500.00	1477800.00
	<b>Misc. Items</b>								
6B31	Providing weep holes in brick masonry / plain / reinforced concrete abutments, wing walls / return walls etc. with 100mm dia A.C. pipe, extending through the full width of structure with slope of IV:20H towards draining face including porous concrete blocks complete as per drawing and Technical Specifications clause 2706.	Nr	96	78.000		7,488		75.00	7200.00
6B32	Providing & fixing drainage Spouts complete as per drawing and Technical Specifications Clause 2705.	Nr	28	720.000		20,160		500.00	14000.00
6B33	Back filling behind abutment with selected granular material of approved quality as per Technical Specifications Clause 305	Cum	2070.90	303.000		6,27,483		100.00	207090.00
6B34	Filter media behind abutments, wing walls, & return walls, including all material, labour, equipment carriage etc. all complete as per drawing and Technical Specification Clauses 305, 309 & 2504.	Cum	730.36	318.000		2,32,254		100.00	73036.00
6B35	Providing & laying plain cement concrete M-15 grade in levelling course under the approach slab complete as per drg. and Technical specifications sections 1700, 2100 and 2700.	Cum	78.84	3400.000		2,68,056		3000.00	236520.00
6B36	Providing & laying reinforced cement concrete M-30 grade in approach slab including form work and reinforcement complete as per drg. and Technical specifications sections 1500, 1600, 1700 & 2100 and clause 2704.	Cum	151.20	7191.000		10,87,279		4500.00	680400.00
	<b>Total Bridges carried to Grand Summary</b>					<b>2,55,40,619</b>			<b>23853267.25</b>
<b>6C</b>	<b>REPAIR &amp; REHABILITATION</b>								
6C01	Construction of temporary diversion, including across waterway, for passage of traffic, complete as per drawings and Technical Specifications Section Clause 112.3, including temporary cross drainage	Lm	639.30	7394.000		47,26,984		2000.00	1278600.00
6C02	Dismantle of various items of structures complete as per Technical specification clause 202 or as directed by the Engineer.								
	a) RCC	Cum	27.68	416.000		11,516		50.00	1384.00
	b) PCC	Cum	41.40	261.000		10,805		50.00	2070.00
	c) Existing Wearing coat	sqm	477.10	53.000		25,286		50.00	23855.00
	d) Stone/Brick masonry	Cum	315.17	180.000		56,731		50.00	15758.50
	f) NP4 Pipe	Lm	185.00	144.000		26,640		50.00	9250.00
	g) Spalling of Concrete	Sqm	205.50	100.000		20,550		50.00	10275.00
6C06	Construction and fixing of PCC Pillar with M15 grade of concrete of size 400 x 400 x 1000 mm for inscribing Structure Number as per drawing and Technical Specification section 1500, 1700 or as directed by the Engineer	Nr	6	116.000		696		500.00	3000.00
6C11	Cleaning and removal of vegetation growth from structures channel and protective works complete as per Technical specification clause 202 or as directed by the Engineer.	Sqm	3094.30	20.000		61,886		10.00	30943.00
6C12	Replacement of RCC railing including reinforcement as per Technical Specifications Section 1500, 1600, 1700,1900, 2200, 2800 and Clause 2703.								
c)	Mild Steel Railing	Lm	54.10	240.000		12,984		5000.00	270500.00

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount	Unit Rates		Amount
				Figures	Words		Figures		
6C22	Providing 25 mm thick mastic asphalt over the top of the deck after applying prime coat underneath wearing course complete as per Technical Specifications Clause 2702, 503 and 515 (Cost of Prime Coat Included)	Sqm	477.10	409.000		1,95,134		750.00	357825.00
6C23	Providing 40 mm thick Bituminous concrete in one layer in wearing course complete as directed by the Engineer and as per Technical Specifications Clause 2702/509 (Cost of Tack Coat Included)	Cum	19.08	6810.000		1,29,962		7000.00	133560.00
6C30	Providing & laying Brick masonry in cement mortar 1:3 (1 cement : 3 coarse sand) in floor protection, foundation, sub-structure complete as per drg. and Technical Specification Section 1300.	Cum	2.40	3475.000		8,340		4000.00	9600.00
6C31	Providing & laying random rubble stone masonry in cement mortar 1:3 (1 cement : 3 coarse sand) works complete as per drg. and Technical Specifications Section 1400.	Cum	8.28	2362.000		19,568		2500.00	20700.00
6C36	Repair of spalling and patches by PMC mortar 50 to 70mm thick at soffit of slab as per clause 2804 of specification and additional specification A-3 and as directed by the Engineer	Sqm	123.60	1769.000		2,18,648		1500.00	185400.00
6C38	Providing concrete M-20 keys of size 200mm x 200mm x 400mm for connecting the old and new masonry work complete as per drawings and Technical Specification sections 1500 and 1700 or as directed by the engineer	Nr	332	84.000		27,888		500.00	166000.00
6C43	Guniting concrete surface with cement mortar applied with compressor after cleaning surface and spraying with epoxy complete as per Technical Specification clause 2807. [Assumed thickness 25mm]	Sqm	94.50	728.000		68,796		2500.00	236250.00
6C47	Jacketing								
	b) Providing & placing in position TMT Fe-500 bar reinforcement incl. curing, bending, hooking and tying complete as per Technical Specification section 1600.	MT	10.40	51888.000		5,39,635		53500.00	556400.00
6C49	Cement plaster 12mm thick in cement mortar 1:3 complete as per drawing and Technical Specifications Section 1000 and 1300 and as directed by the Engineer	Sqm	272.16	82.000		22,317		250.00	68040.00
6C50	Cement pointing with cement mortar 1:3 on brick/stone work complete as per drawings and Technical Specifications section 1000 and 1300	Sqm	43.40	35.000		1,519		150.00	6510.00
6C51	Removal of accumulated debris in Pipe Culverts complete as per Technical Specification clause 202.	Lm	19.90	100.000		1,990		100.00	1990.00
6C53	Providing and laying boulders apron without wire crates on river bed for protection against scour with stone boulders weighing not less than 40 kg each complete as per drawing and Technical specification section 2500	Cum	86.00	805.000		69,230		500.00	43000.00
	<b>Total Repair &amp; Rehabilitation carried to Grand Summary</b>					<b>62,57,106</b>			<b>3430910.50</b>
	<b>Total Retaining Walls carried to Grand Summary</b>					-			
<b>7</b>	<b>DRAINAGE AND PROTECTION WORK</b>								
7.01	Earthwork in excavation in all types of soil including rock complete as per Technical Specification Clauses 304 & 309.	Cum	649.78	28.000		18,194		30.00	19493.40
7.02	Plain Cement concrete M-15 grade in levelling course in drain including centering and shuttering all complete as per drawing and Technical Specification Sections 309, 1500 & 1700.	Cum	25.03	3400.000		85,109		3000.00	75090.00
7.03	Construction of open unlined drains as per proper slope and dimension as shown in drawing and technical specification clause 309.	Lm	65218.00	38.000		24,78,284		30.000	1956540
7.06	Construction of covered lined drains of concrete grade M 25 including cover slab and reinforcement as per proper slope and dimension as shown in drawing and technical specification clause 309.	Lm	2000	8980.836		1,79,61,673		5500.00	11000000.00



Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount	Unit Rates		Amount
				Figures	Words		Figures		
7.08	Construction of chute drain in cement concrete M-15 with M-15 foundation concrete including construction of bell mouth at entry as per drawings and Technical Specification Sections 309, 1500 and 1700.	Lm	139.03	735.000		1,02,189		750.00	104272.50
7.09	Construction of energy dissipation basin in M-15 as per drawing and Technical Specification Sections 309, 1500 & 1700.	Nr	12	1416.000		16,992		1500.00	18000.00
7.10	Providing, laying and jointing RCC. NP-4 machine finish hume pipes under IS:458-1988, Hume Pipes to discharge storm water from catch basins as per drawings and complete as per Technical Specifications section 2900								
	a) 450 mm diameter	Lm	520	1470.000		7,64,400		1500.00	780000.00
	b) 900 mm diameter	Lm	266	2445.000		6,50,370		3000.00	798000.00
7.11	Providing and laying granular material for pipe bedding of Hume Pipe culverts and replacement of soft and loose patches in the bearing area of the Box structure with layers not exceeding 300 mm as per drawing and Technical Specifications Clause 2904	Cum	179.97	378.000		68,027		100.00	17997.00
7.12	Plain cement concrete grade M-20 in Headwall of Access Road Culverts complete as per drawing and Technical Specifications Clause 1500 and 1700	Cum	227.15	3830.000		8,69,994		3500.00	795025.00
7.13	Providing and laying interlocking paver blocks of high density 65 mm thick M-25 grade in pedestrian pathway and in Island of major intersections areas as shown in the drawing, close jointed over bed of 50mm thick river sand to a tight pattern, laid to proper line and level including bedding down the completed surface with a plate vibrator or by firmly topping level with mallet and a large flat piece of timber, finishing by brushing clean dry sand over the surface to fill all the joints thoroughly and as per Additional Technical Specification A 15 or as directed by the Engineer.	sqm	9977.36	492.000		49,08,859		500.00	4988680.00
7.15	Providing and laying Grade M15 Concrete perforated erosion protection scour blocks laid on the slopes and bed of the river including the rebar, trimming of earth to required lines and levels, including capping with concrete on the tops of slopes as per drawings and Specifications	cum	80.46	4540.000		3,65,288		3500.00	281610.00
7.16	Providing and laying plain cement concrete in medians and in sidewalks, foundations complete as per respective drawings, Technical Specifications section 1500 and 1700 and as directed by the Engineer								
	b) Construction of median kerb and island kerb Type A grade M20 (including base preparation, foundation and haunch concrete)	Lm	1015	222.000		2,25,330		400.00	406000.00
7.18	Pitching/revetment on slopes with Cement Concrete blocks in M15 grade conforming to Section 1700 complete as per drawings, technical Specifications 2504 and as directed by the Engineer	Cum	359.06	3468.000		12,45,205		3500.00	1256710.00
7.20	Geo textile filters membrane as per Technical Specifications Clause 2504 and as directed by the Engineer.	Sqm	3256.96	659.000		21,46,338		100.00	325696.00
7.21	Filter media beneath the pitching/revetment on slopes for protection of embankment as per drawings and Technical Specifications clause 2504 and as directed by the Engineer								
	b) Granular Material	Cum	488.54	318.000		1,55,357		200.00	97708.00
7.23	Providing and fixing of man hole including excavation, concrete, C.I. Cover, C.I. Steps complete as per drawing and Technical Specifications sections 300, 1500, 1600, 1700 and manufacture specification approved by the Engineer.	Nr	5	7000.000		35,000		5500.00	27500.00
	<b>Total Drainage and Protection Work rates carried to Grand Summary</b>					<b>3,20,96,609</b>			<b>22948321.90</b>

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount	Unit Rates		Amount
				Figures	Words		Figures		
<b>8</b>	<b>TRAFFIC SIGNAGE AND ROAD APPURTENANCES</b>								
8.01	Providing and erecting a "W" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 70 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 1.8 m high, 1.1 m below ground/road level, all steel parts and fittings to be galvanised by hot dip process, all fittings to conform to IS:1367 and IS:1364, metal beam rail to be fixed on the vertical post with a spacer of channel section 150 x 75 x 5 mm, 330 mm long complete as per clause 810	Lm	8001	<b>2713.000</b>		2,17,06,713		2250.00	18002250.00
8.02	Providing and fixing of retro-reflectorised cautionary, mandatory and informatory sign made of 1.5mm thick Aluminium Sheet/3mm Aluminium Composite Material , face to be fully covered with Class B Type-IV High Intensity Micro Prismatic Grade Sheeting as defined in IRC: 67-2010 having approved messages e.g. letter, numerals,symbols/legend/arrow etc. in Regional and/or Hindi and /or English as per drawing and Technical Specifications for Road and Bridge works (Fourth Revision). The sign plate will be fixed with minimum 6 mm dia aluminium rivets back supported on a mild steel angle iron frame 35x35x5 mm and one vertical Mild Steel post of NB65 Dia Pipe (height from crown level of the road and bottom of the sign board shall not be less than 2.10 m.) firmly fixed to the ground by means of properly designed foundation with M -15 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing including painting of vertical post as per specification.								
a)	<b>Informatory Signs</b>								
i)	Facility information 800 mm x 600 mm complete as per drawings and Technical Specifications Clause 801	Nr	88	<b>5679.637</b>		4,99,808		3500.00	308000.00
ii)	Advance direction sign complete as per drawings and Technical Specifications Clause 801	Sq m	470.75	<b>10626.240</b>		50,02,303		10000.00	4707500.00
iii)	Route marker sign 450mm x 600 mm complete as per drawings and Technical Specifications Clause 801	Nr	21	<b>4867.882</b>		1,02,226		3500.00	73500.00
b)	<b>Cautionary Signs</b>								
i)	Triangular 900 mm side complete as per drawings and Technical Specifications Clause 801	Nr	252	<b>5285.229</b>		13,31,878		4500.00	1134000.00
ii)	Hazard marker 180 x 1200 mm complete as per drawings and Technical Specifications Clause 801	Nr	2	<b>18478.918</b>		36,958		7500.00	15000.00
iii)	Hazard marker 300 x 900 mm complete as per drawings and Technical Specifications Clause 801	Nr	1	<b>3582.794</b>		3,583		3000.00	3000.00
c)	<b>Mandatory Signs</b>								
i)	Triangular 900 mm side (for "GIVE WAY" sign) complete as per drawings and Technical Specifications Clause 801	Nr	75	<b>5285.229</b>		3,96,392		4500.00	337500.00
ii)	Stop sign - Octagon of size 900 mm complete as per drawings and Technical Specifications Clause 801	Nr	118	<b>7485.526</b>		8,83,292		6000.00	708000.00
iii)	Speed limit compulsory keep left 600 mm dia meter complete as per drawings and Technical Specifications Clause 801	Nr	41	<b>4923.266</b>		2,01,854		3500.00	143500.00

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount	Unit Rates		Amount
				Figures	Words		Figures		
8.03	Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 .The finished surface to be level, uniform and free from streaks and holes complete as per drawings and technical specification clause 803.								
	a) Lane/centerline/edge marking or any other marking	Sqm	13688.02	471.000		64,47,055		275.00	3764205.50
	b) Directional arrows, lettering etc								
	i) Straight (nr) RM13	Nr	283	518.000		1,46,594		500.00	141500.00
	ii) Left/right (nr) RM14 & 15	Nr	27	533.000		14,327		500.00	13500.00
	iii) Comb (nr) RM 16& 17	Nr	644	661.000		4,25,552		500.00	322000.00
	iv) Lettering	Nr	101	141.000		14,286		100.00	10100.00
	v) Chevron Marking	Sqm	1392.08	471.000		6,55,669		275.00	382822.00
	vi) Diagonal Marking	Sqm	40.60	471.000		19,123		275.00	11165.00
	vii) Pedestrian Crossing	Sqm	2852.50	471.000		13,43,528		275.00	784437.50
8.04	Reinforced cement concrete M15 grade kilometre stone of standard design as per IRC:8-1980, fixing in position including painting and printing etc complete as per drawings and technical specification clause 804.								
	a) Hectometer Stone	Nr	135	419.000		56,565		200.00	27000.00
	b) Kilometer Stone	Nr	27	1394.000		37,638		1000.00	27000.00
	c) 5th kilometer stone	Nr	7	2312.000		16,184		2000.00	14000.00
8.05	Supplying and fixing of boundary stones of M15 grade concrete complete as per drawing and Technical Specifications clause 806	Nr	169	321.000		54,249		250.00	42250.00
8.06	Providing and fixing retro-reflectorised road delineators complete as per drawing and Technical Specification Clause 805.								
	b) Road way delineators.	Nr	482	1920.000		9,25,440		1500.00	723000.00
8.08	Supply and install single guide rails (crash barriers) as approved by the Engineer as per drawings and Additional Specifications A-12	Lm	7889.92	2688.000		2,12,08,099		1500.00	11834880.00
8.09	Providing and fixing Raised Pavement Marker (Cats Eye, Road Stud), made of high strength engineering Plastic Body having at least 13 tons load bearing capacity of pneumatic tyre. Size or marker 9 cms x 10 cms x 1.6 cm having shape so that no water penetration or dust accumulation takes place on reflective surface, fitted with electronically welded tough polycarbonate micro prismatic reflective panels having 16 sq.cms surface area of each side having long distance visibility at night and in wet weather condition. The body of the marker having finger grip for easy and accurate placement fitted with two number polymer shanks to anchor the marker with the road for avoiding dislocation of the marker where the road is bleeding or made with softer grade of bitumen and application with adhesive on Bituminous road complete as per Additional Technical Specification Clause A-16	Nr	2899	425.000		12,32,075		175.00	507325.00
8.10	Solar Powered Traffic Blinkers LED based 300 mm/200 mm dia signal head with In built blinker unit having battery & battery charger unit with photo electric switch complete as per technical specification clause 112 and as directed by the Engineer.	Nr	4	75000.000		3,00,000		35000.00	140000.00
8.11	Construction of bus shelters for commuters including all building and furnishing works, etc. complete as per drawings and additional Technical Specifications A-17 or as directed by the Engineer.	Nr	9	109149.197		9,82,343		100000.00	900000.00
8.12	Repairing of existing Bus Shelter complete as per drawings and Technical Specifications section 800, 1300, 2500 or as directed by the Engineer.								
	a) Paintitng	sqm	260	35.000		9,100		500.00	130000.00

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount	Unit Rates	Amount
				Figures	Words			
	b) Plastering	sqm	520	82.000		42,640	700.00	364000.00
8.13	Providing and fixing of liter bins complete as per Manufacturer drawing and specification and approved by the Engineer.	Nr	34	10000.000		3,40,000	10000.00	340000.00
8.25	Providing and Construction of Rain water Harvesting complete as per drawings and Technical Specification section 300, 1300, 1500, 1700 or as directed by the Engineer.	Nr	68	50000.000		34,00,000	25000.00	1700000.00
8.26	Providing and construction of Raised Pedestrian Crossing / Speed Hump across the road of 150 mm height and width of 2.5 m with M25 grade concrete considering side slope in 1:10. 100mm dia steel bollard to be fixed on sides. The surface to be painted with brick red colour complete as per drawings and Additional Technical Specification clause A15 or as directed by the Engineer.	sqm	660	1995.419		13,16,976	1000.00	660000.00
8.27	Providing and laying Tactile Block of yellow colour conforming to IS 13801:1993 (Reaffirmed 1998) of size 250 x 250 x 65 mm on pedestrian pathway as shown in drawing and directed by Eng in charge. The tile should be subjected to a pressure of not less than 14N/sqmm. Sample must be approved complete as per Additional Technical Specification A18	sqm	1752.48	520.000		9,11,289	400.00	700992.00
8.28	Providing and Construction of speed hump across the road of 100mm height with Bituminous concrete of 3.7m Length and radius of 17m for the entire width of carriageway complete as per drawings and IRC: 99 or as directed by the Engineer.	Lin.m	7	1657.000		11,599	1000.00	7000.00
8.29	Providing and Construction of raised Rumble strip complete as per drawings and technical specifications section 500 and 800 or as directed by the Engineer.	Lin.m	4636	159.169		7,37,906	100.00	463600.00
8.30	Providing and fixing Aluminum backed flexible prismatic sheeting , consisting of yellow/black colored flexible prismatic sheet with non-mettalic prismatic lens as retro reflective elements and conforming to ASTM D4946 Type VI specifications for reboundable retro reflective sheeting. The prismatic sheet shall be laminated at the back with 50micron aluminum Foil sensitive adhesive and liner with screen printed arrow/slant pattern in yellow/black color. The AFP shall be applied with adhesive , the edge of the sheeting shall be sealed all around with epoxy based structural adhesive and shall be extremely resistant to pill-off complete as per manufacturer drawings approved by the Engineer.	sqm	37.13	5350.000		1,98,635	5500.00	204215.00
8.31	Providing and applying Geru paint of approved brand on Trees withing ROW complete as per drawings and Technical Specification section 800 or as directed by the Engineer	Nr	819	10.000		8,190	25.00	20475.00
8.32	Providing and Constructing Welcome Sign at Start and End of Project corridor complete as drawings and Technical Specification 300, 800, 1500, 1600 and 1700 or as directed by the Engineer.	Nr	2	21740.000		43,480	40000.00	80000.00
8.33	<b>Street Lighting in urban areas</b>							
xxix)	Solar Street Light							

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount	Unit Rates		Amount
				Figures	Words		Figures		
	a) Supplying and erecting MNES certified SOLAR STREET LIGHT fitting made from M.S. Body powder coated / painted with corrosion resistant paint with gasket & transparent cover with following CFL non retro lamp with choke, holder & accessories. Fitting shall be mounted on 75/80 mm B class G.I. pipe pole up to 5.5 mtr load complete erected with C.C. Foundation duly painted with two coats of red oxide and corrosive resistant paint. Complete with tubular battery, inverter, charge controller with photo sensor switch & necessary wiring complete erected connected & commissioned in approved manner.								
	b) 2 x 11 W CFL (Single luminaire with 2 CFL) PV Module:120 W Battery Capacity 12V, 100 AH	Each	680	33000.000		2,24,40,000		25000.00	17000000.00
	c) 2 x 11 W CFL (Double Luminaire with One CFL each), PV Module : 120W Battery Capacity : 12V, 100 AH	Each	40	34000.000		13,60,000		25000.00	1000000.00
	b) Supplying & erecting Solar Home light system with structure as per MNES specification consisting of following non retrofit CFL fitting complete with following CFL lamps & battery capacity dully connected with built in inverter & commissioned as per directed with necessary wiring & fittings.								
	(b) Two No CFL 11 watt non retrofit ceiling / wall mounting features with battery capacity 12 watt, 40 AH	Each	720	12300.000		88,56,000		10000.00	7200000.00
	<b>Total Traffic Signage and Road Appurtenances carried to Grand Summary</b>					<b>10,37,19,548</b>			<b>74947717.00</b>
<b>9</b>	<b>SAFETY IN ROAD CONSTRUCTION ZONE</b>								
9.01	Supplying and fixing sign boards including the cost of posts, fixtures, foundation, fitting and fixing. Sheeting will be made of encapsulated lens type of Retro-reflective type and messages/ borders will be screen printed complete as per Technical Specification clause 801 and as directed by Engineer.								
	a) Speed Limit sign (600mm dia)	Nr	10	3938.613		39,386		3000.00	30000.00
	b) Overtaking Prohibited (900 mm dia)	Nr	10	5988.420		59,884		4000.00	40000.00
	c) Diversion Board (450mm x 600mm)	Nr	30	3894.305		1,16,829		3000.00	90000.00
	d) Men at Work Sign (900mm triangular)	Nr	20	4228.183		84,564		4000.00	80000.00
	Direction Sign (Right / Left) (600 mm Circular)	Nr	10	3938.613		39,386		3000.00	30000.00
9.02	Providing of red fluorescent with white reflective sleeve traffic cone made of low density polyethylene(LDPE) material with a square base of 390x390x35mm and a height of 770mm, 4Kg in weight, placed at 1.5m interval, all as per BS 873 including cost of all materials, labour, loading, unloading, lead, lift, transporting etc complete Technical Specification section & IRC SP 55-2001.	Nr	1480	238.000		3,52,240		250.00	370000.00
9.03	Installation of a steel portable barricade with horizontal rail 300mm wide,2.5m in length fitted on a frame made with 45X45X5 mm angle iron section, 1.5m in height, horizontal rail painted(2coat) with yellow and white strips,150mm in width at angle of 45degree, A frame painted with 2 coats of yellow paint, complete as per IRC:SP:55-2001 including cost of all materials, labour, loading, unloading, lead, lift, transporting etc complete as per drawings or as directed by the Engineer.	Nr	1480	2562.000		37,91,760		1700.00	2516000.00
9.04	Solar Street Light								

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount	Unit Rates		Amount
				Figures	Words		Figures		
	i)	Supplying and erecting MNES certified SOLAR STREET LIGHT fitting made from M.S. Body powder coated / painted with corrosion resistant paint with gasket & transparent cover with following CFL non retro lamp with choke, holder & accessories. Fitting shall be mounted on 75/80 mm B class G.I. pipe pole up to 5.5 mtr load complete erected with C.C. Foundation duly painted with two coats of red oxide and corrosive resistant paint. Complete with tubular battery, inverter, charge controller with photo sensor switch & necessary wiring complete erected connected & commissioned in approved manner.							
		a) 1 x 11 w CFL PV Module : 74 W Battery Capacity : 12V, 75 AH	Each	40	24000.000		9,60,000	20000.00	800000.00
	ii)	Supplying & erecting Solar Home light system with structure as per MNES specification consisting of following non retrofit CFL fitting complete with following CFL lamps & battery capacity dully connected with built in inverter & commissioned as per directed with necessary wiring & fittings.							
		(a) One No CFL 11 watt non retrofit ceiling / wall mounting features with battery capacity 12 watt, 20 AH	Each	40	6900.000		2,76,000	6000.00	240000.00
9.05		Construction of a permanent type barricade made of steel components, 1.5 m high from road level, fitted with 3 horizontal rails 200 mm wide and 4 m long on 50 x 50 x 5 mm angle iron vertical support, painted with yellow and white strips, 150 mm in width at an angle of 45°, complete as per IRC:SP:55-2001	Nr.	4	4123.000		16,492	3500.00	14000.00
		<b>Total of Safety in Road Construction Zone carried to Grand Summary</b>					<b>57,36,541</b>		<b>4210000.00</b>
10		<b>Implementation of Environmental Management Action Plan to be executed under Civil Works Contract</b>							
10.03		Periodic air quality monitoring during construction stage at construction camp sites, bitumen hot mix plants, crusher plants (if specifically established for Project), at major settlement areas along project road. The parameters to be monitored are SPM, RPM, SO2, NOx and CO, Lead. Each monitoring schedule shall be over a duration of 24 hours (in 8 hour shifts) for three seasons per year. (as per the Environmental monitoring plan referred in the EMP)							
		a) Construction Phase	Nr	30	7500.000		2,25,000	10000.00	300000.00
		b) Operation Phase	Nr	12	7500.000		90,000	10000.00	120000.00
10.04		Water quality monitoring during construction phase at locations . The sampling shall be carried out for three seasons per year and cover all parameters as per IS10500 including heavy metals . (as per the Environmental monitoring plan referred in the EMP).							
		a) Construction Phase	Nr	24	6000.000		1,44,000	6000.00	144000.00
10.05		Noise quality monitoring at specified silent receptors along Project Road, at construction camp sites, bitumen hot mix plants, crusher plants(if specifically established for Project), and at major settlement areas along project road. – Each monitoring schedule shall be over a duration of 12hours (6Am to 6PM) for three seasons per year. (as per the Environmental monitoring plan referred in the EMP)The monitoring shall be carried out in accordance with CPCB norms at locations given .							
		a) Construction Phase	Nr	24	3000.000		72,000	10000.00	240000.00
		b) Operation Phase	Nr	12	3000.000		36,000	10000.00	120000.00

Item No.		DESCRIPTION	Unit	Quantity	Unit Rate		Amount	Unit Rates		Amount
					Figures	Words		Figures		
10.06		Soil quality monitoring at construction camp sites, work shop areas, oil/lubricant handling areas, bitumen hot mix plants, at all parking lay byes, vehicle servicing stations along Project Road. Parameters shall include N, P, oil and grease, heavy metals, C/N ratio, pH, organic matter to be monitored for three seasons per year.(as per the Environmental monitoring plan refered in the EMP)								

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount	Unit Rates	Amount
				Figures	Words			
	a) Construction Phase	Nr	4	6000.000		24,000	7000.00	28000.00
10.12	Enhancement of Cultural Properties (bill no 10.18)							
	a) Chavdi Mata Temple (134+900)	Nr.	1	93665.943		93,666	300000.00	300000.00
	b) Harigarna Primary School (145+200)	Nr.	1	9123.593		9,124	500000.00	500000.00
10.13	HIV prevention / alleviation programme comprising of conduction of Information, Education and Communication (IEC) campaigns at least every other month, providing condoms, providing STI and HIV / AIDS screening, diagnosis and referral to dedicated national STI and HIV / AIDS programme and programme management support throughout the contract period ( including the defect liability period).							
	a) IEC materials-Printing, Publishing	Nr.	15	3000.000		45,000	2000.00	30000.00
	b) Healthcare clinic	Nr.	5	30000.000		150,000	25000.00	125000.00
	c) Condom vending machines	Nr.	2	15000.000		30,000	15000.00	30000.00
	d) Condom Supplies	Nr.	15	5000.000		75,000	5000.00	75000.00
	e) Testing	Nr.	300	1500.000		4,50,000	1000.00	300000.00
	f) Signages and hoardings	Nr.	9	15000.000		1,35,000	10000.00	90000.00
	<b>Total Implementation of Environmental Management Action Plan to be executed under Civil Works Contract carried to Grand Summary</b>					<b>15,78,790</b>		<b>2402000.00</b>
<b>11</b>	<b>DAY WORKS</b>							
11.01	Providing labour at site supplied with all necessary hand tools inclusive of all costs, overheads and profit margin complete as directed by the Engineer	As per details in Schedule "A"	1	257810.250		2,57,810	250000.00	250000.00
11.02	Providing equipment at site with operators, P.O.L. etc. complete in good working condition including all types of maintenance during contract period	As per details in Schedule "B"	1	169241.250		1,69,241	150000.00	150000.00
11.03	Providing material at site inclusive of all costs, overheads and profit margin complete as directed by the Engineer	As per details in Schedule "C"	1	534146.250		5,34,146	450000.00	450000.00
	<b>Total Day work rates carried to Grand Summary</b>					<b>9,61,198</b>		<b>850000.00</b>
<b>12</b>	<b>MAINTAINANCE</b>							
12.01	Maintainance of project road for first year of maintainance period after Defect Liability Period as directed by the Engineers	per km	33.80	180000.000		60,84,000	25000.00	845000.00
12.02	Maintainance of project road for 2nd year of maintainance period after Defect Liability Period as directed by the Engineers	per km	33.80	220000.000		74,36,000	50000.00	1690000.00
	<b>Total for mainatance cost</b>					<b>1,35,20,000</b>		<b>2535000.00</b>

**Total Construction cost**

**68,17,95,993.18**

**525533424.45**  
**39,53,24,533**  
920857957.45  
Rebate 4.07% 37478918.87  
**883379038.58**