

General Abstract of Cost of Jagatpur to Duhuria Road

Bill No.	Description	Amount in Rupees
1	Site clearance and Dismantling	5,961,152.00
2	Earth Work	329,659,326.00
3	Sub-base and Base Courses	303,372,012.00
4	Bituminous courses, DLC & PQC	644,268,595.00
5	Culverts	107,511,840.00
6	Bridges	24,934,489.00
7	Retaining Wall, Drainage & Protective works	168,139,595.00
8	Road Safety and Amenities	90,987,104.00
9	Maintenance, Repair and Rehabilitation works	12,588,098.00
10	Environmental Mitigation Measures	9,463,858.00
	SubTotal (A)	1,696,886,069.00
1	Total for Daywork : Labour	136,950.00
2	Total for Daywork : Materials	454,502.00
3	Total for Daywork : Contractor's Equipment	243,846.00
	Subtotal (B)	835,298.00
	Subtotal (C=A+B)	1,697,721,367.00
1	Contingency (D=1% of C)	16,977,213.67
2	Quality Control (E = 1% of C)	16,977,213.67
	Net Total (F = C+D+E)	1,731,675,794.34
	Say,	1,731,676,000.00

T. S. No. 01/12-14 dt. 01.05-2013

Revised technical sanction is accorded for
Rs. 173,16,76,000.00 (Rupees one hundred seventy three
crore sixteen lakh seventy six thousand) only.


 Engineer
 World Bank Project
 O/o the E.I.C. (Civil), Odisha
 Bhubaneswar.

Item No.	Description	Unit	Quantity	Rate	Amount
	BILL NO.1 : SITE CLEARANCE				
1.01	Clearing and Grubbing for road land complete as per Technical Specification Clause 201 and as per the direction of the Engineer.	Hectare	69.00	30,945.30	2,135,226.00
1.02	Dismantling structures and pavement including disposal of resulting material and/or salvaging useful materials complete as per Technical Specification Clause 202, 2809 and as per the direction of the Engineer.				
	a) Brick/ Stone Structures of dry or in lime/cement mortar	Cum	912.00	171.00	155,952.00
	b) Concrete/ Reinforced concrete/ Prestressed concrete structures including cleaning straightening & cutting of bars and separating them out from RCC/PSC.				
	For Slab Culverts & Box Culverts and Bridges				
	i) P.C.C.	Cum	217.00	274.50	59,567.00
	ii) R.C.C.	Cum	121.00	466.70	56,471.00
	c) Dismantling of Pavement course	Cum	21103.00	164.80	3,477,774.00
	d) Hume pipe	Lm	358.00	96.70	34,619.00
	e) Kerb	Lm	23.00	8.40	193.00
	f) stone pitching	Cum	121.00	118.90	14,387.00
	g) Expansion joint	Rm	75.00	124.70	9,353.00
	h) Bituminous Concrete Wearing Coarse	Sqm	338.00	52.10	17,610.00
				Total	5,961,152.00
	SUB TOTAL				5,961,152.00
	BILL NO.2 : EARTH WORKS				
2.01	Roadway and Drainage excavation necessary for construction of roadway complete as per Technical Specification Clause 301 and as per the direction of Engineer.				
	a) All kinds of soil	Cum	94813.00	48.40	4,588,949.00
	b) Softrock (blasting not required)	Cum	500.00	58.20	29,100.00
	c) Hard rock (blasting required)	Cum	500.00	154.90	77,450.00
	d) Hard rock (blasting not required)	Cum	500.00	171.00	85,500.00
2.02	Construction of embankment with approved material from approved borrow areas complete as per Drawing and Technical Specification Clause 305 and as per the direction of the Engineer.	Cum	72409.00	361.70	26,190,335.00
2.03	Construction of embankment with sand from approved quarry complete as per Drawing and Technical Specification Clause 305 and as per the direction of the Engineer.	Cum	328547.00	384.40	126,293,467.00
2.04	Construction of subgrade and earthen shoulder with approved material as per Drawing complete and Technical Specification Clause 305 and as per the direction of the Engineer.	Cum	414491.00	406.50	168,490,592.00
2.05	Construction of embankment and subgrade with suitable material deposited at site from roadway and drainage excavation all complete as per Drawing and Technical Specification Clause 305 and as per the direction of the Engineer.	Cum	27994.00	76.60	2,144,340.00

Item No.	Description	Unit	Quantity	Rate	Amount
2.06	Loosening and recompacting the existing subgrade in all kinds of soil upto a depth of 300mm/500mm to meet the requirement of table 300-2 complete as per Technical Specification Clause 305 and as per the direction of the Engineer.	Cum	17880.00	43.60	779,568.00
2.07	Earthwork with agriculture soil for filling of median/island complete as per Technical Specification Clause 407 and as per the direction of the Engineer.	Cum	1350.00	162.20	218,970.00
2.08	Scarifying the existing bituminous surface layers without disturbing the base including carrying, processing, laying and disposal of waste material complete as per Technical Specification Clause 501 and as per the direction of the Engineer.	Sqm	28938.00	3.50	101,283.00
2.09	Stripping, storing of top soil by road side at 15 m internal and re-application on embankment slopes, cut slopes and other areas in localities where the available embankment material is not conducive to plant growth as directed by the Engineer and as per technical specification-305.	Cum	5364.00	123.00	659,772.00
				Total	329,659,326.00
	SUB TOTAL				329,659,326.00
	BILL NO.3 : SUB-BASE AND BASE COURSES				
3.01	Construction of Granular Sub-base course using crushed stone aggregade by providing the materials conforming to Gr-I of Table 400-2 complete as per Technical Specification Clause 401 and as per the direction of the Engineer.	Cum	121407.00	1,376.70	167,141,017.00
3.02	Construction of wet mix macadam Gr-I complete as per Technical Specification Clause 406 and as per the direction of the Engineer.	Cum	96032.00	1,418.60	136,230,995.00
				Total	303,372,012.00
	SUB TOTAL				303,372,012.00
	BILL NO.4 : BITUMINOUS COURSES				
4.01	Providing bituminous Primer coat over granular surface complete all as per Technical Specification Clause 502 and as per the direction of the Engineer.	Sqm	377494.00	23.60	8,908,858.00
4.02	Providing Tack coat complete as per Technical Specification Clause 503 and as per the direction of the Engineer.				
	(a) Granular Surface treated with primer	Sqm	377494.00	8.70	3,284,198.00
	(b) Over normal bituminous surface	Sqm	377494.00	8.70	3,284,198.00
4.03	Providing Dense Bituminous Macdam course using Bitumen Grade-60/70 (VG-30) complete as per Technical Specification Clause 507 and as per the direction of Engineer.	Cum	32925.00	6,960.80	229,184,340.00
4.04	Providing bituminous concrete wearing course using CRMB-55 complete as per Technical Specification Clause 509 & 521 and as per the direction of the Engineer.	Cum	15100.00	7,937.00	119,848,700.00

Item No.	Description	Unit	Quantity	Rate	Amount
4.05	Construction of dry lean cement concrete Sub-base over a prepared sub-grade with coarse and fine aggregate, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver with electronic sensor, compacting with 8-10 tonnes vibratory roller, finishing and curing as per Technical Specification Section 600 and as per the direction of the Engineer.	Cum	21677.00	2,783.60	60,340,097.00
4.06	Construction of un-reinforced, dowel jointed at expansion and construction joint only, plain cement concrete pavement, thickness as per design, over DLC with appropriate grade of cement as directed by the Engineer, M 40 grade mixed in a batching plant as per approved mixed design, transported in transit mixer to site, laid in approved fixed side form work (Steel channel, laying and fixing of 125 micron thick polythene film, wedges steel plates including levelling the form work as per drawing), spreading the concrete with shovels, rakes, compacted using needle, screed and plate vibrators and finished in continuous operation including provision of contraction and expansion, construction joints, applying debonding strips, primer, sealant, dowel bars, near approaches to bridge/culvert and construction joints, sealing of joints, admixtures as approved, curing of concrete slabs for the required period, finishing to lines and grade as per drawing, technical specification clause No-1501 of MORD and as directed by the Engineer.	Cum	43353.00	5,061.20	219,418,204.00
				Total	644,268,595
	SUB TOTAL				644,268,595
	BILL NO.5 : CULVERTS				
5.01	Earthwork in excavation of foundation for structures complete as per Drawing and Technical Specifications Clause 304 including all leads and lifts and as per the direction of the Engineer.	Cum	12016.00	34.60	415,754.00
5.02	Earth fill below pitching in quadrant portion with approved material complete as per Drawing and Technical Specification Clause 305 with all leads and lifts and as per the direction of the Engineer.	Cum	2350.00	162.20	381,170.00
5.03	Providing and filling behind abutment, wing wall and return wall with granular material etc. and below pipe bed in layers not exceeding 150mm thick including All leads and lifts complete as per Drawing, direction of the Engineer and Technical Specification Clause 304 and as per the direction of the Engineer.	Cum	1029.00	1,099.30	1,131,180.00
5.04	Providing filter media behind abutment, wing wall and return wall complete as per Drawing and Technical Specification Clause 2504, 2509, 2510 and as per the direction of the Engineer.	Cum	435.00	2,326.90	1,012,202.00

Item No.	Description	Unit	Quantity	Rate	Amount
5.05	Cement Concrete M-15 grade in levelling course etc. including centering and shuttering all complete as per Drawing and Technical Specification Sections 1500 and 1700 and as per the direction of the Engineer.	Cum	2414.00	4,377.90	10,568,251.00
5.06	Cement Concrete M-15 grade in substructure & headwall including centering and shuttering all complete as per Drawing and Technical Specification Sections 1500, 1700, 2200 and as per the direction of the Engineer.	Cum	5668.00	4,631.90	26,253,609.00
5.07	Reinforced cement concrete (M-20 grade) in all types of culverts as per Drawing and Technical Specification Section 1500, 1700 & 2200 and as per the direction of the Engineer.	Cum	1413.00	5,338.40	7,543,159.00
5.08	Reinforced cement concrete M-30 grade in approach slabs including cost of reinforcement all complete as per Drawing and Technical Specification Clause 2704 and as per the direction of the Engineer.	Cum	289.00	8,703.90	2,515,427.00
5.09	HYSD (TMT) bar reinforcement complete as per Drawing and Technical Specifications Clause 1600 and as per the direction of the Engineer.	MT	92.00	64,239.00	5,909,988.00
5.10	Providing laying and joining NP-4(I.S 458) hume pipes for culverts on concrete cradle bedding complete as per Drawing Tech. Specification section 2900 and IRC special publication No.13 and as per the direction of the Engineer.				
	a) 1m dia. In Single Row	Lm	1178.00	5,709.00	6,725,202.00
	b) 1.2m dia. In Single Row	Lm	780.00	7,528.00	5,871,840.00
	c) 1m dia. In Double Row	Double Row-Lm	450.00	11,610.80	5,224,860.00
	d) 1.2m dia. In Double Row	Double Row-Lm	870.00	15,262.60	13,278,462.00
5.11	Providing & laying 0.3m dia NP-4 Hume Pipe with collars on first class bedding for utility duct and reptile pass including cost of transportation, loading & unloading, taxes, watering, curing, T&P etc. all complete as per Technical Specification Section 2900 & IRC SP-13 and as per the direction of the Engineer	Lm	1190.00	1,349.30	1,605,667.00
5.12	Providing laying and joining NP-3(I.S 458) hume pipes with culvert complete as per drawing Tech. Specification section 2900 and IRC special publication no.13 and as per the direction of Engineer.				
	a) 0.6m dia in single row for cross drain	Lm	2240.00	2,101.10	4,706,464.00
5.13	Providing and laying filter material underneath stone pitching in slopes complete as per Drawing and Technical Specification section 2504, 2509, 2510 and as per the direction of the Engineer.	Cum	902.00	2,326.90	2,098,864.00

Item No.	Description	Unit	Quantity	Rate	Amount
5.14	Providing and laying stone Pitching on embankment slopes complete as per Drawing and Technical Specification Clause 2504 and as per the direction of the Engineer	Cum	1810.00	1,491.00	2,698,710.00
5.15	Providing rubble stone flooring in Cement mortar (1 Cement: 3 Sand) and joints complete as per Drawing and Technical Specification Section 1400, 2504 and as per the direction of the Engineer.	Cum	1566.00	4,323.60	6,770,758.00
5.16	Providing weep holes in box portion, return wall, wing wall etc. all complete as per Drawing and Technical Specification Clause. 2706 and as per the direction of the Engineer.	Nos	480	105.30	50,544.00
5.17	Supplying, fitting and fixing tar paper bearing in position complete with all accessories as per drawings and technical specification clause 2605.	Sqm	15.00	50.00	750.00
5.18	Supplying and fixing following types of expansion joints complete as per Drawing and as per IRC: SP: 69-2005 and as per the direction of the Engineer.				
	a) Asphaltic plug	Rmt	338.00	1,216.50	411,177.00
5.19	Cement Concrete Parapet in M-15 complete as per Drawing and Technical Specification Section	Cum	281.00	4,377.90	1,230,190.00
5.20	Bituminous wearing course 56mm thick comprising 50mm thick asphaltic concrete in a single layer over Bituminous mastic course 6mm thick with a prime coat complete as per Drawing and Technical Specification Section 2700, Clause 512 and as per the direction of the Engineer.	Sqm	1710.00	631.40	1,079,694.00
5.21	Synthetic enamel painting of culvert No. and span arrangement as per IRC - 7 - 1971 and as per the direction of the Engineer.	Nos.	48.00	68.30	3,278.00
5.22	Providing and applying 2 coats of water based cement paint to unplastered concrete surface after cleaning the surface of dirt, dust, oil, grease, efflorescence and applying paint @ of 1 litre for 2 Sq.m.)	Sqm	704.00	35.00	24,640.00
				Total	107,511,840.00
	SUB TOTAL				107,511,840.00

Item No.	Description	Unit	Quantity	Rate	Amount
	BILL NO.6 : BRIDGES				
6.01	Earthwork in excavation of foundation for structures complete as per Drawing and Technical Specification Clause 304 including all leads & lift and as per the direction of the Engineer.	Cum	3752.00	34.60	129,819.00
6.02	Providing and filling foundation and at the back of abutment, wing wall and return wall etc. and below pipe bed in layers not exceeding 150mm thick with granular material including all leads & lifts as per Technical Specification Clause 304 and as per the direction of the Engineer.	Cum	1141.00	1,099.30	1,254,301.00
6.03	Providing Filter media behind abutment, wing wall and return wall complete as per Drawing and Technical Specification Clause 2504 and as per the direction of the Engineer.	Cum	87.00	2,326.90	202,440.00
6.04	Cement concrete M-15 grade in levelling course etc including centering and shuttering all complete as per Drawing and Technical Specification Section 1500 and 1700 and as per the direction of the Engineer.	Cum	177.00	4,377.90	774,888.00
6.05	Cement concrete (M-15 grade) in foundation and substructure etc including centering and shuttering all complete as per Drawing and Technical Specification Section 1500, 1700, 2100, 2200 and as per the direction of the Engineer.	Cum	360.00	4,631.90	1,667,484.00
6.06	Reinforced cement concrete in foundation complete as per Drawing & Technical Specification sections 1500, 1700, 2100, 2200 and as per the direction of the Engineer.				
	a) M-20 grade	Cum	322.00	5,047.20	1,625,198.00
6.07	Reinforced cement concrete in substructure complete as per Drawing & Technical Specification sections 1500, 1700, 2200 and as per the direction of the Engineer.				
	a) M-20 Grade	Cum	480.00	5,338.40	2,562,432.00
	b) M-35 Grade	Cum	196.00	6,120.60	1,199,638.00
6.08	Reinforced cement concrete in super structure complete as per Drawing and Technical Specification section 1500, 1700, 2300 and as per the direction of the Engineer.				
	a) M-25 grade	Cum	33.00	6,611.50	218,180.00
	b) M-30 Grade	Cum	282.00	6,687.50	1,885,875.00
6.09	HYSD (TMT) bar reinforcement complete as per Drawing and Technical Specifications Clause 1600 and as per the direction of the Engineer.				
	a) in foundation	MT	26.00	64,153.50	1,667,991.00
	b) in substructure	MT	58.00	64,239.00	3,725,862.00
	c) in superstructure	MT	36.00	64,987.50	2,339,550.00

Item No.	Description	Unit	Quantity	Rate	Amount
6.10	Providing and fixing specified bearings complete as per Drawing and Technical Specification 2000 and as per the direction of the Engineer.				
	a) Tarpaper Bearing	Sqm	54.00	50.00	2,700.00
6.11	Reinforced cement concrete M-30 grade for in approach slabs complete as per Drawing and Technical Specification section 1500, 1600, 1700, 2700 and as per the direction of the Engineer.	Cum	96.00	8,703.90	835,574.00
6.12	Bituminous wearing course 56mm thick comprising 50mm thick asphaltic Concrete in a single layer over Bituminous mastic course 6 mm thick with a prime Coat Complete as per Drawing and Technical Specification Section 509 & 2700 and as per the direction of the Engineer.	Sqm	1046.00	631.40	660,444.00
6.13	Providing and fixing Drainage Spouts Complete as per Drawing and Technical Specification Clause 2705 and as per the direction of the Engineer.	Nos.	20.00	847.90	16,958.00
6.14	Providing and laying Stone pitching in slopes complete as per Drawing and Technical Specification Section 2500 and as per the direction of the Engineer.	Cum	29.00	1,491.00	43,239.00
6.15	Providing as laying fitter material underneath Stone pitching in slopes Complete as per Drawing and Technical Specification Clause 2504 and as per the direction of the Engineer.	Cum	121.00	2,426.40	293,594.00
6.16	Providing weep holes in abutments, wing walls and return walls etc. as per Drawing and Technical Specification Clause 2706 and as per the direction of the Engineer.	Nos.	332.00	105.30	34,960.00
6.17	Providing rubble Stone flooring in Cement mortar (1Cement:3 sand) and joints Complete as per Drawing and Technical Specification Section 1400 and 2500 and as per the direction of the Engineer.	Cum	194.00	4,323.60	838,778.00
6.18	Supplying as fixing the following types of expansion joints Complete as per Drawing and as per IRC: SP: 69-2005 and as per the direction of the Engineer.				
	a) Asphaltic plug	Lm	144.00	1,216.50	175,176.00
6.19	Synthetic enamel painting of culvert No. and span arrangement as per IRC - 7 - 1971 and as per the direction of the Engineer.	Nos.	16.00	68.30	1,093.00

Item No.	Description	Unit	Quantity	Rate	Amount
6.20	Carrying and Confirmatory bores up to required depth at locations of bridges as directed by the Engineer complete in all respects, conducting all the tests required as directed by the Engineer and as per Technical Specification Section 2400 and interpretation of the bore data and presentation of the results and as per the direction of the Engineer.				
	a) In all types of soil (except hard rock)				
	i) depth from 0m to 10m	Lm	100.00	400.00	40,000.00
	ii) depth from 10m to 20m	Lm	15.00	450.00	6,750.00
	iii) depth from 20m to 30m	Lm	10.00	500.00	5,000.00
	b) In hard rock				
	i) depth from 0m to 5m	Lm	10.00	600.00	6,000.00
	ii) depth from 5m to 10m	Lm	7.00	650.00	4,550.00
6.21	Providing and painting of flood gauge on substructure is fall height and 500mm width and as per the direction of the Engineer.	Rm	45.00	422.90	19,031.00
6.22	Providing and laying 150mm dia. HDPE Service pipe as per Drawing and as per the direction of the Engineer.	Rm	354.00	300.00	106,200.00
6.23	Earth fill below pitching in quadrant portion with approved material complete as per Drawing and Technical Specification Clause 305 with all leads and lifts and as per the direction of the Engineer.	Cum	516.00	162.20	83,695.00
6.24	Sand Filling in Foundation Trenches as per Drawing & Technical Specification Clause 304, 305 and as per the direction of the Engineer.	Cum	116.00	398.20	46,191.00
6.25	PCC in flooring as per Drawing & Technical Specification section 1700, 2500 and as per the direction of Engineer.				
	a) M-15	Cum	280.00	4,377.90	1,225,812.00
	b) M-20	Cum	93.00	5,040.10	468,729.00
6.26	Providing Reinforced cement concrete crash barrier constructed with M-40 grade concrete with HYSD reinforcement conforming to IRC:21, with MS vertical plate & base plate, 50mm dia pipe and dowel bars 25 mm dia, 450 mm long at expansion joints filled with pre-moulded asphalt filler board, keyed to the structure on which it is built and installed as per design and as per dimensions in the approved drawing and at locations directed by the Engineer and Technical Specification Clause 809, and section 1500, 1600, 1700.				
		Lm	177.00	4,329.70	766,357.00
				Total	24,934,489.00
	SUB TOTAL				24,934,489.00

Item No.	Description	Unit	Quantity	Rate	Amount
	BILL NO.7 : RETAINING WALL, DRAINAGE AND PROTECTIVE WORKS				
7.01	Retaining Wall				
(a)	Earthwork in excavation for foundation complete as per Drawing and Technical Specification Clause 304 in Retaining wall for high embankment stretches as per the direction of the Engineer.	Cum	17298.00	34.60	598,511.00
(b)	Providing Plain cement concrete M -15 in foundation levelling course etc. including centering and shuttering all complete as per Drawing and Technical Clauses 1500, 1700 and as per the direction of the Engineer.	Cum	1390.00	4,377.90	6,085,281.00
(c)	Providing Cement concrete M -20 for reinforced concrete in foundation and substructure including centering and shuttering all complete as per Drawing and Technical Clauses 1500, 1700, 2100 and as per the direction of the Engineer.	Cum	5548.00	5,192.80	28,809,654.00
(d)	Providing steel reinforcement HYSD (TMT) for retaining wall complete as per Drawing and Technical Specification Clause 1600 and as per the direction of the Engineer.	MT	444.00	64,196.25	28,503,135.00
(e)	Providing weep holes in retaining wall complete as per Drawing and Technical Specification Clause 2706 and as per the direction of the Engineer.	Nos.	6775.00	105.30	713,408.00
7.02	Providing and laying stone pitching on embankment slopes as per Drawing and Technical Specification Clause 2504 and as per the direction of the Engineer.				
	Near Bridge approaches where separate embankment exists	Cum	383.00	1,491.00	571,053.00
7.03	Providing and laying filter material underneath stone pitching on embankment slopes as per Drawing and Technical Specification Clause 2504 and as per the direction of the Engineer.	Cum	108.00	2,426.40	262,051.00
7.04	Turfing side slopes of main road and service road with grass sods complete as per Technical Specification Clause 307 and as per the direction of the Engineer.	Sqm	110474.00	23.70	2,618,234.00
7.05	Constructing precast saucer drain to the required lines and grades as per Drawing and Technical Specification and as per the direction of the Engineer.	Lm	31720.00	3,151.90	99,978,268.00
				Total	168,139,595.00
	SUB TOTAL				168,139,595.00
	BILL NO-8 : ROAD SAFETY AND AMENITIES				
8.01	Providing and laying plain cement concrete kerb as per Drawing and Technical Specifications Clauses 408 Section 1500, 1700 and as per the direction of the Engineer.	Lm	2840.00	243.30	690,972.00

Item No.	Description	Unit	Quantity	Rate	Amount
8.02	Providing and laying service ducts with 160/136mm dia HDPE Double Walled Corrugated Pipe conforming to IS:14930 (Part-II) including cutting of trenches and as per the direction of Engineer.	Lm	7100.00	326.00	2,314,600.00
8.03	Providing and fixing RCC boundary posts complete as per Drawing and Technical Specification Clause 806 and as per the direction of the Engineer.	Nos.	537	469.10	251,907.00
8.04	Providing and fixing RCC/PCC hectometer, Kilometer and 5th kilometer stones complete as per Technical Specification Clause 804 and as per the direction of the Engineer.				
	a) No of (200) Hectometre Stone	Nos.	196	417.70	81,869.00
	b) No of Kilometre stone	Nos.	39	1,594.50	62,186.00
	c) No. of 5th Kilometre Stone	Nos.	10	2,571.90	25,719.00
8.05	Constructing footpath/ paved separator at toll plaza, passenger platform / paved part of medians and islands complete as per Drawing and Technical Specifications Clause 409 and 407 and as per the direction of the Engineer.				
		Sqm	2330.00	1,037.00	2,416,210.00
8.06	Providing passenger shelters for Bus Bays as per Drawing and Technical Specifications Section 1500, 1600, 1700, 2100, 2200, 2300 and as per the direction of the Engineer.	Nos.	56.00	80,000.00	4,480,000.00
8.07	Construction of temporary diversion including Cross drainage works where necessary and maintenance thereof including traffic control and safety complete as per Technical Specification Clause 112 and as per the direction of Engineer.	Lm	2550.00	8,298.90	21,162,195.00

Item No.	Description	Unit	Quantity	Rate	Amount
8.08 (a)	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, as per Technical Specification section 800 and as per direction of Engineer.				
	Lane line / Edge marking	Sqm	20262.00	558.20	11,310,248.00
8.08 (b)	Painting lines, dashes, arrows etc on roads in two coats on new work with ready mixed road marking paint conforming to IS:164 on bituminous surface, including cleaning the surface of all dirt, dust and other foreign matter, demarcation at site and traffic control				
	Directional arrows and lettering etc. (over 10cm width)	Sqm	450.00	71.00	31,950.00
8.09	Supplying and fixing sign boards complete as per Technical Specifications Clause 801. Including the cost of Posts, Fitting & fixing. Sheeting will be retro reflective type of high intensively grade and messages / boarders and as per the direction of the Engineer.				
(a)	Informatory Signs				
	(i) Facility Information (800 x 600)mm	Nos.	32	3,282.80	105,050.00
	(ii) Direction Signs (1200 x 700 mm)	Nos.	4	5,396.30	21,585.00
	(iii) Advance Direction (size 1800 x 1200mm) ,	Nos.	4	5,731.40	22,926.00
	(iv) Re-Assurance Sign (1800 X 1200 mm) ,	Nos.	4	5,731.40	22,926.00
	(v) Destination Sign (1500 X 900 mm) ,	Nos.	4	3,731.40	14,926.00
	(vi) Place Identification (1500 X 900 mm) ,	Nos.	56	3,731.40	208,958.00
	(vii) Toll Booth (1500 X 900 mm)	Nos.	4	3,731.40	14,926.00
	(viii) Bus Lane Sign (450mm x 600mm)	Nos.	56	2,534.40	141,926.00
	(ix) Other Informatory Signs (2100mm x 1500mm)	Nos.	4	5,731.40	22,926.00
(b)	CAUTIONARY SIGNS triangular 900mm side	Nos.	20	2,819.50	56,390.00
(c)	MANDATORY SIGNS				
	(i) Circular 600mm dia	Nos.	198	2,580.70	510,979.00
	(ii) Octagon 900 mm height	Nos.	130	3,967.10	515,723.00
	(iii) Triangular 900 mm side	Nos.	517	2,819.50	1,457,682.00
8.10	Providing & fixing retro - reflectorised road delineators complete as per Drawing , Technical Specifications Clause 805 and as per the direction of the Engineer.				
	(i) Roadway delinator	Nos.	1043	790.30	824,283.00
	(ii) Hazard Marker	Nos.	96	790.30	75,869.00
	(iii) Object Marker	Nos.	60	790.30	47,418.00
8.11	Providing and fixing RCC Guard post with reflective paint marking on the top 25mm width band complete including end anchorage as per Drawing and Technical Specifications Clause 806 and as per the direction of the Engineer.	Nos.	4589	471.60	2,164,172.00

Item No.	Description	Unit	Quantity	Rate	Amount
8.12	Providing and fixing of metal beam crash barrier made out of cold rolled steel strip W profile of 3 mm thick having a minimum yield strength of 2400 kg/sqcm, width of 313 mm and depth of corrugation as 83 mm hot dip galvanized of zinc coating @ 550 gm/sq.m. The post and spacer channel is made out of cold rolled channel 150x75x5 mm having minimum yield strength of 2400 kg/sqcm and hot dip galvanized of zinc coating @ 550 gm/sq.m. The total length of post shall be 1900 mm and minimum height of post above concrete foundation shall be 800 mm. The length of spacer channel shall be 330 mm. Job includes neatly fixing new post in cement concrete of M-20 grade complete (cost included) as directed by the Engineer including fasteners and fixing etc. complete. The spacing of the Steel posts shall be about 2 m. The guard rail reflectors of 100 mm dia circular made out of 2 mm thick GI sheet duly fixed with micro-prismatic type sheeting with Type 9 ASTM D 4956-01 standards @ every 5 meters. The work is to be executed as per drawing, Specifications and as directed by the Engineer.	Lm	1200.00	2,495.00	2,994,000.00
8.13	Providing and fixing Pedestrian guard rails in modules including painting with approved paint complete as per drawing and Technical Specification Clause 803,1008,1300 & 1700.	Lm	12688.00	2,545.60	32,298,573.00
8.14	Supply of colour video coverage in Digital format during construction as per Technical Specifications Clause 126 As per requirement and as per the direction of the Engineer.	set	30.00	20,000.00	600,000.00
8.15	Providing rumble strips for complete carriageway width at required places as per Drawing and as per the direction of the Engineer.	Mtr	559	1,730.00	967,070.00
8.16	Providing road hump complete at required places as per Drawing and as per the direction of the Engineer.	Mtr	310	2,178.00	675,180.00
8.17	Providing toll plaza building complex as per Drawing and Technical Specification and as per the direction of the Engineer.	Nos.	1	1,370,418.00	1,370,418.00
8.18	Supplying and fixing of raised (Reflective) pavement marker –RPM (cat's eye) made of aluminium alloy size 75x100x22 having ZI biconvex lenses embedded in circular disc of ABS plastic near the locations of speed humps and at curves as per the direction of Engineer.	No	12738	159.00	2,025,342.00

Item No.	Description	Unit	Quantity	Rate	Amount
8.19	Supplying, erecting and commissioning 100kVA diesel powered generator of approved make for Toll Plaza at required place as per the direction of Engineer including cost of all labour, transportation, taxes, duties etc. complete.	No	1	1,000,000.00	1,000,000.00
				Total	90,987,104.00
	SUB TOTAL				90,987,104.00
	BILL NO.9 MAINTENANCE, REPAIR AND REHABILITATION				
9.01	Restoration of Rain Cuts (Restoration of rain cuts with soil, moorum, gravel or a mixture of these, clearing the loose soil, benching for 300 mm width, laying fresh material in layers not exceeding 250 mm and compacting with plate compactor or power rammers to restore the original alignment, levels and slopes)	cum	662.00	72.00	47,664.00
9.02	Maintenance of Earthen Shoulder (filling with fresh soil) (Making up loss of material/ irregularities on shoulder to the design level by adding fresh approved soil and compacting it with appropriate equipment.)	sqm	52920.00	62.80	3,323,376.00
9.03	Maintenance of Earth Shoulder (stripping excess soil) (Stripping excess soil from the shoulder surface to achieve the approved level and compacting with plate compactor)	sqm	132300.00	9.40	1,243,620.00
9.04	Filling Pot- holes and Patch Repairs with open - graded Premix surfacing, 20mm. (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 as per clause 511, compacting, trimming and finishing the surface to form a smooth continuous surface, all as per clause 3004.2)	sqm	54574.00	136.20	7,432,979.00
9.05	Epoxy bonding of new concrete to old concrete for jacketing as Technical Specification clause 2805 and as per the direction of Engineer-in-charge.	Sqm	971.00	556.60	540,459.00
				Total	12,588,098.00
	SUB TOTAL				12,588,098.00
	BILL NO.10 : ENVIRONMENTAL MITIGATION MEASURES				
10.01	Earthwork in excavation of foundation for structures complete as per Drawing No. OSRP/CEG/SH/ENV/1 - A, B, C, D, 03, 04 - A, B, 05, 05 - A, 07, 09, 10, 12 and Technical Specifications Clause 304 including all leads and lifts and as per the direction of the Engineer.	Cum	430.00	34.60	14,878.00
10.02	Sand filling below foundation of wing wall and return wall, pipe bed in layers not exceeding 150mm thick including All leads and lifts complete as per Drawing No. OSRP/CEG/SH/ENV/1 - A, B, C, D, 03, 04 - A, B, 05, 05 - A, 07, 09, 10, 12 direction of the Engineer and Technical Specification Clause 304 and as per the direction of the Engineer.	Cum	80.00	398.20	31,856.00

Item No.	Description	Unit	Quantity	Rate	Amount
10.03	Providing & laying in position Cement Concrete M-15 grade in foundation, levelling course etc. including centering and shuttering all complete as per Drawing No. OSRP/CEG/SH/ENV/1 - A, B, C, D, 03, 04 - A, 05 - A, 07, 09, 10, 12 and Technical Specification Sections 1500 and 1700 and as per the direction of the Engineer.	Cum	282.00	4,377.90	1,234,567.80
10.04	Providing & laying in position Cement Concrete PCC M-20 grade in foundation, levelling course etc. including centering and shuttering all complete as per drawing no. OSRP/CEG/SH/ENV/1A,B,C,09, Major Jns and Technical Specification Sections 1500 and 1700.	Cum	43.00	5,040.10	216,724.30
10.05	Providing weep holes in PCC toe wall with 100mm dia AC pipe at 1mtrs horizontal interval all complete as per Drawing no. OSRP/CEG/SH/ENV/03 and Technical Specifications cl no. 2706 & 2200	Nos	263.00	105.30	27,693.90
10.06	Providing & laying in position Reinforced Cement Concrete RCC M-20 grade in foundation, levelling course etc. including centering and shuttering all complete as per drawing no. OSRP/CEG/SH/ENV/04-A,B,05,5-A,10, Major Jns and Technical Specification Sections 1500 and 1700.	Cum	83.00	5,047.20	418,917.60
10.07	Providing & laying in position HYSD bars reinforcement bars with cutting, bending, binding, laying in position as per drawing nos OSRP/CEG/SH/ENV/04-A,B,05,5-A,10, including cost of binding wires complete as per technical section clause 1600 and direction of Engineer.	MT	4.00	64,153.50	256,614.00
10.08	Providing and laying filter material under neath the pitching in slopes at water bodies and ponds as per technical specification clause 2500, drawing no.OSRP/CEG/SH/ENV/3 and direction of Engineer-in-Charge.	Cum	158.00	2,426.40	383,371.20
10.09	Providing and laying stone pitching on slopes over filter material at water bodies and ponds as per technical specification clause 2500, drawing no.OSRP/CEG/SH/ENV/3 and direction of Engineer-in-Charge.	Cum	210.00	1,491.00	313,110.00
10.10	Providing cement paint two coats to the walls as per drawing no. OSRP/CEG/SH/ENV/03, 04-A, B, 05, 05A, 10 as per direction of Engineer-in-Charge.	Sqm	623.00	35.00	21,805.00
10.11	Providing and fixing fixed flower vase of bottom(150x150), top (400x400) of depth 300mm and 40mm thick CC M-20 grade as per drawing no OSRP/CEG/SH/ENV/4A and as per direction of Engineer.	Nos	84.00	250.00	21,000.00
10.12	Construction of approach road with GSB and moorum topping well mixed and compacted as hard sholder as per technical spection clause 400.2 drawing no OSRP/CEG/SH/ENV/05 and as per direction of Engineer.	Lm	900.00	250.00	225,000.00
10.13	Maintenance of haulage road for 4 occurrences throughout the construction period as per technical specification clause no. 3002 asnd direction of Engineer.	Cum	22500.00	76.60	1,723,500.00

Item No.	Description	Unit	Quantity	Rate	Amount
10.14	Stripping of top soil from borrow areas located in agriculture fields, storing at a suitable place, spreading and re-laying after taking the borrow earth to maintain fertility of the agricultural field, finishing it to the required levels and satisfaction of the farmer.	Cum	30000.00	123.00	3,690,000.00
10.15	Providing and making masonry Oil & Grease trap chamber of required size including excavation of foundation in all kinds of soil, 100mm thick bed concrete in CC M15 over 100mm thick sand filling, 1st class KB brick masonry in (1:3) for walls up to required height, covered with 100mm thick RCC slab with man hole covers and reinforcement bars as per design, including 12mm thick cement plaster in CM(1:3) with a neat coat of cement punning to the inside wall surfaces including cost of all materials, labour, transportation, taxes, sundries, curing, T&P etc. all complete as per approved drawing No OSRP/CEG/ENV/06, technical specifications and as per the direction of the Engineer.	Nos	1.00	143,092.00	143,092.00
10.16	Providing silt fence and sediment arrestor in the construction zones and stock piles of top soil by fixing wooden posts of 100mm dia firmly to the ground at required intervals and placing closely woven fabric of coconut fibre reinforced with HDPE materials etc. complete as per drawing No OSRP/CE/PW, technical specifications including cost of all materials, labour, transportation, taxes, sundries, curing, T&P etc. and as per the direction of the Engineer.	Lm	3500.00	196.00	686,000.00
10.17	Grouting stone pitching on embankments of reptile passes for making trap drain 23cm deep with Cement Concrete M15 grade using 20mm down stone aggregates as per drawing no-OSRP/CEG/ENV/14, technical specifications including cost of all materials, labour, transportation, taxes, sundries, curing, T&P etc. and as per the direction of the Engineer.	Sqm	288.00	193.50	55,728.00
				Total	9,463,857.80
	SUB TOTAL				9,463,858.00

DAY WORK ITEMS

Sl. No.	Description	Unit	Quantity	Rate	Amount
Schedule of Daywork Rates: 1. Labour					
D101	Labour (Un-skilled)	Day	200	150.00	30000.00
D102	Mason (Special Class)	Day	25	205.00	5125.00
D103	Carpenter (Special Class)	Day	10	205.00	2050.00
D104	Mason (Second Class)	Day	25	190.00	4750.00
D105	Carpenter (Second Class)	Day	10	190.00	1900.00
D106	Steelworker Erector	Day	35	205.00	7175.00
D107	Driver for vehicle up to 10 tons	Day	25	205.00	5125.00
D108	Operator for excavator, dragline, shovel or crane	Day	25	205.00	5125.00
D109	Operator for tractor with dozer blade or ripper	Day	25	205.00	5125.00
D110	Operator grader	Day	25	205.00	5125.00
D111	Operator in other construction equipment	Day	25	205.00	5125.00
D112	Chowkidars for watch & ward	Day	250	150.00	37500.00
				Total	114125.00
D113	Allow 20% percent of Subtotal for Contractor's overhead, profit, etc., in accordance with paragraph 3 (b) above				22825.00
				Total	136950.00

Schedule of Daywork Rates: 2. Materials

D201	Cement, ordinary Portland or equivalent in bags conforming to IS:269:1989 and IS 455:1989	Per Mt	10	6295.55	62955.50
D202	HYSD reinforcing bars upto 25 mm dia conforming to IS:1786:1989	Per Mt	2	44631.55	89263.10
D203	Bricks of class designation 75 as per IS:1077:1992	Per 1000 Nos	10000	5221.25	52212.50
D204	Anti Corrosive Bituminous paint	Per Lit	5	160.27	801.34
D205	Enamel Paint of any shade & colour (IS:2932-1964 & IS 137-1975)	Per Lit	5	160.27	801.34
D206	Coarse Sand as per IS 1542	Per Cum	25	216.50	5412.50
D207	R.R. Stone for masonry	Per Cum	25	782.10	19552.50
D208	Crusher broken stone aggregates up to 25 mm nominal size	Per Cum	25	608.00	15200.00
D209	Crusher broken stone aggregates Above 25 mm nominal size	Per Cum	25	608.00	15200.00
D210	Portable water at site	Per KL	2500	10.00	25000.00
D211	Gravel/ Moorum for Road work	Per Cum	25	579.30	14482.50
D212	Bitumen-VG-30(60/70)	Per Mt	2	38935.36	77870.72
				Total	378752.01

D213 Allow 20% percent of Subtotal for Contractor's overhead, profit, etc., in accordance with paragraph 3 (b) above

	75750.40
Total	454502.41
Say	454502.00

Schedule of Daywork Rates: 2. Contractor's Equipment

D301	Excavator, face shovel, or dragging including the cost of operator:				
0.1	Up to and including 1 m3	Hour	25	840.00	21000.00
0.2	Over 1 m 3 to 2 m 3	Hour	15	840.00	12600.00
0.3	Over 2 m 3	Hour	5	840.00	4200.00
D302	Tractor, including bull or angle dozer including the cost of operator:				
0.1	Up to and including 150 kW	Hour	25	231.00	5775.00
0.2	Over 150 kW to 200 kW	Hour	15	231.00	3465.00
0.3	Over 200 kW to 250 kW	Hour	5	231.00	1155.00
D303	Tractor with ripper including the cost of operator:				
0.1	Up to and including 200 kW	Hour	15	249.00	3735.00
0.2	Over 200 kW to 250 kW	Hour	5	249.00	1245.00
D304	Motor grader including the cost of operator:	Hour	20	1545.00	30900.00
D305	Crane- 5 tonne including the cost of operator:	Hour	20	230.00	4600.00
D306	Diesel Road Roller, or Vibratory Compactor upto 10 t including the cost of operator:	Hour	20	994.00	19880.00
D307	Trucks, or Truck tipper, or Truck with mounted water tank or truck with crane for removal of accidental vehicles including the cost of operator.	Hour	50	582.00	29100.00
D308	Tractor with trolley, or tractor with including the cost of operator:				
(a)	upto 25 HP	Hour	20	249.00	4980.00
(b)	For 25-40 HP	Hour	15	249.00	3735.00
D309	Bitumen mixture (10-14 Cft.) C.C including the cost of operator:	Hour	10	128.00	1280.00
	Mix tyre (10-14 Cft.)				
D310	Water pumping sets mounted on trolley (diesel driven)with inlet & outlet pipes including the cost of operator.				
a)	Sets up to 10 HP	Hour	5	100.00	500.00
b)	Sets 11 to 20 HP	Hour	5	100.00	500.00
c)	Sets above 20 HP	Hour	5	100.00	500.00

D311	Generator sets mounted on trolley including the cost of operator:				
	a) Sets upto 5 Kva	Hour	5	240.00	1200.00
	b) Sets 5-15 Kva	Hour	5	240.00	1200.00
D312	Mobile Crane / Power winch including the cost of operator:	Hour	5	150.00	750.00
D313	Bull Dozer 100/110 Hp including the cost of operator:	Hour	5	2519.00	12595.00
D314	Plate compactors including the cost of operator:	Hour	5	100.00	500.00
D315	Jack hammers for dismantling including the cost of operator:	Hour	5	206.00	1030.00
D316	Utility Vehicles including the cost of driver:	Hour	5	206.00	1030.00
D317	Mini Hot Mix Plant (60-90TPH) including the cost of operator:	Hour	5	7150.00	35750.00
				Total	203205.00
D211	Allow 20% percent of Subtotal for Contractor's overhead, profit, etc., in accordance with paragraph 3 (b) above				
				Total	40641.00
					243846.00