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**General Abstract of Cost of Bhawanipatna-Khariar Road  
(Balance Work) excluding HL Bridges over River Tel and  
Approaches**

1	Site clearance and Dismantling	6,422,175.00
2	Earth Work	68,150,886.00
3	Sub-Base and Base Courses	161,584,768.00
4	Bituminous Courses	267,658,593.00
5	Culverts & Underpasses	109,817,737.00
6	Bridges	80,758,811.00
7	Drainage & Protective works	90,722,952.00
8	Road Safety and Amenities	45,858,498.00
9	Maintenance, Repair and Rehabilitation works	9,036,003.00
10	Environmental mitigation measures	14,440,423.00
	Sub total (A)	<b>854,450,846.00</b>
1	Total for Daywork: Labour	249,750.00
2	Total for Daywork: Materials	1,115,132.00
3	Total for Daywork: Contractor's Equipment	394,918.00
	Sub total (B)	<b>1,759,800.00</b>
	Subtotal (C=A+B)	<b>856,210,646.00</b>
1	Contingency (D = 1% of C)	8,562,106.00
2	Quality Control (E = 1% of C)	8,562,106.00
	Grand Total (F =C+D+E)	<b>873,334,858.00</b>

SAY

**873,335,000.00**

TS No. 2/12/13 DR 2.3.13  
Rupees Eighty Seven Crores Thirty Three Lakhs Thirty Five Thousand Only

Technically sanctioned for an amount of Rs 87,33,35,000/-  
(Rs. eighty seven crore thirty three lakh thirty five thousand only)

*H. B. Mohanty*  
RE P-01

*DR 2.3.13*  
Chief Engg. (re)  
World Bank Project  
to the E.I.C. (Civil) Odisha  
Bhubaneswar

*DR*  
31.1.2013

B. Work Items					
Sl. No.	Description	Unit	Balance Qty	Rate	Amount
<b>BILL NO.1 : SITE CLEARANCE</b>					
1.01	Cleaning and Grubbing for road land complete as per Technical Specification Clause 201 and as per the direction of Engineer-in-charge.	Hectare	75.00	30945.30	2,320,897.50
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 Engineer-in-charge.				
	a) Brick/ Stone Structures of dry or in lime/cement mortar	Cum	1864.00	171.00	318,744.00
	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	495.00	274.50	135,877.50
	ii)R.C.C.	Cum	517.00	466.70	241,283.90
	c) Dismantling of all type of Pavement course	Cum	19792.00	164.80	3,261,721.60
	d) Hume pipe	Lm	623.00	96.70	60,244.10
	e) Kerb	Lm	10.00	8.40	84.00
	f) Dry stone pitching	Cum	37.00	118.90	4,399.30
	g) RCC railing	Lm	6.00	41.70	250.20
	h) Expansion joint	Lm	208.00	124.70	25,937.60
	i) Wearing coat				
	a) Bituminous concrete	Sqm	265.00	52.10	13,806.50
	b) Cement concrete	Sqm	565.00	68.90	38,928.50
				<b>TOTAL</b>	<b>6,422,174.70</b>
				<b>Say,</b>	<b>6,422,175.00</b>
<b>BILL NO.2 : EARTH WORKS</b>					
2.01	Roadway excavation including removal of unsuitable soil necessary for construction of roadway complete as per Technical Specification Clause 301 and as per the direction of Engineer-in-charge.				
	a) All kinds of soil	Cum	274509.00	48.40	13,286,235.60
	b) Softrock (Blasting not required) (LS)	Cum	500.00	58.20	29,100.00
	c) Hard rock (Blasting required) (LS)	Cum	600.00	134.70	80,820.00
	d) Hard rock (Blasting not required) (LS)	Cum	400.00	235.00	94,000.00
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 Engineer-in-charge.	Cum	149647.00	127.00	19,005,169.00
2.03	Construction of subgrade and earthen shoulder with approved material as per drawing complete and Technical Specification Clause 305 and as per the direction of Engineer-in-charge.	Cum	214827.00	150.20	32,267,015.40



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Sl. No.	Description	Unit	Balance Qty	Rate	Amount
2.04	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 Engineer-in-charge.	Cum	9938.00	76.60	761,250.80
2.05	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 Engineer-in-charge.	Cum	5675.00	43.60	247,430.00
2.06	Earthwork with agriculture soil for filling of median/island complete as per Technical Specification Clause 407 and as per the direction of Engineer-in-charge.	Cum	2700.00	162.20	437,940.00
2.07	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 Engineer-in-charge.	Sqm	72500.00	3.50	253,750.00
2.08	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	13725.00	123.00	1,688,175.00
				<b>TOTAL</b>	<b>68,150,885.80</b>
				<b>Say,</b>	<b>68,150,886.00</b>
<b>BILL NO.3 : SUB-BASE AND BASE COURSES</b>					
3.01	Construction of granular sub-base by providing the materials with 100% crushed stone aggregates confirming to grade-I of coarse graded GSB material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per clause 401.	Cum	92899.00	977.30	90,790,192.70
3.02	Construction of wet mix macadam complete as per Technical Specification clause 406 and as per the direction of Engineer-in-charge.				
a) for Base		Cum	60993.00	1160.70	70,794,575.10
				<b>TOTAL</b>	<b>161,584,767.80</b>
				<b>Say,</b>	<b>161,584,768.00</b>
<b>BILL NO.4 : BITUMINOUS COURSES</b>					
4.01	Providing bituminous Primer coat over granular surface complete all as per Technical specification clause 502 and as per the direction of Engineer-in-charge.	Sqm	239942.00	24.60	5,902,573.20
4.02	Providing Tack coat complete as per Technical Specification clause 503 and as per the direction of Engineer-in-charge.				-
a) Granular surface treated with primer		Sqm	253544.00	9.10	2,307,250.40
b) over normal bituminous surface		Sqm	446061.00	9.10	4,059,155.10



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Sl. No.	Description	Unit	Balance Qty	Rate	Amount
4.03	Providing dense bituminous macadam course complete as per Technical Specification Clause 507 and as per the direction of Engineer-in-charge.	Cum	18428.00	6516.00	120,076,848.00
4.04	Providing bituminous concrete wearing course using CRMB-55 complete as per Technical Specification Clause 509 & 521 and as per the direction of Engineer-in-charge.	Cum	18011.00	7504.60	135,165,350.60
4.05	Providing, laying mixed seal surfacing in spur roads complete as per technical specification clause 512 and as per the direction of Engineer-in-charge.	Sqm	1028.00	143.40	147,415.20
				<b>TOTAL</b>	<b>267,658,592.50</b>
				<b>Say,</b>	<b>267,658,593.00</b>
<b>BILL NO.5 : CULVERTS AND UNDERPASSES</b>					
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 Engineer-in-charge.	Cum	12214.00	34.60	422,604.40
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 Engineer-in-charge.	Cum	4729.00	127.00	600,583.00
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 drawings, direction of the Engineer and Technical specification clause 304 and as per the direction of Engineer-in-charge.	Cum	7187.00	472.50	3,395,857.50
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 Engineer-in-charge.	Cum	2834.00	1430.40	4,053,753.60
5.05	Cement Concrete M-15 grade in leveling course etc. including centering and shuttering all complete as per Drawings and Technical Specification Sections 1500 and 1700 and as per the direction of Engineer-in-	Cum	1755.00	3761.20	6,600,906.00
5.06	Cement Concrete M-15 grade in substructure & headwall including centering and shuttering all complete as per Drawings and Technical Specification Sections 1500, 1700, 2200 and as per the direction of Engineer-in-charge.	Cum	3717.00	3978.50	14,788,084.50
5.07	Reinforced cement concrete in all types of culverts as per drawing and technical specification Section 1500, 1700 & 2200 and as per the direction of Engineer-in-charge.				
	a) M-20 grade	Cum	4304.00	4770.00	20,530,080.00
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 Engineer-in-charge.	Cum	1410.00	8323.20	11,735,712.00

Bhawanipatna - Khariar (Balance Work)

  
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Sl. No.	Description	Unit	Balance Qty	Rate	Amount
5.09	HYSD(TMT) bar reinforcement complete as per drawing and technical specifications clause 1600 and as per the direction of Engineer-in-charge.	MT	198.00	70634.70	13,985,670.60
5.10	Providing laying and joining NP-4(I.S 458) hume pipes for culverts complete as per drawing Tech. Specification section2900 and IRC special publication no.13 and as per the direction of Engineer-in-charge.				
	a) 1m dia. hume pipe in single row	Lm	324.00	5828.30	1,888,369.20
	b) 1m dia. hume pipe in double row	Double Row-Lm	963.00	11717.70	11,284,145.10
5.11	Providing and laying filter material underneath stone pitching in slopes complete as per drawings and technical specification section 2504, 2509, 2510 and as per the direction of Engineer-in-charge.	Cum	1338.00	1430.40	1,913,875.20
5.12	Providing and laying stone Pitching on embankment slopes complete as per drawing and technical specification Clause 2504 and as per the direction of Engineer-in-charge	Cum	2624.00	894.90	2,348,217.60
5.13	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 Engineer-in-charge.	Cum	1746.00	3539.30	6,179,617.80
5.14	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 Engineer-in-charge.	Nos	8616.00	105.10	905,541.60
5.15	Supplying and fixing Asphaltic Plug expansion joints complete as per Drawing and as per IRC: SP : 69-2005 and as per the direction of Engineer-in-charge.	Lm	1584.00	1165.00	1,845,360.00
5.16	Reinforced cement concrete railing complete as per Drawing and Technical Specification Section 2700 (Including cost of Reinforcement) and as per the direction of Engineer-in-charge.	Lm	1381.00	1788.20	2,469,504.20
5.17	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 Engineer-in-charge.	Sqm	7874.00	609.10	4,796,053.40
5.18	Synthetic enamel painting of culvert no. and span arrangement as per IRC - 7 - 1971 and as per the direction of Engineer-in-charge.	No.	264.00	68.30	18,031.20
5.19	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	1690.00	33.00	55,770.00
				TOTAL	109,817,736.90
				Say,	109,817,737.00



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Sl. No.	Description	Unit	Balance Qty	Rate	Amount
<b>BILL NO.6 : BRIDGES</b>					
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 Engineer-in-charge.	Cum	7624.00	34.60	263,790.40
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 Engineer-in-charge.	Cum	8594.00	472.50	4,060,665.00
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 Engineer-in-charge.	Cum	555.00	1430.40	793,872.00
6.04	Cement concrete M-15 grade in leveling course etc including centering and shuttering all complete as per drawing and Technical specification Section 1500 and 1700 and as per the direction of Engineer-in-charge.	Cum	483.00	3761.20	1,816,659.60
6.05	Cement concrete 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 Engineer-in-charge.				-
	a) M-15 Grade	Cum	621.00	3978.50	2,470,648.50
	b) M-20 Grade	Cum	1764.00	4629.00	8,165,556.00
6.06	Reinforced cement concrete in foundation complete as per drawing & Technical specification sections 1500, 1700, 2100, 2200 and as per the direction of Engineer-in-charge.				-
	a) M-25 Grade	Cum	754.00	4809.10	3,626,061.40
6.07	Reinforced cement concrete in substructure complete as per drawing & Technical specification sections 1500, 1700, 2200 and as per the direction of Engineer-in-charge.				-
	a) M-20 Grade	Cum	428.00	4602.80	1,969,998.40
	b) M-25 Grade	Cum	2174.00	5099.00	11,085,226.00
	c) M-30 Grade	Cum	310.00	5130.00	1,590,300.00
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 Engineer-in-charge.				-
	a) M-25 grade	Cum	71.00	5758.70	408,867.70
	b) M-30 grade	Cum	797.00	5832.60	4,648,582.20
	b) M-35 grade	Cum	3.00	6060.00	18,180.00
6.09	HYSD(TMT)bar reinforcement complete as per drawing and technical specifications clause 1600 and as per the direction of Engineer-in-charge.				-
	a) in foundation	MT	69.00	70549.10	4,867,887.90
	b) in substructure	MT	216.00	70634.70	15,257,095.20

Sl. No.	Description	Unit	Balance Qty	Rate	Amount
	c) in superstructure	MT	83.00	71327.70	5,920,199.10
6.10	Providing and fixing specified bearings complete as per Drawing and technical specification 2000 and as per the direction of Engineer-in-charge.				
	a) Elastomeric bearing	Cucm	150000.00	1.60	240,000.00
	b) Tar paper bearing	Sqm	25.00	50.00	1,250.00
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 Engineer-in-charge.	Cum	250.00	8323.20	2,080,800.00
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 Engineer-in-charge.	Sqm	2844.00	609.00	1,731,996.00
6.13	Cement concrete wearing course 75mm thick Complete as per drawing and Technical Specification Section 2700 and as per the direction of Engineer-in-charge.	Sqm	290.00	753.40	218,486.00
6.14	Providing and fixing Drainage Spouts Complete as per drawing and Technical Specification Clause 2705 and as per the direction of Engineer-in-charge.	No.	49.00	874.20	42,835.80
6.15	Providing and laying Stone pitching in slopes complete as per drawing and Technical Specification Section 2500 and as per the direction of Engineer-in-charge.	Cum	757.00	894.90	677,439.30
6.16	Providing as laying filter material underneath Stone pitching in slopes Complete as per drawing and Technical Specification clause 2504 and as per the direction of Engineer-in-charge.	Cum	378.00	1529.80	578,264.40
6.17	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	Nos	1806.00	105.10	189,810.60
6.18	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 Engineer-in-charge.	Cum	1010.00	3539.30	3,574,693.00
6.19	Supplying and fixing the following types of expansion joints Complete as per Drawing and as per IRC: SP : 69-2005 and as per the direction of Engineer-in-charge.				-
	a) Asphaltic plug	Lm	384.00	1165.00	447,360.00
6.20	Synthetic enamel painting of culvert no. and span arrangement as per IRC - 7 - 1971 and as per the direction of Engineer-in-charge.	No.	40.00	68.30	2,732.00


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Sl. No.	Description	Unit	Balance Qty	Rate	Amount
6.21	Carrying and Confirmatory bores up to required depth at locations of bridges as directed by 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 Engineer-in-charge.				
	a) In all types of soil (except rock)				-
	i) depth from 0m to 10m	Lm	140.00	400.00	56,000.00
6.22	Providing and painting of flood gauge on substructure is fall height and 500mm width and as per the direction of Engineer-in-charge.	Lm	60.00	422.90	25,374.00
6.23	Providing and laying 150mm dia. HDPE Service pipe as per drawing and as per the direction of Engineer-in-charge.	Lm	884.00	300.00	265,200.00
6.24	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 Engineer-in-charge.	Cum	1496.00	127.00	189,992.00
6.25	PCC in flooring as per Drawing & Technical Specification section 1700, 2500 and as per the direction of Engineer-in-charge.				-
	a) M-15	Cum	352.00	3,761.20	1,323,942.40
	b) M-20	Cum	117.00	4376.30	512,027.10
6.26	Reinforced cement concrete crash barrier including cost of steel and its fabrication to bridge structures as per the approved drawing and Technical Specification clause 809, and section 1500, 1600, 1700 and as per the direction of Engineer-in-charge .	Lm	497.00	3293.80	1,637,018.60
				TOTAL	80,758,810.60
				Say,	80,758,811.00
<b>BILL NO.7 : RETAINING WALL, DRAINAGE AND PROTECTIVE WORKS</b>					
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 Engineer-in-charge.	Cum	3468.00	34.60	119,992.80
(b)	Filter media behind wall complete as per drawing and Technical Specification Clauses 2504 and as per the direction of Engineer-in-charge.	Cum	2700.00	1430.40	3,862,080.00
(c)	Plain cement concrete M -15 in foundation leveling course etc. including centering and shuttering all complete as per drawing and Technical Clauses 1500, 1700 and as per the direction of Engineer-in-charge.	Cum	323.00	3978.50	1,285,055.50
(d)	Cement concrete M -25 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 Engineer-in-charge.	Cum	4785.00	4602.80	22,024,398.00

*D. D. Rayh*  
RE P-01

Bhawanipatna - Khariar (Balance Work)

Sl. No.	Description	Unit	Balance Qty	Rate	Amount
(e)	Providing steel reinforcement HYSD(TMT) for retaining wall complete as per drawing and Technical Specification Clause 1600 and as per the direction of Engineer-in-charge.	MT	383.00	70634.70	27,053,090.10
(f)	Providing guard post complete as per drawings and Technical specifications section 806 and as per the direction of Engineer-in-charge.	No.	1000.00	461.60	461,600.00
(g)	Providing weep holes in retaining wall complete as per drawing and Technical Specification Clause 2706 and as per the direction of Engineer-in-charge.	No.	3000.00	105.10	315,300.00
7.02	Providing and laying stone pitching on embankment slopes as per drawing and Technical Specification Clause 2504 and as per the direction of Engineer-in-charge.	Cum	1409.00	894.90	1,260,914.10
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 Engineer-in-charge.	Cum	705.00	1529.80	1,078,509.00
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 Engineer-in-charge.	Sqm	318546.00	23.70	7,549,540.20
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	8820.00	2755.60	24,304,392.00
7.06	Constructing box type drains to the required lines and grades including cost of steel and its fabrication as per drawing and technical specification section 1500, 1600, 1700, 2100 and as per the direction of Engineer-in-charge.	Lm	120.00	11734.00	1,408,080.00
				<b>TOTAL</b>	<b>90,722,951.70</b>
				<b>Say,</b>	<b>90,722,952.00</b>
<b>BILL NO-8 : ROAD SAFETY AND AMENITIES</b>					
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 Engineer-in-charge.	Lm	480.00	205.50	98,640.00
8.02	Providing and fixing RCC boundary posts complete as per drawing and Technical Specification Clause 806 and as per the direction of Engineer-in-charge.	No	743.00	368.30	273,646.90
8.03	Providing and fixing RCC/PCC hectometer, Kilometer and 5th Kilometer stones complete as per Technical Specification Clause 804 and as per the direction of Engineer-in-charge.				-
a)	No of (200) Hectometer Stone	No	271.00	397.70	107,776.70
b)	No of Kilometer stone	No	54.00	1437.30	77,614.20
c)	No. of 5th Kilometer Stone	No	14.00	2347.80	32,869.20



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Sl. No.	Description	Unit	Balance Qty	Rate	Amount
8.04	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 Engineer-in-charge.	Sqm	863.00	946.00	816,398.00
8.05	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 Engineer-in-charge.	No	31.00	80000.00	2,480,000.00
8.06	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-in-charge.	Lm	3785.00	2366.30	8,956,445.50
8.07	Pavement marking with hot applies thermoplastic paints confirming to ASTMD86 / BS 3262-Part as per drawing and Technical specifications Clause 803.4 and as per the direction of Engineer-in-charge.				
	a) Lane line / Edge marking	Sqm	17394.00	558.20	9,709,330.80
	b) Directional arrows and lettering etc.	Sqm	192.00	71.00	13,632.00
8.08	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 Engineer-in-charge.	.			
(a)	Informatory Signs				
	(i) Facility Information (800 x 600)mm	No	2.00	3208.80	6,417.60
	(ii) Direction Signs (1200 x 700 mm)	No	4.00	5314.00	21,256.00
	(iii) Advance Direction (size 1800 x 1200mm) ,	No	1.00	5632.70	5,632.70
	(iv) Re-Assurance Sign (1800 X 1200 mm) ,	No	1.00	5632.70	5,632.70
	(v) Destination Sign (1500 X 900 mm) ,	No	2.00	3632.70	7,265.40
	(vi) Place Identification (1500 X 900 mm) ,	No	1.00	3632.70	3,632.70
	(vii) Toll Booth (1500 X 900mm)	No	4.00	3632.70	14,530.80
	(viii) Bus Lane Sign (450 X 600mm)	No	34.00	2460.30	83,650.20
	(ix) Route Marker Sign (450mm x 600mm)	No	4.00	2460.30	9,841.20
	(x) Other Informatory Signs (2100mm x 1500mm)	No	4.00	5632.70	22,530.80
(b)	CAUTIONARY SIGNS triangular 900mm side	No	130.00	2745.50	356,915.00
(c)	Mandatory signs				
	(i) Circular 600mm dia	No	30.00	2506.70	75,201.00
	(ii) Octagon 900 mm height	No	20.00	3893.10	77,862.00
	(iii) Triangular 900 mm side	No	30.00	2745.50	82,365.00
8.09	Providing & fixing retro - reflectorised road delineators complete as per drawing , Technical specifications clause 805 and as per the direction of Engineer-in-charge.				
	( i ) Roadway delineator	No	452.00	790.30	357,215.60
	( ii ) Hazard Marker	No	168.00	790.30	132,770.40
	( iii ) Object Marker	No	52.00	790.30	41,095.60

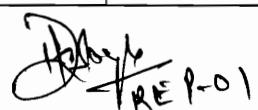
Bhawanipatna - Khariar (Balance Work)

  
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Sl. No.	Description	Unit	Balance Qty	Rate	Amount
8.10	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 Engineer-in-charge.	No.	3357.00	461.60	1,549,591.20
8.11	Supply of colour video coverage in CD form during construction as per Technical Specifications Clause 126 As per requirement and as per the direction of Engineer-in-charge.	set	25.00	20000.00	500,000.00
8.12	Providing rumble strips for complete carriageway width at required places as per drawing and as per the direction of Engineer-in-charge.	No.	26.00	6007.00	156,182.00
8.13	Providing road hump complete at required places as per drawing and as per the direction of Engineer-in-charge.	No.	42.00	18040.00	757,680.00
8.14	Providing toll plaza as per drawing and technical specification and as per the direction of Engineer-in-charge.	No.	1.00	1170506.00	1,170,506.00
8.15	Providing utility duct across the road in specified locations as per the schedule mentioned in drawing and as per the direction of Engineer-in-charge.	No	18.00	171873.60	3,093,724.80
8.16	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	800.00	2422.50	1,938,000.00
8.17	Providing and fixing of bi-directional retro reflective raised pavement markers of approved colour, quality & make conforming to ASTM D-4280 as per approved drawing and locations provided in the schedule made from injection moulded high impact polymer including cleaning, preparation of surface and fixing at position with approved quality adhesives including cost of all materials, labour, transportation, taxes, duties, sundries, T&P etc. complete as per the technical specifications and direction of Engineer.	No	17930.00	159.00	2,850,870.00

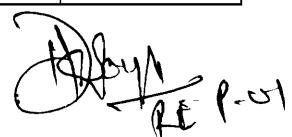


Sl. No.	Description	Unit	Balance Qty	Rate	Amount
8.18	Supplying, erecting and commissioning 100kVA diesel powered generator of approved make for Toll Plaza at required place as per the direction & approval of Engineer including cost of all labour, transportation, taxes, duties etc. complete.	No	1.00	1000000.00	1,000,000.00
8.19	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	3520.00	2548.80	8,971,776.00
				<b>TOTAL</b>	<b>45,858,498.00</b>
				<b>Say,</b>	<b>45,858,498.00</b>
<b>BILL NO.9 MAINTENANCE, REPAIR AND REHABILITATION</b>					
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	267.00	72.00	19,224.00
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	23760.00	28.30	672,408.00
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	59400.00	9.00	534,600.00
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	24503.00	122.10	2,991,816.30
9.05	Guniting by 25mm thick complete as per Technical specification clause 2807 and as per direction of the Engineer-in-charge.	Sqm	134.00	655.90	87,890.60
9.06	Grouting with polymer modified cementitious material complete as per Technical specification clause 2806 and as per direction of the Engineer-in-charge.	Sqm	495.00	9114.30	4,511,578.50
9.07	Providing and laying 75mm thick Cement concrete wearing coat M-30 grade complete as per technical specification section 2700 and as per direction of the Engineer-in-charge.	Sqm	290.00	753.40	218,486.00
			<b>TOTAL</b>		<b>9,036,003.40</b>
				<b>Say,</b>	<b>9,036,003.00</b>
<b>BILL NO.10 ENVIRONMENTAL MITIGATION MEASURES</b>					
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	1717.00	34.60	59,408.20



Bhawanipatna - Khariar (Balance Work)

Sl. No.	Description	Unit	Balance Qty	Rate	Amount
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	371.00	418.20	155,152.20
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	1300.00	3761.20	4,889,560.00
10.04	Providing weep holes in PCC toe wall with 100mm dia AC pipe at 1mtrs horizontal interval all complete as per Drawing No. SRP/CEG/SH/ENV/03 and Technical Specification Section 2700 & 2200 and as per the direction of the Engineer.	Nos	1900.00	105.10	199,690.00
10.05	Providing & laying in position Reinforced cement concrete of M-20 Grade in foundation complete as per Drawing No. OSRP/CEG/SH/ENV/04 - A, B, C, 05, 05 -A, 06, 07, 10 & Technical Specification sections 1700, 2100 & 2200 and as per the direction of the Engineer.	Cum	176.00	4484.00	789,184.00
10.06	HYSD (TMT) bar reinforcement complete as per Drawing No. OSRP/CEG/SH/ENV/04 - A, B, C, D, 05, 06, 07, 10 and Technical Specifications Clause 1600 and as per the direction of the Engineer.	MT	9.00	70549.10	634,941.90
10.07	Providing and laying filter material underneath pitching in slopes at water bodies and ponds as per Technical Specification Section 2500 and as per Drawing No. OSRP/CEG/SH/ENV/03 and as per the direction of the Engineer.	Cum	741.00	1529.80	1,133,581.80
10.08	Providing and laying stone pitching on slopes over filter media as per Technical Specification Section 2500 and as per Drawing No. OSRP/CEG/SH/ENV/03 and as per the direction of the Engineer.	Cum	988.00	894.90	884,161.20
10.09	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	1995.00	8.00	15,960.00
10.10	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-in-Charge.	Lm	1140.00	250.00	285,000.00
10.11	Maintainance of haulage road for 4 occurrences as directed by the Engineer-in-chief through out the construction period as per technical specification cl.no.3002	Cum	22500.00	76.60	1,723,500.00
10.12	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	10000.00	123.00	1,230,000.00



Sl. No.	Description	Unit	Balance Qty	Rate	Amount
10.13	Providing and maintenance of oil & Grease traps detailed as per the Drawing No OSRP/SH/ENV/06	Nos	1.00	126676.00	126,676.00
10.14	Silt fencing of water bodies to avoid increase of turbidity of water & avoid soil erosion by filled up sand in bags of cement/jute with support of non-sal bullahs 50mm dia of 1.0m above and 0.50m depth below soil and as per drawing No OSRP/CEG/SH/ENV/	Lm	3500.00	196.00	686,000.00
10.15	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	108.00	176.00	19,008.00
10.16	Providing erosion control blanket made from coconut fibre reinforced with closely woven HDPE nets on both sides with apperture size less than 5mm of weight not less than 600 gm/sqm, over embankment slopes including preparation of bed, dressing the slopes, removing boulders, pebbles, vegetations and fixed firmly to the slopes using "U" shape galvanized iron hooks of 4mm diametre having dimension 300x75mm and covered with 100mm thick top soil brought from the stock piles/ approved area , spreading manure and spreading of native seeds or planting of shrubs/ grass and maintaining the same for one month by sprinkling water at regular interval as per drawing no-OSRP/PMU/ENV/02 technical specifications including cost of all materials, labour, transportation, taxes, sundries, watering, T&P etc. and as per the direction of the Engineer.	Sqm	6000.00	268.10	1,608,600.00
				TOTAL	14,440,423.30
				Say,	14,440,423.00



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### Daywork Items

Sl. No.	Description	Unit	Balance Qty.	Rate	Amount
<b>Schedule of Daywork Rates: 1. Labour</b>					
D101	Labour (Un-skilled)	Day	300	150.00	45000.00
D102	Mason (Special Class)	Day	50	205.00	10250.00
D103	Carpenter (Special Class)	Day	20	205.00	4100.00
D104	Mason (Second Class)	Day	50	190.00	9500.00
D105	Carpenter (Second Class)	Day	20	190.00	3800.00
D106	Steelworker Erector	Day	70	205.00	14350.00
D107	Driver for vehicle up to 10 tons	Day	50	205.00	10250.00
D108	Operator for excavator, dragline, shovel or crane	Day	50	205.00	10250.00
D109	Operator for tractor with dozer blade or ripper	Day	50	205.00	10250.00
D110	Operator grader	Day	50	205.00	10250.00
D111	Operator in other construction equipment	Day	25	205.00	5125.00
D112	Chowkidars for watch & ward	Day	500	150.00	75000.00
				<b>Total</b>	<b>208125.00</b>
D112	Allow 20% percent of Subtotal for Contractor's overhead, profit, etc., in accordance with paragraph 3 (b) above				<b>41625.00</b>
				<b>Total</b>	<b>249750.00</b>
<b>Schedule of Daywork Rates: 2. Materials</b>					
D201	Cement, ordinary Portland or equivalent in bags conforming to IS:269:1989 and IS 455:1989	Per Mt	20	6101.00	122020.00
D202	HYSD reinforcing bars upto 25 mm dia conforming to IS:1786:1989	Per Mt	5	49366.00	246830.00
D203	Bricks of class designation 75 as per IS:1077:1992	Per 1000 Nos	50000	4053.50	202675.00
D204	Anti Corrosive Bituminous paint	Per Lit	10	160.16	1601.61
D205	Enamel Paint of any shade & colour (IS:2932-1964 & IS 137-1975)	Per Lit	10	160.16	1601.61
D206	Coarse Sand as per IS 1542	Per Cum	50	228.10	11405.00
D207	R.R. Stone for masonry	Per Cum	50	405.76	20288.00
D208	Crusher broken stone aggregates up to 25 mm nominal size	Per Cum	50	587.50	29375.00
D209	Crusher broken stone aggregates Above 25 mm nominal size	Per Cum	50	587.50	29375.00
D210	Portable water at site	Per 1000 ltr	5000	10.00	50000.00
D211	Gravel or Moorum for Road Work	Cum	50	183.60	9180.00
D212	Bitumen-VG-30	MT	5	40985.06	204925.30
				<b>Total</b>	<b>929277.00</b>
D211	Allow 20% percent of Subtotal for Contractor's overhead, profit, etc., in accordance with paragraph 3 (b) above				<b>185855.00</b>
				<b>Total</b>	<b>1115132.00</b>



Bhawanipatna - Khariar

### Daywork Items

Sl. No.	Description	Unit	Balance Qty.	Rate	Amount
<b>Schedule of Daywork Rates: 1. Labour</b>					
D101	Labour (Un-skilled)	Day	300	150.00	45000.00
D102	Mason (Special Class)	Day	50	205.00	10250.00
D103	Carpenter (Special Class)	Day	20	205.00	4100.00
D104	Mason (Second Class)	Day	50	190.00	9500.00
D105	Carpenter (Second Class)	Day	20	190.00	3800.00
D106	Steelworker Erector	Day	70	205.00	14350.00
D107	Driver for vehicle up to 10 tons	Day	50	205.00	10250.00
D108	Operator for excavator, dragline, shovel or crane	Day	50	205.00	10250.00
D109	Operator for tractor with dozer blade or ripper	Day	50	205.00	10250.00
D110	Operator grader	Day	50	205.00	10250.00
D111	Operator in other construction equipment	Day	25	205.00	5125.00
D112	Chowkidars for watch & ward	Day	500	150.00	75000.00
				<b>Total</b>	<b>208125.00</b>
D112	Allow 20% percent of Subtotal for Contractor's overhead, profit, etc., in accordance with paragraph 3 (b) above				<b>41625.00</b>
				<b>Total</b>	<b>249750.00</b>
<b>Schedule of Daywork Rates: 2. Materials</b>					
D201	Cement, ordinary Portland or equivalent in bags conforming to IS:269:1989 and IS 455:1989	Per Mt	20	6101.00	122020.00
D202	HYSD reinforcing bars upto 25 mm dia conforming to IS:1786:1989	Per Mt	5	49366.00	246830.00
D203	Bricks of class designation 75 as per IS:1077:1992	Per 1000 Nos	50000	4053.50	202675.00
D204	Anti Corrosive Bituminous paint	Per Lit	10	160.16	1601.61
D205	Enamel Paint of any shade & colour (IS:2932-1964 & IS 137-1975)	Per Lit	10	160.16	1601.61
D206	Coarse Sand as per IS 1542	Per Cum	50	228.10	11405.00
D207	R.R. Stone for masonry	Per Cum	50	405.76	20288.00
D208	Crusher broken stone aggregates up to 25 mm nominal size	Per Cum	50	587.50	29375.00
D209	Crusher broken stone aggregates Above 25 mm nominal size	Per Cum	50	587.50	29375.00
D210	Portable water at site	Per 1000 ltr	5000	10.00	50000.00
D211	Gravel or Moorum for Road Work	Cum	50	183.60	9180.00
D212	Bitumen-VG-30	MT	5	40985.06	204925.30
				<b>Total</b>	<b>929277.00</b>
D211	Allow 20% percent of Subtotal for Contractor's overhead, profit, etc., in accordance with paragraph 3 (b) above				<b>185855.00</b>
				<b>Total</b>	<b>1115132.00</b>



Bhawanipatna - Khariar

Sl. No.	Description	Unit	Balance Qty.	Rate	Amount
<b>Schedule of Daywork Rates: 2. Contractor's Equipment</b>					
D301	Excavator, face shovel, or draggling:				
0.1	Up to and including 1 m <sup>3</sup>	Hour	15	840.00	12600.00
0.2	Over 1 m <sup>3</sup> to 2 m <sup>3</sup>	Hour	30	840.00	25200.00
0.3	Over 2 m <sup>3</sup>	Hour	10	840.00	8400.00
D302	Tractor, including bull or angle dozer:				
0.1	Up to and including 150 kW	Hour	4	231.00	924.00
0.2	Over 150 kW to 200 kW	Hour	2	231.00	462.00
0.3	Over 200 kW to 250 kW	Hour	2	231.00	462.00
D303	Tractor with ripper:				
0.1	Up to and including 200 kW	Hour	30	249.00	7470.00
0.2	Over 200 kW to 250 kW	Hour	10	249.00	2490.00
D304	Motor grader	Hour	40	1545.00	61800.00
D305	Crane- 5 tonne	Hour	40	230.00	9200.00
D306	Diesel Road Roller, or Vibratory Compactor upto 10 t	Hour	15	738.00	11070.00
D307	Trucks, or Truck tipper, or Truck with mounted water tank or truck with crane for removal of accidental vehicles.	Hour	100	582.00	58200.00
D308	Tractor with trolley, or tractor with water tanker trailer, tractor with ripper Tractor with hydraulic scraper				
	(a) upto 25 HP	Hour	40	242.00	9680.00
	(b) For 25-40 HP	Hour	30	249.00	7470.00
D309	Bitumen mixture (10-14 Cft.) C.C	Hour	20	128.00	2560.00
	Mix tyre (10-14 Cft.)				
D310	Water pumping sets mounted on trolley (diesel driven)with inlet & outlet pipes.				
a)	Sets up to 10 HP	Hour	10	100.00	1000.00
b)	Sets 11 to 20 HP	Hour	10	100.00	1000.00
c)	Sets above 20 HP	Hour	10	100.00	1000.00
D311	Generator sets mounted on trolley				
a)	Sets upto 5 Kva	Hour	10	240.00	2400.00
b)	Sets 5-15 Kva	Hour	10	240.00	2400.00
D312	Mobile Crane / Power winch	Hour	10	150.00	1500.00
D313	Bull Dozer 100/110 Hp	Hour	10	2519.00	25190.00
D314	Plate compactors	Hour	10	100.00	1000.00
D315	Jack hammers for dismantling	Hour	10	206.00	2060.00
D316	Utility Vehicles	Hour	10	206.00	2060.00
D317	Mini Hot Mix Plant (5TPH)	Hour	10	7150.00	71500.00
				<b>Total</b>	<b>329098.00</b>
D211	Allow 20 percent of Subtotal for Contractor's overhead, profit, etc., in accordance with paragraph 3 (b) above				65820.00
				<b>Total</b>	<b>394918.00</b>



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