

Name of work : Widening and Strengthening of Dhansura-Meghraj Road KM-38-501 To KM-64-583 (Dhansura - Malpur) & km-67-711 to 84-986 (Malpur - Meghraj) SH-145

Item No.	DESCRIPTION	Unit	Item No.	DESCRIPTION	Unit	Clarification	Estimates			ASHISH INFRACON PVT. LTD. Ahmedabad - BACKBONE ENTERPRISES LTD (JV)	
							Quantity	Unit Rate	Amount	Rate	Amount
GENERAL ITEMS											
1.02	Supply of master CD / DVD's of important site activities with four copies complete as per Technical Specifications clause 126	Set	1.02	Supply of master CD / DVD's of important site activities with four copies complete as per Technical Specifications clause 126	Set	10.00	10,000.00	1,000.00	1,500.00	15,000.00	
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	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	2,200.00	3,716.00	81,75,200	2,500.00	55,00,000.00	
Total General Items carried to Grand Summary								82,75,200		55,15,000.00	
SITE CLEARANCE AND DISMANTLING											
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	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	52.00	29,520,000	15,35,040	7,500.00	3,90,000.00	
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 as serviceable material with all leads and lifts beyond the ROW complete as per technical specification clause 202.		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 as serviceable material with all leads and lifts beyond the ROW complete as per technical specification clause 202.							
a)	Plain cement concrete	Cum	a)	Plain cement concrete	Cum	11.00	278,000	3,058	300.00	3,200.00	
b)	Reinforced cement concrete	Cum	b)	Reinforced cement concrete	Cum	12.00	463,000	5,556	500.00	6,000.00	
c)	Stone / Brick masonry structures	Cum	c)	Stone / Brick masonry structures	Cum	12.00	189,000	2,268	200.00	2,400.00	
d)	Guide-Hand rails / Fencing / kerb / NP3 Pipes / NP4 Pipes	Lm	d)	Guide-Hand rails / Fencing / kerb / NP3 Pipes / NP4 Pipes	Lm	35.00	151,000	5,285	100.00	3,500.00	
e)	Kilometre stone	Nr	e)	Kilometre stone	Nr	35.00	136,000	4,760	100.00	3,500.00	
f)	5 km stone	Nr	f)	5 km stone	Nr	8.00	226,000	1,808	100.00	800.00	
g)	Hectometre / Boundary stones	Nr	g)	Hectometre / Boundary stones	Nr	173.00	27,000	4,671	50.00	8,650.00	
h)	Utilities	Nr	h)	Utilities	Nr	12.00	101,000	1,212	1,000.00	12,000.00	
i)	Bituminous Pavement	Cum	i)	Bituminous Pavement	Cum	3,689.00	174,000	6,41,886	60.00	2,21,340.00	
j)	Non-Bituminous Pavement	Cum	j)	Non-Bituminous Pavement	Cum	1,280.00	307,000	3,92,960	40.00	51,200.00	
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		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	a)	above 300mm to 600mm girth	Nr	1,775.00	156,000	2,76,900	600.00	10,65,000.00	
b)	above 600mm to 900mm girth	Nr	b)	above 600mm to 900mm girth	Nr	1,036.00	278,000	2,88,008	800.00	8,28,800.00	
c)	above 900mm to 1800mm girth	Nr	c)	above 900mm to 1800mm girth	Nr	1,137.00	542,000	6,16,254	1,300.00	14,78,100.00	
d)	above 1800mm	Nr	d)	above 1800mm	Nr	68.00	1,029,000	69,972	3,000.00	2,04,000.00	
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.		2.04	Removal of tree stumps and roots, disposal and filling of pits complete as per technical specification clause 201. The work shall follow the direction 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	a)	above 300mm to 600mm girth	Nr	1,775.00	307,000	5,44,925	800.00	14,20,000.00	
b)	above 600mm to 900mm girth	Nr	b)	above 600mm to 900mm girth	Nr	1,036.00	519,000	5,37,684	900.00	9,32,400.00	
c)	above 900mm to 1800mm girth	Nr	c)	above 900mm to 1800mm girth	Nr	1,137.00	777,000	8,83,449	1,400.00	15,91,800.00	
d)	above 1800mm	Nr	d)	above 1800mm	Nr	68.00	2,052,000	1,39,536	2,000.00	1,36,000.00	
Total Site Clearance and Dismantling carried to Grand Summary								59,55,232		83,58,790.00	
EARTH WORKS											
3.01	Roadway excavation necessary for construction of roadway including cutting and loading in tippers, 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.		3.01	Roadway excavation necessary for construction of roadway including cutting and loading in tippers, 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	b)	Ordinary soil / Hard soil	Cum	1,65,677.00	28,000	46,38,956	35.00	57,98,695.00	
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	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	6,300.00	43,000	2,70,900	25.00	1,57,500.00	
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	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	27,613.00	149,000	41,14,337	70.00	19,32,910.00	
3.03	Construction of embankment with approved materials deposited at site from roadway cutting and excavation from drain and foundation of other structures graded and compacted complete as per drawings and technical specification clause 305.	Cum	3.03	Construction of embankment with approved materials deposited at site from roadway cutting and excavation from drain and foundation of other structures graded and compacted complete as per drawings and technical specification clause 305.	Cum	25,005.00	74,000	18,50,370	30.00	7,50,150.00	
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	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	2,78,676.00	174,000	4,84,89,624	70.00	1,95,07,320.00	
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	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	713.00	121,000	86,273	150.00	1,06,950.00	
Total Earth Works carried to Grand Summary								5,94,50,460		2,82,53,525.00	
SUB-BASE, BASE COURSES (NON-BITUMINOUS) AND SHOULDERS											
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.	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.	73,568.00	581,000	4,27,43,008	400.00	2,94,27,200.00	
4.02	Construction of granular sub-base with Naturally Obtained Granular sub base (GSB), 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		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							
b)	As per Table 400-1, Course- Graded Grading I	Cum	b)	As per Table 400-1, Course-Graded Grading I	Cum	74,250.00	581,000	4,31,39,250	400.00	2,97,00,000.00	
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.		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.							
a)	Mechanically laid base (Spread by motor grader) including profile corrective course and access roads if applicable	Cum	a)	Mechanically laid base (Spread by motor grader) including profile corrective course and access roads if applicable	Cum	23,816.00	742,000	1,76,71,472	785.00	1,86,95,560.00	
b)	Mechanically laid base (laid by Electronic Sensor Paver)	Cum	b)	Mechanically laid base (laid by Electronic Sensor Paver)	Cum	29,186.00	755,000	2,20,35,430	805.00	2,34,94,730.00	
Total Sub-Base, Base Courses (Non-Bituminous) and Shoulders carried to Grand Summary								12,55,89,160		10,13,17,490.00	
BASE AND SURFACE COURSES (BITUMINOUS)											
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	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	2,05,624.00	26,000	53,46,224	24.00	49,34,976.00	
5.02	Providing surface dressing with aggregate using Bitumen over primed water bound macadam/ wet mix macadam complete as per Technical Specifications Clause 510		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	Sum	b)	Second Coat Surface Dressing	Sum	14,000.00	57,000	7,98,000	35.00	4,90,000.00	
			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	a)	@ 2.0 to 2.5 kg/10m2 on bituminous surface	Sqm	10,72,298.00	9,000	96,50,682	9.00	96,50,682.00	
b)	@ 2.5 to 3.0 kg/10m2 on granular surface treated with primer/hungry bituminous surface.	Sqm	b)	@ 2.5 to 3.0 kg/10m2 on granular surface treated with primer/hungry bituminous surface.	Sqm	2,05,624.00	11,000	22,61,864	11.00	22,61,864.00	

5.04	Providing and laying bituminous macadam (Grading II) with 100-120 TPH hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading premixed with bituminous binder (VG-30), transported to site, laid over a previously prepared surface with paver finisher with sensor control to the required grade, level and alignment and rolled complete as per drawings and Technical Specification clauses 501.6 and 501.7 or as directed by the Engineer.	Cum	5.04	Providing and laying bituminous macadam (grading II) 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 grade, transported to site, laid over previously prepared surface with paver finisher with sensor control to the required grade, level and alignment and rolled complete as per drawings and Technical specification clauses 501.6 and 501.7 or as directed by the engineer (VG-30).	Cum	28,823.00	4,465.00	12,86,94,695	4,310.00	12,42,27,130.00
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	5.08	Providing and laying bituminous concrete with 100-120 TPH batch type hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder 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. (VG-30).	Cum	8,981.00	5,942.00	5,33,65,102	6,917.00	6,21,21,577.00
5.10	Variation of quantity of VG 30 grade bitumen in bituminous courses as per Technical Specification Clause 507.9 and 509.9	MT	5.10	Variation of quantity of VG 40 grade bitumen in bituminous courses as per Technical Specification Clause 507.9 and 509.9	MT	230.00	39,514.310	90,88,291	5,000.00	11,50,000.00
5.11	Variation of quantity of rapid emulsion in Tack coat as per Technical Specification Clause 503.	MT	5.11	Variation of quantity of rapid emulsion in Tack coat as per Technical Specification Clause 503.	MT					
	a) 0.5 kg extra for normal bituminous surface	MT		a) 0.5 kg extra for normal bituminous surface	MT	54.00	34,938.310	18,86,669	4,000.00	2,16,000.00
	b) 0.5 kg extra for Granular Surface	MT		b) 0.5 kg extra for Granular Surface	MT	10.00	34,938.310	3,49,383	4,000.00	40,000.00
5.12	Variation of quantity of slow emulsion for prime coat as per Technical Specification clause 502.	MT	5.12	Variation of quantity of slow emulsion for prime coat as per Technical Specification clause 502.	MT	21.00	33,773.510	7,09,244	5,000.00	1,05,000.00
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	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	8,548.00	269,000	22,99,412	280.00	23,93,440.00
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	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	11,967.00	35,000	4,18,845	36.00	4,30,812.00
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	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	17,096.00	55,000	9,40,280	25.00	4,27,400.00
5.16	Full depth repair of section in case of poor pavement complete as per drawings or as directed by the engineer	sqm	5.16	Full depth repair of section in case of poor pavement complete as per drawings or as directed by the engineer	sqm	1,710.00	1,296,928	22,17,747	500.00	8,55,000.00
	Total Base and Surface Courses (Bituminous) carried to Grand Summary			Total Base and Surface Courses (Bituminous) carried to Grand Summary				21,80,26,438		20,93,03,881.00
6	STRUCTURES		6	STRUCTURES						
6A	CULVERTS:		6A	CULVERTS:						
6A01	Construction of temporary diversion, including across waterway, for passage of traffic, complete as per drawings and Technical Specifications Clause 112.3.	Lm	6A01	Construction of temporary diversion, including across water way, for passage of traffic, complete as per drawings and technical specification clause 112.3	Lm	200.00	7,385.000	14,77,000	4,000.00	8,00,000.00
6A02	Excavation of foundation for culverts including preparation of foundation bed complete as per drawing and Technical Specifications Clause 304 in the following strata		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	a)	Ordinary soil / Hard soil	Cum	410.00	32,000	13,120	70.00	28,700.00
	b) Ordinary rock / Soft rock	Cum	b)	Ordinary rock / Soft rock	Cum	146.00	40,000	5,840	150.00	21,900.00
	c) Hard Rock (Blasting Prohibited)	Cum	c)	Hard Rock (Blasting Prohibited)	Cum	29.00	254,000	7,366	250.00	7,250.00
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	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	198.00	747,000	1,47,906	450.00	89,100.00
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		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	a)	M15 grade	Cum	29.00	3,496,000	1,01,384	2,800.00	81,200.00
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		6A16	Providing, laying and jointing RCC, NP-4 Hume Pipes for culverts or equivalent pipes under IS-458-1988, approved by the Engineer complete as per Technical Specifications section 2900						
	d) Diameter 1200mm	Lm	d)	Diameter 1200mm	Lm	211.00	3,842,000	8,10,662	4,800.00	10,12,800.00
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	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	270.00	3,890,000	10,50,300	3,500.00	9,45,000.00
6A18	Painting of culvert reference number complete as per Technical Specifications section 800 or as directed by the Engineer.	sqm	6A18	Painting of culvert reference number complete as per Technical Specifications section 800 or as directed by the Engineer.	sqm	10.00	57,000	570	150.00	1,500.00
6A22	Geo textiles filter membrane underneath pitching complete as per drawings and technical specification clause 2504 and as directed by the Engineer.	Sqm	6A22	Geo textiles filter membrane underneath pitching complete as per drawings and technical specification clause 2504 and as directed by the Engineer.	Sqm	222.00	74,000	16,428	30.00	6,660.00
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	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	33.00	416,000	13,728	300.00	9,900.00
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	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	67.00	3,566,000	2,38,922	4,000.00	2,68,000.00
6A27	750 thick flexible stone apron as per Clause No. 2503.1 of Technical Specification and as directed by the Engineer	Cum	6A27	750 thick flexible stone apron as per Clause No. 2503.1 of Technical Specification and as directed by the Engineer	Cum	93.00	749,000	69,657	900.00	83,700.00
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	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	20.00	116,000	2,320	800.00	16,000.00
	Total Culverts carried to Grand Summary			Total Culverts carried to Grand Summary				39,55,203		33,71,710.00
6B	BRIDGES		6B	BRIDGES						
6B01	Construction of temporary diversion, including across waterway, for passage of traffic, complete as per drawing and Technical Specifications Clause 112.3, including temporary cross drainage	Lm	6B01	Construction of temporary diversion, including across water way, for passage of traffic, complete as per Technical Specifications Section Clause 112.3 including temporary cross drainage	Lm	100.00	7,385.000	7,38,500	4,000.00	4,00,000.00
6B03	Foundation Earthwork in excavation of foundations for structures including all leads and lifts complete as per drawings and Technical specifications clause 304.		6B03	Foundation 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	a)	In all types of soil	Cum	140.00	32,000	4,480	70.00	9,800.00
	b) In soft/ordinary rock	Cum	b)	In soft/ordinary rock	Cum	50.00	40,000	2,000	150.00	7,500.00
	c) In hard rock (Blasting Prohibited)	Cum	c)	In hard rock (Blasting Prohibited)	Cum	10.00	254,000	2,540	250.00	2,500.00
6B04	Plain cement concrete grade M15 in foundation and fill around foundation to protect from erosion complete as per drawing and Technical Specifications Section 1500 and 1700	Cum	6B04	Plain cement concrete grade M-15 in foundation and fill around foundation to protect from erosion complete as per drawing and technical specifications section 1500 and 1700.	Cum	18.00	3,496,000	62,928	3,000.00	54,000.00
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.		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.						
	b) M-20 grade	Cum	b)	M-20 grade	Cum	106.00	3,679,000	3,89,974	3,500.00	3,71,000.00
6B17	Supplying, placing and fixing TMT Fe 500 bar reinforcement complete as per drg. and Technical specifications section 1600.		6B17	Supplying, placing and fixing TMT Fe 500 bar reinforcement complete as per drg. and Technical specifications section 1600.						
	a) For Foundation	MT	a)	For Foundation	MT	3.00	64,359,000	1,93,077	50,000.00	1,50,000.00
	b) For sub-structure	MT	b)	For sub-structure	MT	1.00	64,409,000	64,409	50,000.00	50,000.00
	c) For super-structure	MT	c)	For super-structure	MT	2.00	65,124,000	1,30,248	50,000.00	1,00,000.00
	Sub-Structure			Sub-Structure						
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.		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	a)	M-20 grade	Cum	110.00	4,033,000	4,43,630	4,000.00	4,40,000.00
6B20	Bearing Supply & fixing of bearings complete as per drg. and Technical specifications section 2000.		6B20	Bearing Supply & fixing of bearings complete as per drg. and Technical specifications section 2000.						
	a) Tar paper bearing	Sqm	a)	Tar paper bearing	Sqm	5.00	51,000	255	200.00	1,000.00
6B22	Providing & fixing of expansion joints complete as per drg. and Technical specifications section 2600		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 pre-moulded joint filler in expansion joint and filling joint sealant compound complete as per drawings and Technical specification section 2600.	Lm	a)	Providing and fixing filler type expansion joint with 2mm thick copper plate, 20mm thick compressible fiber board, 20mm thick pre-moulded joint filler in expansion joint and filling joint sealant compound complete as per drawings and Technical specification section 2600.	Lm	48.00	1,618,000	77,664	2,500.00	1,20,000.00
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.			Super Structure						

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	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	170.00	755.000	1,28,350	1,500.00	2,55,000.00
7.09		Construction of energy dissipation basin in M-15 as per drawing and Technical Specification Sections 309, 1500 & 1700.	Nr	7.09		Construction of energy dissipation basin in M-15 as per drawing and Technical Specification Sections 309, 1500 & 1700.	Nr	20.00	1,456.000	29,120	5,000.00	1,00,000.00
7.11		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	Lm	7.11		Providing, laying and jointing RCC, NP-4 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	Lm	138.00	1,470.000	2,02,860	1,500.00	2,07,000.00
	a)	450 mm diameter	Lm		a)	450 mm diameter	Lm	138.00	1,470.000	2,02,860	1,500.00	2,07,000.00
	b)	900 mm diameter	Lm		b)	900 mm diameter	Lm	665.00	2,446.000	16,26,590	4,200.00	27,93,000.00
7.12		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	7.12		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	450.00	747.000	3,36,150	400.00	1,80,000.00
7.13		Plain cement concrete grade M-20 in Headwall of Access Road Culverts complete as per drawing and Technical Specifications Clause 1500 and 1700	Cum	7.13		Plain cement concrete grade M-20 in Headwall of Access Road Culverts complete as per drawing and Technical Specifications Clause 1500 and 1700	Cum	568.00	3,890.000	22,09,520	4,000.00	22,72,000.00
7.14		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 tamping 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	7.14		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 tamping 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	11,685.00	621.000	72,56,385	430.00	50,24,550.00
7.16		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	7.16		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	201.00	4,666.000	9,37,866	4,000.00	8,04,000.00
7.17		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	Lm	7.17		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	Lm					
	b)	Construction of median kerb and island kerb Type A grade M20 (including base preparation, foundation and haunch concrete)	Lm		b)	Construction of median kerb and island kerb Type B grade M20 (including base preparation, foundation and haunch concrete)	Lm	1,913.00	224.000	4,28,512	520.00	9,94,760.00
7.19		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	7.19		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	492.00	3,566.000	17,54,472	4,000.00	19,68,000.00
7.21		Geo textile filters membrane as per Technical Specifications Clause 2504 and as directed by the Engineer.	Sqm	7.21		Geo textile filters membrane as per Technical Specifications Clause 2504 and as directed by the Engineer.	Sqm	3,665.00	74.000	2,71,210	30.00	1,09,950.00
7.22		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	7.22		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	612.00	318.000	1,94,616	400.00	2,44,800.00
	b)	Granular Material	Cum		b)	Granular Material	Cum	612.00	318.000	1,94,616	400.00	2,44,800.00
7.24		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	7.24		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	5.00	7,900.000	35,000	10,000.00	50,000.00
		Total Drainage and Protection Work rates carried to Grand Summary				Total Drainage and Protection Work rates carried to Grand Summary				3,46,86,450		3,15,93,285.00
8		TRAFFIC SIGNAGE AND ROAD APPURTENANCES		8		TRAFFIC SIGNAGE AND ROAD APPURTENANCES						
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	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	7,621.00	2,713.000	2,06,75,773	1,700.00	1,29,55,700.00
8.02		Providing and fixing of retro-reflectorised cautionary, mandatory and informative 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. letters, numerals, symbols, legends, arrows 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.		8.02		Providing and fixing of retro-reflectorised cautionary, mandatory and informative 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. letters, numerals, symbols, legends, arrows 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)	Informatory Signs			a)	Informatory Signs						
	i)	Facility information 800 mm x 600 mm complete as per drawings and Technical Specifications Clause 801	Nr		i)	Facility information 800 mm x 600 mm complete as per drawings and Technical Specifications Clause 801	Nr	78.00	5,679.637	4,43,012	4,000.00	3,12,000.00
	ii)	Advance direction sign complete as per drawings and Technical Specifications Clause 801	Sqm		ii)	Advance direction sign complete as per drawings and Technical Specifications Clause 801	Sqm	363.00	10,626.240	38,57,325	5,500.00	19,96,500.00
	iii)	Route marker sign 450mm x 600 mm complete as per drawings and Technical Specifications Clause 801	Nr		iii)	Route marker sign 450mm x 600 mm complete as per drawings and Technical Specifications Clause 801	Nr	25.00	4,867.882	1,21,697	3,500.00	87,500.00
	iv)	Direction sign less than 0.9 sqm of area complete as per drawings and Technical Specification clause 801.	Sqm		iv)	Direction sign less than 0.9 sqm of area complete as per drawings and technical specification clause 801.	Sqm	11.00	8,855.240	97,408	5,500.00	60,500.00
	b)	Cautionary Signs			b)	Cautionary Signs						
	i)	Triangular 900 mm side complete as per drawings and Technical Specifications Clause 801	Nr		i)	Triangular 900 mm side complete as per drawings and Technical Specifications Clause 801	Nr	303.00	5,285.229	16,01,424	3,500.00	10,60,500.00
	ii)	Hexagonal marker 300 x 900 mm complete as per drawings and Technical Specifications Clause 801	Nr		ii)	Hexagonal marker 180 x 1200 mm complete as per drawings and Technical Specifications Clause 801	Nr	4.00	3,582.794	14,331	3,000.00	12,000.00
	c)	Mandatory Signs			c)	Mandatory Signs						
	i)	Triangular 900 mm side (for "GIVE WAY" sign) complete as per drawings and Technical Specifications Clause 801	Nr		i)	Triangular 900 mm side (for "GIVE WAY" sign) complete as per drawings and Technical Specifications Clause 801	Nr	50.00	5,285.229	2,64,261	3,500.00	1,75,000.00
	ii)	Stop sign - Octagon of size 900 mm complete as per drawings and Technical Specifications Clause 801	Nr		ii)	Stop sign - Octagon of size 900 mm complete as per drawings and Technical Specifications Clause 801	Nr	209.00	7,485.526	15,64,475	6,500.00	13,58,500.00
	iii)	Speed limit compulsory keep left 600 mm dia meter complete as per drawings and Technical Specifications Clause 801	Nr		iii)	Speed limit compulsory keep left 600 mm dia meter complete as per drawings and Technical Specifications Clause 801	Nr	52.00	4,923.266	2,56,010	3,500.00	1,82,000.00
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.		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		a)	Lane/centerline/edge marking or any other marking	Sqm	16,983.00	471.000	79,98,993	260.00	44,15,580.00
	b)	Directional arrows, lettering etc			b)	Directional arrows, lettering etc						
	i)	Straight (nr) RM13	Nr		i)	Straight (nr) RM13	Nr	293.00	518.000	1,51,774	600.00	1,75,800.00
	ii)	Left/right (nr) RM14 & 15	Nr		ii)	Left/right (nr) RM14 & 15	Nr	178.00	533.000	94,874	600.00	1,06,800.00
	iii)	Comb (nr) RM 16& 17	Nr		iii)	Comb (nr) RM 16& 17	Nr	628.00	661.000	4,15,108	750.00	4,71,000.00
	iv)	Lettering	Nr		iv)	Lettering	Nr	95.00	141.000	13,395	500.00	47,500.00
	v)	Chevron Marking	Sqm		v)	Chevron Marking	Sqm	1,310.00	471.000	6,17,010	450.00	5,89,500.00
	vi)	Diagonal Marking	Sqm		vi)	Diagonal Marking	Sqm	210.00	471.000	89,910	450.00	94,500.00
	vii)	Pedestrian Crossing	Sqm		vii)	Pedestrian Crossing	Sqm	2,734.00	471.000	12,87,714	450.00	12,30,300.00
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.		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		a)	Hectometer Stone	Nr	173.00	423.000	73,179	300.00	51,900.00
	b)	Kilometer Stone	Nr		b)	Kilometer Stone	Nr	35.00	1,429.000	49,700	1,400.00	52,500.00
	c)	5th kilometre stone	Nr		c)	5th kilometre stone	Nr	16.00	2,349.000	37,584	2,500.00	40,000.00
8.05		Supplying and fixing of boundary stones of M15 grade concrete complete as per drawing and Technical Specifications clause 806	Nr	8.05		Supplying and fixing of boundary stones of M15 grade concrete complete as per drawing and Technical Specifications clause 806	Nr	216.00	319.000	68,904	300.00	64,800.00
8.06		Providing and fixing retro-reflectorised road delineators complete as per drawing and Technical Specification Clause 805.		8.06		Providing and fixing retro-reflectorised road delineators complete as per drawing and Technical Specification Clause 805.						
	a)	Cluster of Red Reflectors.	Nr		a)	Cluster of Red Reflectors.	Nr	7.00	2,278.073	15,947	1,000.00	7,000.00
	b)	Road way delineators.	Nr		b)	Road way delineators.	Nr	1,734.00	1,920.000	33,29,280	600.00	10,40,400.00

8.08	Providing, fixing and erecting 50 mm dia steel pipe railing in 3 rows duly painted on medium weight steel channels (BMC series) 100 mm x 50 mm, 1.2 metres high above ground, 2 m centre to centre, complete as per approved drawings and Technical Specification section 800.	Ln	8.08		Providing, fixing and erecting 50 mm dia steel pipe railing in 3 rows duly painted on medium weight steel channels (BMC series) 100 mm x 50 mm, 1.2 meter high above ground, 2meter c/c, complete as per approved drawings and technical specification section 800.	Ln	7,644.00	2,097,000	1,60,29,468	1,600.00	1,22,30,400.00
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	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	10,206.00	425,000	43,37,550	170.00	17,35,020.00
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	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	16.00	75,000,000	12,00,000	16,000.00	2,56,000.00
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	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	26.00	1,09,000,000	28,34,000	1,25,000.00	32,50,000.00
8.12	Repairing of existing Bus Shelter complete as per drawings and Technical Specifications section 800, 1300, 2500 or as directed by the Engineer.		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) Painting	sqm			a) Painting	sqm	80.00	35,000	2,800	120.00	9,600.00
	b) Plastering	sqm			b) Plastering	sqm	160.00	83,000	13,280	250.00	40,000.00
8.13	Providing and fixing of litter bins complete as per Manufacturer drawing and specification and approved by the Engineer.	Nr	8.13		Providing and fixing of litter bins complete as per Manufacturer drawing and specification and approved by the Engineer.	Nr	36.00	10,000,000	3,60,000	5,000.00	1,80,000.00
8.14	Providing and Fixing of water kiosks complete as per Manufacturer drawing and specification and approved by the Engineer.	Nr	8.14		Providing and Fixing of water kiosks complete as per Manufacturer drawing and specification and approved by the Engineer.	Nr	2.00	15,000,000	30,000	50,000.00	1,00,000.00
8.16	Construction of Toilets in rest area complete as per Manufacturer drawing and specification and approved by the Engineer.	Sqm	8.16		Construction of Toilets in rest area complete as per Manufacturer drawing and specification and approved by the Engineer.	Sqm	35.00	8,000,000	2,80,000	20,000.00	7,00,000.00
8.19	Rest Area for Drivers complete as per Manufacturer drawing and specification and approved by the Engineer.	Sqm	8.19		Rest Area for Drivers complete as per Manufacturer drawing and specification and approved by the Engineer.	Sqm	128.00	10,000,000	12,80,000	12,000.00	15,36,000.00
8.20	Plantation of shrubs in central median including planting with manure, gardening and maintenance complete as per Technical Specifications Clause 308.	Nr	8.20		Plantation of shrubs in central median including planting with manure, gardening and maintenance complete as per Technical Specifications Clause 308.	Nr	224.00	463,000	1,03,712	1,200.00	2,68,800.00
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	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	87.00	50,000,000	43,50,000	25,000.00	21,75,000.00
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	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 M-25 grade concrete considering side slope in 1:10. 100 mm 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 A-15 or as directed by the engineer.	sqm	528.00	2,012,233	10,62,459	1,800.00	9,50,400.00
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/sqm. Sample must be approved complete as per Additional Technical Specification A18	sqm	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/sqm. Sample must be approved complete as per Additional Technical Specification A18	sqm	1,518.00	650,000	9,86,700	400.00	6,07,200.00
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	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	30.00	1,659,000	49,770	3,000.00	90,000.00
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	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	5,684.00	159,213	9,04,964	1,000.00	56,84,000.00
8.30	Providing and fixing Aluminum backed flexible prismatic sheeting , consisting of yellow/black colored flexible prismatic sheet with non-metallic 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 pull-off complete as per manufacturer drawings approved by the Engineer.	sqm	8.30		Providing and fixing Aluminum backed flexible prismatic sheeting , consisting of yellow/black colored flexible prismatic sheet with non-metallic 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 pull-off complete as per manufacturer drawings approved by the Engineer.	sqm	23.00	5,377,000	1,23,671	5,500.00	1,26,500.00
8.31	Providing and applying Geru paint of approved brand on Trees within ROW complete as per drawings and Technical Specification section 800 or as directed by the Engineer	Nr	8.31		Providing and applying Geru paint of approved brand on Trees within ROW complete as per drawings and Technical Specification section 800 or as directed by the Engineer	Nr	145.00	10,000	1,450	100.00	14,500.00
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	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	2.00	36,000,000	72,000	25,000.00	50,000.00
8.33	Street Lighting in urban areas		8.33		Street Lighting in urban areas						
	xxxx) Solar Street Light				xxxx) Solar Street Light						
	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.				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			b) 2 x 11 W CFL (Single luminaire with 2 CFL) PV Module:120 W Battery Capacity 12V, 100 AH	Each	882.00	33,000,000	2,91,06,000	16,000.00	1,41,12,000.00
	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 duly connected with built in inverter & commissioned as per directed with necessary wiring & fittings.				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 duly 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			(b) Two No CFL 11 watt non retrofit ceiling / wall mounting features with battery capacity 12 watt, 40 AH	Each	882.00	12,300,000	1,08,48,600	12,000.00	1,05,84,000.00
	Total Traffic Signage and Road Appurtenances carried to Grand Summary				Total Traffic Signage and Road Appurtenances carried to Grand Summary						11,71,24,512
9	SAFETY IN ROAD CONSTRUCTION ZONE		9		SAFETY IN ROAD CONSTRUCTION ZONE						8,12,87,200.00
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.		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			a) Speed Limit sign (600mm dia)	Nr	22.00	3,938,613	86,649	3,500.00	77,000.00
	b) Overtaking Prohibited (900 mm dia)	Nr			b) Overtaking Prohibited (900 mm dia)	Nr	22.00	5,988,420	1,31,745	3,500.00	77,000.00
	c) Diversion Board (450mm x 600mm)	Nr			c) Diversion Board (450mm x 600mm)	Nr	66.00	3,894,305	2,57,024	4,500.00	2,97,000.00
	d) Men at Work Sign (900mm triangular)	Nr			d) Men at Work Sign (900mm triangular)	Nr	44.00	4,228,183	1,86,040	3,500.00	1,54,000.00
	e) Direction Sign (Right / Left) (600 mm Circular)	Nr			e) Direction Sign (Right / Left) (600 mm Circular)	Nr	22.00	3,938,613	86,649	3,500.00	77,000.00
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	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	3,256.00	238,000	7,74,938	400.00	13,02,400.00
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/coated 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	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/coated 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	3,256.00	2,562,000	83,41,872	700.00	22,79,200.00

9.04	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 450, complete as per IRC:SP-55-2001	Nr.	9.04	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 450, complete as per IRC:SP-55-2001	Nr.	20.00	4,123,000	82,460	5,000.00	1,00,000.00
9.08	Solar Street Light		9.04	Solar Street Light						
	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.			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		a) 1 x 11 w CFL PV Module : 74 W Battery Capacity : 12V, 75 AH	Ea.	88.00	24,000,000	21,12,000	16,000.00	14,08,000.00
	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 duly connected with built in inverter & commissioned as per directed with necessary wiring & fittings.			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 duly 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		(a) One No CFL, 11 watt non retrofit ceiling / wall mounting features with battery capacity 12 watt, 20 AH	Ea.	88.00	6,900,000	6,07,200	12,000.00	10,56,000.00
	Total of Safety in Road Construction Zone carried to Grand Summary			Total of Safety in Road Construction Zone carried to Grand Summary				1,26,66,568		68,27,600.00
10	Implementation of Environmental Management Plan to be executed under Civil Works Contract		10	Implementation of Environmental Management Action Plan to be executed under Civil Works Contract						
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, SO ₂ , NO _x 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)		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, SO ₂ , NO _x 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.		a) Construction Phase	Nr.	36.00	7,500,000	2,70,000	9,000.00	3,24,000.00
	b) Operation Phase	Nr.		b) Operation Phase	Nr.	18.00	7,500,000	1,35,000	7,000.00	1,26,000.00
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)		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.		a) Construction Phase	Nr.	36.00	6,000,000	2,16,000	7,000.00	2,52,000.00
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.		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.		a) Construction Phase	Nr.	42.00	3,000,000	1,26,000	3,000.00	1,26,000.00
	b) Operation Phase	Nr.		b) Operation Phase	Nr.	18.00	3,000,000	54,000	3,000.00	54,000.00
10.06	Soil quality monitoring at construction camp sites, work shop areas, oil/lubricant handling areas, bitumen hot mix plants, at all parking lay bys, 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 referred in the EMP)		10.06	Soil quality monitoring at construction camp sites, work shop areas, oil/lubricant handling areas, bitumen hot mix plants, at all parking lay bys, 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 referred in the EMP)						
	a) Construction Phase	Nr.		a) Construction Phase	Nr.	6.00	6,000,000	36,000	8,000.00	48,000.00
10.12	Enhancement of Cultural Properties		10.12	Enhancement of Cultural Properties (bill no 10/18)						
	a) Vaidya Primary School (47-900)	Nr.		a) Hanuman Temple (32-800)	Nr.	1.00	41,012,000	41,012	50,000.00	50,000.00
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).		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 notification period).						
	a) IEC materials - Printing, Publishing	Nr.		a) IEC materials - printing, publishing	Nr.	24.00	3,000,000	72,000	5,000.00	1,20,000.00
	b) Healthcare clinic	Nr.		b) Healthcare clinic	Nr.	8.00	20,000,000	2,40,000	10,000.00	80,000.00
	c) Condom vending machines	Nr.		c) Condom vending machines	Nr.	3.00	15,000,000	45,000	5,000.00	15,000.00
	d) Condom supplies	Nr.		d) Condom supplies	Nr.	24.00	5,000,000	1,20,000	10,000.00	2,40,000.00
	e) Testing	Nr.		e) Testing	Nr.	500.00	1,500,000	7,50,000	1,000.00	5,00,000.00
	f) Signage and hoardings	Nr.		f) Signages and hoardings	Nr.	15.00	15,000,000	2,25,000	10,000.00	1,50,000.00
	Total Implementation of Environmental Management Action Plan to be executed under Civil Works Contract carried to Grand Summary			Total Implementation of Environmental Management Action Plan to be executed under Civil Works Contract carried to Grand Summary				23,30,912		20,85,000.00
11	DAY WORKS		11	DAY WORKS						
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"	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"	1.00	2,57,810,000	2,57,810	7,02,000.00	7,02,000.00
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"	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"	1.00	1,69,241,000	1,69,241	8,45,500.00	8,45,500.00
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"	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"	1.00	5,35,862,500	5,35,863	1,41,062.50	1,41,062.50
	Total Day work rates carried to Grand Summary			Total Day work rates carried to Grand Summary				9,62,914		16,88,562.50
12	MAINTENANCE		12	MAINTENANCE						
12.01	Maintenance of project road for first year of maintenance period after Defect Liability Period as directed by the Engineers	per km	12.01	Maintenance of project road for first year of maintenance period after construction as directed by the Engineers	per km	44.00	1,80,000,000	79,20,000	5,000.00	2,20,000.00
12.02	Maintenance of project road for 2nd year of maintenance period after Defect Liability Period as directed by the Engineers	per km	12.02	Maintenance of project road for 2nd year of maintenance period after construction as directed by the Engineers	per km	44.00	2,20,000,000	96,80,000	10,000.00	4,40,000.00
	Total for maintenance cost			Total for maintenance cost				1,76,00,000		6,60,000.00

GRAND TOTAL Rs

Grand total

61,51,11,070.26

48,86,57,158.50

 Rebate:- 3.60%
 Rebate Amount:- 1,75,91,657.71
 Net Amount:- 47,10,65,500.79