

## Tender No. All/EN/WC/ROBs/4(2015-16) DATE: 11.02.2016

### For

Construction of 2 Nos. Two Lane ROBs (including approaches & LHS) in lieu of Level crossings No. 74 & 75 at Km. 483/3-4 between Bhagwanpura - Rani & Km 486/5-6 between Rani-Khimel of Madar-Palanpur Section of Ajmer Division of North Western Railway.

## FINANCIAL BID (PACKET-B)

TENDER DOCUMENT February - 2016

Employer: DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LIMITED (A GOVERNMENT OF INDIA ENTERPRISE) Under MINISTRY OF RAILWAYS п

### **GENERAL INFORMATION / DATA SHEET**

TENDER NOTICE NO.	AII/EN/WC/ROBs/4(2015-16) DATE: 11.02.2016
Name of the work	Construction of 2 Nos. Two Lane ROBs (including approaches & LHS) in lieu of Level crossings No. 74 & 75 at Km. 483/3-4 between Bhagwanpura - Rani & Km 486/5-6 between Rani-Khimel of Madar-Palanpur Section of Ajmer Division of North Western Railway.
(a) Tender Value	Rs 67,23,73,130/-
(b) Completion Period	20 months
(c) Earnest Money	Rs. 35,11,900/-
(d) Date and Time of Issue of Tender	From 15.02.2016 to 20.03.2016 on all working days from 10:00 hrs. to 17:00 hrs. & on 21.03.2016 from 10:00 hrs. to 12:00 hrs. against the prescribed fee of Rs. 25000/- which is not refundable.
(e) Last date and Time of submission of Tender	21.03.2016 upto 15:00 hrs
(f) Date and Time of Opening of Tender (Technical bids - Packet A)	<b>21.03.2016</b> at 15:30 hrs
(g) Validity of offer	90 days
(h) Retention Money / Security Deposit	5 % of Contract Value
(i) Performance Bank Guarantee	Performance Guarantee (PG) have to submit within 30(thirty) days from the date of issue of Letter of Acceptance (LOA), amounting to 5% of the contract value in the form as give in clause 16.4 of GCC.

#### SUMMARY OF PRICES

**Name of work:-** Construction of 2 Nos. Two Lane ROBs (including approaches & LHS) in lieu of Level crossings No. 74 & 75 at Km. 483/3-4 between Bhagwanpura - Rani & Km 486/5-6 between Rani-Khimel of Madar-Palanpur Section of Ajmer Division of North Western Railway.

SI. No.	Description of works	Cost as per RUIDP SOR 2013	Rates to be quoted in figures & words (Clearly mention above / below / at par on updated DFCCIL Rate / cost given in column 3)
1	2	3	4
1.	Execution of all works as per Schedule "A" (Items as per RUIDP SOR	66,36,82,135.00	(in figures)
	2013		%age Above/
2.	Execution of all works as per Schedule " <b>B</b> "	49,90,995.00	Below/ At par on the schedule.
	(NS Items)		(In words)
3.	Execution of all works as per Schedule "C" (NS Items-Misc.)	37,00,000.00	
	Grand Total		Vara Abova/ Palow/ At par an
	Grand Total	67,23,73,130.00	%age Above/ Below/ At par on
			the schedule.

Notes:-

- (i) The above prices are inclusive of all taxes, duties including Excise duty, Sales Tax, Octroi, Local levies, Works Contract Tax etc.
- (ii) The tenderer should quote single percentage above / par / below for complete schedule cost.
- (iii) If the uniform percentage quoted by the Tenderer does not clearly indicate whether the rates are above/at par/below the estimated rates then through sign convention it will be considered to be on plus side and evaluated accordingly.
- (iv) Rate of item payable to contractor shall be as per above/below/at par on rates of schedule.

Signature of the Tenderer (s) with Seal

FORM No. 4

## SCHEDULE -1 SCHEDULE OF PRICES & TOTAL PRICES

		SCHEDULE-A : RUIDP SOR	2013 IT	EMS		
Sr. No.	Refer (RUIDP SOR 2013)	Particulars	Unit	Qty	Rate (Rs.)	Amount
1.	1.1	Carriage of material by mechanical transport including loading, unloading and stacking				
2.	1.1.1	Earth@lead for 5 Km	Cum	3,009	88.98	2,67,740.82
3.	1.1.3	Stone, boulders, gravelly material@lead for 5 Km	Cum	2,821	83.74	2,36,230.54
4.	1.1.5	Brick Tiles @ lead for 5 Km	Cum	3,251	113.89	3,70,256.39
	2.1	Cutting of trees, including cutting of trunks, branches and removal of stumps, roots, stacking of serviceable material with all lifts and up to a lead of 1000 mtrs and earth filling in the depression/pit to required compaction as per MoRT&H specification clause 201. (Measurment of girth to be done at height of 1 m above ground level)				
5.	2.1.1	Girth from 300 mm to 600 mm	each	13	938.00	12,194.00
6.	2.1.2	Girth from 600 mm to 900 mm	each	11	1,180.00	12,980.00
7.	2.1.3	Girth from 900 mm to 1800 mm	each	34	1,880.00	63,920.00
8.	2.1.4	Girth from 1800 mm to 2700 mm	each	7	3,390.00	23,730.00
9.	2.1.5	Girth above 2700 mm	each	1	6,410.00	6,410.00
10.	2.2	Clearing Grass and Removal of Rubbish (Maximum 150mm) by manual means and disposal at a lead of 50 metres as per MoRT&H specification clause 201	hectare	1	17,100.00	17,100.00
	2.3	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 a lead of 50 metres from road boundary including removal and disposal of top organic soil not exceeding 150 mm in thickness as directed by Engineer				
11.	2.3.1	In area of light jungle	hectare	0.78	51,200.00	39,936.00
12.	2.3.2	In area of thorny jungle	hectare	4.40	60,300.00	2,65,320.00
	2.4	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, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and lead of 50 metres as directed by Engineer				
13.	2.4.1	Lime Concrete, cement concrete grade M-10 (1:5:10) and below	cum	150	317.00	47,550.00
14.	2.4.2	Cement concrete M-15 & M-20 and PCC blocks	Cum	150	771.00	1,15,650.00
	2.4.4	Dismantling Brick / Tile work				
15.	2.4.4.2	In cement morter	Cum	2,242	249.00	5,58,258.00
	2.4.5	Dismantling Stone Masonry				

16.	2.4.5.2	AII/EN/WC/ROBs/4(2015-16) Rubble Stone Masonry in cement morter	Cum	363	249.00	90,387.00
10.	2.4.5.2	Dismantling of flexible pavements and disposal	Culli	303	249.00	90,387.00
		of dismantled materials up to a lead of 50				
	2.9	metres, stacking serviceable and unserviceable				
		materials separately as directed by Engineer.				
17.	2.9.1	Bituminous courses	Cum	3,286	1,020.00	33,51,720.0
18.	2.9.2	Granular Course	Cum	5,111	682.00	34,85,702.0
.0.	2:0:2	Dismantling of cement concrete pavement by	Call	0,111	002.00	0 1,00,1 02.0
19.	2.10	mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 cum in volume and stock piling at designated locations	Cum	324	976.00	3,16,224.00
		and disposal of dismantled materials up to a lead of 1000 metres, stacking serviceable and unserviceable materials separately as per MoRT&H specification clause 202.				
20	2.16	Removal of telephone / electric poles including excavation and dismantling of foundation concrete and lines under the supervision of concerned department, disposal with all lifts and upto lead of 1000meters and stacking serviceable material and unserviceable material separately as per MoRT&H specification clause 202.	each	30	717.00	21,510.00
	4.2	Earth work in excavation for roadway, including trimming bottom and side slopes in accordance with requirement of line, grades and cross sections, including disposal of surplus material with all lift and lead upto 1.0 kM as per MoRT&H specification clause 301.				
21	4.2.1	In all type of soil.	cum	14,727	171.00	25,18,317.0
22	4.4	Construction of embankment with approved material obtained from borrow pit with all lifts and leads, transporting to site, spreading, grading to required slope and compacting by vibratory roller 8-10 tonne to meet requirement of table 300-2 including cost of compensation for earth taken from private land complete as per MoRT&H specification clause 305. (Lead taken upto 5 km)	cum	19,648	196.00	38,51,008.0
23	4.6	Construction of subgrade and earthen shoulders with approved material obtained from borrow area with all lifts & leads, transporting to site, spreading, grading to required slope and compacted in layers not exceeding 200mm thickness at OMC, with vibratory roller of 80-100 KN static weight or more to attain a density 97% maximum dry density to meet requirement of table No.300-2 as per MoRT&H specification clause 305. (Lead taken upto 5 km)	cum	23,204	223.00	51,74,492.0
	4.8	Compacting original ground				
24	4.8.2	Loosening and recompacting original ground below embankment including Loosening leveling and recompacting original ground supporting embankment to facilitate placement of of first layer of embankment, scarified to a depth of 150 mm, mixed with water at OMC and then compacted by rolling by vibratory roller 8-10 tonne so as to achieve minimum dry density as given in table 300-2 for embankment construction	Cum	2,834	23.00	65,182.00

		AII/EN/WC/ROBs/4(2015-16) as per MoRT&H specification clause 305.3.4.		1		
		as per mor ran specification clause 505.5.4.				
		Earth work in excavation in foundation, trenches				
		etc. including dressing of sides and ramming of				
		bottoms, including getting out the excavated				
	4.9	material, refilling after laying pipe/ foundation				
		and disposal of surplus excavated material at a lead upto 50m suitable site as per direction of				
		Engineer for following depths, below natural				
		ground / Road top level				
		In all types soils/ saturated soil such as moorum,				
	4.9.1	sand, sandy silt, clay, black cotton soil, kankar, etc.				
25	4.9.1.1	Depth upto 1.5m.	Cum	24,162	169.00	40,83,378.0
26	4.9.1.2	Add extra for over all depth of excavation above	Cum	3,022	25.50	77,061.00
20	4.9.1.2	1.5 m and upto 3.0m over item no 4.9.1.1	Cum	3,022	25.50	77,001.00
27	4.9.1.3	Add extra for over all depth of excavation above	Cum	3,172	54.50	1,72,874.00
21	4.0.1.0	3.0 m and upto 4.5m over item no 4.9.1.1	Oum	0,172	04.00	1,72,074.00
28	4.9.1.4	Add extra for over all depth of excavation above	Cum	835	88.00	73,480.00
		4.5 m and upto 6.0m over item no 4.9.1.1				_,
	4.9.2	In ordinary rock				
29	4.9.2.1	Depth upto 1.5m.	Cum	1,160	730.00	8,46,800.00
30	4.9.2.2	Add extra for over all depth of excavation above	Cum	435	109.00	47,415.00
	_	1.5 m and upto 3.0m over item no 4.9.2.1				,
31	4.9.2.3	Add extra for over all depth of excavation above	Cum	270	236.00	63,720.00
_		3.0 m and upto 4.5m over item no 4.9.2.1		_		,
	4.9.3	In hard rock (required blasting) including Blasting				
22	4.9.3.1	materials Depth upto 1.5m .	0	500	1 100 00	C CC 400 00
32	4.9.3.1		Cum	560	1,190.00	6,66,400.00
33	4.9.3.2	Add extra for over all depth of excavation above 1.5 m and upto 3.0m over item no 4.9.3.1	Cum	235	239.00	56,165.00
		· · · · · · · · · · · · · · · · · · ·				
34	4.9.3.3	Add extra for over all depth of excavation above 3.0 m and upto 4.5m over item no 4.9.3.1	Cum	220	525.00	1,15,500.00
	40.4	•				
05	4.9.4	In hard rock (Blasting prohibited)	0	005	0.000.00	0.00.000.00
35	4.9.4.1	Depth upto 1.5m .	Cum	385	2,360.00	9,08,600.00
36	4.9.4.2	Add extra for over all depth of excavation above	Cum	185	472.00	87,320.00
	_	1.5 m and upto 3.0m over item no 4.9.4.1				- ,
37	4.9.4.3	Add extra for over all depth of excavation above	Cum	120	1,040.00	1,24,800.00
		3.0 m and upto 4.5m over item no 4.9.4.1			,	, ,
	5.18	SITE OFFICE				
		Providing, arranging, managing and maintaining				
		500 sq.ft. well furnished office and well equipped				
		Laboratory with 3 tables, 10 chairs, 2 steel almirah, one computer with printer & operator,				
		sufficient number of display etc. to the				
		satisfaction of the Project Manager including				
38	5.18.1	Electrical, Water expenses etc. For execution of	month	40	18,000.00	7,20,000.00
		this item the date of start shall be considered		-		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
		only when the Contractor has actually				
		rented/constructed the required premises				
		established the office & Laboratory as per				
		requirement. This item shall remain valid only for				
		original contact period; no additional payment				

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		shall be made for whatsoever reason even if				
1		time extension if provided or date of completion				
		is extended. This office and laboratory including				
		furniture and all other equipment shall be				
		property of contractor after completion of Project.				
		Providing, laying, spreading and compacting of				
		granular sub-base by providing close graded				
		Material, mixing in a mechanical mix plant at				
		OMC, carriage of mixed Material to work site,				
	7.1	spreading in uniform layers with motor grader on				
		prepared surface and compacting with vibratory				
		power roller to achieve the desired density,				
		complete as per MoRT&H specification clause -				
		401 including all material, labour, machinery,				
		lighting, guarding and maintenance of diversion.				
39	7.1.1	Grading - I Material	Cum	8,023	1,080.00	86,64,840.0
		Providing laying, spreading and compacting				
		stone aggregates of specific sizes as per Table				
		400-7 to Water Bound Macadam specification				
		including spreading in uniform thickness; hand				
		packing, rolling with power roller 8-10 tonnes, in				
		stages to proper grade and camber, applying				
	7.5	and brooming requisite type of screening (Table				
		400-8) binding materials to fill up the interstices				
		of coarse aggregates, watering (with water				
		browser) and compacting to required density,				
		making necessary earthen bund to protect edges				
		as per clause 404 of MoRT&H specification				
		including all material, labour, machinery, lighting,				
		guarding and maintenance of diversion complete				
40	7.5.4	Crusher Broken Grade III (53-22.4mm)	Cum	1,378	1,480.00	20,39,440.0
		Providing, laying, spreading (with paver finisher				
		only) and compacting wet mix macadam (WMM)				
		base course comprising of graded stone				
		aggregate and granular material conforming to				
		MORT&H specifications (Table 400-II) in layers				
1		MORT&H specifications (Table 400-II) in layers				
		of equal compacted thickness each				
		of equal compacted thickness each consolidated, including pre-mixing the material				
41	7.6	of equal compacted thickness each consolidated, including pre-mixing the material with water at OMC in mechanical mixer (Pug	Cum	8,498	1,300.00	110,47,400.0
41	7.6	of equal compacted thickness each consolidated, including pre-mixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tippers to site,	Cum	8,498	1,300.00	110,47,400.0
41	7.6	of equal compacted thickness each consolidated, including pre-mixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tippers to site, laying in uniform layers in base course on a well	Cum	8,498	1,300.00	110,47,400.0
41	7.6	of equal compacted thickness each consolidated, including pre-mixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tippers to site, laying in uniform layers in base course on a well prepared sub-base/ base course and compacting	Cum	8,498	1,300.00	110,47,400.0
41	7.6	of equal compacted thickness each consolidated, including pre-mixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tippers to site, laying in uniform layers in base course on a well prepared sub-base/ base course and compacting with power vibratory-roller to achieve the desired	Cum	8,498	1,300.00	110,47,400.0
41	7.6	of equal compacted thickness each consolidated, including pre-mixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tippers to site, laying in uniform layers in base course on a well prepared sub-base/ base course and compacting with power vibratory-roller to achieve the desired density complete as per MoRT&H specification	Cum	8,498	1,300.00	110,47,400.0
41	7.6	of equal compacted thickness each consolidated, including pre-mixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tippers to site, laying in uniform layers in base course on a well prepared sub-base/ base course and compacting with power vibratory-roller to achieve the desired density complete as per MoRT&H specification clause - 406 including all material, labour,	Cum	8,498	1,300.00	110,47,400.0
41	7.6	of equal compacted thickness each consolidated, including pre-mixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tippers to site, laying in uniform layers in base course on a well prepared sub-base/ base course and compacting with power vibratory-roller to achieve the desired density complete as per MoRT&H specification	Cum	8,498	1,300.00	110,47,400.0
41	7.6	of equal compacted thickness each consolidated, including pre-mixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tippers to site, laying in uniform layers in base course on a well prepared sub-base/ base course and compacting with power vibratory-roller to achieve the desired density complete as per MoRT&H specification clause - 406 including all material, labour,	Cum	8,498	1,300.00	110,47,400.0
41	7.6	of equal compacted thickness each consolidated, including pre-mixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tippers to site, laying in uniform layers in base course on a well prepared sub-base/ base course and compacting with power vibratory-roller to achieve the desired density complete as per MoRT&H specification clause - 406 including all material, labour, machinery, lighting, guarding and maintenance of diversion.	Cum	8,498	1,300.00	110,47,400.0
41	7.6	of equal compacted thickness each consolidated, including pre-mixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tippers to site, laying in uniform layers in base course on a well prepared sub-base/ base course and compacting with power vibratory-roller to achieve the desired density complete as per MoRT&H specification clause - 406 including all material, labour, machinery, lighting, guarding and maintenance of diversion.	Cum	8,498	1,300.00	110,47,400.0
41	7.6	of equal compacted thickness each consolidated, including pre-mixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tippers to site, laying in uniform layers in base course on a well prepared sub-base/ base course and compacting with power vibratory-roller to achieve the desired density complete as per MoRT&H specification clause - 406 including all material, labour, machinery, lighting, guarding and maintenance of diversion. Providing and applying priming coat over prepared surface of grangular base with	Cum	8,498	1,300.00	110,47,400.0
41	7.6	of equal compacted thickness each consolidated, including pre-mixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tippers to site, laying in uniform layers in base course on a well prepared sub-base/ base course and compacting with power vibratory-roller to achieve the desired density complete as per MoRT&H specification clause - 406 including all material, labour, machinery, lighting, guarding and maintenance of diversion. Providing and applying priming coat over prepared surface of grangular base with bitumen emulsion as per IS;8887 and approved	Cum	8,498	1,300.00	110,47,400.0
		of equal compacted thickness each consolidated, including pre-mixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tippers to site, laying in uniform layers in base course on a well prepared sub-base/ base course and compacting with power vibratory-roller to achieve the desired density complete as per MoRT&H specification clause - 406 including all material, labour, machinery, lighting, guarding and maintenance of diversion. Providing and applying priming coat over prepared surface of grangular base with bitumen emulsion as per IS;8887 and approved quality @ 0.60kg/sqm with the help of spray set				
41	7.6	of equal compacted thickness each consolidated, including pre-mixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tippers to site, laying in uniform layers in base course on a well prepared sub-base/ base course and compacting with power vibratory-roller to achieve the desired density complete as per MoRT&H specification clause - 406 including all material, labour, machinery, lighting, guarding and maintenance of diversion. Providing and applying priming coat over prepared surface of grangular base with bitumen emulsion as per IS;8887 and approved quality @ 0.60kg/sqm with the help of spray set fitted on bitumen container (boiler) after cleaning	Cum	8,498	1,300.00	110,47,400.0
		of equal compacted thickness each consolidated, including pre-mixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tippers to site, laying in uniform layers in base course on a well prepared sub-base/ base course and compacting with power vibratory-roller to achieve the desired density complete as per MoRT&H specification clause - 406 including all material, labour, machinery, lighting, guarding and maintenance of diversion. Providing and applying priming coat over prepared surface of grangular base with bitumen emulsion as per IS;8887 and approved quality @ 0.60kg/sqm with the help of spray set fitted on bitumen container (boiler) after cleaning the surface including removing of binding				
		of equal compacted thickness each consolidated, including pre-mixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tippers to site, laying in uniform layers in base course on a well prepared sub-base/ base course and compacting with power vibratory-roller to achieve the desired density complete as per MoRT&H specification clause - 406 including all material, labour, machinery, lighting, guarding and maintenance of diversion. Providing and applying priming coat over prepared surface of grangular base with bitumen emulsion as per IS;8887 and approved quality @ 0.60kg/sqm with the help of spray set fitted on bitumen container (boiler) after cleaning the surface including removing of binding material and other foreign matter with wire				
		of equal compacted thickness each consolidated, including pre-mixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tippers to site, laying in uniform layers in base course on a well prepared sub-base/ base course and compacting with power vibratory-roller to achieve the desired density complete as per MoRT&H specification clause - 406 including all material, labour, machinery, lighting, guarding and maintenance of diversion. Providing and applying priming coat over prepared surface of grangular base with bitumen emulsion as per IS;8887 and approved quality @ 0.60kg/sqm with the help of spray set fitted on bitumen container (boiler) after cleaning the surface including removing of binding material and other foreign matter with wire brushes and small picks, sweeping with brooms				
		of equal compacted thickness each consolidated, including pre-mixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tippers to site, laying in uniform layers in base course on a well prepared sub-base/ base course and compacting with power vibratory-roller to achieve the desired density complete as per MoRT&H specification clause - 406 including all material, labour, machinery, lighting, guarding and maintenance of diversion. Providing and applying priming coat over prepared surface of grangular base with bitumen emulsion as per IS;8887 and approved quality @ 0.60kg/sqm with the help of spray set fitted on bitumen container (boiler) after cleaning the surface including removing of binding material and other foreign matter with wire				

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		treatment complete as per clause 502 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.				
43	8.2	Extra for additional bitumen emulsion used in above item for every 1kg per 10 sqm	sqm	71,704.5	4.50	3,22,670.25
44	8.3	Providing and applying tack coat on the prepared surface with bitumen emulsion as per IS;8887 and approved quality @0.2kg/ sqm with the help of spray set fitted on bitumen container (boiler) after cleaning the surface with brooms or soft brushes and finally dusting with old gunny bags and compressed air to receive bituminous treatment complete as per clause 502 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	sqm	65,204	9.50	6,19,438.00
45	8.4	Extra for additional bitumen emulsion used in above item for every 1kg per 10 sqm [for 0.015kg/Sqm Rate 4.5x0.15=0.675]	sqm	9,780.6	4.50	44,012.70
	8.8	Providing and laying 50-75 mm compacted thick design mix (approved by Engineer) Dense Bituminous Macadam on prepared surface with specified graded crushed aggregates as per Table 500-9, 500-10 with bitumen binder set (including cost of anti-stripping compound wherever required) for base/ binder course including loading of material with F.E. loader, heating and mixing of stone aggregate, filler and bitumen in computerised hot mix plant, transporting the mixed material by tippers to paver and laying with paver finisher fitted with electronic sensor control as per clause 504.3.5 to the required level and grade, compacting by power rollers and vibratory rollers or 150 to 250 KN pneumatic tyred roller with TP = 0.7 Mpa to achieve the desired density (approximately 2.3 tonne/cum) complete as per clause 507 of MoRT&H specification but excluding primer/tack coat, including all material, labour, machinery, lighting, guarding and maintenance of diversion.				
46	8.8.2	Grade-II with Bitumen VG-grade 30 @ 4.50 %, lime filler @ 2% (percent by weight of total mix)	Cum	1,963	7,130.00	139,96,190.0
	8.10	Providing and laying 30-45 mm compacted thickness Bituminous Concrete as per design mix (approved by Engineer) on prepared surface with specified grade stone aggregate as per Table - 500-18 with bitumen for wearing course including loading of aggregate with F.E. loader and hot mixing of stone aggregate and bitumen (including cost of anti-stripping compound wherever required) in computerised hot mix plant, transporting the mixed material by tippers to paver and laying with paver finisher fitted with electronic sensing device (as per clause 504-3.5) to the required level and grade				

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		and compacting by power rollers and vibratory rollers or 150 to 250 KN pneumatic tyred roller with TP= 0.7 Mpa, to achieve the desired density complete as per clause 509 of MoRT&H specification including all material, labour,				
		machinery, lighting, guarding and maintenance				
47	8.10.2	of diversion but excluding primer/tack coat. Grade-II with bitumen of grade CRMB-60 @ 6% (percent by weight of total mix)	Cum	1,593	8,870.00	141,29,910.0
48	8.16	Providing and laying 25 mm thick bitumen mastic asphalt wearing course with paving grade bitumen meeting the requirements given in table 500-29 (including cost of anti-stripping compound wherever required) @ 14-17% (by weight) as per job mix formula, coarse aggregate as per Table 500-32, fine aggregate as per Table 500-31 and lime stone powder as filler, prepared by using mastic cooker and laid to required level and grade after cleaning the surface, including providing antiskid surface with bitumen precoated finegrained hard stone chipping of 13.2 mm nominal size @ 0.005cum per 10 sqm and at an approximate spacing of 10 cm center to center in both directions, pressed into surface when the temperature of surfaces not less than 100 degree Centigrade, protruding 1 mm to 4 mm over mastic surface, all complete including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 515 of MoRT&H specification.	Sqm	6,325	544.00	34,40,800.00
49	10.1	Providing and fixing precast cement concrete M- 20 grade (Using mechanical Concrete Mixer) kerb stone top and bottom width 115 and 165 mm respectively, 250 mm high on 150 mm thick PCC M-10 grade foundation as per design, including fixing at site as per clause 408 of MoRT&H Specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	metre	2,677	244.00	6,53,188.00
	10.5	Painting two coats on specified surface with synthetic enamel paint of approved brand and shade, after thorough cleaning and necessary filling to give even shade as per clause 803 of MoRT&H Specification including all material, labour.				
50	10.5.1	On New Plastered concrete Surface	Sqm	5,916	83.00	4,91,028.00
51	10.8	Providing and laying marking of center line and stop line etc with hot thermoplastic compound 2.5 mm thick on road/ plain surface, including reflectorising glass beads @ 250 gms per sqm area with special applicator machine, as per IRC:35 including cleaning the surface of all dirt, dust and other foreign matter, demarcation at site and traffic control involved. The finished surface to be level, uniform and free from streaks and holes as per clause 803 of MoRT&H Specification including all material, labour,	Sqm	1,389	803.00	11,15,367.00

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		machinery, lighting, guarding and maintenance				
		of diversion.				
		Providing and fixing of retro- reflectorised				
		cautionary, mandatory and informatory sign as per IRC :67 made of encapsulated lens type				
		reflective sheeting vide clause 801.3, fixed over				
		aluminium sheeting, 1.5 mm thick supported on				
	10.9	a mild steel angle iron post 3 metre long and size				
		75 mm x 75 mm x 6 mm firmly fixed to the ground				
		by means of properly designed foundation with				
		M15 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved				
		drawing including all material, labour.				
52	10.9.1	90 cm equilateral triangle	each	50	4,130.00	2,06,500.00
53	10.9.3	60 cm circular	each	60	3,660.00	2,19,600.00
54	10.9.4	80 mm x 60 mm rectangular	each	20	5,050.00	1,01,000.00
55	10.9.7	90 cm high octagon	each	8	6,390.00	51,120.00
		Providing and erecting overhead signs with a				
		corrosion resistant 2mm thick aluminium alloy				
		sheet reflectorised with high intensity retro-				
		reflective sheeting of encapsulated lens type with vertical and lateral clearance given in clause				
	10.13	802.2 and 802.3 and installed as per clause				
		802.7 over a designed support system of				
		galvanised steel trestles and trusses of sections				
		and type as per structural design requirements				
50	10.13.1	and approved plans. Truss and Vertical Support	10000	10	00,000,00	45 64 000 00
56 57	10.13.1	Aluminium alloy plate for over head sign	tonne	18 152	86,900.00	15,64,200.00
57	10.13.2	Providing and fixing 50 mm dia G.I. steel pipe	Sqm	102	1,300.00	1,97,000.00
		railing in 3 rows duly painted on medium weight				
50	40.47	steel channels (ISMC series) 100 mm x 50 mm,	Matua	400	0.040.00	0.04.000.00
58	10.17	1.2 metres high above ground, 2 m centre to	Metre	100	2,210.00	2,21,000.00
		centre, complete as per approved drawings				
		including all material, labour.				
		Providing and fixing CAT's eye made of aluminium alloy size 75x100x22mm having 21				
59	10.19	biconvex lenses embedded in circular disk of AS	Each	1,556	195.00	3,03,420.00
00	10.10	plastic on each side on road surface complete	Laon	1,000	100.00	0,00,420.00
		including allmaterial, labour, diversion.				
		Providing and fixing "SWISS" type bollard 134cm				
		height made out of 1.25mm thick M.S. sheet				
		welded in conical section having upper dia 15cm				
		and lower dia 20cm with another attachment of mandatory 7mm thick plate and fixed with the				
		help of 7cm long, 30cm dia chrome plated MS				
60	10.22	tube, this part is fixed on the body with another	Each	60	1,480.00	88,800.00
		attachment of a cap 30x7cm, whole body is				
		painted in black stove enamel and mandatory				
		plate in azure blue with one compulsory keep left				
		arrow with 10mm border reflective strip each of 7.5cm on body complete in all respect including				
		all material, labour, diversion.				
		······································		1	I	I

#### Tender No.: All/EN/WC/ROBs/4(2015-16) Providing and fixing of hazard marker made out of 2mm thick MS angle iron 25x25x3mm and 61 10.23 fixed on channel posts 75x75x6 mm and hold Each 32 495.00 15,840.00 fast at bottom whole body is painted in white stoving enamel and 6 nos. 5cm dia reflective sheet on white reflective background with additional border of 1.25cm all around it complete in all respect including all material, labour, diversion. Filling of Pot- holes and patch repairs with Built up Spray Grout in two layers with 53-22.4mm size of aggregate upto 75mm depth and 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 12.1 62 Sqm 2,100 262.00 5,50,200.00 material as per clause 506, compacting with 8-10 tonne power roller, trimming and finishing the surface to form a smooth continuous surface complete using Bitumen VG-grade 30 as per clause 503, 506 & 3004.2 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion ... Filling of Pot- holes and patch repairs with open graded premix surfacing 20mm thick compacted with bitumen binder VG-grade 30 @ 14.60 kg/10 sqm and aggregate in Hot mix plant, transporting the mixed material with tipper and laying manually to the required level and grade, rolling with power roller, 8-10 tonne, removal of all failed material, trimming of completed excavation to provide firm vertical faces, cleaning of surface, 63 12.2 Sqm 1,470 120.00 1,76,400.00 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 complete as per clause 3004.2 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion ... Providing, laving and compacting plain/ reinforced cement concrete of specified grade in foundation/ leveling course/ pile cap using concrete mixer and vibrater complete including 13.4 cost of form work, as per drawing and technical specifications and clause as per 1100,1500,1700,2100 of MoRT&H specification including all scaffolding material, labour, machinerv PCC Grade M -15 64 13.4.1 Cum 2,520 3,840.00 96,76,800.00 65 13.4.2 PCC Grade M -20 Cum 182 4,310.00 7,84,420.00 Providing, laying and compacting design mix 13.5 plain/ reinforced cement concrete of specified

grade in foundation/ levelling course/pile cap

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		using batching plant, transit mixer and concrete pump and vibrater including cost of form work, complete as per drawing and technical				
		specifications as per clause 1100, 1500, 1700, 2100 of MoRT&H specification including all				
		material, labour, machinery, and maintenance of				
		diversion				
66	13.5.8	RCC Grade M -35	Cum	2,313	5,100.00	117,96,300.0
67	13.24	Providing and laying TMT bar reinforcement at any level in foundation/ pile/ pile cap complete as per drawing and clause 1600 of MoRT&H Specification including all material, labour and machinery.	tonne	376.40	64,600.00	243,15,440.0
	14.6	Providing and laying structural plain/ reinforced cement concrete (design mix) of specified grade in substructure at all levels using concrete mixer and vibrater, including cost of form work, as per drawing and technical specifications complete as per clause 1500, drawing and technical specifications complete as per clause 1500, 1700 and 2200 of MoRT&H specification including all material, labour, scaffolding etc.				
68	14.6.5	RCC Grade M -25	Cum	188	5,150.00	9,68,200.00
69	14.6.7	RCC Grade M -35	Cum	3,397	5,250.00	178,34,250.0
	14.8	Providing weep holes in brick/ stone masonry/ Plain/ Reinforced concrete abutment, wing wall/ return wall with following dia AC pipe, extending through the full width of the structure with slope of 1V:20H towards drawing face complete as per drawing, technical specifications and clause 2205 ofMoRT&H Specification including all scaffolding, material, labour, machinery etc.				
70	14.8.1	100 mm dia	metre	400	104.00	41,600.00
71	14.9	Supplying, fitting and fixing in position true to line and level Elastomeric Bearing conforming to IRC:83 (Part-II) section IX and clause 2005 of MoRT&H specification complete including all accessories as per drawing and technical specification and as per clause 2000 & 2200 of MoRT&H Specification including all scaffolding, material, labour, machinery etc.	Cubic centimetre	35,13,510		26,35,132.50
72	14.10	Supplying, fitting and fixing in position true to line and level POT/PTFE bearing consisting of a metal piston supported by a disc or unreinforced elastomer confined within a metal cylinder, sealing rings, dust seals, PTFE surface sliding against stainless steel mating surface, complete assembly to be of cast steel/fabricated structural steel, metal and elastomer elements to be as per IRC: 83 part-I & II respectively and other parts conforming to BS: 5400, section 9.1 & 9.2 and clause 2006 of MoRT&H Specifications complete as per drawing and approved technical specifications and as per clause 2000 & 2200 of MoRT&H Specification including all scaffolding, material, labour, machinery etc.	per tonne load	9,450	308.00	29,10,600.00

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73	14.11	Providing and laying of Filter media with granular materials/stone crushed aggregates satisfying the requirements laid down in clause 2504.2.2. of MoRT&H specifications with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind abutment, wing wall and return wall to the full height compacted to a firm condition complete as per drawing and technical specification including all material, labour, machinery as per clause 710.1.4 of IRC:78 and clause 2200 of MoRT&H specification.	Cum	7,023	1,150.00	80,76,450.00
	14.12	Back filing in foundation, trench behind abutment, wing wall and return wall etc and below pipe bed in layers not exceeding 20cm in depth, consolidating each deposited layer compacted by mechanical means with all lead and lift as per drawing and technical specification including all material, labour, machinery as per clause 2100 and 2200 of MoRT&H specification including all material, labour, machinery.				
74	14.12.1	Using selected granular material (as per clause 2200 of MoRT&H).	Cum	850	836.00	7,10,600.00
75	14.14	Providing and laying precast cement concrete M- 30 Grade 100mm thick paving blocks of approved shape and size (not less than 0.20 sqm), over 100mm thick PCC M-10 Grade bedding (duly compacted) including filling of joints with cement sand mortar (1:3) complete as per drawing and specification and as approved by Engineer.	Sqm	2,500	975.00	24,37,500.00
76	14.16	Fabrication, Welding, Riveting, bolting by HSFG bolts wherever required, supply, transportation to site, Assembling, Launching, Erecting of steel girder spans as per drawings and specifications approved by Railway and department for composite construction i.e. (Steel +RCC) of superstructure of the Road Over Bridge with contractor's own mild steel confirming to IS: 2062 Grade 250(B) with all welds, rivets, nuts bolts rivet materials, weld materials, HSFG bolts, service bolts, with other ancillary steel structures fixed to the girder where necessary in proper level and alignment and as per technical specifications etc. with contractor's own materials, fabrication, machinery, templates, fixtures, equipments tools and plants, transportation to site, skilled/ unskilled labour, excise duty., Octroi, sales tax and other taxes, all leads and lifts, descent, loading, unloading, crossing one or more Railway track if required etc. complete and as per technical specifications. The rate shall also be inclusive of cold straightening of deformed and bent girder parts before their assembly. The structural steel to be used should be manufactured by SAIL/ RINL/	kg	9,81,000	136.00	133416,000.0

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		TISCO/ ESSAR/ JINDAL only. For Painting prior				
		approval for superior brand/ make of the paint				
		should be taken from engineer in charge.				
		The rate shall be inclusive of supply, erection				
		and dismantling of staging and scaffolding and				
		other temporary arrangements required for the				
		purpose of assembly, erection and launching of				
		girders. The rate shall also be inclusive of cold				
		straightening of deformed and bent girder parts before/after their assembly Metalising girder/				
		girder component such as cross girder, top chord				
		channels, bracing etc of BG new steel girder as				
		directed by engineer with epoxy paint spray not				
		less than two layers after preparing surface by				
		sand/grit blasting as per provision laid in				
		Appendix VI of IRS B-1179 code ( latest				
		alteration) including one coat wash primer one				
		coat epoxy zinc crome primer and two coat of				
		epoxy paint with approved paint conforming to IS specification for fabrication & erection of steel				
		girder bridge (RS B 1-79) as corrected up to				
		date with contractor's own materials, tools,				
		plants, labour, handling, rehandling if any				
		including all lead, lifts descents, crossing of				
		track/ obstruction etc. complete in all respect and				
		as per direction of the engineer.				
		Note: 1. The fabrication of girders must be got				
		done from RDSO approved firms only.				
		<ol><li>For Payment purpose, nominal weight of the girder as per drawing will only be considered.</li></ol>				
		Providing and laying structural reinforced/				
		prestressed cement concrete (design mix) of				
		specified grade using batching plant, transit				
	14.17	mixer, concrete pump and vibrater in				
	14.1/	superstructure at all levels including cost of steel				
		form work complete as per clause 1500, 1600				
		and 1700 of MoRT&H specification including all				
	14.17.4	scaffolding, material, labour, machinery etc RCC/PSC Grade M -40				
77	14.17.4	For T-beam & slab	Cum	2,398	6,410.00	153,71,180.0
	· · · · · · · · · · · · · · · · · · ·	Providing, precasting, transportation and placing	Cum	2,000	0,110.00	
		in position at all level precast pre/post-tensioned				
	14.18	specified grade girders complete as per drawing				
	14.10	and clause 1800 & 2300 of MoRT&H				
		specifications including all material, labour,				
70	11 10 1	machinery including suitable crane etc.	<u></u>	0.400	21 202 02	462.46.000.0
78	14.18.1	RCC M-40	Cum	2,180	21,200.00	462,16,000.0

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	14.21	Providing and laying structural Reinforced cement concrete (design mix) of specified grade using mechanical concrete mixer and vibrater in approach slab, friction slab, edge beam, footpath and kerb as per approved drawing and specification as directed by the Engineer as per clause 1500 &1700 of MoRT&H specification including all scaffolding, material, labour, machinery etc.				
79	14.21.1	RCC M-30	Cum	852	5,980.00	50,94,960.0
80	14.21.2	RCC M-35	Cum	380	6,010.00	22,83,800.0
	14.22	Providing and laying structural Reinforced cement concrete (design mix) of specified grade using batching plant, transit mixer, concrete pump and vibrater in approach slab, friction slab, edge beam, footpath and kerb as per approved drawing and specification as directed by the Engineer as per clause 1500 &1700 of MoRT&H specification including all scaffolding, material, labour, machinery etc'.				
81	14.22.2	RCC M-35	Cum	76	6,340.00	4,81,840.00
82	14.22.3	RCC M-40	Cum	50	6,410.00	3,20,500.00
83	14.23	Designing, providing and erection of Precast RCC facia panels of thickness 180mm made with M-35 Grade concrete batching plant, transit mixer, concrete pump and vibrater for retaining earth with all elements and accessories including reinforcing element, complete as per approved drawing and clause 3100 of MoRT&H specifications including all material, labour, machinery etc. (Scope of work includes designing, getting approval, casting in yard including reinforcement, curing, storing, transporting, lifting, placing in position, erection with all necessary fasteners etc complete)	Sqm	11,349	4,620.00	524,32,380.0
84	14.24	Providing, placing and compacting to desired density approved backfill material in layers as per approved methodology including testing for reinforced fill portion and random fill portion in the approaches between the Reinforced Soil (RS) wall panels as pre approved drawings as per clause 3103 of MoRT&H specification The soil should be predominately coarse grained not more than 10% of particle should pass 75 micron sieve The item shall be measured and paid for the finished volume of backfill and sub-grade placed in position excluding the volume of filter media at base and behind the RS walls.	Cum	47,507	383.00	181,95,181.0
85	14.25	Supplying, fitting and placing TMT bar reinforcement in sub structure/ superstructure at all level complete as per drawing and clause 1600 & 2200 of MoRT&H Specification including all material, labour, machinary etc.	tonne	1,753	65,700.00	1151,72,100.

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86	14.27	Providing and laying reinforced cement concrete wearing coat M-30 grade at any level including formworkand reinforcement @75kg/cum complete as per drawing and technical specification and as per clause 2702 of MoRT&H Specification including all material, labour, machinary etc.	Cum	30	9,720.00	2,91,600.00
	14.28	Providing and laying Precast Reinforced cement concrete slab for footpath and median with approved finish, constructed with specified grade concrete as per dimensions in the approved drawing and at locations directed by the Engineer including form work and excluding reinforcement and complete as per clause 1500 & 1700 of MoRT&H specification including all material, labour, machinery.				
87	14.28.2	RCC M-25	Cum	719	5,200.00	37,38,800.0
88	14.28.3	RCC M-30	Cum	80	5,220.00	4,17,600.00
89	14.29	Construction of precast/ cast-in-situ RCC railing M-30 grade, true to line and grade, center to center spacing between vertical post not to exceed 2000mm leaving adequate space between vertical post for expansion, complete as per drawing and technical specification and as per clause 1500, 1600, 1700 & 2703 of MoRT&H Specification including all material, labour, machinary etc.	Metre	920	1,590.00	14,62,800.0
90	14.30	Providing and fixing Mild steel railing including painted, complete as per drawing and technical specification and as per clause 1900 & 2703.2 of MoRT&H Specification including all material, labour, machinary etc.	Metre	150	2,870.00	4,30,500.00
91	14.32	Providing, laying and fixing of strip seal expansion joint catering to maximum horizontal movement upto 70 mm complete as per approved drawings and as per clause 2600 of MoRT&H specifications to be installed by manufacturer's authorized representative ensuring to compliance to manufacturer's instruction for installation including preparing the edges of bridge, welding to exposed reinforcement, concreting with design mix of grade of bridge or M-35 whichever is richer including all material, labour, machinery etc complete.	Metre	314	9,060.00	28,44,840.0
92	14.33	Providing and erecting Drainage Spouts with 0.15m long GI pipe 150mm dia and GI bolt 10mm dia with Galvanised MS flat clamp complete as per drawing and Technical specification as per clause 2705 of MoRT&H specifications including all material, labour, machinery etc.	Each	138	862.00	1,18,956.00
	14.35	Providing and constructing of Reinforced cement concrete crash barrier at the edges of the road, approaches to bridge structures and medians, constructed with specified grade concrete using mechanical mixer and vibrator with 450 mm long at expansion joints filled with pre-moulded				

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		asphalt filler board, keyed to the structure on which it is built and installed as per design and dimensions in the approved drawing and at locations directed by the Engineer, all as specified as per clause 809 of MoRT&H specification including all material, labour scaffolding etc				
93	14.35.3	RCC M-35	Cum	3,428	5,790.00	198,48,120.0
94	14.38	Providing and erecting a "Thrie" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 85 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 2 m high with 1.15 m below ground level, all steel parts and fitments 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 space of channel section 150 x 75 x 5 mm, 546 mm long complete as per clause 810 of MoRT&H specification including all material, labour machinery etc.	Metre	314	4,240.00	13,31,360.00
95	14.39	Providing and fixing G.I. Pipes railing of 80 mm dia. (Class B) over brackets of 16 mm thick MS plate with 200 mm at bottom & 120 mm at top with 200 mm height welded to 16 mm thick MS Plates of size 200 X 175 anchored with 400 mm long 4-12 mm dia.steel bars at the top of RCC crash barrier @1.0m c/c including fixing arrangement as per the drawing, clause 800 of MoRTH specification and as per the direction of the Engineer.	Metre	3,810	1,170.00	44,57,700.0
96	14.41	Providing and applying elastic, elastomeric membrane foming system with anti carbonation and breathing properties. The system should be based on solvent free acrylic polymer with selected minerals fillers and should be ultra violet resistant, crack bridging type, carbonation resistant, breathable, environment friendly, water proofing coating. for anti carbonation equivalent air layer thickness denoted as R or SDCO2 >= 50mm and for breathability equivalent air layer thickness denoted as SDH2O shall be <= 4mm for vapour transmitting barrier. The system consist of one coat primer namely PREMIX 250 or equivalent @ 75-100 g/sqm. The consumption of main polymer namely EMCECOLORFLEX or equivalent to give film thickness of 200-225 microns(solid content,70% +-3%)should be application (either by roller or brush)and surface smoothness of the coating should be min. 200 microns for the above system. Polymer coating should be in suitable shades, including cost of materials, cleaning, chipping and removing the dirt particles of the concrete slabs with wire brush & water, labour charges for filling the bug	sqm	20	355.00	7,100.00

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		holes, cracks, joints etc. with one component				
		polymer modified fine repair and cosmetic				
		mortar, labour for applying above coating,				
		scaffolding charges, all inclusive taxes.				
97	14.42	Providing, fixing, maintaining, shifting & refixing, barricading of minimum 2.0 mtr height at stipulated active site of the same project site, made with angle iron frame of 50x50x5mm and GI sheet of 0.63mm thick including primer painted initialy, painting, lettering & border with reflective paint at the time of every shifing, traffic diversion arrangement, safety guard, suitable lightning arrangement during night, complete in all respect till completion of the project as per technical specification and direction of Engineer- In-charge and same shall be possessed by the contractor after completion of the Project. Payment under this item will be released: (1) 50% At the time of Providing new barricading at the time of start of project at location and plan as approved by the Engineer & certification. (2) 50% After completion of project including shifting re-erecting and maintaining the barricading in position, during entire construction tenure with requisite manpower /flagman etc.	Sqm	1,700	2,650.00	45,05,000.0
		complete for guiding traffic and safety etc and				
		dismantling after completion of project. Providing, lowering, laying in trenches, aligning,				
	19.6	fixing in position and double flanged (welded) centrifugally (spun) Ductile iron ISI marked K-9 grade pipes as per IS:8329-2000 (amended upto date), (including jointing and jointing material) complete including all material, labour, hydraulic testing and commissioning as per Technical Specifications and as per direction of Engineer				
98	19.6.2	150 mm	Metre	20	3,490.00	69,800.00
	19.14	Providing, lowering, laying, aligning, fixing in position at and jointing at all level/ depths ISI marked HDPE pipes of PE-100 grade & PN-6 for potable water as per IS 4984 (amended upto date) in trenches in complete including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.				
99	19.14.1	90 mm dia	metre	5,124	218.00	11,17,032.0
100	19.14.5	160 mm dia	metre	11,484	664.00	76,25,376.0
101	19.14.9	250 mm dia	metre	112	1,610.00	1,80,320.00
102	29.2	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete:	Kg	22,875	74.50	17,04,187.5
	29.25	Steel work welded in built up sections/ framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.				

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103	29.25.2	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.	Kg	5,100	88.50	4,51,350.00
	30.20	Chequerred precast cement concrete tiles 22 mm thick in footpath & courtyard jointed with neat cement slurry mixed with pigment to match the shade of tiles including rubbing and cleaning etc. complete on 20 mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand).				
104	30.20.3	Dark shade using ordinary cement.	sqm	2,715	660.00	17,91,900.0
	31.41	Providing and fixing on wall face Unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion. (i) Single socketed pipes				
105	31.41.2	110 mm diameter	metre	2,544	220.00	5,59,680.00
	32.35	Finishing walls wit Acrylic Smooth exterior paint of required shade				
106	32.35.1	New work (two or more coat applied @ 1.67 ltr./10 sqm over and including base coat of water proofing cement paint applied @2.20 kg/ 10 sqm.)	Sqm	16,439	77.00	12,65,803.0
	32.41	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete.				
107	32.41.1	On steel work	sqm	520	118.00	61,360.00
108	32.41.2	On concrete work	sqm	100	122.00	12,200.00
	32.50	Painting with synthetic enamel paint of approved brand and manufacturer of required colour to give even shade.				
109	32.50.1	Two or more coats on new work	sqm	410	66.50	27,265.00
110	32.68	Add extra over items of Cement Plaster / Cement Concrete Flooring/ Plain or RCC work providing and mixing admixture of synthetic fibre 6 mm / 12 mm @ rate of 125 gm.pack per 50 kg.of Cement or in the ratio of as specified by manufacture specification and direction of the Engineer with all leads and lifts.	Per Pack 125 gm	40,000	53.00	21,20,000.0
	35.22	Cleaning and removal of earth, silt, sludge, kankar, boulder, building material and garbage in existing nallah/drains including construction of bye pass arrangement to byepass water with 1.5m lift from ground level and lead upto 50 m including foul & saturated condition where pumping out or bailing out of water is required, including shoring, shuttering where required and dewatering. Making access for disposal and dressing disposal side as per the directed of the Engineer.				
111	35.22.1	Depth upto 1.50 m	Cum	1,925	286.00	5,50,550.00
112	39.1	Trenching in specified soil up to adepth of 60 cm including removal and stacking of serviceable materials and then disposal by spreading and neatly leveling within a lead of 50 meters and making up the trenches area to proper levels by filling with earth or earth mixed with sludge	Cum	10	170.00	1,700.00

	ender No.:	AII/EN/WC/ROBs/4(2015-16) or/and farm -yard manuare before and after flooding with water(excluding cost of imported earth and sludge or farm yard manure)				
113	39.3	Supplying and stacking good earth at site of work.Note: 1) Loading, unloading and carriage to be paid extra as per actual lead.2) Earth measured in stacks will be reduced by 20% for payment	Cum	50	167.00	8,350.00
114	39.4	Supply at site of work well decayed farm yard manure, from any available source, approved by the engineer in charge including screening and stacking.	Cum	10	847.00	8,470.00
	39.12	Grassing with 'Doobs' grass including watering and maintenance of the lawn for 30 days or more till the grass forms a thick lawn free from weeds and fit for moving including supplying good earth if needed.				
115	39.12.2	In rows 7.5 cm apart in either direction	sqm	200	26.00	5,200.00
116	39.22	Planting permanent hedges including digging of trenches, 60 cm wide and 45 cm deep, refilling the excavated earth mixed with farmyard manure, supplied at the rate of 4.65 cum per 100 metres and supplying and planting hedge plants at 30 cm apart.	Metre	100	219.00	21,900.00
117	39.23	Maintenance of Hedge for one year	Metre	200	181.00	36,200.00
118	39.24	Planting Flowering Plants and Shrubs in Central Verge	Km	0.40	80,300.00	32,120.00
119	39.25	Maintenance of Flowering Plants and Shrubs in Central Verge for one Year.	Km	0.40	1,76,100.00	70,440.00
120	39.30	Planting of trees by the road side (Avenue trees) in 0.60 m dia holes, 1 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, planting the saplings, backfilling the trench, watering, fixing the tree guard and maintaining the plants for one year.	Each	400	1,040.00	4,16,000.00
121	39.36	Providing and fixing MS iron tree guard 60 cm dia and 2 metre high above ground level formed of 4 Nos (25 x 6 mm) and 8 Nos (25 x 3 mm) vertical MS riveted to 3 Nos (25 x 6 mm) iron rings in two halves, bolted together with 8 mm dia and 30 mm long bolts including painting two coats with paint of approved brand over a coat of priming, complete in all respects.	Each	400	1,990.00	7,96,000.00
		Electrical Items for Road Light				
	43.4	S&F following sizes of ISI marked steel conduit along with heavy duty accessories in surface /recessed using saddles, clamps, fasteners as required including cutting the wall and making good the same as required.				
122	43.4.5	50 mm Group 1	R. mtr.	450	298.00	1,34,100.00
	44.1	Supplying and drawing FR PVC insulated & unsheathed flexible copper conductor ISI marked (IS:694) of 1.1 kV grade and approved make in existing surface or recessed conduit/casing capping including making connections etc. as				

l'e	ender No.:	AII/EN/WC/ROBs/4(2015-16)	I.		1	
		required.				
123	44.1.7	2 x 2.5 sq.mm group 1	Mtr.	3,510	36.00	1,26,360.00
124	44.1.9	3 x 2.5 sq.mm group 1	Mtr.	200	55.00	11,000.00
		P&F 240/415 V MCB of breaking capacity not				,
		less than 10 KA (B/ C/ D tripping characteristic)				
	46.1	ISI marked IS 8828(1996)]/ conforming to IEC				
		60898 in existing board/sheets including making				
		connections with lugs, testing etc. as required.				
	46.1.2	Double pole MCB				
125	46.1.2.1	6 A to 32 A rating group 1	Each	224	488.00	1,09,312.00
		P&F Recessed/ Surface mounting heavy duty				
		horizontal type sheet steel Distribution board				
	10 5	phophatised/ powder painted complete with				
	46.5	copper bus bar, shorting link ,neutral link, earth				
		link and din bar, conforming to IS13032 & IS8623 including making internal DB terminations				
		with copper lugs , testing etc. as required				
	46.5.6	Double door (Three phase) Per phase isolation				
126	46.5.6.2	2+12 Way	Each	17	9,750.00	1,65,750.00
120	10.0.0.2	P&F recessed/ surface mounting heavy duty	Laon		0,700.00	1,00,700.00
		Vertical type sheet steel Distribution board with				
		provision of 8way incomer, phophatised ,powder				
	46.10	painted complete with insulated copper bus bar,				
	40.10	neutral link, earth link and din bar, conforming to				
		IS13032 & IS8623 including making internal DB				
		terminations with copper lugs ,testing etc. as				
	46.10.2	required				
127	46.10.2	Double door (Three phase) 12 Way	Each	17	9 740 00	1 19 590 00
127	40.10.2.4	-	Each	17	8,740.00	1,48,580.00
		P&F of thermoplastic/ PVC cable junction boxes of following minimum sizes with IP65/ IP55				
	48.22	protection including threaded cable glands made				
	10.22	of polyamide material, terminals complete in all				
		respect.				
128	48.22.4	150 x 110 x 70 (mm)) (10 Sq. mm)	Each	28	642.00	17,976.00
		P/Laying XLPE insulated / P.V.C. sheathed				
		cable of 1.1 KV grade with aluminium conductor				
		Armoured of IS:7098-I/1554-1 approved make in				
	51.1	ground as per IS:1255 including excavation of				
	0111	30cmx75cm size trench, 25 cm thick under layer				
		of sand, IInd class bricks covering, refilling earth,				
		compaction of earth, making necessary connection, testing etc. as required of size.				
	51.1.2	4.0 Sq.mm				
129	51.1.2.1	2 core group-2	Mtr.	1,200	104.00	1,24,800.00
120	51.1.4	10.0 Sq.mm		1,200	10 1.00	1,21,000.00
130	51.1.4.3	4 core group-2	Mtre	16,880	149.00	25,15,120.0
130	51.1.4.5	25 Sq.mm	INILI C	10,000	143.00	20,10,120.0
131	51.1.6.4	•	Mtre	854	221.00	1,88,734.00
131		4 core, group-l	IVILLE	034	221.00	1,00,734.00
132	51.1.7	35.0 Sq.mm	Mtro	200	24E 00	40,000,00
132	51.1.7.4	3.5 core, group-l	Mtre	200	245.00	49,000.00

	51.1.8	AII/EN/WC/ROBs/4(2015-16) 50.0 Sq.mm		1	1	1
133	51.1.8.4		Mtre	8,550	263.00	22,48,650.0
155	51.1.0.4	3.5 core group-2	witte	0,000	203.00	22,40,030.0
134	51.1.11.4	120.0 Sq.mm 3.5 core group-2	Mtre	4,400	505.00	22,22,000.0
134	51.1.13	185.0 Sq.mm	IVILIE	4,400	303.00	22,22,000.0
135	51.1.13.4	3.5 core group-l	Mtre	5,080	834.00	42,36,720.0
100	01.1.10.4	P & Laying XLPE insulated IS:7098/II/85 of	INICO	0,000	004.00	42,00,720.0
	53.1	approved make H.T.Cable for working voltage 11 K.V.Earthed direct in ground including excavation of 30cmx100cm size trench, 25cm layer of river sand, IInd class bricks covering, refilling earth, compaction of earth, making necessary connection testing etc. as required of size.				
136	53.1.7	3 core 185.0 Sq.mm	Mtre	4,580	1,280.00	58,62,400.0
	53.2	Providing & making heat shrinkable type indoor/outdoor/straight through terminations/joint kit of approved make suitable for XLPE insulated 11 KV cable, with required components, prepration of cable ends, testing etc. as required of following sizes.				
	53.2.2	Outdoor				
137	53.2.2.3	3 core 120/150/185/225 Sq.mm	Set	36	3,465.00	1,24,740.00
	53.2.3	Straight Through				
138	53.2.3.3	3 core 120/150/185/225 Sq.mm	Set	10	8,160.00	81,600.00
139	55.1	Pipe Earthing as per IS:3043 with perforated 3.0 Mtr. Long, 40 mm dia. ' B ' class G.I. Pipe including all accessories like nut, bolts, reducer, nipple, wire meshed funnel, and C.C. finished chamber covered with hinged type with locking arrangement C.I. Cover, C.I. Frame of size 300mm x 300 mm and embodying the pipe complete with alternate layers salt and coke/ charcoal, testing of earth resistance as required.	each	55	1,650.00	90,750.00
	55.4	S & Laying following size earth wire/strip in horizontal or vertical run in ground/surface/ recess including riveting, soldering, saddles, making connection etc. as required.				
140	55.4.5	8 SWG G.I. Wire	Mtr.	350	8.00	2,800.00
	59.3	P & F IP-65 protected street light luminaire on existing bracket suitable for HPSV/ MH LAMP, made out from powder coated single piece die cast aluminium housing, electrochemically brightened and anodized POT optics aluminium reflector, heat resistant and toughened glass cover and accessories like copper ballast, electronic ignitor, capacitor, holder prewired up to terminal block etc. as required including making connection testing etc. as required (without lamp)				
141	59.3.3	1 X 250 Watt group-I	Each	40	5,740.00	2,29,600.00
	59.12	P & F high pressure sodium vapour/ High pressure mercury vapour/ Metal halide/ halogen lamp as required				
	59.12.1	HPSV Elleptical lamp normal output				

142     59,12.1.3     250 watt group-1     Each     30     578.00     17,340.00       2     Supply and erection of Octagonal pole of following length and dimension as per table E-20 with base plate on the cement concrete foundation of M-15 grade (11.5.3) with the help of anchor bolts of grade 6.8 (15.1367 PIII). The pole shall be made of S-355.00 grade steel sheet i, Netded lengthwise to obtained Octagonal shape, Netdergrad galvanised internally & actual provide and locking arrangements. The complete work shall be supervised and certified by the manufacturers for satisfactory supply, erection, testing and commissioning.(SEE TABLE)     224     19,600.00     43.90,400.0       143     59.21.4     10 Mtr. Group 1     Each     224     19,600.00     43.90,400.0       144     59.22.1     Supply, Erection and Fixing of hot dipped galvanised Overhang (6X 3.25 mM) with cap (250 x 137.9 x 4.05 mM) over the existing poles     Each     224     935.00     2,09,440.00       144     59.22.1     Single arm overhang group 1     Each     224     935.00     2,09,440.00       144     59.22.1     Pi FIP-66/ IP-66 protected street light luminaries on existing poles     Each     224     935.00     2,09,440.00       145     59.24.1     ID Mtr. Group 1     Each     224     935.00     2,09,440.00       145     Single arm overhang group 1     Each     224     935.00     2,09,440.00       145     59.34.1     ID-65 protected steel light			AII/EN/WC/ROBs/4(2015-16)				
Image: set of the set of	142	59.12.1.3		Each	30	578.00	17,340.00
with base plate on the cement concrete foundation of M-15 grade (11.53) with the help of anchor botts of grade (3.163 1367 P III). The pole shall be made of S-355JO grade steel sheet . folded lengthwise to obtained Octagonal shape, having single longitudinal seam weld and hot dipped galvanised internally & externally in accordance with IS 2629. The pole shall have a weatherproof flush door and locking arrangements. The complete work shall be supervised and certified by the manufacturers for satisfactory supply, erection, testing and commissioning (SEE TABLE)         Each         224         19,600.00         43,90,400.0           143         59.21.4         10 Mtr. Group 1         Each         224         19,600.00         43,90,400.0           59.22         Supply. Erection and Fixing of hot dipped galvanised Overhang froup 1         Each         224         935.00         2,09,440.00           144         59.22.1         Single arm overhang group 1         Each         224         935.00         2,09,440.00           144         59.24.1         Ningle arm overhang group 1         Each         224         935.00         2,09,440.00           150         Songle pressure dic cast aluminum housing with heat dissipation fins on housing with high power LEDs of CREF NICHIA/ GSRAM PHILPS make. Diffuser glass cover for ensuing IP-65 protection for lamp and control gear compartment, system lumen output of 1500—8500 high power LED. Integrated driver shall be high efficiency having efficiency more than 85 shad in compliance to 1EC standards. System life of 25000 burning hours with 70 % of initial lumens maintained. Fixture							
foundation of M-15 grade (11.5.3) with the help of anchor botts of grade 6.8 (8.1367 Pt II) , The pole shall be made of S-355JO grade steel sheet , folded lengthwise to obtained Octagonal shape, having single longitudinal seam weld and hot dipped galvanised internally & externally in accordance with IS 252.9. The pole shall have a weatherproof flush door and locking arrangements. The complete work shall be supervised and certified by the manufacturers for satisfactory supply, erection, testing and commissioning (SEE TABLE)       Each       224       19,600.00       43,90,400.0         143       59.21.4       10 Mrr. Group 1       Each       224       19,600.00       43,90,400.0         59.21.4       10 Mrr. Group 1       Each       224       19,600.00       43,90,400.0         59.21.4       10 Mrr. Group 1       Each       224       935.00       2,09,440.00         143       59.22.1       Single arm overhang group 1       Each       224       935.00       2,09,440.00         144       59.22.1       Single arm overhang group 1       Each       224       935.00       2,09,440.00         144       59.23.41       Pi FI-65/ IP-66 protected street light luminaries on existing bracket. Fixture made from powder coated single piece pressure die cast aluminum housing with head bisplation fins on housing with high power LED. Integrated driver shall be high efficiency having efficiency more than 85 w and in compliance to IEC standards. System life of 25000 hym poworup LEC standards. System life of 25000 hym poworup LEC standards. System li			following length and dimension as per table E-20				
59.21       of anchor botts of gräde 6.8 (IS 1367 P III). The pole shall be made of 5-355.0 grade steel sheet having single longitudinal seam weld and hot dipped galvanised internally & externally in accordance with IS 2629. The pole shall have a weatherproof flush door and locking arrangements. The complete work shall be supervised and certified by the manufacturers for satisfactory supply, erection, testing and commissioning (SET TABLE)         143       59.21.4       10 Mtr. Group 1       Each       224       19,600.00       43,90,400.0         59.22       Supply. Erection and Fixing of hot dipped galvanised Overhang (60 X 3.25 mm) with cap (250 x 137.9 x 4.05 mm) over the existing poles       Each       224       935.00       2,09,440.00         144       59.22.1       Single arm overhang group 1       Each       224       935.00       2,09,440.00         144       59.22.1       Single arm overhang group 1       Each       224       935.00       2,09,440.00         144       Single arm overhang proup 1       Each       224       935.00       2,09,440.00         144       Single arm overhang proup 1       Each       224       935.00       2,09,440.00         145       Single arm overhang proup 1       Each       224       935.00       2,09,440.00         145       Single arm overhang prove 1/2       Each       1/2       1/2       2/0         144 <td< td=""><td></td><td></td><td>with base plate on the cement concrete</td><td></td><td></td><td></td><td></td></td<>			with base plate on the cement concrete				
59.21       pole shall be made of S-355JO grade steel sheet, folded lengthwise to obtained Octagonal shape, having single longitudinal seam weld and hot dipped galvanised internally & externally in accordance with IS 2629. The pole shall have a weatherproof flush door and locking arrangements. The complete work shall be supervised and certified by the manufacturers for satisfactory supply, erection, testing and commissioning, (SEE TABLE)         143       59.21.4       10 Mtr. Group 1       Each       224       19,600.00       43,90,400.0         59.22.7       galvanised overhang (60 X 3.25 mm) with cap (250 x 137.9 x 4.05 mm) over the existing poles       Each       224       935.00       2,09,440.00         144       59.22.1       Single arm overhang group 1       Each       224       935.00       2,09,440.00         144       59.22.1       Single piece pressure die cast aluminum housing with heat dissipation fins on housing with heat dissipation files of protected driver shall be high efficiency having efficiency more than 85 % and in compliance to IEC standards. System life of 25000 burning hours with 70 % of initial lumens maintained. Fixture shall be in CE compliance.       216       43,000.00       92,88,000.0         145       59.34.1       IED street light fixture 110-120 watt group-1       Each       216       43,000.00       92,88,000.0         145       59.34.1.4       IED street light fixture 110-120 watt group-1       E			foundation of M-15 grade (1:1.5:3) with the help				
59.21       pole shall be made of S-355JO grade steel sheet, folded lengthwise to obtained Octagonal shape, having single longitudinal seam weld and hot dipped galvanised internally & externally in accordance with IS 2629. The pole shall have a weatherproof flush door and locking arrangements. The complete work shall be supervised and certified by the manufacturers for satisfactory supply, erection, testing and commissioning, (SEE TABLE)         143       59.21.4       10 Mtr. Group 1       Each       224       19,600.00       43,90,400.0         59.22.7       galvanised overhang (60 X 3.25 mm) with cap (250 x 137.9 x 4.05 mm) over the existing poles       Each       224       935.00       2,09,440.00         144       59.22.1       Single arm overhang group 1       Each       224       935.00       2,09,440.00         144       59.22.1       Single piece pressure die cast aluminum housing with heat dissipation fins on housing with heat dissipation files of protected driver shall be high efficiency having efficiency more than 85 % and in compliance to IEC standards. System life of 25000 burning hours with 70 % of initial lumens maintained. Fixture shall be in CE compliance.       216       43,000.00       92,88,000.0         145       59.34.1       IED street light fixture 110-120 watt group-1       Each       216       43,000.00       92,88,000.0         145       59.34.1.4       IED street light fixture 110-120 watt group-1       E			of anchor bolts of grade 6.8 (IS 1367 P III ). The				
59.21							
59.21       having single longitudinal seam wield and hot dipped galvanised internally & externally in accordance with IS 2629. The pole shall have a weatherproof flush door and locking arrangements. The complete work shall be supervised and certified by the manufacturers for satisfactory supply, erection, testing and commissioning (SEE TABLE)       Each       224       19,600.00       43,90,400.0         143       59.21.4       10 Mr. Group 1       Each       224       19,600.00       43,90,400.0         144       59.22.1       Single arm overhang group 1       Each       224       19,600.00       43,90,400.0         144       59.22.1       Single arm overhang group 1       Each       224       935.00       2,09,440.00         144       59.22.1       Single arm overhang group 1       Each       224       935.00       2,09,440.00         144       59.22.1       Single arm overhang group 1       Each       224       935.00       2,09,440.00         144       59.24.1       Night power LED. Integrated driver so existing bracket. Fixture made from powder coated single piece pressure dic cast aluminum housing with heat dissipation fins on housing with high power LED. Integrated driver shall be high efficiency having efficiency more than 85 % and in compliance to IEC standards. System life of 25000 burning house with 70 % of initial lumens maintained. Fixture shall be in CE compliance.       Each       216       43,000.00       92,88,000.0 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>							
dipped galvanised internally & externally in accordance with IS 2629. The pole shall have a weatherproof flush door and locking arrangements. The complete work shall be supervised and certified by the manufacturers for satisfactory supply, erection, testing and cormissioning, (SET TABLE)         143       59.21.4       10 Mtr. Group 1       Each       224       19,600.00       43,90,400.0         143       59.22.1       Supply, Erection and Fixing of hot dipped galvanised Overhang (60 X 3.25 mm) with cap (250 x 137.9 x 4.05 mm) over the existing poles       Each       224       935.00       2,09,440.00         144       59.22.1       Single arm overhang group 1       Each       224       935.00       2,09,440.00         144       59.22.1       Single arm overhang group 1       Each       224       935.00       2,09,440.00         144       59.24.1       North existing bracket. Fixture made from powder coated single piece pressure die cast aluminum housing with heat dissipation fins on housing with heat dissipation fins on housing with heat dissipation for lamp and control gear compartment, system lumen output of 1500—8500 high power LED. Integrated driver shall be high efficiency having efficiency more than 85 % and in compliance to IEC standards. System lumen output of 1500—8500 high power LED. Integrated driver shall be high efficiency having efficiency more than 85 % and in compliance to IEC standards. System lumen output of 1500—8500 high power LED. Integrated driver shall be in CE compliance.       216       43,000.00       92,88,000.0       90,88,000.0       92,88,000.0 <td></td> <td>59 21</td> <td></td> <td></td> <td></td> <td></td> <td></td>		59 21					
accordance with IS 2629. The pole shall have a weatherproof flush door and locking arrangements. The complete work shall be supervised and certified by the manufacturers for satisfactory supply, erection, testing and commissioning (SEE TABLE)         Each         224         19,600.00         43,90,400.0           143         59.21.4         10 Mtr. Group 1         Each         224         19,600.00         43,90,400.0           59.22         galvanised Overhang (60 X 3.25 mm) with cap (250 x 137.9 x 4.05 mm) over the existing poles         Each         224         935.00         2,09,440.00           144         59.22.1         Single arm overhang group 1         Each         224         935.00         2,09,440.00           144         59.22.1         Single arm overhang group 1         Each         224         935.00         2,09,440.00           144         59.22.1         Single arm overhang group 1         Each         224         935.00         2,09,440.00           145         59.34.1         IP-65 / IP-66 protected street light luminaries on existing bracket. Fixture made from powder coated single piece pressure die cast aluminum housing with heat dissipation for lamp and control gear compartment, system lume output of 1500-B500 high power LED. Integrated driver shall be high efficiency having efficiency more than 85 % and in compliance to IEC standards. System life of 25000 burning hours with 70 % of initial lumens maintained. Fixture shall be in CE compliance.         216         43,000.00							
weatherproof         flush         door         and         locking           arrangements. The complete work shall be supervised and certified by the manufacturers for satisfactory supply, erection, testing and commissioning (SEE TABLE)         Each         224         19,600.00         43,90,400.0           143         59.21         Supply. Erection and Fixing of hot dipped galvanised Overhang (60 X 3,25 mm) with cap (250 x 137.9 x 4.05 mm) over the existing poles         Each         224         935.00         2,09,440.00           144         59.22.1         Single arm overhang group 1         Each         224         935.00         2,09,440.00           144         59.22.1         Single arm overhang group 1         Each         224         935.00         2,09,440.00           144         59.23.4         Br/F IP-65 /IP-66 protected street light luminaries on existing bracket. Fixture made from powder coated single piece pressure die cast aluminum housing with heat dissipation fins on housing with high power LEDs of CREE/ NICHIA/ OSRAM PHILIPS make. Diffuser /glass cover for ensuring IP-65 protection for lamp and control gear compartment, system lumen output of 1500—8500 high power LED. Integrated driver shall be high efficiency having efficiency more than 85 % and in compliance to IEC standards. System life of 25000 burning hours with 70 % of initial lumens maintained. Fixture shall be in CE compliance.         216         43,000.00         92,88,000.0           145         59.34.1.4         LED street light fuxiner 10-120 watt group-I <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
arrangements. The complete work shall be supervised and certified by the manufacturers for satisfactory supply, erection, testing and commissioning (SEE TABLE)         Image: Complete work shall be commissioning (SEE TABLE)           143         59.21.4         10 Mtr. Group 1         Each         224         19,600.00         43,90,400.0           59.22         galvanised Overhang (60 X 3.25 mm) with cap (250 X 31.7 9 X 4.05 mm) over the existing poles         Each         224         935.00         2,09,440.00           144         59.22.1         Single arm overhang group 1         Each         224         935.00         2,09,440.00           144         59.22.1         Single arm overhang group 1         Each         224         935.00         2,09,440.00           144         59.22.1         Single arm overhang group 1         Each         224         935.00         2,09,440.00           144         59.23.4         P/F IP-65/ IP-66 protected street light luminaries on existing bracket. Fixture made from powder coated single piece pressure die cast aluminum housing with hat no compliance to IEC standards. System life of 25000 burning hours with 70 % of initial lumens maintained. Fixture shall be in CE compliance.         Supply and erection of P.C.C.R.C.C. pole as per REC manual no 15/1979 conforming to IS: 2905/1966 as per requirement of sec3 in alignment, including excavation of pit and back filling with stone aggregate/boulders and soli in 0.45m torsone aggregate/boulders and soli in 0.45m consolidating each deposited layer of 0.45m down							
supervised and certified by the manufacturers for satisfactory supply, erection, testing and commissioning. (SEE TABLE)         Each         224         19,600.00         43,90,400.0           143         59.21.4         10 Mr. Group 1         Each         224         19,600.00         43,90,400.0           59.22         galvanised Overhang (60 X 3.25 mm) with cap (250 x 137.9 x 4.05 mm) over the existing poles         Each         224         935.00         2,09,440.00           144         59.22.1         Single arm overhang group 1         Each         224         935.00         2,09,440.00           144         59.22.1         Single arm overhang group 1         Each         224         935.00         2,09,440.00           144         59.22.1         Single arm overhang group 1         Each         224         935.00         2,09,440.00           145         59.34.1         P/ F IP-65/ IP-66 protected street light luminaries on existing pole         Each         224         935.00         2,09,440.00           1500-mstring IP-65 protection for lamp and control gear compartment, system lumen output of 1500-mstraing the fifciency having efficiency more shall be high efficiency having efficiency more than 85 % and in compliance to IEC standards. System life of 25000 burning hours with 70 % of initial lumens maitained. Fixture shall be in CE compliance.         216         43,000.00         92,88,000.0           1			1 0				
satisfactory supply, erection, testing and commissioning.(SEE TABLE)       Each       224       19,600.00       43,90,400.0         143       59.21.4       10 Mtr. Group 1       Each       224       19,600.00       43,90,400.0         59.22       Supply, Erection and Fixing of hot dipped galvanised Overhang (60 X 3.25 mm) with cap (250 x 137.9 x 4.05 mm) over the existing poles       Each       224       935.00       2,09,440.00         144       59.22.1       Single arm overhang group 1       Each       224       935.00       2,09,440.00         144       59.22.1       Single arm overhang group 1       Each       224       935.00       2,09,440.00         144       59.22.1       Single arm overhang group 1       Each       224       935.00       2,09,440.00         144       59.24.1       Pre-65/ IP-65/ IP-66 protected street light luminaries on existing bracket. Fixture made from powder coated single piece pressure die cast aluminum housing with high power LEDs of CREE/ NICHIA/ OSRAM/ PHILIPS make. Diffuser (glass cover for ensuring IP-65 protected protected rot lamp and control gear compartment, system lumen output of 1500-8500 high power LED. Integrated driver shall be high efficiency having efficiency more than 85 % and in compliance to IEC standards. System life of 25000 burning hours with 70 % of initial lumens maintained. Fixture shall be in CE compliance.       216       43,000.00       92,88,000.0         145       59.34.1       IP-65 prot							
Image: commissioning.(SEE TABLE)         Each         224         19,600.00         43,90,400.0           143         59.21.4         10 Mtr. Group 1         Each         224         19,600.00         43,90,400.0           59.22         galvanised Overhang (60 X 3.25 mm) with cap (250 x 137.9 X 4.05 mm) over the existing poles         Each         224         935.00         2,09,440.00           144         59.22.1         Single arm overhang group 1         Each         224         935.00         2,09,440.00           144         59.22.1         Single arm overhang group 1         Each         224         935.00         2,09,440.00           144         59.22.1         Single arm overhang group 1         Each         224         935.00         2,09,440.00           144         59.24.1         P/ F IP-65/ IP-66 protected street light luminaries on existing power LEDs of CREE/ NICHIA/ OSRAM/ PHILIPS make. Diffuser /glass cover for ensuring IP-65 protection for lamp and control gear compartment, system lumen output of 1500—8500 high power LED. Integrated driver shall be high efficiency more than 85 % and in compliance to IEC standards. System life of 25000 burning hours with 70 % of initial lumens maintained. Fixture shall be in CE         43,000.00         92,88,000.0           145         59.34.1         IP-65 protected LED street light luminaries sopoly and eraction of P.C.C.R.C.C. pole as per REC manual no 15/1979 conforming to IS: 2905/1966 as per requirement of							
143       59.21.4       10 Mtr. Group 1       Each       224       19,600.00       43,90,400.0         Supply, Erection and Fixing of hot dipped galvanised Overhang (60 X 3.25 mm) with cap (250 x 137.9 x 4.05 mm) over the existing poles       224       935.00       2,09,440.00         144       59.22.1       Single arm overhang group 1       Each       224       935.00       2,09,440.00         144       59.22.1       Single arm overhang group 1       Each       224       935.00       2,09,440.00         144       59.22.1       Single arm overhang group 1       Each       224       935.00       2,09,440.00         144       59.22.1       Single arm overhang group 1       Each       224       935.00       2,09,440.00         144       59.22.1       Single arm overhang group 1       Each       224       935.00       2,09,440.00         145       59.34       IP F IP-65/ IP-66 protected street light luminaries       Each       216       43,000.00       92,88,000.0         59.34.1       IP-65 protected LED street light luminaries       Each       216       43,000.00       92,88,000.0         145       59.34.1       IE-65 protected LED street light luminaries       Each       216       43,000.00       92,88,000.0       90,010.00       92,88,000.							
Supply, Erection and Fixing of hot dipped galvanised Overhang (60 X 3.25 mm) with cap (250 x 137.9 x 4.05 mm) over the existing poles           144         59.221         Single arm overhang group 1         Each         224         935.00         2,09,440.00           144         59.22.1         Single arm overhang group 1         Each         224         935.00         2,09,440.00           144         59.22.1         Single arm overhang group 1         Each         224         935.00         2,09,440.00           144         59.22.1         Single arm overhang group 1         Each         224         935.00         2,09,440.00           144         59.22.1         Single arm overhang group 1         Each         224         935.00         2,09,440.00           145         59.34.1         Ipe Sprotected Street light luminaries         1	1/2	50 21 4		Each	224	10,600,00	42 00 400 0
59.22       galvanised Overhang (60 X 3.25 mm) with cap (250 x 137.9 x 4.05 mm) over the existing poles       Image: Constraint of the existing poles         144       59.22.1       Single arm overhang group 1       Each       224       935.00       2,09,440.00         144       59.22.1       Single arm overhang group 1       Each       224       935.00       2,09,440.00         144       59.22.1       Single arm overhang group 1       Each       224       935.00       2,09,440.00         144       59.21.1       P/ F IP-65/ IP-66 protected street light luminaries on existing bracket. Fixture made from powder coated single piece pressure die cast aluminum housing with heat dissipation fins on housing with high power LEDs of CREE/ NICHIA/ OSRAM/ PHILIPS make. Diffuser /glass cover for ensuring IP-65 protection for lamp and control gear compartment, system lumen output of 1500—8500 high power LED. Integrated driver shall be high efficiency having efficiency more than 85 % and in compliance to IEC standards. System life of 25000 burning hours with 70 % of initial lumens maintained. Fixture shall be in CE compliance.       216       43,000.00       92,88,000.0         145       59.34.1       IP-65 protected LED street light luminaries per REC manual no 15/1979 conforming to IS. 2905/1966 as per requirement of sec3 in alignment, including excavation of pit and back filling with stone aggregate/boulders and soil in 0.45m by ramming and watering etc complete in all respect       50       3,220.00       1,61,000.00         146       60.3.2       9.0 Mt l	143	59.21.4		Each	224	19,000.00	43,90,400.0
144       59.22.1       Single arm overhang group 1       Each       224       935.00       2,09,440.00         144       59.22.1       P/ F IP-65/IP-66 protected street light luminaries on existing bracket. Fixture made from powder coated single piece pressure die cast aluminum housing with heat dissipation fins on housing with high power LEDs of CREE/ NICHIA/ OSRAM/ PHILIPS make. Diffuser /glass cover for ensuring IP-65 protection for lamp and control gear compartment, system lumen output of 1500—8500 high power LED. Integrated driver shall be high efficiency having efficiency more than 85 % and in compliance to IEC standards. System life of 25000 burning hours with 70 % of initial lumens maintained. Fixture shall be in CE compliance.       216       43,000.00       92,88,000.0         145       59.34.1       IP-65 protected LED street light luminaries per REC manual no 15/1979 conforming to IS: 2905/1966 as per requirement of sec3 in alignment, including excavation of pit and back filling with stone aggregate/boulders and soli in 0.45m consolidating each deposited layer of 0.45m by ramming and watering etc complete in all respect       50       3,220.00       1,61,000.00         146       60.3.2       9.0 Mtr long as per Discom specification specification complete with long stay rod with and G.I stay wire tightened through strain insulator, in cement concrete 1:3:6 including excavation of pit-er-filling etc as reqd.       50       3,220.00       1,61,000.00		59 22					
144       59.22.1       Single arm overhang group 1       Each       224       935.00       2,09,440.00         144       59.22.1       Single arm overhang group 1       Fach       224       935.00       2,09,440.00         144       59.22.1       Single arm overhang group 1       Each       224       935.00       2,09,440.00         144       59.24.1       Pi Fi P-66 protected street light luminaries on existing bracket. Fixture made from powder coated single piece pressure die cast aluminum housing with heat dissipation fins on housing with high power LEDs of CREE/ NICHIA/ OSRAM/ PHILPS make. Diffuser /glass cover for ensuring IP-65 protection for lamp and control gear compartment, system lumen output of 1500—8500 high power LED. Integrated driver shall be high efficiency having efficiency more than 85 % and in compliance to IEC standards. System life of 25000 burning hours with 70 % of initial lumens maintained. Fixture shall be in CE compliance.       9145       59.34.1       IP-66 protected LED street light luminaries         145       59.34.1       LED street light fixture 110-120 watt group-I       Each       216       43,000.00       92,88,000.0         145       59.34.1       LED street light fixture 110-120 watt group-I       Each       216       43,000.00       92,88,000.0         145       59.34.1       LED street light fixture 110-120 watt group-I       Each       216       43,000.00       92,88,000.0         146 <td< td=""><td></td><td>55.22</td><td></td><td></td><td></td><td></td><td></td></td<>		55.22					
99.34       P/ F IP-65/ IP-66 protected street light luminaries on existing bracket. Fixture made from powder coated single piece pressure die cast aluminum housing with heat dissipation fins on housing with high power LEDs of CREE/ NICHIA/ OSRAM/ PHILIPS make. Diffuser /glass cover for ensuring IP-65 protection for lamp and control gear compartment, system lumen output of 1500—8500 high power LED. Integrated driver shall be high efficiency having efficiency more than 85 % and in compliance to IEC standards. System life of 25000 burning hours with 70 % of initial lumens maintained. Fixture shall be in CE compliance.         59.34.1       IP-65 protected LED street light luminaries         145       59.34.1.4       LED street light fixture 110-120 watt group-I Supply and erection of P.C.C./R.C.C. pole as per REC manual no 15/1979 conforming to IS: 2905/1966 as per requirement of sec3 in alignment, including excavation of pit and back filling with stone aggregate/boulders and soil in 0.45m consolidating each deposited layer of 0.45m by ramming and watering etc complete in all respect       50       3,220.00       1,61,000.00         146       60.4       Supply and eraction of GI stay set as per Discom specification complete with long stay rod with anchor plate including stay clamps turn buckle and G.I stay wire tightened through strain insulator, in cement concrete 1:3:6 including excavation of pit-re-filling etc as reqd.       50       3,220.00       1,61,000.00         147       60.42       Stay set of dia 16mm,1.8m long stay rod and       Each       50       3,220.00       1,61,000.00	1//	50 22 1		Each	224	035.00	2 00 440 00
99.34       on existing bracket. Fixture made from powder coated single piece pressure die cast aluminum housing with heat dissipation fins on housing with high power LEDs of CREE/ NICHIA/ OSRAM/ PHILIPS make. Diffuser /glass cover for ensuring IP-65 protection for lamp and control gear compartment, system lumen output of 1500—8500 high power LED. Integrated driver shall be high efficiency having efficiency more than 85 % and in compliance to IEC standards. System life of 25000 burning hours with 70 % of initial lumens maintained. Fixture shall be in CE compliance.       99.34.1       IP-65 protected LED street light luminaries         145       59.34.1       IP-65 protected LED street light luminaries       90.3       92,88,000.0         60.3       Supply and erection of P.C.C./R.C.C. pole as per REC manual no 15/1979 conforming to IS: 2905/1966 as per requirement of sec3 in alignment, including excavation of pit and back filling with store aggregate/boulders and soli in 0.45m consolidating each deposited layer of 0.45m by ramming and watering etc complete in all respect       50.3,220.00       1,61,000.00         146       60.4       Supply and eraction of GI stay set as per Discom specification       Each       50       3,220.00       1,61,000.00         146       60.4       Anchor plate including stay camps turn buckle and GJ. stay wire tightened through strain insultary, in cement concrete 1:3:6 including excavation of pit re-filling etc as reqd.       50       3,220.00       1,61,000.00         147       60.42       Stay set of dia 16mm, 1.8m long stay rod and exavation of pit and back fillin throusing stay rod and exavation of pit and back fil	144	59.22.1	5 5 5 1	Eaun	224	933.00	2,09,440.00
59.34coated single piece pressure die cast aluminum housing with heat dissipation fins on housing with high power LEDs of CREE/ NICHIA/ OSRAM/ PHILIPS make. Diffuser /glass cover for ensuring IP-65 protection for lamp and control gear compartment, system lumen output of 1500—8500 high power LED. Integrated driver shall be high efficiency having efficiency more than 85 % and in compliance to IEC standards. System life of 25000 burning hours with 70 % of initial lumens maintained. Fixture shall be in CE compliance.114559.34.1IP-65 protected LED street light luminaries214559.34.14LED street light fixture 110-120 watt group-1Each14559.34.14LED street light fixture 110-120 watt group-1Each14560.3Supply and erection of P.C.C./R.C.C. pole as per REC manual no 15/1979 conforming to IS: 2905/1966 as per requirement of sec3 in all gigment, including excavation of pit and back filling with stone aggregate/boulders and soil in 0.45m to yramming and watering etc complete in all respect503,220.0014660.329.0 Mtr long as per Discom specification specification of GI stay set as per Discom specification of GI stay set as per Discom specification of pit and back filling with stone aggregate/boulders and soil in o.45m by ramming and watering etc and pit and stay set as per Discom specification of GI stay set as per Discom specification complete with long stay rod with anchor plate including stay clamps turn buckle and G.I stay wire tightened through strain insulator, in cement concrete 1:3:6 including excavation of pit-re-filling etc as reqd.26785 0028.260.00							
59.34housing with heat dissipation fins on housing with high power LEDs of CREE/ NICHIA/ OSRAW/ PHILIPS make. Diffuser /glass cover for ensuring IP-65 protection for lamp and control gear compartment, system lumen output of 1500—8500 high power LED. Integrated driver shall be high efficiency having efficiency more than 85 % and in compliance to IEC standards. System life of 25000 burning hours with 70 % of initial lumens maintained. Fixture shall be in CE compliance.414559.34.1IP-65 protected LED street light luminaries414559.34.1.4LED street light fixture 110-120 watt group-I supply and erection of P.C.C./R.C.C. pole as per REC manual no 15/1979 conforming to IS: 2905/1966 as per requirement of sec3 in alignment, including excavation of pit and back filling with stone aggregate/boulders and soil in 0.45m by ramming and watering etc complete in all respect503,220.0014660.329.0 Mtr long as per Discom specification specification complete with long stay rod with and C.I stay wire tightened through strain insulator, in cement concrete 1:3:6 including excavation of pit-re-filling etc as reqd.503,220.001,61,000.0014760.42Stay set of dia 16mm,1.8m long stay rod and excavation of pit-re-filling et as reqd.Each26785.0028,260.00							
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59.34OSRAM PHILIPS make. Diffuser /glass cover for ensuring IP-65 protection for lamp and control gear compartment, system lumen output of 1500—8500 high power LED. Integrated driver shall be high efficiency having efficiency more than 85 % and in compliance to IEC standards. System life of 25000 burning hours with 70 % of initial lumens maintained. Fixture shall be in CE compliance.Image: Compliance to IEC standards. System life of 25000 burning hours with 70 % of initial lumens maintained. Fixture shall be in CE compliance.Image: Compliance to IEC standards. System life of 25000 burning hours with 70 % of initial lumens maintained. Fixture shall be in CE compliance.Image: Compliance to IEC standards. System life of 25000 burning hours with 70 % of initial lumens maintained. Fixture shall be in CE compliance.Image: Compliance to IEC standards. System life of 25000 burning hours with 70 % of to % of supply and erection of P1.CC./R.C.C. pole as per REC manual no 15/1979 conforming to IS: 2905/1966 as per requirement of sec3 in alignment, including excavation of pit and back filling with stone aggregate/boulders and soil in 0.45m by ramming and watering etc complete in all respectImage: Complete in alignment, including each deposited layer of 0.45m by ramming and watering etc complete in all respectImage: Complete in alignment, including stay clamps turn buckle and G.I stay wire tightened through strain insulator, in cement concrete 1:3:6 including excavation of pit-re-filling etc as reqd.Image: Complete in alignment, issued of pit-re-filling etc as reqd.Image: Complete in alignment, issued or pit-re-filling etc as reqd.Image: Complete in alignment, issued or pit-re-filling etc as reqd.Image: Complete in alignment, issued or pit-re-filling etc as reqd. <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
59.34       for ensuring IP-65 protection for lamp and control gear compartment, system lumen output of 1500—8500 high power LED. Integrated driver shall be high efficiency having efficiency more than 85 % and in compliance to IEC standards. System life of 25000 burning hours with 70 % of initial lumens maintained. Fixture shall be in CE compliance.       Image: Complet in the initial lumens maintained. Fixture shall be in CE compliance.         59.34.1       IP-65 protected LED street light luminaries       Image: Complet in the initial lumens maintained. Fixture shall be in CE compliance.       Image: Complet in the initial lumens maintained. Fixture shall be in CE complete.         145       59.34.1       IED street light fixture 110-120 watt group-I       Each       216       43,000.00       92,88,000.0         145       59.34.1.4       LED street light fixture 110-120 watt group-I       Each       216       43,000.00       92,88,000.0         145       59.34.1.4       LED street light fixture 110-120 watt group-I       Each       216       43,000.00       92,88,000.0         145       59.34.1.4       LED street light fixture 110-120 watt group-I       Each       216       43,000.00       92,88,000.0         146       60.3       alignment, including excavation of pit and back filling with stone aggregate/boulders and soil in 0.45m by ramming and watering etc complete in all respect       50       3,220.00       1,61,000.00         146       60.4       Supply and eraction of GI sta							
59.34       gear compartment, system lumen output of 1500—8500 high power LED. Integrated driver shall be high efficiency having efficiency more than 85 % and in compliance to IEC standards. System life of 25000 burning hours with 70 % of initial lumens maintained. Fixture shall be in CE compliance.							
gear compartment, system lumen output of 1500—8500 high power LED. Integrated driver shall be high efficiency having efficiency more than 85 % and in compliance to IEC standards. System life of 25000 burning hours with 70 % of initial lumens maintained. Fixture shall be in CE compliance.         59.34.1       IP-65 protected LED street light luminaries         145       59.34.14       LED street light fixture 110-120 watt group-I       Each       216       43,000.00       92,88,000.0         145       59.34.14       LED street light fixture 110-120 watt group-I       Each       216       43,000.00       92,88,000.0         145       59.34.14       LED street light fixture 110-120 watt group-I       Each       216       43,000.00       92,88,000.0         145       59.34.14       LED street light fixture 110-120 watt group-I       Each       216       43,000.00       92,88,000.0         145       59.34.14       LED street light fixture 110-120 watt group-I       Each       216       43,000.00       92,88,000.0         60.3       alignment, including excavation of pl.C.C./R.C.C. pole as per REC manual no 15/1979 conforming to IS: 2905/1966 as per requirement of sec3 in alignment, including excavation of pit and back filling with stone aggregate/boulders and soil in 0.45m consolidating each deposited layer of 0.45m by ramming and watering etc complete in all respect       3,220.00       1,61,000.00         146       60.3.2       9.0 Mtr long as per Discom specif		59.34	<b>a</b> 1				
shall be high efficiency having efficiency more than 85 % and in compliance to IEC standards. System life of 25000 burning hours with 70 % of initial lumens maintained. Fixture shall be in CE compliance.Image: Compliance of Complete the compliance of Complete the compliance.14559.34.1IP-65 protected LED street light luminariesImage: Compliance of P.C.C./R.C.C. pole as per REC manual no 15/1979 conforming to IS: 2905/1966 as per requirement of sec3 in alignment, including excavation of pit and back filling with stone aggregate/boulders and soil in 0.45m consolidating each deposited layer of 0.45m by ramming and watering etc complete in all respectSupply and eraction of GI stay set as per Discom specification complete with long stay rod with anchor plate including stay clamps turn buckle and G.I stay wire tightened through strain insulator, in cement concrete 1:3:6 including excavation of pit-ire-filling etc as reqd.Supply and eraction of Stay set as reqd.Supply and eraction of Stay set as reqd.14760.42Stay set of dia 16mm, 1.8m long stay rod andSupply and eraction of Stay set as reqd.Supply and eraction of Stay set as reqd.Supply and eraction of Stay set as reqd.							
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System life of 25000 burning hours with 70 % of initial lumens maintained. Fixture shall be in CE compliance.Image: Compliance initial lumens maintained. Fixture shall be in CE compliance.14559.34.1IP-65 protected LED street light luminariesImage: Compliance initial lumens maintained. Fixture shall be in CE compliance.Image: Compliance initial lumens maintained. Fixture shall be in CE compliance.Image: Compliance initial lumens maintained. Fixture shall be in CE compliance.14559.34.14LED street light fixture 110-120 watt group-IEach21643,000.0092,88,000.0145Supply and erection of P.C.C./R.C.C. pole as per REC manual no 15/1979 conforming to IS: 2905/1966 as per requirement of sec3 in alignment, including excavation of pit and back filling with stone aggregate/boulders and soil in 0.45m consolidating each deposited layer of 0.45m by ramming and watering etc complete in all respectImage: Complete in all respect14660.3.29.0 Mtr long as per Discom specificationEach503,220.001,61,000.0014660.4Supply and eraction of GI stay set as per Discom specification complete with long stay rod with anchor plate including stay clamps turn buckle and G.I stay wire tightened through strain insulator, in cement concrete 1:3:6 including excavation of pit-re-filling etc as reqd.Image: Complete in all respecImage: Complete in all respec14760.4.2Stay set of dia 16mm, 1.8m long stay rod andEach26785.0028.260.00							
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60.4       anchor plate including stay clamps turn buckle and G.I stay wire tightened through strain insulator, in cement concrete 1:3:6 including excavation of pit-re-filling etc as reqd.         147       60.4.2         Stay set of dia 16mm,1.8m long stay rod and							
60.4       and G.I stay wire tightened through strain insulator, in cement concrete 1:3:6 including excavation of pit-re-filling etc as reqd.       13:6       147       60.4.2       Stay set of dia 16mm,1.8m long stay rod and       Each       26       785.00       28.260.00							
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anchor plate 300x300x6.4mm	147	60 4 2		Fach	36	785.00	28 260 00
	171	00.7.2	anchor plate 300x300x6.4mm	Laon	50	100.00	20,200.00

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	60.9	Supplying and drawing overhead steel core Aluminium conductor (ACSR) ISI marked(IS 398 part II-1996) on existing cross arms through insulator with all necessary T&P required including binding and twisting etc. complete in all respect as required as per Discom specification.				
148	60.9.5	100 sqmm of (6/4.72 mm+1/1.57 mm) (Dog)	Mtr	150	89.00	13,350.00
	60.18	Supply and fixing 11kV Disc insulator (IS 731/ 1971) with minimum creepage distance of 300mm on existing bracket including all accessories like hot dipped GI spindle and nuts etc (as per specification Discom).				
149	60.18.1	B & S type hardware & insulator	Each	20	965.00	19,300.00
150	60.18.2	T & C type hardware & insulator	Each	104	650.00	67,600.00
151	60.20	Supplying and laying earth conductor from electrode to source in ground/ floor/ wall on iron saddles etc as required including making connection duly soldered or crimped 7/3.15 mm hot dipped stay wire.	Mtr	720	20.00	14,400.00
152	60.22	Supply and fixing of piller box made of 2mm CRCA MS sheet of 415 volts 3 phase 4 wire triple pole and neutral type, complete in all respect as required. Including knife switch, HRC fuses with copper one piece U contacts base, brass studs and nuts, copper busbar for main and interconnection, MS angle frame of 50 x 50 x 6 mm grouted with C.C. of M-10 grade to achieve the height of 1.5 feet above the road level suitable for four outgoing.(400Amp apacity)	Each	4	42,500.00	1,70,000.00
153	60.23	Supply and fixing 100 Amp, 11kV Horn gap fuse set IS 9385 on existing DP structure with 6 nos 24kV/22kV post insulator (IS:5350 part III), hot dipped hard ware,fuse wire of required size etc. complete in all respect as per specification given by Discom. (Type tested by ERDA/CPRI)	Each	6	6,050.00	36,300.00
154	60.24	Supply and fixing of 11kV, 400 Amp 3pole, central pot rotating double break type isolator (IS:9921 part I toV) without earth blade operating mechanism with GI spring loaded reverse loop type fixed contact, solid hard drawn electolytic copper tubular moving contact with silver/ nickel plated at end points, 9 nos post insulator of 12 kV (IS:2554 & IS 5350 part III), hot dipped galvanising hard ware, nut, bolts etc complete in all respect as per specification of Discom.(Type tested by ERDA/CPRI.)	Each	6	13,200.00	79,200.00
155	60.25	Supply and fixing of distribution type Lightening arrestor 9 kV, 5 kA (IS:3070) with mounting breaking to be installed on existing DP structure. (Type tested by ERDA/CPRI.)	Each	18	2,390.00	43,020.00
156	60.26	Supply and fixing double pole structure for 11/0.4 Kv substation as per Discom specification complete in all respect as required including nuts and bolts etc (excluding the cost of poles) made of MS channel of 4 nos 100 x 50 x 6mm and 4 nos 75 x 40 x 6mm and MS flat 50 x 6mm as per	Each	8	8,570.00	68,560.00

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		Discom specifications.				
		P&F of thermoplastic/ PVC cable junction boxes				
		(United/ HPL make) of following sizes including clamps for holding the box, cost of DIN rail for				
	60.31	MCB mounting, connectors for cables terminals,				
		threaded cable glands made of polyamide				
		material etc. complete in all respect.				
		supply and installation of spike of M.S rod 20mm				
		dia 3.0 mrt long for earthing of (tower/pole) drive				
157	60.31.5	into earth by mechnical means structure connecting the spike with cross arm top hamper	Each	20	650.00	13,000.00
		PCC pole, lattics tower toearth etc. complate as				
		per techinal specification of DISCOM.				
		Dismantling of existing LT/HTelectric lines				
		including poles/towers, ACSR conductors, guard				
		wires, stay wire, insulators and other electrical				
	71.1	items of the pole coming along the alignment of the road or in the plant premises and removal				
		and transportation as well as disposal of all the				
		items as per the direction of engineer incharge.				
		(Serviceable material or can-dum material.)				
		Dismantling of 33KV Lattice Tower (580				
158	71.1.1	kg/520kg) with all accessories brackets,	Each	2	3,000.00	6,000.00
		tophamper, chakri, V-Cross arms guard bracket, stay, insulators (pin /disc) etc.				
		Dismantling of LT line /joist/rail pole (PCC 8/9				
		mtr height) with existing street light fixtures,				
159	71.1.6	brackets, top hamper, earth guarding bracket,	Each	150	1,200.00	1,80,000.00
100	71110	insulators, stay etc with ACSR conductor, 3	Laon	100	1,200.00	1,00,000.00
		phase/ single phase, one neutral one earthwire and one street light phase )				
		Dismantling and rerolling of 11KV conductor any				
160	71.1.9	type	Rmt	4,100	8.00	32,800.00
161	71.1.13	Dismantling and reinstallation of 11KV Feeder	Each	12	2 000 00	26,000,00
101	11.1.13	pillar box any type	Each	12	3,000.00	36,000.00
		Fabrication supply and erection of new 11 KV				
		line poles structures with all necessary required				
	71.2	items for stringing the ACSR conductors insulators, V - cross arms, chakri, top hamper,				
	11.2	brackets, stay and other items including				
		reconnection of existing service lines of service				
		connections.				
162	71.2.2	11 KV pole 10 mtr height. (single phase/3 phase)	Each	16	10,000.00	1,60,000.00
.02	11.6.6	R.S joist	Luon		10,000.00	1,00,000.00
		MAIN CUBICAL PANEL / STREET LIGHT				
		CONTROL PANEL P/F testing & commissioning of kiosk type weather proof out door main cubical				
		panel size 750 mm X 1250 mm X 500 mm (app.)				
163	71.4	made out of 14 gauge MS sheet front and back	Each	10	55,000.00	5,50,000.00
		both side openable duely hinged door with			,	, ,
		locking arrangement by providing both side held				
		draft and all required hard wares. The cubical				
		should be dust and vermin proof followed by coat				

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		of zimpholite primer and finally two coats of				
		enamal gray paint. The cubical should be				
		mounted with hard ware on angle iron frame size				
		50 X 50 X 6 mm and 1500 legs duly painted				
		framed be grouted 750 mm below ground level				
		with cement concrete 1:3:6 in 1000 X 500 X 600				
		mm and providing brick masonary along angle iron frame above G.L. They shall be in two				
		section comprising as follows:				
		(i) Providing & Fixing 415 V ,TP combination				
		double break HRC switch fuse unit ,100 Amp.				
		Rating for incoming supply with HRC fuse 100				
		Amp rating and BCH/L&T/EE/ Siemens/ ABB .				
		(ii) Providing fixing timer switch TSQ 100 series				
		240 Volts, and full running service standered				
		mounting with base of L & T or equivalent make				
		including the cost of contactor and 63 amp. 50				
		Hz. 440/400volt.				
		(iii) P/F open busbars 25mmX3mm of required				
		length duly covered by heat shrinkable sleeves				
		with busbar supporters				
		(iv) Provision for residual current operated 63				
		Amp. 1 Pole ELCB of MA to 300 MA sensitevely				
		as required including making connections etc.(EE/Load stop make)				
		(v) P/F Nos. 415 Volts Tpn combination double				
		break switch fuse unit,63 Amp. Rating with HRC				
		fuses (EE/mds/ SCHNEIDER bch/Siemens )for				
		outgoing cable and making connection etc. also				
		to have a provision for two nos. above switchs.				
		(vi) P/F of 3 nos. RYB phase indicator resitance				
		type complete with lamp (Takaic/ac.). P/F HP				
		danger plate of size 200 X 150 mm made of				
		aluminium sheet 20 gauge.				
		(vii) P/F cable glands double compression type				
		and Al. lugs duly crimped for incoming cable and				
		out going up to 5mm Cables.				
		(viii) Providing 2 Nos. earth terminals including				
		lugs and H/W duly inter connected with 8 SWG				
		bars copper wire . (ix)Inter connection of main busbar to each out				+
		going switch and swathes to cable terminal shall				
		be with 4 sqmm PVC copper conductor duly				
		crimped with AL lugs.				
		(x) Cable termination shall be fixed at backside				
		of the panel with H/W and spring washers				
		(xi) Light control switch with photo senser				
		complete unit as required				
164	71.8	Providing cut point for LT line	Each	102	800.00	81,600.00
165	71.9	Providing cut point for 11 KV line	Each	26	1,600.00	41,600.00
		Providing of LT distribution pillar box, LT dis				
		connector with 400amp I/C and 200 amp 3Nos				
166	71.12	O/G with abonite 8mm sheet, size 100mm x	Each	52	8,000.00	4,16,000.00
		500mmx 700mm with top tampered for				
407	74 4 4	distribution transformer		000	700.00	2 40 000 00
167	71.14	Providing & Laying GI pipe 125mm dia B- Class	mtr.	396	798.00	3,16,008.00

168	71.15	AII/EN/WC/ROBS/4(2015-16) Providing & Laying GI pipe 150mm dia B- Class	mtr.	1,068	1,050.00	11,21,400.0
	72.1	Dismantling and re - erection of P.C.C./R.C.C. pole as per REC manual no 15/1979 conforming to IS: 2905/1966 as per requirement of sec3 in alignment, including excavation of pit and back filling with stone aggregate/boulders and soil in 0.45m consolidating each deposited layer of 0.45m by ramming and watering etc complete in all respect				
169	72.1.2	9.0 Mtr long as per Discom specification	Each	12	813.00	9,756.00
	72.16	Dismantling and re-fixing11kV Disc insulator (IS 731/1971) with minimum creepage distance of 300mm on existing bracket including all accessories like hot dipped GI spindle and nuts etc (as per specification of Discom).				
170	72.16.1	B & S type insulator with hardware	Each	72	300.00	21,600.00
171	72.16.2	T & C type insulator with hardware	Each	144	165.00	23,760.00
		Machinary				
172	0168	Providing and supply of computer operator	per month	20	6,000.00	1,20,000.00
		LABOUR				
173	0218	Skilled Beldar	Man day	500	350.00	1,75,000.00
174	0740	GI pipe 150 mm dia "B" class.	metre	100	1,185.00	1,18,500.00
175	1863	125 mm dia U-PVC pipes with rubber ring (working pressure 6 kg /cm^2)	metre	20	291.00	5,820.00
176	2307	200 mm dia HDPE pipe PE-100 for potable water as per IS 4984	metre	990	841.00	8,32,590.00
177	2801	Stone Aggregate (Single size) : 06 mm nominal size	Cum	10	600.00	6,000.00
178	2804	Stone Aggregate (Single size) : 20 mm nominal size	Cum	10	770.00	7,700.00
179	2806	Stone Aggregate (Single size) : 40 mm nominal size	Cum	10	650.00	6,500.00
180	4101	Horizontal directional drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pulling 200 mm dia (ID) HDPE pipe including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pi	metre	990	545.00	5,39,550.00
181	RUIDP SOR 2013	Execution of items not covered in any of the schedule under tender BOQ but essentially required to complete the contractual scope of work to Complete ROB & Approaches in all respect to be executed as per site requirement and payable as per RUIDP SOR 2013 items (Civil Works)	SOR Unit	2	2750000	5500000
	TOTAL OF SCHEDULE "A"					32,135.00

	SCHED	ULE-B: (NS Items)			1		
1	NS/1- LHS	Casting, transporting and launching of precast reinforced concrete slabs in M-25 design mix for RCC boxes including launching during traffic block or without traffic block etc. as per approved drawings & design with contractor's own materials such as cement, sand, water, 6mm to 20mm well graded machine crushed stone aggregate, admixtures etc. including machine mixing of all gradients, placing, mechanical vibrating, curing etc. and providing shuttering, centering, formwork and handling, transporting to bridge sites including loading & unloading and launching including supplying, laying and levelling of required layer of sand underneath RCC slab as per approved drawing with contractor's own labour and equipments, all lead, lift, royalties, taxes etc. complete in all respect <b>except cost of reinforcement which will be</b> <b>paid separately under relevant SOR items.</b>	Cum	19	6,722.88	1,27,734.72	
2	NS/2- LHS	Casting and transporting precast reinforced cement concrete boxes and U-Type/L-Type retaining wall segments in M35 design mix near LHS site with machine batched, machine mixed and machine vibrated design mix concrete, including the cost of cement, centering, shuttering, finishing, admixture, if required, as per IS: 9103 to retard setting of concrete/improve workability without impairing strength and durability as per direction of Engineer-in-charge. Only machine mixed and automatic weigh batched concrete/ concrete produced by Fiori shall be used during entire work. The concrete shall be placed with the help of mechanical means only. Rates are inclusive of all the materials, labour, transporting to bridge sites including loading & unloading with contractor's own labour and equipments . curing, machinery, tools, plants, taxes etc. complete in all respect except cost of reinforcement which will be paid separately under relevant SOR items.	Cum	108	8,556.25	9,24,075.00	
	NS/3- LHS	Placement of precast reinforced cement concrete components (RCC box/U-Type/L-Type segments of retaining walls) with the help of suitable capacity road crane at desired location during traffic block of short duration with all contactor's labour, tools, material, cranes, machinery, preparation of surface including cost of filling of joints by epoxy mortar, cutting of lifting hooks by gas cutting, all lead, lift, taxes etc complete in all respect.					
3	(a)	Requiring traffic block	MT	191	3,730.00	7,12,430.00	
4	(b)	Not requiring traffic block	MT	127	1,933.00	2,45,491.00	

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5	NS/4- LHS	Insertion and taking out of temporary service girder of required length as per need of site below track in short duration traffic block as per Railway approved drawing to provide temporary arrangement for casting of box/excavation of hard/rocky strata to make space for launching of RCC Box/for launching of RCC components in subsequent blocks, including making and laying sleeper cribs, bearing plate, dismantling & laying of track, cutting/filling of earth etc. as per standard drg. to make track fit for 20 Kmph speed, with contractors own labour, crane, tools and plants etc. Nothing extra will be paid to the contractor except the accepted rate, whatsoever.	Per Job	2	1,04,200.00	2,08,400.00
6	NS/5- LHS	Removing of existing any type of track for insertion of RCC boxes, laying, linking & lifting of any type of track on newly laid RCC box on either side of LHS including cutting of rails, drilling of holes, subsequent through packing to make track fit for 75Kmph & de-stressing of LWR/CWR of any type of track and picking up of stone ballast (new or retrieved) including loading & leading of ballast from stacks.	Per Job	2	73,900.00	1,47,800.00
		Various activities involved in this work along with their tentative scope are: (i) Removing of existing track - 39.0mtr (ii) Removing ballast from track & keeping it away from site of work. (iii) After insertion of RCC boxes, putting back existing ballast at (ii) above and supplying& putting in track additional quantity of ballast so as to provide minimum ballast cushion of 300mm to 350mm in compacted condition. (iv) Re-laying & linking of track - 39.0mtr (v) Lifting of track in stages of 50/75mm for required length to ensure ballast cushion of 300mm to 350mm as per site conditions minimum ballast supply 50.0cum on each LHS. (vi) Cutting of any type of rails – 4 to 8 nos. (vii) Drilling of 31.75mm/26.5mm or similar dia holes in rails of any section- 16 nos (viii) Subsequent through packings to make track fit for 75Kmph-50.0mtr either side of LHS (ix) Local de-stressing of LWR/CWR 100.0m on either side of LHS. (x) AT welding of rail joints on any type of rail on single rail/SWP/LWR with Railway prefabricated moulds and railway portions as per IRS specifications T-19-2012 ( amended up to date) Qty. and scope of work shown above at S.No. (i) to (x) are tentative only. The scope of these items may vary as per site conditions & as per direction of Engineer-in-charge for completing the work of LHS safely and successfully. The quoted rates are for complete job. Nothing extra shall be paid on any account.				

10		AII/EN/WC/ROBS/4(2015-16)		-	1	
7	NS/6- LHS	Laying of new BG/MG track at level crossings as per RDSO approved drawing with Railway's New/SH rails for check rails and special sleepers laid truly square at required spacing over the compacted ballast bed with contractor's own labour and T & P. The rates include fabrication of check rails as per standard drawing, fixing them on the special sleepers with the help of MS brackets, bolts, washers, plate screws etc; applying two coats of anti corrosive paint of approved quality on running as well as check rails, marking sleeper spacing, cleaning and greasing of the MCI insert and ERCs as per Para1411 (5) of IRPWM (second reprint 2004 corrected up to date), raising of track in stages	Each LC	2	5,247.00	10,494.00
		by not more than 75mm at a time to achieve clean ballast cushion of 300mm to 350mm, two rounds of packing manually to bring the longitudinal and transverse level to desired standard, dressing and boxing of ballast, providing wooden blocks between the check rails on both the ends and filling up the space between the wooden blocks by ballast to facilitate smooth movement of road traffic and any other incidental work to the entire satisfaction of the Engineer in charge. Level Crossings with 7.00 (+0.50) m long check rails. (Use this NS item only when a Temporary LC is				
		required to be commissioned before construction of LHS)				
8	NS/7- LHS	Supply, installation testing and commissioning of lifting barrier (for level crossing gate) Drawing No.SA-7974/M (Adv) Alt-3 with Gate lamps, levers with lever locks, boom locks arrangement and winch to Drg. No.SA-8132DC (Adv), complete 10 meters to spec. No. IRS-S-1078. Both side of level crossing (1 set = 02 Barriers.).	Sets	3	2,23,572.00	6,70,716.00
		(Use this NS item only when a Temporary LC is required to be commissioned before construction of LHS)				
	NS/8 - RWH	Providing, hoisting and fixing in position upto floor two level M20 Grade precast RCC work including setting in cement mortar 1:3(1 cement : 3 coarse sand) and finishing smooth with 6mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces complete including cost of centering, shuttering, finishing, Admixtures in recommended proportion (as per IS:9103) to accelerate, retard setting of concrete, improve workability without impairing strength and durability, excluding cost of cement and steel reinforcement, as per approved plan & direction of Engineer in charge.				
9	(a)	In slabs for drain covers, manhole covers, flue tops etc.	Cum	5	5,991.00	29,955.00

		AII/EN/WC/ROBs/4(2015-16)		1		-
10	NS/9 - RWH	Steel work welded in built up sections/ framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required-In gratings, frames, guard bar, ladders, railings, brackets, gates and similar works	Kg	2,000	96.00	1,92,000.00
11	NS/10- RWH	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes including bends etc with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1cement: 2fine sand) including testing of joints etc. complete -450mm dia. R.C.C. pipe	Metre	800	713.00	5,70,400.00
12	NS/11- RWH	Drilling of bore well for specified depth in all types of soil and rock mechanically with all contractor's tools, plants, material and labour up to 75 meters-For 250 mm dia	Metre	150	690.00	1,03,500.00
13	NS/11(a)- RWH	Extra over item no. NS/11 for 75m drilling for 250 mm dia	Metre	150	138.00	20,700.00
14	NS/12- RWH	Providing supplying, lowering and fixing in bore un perforated MS casing pipe 6 mm thickness up to specified depth below ground level with all contractor's tools, plants, material and labour etc. complete- <b>200 mm internal pipe</b>	Metre	150	1,445.00	2,16,750.00
15	NS/13- RWH	Extra for using slotted or perforated MS casing pipe of 200 mm internal dia	Metre	150	145.00	21,750.00
16	NS/14- RWH	Dry/Wet Sinking of Circular Wells (Other than pneumatic method) in all types of strata except hard rock requiring ballasting, including bailing and pumping out water, removal of excavated soil, with all labour and material required for sinking as per drawing and direction of the Engineer in charge, disposal of surplus soil upto 1 Km lead in the adjoining bank/embankment (The compaction to be paid separately under the relevant item)- <b>From initial level of cutting</b> <b>edge &amp; Up to 3m depth</b>	Cum.	300	155.00	46,500.00
17	NS/14(a)- RWH	Extra over item no. NS/14 for From 3m to 10m depth	Cum.	308	203.00	62,524.00
18	NS/15- RWH	Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Cement Concrete M35 grade (Cast - in Situ) using 20 mm graded crushed stone aggregate and coarse sand of approved quality in the following elements of well including finishing, using Admixtures in recommended proportions( as per IS 9103), if approved in Mix design, to accelerate, retard setting of concrete, improve workability without impairing strength and durability complete as per drawings and technical specifications as directed by Engineer. Payment for reinforcement and shuttering shall be paid extraIn Steining of wells	Cum.	100	4,718.00	4,71,800.00
19	NS/16- RWH	Centring and shuttering including strutting, propping etc. and removal of form for well Kerb & Steining	Sqm	500	312.00	1,56,000.00

			<u> </u>		107.00	0.040.00
20	NS/17-	All in One Bajri aggregate 20 mm size	Cum	20	497.00	9,940.00
20	RWH					
	NS/18	Transportation of any Railway material (relieving				
		girders, cross girders etc.)				
21	(a)	Lead up to 10 Km.	MT	90	258.00	23,220.00
	(b)	Extra lead beyond 10 Kms. For every kilometre	MTKM	5,300	3.55	18,815.00
22		or part thereof				
	TOTAL OF SCHEDULE "B"				49,9	0,995.00

		ULE - C: (NS Items-Misc.)				
1.	NS/19	<b>for Inspection</b> Providing One vehicles of SUV category INNOVA/ SCORPIO or equivalent with Driver and POL for requirement of Employer/ client as directed for any single day purpose movements limited to 150 kms per day & 12 hours average duty complete.(No other payment will be admissible except Toll tax and that will be reimbursable separately as per actual receipts).	Per day	120	2500	300000.00
2.	NS/20	Providing One vehicles of category INDIGO/SWIFT or equivalent with Driver and POL for requirement of Employer/ client as directed limited to 3000kms per month & 12 hours/day average duty complete. (No other payment will be admissible except Toll tax and that will be reimbursable separately as per actual receipts). This item is additional to supply of vehicle mentioned in the tender document any where as incidental to the work.	Per Month	40	35000	1400000.00
		Designing & Drawing Portion				
	NS/21	Detailed Design and Drawing Preparation Consultancy work for ROB				
3.	a.	Submission of all Detailed Design, Detailed Working /Construction Drawing etc. to DFCCIL after proof checked by IIT Delhi/ NIT/any other proof checking consultant approved by DFCCIL, and approved Clients and Railways for Foundation, Sub-Structure and Approaches for ROB and RUB both.	LS	2	350000	700000.00
4.	b.	Submission of all Detailed Design, Detailed Working /Construction Drawing etc. to DFCCIL after proof checked by IIT Delhi/ NIT/any other proof checking consultant approved by DFCCIL and approved Clients and Railways for Super Structure and any leftover part for ROB and RUB both.	LS	2	350000	700000.00

	TOTAL OF SCHEDULE "C TOTAL COST OF WORK (Total of Schedule A, B & C)		E "C"		0,000.00 3,130.00	
6.	d.	Providing design support during construction like modifications in design, redesign / clarifications as per site requirement and submission of completion drawing / report (Upon issue of completion certificate this item will be considered)	LS	2	125000	250000.00
5.	C.	Submission and approval of detailed launching scheme / placement of girders for Railway portion within Railway Boundary duly approved by Railways and CRS complete.	LS	2	175000	350000.00

# Last Page of Tender