

BOQ Item No.	Annexure-XII Description of Items	Unit	Qty	UNIT RATE			AMOUNT			Ref	Remark	
				Supply	Erection	Total	Supply	Erection	Total			
1	2	3	4	5	6	7(5+6)	8(4x5)	9(4x6)	10(8+9)	RVNL STAND ARD BOQ APRIL'2010		
NS-12	Supply, installation, testing and commissioning of prewired 1x28watt, T-5, energy efficient street light luminary similar to Bajaj Cat. Ref. No. BTSLF224MS, complete with T-5 tubes, electronic ballast etc on bracket pipe of erected pole or on wall bracket of GI class "B" pipe & connections from junction box/overhead line/light point etc. to luminary with 1.5 sq mm FRLS PV& insulated multistranded copper conductor single core cable & earthing etc as required.	No.	0	2,601.16	501.02	2,502.16				-do-		
NS-13	Supply, laying under ground/road/railway track/recessing in wall/floor, in laid RCC/G.I. pipe etc. 1.1 KV grade LT XLPE insulated armoured, aluminum conductor cable conforming to IS:7998(P1) (latest version) including digging of cable trench, sand cushioning, protective covering with second class bricks, refilling of trench with excavated earth, making good the damages, end terminations with aluminium crimping sockets/plugs, provision of cable route markers, testing and commissioning as required		0							-do-		
	2 Core 25 Sq.mm or 4 core up to 120 sq.mm	Meter	2	190.97	47.43	238.39	381.82	94.96	476.78	-do-		
NS-14	Supply, fixing, connecting and commissioning of Street light energy efficient fluorescent tube light fitting single phase 50Hz, 230 Volt supply conforming to IS 10322 part - 5 section 3 or latest and as per IP - 65 protection with 2 feet 4 x 24 watt (T-5) day light tube rod and premium control control gears one control gear for each tube rod and aluminium body with clear acrylic cover UV treated similar to CGL.OSRAM.BAJAJ, PHILLIPS	Nos	0	5,630.39	1,408.08	7,038.47				-do-		
NS-17	Supply, erection testing & commissioning of control and distribution panel for colour light signalling supply 30 amps capacity in 25 KV AC traction system as per RDSO technical specification No. T/SPC/PSI/CLS/0020 including latest amendment	No.	0	31,139.64	5,494.72	36,634.36				-do-		
<b>Total Amount</b>							<b>358,775.89</b>	<b>55,152.53</b>	<b>413,928.42</b>			
<b>Reference of letter No.C/Policy/Estimate&amp;BOQ/2011/24</b>							<b>(- 6.77%)</b>	<b>24289.13</b>	<b>3733.83</b>	<b>28022.95</b>		
<b>G.Total</b>							<b>334486.76</b>	<b>51418.71</b>	<b>385905.47</b>			
NS-1	Payment to be made to GER for Availing/ augmentation power Supply	KW	2	6000	0	6000	12,000.00		12,000.00	ADI-DIV Sanction Memo. No. W/705/2-ADI/68/b dt. 16.8.11		
<b>G.Total</b>							<b>346486.76</b>	<b>51418.71</b>	<b>397905.47</b>			

**Rate references**

NS-1	GER payment/ power Augmentation charges per KW	Rate	Sanction Memo. W/705/2-ADI/68/b dt. 16.8.11 Sr DEE, ADI		
			Supply	Erection	Total
			0	6000	6000

GENERAL SERVICES ELECTRICAL WORKS											
BOQ (Reference rate of Estimate for Schedule No. - 33)										Annexure-IX	
This schedule shall be read in conjunction with its Explanatory Notes and Technical Specifications for detailed description for various items included therein.											
BOQ item No.	Description of Items	Unit	Qty	UNIT RATE			AMOUNT			Ref	Remark
				Supply	Erection	Total	Supply	Erection	Total		
1	2	3	4	5	6	7(5+6)	8(4x5)	9(4x6)	10(8+9)	RVNL STANDAR D BOQ APRIL,201 0	
<b>SECTION - J: PROVISION OF PUMPS</b>											
33045(i)	Supply, installation, testing & commissioning of submersible pump set to supply water @525 LPM at 50m height along with control panel etc. to operate on 3 phase, 415V, 50Hz, AC supply complete as per explanatory notes.	Job	0	49,418.00	4,887.00	54,305.00	-	-	-	-do-	
33045(ii)	Supply, installation, testing & commissioning of submersible pump set to supply water 350 LPM at 40m height, along with control panel etc. to operate on 3-phase 415V, 50Hz, AC supply complete as per explanatory notes.	Job	0	45,256.00	4,476.00	49,732.00	-	-	-	-do-	
<b>Electrification of Pump House</b>											
33003(i)	Wiring for light/ceiling fan/exhaust fan/call bell/light plug/group etc. points including circuit wiring, sub-main wiring with Fire Retardant (FR) PVC insulated, multistranded, copper conductor, single core cable on surface/in recessed PVC conduits, distribution boards, sub distribution boards, earthing etc as required. Wiring shall be done as per sizes of cables, no of points permissible in each circuit and sub main as indicated in Explanatory Notes	Point	5.00	693.00	154.00	847.00	3,485.00	770.00	4,235.00	-do-	
33005	Supply, installation, testing and commissioning of prewired 1x28watt, T-5, energy efficient, surface type luminary with epoxy powder coated CRCA sheet steel housing with reflector cover, similar to Bajaj Cat. Ref. No.BTR 128 complete with electronic ballast, T-5 tube etc & earthing etc as required.	No.	3.00	1,133.00	178.00	1,311.00	3,399.00	534.00	3,933.00	-do-	
33046	Co-ordination/insuring and chasing with State Utility Company for availing new electrical connection/augmentation of sanctioned load at stations, level crossings etc. including applying for load, collection of estimates for loads, modification of power line crossings, arranging payment from RVNL, depositing payment to State Utility Company, arranging release of load & other related works. Payment to be made to SEB for new connection, load augmentation, modification of power line crossings etc. shall be made by RVNL.	Each Location	5	0.00	5,273.00	5,273.00	-	25,365.00	26,365.00	-do-	For pump connection
<b>SECTION - F: EARTHING ARRANGEMENT</b>											
33032	Earthing with 3 meter long, 50 mm dia, G.I pipe class 'B' earth electrode, adding of charcoal or coke and salt to achieve earth resistance less than 5.0 ohms, providing masonry enclosure and MS cover plate with locking arrangement etc including connections with 4mm G.I wire from earth electrode to switch board/electrical equipment as required.	Job	2	1,780.00	280.00	2,060.00	3,560.00	560.00	4,120.00	-do-	
33033	Earthing with 600mmx600mmx6mm thick G.I earth plate, adding of charcoal or coke and salt to achieve earth resistance less than 1.0 ohm, providing masonry enclosure and M.S cover plate with locking arrangement, watering pipe etc as required.	Job	0	1,976.00	310.00	2,286.00	-	-	-	-do-	
33034	Earthing with 600mmx600mmx3mm thick copper earth plate, adding of charcoal or coke and salt to achieve earth resistance less than 1.0 ohm, providing masonry enclosure and M.S cover plate with locking arrangement, watering pipe etc as required.	Job	0	3,492.00	548.00	4,040.00	-	-	-	-do-	
<b>EARTH CONNECTIONS</b>											
(i)	Supply and laying 25 mm x 6 mm G. I. strip at not less than 0.50 meter below ground or in recess as required.	Meter	20	40.00	7.00	47.00	800.00	140.00	940.00	-do-	10 Mtr for each earthing
(ii)	Supply and laying 40 mm x 10 mm G. I. strip at not less than 0.50 meter below ground or in recess as required.	Meter	0	65.00	10.00	75.00	-	-	-	-do-	10 Mtr for each earthing
(iii)	Supplying and fixing 40 mm x 5 mm copper strip on surface or in recess or in 50 mm dia G.I pipe as required.	Meter	0	518.00	81.00	599.00	-	-	-	-do-	10 Mtr for each earthing
<b>Total Amount</b>							11,224.00	28,369.00	39,593.00		
Reference of letter No.C/Policy/Estimate&BOQ/2011/24							759.86	1920.58	2680.45		
<b>Total</b>							<b>10464.14</b>	<b>26448.42</b>	<b>36912.55</b>		

NS-1	(i) Supply, installation, testing & commissioning of submersible pump set to supply water @300 LPM at 150m height along with control panel etc. to operate on 3 phase, 415V, 50Hz, AC supply complete as per explanatory notes	No.	1	69,197.00	0.00	69,197.00	69,197.00		69,197.00	-do-	As per LOA No. EU/50/17/03/12/131/01/11/12 SCHEDULE-A of Sr DEE-ADI
	(ii) Erection, testing and commissioning of Submersible pump set complete with standard accessories as per specification	No.	1		9,592.00	9,592.00		9,592.00	9,592.00	-do-	
	(iii) Supply & Installation of UPVC column pipes of 50 mm dia of Ashirvad/Maruti/Finolex make as per specification.	No.	175	433.00	56.00	489.00	75,775.00	9,800.00	85,575.00	-do-	
	(iv) Supply of Flat 3 core Copper cable of 6 sq mm of F.inox/Nicco/Asian as per specification.	No.	350	193.00	0.00	193.00	67,550.00		67,550.00	-do-	
	(V) Supply, erection testing & commissioning of Star Delta control panel suitable for 20 HA as per specification.	No.	1	21,110.00	2,345.00	23,455.00	21,110.00	2,345.00	23,455.00	-do-	
NS 2	Payment to be made to GERB for Availing/augmentation power Supply.	KW	20	6000		120000	120,000		120,000		Sanction Memo No. W/705/Z, AB/488 dt. 16.8.11
						<b>G. TOTAL</b>	<b>244096.14</b>	<b>48185.42</b>	<b>292281.55</b>		

Rate references

NS1	(d) Supply, installation, testing & commissioning of submersible pump set to supply water @300 LPM at 150m height along with control panel etc. to operate on 3 phase.	Rate	Tender	T/3 (12.13)	T3 base	MH DV	
			Supply	76311	61783		69197
			Erection	0	0		0
	(d) Erection, testing and commissioning of Submersible pump set complete with standard accessories as per specification	Rate	Tender	T/3 (12.13)	T3 base		
			Supply	10649	8541		9592
			Erection	0	0		0
	(d) Supply & Installation of UPVC column pipes of 50 mm dia of Ashirvad/Maruti/Fimolex make as per specification	Rate	Tender	T/3 (12.13)	T3 base		
			Supply	480	387		433
			Erection	62	50		56
(V) Supply of Flat 3 core Copper cable of 6 sq mm of Fimolex/Niccoc/Asian as per specification	Rate	Tender	T/3 (12.13)	T3 base			
		Supply	243	172		193	
		Erection	0	0		0	
(V) Supply, erection testing & commissioning of Star Delta control panel suitable for 20 HP as per specification.	Rate	Tender	T/3 (12.13)	T3 base			
		Supply	23372	18848		21110	
		Erection	2507	2664		2345	
NS 2	GER payment/powr Augumentation charges per KW	Rate	Senction Memo. W/7057-MH GSS dt. 16.8.11 Sr. DEE, MH				
			Supply	0			0
			Erection	6000			6000

Tender No	15/13	15/14		
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GENERAL SERVICES ELECTRICAL WORKS												
BOQ (Reference rate of Estimate for Schedule No. - 33)												
This schedule shall be read in conjunction with its Explanatory Notes and Technical Specifications for detailed description for various items included therein.												
BOQ item No.	Annexure-X Description of Items	Unit	Qty	UNIT RATE			AMOUNT			Ref RVNL STANDAR D BOQ APRIL 201 0	Remark	
				Supply	Erection	Total	Supply	Erection	Total			
1	2	3	4	5	6	7(5+6)	8(4x5)	9(4x6)	10(8+9)			
<b>SECTION - J: PROVISION OF PUMPS</b>												
33045(i)	Supply, installation, testing & commissioning of submersible pump set to supply water @525 LPM at 50m height along with control panel etc. to operate on 3 phase, 415V, 50Hz, AC supply complete as per explanatory notes	Job	0	49,418.00	4,887.00	54,305.00				-do-		
33045(ii)	Supply, installation, testing & commissioning of submersible pump set to supply water 350 LPM at 40m height, along with control panel etc. to operate on 3-phase 415V, 50Hz, AC supply complete as per explanatory notes	Job	0	45,256.00	4,476.00	49,732.00				-do-		
<b>Electrification of Pump House</b>												
33003(i)	Wiring for light/ceiling fan/exhaust fan/call bell/light plug/group etc. points including circuit wiring, sub-main wiring with Fire Retardant (FR), PVC insulated, multi-stranded, copper conductor, single core cable on surface/in recessed PVC conduits, distribution boards, sub distribution boards, earthing etc as required. Wiring shall be done as per sizes of cables, no of points permissible in each circuit and sub main as indicated in Explanatory Notes	Point	5.00	693.00	154.00	847.00	3,465.00	770.00	4,235.00	-do-		
33005	Supply, installation, testing and commissioning of prewired 1x28watt, T-5, energy efficient, surface type luminary with epoxy powder coated CRCA sheet steel housing with reflector cover, similar to Bajaj Cat. Ref No BTIR 129 complete with electronic ballast, T-5 tube etc. & earthing etc as required	No.	0.00	1,133.00	178.00	1,311.00				-do-		
33046	Co-ordination/wiring and chasing with State Utility Company for availing new electrical connection/augmentation of sanctioned load at stations, level crossings etc including applying for load, collection of estimates for loads, modification of power line crossings, arranging payment from RVNL, depositing payment to State Utility Company, arranging release of load & other related works. Payment to be made to SEB for new connection, load augmentation, modification of power line crossings etc. shall be made by RVNL	Each Location	5	0.00	5,273.00	5,273.00		26,365.00	26,365.00	-do-	For pump connection	
<b>SECTION - F: EARTHING ARRANGEMENT</b>												
33032	Earthing with 3 meter long, 50 mm dia, G.I pipe class B' earth electrode, adding of charcoal or coke and salt to achieve earth resistance less than 5.0 ohms, providing masonry enclosure and MS cover plate with locking arrangement etc. including connections with 4mm G.I wire from earth electrode to switch board/electrical equipment as required	Job	2	1,780.00	280.00	2,060.00	3,560.00	560.00	4,120.00	-do-		
33033	Earthing with 600mmx600mmx6mm thick G.I earth plate, adding of charcoal or coke and salt to achieve earth resistance less than 1.0 ohm, providing masonry enclosure and MS cover plate with locking arrangement, watering pipe etc as required	Job	0	1,976.00	310.00	2,286.00				-do-		
33034	Earthing with 600mmx600mmx3mm thick copper earth plate, adding of charcoal or coke and salt to achieve earth resistance less than 1.0 ohm, providing masonry enclosure and MS cover plate with locking arrangement, watering pipe etc as required	Job	0	3,492.00	548.00	4,040.00				-do-		
33035	<b>EARTH CONNECTIONS</b>											
(i)	Supply and laying 25 mm x 6 mm G. I. strip at not less than 0.50 meter below ground or in recess as required	Meter	20	40.00	7.00	47.00	800.00	140.00	940.00	-do-	10 Mtr for each earthing	
(ii)	Supply, and laying 40 mm x 10 mm G. I. strip at not less than 0.50 meter below ground or in recess as required	Meter	0	65.00	10.00	75.00				-do-	10 Mtr for each earthing	
(iii)	Supplying and fixing 40 mm x 5 mm copper strip on	Meter	0	518.00	81.00	599.00				-do-	10 Mtr for	
<b>Total Amount</b>							<b>7,825.00</b>	<b>27,835.00</b>	<b>35,660.00</b>			
<b>Reference of letter No.C/Policy/Estimate&amp;BOQ/2011/24</b>							<b>(- 6.77%)</b>	<b>529.75</b>	<b>1884.43</b>	<b>2414.18</b>		
<b>Total</b>							<b>7295.25</b>	<b>25950.57</b>	<b>33245.82</b>			

BOQ item No.	Annexure-X Description of Items	Unit	Qty	UNIT RATE			AMOUNT			Ref	Remark
				Supply	Erection	Total	Supply	Erection	Total		
1	2	3	4	5	6	7(5+6)	8(4x5)	9(4x6)	10(8+9)	RVNL STANDAR D BOQ APRIL'201 0	
NS 1	Supply of horizontal Monoblock Submersible pump set with home all accessories having Discharge 190 LPM at the head 33 Meter of Crompton Greaves model no. OSKS-32SS (Inlet and outlet should arranged for 50 mm dia pipe) or equivalent model of KSB/ Calama/ LUBI/ Kirlosker / ABB as per specification shown in para (A) of Annexure.	No.	1	18,741.00	0.00	18,741.00	18,741.00		18,741.00	-do-	As per LOA No. EU/50/1/T/3(1 1-12) of Sr.DEE-ADI
NS 2	Supply, erection, testing and commissioning of Automatic Control panel with one set contactor's kit for all three types for item no.1 & 4 as per specifications shown in para (C) of Annexure.	No.s	1	10,035.00	1,809.00	11,844.00	10,035.00	1,809.00	11,844.00		As per LOA No. EU/50/1/T/3(1 1-12) of Sr.DEE-ADI
NS 3	Supply of flat 3 core copper cables of 16 Sq mm of Finolex/ Torrent/ Nicco/ Havell's/ Asian/ CCL/ Fort gloster/ Avocab/ ICL as per specification shown in Para (G) of Annexure.	No.s	50	268.00	0.00	268.00	13,400.00		13,400.00		As per LOA No. EU/50/1/T/3(1 1-12) of Sr.DEE-ADI
NS-4	Payment to be made to GEB for Availing/augmentation power Supply.	KW	10	6000		60000	60,000		60000		ADI-DIV. Sanction Memo. No. W70572-ADH6888 dt. 16.8.11
<b>G. TOTAL</b>							<b>49471.25</b>	<b>27759.57</b>	<b>77230.82</b>		

**Rate references**

NS-1	Supply of horizontal Monoblock Submersible pump set with home all accessories having Discharge 190 LPM at the head 33 Meter of Crompton Greaves model no. OSKS-32SS (Inlet and outlet should arranged for 50 mm dia pipe) or equivalent model of KSB/ Calama/ LUBI/ Kirlosker / ABB as per specification shown in para (A) of Annexure.	Rate	Tender		T3 base		ADI-DIV
			Supply	Erection	Supply	Erection	
			29671	0	16808	0	18741
							0
NS-1	Supply, erection, testing and commissioning of Automatic Control panel with one set contactor's kit for all three types for item no.1 & 4 as per specifications shown in para (C) of Annexure.	Rate	Tender		T3 base		
			Supply	11070	3000	10035	
			Erection	1809	1622	1809	
NS-2	Supply of flat 3 core copper cables of 16 Sq mm of Finolex/ Torrent/ Nicco/ Havell's/ Asian/ CCL/ Fort gloster/ Avocab/ ICL as per specification shown in Para (G) of Annexure.	Rate	Tender		T3 base		
			Supply	268	268	268	
			Erection	0	0	0	
NS-3	GEB payment/ power Augmentation charges per KW	Rate	Sanction Memo. W70572-ADH6888 dt. 16.8.11 Sr.DEE-ADI				
			Supply	0			0
			Erection	6000			6000

GENERAL SERVICES ELECTRICAL WORKS

BOQ (Reference rate of Standard bill of Quantity for Civil Engineering DECEMBER 2013)

This schedule shall be read in conjunction with its Explanatory Notes and Technical Specifications for detailed description for various items included therein.

BOQ Item No.	Annexure-XIII Description of Items	Unit	Qty	UNIT RATE			Total	AMOUNT			Ref RVNL BOQ DEC 13	Remark
				Supply	Erection	Total		Supply	Erection	Total		
1	2	3	4	5	6	7(5+6)	8(4+5)	9(4+6)	10(8+9)			
<b>SECTION - Estimate for Site FACILITIES for General Electrification Work</b>												
9001	Providing site offices for Employer with Contractor's material, Labour, Tool and plant, Equipment	Per Sq. M. of Plinth area	24.00	0.00	10.657.00	10,657.00		255,768.00	255,768.00		-do-	
9002	Providing furniture as per given clauses 3.3, 3.3.1 of Chapter 3 (Site facilities for the Employer) of Section	LS Per Site Office	0.25	827,760.00	0.00	827,760.00	206,940.00		206,940.00		-do-	
9003 a	Providing Road Vehicle mentioned below for the use of Engineer/ Employer as per the condition mentioned in clause 3.4.3, i.e 3.4.3.1 to 3.4.3.3 of Chapter 3 ( Site Facilities for the employer and the engineer) of section Tavera, Innova or Simler	Per Vehicle/ Month	36	0.00	44,492.00	44,492.00		1,601,712.00	1,601,712.00		-do-	1 Vehival for 3 Year
9003 b	Tata Sumo, Bolero or Simler	Per Vehicle/ Month	72	0.00	38,284.00	38,284.00		2,756,448.00	2,756,448.00		-do-	2 Vehival for 3 Year
9003 c	Extra for running and maintenance of every additional km and above 4000 kms as per specified in item 9003 (a)	Per KM	36000	0.00	10.35	10.35		372,600.00	372,600.00		-do-	Per Vehicle 1000 Km per month
9003 d	Extra for running and maintenance of every additional km and above 4000 kms as per specified in item 9003 (b)	Per KM	72000	0.00	8.28	8.28		596,160.00	596,160.00		-do-	Per Vehicle 1000 Km per month
<b>Total Amount</b>							<b>206,940.00</b>	<b>5,582,688.00</b>	<b>5,789,628.00</b>			

**WESTERN RAILWAY  
ELECTRICAL DEPARTMENT**

Estimate No. EL/W/121/PNU-SIOB/Doubling

Name of work:-Doubling line between Palanpur-Samakhiali section.

Sr. No.	Description	Qty	Rate			Unit	Cost		Total
			Erection	Supply	Total		Cash	Store	
1	Modification of GEB's 66KV EHT electrical track crossing.	3	2000000	0	2000000	Nos	6000000	0	6000000
2	Modification of GEB's 11KV HT electrical track crossing by using underground XLPE 185 sqmm cables complete with joining earthing etc. as per Annexure-I	29	132803	233949	366752	Nos	3851287	6784521	10635808
3	Electrification of S&T building as per Annexure-II	28	325831	214221	540052	Nos	9123268	5998188	15121456
4	Electrification of LC gates as per annexure-III	155	183491	36612	220103	Nos	28441105	5674860	34115965
5	Electrification of P/F and FOB as per Annexure-IV	28	153381	358666	512047	Nos	4294668	10042648	14337316
6	Electrification of Goods P/F as per Annexure-V	7	311166	853494	1164660	Nos	2178162	5974458	8152629
7	Electrification of Running Room/ Rest House/AXEN /iOW & PWI Office as per annexure-VI	2	583678	702444	1286122	Nos	1167356	1404888	2572244
8	Provision of Pump set for bore with Control panel as per Annexure-VII	29	106268	439670	545938	Nos	3081772	12750430	15832202
9	Provision of Pump set for sump with Control panel as per Annexure-VIII	29	76046	244041	320087		2205334	7077189	9282523
10	Electrification of staff qtrs. as per annexure-IX				0		0	0	0
a	Type-II	973	30952	18188	49140	Nos	30116296	17696924	47813220
b	Type-III	91	34964	21722	56686	Nos	3181724	1976702	5158426
	Total						93640972	75380808	169021780
	D&G charges		6.43%				10868100	0	10868100
	Contingency		1%				104509072	75380808	179889880
							1798899	0	1798899
	CRRM						106307971	75380808	181688779
							-376300	0	-376300
							105931671	75380808	181312479