

No. 8127  
File: SMT- 1766

Date. 05.10.2021

**NOTICE INVITING TENDER**

**INVITATION FOR BIDS (IFB)**

1. The Managing Director, Odisha Bridge & Construction Corporation Limited, Vikash Bhavan, Odisha, Bhubaneshwar on behalf of Governor of Odisha invites bids from eligible bidders for the work mentioned below on turnkey basis:

SL. NO.	NAME OF WORK	BID IDENTIFICATION NO.	CONCERNED NODAL OFFICER WITH HEADQUARTERS	BID SECURITY DECLARATION	Bid Processing fee ONLY ONLINE MODE (IN INR)	TIME FOR COMPLETION
1	2	3	4	5	6	
1	Beach Road Development and Extension including Acharya Harihar Square Redevelopment, Construction of MLCP at Digabareni Chhak and Construction of on-ground Parkings at Jatrika and Sipasurubuli Projects in the Heritage City of Puri under ABADHA Scheme	29/Tender/OBCC /2021-22	Chief General Manager -I, O.B.& C.C. Ltd., Bhubaneshwar	In prescribed format	1.50 lakhs (Including GST)	24 (Twenty-Four) Calendar months
2	Design and Implementation of Smart Solution Interventions in the Heritage City of Puri under ABADHA Scheme	30/Tender/OBCC /2021-22			1.00 lakhs (Including GST)	12 (Twelve) Calendar months

2. The Bid documents will be available in the website: [www.tendersodisha.gov.in](http://www.tendersodisha.gov.in) from **08.10.2021 to 5.00 P.M. of Dt. 10.11.2021** for online bidding.
3. The bidder must possess compatible Digital Signature Certificate (DSC) of Class-II or Class-III.
4. The Pre-bid queries from the bidders, if any, shall be received through e-mail (online) on or before **5.00 P.M. of Dt. 21.10.2021**.
5. The Pre-bid Clarification shall be available in e-procurement portal on **Dt. 25.10.2021**.
6. Bids shall be received on "online mode" on or before **5.00 P.M. of Dt. 10.11.2021**.

7. The Bidders must submit the non-refundable bid processing fee of required amount as stated in the above table at column No.5 in online mode only in the e-portal as per the procurement Standard Operating Procedure (SOP).
8. The original financial transaction receipt in support of bid processing fee and Bid Security Declaration in the prescribed format shall have to be prepared by the bidder and the scanned copy of the same shall have to be uploaded along with the Technical Bid failing which the bid shall be summarily rejected.
9. Technical Bids received **online** shall be opened at **11.30 A.M. on Dt. 11.11.2021** in the office of the Managing Director, O.B. & C.C.Ltd., Vikash Bhavan, Bhubaneshwar, Odisha in the presence of the bidders, who wish to attend. Bidders who participated in the bid can witness the opening of bids after logging on to the site through their DSC. If the office happens to be closed on the scheduled date of opening, the bid will be opened on the next working day at the same time and venue.
10. The Concept Design Report (CDR) in Cover-III and the original financial transaction receipts in support of Bid processing Fee and Bid Security declaration in Cover-IV shall have to be submitted on or before **5.00 PM on 12.11.2021** to the Managing Director, OB&CC Ltd. failing which the bid shall not be evaluated and liable for rejection.
11. Bids submitted other than e-procurement platform shall not be considered.
12. Further details can be seen from the e-Procurement portal: <https://www.tendersodisha.gov.in>.
13. The authority reserves the right to cancel any or all bids without assigning any reason thereof.
14. The addendum/ corrigendum, if any, will be posted in the e-procurement portal only.



EIC-cum-Managing Director

Copy to:-

- 1) Commissioner-cum-Secretary to Government of Odisha, Works Department, Bhubaneshwar
- 2) Engineer-in-Chief (Civil), Odisha, Bhubaneshwar
- 3) Chief Engineer, D.P.I & Roads, Odisha
- 4) Chief Engineer, Buildings, Odisha
- 5) Chief Manager (Technical), State e-Procurement Cell, O/o the E.I.C., Nirmana Soudha, Bhubaneshwar
- 6) Chief Engineer, NHs, Odisha, Bhubaneshwar/NIC Office, Bhubaneshwar
- 7) Collector & District Magistrate/Superintendent of Police, Puri
- 8) Secretary, Puri Konark Development Authority, Puri
- 9) Senior Project Manager, Puri Project Division No. I / II / III, O B & C C Ltd.
- 10) Manager (Finance), O B & C C Ltd., Head Office, Bhubaneshwar



**BEACH ROAD DEVELOPMENT AND EXTENSION INCLUDING ACHARYA HARIHAR SQUARE REDEVELOPMENT, CONSTRUCTION OF MLCP AT DIGABARENI CHHAK AND CONSTRUCTION OF ON-GROUND PARKINGS AT JATRIKA AND SIPASURUBULI IN HERITAGE CITY OF PURI UNDER ABADHA SCHEME**



**ODISHA BRIDGE & CONSTRUCTION CORPORATION LIMITED**

(A Government of Odisha Undertaking)

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## REVISION STATUS

Sl. No.	Revision No	Prepared By	Checked By	Approved By	Submitted On	Purpose
1	P0	NY, UD, CB, AK, SHS, MKC, AG	PM	BST	04-10-2021	For Approval

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## 1.0 INTRODUCTION

### INTRODUCTION TO PURI CITY

Puri is a coastal city and a municipality in the state of Odisha in eastern India. It is the district headquarters of Puri district and is situated on the Bay of Bengal, 60 kilometres (37 mi) south of the state capital of Bhubaneswar. It is also known as Sri Jagannatha Dham after the 12th-century Jagannath Temple located in the city. It is one of the original Char Dham pilgrimage sites for Hindus.

### CLIMATE

According to the Köppen–Geiger climate classification system the climate of Puri is classified as Aw (Tropical savanna climate). The city has moderate and tropical climate. Humidity is high throughout the year. The temperature during summer touches a maximum of 36 °C (97 °F) and during winter it is 17 °C (63 °F). The average annual rainfall is 1,337 millimeters (52.6 in) and the average annual temperature is 26.9 °C (80.4 °F).

### CONNECTIVITY

Puri is well-connected by rail, road and air services. A broad-gauge railway line of the South Eastern Railways which connects Puri with Calcutta, and Khurda is an important railway junction on this route. The rail distance is about 499 kilometres (310 mi) from Calcutta and 468 kilometres (291 mi) from Vishakhapatnam. Road network includes NH 203 that links the city with Bhubaneswar, the state capital, situated about 60 kilometres (37 mi) away. NH 203 B connects the city with Satapada via Brahmagiri. Marine drive, which is part of NH 203 A, connects Puri with Konark. The nearest airport is the Biju Patnaik International Airport at Bhubaneswar. Puri railway station is among the top hundred booking stations of the Indian Railways.

### AIM AND OBJECTIVE OF THE PROJECT

- Revitalization of Puri beach front and beach road till Acharya Harihar square.
- Redevelopment of Acharya Harihar square to enhance traffic circulation.
- To Create an inclusive public space for all user groups and stakeholders preserving socio-cultural magnet associated with the Sea.
- To Augment approach to the beachfront accommodating future development prospects and cyclic changes.
- To improve node and Landmark identity for enhanced wayfinding and imageability.

- To Plugin new and strengthen existing infrastructure amenities with inclusion of Waste water management.
- To undertake Placemaking focussing safety and security aspects of crowd control and circulation management.
- To use Green buffer strategies for segregation and linking of active and passive recreation zones increasing round the clock usability of the Beachfront.
- To generate Response to words marine ecology creating Resilient Landscape for climate change.
- To Enhance balanced and sustainable economic activities along the beachfront supporting Tourism and associated subsidiary activities.
- Development of On-Ground Parking at Jatrika and Sipasurubili
- Development of Multi-level Car Parking at Digabareni

## 2.0 ABOUT THE SITE

### SITE LOCATION

The proposed project is located in Puri, Odisha. The project site stretches for 4.5km along the Puri Beach starting from Acharya Harihar Square up to the NH-316 turning point.

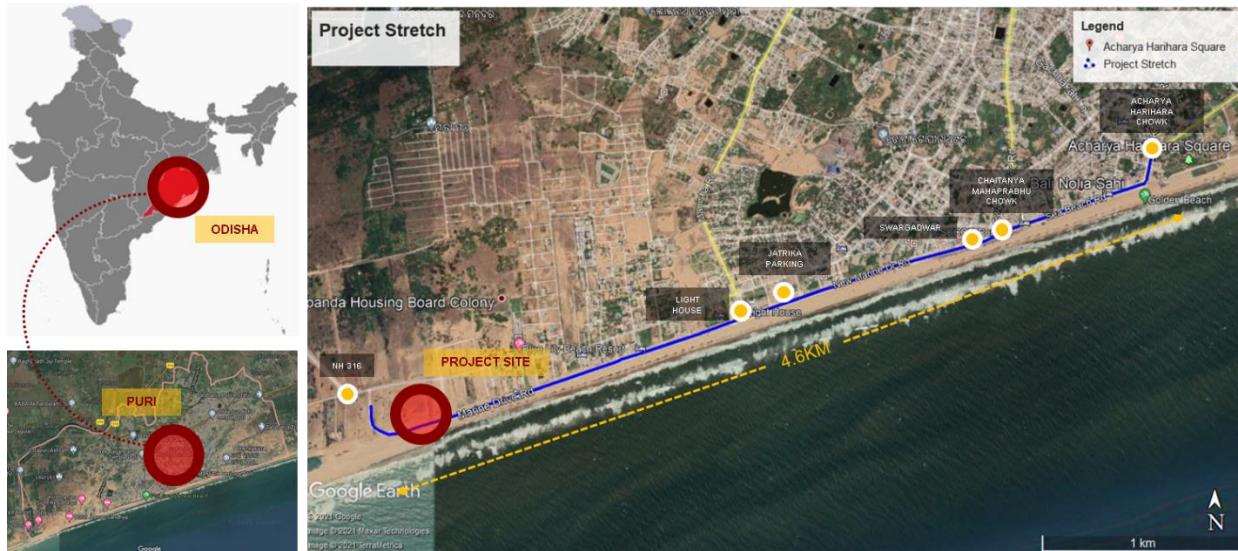


Figure 1: Site Location

### SITE CONNECTIVITY

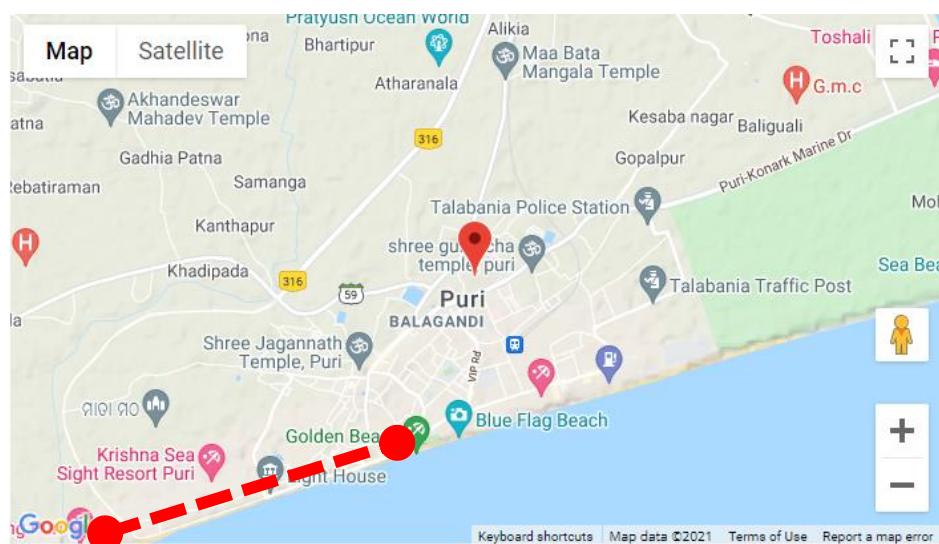


Figure 2: Site Connectivity with Surrounding

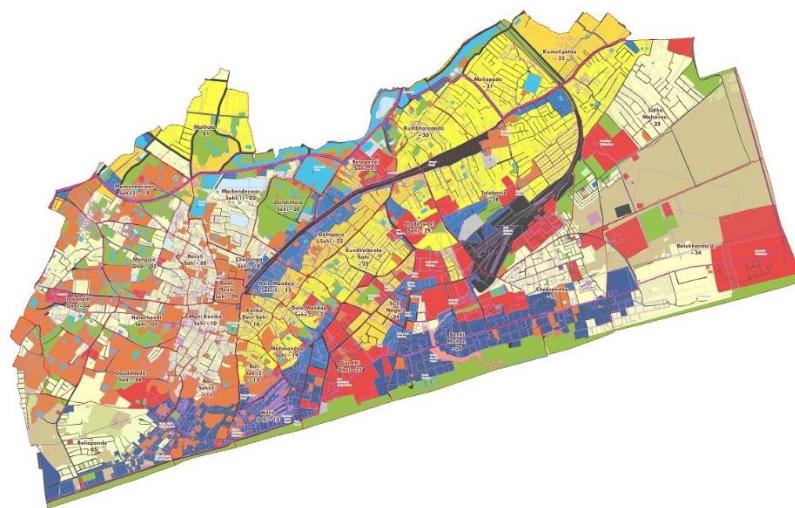


Figure 3: Site Connectivity with Multiple Land Use Character

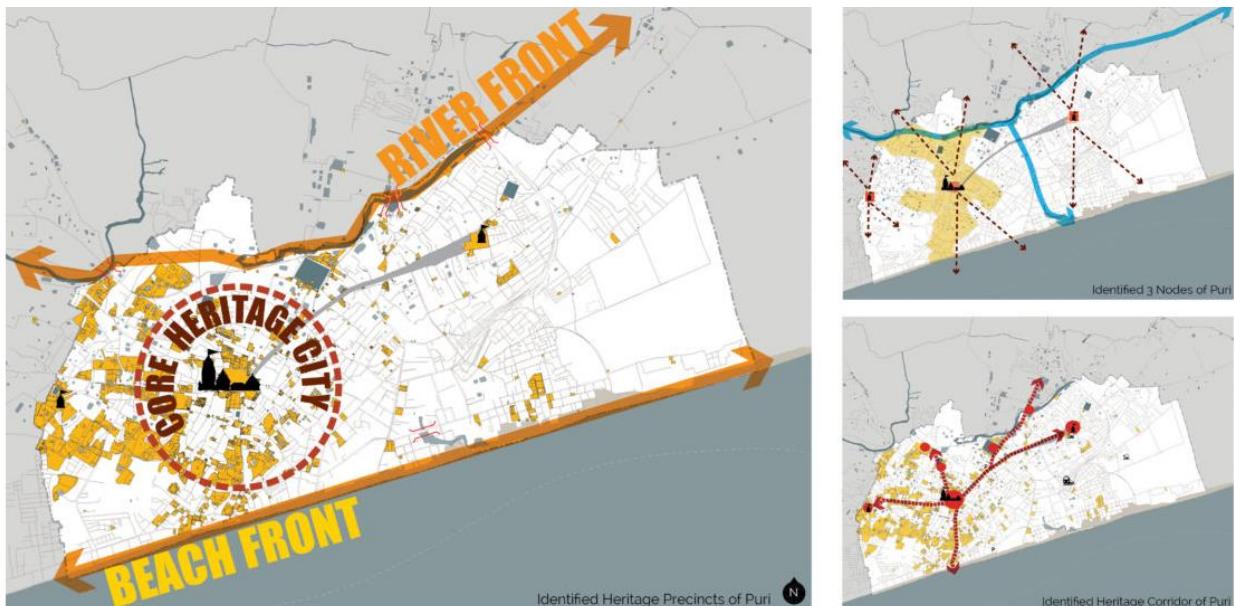


Figure 4: Site Connectivity with Cultural Heritage

## SITE SURROUNDING AND LAND AVAILABILITY



**Figure 5: Land Availability**

## PROJECT DESCRIPTION

The Puri development region has myriad potential through its natural bounties and its human resource. However, the key to its sustainable future lies in striking right balance between the development and the opening of its lesser explored dimensions and a meticulously driven conservation effort.

Hence the Puri beach road development and extension not only addresses the present issues but also connect its city's fabrics, cultural & heritage identity, empowers and engages folks and tourist with minimal intervention and sustainable approach.

The Puri beach front development project has been envisaged as a revitalization of beach road, beach front and the associated activities with main features being derived from social, ecological, commercial, religious, cultural and climatic response aspects of the holy city. It shall include:

- Revitalization of the beach,
- Creation of inclusive public space,
- Preservation of socio-cultural fabric of the city,
- Introduction of new functional infrastructure while restoring the existing essentials,
- Placemaking,
- Ensuring public safety, security and sanitation,
- Proposed balanced, sustainable and economic activities,
- Proposing strategies for green buffer and preservation of marine ecology.

The Rejuvenation shall also include few engineering solutions for sand erosion control, stability of existing retaining wall etc. The main aim of the projects is to make the beach more visual pleasing and accessible to the citizens. The project shall help improve the holistic visiting

experience for the tourists. The projects shall also emphasize on improving landscaping focusing on indigenous plants, introducing beach elements and providing better infrastructure facilities.

As per CRZ, the Inter tidal zone found on the seaside is CRZ I B. The proposed Beachfront development site falls within Municipal Corporation boundary and categorized as CRZ II

## 3.0 ARCHITECTURE

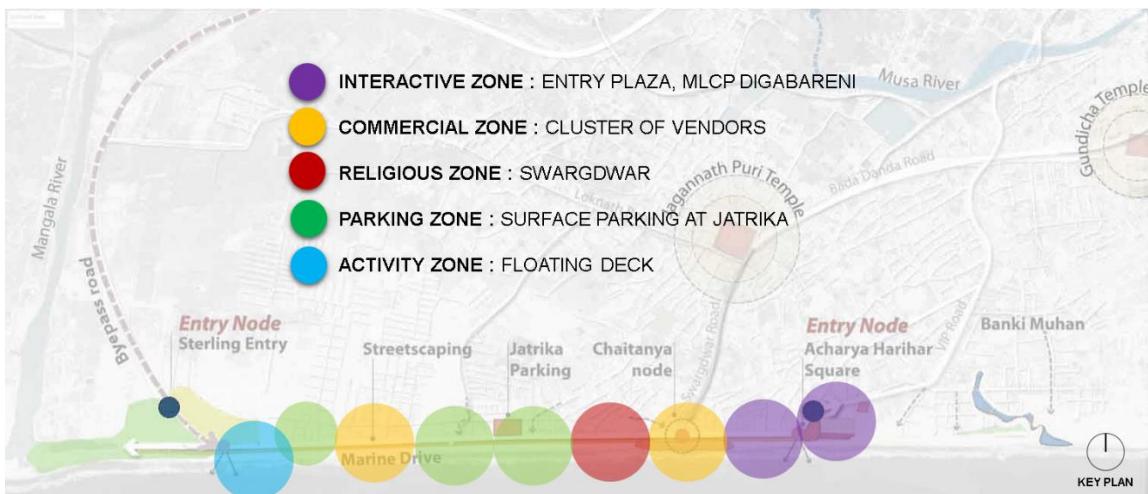
### BRIEF DESCRIPTION OF THE PROJECT

The Project comprises of Beach road development, Construction of MLCP at Digabareni, Surface Parkings at Jatrika & Sipasurubuli. The proposed project shall enhance the experience of tourists visiting Puri Beach, decongest the road with dedicated organised parkings, enhance the road safety, extension of walkway along the beach side.

The main features of the project are-

- Project encompasses a road stretch of 4.5km.
- The road is being redesigned with machine cut cobble stone.
- Provision of gabion wall along the beach side for extension of the walkway for 3m.
- Provision of vending plaza for 662 vendors, 12 control rooms and 76 toilets as per CRZ letter to DFO.
- Provision of MLCP at Digabareni with an ECS of 292, total built up area of 10,482 sqm. The proposed MLCP shall be B+G+3 storied building for multi-storied car parking cum tourist facilitation center having 8 nos of room, one food court, sit out area and freshwater bathing & changing rooms and parking.
- On-ground parking at Jatrika for an ECS of about 649 with provision of post top lights, grass pavers and landscaping.
- On-ground parking at Sitasurubilli for about an area of 2 acres.
- Provision of stone art at Digabareni Chhak and strategic locations as per requirement.
- The project development shall be as per CRZ requirements and specifications.

The reconstruction of road has been planned as per IRC guidelines and CRZ guidelines.



**Figure 6: Proposed Zoning Plan**

## SCOPE OF WORKS

Brief scope of works is outlined as follows:

- Carrying out detailed surveys such as topographic, measured drawings, geotechnical surveys, etc.
- Overall development of the Site.
- Project will rejuvenate a 4.5km stretch starts from Acharya Harihar square to NH316 which includes Pathways, pavement, road junctions, roundabout, street furniture, crossover junctions surface level parking and beach front.
- Providing MLCP near Acharya Harihar square /round about, Jatrika 01 & 02 as a solution for parking problems along the stretch.
- For Beach front development, Entry Plaza, Pathways, furniture, gabion wall for erosion control, planting palms and ground retaining plants like Ipomoea etc. is introduced.
- Vendor Plaza/cluster: Around 662 vendor spaces need to be catered and as per CRZ norms a typical vendor cluster need to be design as a module for define locations.
- Promoting local Arts and crafts; regional and local art in the form of metal sculpture, sand art, stone sculptures, artwork street furniture etc. will be placed in various location along the stretch.
- Electrical works including Street Lighting, focus lighting for artwork and trees at strategic locations and accent light to enhance the visual experience at night.

- Landscaping- hardscape and softscape works by using hardy and sustainable materials and indigenous regional planting species.
- Existing ROW and pathway width are retained as per the survey, with an intend to enhance the driving as well pedestrian experience with proper demarcations and safety measures.
- Introduction of gabion wall all along the stretch for sand erosion control and strengthening of existing retaining wall.
- Aarti platforms for religious activities.
- Concrete bollards for controlled entry.
- Facilities like water ATM, watch towers, thatch umbrellas etc at beach.
- Floating Jetty for water sports.
- Water supply and sewerage including saucer drains along the road, plumbing & sanitary installations in the Bio-Toilets provided in vendor zones.
- Landscaping work with street furniture like benches and dustbins.
- Development of pedestrian areas.
- Installation of Signages.
- Dismantling work in necessary places
- Provision of HDPE ducts for OFC network required as per Smart Solution requirements.
- Provision of Water supply – Laying of 2.4km 100mm HDPE pipeline along the beach side and provision of Service connection to toilet blocks in vending plaza clusters.
- Provision of screen chambers at the drains connecting to the Beach Road Storm water drain.
- Provision of 1200mm NP4 RCC Hume pipe for road crossing of storm water drain.
- Lifting of manholes for existing sewerage network.

## 4.0 COST ESTIMATE

Refer to Annexure of Block Cost estimate for the cost estimate of the project.

**Beach Road Development and Extension which Includes Jatrika Parking 1 & 2 ,  
MLCP at Digabareni and 2 acre Surface parking at Sipasurubull**

S.No.	Description of works	Amount
A	Beach Road Development and Extension	₹ 71,08,39,315.86
B	Jatrika Parking	₹ 8,28,49,703.99
C	Surface Parking at Sipasurubull (2.0 Acres)	₹ 3,50,15,647.90
D	Multilevel Car Parking (MLCP) (B+G+3) at Digabareni, Puri	₹ 32,44,68,368.29
E	Architectural Art Work and Murals	₹ 3,43,00,000.00
	<b>Total (F = A+B+C+D+E)</b>	<b>₹ 1,18,74,73,036.03</b>
	<b>Amount Put to Tender (G = F-E)</b>	<b>₹ 1,15,31,73,036.03</b>
	<b>GST @12% of F (H)</b>	<b>₹ 14,24,96,764.32</b>
	Add Corporation Supervision charge@8% of F (I)	₹ 9,49,97,842.88
	<b>Grand Total (J = F+H+I)</b>	<b>₹ 1,42,49,67,643.23</b>
	<b>Say</b>	<b>142.5 Crore</b>

Project Manager  
Puri Project Division - I  
OBCC Ltd.

Project Manager  
Puri Project Division - I  
OBCC Ltd.

Sr. Project Manager  
Puri Project Division - I  
OBCC Ltd.

Technically approved for an amount of RS. 142,49,67,643  
(Rupees One Hundred Forty-two Crores Forty Nine Lakhs Sixty-Seven  
Thousand Six Hundred Forty-Three) Only .

Chief General Manager - I  
OBCC Ltd.  
Bhubaneswar

04.10.2021

EIC-cum-Managing Director  
OBCC Ltd.  
Bhubaneswar

4/121

Beach Road Development and Extension		
S.N.O	Description	Amount (In Rupees)
A	Civil Works	12,70,71,767.68
B	Storm water drainage and Biogester tank	1,25,58,754.26
C	Electrical Works	10,52,65,450.89
D	Plantation	2,04,26,478.02
E	Non SOR and Others	44,55,16,865.00
	<b>TOTAL (F=A+B+C+D+E)</b>	<b>71,08,39,315.86</b>
	<b>Add corporation Charges (G = 8% of F)</b>	<b>5,68,67,145.27</b>
	<b>Add GST (H = 12% of F)</b>	<b>8,53,00,717.90</b>
	<b>Grand Total (I = F+G+H))</b>	<b>85,30,07,179.03</b>
	<b>Say</b>	<b>85.3 Crore</b>

Project Manager  
 Puri Project Division - I  
 OBCC Ltd.

Project Manager  
 Puri Project Division - I  
 OBCC Ltd.

Sr. Project Manager  
 Puri Project Division - I  
 OBCC Ltd.

BILL OF QUANTITIES - Beach Road Development and Extension						
CATEGORY : CIVIL						
SL. No.	DESCRIPTION	UOM	Total Qty	Rate (Rs.)	Amount (Rs.)	Reference
<b>1.0</b>	<b>DISMANTLING</b>					
1.1	Dismantling brick or stone masonry in lime or cement mortar under 3. m height including stacking the useful materials for reuse and removing the debris with in 50. m Lead.	Cum	297.16	1,084.96	3,22,407.02	Odisha rate analysis
1.2	Sacrificing the existing bituminous road surface to a depth of 50 mm and disposal of scarified material with in all lifts and lead upto 1000 metres.					
1.1.1	For existing Bitumen Pavement	sqm	7690.00	3.60	27,684.00	RA
1.3	Dismantling & removing RCC columns, beams, slab, staircase landing, lintels including stacking the useful materials for reuse and removing the debris with in 50. m Lead. (per 1 Cum.)	Cum	1,135.70	1,153.37	13,09,882.13	Odisha rate analysis
1.4	Dismantling & removing old tile flooring including removing the base course and stacking the useful materials for reuse and removing the debris with in 50. m Lead.					
1.4.1	For existing footpath	Sqm	1,868.00	97.10	1,81,385.42	Odisha rate analysis
1.5	Taking out existing kerb stones of all types from footpath/ central verge, including removal of mortar etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.	M	2,670.00	13.73	36,654.77	RA
1.6	Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.	sqm	2,802.00	46.07	1,29,099.60	RA
<b>2.0</b>	<b>DISPOSAL</b>					
2.1	Removal of dismantled material up to a distance of 5km by mechanical means	cum	1,634.79	151.17	2,47,126.56	Odisha rate analysis
<b>3.0</b>	<b>Earth work</b>					
3.1	Earth work in excavation in ordinary soil within 50m, initial lead and 1.5m, initial lift including rough dressing and breaking clods to maximum 5cm to 7cm and laying in layers not exceeding 0.3m in depth and as per direction of the Engineer-in-charge	Cum	255.60	138.71	35,454.19	Odisha rate analysis
3.2	Filling in foundation and plinth with excavated materials moorum including watering and ramming as directed by the Engineer-in-charge of earth work etc.	Cum	89.88	114.04	10,248.95	Odisha rate analysis
<b>4.0</b>	<b>PCC</b>					
4.1	Cement concrete (1:3:6) with 40 mm size hard granite metal (per Cum)	cum	84.34	4,696.90	3,96,135.05	Odisha rate analysis
<b>5.0</b>	<b>Cast in Situ Cement Concrete M20 Kerb</b>					
5.1	Construction of cement concrete kerb with top and bottom width 115 and 165 mm respectively, 250 mm high in M 20 grade PCC on M-10 grade foundation 150 mm thick, foundation having 50 mm projection beyond kerb stone, kerb stone laid with kerb laying machine, foundation concrete laid manually, all complete as per clause 408					
a	Footpath	m	12,405.00	270.37	33,53,913.20	RA
b	Mountable kerb	m	450.00	270.37	1,21,665.53	RA
<b>6.0</b>	<b>Stone cladding &amp; COPPING</b>					
	Cladding					

BILL OF QUANTITIES - Beach Road Development and Extension						
CATEGORY : CIVIL						
SL. No.	DESCRIPTION	UOM	Total Qty	Rate (Rs.)	Amount (Rs.)	Reference
6.1	Granite work (polished and machine cut) of thickness 20 mm for wall lining (veneer work), backing filled with a grout of average 12 mm thick in cement mortar 1:3 (1 cement : 3 coarse sand), including pointing with white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment to match the granite shade.	sqm	129.66	3,500.36	4,53,856.18	RA
	<b>copping</b>					
6.2	Providing and fixing 40 mm thick mirror polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills, facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete.	sqm	41.26	4,092.02	1,68,820.34	RA
7.0	<b>Road work &amp; Pathway</b>					
7.2	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver in sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density.	Cum	1,988.95	1,544.20	30,71,336.59	RA
7.3	Supplying of 75-100mm thick Granite cobble stone of approved shade on site					
7.3.1	Natural Finish	sqm	19,413.00	2,520.00	4,89,20,760.00	Quotation
7.4	Laying and fixing 75-100mm thick Granite cobble stone, for paving in floors, drains , footpath, etc. laid over 20mm thick base mortar 1:4 (1 cement : 4 coarse sand) with joints 10mm wide filled with same mortar including ruled pointing etc. complete as per direction of engineer-in-charge.	sqm	19,413.00	460.42	89,38,044.42	RA
7.5	Supplying of 40mm thick Flamed granite stone of approved shade on site					Quotation
7.5.1	for Footpath & Entry Plaza	sqm	800.00	2,798.71	22,38,966.63	
7.6	Fitting and fixing Granite Slab (0.4 to 1.00 Sqm ) in floors of approved make laid on 20mm thick C.M (1:4) & filling joints with white cement of approved quality including cost of all materials, takes labour T&P etc required for the work.					
7.6.1	for Footpath & Entry Plaza	sqm	800.00	293.81	2,35,051.98	RA
7.7	Construction of granular sub-base by providing coarse graded material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per clause 401.					
7.7.1	for Footpath & Entry Plaza	cum	1,387.95	1,721.00	23,88,661.95	RA
8.0	<b>Road marking</b>					
8.1	Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 .The finished surface to be level, uniform and free from streaks and holes.	Sqm	2,907.25	495.13	14,39,463.71	RA
9.0	<b>Bollard</b>					
9.1	Providing and fixing RCC bollard of M25 grade with 200mm diameter and 1 m height on 200mm thick cement concrete (1:3:6) base including cost of labour and material.	Nos	476.00	872.17	4,15,152.37	RA
10.0	<b>GABION WALL</b>					

BILL OF QUANTITIES -Beach Road Development and Extension						
CATEGORY : CIVIL						
SL. No.	DESCRIPTION	UOM	Total Qty	Rate (Rs.)	Amount (Rs.)	Reference
10.1	Construction of Gabion wall as per the design section, the Gabions used shall be hot-deeped galvanized ( <b>HEAVY GALVANIZED 250 GSM +</b> ), double twisted, hexagonal shaped with mesh opening size 10 x 12 cm Zinc + PVC coating. Back fill side of gabion wall shall be followed by Geotextile sheet. The stones shall be having minimum crushing strength of 20 KN and 90 % size of stone shall range between 150mm – 300mm. The cost includes supply of gabion material, inspection of work and installation cost only.	cum	25,080.00	1,079.00	2,70,61,320.00	Quotation
11.0	<b>Paver at landscaping on beach side</b>					
11.1	Providing and laying Paver Block of size 60mm thick of M35 grade and approved make variety colour and size made by Block making machine with strong vibratory compaction of approved design and shape, laid in required colour including cost, conveyance, royalty, labour, T&P etc. complete as per direction of EIC.	Sqm	690.20	716.70	4,94,667.20	Odisha rate analysis
12.0	<b>Speed breaker</b>					
12.1	Dual direction speed breaker having high intensity cube corner reflector ultrasonic welded to high impact resistant ABS plastic body of color yellow and black of size 250x345x50mm (height) provided with 4 steel nails, shape of the side body to have interlocking pattern to keep all speed breakers in a row. Cat- Part no, GPL-07-06 Make Greens/Greenlite or equivalent.	m	339.00	4,637.68	15,72,173.91	Quotation
13.0	<b>Brick work</b>					
13.1	Brick work with Flyash bricks in C.M(1:4) in Foundation & Plinth (per one Cum) 23x11x8cm	cum	56.80	4,504.90	2,55,881.70	Odisha rate analysis
14.0	<b>Plastering</b>					
14.1	20 mm thick Cement Plaster(1:4)	Sqm	163.13	221.05	36,058.36	Odisha rate analysis
15.0	<b>RCC work, Form work and Steel</b>					
15.1	Reinforced Cement concrete work of M-25 grade concrete with 20 mm down graded crusher broken hard granite chips (per Cum)	Cum	18.55	5,262.91	97,606.01	Odisha rate analysis
15.2	Supplying, fitting and placing uncoated HYSD bar reinforcement complete as per drawing and technical specification.	MT	1.58	60,017.84	94,612.72	Odisha rate analysis
15.3	Rigid and smooth centering and shuttering for R.C.C. works including false works and dismantling then after casting including cost of materials complete in ground floor & different floors etc.					
a	R.C.C. floor and roof slabs, landings, balconies, projecting sun shades and chajjas	sqm	6.16	423.85	2,610.89	Odisha rate analysis
b	RCC Foundation and plinth band, footings, base of columns mass concrete etc.	sqm	99.00	100.55	9,954.00	Odisha rate analysis
16	<b>Railing</b>					
16.1	SS 316 RAILING AT ISLAND - : Supplying, fitting and fixing of stainless steel of 316 grade including jointing and bolting as per approved design and specification, buffing, polishing etc. with cost, conveyance, taxes of all materials, labor, T&P etc. required for the complete in all respect.					
	hollow section 50mm @3.1kg/rmt	kg	310.00	462.69	1,43,433.96	RA
	Baluster hollow section 33.4mm @2.1kg/rmt	kg	1,575.00	462.69	7,28,737.05	RA
17	<b>RCC pipe for service crossing</b>					
17.1	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2(1 cement : 2 fine sand) including testing of joints etc. complete :					

BILL OF QUANTITIES - Beach Road Development and Extension						
CATEGORY : CIVIL						
SL. No.	DESCRIPTION	UOM	Total Qty	Rate (Rs.)	Amount (Rs.)	Reference
	250 mm dia. R.C.C. pipe	m	330.00	563.33	1,85,900.33	RA
<b>18</b>	<b>Road Signage</b>					
18.1	SUPPLYING OF SIGN BOARDS 1) Providing retro-reflectorised cautionary, Mandatory and Informatory sign boards as per IRC. 67 made of high intensity grade sheeting vide clause no. 801.3 fixed over aluminium sheeting 1.5mm thick supported on a mild steel angle iron post 75 x 75mm x 6mm size firmly fixed to the ground by means of properly designed foundation with M 15 cement concrete 45 x 45cm x 60cm 60cm below ground level as per drawing as per approved drawing (Data book Page 213 Sr. No. 8.4 Unit- 1each Output 1no					
a	60cm size equilateral Triangles	nos	60.00	8,822.13	5,29,327.80	RA
b	60cm size Circular	nos	60.00	9,854.69	5,91,281.40	RA
<b>19</b>	<b>Chamber</b>					
19.1	Constructing masonry Chamber 90x90x100 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100 mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size ), i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size ) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :					
	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	nos	20.00	10,573.88	2,11,477.68	DAR2020-18.34.1-PG-1230
<b>20</b>	<b>DWC pipe</b>					
20.1	Supply and laying double walled corrugated (DWC) HDPE Pipe including all necessary connecting Sockets/Couplings/Tees/Bends/End-caps of same materials in existing trench as per IS 14930 part -II suitable for drawing underground cables. 120mm OD / 100mm ID	m	4,450.00	153.00	6,80,850.00	Quotation
<b>21</b>	<b>Water Supply</b>					
21.1	Dist Network (dia less than and upto 100mm)	m	2,400.00	1,161.00	27,86,400.00	Refer 5.4.1 of CPWD PAR2020
<b>22</b>	<b>Plot connections</b>					
22.1	Plot connections with 15MM dia CPVC pipe	nos	38.00	5,483.00	2,08,354.00	RA
<b>23</b>	<b>Boundary wall</b>					
23.1	Construction of boundary wall as per detail	m	112.00	17,743.85	19,87,310.79	RA
<b>24.0</b>	<b>SS-316 Screens for Drains</b>	kg	43.90	462.69	20,312.10	RA
<b>25.0</b>	<b>Precast perforated cover</b>					
25.1	Providing and fixing factory made precast RCC perforated drain covers, having concrete of strength not less than M-25, of size 1000 x 450x50 mm, reinforced with 8 mm dia four nos longitudinal & 9 nos cross sectional T.M.T. hoop bars, including providing 50 mm dia perforations @ 100 to 125 mm c/c, including providing edge binding with M.S. flats of size 50 mm x 1.6 mm complete, all as per direction of Engineer-in-charge.	sqm	890.00	856.56	7,62,340.63	DAR2020-23.9-PG-1579
<b>26.0</b>	<b>Grating</b>					
26.1	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15 cm diameter and weighing not less than 440 grams.	nos	224.00	36.52	8,180.00	DAR2020-12.44-PG-741

BILL OF QUANTITIES -Beach Road Development and Extension						
CATEGORY : CIVIL						
SL. No.	DESCRIPTION	UOM	Total Qty	Rate (Rs.)	Amount (Rs.)	Reference
27.0	Providing and laying bituminous concrete with 100-120 TPH batch type hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 5.4 to 5.6 per cent of mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 509 complete in all respects					
27.1	30mm BC Course	Cum	1,536.00	8,780.51	1,34,86,863.36	RA
27.2	5% extra BC Course for Profile Correction	Cum	76.80	8,780.51	6,74,343.17	RA
<b>TOTAL FOR CIVIL WOKS (Rs.)</b>					<b>12,70,71,767.68</b>	

CIVIL - BEACHFRONT MEASUREMENT SHEET								
S. NO.	Particular	L	B	H	Nos.	Quantity	Unit	Remarks
	EXISTING ENTRY ON BEACH SIDE	2.5			40			Considering AVG length 2.5m
1	dismantle							
1.1	RCC							
a	Existing RW wall	3745	0.45	0.60		1011.15	CUM	
b	Colum of social welfare building					18.36	CUM	
c	Beam of social welfare building					16.96	CUM	
d	Slab of social welfare building					89.23	CUM	
1.2 A	<b>Brick work</b>					169.64	CUM	
1.3A	ROUND ABOUT	11	0.6	0.23		1.52		
1.2 B	Existing steps	1.26		2.50	40	126.00	CUM	
						<b>297.16</b>	CUM	
1.2	Scarifying Bitumen pavement	7690	Sqm			7690.00	sqm	
	in cum	7690	Sqm	0.05		384.50	cum	
1.3	Footpath with tile	1868	SQM			1868.00	sqm	Considering 40% of existing footpath
	Footpath with paver	2802	SQM			2802.00	sqm	Considering 60% of existing footpath
	in cum	4670	SQM	0.05		233.50	cum	Assuming 50 mm thickness
1.4	Kerb							
a	Beach side	1335	0.3	0.15		60.08	cum	Considering, 30% of total new kerb stone on beach side
b	Opposite side	1335	0.3	0.15		60.08	cum	Considering 30% of total new kerb stone on beach side
2	Disposal					<b>1634.79</b>	<b>CUM</b>	Considering 20% to be reused
3	earth work							
3.1	Earth work in excavation for widening							
a	For planting wall without seating	11.6	0.63	0.6	2	8.77	CUM	Working space
b	For planting wall with seating	8.5	0.63	0.6	6	19.28	CUM	
c	For island	100	0.63	0.6		37.80	CUM	
d	Pipe	330	0.5	1.15		189.75	CUM	
					<b>Total</b>	<b>255.60</b>	<b>CUM</b>	
3.2	Backfill							
b	For planting wall without seating	11.6	0.4	0.4	2	3.712	CUM	
	For planting wall with seating	8.5	0.4	0.4	6	8.16	CUM	
c	For island	21.576	0.4	0.4		3.45	CUM	
d	Pipe	330	0.5	0.55		74.55	CUM	
					<b>Total</b>	<b>89.88</b>	<b>CUM</b>	

CIVIL - BEACHFRONT MEASUREMENT SHEET								
S. NO.	Particular	L	B	H	Nos.	Quantity	Unit	Remarks
4	PCC Work							
c	Entry plaza	800	Sqm	0.075		60.00	CUM	
d.1	PCC coping at island wall top	100	0.28	0.04		1.12	CUM	PCC projection
d	PCC base of wall at island	100	0.2	0.43		8.60	CUM	
e	PCC base of Planting wall without seating	11.6	0.43	0.2	2	2.00	CUM	
e	PCC base of Planting wall with seating	8.5	0.43	0.2	6	4.39	CUM	Considering 10 % as provisional
f	PCC coping at planting wall with seating	8.5	0.28	0.04	6	0.57	CUM	
	TOTAL					<b>84.34</b>	<b>CUM</b>	
5	KERB							On complete length
5.1	Footpath edge							
a	Beachfront side	4450				4450	m	at entry
b	Opposite beachfront side	7955				7955	m	
5.2	Mountable kerb	450				450	m	
							m	
6	stone cladding							
7.1	Cladding 20 thick granite stone							
a	Planting wall with seating at entry plaza	9.2	0.6		6	33.12		
b	Planting wall without seating at entry plaza	11.6	0.6		2	13.92	Sqm	
c	Round about at harihar chowk	37.7	0.6		1	22.62	Sqm	
d	At island wall chaitanya mahaprabhu	100	0.6			60.00	Sqm	
	<b>Total</b>					<b>129.66</b>	Sqm	
7.2	40 thick Copping						<b>Sqm</b>	
c	For seating on planter	11.2	0.5		6	33.60		
d	Planting wall without seating at entry plaza	11.6	0.33		2	7.66	Sqm	
	<b>Total</b>					<b>41.26</b>		
							<b>CUM</b>	
7	Road work & Pathway							
	<b>Total road area</b>	62925	SQM					
	<b>Total footpath area INCLUDING EXISTING</b>	4450	2.5			11125		
	<b>Existing Foot path area</b>	4670	SQM				sqm	
	<b>Parking</b>	2371.7	SQM					Opposite to beach side
	<b>Plot Entry area</b>	1400	SQM					
	<b>Entry Plaza Flamed granite</b>	800	SQM					
	<b>Entry Plaza cobble</b>	598	SQM					
	<b>Junction</b>	7690	SQM					
	<b>WMM</b>							
7.1 a	For Pavement at junciton	7690	SQM	0.075		576.75	CUM	
b	Entry plaza	598	SQM	0.15		89.70	CUM	For profile correction
c	For plot entry	1400	SQM	0.15		210.00	CUM	

CIVIL - BEACHFRONT MEASUREMENT SHEET								
S. NO.	Particular	L	B	H	Nos.	Quantity	Unit	Remarks
d	For Footpath	11125	SQM	0.1		1112.50	CUM	
	Total					<b>1988.95</b>	CUM	
							<b>CUM</b>	
7.2	<b>GSB</b>							
a	GSB for footpath	6455	SQM	0.15		968.25	CUM	
b	Entry plaza	1398	SQM	0.15		209.70	CUM	
d	For entry	1400	SQM	0.15		210.00		
e	Total					<b>1387.95</b>	<b>CUM</b>	
7.3	<b>cobble</b>							
a	<b>Natural finish</b>							
	For road	<b>7690</b>				<b>7690.00</b>	<b>sqm</b>	
	For plaza	<b>598</b>				<b>598.00</b>	<b>sqm</b>	
	for footpath	<b>11125</b>				<b>11125.00</b>	<b>sqm</b>	
	Total					<b>19413.00</b>	<b>sqm</b>	
	<b>Total</b>						<b>Sqm</b>	
	40 thick flamed granite stone (M-35)							
b	Entry plaza	800	sqm			800.00	Sqm	
						<b>800.00</b>	<b>Sqm</b>	
8	Road marking							
	Pedestrian crossing	0.5	2		530	530	sqm	
8.1	Stop line	300	0.2			60	sqm	
8.2	Road edge line	9200	0.15			1380	sqm	
8.3	Dashed center line	625	0.15			93.75	sqm	
8.4	Doubled center line	4430	0.15			664.5	sqm	
8.5	Direction Arrows							
a	Straight and Left turn arrow	1.05	sqm		80	84	sqm	
b	Straight	0.76	sqm		125	95	sqm	
	Total					<b>2907.25</b>	<b>sqm</b>	
9	<b>BOLLARD</b>							
	Bollard					<b>476</b>	<b>nos</b>	
10	Gabion							
	Total area	12540	sqm	2		25080	cum	
								Considering average 2m height
	Total					25080	cum	
11	Paver on beach side along the plantation edge							
11.1	Paver for landscape at beach side	3451	0.2			690.2	sqm	
					total	<b>690.2</b>	<b>sqm</b>	
12	Speed breaker						<b>m</b>	
12.1	Speed breaker	113			3	<b>339</b>		
13	Brick Work							
13.1	For island	100	M					
	QTY for island	100	0.23	1.2		27.6	cum	

CIVIL - BEACHFRONT MEASUREMENT SHEET								
S. NO.	Particular	L	B	H	Nos.	Quantity	Unit	Remarks
13.3	Round about	37.7	0.23	0.6		5.2026		
13.2	For planter with seating	8.5	0.23	1.5	6	17.595	cum	
	For planter without seating	11.6	0.23	1.2	2	6.4032	cum	
	Total					<b>56.8008</b>	<b>cum</b>	
14	Plastering work							
14.1	For island wall	60	sqm			60.00	sqm	
14.2	For planter with seating	66.72	sqm			66.72	sqm	
14.3	For planter without seating	21.576	sqm			21.58	sqm	
	Total					<b>163.13</b>	<b>sqm</b>	
15	RCC work, Steel and formwork							
13.1	RCC							
a	RCC slab for seating support	11.2	0.5	0.1	6	3.70	cum	Considering additional 10 percent as provisional
b	Bedding for crossing	330	0.3	0.15		14.85	cum	
					Total	<b>18.55</b>	<b>cum</b>	
13.2	Steel					<b>1576.41</b>	<b>kg</b>	
13.2	Form work							
a	RCC slab for seating support	11.2	0.5			6.16	sqm	
b	Crossing	330	0.15		2	99.00	sqm	
					Total	<b>105.16</b>	<b>sqm</b>	80kg/cum (1%)
16	Stainless steel railing							
16.1	Inclined hollow section 50mm @3.1kg/rmt	100	3.1			310	kg	
16.2	Baluster hollow section 33.4mm @2.1kg/rmt	750	2.1			1575	kg	
17	NP3 pipe with RCC Bedding							
	Total length	330	m	0.25	dia			
17.1	Pipe of dia 250mm	330				330	m	balusters 100mm center to center and 750mm height
18	Road signage							
18.1	Signage							
	circular	3	Nos			20	60	Nos
	Triangular	3	Nos			20	60	Nos
								20 number of juctions
19	Chamber							
19.1	Chamber					20	Nos	
20	DWC pipe					4450	m	Total 10 crossings
21	Water Supply					2400	m	
22	Connection					38	nos	
23	Boundary wall					112	m	
24	Screen for Drains							
	Coarse Screen			Wt/m	No.			
	0.5mX0.6m	8.2		0.5	1	4.1	Kg	
	0.3mX0.6m	5.4		0.5	2	5.4	Kg	
	0.7mX0.6m	13.4		0.5	1	6.7	Kg	
	Fine Screen							

CIVIL - BEACHFRONT MEASUREMENT SHEET								
S. NO.	Particular	L	B	H	Nos.	Quantity	Unit	Remarks
	0.5mX0.6m	14.2		0.5	1	7.1	Kg	
	0.3mX0.6m	9		0.5	2	9	Kg	
	0.7mX0.6m	23.2		0.5	1	11.6	Kg	
	Total					43.9		
							sqm	
24	Precast cover	445	2			890	nos	
25	Grating for drain	112			2	224		Considering 10 % of length and 2 m width
26	Bituminous concrete						CUM	
A	BC	51200		0.03		1536	CUM	
B	5% extra for profile correction					76.8	CUM	

Cobble and Granite Stone Analysis							
S.NO.	Stone mat	L	B	Per piece rate	No of pieces in 1 sqm	Cost 1 sqm	Reducing 10% for mortar grooves
1	Natural finish cobble stone	0.1	0.1	28	100.00	2800	2520
3							
S.NO.	Stone mat	Per sqft	per sqmt				
1	Flamed granite stone	260	2798.71				

COST ESTIMATE FOR WATER SUPPLY DISTRIBUTION WORKS										
Measurement sheet for Connections-15 mm										
Sl. No.	Item Description	Unit	No	L	W	D	Qty	Rate in INR	Amount in INR	Rate Reference
1	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m :									DSR'2018, Sec 2.0, Item No 2.10.1, Pg No 77
	Distribution Pipe	Rmt		10			10	199	₹ 1,991.07	
2	Brass Ferrule as per IS 319 grade of sizes 15mm, 20mm and 25mm size and threaded as per IS :554 BSPT, ISO:7-1 to suit the corresponding bore sizes of 15mm, 20mm and 25mm dia size (1/2", 3/4" and 1") in the saddle Connection, as per IS:1554 BSPT, ISO:7-1									
	15mm	No	1				1	128	₹ 128.00	TWAD page no. 52 item no. 3(i)
3	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings This includes jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling & testing of joints complete as per direction of Engineer in Charge.									DSR'2018, Sec 18.0, Item No 18.9, Pg No 334
	15mm CPVC Pipe	Rmt		10			10	181	₹ 1,811.16	
4	Poly Propylene compression Female ThreadedAdaptor with metal insert of SS 304 as per standards ISO 14236 and Tested as per BS 6920 in WRC-NSF LTD, UK for connecting 15mm, 20mm and 25mm outlet points of Brass ferrule of sizes 15mm, 20mm and 25mm respectively.									
	Female Adaptor-20mm	No	1				1	106.00	₹ 106.00	TWAD page 53 item no. 3(ii)
5	U PVC ball valve with one side compression end and other side female end as per ISO 4422-4 and Tested as per BS 6920 in WRC-NSF LTD, UK,size : 20mm ODx1/2"ID, 25mm ODX1/2"ID and 32mm OD X 3/4" ID									
	20mm	No	1				1	106.00	₹ 106.00	TWAD page 53 item no. 3(vii)
6	Poly propylene 90 Degree Compression elbow with compression joint at both ends as per standards ISO 14236 and Tested as per BS 6920 in WRCNSF LTD, UK suitable for 20mm, 25mm and 32mm OD CPVC pipes									
	20mm	No	1				1	60.00	₹ 60.00	TWAD page 53. item no. 3(iii)

COST ESTIMATE FOR WATER SUPPLY DISTRIBUTION WORKS										
Measurement sheet for Connections-15 mm										
Sl. No.	Item Description	Unit	No	L	W	D	Qty	Rate in INR	Amount in INR	Rate Reference
7	Poly Propylene compression Female Threaded Elbow with metal insert of SS 304 as per standards ISO 14236 and Tested as per BS 6920 in WRC-NSF LTD, UK suitable for 20mm, 25mm and 32mm OD CPVC pipes									
	20mm	No	1				1	106	₹ 106.00	TWAD page 53. item no. 3(iv)
8	Poly Propylene compression Male Threaded Adaptor with metal insert of SS 304 as per standards ISO 14236 and Tested as per BS 6920 in WRC-NSF LTD, UK suitable for 20mm, 25mm and 32mm OD CPVC pipes									
	20mm	No	1				1	102	₹ 102.00	TWAD page 53. item no. 3(v)

COST ESTIMATE FOR WATER SUPPLY DISTRIBUTION WORKS										
Measurement sheet for Connections-15 mm										
Sl. No.	Item Description	Unit	No	L	W	D	Qty	Rate in INR	Amount in INR	Rate Reference
9	Electrofusion tapping saddle PE 80 blue, PN 12.5 with female threaded metal insert of SS 304 as per standards BS EN 12201 tested as per BS 6920 for drinking water in WRC-NSF Ltd, UK. (Non Wrap with top loading type). Sizes:63mm to 315mm dia distribution HDPE pipes.									
	20mm	No	1				1	489.00	₹ 489.00	TWAD Page No. 52 item no. 1
10	Dismantling stone masonry in lime or cement including stacking the materials as directed with all leads lifts complete									PWD DSR13-14 P/I-115/14 RS. $150+150*10\% = 165$
	Compound wall	Cum	1	0.3	0.3	0.3	0.03	134.00	₹ 3.98	
11	Dismantling the RCC work 1:2:4 and sorting out the materials such as steel etc as directed and stacking them with the specified leads as directed									PWD DSR13-14 P/I-115/23 RS. $570+570*10\% = 627$
	RCC Gutter	Cum	2	0.3	0.3	0.3	0.05	509	₹ 30.23	
12	Supply and delivery of protection box of size 20cm x 30cm for fixing of Water Meter. The box should be rectangular base in construction and material of construction should be weather resistant polyethylene (PE) blue /block .Reinforcement rips should be provided at the walls of the box. Box should be at two components comprising body and lid. Lid should be press fitted to the body. No hinges should be used for opened /closed. Operation meter box should be provided with built in lock. The body as inlet and outlet windows to pass the pipe through suitable for use with pipes of sizes up to 1" .Base of the box should be designed in such a way That the box can be installed to the floor/wall using anchor Bolts / screws without grouting the entire base of the meter Box. Provision for fixing Name plate showing the name of the Department etc., complete and as directed by the Engineer	No	1			1	1	550	₹ 550.00	TWAD page 54 item no. 3(ix)
	<b>Total per Connection for 15mm CPVC</b>								<b>₹ 5,483.00</b>	

BILL OF QUANTITIES - ENTRY PLAZA- BOUNDARY WALL FOR 40M LENGTH						
CATEGORY : CIVIL						
SL. No.	DESCRIPTION	UOM	QTY	Rate (Rs.)	Amount (Rs.)	Reference
<b>1.0</b>	<b>Earth work</b>					
1.1	Earth work in excavation in ordinary soil within 50m, initial lead and 1.5m, initial lift including rough dressing and breaking clods to maximum 5cm to 7cm and laying in layers not exceeding 0.3m in depth and as per direction of the Engineer-in-charge (per 100 Cum.)					
<b>1.1.1</b>	For foundation	Cum	<b>80.47</b>	<b>138.71</b>	<b>11,162.04</b>	Odisha rate analysis
1.2	Filling in foundation and plinth with excavated materials moorum including watering and ramming as directed by the Engineer-in-charge of earth work etc.	Cum	<b>39.92</b>	<b>114.04</b>	<b>4,552.48</b>	Odisha rate analysis
<b>2.0</b>	<b>PCC</b>					
2.1	Provide and Laying in position plain cement concrete of specified grade in raft, bases of column footings, brick wall footing, base of floor, as screed over areas to make up levels or to form slopes, laid to required levels and grade at all locations and levels, consolidated finished fair and cured.					
<b>2.1.1</b>	Cement concrete (1:3:6) with 40 mm size hard granite metal (per Cum)					
a	For foundation	Cum	<b>5.89</b>	<b>4,696.90</b>	<b>27,667.10</b>	Odisha rate analysis
<b>3.0</b>	<b>RCC work</b>					
3.1	Reinforced Cement concrete work of M-25 grade concrete with 20 mm down graded crusher broken hard granite chips (per Cum)					
a	For foundation	Cum	<b>15.07</b>	<b>5,262.91</b>	<b>79,291.07</b>	Odisha rate analysis
b	For column	Cum	<b>4.32</b>	<b>5,262.91</b>	<b>22,735.79</b>	Odisha rate analysis
c	For RCC wall	Cum	<b>19.15</b>	<b>5,262.91</b>	<b>1,00,795.34</b>	Odisha rate analysis
<b>4.0</b>	<b>Steel Work</b>					
4.1	Supplying, fitting and placing uncoated HYSD bar reinforcement complete as per drawing and technical specification.	MT	<b>3.28</b>	<b>60,017.84</b>	<b>1,96,602.24</b>	Odisha rate analysis
<b>5.0</b>	<b>Form Work</b>					
5.1	Rigid and smooth centering and shuttering for R.C.C. works including false works and dismantling then after casting including cost of materials complete in ground floor & different floors etc.					
<b>5.1.1</b>	RCC Foundation and plinth band, footings, base of columns mass concrete etc.					Odisha rate analysis
a	For RCC foundation and PCC	sqm	<b>33.24</b>	<b>100.55</b>	<b>3,342.13</b>	
<b>5.1.2</b>	RCC Walls & fins including attached pilaster					Odisha rate analysis
a	For RCC wall and Column	sqm	<b>146.16</b>	<b>620.25</b>	<b>90,655.90</b>	
<b>6.0</b>	<b>Plastering</b>					
6.1	20 mm thick Cement Plaster(1:4)	Sqm	<b>271.96</b>	<b>221.05</b>	<b>60,115.62</b>	Odisha rate analysis
<b>7.0</b>	<b>Brickwork</b>					
7.1	Brick work with Flyash bricks in C.M(1:6) in Foundation & Plinth (per one Cum) 23x11x8cm	Cum	<b>25.05</b>	<b>4,504.90</b>	<b>1,12,834.13</b>	Odisha rate analysis
<b>TOTAL FOR CIVIL WOKS (Rs.)</b>					<b>7,09,753.85</b>	
<b>TOTAL FOR CIVIL WOKS PER METER LENGTH (Rs.)</b>					<b>17,743.85</b>	



6.1	Wall	36.3	3	0.23	1	25.047	CUM	
<b>7</b>	<b>Plastering</b>							
7.1	Brick wall							
	on face	36.3	3		2	217.8	Sqm	
	on top	36.3	0.23		1	8.349	Sqm	
7.2	column							
a	column on 0.3 face	3	0.6		12	21.6	Sqm	
	column on 0.4 face	3	0.34		12	12.24	Sqm	
7.3	RC Wall 300mm h	39.9	0.3		<b>1</b>	11.97	Sqm	
		Total				<b>271.959</b>	Sqm	

**PgMC FOR VARIOUS PROJECTS IN PURI**  
**Cost Estimate for Catch Basin, Saucer Drain, Cross Drainage & Bio Digester for Beach front**

Sl. No.	Reference	Description	Qty	Unit	Rate (Rs.)	Amount (Rs.)
<b>1.0 EXCAVATION &amp; EARTHWORK</b>						
	Oddisha Bulding Rate Anaysis -Earth work . itme no: 1A	Earth work in ordinary soil within 50m. Initial lead and 1.5m initial lift including rough dressing and breaking clods to maximum 5cm to 7cm laying in layers not exceeding 0.3m in depth and as per the direction of the Engineer-in-charge . Earth work excavation of foundation in ordinary soil	808	CUM	138.71	112097.89
	<b>Sub total</b>					
	<b>2.0 FOR Catch Basin</b>					
	DSR- VOL -2. CODE 19.30 (PG. No-369.)	Constructing brick masonry chamber for underground C.I. inspection chamber and bends with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg), R.C.C. top slab with 1:1.5:3 mix (1 cement : 1.5 Fine sand : 3 graded stone aggregate 20 mm nominal size), foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand), finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design:				
		Inside dimensions 450x610 mm and 45 cm deep				
	DSR-19.30.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	480.00	each	5412.46	2597978.57
		Extra for depth beyond 45 cm of brick masonry chamber				
	DSR-19.31.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	96.00	metre	3315.83	318320.00
	<b>Sub total</b>					
	<b>3.0 UPVC connecting pipe from catch basin to drain</b>					
	DSR- VOL -2. Item-19.27 (PG. No-396.)	PVC blind pipe 200 mm dia as per IS: 12818	320	RM	703.68	225177.14
	<b>Sub total</b>					
4.0	Cross Drainage Works	Cross drainage works (closed conduit)				
	DSR-vol-1	Providing and laying Non Pressure NP-4 class (Heavy duty) R.C.C. pipes including collars/spigot jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete	120	RM	8082.30	969876.12
	<b>Sub total</b>					
4.0	<b>Precast Saucer Drain</b>					
	Vendor Quotation	Precast Saucer drain with Dimension 600X300X75mm	16353	Nos	250.00	4088333.33
	<b>Sub total</b>					
5.0	SVM	Fiber Reinforced plastic Bio-Digester Tank(2000 ltr) for beach side toilet	76	Nos	48000.00	3648000.00
	DSR-vol-1(page-42)	PVC blind pipe 200 mm dia as per IS: 12818(for outlet connection from bio-digester tank)	760	metre	788.12	598971.20
	<b>Sub Total</b>					
	<b>Total =</b>					
	<b>12558754.3</b>					

Project Manager  
Puri Project Division - I  
OBCC Ltd.

Project Manager  
Puri Project Division - I  
OBCC Ltd.

Sr. Project Manager  
Puri Project Division - I  
OBCC Ltd.

Puri Pgmc STROM WATER TRENCH COST ESTIMATE AT BEACH FRONT										
		Unit	No	L	B/T	H			w	d
								Drain Size	0.5	0.5
	Wall -W1	m	1	1	0.1	0.50				
	Wall -W2	m	1	1	0.1	0.50				
	Raft	m	1	1	0.7	0.15				
	Excavated Pit	m	1	1	0.8	0.80				
	Slab-S1	m	1	1	0.7	0.15				
SI No	Item Description	Unit	No	L (m)	B (m)	H (m)	Qty	UNIT RATE (in Rs.)	AMOUNT (In Rs.)	Reference
1	Excavation									
1.1	Excavation for all types and sizes of foundations, trenches and drains or for any other purpose including disposal of excavated stuff upto 1.5 m lift and lead upto 50m (at least 5m away from the excavated area), including dressing and leveling of pits.									Odisha-RA
	Strom drain Trenches	Cum	1	1	0.8	0.8	0.640			
1.1.1	In all types of soils.						0.7	₹ 115.59	₹ 80.91	
2	PCC- 100 mm thk									
2.1	Providing and laying nominal mix Plain Cement Concrete with crushed stone aggregate using concrete mixer in all works upto plinth level excluding cost of form work.									Odisha-RA
2.1.1	1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40mm nominal size).	Cum	1	1	0.9	0.1	0.090	₹ 4,559.08		
							Total=	0.10	₹ 4,559.08	₹ 455.91
3	RCC									
3.1	Providing and laying design mix Reinforced Cement Concrete with crushed graded stone aggregate 20mm nominal size using batching plant, transit mixer and concrete pump, in all works upto plinth level excluding cost of form work.									Odisha-RA
	Raft	Cum	1	1	0.7	0.15	0.105			
	Wall -W1	Cum	1	1	0.1	0.50	0.050			
	Wall -W2	Cum	1	1	0.1	0.50	0.050			
	Slab-S1	Cum	1	1	0.7	0.15	0.105			
3.2	M-25'Grade						Total=	0.400	₹ 5,050.56	₹ 2,020.22
5	Reinforcement									
5.1	Providing and placing in position reinforcement for R.C.C. work including straightening, cutting, bending, binding etc. complete as per drawings including cost of binding wire in foundation and plinth all complete									Odisha-RA
				Bar Dia	Spac ing	No.	Length	Qty		
1	Raft- Main Top & Bottom Reinforcement- T10@150 c/c	Kg	8	175	14.0	1.00	5.60			
2	Raft- Dist. Top & Bottom Reinforcement-T8@175 c/c	Kg	8	175	10.0	1.00	4.00			
3	Wall-1- Vertical- T10@150-C/C	Kg	8	150	16.0	1.30	8.30			
4	Wall-1- Horizon.-T8@175-C/C	Kg	8	175	8.0	1.00	3.20			
5	Wall-2-Vertical- T8@150-C/C	Kg	8	150	16.0	1.30	8.30			
6	Wall-2-Horizon.- T8@175-C/C	Kg	8	175	8.0	1.00	3.20			
9	Slab-1- Main Top & Bottom Reinforcement- T10@150 c/c	Kg	8	150	16.0	1.30	8.30			
10	Slab-1- Dist. Top & Bottom Reinforcement- T8@175 c/c	Kg	8	175	10.0	1.00	4.00			
5.2	Thermo-Mechanically treated bars FE 500D	Kg					Total=	44.9	₹ 60.43	₹ 2,713.44
	Total cost per m length=								₹ 5,270.48	

**Measurement Sheet-Storm Water**

S. NO.	Particular	L	B	H	Nos.	Quantity	Unit	Remarks
1	Excavation and earth work up tp 1.5 meters							
1.1	for catch basin	0.6	0.45	0.6	480	77.76	CUM	
1.2	for Saucer drain	10100	0.3	0.15	1	454.5	CUM	
1.3	Road crossing through closed conduit	15	1.8		8	275.88	Cum	
2	Bio Digester	2000 litr tank			46	48000		

Summarized Quantity of Storm Water Civil Works			
S. NO.	Particular	Unit	qty
1	Excavation and earth work up tp 1.5 meters		
1.1	for catch basin	CUM	77.76
1.2	for Saucer drain	CUM	454.5
1.3	for cross drainage	cum	275.88
			808.14

**BEACHFRONT DEVELOPMENT ,PURI  
COST ESTIMATION**

Sl. No	Description	UNIT	No.	QTY	RATE (INR)	AMOUNT	REFERENCE	Remark
<b>A SITE CLEANING, SOIL RESTORATION AND EARTHWORK</b>								
	Trenching in ordinary soil up to a depth of 60 cm including removal and stacking of serviceable materials and then disposing of surplus soil, by spreading and neatly levelling within a lead of 50 m and making up the trenched area to proper levels by filling with earth or earth mixed with sludge or / and manure before and after flooding trench with water (excluding cost of imported earth, sludge or manure).	cum	1	2,250	68.70	1,54,575.00	CPWD DSR 2018 / SH :B2 / item no : 2.1 / pg no 81	(Total area for landscape works) X (0.6).
<b>A.1</b>	<b>Rough dressing</b>							
	Rough dressing the trenched ground including breaking clods.	sqm	1	3,750	1.30	4,875.00	CPWD DSR 2018 / SH :B2 / item no : 2.5 / pg no 81	Total area for landscape works.
<b>A.2</b>	<b>Fine dressing</b>							
	Fine dressing of the ground	sqm	1	3,750	3.25	12,187.50	CPWD DSR 2018 / SH :B2 / item no : 2.7 / pg no 81	Total area for landscape works.
<b>A.3</b>	<b>Mixing and spreading of good soil and manure</b>							
	Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge	cum	1	2,250	32.1	72,225.00	CPWD DSR 2018 / SH :B2 / item no : 2.9 / pg no 81	(Total area for landscape works) X (0.6).
<b>B</b>	<b>SOFTSCAPE AND PLANTING</b>							
<b>B.1</b>	<b>Good garden soil</b>							
1	Supplying and stacking of good earth at site including royalty and carriage upto 5 km complete (earth measured in stacks will be reduced by 20% for payment	cum	1	2,250	469.50	10,56,375.00	CPWD DSR 2018 / SH :B2 / item no : 2.2 / pg no 87	(Total area for landscape works) X (0.3).
<b>B.2</b>	<b>Cow dung manure</b>							
1	Supplying and stacking of well decayed cattle manure at site including royalty and carriage upto 5 k.m. lead complete (cattle manure measured in stacks will reduced by 8% for Payment).	cum	1	188	230.45	43,209.38	CPWD DSR 2018 / SH :B2 / item no : 2.25 / pg no 85	5cum/100 sq.mt area
<b>B.4</b>	<b>Trees, Shrubs, Hedges and Groundcover plantation</b>							

B.4. 1	Digging holes in ordinary soil and refilling the same with the excavated earth mixed with manure or sludge in the ratio of 2:1 by volume (2 parts of stacked volume of earth after reduction by 20% : 1 part of stacked volume of manure after reduction by 8%) flooding with water, dressing including removal of rubbish and surplus earth, if any, with all leads and lifts (cost of manure, sludge or extra good earth if needed to be paid for separately) :	Each				-	CPWD DSR 2.14.2, pg no 89	Trees as per plant list
B.4. 1.1	Holes 90 cm dia, and 90 cm deep	Each		1,392	130.40	1,81,516.80	CPWD DSR 2018 / SH :B2 / item no : 2.14.2 / pg no 89	
B.4. 1.2	Holes 45 cm dia, and 45 cm deep.	Each		81,510	17.10	13,93,821.00	CPWD DSR 2018 / SH :B2 / item no : 2.14.4 / pg no 89	
B.4. 3	Plantation of Trees, Shrubs, and Hedge at site i/c watering and removal of unserviceable material's as per direction of officer in charge (excluding cost of plant & water)	Each					CPWD DSR 20168/ SH :B2 / item no : 2.57 / pg no 105	
B.4. 3.1	Trees		1,392	1,392	6.40	8,908.80	CPWD DSR 2018 / SH :B2 / item no : 2.57.1 / pg no 105	
B.4. 3.2	Shrubs		81,510	81,510	3.20	2,60,832.00	CPWD DSR 20168/ SH :B2 / item no : 2.57.2 / pg no 105	
<b>C PLANT MATERIAL</b>								
<b>C.1</b>	<b>PALM &amp; TREE</b>							
1	foxtail palm	Each	310		2500	775000		
2	cassia siamea	Each	38		2250.00	85500		
3	Mimusops elengi	Each	34		2500.00	85000		
4	Plumeria alba	Each	7		2500.00	17500		
5	Roystonea regia	Each	10		3000.00	30000		
6	Phoenix dactylifera	Each	657		14000.00	9198000		
7	casuarina tree	Each	94		2200.00	206800		
8	coconut palm	Each	207		2500.00	517500		
9	Bambusa ventricosa	Each	35		3000.00	105000		
<b>C.2</b>	<b>Ground cover</b>							
1	ipomia carpis	AREA	6850		500.00	34,25,000.00		
2	Hemerocallis ( Daylily)	Each	3060		85	2,60,100.00		
3	Wedelia trilobata	Each	10800		7	75,600.00		
4	Cyperus Alternifolius	Each	6000		100	6,00,000.00		
<b>TOTAL COST</b>						<b>1,85,69,525.48</b>		
	Maintainance cost for 4 year (10%)					18,56,952.55		
	<b>Grand Total</b>					<b>2,04,26,478.02</b>		

## BEACHFRONT DEVELOPMENT ,PURI

### Measurement Sheet

SI. No.	Description	UNIT	No.	L (m)	B (m)	H (m)	QTY	REFERENCE	Remark
<b>A SITE CLEANING, SOIL RESTORATION AND EARTHWORK</b>									
Trenching in ordinary soil up to a depth of 60 cm including removal and stacking of serviceable materials and then disposing of surplus soil, by spreading and neatly levelling within a lead of 50 m and making up the trenched area to proper levels by filling with earth or earth mixed with sludge or / and manure before and after flooding trench with water (excluding cost of imported earth, sludge or manure).									
<b>A.1 Rough dressing</b>									
	Rough dressing the trenched ground including breaking clods.	sqm	1	3750		3,750	CPWD DSR 2018 / SH :B2 / item no : 2.5 / pg no 81	Total area for landscape works.	
<b>A.2 Fine dressing</b>									
	Fine dressing of the ground	sqm	1	3750		3,750	CPWD DSR 2018 / SH :B2 / item no : 2.7 / pg no 81	Total area for landscape works.	
<b>A.3 Mixing and spreading of good soil and manure</b>									
	Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge	cum	1	3750	0.6	2,250	CPWD DSR 2018 / SH :B2 / item no : 2.9 / pg no 81	(Total area for landscape works) X (0.6).	
<b>B SOFTSCAPE AND PLANTING</b>									
<b>B.1 Good garden soil</b>									
1	Supplying and stacking of good earth at site including royalty and carriage upto 5 km complete (earth measured in stacks will be reduced by 20% for payment	cum	1	3750	0.6	2,250	CPWD DSR 2018 / SH :B2 / item no : 2.2 / pg no 87	(Total area for landscape works) X (0.3).	
<b>B.2 Cow dung manure</b>									
1	Supplying and stacking of well decayed cattle manure at site including royalty and carriage upto 5 k.m. lead complete (cattle manure measured in stacks will reduced by 8% for Payment).	cum	1	3750		188	CPWD DSR 2018 / SH :B2 / item no : 2.25 / pg no 85	5cum/100 sq.mt area	
<b>B.4 Trees, Shrubs, Hedges and Groundcover plantation</b>									
1	Digging holes in ordinary soil and refilling the same with the excavated earth mixed with manure or sludge in the ratio of 2:1 by volume (2 parts of stacked volume of earth after reduction by 20% : 1 part of stacked volume of manure after reduction by 8%) flooding with water, dressing including removal of rubbish and surplus earth, if any, with all leads and lifts (cost of manure, sludge or extra good earth if needed to be paid for separately) :	Each					CPWD DSR 2.14.2, pg no 89	Trees as per plant list	

B.4.1.1	Holes 90 cm dia, and 90 cm deep	Each				1,392	CPWD DSR 2018 / SH :B2 / item no : 2.14.2 / pg no 89	
B.4.1.2	Holes 45 cm dia, and 45 cm deep.	Each				81,510	CPWD DSR 2018 / SH :B2 / item no : 2.14.4 / pg no 89	
B.4.3	Plantation of Trees, Shrubs, and Hedge at site i/c watering and removal of unserviceable material's as per direction of officer in charge (excluding cost of plant & water)	Each					CPWD DSR 20168/ SH :B2 / item no : 2.57 / pg no 105	
B.4.3.1	Trees		1,392			1,392	CPWD DSR 2018 / SH :B2 / item no : 2.57.1 / pg no 105	
B.4.3.2	Shrubs		81,510			81,510	CPWD DSR 20168/ SH :B2 / item no : 2.57.2 / pg no 105	
<b>C PLANT MATERIAL</b>								
<b>C.1</b>	<b>PALM &amp; TREE</b>							
1	foxtail palm	Each	310					
2	cassia siamea	Each	38					
3	Mimusops elengi	Each	34					
4	Plumeria alba	Each	7					
5	Roystonea regia	Each	10					
6	Phoenix dactylifera	Each	657					
7	casuarina tree	Each	94					
8	coconut palm	Each	207					
9	Bambusa ventricosa	Each	35					
<b>C.2</b>	<b>Ground cover</b>							
1	ipomia carpis	AREA	6850					
2	Hemerocallis ( Daylily)	Each	3060					
3	Wedelia trilobata	Each	10800					
4	Cyperus Alternifolius	Each	6000					

BEACHFRONT DEVELOPMENT, PURI								
LANDSCAPE ELEMENTS								
No.	Image	Product name	Product Specifications	Unit	QTY	Rate	Total Amount	Reference
TREE GRATING								
1		TREE GRATING	CHECKERED Tree Grates, Material Cast Iron, Size 1200 x 1200mm, Clear Opening Diameter 400mm, Thickness: 15mm.	Each	52	20,000	10,40,000.00	Market Rate Analysis excluding tax
DUSTBIN								
2		GALVANIZED STEEL BIN	Haito Dustbin 1,5mm thick steel hood and frame, galvanized and powder coated, Front- and rear panel: 1,5mm (smooth) steel plate, galvanized and powder coated, Inner bin: plastic inner bin, Capacity: 50 litres.	Each	288	22,500	64,80,000.00	Market Rate Analysis excluding tax
BENCH								
3		BENCH	STEELWOOD BENCH Material: Stainless Steel, Grade: SS 304, Size: 6 feet length X 2.5 Feet height X 1.5 feet depth, Backrest Size: 6ft length x 400mm Height.	Each	75	41,975	31,48,125.00	
		BAMBOO BENCH		EACH	24	26,000	6,24,000.00	
VENDOR KIOSK								
	VENDING KIOSK STRUCTURE							quotation attached
4 Chaos		KIOSK	Design, Supply, Fabrication and Installation of : Bolted Structure Control Room Size : (W 2.0 mt x L 2.0 mt H 2.7 mt) the scrop work inclusive all suppoting WPC columns with MS (120 x 120 mm), Piling columns 3.0 mt, reinforcement beam, Flooring, 3 side WPC railing (W 1.76 mt x H 0.8 mt) with Roofing Tensile Fabric etc.	Nos	674	2,80,000	18,87,20,000.00	quotation attached

BEACHFRONT DEVELOPMENT, PURI								
LANDSCAPE ELEMENTS								
No.	Image	Product name	Product Specifications	Unit	QTY	Rate	Total Amount	Reference
5	Toilet	TOILET	Desine, Supply, Fabrication and Installation of : Bolted Structure Control Room Size : (W 2.0 mt x L 2.0 mt H 2.7 mt) the scrop work inclusive all suppoting WPC columns with MS (120 x 120 mm), Piling columns 3.0 mt, reinforcement beam, Flooring, 4 side WPC wall with 1 door (W 0.75 mt x H 2.05 mt) 1 water tank , 1 commode, 1 urinal, 1 hand basin and only kiosk water pipe line with Roofing Tensile Fabric etc.	Nos	76	4,10,000	3,11,60,000.00	quotation attached
<b>HDPE FLOATING DECK</b>								
6	FLOATING DECK		FRP Modular floating docks size:2.5m x 5m x 0.65m	Each	250	4,30,000	10,75,00,000.00	quotation attached
<b>SIT-OUT UMBRELLA</b>								
7	UMBRELLA		Sit-out umbrella made of wooden/ bamboo poles & treated thatch including Installation, commissioning, foundation Work.	Each	24	68,900	16,53,600.00	quotation attached
<b>Watch Tower</b>								
8	BAMBOO WATCH TOWER		Watch Tower (Bamboo) - upto 6.5 metres including installation, foundation work and as per specification and drawing	Each	8	3,95,380	31,63,040.00	
<b>Aarti Platform</b>								
9	Aarti Platform		Desine, Supply, Fabrication and Installation of : Wooden Aarti Platfrom in WPC Size : (W 3.0 mt x L 6.0 mt ) the scrop work inclusive all suppoting WPC Piling columns 3.0 mt MS (120 x 120 mm), reinforcement beam, Flooring ,etc.	Each	3	6,00,000	18,00,000.00	quotation attached
<b>SIGNAGE</b>								
10	BAMBOO SIGNAGE			nos	17	5,300	90,100.00	
11	CAST IRON SIGNAGE			nos	72	19,750	14,22,000.00	
12	WPC Panel 50 mm thick							

BEACHFRONT DEVELOPMENT, PURI								
LANDSCAPE ELEMENTS								
No.	Image	Product name	Product Specifications	Unit	QTY	Rate	Total Amount	Reference
12		<b>WPC Flooring</b>	Providing and fixing flooring made from high class Wood Plastic Composite Panels made from 55%, Wood 35% High grade polymer (HDPE) and 10% Additives like bonding stabilizer, UV stabilizer etc. and the material should follow ASTM D 570, ASTM D 1894, ASTM D 256, ASTM D 790, ASTM D 1525, ASTM D 648, ISO 9352, IS 14887:2000. It should be weather proof and suitable to be used in outdoor spaces with temperature ranging between -10 °C to 60 °C. WPC decking section should have bulk density of 1.2 g/cm3. Wood Polymer Composites products must be certified as GREEN PRODUCT by IGBC. WPC decking have thickness 23mm and width 143mm. 143x23mm.	sqm	19750	3,700	7,30,75,000.00	
		<b>WPC Railing (900mm high)</b>	Providing and fixing Deck flooring made from high class Wood Plastic Composite Panels made from 55%, Wood 35% High grade polymer (HDPE) and 10% Additives like bonding stabilizer, UV stabilizer etc. and the material should follow ASTM D 570, ASTM D 1894, ASTM D 256, ASTM D 790, ASTM D 1525, ASTM D 648, ISO 9352, IS 14887:2000. It should be weather proof and suitable to be used in outdoor spaces with temperature ranging between -10 °C to 60 °C. WPC railing section should have bulk density of 1.2 g/cm3. Wood Polymer Composites products must be certified as GREEN PRODUCT by IGBC. WPC railing post 95x95mm, wpc hand railing 100x60 and wpc vertical member 45x65mm hollow pipe. The item shall be executed as per approved	m	3700	6,930	2,56,41,000.00	
<b>TOTAL FOR OTHER ITEMS</b>							<b>44,55,16,865.00</b>	

NAME OF PROJECT: BEACH ROAD DEVELOPMENT & EXTENSION						
BLOCK COST ESTIMATE FOR ELECTRICAL						
Sl. No.	Item Description	Qty.	Unit	Unit Rate ( In Rs.)	Total Amount ( In Rs)	Remarks
1	Supply, Installation, Testing & Commissioning of 415V Low Voltage Panel (MDB - Floor Mounted)	1	Lot	259344	2,59,343.80	SCHEDULE OF RATES FOR ELECTRICAL WORKS; PWD 2019-20 (Reference - Annexure-B)
2	Supply, Installation, Testing & Commissioning of 415V Low Voltage Panel (Main Consumer Panel - 1- Floor Mounted)	1	Lot	232302	2,32,301.80	SCHEDULE OF RATES FOR ELECTRICAL WORKS; PWD 2019-20 (Reference - Annexure-B)
3	Supply, Installation, Testing & Commissioning of 415V Low Voltage Panel (Main Consumer Panel - 2 - Floor Mounted)	1	Lot	220686	2,20,685.80	SCHEDULE OF RATES FOR ELECTRICAL WORKS; PWD 2019-20 (Reference - Annexure-B)
4	Supply, Installation, Testing & Commissioning of 415V Low Voltage Panel (Consumer Panel for Left Side Vending Zone - Floor Mounted)	23	Lot	221945	51,04,730.40	SCHEDULE OF RATES FOR ELECTRICAL WORKS; PWD 2019-20 (Reference - Annexure-B)
5	Supply, Installation, Testing & Commissioning of 415V Low Voltage Panel (Consumer Panel for Right Side Vending Zone - Floor Mounted)	15	Lot	218309	32,74,632.00	SCHEDULE OF RATES FOR ELECTRICAL WORKS; PWD 2019-20 (Reference - Annexure-B)
6	Supply, Installation, Testing & Commissioning of 415V Low Voltage Panel (Feeder Pillar - Floor Mounted)	4	Lot	87952	3,51,807.20	SCHEDULE OF RATES FOR ELECTRICAL WORKS; PWD 2019-20 (Reference - Annexure-B)
7	Supplying, installation, testing and commissioning of online 3 phase/1 phase UPS System with 30 minutes back up including batteries, interconnecting cables, battery racks etc.	10	Nos.	20000	2,00,000.00	CPWD Plinth Area Rates 2020 (Sl. No.4, Page - 16 of 44)
8	Supply, Installation, Testing & Commissioning of 415V Low Voltage Panel (UPS DB, Indoor SPN DB- Wall Mounted)	754	Nos.	8329	62,80,066.00	SCHEDULE OF RATES FOR ELECTRICAL WORKS; PWD 2019-20 (Reference - Annexure-B)
9	Supply, Installation, Testing and Commissioning of LT 1phase meter.	750	Nos.	8000	60,00,000.00	
10	Supply, testing, tagging, laying and commissioning following sizes of 1100 Volt grade, XLPE / PVC insulated multistrand Al. / Cu. Conductor armoured / unarmoured cables (As Per IS 1554 & IS 7098) in readymade RCC trench, in provided DWC pipe, RCC pipe hume pipe, on provided cable trays / ladders etc. as required complete with clamps, hardware for fixing tagging, identification etc.					
a	3.5C x 300 Sq.mm Al XLPE Armoured Cable	5500	Mtr.	1552	85,33,816.50	Reference - Annexure-A - Rate Analysis for Non-Sor Item
b	3C x 25 Sq.mm Al XLPE Armoured Cable	5000	Mtr.	175	8,77,162.50	
c	4C x 16 Sq.mm Al XLPE Armoured Cable	5300	Mtr.	161	8,54,031.40	
d	4C x 10 Sq.mm Al XLPE Armoured Cable	10600	Mtr.	136	14,46,343.50	
e	3C x 10 Sq.mm Al XLPE Armoured Cable	500	Mtr.	126	63,025.75	
f	3.5C x 25 Sq.mm Al XLPE Armoured Cable	10200	Mtr.	204	20,81,019.30	
g	3C x 2.5 Sq.mm CU Cable.( Flexible )	16876	Mtr.	205	34,64,997.20	
11	Supply and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium cable of 1.1kv grade (without cost of cable ) as required.					
a	3.5C x 300 Sq.mm Al XLPE Armoured Cable	14	Nos.	895	12,530.00	OPWD Electrical SoR Item No. - 5.8.30
b	3C x 25 Sq.mm Al XLPE Armoured Cable	10	Nos.	174	1,740.00	OPWD Electrical SoR Item No. - 5.8.9
c	4C x 16 Sq.mm Al XLPE Armoured Cable	10	Nos.	171	1,710.00	OPWD Electrical SoR Item No. - 5.8.32
d	4C x 10 Sq.mm Al XLPE Armoured Cable	20	Nos.	150	3,000.00	OPWD Electrical SoR Item No. - 5.8.31
e	3C x 10 Sq.mm Al XLPE Armoured Cable	6	Nos.	146	876.00	OPWD Electrical SoR Item No. - 5.8.7
f	3.5C x 25 Sq.mm Al XLPE Armoured Cable	80	Nos.	249	19,920.00	OPWD Electrical SoR Item No. - 5.8.20

g	3C x 2.5 Sq.mm CU Cable.( Flexible )	1770	Nos.	214	3,79,518.98	Reference - Annexure-A - Rate Analysis for Non-Sor Item
12	Laying of one number of PVC insulated and PVC seathed / XLPE power cable of 1.1 KV grade of size exceeding 120 mmsq but not exceeding 120 mmsq to 400 mmsq direct in ground including excavation, sand, cushioning, protective covering and refilling the trench etc. as required	5500	Mtr.	121	6,65,500.00	OPWD Electrical SoR Item No. - 5.5.3
13	Laying of one number of PVC insulated and PVC seathed / XLPE power cable of 1.1 KV grade of size not exceeding 25 mmsq direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc. as required	31600	Mtr.	102	32,23,200.00	OPWD Electrical SoR Item No. - 5.5.1
14	6 mt. Post Top Pole -Supply, Installation, Testing and Commissionin of pole 6 mt shall be of 'composite' construction designed to withstand specified 'dead load' pertaining to the luminaire and its mounting accessories and 'wind load' corresponding to a basic wind speed of 300kmph without any deformation or damage to the structure. The Pole Shaft should be fabricated out of Steel tube of grade YST 240 and batch test reports for chemical and mechanical properties of material should be submitted along with the bid. Pole pipe should be provided with Spikes .Structurally designed base plate of Steel A36/A572-50 or equivalent should be welded with the pole shaft. Height 6 meters. Make : Keselec /Rosa/Ligman/Simes or equivalent.	370	Nos.	64975	2,40,40,750.00	
15	45W Decorative luminaire - Supply, Installation, Testing and Commissionin of Decorative Luminaires BIS approved ( alongwith BIS certification of same model confirming to IS 10322 /IEC60598 & LM79 parameters as per tender specs) for Urban lighting, body made of painted spun aluminium with Top spun aluminium minimum thickness of 1.5 mm,Dia should not exceed 435 mm and height should not exceed 265 mm ,weight should not be less than 1.28 kg and Lower spun aluminium of minimum thickness of 1.5 mm ,dia should not exceed 595 mm ,height should not exceed 40 mm and weight should not be less than 0.9 kg.Body of the fixture must be in two parts and fixture opening of the fixture is from front side for the ease of operation . Fixture is having external surge protection of 10KV. Electronic driver is having power factor>0.90*, THD<15*, CRI>80 and input voltage range from 120-227V AC at 50Hz. Minimum lumen 6000 lumen (Confirmed by LM79 report from Third party NABL approved lab) in CCT range of 4000 as per ANSI. presented with Dialux report and IES file of the luminaire System life of 50000 burning hours with 70% of initial lumens maintained. Luminaire is suitable for operating temperature	370	Nos.	34437	1,27,41,597.50	Reference - Annexure-A - Rate Analysis for Non-Sor Item
16	Up Lighting: Supply, Installation, Testing and Commissioning of LED Inground luminaire with a system lumen output of 3600 lumens and a minimum system efficacy of >100 lm/W. The luminaire shall have a rated system lifetime of 50,000 burning hours at L70. The luminaire should have a color temperature of 4000K and CRI > 70. The luminaire shall meet <b>IP67/IK10</b> with THD < 10% and PF > 0.9. SDCM Value should be less than 5. The luminaire shall have closed diffused optics with PMMA diffuser board. The total power consumption should not exceed 36W (including driver). Similar to Philips Make LED UNI Inground "BBP342 LED3600/WW 36W 20D 100-240V"	91	Nos.	12014	10,93,262.85	

17	Focus Uplighting for Artwork: Supply, Installation, Testing and Commissioning of Supply of Four Feet Length Mono Color LED linear grazing luminaire with housing material of extruded aluminum, dark grey anodized finish, system wattage not exceeding 18W and system lumen output of not less than 1700 lumens, CRI more than 80. Color temperature should be 3000K. Fixture shall be available with architectural optics with choice of beam angles of Elliptical 25°-30°x80°-90° or wide 110°-120°. Fixture dimension(Height x Width x Depth) shall be not larger than 60 x 1200 x 70 mm and weight not more than 2.5kgs. Fixture shall operate in a temperature range of -40°C to 40°C. Fixture shall have auto-ranging input voltage for 100 – 240 VAC. Lifetime should be at least 60,000 burning hours at L70 at 40 degree centigrade with total IP66 protection. Fixture shall be equipped with mechanical impact of minimum IK07. Both Luminaire and driver should be BIS approved. Similar to Philips Make "VAYA LINEAR LP G2 3000K 28X84DEG"	73	Nos.	69978	51,08,399.48	
18	TMC100 1xTLED 18W Battenor Equivalent	750	Nos.	273	2,04,671.25	
19	30W, MAS LED TUBE-LIGHT 30W/4000 lumens or Equivalent	750	Nos.	858	6,43,252.50	
20	Recessed wiring to light point/Fan point/ Exhaust fan point/Call bell point with 1.5 sq.mm FR PVC insulated single core multistrand copper conductor of ISI marked with 20 mm dia non-metallic PVC flexible conduit with 6Amp, 250V Modular switch ISI marked and ceiling rose ISI marked mounted on metal box having front Modular cover of suitable size, metal box with 1.5 sq.mm FR PVC insulated single core multistrand copper conductor as earth wire including all accessories and connection.(Make of wire- L&T/Anchor/Havells/V-Guard/Great White/HPL) Group-B	2250	Point	914	2056500	OPWD Electrical Non-Schedule Item Rates
21	Recessed wiring for light / power plug with 2 x 2.5 sq.mm FR PVC insulated single core multistrand copper conductor of ISI marked with 20mm dia non-metallic PVC flexible conduit alongwith 1 x 1.5 sq.mm FR PVC insulated single core multistrand copper conductor for loop earthing as required. (Make of wire- Finolex/L&T/Anchor/Havells/V-Guard/ HPL)	27000	Mtr	109	2943000	OPWD Electrical SoR Item No. 1.4
22A	Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke and salt as required.	90	Nos.	4739	4,26,535.71	DSR 2018 (Ref. Cl. No. - 5.2)
22B	Maintenance free Chemical Earthing: Supply of UL Listed Maintenance Free Earthing System made of copper bonded rod of 10 feet (3 mtr approx.) length, 17.2 mm dia. (Minimum copper bonding shall be 0.25mm, suitable for 25 kA fault current) along with Rod-to-Conductor connectors, 95% pure Carbon-Based Earth enhancement material of 30kg, Pit Cover as required.	370	Nos.	5356	19,81,720.00	GWSSB Electrical SoR Item No. 3.5.12
23	Providing and fixing testing joint, made of G.I. strip, 125 mm long, with 4 nos. of G.I. bolts, nuts, chuck nuts and spring washers etc. complete as required.	460	Nos.	91	41,892.86	DSR 2018 (Ref. Cl. No. - 6.1.2)
24	Supplying and laying 25 mm X 5 mm G.I strip at 0.50 metre below ground as strip earth electrode, including connection/terminating with G.I. nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50mm)	4600	Mtr.	117	5,38,035.71	DSR 2018 (Ref. Cl. No. - 5.9)

25	Supplying and laying 6 SWG G.I. wire at 0.50 metre below ground level for conductor earth electrode, including connection/ termination with GI thimble etc. as required.	10600	Mtr.	25	2,65,000.00	DSR 2016, item no- 5.7
26	Supply and laying double walled corrugated (DWC) HDPE Pipe including all necessary connecting Sockets/Couplings/Tees/Bends/End-caps of same materials in existing trench as per IS 14930 part -II suitable for drawing underground cables. 40mm OD / 32mm ID	16876	Mtr.	68	11,40,378.82	Reference - Annexure-A - Rate Analysis for Non-Sor Item
27	Supply and laying double walled corrugated (DWC) HDPE Pipe including all necessary connecting Sockets/Couplings/Tees/Bends/End-caps of same materials in existing trench as per IS 14930 part -II suitable for drawing underground cables. 63mm OD / 50mm ID	31600	Mtr.	83	26,28,108.80	Reference - Annexure-A - Rate Analysis for Non-Sor Item
28	Supply and laying double walled corrugated (DWC) HDPE Pipe including all necessary connecting Sockets/Couplings/Tees/Bends/End-caps of same materials in existing trench as per IS 14930 part -II suitable for drawing underground cables. 120mm OD / 100mm ID	5500	Mtr.	153	8,43,375.50	Reference - Annexure-A - Rate Analysis for Non-Sor Item
29	Supply including fitting and fixing of outdoor cable 4 way Polycarbonate Junction Boxes IP 67 & IK08 halogen free and weather proof for outdoor installation Base with metric knock-outs and PUR gasket, screws for mounting plate/DIN-rail and cover with polyamide cover screws. including all accessories complete as specified and directed by the Deptt.					
a	Junction Box Size with 100x100x75 mm for Cable size 4Cx10sq.mm (main cable), 4Cx2.5 sq.mm & 4Cx4 Sq.mm (tap off cables) as in the above items. The junction box shall be suitable for outdoor application with minimum IP65	264	Nos.	467	1,23,161.41	Reference - Annexure-A - Rate Analysis for Non-Sor Item
30	Civil Works for Electrical Equipment	298	Sqr. Mtr.	8929	26,59,553.57	CPWD Plinth Area Rates 2020 (Sl. No.1.3.6, Page - 11 of 44)
31	Civil Works for Post Top	370	Nos.	6039	22,34,296.80	Reference - Rate Analysis (Annexure-3 A)
				<b>Total</b>	<b>10,52,65,450.89</b>	

Electrical Rate Analysis														
Sr. No.	Item Description	Unit	Supply	P&F and Transportation (%)	P&F and Transportation (Rs.)	Total Supply UR (Rs.)	Inst. %	Inst (Rs.)	Total Inst UR (Rs.)	Total without GST (SITC) (Rs.)	OH + Profit @15% (Rs.)	UR (Supply+ Inst) (Rs.)	Total Rate (Rs.)	Ref.
1	Supply, testing, tagging, laying and commissioning following sizes of 1100 Volt grade, XLPE / PVC insulated multistrand Al. / Cu. Conductor armoured / unarmoured cables (As Per IS 1554 & IS 7098) in readymade RCC trench, in provided PVC pipe, RCC pipe hume pipe, on provided cable trays / ladders etc. as. required complete with clamps, hardware for fixing tagging, identification etc.													
a	3.5C x 300 sqmm A2XFY armoured AL Cable	Mtr.	1194	3%	36	1,230	10%	119	119	1,349	202	1,552	<b>1552</b>	Ref:KEI-AEC-AL-Armoured-Unarmoured-Cable Price List (Annexure-C)
b	3C x 25 sqmm A2XFY armoured AL Cable	Mtr.	135	3%	4	139	10%	14	14	153	23	175	<b>175</b>	Ref:KEI-AEC-AL-Armoured-Unarmoured-Cable Price List (Annexure-C)
c	4C x 16 sqmm A2XFY armoured AL Cable	Mtr.	124	3%	4	128	10%	12	12	140	21	161	<b>161</b>	Ref:KEI-AEC-AL-Armoured-Unarmoured-Cable Price List (Annexure-C)
d	4c x 10 sqmm A2XFY armoured AL Cable	Mtr.	105	3%	3	108	10%	11	11	119	18	136	<b>136</b>	Ref:KEI-AEC-AL-Armoured-Unarmoured-Cable Price List (Annexure-C)
e	3c x 10 sqmm A2XFY armoured AL Cable	Mtr.	97	3%	3	100	10%	10	10	110	16	126	<b>126</b>	Ref:KEI-AEC-AL-Armoured-Unarmoured-Cable Price List (Annexure-C)
f	3c x 25 sqmm A2XFY armoured AL Cable	Mtr.	157	3%	5	162	10%	16	16	177	27	204	<b>204</b>	Ref:KEI-AEC-AL-Armoured-Unarmoured-Cable Price List (Annexure-C)
g	3C x 2.5 Sq.mm CU Cable.( Flexible )	Mtr.	158	3%	5	163	10%	16	16	179	27	205	<b>205</b>	Non SOR Item Ref:Polycab Price List
2	Supply and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium cable of 1.1kv grade (without cost of cable ) as required.													
a	3C x 4 Sq.mm CU armoured Cable	nos	184	3%	6	190	10%	18	18	208	31	239	<b>239</b>	Jainson Price List
b	3C x 2.5 Sq.mm CU Cable.( Flexible )	nos	165	3%	5	170	10%	17	17	186	28	214	<b>214</b>	Jainson Price List
3	6 Meter Post Top Pole	nos	50000	3%	1,500	51,500	10%	5,000	5,000	56,500	8,475	64,975	<b>64975</b>	Non SOR Item Ref:Keselec Quote (Annexure-C)
4	45 Watt Decorative Luaminare	nos	26500	3%	795	27,295	10%	2,650	2,650	29,945	4,492	34,437	<b>34437</b>	Non SOR Item Ref:Keselec Quote (Annexure-C)

5	TMC100 1xTLED 18W Batten	Nos	210	0.03	6.3	216.3	10%	21	21	237.3	35.595	272.895	<b>273</b>	Non SOR Item Ref:Philips Quotation
6	30W, MAS LED TUBE-LIGHT 30W/4000 lumens	Nos	660	0.03	19.8	679.8	10%	66	66	745.8	111.87	857.67	<b>858</b>	Non SOR Item Ref:Philips Quotation
7	Up Lighter	Nos	9245	0.03	277	9522	10%	925	925	10447	1567	12014	<b>12014</b>	Non SOR Item Ref:Philips Quotation
8	Focus Uplighting for Artwork	Nos	53850	0.03	1616	55466	10%	5385	5385	60851	9128	69978	<b>69978</b>	Non SOR Item Ref:Philips Quotation
9	40mm OD Pipe	Mtr.	52	3%	2	54	10%	5	5	59	9	68	<b>68</b>	Ref-Noble Quotation (Annexure-C)
10	63mm OD Pipe	Mtr.	64	3%	2	66	10%	6	6	72	11	83	<b>83</b>	Ref-Noble Quotation (Annexure-C)
11	120mm OD Pipe	Mtr.	118	3%	4	122	10%	12	12	133	20	153	<b>153</b>	Ref-Noble Quotation (Annexure-C)
12	Supply installation, testing and commissioning of outdoor type 3/4 way Junction box with terminal arrangement for 4Cx6 Sq.mm. cable. Junction boxes should be with IP 67 Protection.	Nos.	359	3%	11	370	10%	36	36	406	<b>61</b>	467	<b>467</b>	Ref-FIBOX Quote (Annexure-C)
13	11KV(E), 3C X 300 sq.mm	Rmt	1844	3%	55	1,899	10%	184	184.4	2,084	313	2,396	<b>2396</b>	Ref-KEI HT Cable Price List (Annexure-C)

Main Distribution Board									
Reference (PWD 2019-20)	Unit	Description	No	L(cm)	B(cm)	D(cm)	Qty	Rate	Amount
	1	2	3	4	5	6	7	8	9
<b>SWITCHGEARS &amp; ACCESSORIES</b>									
(Ref. Cl. No.-5.42)	Sq.cm	Fabricating supplying and mounting MS box made out ... SWG suitable for floor / wall mounting, fully weather proof with provision							
		<b>14SWG</b>							
		MDB	1	220	75	220	292600	0.40	117,040.00
(Ref. Cl. No.-5.34)	Each	Supplying, fixing and wiring 50/5 to 400/5Amps 5VA burden Current Transformer. Class 0.5 accuracy with Tape Wound.							
		Current Transformer					3	468.00	1,404.00
(Ref. Cl. No.-5.33)	Each	Supplying of multi function digital meter with three line back light LCD type display for voltage, Current, frequency, Power, power							
		Multi function digital meter					1	7750.00	7,750.00
(Material Component Sl. No.)	Each	Supply and fixing of 4 pole power contactor with NO/NC contacts on existing wood/panel board using necessary bolts, nuts, washers							
		25Amps					1	757.80	757.80
(Ref. Cl. No.-5.38)	Each	Supplying and fixing of LED type panel board indicating lamp with required colour suitable for 220v A.C. 50 Hz 12/24v D.C.							
		LED type panel board					1	430.00	430.00
(Ref. Cl. No.-5.40.1)	Mtr	Supplying ..... amps rated 3phase with neutral bus bar using required capacity electrolytic aluminum strips covered with heat							
		100Amps 4x30x6mm Aluminum Strips					2	2050.00	4,100.00
(Ref. Cl. No.-5.41.1)	Mtr	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.., and M.S. flat ... with bolts, washers etc., and painted							
		40x40x6mm					25	255.00	6,375.00
(Ref. Cl. No.-5.41.3)	Mtr	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.., and M.S. flat ... with bolts, washers etc., and painted							
		75x75x6mm					25	460.00	11,500.00
(Ref. Cl. No.-5.41.4)	Mtr	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.., and M.S. flat ... with bolts, washers etc., and painted							
		50x100x50x6mm C channel					10	630.00	6,300.00
(Ref. Cl. No.-5.14.14)	Each	Supplying and fixing Moulded Case Circuit Breaker (MCCB) over the existing wood/panel board using necessary screws, bolts, nuts							
		630Amps 25kA.					1	28,500.00	28,500.00
(Ref. Cl. No.-5.14.12)	Each	Supplying and fixing Moulded Case Circuit Breaker (MCCB) over the existing wood/panel board using necessary screws, bolts, nuts							
		315Amps 25kA.					2	26,000.00	52,000.00
(Ref. Cl. No.-5.17.8)	Each	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type							
		32-63 Amps TPN					8	1,936.00	15,488.00
(Ref. Cl. No.-5.17.4)	Each	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type							
		6-32 Amps DP					6	909.00	5,454.00
(Ref. Cl. No.-5.29)	Each	Supplying, fixing and wiring 3 Phase Digital Ammeter /Voltmeter.							
		Digital Ammeter /Voltmeter.					1	185.00	185.00
(Ref. Cl. No.-5.28)	Each	Supplying, fixing and wiring rotary selector switch suitable for Voltmeter.							
		rotary selector switch suitable for Voltmeter.					1	135.00	135.00
(Ref. Cl. No.-5.47)	Each	Supplying and fixing Microprocessor based Electronic timer (without contactor,Din Mounting using necessary bolts, nuts and							
							1	1925.00	1,925.00
								Total	259,343.80

Feeder Pillar for Beach front Lighting									
Reference (PWD 2019-20)	Unit	Description	No	L(cm)	B(cm)	D(cm)	Qty	Rate	Amount
	1	2	3	4	5	6	7	8	9
<b>SWITCHGEARS &amp; ACCESSORIES</b>									
(Ref. Cl. No.-5.42)	Sq.cm	Fabricating supplying and mounting MS box made out ... SWG suitable for floor / wall mounting, fully weather proof with provision							
		<b>14SWG</b>							
		FP	1	100	60	100	76000	0.40	30,400.00
(Ref. Cl. No.-5.34)	Each	Supplying, fixing and wiring 50/5 to 400/5Amps 5VA burden Current Transformer. Class 0.5 accuracy with Tape Wound.							
		Current Transformer					3	468.00	1,404.00
(Ref. Cl. No.-5.33)	Each	Supplying of multi function digital meter with three line back light LCD type display for voltage, Current, frequency, Power, power							
		Multi function digital meter					1	7750.00	7,750.00
(Material Component Sl. No.)	Each	Supply and fixing of 4 pole power contactor with NO/NC contacts on existing wood/panel board using necessary bolts, nuts, washers							
		25Amps					1	757.80	757.80
(Ref. Cl. No.-5.38)	Each	Supplying and fixing of LED type panel board indicating lamp with required colour suitable for 220v A.C. 50 Hz 12/24v D.C.							
		LED type panel board					1	430.00	430.00
(Ref. Cl. No.-5.40.1)	Mtr	Supplying ..... amps rated 3phase with neutral bus bar using required capacity electrolytic aluminum strips covered with heat							
		100Amps 4x30x6mm Aluminum Strips					2	2050.00	4,100.00
(Ref. Cl. No.-5.41.1)	Mtr	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.., and M.S. flat ... with bolts, washers etc., and painted							
		40x40x6mm					25	255.00	6,375.00
(Ref. Cl. No.-5.41.3)	Mtr	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.., and M.S. flat ... with bolts, washers etc., and painted							
		75x75x6mm					25	460.00	11,500.00
(Ref. Cl. No.-5.41.4)	Mtr	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.., and M.S. flat ... with bolts, washers etc., and painted							
		50x100x50x6mm C channel					10	630.00	6,300.00
(Ref. Cl. No.-5.14.7)	Each	Supplying and fixing Moulded Case Circuit Breaker (MCCB) over the existing wood/panel board using necessary screws, bolts, nuts							
		100Amps 25kA.					1	6,400.00	6,400.00
(Ref. Cl. No.-5.17.7)	Each	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type							
		6-32 Amps TPN					6	1,715.00	10,290.00
(Ref. Cl. No.-5.17.4)	Each	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type							
		6-32 Amps DP					0	909.00	0.00
(Ref. Cl. No.-5.29)	Each	Supplying, fixing and wiring 3 Phase Digital Ammeter /Voltmeter.							
		Digital Ammeter /Voltmeter.					1	185.00	185.00
(Ref. Cl. No.-5.28)	Each	Supplying, fixing and wiring rotary selector switch suitable for Voltmeter.							
		rotary selector switch suitable for Voltmeter.					1	135.00	135.00
(Ref. Cl. No.-5.47)	Each	Supplying and fixing Microprocessor based Electronic timer (without contactor,Din Mounting using necessary bolts, nuts and							
							1	1925.00	1,925.00
								Total	87,951.80

UPS DB, VDZ DB, Indoor SPN DB									
Reference (PWD 2019-20)	Unit	Description	No	L(cm)	B(cm)	D(cm)	Qty	Rate	Amount
	1	2	3	4	5	6	7	8	9
<b>SWITCHGEARS &amp; ACCESSORIES</b>									
(Ref. Cl. No.-5.42)	Sq.cm	Fabricating supplying and mounting MS box made out ... SWG suitable for floor / wall mounting, fully weather proof with provision							
		<b>14SWG</b>							
		UPS DB, VDZ DB	1	30	30	30	9000	0.40	3,600.00

(Ref. Cl. No.-5.14.7)	Each	Supplying and fixing Moulded Case Circuit Breaker (MCCB) over the existing wood/panel board using necessary screws, bolts, nuts 40-63 Amps DP				1	1,093.00	1,093.00
(Ref. Cl. No.-5.17.4)	Each	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type 6-32 Amps DP				4	909.00	3,636.00
							Total	8,329.00

Main Consumer Panel - 1										
Reference (PWD 2019-20)	Unit	Description	No	L(cm)	B(cm)	D(cm)	Qty	Rate	Amount	
			1	2	3	4	5	6	7	8
<b>SWITCHGEARS &amp; ACCESSORIES</b>										
(Ref. Cl. No.-5.42)	Sq.cm	Fabricating supplying and mounting MS box made out ... SWG suitable for floor / wall mounting, fully weather proof with provision <b>14SWG</b>								
		MCP-1	1	220	75	220	292600	0.40	117,040.00	
(Ref. Cl. No.-5.34)	Each	Supplying, fixing and wiring 50/5 to 400/5Amps 5VA burden Current Transformer. Class 0.5 accuracy with Tape Wound. Current Transformer					3	468.00	1,404.00	
(Ref. Cl. No.-5.33)	Each	Supplying of multi function digital meter with three line back light LCD type display for voltage, Current, frequency, Power, power Multi function digital meter					1	7750.00	7,750.00	
(Material Component Sl. No.)	Each	Supply and fixing of 4 pole power contactor with NO/NC contacts on existing wood/panel board using necessary bolts, nuts, washers 25Amps					1	757.80	757.80	
(Ref. Cl. No.-5.38)	Each	Supplying and fixing of LED type panel board indicating lamp with required colour suitable for 220v A.C. 50 Hz 12/24v D.C. LED type panel board					1	430.00	430.00	
(Ref. Cl. No.-5.40.1)	Mtr	Supplying ..... amps rated 3phase with neutral bus bar using required capacity electrolytic aluminum strips covered with heat 100Amps 4x30x6mm Aluminium Strips					2	2050.00	4,100.00	
(Ref. Cl. No.-5.41.1)	Mtr	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts, washers etc., and painted 40x40x6mm					25	255.00	6,375.00	
(Ref. Cl. No.-5.41.3)	Mtr	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts, washers etc., and painted 75x75x6mm					25	460.00	11,500.00	
(Ref. Cl. No.-5.41.4)	Mtr	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts, washers etc., and painted 50x100x50x6mm C channel					10	630.00	6,300.00	
(Ref. Cl. No.-5.14.12)	Each	Supplying and fixing Moulded Case Circuit Breaker (MCCB) over the existing wood/panel board using necessary screws, bolts, nuts 315Amps 25kA.					1	26,000.00	26,000.00	
(Ref. Cl. No.-5.17.8)	Each	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type 32-63 Amps TPN					25	1,936.00	48,400.00	
(Ref. Cl. No.-5.29)	Each	Supplying, fixing and wiring 3 Phase Digital Ammeter /Voltmeter. Digital Ammeter /Voltmeter.					1	185.00	185.00	
(Ref. Cl. No.-5.28)	Each	Supplying, fixing and wiring rotary selector switch suitable for Voltmeter. rotary selector switch suitable for Voltmeter.					1	135.00	135.00	
(Ref. Cl. No.-5.47)	Each	Supplying and fixing Microprocessor based Electronic timer (without contactor,Din Mounting using necessary bolts, nuts and washers)					1	1925.00	1,925.00	
								Total	232,301.80	

Main Consumer Panel - 2										
Reference (PWD 2019-20)	Unit	Description	No	L(cm)	B(cm)	D(cm)	Qty	Rate	Amount	
			1	2	3	4	5	6	7	8
<b>SWITCHGEARS &amp; ACCESSORIES</b>										
(Ref. Cl. No.-5.42)	Sq.cm	Fabricating supplying and mounting MS box made out ... SWG suitable for floor / wall mounting, fully weather proof with provision <b>14SWG</b>								
		MCP-1	1	220	75	220	292600	0.40	117,040.00	
(Ref. Cl. No.-5.34)	Each	Supplying, fixing and wiring 50/5 to 400/5Amps 5VA burden Current Transformer. Class 0.5 accuracy with Tape Wound. Current Transformer					3	468.00	1,404.00	
(Ref. Cl. No.-5.33)	Each	Supplying of multi function digital meter with three line back light LCD type display for voltage, Current, frequency, Power, power Multi function digital meter					1	7750.00	7,750.00	
(Material Component Sl. No.)	Each	Supply and fixing of 4 pole power contactor with NO/NC contacts on existing wood/panel board using necessary bolts, nuts, washers 25Amps					1	757.80	757.80	
(Ref. Cl. No.-5.38)	Each	Supplying and fixing of LED type panel board indicating lamp with required colour suitable for 220v A.C. 50 Hz 12/24v D.C. LED type panel board					1	430.00	430.00	
(Ref. Cl. No.-5.40.1)	Mtr	Supplying ..... amps rated 3phase with neutral bus bar using required capacity electrolytic aluminum strips covered with heat 100Amps 4x30x6mm Aluminium Strips					2	2050.00	4,100.00	
(Ref. Cl. No.-5.41.1)	Mtr	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts, washers etc., and painted 40x40x6mm					25	255.00	6,375.00	
(Ref. Cl. No.-5.41.3)	Mtr	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts, washers etc., and painted 75x75x6mm					25	460.00	11,500.00	
(Ref. Cl. No.-5.41.4)	Mtr	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts, washers etc., and painted 50x100x50x6mm C channel					10	630.00	6,300.00	
(Ref. Cl. No.-5.14.12)	Each	Supplying and fixing Moulded Case Circuit Breaker (MCCB) over the existing wood/panel board using necessary screws, bolts, nuts 315Amps 25kA.					1	26,000.00	26,000.00	
(Ref. Cl. No.-5.17.8)	Each	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type 32-63 Amps TPN					19	1,936.00	36,784.00	
(Ref. Cl. No.-5.17.4)	Each	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type 6-32 Amps DP					0	909.00	0.00	
(Ref. Cl. No.-5.29)	Each	Supplying, fixing and wiring 3 Phase Digital Ammeter /Voltmeter. Digital Ammeter /Voltmeter.					1	185.00	185.00	
(Ref. Cl. No.-5.28)	Each	Supplying, fixing and wiring rotary selector switch suitable for Voltmeter. rotary selector switch suitable for Voltmeter.					1	135.00	135.00	
(Ref. Cl. No.-5.47)	Each	Supplying and fixing Microprocessor based Electronic timer (without contactor,Din Mounting using necessary bolts, nuts and washers)					1	1925.00	1,925.00	
								Total	220,685.80	

Consumer Panel Vending Zone Left Side									
Reference (PWD 2019-20)	Unit	Description	No	L(cm)	B(cm)	D(cm)	Qty	Rate	Amount
	1	2	3	4	5	6	7	8	9

		SWITCHGEARS & ACCESSORIES							
(Ref. Cl. No.-5.42)	Sq.cm	Fabricating supplying and mounting MS box made out ... SWG suitable for floor / wall mounting, fully weather proof with provision							
		<b>14SWG</b>							
		Consumer Panel Left Side	1	320	75	220	395600	<b>0.40</b>	<b>158,240.00</b>
(Ref. Cl. No.-5.34)	Each	Supplying, fixing and wiring 50/5 to 400/5Amps 5VA burden Current Transformer. Class 0.5 accuracy with Tape Wound.					3	468.00	1,404.00
(Ref. Cl. No.-5.33)	Each	Supplying of multi function digital meter with three line back light LCD type display for voltage, Current, frequency, Power, power					1	7750.00	7,750.00
(Material Component Sl. No.)	Each	Supply and fixing of 4 pole power contactor with NO/NC contacts on existing wood/panel board using necessary bolts, nuts, washers					1	757.80	757.80
		25Amps							
(Ref. Cl. No.-5.38)	Each	Supplying and fixing of LED type panel board indicating lamp with required colour suitable for 220V A.C. 50 Hz 12/24V D.C.					1	430.00	430.00
		LED type panel board							
(Ref. Cl. No.-5.40.1)	Mtr	Supplying ..... amps rated 3phase with neutral bus bar using required capacity electrolytic aluminum strips covered with heat					2	2050.00	4,100.00
(Ref. Cl. No.-5.41.1)	Mtr	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts, washers etc., and painted					25	255.00	6,375.00
(Ref. Cl. No.-5.41.3)	Mtr	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts, washers etc., and painted					25	460.00	11,500.00
(Ref. Cl. No.-5.41.4)	Mtr	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts, washers etc., and painted					10	630.00	6,300.00
(Ref. Cl. No.-5.17.8)	Each	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type					1	1,936.00	1,936.00
(Ref. Cl. No.-5.17.4)	Each	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type					23	909.00	20,907.00
(Ref. Cl. No.-5.29)	Each	Supplying, fixing and wiring 3 Phase Digital Ammeter / Voltmeter.							
		Digital Ammeter / Voltmeter.					1	185.00	185.00
(Ref. Cl. No.-5.28)	Each	Supplying, fixing and wiring rotary selector switch suitable for Voltmeter.							
		rotary selector switch suitable for Voltmeter.					1	135.00	135.00
(Ref. Cl. No.-5.47)	Each	Supplying and fixing Microprocessor based Electronic timer (without contactor,Din Mounting using necessary bolts, nuts and							
							1	1925.00	1,925.00
								Total	221,944.80

Consumer Panel Vending Zone Right Side									
Reference (PWD 2019-20)	Unit	Description	No	L(cm)	B(cm)	D(cm)	Qty	Rate	Amount
	1	2	3	4	5	6	7	8	9
<b>SWITCHGEARS &amp; ACCESSORIES</b>									
(Ref. Cl. No.-5.42)	Sq.cm	Fabricating supplying and mounting MS box made out ... SWG suitable for floor / wall mounting, fully weather proof with provision							
		<b>14SWG</b>							
		Consumer Panel Right Side	1	320	75	220	395600	<b>0.40</b>	<b>158,240.00</b>
(Ref. Cl. No.-5.34)	Each	Supplying, fixing and wiring 50/5 to 400/5Amps 5VA burden Current Transformer. Class 0.5 accuracy with Tape Wound.					3	468.00	1,404.00
(Ref. Cl. No.-5.33)	Each	Supplying of multi function digital meter with three line back light LCD type display for voltage, Current, frequency, Power, power					1	7750.00	7,750.00
(Material Component Sl. No.)	Each	Supply and fixing of 4 pole power contactor with NO/NC contacts on existing wood/panel board using necessary bolts, nuts, washers					1	757.80	757.80
		25Amps							
(Ref. Cl. No.-5.38)	Each	Supplying and fixing of LED type panel board indicating lamp with required colour suitable for 220V A.C. 50 Hz 12/24V D.C.					1	430.00	430.00
		LED type panel board							
(Ref. Cl. No.-5.40.1)	Mtr	Supplying ..... amps rated 3phase with neutral bus bar using required capacity electrolytic aluminum strips covered with heat					2	2050.00	4,100.00
(Ref. Cl. No.-5.41.1)	Mtr	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts, washers etc., and painted					25	255.00	6,375.00
(Ref. Cl. No.-5.41.3)	Mtr	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts, washers etc., and painted					25	460.00	11,500.00
(Ref. Cl. No.-5.41.4)	Mtr	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts, washers etc., and painted					10	630.00	6,300.00
(Ref. Cl. No.-5.17.8)	Each	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type					1	1,936.00	1,936.00
(Ref. Cl. No.-5.17.4)	Each	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type					19	909.00	17,271.00
(Ref. Cl. No.-5.29)	Each	Supplying, fixing and wiring 3 Phase Digital Ammeter / Voltmeter.							
		Digital Ammeter / Voltmeter.					1	185.00	185.00
(Ref. Cl. No.-5.28)	Each	Supplying, fixing and wiring rotary selector switch suitable for Voltmeter.							
		rotary selector switch suitable for Voltmeter.					1	135.00	135.00
(Ref. Cl. No.-5.47)	Each	Supplying and fixing Microprocessor based Electronic timer (without contactor,Din Mounting using necessary bolts, nuts and							
							1	1925.00	1,925.00
								Total	218,308.80

Input Data				Unit
1	Working Space Provided ( Both Side)		0.2	m
<b>Civil work for street light pole</b>				
	L	B	H	
2	0.60	0.6	1.2	m

CIVIL WORK FOR STREET LIGHT						
ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	REMARKS
<b>INSPECTION CHAMBER</b>						
1	<b>0.6x0.6x1.2</b>					
1.1	Excavation for inspection chamber incl. all safety provisions using site rails and stacking excavated stuff up to a lead of 90 mts. cleaning the site etc. complete for lifts and strata as specified :In all sorts of soil and soft murrum	m <sup>3</sup>	1.6	171	274	refer earth work I-4
1.2	Reinforced Cement concrete work of M-20 grade concrete with 20 mm down graded crusher broken hard granite chips (per Cum)	m <sup>3</sup>	0.43	4891	2113	IV - 04 (Ref :-A/R - 2006, P-50, Item No - 04)
1.3	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.Thermo-Mechanically Treated bars of grade Fe-500D or more	Kg	43.20	76	3296	IV - 09 (Ref :-A/R - 2006, P-52, Item No - 09)
1.4	Providing formwork of ordinary timber planking so as to give a rough finish including centering shuttering strutting and propping etc. Height of propping and centering below supporting floor to ceiling not exceeding 4 M. and removal of the same for in situ reinforced concrete and plain concrete work in. (A) Foundations Footings Bases of Columns etc. and Mass concrete.	m <sup>2</sup>	2.88	124	356	DSR Item no. 2.16.1, Page 76
				<b>TOTAL</b>	<b>6038.64</b>	

CIVIL WORK FOR STREET LIGHT							
S.NO.	ITEM	L	B	H	QUANTITY	UNIT	Remarks
<b>INSPECTION CHAMBER</b>							
1	<b>0.6x0.6x1.2</b>						clear dimension
1	EXCAVATION WORK	1	1	1.6	1.60	m <sup>3</sup>	
2	RCC WORK	0.60	0.6	1.2	0.43	m <sup>3</sup>	
3	Reinforcement				43.20	kg	
4	Shuttering work	0.6	0.6	1.20	2.88	m <sup>2</sup>	
	Working Space Provided ( Both Side)	0.2					

<b>1</b>	Supplying, fitting and placing uncoated HYSD bar reinforcement complete as per drawing and technical specification.						<b>IV - 09</b> (Ref :- A/R - 2006, P-52, Item No - 09)	
	Data for 1MT							
<b>(a) Material</b>								
(i)HYSD bars including 5 % overlaps and wastage	1.05	MT @Rs.	45371.19	Per MT	Rs.	47639.75		
(ii)Binding Wire	8	Kg @ Rs.	65.53	Per Kg	Rs.	524.24		
(iii)Blacksmith 1st Class	3	No. @ Rs.	461.00	Per day	Rs.	1383.00		
<b>(b) Labour</b>								
(i)Mate	0.44	No. @ Rs.	351.00	Per day	Rs.	154.44		
(ii)Man mulia	8	No. @ Rs.	311.00	Per day	Rs.	2488.00		
<b>(c) Add Overhead Charges @ 7.5%</b>	7.50%	on (a+b)			Rs.	3914.21		
<b>(d) Add Contractor Profit @ 7.5%</b>	7.50%	on (a+b)			Rs.	3914.21		
					Rs.	<b>60017.84</b>	Per MT	
<b>(e) Royalty &amp; Carriage</b>								
HYSD bars including 5 % overlaps and wastage	1.05	MT @Rs.	161.72	Per MT		169.81		
						<b>60187.65</b>	Per MT	
<b>(f) Add Labour Cess @ 1%</b>	1%	on (a+b+c+d+e)				601.88		
						<b>60789.52</b>	per MT	
	<i>Gnd Floor</i>	<i>1st Floor</i>	<i>2nd Floor</i>	<i>3rd Floor</i>	<i>4th Floor</i>	<i>5th Floor</i>	<i>6th Floor</i>	<i>7th Floor</i>
<b>Material Cost</b>	49546.99	49546.99	49546.99	49546.99	49546.99	49546.99	49546.99	49546.99
<b>Labour Cost</b>	2642.44	2774.56	2913.29	3058.95	3211.90	3372.50	3541.12	3718.18
<b>Add Overhead Charges @ 7.5%</b>	3914.21	3924.12	3934.52	3945.45	3956.92	3968.96	3981.61	3994.89
<b>Add Contractor Profit @ 7.5%</b>	3914.21	3924.12	3934.52	3945.45	3956.92	3968.96	3981.61	3994.89
<b>Add Royalty &amp; Carriage</b>	169.81	169.81	169.81	169.81	169.81	169.81	169.81	169.81
	<b>60187.65</b>	<b>60339.59</b>	<b>60499.12</b>	<b>60666.64</b>	<b>60842.53</b>	<b>61027.21</b>	<b>61221.13</b>	<b>61424.74</b>
<b>Add Labour Cess @ 1%</b>	601.88	603.40	604.99	606.67	608.43	610.27	612.21	614.25
<b>Rate per MT</b>	<b>60789.52</b>	<b>60942.98</b>	<b>61104.11</b>	<b>61273.30</b>	<b>61450.95</b>	<b>61637.48</b>	<b>61833.34</b>	<b>62038.99</b>

<b>2</b>	Earth work in all kinds of soil (per 100 Cum.)						<b>I - 4</b>	
<b>(a) In ordinary soil</b>						11444.80		
<b>(b) In Hard soil</b>						15378.95		
<b>(c) In Stony Earth</b>						23984.01		
						50807.76		
					Average Rate	Rs.	16935.92	
<b>Add Cess</b>	1%						<b>169.36</b>	
							<b>17105.28</b>	per 100 cum
					Add 20% extra For Foundation Rs.		3387.18	
						Rs	<b>20323.10</b>	per 100 cum
<b>Add Cess</b>	1%						<b>203.23</b>	
							<b>20526.33</b>	per 100 cum

<b>3</b>	Reinforced Cement concrete work of M-20 grade concrete with 20 mm down graded crusher broken hard granite chips (per Cum)						<b>IV - 04</b> (Ref :- A/R - 2006, P-50, Item No - 04)	
	Data per 15 cum.							
<b>(a) Material</b>								
(i)Granite chips 10 mm	5.4	Cum @ Rs.	1066.67	Per Cum.	Rs.	5760.02		
(ii)Granite chips 20 mm	8.1	Cum @ Rs.	1007.62	Per Cum.	Rs.	8161.72		
(iii)Sand	6.75	Cum @ Rs.	46.67	Per Cum.	Rs.	315.02		
(iv)Cement	52.1	Qntl @ Rs.	533.40	Per Qntl.	Rs.	27790.14		
<b>(b) Labour</b>								
(i)Mason 2 nd Class	1.5	No. @ Rs.	401.00	Per day	Rs.	601.50		
(ii)Mate	0.86	No. @ Rs.	351.00	Per day	Rs.	301.86		
(iii)Female Mulia	20	No. @ Rs.	311.00	Per day	Rs.	6220.00		
<b>(c) Machinery</b>								
(i)Concrete Mixer	6	Hour @ Rs.	153.91	Per Hour	Rs.	923.46		
(ii)Generator 33KV	6	Hour @ Rs.	208.70	Per Hour	Rs.	1252.20		
<b>(d) Add Overhead Charges @ 7.5%</b>	7.50%	on (a+b+c)			Rs.	3849.44		
<b>(e) Add Contractor Profit @ 7.5%</b>	7.50%	on (a+b+c)			Rs.	3849.44		
				Rate per 15 Cum	Rs.	<b>59024.81</b>		
<b>(f) Royalty &amp; Carriage</b>								
(i)Granite chips 10 mm	5.4	Cum @ Rs.	862.27	Per Cum.		4656.26		
(ii)Granite chips 20 mm	8.1	Cum @ Rs.	862.27	Per Cum.		6984.39		
(iii)Sand	6.75	Cum @ Rs.	536.67	Per Cum.		3622.52		
(iv)Cement	52.1	Qntl @ Rs.	16.17	Per Qntl.		842.56		
				Rate per 15 Cum		<b>75130.54</b>	per 15 cum	
				Rate per Cum		<b>5008.70</b>	per cum	
<b>(g) Add Labour Cess @ 1%</b>	1%	on (a+b+c+d+e+f)				50.09		
						<b>5058.79</b>	per cum	
	<i>Gnd Floor</i>	<i>1st Floor</i>	<i>2nd Floor</i>	<i>3rd Floor</i>	<i>4th Floor</i>	<i>5th Floor</i>	<i>6th Floor</i>	<i>7th Floor</i>
<b>Material Cost</b>	2801.79	2801.79	2801.79	2801.79	2801.79	2801.79	2801.79	2801.79
<b>Labour Cost</b>	474.89	546.12	628.04	722.25	830.59	955.17	1098.45	1263.22
Machinery Cost	145.04	145.04	145.04	145.04	145.04	145.04	145.04	145.04
<b>Add Overhead Charges @ 7.5%</b>	256.63	261.97	268.12	275.18	283.31	292.65	303.40	315.75
<b>Add Contractor Profit @ 7.5%</b>	256.63	261.97	268.12	275.18	283.31	292.65	303.40	315.75
<b>Add Royalty &amp; Carriage</b>	<b>1073.72</b>	<b>1073.72</b>	<b>1073.72</b>	<b>1073.72</b>	<b>1073.72</b>	<b>1073.72</b>	<b>1073.72</b>	<b>1073.72</b>
	<b>5008.70</b>	<b>5090.62</b>	<b>5184.83</b>	<b>5293.17</b>	<b>5417.75</b>	<b>5561.03</b>	<b>5725.80</b>	<b>5915.28</b>
<b>Add Labour Cess @ 1%</b>	50.09	50.91	51.85	52.93	54.18	55.61	57.26	59.15
<b>Rate per Cum</b>	<b>5058.79</b>	<b>5141.53</b>	<b>5236.68</b>	<b>5346.10</b>	<b>5471.93</b>	<b>5616.64</b>	<b>5783.05</b>	<b>5974.43</b>

JATRIKA PARKINGS- ABSTRACT OF COST		
S. No.	Description	Amount (In Rupees)
A	Civil Works	3,87,64,046.34
B	Storm water drainage	58,47,337.53
C	Electrical Works	3,49,21,938.83
D	Planting	33,16,381.29
	<b>TOTAL (E=A+B+C+D)</b>	<b>8,28,49,703.99</b>
	Add corporation Charges (F = 8% of E)	66,27,976.32
	Add GST (G = 12% of E)	99,41,964.48
	<b>Grand Total (H=E+F+G)</b>	<b>9,94,19,644.78</b>

*Say*

*9.94 Crore*

**Project Manager**  
Puri Project Division - I  
OBCC Ltd.

**Project Manager**  
Puri Project Division - I  
OBCC Ltd.

**Sr. Project Manager**  
Puri Project Division - I  
OBCC Ltd.

BILL OF QUANTITIES -For beach front parking								
CATEGORY : CIVIL		UOM	Jatarika-1 Qty	Jatarika-2 Qty	Total Qty	Rate (Rs.)	Amount (Rs.)	Reference
<b>1.0 SITE CLEANING</b>								
1.1	Clearing & Grubbing the road land including uprooting rank vegetation grass, bushes, shrubs, saplings and trees girth upto 300m, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, upto a lead of 1000 meters including removal and disposal of top organic soil not exceeding 150mm in thickness.	Sqm	2,701.76	1,136.30	3,838.06	5.69	21,824.49	Odisha rate analysis
<b>2.0 Cast in Situ Cement Concrete M20 Kerb</b>								
2.1	Construction of cement concrete kerb with top and bottom width 115 and 165 mm respectively, 250 mm high M 20 grade PCC on M-10 grade foundation 150 mm thick, foundation having 50 mm projection beyond kerb stone, kerb stone laid with kerb laying machine, foundation concrete laid manually, all complete as per clause 408	m	1,790.00	1,015.00	2,805.00	269.56	756,117.27	RA
<b>3.0 Brickwork for toe wall</b>								
3.1	Brick work with Flyash bricks in C.M(1:6) in Foundation & Plinth (per one Cum) 23x11x8cm	Cum	123.51	70.04	193.55	4,497.43	870,455.12	Odisha rate analysis
<b>4.0 PCC</b>								
4.1	Cement concrete (1:3:6) with 40 mm size hard granite metal (per Cum)	Cum	68.02	57.86	125.88	4,684.10	589,611.54	Odisha rate analysis
<b>5.0 Access road and Parking</b>								
5.1	Providing and laying Interlocking Paver Block of I section of size 80 mm thick of approved quality over 25mm thick bed of CM (1:1) with cost of all materials							
a	For access road	Sqm	5,400.00	2,875.00	8,275.00	1,012.89	8,381,660.02	Odisha rate analysis
<b>5.2 Supply of GRC Paving Tiles to the site in Puri</b>								
a	For junction	Sqm	670.00	315.00	985.00	1,291.71	1,272,335.84	quotation
5.3	Laying and fixing GRC paving block, for paving in floors, drains , footpath, etc. laid over 20mm thick base mortar 1:4 (1 cement : 4 coarse sand) with joints 10mm wide filled with same mortar including ruled pointing etc. complete as per direction of engineer-in-charge.							
a	For junction	Sqm	670.00	315.00	985.00	458.90	452,017.48	RA
5.4	Providing and Laying of 80 mm thick factory made Concrete paver block (GRASS PAVER) of M-35 grade made by block making machine with strong vibratory compaction of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with fine sand etc. all complete as per the direction of Engineer-in-charge.	Sqm	5,693.50	2,491.50	8,185.00	1,133.40	9,276,879.00	RA
5.5	Loosening, leveling and Compacting original ground supporting embankment to facilitate placement of first layer of embankment, scarified to a depth of 150 mm, mixed with water at OMC and then compacted by rolling so as to achieve minimum dry density as given in table 300-2 for embankment construction construction & Clause 305 of MoSRT&H Specifications for Road & Bridge works (Latest Revision) vide ARP.158 item no.37	Cum	1,764.53	852.23	2,616.75	41.41	108,365.02	RA
5.6	Construction of granular sub-base by providing coarse graded material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per clause 401.	Cum	1,764.53	852.23	2,616.75	1,712.50	4,481,184.38	RA

BILL OF QUANTITIES -For beach front parking								
CATEGORY : CIVIL		UOM	Jatarika-1 Qty	Jatarika-2 Qty	Total Qty	Rate (Rs.)	Amount (Rs.)	Reference
5.7	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver in sub- base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density.	Cum	2,352.70	1,136.30	3,489.00	1,544.20	5,387,713.80	RA
6.0	<b>EARTHWORK</b>							
6.1	Earth work in ordinary soil within 50m, initial lead and 1.5m, initial lift including rough dressing and breaking clods to maximum 5cm to 7cm and laying in layers not exceeding 0.3m in depth and as per direction of the Engineer-in-charge (per 100 Cum.)	CUM	379.48	242.08	621.56	138.71	86,216.85	RA
7.0	<b>Dismantling</b>							
7.1	Dismantling brick or stone masonry in lime or cement mortar under 3. m height including stacking the useful materials for reuse and removing the debris with in 50. m Lead.	Cum	135.40		135.40	1,084.96	146,899.38	RA
7.2	Dismantling & removing RCC columns, beams, slab, staircase landing, lintels including stacking the useful materials for reuse and removing the debris with in 50. m Lead. (per 1 Cum.)	Cum	33.78		33.78	1,153.37	38,955.67	RA
8.0	<b>Toilet Blocks (2 nos)</b>							
8.1	Civil Works	sqm	74.00		74.00	17,589.00	1,301,586.00	Refer Sr. No. 1.1.2 of CPWD PAR 2020
8.2	Internal water supply and sanitary installation		12%				156,190.32	Refer Sr. No. 2.1 of CPWD PAR2020
8.3	Internal Electric Installations		12.50%				162,698.25	Refer Sr. No. 2.3 of CPWD PAR 2020
8.4	Power wiring and Plugs		4%				52,063.44	Refer Sr. No. 2.4.1 of CPWD PAR 2020
8.5	External Civil Service Connections (Water & Sewerage)		1%				16,269.83	Refer Sr. No. 2.2.2 of CPWD PAR 2020
8.6	Water Tank		5.00		5.00	17,857.00	89,285.00	Refer Sr. No. 4.5 CPWD PAR 2020
9.0	<b>DISPOSAL</b>							
9.1	Removal of dismantled material up to a distance of 5km by mechanical means	cum	33.78		33.78	151.17	5,105.74	Odisha rate analysis
10.0	<b>Boundary wall construction</b>							
10.1	Construction, Providing, Supplying and fixing the pre-cast, pre-tensioned SFRC compound wall poles having finished dimension of 200mmx200mmx3000mm long, (providing the construction joint at the interval of 15.4mtr) made in M-30 grade concrete with 10 nos. of 4mm dia. HTPC (High Tension Pre Coated) wire, fixed in cast-in-situ PCC M-20 concrete in foundation footing of size 600 mm dia 750mm depth from top inside the pre-cast RCC collar (NP-2) of 600mm internal dia. & length of 750mm, placed over a base of P.C.C. (1:4:8) of size 680 mm dia., 100 mm depth including excavating foundation pit for each pole, in all kind of soil of size 680 mm dia., 850 mm depth including watering & curing for required days along with supplying, fitting & fixing of pre-cast, pre-tensioned SFRC slab having dimension of 2100mm (long) x 300mm (wide) x 50mm (thick) 7.5 nos. per span, made with M-30 grade concrete with 4mm dia. GI HTPC wire 4 nos. covering the top of the compound wall poles with a pre-cast SFRC cover of size (300X300X150) mm	m	212.00	460.00	672.00	5,918.80	3,977,433.60	RA
10.2	Cement concrete (1:3:6) with 40 mm size hard granite metal (per Cum)	cum	76.32	165.60	241.92	4,684.10	1,133,178.33	

BILL OF QUANTITIES -For beach front parking							
CATEGORY : CIVIL							
SL. No.	DESCRIPTION	UOM	Jatarika-1 Qty	Jatarika- 2 Qty	Total Qty	Rate (Rs.)	Amount (Rs.)
	TOTAL FOR CIVIL WOKS (Rs.)						38,764,046.34

<u>ANALYSIS</u>						
Sl. No.	Description	Unit	Quantity	Rate	Amount	
<u>Data for 1.00 mtr length</u>						
i	Construction, Providing, Supplying and fixing the pre-cast, pre-tensioned SFRC compound wall poles having finished dimension of 200mmx200mmx3000mm long, (providing the construction joint at the interval of 15.4mtr) made in M-30 grade concrete with 10 nos. of 4mm dia. HTPC (High Tension Pre Coated) wire, fixed in cast-in-situ PCC M-20 concrete in foundation footing of size 600 mm dia 750mm depth from top inside the pre-cast RCC collar (NP-2) of 600mm internal dia. & length of 750mm, placed over a base of P.C.C. (1:4:8) of size 680 mm dia., 100 mm depth including excavating foundation pit for each pole, in all kind of soil of size 680 mm dia., 850 mm depth including watering & curing for required days along with supplying, fitting & fixing of pre-cast, pre-tensioned SFRC slab having dimension of 2100mm (long) x 300mm (wide) x 50mm (thick) 7.5 nos. per span, made with M-30 grade concrete with 4mm dia. GI HTPC wire 4 nos. covering the top of the compound wall poles with a pre-cast SFRC cover of size (300X300X150) mm in order to prevent the slab pannels from removing. All complete as a set to be measured in term of running meter including such pre-cast, SFRC top cover, slab, pole, including painting two coats of approved weather coat paint over a coat of wall primer including curing cost and conveyance of all materials, royalties, taxes all labour, labour cess, T & P required for the work etc. complete including dewatering if required as per the direction of the Engineer-in-charge (Excluding cost of GST).	Rmt	1.00	4630.47	4630.47	
<i>The above rate has been taken from the work "Construction of SFRC Precast Pre-tensioned compound wall under Jaipur Road Division" of IDCO approved by Competent Authority vide Office Order No. 17468 dtd. 16.10.2019 &amp; Office Order No. 65 dtd. 01.01.2020</i>						
ii	Earthwork in excavation in Ordinary Soil, P.C.C(1:4:8), R.C.Cof M-20 in column footing, 600mm dia (NP-2) RCC Collar and two coats of weather painting over one coat of wall primer as per analysis attached	Rmt	1.00	1288.30	1288.30	
For 1.00 mtr length			Total	5918.77	<b>5918.80</b>	

NAME OF THE PROJECT : Beach front road development and extension -JATRIKA PARKING							
	Parking 1	On beach side parking					SQM
S. NO.	Particular	L	B	H	Nos.	Quantity	Unit
<b>1</b>	<b>Site clearance</b>						
	<b>Considering 20% of paving area</b>	2701.755	Sqm			<b>2701.755</b>	<b>Sqm</b>
<b>2</b>	<b>Kerb stone</b>						
2.1	Cast in Situ Cement Concrete kerb stone						
b	parking 1	1790	m			1790	m
	<b>Total</b>					<b>1790 m</b>	
<b>3</b>	<b>Brick work for toe wall</b>						
3.1	For toe wall below kerb						
b	parking 1	1790	0.23	0.3		123.51	cum
	<b>Total</b>					<b>123.51</b>	<b>cum</b>
<b>4</b>	<b>PCC work</b>						
a	parking 1 Toe wall	1790	0.38	0.1		68.02	cum
	<b>Total</b>					<b>68.02</b>	<b>cum</b>
<b>5</b>	<b>Access road and Parking</b>						
<b>5.1</b>	<b>Concrete paver + GRV paver</b>						
<b>5.1.1</b>	6m wide access road						
a	Total access road area including junction	6070	Sqm		1	<b>6070</b>	<b>sqm</b>
b	Junction paving area	670	sqm		1	<b>670</b>	<b>sqm</b>
c	Total - junction	5400	sqm		1	<b>5400</b>	<b>sqm</b>
<b>5.1.2</b>	Green Concrete paver (beige) for parking						
b	Parking 1 (4 wheeler)	5	2.5		425	<b>5312.5</b>	<b>sqm</b>
d	Parking 1 (2 wheeler)	2.5	1.2		127	<b>381</b>	<b>sqm</b>
	<b>Total</b>					<b>5693.5</b>	<b>sqm</b>
<b>0.1</b>	<b>Loosening</b>						
<b>0.1.1</b>	<b>Loosening for 6m wide access road</b>						
b	Parking 1	6070	Sqm	0.15	1	<b>910.5</b>	<b>cum</b>
<b>0.1.2</b>	<b>Loosening for parking</b>						
b	Parking 1 (4 wheeler)	5	2.5	0.15	425	<b>796.875</b>	<b>cum</b>
d	Parking 1 (2 wheeler)	2.5	1.2	0.15	127	<b>57.15</b>	<b>cum</b>
	<b>Total</b>					<b>1764.525</b>	<b>cum</b>
<b>5.2</b>	<b>GSB</b>						
<b>5.2.1</b>	<b>GSB for 6m wide access road</b>						
b	Parking 1	6070	Sqm	0.15	1	<b>910.5</b>	<b>cum</b>
<b>5.2.2</b>	<b>GSB for parking</b>						
b	Parking 1 (4 wheeler)	5	2.5	0.15	425	<b>796.875</b>	<b>cum</b>
d	Parking 1 (2 wheeler)	2.5	1.2	0.15	127	<b>57.15</b>	<b>cum</b>
	<b>Total</b>					<b>1764.525</b>	<b>cum</b>
<b>5.3</b>	<b>WMM</b>						
<b>5.3.1</b>	<b>WMM for 6m wide access road</b>						
b	Parking 1	6070	Sqm	0.2	1	<b>1214</b>	<b>cum</b>
<b>5.3.2</b>	<b>WMM for parking</b>						
b	Parking 1 (4 wheeler)	5	2.5	0.2	425	<b>1062.5</b>	<b>cum</b>
d	Parking 1 (2 wheeler)	2.5	1.2	0.2	127	<b>76.2</b>	<b>cum</b>
	<b>Total</b>					<b>2352.7</b>	<b>cum</b>
<b>6</b>	<b>Earthwork</b>						
a	Excavation for Toe wall	1790	0.53	0.4		379.48	cum
<b>7</b>	<b>Dismantling</b>						
<b>7.1</b>	<b>Brick work of toilet</b>	33.00063				<b>33.00</b>	cum
	<b>Brick work of boundary wall</b>	212	2.1	0.23		<b>102.40</b>	cum
	<b>Total</b>					<b>135.40</b>	cum
<b>7.2</b>	<b>RCC</b>						
	<b>Beam</b>	36.79	0.45	0.23	2.00	<b>7.62</b>	cum
	<b>Slab</b>	80		0.15	2	<b>24.00</b>	cum
	<b>Column</b>	0.3	0.3	3	8	<b>2.16</b>	cum
	<b>Total</b>					<b>33.78</b>	cum
<b>8</b>	<b>Toilet Block</b>						
8.1	<b>Area of toilet block</b>	37	sqm		2	<b>74.00</b>	sqm
<b>9</b>	<b>Disposal of dismantled material</b>						
	<b>Considering 80% of dismantled material</b>					<b>135.337728</b>	<b>cum</b>
<b>10</b>	<b>Boundary wall</b>						
10.1	<b>Total including constructed and new construction</b>	489				<b>489</b>	<b>m</b>

NAME OF THE PROJECT : Beach front road development and extension -JATRIKA PARKING						
S. NO.	Parking 1 Particular	On beach side parking				SQM Unit
		L	B	H	Nos.	Quantity

NAME OF THE PROJECT : Beach front road development and extension -JATRIKA PARKING							
	Parking 2					6270	sqm
S. NO.	Particular	L	B	H	Nos.	Quantity	Unit
<b>1</b>	<b>Site clearance</b>						
	<b>Considering 20% of total area</b>	1136.3	Sqm			<b>1136.3</b>	<b>Sqm</b>
<b>2</b>	<b>Kerb stone</b>						
2.1	Cast in Situ Cement Concrete kerb stone						
a	parking 2	1015	m			1015	m
	<b>Total</b>					<b>1015</b>	<b>m</b>
<b>3</b>	<b>Brick work for toe wall</b>						
3.1	For toe wall below kerb						
a	parking 2	1015	0.23	0.3		70.035	cum
	<b>Total</b>					<b>70.035</b>	<b>cum</b>
<b>4</b>	<b>PCC work for toe wall</b>						
a	parking 2	1015	0.38	0.15		57.855	cum
	<b>Total</b>					<b>57.855</b>	<b>cum</b>
<b>5</b>	<b>Access road and Parking</b>						
<b>5.2</b>	<b>Concrete paver</b>						
<b>5.2.1</b>							
a	Total access road area Parking 2	3190	Sqm		1	<b>3190</b>	<b>sqm</b>
b	Junction area	315	sqm		1	<b>315</b>	<b>sqm</b>
c	Total-junction	2875	sqm		1	<b>2875</b>	<b>sqm</b>
<b>5.2.2</b>	<b>Grass Concrete paver for parking</b>						
a	Parking 2 (4 wheeler)	5	2.5		183	<b>2287.5</b>	<b>sqm</b>
c	Parking 2 (2 wheeler)	2.5	1.2		68	<b>204</b>	<b>sqm</b>
	<b>Total</b>					<b>2491.5</b>	<b>sqm</b>
<b>0.3</b>	<b>Loosening</b>						
<b>0.3.1</b>	<b>Loosening for 6m wide access road</b>						
a	Parking 2	3190	Sqm	0.15	1	<b>478.5</b>	<b>cum</b>
<b>0.3.2</b>	<b>Loosening for parking</b>						
a	Parking 2 (4 wheeler)	5	2.5	0.15	183	<b>343.125</b>	<b>cum</b>
c	Parking 2 (2 wheeler)	2.5	1.2	0.15	68	<b>30.6</b>	<b>cum</b>
	<b>Total</b>					<b>852.225</b>	<b>cum</b>
<b>5.3</b>	<b>GSB</b>						
<b>5.3.1</b>	<b>GSB for 6m wide access road</b>						
a	Parking 2	3190	Sqm	0.15	1	<b>478.5</b>	<b>cum</b>
<b>5.3.2</b>	<b>GSB for parking</b>						
a	Parking 2 (4 wheeler)	5	2.5	0.15	183	<b>343.125</b>	<b>cum</b>
c	Parking 2 (2 wheeler)	2.5	1.2	0.15	68	<b>30.6</b>	<b>cum</b>
	<b>Total</b>					<b>852.225</b>	<b>cum</b>
<b>5.4</b>	<b>WMM</b>						
<b>5.4.1</b>	<b>WMM for 6m wide access road</b>						
a	Parking 2	3190	Sqm	0.2	1	<b>638</b>	<b>cum</b>
<b>5.4.2</b>	<b>WMM for parking</b>						
a	Parking 2 (4 wheeler)	5	2.5	0.2	183	<b>457.5</b>	<b>cum</b>
c	Parking 2 (2 wheeler)	2.5	1.2	0.2	68	<b>40.8</b>	<b>cum</b>
	<b>Total</b>					<b>1136.3</b>	<b>cum</b>
<b>6</b>	<b>Earthwork</b>						
<b>6.1</b>	<b>Excavation for toe wall</b>	1015	0.53	0.45		<b>242.0775</b>	<b>cum</b>
<b>10</b>	<b>Boundary wall construction</b>						
a	Length of boundary wall	460				<b>460</b>	<b>m</b>



NAME OF PROJECT: JATRIKA PARKING - 1						
BLOCK COST ESTIMATE FOR ELECTRICAL						
Sl. No.	Item Description	Qty.	Unit	Unit Rate (In Rs.)	Total Amount (In Rs)	Remarks
1	Supply, testing, tagging, laying and commissioning following sizes of 1.1KV , XLPE / PVC insulated multistrand Al. / Cu. Conductor armoured / unarmoured cables (As Per IS 1554 & IS 7098) in readymade RCC trench, in provided DWC pipe, RCC pipe hume pipe, on provided cable trays / ladders etc. as. required complete with clamps, hardware for fixing tagging, identification etc. (3.5Cx35 sqmm, Al, Armoured, XLPE)	250	Mtr.	252	63026	Annexure-1_Rate Analysis_Non-Sor Item_Electrical
2	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required. (Upto 35 sq. mm)	250	Mtr.	288	72098	DSR 2018 Item No. - 7.1.1
3	Supply, Installation, Testing & Commissioning of 415V Low Voltage Panel (Feeder Pillar - Floor Mounted), Outdoor Type IP-55 (TTA Panel)	1	Lot	144284	144284	Annexure-4_LV Panel Cost Estimation
3a	Indoor SPN DB	2	Lot	8017	16034	Annexure-4_LV Panel Cost
4	Supply, testing, tagging, laying and commissioning following sizes of 1100 Volt grade, XLPE / PVC insulated multistrand Al. / Cu. Conductor armoured / unarmoured cables (As Per IS 1554 & IS 7098) in readymade RCC trench, in provided DWC pipe, RCC pipe hume pipe, on provided cable trays / ladders etc. as. required complete with clamps, hardware for fixing tagging, identification etc.					
a	4C x 10 Sq.mm Al XLPE Armoured Cable	1680	Mtr.	136	229232	Annexure-1_Rate
b	4C x 6 Sq.mm Al XLPE Armoured Cable	240	Mtr.	116	27757	Analysis_Non-Sor
c	3C x 2.5 Sq.mm CU Cable.( Flexible )	1330	Mtr.	205	272548	Item_Electrical
5	Supply and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium cable of 1.1kv grade (without cost of cable ) as required.					
a	3.5C x 35 Sq.mm Al XLPE Armoured Cable	2	Nos.	255	510	OPWD Electrical SoR Item No. - 5.8.21
b	4C x 10 Sq.mm Al XLPE Armoured Cable	14	Nos.	150	2100	OPWD Electrical SoR Item No. - 5.8.31
c	4C x 6 Sq.mm Al XLPE Armoured Cable	10	Nos.	125	1248	OPWD Electrical SoR Item No. - 5.8.31.a
d	3C x 2.5 Sq.mm CU Cable.( Flexible )	213	Nos.	214	45582	Annexure-1_Rate Analysis_Non-Sor Item_Electrical
6	5 mt. Post Top Pole -Supply, Installation, Testing and Commissionin of pole 5 mt shall be of 'composite' construction designed to withstand specified 'dead load' pertaining to the luminaire and its mounting accessories and 'wind load' corresponding to a basic wind speed of 300kmph without any deformation or damage to the structure. The Pole Shaft should be fabricated out of Steel tube of grade YST 240 and batch test reports for chemical and mechanical properties of material should be submitted along with the bid. Pole pipe should be provided with Spikes .Structurally designed base plate of Steel A36/A572-50 or equivalent should be welded with the pole shaft. Height 5 meters. Make : Keselec or equivalent.	209	Nos.	55879	11678711	Annexure-1_Rate Analysis_Non-Sor Item_Electrical
7	60W Decorative luminaire - Supply, Installation, Testing and Commissioning of Decorative Luminaires BIS approved ( along with BIS certification of same model confirming to IS 10322 /IEC60598 & LM79 parameters as per tender specs) for Urban lighting, body made of painted spun aluminium with Top spun aluminium minimum thickness of 1.5 mm, Dia should not exceed 435 mm and height should not exceed 265 mm ,weight should not be less than 1.28 kg and Lower spun aluminium of minimum thickness of 1.5 mm ,dia should not exceed 595 mm ,height should not exceed 40 mm and weight should not be less than 0.9 kg. Body of the fixture must be in two parts and fixture opening of the fixture is from front side for the ease of operation . Fixture is having external surge protection of 10KV. Electronic driver is having power factor>0.90*, THD<15*, CRI>80 and input voltage range from 120-227V AC at 50Hz. Minimum lumen 7800 lumen (Confirmed by LM79 report from Third party NABL approved lab) in CCT range of 4000 as per ANSI. presented with Dialux report and IES file of the luminaire System life of 50000 burning hours with 70% of initial lumens maintained. Luminaire is suitable for operating temperature (Ta) from -20° to 50°C. Driver can withstand 320V AC for 48 hours and 440 V AC for 8 hours. WATT-60W. Make : Keselec Porto-NU-60 watt/Rosa OW/Ligman/Simes or equivalent.	209	Nos.	34437	7197333	
7a	11W, Philips SM250C LED12S-6500 PSU WH or Equivalent	38	Nos.	1235	46930	

NAME OF PROJECT: JATRIKA PARKING - 1						
BLOCK COST ESTIMATE FOR ELECTRICAL						
Sl. No.	Item Description	Qty.	Unit	Unit Rate (In Rs.)	Total Amount (In Rs)	Remarks
A	Recessed wiring to light point/Fan point/ Exhaust fan point/Call bell point with 1.5 sq.mm FR PVC insulated single core multistrand copper conductor of ISI marked with 20 mm dia non-metallic PVC flexible conduit with 6Amp, 250V Modular switch ISI marked and ceiling rose ISI marked mounted on metal box having front Modular cover of suitable size, metal box with 1.5 sq.mm FR PVC insulated single core multistrand copper conductor as earth wire including all accessories connection.(Make of wire-L&T/Anchor/Havells/V-Guard/Great White/HPL) Group-B	38	Point	914	34732	OPWD Electrical Non-Schedule Item Rates
B	Recessed wiring for light / power plug with 2 x 2.5 sq.mm FR PVC insulated single core multistrand copper conductor of ISI marked with 20mm dia non-metallic PVC flexible conduit along with 1 x 1.5 sq.mm FR PVC insulated single core multistrand copper conductor for loop earthing as required. (Make of wire-Finolex/L&T/Anchor/Havells/V-Guard/ HPL)	228	Mtr	109	24852	OPWD Electrical SoR Item No. 1.4
8A	Earthing with GI earth pipe 3 Mtr long , 40 mm dia including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke & salt as required.	2	Nos.	2359	4718	OPWD Electrical SoR Item No. 3.2
8B	Maintenance free Chemical Earthing: Supply of UL Listed Maintenance Free Earthing System made of copper bonded rod of 10 feet (3 mtr approx.) length, 17.2 mm dia. (Minimum copper bonding shall be 0.25mm, suitable for 25 kA fault current) along with Rod-to-Conductor connectors, 95% pure Carbon-Based Earth enhancement material of 30kg, Pit Cover as required.	209	Nos.	5356	1119404	GWSSB Electrical SoR Item No. 3.5.12
9	Providing and fixing testing joint, made of G.I. strip, 125 mm long, with 4 nos. of G.I. bolts, nuts, chuck nuts and spring washers etc. complete as required.	2	Nos.	91	182	DSR 2018 (Ref. Cl. No. - 6.1.2)
10	Supplying and laying 25 mm X 5 mm G.I strip at 0.50 metre below ground as strip earth electrode, including connection/terminating with G.I. nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50mm)	2110	Mtr.	117	246795	DSR 2018 (Ref. Cl. No. - 5.9)
11	Supplying and laying 6 SWG G.I. wire at 0.50 metre below ground level for conductor earth electrode, including connection/ termination with GI thimble etc. as required.	1860	Mtr.	25	46500	DSR 2016, item no- 5.7
12	Supply and laying double walled corrugated (DWC) HDPE Pipe including all necessary connecting Sockets/Couplings/Tees/Bends/End-caps of same materials in existing trench as per IS 14930 part -II suitable for drawing underground cables. 40mm OD / 32mm ID	3250	Mtr.	68	219582	Annexure-1_Rate Analysis_Non-Sor Item_Electrical
13	Supply and laying double walled corrugated (DWC) HDPE Pipe including all necessary connecting Sockets/Couplings/Tees/Bends/End-caps of same materials in existing trench as per IS 14930 part -II suitable for drawing underground cables. 90mm OD / 76mm ID	250	Mtr.	113	28264	Annexure-1_Rate Analysis_Non-Sor Item_Electrical
14	Supply including fitting and fixing of outdoor cable 4 way Polycarbonate Junction Boxes IP 67 & IK08 halogen free and weather proof for outdoor installation Base with metric knock-outs and PUR gasket, screws for mounting plate/DIN-rail and cover with polyamide cover screws. including all accessories complete as specified and directed by the Deptt.					
a	Junction Box Size with 100x100x75 mm for Cable size 4Cx10sq.mm (main cable), 4Cx2.5 sq.mm & 4Cx4 Sq.mm (tap off cables) as in the above items. The junction box shall be suitable for outdoor application with minimum IP65 protection.	10	Nos.	467	4665	Annexure-1_Rate Analysis_Non-Sor Item_Electrical
15	Civil Works for Electrical Equipment	2	Sqr. Mtr.	8929	14286	CPWD Plinth Area Rates 2020 (Sl. No.1.3.6, Page - 11 of 44)
16	Civil Works for Pole	209	Nos.	5539	1157580	Annexure-3_Rate Analysis for Pole Foundation
				<b>Total</b>	<b>22,698,952</b>	

Electrical Rate Analysis														
Sr. No.	Item Description	Unit	Supply	P&F and Transporta tion (%)	P&F and Transporta tion (Rs.)	Total Supply UR (Rs.)	Inst. %	Inst (Rs.)	Total Inst UR (Rs.)	Total without GST (SITC) (Rs.)	OH + Profit @15% (Rs.)	UR (Supply + Inst) (Rs.)	Total Rate (Rs.)	Ref.
1	Supply, testing, tagging, laying and commissioning following sizes of 1100 Volt grade, XLPE / PVC insulated multistrand Al. / Cu. Conductor armoured / unarmoured cables (As Per IS 1554 & IS 7098) in readymade RCC trench, in provided PVC pipe, RCC pipe hume pipe, on provided cable trays / ladders etc. as. required complete with clamps, hardware for fixing tagging, identification etc.													
a	3.5C x 35 sqmm A2XFY armoured AL Cable	Mtr.	194	3%	6	200	10%	19	19.4	219	33	252	252	Ref:KEI-AEC-AL-Armoured-Unarmoured-Cable Price List (Annexure-C)
b	4c x 10 sqmm A2XFY armoured AL Cable	Mtr.	105	3%	3	108	10%	11	10.5	119	18	136	136	Ref:KEI-AEC-AL-Armoured-Unarmoured-Cable Price List (Annexure-C)
c	4c x 6 sqmm A2XFY armoured AL Cable	Mtr.	89	3%	3	92	10%	9	8.9	101	15	116	116	Ref:KEI-AEC-AL-Armoured-Unarmoured-Cable Price List (Annexure-C)
d	3C x 2.5 Sq.mm CU Cable.( Flexible )	Mtr.	158	3%	5	163	10%	16	15.8	179	27	205	205	Non SOR Item Ref:Polycab Price List
2	Supply and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium cable of 1.1kv grade (without cost of cable ) as required.													
a	3C x 2.5 Sq.mm CU Cable.( Flexible )	nos	165	3%	5	170	10%	17	17	186	28	214	214	Jainson Price List
3	5 Meter Post Top Pole	nos	43000	3%	1,290	44,290	10%	4,300	4,300	48,590	7,289	55,879	####	Non SOR Item Ref:Keselc Quote (Annexure-C)
4	60 Watt Decorative Luaminare	nos	26500	3%	795	27,295	10%	2,650	2,650	29,945	4,492	34,437	####	Non SOR Item Ref:Keselc Quote (Annexure-C)
8	40mm OD Pipe	Mtr.	52	3%	2	54	10%	5	5	59	9	68	68	Ref:-Noble Quotation (Annexure-C)
9	90mm OD Pipe	Mtr.	87	3%	3	90	10%	9	9	98	15	113	113	Ref:-Noble Quotation (Annexure-C)
10	Supply installation, testing and commissioning of outdoor type 3/4 way Junction box with terminal arrangement for 4Cx6 Sq.mm. cable. Junction boxes should be with IP 67 Protection.	Nos.	359	3%	11	370	10%	36	36	406	61	467	467	Ref:-FIBOX Quote (Annexure-C)
11	11W, Philips SM250C LED12S-6500 PSU WH or Equivalent	Nos.	950	3%	29	979	10%	95	95	1,074	161	1,235	1235	Non SOR Item Ref:Philips Quote (Annexure-C)

Input Data				
1	Working Space Provided ( Both Side)		0.2	m
<b>Civil work for street light pole</b>				
2	L 0.60	B 0.6	H 1.2	

CIVIL WORK FOR STREET LIGHT						
ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	REMARKS
<b>POLE FOUNDATION</b>						
1	<b>0.6x0.6x1.2</b>					
1.1	Excavation for inspection chamber incl. all safety provisions using site rails and stacking excavated stuff up to a lead of 90 mts. cleaning the site etc. complete for lifts and strata as specified :In all sorts of soil and soft murrum	m <sup>3</sup>	1.6	205.2633	328.42	refer earth work I-4
1.2	Reinforced Cement concrete work of M-20 grade concrete with 20 mm down graded crusher broken hard granite chips (per Cum)	m <sup>3</sup>	0.43	5058.79	2185.40	IV - 04 (Ref :-A/R - 2006, P-50, Item No - 04)
1.3	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.Thermo-Mechanically Treated bars of grade Fe-500D or more	Kg	43.20	60.78952	2626.11	IV - 09 (Ref :-A/R - 2006, P-52, Item No - 09)
1.4	Providing formwork of ordinary timber planking so as to give a rough finish including centering shuttering strutting and propping etc. Height of propping and centering below supporting floor to ceiling not exceeding 4 M. and removal of the same for in situ reinforced concrete and plain concrete work in. (A) Foundations Footings Bases of Columns etc. and Mass concrete.	m <sup>2</sup>	2.88	138.45	398.74	DSR Item no. 2.16.1, Page 76
				<b>TOTAL</b>	<b>5538.66</b>	

CIVIL WORK FOR STREET LIGHT							
S.NO.	ITEM	L	B	H	QUANTITY	UNIT	Remarks
INSPECTION CHAMBER							
1	<b>0.6x0.6x1.2</b>						clear dimension
1	EXCAVATION WORK	1	1	1.6	1.60	m <sup>3</sup>	
2	RCC WORK	0.60	0.6	1.2	0.43	m <sup>3</sup>	
3	Reinforcement				43.20	kg	
4	Shuttering work	0.6	0.6	1.20	2.88	m <sup>2</sup>	
	Working Space Provided ( Both Side)	0.2					

Reference (PWD 2019-20)	Unit	Description	No 2	L (cm) 3	B(cm) 4	D(cm) 5	Qty 6	Rate 7	Amount 8	9
<b>SWITCHGEARS &amp; ACCESSORIES</b>										
(Ref. Cl. No.-5.42)	Sq.cm	Fabricating supplying and mounting MS box made out ... SWG suitable for floor / wall mounting, fully weather proof with 14SWG FP		1	200	40	200	208000	0.40	83,200.00
(Ref. Cl. No.-5.34)	Each	Supplying, fixing and wiring 50/5 to 400/5Amps 5VA burden Current Transformer. Class 0.5 accuracy with Tape Wound. Current Transformer					3	468.00		1,404.00
(Ref. Cl. No.-5.33)	Each	Supplying of multi function digital meter with three line back light LCD type display for voltage, Current, frequency, Multi function digital meter					1	7750.00		7,750.00
(Material Component Sl. No.)	Each	Supply and fixing of 4 pole power contactor with NO/NC contacts on existing wood/panel board using necessary bolts, 25Amps					1	757.80		757.80
(Ref. Cl. No.-5.38)	Each	Supplying and fixing of LED type panel board indicating lamp with required colour suitable for 220v A.C. 50 Hz 12/24v D.C. LED type panel board					1	430.00		430.00
(Ref. Cl. No.-5.40.1)	Mtr	Supplying ..... amps rated 3phase with neutral bus bar using required capacity electrolytic aluminum strips covered with 100Amps 4x30x6mm Aluminium Strips					2	2050.00		4,100.00
(Ref. Cl. No.-5.41.1)	Mtr	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.., and M.S. flat ... with bolts, washers etc., and 40x40x6mm					25	255.00		6,375.00
(Ref. Cl. No.-5.41.3)	Mtr	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.., and M.S. flat ... with bolts, washers etc., and 75x75x6mm					25	460.00		11,500.00
(Ref. Cl. No.-5.41.4)	Mtr	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.., and M.S. flat ... with bolts, washers etc., and 50x100x50x6mm C channel					10	630.00		6,300.00
(Ref. Cl. No.-5.14.7)	Each	Supplying and fixing Moulded Case Circuit Breaker (MCCB) over the existing wood/panel board using necessary screws, 100Amps 25kA.					1	6,400.00		6,400.00
(Ref. Cl. No.-5.17.7)	Each	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' 6-32 Amps TPN					7	1,715.00		12,005.00
(Ref. Cl. No.-5.17.4)	Each	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' 6-32 Amps DP					2	909.00		1,818.00
(Ref. Cl. No.-5.29)	Each	Supplying, fixing and wiring 3 Phase Digital Ammeter /Voltmeter. Digital Ammeter /Voltmeter.					1	185.00		185.00
(Ref. Cl. No.-5.28)	Each	Supplying, fixing and wiring rotary selector switch suitable for Voltmeter. rotary selector switch suitable for Voltmeter.					1	135.00		135.00
(Ref. Cl. No.-5.47)	Each	Supplying and fixing Microprocessor based Electronic timer (without contactor,Din Mounting using necessary bolts, nuts					1	1925.00		1,925.00
								Total		144,284.80

Rate Analysis of Indoor LDB						
S.No.	Description of ite	Qty	Unit	Rate (In Rs.)	Amount (In Rs.)	Price Reference
1	Supply and fixing of following way single pole and neutral, sheet steel, MCB distribution board consumer unit, 240 V on surface / recess complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, hinged front acrylic cover for the MCB knobs detachable gland plate, interconnections, phosphatized and powder painted including earthing etc. as required(But without MCB/RCCB/isolator) 4 + 8 WAY SINGLE DOOR	1	Nos	2369	2369	OPWD Electrical SoR Item No. 2.4.2

2	Supply and fixing of 5 amp to 32 amp rating 240/415 V "B" series miniature circuit breaker suitable for lighting and other loads of the following poles in the existing MCB DB ISI marked complete with connections testing and commissioning etc. as required DP	1	Nos	1107	1107	OPWD Electrical SoR Item No. 2.6.4
3	Supply and fixing of 5 amp to 32 amp rating 240/415 V "B" series miniature circuit breaker suitable for lighting and other loads of the following poles in the existing MCB DB ISI marked complete with connections testing and commissioning etc. as required DP	6	Nos	403	2418	OPWD Electrical SoR Item No. 2.6.2
4	Supply and Fixing of following rating four pole (single pole and neutral) 240 V residual current carrying breaker (RCCB) having a sensitivity current up to 300 milli ampere in the existing MCB DB ISI marked complete with connection testing and commissioning etc as required. 25A	1	Nos	2123	2123	OPWD Electrical SoR Item No. 2.10.1
<b>Total</b>						<b>8,017</b>

Reference (PWD 2019-20)	Unit	Description	No	L(cm)	B(cm)	D(cm)	Qty	Rate	Amount
	1	2	3	4	5	6	7	8	9
<b>SWITCHGEARS &amp; ACCESSORIES</b>									
(Ref. Cl. No.-5.42)	Sq.cm	Fabricating supplying and mounting MS box made out ... SWG suitable for floor / wall mounting, fully weather proof with provision							
		<b>14SWG</b>							
		FP	1	200	40	200	208000	0.40	83,200.00
(Ref. Cl. No.-5.34)	Each	Supplying, fixing and wiring 50/5 to 400/5Amps SVA burden Current Transformer. Class 0.5 accuracy with Tape Wound.							
		<b>Current Transformer</b>					3	468.00	1,404.00
(Ref. Cl. No.-5.33)	Each	Supplying of multi function digital meter with three line back light LCD type display for voltage, Current, frequency, Power, Multi function digital meter					1	7750.00	7,750.00
(Material Component Sl. No.)	Each	Supply and fixing of 4 pole power contactor with NO/NC contacts on existing wood/panel board using necessary bolts, nuts, 25Amps					1	757.80	757.80
(Ref. Cl. No.-5.38)	Each	Supplying and fixing of LED type panel board indicating lamp with required colour suitable for 220v A.C. 50 Hz 12/24v D.C.					1	430.00	430.00
(Ref. Cl. No.-5.40.1)	Mtr	Supplying ..... amps rated 3phase with neutral bus bar using required capacity electrolytic aluminum strips covered with heat 100Amps 4x30x6mm Aluminium Strips					2	2050.00	4,100.00
(Ref. Cl. No.-5.41.1)	Mtr	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts, washers etc., and painted 40x40x6mm					25	255.00	6,375.00
(Ref. Cl. No.-5.41.3)	Mtr	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts, washers etc., and painted 75x75x6mm					25	460.00	11,500.00
(Ref. Cl. No.-5.41.4)	Mtr	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts, washers etc., and painted 50x100x50x6mm C channel					10	630.00	6,300.00
(Ref. Cl. No.-5.14.7)	Each	Supplying and fixing Molded Case Circuit Breaker (MCCB) over the existing wood/panel board using necessary screws, bolts, nuts 100Amps 25kA.					1	6,400.00	6,400.00
(Ref. Cl. No.-5.17.7)	Each	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type 6-32 Amps TPN					7	1,715.00	12,005.00
(Ref. Cl. No.-5.17.4)	Each	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type 6-32 Amps DP					0	909.00	0.00
(Ref. Cl. No.-5.29)	Each	Supplying, fixing and wiring 3 Phase Digital Ammeter /Voltmeter. Digital Ammeter /Voltmeter.					1	185.00	185.00
(Ref. Cl. No.-5.28)	Each	Supplying, fixing and wiring rotary selector switch suitable for Voltmeter. rotary selector switch suitable for Voltmeter.					1	135.00	135.00
(Ref. Cl. No.-5.47)	Each	Supplying and fixing Microprocessor based Electronic timer (without contactor,Din Mounting using necessary bolts, nuts and					1	1925.00	1,925.00
								Total	142,466.80

NAME OF PROJECT: JATRIKA PARKING - 2						
BLOCK COST ESTIMATE FOR ELECTRICAL						
Sl. No.	Item Description	Qty.	Unit	Unit Rate ( In Rs.)	Total Amount ( In Rs)	Remarks
1	Supply, testing, tagging, laying and commissioning following sizes of 1.1KV , XLPE / PVC insulated multistrand Al. / Cu. Conductor armoured / unarmoured cables (As Per IS 1554 & IS 7098) in readymade RCC trench, in provided DWC pipe, RCC pipe hume pipe, on provided cable trays / ladders etc. as. required complete with clamps, hardware for fixing tagging, identification etc. (3.5Cx35 sqmm, Al, Armoured, XLPE)	250	Mtr.	252	63026	Annexure-1_Rate Analysis_Non-Sor Item_Electrical
2	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required. (Upto 35 sq. mm)	250	Mtr.	288	72098	DSR 2018 Item No. - 7.1.1
3	Supply, Installation, Testing & Commisioning of 415V Low Voltage Panel (Feeder Pillar - Floor Mounted), Outdoor Type IP-55 (TTA Panel)	1	Lot	142467	142467	Annexure-4_LV Panel Cost Estimation
4	Supply, testing, tagging, laying and commissioning following sizes of 1100 Volt grade, XLPE / PVC insulated multistrand Al. / Cu. Conductor armoured / unarmoured cables (As Per IS 1554 & IS 7098) in readymade RCC trench, in provided DWC pipe, RCC pipe hume pipe, on provided cable trays / ladders etc. as. required complete with clamps, hardware for fixing tagging, identification etc.					
a	4C x 10 Sq.mm Al XLPE Armoured Cable	988	Mtr.	136	134810	Annexure-1_Rate Analysis_Non-Sor Item_Electrical
b	4C x 6 Sq.mm Al XLPE Armoured Cable	240	Mtr.	116	27757	
c	3C x 2.5 Sq.mm CU Cable.( Flexible )	616	Mtr.	205	126280	
5	Supply and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium cable of 1.1kv grade (without cost of cable ) as required.					
a	3.5C x 35 Sq.mm Al XLPE Armoured Cable	2	Nos.	255	510	OPWD Electrical SoR Item No. - 5.8.21
b	4C x 10 Sq.mm Al XLPE Armoured Cable	14	Nos.	150	2100	OPWD Electrical SoR Item No. - 5.8.31
c	4C x 6 Sq.mm Al XLPE Armoured Cable	10	Nos.	125	1248	OPWD Electrical SoR Item No. - 5.8.31.a
d	3C x 2.5 Sq.mm CU Cable.( Flexible )	112	Nos.	214	23968	Annexure-1_Rate Analysis_Non-Sor Item_Electrical
6	5 mt. Post Top Pole -Supply, Installation, Testing and Commissioning of pole 5 mt shall be of 'composite' construction designed to withstand specified 'dead load' pertaining to the luminaire and its mounting accessories and 'wind load' corresponding to a basic wind speed of 300kmph without any deformation or damage to the structure. The Pole Shaft should be fabricated out of Steel tube of grade YST 240 and batch test reports for chemical and mechanical properties of material should be submitted along with the bid. Pole pipe should be provided with Spikes .Structurally designed base plate of Steel A36/A572-50 or equivalent should be welded with the pole shaft. Height 5 meters. Make : Keselec or equivalent.	112	Nos.	55879	6258448	Annexure-1_Rate Analysis_Non-Sor Item_Electrical
7	60W Decorative luminaire - Supply, Installation, Testing and Commissioning of Decorative Luminaires BIS approved ( along with BIS certification of same model confirming to IS 10322 /IEC60598 & LM79 parameters as per tender specs) for Urban lighting, body made of painted spun aluminium with Top spun aluminium minimum thickness of 1.5 mm,Dia should not exceed 435 mm and height should not exceed 265 mm ,weight should not be less than 1.28 kg and Lower spun aluminium of minimum thickness of 1.5 mm ,dia should not exceed 595 mm ,height should not exceed 40 mm and weight should not be less than 0.9 kg.Body of the fixture must be in two parts and fixture opening of the fixture is from front side for the ease of operation . Fixture is having external surge protection of 10KV. Electronic driver is having power factor>0.90*, THD<15*, CRI>80 and input voltage range from 120-227V AC at 50Hz. Minimum lumen 7800 lumen (Confirmed by LM79 report from Third party NABL approved lab) in CCT range of 4000 as per ANSI. presented with Dialux report and IES file of the luminaire System life of 50000 burning hours with 70% of initial lumens maintained. Luminaire is suitable for operating temperature (Ta) from -20° to 50°C. Driver can withstand 320V AC for 48 hours and 440 V AC for 8 hours. WATT-60W. Make : Keselec Porto-NU-60 watt/Rosa OW/Ligman/Simes or equivalent.	112	Nos.	34437	3856944	
8A	Earthing with GI earth pipe 3 Mtr long , 40 mm dia including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke & salt as required.	2	Nos.	2359	4718	OPWD Electrical SoR Item No. 3.2

NAME OF PROJECT: JATRIKA PARKING - 2						
BLOCK COST ESTIMATE FOR ELECTRICAL						
Sl. No.	Item Description	Qty.	Unit	Unit Rate ( In Rs.)	Total Amount ( In Rs)	Remarks
8B	Maintenance free Chemical Earthing: Supply of UL Listed Maintenance Free Earthing System made of copper bonded rod of 10 feet (3 mtr approx.) length, 17.2 mm dia. (Minimum copper bonding shall be 0.25mm, suitable for 25 kA fault current) along with Rod-to-Conductor connectors, 95% pure Carbon-Based Earth enhancement material of 30kg, Pit Cover as required.	112	Nos.	5356	599872	GWSSB Electrical SoR Item No. 3.5.12
9	Providing and fixing testing joint, made of G.I. strip, 125 mm long, with 4 nos. of G.I. bolts, nuts, chuck nuts and spring washers etc. complete as required.	2	Nos.	91	182	DSR 2018 (Ref. Cl. No. - 6.1.2)
10	Supplying and laying 25 mm X 5 mm G.I strip at 0.50 metre below ground as strip earth electrode, including connection/terminating with G.I. nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50mm)	1140	Mtr.	117	133339	DSR 2018 (Ref. Cl. No. - 5.9)
11	Supplying and laying 6 SWG G.I. wire at 0.50 metre below ground level for conductor earth electrode, including connection/ termination with GI thimble etc. as required.	988	Mtr.	25	24700	DSR 2016, item no- 5.7
12	Supply and laying double walled corrugated (DWC) HDPE Pipe including all necessary connecting Sockets/Couplings/Tees/Bends/End-caps of same materials in existing trench as per IS 14930 part -II suitable for drawing underground cables. 40mm OD / 32mm ID	1228	Mtr.	68	82981	Annexure-1_Rate Analysis_Non-Sor Item_Electrical
13	Supply and laying double walled corrugated (DWC) HDPE Pipe including all necessary connecting Sockets/Couplings/Tees/Bends/End-caps of same materials in existing trench as per IS 14930 part -II suitable for drawing underground cables. 90mm OD / 76mm ID	250	Mtr.	113	28264	Annexure-1_Rate Analysis_Non-Sor Item_Electrical
14	Supply including fitting and fixing of outdoor cable 4 way Polycarbonate Junction Boxes IP 67 & IK08 halogen free and weather proof for outdoor installation Base with metric knock-outs and PUR gasket, screws for mounting plate/DIN-rail and cover with polyamide cover screws. including all accessories complete as specified and directed by the Deptt.					
a	Junction Box Size with 100x100x75 mm for Cable size 4Cx10sq.mm (main cable), 4Cx2.5 sq.mm & 4Cx4 Sq.mm (tap off cables) as in the above items. The junction box shall be suitable for outdoor application with minimum IP65 protection.	10	Nos.	467	4665	Annexure-1_Rate Analysis_Non-Sor Item_Electrical
15	Civil Works for Electrical Equipment	2	Sqr. Mtr.	8929	14286	CPWD Plinth Area Rates 2020 (Sl. No.1.3.6, Page - 11 of 44)
16	Civil Works for Pole	112	Nos.	5539	620323	Annexure-3_Rate Analysis for Pole Foundation
				<b>Total</b>	<b>12,222,987</b>	

**PgMC FOR VARIOUS PROJECTS IN PURI**  
**Cost Estimate for Catch Basin, Saucer Drain, Cross Drainage & Bio Digester for Jatrika Parking**

Sl. No.	Reference	Description	Qty	Unit	Rate (Rs.)	Amount (Rs.)
<b>1.0 EXCAVATION &amp; EARTHWORK</b>						
	Oddisha Bulding Rate Anasis - Earth work . itme no: 1A	Earth work in ordinary soil within 50m. Initial lead and 1.5m initial lift including rough dressing and breaking clods to maximum 5cm to 7cm laying in layers not exceeding 0.3m in depth and as per the direction of the Engineer-in-charge . Earth work excavation of foundation in ordinary soil	2174	CUM	138.71	301570.77
<b>Sub total</b>						<b>301570.8</b>
<b>2.0 FOR Catch Basin</b>						
	DSR- VOL -2, CODE-19.30 (PG. No-369.)	Constructing brick masonry chamber for underground C.I. inspection chamber and bends with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg), R.C.C. top slab with 1:1.5:3 mix (1 cement : 1.5 Fine sand : 3 graded stone aggregate 20 mm nominal size), foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand), finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design:				
		Inside dimensions 455x610 mm and 45 cm deep				
	DSR-19.30.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	13.00	each	5412.46	70361.92
		Extra for depth beyond 45 cm of brick masonry chamber				
	DSR-19.31.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	2.60	metre	3315.83	8621.17
<b>Sub total</b>						<b>78983.09</b>
<b>3.0</b>	<b>SVM</b>	Fiber Reinforced plastic Bio-Digester Tank(2000 ltr) for toilet	<b>24</b>	<b>cum</b>	<b>24000.00</b>	576000.00
<b>Sub Total</b>						<b>576000.00</b>
<b>4.0 Rain water Harvesting/Rechargeable Filter Drain</b>						
	RA	RAIN WATER HARVESTING( 0.3X0.6)	774	metre	5742.96875	4446493.55
	RA	RAIN WATER HARVESTING(0.6X1.5)	2213	metre	200.76	444290.12
<b>Sub total</b>						<b>4890783.7</b>
<b>Total =</b>						<b>5847337.5</b>

RWH TRENCH-MEASUREMENT FOR 1 M LENGTH (0.3 WIDTH)							
S.NO	particular	L	B	H	QTY	Unit	Remarks
1	excavation	1	0.3	0.6	0.18	cum	
2	stone boulder granite (15 cm & above)	1	0.3	0.2	0.06	CUM	
3	40-50mm size C B H G Metal	1	0.3	0.2	0.06	CUM	
4	10-20mm size C B H G Metal	1	0.3	0.075	0.0225	CUM	
5	Coarse sand	1	0.3	0.025	0.0075	CUM	

RWH TRENCH-COST FOR PER M LENGTH (0.3 WIDTH)							
S.NO	particular	Unit	QTY	RATE	Amount	Remarks	
1	Earth work in excavation in ordinary soil within 50m, initial lead and 1.5m, initial lift including rough dressing and breaking clods to maximum 5cm to 7cm and laying in layers not exceeding 0.3m in depth and as per direction of the Engineer-in-charge (per 100 Cum.)	CUM	0.18	138.71	24.97		
2	stone boulder granite (15 cm & above)	CUM	0.06	642.67	38.56		
3	40-50mm size C B H G Metal	CUM	0.06	1488.39	89.30		
4	10-20mm size C B H G Metal	CUM	0.0225	1918.82	43.17		
5	Coarse sand including cost of material, Carriage and rolaty and labour	CUM	0.0075	634.55	4.76		
Total					200.76		

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## Filling Filter media material in Recharge trench

I - 15

Female Mulia	12.36 Rs.	No. @	311.00 Per day	3843.96
Add Overhead Charges	7.50%			288.30
<i>Add Contractor Profit</i>	7.50%			288.30
				per 100
				4420.55 cum
		Rate per Cum		44.21
		Rs.		<b>44.21</b> Per cum
Add Cess	1%			0.44
				<b>44.65</b> Per cum

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Material	Basic Rate	Carriage and royalty	(7.5% overhead + 7.5% contractor profit)	Total RS per cum
stone boulder granite (15 cm & above)	141.90	435.27	21.29	598.46
Metal 40-50	662.86	681.89	99.43	1444.18
Metal Chips 10-20mm	1037.15	681.89	155.57	1874.61
Coarse sand	46.67	536.67	7.00	590.34

RWH TRENCH-MEASUREMENT FOR 1 M LENGTH (0.6) clear width							
S.NO	particular	L	B	H	QTY	Unit	Remarks
1	excavation	1	1.11	1.575	1.74825	cum	
2	PCC	1	0.61	0.1	0.061	CUM	
3	Brick Work	1	0.46	1.3	0.598	CUM	
4	stone boulder granite (15 cm & above)	1	0.5	0.45	0.225	CUM	
5	40-50mm size C B H G Metal						
6	10-20mm size C B H G Metal	1	0.5	0.3	0.15	CUM	
7	Coarse sand	1	0.5	0.3	0.15	CUM	
8	precast cover	2.6			2.6	nos	

**RWH TRENCH-COST FOR PER M LENGTH ((0.6) clear width**

S.NO	particular	Unit	QTY	RATE	Amount	Remarks
1	Earth work in excavation in ordinary soil within 50m, initial lead and 1.5m, initial lift including rough dressing and breaking clods to maximum 5cm to 7cm and laying in layers not exceeding 0.3m in depth and as per direction of the Engineer-in-charge (per 100 Cum.)	CUM	1.748	138.71	242.5015	
2	Cement concrete (1:3:6) with 40 mm size hard granite metal (per Cum)	CUM	0.061	4696.90	286.511	
3	Brick work with Flyash.bricks in C.M(1:4) in Foundation & Plinth (per one Cum) 23x11x8cm	CUM	0.598	4,696.90	2808.748	
4	40-50mm size C B H G Metal	CUM	0.225	1444.18	324.9403	
6	10-20mm size C B H G Metal	CUM	0.15	1874.61	281.191	
7	Coarse sand including cost of material, Carriage and roalty	CUM	0.15	590.34	88.55108	
7	precast cover	nos	2.6	650	1710.526	
	Total				5742.969	



Analysis of Rates						
S. NO.	Particular					Rate
<b>1</b>	Earth work in ordinary soil within 50m, initial lead and 1.5m, initial lift including rough dressing			<i>I - I(a)</i>		
	Man mulia	16	No. @ Rs.	311.00	Per day	4976.00
	Female Mulia	16	No. @ Rs.	311.00	Per day	4976.00
	Add Overhead Charges	7.50%				746.40
	<i>Add Contractor Profit</i>	7.50%				746.40
				A	<b>11444.80</b>	per 100 cum
	Add Cess	1%			<b>114.45</b>	
					<b>11559.25</b>	per 100 cum
			Add 20% extra For Foundation Rs.		2288.96	A
					<b>13733.76</b>	per 100 cum
	Add Cess	1%			<b>137.34</b>	
					<b>13871.10</b>	per 100 cum <b>138.71098</b>
<b>2.Saucer Drain of dimension 600mmx300mmx75mm</b>						
		for 1 no			200	Rs
		Add transportation charges 10%			20	Rs
		Add contractor profit 7.5 %			15	Rs
		Over head charges 7.5%			15	Rs
		Total cost per 1 piece			<b>250</b>	Rs
<b>3</b>	Precast Drain Cover (650x380x75)					
		For 1 no			520	Rs
		Add transportation charges 10%			52	Rs
		Add contractor profit 7.5 %			39	Rs
		Over head charges 7.5%			39	Rs
		Total cost per 1 piece			<b>650</b>	Rs

RATE ANALYSIS: CONSUTRCTION OF PRECAST U DRAIN						
SL NO	DESCRIPTION	Base Rate (Rs.)	Overhead Charges(Rs) @ 7.5%	Contractor's profit 7% - CP (Rs)	Total Unit rate with contractor's profit (Rs)	
			7.50%	7.5%		
		(a)	(D) = (a) x 7.5%	(E) = (a) x 7.5%	(F) = (D) + (E)	
1.0	Precast Drain RA(L-500 mm, W-380mm, D-280 mm) With heavy duty drain cover					
		₹ 2,150.00	₹ 161.25	₹ 161.25	₹ 2,472.50	
		Unit	Nos	Quantity	Unit Price	Total Cost
	Excavation	Cum	1	0.060	114.448	6.890
	Cement Mortar for Joint(1:8)	Sq mtr	1	0.015	951.361	14.651
	Base Compaction	Cum	1	0.060	3.869	0.233
				Grand Total =		<b>2494.27</b>

JATRIKA PARKING,PURI										
COST ESTIMATION										
Sl. No.	Description	UNIT	NUMBER	L (m)	B (m)	H (m)	QUANTITY	RATE (INR)	AMOUNT	REFERENCE
<b>A SITE CLEANING, SOIL RESTORATION AND EARTHWORK</b>										
	Trenching in ordinary soil up to a depth of 60 cm including removal and stacking of serviceable materials and then disposing of surplus soil, by spreading and neatly leveling within a lead of 50 m and making up the trenched area to proper levels by filling with earth or earth mixed with sludge or / and manure before and after flooding trench with water (excluding cost of imported earth, sludge or manure).	cum	1	3156	0.6	1,894	68.70	1,30,090.32	CPWD DSR 2018 / SH :B2 / item no : 2.1 / pg no 81	(Total area for landscape works) X (0.6).
<b>A.1</b>	<b>Rough dressing</b>									
	Rough dressing the trenched ground including breaking clods.	sqm	1	3156		3,156	1.30	4,102.80	CPWD DSR 2018 / SH :B2 / item no : 2.5 / pg no 81	Total area for landscape works.
<b>A.2</b>	<b>Fine dressing</b>									
	Fine dressing of the ground	sqm	1	3156		3,156	3.25	10,257.00	CPWD DSR 2018 / SH :B2 / item no : 2.7 / pg no 81	Total area for landscape works.
<b>A.3</b>	<b>Mixing and spreading of good soil and manure</b>									
	Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge	cum	1	3156	0.6	1,894	32.1	60,784.56	CPWD DSR 2018 / SH :B2 / item no : 2.9 / pg no 81	(Total area for landscape works) X (0.6).
<b>B SOFTSCAPE AND PLANTING</b>										
<b>B.1</b>	<b>Good garden soil</b>									
1	Supplying and stacking of good earth at site including royalty and carriage upto 5 km complete (earth measured in stacks will be reduced by 20% for payment)	cum	1	3156	0.3	947	469.50	4,44,522.60	CPWD DSR 2018 / SH :B2 / item no : 2.2 / pg no 87	(Total area for landscape works) X (0.3).
<b>B.2</b>	<b>Cow dung manure</b>									
1	Supplying and stacking of well decayed cattle manure at site including royalty and carriage upto 5 k.m. lead complete (cattle manure measured in stacks will reduced by 8% for Payment).	cum	1	3156		158	230.45	36,365.01	CPWD DSR 2018 / SH :B2 / item no : 2.25 / pg no 85	5cum/100 sq.mt area
<b>B.4</b>	<b>Trees, Shrubs, Hedges and Groundcover plantation</b>									
B.4.1	Digging holes in ordinary soil and refilling the same with the excavated earth mixed with manure or sludge in the ratio of 2:1 by volume (2 parts of stacked volume of earth after reduction by 20% : 1 part of stacked volume of manure after reduction by 8%) flooding with water, dressing including removal of rubbish and surplus earth, if any, with all leads and lifts (cost of manure, sludge or extra good earth if needed to be paid for separately) :	Each							- CPWD DSR 2.14.2, pg no 89	Trees as per plant list
B.4.1.1	Holes 90 cm dia, and 90 cm deep	Each				405	130.40	52,812.00	CPWD DSR 2018 / SH :B2 / item no : 2.14.2 / pg no 89	
B.4.1.2	Holes 45 cm dia, and 45 cm deep.	Each				27,900	17.10	4,77,090.00	CPWD DSR 2018 / SH :B2 / item no : 2.14.4 / pg no 89	

B.4.2	Preparation of beds for hedging and shrubbery by excavating 60 cm deep and trenching the excavated base to a further depth of 30 cm, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20% : one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately)	cum		250	0.6	150	195.90	29,385.00	CPWD DSR 2018 / SH :B2 / item no : 2.13 / pg no 89	(Total area of all the proposed shrubs) X (0.6)
B.4.3	Plantation of Trees, Shrubs, and Hedge at site i/c watering and removal of unserveiceable material's as per direction of officer in charge (excluding cost of plant & water)	Each							CPWD DSR 2016B/ SH :B2 / item no : 2.57 / pg no 105	
B.4.3.1	Trees		405				405	6.40	2,592.00	CPWD DSR 2018 / SH :B2 / item no : 2.57.1 / pg no 105
B.4.3.2	Shrubs		27900				27,900	3.20	89,280.00	CPWD DSR 2016B/ SH :B2 / item no : 2.57.2 / pg no 105
<b>C</b>	<b>PLANT MATERIAL</b>									
<b>C.1</b>	<b>PALM &amp; TREE</b>			ht	spre ad	dia				
1	Mimusops elengi	Each	158	10-12 ft	6ft	4 inch		2400	379200	quotation attached
2	Azadirachta indica	Each	20	12ft plus	6ft	4 inch		2350	47,000.00	quotation attached
3	ficus benjamina	Each	6	10-12 ft	4ft	4 inch		2100	12,600.00	quotation attached
4	Alstonia scholaris	Each	55	12ft plus	5-6ft	4 inch		2200	1,21,000.00	quotation attached
5	CASSIA SIAMEA	Each	166	10-12 ft	6ft	4 inch		1800	298800	quotation attached
<b>C.1</b>	<b>SHRUBS</b>			<b>specifications</b>						
1	Hemerocallis ( Daylily)	Each	3600	carpet effect				60	216000	quotation attached
2	Wedelia trilobata	Each	13500	carpet effect				7	94500	quotation attached
2	Hamelia patens	Each	10800	carpet effect				75	810000	quotation attached
<b>TOTAL COST</b>									<b>33,16,381.29</b>	

Project Manager  
Puri Project Division - I  
OBCC Ltd

Project Manager  
Puri Project Division - I  
OBCC Ltd

Sr. Project Manager  
Puri Project Division - I  
OBCC Ltd.

<b>Surface Parking at Sipasurubuli (2.0 Acres)</b>		
<b>S. No.</b>	<b>Description</b>	<b>Amount (In Rupees)</b>
A	Civil Works	1,68,69,037.46
B	Storm water drainage	37,40,017.64
C	Electrical Works	1,39,96,738.82
D	Planting	4,09,853.97
	<b>TOTAL (E=A+B+C+D)</b>	<b>3,50,15,647.90</b>
	<b>Add corporation Charges (F = 8% of E)</b>	<b>28,01,251.83</b>
	<b>Add GST (G = 12% of E)</b>	<b>42,01,877.75</b>
	<b>Grand Total (H=E+F+G)</b>	<b>4,20,18,777.48</b>
		Say <b>4.2 Crore</b>

Project Manager  
 Puri Project Division - I  
 OBCC Ltd.

Project Manager  
 Puri Project Division - I  
 OBCC Ltd.

Sr. Project Manager  
 Puri Project Division - I  
 OBCC Ltd.

BILL OF QUANTITIES -For Sipasurubuli (2.0 Acres) Parking						
CATEGORY : CIVIL		DOC NO				
SL. No.	DESCRIPTION	UOM	Total Qty	Rate (Rs.)	Amount (Rs.)	Reference
1.0	<b>SITE CLEANING</b>					
1.1	Clearing & Grubbing the road land including uprooting rank vegetation grass, bushes, shrubs, saplings and trees girth upto 300m, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, upto a lead of 1000 meters including removal and disposal of top organic soil not exceeding 150mm in thickness.	Sqm	1621.05	5.69	9,217.86	Odisha rate analysis
2.0	<b>Cast in Situ Cement Concrete M20 Kerb</b>					
2.1	Construction of cement concrete kerb with top and bottom width 115 and 165 mm respectively, 250 mm high in M 20 grade PCC on M-10 grade foundation 150 mm thick, foundation having 50 mm projection beyond kerb stone, kerb stone laid with kerb laying machine, foundation concrete laid manually, all complete as per clause 408	m	1074.00	274.00	2,94,277.54	RA
3.0	<b>Brickwork for toe wall</b>					
3.1	Brick work with Flyash.bricks in C.M(1:6) in Foundation & Plinth (per one Cum) 23x11x8cm	Cum	74.11	4,504.90	3,33,839.83	Odisha rate analysis
4.0	<b>PCC for toe wall</b>					
4.1	Cement concrete (1:3:6) with 40 mm size hard granite metal (per Cum)	Cum	40.81	4,696.90	1,91,689.98	Odisha rate analysis
5.0	<b>Access road and Parking</b>					
5.1	Providing and laying Interlocking Paver Blockof I section of size 80 mm thick of approved quality over 25mm thick bed of CM (1:1) with cost of all materials					
a	For access road	Sqm	3240.00	1,013.24	32,82,884.83	Odisha rate analysis
5.2	Supply of GRC Paving Tiles to the site in Puri					
a	For junciton	Sqm	402.00	1,291.71	5,19,268.03	quotation
5.3	Laying and fixing GRC paving block, for paving in floors, drains , footpath, etc. laid over 20mm thick base mortar 1:4 (1 cement : 4 coarse sand) with joints 10mm wide filled with same mortar including ruled pointing etc. complete as per direction of engineer-in-charge.					
a	For junciton	Sqm	402.00	460.42	1,85,087.00	RA
5.4	Providing and Laying of 80 mm thick factory made Concrete paver block (GRASS PAVER) of M-35 grade made by block making machine with strong vibratory compaction of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with fine sand etc. all complete as per the direction of Engineer-in-charge.	Sqm	3416.10	1,133.40	38,71,807.74	RA
5.5	Loosening, leveling and Compacting original ground supporting embankment to facilitate placement of first layer of embankment, scarified to a depth of 150 mm, mixed with water at OMC and then compacted by rolling so as to achieve minimum dry density as given in table 300-2 for embankment construction construction & Clause 305 of MoSRT&H Specifications for Road & Bridge works (Latest Revision) vide ARP.158 item no.37	Cum	1058.72	852.23	9,02,265.95	RA
5.6	Construction of granular sub-base by providing coarse graded material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per clause 401.	Cum	1058.72	1,721.00	18,22,053.68	RA
5.7	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver in sub- base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density.	Cum	1411.62	1,544.20	21,79,823.60	RA
6.0	<b>EARTHWORK</b>					
6.1	Earth work in ordinary soil within 50m, initial lead and 1.5m, initial lift including rough dressing and breaking clods to maximum 5cm to 7cm and laying in layers not exceeding 0.3m in depth and as per direction of the Engineer-in-charge (per 100 Cum.)	CUM	227.69	138.71	31,582.82	RA
7.0	<b>Dismantalling</b>					
7.1	Dismantling brick or stone masonry in lime or cement mortar under 3. m height including stacking the useful materials for reuse and removing the debris with in 50. m Lead.	Cum	81.24	1,084.96	88,141.82	RA

BILL OF QUANTITIES -For Sipasurubuli (2.0 Acres) Parking						
CATEGORY : CIVIL		DOC NO				
SL. No.	DESCRIPTION	UOM	Total Qty	Rate (Rs.)	Amount (Rs.)	Reference
7.2	Dismantling & removing RCC columns, beams, slab, staircase landing, lintels including stacking the useful materials for reuse and removing the debris with in 50. m Lead. (per 1 Cum.)	Cum	20.27	1,153.37	23,376.49	RA
8.0	Toilet Blocks (2 nos)					
8.1	Civil Works	sqm	37.00	17,589.00	6,50,793.00	Refer Sr. No. 1.1.2 of CPWD PAR 2020
8.2	Internal water supply and sanitary installation		12%		78,095.16	Refer Sr. No. 2.1 of CPWD PAR2020
8.3	Internal Electric Installations		12.50%		81,349.13	Refer Sr. No. 2.3 of CPWD PAR 2020
8.4	Power wiring and Plugs		4%		26,031.72	Refer Sr. No. 2.4.1 of CPWD PAR 2020
8.5	External Civil Service Connections (Water & Sewerage)		1%		8,134.91	Refer Sr. No. 2.2.2 of CPWD PAR 2020
8.6	Water Tank		3.00	17,857.00	53,571.00	Refer Sr. No. 4.5 CPWD PAR 2020
9.0	<b>DISPOSAL</b>					
9.1	Removal of dismantled material up to a distance of 5km by mechanical means	cum	20.27	151.17	3,063.85	Odisha rate analysis
10.0	<b>Boundary wall construction</b>					
10.1	Construction, Providing, Supplying and fixing the pre-cast, pre-tensioned SFRC compound wall poles having finished	m	293.40	5,918.80	17,36,575.92	RA
10.2	Cement concrete (1:3:6) with 40 mm size hard granite metal (per Cum)	CUM	105.62	4,696.90	4,96,105.61	Odisha rate analysis
<b>TOTAL FOR CIVIL WOKS (Rs.)</b>					<b>1,68,69,037.46</b>	

<u><b>ANALYSIS</b></u>						
Sl. No.	Description	Unit	Quantity	Rate	Amount	
<u>Data for 1.00 mtr length</u>						
i	Construction, Providing, Supplying and fixing the pre-cast, pre-tensioned SFRC compound wall poles having finished dimension of 200mmx200mmx3000mm long, (providing the construction joint at the interval of 15.4mtr) made in M-30 grade concrete with 10 nos. of 4mm dia. HTPC (High Tension Pre Coated) wire, fixed in cast-in-situ PCC M-20 concrete in foundation footing of size 600 mm dia 750mm depth from top inside the pre-cast RCC collar (NP-2) of 600mm internal dia. & length of 750mm, placed over a base of P.C.C. (1:4:8) of size 680 mm dia., 100 mm depth including excavating foundation pit for each pole, in all kind of soil of size 680 mm dia., 850 mm depth including watering & curing for required days along with supplying, fitting & fixing of pre-cast, pre-tensioned SFRC slab having dimension of 2100mm (long) x 300mm (wide) x 50mm (thick) 7.5 nos. per span, made with M-30 grade concrete with 4mm dia. GI HTPC wire 4 nos. covering the top of the compound wall poles with a pre-cast SFRC cover of size (300X300X150) mm in order to prevent the slab pannels from removing. All complete as a set to be measured in term of running meter including such pre-cast, SFRC top cover, slab, pole, including painting two coats of approved weather coat paint over a coat of wall primer including curing cost and conveyance of all materials, royalties, taxes all labour, labour cess, T & P required for the work etc. complete including dewatering if required as per the direction of the Engineer-in-charge (Excluding cost of GST).	Rmt	1.00	4630.47	4630.47	
<i>The above rate has been taken from the work "Construction of SFRC Precast Pre-tensioned compound wall under Jajpur Road Division" of IDCO approved by Competent Authority vide Office Order No. 17468 dtd. 16.10.2019 &amp; Office Order No. 65 dtd. 01.01.2020</i>						
ii	Earthwork in excavation in Ordinary Soil, P.C.C(1:4:8), R.C.Cof M-20 in column footing, 600mm dia (NP-2) RCC Collar and two coats of weather painting over one coat of wall primer as per analysis attached	Rmt	1.00	1288.30	1288.30	
For 1.00 mtr length			Total	5918.77	<b>5918.80</b>	



NAME OF PROJECT: Sipasurubuli (2.0 Acres) Parking						
BLOCK COST ESTIMATE FOR ELECTRICAL						
Sl. No.	Item Description	Qty.	Unit	Unit Rate ( In Rs.)	Total Amount ( In Rs)	Remarks
1	Supply, testing, tagging, laying and commissioning following sizes of 1.1KV , XLPE / PVC insulated multistrand Al. / Cu. Conductor armoured / unarmoured cables (As Per IS 1554 & IS 7098) in readymade RCC trench, in provided DWC pipe, RCC pipe hume pipe, on provided cable trays / ladders etc. as. required complete with clamps, hardware for fixing tagging, identification etc. (3.5Cx35 sqmm, Al, Armoured, XLPE)	250	Mtr.	252	63026	Annexure-1_Rate Analysis_Non-Sor Item_Electrical
2	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required. (Upto 35 sq. mm)	250	Mtr.	288	72098	DSR 2018 Item No. - 7.1.1
3	Supply, Installation, Testing & Commissioning of 415V Low Voltage Panel (Feeder Pillar - Floor Mounted), Outdoor Type IP-55 (TTA Panel)	1	Lot	144284	144284	Annexure-4_LV Panel Cost Estimation
3a	Indoor SPN DB	2	Lot	8017	16034	Annexure-4_LV Panel Cost Estimation
4	Supply, testing, tagging, laying and commissioning following sizes of 1100 Volt grade, XLPE / PVC insulated multistrand Al. / Cu. Conductor armoured / unarmoured cables (As Per IS 1554 & IS 7098) in readymade RCC trench, in provided DWC pipe, RCC pipe hume pipe, on provided cable trays / ladders etc. as. required complete with clamps, hardware for fixing tagging, identification etc.					
a	4C x 10 Sq.mm Al XLPE Armoured Cable	1680	Mtr.	136	229232	Annexure-1_Rate Analysis_Non-Sor Item_Electrical
b	4C x 6 Sq.mm Al XLPE Armoured Cable	240	Mtr.	116	27757	
c	3C x 2.5 Sq.mm CU Cable.( Flexible )	870	Mtr.	205	178289	
5	Supply and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium cable of 1.1kv grade (without cost of cable ) as required.					
a	3.5C x 35 Sq.mm Al XLPE Armoured Cable	2	Nos.	255	510	OPWD Electrical SoR Item No. - 5.8.21
b	4C x 10 Sq.mm Al XLPE Armoured Cable	14	Nos.	150	2100	OPWD Electrical SoR Item No. - 5.8.31
c	4C x 6 Sq.mm Al XLPE Armoured Cable	10	Nos.	125	1248	OPWD Electrical SoR Item No. - 5.8.31.a
d	3C x 2.5 Sq.mm CU Cable.( Flexible )	129	Nos.	214	27692	Annexure-1_Rate Analysis_Non-Sor Item_Electrical
6	5 mt. Post Top Pole -Supply, Installation, Testing and Commissionin of pole 5 mt shall be of 'composite' construction designed to withstand specified 'dead load' pertaining to the luminaire and its mounting accessories and 'wind load' corresponding to a basic wind speed of 300kmph without any deformation or damage to the structure. The Pole Shaft should be fabricated out of Steel tube of grade YST 240 and batch test reports for chemical and mechanical properties of material should be submitted along with the bid. Pole pipe should be provided with Spikes .Structurally designed base plate of Steel A36/A572-50 or equivalent should be welded with the pole shaft. Height 5 meters. Make : Keselec or equivalent.	125	Nos.	55879	7007227	
7	60W Decorative luminaire - Supply, Installation, Testing and Commissionin of Decorative Luminaires BIS approved ( alongwith BIS certification of same model confirming to IS 10322 /IEC60598 & LM79 parameters as per tender specs) for Urban lighting, body made of painted spun aluminium with Top spun aluminium minimum thickness of 1.5 mm,Dia should not exceed 435 mm and height should not exceed 265 mm ,weight should not be less than 1.28 kg and Lower spun aluminium of minimum thickness of 1.5 mm ,dia should not exceed 595 mm ,height should not exceed 40 mm and weight should not be less than 0.9 kg.Body of the fixture must be in two parts and fixture opening of the fixture is from front side for the ease of operation . Fixture is having external surge protection of 10KV. Electronic driver is having power factor>0.90*, THD<15*, CRI>80 and input voltage range from 120-227V AC at 50Hz. Minimum lumen 7800 lumen (Confirmed by LM79 report from Third party NABL approved lab) in CCT range of 4000 as per ANSI. presented with Dialux report and IES file of the luminaire System life of 50000 burning hours with 70% of initial lumens maintained. Luminaire is suitable for operating temperature (Ta) from -20° to 50°C. Driver can withstand 320V AC for 48 hours and 440 V AC for 8 hours. WATT-60W. Make : Keselec Porto-NU-60 watt/Rosa OW/Ligman/Simes or equivalent.	125	Nos.	34437	4318400	Annexure-1_Rate Analysis_Non-Sor Item_Electrical

NAME OF PROJECT: Sipasurubuli (2.0 Acres) Parking						
BLOCK COST ESTIMATE FOR ELECTRICAL						
Sl. No.	Item Description	Qty.	Unit	Unit Rate (In Rs.)	Total Amount (In Rs)	Remarks
7a	11W, Philips SM250C LED12S-6500 PSU WH or Equivalent	38	Nos.	1235	46930	
A	Recessed wiring to light point/Fan point/ Exhaust fan point/Call bell point with 1.5 sq.mm FR PVC insulated single core multistrand copper conductor of ISI marked with 20 mm dia non-metallic PVC flexible conduit with 6Amp, 250V Modular switch ISI marked and ceiling rose ISI marked mounted on metal box having front Modular cover of suitable size, metal box with 1.5 sq.mm FR PVC insulated single core multistrand copper conductor as earth wire including all accessories and connection.(Make of wire-L&T/Anchor/Havells/V-Guard/Great White/HPL) Group-B	38	Point	914	34732	OPWD Electrical Non-Schedule Item Rates
B	Recessed wiring for light / power plug with 2 x 2.5 sq.mm FR PVC insulated single core multistrand copper conductor of ISI marked with 20mm dia non-metallic PVC flexible conduit alongwith 1 x 1.5 sq.mm FR PVC insulated single core multistrand copper conductor for loop earthing as required. (Make of wire-Finolex/L&T/Anchor/Havells/V-Guard/ HPL)	228	Mtr	109	24852	OPWD Electrical SoR Item No. 1.4
8A	Earthing with GI earth pipe 3 Mtr long , 40 mm dia including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke & salt as required.	2	Nos.	2359	4718	OPWD Electrical SoR Item No. 3.2
8B	Maintenance free Chemical Earthing: Supply of UL Listed Maintenance Free Earthing System made of copper bonded rod of 10 feet (3 mtr approx.) length, 17.2 mm dia. (Minimum copper bonding shall be 0.25mm, suitable for 25 kA fault current) along with Rod-to-Conductor connectors, 95% pure Carbon-Based Earth enhancement material of 30kg, Pit Cover as required.	125	Nos.	5356	671642	GWSSB Electrical SoR Item No. 3.5.12
9	Providing and fixing testing joint, made of G.I. strip, 125 mm long, with 4 nos. of G.I. bolts, nuts, chuck nuts and spring washers etc. complete as required.	2	Nos.	91	182	DSR 2018 (Ref. Cl. No. - 6.1.2)
10	Supplying and laying 25 mm X 5 mm G.I strip at 0.50 metre below ground as strip earth electrode, including connection/terminating with G.I. nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50mm)	1274	Mtr.	117	149013	DSR 2018 (Ref. Cl. No. - 5.9)
11	Supplying and laying 6 SWG G.I. wire at 0.50 metre below ground level for conductor earth electrode, including connection/termination with GI thimble etc. as required.	1860	Mtr.	25	46500	DSR 2016, item no- 5.7
12	Supply and laying double walled corrugated (DWC) HDPE Pipe including all necessary connecting Sockets/Couplings/Tees/Bends/End-caps of same materials in existing trench as per IS 14930 part -II suitable for drawing underground cables. 40mm OD / 32mm ID	2790	Mtr.	68	188511	Annexure-1_Rate Analysis_Non-Sor Item_Electrical
13	Supply and laying double walled corrugated (DWC) HDPE Pipe including all necessary connecting Sockets/Couplings/Tees/Bends/End-caps of same materials in existing trench as per IS 14930 part -II suitable for drawing underground cables. 90mm OD / 76mm ID	250	Mtr.	113	28264	Annexure-1_Rate Analysis_Non-Sor Item_Electrical
14	Supply including fitting and fixing of outdoor cable 4 way Polycarbonate Junction Boxes IP 67 & IK08 halogen free and weather proof for outdoor installation Base with metric knock-outs and PUR gasket, screws for mounting plate/DIN-rail and cover with polyamide cover screws. including all accessories complete as specified and directed by the Deptt.					
a	Junction Box Size with 100x100x75 mm for Cable size 4Cx10sq.mm (main cable), 4Cx2.5 sq.mm & 4Cx4 Sq.mm (tap off cables) as in the above items. The junction box shall be suitable for outdoor application with minimum IP65 protection.	10	Nos.	467	4665	Annexure-1_Rate Analysis_Non-Sor Item_Electrical
15	Civil Works for Electrical Equipment	2	Sqr. Mtr.	8929	14286	CPWD Plinth Area Rates 2020 (
16	Civil Works for Pole	125	Nos.	5539	694548	Annexure-3_Rate Analysis for Pole Foundation
				Total	1,39,96,739	

**PgMC FOR VARIOUS PROJECTS IN PURI**  
**Cost Estimate for Catch Basin, Saucer Drain, Cross Drainage & Bio Digester for Jatrika Parking**

Sl. No.	Reference	Description	Qty	Unit	Rate (Rs.)	Amount (Rs.)
<b>1.0</b>	<b>EXCAVATION &amp; EARTHWORK</b>					
	Odisha Bulding Rate Anaysis - Earth work . itme no: 1A	Earth work in ordinary soil within 50m. Initial lead and 1.5m initial lift including rough dressing and breaking clods to maximum 5cm to 7cm laying in layers not exceeding 0.3m in depth and as per the direction of the Engineer-in-charge . Earth work excavation of foundation in ordinary soil	1304	CUM	<b>138.71</b>	180942.46
	<b>Sub total</b>					
<b>2.0</b>	<b>FOR Catch Basin</b>					
	DSR- VOL -2. CODE-19.30 (PG. No-369.)	Constructing brick masonry chamber for underground C.I. inspection chamber and bends with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg), R.C.C. top slab with 1:1.5:3 mix (1 cement : 1.5 Fine sand : 3 graded stone aggregate 20 mm nominal size), foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand), finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design:				
		Inside dimensions 455x610 mm and 45 cm deep				
	DSR-19.30.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	8.00	each	<b>5412.46</b>	43299.64
		Extra for depth beyond 45 cm of brick masonry chamber				
	DSR-19.31.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	1.60	metre	<b>3315.83</b>	5305.33
	<b>Sub total</b>					
<b>3.0</b>	<b>SVM</b>	Fiber Reinforced plastic Bio-Digester Tank(2000 ltr) for toilet	24	cum	<b>24000.00</b>	576000.00
	<b>Sub Total</b>					
<b>4.0</b>	<b>Rain water Harvesting/Rechargeable Filter Drain</b>					
	RA	RAIN WATER HARVESTING( 0.3X0.6)	465	metre	<b>5742.96875</b>	2667896.13
	RA	RAIN WATER HARVESTING(0.6X1.5)	1328	metre	<b>200.76</b>	266574.07
	<b>Sub total</b>					
	<b>Total =</b>					
	<b>3740017.6</b>					

RWH TRENCH-MEASUREMENT FOR 1 M LENGTH (0.3 WIDTH)							
S.NO	particular	L	B	H	QTY	Unit	Remarks
1	excavation	1	0.3	0.6	0.18	cum	
2	stone boulder granite (15 cm & above)	1	0.3	0.2	0.06	CUM	
3	40-50mm size C B H G Metal	1	0.3	0.2	0.06	CUM	
4	10-20mm size C B H G Metal	1	0.3	0.075	0.0225	CUM	
5	Coarse sand	1	0.3	0.025	0.0075	CUM	
RWH TRENCH-COST FOR PER M LENGTH (0.3 WIDTH)							
S.NO	particular	Unit	QTY	RATE	Amount	Remarks	
1	Earth work in excavation in ordinary soil within 50m, initial lead and 1.5m, initial lift including rough dressing and breaking clods to maximum 5cm to 7cm and laying in layers not exceeding 0.3m in depth and as per direction of the Engineer-in-charge (per 100 Cum.)	CUM	0.18	138.71	24.97		
2	stone boulder granite (15 cm & above)	CUM	0.06	642.67	38.56		
3	40-50mm size C B H G Metal	CUM	0.06	1488.39	89.30		
4	10-20mm size C B H G Metal	CUM	0.0225	1918.82	43.17		
5	Coarse sand including cost of material, Carriage and rolaty and labour	CUM	0.0075	634.55	4.76		
Total					200.76		

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## Filling Filter media material in Recharge trench

I - 15

	No. @		
Female Mulia	12.36 Rs.	311.00 Per day	3843.96
Add Overhead Charges	7.50%		288.30
<i>Add Contractor Profit</i>	7.50%		288.30
			<u>4420.55</u> per 100 cum
		Rate per Cum	44.21
		Rs.	<b>44.21</b> Per cum
Add Cess	1%		<b>0.44</b>
			<b>44.65</b> Per cum

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Material	Basic Rate	Carriage and royalty	(7.5% overhead + 7.5% contractor profit)	Total RS per cum
stone boulder granite (15 cm & above)	141.90	435.27	21.29	598.46
Metal 40-50	662.86	681.89	99.43	1444.18
Metal Chips 10-20mm	1037.15	681.89	155.57	1874.61
Coarse sand	46.67	536.67	7.00	590.34

RWH TRENCH-MEASUREMENT FOR 1 M LENGTH (0.6) clear width							
S.NO	particular	L	B	H	QTY	Unit	Remarks
1	excavation	1	1.11	1.575	1.74825	cum	
2	PCC	1	0.61	0.1	0.061	CUM	
3	Brick Work	1	0.46	1.3	0.598	CUM	
4	stone boulder granite (15 cm & above)	1	0.5	0.45	0.225	CUM	
5	40-50mm size C B H G Metal						
6	10-20mm size C B H G Metal	1	0.5	0.3	0.15	CUM	
7	Coarse sand	1	0.5	0.3	0.15	CUM	
8	precast cover	2.6			2.6	nos	
RWH TRENCH-COST FOR PER M LENGTH ((0.6) clear width							
S.NO	particular	Unit	QTY	RATE	Amount	Remarks	
1	Earth work in excavation in ordinary soil within 50m, initial lead and 1.5m, initial lift including rough dressing and breaking clods to maximum 5cm to 7cm and laying in layers not exceeding 0.3m in depth and as per direction of the Engineer-in-charge (per 100 Cum.)	CUM	1.748	138.71	242.5015		
2	Cement concrete (1:3:6) with 40 mm size hard granite metal (per Cum)	CUM	0.061	4696.90	286.511		
3	Brick work with Flyash.bricks in C.M(1:4) in Foundation & Plinth (per one Cum) 23x11x8cm	CUM	0.598	4,696.90	2808.748		
4	40-50mm size C B H G Metal	CUM	0.225	1444.18	324.9403		
6	10-20mm size C B H G Metal	CUM	0.15	1874.61	281.191		
7	Coarse sand including cost of material, Carriage and rolalty	CUM	0.15	590.34	88.55108		
7	precast cover	nos	2.6	650	1710.526		
	Total				5742.969		

PARKING 2.0ACRES ,PURÍ							
PLANTING WORK							
Sl. No.	Description	UNIT	QTY	RATE (INR)	AMOUNT	REFERENCE	Remark
<b>A</b>	<b>SITE CLEANING, SOIL RESTORATION AND EARTHWORK</b>						
	Trenching in ordinary soil up to a depth of 60 cm including removal and stacking of serviceable materials and then disposing of surplus soil, by spreading and neatly leveling within a lead of 50 m and making up the trenched area to proper levels by filling with earth or earth mixed with sludge or / and manure before and after flooding trench with water (excluding cost of imported earth, sludge or manure).	cum	706	68.70	18,101.16	CPWD DSR 2018 / SH :B2 / item no : 2.1 / pg no 81	(Total area for landscape works) X (0.6).
<b>A.1</b>	<b>Rough dressing</b>						
	Rough dressing the trenched ground including breaking clods.	sqm	1,177	1.30	570.88	CPWD DSR 2018 / SH :B2 / item no : 2.5 / pg no 81	Total area for landscape works.
<b>A.2</b>	<b>Fine dressing</b>						
	Fine dressing of the ground	sqm	1,177	3.25	1,427.19	CPWD DSR 2018 / SH :B2 / item no : 2.7 / pg no 81	Total area for landscape works.
<b>A.3</b>	<b>Mixing and spreading of good soil and manure</b>						
	Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge	cum	706	32.1	8,457.75	CPWD DSR 2018 / SH :B2 / item no : 2.9 / pg no 81	(Total area for landscape works) X (0.6).
<b>B</b>	<b>SOFTSCAPE AND PLANTING</b>						
<b>B.1</b>	<b>Good garden soil</b>						
1	Supplying and stacking of good earth at site including royalty and carriage upto 5 km complete (earth measured in stacks will be reduced by 20% for payment	cum	353	469.50	61,852.22	CPWD DSR 2018 / SH :B2 / item no : 2.2 / pg no 87	(Total area for landscape works) X (0.3).
<b>B.2</b>	<b>Cow dung manure</b>						
1	Supplying and stacking of well decayed cattle manure at site including royalty and carriage upto 5 k.m. lead complete (cattle manure measured in stacks will reduced by 8% for Payment).	cum	59	230.45	5,059.94	CPWD DSR 2018 / SH :B2 / item no : 2.25 / pg no 85	5cum/100 sq.mt area
<b>B.4</b>	<b>Trees, Shrubs, Hedges and Groundcover plantation</b>						
B.4. 1	Digging holes in ordinary soil and refilling the same with the excavated earth mixed with manure or sludge in the ratio of 2:1 by volume (2 parts of stacked volume of earth after reduction by 20% : 1 part of stacked volume of manure after reduction by 8%) flooding with water, dressing including removal of rubbish and surplus earth, if any, with all leads and lifts (cost of manure, sludge or extra good earth if needed to be paid for separately) :	Each			-	CPWD DSR 2.14.2, pg no 89	Trees as per plant list
B.4. 1.1	Holes 90 cm dia, and 90 cm deep	Each	112	130.40	5,454.05	CPWD DSR 2018 / SH :B2 / item no : 2.14.2 / pg no 89	
B.4. 1.2	Holes 45 cm dia, and 45 cm deep.	Each	3,882	17.10	24,764.23	CPWD DSR 2018 / SH :B2 / item no : 2.14.4 / pg no 89	

B.4. 2	Preparation of beds for hedging and shrubbery by excavating 60 cm deep and trenching the excavated base to a further depth of 30 cm, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20% : one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately)	cum	56	195.90	4,088.72	CPWD DSR 2018 / SH :B2 / item no : 2.13 / pg no 89  (Total area of all the proposed shrubs) X (0.6)
B.4. 3	Plantation of Trees, Shrubs, and Hedge at site i/c watering and removal of unserviceable material's as per direction of officer in charge (excluding cost of plant & water)	Each				CPWD DSR 20168 / SH :B2 / item no : 2.57 / pg no 105
B.4. 3.1	Trees		56	6.40	134.47	CPWD DSR 2018 / SH :B2 / item no : 2.57.1 / pg no 105
B.4. 3.2	Shrubs		3,882	3.20	4,634.24	CPWD DSR 20168 / SH :B2 / item no : 2.57.2 / pg no 105
<b>C</b>	<b>PLANT MATERIAL</b>					
<b>C.1</b>	<b>PALM &amp; TREE</b>					
1	Mimusops elengi	Each	2400	52819.46185	quotation attached	
2	Azadirachta indica	Each	2350	6,136.16	quotation attached	
3	ficus benjamina	Each	2100	1,566.68	quotation attached	
4	Alstonia scholaris	Each	2200	17,233.47	quotation attached	
5	CASSIA SIAMEA	Each	1800	41628.8979	quotation attached	
<b>C.1</b>	<b>SHRUBS</b>					
1	Hemerocallis ( Daylily)	Each	60	30057.85477	quotation attached	
2	Wedelia trilobata	Each	7	13149.65868	quotation attached	
2	Hamelia patens	Each	75	112716.9554	quotation attached	
<b>TOTAL COST</b>				<b>4,09,853.97</b>		

Project Manager  
Puri Project Division - I  
OBCC Ltd

Project Manager  
Puri Project Division - I  
OBCC Ltd

Sr. Project Manager  
Puri Project Division - I  
OBCC Ltd

PARKING 2.0ACRES ,PURI								
Measurement Sheet								
Sl. No.	Description	Unit	No	L (m)	B (m)	H (m)	Qty	Reference
<b>A</b>	<b>SITE CLEANING, SOIL RESTORATION AND EARTHWORK</b>							
	Trenching in ordinary soil up to a depth of 60 cm including removal and stacking of serviceable materials and then disposing of surplus soil, by spreading and neatly leveling within a lead of 50 m and making up the trenched area to proper levels by filling with earth or earth mixed with sludge or / and manure before and after flooding trench with water (excluding cost of imported earth, sludge or manure).	cum	1	3156		0.6	706	CPWD DSR 2018 / SH :B2 / item no : 2.1 / pg no 81  (Total area for landscape works) X (0.6).
<b>A.1</b>	<b>Rough dressing</b>							
	Rough dressing the trenched ground including breaking clods.	sqm	1	3156			1,177	CPWD DSR 2018 / SH :B2 / item no : 2.5 / pg no 81  Total area for landscape works.
<b>A.2</b>	<b>Fine dressing</b>							
	Fine dressing of the ground	sqm	1	3156			1,177	CPWD DSR 2018 / SH :B2 / item no : 2.7 / pg no 81  Total area for landscape works.
<b>A.3</b>	<b>Mixing and spreading of good soil and manure</b>							
	Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge	cum	1	3156		0.6	706	CPWD DSR 2018 / SH :B2 / item no : 2.9 / pg no 81  (Total area for landscape works) X (0.6).
<b>B</b>	<b>SOFTSCAPE AND PLANTING</b>							
<b>B.1</b>	<b>Good garden soil</b>							
1	Supplying and stacking of good earth at site including royalty and carriage upto 5 km complete (earth measured in stacks will be reduced by 20% for payment	cum	1	3156		0.3	353	CPWD DSR 2018 / SH :B2 / item no : 2.2 / pg no 87  (Total area for landscape works) X (0.3).
<b>B.2</b>	<b>Cow dung manure</b>							
1	Supplying and stacking of well decayed cattle manure at site including royalty and carriage upto 5 k.m. lead complete (cattle manure measured in stacks will reduced by 8% for Payment).	cum	1	3156			59	CPWD DSR 2018 / SH :B2 / item no : 2.25 / pg no 85  5cum/100 sq.mt area
<b>B.4</b>	<b>Trees, Shrubs, Hedges and Groundcover plantation</b>							
<b>B.4.1</b>	Digging holes in ordinary soil and refilling the same with the excavated earth mixed with manure or sludge in the ratio of 2:1 by volume (2 parts of stacked volume of earth after reduction by 20% : 1 part of stacked volume of manure after reduction by 8%) flooding with water, dressing including removal of rubbish and surplus earth, if any, with all leads and lifts (cost of manure, sludge or extra good earth if needed to be paid for separately) :	Each						CPWD DSR 2.14.2, pg no 89  Trees as per plant list
B.4.1.1	Holes 90 cm dia, and 90 cm deep	Each					112	CPWD DSR 2018 / SH :B2 / item no : 2.14.2 / pg no 89
B.4.1.2	Holes 45 cm dia, and 45 cm deep.	Each					3,882	CPWD DSR 2018 / SH :B2 / item no : 2.14.4 / pg no 89
<b>B.4.2</b>	Preparation of beds for hedging and shrubbery by excavating 60 cm deep and trenching the excavated base to a further depth of 30 cm, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20% : one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately)	cum		250		0.6	56	CPWD DSR 2018 / SH :B2 / item no : 2.13 / pg no 89  (Total area of all the proposed shrubs) X (0.6)



**RATE ANALYSIS: CONSUTRCTION OF PRECAST U DRAIN**

SL NO	DESCRIPTION	Base Rate (Rs.)	Overhead Charges(Rs) @ 7.5%	Contractor's profit 7% - CP (Rs)	Total Unit rate with contractor's profit (Rs)	
			7.50%	7.5%	(F) = (D) + (E)	
		(a)	(D) = (a) x 7.5%	(E) = (a) x 7.5%	(F) = (D) + (E)	
1.0	Precast Drain RA(L-500 mm, W-380mm, D-280 mm) With heavy duty drain cover					
		₹ 2,150.00	₹ 161.25	₹ 161.25	₹ 2,472.50	
		Unit	Nos	Quantity	Unit Price	Total Cost
	Excavation	Cum	1	0.060	114.448	6.890
	Cement Mortar for Joint(1:8)	Sq mtr	1	0.015	951.361	14.651
	Base Compaction	Cum	1	0.060	3.869	0.233
					Grand Total =	<b>2494.27</b>

MLCP at DIGABARENI- ABSTRACT OF COST		
S. No.	Description	Amount (In Rupees)
A	Civil Works	22,10,36,003.00
B	Water Supply & Sanitation	1,78,53,410.29
C	Electrical Works	8,55,78,955.00
	TOTAL (D=A+B+C)	32,44,68,368.29
	Add corporation Charges (E = 8% of D)	2,59,57,469.46
	Add GST (F = 12% of D)	3,89,36,204.19
	Grand Total (G=D+E+F)	38,93,62,041.94
	<i>Say</i>	<i>38.94 Crore</i>

Project Manager  
Puri Project Division - I  
OBCC Ltd.

Project Manager  
Puri Project Division - I  
OBCC Ltd.

Sr. Project Manager  
Puri Project Division - I  
OBCC Ltd.

**Estimate for Multilevel Car Parking (MLCP)**  
**(B+G+3) at Digabareni, Puri**

**(1). General Provision:**

Group of Occupancy	=	Group H - MLCP & Group F - Mercantile (As Per Cl No.7, Part-III of NBC, 2016)
Occupant Load	=	30 m <sup>2</sup> /person for Group H - MLCP 3 m <sup>2</sup> /person for Group F - Mercantile
Total Occupant Load	=	1185 persons

(2). Plot Area	=	1.21 Ac.	4884	Sqm
Front road width (South side)	=	22 m		
Total No of Blocks	=	1 Nos		

**(3). Details:**

Stair Case:

Numbers of staircase	=	2 Nos
Dimension (8.4 mx 4.35 m)	=	36.54 Sqm
Dimension (6.3 mx 4.7 m)	=	29.61 Sqm

Lift:

Numbers of Lifts	=	2 Nos
Passenger Lift 13 Pax (3 nos)	=	13.04 Sqm
Dimension (1.85 m x 2.35 m)	=	

Car Lift (6.3m x 3.3m)	=	20.79 Sqm
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**(4). Parking Area Statement**

Basement Parking area	=	2812 Sqm
Basement floor ECS provided	=	99
Ground Floor Parking area	=	2784
Ground floor ECS provided	=	51
First Floor Parking area	=	2444 Sqm
First floor ECS provided	=	20
Second Floor Parking area	=	1937 Sqm
Second floor ECS provided	=	64
Third Floor Parking area	=	504.2 Sqm
Second floor ECS provided	=	58

**(4). Compliance to Bylaw requirements**

(ii) Ground coverage	=	58.00%
(iii) Floor Area Ratio (FAR)	=	
(Total built-up area/Plot area)	=	1.47 (Permissible 2.75)

**(5). Area Statement:**

Basement floor	=	2812 sqm	(Parking)
Ground Floor	=	2784 sqm	(Parking)
First Floor	=	2444 sqm	(Parking)
Second Floor	=	1937 sqm	(Parking)
Third Floor	=	504.2 sqm	(Parking)
<b>Total Builtup area</b>	<b>=</b>	<b>10482 sqm</b>	

Rough Cost Estimate							
Sl No.	Item	Quantity	Unit	Rate		Amount	Remarks
A.	<b>Civil Works</b> RCC framed structure non-residential building.						
a1	Basement floor Basement height up to 3.05 m	2812	Sqm @	26785.71	= Rs	7,53,21,428.57	CPWD PAR-2020
	Ground floor	2784	Sqm @	18482.14	= Rs	5,14,61,300.97	
	First Floor	2444	Sqm @	18482.14	= Rs	4,51,77,373.37	
	Second Floor	1937	Sqm @	18482.14	= Rs	3,58,03,971.25	
	Third Floor	504	Sqm @	18482.14	= Rs	93,19,064.63	
		10482		Sub-Total-A:		A 21,70,83,138.80	
a2	False ceiling (Calcium silicate)	1916.00	Sqm @	860.80	= Rs	16,49,292.80	Market rate
a4	Compound Wall (1500mm Height and 600mm Grill)	300.00	Rmt	7678.57	= Rs	23,03,571.43	CPWD PAR-2020
					= Rs	22,10,36,003.00	
B.	<b>Water Supply &amp; Sanitary Installation Services</b>						
b1	Internal and External Water supply & Sanitary Installation including STP, O.H. water tank, U/G sump.	@	6.2500%	On 'A'	= Rs	1,35,67,696.00	CPWD PAR-2020
b2	Modular STP	80.00	KLD	53571.43	= Rs	42,85,714.29	CPWD PAR-2020
				Sub-Total-B:		1,78,53,410.29	
C.	<b>Electrical Services</b>						
c1	Internal electric installations all floors, UPS including space frame for 5% load, LAN, CCTV, EPABX.	@	12.5%	On 'A'	= Rs	2,71,35,392.35	CPWD PAR-2020
c2	Pressurized mechanical ventilation system in the basement parking area with Supply duct of exhaust blowers	2812.00	Sqm @	937.50	= Rs	26,36,250.00	
c3	Elevators 13 pax. B+G+3	1.00	Nos @	1607142.86	= Rs	16,07,142.86	
c4	Car Lift	1.00	Nos @	2410714.29	= Rs	24,10,714.29	

Rough Cost Estimate								
Sl No.	Item	Quantity	Unit	Rate		Amount		Remarks
c5	Fire fighting fire extinguisher, Hose reel, Wet riser, Yard hydrant, automatic sprinkler system, under ground storage 1,50,000 Lt with fire pumps, terrace tank,as per N.B.C.guidelines	10482.20	Sqm @	1071.43	=	Rs	1,12,30,928.57	CPWD PAR-2020
c6	Fire alarm (manual)	10482.20	Sqm @	223.21	=	Rs	23,39,776.79	
c7	Supplying, installation, testing and commissioning of energy efficient central AC Plant including low side works	200.00	Tn @	75892.86	=	Rs	1,51,78,572.00	CPWD PAR-2020
c8	Supplying, installation, testing and commissioning of 33kV/0.433kV or 11kV/0.433 kV substation equipments comprising HT Panel, Dry type Transformers, HT cable, Bus trunking from Transformer to LT Panel, LT Panel, Automatic Power factor correction panel, Active Harmonic Filters, TVSS (Transient Voltage suppression system),SPD ( Surge protection system), Essential panel, Earthing, required interconnections,substation safety equipments including LT cabling from sub station to the buildings fed by the sub station	160.00	KVA @	8035.71	=	Rs	12,85,713.60	CPWD PAR-2020
c9	Supplying, installation, testing and commissioning of Silent Type DG Sets,AMF Panel, Bus Ducting/ Cables from DG Sets to Essential Panel, Synchronizing Panel where required, DG Set enclosure room sound insulation/ventilation/smoke exhaust as required, Earthing of DG Set system, control cabling, Fuel tank/piping, DG set Exhaust piping/ Exhaust Chimney as per CPCB norms, Civil works connected with DG Sets including Foundation as required.	30.00	KVA @	9821.43	=	Rs	2,94,642.86	CPWD PAR-2020
c10	Supplying, installation, testing and commissioning of online 3 phase UPS System with 30 minutes back up including batteries, interconnecting cables, battery racks etc.	32.00	KVA @	17857.14	=	Rs	5,71,428.57	CPWD PAR-2020
c11	Supplying, installation, testing and commissioning of Grid interactive roof top solar photo voltaic power generation system including space frame	300.00	kWp @	58035.71	=	Rs	1,74,10,714.29	

Rough Cost Estimate								
Sl No.	Item	Quantity	Unit	Rate		Amount		Remarks
c12	CAR parking system (Sensor based car parking system with controller, display etc. as required. (Cost based on minimum car quantity of 250 cars)	292.00	Nos @	8928.57	=	Rs	26,07,142.86	CPWD PAR-2020
c13	Boom Barrier for car: Electromechanical parking barrier with all accessories upto 6 meter length	2.00	Nos @	111607.14	=	Rs	2,23,214.29	
c14	Supplying, installation, testing and commissioning of Driver face and automatic number plate recording system / recognition system Including High resolution camera and software set for the driver face capture and automatic number plate recording	1.00	Set @	647321.43	=	Rs	6,47,321.43	
				Sub-Total-C:		<b>8,55,78,955.00</b>		
				Total(A+B+C)		Rs	<b>32,44,68,368.29</b>	
GST			@	12.00%	=	Rs	3,89,36,204.19	
Add Corporation Supervision charge			@	8.00%	=	Rs	2,59,57,469.46	
				G.Total:		Rs	<b>38,93,62,041.94</b>	
				Or, Say:		Rs	<b>38.94</b>	

Project Manager

Puri Project Division - I  
OBCC Ltd

Project Manager

Puri Project Division - I  
OBCC Ltd

Sr. Project Manager

Puri Project Division - I  
OBCC Ltd

<b>(A) Usage Rates of Plant and Machinery</b>					
<b>Sl. No.</b>	<b>Description of Machine</b>	<b>Activity</b>	<b>Output of Machine</b>	<b>Unit</b>	<b>Rate</b>
P&M-001	Air Compressor	General Purpose	capacity in cfm	hour	179.13
P&M-002	Batching and Mixing Plant (a) 30 cum capacity	Concrete Mixing	cum/hour	hour	1252.17
P&M-003	Batching and Mixing Plant (b) 15 - 20 cum capacity	Concrete Mixing	cum/hour	hour	1043.48
P&M-004	Bitumen Pressure Distributor	Applying bitumen tack coat	sqm/hour	hour	601.74
P&M-005	Bitumen Boiler oil fired	Bitumen Spraying	capacity in litre	hour	111.3
P&M-006	Concrete Paver Finisher with 40 HP Motor	Paving of concrete surface	175cum / hour	hour	1608.7
P&M-007	Concrete Pump of 45 & 30 cum capacity	Pumping of concrete	33cum / hour	hour	143.48
P&M-008	Concrete Bucket	For Pouring concrete	capacity in cum	hour	8.7
P&M-009	Concrete Mixer (a) 0.4/0.28 cum	Concrete Mixing	cum/hour	hour	153.91
P&M-010	Concrete Mixer (b) 1 cum	Concrete Mixing	cum/hour	hour	153.91
P&M-011	Crane (a) 80 tonnes	Lifting Purpose		hour	717.39
P&M-012	Cranes b) 35 tonnes	Lifting Purpose		hour	478.26
P&M-013	Cranes c) 3 tonnes	Lifting Purpose		hour	200
P&M-014	Dozer D - 80 - A 12	Spreading /Cutting / Clearing	cum/hour	hour	2190.43
P&M-015	Dozer D - 50 - A 15	Spreading /Cutting / Clearing	cum/hour	hour	1592.17
P&M-016	Emulsion Pressure Distributor	Applying emulsion tack coat	sqm/hour	hour	448.7
P&M-017	Front End loader 1 cum bucket capacity	Soil loading / Aggregate loading	cum/hour	hour	452.17
P&M-018	Generator (a) 125 KVA	Genration of electric Energy	KVA	hour	786.96
P&M-019	Generator( b) 63 KVA	Genration of electric Energy	KVA	hour	208.7
P&M-020	GSB Plant 50 cum	Producing GSB	cum/hour	hour	582.61
P&M-021	Hotmix Plant - 120 TPH capacity	DBM/BM/SDC/ Premix	cum/hour	hour	13130.43

<b>(A) Usage Rates of Plant and Machinery</b>					
<b>Sl. No.</b>	<b>Description of Machine</b>	<b>Activity</b>	<b>Output of Machine</b>	<b>Unit</b>	<b>Rate</b>
P&M-022	Hotmix Plant - 100 TPH capacity	DBM/BM/SDC/ Premix	cum/hour	hour	9710.43
P&M-023	Hotmix Plant - 60 to 90 TPH capacity	DBM/BM/SDC/ Premix	cum/hour	hour	7765.22
P&M-024	Hotmix Plant - 40 to 60 TPH capacity	DBM/BM/SDC/ Premix	cum/hour	hour	6217.39
P&M-025	Hydraulic Chip Spreader	Surface Dressing	sqm/hour	hour	1478.26
P&M-026	Hydraulic Excavator of 1 cum bucket	Soil Ordinary/Soil Marshy / Soil Unsuitable	cum/hour	hour	730.43
P&M-027	Integrated Stone Crusher 100THP	Crushing of Spalls	TPH	hour	4860.87
P&M-028	Integrated Stone Crusher 200 HP	Crushing of Spalls	TPH	hour	10226.09
P&M-029	Kerb Casting Machine	Kerb Making	Rm/hour	hour	173.91
P&M-030	Mastic Cooker	Mastic Wearing coat	Capacity <sup>tonne</sup>	hour	1379.13
P&M-031	Mechanical Broom Hydraulic	Surface Cleaning	sqm/hour	hour	200
P&M-032	Motor Grader 3.35 mtr blade	Clearing /Spreading /GSB /WBM	cum/hour	hour	1343.48
P&M-032	Motor Grader 3.35 mtr blade	Clearing /Spreading /GSB /WBM	cum/hour	hour	671.74
P&M-033	Mobile slurry seal equipment	Mixing and laying slurry seal	sqm/hour	hour	565.22
P&M-034	Paver Finisher Hydrostatic with sensor control 100 TPH	Paving of DBM/ BM/SDC/ Premix	cum/hour	hour	1500
P&M-035	Paver Finisher Mechanical 100 TPH	Paving of WMM /Paving of DLC	cum/hour	hour	642.61
P&M-036	Piling Rig with Bantonite Pump	0.75 m dia to 1.2 m dia Boring attachment	Rm/hour	hour	3065.22
P&M-037	Pneumatic Road Roller	Rolling of Asphalt Surface	cum/hour	hour	697.39

<b>(A) Usage Rates of Plant and Machinery</b>					
<b>Sl. No.</b>	<b>Description of Machine</b>	<b>Activity</b>	<b>Output of Machine</b>	<b>Unit</b>	<b>Rate</b>
P&M-038	Pneumatic Sinking Plant	Pneumatic Sinking of wells	cum/hour	hour	2339.13
P&M-039	Pot Hole Repair Machine	Repair of potholes	cum/hour	hour	508.7
P&M-040	Prestressing Jack with Pump & access	Stressing of steel wires/stands		hour	72.17
P&M-041	Ripper	Scarifying	cum/hour	hour	15.65
P&M-042	Rotavator	Scarifying	cum/hour	hour	9.57
P&M-043	Road marking machine	Road marking	Sqm/hour	hour	52.17
P&M-044	Smooth Wheeled Roller 8 tonne	Soil Compaction /BM Compaction	cum/hour	hour	294.78
P&M-045	Tandem Road Roller	Rolling of Asphalt Surface	cum/hour	hour	641.74
P&M-046	Tipper - 5 cum	Transportation of soil, GSB, WMM, Hotmix etc.	Capacity in cum	km	20.87
P&M-047	Tipper - 5 cum	Transportation of soil, GSB, WMM, Hotmix etc.	Capacity in cum	tonne.km	2.17
P&M-048	Tipper - 5 cum	Transportation of soil, GSB, WMM, Hotmix etc.	Capacity in cum	hour	506.09
P&M-049	Transit Mixer 4.0/4.5 cum	Transportation of Concrete Mix to site	cum/hour	hour	521.74
P&M-050	Transit Mixer 4/4.5 cum	Transportation of Concrete Mix to site	cum/hour	tonne.km	2.17
P&M-051	Transit Mixer 3.0 cum	Transportation of Concrete Mix to site	cum/hour	hour	478.26
P&M-052	Transit Mixer 3.0 cum	Transportation of Concrete Mix to site	cum/hour	tonne.km	1.46
P&M-053	Tractor	Pulling	capacity in HP	hour	200.87
P&M-054	Tractor with Rotevator	Rate of Tractor + Rotevator		hour	210.44
P&M-055	Tractor with Ripper	Rate of Tractor 6+ Ripper		hour	216.52
P&M-056	Truck 5.5 cum per 10 tonnes	Material Transport	capacity/cum	km	17.39
P&M-057	Truck 5.5 cum per 10 tonnes	Material Transport	capacity/cum	hour	484.35
P&M-058	Truck 5.5 cum per 10 tonnes	Material Transport	capacity/cum	tonne.km	2.17
P&M-059	Vibratory Roller 8 tonne	Earth or soil / GSB / WBM	cum/hour	hour	864.35
P&M-060	Water Tanker	Water Transport	capacity in KL	hour	506.09
P&M-061	Water Tanker	Water Transport	capacity in KL	km	15.6
P&M-062	Wet Mix Plant 60 TPH	Wet Mix	cum/hour	hour	675.65
	Needle vibrator/Plate vibrator/ screed vibrator	Concrete Mixing	cum/hour	hour	92.17
	Mini hot mix plant	bitumen mixing		hour	891.3
P&M-063	Air compressor with pneumatic chisel attachment for cutting hard clay.			hour	206
P&M-064	Cement concrete batch mixing plant @175 cum per hour (effective output)			hour	5160
P&M-065	Cement concrete batch mixing plant @75 cum per hour (effective output)			hour	2760
P&M-066	Boat to carry atleast 20 persons			hour	input
P&M-067	Cement concrete batch mix plant @ 175 cum per hour (effective output)			hour	5160
P&M-068	Cement concrete batch mix plant @ 75 cum per hour			hour	1200
P&M-076	Compressor with guniting equipment along with accessories			hour	206

**(A) Usage Rates of Plant and Machinery**

Sl. No.	Description of Machine	Activity	Output of Machine	Unit	Rate
P&M-077	Drum mix plant for cold mixes of appropriate capacity but not less than 75 tonnes/hour.			hour	input
P&M-078	Epoxy Injection gun			hour	500
P&M-079	Generator 33 KVA			hour	208.7
P&M-080	Generator 100 KVA			hour	391.3
P&M-081	Generator 250 KVA			hour	978.26
P&M-082	Induction, deinduction and erection of plant and equipment including all components and			hour	input
P&M-083	Joint Cutting Machine with 2-3 blades (for rigid pavement)			hour	67
P&M-084	Jack for Lifting 40 tonne lifting capacity.			day	input
P&M-085	Piling rig Including double acting pile driving hammer (Hydraulic rig)			hrs	3065.22
P&M-086	Plate compactor			hour	100
	Concrete joint cutting machine			hour	300
P&M-094	Wet Mix Plant 75 TPH				900.87

**(B) Labour**

Sl. No.	Description of Labour	Unit	Rate
L-01	Blacksmith (IIInd class)	day	401
L-02	Blacksmith (Ist class)/ Welder/ Plumber/ Electrician	day	461
L-03	Blaster (Stone cutter)	day	461
L-04	Carpenter I Class	day	461
L-05	Chiseller (Head Mazdoor)	day	461
L-06	Driller (Jumper)	day	461
L-07	Diver	day	461
L-08	Fitter	day	461
L-09	Mulia	day	311
L-10	Mason (IIInd class)	day	401
L-11	Mason (Ist class)	day	461
L-12	Mate / Supervisor	day	351
L-13	Mazdoor	day	301
L-14	Mazdoor/Dresser (Semi Skilled)	day	351
L-15	Mazdoor/Dresser/Sinker (Skilled)	day	401
L-16	Medical Officer	day	0
L-17	Operator(grouting)	day	0
L-18	Painter I class	day	461
L-19	Para medical personnel	day	0

**(C) Materials**

Sl. No.	Description	Unit	Rate
M-012	Filter media/Filter Material as per Table 300-3 (MoRT&H Specification)	Cum	638.10
	Plasicizer	litre	40
	cut out of rubber filler boatr	nos	5
	Debonding strip 3.5mtr length x 10mm widthx 5mm thick	metre	60
	Jute rope 12mm dia	metre	12
	Polythene sheet 125 micron thick	sm	3
M-013	Close graded Granular sub-base Material 53 mm to 9.5 mm		840.48
M-014	Close graded Granular sub-base Material 37.5 mm to 9.5 mm	input	input
M-015	Close graded Granular sub-base Material 26.5 mm to 9.5 mm		733.33
M-016	Close graded Granular sub-base Material 9.5 mm to 4.75 mm		892.86
M-017	Close graded Granular sub-base Material 9.5 mm to 2.36 mm		738.10

<b>(A) Usage Rates of Plant and Machinery</b>					
<b>Sl. No.</b>	<b>Description of Machine</b>	<b>Activity</b>	<b>Output of Machine</b>	<b>Unit</b>	<b>Rate</b>
M-018	Close graded Granular sub-base Material 4.75mm to 2.36 mm			666.665	666.665
M-019	Close graded Granular sub-base Material 4.75mm to 75 micron mm			input	input
M-020	Close graded Granular sub-base Material 2.36 mm			657.14	657.14
M-021	Stone crusher dust finer than 3mm with not more than 10% passing 0.075 sieve.			73.33	73.33
M-022	Coarse graded Granular sub-base Material 2.36 mm & below			657.14	657.14
M-023	Coarse graded Granular sub-base Material 4.75mm to 75 micron mm			input	input
M-024	Coarse graded Granular sub-base Material 4.75 mm to 2.36 mm			input	input
M-025	Coarse graded Granular sub-base Material 9.5 mm to 4.75 mm			1327.5	input
M-026	Coarse graded Granular sub-base Material 26.5 mm to 4.75 mm			733.33	733.33
M-027	Coarse graded Granular sub-base Material 26.5 mm to 9.5 mm			input	input
M-028	Coarse graded Granular sub-base Material 37.5 mm to 9.5 mm			input	input
M-029	Coarse graded Granular sub-base Material 53 mm to 26 .5mm			638.10	638.1
M-030	Aggregates below 4.75 mm			374.76	374.76
M-031	Aggregates 22.4 mm to 2.36 mm			890.48	890.48
M-032	Aggregates 22.4 mm to 6.7 mm			757.145	757.145
M-033	Aggregates 45 mm to 22.4 mm			input	input
M-034	Aggregates 45 mm to 22.4 mm			733.33	733.33
M-035	Aggregates 53 mm to 2.8 mm			input	input
M-036	Aggregates 53 mm to 22.4 mm			638.10	638.1
M-037	Aggregates 63 mm to 2.8 mm			input	input
M-038	Aggregates 63 mm to 45 mm			638.1	638.1

<b>(A) Usage Rates of Plant and Machinery</b>					
<b>Sl. No.</b>	<b>Description of Machine</b>	<b>Activity</b>	<b>Output of Machine</b>	<b>Unit</b>	<b>Rate</b>
M-039	Aggregates 90 mm to 45 mm			input	input
M-040	Aggregates 10 mm to 5 mm			892.855	892.855
M-041	Aggregates 11.2 mm to 0.09 mm			1066.67	1066.67
M-042	Aggregates 13.2 mm to 0.09 mm			1066.67	1066.67
M-043	Aggregates 13.2 mm to 5.6 mm			1109.52	1109.52
M-044	Aggregates 13.2 mm to 10 mm			1042.86	1042.86
M-045	Aggregates 20 mm to 10 mm			input	input
M-046	Aggregates 25 mm to 10 mm			757	757.14
M-047	Aggregates 19 mm to 6 mm			input	input
M-048	Aggregates 37.5 mm to 19 mm			input	input
M-049	Aggregates 37.5 mm to 25 mm			638.10	638.1
M-050	Aggregates 6 mm nominal size			757.14	757.14
M-051	Aggregates 10 mm nominal size			1109.52	1109.52
M-052	Aggregates 13.2/12.5 mm nominal size			374.76	374.76
M-053	Aggregates 20 mm nominal size			1038.10	1038.1
M-054	Aggregates 40 mm nominal size			709.52	709.52
M-055	Aggregates 25 mm nominal size			input	input
M-056	IRC grade II material 63mm to 45mm				647.62
M-057	IRC grade III material 53mm to 22.4mm				700
M-056	AC pipe 100 mm dia			metre	60
M-060	Aluminium alloy/galvanised steel			tonne	33017.5
M-061	Aluminium sheeting fixed with encapsulated lens type reflective sheeting including 2% towards			sqm	7000

**(A) Usage Rates of Plant and Machinery**

<b>Sl. No.</b>	<b>Description of Machine</b>	<b>Activity</b>	<b>Output of Machine</b>	<b>Unit</b>	<b>Rate</b>
M-062	Aluminium studs 100 x 100 mm fitted with lense reflectors			nos	1000
M-063	Barbed wire			kg	42
M-064	Bearing (Cost of parts)			nos	input
M-065	Bearing (Cast steel rocker bearing assembly of 250 tonne )			nos	input
M-066	Bearing (Elastomeric bearing assembly consisting of 7 internal layers of elastomer bonded to 6 nos. internal reinforcing steel laminates by the process of vulcanisation,)			nos	23000
M-067	Bearing (Forged steel roller bearing of 250 tonne			nos	input
M-068	Bearing (Pot type bearing assembly consisting of a metal piston supported by a disc, PTFE pads providing sliding surfaces against stainless steel mating together with cast steel assemblies/fabricated structural steel assemblies duly painted with all components			nos	11385
M-069	Bearing (PTFE sliding plate bearing assembly of 80 tonnes )			nos	input
M-070	Bearing (Supply of sliding plate bearing of 80 tonne)			nos	input
M-071	Bentonite			kg	2.58
M-072	Binding wire			kg	79
M-073	Bitumen ( Cationic Emulsion )			tonne	input
M-074	Bitumen (60-70 grade)			tonne	30720
M-075	Bitumen (34-40 grade )			tonne	35153.26
M-076	Bitumen (Cutback )			tonne	input
M-077	Bitumen (emulsion)			tonne	25903.67
M-078	Bitumen (modified graded)			tonne	35153.26
M-079	Brick			each	input
M-080	C.I.shoes for the pile			kg	input
M-081	Cement			tonne	5196.60
M-082	Cold twisted bars (HYSD Bars)			tonne	43230.20
M-083	Coller for joints 300 mm dia			nos	input
M-084	Compressible Fibre Board(20mm thick)			sqm	130
M-085	Connectors/ Staples			each	input
M-086	Copper Plate(12m long x 250mmwide)			kg	543
M-087	Corrosion resistant Structural steel			tonne	75000
M-088	Corrugated sheet, 3 mm thick, "Thrie" beam section railing			kg	input
M-089	Credit for excavated rock found suitable for use			cum	148
M-090	Curing compound			liter	40
M-091	Delineators from ISI certified firm as per the standard drawing given in IRC - 79			each	600
M-092	Earth Cost or compensation for earth taken from private land			cum	19.4
M-093	Elastomeric slab seal expansion joint assembly manufactured by using chloroprene, elastomer for			metre	input
M-094	Electric Detonators @ 1 detonator for 1/2 gelatin stick of 125 gms each			100 nos	1400
M-095	Epoxy compound with accessories for preparing epoxy mortar			kg	200
M-096	Epoxy mortar			kg	input
M-097	Epoxy primer			kg	30
M-101	Galvanised MS flat clamp			nos	10
M-102	Galvanised steel wire crates of mesh size 100 mm x 100 mm woven with 4mm dia. GI wire in rolls of			sqm	input
M-103	Galvanised structural steel plate 200 mm wide, 6 mm thick, 24 m long			kg	75
M-104	Gelatin 80%			kg	100
M-110	GI bolt 10 mm Dia			nos	1.5
M-111	Grouting pump with agitator			hour	65
M-118	Hot applied thermoplastic compound			litre	130
M-119	HTS strand			tonne	input
M-120	Joint Sealant Compound			Ltr	50
M-121	Jute netting, open weave, 2.5 cm square opening for seeding and Mulching			sqm	input
M-122	LDO for steam curing			litre	input
M-123	M.S. Clamps			nos	10
M-124	M.S. Clamps			kg	input
M-125	M.S.shoes @ 35 Kg per pile of 15 m			kg	input
M-126	Mild Steel bars			tonne	43230.20
M-127	Modular strip/box seal expansion joint including anchorage catering to a horizontal movement			metre	input
M-128	Modular strip/box seal expansion joint catering to a horizontal movement beyond 140mm and upto			metre	input
M-129	Nipples 12mm			nos	input
M-130	Nuts and bolts			kg	52
M-131	Paint			litre	193
M-132	Pavement Marking Paint			litre	154.38

**(A) Usage Rates of Plant and Machinery**

Sl. No.	Description of Machine	Activity	Output of Machine	Unit	Rate
M-137	Pipes 200 mm dia, 2.5 m long for drainage			metre	360
M-138	Plastic sheath, 1.25 mm thick for dowel bars			sqm	input
M-139	Plastic tubes 50 cm dia, 1.2 m high			nos	input
M-140	Polymer braids			metre	input
M-141	Pre moulded Joint filler,25 mm thick for expansion joint.			sqm	996
M-142	Pre-coated stone chips of 13.2 mm nominal size			cum	1065
M-143	Preformed continuous chloroprene elastomer or closed cell foam sealing element with high tear			metre	input
M-144	Pre-moulded asphalt filler board			sqm	150
M-145	Pre-packed cement based polymer concrete of strength 45 Mpa at 28 days			kg	200
M-146	Primer			kg	input
M-147	Quick setting compound			kg	input
M-148	Random Rubble Stone			cum	115
	RCC Pipe NP 4 heavy duty non pressure pipe 900 mm dia			metre	150.13
M-149	RCC Pipe NP 4 heavy duty non pressure pipe 1000 mm dia			metre	150.13
M-150	RCC Pipe NP 4 heavy duty non pressure pipe 1200 mm dia			metre	150.13
M-151	RCC Pipe NP 4 heavy duty non pressure pipe 300 mm dia			metre	input
M-152	Reflectorising glass beads			kg	50
M-163	Selected earth			cum	14
M-164	Separation Membrane of impermeable plastic sheeting 125 micron thick			sqm	input
M-165	Sheathing duct			metre	input
M-166	Shrubs			each	input
M-167	Sludge / Farm yard manure @ 0.18 cum per 100 sqm at site of work for turfing			cum	50
M-168	Sodium vapour lamp			each	input
M-169	Square Rubble Coursed Stone			cum	741
M-170	Steel circular hollow pole of standard specification for street lighting to mount light at 5 m height			each	input
M-171	Steel circular hollow pole of standard specification for street lighting to mount light at 9 m height			each	input
M-172	Steel drum 300 mm dia 1.2 m high/empty bitumen drum			nos	230
M-178	Strip seal expansion join			metre	9500
M-179	Structural Steel			tonne	31154
M-180	Super plastisizer admixture IS marked as per 9103-1999			kg	30
M-181	Synthetic Geogrids as per clause 3102.8 and approved design and specifications.			sqm	input
M-182	Through and bond stone			each	95
M-183	Tie rods 20mm diameter			nos	input
M-184	Tiles size 300 x 300 mm and 25 mm thick			each	1521
M-188	Unstaked lime			tonne	9000
M-189	Water			KL	10
M-190	Water based cement paint			litre	35
M-191	Welded steel wire fabric			kg	input
M-192	Wire mesh 50mm x 50mm size of 3mm wire			kg	62
M-197	Spalls			cum	882
	Overheads for Road Works	0.075			
	Contractors profit for Road Works	0.075			
	Overheads for Bridge Works	0.075			
	Overheads for Bridge Works (Rehabilitation)	0.075			
	Contractors profit for Bridge Works	0.075			
	Lead from Mixing Plant to working site	60	km		
	Lead for E/W borrow area to site	5	km		
	Lead for fly ash from source to site	input	km		

for input of Overheads or Contractors  
Type symbol of apostrophe(') then input  
value then one space then symbol of

**ANALYSIS OF RATE - 2018**  
**(With revised SR 2014 w.e.f 10.11.2014 Labour 30.10.18 Royalty 14.12.2016)**  
**LEAD STATEMENT**

Sl. No.	Name of Building Materials	Unit	Name of Quarry	LEAD (in Km.)	Carraige	Basic rate of Materials	Carriage + Basic Rate	Royalty effective from 14.12.16	Total	Carraige+ Royalty
1	Cement	Qntl.	Local	5	16.17	533.40	549.57		<b>549.57</b>	16.17
2	Steel	MT	Puri	5	161.72	45371.19	45532.91		<b>45532.91</b>	161.72
3	Sand for Mortar	Cum	Haripur	45	501.67	46.67	548.34	35.00	<b>583.34</b>	536.67
4	Sand for Filling	Cum	Balanga	37	431.27	41.90	473.17	35.00	<b>508.17</b>	466.27
5	K.B.Brick	1000 Nos.	Kusandpur	20	780.79	4638.30	5419.09	0.00	<b>5419.09</b>	780.79
6	Fly Ash Brick (25x 12x 8 cm)	1000 Nos.	Chandanpur	11	602.50	3914.89	4517.39	0.00	<b>4517.39</b>	602.50
7	Fly Ash Brick (23x 11x 8 cm)	1000 Nos.	Chandanpur	11	482.00	3787.23	4269.23	0.00	<b>4269.23</b>	482.00
8	Brick Khoa	Cum	Harirajpur	12	211.27	322.55	533.82	0.00	<b>533.82</b>	211.27
9	Moorum	Cum	Local	20	281.67	45.71	327.38	35.00	<b>362.38</b>	316.67
10	Laterite Stone (Rough Dressed)	Cum	Jatini	47	519.27	544.76	1064.03	180.00	<b>1244.03</b>	699.27
11	Soling stone other than granite (40 to 90 mm)	Cum	Patrapada	17	255.27	181.90	437.17	180.00	<b>617.17</b>	435.27
12	Soling stone boulder granite (15 cm & above)	Cum	Patrapada	17	255.27	141.90	397.17	180.00	<b>577.17</b>	435.27
13	IRC Grade-I Metal	Cum	Tapanga	51	551.89	597.14	1149.03	130.00	<b>1279.03</b>	681.89
14	IRC Grade-II Metal	Cum	Tapanga	51	551.89	661.90	1213.79	130.00	<b>1343.79</b>	681.89
15	IRC Grade-III Metal	Cum	Tapanga	51	551.89	704.76	1256.65	130.00	<b>1386.65</b>	681.89
16	50 mm size C B H G Metal	Cum	Tapanga	51	551.89	619.05	1170.94	130.00	<b>1300.94</b>	681.89
17	40 mm size C B H G Metal	Cum	Tapanga	51	551.89	706.67	1258.56	130.00	<b>1388.56</b>	681.89
18	26.5mm size C B H G Metal	Cum	Tapanga	51	551.89	758.10	1309.99	130.00	<b>1439.99</b>	681.89
19	25 mm size C B H G Metal	Cum	Tapanga	51	551.89	770.48	1322.37	130.00	<b>1452.37</b>	681.89
20	22.4 mm size C B H G Metal	Cum	Tapanga	51	551.89	789.52	1341.41	130.00	<b>1471.41</b>	681.89
21	20 mm size C B H G Chips	Cum	Tapanga	51	551.89	1007.62	1559.51	130.00	<b>1689.51</b>	681.89
22	13.2 mm size C B H G Chips	Cum	Tapanga	51	551.89	1024.76	1576.65	130.00	<b>1706.65</b>	681.89
23	12 mm size C B H G Chips	Cum	Tapanga	51	551.89	1047.62	1599.51	130.00	<b>1729.51</b>	681.89
	11.2 mm size C B H G Chips	Cum	Tapanga	51	551.89	1049.52	1601.41	130.00	<b>1731.41</b>	681.89
24	10 mm size C B H G Chips	Cum	Tapanga	51	551.89	1066.67	1618.56	130.00	<b>1748.56</b>	681.89
25	6 mm size C B H G Chips	Cum	Tapanga	51	551.89	704.76	1256.65	130.00	<b>1386.65</b>	681.89
26	Granite Stone broken Chips 6.7 mm size	Cum	Tapanga	51	551.89	704.76	1256.65	130.00	<b>1386.65</b>	681.89
27	2.36mm size C B H G Chips	Cum	Tapanga	51	551.89	628.57	1180.46	130.00	<b>1310.46</b>	681.89
28	4.75mm size C B H G Chips	Cum	Tapanga	51	551.89	638.10	1189.99	130.00	<b>1319.99</b>	681.89
29	Quarry rubbish Screened	Cum	Tapanga	51	551.89	76.19	628.08	35.00	<b>663.08</b>	586.89
30	50 mm size H B H G Metal	Cum	Tapanga	51	551.89	493.33	1045.22	130.00	<b>1175.22</b>	681.89
31	40 mm size H B H G Metal	Cum	Tapanga	51	551.89	564.76	1116.65	130.00	<b>1246.65</b>	681.89
32	25 mm size H B H G Metal	Cum	Tapanga	51	551.89	585.71	1137.60	130.00	<b>1267.60</b>	681.89
33	20 mm size H B H G Hhips	Cum	Tapanga	51	551.89	763.81	1315.70	130.00	<b>1445.70</b>	681.89
34	12 mm size H B H G Hhips	Cum	Tapanga	51	551.89	811.43	1363.32	130.00	<b>1493.32</b>	681.89
35	10 mm size H B H G Hhips	Cum	Tapanga	51	551.89	838.10	1389.99	130.00	<b>1519.99</b>	681.89
36	Maxphalt (OSICL) 60/70	Qntl.	Haladia		149.67					
37	Maxphalt (OSICL) 80/100	Qntl.	Haladia		149.67					
38	Bitumen 60/70 (source to plant)	Tonne	Haladia	351	2636.06	44582.76	47218.82		<b>47218.82</b>	2636.06
37	Hallow Brick	300Nos		10	1165.37	20.47	1185.84	0.00	<b>1185.84</b>	1165.37
36	White Cement	Qntl.	Local	5	16.17	533.40	549.57	0.00	<b>549.57</b>	16.17
37	Khondolite	Cum	Bhubaneswar	60	607.87	22968.20	23576.07	180.00	<b>23756.07</b>	787.87
38	Dust	cum	Tapanga-Quarry	5	149.67			35.00		184.67
39	Metal Chips	cum	Tapanga-Quarry	5	149.67			130.00		279.67
40	Precast Saucer drain	cum	Khorda	59	601.65	14800.00	15401.65		15401.65	601.65

Certified that the lead provided are minimum and correct to the best of my knowledge

10	608.90
10	1217.80
10	1165.37

**Steel from SAIL as on 03/2020**

8mm		10mm		12mm		16mm		20mm	
264.00		397.00		566.00		1005.00		1552.00	
0.395	kg/mtr	0.62	kg/mtr	0.888	kg/mtr	1.578	kg/mtr	2.465	kg/mtr
4.74	kg	7.44	kg	10.66	kg	18.94	kg	29.58	kg
55.7	Rs/kg	53.36	Rs/kg	53.1	Rs/kg	53.06	Rs/kg	52.47	Rs/kg
55700	Rs/Ton	53360	Rs/Ton	53100	Rs/Ton	53060	Rs/Ton	52470	Rs/Ton
							Average		
							GST		1.18

Schedule Rate 2013 effective from 1.07.2013

Sl. No.	DESCRIPTIONS		Output	USAGE RATES IN Rs.	
	Machine	Activity		Unit	Rate
1	Dozer D-50 -A 15	Spreading	200cum/hour	per hour	1831.00 1592.17
		Cutting	100cum/hour	per hour	1831.00 1592.17
		Cleaning	150cum/hour	per hour	1831.00 1592.17
2	Dozer D-80-A 12	Spreading	300cum/hour	per hour	2519.00 2190.43
		Cutting	150cum/hour	per hour	2519.00 2190.43
		Cleaning	250cum/hour	per hour	2519.00 2190.43
3	Motor Grader 3.35meter blade	Clearing	200cum/hour	per hour	1545.00 1343.48
		Spreading	200cum/hour	per hour	1545.00 1343.48
		GSB	50cum/hour	per hour	1545.00 1343.48
		WMM	50cum/hour	per hour	1545.00 1343.48
4	Tractor with ordinary grader				289.00 251.30
5	Hydraulic Excavator of 1cum bucket	Soil ordinary	60cum/hour	per hour	840.00 730.43
		Soil Marshy	60cum/hour	per hour	840.00 730.43
		Soil unsuitable	60cum/hour	per hour	840.00 730.43
6	Hydraulic Excavator of 2cum bucket	Soil		per hour	1868.00 1624.35
7	Front End loader 1 cum bucket capacity	Soil loading	60cum/hour	per hour	520.00 452.17
		Aggregate loading	25cum/hour	per hour	520.00 452.17
8	Tipper 5cum	Transportation of soil, GSB, WMM, Hotmix etc.	5.5cum	per km.	24.00 20.87
				per tonne.km	2.50 2.17
				per hour	582.00 506.09
9	Vibratory Roller 8-10 tonne	Earth/soil	100cum/hour	per hour	994.00 864.35
		GSB	60cum/hour	per hour	994.00 864.35
		WMM	60cum/hour	per hour	994.00 864.35
10	Smooth wheeled Roller 8 -10 tonne	Soil compaction	70cum/hour	per hour	339.00 294.78
		BM compaction	25cum/hour	per hour	339.00 294.78
11	Sheep foot Roller Soil	compaction		per hour	65.00 56.52
12	Truck mounted water tanker	Water transport	6KL	per hour	582.00 506.09
13	Tractor	Pulling	50HP	per hour	231.00 200.87
14	Rotavator	Mixing	25cum/hour	per hour	11.00 9.57
15	Ripper	Scarifying	60cum/hour	per hour	18.00 15.65
16	Air Compressor	General purpose	170/250cfm	per hour	206.00 179.13
17	Diesel Compressor		400cfm	per hour	856.00 744.35
18	Diesel Compressor		300cfm	per hour	711.00 618.26
19	Electrical Compressor		500cfm	per hour	497.00 432.17
20	Wet Mix Plant	60 TPH Wet Mix	25cum/hour	per hour	777.00 675.65
21	Wet Mix Plant	75 TPH Wet Mix	34cum/hour	per hour	1036.00 900.87
22	Mechanical broom hydraulic	Surface cleaning	1250sqm/hour	per hour	230.00 200.00
23	Bitumen pressure distributor	Applying bitumen tack coat	1750sqm/hour	per hour	692.00 601.74
24	Emulsion pressure distributor	Applying emulsion tack	1750sqm/hour	per hour	516.00 448.70

Schedule Rate 2013 effective from 1.07.2013

Sl. No.	DESCRIPTIONS		Output	USAGE RATES IN Rs.		
	Machine	Activity		Unit		Rate
25	Hotmix plant -120 TPH	DBM/BM/SDC/ Premix	40cum/hour	per hour	15100.00	13130.43
26	Hotmix plant -100 TPH	DBM/BM/SDC/Premix	30cum/hour	per hour	11167.00	9710.43
27	Hotmix plant -60 to 90TPH	DBM/BM/SDC/ Premix	25cum/hour	per hour	8930.00	7765.22
28	Hotmix plant -40 to 60TPH	DBM/BM/SDC/Premix	17cum/hour	per hour	7150.00	6217.39
29	Hotmix plant -8 to 10TPH	Premix	cum/hour	per hour	1025.00	891.30
30	Paver Finisher Hydrostatic withsensor control 100 TPH	Paving of DBM /BM /SDC/Premix	40cum/hour	per hour	1725.00	1500.00
31	Paver Finisher Mechanical 100 TPH	Paving of WMM/PMC	40cum/hour	per hour	739.00	642.61
		Paving of DLC	30cum/hour	per hour	739.00	642.61
32	Paver Finisher Mechanical	Paving of DLC	75cum/hour	per hour	1846.00	1605.22
33	Hydraulic Chips Spreader	Surface Dressing	1500sqm/hour	per hour	1700.00	1478.26
34	Tandem Road Roller	Rolling of Asphalt surface	30cum/hour	per hour	738.00	641.74
35	Pneumatic Road Roller	Rolling of Asphalt surface	25cum/hour	per hour	802.00	697.39
36	Pot hole repair machine	Repair of pot holes	4cum/hour	per hour	585.00	508.70
37	Bitumen boiler oil fired	Bitumen spraying	1500Litre	per hour	128.00	111.30
38	Tar boiler	Bitumen spraying		per hour	74.00	64.35
39	GSB Plant 50 cum	Producing GSB	40cum/hour	per hour	670.00	582.61
40	Mastic Cooker	Mastic Wearing Coat	1tonne	per hour	1586.00	1379.13
41	Batching and Mixing plant 15- 20cum	Concrete Mixing	13cum/hour	per hour	1200.00	1043.48
42	Batching and Mixing plant 30cum	Concrete Mixing	20cum/hour	per hour	1440.00	1252.17
43	Batching and Mixing plant 112.5cum	Concrete Mixing	75cum/hour	per hour	2760.00	2400.00
44	Batching and Mixing plant 262.5cum	Concrete Mixing	175cum/hour	per hour	5160.00	4486.96
45	Transit Mixer	Transportation of concrete mix to site	4.5cum/hour	per hour	600.00	521.74
			3cum/hour	per hour	550.00	478.26
46	Grout pump			per hour	65.00	56.52
47	Concrete pump of 45 & 30 cum	Pumping Concrete	33cum/hour 22cum/hour	per hour	165.00	143.48
48	Pump with 5HP diesel engine	Pumping of Water		per hour	59.00	51.30
49	Pump with 10HP diesel engine	Pumping of Water		per hour	108.00	93.91
50	Pump with 20HP diesel engine	Pumping of Water		per hour	166.00	144.35
51	Pump with 40HP diesel engine	Pumping of Water		per hour	278.00	241.74
52	Pump with 40HP electrical			per hour	149.00	129.57
53	Pump with 50HP electrical			per hour	182.00	158.26

Schedule Rate 2013 effective from 1.07.2013

Sl. No.	DESCRIPTIONS		Output	USAGE RATES IN Rs.		
	Machine	Activity		Unit		Rate
54	Cranes 80 tonnes	Lifting purpose		per hour	825.00	717.39
55	Cranes 35 tonnes	Lifting purpose		per hour	550.00	478.26
56	Cranes 3 tonnes	Lifting purpose		per hour	230.00	200.00
57	Crawler mounted Crane (18T)	Lifting purpose		per hour	1717.00	1493.04
58	Tower Crane	Lifting purpose		per hour	551.00	479.13
59	Welding transformer	Welding		per hour	81.00	70.43
60	Gunnetting machine without compressor			per hour	91.00	79.13
61	Mechanical Winch (10T)			per hour	224.00	194.78
62	Power Winch (40HP)			per hour	220.00	191.30
63	Concrete Bucket	For pouring concrete	1cum	per hour	10.00	8.70
64	Kerb casting machine	Kerb making	80RM/hour	per hour	200.00	173.91
65	Concrete Mixer	Concrete Mixing	2.5cum/hour	per hour		
	a) 04 / 0.28 cum				177.00	153.91
	b) 01cum		7.5cum/hour	per hour	177.00	153.91
66	Vibrator (3HP diesel)	Compacting Concrete		per hour	106.00	92.17
67	Piling Rig with Bantonite Pump	0.75m dia to 1.2m dia Boring Attachment	2 to 3RM/hour	per hour	3525.00	3065.22
68	Concrete Paver Finisher with 40HP Motor	Paving of Concrete Surface	20cum/hour	per hour	1850.00	1608.70
69	Integrated stone crusher	Crushing of Spalls	100TPH	per hour	5590.00	4860.87
		Crushing of Spalls	200TPH	per hour	11760.00	10226.09
70	Stone crusher (electrical)	Crushing of Spalls		per hour	184.00	160.00
71	Crushing & processing plant (electrical)			per hour	235.00	204.35
72	Concrete Paver Finisher with 40HP Motor	Paving of Concrete Surface	175cum/hour	per hour	16188.00	14076.52
73	Prestressing Jack with Pump & Access	Stressing of Steel Wires/Stands		per hour	83.00	72.17
74	Generator 100KVA	Generation of Electric Energy	100KVA	per hour	450.00	391.30
75	Generator 250KVA	Generation of Electric Energy	100KVA	per hour	1125.00	978.26
76	Generator 33KVA	Generation of Electric Energy	50KVA	per hour	240.00	208.70
77	Generator 40KVA	Generation of Electric Energy	KVA	per hour	425.00	369.57
78	Generator 125KVA	Generation of Electric Energy	KVA	per hour	905.00	786.96
79	Pneumatic Sinking Plant	Pneumatic Sinking of wells	1.5 to 2.0 cum/hour	per hour	2690.00	2339.13
80	Truck 5.5cum per 10 tonnes	Material Transport	4.5cum	Per Km.	20.00	17.39
				per tonne.km	2.00	1.74
				per hour	557.00	484.35
81	Road Marking machine	Road marking	100sqm/hour	per hour	60.00	52.17

Schedule Rate 2013 effective from 1.07.2013

Sl. No.	DESCRIPTIONS		Output	USAGE RATES IN Rs.		
	Machine	Activity		Unit		Rate
82	Mobile Slurry Seal Equipment	Mixing and laying slurry seal	2700sqm/hour	per hour	650.00	565.22
83	Wagon drill			per hour	128.00	111.30
84	Dimond drill			per hour	338.00	293.91
85	Inwell rings			per hour	72.00	62.61
86	Jack hammer			per hour	9.00	7.83
87	Pneumatic rammer			per hour	13.00	11.30
88	Pusher leg			per hour	5.00	4.35
89	Drilling Machine			per hour	100.00	86.96
90	Plate compactor			per hour	50.00	43.48

**ANALYSIS OF RATE - 2013**  
**(With revised SR w.e.f 1.07.2013 and Labour rate w.e.f 13.07.2009 Revised Royalty 01.09.13)**

Sl. No.	Name of the Item	Unit	<b>SR-2014 (Post GST)</b>	Rate for Northern Zone (in Rs.)	Rate for Southern Zone (in Rs.)	<b>SR-2013</b>	<b>SR-2014</b>	<b>SR-2014 (Post GST)</b>
			3	4	5	6		
1	Well burnt Clamp Burnt bricks (25 X 12 X 8 cm) having crushing strength not less than 35 kg/cm <sup>2</sup> with dimensional tolerance of + 8%.	1000 nos.	<b>3148.94</b>			<b>3300.00</b>	<b>3700.00</b>	<b>3148.94</b>
2	Well burnt Clamp Burnt bricks (23 X 11 X 8 cm) having crushing strength not less than 35 kg/cm <sup>2</sup> with dimensional tolerance of + 8%.	1000 nos.	<b>2893.62</b>			<b>2970.00</b>	<b>3400.00</b>	<b>2893.62</b>
3	K.B. bricks (25 X 12 X 8 cm) having crushing strength not less than 75 kg/cm <sup>2</sup> with dimensional tolerance of + 8%.	1000 nos.	<b>4638.30</b>			<b>4950.00</b>	<b>5450.00</b>	<b>4638.30</b>
4	K.B. bricks (23 X 11 X 8 cm) having crushing strength not less than 75 kg/cm <sup>2</sup> with dimensional tolerance of + 8%.	1000 nos.	<b>4042.55</b>			<b>4400.00</b>	<b>4750.00</b>	<b>4042.55</b>
5	Fly Ash bricks (25 X 12 X 8 cm) having crushing strength not less than 75 kg/cm <sup>2</sup> with dimensional tolerance of + 2%.	1000 nos.	<b>3914.89</b>			<b>4620.00</b>	<b>4600.00</b>	<b>3914.89</b>
6	Fly Ash bricks (23 X 11 X 8 cm) having crushing strength not less than 75 kg/cm <sup>2</sup> with dimensional tolerance of + 2%.	1000 nos.	<b>3787.23</b>			<b>4070.00</b>	<b>4450.00</b>	<b>3787.23</b>
7	a Fly Ash blocks (30 X 20 X 15 cm) having crushing strength not less than 75 kg/cm <sup>2</sup> with dimensional tolerance of + 2%.	Nos.	<b>13.62</b>			<b>10.00</b>	<b>16.00</b>	<b>13.62</b>
	b Fly Ash blocks (30 X 20 X 15 cm) having crushing strength not less than 75 kg/cm <sup>2</sup> with dimensional tolerance of + 2%.	Nos.				<b>14.00</b>	<b>16.00</b>	
8	Cement concrete Solid Block Machine mixed and Hydraulic compressed having crushing strength not less than 75 kg/cm <sup>2</sup> .							
	a 400 mm X 200 mm X 200 mm Size	Nos.	<b>22.05</b>			<b>25.00</b>	<b>28.00</b>	<b>22.05</b>
	b 400 mm X 150 mm X 200 mm Size	Nos.	<b>18.11</b>			<b>20.00</b>	<b>23.00</b>	<b>18.11</b>
	c 400 mm X 100 mm X 150 mm Size	Nos.	<b>12.60</b>			<b>14.00</b>	<b>16.00</b>	<b>12.60</b>
	d 300 mm X 200 mm X 150 mm Size	Nos.	<b>12.60</b>			<b>15.00</b>	<b>16.00</b>	<b>12.60</b>
	e 300 mm X 150 mm X 150 mm Size	Nos.	<b>11.02</b>			<b>13.00</b>	<b>14.00</b>	<b>11.02</b>
	f 300 mm X 100 mm X 150 mm Size	Nos.	<b>9.45</b>			<b>11.00</b>	<b>12.00</b>	<b>9.45</b>
9	Cement concrete Hollow Block Machine mixed and Hydraulic compressed having crushing strength not less than 75 kg/cm <sup>2</sup> .							
	a 400 mm X 200 mm X 200 mm Size	Nos.	<b>20.47</b>			<b>23.00</b>	<b>26.00</b>	<b>20.47</b>
	b 400 mm X 150 mm X 200 mm Size	Nos.	<b>15.75</b>			<b>18.00</b>	<b>20.00</b>	<b>15.75</b>
	c 400 mm X 100 mm X 150 mm Size	Nos.	<b>11.02</b>			<b>13.00</b>	<b>14.00</b>	<b>11.02</b>
	d 300 mm X 200 mm X 150 mm Size	Nos.	<b>11.02</b>			<b>13.00</b>	<b>14.00</b>	<b>11.02</b>
	e 300 mm X 150 mm X 150 mm Size	Nos.	<b>10.24</b>			<b>12.00</b>	<b>13.00</b>	<b>10.24</b>
	f 300 mm X 100 mm X 150 mm Size	Nos.	<b>7.87</b>			<b>9.00</b>	<b>10.00</b>	<b>7.87</b>
10	K B Brick Khoa 4 Cm Size	1 Cum.	<b>322.55</b>			<b>330.00</b>	<b>379.00</b>	<b>322.55</b>
11	Clamp burnt Brick khoa 4 Cm Size	1 Cum.	<b>259.57</b>			<b>288.00</b>	<b>305.00</b>	<b>259.57</b>
12	Surki of clamp burnt bricks	1 Cum.	<b>348.94</b>			<b>394.00</b>	<b>410.00</b>	<b>348.94</b>
13	Surki of Kiln burnt bricks	1 Cum.	<b>357.45</b>			<b>411.00</b>	<b>420.00</b>	<b>357.45</b>
14	Screen washed gravel for concrete (12 mm to 20	1 Cum.	<b>133.33</b>			<b>132.00</b>	<b>140.00</b>	<b>133.33</b>
15	Gravel or moorum for roadwork satisfying the P.I value with sand admixture, if required.	1 Cum.	<b>45.71</b>			<b>44.00</b>	<b>48.00</b>	<b>45.71</b>
16	Stone screened Dust passing through 2.36 mm sieve and retained on 0.075 mm sieve	1 Cum.	<b>76.19</b>			<b>77.00</b>	<b>80.00</b>	<b>76.19</b>
17	River single or bajri (12 mm to 20 mm)	1 Cum.	<b>90.48</b>			<b>88.00</b>	<b>95.00</b>	<b>90.48</b>
18	Screened and washed sharp sand for mortar	1 Cum.	<b>46.67</b>			<b>46.00</b>	<b>49.00</b>	<b>46.67</b>
19	Sand for filling and road blinding	1 Cum.	<b>41.90</b>			<b>41.00</b>	<b>44.00</b>	<b>41.90</b>
20	Clay mortar for masonry work with admixture of	1 Cum.	<b>46.67</b>			<b>45.00</b>	<b>49.00</b>	<b>46.67</b>
21	Stone lime unslaked	1 Kg.	<b>13.33</b>			<b>13.00</b>	<b>14.00</b>	<b>13.33</b>
22	Ghooting lime Unslaked	1 Kg.	<b>17.14</b>			<b>17.00</b>	<b>18.00</b>	<b>17.14</b>
23	Shell lime Unslaked	1 Kg.	<b>15.24</b>			<b>15.00</b>	<b>16.00</b>	<b>15.24</b>
24	a Granite broken stone not less than 0.025 Cu.m. stacked	1 Cum.	<b>200.87</b>			<b>214.00</b>	<b>230.00</b>	<b>200.87</b>
	b Granite broken stone not less than 0.025 Cu.m.	1 Cum.	<b>174.67</b>			<b>187.00</b>	<b>200.00</b>	<b>174.67</b>
25	Stone other than granite quarried, broken and stacked 0.015 Cum to 0.03 Cum.	1 Cum.	<b>181.90</b>			<b>176.00</b>	<b>191.00</b>	<b>181.90</b>
26	Stone other than granite picked up, broken and stacked 0.015 Cum to 0.03 Cum.	1 Cum.	<b>158.10</b>			<b>154.00</b>	<b>166.00</b>	<b>158.10</b>
27	Stone other than granite quarried, broken and stacked above 0.03 Cum.	1 Cum.	<b>166.67</b>			<b>165.00</b>	<b>175.00</b>	<b>166.67</b>
28	Stone other than granite picked up, broken and stacked above 0.03 Cum.	1 Cum.	<b>158.10</b>			<b>154.00</b>	<b>166.00</b>	<b>158.10</b>
29	Granite Stone broken metal 63 Cm. size.							
	a Crusher Broken	1 Cum.	<b>619.05</b>			<b>594.00</b>	<b>650.00</b>	<b>619.05</b>
	b Hand Broken	1 Cum.	<b>493.33</b>			<b>473.00</b>	<b>518.00</b>	<b>493.33</b>
30	Granite Stone broken metal 4.5 Cm. size.							

**ANALYSIS OF RATE - 2013**  
**(With revised SR w.e.f 1.07.2013 and Labour rate w.e.f 13.07.2009 Revised Royalty 01.09.13)**

Sl. No.	Name of the Item	Unit	SR-2014 (Post GST)	Rate for Northern Zone (in Rs.)	Rate for Southern Zone (in Rs.)	<b>SR-2013</b>	<b>SR-2014</b>	<b>SR-2014 (Post GST)</b>
			3	4	5			
1								
	a Crusher Broken	1 Cum.	<b>639.05</b>			<b>616.00</b>	<b>671.00</b>	<b>639.05</b>
	b Hand Broken	1 Cum.	<b>489.52</b>			<b>475.00</b>	<b>514.00</b>	<b>489.52</b>
31	Granite Stone broken metal 4 Cm. size.		<b>0.00</b>					<b>0.00</b>
	a Crusher Broken	1 Cum.	<b>706.67</b>			<b>682.00</b>	<b>742.00</b>	<b>706.67</b>
	b Hand Broken	1 Cum.	<b>564.76</b>			<b>544.00</b>	<b>593.00</b>	<b>564.76</b>
32	Granite Stone broken metal 2.65 Cm. size.		<b>0.00</b>					<b>0.00</b>
	a Crusher Broken	1 Cum.	<b>758.10</b>			<b>726.00</b>	<b>796.00</b>	<b>758.10</b>
	b Hand Broken	1 Cum.	<b>573.33</b>			<b>550.00</b>	<b>602.00</b>	<b>573.33</b>
33	Granite Stone broken metal 2.5 Cm. size.		<b>0.00</b>					<b>0.00</b>
	a Crusher Broken	1 Cum.	<b>770.48</b>			<b>737.00</b>	<b>809.00</b>	<b>770.48</b>
	b Hand Broken	1 Cum.	<b>585.71</b>			<b>561.00</b>	<b>615.00</b>	<b>585.71</b>
34	Granite Stone broken metal 2.24 Cm. size.		<b>0.00</b>					<b>0.00</b>
	a Crusher Broken	1 Cum.	<b>789.52</b>			<b>759.00</b>	<b>829.00</b>	<b>789.52</b>
	b Hand Broken	1 Cum.	<b>587.62</b>			<b>683.00</b>	<b>617.00</b>	<b>587.62</b>
35	Granite Stone broken Chips 20 mm. size.		<b>0.00</b>					<b>0.00</b>
	a Crusher Broken	1 Cum.	<b>1007.62</b>			<b>968.00</b>	<b>1058.00</b>	<b>1007.62</b>
	b Hand Broken	1 Cum.	<b>763.81</b>			<b>753.00</b>	<b>802.00</b>	<b>763.81</b>
36	Granite Stone broken Chips 13.2 mm. size.		<b>0.00</b>					<b>0.00</b>
	a Crusher Broken	1 Cum.	<b>1024.76</b>			<b>990.00</b>	<b>1076.00</b>	<b>1024.76</b>
	b Hand Broken	1 Cum.	<b>800.95</b>			<b>770.00</b>	<b>841.00</b>	<b>800.95</b>
37	Granite Stone broken Chips 12 mm. size.		<b>0.00</b>					<b>0.00</b>
	a Crusher Broken	1 Cum.	<b>1047.62</b>			<b>1001.00</b>	<b>1100.00</b>	<b>1047.62</b>
	b Hand Broken	1 Cum.	<b>811.43</b>			<b>761.00</b>	<b>852.00</b>	<b>811.43</b>
38	Granite Stone broken Chips 11.2 mm. size.		<b>0.00</b>					<b>0.00</b>
	a Crusher Broken	1 Cum.	<b>1049.52</b>			<b>1012.00</b>	<b>1102.00</b>	<b>1049.52</b>
	b Hand Broken	1 Cum.	<b>838.10</b>			<b>803.00</b>	<b>880.00</b>	<b>838.10</b>
39	Granite Stone broken Chips 10 mm. size.		<b>0.00</b>					<b>0.00</b>
	a Crusher Broken	1 Cum.	<b>1066.67</b>			<b>1023.00</b>	<b>1120.00</b>	<b>1066.67</b>
	b Hand Broken	1 Cum.	<b>838.10</b>			<b>803.00</b>	<b>880.00</b>	<b>838.10</b>
A	Granite Stone broken Chips 6.7 mm size (Passing through 11.2 mm sieve & retained on 2.8 mm sieve)	1 Cum.	<b>704.76</b>			<b>687.00</b>	<b>740.00</b>	<b>704.76</b>
B	Granite stone screening (Passing through 2.36 mm sieve & retained on 180 micron sieve)	1 Cum.	<b>628.57</b>			<b>605.00</b>	<b>660.00</b>	<b>628.57</b>
40	Granite Stone broken Chips of 4.7 mm size passing through 6.7 mm sieve (crusher broken) & retained on 2.36 mm sieve	1 Cum.	<b>638.10</b>			<b>616.00</b>	<b>670.00</b>	<b>638.10</b>
41	Stone other than granite broken to 5 Cm. size.	1 Cum.	<b>238.10</b>			<b>231.00</b>	<b>250.00</b>	<b>238.10</b>
42	Stone other than granite broken to 4 Cm. size.	1 Cum.	<b>244.76</b>			<b>236.00</b>	<b>257.00</b>	<b>244.76</b>
43	Stone other than granite broken to 2 Cm. size.	1 Cum.	<b>260.95</b>			<b>253.00</b>	<b>274.00</b>	<b>260.95</b>
44	Stone other than granite broken to 1 Cm. size.	1 Cum.	<b>274.29</b>			<b>264.00</b>	<b>288.00</b>	<b>274.29</b>
45	Stone boulder 15 Cm. & above size granite picked up and nullah boulders.	1 Cum.	<b>141.90</b>			<b>137.00</b>	<b>149.00</b>	<b>141.90</b>
46	Soiling stone boulder 15 Cm. & above size picked up and nullah boulders & broken.	1 Cum.	<b>144.76</b>			<b>143.00</b>	<b>152.00</b>	<b>144.76</b>
47	Stone boulder 15 Cm. & above size other than granite or laterite picked up and nullah boulders & broken.	1 Cum.	<b>114.29</b>			<b>110.00</b>	<b>120.00</b>	<b>114.29</b>
48	Soiling stone boulder 15 Cm. & above size other than granite or laterite picked up and nullah boulders & broken.	1 Cum.	<b>125.71</b>			<b>121.00</b>	<b>132.00</b>	<b>125.71</b>
49	Soiling stone boulder 10 Cm. size picked up other than granite	1 Cum.	<b>113.33</b>			<b>110.00</b>	<b>119.00</b>	<b>113.33</b>
50	Hard broken soiling stone other than granite (40 mm to 90 mm)	1 Cum.	<b>181.90</b>			<b>176.00</b>	<b>191.00</b>	<b>181.90</b>
51	I.R.C. Grade - I (40 mm to 90 mm)	1 Cum.	<b>597.14</b>			<b>572.00</b>	<b>627.00</b>	<b>597.14</b>
52	I.R.C. Grade - II (40 mm to 62 mm)	1 Cum.	<b>661.90</b>			<b>638.00</b>	<b>695.00</b>	<b>661.90</b>
53	I.R.C. Grade - III (25 mm to 50 mm)	1 Cum.	<b>704.76</b>			<b>682.00</b>	<b>740.00</b>	<b>704.76</b>
54	Laterite soiling Stone 23 Cm. size	1 Cum.	<b>95.24</b>			<b>93.00</b>	<b>100.00</b>	<b>95.24</b>
55	Laterite Stone rough dressed	1 Cum.	<b>544.76</b>			<b>528.00</b>	<b>572.00</b>	<b>544.76</b>
56	Bamboo mat or Talai	1 Sqmt.	<b>97.93</b>			<b>110.00</b>	<b>118.00</b>	<b>97.93</b>
57	Bamboo 1st class 7 cm to 10 cm dia & above 6.0 Mt. Long	Each	<b>106.22</b>			<b>121.00</b>	<b>128.00</b>	<b>106.22</b>
58	Belongi Bamboo 2.51 cm to 4. cm dia & above 5.0 Mt. Long	Each	<b>24.90</b>			<b>27.00</b>	<b>30.00</b>	<b>24.90</b>
	b Belongi Bamboo above 4. cm dia & up to 7. cm dia & above 5.0 Mt. Long	Each	<b>32.37</b>			<b>36.00</b>	<b>39.00</b>	<b>32.37</b>
59	Sal bullah 75 mm to 120 mm dia up to 5.5 mt. long	Each	<b>82.99</b>			<b>92.00</b>	<b>100.00</b>	<b>82.99</b>
60	Sal bullah 150 mm to 200 mm dia up to 5.5 mt. long	Each	<b>89.63</b>			<b>103.00</b>	<b>108.00</b>	<b>89.63</b>
61	Sal bullah above 200 mm & up to 250 mm dia & up to 2.75 mt. long	1 Cum.	<b>7296.97</b>			<b>8008.00</b>	<b>8792.00</b>	<b>7296.97</b>

**ANALYSIS OF RATE - 2013**  
**(With revised SR w.e.f 1.07.2013 and Labour rate w.e.f 13.07.2009 Revised Royalty 01.09.13)**

Sl. No.	Name of the Item	Unit	SR-2014	Rate for Northern Zone (in Rs.)	Rate for Southern Zone (in Rs.)	SR-2013	SR-2014	SR-2014
			(Post GST)					(Post GST)
1	2	3	4	5	6			
62	Sal bullah above 200 mm & up to 250 mm dia above 2.75 Mt. & up to 4.75 mt. long	1 Cum.	<b>8215.77</b>			<b>9020.00</b>	<b>9900.00</b>	<b>8215.77</b>
63	Sal bullah above 200 mm & up to 250 mm dia above 4.75 mt. long	1 Cum.	<b>9211.62</b>			<b>10340.00</b>	<b>11100.00</b>	<b>9211.62</b>
64	Sal bullah above 250 mm & up to 380 mm mean dia & up to 2.75 mt. long	1 Cum.	#####			<b>11605.00</b>	<b>12680.00</b>	<b>10522.82</b>
65	Sal bullah above 250 mm & up to 380 mm mean dia & above 2.75 mt. up to 4.75 mt. long	1 Cum.	#####			<b>14410.00</b>	<b>15740.00</b>	<b>13062.24</b>
66	Sal bullah above 250 mm & up to 380 mm mean dia & above 4.75 mt. long	1 Cum.	#####			<b>15911.00</b>	<b>17482.00</b>	<b>14507.88</b>
67	Non-sal bullahs 75 mm dia of any length	1 Mtr.	<b>39.83</b>			<b>44.00</b>	<b>48.00</b>	<b>39.83</b>
68	Non-sal bullahs 100 mm mean dia of any length	1 Mtr.	<b>51.45</b>			<b>57.00</b>	<b>62.00</b>	<b>51.45</b>
69	Non-sal bullahs 125 mm mean dia of any length	1 Mtr.	<b>58.09</b>			<b>66.00</b>	<b>70.00</b>	<b>58.09</b>
70	Non-sal bullahs 150 mm to 200 mm mean dia of any length	1 Mtr.	<b>73.03</b>			<b>82.00</b>	<b>88.00</b>	<b>73.03</b>
71	Non-sal bullahs above 200 mm & up to 250 mm mean dia up to 2.50 mt. long	1 Cum.	<b>5136.93</b>			<b>3720.00</b>	<b>6190.00</b>	<b>5136.93</b>
72	Non-sal bullahs above 200 mm & up to 250 mm mean dia above 2.50 mt. long	1 Cum.	<b>5770.95</b>			<b>6325.00</b>	<b>6954.00</b>	<b>5770.95</b>
73	Seasoned rough dressed sawn Sal wood having minimum dimensional 50 mm to 150 mm and above 2.75 mt. long.	1 Cum.	#####			<b>29810.00</b>	<b>32640.00</b>	<b>27087.14</b>
74	Seasoned rough dressed sawn Sal wood having minimum dimensional 50 mm to 150 mm and above 2.75 mt. long.	1 Cum.	#####			<b>32537.00</b>	<b>35670.00</b>	<b>29601.66</b>
75	Seasoned rough dressed sawn Sal wood having minimum dimensional 100 mm and above 2.75 mt. long.	1 Cum.	#####			<b>32812.00</b>	<b>35600.00</b>	<b>29543.57</b>
76	Seasoned Sal wood planks not more than 75 mm thick and not less than 200 mm width.	1 Cum.	#####			<b>29247.00</b>	<b>32130.00</b>	<b>26663.90</b>
77	Seasoned Pia Sal wood planks for shutters.	1 Cum.	#####			<b>47192.00</b>	<b>51200.00</b>	<b>42489.63</b>
78	Seasoned Teak wood planks for shutters.	1 Cum.	#####			<b>62100.00</b>	<b>67770.00</b>	<b>56240.66</b>
79	Non-sal wood scantling and planks (Tentera, Kasi, Gamhari, Kuruma)	1 Cum.	#####			<b>17989.00</b>	<b>19640.00</b>	<b>16298.76</b>
80	Non-Sal reapers	1 Cum.	<b>9958.51</b>			<b>10941.00</b>	<b>12000.00</b>	<b>9958.51</b>
81	Fire Wood	1 Qntl.	<b>409.00</b>			<b>385.00</b>	<b>409.00</b>	<b>409.00</b>
82	1st class Raniganj or Mangalore pattern tiles	100 Nos.	<b>710.24</b>			<b>825.00</b>	<b>902.00</b>	<b>710.24</b>
83	Ridges of Raniganj or Mangalore pattern tiles	100 Nos.	<b>1111.81</b>			<b>1301.00</b>	<b>1412.00</b>	<b>1111.81</b>
84	Flat tiles (14 cm. X 14 cm. X 1 cm.)	1000 Nos.	<b>211.02</b>			<b>264.00</b>	<b>268.00</b>	<b>211.02</b>
85	Flat tiles (15 cm. X 15 cm. X 1.20 cm.)	1000 Nos.	<b>244.09</b>			<b>284.00</b>	<b>310.00</b>	<b>244.09</b>
86	Flat tiles (30 cm. X 15 cm. X 2.50 cm.)	1000 Nos.	<b>959.84</b>			<b>1112.00</b>	<b>1219.00</b>	<b>959.84</b>
87	Flat tiles (30 cm. X 30 cm. X 2.50 cm.)	1000 Nos.	<b>1111.81</b>			<b>1298.00</b>	<b>1412.00</b>	<b>1111.81</b>
88	Pan Tiles	1000 Nos.	<b>236.22</b>			<b>278.00</b>	<b>300.00</b>	<b>236.22</b>
89	Nuria Tiles (20 cm. to 25 cm.)	1000 Nos.	<b>494.49</b>			<b>581.00</b>	<b>628.00</b>	<b>494.49</b>
90	Nuria Tiles (25 cm. to 30 cm.)	1000 Nos.	<b>590.55</b>			<b>685.00</b>	<b>750.00</b>	<b>590.55</b>
91	Ridge Tiles	1000 Nos.	<b>740.94</b>			<b>862.00</b>	<b>941.00</b>	<b>740.94</b>
92	Marble Tiles ( minimum16 mm thick) Dunguri Variety.							
a	Up to 0.10 Sqmt.	1 Sqm.	<b>424.41</b>	39.43		<b>495.00</b>	<b>539.00</b>	<b>424.41</b>
b	Above 0.10 Sqmt. To 0.40 Sqmt.	1 Sqm.	<b>518.90</b>	48.21		<b>605.00</b>	<b>659.00</b>	<b>518.90</b>
c	Above 0.40 Sqmt. To 1.00 Sqmt.	1 Sqm.	<b>581.10</b>	53.98		<b>682.00</b>	<b>738.00</b>	<b>581.10</b>
93	Kota Tiles (minimum16 mm thick)							
a	Up to 0.10 Sqmt.	1 Sqm.	<b>313.39</b>			<b>365.00</b>	<b>398.00</b>	<b>313.39</b>
b	Above 0.10 Sqmt.	1 Sqm.	<b>379.53</b>			<b>447.00</b>	<b>482.00</b>	<b>379.53</b>
94	Khandolites (Up to 0.06 Sqm.)	1 Sqm.	<b>244.09</b>			<b>287.00</b>	<b>310.00</b>	<b>244.09</b>
95	Granite Tiles		<b>0.00</b>					<b>0.00</b>
a	Up to 0.10 Sqmt. ( 10 mm thick)	1 Sqm.	<b>916.54</b>			<b>1067.00</b>	<b>1164.00</b>	<b>916.54</b>
b	Above 0.10 Sqmt. To 0.40 Sqmt. ( 10 mm thick)	1 Sqm.	<b>1039.37</b>			<b>1210.00</b>	<b>1320.00</b>	<b>1039.37</b>
c	Above 0.40 Sqmt. ( 20 mm thick)	1 Sqm.	<b>1637.80</b>			<b>1900.00</b>	<b>2080.00</b>	<b>1637.80</b>
96	Kadappa Tiles (10 mm and above thickness)		<b>0.00</b>					<b>0.00</b>
a	Above 0.10 Sqmt. To 0.40 Sqmt. ( 10 mm thick)	1 Sqm.	<b>236.22</b>			<b>275.00</b>	<b>300.00</b>	<b>236.22</b>
b	Above 0.40 Sqmt.	1 Sqm.	<b>277.17</b>			<b>330.00</b>	<b>352.00</b>	<b>277.17</b>
97	Dholpuri Stone Tiles	1 Sqm.	<b>307.87</b>			<b>363.00</b>	<b>391.00</b>	<b>307.87</b>
98	Glazed Tiles		<b>0.00</b>					<b>0.00</b>
	20 cm X 30cm /20cmX20 cm special plain/printed series ceramic <b>wall</b> tile of premium grade having thickness 6.5 to6.7mm confirming to IS 13753	1 Sqm.	<b>300.00</b>	27.87		<b>352.00</b>	<b>381.00</b>	<b>300.00</b>
	30 cm X 30cm /40cmX40 cm special plain/printed series ceramic <b>Floor</b> tile of premium grade having thickness 7 to 8 mm confirming to IS 13755	1 Sqm.	<b>329.13</b>	30.58		<b>390.00</b>	<b>418.00</b>	<b>329.13</b>

**ANALYSIS OF RATE - 2013**  
**(With revised SR w.e.f 1.07.2013 and Labour rate w.e.f 13.07.2009 Revised Royalty 01.09.13)**

Sl. No.	Name of the Item	Unit	SR-2014	Rate for Northern Zone (in Rs.)	Rate for Southern Zone (in Rs.)	SR-2013	SR-2014	SR-2014
			(Post GST)					(Post GST)
1	2	3	4	5	6			
99	Chequered Tiles	1 Sqm.	<b>163.78</b>			<b>198.00</b>	<b>208.00</b>	<b>163.78</b>
100	Terrazo Tiles		<b>0.00</b>					<b>0.00</b>
a	With Grey Cement	1 Sqm.	<b>184.25</b>			<b>226.00</b>	<b>234.00</b>	<b>184.25</b>
b	With White Cement	1 Sqm.	<b>225.20</b>			<b>268.00</b>	<b>286.00</b>	<b>225.20</b>
101	Red Oxide Primer	1 Litre.	<b>96.06</b>			<b>118.00</b>	<b>122.00</b>	<b>96.06</b>
102	Wood Primer	1 Litre.	<b>109.45</b>			<b>133.00</b>	<b>139.00</b>	<b>109.45</b>
103	Wood Shine Paint	1 Litre.	<b>118.11</b>			<b>145.00</b>	<b>150.00</b>	<b>118.11</b>
104	Plastic Emulsion Paint	1 Litre.	<b>187.40</b>			<b>227.00</b>	<b>238.00</b>	<b>187.40</b>
105	Enamel Paint	1 Litre.	<b>149.61</b>			<b>176.00</b>	<b>190.00</b>	<b>149.61</b>
106	Distemper	1 Kg.	<b>51.18</b>			<b>60.00</b>	<b>65.00</b>	<b>51.18</b>
107	Cement Paint	1 Kg.	<b>34.65</b>			<b>42.00</b>	<b>44.00</b>	<b>34.65</b>
108	Red Oxide Powder	1 Kg.	<b>88.98</b>			<b>106.00</b>	<b>113.00</b>	<b>88.98</b>
109	French Polish	1 Litre.	<b>126.77</b>			<b>150.00</b>	<b>161.00</b>	<b>126.77</b>
110	Varnish	1 Litre.	<b>122.05</b>			<b>145.00</b>	<b>155.00</b>	<b>122.05</b>
111	Plaster of Paris	1 Kg.	<b>9.45</b>			<b>11.00</b>	<b>12.00</b>	<b>9.45</b>
112	Coal Tar	1 Kg.	<b>36.60</b>			<b>40.00</b>	<b>43.00</b>	<b>36.60</b>
113	GCI Sheet 0.30mm thick	1 Sqm.	<b>240.85</b>			<b>260.00</b>	<b>283.00</b>	<b>240.85</b>
114	A.C. Sheet	1 Sqm.	<b>151.97</b>			<b>182.00</b>	<b>193.00</b>	<b>151.97</b>
115	A.C. Ridges	1 Pair	<b>141.73</b>			<b>171.00</b>	<b>180.00</b>	<b>141.73</b>
116	6 mm thick plain A.C. Sheet	1 Sqm.	<b>176.38</b>			<b>210.00</b>	<b>224.00</b>	<b>176.38</b>
117	Tar Paper	1 Sqm.	<b>14.47</b>			<b>16.00</b>	<b>17.00</b>	<b>14.47</b>
118	Putty (Wood)	1 Kg.	<b>22.05</b>			<b>26.00</b>	<b>28.00</b>	<b>22.05</b>
119	Putty (Iron)	1 Kg.	<b>76.38</b>			<b>90.00</b>	<b>97.00</b>	<b>76.38</b>
120	Wire Nails	1 Kg.	<b>50.21</b>			<b>55.00</b>	<b>59.00</b>	<b>50.21</b>
121	M.S. Angle	1 Qntl.	<b>SAIL</b>			<b>4200.00</b>	<b>SAIL</b>	<b>SAIL</b>
122	M.S. Channel	1 Qntl.	<b>SAIL</b>			<b>4200.00</b>	<b>SAIL</b>	<b>SAIL</b>
123	Bolt, Nut & Washers	1 Kg.	<b>58.27</b>			<b>70.00</b>	<b>74.00</b>	<b>58.27</b>
124	Holding down bolts minimum 60 cm long with 15 cm X 15 cm X 6 mm size washer plate	1 Kg.	<b>57.48</b>			<b>68.00</b>	<b>73.00</b>	<b>57.48</b>
125	Binding Wire	1 Kg.	<b>65.53</b>			<b>72.00</b>	<b>77.00</b>	<b>65.53</b>
126	Coir String	1 Kg.	<b>42.45</b>			<b>42.00</b>	<b>45.00</b>	<b>42.45</b>
127	Empty Cement Bag (HDPE) by lot & not sorted out,	100 Nos.	<b>308.94</b>			<b>350.00</b>	<b>380.00</b>	<b>308.94</b>
	Empty Cement gunny bags by lot & not shorted out	100 nos	<b>284.55</b>			<b>350.00</b>	<b>350.00</b>	<b>284.55</b>
128	Empty Bitumen Drum	Each	<b>97.56</b>			<b>250.00</b>		<b>97.56</b>
129	Empty Bitumen Emulsion Drum	Each	<b>186.99</b>			<b>2250.00</b>		<b>186.99</b>
130	Straw in bundle	100 Nos.	<b>200.00</b>			<b>320.00</b>	<b>246.00</b>	<b>200.00</b>
131	Marble Chips	1 Qntl.	<b>515.28</b>				<b>590.00</b>	<b>515.28</b>
a	Marble Powder	1 Qntl.	<b>300.44</b>				<b>344.00</b>	<b>300.44</b>
b	Cement		<b>0.00</b>					<b>0.00</b>
c	33 Grade	1 Qntl.	<b>0.00</b>					<b>0.00</b>
132	43 Grade	1 Qntl.	<b>533.40</b>			<b>1750.00</b>		<b>528.20</b>
133	53 Grade	1 Qntl.	<b>0.00</b>					<b>0.00</b>
a	White Cement	1 Qntl.	<b>1496.09</b>				<b>1900.00</b>	<b>1496.09</b>
b	Steel							
134	Plain	1 Qntl.				<b>5020.00</b>		
135	HYSD (FE - 415)	1 Qntl.				<b>269.00</b>		
	'Z' type steel sheet piles	1 Qntl.	<b>4680.85</b>					<b>4680.85</b>
	Bentonite Powder	1 Qntl.	<b>254.15</b>				<b>291.00</b>	<b>254.15</b>
	<i>Oxidised Mild Steel Fittings (I.S.I)</i>						<b>6.00</b>	
136	But Hinges (I.S.I)					<b>8.00</b>		
a	50 X 37 X 1.5 mm	Each	<b>4.72</b>			<b>13.00</b>	<b>6.00</b>	<b>4.72</b>
b	75 X 47 X 0.70 mm	Each	<b>6.30</b>			<b>20.00</b>	<b>8.00</b>	<b>6.30</b>
c	100 X 58 X 1.90 mm	Each	<b>11.02</b>				<b>14.00</b>	<b>11.02</b>
d	125 X 65 X 2.12 mm	Each	<b>17.32</b>			<b>84.00</b>	<b>22.00</b>	<b>17.32</b>
137	M.S. Aldrop (I.S.I)		<b>0.00</b>			<b>90.00</b>		<b>0.00</b>
	250 X 16 mm	Each	<b>71.65</b>				<b>91.00</b>	<b>71.65</b>
	300 X 16 mm	Each	<b>77.17</b>			<b>13.00</b>	<b>98.00</b>	<b>77.17</b>
138	M.S. Handle (I.S.I)		<b>0.00</b>			<b>15.00</b>		<b>0.00</b>
	100 mm	Each	<b>11.02</b>			<b>19.00</b>	<b>14.00</b>	<b>11.02</b>
	125 mm	Each	<b>12.60</b>				<b>16.00</b>	<b>12.60</b>
	150 mm	Each	<b>15.75</b>			<b>16.00</b>		<b>15.75</b>
139	M.S. Tower bolt (I.S.I)		<b>0.00</b>			<b>24.00</b>		<b>0.00</b>
	100 X 10 mm	Each	<b>12.60</b>			<b>31.00</b>	<b>16.00</b>	<b>12.60</b>
	150 X 10 mm	Each	<b>20.47</b>				<b>26.00</b>	<b>20.47</b>
a	200 X 10 mm	Each	<b>26.77</b>			<b>27.00</b>	<b>34.00</b>	<b>26.77</b>
140	b M.S. Screw (I.S.I)		<b>0.00</b>			<b>30.00</b>		<b>0.00</b>

**ANALYSIS OF RATE - 2013**  
**(With revised SR w.e.f 1.07.2013 and Labour rate w.e.f 13.07.2009 Revised Royalty 01.09.13)**

Sl. No.	Name of the Item	Unit	SR-2014	Rate for Northern Zone (in Rs.)	Rate for Southern Zone (in Rs.)	SR-2013	SR-2014	SR-2014
			(Post GST)					(Post GST)
1		3	4	5	6			
	c 12 X 3 mm	100 Pcs.	<b>21.26</b>			<b>34.00</b>	<b>27.00</b>	<b>21.26</b>
	d 12 X 4 mm	100 Pcs.	<b>25.98</b>			<b>36.00</b>	<b>33.00</b>	<b>25.98</b>
	e 20 X 4 mm	100 Pcs.	<b>29.13</b>			<b>38.00</b>	<b>37.00</b>	<b>29.13</b>
	f 20 X 5 mm	100 Pcs.	<b>30.71</b>			<b>43.00</b>	<b>39.00</b>	<b>30.71</b>
	g 25 X 4 mm	100 Pcs.	<b>32.28</b>			<b>45.00</b>	<b>41.00</b>	<b>32.28</b>
	h 25 X 5 mm	100 Pcs.	<b>37.01</b>			<b>47.00</b>	<b>47.00</b>	<b>37.01</b>
	i 30 X 4 mm	100 Pcs.	<b>38.58</b>			<b>50.00</b>	<b>49.00</b>	<b>38.58</b>
	j 30 X 5 mm	100 Pcs.	<b>40.16</b>			<b>53.00</b>	<b>51.00</b>	<b>40.16</b>
	k 30 X 6 mm	100 Pcs.	<b>43.31</b>			<b>56.00</b>	<b>55.00</b>	<b>43.31</b>
	l 35 X 6 mm	100 Pcs.	<b>45.67</b>			<b>65.00</b>	<b>58.00</b>	<b>45.67</b>
	m 35 X 7 mm	100 Pcs.	<b>48.03</b>			<b>71.00</b>	<b>61.00</b>	<b>48.03</b>
	n 35 X 8 mm	100 Pcs.	<b>55.91</b>			<b>75.00</b>	<b>71.00</b>	<b>55.91</b>
	o 50 X 7 mm	100 Pcs.	<b>61.42</b>				<b>78.00</b>	<b>61.42</b>
	p 50 X 8 mm	100 Pcs.	<b>64.57</b>			<b>23.00</b>	<b>82.00</b>	<b>64.57</b>
<b>141</b>	Steel Window stay Bar (I.S.I)		<b>0.00</b>			<b>28.00</b>		<b>0.00</b>
	a 200 mm	Each	<b>19.69</b>			<b>34.00</b>	<b>25.00</b>	<b>19.69</b>
	b 250 mm	Each	<b>23.62</b>				<b>30.00</b>	<b>23.62</b>
	c 300 mm	Each	<b>29.13</b>			<b>19.00</b>	<b>37.00</b>	<b>29.13</b>
<b>142</b>	Steel Window handle including Nut, bolt & washer (I.S.I)		<b>0.00</b>			<b>24.00</b>		<b>0.00</b>
	a 100 mm	Each	<b>14.96</b>				<b>19.00</b>	<b>14.96</b>
	b 150 mm	Each	<b>20.47</b>			<b>172.00</b>	<b>26.00</b>	<b>20.47</b>
<b>143</b>	Welded Mesh		<b>0.00</b>			<b>159.00</b>		<b>0.00</b>
	a 25 mm X 25 mm X 11 gauge	Sqmt.	<b>160.00</b>			<b>159.00</b>	<b>188.00</b>	<b>160.00</b>
	b 25 mm X 25 mm X 13 gauge	Sqmt.	<b>148.09</b>			<b>145.00</b>	<b>174.00</b>	<b>148.09</b>
	c 50 mm X 25 mm X 11 gauge	Sqmt.	<b>148.09</b>			<b>60.00</b>	<b>174.00</b>	<b>148.09</b>
	d 50 mm X 25 mm X 13 gauge	Sqmt.	<b>134.47</b>			<b>69.00</b>	<b>158.00</b>	<b>134.47</b>
<b>144</b>	G.I 'L' & 'J' Hook	Kg	<b>46.81</b>				<b>55.00</b>	<b>46.81</b>
<b>145</b>	W.I. Clamps	Kg	<b>59.06</b>				<b>75.00</b>	<b>59.06</b>
<b>146</b>	<i>Aluminium Fittings (I.S.I)</i>		<b>0.00</b>			<b>60.00</b>		<b>0.00</b>
	But Hinges (I.S.I)		<b>0.00</b>			<b>50.00</b>		<b>0.00</b>
	a 125 X 75 X 4 mm	Each	<b>51.18</b>			<b>47.00</b>	<b>65.00</b>	<b>51.18</b>
	b 125 X 63 X 4 mm	Each	<b>42.52</b>			<b>45.00</b>	<b>54.00</b>	<b>42.52</b>
	c 100 X 75 X 4 mm	Each	<b>40.16</b>			<b>30.00</b>	<b>51.00</b>	<b>40.16</b>
	d 100 X 63 X 4 mm	Each	<b>38.58</b>			<b>12.00</b>	<b>49.00</b>	<b>38.58</b>
	e 75 X 63 X 4 mm	Each	<b>25.98</b>				<b>33.00</b>	<b>25.98</b>
	f 50 X 35 X 3.2 mm	Each	<b>10.24</b>			<b>26.00</b>	<b>13.00</b>	<b>10.24</b>
<b>147</b>	Aluminiun Handle (I.S.I)		0			<b>26.00</b>		<b>0.00</b>
	a 150 mm with 175 mm X 40 mm Flat	Each	<b>20.47</b>			<b>25.00</b>	<b>26.00</b>	<b>20.47</b>
	b 125 mm with 175 mm X 40 mm Flat	Each	<b>20.47</b>			<b>24.00</b>	<b>26.00</b>	<b>20.47</b>
	c 100 mm with 150 mm X 33 mm Flat	Each	<b>21.26</b>				<b>27.00</b>	<b>21.26</b>
	d 75 mm with 118 mm X 33 mm Flat	Each	<b>20.47</b>			<b>60.00</b>	<b>26.00</b>	<b>20.47</b>
<b>148</b>	Aluminiun Tower bolt (Barrel Type) (I.S.I)		0			<b>55.00</b>		<b>0.00</b>
	a 300 mm X 10 mm	Each	<b>51.18</b>			<b>50.00</b>	<b>65.00</b>	<b>51.18</b>
	b 250 mm X 10 mm	Each	<b>47.24</b>			<b>42.00</b>	<b>60.00</b>	<b>47.24</b>
	c 200 mm X 10 mm	Each	<b>43.31</b>			<b>34.00</b>	<b>55.00</b>	<b>43.31</b>
	d 150 mm X 10 mm	Each	<b>36.22</b>				<b>46.00</b>	<b>36.22</b>
	e 100 mm X 10 mm	Each	<b>29.13</b>			<b>200.00</b>	<b>37.00</b>	<b>29.13</b>
<b>149</b>	Sliding door bolt (Aldrop) (I.S.I)		<b>0.00</b>			<b>190.00</b>		<b>0.00</b>
	a 300 mm X 16 mm	Each	<b>171.65</b>				<b>218.00</b>	<b>171.65</b>
	b 250 mm X 16 mm	Each	<b>161.42</b>				<b>205.00</b>	<b>161.42</b>
<b>150</b>	<i>Brass Fittings (I.S.I)</i>		0			<b>60.00</b>		<b>0.00</b>
	But Hinges (Light / Ordinary) (I.S.I) Brass		<b>0.00</b>			<b>45.00</b>		<b>0.00</b>
	a 125 X 70 X 4 mm	Each	<b>55.32</b>			<b>33.00</b>	<b>65.00</b>	<b>55.32</b>
	b 100 X 70 X 4 mm	Each	<b>41.70</b>			<b>17.00</b>	<b>49.00</b>	<b>41.70</b>
	c 75 X 40 X 2.5 mm	Each	<b>30.64</b>				<b>36.00</b>	<b>30.64</b>
	d 50 X 40 X 2.5 mm	Each	<b>14.47</b>			<b>185.00</b>	<b>17.00</b>	<b>14.47</b>
<b>151</b>	But Hinges (Heavy type) (I.S.I)		<b>0.00</b>			<b>167.00</b>		<b>0.00</b>
	a 125 X 85 X 5.5 mm (0.07 kg)	Each	<b>170.21</b>			<b>70.00</b>	<b>200.00</b>	<b>170.21</b>
	b 100 X 85 X 5.5 mm (0.056 kg)	Each	<b>154.89</b>				<b>182.00</b>	<b>154.89</b>
	c 75 X 65 X 4 mm (0.02 kg)	Each	<b>64.68</b>			<b>190.00</b>	<b>76.00</b>	<b>64.68</b>
<b>152</b>	Brass tower bolt (Barrel Type) (I.S.I)		<b>0.00</b>			<b>158.00</b>		<b>0.00</b>
	a 250 X 10 mm	Each	<b>174.47</b>			<b>118.00</b>	<b>205.00</b>	<b>174.47</b>
	b 200 X 10 mm	Each	<b>146.38</b>			<b>86.00</b>	<b>172.00</b>	<b>146.38</b>
	c 150 X 10 mm	Each	<b>107.23</b>				<b>126.00</b>	<b>107.23</b>

**ANALYSIS OF RATE - 2013**  
**(With revised SR w.e.f 1.07.2013 and Labour rate w.e.f 13.07.2009 Revised Royalty 01.09.13)**

Sl. No.	Name of the Item	Unit	SR-2014	Rate for Northern Zone (in Rs.)	Rate for Southern Zone (in Rs.)	SR-2013	SR-2014	SR-2014
			(Post GST)					(Post GST)
1		3	4	5	6			
	<b>d</b> 100 X 10 mm	Each	<b>79.15</b>			<b>161.00</b>	<b>93.00</b>	<b>79.15</b>
<b>153</b>	Brass Screws (I.S.I)			0		<b>146.00</b>		<b>0.00</b>
	<b>a</b> 50 mm	100 Nos.	<b>149.79</b>			<b>126.00</b>	<b>176.00</b>	<b>149.79</b>
	<b>b</b> 40 mm	100 Nos.	<b>136.17</b>			<b>112.00</b>	<b>160.00</b>	<b>136.17</b>
	<b>c</b> 30 mm	100 Nos.	<b>115.74</b>			<b>83.00</b>	<b>136.00</b>	<b>115.74</b>
	<b>d</b> 25 mm	100 Nos.	<b>102.98</b>				<b>121.00</b>	<b>102.98</b>
	<b>e</b> 20 mm	100 Nos.	<b>57.87</b>				<b>68.00</b>	<b>57.87</b>
<b>154</b>	<i>Chromium plated Fittings (Brass) (I.S.I)</i>		<b>0.00</b>			<b>135.00</b>		<b>0.00</b>
	Handle (I.S.I)		<b>0.00</b>			<b>115.00</b>		<b>0.00</b>
	<b>a</b> 125 mm with 175 X 32 mm plate	Each	<b>124.26</b>			<b>101.00</b>	<b>146.00</b>	<b>124.26</b>
	<b>b</b> 100 mm with 150 mm X 25 mm plate	Each	<b>104.68</b>				<b>123.00</b>	<b>104.68</b>
	<b>c</b> 75 mm with 125 mm X 25 mm plate	Each	<b>93.62</b>			<b>108.00</b>	<b>110.00</b>	<b>93.62</b>
<b>155</b>	Wall cement primer (I.S.I)			0		<b>140.00</b>		<b>0.00</b>
<b>156</b>	Oil Bound	1 Ltr.	<b>88.19</b>			<b>150.00</b>	<b>112.00</b>	<b>88.19</b>
<b>157</b>	Water Bound	1 Ltr.	<b>119.69</b>			<b>175.00</b>	<b>152.00</b>	<b>119.69</b>
<b>158</b>	Aluminium Paint (I.S.I)	1 Ltr.	<b>128.35</b>				<b>163.00</b>	<b>128.35</b>
	<b>a</b> Weather seal coat (I.S.I)	2 Ltr.	<b>149.61</b>			<b>200.00</b>	<b>190.00</b>	<b>149.61</b>
	<b>b</b> Adhesive (I.S.I)		<b>0.00</b>			<b>200.00</b>		<b>0.00</b>
<b>159</b>	Dendrite Type	Kg	<b>171.65</b>				<b>218.00</b>	<b>171.65</b>
	<b>a</b> Fevicol Type	Kg	<b>171.65</b>			<b>652.00</b>	<b>218.00</b>	<b>171.65</b>
	<b>b</b> Bituminous expansion joint board (I.S.I)		<b>0.00</b>			<b>927.00</b>		<b>0.00</b>
	<b>c</b> 12 mm thick	Kg	<b>600.84</b>			<b>1200.00</b>	<b>715.00</b>	<b>600.84</b>
<b>160</b>	16 mm thick	Kg	<b>852.94</b>			<b>60.00</b>	<b>1015.00</b>	<b>852.94</b>
<b>161</b>	25 mm thick	Kg	<b>1096.64</b>				<b>1305.00</b>	<b>1096.64</b>
	<b>a</b> Barbed Wire (I.S.I)	Kg	<b>55.32</b>			<b>320.00</b>	<b>65.00</b>	<b>55.32</b>
	<b>b</b> Glass Plain (I.S.I)		<b>0.00</b>			<b>365.00</b>		<b>0.00</b>
	<b>c</b> 3 mm	Sqm.	<b>297.87</b>			<b>485.00</b>	<b>350.00</b>	<b>297.87</b>
	<b>d</b> 4 mm	Sqm.	<b>340.43</b>			<b>550.00</b>	<b>400.00</b>	<b>340.43</b>
	<b>e</b> 5 mm	Sqm.	<b>451.06</b>			<b>850.00</b>	<b>530.00</b>	<b>451.06</b>
	<b>f</b> 6 mm	Sqm.	<b>510.64</b>			<b>1070.00</b>	<b>600.00</b>	<b>510.64</b>
	<b>g</b> 8 mm	Sqm.	<b>791.49</b>			<b>1265.00</b>	<b>930.00</b>	<b>791.49</b>
<b>162</b>	10 mm	Sqm.	<b>985.53</b>				<b>1158.00</b>	<b>985.53</b>
	<b>a</b> 12 mm	Sqm.	<b>1176.17</b>			<b>287.00</b>	<b>1382.00</b>	<b>1176.17</b>
	<b>b</b> Glass Pin headed (I.S.I)		<b>0.00</b>			<b>360.00</b>		<b>0.00</b>
<b>163</b>	4 mm	Sqm.	<b>267.23</b>				<b>314.00</b>	<b>267.23</b>
	<b>a</b> 5 mm	Sqm.	<b>334.47</b>			<b>490.00</b>	<b>393.00</b>	<b>334.47</b>
	<b>b</b> Black Glass (I.S.I)		<b>0.00</b>			<b>590.00</b>		<b>0.00</b>
	<b>c</b> 4 mm	Sqm.	<b>455.32</b>			<b>720.00</b>	<b>535.00</b>	<b>455.32</b>
	<b>d</b> 5 mm	Sqm.	<b>546.38</b>			<b>1135.00</b>	<b>642.00</b>	<b>546.38</b>
	<b>e</b> 6 mm	Sqm.	<b>663.83</b>			<b>1790.00</b>	<b>780.00</b>	<b>663.83</b>
<b>164</b>	8 mm	Sqm.	<b>1047.66</b>				<b>1231.00</b>	<b>1047.66</b>
	<b>a</b> 12 mm	Sqm.	<b>1663.83</b>			<b>480.00</b>	<b>1955.00</b>	<b>1663.83</b>
	<b>b</b> Frosted Glass (I.S.I)		<b>0.00</b>			<b>510.00</b>		<b>0.00</b>
	<b>c</b> 4 mm	Sqm.	<b>441.70</b>			<b>595.00</b>	<b>519.00</b>	<b>441.70</b>
<b>166</b>	5 mm	Sqm.	<b>470.64</b>				<b>553.00</b>	<b>470.64</b>
	<b>a</b> Wire Glass 6 mm (I.S.I)	Sqm.	<b>548.09</b>			<b>530.00</b>	<b>644.00</b>	<b>548.09</b>
	<b>b</b> Sun control film (I.S.I)		<b>0.00</b>			<b>380.00</b>		<b>0.00</b>
<b>167</b>	Reflective	Sqm.	<b>485.96</b>				<b>571.00</b>	<b>485.96</b>
	<b>a</b> Non-reflective	Sqm.	<b>343.83</b>			<b>550.00</b>	<b>404.00</b>	<b>343.83</b>
	Prelaminated particle board (Novapan standard Type) (I.S.I)		<b>0.00</b>			<b>630.00</b>		<b>0.00</b>
	<b>c</b> 9 mm	Sqm.	<b>468.09</b>			<b>700.00</b>	<b>550.00</b>	<b>468.09</b>
	<b>d</b> 12 mm	Sqm.	<b>536.17</b>			<b>830.00</b>	<b>630.00</b>	<b>536.17</b>
<b>168</b>	18 mm	Sqm.	<b>595.74</b>				<b>700.00</b>	<b>595.74</b>
	<b>a</b> 25 mm	Sqm.	<b>706.38</b>			<b>270.00</b>	<b>830.00</b>	<b>706.38</b>
	<b>b</b> BWR Plywood (I.S.I)		<b>0.00</b>			<b>315.00</b>		<b>0.00</b>
	<b>c</b> 3 mm	Sqm.	<b>242.55</b>			<b>450.00</b>	<b>285.00</b>	<b>242.55</b>
	<b>d</b> 4 mm	Sqm.	<b>289.36</b>			<b>555.00</b>	<b>340.00</b>	<b>289.36</b>
	<b>e</b> 6 mm	Sqm.	<b>410.21</b>			<b>730.00</b>	<b>482.00</b>	<b>410.21</b>
	<b>f</b> 9 mm	Sqm.	<b>510.64</b>			<b>870.00</b>	<b>600.00</b>	<b>510.64</b>
	<b>g</b> 12 mm	Sqm.	<b>672.34</b>			<b>1020.00</b>	<b>790.00</b>	<b>672.34</b>
	<b>h</b> 16 mm	Sqm.	<b>801.70</b>			<b>1460.00</b>	<b>942.00</b>	<b>801.70</b>
<b>169</b>	19 mm	Sqm.	<b>876.60</b>				<b>1030.00</b>	<b>876.60</b>
	<b>a</b> 25 mm	Sqm.	<b>1344.68</b>			<b>770.00</b>	<b>1580.00</b>	<b>1344.68</b>
	<b>b</b> BWR Block Board (I.S.I)		<b>0.00</b>			<b>870.00</b>		<b>0.00</b>

**ANALYSIS OF RATE - 2013**  
**(With revised SR w.e.f 1.07.2013 and Labour rate w.e.f 13.07.2009 Revised Royalty 01.09.13)**

Sl. No.	Name of the Item	Unit	SR-2014	Rate for Northern Zone (in Rs.)	Rate for Southern Zone (in Rs.)	SR-2013	SR-2014	SR-2014
			(Post GST)					(Post GST)
1		3	4	5	6			
	<b>c</b> 16 mm	Sqm.	<b>710.64</b>			<b>990.00</b>	<b>835.00</b>	<b>710.64</b>
	<b>d</b> 19 mm	Sqm.	<b>801.70</b>			<b>1230.00</b>	<b>942.00</b>	<b>801.70</b>
<b>170</b>	25 mm	Sqm.	<b>919.15</b>				<b>1080.00</b>	<b>919.15</b>
	<b>i</b> 32 mm	Sqm.	<b>1140.43</b>				<b>1340.00</b>	<b>1140.43</b>
	<b>a</b> Vinyl Flooring (I.S.I)		<b>0.00</b>			<b>280.00</b>		<b>0.00</b>
	<b>b</b> Homogeneous Range (I.S.I)		<b>0.00</b>			<b>320.00</b>		<b>0.00</b>
	<b>c</b> PVC (MF) Classic roll - 1.00 mm thick	Sqm.	<b>240.16</b>			<b>370.00</b>	<b>305.00</b>	<b>240.16</b>
	<b>d</b> PVC (MF) Classic tile - 1.00 mm thick	Sqm.	<b>271.65</b>			<b>445.00</b>	<b>345.00</b>	<b>271.65</b>
	<b>e</b> PVC (MF) Impress roll - 1.50 mm thick	Sqm.	<b>314.96</b>			<b>496.00</b>	<b>400.00</b>	<b>314.96</b>
	<b>f</b> PVC (MF) Impress tile - 1.50 mm thick	Sqm.	<b>380.31</b>			<b>573.00</b>	<b>483.00</b>	<b>380.31</b>
	<b>ii</b> PVC (MF) Super roll - 2.00 mm thick	Sqm.	<b>425.20</b>				<b>540.00</b>	<b>425.20</b>
	<b>a</b> PVC (MF) Super tile - 2.00 mm thick	Sqm.	<b>492.13</b>			<b>520.00</b>	<b>625.00</b>	<b>492.13</b>
	<b>b</b> Heterogeneous Range (I.S.I)		<b>0.00</b>			<b>590.00</b>		<b>0.00</b>
	PVC (MF) Retro roll - 2.00 mm thick	Sqm.	<b>441.73</b>				<b>561.00</b>	<b>441.73</b>
<b>171</b>	PVC (MF) Retro tile - 2.00 mm thick	Sqm.	<b>504.72</b>			<b>605.00</b>	<b>641.00</b>	<b>504.72</b>
<b>172</b>			0			<b>660.00</b>		<b>0.00</b>
<b>173</b>	Polished Vitrified Floor Tile 60x60cm plain Ivory 8 to 10 mm thick of Premium grade conforming to IS 15622:2006 (Group-B la)	Sqm.	<b>476.38</b>			<b>550.00</b>	<b>605.00</b>	<b>476.38</b>
	Polished Vitrified Floor Tile 60x60cm colour printed 8 to 10 mm thick of Premium grade conforming to IS 15622:2006 (Group-B la)(Homogeneous)	Sqm.	<b>519.69</b>				<b>660.00</b>	<b>519.69</b>
<b>174</b>	Polished Vitrified Industrial Floor Tile 30x30cm of premium grade 8 to 10 mm thick conforming to IS 4457	Sqm.	<b>433.07</b>			<b>50.00</b>	<b>550.00</b>	<b>433.07</b>
			<b>0.00</b>			<b>130.00</b>		<b>0.00</b>
<b>175</b>	Retro reflectorise glass bead	Kg	<b>50.00</b>				<b>50.00</b>	<b>50.00</b>
<b>176</b>	Thermoplastic Compound	Litre	<b>130.00</b>				<b>130.00</b>	<b>130.00</b>
			0					<b>0.00</b>
<b>177</b>	Aluminium Sheeting 2mm thick	sqm	<b>7500.00</b>			<b>7500.00</b>	<b>7500.00</b>	<b>7500.00</b>
			<b>0.00</b>					<b>0.00</b>
<b>178</b>	Mild steel angle iron	kg	<b>36.56</b>			<b>36.56</b>	<b>36.56</b>	<b>36.56</b>
			<b>0.00</b>					<b>0.00</b>
<b>179</b>	Cement based Putty	kg	<b>30.00</b>			<b>30.00</b>	<b>30.00</b>	<b>30.00</b>
			<b>0.00</b>					<b>0.00</b>
<b>180</b>	1.5mm plastic felt	sqm	<b>72.00</b>			<b>72.00</b>	<b>72.00</b>	<b>72.00</b>
<b>181</b>			<b>0.00</b>					<b>0.00</b>
<b>182</b>	2.0mm plastic felt	sqm	<b>84.00</b>			<b>84.00</b>	<b>84.00</b>	<b>84.00</b>
<b>183</b>			<b>0.00</b>					<b>0.00</b>
<b>184</b>	Alm anodised T section no 3215	kg	<b>205.00</b>			<b>205.00</b>	<b>205.00</b>	<b>205.00</b>
<b>185</b>	L section no 1705	kg	<b>205.00</b>			<b>205.00</b>	<b>205.00</b>	<b>205.00</b>
<b>186</b>	P V C rawl plug	nos	<b>7.00</b>			<b>7.00</b>	<b>7.00</b>	<b>7.00</b>
<b>187</b>	g' connecting hook	nos	<b>5.50</b>			<b>5.50</b>	<b>5.50</b>	<b>5.50</b>
<b>188</b>	G I wire	kg	<b>40.00</b>			<b>40.00</b>	<b>40.00</b>	<b>40.00</b>
<b>189</b>	65mm PVC plug	nos	<b>0.60</b>			<b>0.60</b>	<b>0.60</b>	<b>0.60</b>
<b>190</b>	50mmx8mm screw	nos	<b>0.63</b>			<b>0.75</b>	<b>0.82</b>	<b>0.63</b>
<b>191</b>	U rubber beads	mtr	<b>15.00</b>			<b>15.00</b>	<b>15.00</b>	<b>15.00</b>
<b>192</b>	3" screw	nos	<b>2.00</b>			<b>2.00</b>	<b>2.00</b>	<b>2.00</b>
<b>193</b>	P V C plug	nos	<b>1.50</b>			<b>1.50</b>	<b>1.50</b>	<b>1.50</b>
<b>194</b>	T rubber beading	mtr	<b>10.00</b>			<b>10.00</b>	<b>10.00</b>	<b>10.00</b>
<b>195</b>	Al wheel runner	nos	<b>25.00</b>			<b>25.00</b>	<b>25.00</b>	<b>25.00</b>
<b>196</b>	Handle with lock	nos	<b>40.00</b>			<b>40.00</b>	<b>40.00</b>	<b>40.00</b>
<b>197</b>	Friction stay	nos	<b>122.00</b>			<b>122.00</b>	<b>122.00</b>	<b>122.00</b>
<b>198</b>	Door stopper	nos	<b>25.00</b>			<b>25.00</b>	<b>25.00</b>	<b>25.00</b>
<b>199</b>	6 lever Mortice lock	nos	<b>400.00</b>			<b>400.00</b>	<b>400.00</b>	<b>400.00</b>
<b>200</b>	Automatic Door closure	nos	<b>600.00</b>			<b>600.00</b>	<b>600.00</b>	<b>600.00</b>
<b>201</b>	4" anodised Al hinges	nos	<b>38.00</b>			<b>39.00</b>	<b>39.00</b>	<b>38.00</b>
<b>202</b>	Handle	nos	<b>62.50</b>			<b>62.50</b>	<b>62.50</b>	<b>62.50</b>
<b>203</b>	Chicken mesh	Sqm	<b>28.84</b>			<b>37.66</b>	<b>37.66</b>	<b>28.84</b>
<b>204</b>	GCI Sheet 0.40mm thick	1 Sqm.	<b>246.81</b>			<b>266.00</b>	<b>290.00</b>	<b>246.81</b>
<b>205</b>	Water	Kl	<b>10.00</b>			<b>10.00</b>	<b>10.00</b>	<b>10.00</b>
<b>206</b>	Window pile	mtr	<b>10.00</b>			<b>10.00</b>	<b>10.00</b>	<b>10.00</b>
<b>207</b>	Handle	nos	<b>21.00</b>			<b>21.00</b>	<b>21.00</b>	<b>21.00</b>
<b>208</b>	12.5m thick Gypsum Board of size 6'-0" x 4'-0"	one piece	<b>299.21</b>	/ 24 sqft		<b>350.00</b>	<b>380.00</b>	<b>299.21</b>
<b>209</b>	SLIDING Window		<b>0.00</b>					<b>0.00</b>
<b>210</b>	Outer frames(side/top)		<b>178.72</b>	Per Mtr.		<b>195.00</b>	<b>210.00</b>	<b>178.72</b>
<b>211</b>	Outer frames(bottom)		<b>121.70</b>	Per Mtr.		<b>135.00</b>	<b>143.00</b>	<b>121.70</b>

**ANALYSIS OF RATE - 2013**  
**(With revised SR w.e.f 1.07.2013 and Labour rate w.e.f 13.07.2009 Revised Royalty 01.09.13)**

Sl. No.	Name of the Item	Unit	SR-2014	Rate for Northern Zone (in Rs.)	Rate for Southern Zone (in Rs.)	<b>SR-2013</b>	<b>SR-2014</b>	<b>SR-2014</b> (Post GST)
			(Post GST)					
1	2	3	4	5	6			
212	Sliding shutter		<b>147.23</b>	Per Mtr.		<b>160.00</b>	<b>173.00</b>	<b>147.23</b>
213	Sliding track(SS)		<b>474.04</b>	Per Mtr.		<b>510.00</b>	<b>557.00</b>	<b>474.04</b>
214	Sash bar at shutter		<b>245.96</b>	Per Mtr.		<b>265.00</b>	<b>289.00</b>	<b>245.96</b>
215	<b>Accessories</b>		<b>0.00</b>					<b>0.00</b>
216	Sliding outer frame assembly / pc		<b>228.09</b>	Per No.		<b>248.00</b>	<b>268.00</b>	<b>228.09</b>
217	Sliding shutter / pc		<b>281.70</b>	Per No.		<b>305.00</b>	<b>331.00</b>	<b>281.70</b>
218	Sash bar		<b>15.32</b>	Per No.		<b>17.00</b>	<b>18.00</b>	<b>15.32</b>
219	Wall fixing with polyimide anchor at every 600mm c/c. of outer fr		<b>24.68</b>	Per No.		<b>27.00</b>	<b>29.00</b>	<b>24.68</b>
220	Outer frame corner		<b>37.45</b>	Per No.		<b>40.00</b>	<b>44.00</b>	<b>37.45</b>
221	Top hung shutter / pc		<b>306.38</b>	Per No.		<b>330.00</b>	<b>360.00</b>	<b>306.38</b>
222	Fixed mullion		<b>45.96</b>	Per No.		<b>50.00</b>	<b>54.00</b>	<b>45.96</b>
223	Fixed glazing		<b>91.06</b>	Per No.		<b>100.00</b>	<b>107.00</b>	<b>91.06</b>
224	Louvered blade		<b>24.68</b>	Per No.		<b>27.00</b>	<b>29.00</b>	<b>24.68</b>
225	Side hung door / pc		<b>353.19</b>	Per No.		<b>380.00</b>	<b>415.00</b>	<b>353.19</b>
226	Door lock / pc		<b>314.89</b>	Per No.		<b>340.00</b>	<b>370.00</b>	<b>314.89</b>
227	Swing door shutter / pc		<b>176.17</b>	Per No.		<b>190.00</b>	<b>207.00</b>	<b>176.17</b>
228	Floor spring ( Godrej make )		<b>2710.64</b>	Per No.		<b>2900.00</b>	<b>3185.00</b>	<b>2710.64</b>
229	Alluminium Extruded Section		<b>219.57</b>	Per kg		<b>240.00</b>	<b>258.00</b>	<b>219.57</b>
230	<b>Gasket</b>		<b>0.00</b>					<b>0.00</b>
231	Gasket for shutter		<b>34.89</b>	Per Mtr.		<b>38.00</b>	<b>34.89</b>	<b>34.89</b>
232	Gasket for beading		<b>45.96</b>	Per Mtr.		<b>50.00</b>	<b>45.96</b>	<b>45.96</b>
233	Gasket for sashbar		<b>96.17</b>	Per Mtr.		<b>105.00</b>	<b>96.17</b>	<b>96.17</b>
234	per IS-513 of 0.6 mm thick "D" quality galvanised as per IS-		<b>0.00</b>					<b>0.00</b>
235	Outer frame		<b>286.81</b>	Per Mtr.		<b>310.00</b>	<b>337.00</b>	<b>286.81</b>
236	Intermediate mullion		<b>315.74</b>	Per Mtr.		<b>345.00</b>	<b>371.00</b>	<b>315.74</b>
237	Shutter frame		<b>240.00</b>	Per Mtr.		<b>260.00</b>	<b>282.00</b>	<b>240.00</b>
238	Fixed beeding		<b>120.00</b>	Per Mtr.		<b>134.00</b>	<b>141.00</b>	<b>120.00</b>
239	Sash bar		<b>449.36</b>	Per Mtr.		<b>480.00</b>	<b>528.00</b>	<b>449.36</b>
240	Louvered horizontal (Top/Bottom)		<b>125.11</b>	Per Mtr.		<b>135.00</b>	<b>147.00</b>	<b>125.11</b>
241	33x57 box section		<b>290.21</b>	Per Mtr.		<b>315.00</b>	<b>341.00</b>	<b>290.21</b>
242	100x50 box section		<b>434.89</b>	Per Mtr.		<b>470.00</b>	<b>511.00</b>	<b>434.89</b>
243	Small Z section		<b>221.91</b>	Per Mtr.		<b>230.00</b>	<b>249.00</b>	<b>221.91</b>
244	Extended Z section		<b>268.81</b>	Per Mtr.		<b>310.00</b>	<b>337.00</b>	<b>268.81</b>
245	Cover profile		<b>102.13</b>	Per Mtr.		<b>112.00</b>	<b>120.00</b>	<b>102.13</b>
246	60 micron powder coating for alluminium section		<b>22.83</b>	Per kg		<b>27.00</b>	<b>29.00</b>	<b>22.83</b>
247	Waste plastic duly cleaned and shredded conforming to the size passing 2.36mm sieve and retained on 600 micron sieve and conforming to requirement if IRC:SP-98-2013		<b>30.00</b>	Per kg			<b>30.00</b>	<b>30.00</b>

**ANALYSIS OF RATE - 2013**  
**RATES OF LABOUR**

Sl. No.	Description	Unit	VDA from 1.4.17	Rate in (Rs.)	Rate in (Rs.) as on 1.4.17 with VDA	Rate in (Rs.) as on 1.4.18 with VDA	Rate in (Rs.) as on 30.10.18	Rate in (Rs.) WITH VDA as on 1.4.19	Rate in (Rs.) WITH VDA as on 1.0.2020	Rate in (Rs.) WITH VDA as on 25.05.2021	Rate in (Rs.) WITH VDA as on 1.10.19	Rate in (Rs.) WITH VDA as on 1.04.2020	Rate in (Rs.) WITH VDA as on 1.10.2020
1	2	3	4	5	6	7	8	9	10	10	11	12	13
<b>A Category - Un-skilled</b>													
1	Male Mulia	Per Day	13.50	200.00	213.50	224.30	280.00	286.30	308.00	311.00	298.00	303.40	308.00
2	Female Mulia	Per Day	13.50	200.00	213.50	224.30	280.00	286.30	308.00	311.00	298.00	303.40	308.00
3	Survey Khalasi / Chain man	Per Day	13.50	200.00	213.50	224.30	280.00	286.30	308.00	311.00	298.00	303.40	308.00
4	Scavanger	Per Day	13.50	200.00	213.50	224.30	280.00	286.30	308.00	311.00	298.00	303.40	308.00
1	2	3	4	5	6	7	8	9	10	10	11	12	13
<b>B Category - Semi-skilled</b>													
				0.00	<b>244.30</b>	<b>320.00</b>	<b>326.30</b>	<b>348.00</b>	<b>351.00</b>	<b>338.00</b>	<b>343.40</b>	<b>348.00</b>	
1	Mulia working in water or	Per Day	13.50	220.00	233.50	244.30	320.00	326.30	348.00	351.00	338.00	343.40	348.00
2	Night mulia or attendant working per day in flood and	Per Day	13.50	220.00	233.50	244.30	320.00	326.30	348.00	351.00	338.00	343.40	348.00
3	& Tar boiler men	Per Day	13.50	220.00	233.50	244.30	320.00	326.30	348.00	351.00	338.00	343.40	348.00
4	Sangi Mulia	Per Day	13.50	220.00	233.50	244.30	320.00	326.30	348.00	351.00	338.00	343.40	348.00
5	Pile Driving mate ( Guide Man)	Per Day	13.50	220.00	233.50	244.30	320.00	326.30	348.00	351.00	338.00	343.40	348.00
6	Mate	Per Day	13.50	220.00	233.50	244.30	320.00	326.30	348.00	351.00	338.00	343.40	348.00
7	Helper to	Per Day	13.50	220.00	233.50	244.30	320.00	326.30	348.00	351.00	338.00	343.40	348.00
8	Hammer Man	Per Day	13.50	220.00	233.50	244.30	320.00	326.30	348.00	351.00	338.00	343.40	348.00
9	Thacher or Gharami	Per Day	13.50	220.00	233.50	244.30	320.00	326.30	348.00	351.00	338.00	343.40	348.00
#	Tile Turner or Tile layer	Per Day	13.50	220.00	233.50	244.30	320.00	326.30	348.00	351.00	338.00	343.40	348.00
#	Majhi or Boatman	Per Day	13.50	220.00	233.50	244.30	320.00	326.30	348.00	351.00	338.00	343.40	348.00
#	Bhisti	Per Day	13.50	220.00	233.50	244.30	320.00	326.30	348.00	351.00	338.00	343.40	348.00
#	Well Sinker (Open Well)	Per Day	13.50	220.00	233.50	244.30	320.00	326.30	348.00	351.00	338.00	343.40	348.00
#	Rod Binder & Bender	Per Day	13.50	220.00	233.50	244.30	320.00	326.30	348.00	351.00	338.00	343.40	348.00
#	Cleaner / Sweeper	Per Day	13.50	220.00	233.50	244.30	320.00	326.30	348.00	351.00	338.00	343.40	348.00
#	Stone Packer	Per Day	13.50	220.00	233.50	244.30	320.00	326.30	348.00	351.00	338.00	343.40	348.00
#	Pump Helper	Per Day	13.50	220.00	233.50	244.30	320.00	326.30	348.00	351.00	338.00	343.40	348.00
#	Watcher / Security Guard	Per Day	13.50	220.00	233.50	244.30	320.00	326.30	348.00	351.00	338.00	343.40	348.00
#	Bellow Man	Per Day	13.50	220.00	233.50	244.30	320.00	326.30	348.00	351.00	338.00	343.40	348.00
1	2	3	4	5	6	7	8	9	10	10	11	12	13
<b>C Category - Skilled</b>													
				253.50	<b>264.30</b>	<b>370.00</b>	<b>376.30</b>	<b>398.00</b>	<b>401.00</b>	<b>388.00</b>	<b>393.40</b>	<b>398.00</b>	
1	Blaster 2 nd Class	Per Day	13.50	240.00	253.50	264.30	370.00	376.30	398.00	401.00	388.00	393.40	398.00
2	Mason 2 nd Class	Per Day	13.50	240.00	253.50	264.30	370.00	376.30	398.00	401.00	388.00	393.40	398.00
3	Black smith 2 nd class	Per Day	13.50	240.00	253.50	264.30	370.00	376.30	398.00	401.00	388.00	393.40	398.00
4	Carpenter 2 nd class	Per Day	13.50	240.00	253.50	264.30	370.00	376.30	398.00	401.00	388.00	393.40	398.00
5	Fitter 2nd Class	Per Day	13.50	240.00	253.50	264.30	370.00	376.30	398.00	401.00	388.00	393.40	398.00
6	Painter / Polisher 2 nd Class	Per Day	13.50	240.00	253.50	264.30	370.00	376.30	398.00	401.00	388.00	393.40	398.00
7	Welder 2 nd class	Per Day	13.50	240.00	253.50	264.30	370.00	376.30	398.00	401.00	388.00	393.40	398.00
8	Plumber 2 class	Per Day	13.50	240.00	253.50	264.30	370.00	376.30	398.00	401.00	388.00	393.40	398.00
9	Driller 2 nd class	Per Day	13.50	240.00	253.50	264.30	370.00	376.30	398.00	401.00	388.00	393.40	398.00
#	Stone dresser / cutter 2 nd class	Per Day	13.50	240.00	253.50	264.30	370.00	376.30	398.00	401.00	388.00	393.40	398.00
#	Cobbler with tools 2 nd class	Per Day	13.50	240.00	253.50	264.30	370.00	376.30	398.00	401.00	388.00	393.40	398.00
#	Wireman / Lift Operator / Diesel pump Driver / Operator / Telephone Operator 2 nd class	Per Day	13.50	240.00	253.50	264.30	370.00	376.30	398.00	401.00	388.00	393.40	398.00
#	Boring Mistry / Pipe driver	Per Day	13.50	240.00	253.50	264.30	370.00	376.30	398.00	401.00	388.00	393.40	398.00
#	Electrician / Rigger / Lineman /	Per Day	13.50	240.00	253.50	264.30	370.00	376.30	398.00	401.00	388.00	393.40	398.00
#	Gardener	Per Day	13.50	240.00	253.50	264.30	370.00	376.30	398.00	401.00	388.00	393.40	398.00
#	Amin	Per Day	13.50	240.00	253.50	264.30	370.00	376.30	398.00	401.00	388.00	393.40	398.00
#	Tracer	Per Day	13.50	240.00	253.50	264.30	370.00	376.30	398.00	401.00	388.00	393.40	398.00
#	Junior Progress Recorder	Per Day	13.50	240.00	253.50	264.30	370.00	376.30	398.00	401.00	388.00	393.40	398.00
#	Store Keeper Grade - II / Store Assistant / Accounts Clerk / Clerk / Typist / Tool Keeper / Time Keeper / Munsi	Per Day	13.50	240.00	253.50	264.30	370.00	376.30	398.00	401.00	388.00	393.40	398.00
1	2	3	4	5	6	7	8	9	10	10	11	12	13
<b>D Category - Highly Skilled</b>													
					<b>284.30</b>	<b>430.00</b>	<b>436.30</b>	<b>458.00</b>	<b>461.00</b>	<b>448.00</b>	<b>453.40</b>	<b>458.00</b>	
1	Blaster Licensed	Per Day	13.50	260.00	273.50	284.30	430.00	436.30	458.00	461.00	448.00	453.40	458.00
2	Mason Special	Per Day	13.50	260.00	273.50	284.30	430.00	436.30	458.00	461.00	448.00	453.40	458.00
3	Black smith Special	Per Day	13.50	260.00	273.50	284.30	430.00	436.30	458.00	461.00	448.00	453.40	458.00
4	Carpenter Special	Per Day	13.50	260.00	273.50	284.30	430.00	436.30	458.00	461.00	448.00	453.40	458.00
5	Fitter Special	Per Day	13.50	260.00	273.50	284.30	430.00	436.30	458.00	461.00	448.00	453.40	458.00
6	Painter / Polisher Special	Per Day	13.50	260.00	273.50	284.30	430.00	436.30	458.00	461.00	448.00	453.40	458.00
7	Welder Special	Per Day	13.50	260.00	273.50	284.30	430.00	436.30	458.00	461.00	448.00	453.40	458.00
8	Plumber Special	Per Day	13.50	260.00	273.50	284.30	430.00	436.30	458.00	461.00	448.00	453.40	458.00
9	Driller Special	Per Day	13.50	260.00	273.50	284.30	430.00	436.30	458.00	461.00	448.00	453.40	458.00
#	Stone dresser / cutter Special	Per Day	13.50	260.00	273.50	284.30	430.00	436.30	458.00	461.00	448.00	453.40	458.00
#	Driver for well sinking in Bridges (per shift of four hours)	Per Day	13.50	260.00	273.50	284.30	430.00	436.30	458.00	461.00	448.00	453.40	458.00
#	Electrician / Air conditioning plant operator / Wire Man / Lift Operator / Diesel pump operator (Special)	Per Day	13.50	260.00	273.50	284.30	430.00	436.30	458.00	461.00	448.00	453.40	458.00

**ANALYSIS OF RATE - 2013**  
**RATES OF LABOUR**

Sl. No.	Description	Unit	VDA from 1.4.17	Rate in (Rs.)	Rate in (Rs.) as on 1.4.17 with VDA	Rate in (Rs.) as on 1.4.18 with VDA	Rate in (Rs.) as on 30.10.18	Rate in (Rs.) WITH VDA as on 1.4.19	Rate in (Rs.) WITH VDA as on 1.04.2020	Rate in (Rs.) WITH VDA as on 25.05.2021	Rate in (Rs.) WITH VDA as on 1.10.19	Rate in (Rs.) WITH VDA as on 1.04.2020	Rate in (Rs.) WITH VDA as on 1.10.2020
1	2	3	4	5	6	7	8	9	10	10	11	12	13
#	Jeep Driver / Tractor Driver / Truck Driver / Dozer Driver / Roller Driver / Concrete Mixer Operator / Crane Operator	Per Day	13.50	260.00	273.50	284.30	430.00	436.30	458.00	461.00	448.00	453.40	458.00
#	Auto Electrician	Per Day	13.50	260.00	273.50	284.30	430.00	436.30	458.00	461.00	448.00	453.40	458.00
#	Guiniting Machine Operator	Per Day	13.50	260.00	273.50	284.30	430.00	436.30	458.00	461.00	448.00	453.40	458.00
#	Senior Accountant / Stenographer	Per Day	13.50	260.00	273.50	284.30	430.00	436.30	458.00	461.00	448.00	453.40	458.00
#	Supervisor / Manager	Per Day	13.50	260.00	273.50	284.30	430.00	436.30	458.00	461.00	448.00	453.40	458.00
#	Testing Laboratory Assistant / Instrument Mechanic / Telephone Mechanic	Per Day	13.50	260.00	273.50	284.30	430.00	436.30	458.00	461.00	448.00	453.40	458.00
#	Rigger and cobbler with Tools Driver (Heavy Vehicle)	Per Day	13.50	260.00	273.50	284.30	430.00	436.30	458.00	461.00	448.00	453.40	458.00
<b>Note</b>													
1 Labour rates for unskilled, semi-skilled, skilled and Highly skilled as are to be fixed from time to time by Labour Department under minimum Wages Act shall prevail in respect of any category what so ever.													
2 The rates of above four categories of labour are inclusive of weekly day of rest.													
3 An adult employee shall work for 8 (eight) hours per day including half an hour of rest.													
<b>E Other Category</b>													
	(Not covered by the notification of Labour & Employment Deptt.)												
1	Boring Mistry (Special)	Per Day	102.50		102.50	102.50		102.50		102.50	102.50	102.50	102.50
2	Winch Operator	Per Day	112.50		112.50	112.50		112.50		112.50	112.50	112.50	112.50
3	Well Sinker (Special)	Per Day	220.00		220.00	220.00		220.00		220.00	220.00	220.00	220.00
4	Helper to Well Sinker	Per Day	823.50		823.50	823.50		823.50		823.50	823.50	823.50	823.50
5	Computer Programmer / Analyzer	Per Month	5075.00		5075.00	5075.00		5075.00		5075.00	5075.00	5075.00	5075.00
6	Computer Operator	Per Month	4075.00		4075.00	4075.00		4075.00		4075.00	4075.00	4075.00	4075.00
7	Helper to Operator of Heavy Construction Machinaries	Per Month	3575.00		3575.00	3575.00		3575.00		3575.00	3575.00	3575.00	3575.00
8	Mechanic for Heavy Construction Machinaries	Per Month	4075.00		4075.00	4075.00		4075.00		4075.00	4075.00	4075.00	4075.00
9	Helper to Mechanic of Heavy Construction Machinaries	Per Month	3075.00		3075.00	3075.00		3075.00		3075.00	3075.00	3075.00	3075.00
#	Operator for Heavy Construction Machinaries	Per Month	5075.00		5075.00	5075.00		5075.00		5075.00	5075.00	5075.00	5075.00
#	Junior Research Assistant (Technical Assistant)	Per Month	4075.00		4075.00	4075.00		4075.00		4075.00	4075.00	4075.00	4075.00

**ANALYSIS OF RATE - 2017**  
**(With revised SR 2014 w.e.f 10.11.2014 Labour 24.07.15 Royalty 14.12.2016)**  
**COST OF CONVEYANCE**

Sl. No.	Distance to be Carried	Rough Stone, Metal, Khoa, Chips,m Single, Sand, Surki, Quarry Rubbish, Moorum, Laterite Stone, Washed Gravel, Fly Ash & Earth (Per 1 Cum.)		Iron, Grills, Cement, Bitumen, A.C. Sheet, GCI Sheets & Paints etc. (per 1000 kg) Wood (per 1.25 Cum)		Bulky materials like machineries, Generators, Concrete Pipes & Furnitures etc. (per Truck)
		Bricks 23 cm = 2500 Nos. Bricks 25 cm = 2000 Nos.	Cement concrete & fly ash Blocks 400 mm X 200 mm X 200 mm = 300 nos. 400 mm X 150 mm X 200 mm = 400 nos. 400 mm X 100 mm X 200 mm = 600 nos. 300 mm X 200 mm X 150 mm = 550 nos. 300 mm X 150 mm X 150 mm = 730 nos. 300 mm X 100 mm X 150 mm = 1100 nos. All kinds of Tiles = 180 Sqm.	Railway Station	Other Placers	
1	2	3	4	5	6	7
1	Up to 5.00 Km	149.67	967.27	175.50	161.72	1320.57
2	Every extra km beyond 5 km and up to 50.00 km	8.80	39.62	8.23	8.23	40.67
3	Every extra km beyond 50.00 km	6.22	31.87	6.99	6.99	31.87

Note :- Extra percentage to be allowed over the rates for :

1. Earthen roads or village tracks or cross country tracks :- 20% extra may be allowed on the certificate of Executive Engineer after his inspection and duly approved by Superintending Engineer.
2. For declared Ghat roads add extra length of Ghat Road portion

Item No. 2: Loading into Trucks and Unloading from trucks (Within 50 m lead) including stacking.

Sl. No.	Details of Materials	Unit	Rate (In Rs.)
1	Rough Stone, Metal, Khoa, Chips,m Single, Sand, Surki, Quarry Rubbish, Moorum, Laterite Stone, Washed Gravel, Fly Ash & Earth	1 Cum	79.00
2	Iron, Grills, Cement, Bitumen, A.C. Sheet, GCI Sheets & Paints etc. (per 1000 kg) Wood (per 1.25 Cum)	I Qntl.	11.00
3	Bricks 23 cm = 2500 Nos. Bricks 25 cm = 2000 Nos. Cement concrete & fly ash Blocks 400 mm X 200 mm X 200 mm = 300 nos. 400 mm X 150 mm X 200 mm = 400 nos. 400 mm X 100 mm X 200 mm = 600 nos. 300 mm X 200 mm X 150 mm = 550 nos. 300 mm X 150 mm X 150 mm = 730 nos. 300 mm X 100 mm X 150 mm = 1100 nos. All kinds of Tiles = 180 Sqm.	I Truck Load	448.00
4	Bulky materials such as (a) Hume pipes & Furnitures (b) Heavy machineries such as compressor, concrete mixture, hotmix plant etc.	I Truck Load	611.00
		I Truck Load	728.00

**ANALYSIS OF RATE - 2017**  
**(With revised SR 2014 w.e.f 10.11.2014 Labour 24.07.15 Royalty 14.12.2016)**  
**COST OF CONVEYANCE**

- Note: a) For item no. 1  
 i)  $\frac{2}{3}$  of rate is considered for Loading  
 ii)  $\frac{1}{3}$  of rate is considered for unloading  
 b) For item no. 2, 3 & 4  
 i) 50% of rate is considered for Loading  
 ii) 50% of rate is considered for unloading

**Item No. 3: Carriage of Bullock Cart including Loading and Unloading.**

Sl. No.	Distance to be carried	Unit	Rate (In Rs.)
1	First MK	1 Cart	67.00
2	Subsequent KM	I Cart	34.00

**Item No. 4: Unloading from Railway wagon and loading into Trucks.**

Sl. No.	Details of Materials	Unit	Rate (In Rs.)
1	Unloading from Railway wagon and stacking on platform 1.0 mtr. In clear of rails within 15.0 mtr. Lead (a) Cement, Bitumen, Coal paint etc. (b) Steel, A. C. Sheets, GCI Sheet etc.	1 Qntl	1.60
2	Removing from railway platform and loading into trucks (a) Cement, Bitumen, Coal paint etc. (b) Steel, A. C. Sheets, GCI Sheet etc.	1 Qntl	5.80

**Item No. 5: Conveyance by Head load including loading & unloading and stacking.**

Sl. No.	Distance to be carried	Rough stone, metal, Khoa chips, sand, surki, quarry rubbish, moorum literite stone, moorum, washed gravel & earth	Iron, grills, cement, Bitumen, A.C. Sheet, GCI Sheet, paint etc. (per 1 qntl.), Wood per 0.125 Cum.
		2	3
		Rate in Rs.	Rate in Rs.
1	Up to 50 mtr.	33.00	8.30
2	Beyond 50 mtr. And upto 100 mtr.	38.00	12.40
3	Beyond 100 mtr. And upto 150 mtr.	50.00	18.00

**ANALYSIS OF RATE - 2017**  
**(With revised SR 2014 w.e.f 10.11.2014 Labour 24.07.15 Royalty 14.12.2016)**

**COST OF CONVEYANCE**

Item No. 6: Conveyance by Boat including loading & unloading.

Sl. No.	Distance to be carried	Rough Stone, Metal, Khoa, Chips, Sand, Surki, Quarry Rubbish, Moorum Laterite Stone, Moorum, Washed Gravel, Fly	Bricks 23 cm = 2500 Nos. Bricks 25 cm = 2000 Nos. Cement concrete & fly ash Blocks 400 mm X 200 mm X 200 mm = 300 nos. 400 mm X 150 mm X 200 mm = 400 nos. 400 mm X 100 mm X 200 mm = 600 nos. 300 mm X 200 mm X 150 mm = 550 nos.	Iron, Grills, Cement, Bitumen, A.C. Sheet, GCI Sheets & Paints etc. (per 1000 kg) Wood (per 1.25 Cum)
1	2	3	4	5
	Rate in Rs.	Rate in Rs.	Rate in Rs.	Rate in Rs.
A	In River i) Up to 5 KM ii) Every extra KM beyond	49.00 5.20 2.60	280.00 24.70 18.00	8.40 0.70 0.60
B	In Canal i) Up to 5 KM ii) Every extra KM beyond iii) Every extra KM beyond	34.00 5.80 2.60	245.50 20.80 16.00	7.00 0.90 0.70

*Add Overhead Charges*

7.50%

*Add Sundries T & P etc.*

0.00%

*Add contractor profit*

7.50%

*Add Overhead Charges*

12.50% For Electrical & PH Work

BEACH FRONT ROAD DEVELOPMENT AND EXTENSION RATE ANALYSIS CIVIL						
ROAD WORK						
1	Road Marking with Hot Applied Thermoplastic Compound with Reflectoising Glass Beads on Bituminous Surface (DATA BOOK 8.1 - 803)					
	Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectoising glass beads @ 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 .The finished surface to be level, uniform and free from streaks and holes.			Ref. to MoRTH Spec.8.13 / 803		
		<b>Unit = sqm</b>				
		<b>Taking output = 640 sqm</b>				
a)	<b>Labour</b>					
	Mate	0.50	Day	351.00	175.50	
	Mazdoor	2.00	Day	311.00	622.00	
					<b>797.50</b>	
b)	<b>Machinery</b>					
	Road marking machine @ 60 sqm per hour	8.00	Hour	52.17	417.36	
	Tractor-trolley	8.00	Hour	200.87	1606.96	
					<b>2024.32</b>	
c)	<b>Material</b>					
	Hot applied thermoplastic compound	2000.00	Litre	130.00	260000.00	
	Reflectorising glass beads	200.00	Kg	50.00	10000.00	
					<b>270000.00</b>	
	(a+b+c)				272821.82	
d)	<b>Overhead charges @ 7.50%</b>				20461.64	
e)	<b>Contractor's profit @ 7.50%</b>				20461.64	
	Cost for 600 sqm = a+b+c+d+e				<b>313745.09</b>	
	<b>Rate per sqm = a+b+c+d+e) / 640</b>				490.23	
		Add 1% for labour Cess			4.90	
					<b>495.13</b>	/ Sqm
2	<b>Cast in Situ Cement Concrete M20 Kerb</b>					
	Construction of cement concrete kerb with top and bottom width 115 and 165 mm respectively, 250 mm high in M 20 grade PCC on M-10 grade foundation 150 mm thick, foundation having 50 mm projection beyond kerb stone, kerb stone laid with kerb laying machine, foundation concrete laid manually, all complete as per clause 408	Sr No 8.1	Ref. to MoRTH Spec. 408 data book			
	<b>Unit = Running metre</b>					
	<b>Taking output = 360 metre</b>					
	<b>Using Concrete Mixer</b>					
	<b>Cement Concrete</b>					
	Cement concrete of grade M20 = 12.60 cum					

	Cement concrete of grade M10 for base= 11.61 cum							
	Total Concrete = 24.21 cu.m							
a)	Labour							
	Mate	0.72	day	351.00	252.72			
	Mason	2.00	day	461.00	922.00			
	Mazdoor	16.00	day	311.00	4976.00			
b)	Machinery							
	Kerb casting machine @ 60 metres/hour	6.00	hour	173.91				
					1043.46			
	Concrete mixer 0.48/0.28 cum capacity	12.00	hour	153.91				
					1846.92			
	Water tanker 6 KL capacity	5.00	hour	506.09				
					2530.43			
c)	Material							
	Crushed stone aggregate 20 mm nominal size 50 per cent	21.79	cum	1007.62				
					21956.04			
	Coarse sand 30 per cent	10.90	cum	46.67				
					508.70			
	Cement 11 per cent	5.70	tonne	5334.00				
					30403.80			
	Cost of water	30.00	KL	10.00	300.00			
d)	Overhead charges @ 7.5% on (a+b+c)							
					4855.51			
e)	Contractor's profit @ 7.5% on (a+b+c+d)							
					4855.51			
f)	Add Royalty+carriage for stone product	21.79	cum	681.89				
					14858.38			
g)	Add Royalty+carriage for stone product below 2.36 mm	10.90	cum	536.67				
					5849.70			
h)	Add Royalty+carriage for cement	5.70	tonne	161.72				
					921.80			
	Cost for 195 cum = a+b+c+d+e+f+g+h							
					96080.98			
	Rate per m = (a+b+c+d+e+f+g+h)/360							
					266.89			
	Add 1% towards Labour Welfare Cess							
					2.67			
					269.56 / RM			
3	Cement Concrete Pavement							
	Construction of unreinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with 43 grade cement @ 400 kg per cum, coarse and fine aggregate conforming to IS 383, maximum size of coarse aggregate not							
	Unit = cum							
	Taking output = 1050 cum (2415 tonne)							
a)	Labour							
	Mate		day	2.00	351.00	702.00		

	Mazdoor skilled	day	15.00	401.00	6015.00				
	Mazdoor	day	35.00	311.00	10885.00				
b)	<b>Machinery</b>								
	Road Sweeper @ 1250 sqm per hour	hour	2.80	230.00	644.00				
	Front end loader 1 cum bucket	hour	18.00	452.17	8139.06				
	Cement concrete batch mix plant @ 175 cum per hour (effective output)	hour	6.00	5160.00	30960.00				
	Electric generator 250 KVA	hour	6.00	1125.00	6750.00				
	Slip form paver with electronic sensor	hour	6.00	1850.00	11100.00				
	Water tanker 6 KL capacity	hour	36.00	506.09	18219.13				
	Transit truck agitator 5 cum	tonne.km	2415x60	2.00	289800.00				
	Add 10 per cent of cost of carriage to cover cost of loading and unloading				28980.00				
	Concrete joint cutting machine	hour	12.00	67.00	804.00				
	Texturing machine	hour	12.00	2200.00	26400.00				
c)	<b>Material</b>								
	Crushed stone coarse aggregates of 25mm and 12.5mm nominal size @ 0.90 cum/cum of concrete	cum	945.00	909.05	859052.25				
	Sand as per IS: 383 and conforming to clause 602.2.4 @ 0.45 cum/cum of concrete	cum	473.00	46.67	22074.91				
	Cement 43 grade @ 400 kg/cum of concrete	tonne	414.00	5334.00	2208276.00				
	32 mm mild steel dowel bars of grade S 240	tonne	9.45	45371.19	428757.71				
	16 mm deformed steel tie bars of grade S 415	tonne	1.17	45371.19	53084.29				
	Separation Membrane of impermeable plastic sheeting 125 micron thick	sqm	3675.00	30.00	110250.00				
	Pre moulded Joint filler, 25 mm thick for expansion joint.	sqm	16.33	1200.00	19596.00				
	Joint sealant	kg	875.00	450.00	393750.00				
	Sealant primer	kg	116.67	377.00	43984.59				
	Plastic sheath, 1.25 mm thick for dowel bars	sqm	46.67	120.00	5600.40				
	Curing compound	liter	1850.00	80.00	148000.00				
	Super plastisizer admixture IS marked as per 9103-1999 @ 0.5 per cent by weight of	kg	2070.00	50.00	103500.00				
	Cost of water	KL	216.00	10.00	2160.00				
	Add 1 per cent of material for cost of miscellaneous materials like tarpauline, Hessian cloth, metal cap, cotton / compressible sponge and cradle for dowel bars, work bridges for men to approach concrete surface without walking over it, cutting blades and bites, minor equipments like scabbling machine, threads, ropes, guide wires and any other unforeseen items.				43980.86				

	d) Overhead charges @0.075 on (a+b+c)				366109.89			
	e) Contractor's profit @0.075 on (a+b+c+d)				366109.89			
	Add Lead & royalty of stone aggregates	cum	945.00	681.89	644386.05			
	Add Lead & royalty of sand	cum	473.00	536.67	253844.91			
	Add Lead of Cement	tonne	414.00	161.72	66952.08			
	Add Lead of Steel	tonne	10.62	161.72	1717.47			
	Cost for 1050 cum = a+b+c+d+e				6580585.49			
	Rate per cum = (a+b+c+d+e)/1050				6267.22			
	Add for labour welfare cess @1%				62.67			
					6329.89			
4	<b>Wet Mix Macadam</b>							
	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver in sub- base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density.							
	<i>Unit = cum</i>							
	<i>Taking output = 225 cum (495 tonnes)</i>							
	a) Labour							
	Mate	day	0.48	351.00	168.48			
	Mazdoor skilled	day	2.00	401.00	802.00			
	Mazdoor	day	10.00	311.00	3110.00			
	b) Machinery							
	Wet mix plant of 75 tonne hourly capacity	hour	6.60	900.87	5945.74			
	Electric generator 125 KVA	hour	6.00	786.96	4721.76			
	Front end loader 1 cum capacity	hour	6.00	452.17	2713.02			
	Paver finisher	hour	6.00	642.61	3855.66			
	Vibratory roller 8 - 10 tonne	hour	6x0.65	864.35	3370.97			
	Water tanker 6 KL capacity	hour	3.00	506.09	1518.26			
	Tipper	tonne.km	495 x 46	2.17	49410.90			
	Add 10 per cent of cost of carriage to cover cost of loading and unloading				4941.09			
	c) Material (Table 400-11)							

	45 mm to 22.4 mm@ 30 per cent	cum	89.10	704.29	62751.79				
	22.4 mm to 2.36 mm @ 40 per cent	cum	118.80	709.05	84234.55			709.045	
	crusher dust@ 30 per cent	cum	89.10	73.33	6533.70		826.67		
	Cost of water	KL	18.00	10.00	180.00				
	d) Overhead charges @ 0.075 on (a+b+c)				17569.34				
	e) Contractor's profit @ 0.075 on (a+b+c)				17569.34				
	Cost for 225 cum = a+b+c+d+e				269396.61				
	f) Lead and Royalty								
	Metal chips	cum	207.90	279.67	58143.39				
	Dust	cum	89.10	184.67	16454.10				
	Rate per cum = (a+b+c+d+e+f)/225				1528.86				
	Add cess 1%				15.29				
					<b>1544.20</b>				
<b>Note</b>	1. Though vibratory roller is required only for 3 hours as per norms, the same is required to be available at site for 6 hours to match with other machines. The usage rates of vibratory roller may be multiplied with a factor of 0.65								
	2. As three wheeled smooth steel rollers are commonly in use, the same has been provided as an alternative which can be used if the thickness of individual layer does not exceed 100 mm..								
5	Extra for compaction of earth work in embankment under optimum moisture conditions to give at least 95% of the maximum dry density (proctor density).								
Code	Description	Unit	Quantity	Rate	Amount				remark
A	LABOUR								
	Bhisti	day	0.17	351.00	59.67				
	Roller charges (one roller does 1860sqm. Of consolidation per day of 8hours and uses 18 litres diesel)								
	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.01	3000.00	24.00				DAR RATE 1
	chowkidar	day	0.01	351.00	2.81				
	sundries	L.S	1.43	2.00	2.86				As per DAR
	TOTAL				89.34				
<b>B</b>	<b>1% WATER CHARGE ON (A)</b>								
					0.89				

C	Add 7.5% overhead and 7.5contractor profit on (A+B)						
D	LABOUR CESS 1% (ON A+B+C)			13.53			
E	Total for 10 cum			1.04			
	total for 1 cum			104.80			
				10.48			
	<b>Ref. to MoRTH Spec.</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Rate Rs</b>	<b>Cost Rs</b>	
6	<b>401</b>	<b>Granular Sub-Base with Coarse Graded Material (Table:- 400- 2)</b>					
		Construction of granular sub-base by providing coarse graded material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per clause 401.					
		<b>Unit = cum</b>					
		<b>Taking output = 300 cum</b>					
	a) Labour						
	Mate	day	0.40	351.00	140.40		
	Mazdoor skilled	day	2.00	401.00	802.00		
	Mazdoor	day	8.00	311.00	2488.00		
	b) Machinery						
	Mortar Grader 110 HP @ 50 cum per hour	hour	6.00	1343.48	8060.88		
	Vibratory roller 8 - 10 tonne	hour	6.00	864.35	5186.10		
	Water tanker 6 KL capacity	hour	3.00	506.09	1518.26		
	c) Material						
	For coarse graded Granular sub-base Materials per table 400-2						
	<b>For grading-IV Material</b>						
	26.5 mm to 4.75 mm @ 75 per cent	cum	288.00	698.10	201052.80		
	2.36 mm below @ 25 per cent	cum	96.00	76.19	7314.24		
	Cost of water	KL	18.00	10.00	180.00		
(i)	<b>Rate per cum for grading-IV Material</b>						
	d) Overhead charges @ 0.075 on (a+b+c)				17005.70		
	e) Contractor's profit @ 0.075 on (a+b+c)				17005.70		
	Cost for 300 cum = a+b+c+d+e				260754.08		
	f) Lead and royalty						
	Graded Aggregates	cum	288.00	681.89	196384.32		
	Dust	cum	96.00	536.67	51520.32		
	Rate per cum = (a+b+c+d+e+f)				508658.72		
	Rate per cum = (a+b+c+d+e+f)/300				1695.50		
	Add cess 1%				16.96		
					<b><u>1712.50</u></b>		

	305.3.4	Compacting original ground supporting sub-grade						
		Loosening of the ground upto a level of <b>500 mm</b> below the sub-grade level, watered, graded and compacted in layers to meet requirement of table 300-2 for sub-grade construction.						
		<b>Unit = cum</b>						
		<b>Taking output = 600 cum</b>						
	a) Labour							
	Mate	day	0.12	351.00	42.12			
	Mazdoor	day	3.00	311.00	933.00			
	b) Machinery							
	Tractor with ripper attachment	hour	9.00	216.52	1948.68			
	Motor grader for grading	hour	6.00	1343.48	8060.88			
	Water tanker 6 KL capacity	hour	4.00	506.09	2024.35			
	Vibratory roller 8-10 tonne @ 80 cum/hour	hour	7.50	864.35	6482.63			
	c) Material							
	Cost of water	KL	24.00	10.00	240.00			
	d) Overhead charges @ 0.075 on (a+b+c)				1479.87			
	e) Contractor's profit @ 0.075 on (a+b+c+d)				1590.86			
	Cost for 600 cum = a+b+c+d+e				22802.39			
	Rate per cum = (a+b+c+d+e)/600				38.00			
					38.00			
	Add cess 1%				0.38			
					<b><u>38.38</u></b>			

7 Providing and fixing RCC bollard of M25 grade with 200mm diameter and 1 m height on 200mm thick cement concrete (1:3:6) base including cost of labour

	Material							
	COST FOR EACH bollar	Unit	QTY	RATE	AMOUNT			
a	Bollard	each	1.00	600.00	600.00	Quotation	L	B
b	PCC including labour	cum	0.03	4684.10	149.89	RA	PCC	0.4
c	Excavation	cum	0.18	138.71	24.97	RA	EXCAVATION	0.6
d	Add 7.5 % overhead and 7.5% contractor profit on ( a )				90.00			
e	Add 1% cess on (a+d)				6.90			
	Cost for each				<b><u>871.76</u></b>			

#### Dismantalling

1	Scarifying Existing Bituminous Surface to a depth of 50 mm by Mechanical Means							
	Scarifying the existing bituminous road surface to a depth of 50 mm and disposal of scarified material with in all lifts and lead upto 1000 metres.							
	<b>Unit = sqm</b>							
	<b>Taking output = 100 sqm</b>							
	a) Labour							
	Mate	day	0.01	351.00	3.51			
	Mazdoor	day	0.25	311.00	77.75			
	b) Machinery							

	Tractor with ripper attachment @ 60 cum per hour	hour	0.08	216.52	17.32				
	Front end loader 1 cum bucket capacity @ 25 cum	hour	0.20	452.17	90.43				
	Tipper 5.5 cum capacity, 4 trips per hour	hour	0.23	506.09	116.40				
	c) Overhead charges @7.5% on (a+b)				22.91				
	d) Contractor's profit @7.5% on (a+b)				24.36				
	Cost for 100 sqm = a+b+c+d				352.68				
	Rate per sqm = (a+b+c+d)/100				3.53				
	Add cess 1%				0.04				
					<b>3.60</b>				
				<i>say</i>	<b><u>3.60</u></b>				
2	Dismantling brick or stone masonry in lime or cement mortar under 3. m height including stacking the useful materials for reuse and removing the debris with in 50. m Lead. (per 1 Cum.) (Data for 2.83 cum.)								
	Man Mulia	4.00	No. @ Rs	311.00	Per day	Rs.	1244	By odissa SO	
	Female Mulia	4.50	No. @ Rs	311.00	Per day	Rs.	1399.5		
	<i>Add Overhead Charges 7.5%</i>					Rs.	198.26		
	<i>Add Contractor Profit 7.5%</i>					Rs.	198.26		
						Rs.	3040.03		
					Rate per	Cum. Rs.	1074.21		
	Add Cess	0.01					<b>10.74</b>		
							1084.96	CUM	
	<b><u>For 1st Floor:</u></b>		<b>Labour of next lower floor</b>	<b>for upper floor</b>	Overhead charges @ 7.5%	Add profit to contractor 7.5 %			
	Add 5% extra labour over & above the rates from	934.10	46.70	3.50	3.50	<b>53.71</b>			
	Add Cess	0.01				0.54			
						<b>1139.20</b>			
3	Dismanteling & removing RCC columns, beams, slab, staircase landing, lintels including stacking the useful materials for reuse and removing the debris with in 50. m Lead. (per 1 Cum.)						XVI - 24		
	Semi-skilled Mulia	1.50	No. @ Rs	351.00	Per day	Rs.	526.50		
	Man Mulia	1.50	No. @ Rs	311.00	Per day	Rs.	466.50		
	<i>Add Overhead Charges 7.5%</i>					Rs.	74.48		
	<i>Add Contractor Profit 7.5%</i>					Rs.	74.48		
					Rate per one	Cum. Rs.	<b>1141.95</b>		
	Add Cess	0.01					11.42		
							<b>1153.37</b>		
	<b><u>For 1st Floor:</u></b>		<b>Labour of next lower floor</b>	<b>for upper floor</b>	Overhead charges @ 7.5%	Add profit to contractor 7.5 %			
	Add 5% extra labour over & above the rates from	993.00	49.65	3.72	3.72	<b>57.10</b>			
	Add Cess	0.01				0.57			
						<b>1211.04</b>			
4	Dismanteling & removing old tile flooring including removing the base course and stacking the useful materials for reuse and removing the debris with in 50. m Lead. (per 1 Sqm.) (Data for 9.30 Sqm.)						XVI - 28		
	Man Mulia	1.00	No. @ Rs	311.00	Per day	Rs.	311.00		
	Female Mulia	1.50	No. @ Rs	311.00	Per day	Rs.	466.50		
	<i>Add Overhead Charges 7.5%</i>					Rs.	58.31		
	<i>Add Contractor Profit 7.5%</i>					Rs.	58.31		
						Rs.	894.13		
					Rate per one	Sqm Rs.	<b>96.14</b>		
	Add Cess	0.01					0.96		
							<b>97.10</b>		
5	Taking out existing kerb stones of all types from footpath/ central verge, including removal of mortar etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.						DAR 2019 16.82 PG 12 <sup>2</sup>		

DETAIL FOR 100M				
	unit	qty	rate	amount
<b>Labour</b>				
Beldar/ male mulia	day	0.75	311.00	233.25
Coolie/ female mulia	day	3.00	311.00	933.00
Sundries	LS	2.00	2.00	4.00
Add 1 % water charge				11.70
Add 7.5 % overhead				88.65
Add 7.5 % profit				88.65
Total				1359.25
Add 1 % labour cess				13.59
Cost 100 m				1372.84
Cost 1 m				<b>13.73</b>

Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.

DAR 2019 16.83 PG 12

DETAIL FOR 10sqm				
	unit	qty	rate	amount
<b>Labour</b>				
Beldar/ male mulia	day	0.25	311.00	77.75
Coolie/ female mulia	day	1.00	311.00	311.00
Sundries	LS	2.00	2.00	4.00
Add 1 % water charge				3.93
Add 7.5 % overhead				29.75
Add 7.5 % profit				29.75
Total				456.18
Add 1 % labour cess				4.56
Cost 100 m				460.74
Cost 1 m				<b>46.07</b>

#### DISPOSAL

1	Removal of Excavated earth up to a distance of 5km by mechanical means				
	Rate for 5km				149.67
	Add Cess	0.01			<b>1.50</b>
					<b>151.17</b> per cum

#### EARTHWORK

2	Earth work in ordinary soil within 50m, initial lead and 1.5m, initial lift including rough dressing and breaking clods to maximum 5cm to 7cm and laying in layers not exceeding 0.3m in depth and as per direction of the Engineer-in-charge (per 100 Cum.)				I - I(a)
	Man mulia	16.00	No. @ Rs.	311.00 Per day	4976.00
	Female Mulia	16.00	No. @ Rs.	311.00 Per day	4976.00
	Add Overhead Charges	0.08			746.40
	Add Contractor Profit	0.08			746.40
				A	Rs. <b>11444.80</b> per 100 cum
	Add Cess	0.01			<b>114.45</b>
					<b>11559.25</b> per 100 cum
			Add 20% extra For Foundation Rs.		2288.96 A
				Rs.	<b>13733.76</b> per 100 cum
	Add Cess	0.01			<b>137.34</b>
					<b>13871.10</b> per 100 cum

Ref. to MoRT	Excavation in Soil using Hydraulic				
	Excavation for				
	<i>Unit = cum</i>				
	<i>Taking output - 500 cum</i>				
a) Labour					
Mate	day	0.080	351.00	28.08	
Mazdoor	day	2.00	311.00	622.00	
b) Machinery					
Hydraulic excavator	hour	6.000	730.43	4382.58	
0.080 cum per hour	hour	16.000	506.09	8097.44	
c) Overhead				984.76	
d) Contractors				984.76	
cost for 500 cum -				15099.62	
Rate per cum -				41.94	

	<b>Add cess 1%</b>			41.90			
				0.419			
				<b><u>42.32</u></b>			
<b>305</b>	<b>Construction of Embankment with Material obtained from Borrowpits</b>						
	Construction of embankment with approved material obtained from borrow pits with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement of table 300-2 by mechanical means carriage within 5km lead						
	<i>Unit = cum</i> <i>Taking output = 100</i>						
	<b>a) Labour</b>						
Mate	day	0.040	351.00	14.04			
Mazdoor	day	1.000	311.00	311.00			
<b>b) Machinery</b>							
Hydraulic Excavator	hour	1.670	730.43	1219.82			
Tipper 10 tonne capacity	tonne.km	160 x5	2.17	1736.00			
Add 10 per cent of cost of carriage to				173.60			
Dozer 80 HP for motor grading for water tanker KL	hour	0.500	1592.17	796.09			
Vibratory roller 8 -10 tonnes @ 100 cum	hour	1.000	671.74	671.74			
hour	4.000	506.09	2024.36				
hour	1.000	864.35	864.35				
<b>c) Material</b>							
Cost of water	KL	24.000	10.00	240.00			
<b>d) Overhead</b>				603.82			
<b>e) Contractor's</b>				603.82			
<b>Royalty</b>	cum	100.000	35.00	3500.00			
Cost for 100 cum				12758.64			
rate per cum				127.59			
cost per cum				127.60			
<b>Add cess 1%</b>				1.276			
				<b><u>128.90</u></b>			
<b>Note</b>	Compensation for earth will vary from place to place and will have to be assessed realistically as per particular ground situation. In case earth is available from Govt. land, compensation for earth will not be required. The position is required to be clearly stated in the cost estimate.						

<b>1</b>	Cement concrete (1:3:6) with 40 mm size hard granite metal (per Cum)							<i>III - 3 (Ref:-A/R - 2006, P-43, Item No - 3)</i>
<b>(a)</b>	<b>Material</b>							
(i)	Granite metal	0.96	Cum @ Rs.	706.67	Per Cum.		Rs.	678.40
(ii)	Sand	0.48	Cum @ Rs.	46.67	Per Cum.		Rs.	22.40
(iii)	Cement (0.16 Cum)	2.29	Qntl @ Rs.	533.40	Per Qntl.		Rs.	1221.49
<b>(b)</b>	<b>Labour</b>							
(i)	Mason 2 nd Class	0.18	No. @ Rs.	401.00	Per day		Rs.	72.18
(ii)	Man mulia	1.80	No. @ Rs.	311.00	Per day		Rs.	559.80
(iii)	Female Mulia	1.40	No. @ Rs.	311.00	Per day		Rs.	435.40
(iv)	Man mulia for mixin	0.70	No. @ Rs.	311.00	Per day		Rs.	217.70
<b>(c)</b>	<b>Add Overhead Charges</b>	0.08	on (a+b)				Rs.	240.55
<b>(d)</b>	<b>Add Contractor Profit</b>	0.08	on (a+b)					240.55
							Rs.	<b>3688.48</b> per cum
<b>(e)</b>	<b>Royalty &amp; Carriage</b>							
(i)	Granite metal	0.96	Cum @ Rs.	681.89	Per Cum.			654.61
(ii)	Sand	0.48	Cum @ Rs.	536.67	Per Cum.			257.60
(iii)	Cement	2.29	Cum @ Rs.	16.17	Per Qntl.			37.03
								4637.73
<b>(f)</b>	<b>Add Labour Cess @ 1%</b>	0.01	on (a+b+c+d+e)					46.38
							Rs.	<b>4684.10</b> per cum

### STONE WORK

<b>1</b>	Supplying, fitting and fixing <b>GraniteSlab (0.4 to 1.00 Sqm )</b> in floors of approved make laid on <b>20mm thick C.M (1:4)</b> & filling joints with white cement of approved quality including cost of all materials, takes labour T&P etc required for the work. per 1 sqm (Data for 10 sq.mt.)							
<b>(a)</b>	<b>Material</b>							
(i)	Cost of Tile	10.00	Sqm.	1637.80	Per Sqmt.	Rs.	16378.00	
(ii)	Sand	0.21	cum.	46.67	Per Cum	Rs.	9.80	
(iii)	Cement	0.74	Qntl.	533.40	Per Qntl	Rs.	396.85	
(iv)	Cement for slurry	0.33	Qntl.	533.40	Per Qntl	Rs.	176.02	
(v)	White Cement	0.08	Qntl.	1496.09	Per Qntl	Rs.	113.70	
<b>(b)</b>	<b>Labour</b>							
(i)	Mason Special	2.16	No.s	461.00	Per day	Rs.	995.76	
(ii)	Man mulia	2.16	No.s	311.00	Per day	Rs.	671.76	
						Rs.	18741.90	
<b>(c)</b>	<b>Add Overhead Charges</b>	0.08	on (a+b)			Rs.	1405.64	
<b>(d)</b>	<b>Add Contractor Profit</b>	0.08	on (a+b)			Rs.	1405.64	
						Rs.	<b>21553.18</b>	
<b>(e)</b>	<b>Royalty &amp; Carriage</b>							
(i)	Cement	1.15	Qntl.	16.17	Per Qntl	Rs.	18.60	
(ii)	Sand	0.21	cum.	536.67	Per Cum	Rs.	112.70	
(iii)	Tile	10.00	0.00	967.27	180sqm	Rs.	53.74	
						Rs.	<b>21738.22</b> per 10 Sqm	
					Rate per Sq.Mt.	Rs.	<b>2173.82</b> per 1 Sqm	
<b>(f)</b>	<b>Add Labour Cess @ 1%</b>	0.01	on (a+b+c+d+e)			Rs.	21.74	
					Rate per Sq.Mt.	Rs.	<b>2195.56</b> per 1 Sqm	
<b>2</b>	Providing edge moulding to 18 mm thick marble stone counters, Vanities etc., including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer-in-Charge.							
Code	Description	Unit	Quantity	Rate	Amount			remark
	Details of cost for 10.00 m							
a	LABOUR							
	Hand Grinder For mirr	day	2.50	250.00	625.00			DAR rate
	Beldar/MULIA	day	3.50	311.00	1088.50			OBCC
	Sundries Blades & Poli	L.S.	117.00	2.00	234.00			DAR rate
	Total				1947.50			
b	1 % Water charges on "a"				19.48			
c	ADD 7.5% overhead + 7.5% contractor profit (a+b)				295.05			
d	1% Labour cess on (a+b+c)				22.62			
e	Total (a+b+c+d) for 10m				2284.64			

	<b>1 m cost</b>				<b>228.46</b>			
3	Laying and fixing GRV paving block, for paving in floors, drains , footpath, etc. laid over 20mm thick base mortar 1:4 (1 cement : 4 coarse sand) with joints 10mm wide filled with same mortar including ruled pointing etc. complete as per direction of engineer-in-charge.							
Code	Description	Unit	Quantity	Rate	Amount			remark
	Details of cost for 10.00 sqm.							
a	MATERIALS :							
	mortar	cum	0.43	3413.56	1481.48			
	Cement	quintal	0.20	533.40	106.68			
b	Labour							
	Mason (brick layer) 2r/day		1.08	401.00	433.08			
	Beldar/ Male mulia	day	0.25	311.00	77.75			
	Coolie/ Female mulia	day	1.62	311.00	503.82			
	Bhisti	day	0.27	351.00	94.77			
c	SH: FINISHING/pointing/sqm		10.00	142.44	1424.43			
d	Add 1% water charge on a+b				26.98			
e	ADD 7.5% overhead + 7.5% contractor profit on (a+b+d)				408.68			
f	add 1% Labour cess on (a+b+c+d+e)				31.33			
g	Total (a+b+c+d+e+f)				4589.01	Per 10 sqm		
					458.90	Per sqm		
4	Fitting and fixing GraniteSlab (0.4 to 1.00 Sqm ) in floors of approved make laid on 20mm thick C.M (1:4) &							modified
(a)	<i>Material</i>							
	(ii)Sand		0.21	Per Cum	46.67	Rs.	9.80	
	(iii)Cement		0.74	Per Qntl	533.40	Rs.	396.85	
	(iv)Cement for slurry		0.33	Per Qntl	533.40	Rs.	176.02	
	(v)White Cement		0.08	Per Qntl	1496.09	Rs.	113.70	
	<i>Labour</i>							
(b)	(i)Mason Special	No.s	2.16	Per day	461.00	Rs.	995.76	
	(ii)Man mulia	No.s	2.16	Per day	311.00	Rs.	671.76	
						Rs.	2363.90	
	<i>Add Overhead Charges</i>		0.08	on (a+b)		Rs.	177.29	
(c)	<i>Add Contractor Profit @ 7.5%</i>		0.08	on (a+b)		Rs.	177.29	
(d)						Rs.	2718.48	
	<i>Royalty &amp; Carriage</i>							
(e)	(i)Cement	Qntl.	1.15	Per Qntl	16.17	Rs.	18.60	
	(ii)Sand	cum.	0.21	Per Cum	536.67	Rs.	112.70	
	(iii)Tile		10.00	180sqm	0.00	Rs.	53.74	
						Rs.	2903.52	per 10 Sqm
				Rate per Sq.Mt.		Rs.	290.35	per 1 Sqm
	<i>Add Labour Cess @ 1%</i>		0.01	on (a+b+c+d+e)		Rs.	2.90	
(f)					Rate per Sq.Mt.	Rs.	293.26	per 1 Sqm
5	Laying and Fixing of monolithic granite stone blocks of any design/ shape laid in required line, level, curvature,							
	<i>Labour</i>							
(a)	(i)Mason Special	No.s	2.16	Per day	461.00	Rs.	995.76	
	(ii)Man mulia	No.s	2.16	Per day	311.00	Rs.	671.76	
						Rs.	1667.52	
	<i>Add Overhead Charges</i>		0.08	on (a)		Rs.	125.06	
	<i>Add Contractor Profit @ 7.5%</i>		0.08	on (a)		Rs.	125.06	
(b)	<i>total</i>					Rs.	1917.65	
(c)	<i>Add Labour Cess @ 1%</i>		0.01	on (b)		Rs.	19.18	
(d)	<i>Total (b+c)</i>					Rs.	193.682448	Rate per 1 Sq.Mt.
						Rs.	193.682448	Rate per 10 Sq.Mt.
						Rs.	1291.21632	Rate per cum
1	Pointing on stone work with cement mortar 1:4 (1 cement : 4 fine sand) :							
	Flush/ Ruled pointing							
Code	Description	Unit	Quantity	Rate	Amount			remark
	Detail of cost for 10 sqm							
a	Material							
	SH: Mortars	cum	0.02	3413.56	78.51			
	Sundry	LS	7.15	2.00	14.30			AS/DAR
b	LABOUR							
	Mason (average)	day	0.92	401.00	368.92			
	Coolie/ Female mulia	day	1.37	311.00	426.07			
	Bhisti	day	0.93	351.00	326.43			
c	Add 1 % water charge on (a+b)				12.14			

d	Add 7.5% over head and 7.5% contractor profit on (a+b+c)							
e	Total (a+b+c+d)				183.96			
f	Add 1% labour cess				1410.33			
	Total e+f				14.10			
					1424.43	for 10 sqm		
					142.44	for 1sqm		
<b>RCC</b>								
	Providing Interlocking Paver Block of I section of size <b>80 mm</b> thick of approved quality over 25mm thick bed of CM (1:1) with cost of all materials (Ref AR 2006 P-89 Item -16							
	Data for 10 Sqm							
	<b>Material</b>							
	Sand	0.13	Cum @ Rs.	Per Cum.	46.67	Rs.	6.07	
	<b>Paver Block 80 mm</b>						0.00	
	Cost of Paver Block	10.00	Sqm @ Rs.	Per Sqm	548.32	Rs.	5483.20	
	80mm vide SE no 18 dt 19.03.2016 @ Rs.53.00/Sft							
	Cost of tile per Sft = Rs. 50.96							
	<u>Add VAT @ 4% = Rs. 2.04</u>							
	Rs.53.00							
	Cement	1.86	Qnt. @ Rs.	Per Qntl.	533.40	Rs.	990.52	
	Cement for Slurry	0.88	Qnt. @ Rs.	Per Qntl.	533.40	Rs.	469.39	
						Rs.	<b>6949.18</b>	
	<b>Labour</b>							
	Mason Special	2.16	No. @ Rs.	Per day	461.00	Rs.	995.76	
	Man mulia	2.16	No. @ Rs.	Per day	311.00	Rs.	671.76	
						Rs.	<b>1667.52</b>	
	<b>Carriage</b>							
	Sand	0.13	Cum @ Rs.	Per Cum.	501.67	Rs.	65.22	
	Cement	1.86	Qnt. @ Rs.	Per Qntl.	16.17	Rs.	30.03	
	Transportation of Paver Block 5km = 967.27/180 Sqm							
		1.00	Sqm @ Rs.	Per Sqm	5.37	Rs.	5.37	
	Cement for Slurry	0.88	Qnt. @ Rs.	Per Qntl.	16.17	Rs.	14.23	
						Rs.	<b>114.85</b>	
	<b>Royalty</b>							
	Sand	0.13	Cum @ Rs.	Per Cum.	35.00	Rs.	4.55	
	Cement	2.74	Qnt. @ Rs.	Per Qntl.		Rs.	0.00	
						Rs.	<b>4.55</b>	
	<i>Add Overhead Charges</i>	0.08					646.25	<b>655.2077</b>
	<i>Add Contractor Profit</i>	0.08					646.25	
	Total						10028.61	
	Rate/Sqm						1002.86	
							<b>1002.86</b>	
	Add Cess	0.01					10.03	
							<b>1012.89</b>	
	Providing Interlocking Paver Block of I section of size <b>60 mm</b> thick of approved quality over 25mm thick bed of CM (1:1) with cost of all materials (Ref AR 2006 P-89 Item -16							
	Data for 10 Sqm							
	<b>Material</b>							
	Sand	0.13	Cum @ Rs.	Per Cum.	41.90	Rs.	5.45	
	<b>Paver Block 80 mm</b>						0.00	
	Cost of Paver Block	10.00	Sqm @ Rs.	Per Sqm	444.93	Rs.	4449.26	
	80mm vide SE no 18 dt 19.03.2016 @ Rs.53.00/Sft							
	Cost of tile per Sft = Rs. 50.96							
	<u>Add VAT @ 4% = Rs. 2.04</u>							
	Rs.53.00							
	Cement	1.86	Qnt. @ Rs.	Per Qntl.	533.40	Rs.	990.52	
	Cement for Slurry	0.88	Qnt. @ Rs.	Per Qntl.	533.40	Rs.	469.39	
						Rs.	<b>5914.62</b>	
	<b>Labour</b>							
	Mason Special	2.16	No. @ Rs.	Per day	461.00	Rs.	995.76	
	Man mulia	2.16	No. @ Rs.	Per day	311.00	Rs.	671.76	
						Rs.	<b>1667.52</b>	
	<b>Carriage</b>							
	Sand	0.13	Cum @ Rs.	Per Cum.	501.67	Rs.	65.22	
	Cement	1.86	Qnt. @ Rs.	Per Qntl.	16.17	Rs.	30.03	
	Transportation of Paver Block 5km = 967.27/180 Sqm							
		1.00	Sqm @ Rs.	Per Sqm	5.37	Rs.	5.37	
	Cement for Slurry	0.88	Qnt. @ Rs.	Per Qntl.	16.17	Rs.	14.23	
						Rs.	<b>114.85</b>	



<b>2</b>	<b>Cement MORTAR ( 1:3)</b>							
<b>(a)</b>	<b>Material</b>							
	(i)Sand (Screened and w	1.07	Cum	46.67	Per Cum.	Rs.	49.94	
	(ii)Cement	5.10	Qntl.	533.40	Per Qntl.	Rs.	2720.34	
<b>(b)</b>	<b>Labour</b>							
	Male mulia	0.75	No.s	351.00	Per day	Rs.	263.25	
	Bhisti	0.07	No.s	401.00	Per day	Rs.	28.07	
	Hire and running charges of mechanical mixer	26.91	L.S	2.00		Rs.	53.82	as per dar
	Sundry	13.52	L.S	2.00		Rs.	27.04	as per dar
<b>(c)</b>	<b>Add Overhead Charges</b>	0.08	on (a+b)			Rs.	235.68	
<b>(d)</b>	<b>Add Contractor Profit @</b>	0.08	on (a+b)			Rs.	235.68	
						Rs.	<b>3613.83</b>	
<b>(e)</b>	<b>Royalty &amp; Carriage</b>							
	(i)Sand	1.07	Cum	536.67	Per Cum.	Rs.	574.24	
	(ii)Cement	5.10	Qntl.	16.17	Per Qntl.	Rs.	82.48	
							<b>4270.54</b>	
<b>(f)</b>	<b>Add Labour Cess @ 1%</b>	0.01	on (a+b+c+d+e)				42.71	
							<b>4313.24</b>	
White CM 1:2								

Sl. No.	Description	Quantity Required		Rate Rs. P.	Unit	Amount	
<b>2</b>	<b>Cement MORTAR ( 1:2)</b>						
<b>(a)</b>	<b>Material</b>						
	(i)Dust/powder	0.95	Cum	76.19	Per Cum.	Rs.	72.38
	(ii) White cement	6.80	Qntl.	1496.09	Per Qntl.	Rs.	10173.41
<b>(b)</b>	<b>Labour</b>						
	Male mulia	0.75	No.s	311.00	Per day	Rs.	233.25
	Bhisti	0.07	No.s	351.00	Per day	Rs.	24.57
	Hire and running charges of mechanical mixer	26.91	L.S	2.00		Rs.	53.82
	Sundry	13.52	L.S	2.00		Rs.	27.04
<b>(c)</b>	<b>Add Overhead Charges</b>	0.08	on (a+b)			Rs.	793.84
<b>(d)</b>	<b>Add Contractor Profit @</b>	0.08	on (a+b)			Rs.	793.84
						Rs.	<b>12172.14</b>
<b>(e)</b>	<b>Royalty &amp; Carriage</b>						
	(i)Dust/powder	0.95	Cum	536.67	Per Cum.	Rs.	509.84
	(ii) White cement	6.80	Qntl.	16.17	Per Qntl.	Rs.	109.97
							<b>12791.95</b>
<b>(f)</b>	<b>Add Labour Cess @ 1%</b>	0.01	on (a+b+c+d+e)				127.92
							<b>12919.87</b> per cum

#### Earth work

<b>19</b>	Filling in foundation and plinth with excavated materials moorum including watering and ramming as directed by the Engineer-in-charge of earth work etc. (per 100 Cum.)						<i>I - 14</i>	
	<b>All Kinds of soil</b>					Rs.	<b>11290.61</b>	per 100 cum
	Add Cess	0.01					<b>112.91</b>	
							<b>11403.52</b>	per 100 cum
	<b>Hard Soil</b>					Rs.	<b>10252.63</b>	per 100 cum
	Add Cess	0.01					<b>102.53</b>	
							<b>10355.16</b>	per 100 cum
	<b>Stoney earth</b>					Rs.	<b>15989.34</b>	per 100 cum
	Add Cess	0.01					<b>159.89</b>	
							<b>16149.23</b>	per 100 cum

#### Brick work

<b>35</b>	Brick work with Flyash.bricks in C.M(1:6) in Foundation & Plinth (per one Cum) 23x11x8cm						<i>VI - 3</i>	
<b>(a)</b>	<b>Material</b>							
	(i)Flyash Brick	400.00	Nos.	3787.23	per 1000	Rs.	1514.89	
	(ii)Sand	0.28	Cum	46.67	Per Cum	Rs.	13.07	
	(iii)Cement	1.00	Qntl.	533.40	Per Qntl.	Rs.	533.40	
<b>(b)</b>	<b>Labour</b>							
	(i)Mason 1st class	0.35	No.	461.00	Per day	Rs.	161.35	
	(ii)Mason 2nd class	1.05	No.	401.00	Per day	Rs.	421.05	

(iii)Mulia for mortar	1.41	No.	311.00	Per day	Rs.	438.51		
(iv)Mulia	1.41	No.	311.00	Per day	Rs.	438.51		
(v)Mulia Preparing Mortar & getting Water	0.14	No.	311.00	Per day	Rs.	43.54		
(c) Add Overhead Charges	0.08	on (a+b)			Rs.	267.32		
(d) Add Contractor Profit %	0.08	on (a+b)			Rs.	267.32		
					Rs.	<b>4098.97</b>	per cum	
(e) Royalty & Carriage								
(i)FlyAsh Brick	400.00	Nos.	482.00	per 1000	Rs.	192.80		
(ii)Sand	0.28	Cum	536.67	Per Cum	Rs.	150.27		
(iii)Cement	0.67	Qntl.	16.17	Per Qntl.	Rs.	10.87		
					Rs.	<b>4452.90</b>		
(f) Add Labour Cess @ 1%	0.01	on (a+b+c+d+e)			Rs.	44.53		
					Rs.	<b>4497.43</b>		
					Rs.	33.00		
Add Contractor Profit %	0.08				Rs.	2.48		
					Rs.	<b>4488.38</b>	per cum	
Add Labour Cess @ 1%	0.01				Rs.	44.88		
					Rs.	<b>4533.26</b>		
Sl. No.s	Description	Quantity Required	Rate Rs. P.	Unit	Amount			
1	Clearing & Grubbing the road land including uprooting rank vegetation grass, bushes, shrubs, saplings and trees girth upto 300m, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, upto a lead of 1000 meters including removal and disposal of top organic soil not exceeding 150mm in thickness.							XIV - 03 (Ref :-A/R - 2006, P-196, Item No - 03)
	Unit- Hectare							
(I)	In area of light Jungle							
(a)	Labour							
(i)	Mate	6.00	day	351.00	/day	Rs.	2106.00	
(ii)	Mulia unskilled	150.00	day	311.00	/day	Rs.	46650.00	
					Rs.	48756.00		
(b)	Machinery							
(i)	Tractor - Trolley	1	hour	200.87	/hour	Rs.	200.87	
					Rs.	48956.87		
(c)	Add Overhead Charges	7.50%	on (a+b)			Rs.	3671.77	
(d)	Add Contractor Profit %	7.50%	on (a+b)			Rs.	3671.77	
	Rate / Hectre					Rs.	56300.40	Per Hectre
					Rs.	<b>5.63</b>	Per Sqm	
(f)	Add Labour Cess @ 1%	1%	on (a+b+c+d+e)			Rs.	0.06	
					Rs.	<b>5.69</b>	Per Sqm	
3	Providing and Laying of 80 mm thick factory made Concrete paver block (GRASS PAVER) of M-40 grade made by block making machine with strong vibratory compaction of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with fine sand etc. all complete as per the direction of Engineer-in-charge.							Ref. CPWD Analysis of Rate, Vol-II, item-16.68
	<b>Note: 80mm thick Concrete tile of M-40 grade C.C. (grass paver)</b>							
(A)	Material							
(i)	Interlocking C.C. tile (80mm thick, M-40)	10	Sqm @ Rs.	<b>807.00</b>	Per Sqm		Rs. 8070.00	
(ii)	Coarse Sand Bedding Layer-60mm thick =10x0.060=0.60 Cum	0.6	Cum @ Rs.	46.67	Per Cum.		Rs. 28.00	
(iii)	Filling joints with F	0.15	Cum @ Rs.	41.90	Per Cum.		Rs. 6.29	
(B)	Labour							
(i)	Mason 1st Class	0.5	No. @ Rs.	461.00	Per day		Rs. 230.50	
(ii)	Mason 2nd Class	0.5	No. @ Rs.	401.00	Per day		Rs. 200.50	
(iii)	Man mulia	1	No. @ Rs.	311.00	Per day		Rs. 311.00	
(iii)	Mulia	0.5	No. @ Rs.	311.00	Per day		Rs. 155.50	
					Sub-Total	=	Rs. <b>9001.79</b>	
(C)	Add Overhead Char	7.50%	on (A+B)				Rs. 675.13	
(D)	Add Contractor Pro	7.50%	on (A+B)				Rs. 675.13	
							Rs. <b>10352.06</b>	per 10 Sqm
(E)	Royalty & Carriage							
(i)	Coarse Sand	0.5	Cum @ Rs.	536.67	Per Cum.		Rs. 268.34	
(ii)	Fine Sand	0.15	Cum @ Rs.	466.27	Per Cum.		Rs. 69.94	
(iii)	Paver block	0.8	Cum @ Rs.	663.85	Per Cum.		Rs. 531.08	
					TOTAL	=	Rs. <b>11221.41</b>	per 10 Sqm
(F)	Add Labour Cess %	1%					Rs. 112.21	
					Rate per 10 Sqm		Rs. <b>11333.62</b>	

					Rate per 1 Sqm	Rs.	1133.36
					Say	Rs.	1133.40 per 1 Sqm
305	Construction of Subgrade and Earthen Shoulders						
	Construction of sub-grade and earthen shoulders with approved material obtained from borrow pits with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of table No. 300-2						
	<b>Unit = cum</b>						
	<b>Taking output = 100 cum</b>						
a)	<b>Labour</b>						
Mate	day	0.040	351.00	14.04			
Mazdoor	day	1.000	311.00	311.00			
b)	<b>Machinery</b>						
Hydraulic excavator 1 cum bucket capacity @ 60 cum per hour	hour	1.670	730.43	1219.82			
Tipper 10 tonne capacity	tonne.km	175x5	2.17	1898.75			
Add 10 per cent of cost of carriage to cover cost of loading and unloading				189.88			
Dozer 80 HP for spreading @ 200 cum per hour	hour	0.500	1592.17	796.09			
Motor grader for grading @ 50 cum per hour	hour	2.000	671.74	1343.48			
Water tanker with 6 km lead	hour	4.000	506.09	2024.36			
Vibratory roller 8-10 tonnes @ 80 cum per hour	hour	1.250	864.35	1080.44			
c)	<b>Material</b>						
Cost of water	KL	24.000	10.00	240.00			
Compensation for earth taken from private land	cum	0.000	19.40	0.00			
d)	<b>Overhead charges @ 0.075 on (a+b+c)</b>			683.84			
e)	<b>Contractor's profit @ 0.075 on (a+b+c)</b>			683.84			
f)	<b>Royalty</b>	cum	100.00	35.00	3500.00		
Cost for 100 cum = a+b+c+d+e				13985.52			
Rate per cum = (a+b+c+d+e)/100				139.86			
Add cess 1%				1.399			
				<b><u>141.30</u></b>			





	Aluminium sheathing fixed with encapsulated lens type reflective sheeting of size including lettering and signs etc.	sqm	0.283	7000.00			1,981.00
d	Add overhead charges a+b+c	7.5%	7966.80				597.51
e	Add contractor's profit	7.5%	7966.80				597.51
	Rate for traffic sign i+ii+iii+a+b+c+d						9,757.12
	<b>Add 1% towards Labour welfare cess</b>						<b>97.57</b>
				<b>Total</b>			<b>9,854.69</b>
<b>(iv) 80cm x 60cm size Rectangular</b>							
	Aluminium sheathing fixed with encapsulated lens type reflective sheeting of size including lettering and signs etc.	sqm	0.480	7000.00			3,360.00
d	Add overhead charges a+b+c	7.5%	9345.80				700.94
e	Add contractor's profit	7.5%	9345.80				700.94
	Rate for traffic sign i+ii+iii+a+b+c+d						11,342.98
	<b>Add 1% towards Labour welfare cess</b>						<b>113.43</b>
				<b>Total</b>			<b>11,456.41</b>
<b>(v) 60cm x 45cm size Rectangular</b>							
	Aluminium sheathing fixed with encapsulated lens type reflective sheeting of size including lettering and signs etc.	sqm	0.270	7000.00			1,890.00
d	Add overhead charges a+b+c	7.5%	7875.80				590.69
e	Add contractor's profit	7.5%	9345.80				590.69
	Rate for traffic sign i+ii+iii+a+b+c+d						9,652.48
	<b>Add 1% towards Labour welfare cess</b>						<b>96.52</b>
				<b>Total</b>			<b>9,749.00</b>

<b>(vi) 100cm x 30cm size (Hazard marker)</b>											
	Aluminium sheathing fixed with encapsulated lens type reflective sheeting of size including lettering and signs etc.			sqm	0.300	7000.00		2,100.00			
d	Add overhead charges a+b+c			7.5%	8085.80		606.44				
e	Add contractor's profit			7.5%	9345.80		606.44				
	Rate for traffic sign i+ii+iii+a+b+c+d							<b>9,893.98</b>			
	<b>Add</b>	<b>1%</b>	<b>towards Labour welfare cess</b>								
									<b>98.94</b>		
						<b>Total</b>			<b>9,992.92</b>		

SUB-BASES, BASES ( NON- BITUMINOUS) AND SHOULDERS						
BOQ Item No	Ref. to MORTH Spec.	Description	Unit	Quantity	Rate Rs	Cost Rs
C.9	508	<b>Bituminous Concrete</b>				
		Providing and laying bituminous concrete with 100-120 TPH batch type hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 5.4 to 5.6 per cent of mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 509 complete in all respects				
		<i>Unit = cum</i>				
		<i>Taking output = 191 cum (450 tonnes)</i>				
		<b>a) Labour</b>				
		Mate	day	0.840	351.00	294.84
		Mazdoor working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction	day	16.000	311.00	4976.00
		Skilled mazdoor for checking line & levels	day	5.000	401.00	2005.00
		<b>b) Machinery</b>				
		Batch mix HMP @ 75 tonne per hour	hour	6.000	9710.43	58262.58
		Paver finisher hydrostatic with sensor control @ 75 cum per hour	hour	6.000	1500.00	9000.00
		Generator 250 KVA	hour	6.000	978.26	5869.56
		Front end loader 1 cum bucket capacity	hour	6.000	452.17	2713.02
		Tipper 10 tonne capacity	tonne.km	450 x 60	2.17	58590.00
		Add 10 per cent of cost of carriage to cover cost of loading and unloading				5859.00
		Smooth wheeled roller 8-10 tonnes for initial break down rolling.	hour	6.00x0.65*	294.78	1149.64
		Vibratory roller 8 tonnes for intermediate rolling.	hour	6.00x0.65*	864.35	3370.97
		Finish rolling with 6-8 tonnes smooth wheeled tandem roller.	hour	6.00x0.65*	641.74	2502.79
		<b>c) Material</b>				
		<b>i) Bitumen@ 5 per cent of weight of mix</b>	tonne	22.500	44582.76	1003112.10
		<b>ii) Aggregate</b>				
		Total weight of mix = 450 tonnes				
		Weight of bitumen = 22.5 tonnes				
		Weight of aggregate = 450 -22.50 = 427.50 tonnes				
		<i>Taking density of aggregate = 1.5 ton/cum</i>				
		Volume of aggregate = 285 cum				
		<b>* Grading - I-19 mm (Nominal Size)</b>				
		20 - 10 mm 35 per cent	cum	99.750	1042.86	104025.29
		10 - 5 mm 23 per cent	cum	65.550	892.86	58526.65
		5 mm and below 40 per cent	cum	114.000	374.76	42722.64
		Filler @ 2 per cent of weight of aggregates.	tonne	8.620	73.33	632.10

SUB-BASES, BASES ( NON- BITUMINOUS) AND SHOULDERS						
BOQ Item No	Ref. to MORTH Spec.	Description	Unit	Quantity	Rate Rs	Cost Rs
		<b>or</b>				
		<b>Grading - II-13 mm (Nominal Size)</b>				
		13.2 - 10 mm 30 per cent	cum	85.500	1066.67	91200.29
		10 - 5 mm 25 per cent	cum	71.250	892.86	63615.92
		5 mm and below 43 per cent	cum	122.550	374.76	45926.84
		Filler @ 2 per cent of weight of aggregates.	tonne	8.620	73.33	632.10
		*Any one of the alternative may be adopted as per approved design				
i)		<b>for Grading-I ( 19 mm nominal size )</b>				
	d)	<b>Overhead charges 0.075 on (a+b+c)</b>				102270.91
	e)	<b>Contractor's profit @ .075 on (a+b+c+d)</b>				102270.91
		Cost for 191 cum = a+b+c+d+e				1568153.99
		<b>Rate per cum = (a+b+c+d+e)/191</b>				8210.23
					<i>say</i>	<b><u>8210.23</u></b>
ii)		<b>for Grading-II(13 mm nominal size)</b>				
	d)	<b>Overhead charges 7.5% @ input on (a+b+c)</b>				101931.05
	e)	<b>Contractor's profit 7.5% @ input on (a+b+c+d)</b>				101931.05
		Cost for 191 cum = a+b+c+d+e				1562942.74
	f)	<b>Lead &amp; Royalty</b>				
		13.2 - 10 mm 30 per cent	cum	85.500	455.67	38959.79
		10 - 5 mm 25 per cent	cum	71.250	455.67	32466.49
		5 mm and below 43 per cent	cum	122.550	408.17	50021.23
		Filler @ 2 per cent of weight of aggregates.	tonne	8.620	360.67	3108.98
		Bitumen	ton	22.500	2216.66	49874.85
		<b>TOTAL COST FOR 191 cum</b>				1737374.07
		<b>cost for 1 cum</b>				9096.20
		<b>Add cess 1%</b>				90.96199302
						<b><u>9187.20</u></b>

**Project : BEACH ROAD DEVELOPMENT AND EXTENSION , PURI**

CONSULTANT : TATA CONSULTANTING ENG. LTD

BOQ No: TFS/TCEL/01/06102021/21-22

### Proforma Invoice

Contractor : Tensafabstructures

Date of Submission: 06.10.2021 / Quotation Validity of : 30 Days.

<b>SL NO</b>	<b>PARTICULAR</b>	<b>UOM</b>	<b>RATE</b>	<b>QTY</b>	<b>AMOUNT (Rs.)</b>
<b>1.0</b>	<b>ITEM: CONTROL ROOM</b> Desine, Supply, Fabrication and Installation of : Bolted Structure Control Room Size : (W 2.0 mt x L 2.0 mt H 2.7 mt) the scrop work inclusive all suppoting WPC columns with MS (120 x 120 mm), Piling columns 3.0 mt, reinforcement beam, Flooring, 3 side WPC railing (W 1.76 mt x H 0.8 mt) with Roofing Tensile Fabric etc.	Nos.	2,80,000.00	12.0	33,60,000.00
<b>2.0</b>	<b>ITEM: KIOSK</b> Desine, Supply, Fabrication and Installation of : Bolted Structure Control Room Size : (W 2.0 mt x L 2.0 mt H 2.7 mt) the scrop work inclusive all suppoting WPC columns with MS (120 x 120 mm), Piling columns 3.0 mt, reinforcement beam, Flooring, 3 side WPC railing (W 1.76 mt x H 0.8 mt) with Roofing Tensile Fabric etc.	Nos.	2,80,000.00	662.0	18,53,60,000.00
<b>3.0</b>	<b>ITEM: TOILETS GENTS</b> Desine, Supply, Fabrication and Installation of : Bolted Structure Control Room Size : (W 2.0 mt x L 2.0 mt H 2.7 mt) the scrop work inclusive all suppoting WPC columns with MS (120 x 120 mm), Piling columns 3.0 mt, reinforcement beam, Flooring, 4 side WPC wall with 1 door (W 0.75 mt x H 2.05 mt) 1 water tank , 1 commode, 1 urinal, 1 hand basin and only kiosk water pipe line with Roofing Tensile Fabric etc.	Nos.	4,10,000.00	38.0	1,55,80,000.00
<b>4.0</b>	<b>ITEM: TOILETS LADIES</b> Desine, Supply, Fabrication and Installation of : Bolted Structure Control Room Size : (W 2.0 mt x L 2.0 mt H 2.7 mt) the scrop work inclusive all suppoting WPC columns with MS (120 x 120 mm), Piling columns 3.0 mt, reinforcement beam, Flooring, 4 side WPC wall with 1 door (W 0.75 mt x H 2.05 mt) 1 water tank , 1 commode, 1 pan, 1 hand basin and only kiosk water pipe line with Roofing Tensile Fabric etc.	Nos.	4,10,000.00	38.0	1,55,80,000.00
<b>5.0</b>	<b>ITEM: WOODEN ARTI PLATFROM</b> Desine, Supply, Fabrication and Installation of : Wooden Arti Platform in WPC Size : (W 3.0 mt x L 6.0 mt ) the scrop work inclusive all suppoting WPC Piling columns 3.0 mt MS (120 x 120 mm), reinforcement beam, Flooring ,etc.	Nos.	6,00,000.00	3.0	18,00,000.00
<b>Total Amount :</b>					<b>22,16,80,000.00</b>

Note:

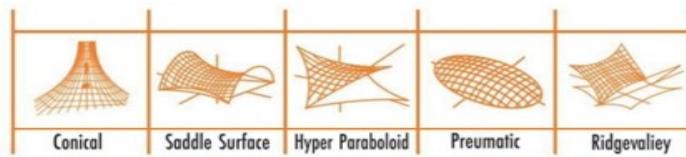
- 1) GST & all Other Taxes Extra
- 2) Scaffolding Provided by Client

Payment :

- a) 50% of the Contract value shall be paid as advance along with Work Order.
- b) 40% of the Contract value shall be paid as on supply of material at site.
- d) 10% of the Contract value shall be paid on Pro Rata basis of Work done.

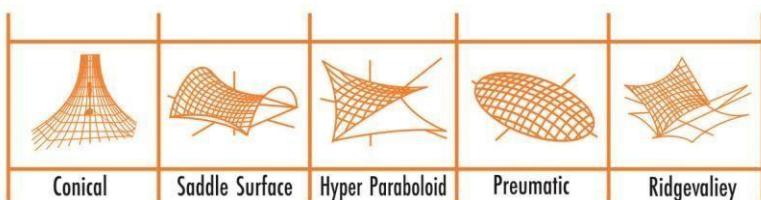
For :

Tensafabstructures



## **PROPOSED WPC RAILING AND WPC FLOORING FOR BEACH ROAD**

**DEVLOPMENT AND EXTENSION WORK AT SITE PURI.**



Date: 18/10/2021

TFS/28-21

To,

Kind Attn.: **Pratima Marwah.**

Assistant General Manager-Landscape Architect  
Mob: + 919654888853 Email: [pratimam@tce.co.in](mailto:pratimam@tce.co.in)

Dear Sir,

We are submitting our proposal for Supply, and Fabrication & Erection of wpc railing and wpc flooring as per the concept.

We thankfully acknowledge receipt of your enquiry on the subject and extend our gratitude for giving an opportunity to quote on above subject.

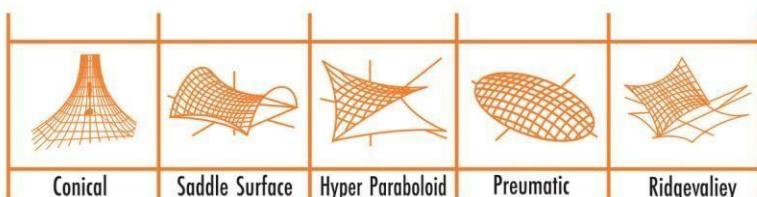
We hope you shall find our offer in line with your requirement and look forward to your early favorable response.

For **TENSAFABSTRUCTURES.**

**Anil Nayak**

**Mob:** 7978574626, 7377807418.

**Email:** [tensa.fab007@gmail.com](mailto:tensa.fab007@gmail.com)



## **1. Technical Offer**

### **I. Our Understanding of Client Requirements.**

As per provided concept

### **II. Scope of work**

Providing Design Supply, Fabrication, Erection of wpc  
Railing and WPC flooring .

### **III. Materials.**

#### **• WPC FOR RAILING**

- a. All WPC column will be 95\*95 mm, Rafter will be 100\*60 mm, WPC Vertical members will be 45\*65 mm.
- b. All nut bolts will be 4.8/8.8 gr with hot deep galvanized.

#### **• Painting of Steel Structure (Protective Coat)**

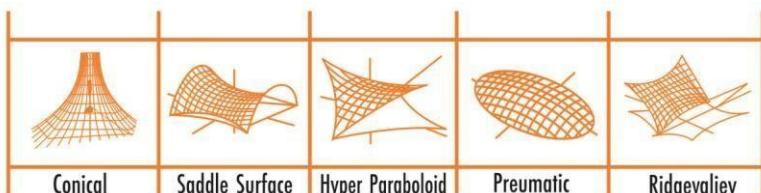
- a. All steel members will be hot deep galvanized with 80-micron thk.

### **WORK SCHEDULE**

Schedule can be mutually agreed as per project urgency and availability of material.  
180 Days after getting the approved site drawing and LOA.

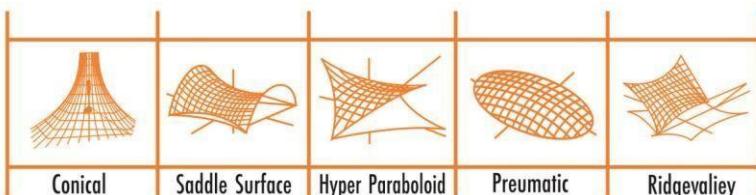
### **IV. General Material Specification**

<b>1) STRUCTURAL STEEL MEMBERS</b>	
a. Materials of structural steel members	CHS/RHS confirming to IS 1161/1239/4239 of min 240 YST. Mild steel plates" IS 2062 E 250 / 350"
b. Make of structural steel members.	Pipes: TATA/ JINDAL / BHUSHAN /APPOLO MS Plates: SAIL/JINDAD
d. Paint on the structural members	<p>The structural members shall be painted with 300 DFT anticorrosive protection coating using Paint/Primer of approved make with one coat of Epoxy Primer cum MIO 150 microns thick and final coat of polyurethane paint 100 microns thick (to be applied in 2 coat)</p> <p>OR – All ms steel structure will be hotdeepgalvanized with minium coating of 80 micron</p> <p>OR – All ms steel structure will be 3 times coating tank mastic black paint.</p>



**ESTIMATE.**

Sl. N. o.	Brief Description of Item	Unit	Estimated Qty in rmtr/ Sqmts	Rate per rmtr/ Sqmts	Amount
	<b>WPC RAILING</b> <p>Providing and fixing Deck flooring made from high class Wood Plastic Composite Panels made from 55%, Wood 35% High grade polymer (HDPE) and 10% Additives like bonding stabilizer, UV stabilizer etc. and the material should follow ASTM D 570, ASTM D 1894, ASTM D 256, ASTM D 790, ASTM D 1525, ASTM D 648, ISO 9352, IS 14887:2000. It should be weather proof and suitable to be used in outdoor spaces with temperature ranging between -10 °C to 60 °C. WPC railing section should have bulk density of 1.2 g/cm3. Wood Polymer Composites products must be certified as GREEN PRODUCT by IGBC. WPC railing post 95x95mm, wpc hand railing 100x60 and wpc vertical member 45x65mm hollow pipe. The item shall be executed as per approved drawings and direction of the Engineer-in-Charge complete.</p>	RMTR	4200	6930/-	2,91,06,300/-
	<b>WPC FLOORING</b> <p>Providing and fixing flooring made from high class Wood Plastic Composite Panels made from 55%, Wood 35% High grade polymer (HDPE) and 10% Additives like bonding stabilizer, UV stabilizer etc. and the material should follow ASTM D 570, ASTM D 1894, ASTM D 256, ASTM D 790, ASTM D 1525, ASTM D 648, ISO 9352, IS 14887:2000. It should be weather proof and suitable to be used in outdoor spaces with temperature ranging between -10 °C to 60 °C. WPC decking section should have bulk density of 1.2 g/cm3. Wood Polymer Composites products must be certified as GREEN PRODUCT by IGBC. WPC decking have thickness 23mm and width 143mm. 143x23mm.</p>	SQMT	21000	3700	7,77,00,000/-



i. Mode of Measurement

Mode of measurement will be actual Surface area of flooring and running mtr of Railing.  
Tax and Duties 18 % Extra (GST).

I. PAYMENT TERMS.

- 50 % along with LOA.
- 50 % after supply of wpc materials at site .
- 10% after completion of work.

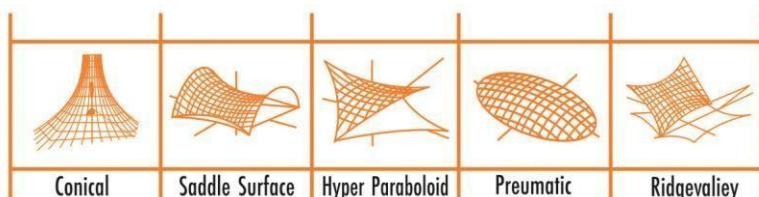
II. GENERAL TERMS & CONDITIONS

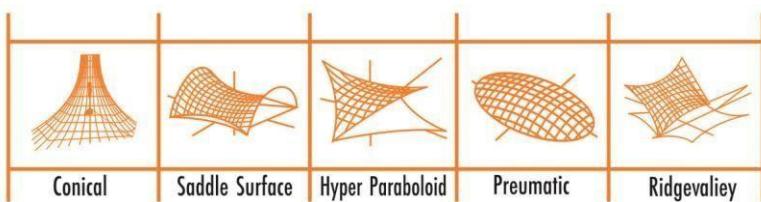
- Clear area for fabrication will have to be provided by you.
- Day & night working permission required will be in your scope of work.
- All civil work not in our scope.
- Above mentioned rates subject to the Current wpc and steel price
- Electricity, drinking water, DG Backup, labours stay at site will be your scope.

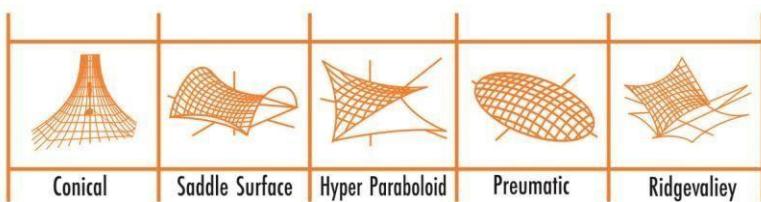
Feel free to contact us for any further technical clarifications and queries.

Thanking you,  
For Tensafab Structures,  
Anil Nayak,

Mob No - + 917978574626, 7377807418.









## JANS Bamboo Products Pvt Ltd.

Reg. Office:	A 502, Vakratunda, Dhokali Naka, Kolshet Road, Thane West. INDIA. Pin: 400607 A 104, Vakratunda, Manorama Nagar Road, Above SBI Bank, Thane West. INDIA. Pin: 400607. Email: krunal.n@jansbamboo.com Tel no: 022-25890156				
Quote No:	JANS/QUOT/2021-22/17a				
Company :	Tata Consulting Engineers				
Kind Attn:	Ms Neha Yadav				
<b>Quotation for supply and installation of Bamboo structures in Puri (Type A Cluster)</b>					
Sr no	Description Of Items	Qty	Unit	Rate	Amount (INR)
1	Sit-out umbrella made of wooden/ bamboo poles & treated thatch including Installation, commissioning, foundation Work.	24.00	Nos	<b>68,900</b>	<b>1,653,600</b>
2	Recliner Bamboo Lounger chairs	48.00	Nos	<b>25,769</b>	<b>1,236,893</b>
3	Watch Tower (Bamboo) -upto 6.5 metres including installation, foundation work and as per specification and drawing	8.00	Nos	<b>395,380</b>	<b>3,163,040</b>
4	Vendor zone cluster of type A (36 SHOPS of size 2mtr x 2mtr and 2.7mtr avg height)	144.00	Sqm	<b>65,614</b>	<b>9,448,416</b>
5	Bamboo Ramp/ platform with Railings with treated wood flooring for shop including installation.	349.59	Sqm	<b>37,100</b>	<b>12,969,806</b>
6	Bamboo Singages (Board size 2.5ft x 2ft)	30.00	Nos	<b>5,300</b>	<b>159,000</b>
<b>TOTAL =</b>					<b>28,630,755</b>
<b>Add for GST @ 18% =</b>					<b>5,153,536</b>
<b>G. TOTAL =</b>					<b>33,784,291</b>

### Payment Terms and Conditions

- 1 50 % Advance shall be paid along work order for all items.
- 2 25% after inspection of pre-fabricated material at factory & prior to site dispatch.
- 3 25% after completion of installation work at site.

**GSTIN:** 27AADCJ6663NIZY

### Other Terms and Conditions

- 1 The total work shall be carried out in a single sequence per beach. Incase if there is a break in sequence of works due to Client approval process, then additional expenses as incurred will be paid by Client.
- 2 The validity of quotation is one month.
- 4 The above work is for bamboo works including civil foundations
- 5 Work can be started after getting confirmed Work Order alongwith advance payment
- 6 A period of 6 months considering 4 months at factory and 2 months for installation should be considered as timelines for execution
- 7 Electricity, water and storage for material with proper safety and security is considered to be provided by Client free of cost.

**JANS Bamboo Products Pvt Ltd.**



Authorised Signatory

Our Ref : M/TCE/0167/2021  
Dated 06<sup>th</sup> October, 2021



Tata Consulting Engineers,  
Noida, UP-110096  
E-mail: pratimam@tce.co.in

Kind Attn : Ms Pratima Marwah

**MECHEM**  
**MECHEM**  
**PRIVATE LIMITED**  
**Corporate Office**  
S-3/72 (Annexe), 1<sup>st</sup> Floor  
Mancheswar Industrial Estate  
Bhubaneswar 751 010  
Phone: 91-674-2580404  
Fax: 91-674-2585886  
E-mail: mechempl@gmail.com

SUB : QUOTATION FOR MANUFACTURE, SUPPLY AND INSTALLATION OF FRP JETTY.

Dear Sir,

With reference to the above subject we are pleased to submit our offer as furnished below for your kind consideration.

**1. SCOPE OF WORK :**

Our Scope of Work will comprise of manufacture, supply and installation of FRP Jetty as per your drawing. The Jetty consists of 250 no. of FRP Floats, each of size 2.5mtr x 5mtr x 0.65mtr height, with a total area of 3125 Sqm.

**2. CONSTRUCTION CAPABILITIES :**

**(a) Factory :**

Our Factory is situated in the Mancheswar Industrial Estate, Bhubaneswar having a moulding shop and an assembly yard for construction of FRP Jetty and a wide range of other FRP Products. The factory is well equipped and we have adequate skilled manpower for manufacture of these products.

**(b) Awards:**

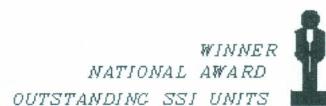
We have won the following Awards for our performance.

- (i) National Award – for Outstanding SSI Units – Special Recognition Prize.
- (ii) National Award – for Quality Products – First Prize.

**(c) ISO Certification:**

We have received the ISO 9001:2015 Certification.

Contd...p/2



Our Ref : M/TCE/0167/2021  
Dated 06<sup>th</sup> October, 2021



MECHEM

[Page-2]

**3. PRICE OF FRP JETTY:**

Rs. 11,28,75,000/- (Rupees eleven crore twenty eight lakhs seventy five thousand only)

**N.B.:** (The above price is inclusive of GST, Transportation and Installation at site)

**4. TAXES & DUTIES:**

At present, as per Govt. rules, GST has been charged @5% on the FRP Jetty. Any variation (escalation/reduction) in GST, if and as applicable at the time of delivery, will be charged as per Govt. Rules.

**5. TERMS OF PAYMENT:**

50% Advance alongwith the Purchase Order and balance after installation at site.

**6. DELIVERY:**

Within 15(fifteen) months from the date of receipt of your confirmed order.

**7. VALIDITY :**

Our offer is valid for 04(four) months from the date of this quotation.

Thanking you.

Yours faithfully,  
For MECHEM PRIVATE LIMITED

AUTHORISED SIGNATORY



WINNER  
NATIONAL AWARD  
QUALITY PRODUCTS



WINNER  
NATIONAL AWARD  
OUTSTANDING SSI UNITS



# QUOTATION

## GABION CONSULTANCY SERVICES ENGINEERS & CONTRACTORS



*LAKE DIAFRAM WALL*



*ROCK FALL NETTING*



*GABION FENCE WALL*



**AMIT REDKAR**

D.C.E, B.E.(Civil), PGDCM(NICMAR)

**GABION CONSULTANCY SERVICES**

B-18, Rolex Shopping Centre, Station Road,  
Goregaon(West). Mumbai: 400062

Phone: +91 9820440007  
Mail: [gabion\\_cs@rediffmail.com](mailto:gabion_cs@rediffmail.com)



# Gabion Consultancy Services

B-18, Rolex Shopping Centre, Station Road, Goregaon (West) Mumbai: 400062  
Mob: 98204 40007, Telephone- 66987750, E-Mail: [gabion\\_cs@rediffmail.com](mailto:gabion_cs@rediffmail.com)

DATE	July 2, 2021
REF NO	GCS/AR/2021/72

**Kind Attention:-Pratima Marwah**

**Sub: - Quotation for supply of gabions at Puri.**

Madam,

With reference to the above we are pleased to submit our most competitive **quotation** as under:-

**PAYMENT TERMS:**

Payment to be done 100% against Proforma Invoice along with Purchase Order by RTGS.

**VALIDITY:** Our offer is valid for your acceptance for a period of 30 days from the date of this offer.

**FORCE MAJEURE:**

Neither party shall be responsible to the other for any delay or failure in performance of its obligations due to any occurrence commonly known as Force Majeure that is beyond the control of any of the parties, including, but not limited to, fire, flood, explosion, acts of God or any Governmental body, public disorder, riots, embargoes, strikes, acts of military authority, epidemics, lockouts or other labour disputes, insurrections, civil commotion, war, enemy actions. In the event of such circumstances the affected party shall inform the other within a reasonable time frame of the occurrence of the same and the likely delay which may arise on this account.

For Gabion Consultancy Services,



Amit Redkar

Encl: 1. Price Annexure

### Price Annexure

Date:- 02/07/2021

<b>SR. NO.</b>	<b>Description</b>	<b>Rate (INR)</b>
1)	Supply of gabions which shall be hot dipped galvanized, wire diameter 2.7mm/3.7mm ,double twisted, hexagonal shaped with mesh opening size of 10 cms x 12 cms, <b>heavy galvanized (250gsm)</b> plus zinc coating	
	a) 4.0m x 1.0m x 1.0m	3562.00
	b) 3.0m x 1.0m x 1.0m	2850.00
	c) 2.0m x 1.0m x 1.0m	1934.00
	d) 1.0m x 1.0m x 1.0 m	1079.00

Rates are exclusive of GST and TRANSPORT.

For **Gabion Consultancy Services**



Amit Redkar.

Ref: UPA/Quotation /2021-22/0053

July 23, 2021

To,  
Ms. Neha Yadav  
M/s Tata Consulting Engineers Ltd.

**Subject: Quotation for supply of UniStone GRC Paving Tiles for your site in Puri, Odisha.**

Dear Ma'am,

We are pleased to submit our offer as follows:

S. No.	Product	Reference Image	Special Discounted Price Per Sq. Ft in INR
1.	UniStone GRC Paving Tiles <b>Pattern:</b> Granite Stone Block <b>Size:</b> 4 <sup>1</sup> / <sub>4</sub> " x 4 <sup>1</sup> / <sub>4</sub> " <b>Thickness:</b> 55mm <b>Shade:</b> As approved		Rs. 120.00 Per Sq. Ft.
2.	UniStone GRC Paving Tiles <b>Pattern:</b> Granite Stone Block <b>Size:</b> 4 <sup>1</sup> / <sub>4</sub> " x 4 <sup>1</sup> / <sub>4</sub> " <b>Thickness:</b> 40mm <b>Shade:</b> As approved		Rs. 100.00 Per Sq. Ft.

#### **TERMS & CONDITION**

- **GST@ 18%** will be charged extra.
- **Cartage** shall be charged as per actual, GST @ 18% will be charged extra on freight also.
- We will be supplying material only.
- **Unloading of material at site will be in client's scope.**
- **Delivery:** Delivery shall begin after **2-3 weeks** of receipt of confirmed purchase order along with advance.

#### **PAYMENT TERMS**

- 40% of total Purchase Order to be paid as advance along with written purchase order.
- Lot wise payment to be made before dispatch of material on P.I. basis.
- Advance shall be adjusted on last lot.

# **UniStone**

Products (India) Private Ltd.

**NOTE**

- Kindly calculate the exact quantity before placing your order. The Ordered quantity shall not be returned or cancelled.
- The above rates are valid for Three months from the date of quotation.

Thanking you,  
Yours faithfully,

**For UniStone Products (I) Private Ltd.**

*Dominic Roy*

Dominic Roy  
Area Sales Manager  
Mobile: +91 9873649440  
Email: [dominic@unistone.in](mailto:dominic@unistone.in)



**Green Meadows**  
Landscape

The green World!

A1/21, FF, South City-2,  
Gurugram-122018 (HR)

9971698394, 9899190100  
greenmeadowslandscape@rediffmail.com

GSTIN : 06ALKPG9963B2ZZ

C PLANT MATERIAL								
C.1	PALM & TREE		ht	spread	Girth			
1	foxtail palm	Each	248	10'-12'	5'-6',well dev. Fronds	6"-7"	2500	620000
2	cassia siamea	Each	30	9'-10'	5'-6',well dev. Fronds	6"	2250.00	67500
3	Mimusops elengi	Each	27	10'-12'	5'-6',well dev.	6"-7"	2500.00	67500
4	Plumeria alba	Each	5	10'-12'	7'-8',well dev canopy,mature plant	6"-7"	2500.00	12500
5	Roystonea regia	Each	8	10'-12'	5'-6',well dev. Fronds	6"-7"	3000.00	24000
6	Phoenix dactylifera	Each	525	10'-12'	5'-6',well dev. Fronds	10"-12'	14000.00	7350000
7	casuarina tree	Each	75	10'-12'	5'-6',well dev.	6"-7"	2200.00	165000
8	coconut palm	Each	165	10'-12'	5'-6',well dev. Fronds	6"-7"	2500.00	412500
9	Bambusa ventricosa	Each	28	8'-10'	4'-5',well dev. Fronds	6"-7"	3000.00	84000
C.2	Ground cover							
1	ipomia carpis	AREA	6850	6"	polybags ,well dev		500.00	3,425,000.00
2	Hemerocallis ( Daylily)	Each	3060	1'-1.6' ht.	1'-1.6' ht.		85	260,100.00
3	Wedelia trilobata	Each	10800	6"	polybags ,well dev.		7	75,600.00
4	Cyperus Alternifolius	Each	6000	2'-2.5' ht	Dev. plant with clumps		100	600,000.00
<b>TOTAL COST</b>								<b>15,785,597.18</b>

Green Meadows Landscape

Proprietor

A1/21, FF, South City-2,  
Gurugram-122018 (HR)

9971698394, 9899190100  
greenmeadowslandscape@rediffmail.com

GSTIN : 06ALKPG9963B2ZZ



**BEACHFRONT DEVELOPMENT ,PURI  
COST ESTIMATION**

Sl. No.	Description	UNIT	No.	L (m)	B (m)	H (m)	Qty	RATE (INR)	AMOUNT
<b>A SITE CLEANING, SOIL RESTORATION AND EARTHWORK</b>									
	Trenching in ordinary soil up to a depth of 60 cm including removal and stacking of serviceable materials and then disposing of surplus soil, by spreading and neatly leveling within a lead of 50 m and making up the trenched area to proper levels by filling with earth or earth mixed with sludge or / and manure before and after flooding trench with water (excluding cost of imported earth, sludge)	cum	1		3750	0.6	2,250	68.70	154,575.00
<b>A.1 Rough dressing</b>									
	Rough dressing the trenched ground including	sqm	1		3750		3,750	1.30	4,875.00
<b>A.2 Fine dressing</b>									
	Fine dressing of the ground	sqm	1		3750		3,750	3.25	12,187.50
<b>A.3 Mixing and spreading of good soil and</b>									
	Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge	cum	1		3750	0.6	2,250	32.1	72,225.00
<b>B SOFTSCAPE AND PLANTING</b>									
<b>B.1 Good garden soil</b>									
1	Supplying and stacking of good earth at site including royalty and carriage upto 5 km complete (earth measured in stacks will be reduced by 20% for payment)	cum	1		3750	0.3	1,125	469.50	528,187.50
<b>B.2 Cow dung manure</b>									
1	Supplying and stacking of well decayed cattle manure at site including royalty and carriage upto 5 k.m. lead complete (cattle manure measured in stacks will reduced by 8% for Payment).	cum	1		3750		188	230.45	43,209.38
<b>B.3 Trees, Shrubs, Hedges and Groundcover plantation</b>									
B.3.1	Digging holes in ordinary soil and refilling the same with the excavated earth mixed with manure or sludge in the ratio of 2:1 by volume (2 parts of stacked volume of earth after reduction by 20% : 1 part of stacked volume of manure after reduction by 8%) flooding with water, dressing including removal of rubbish and surplus earth, if any, with all leads and lifts (cost of manure, sludge or extra good earth if needed to be paid for separately) :	Each							
B.3.1.1	Holes 90 cm dia, and 90 cm deep	Each					1,111	130.40	144,874.40
B.3.1.2	Holes 45 cm dia, and 45 cm deep.	Each					81,510	17.10	1,393,821.00
B.3.2	Plantation of Trees, Shrubs, and Hedge at site i/c watering and removal of unserveiceable material's as per direction of officer in charge (excluding cost of plant & water)	Each							
B.3.3.1	Trees		1,111				1,111	6.40	7,110.40
B.3.3.2	Shrubs		81,510				81,510	3.20	260,832.00

Green Meadows Landscape

Proprietor

## PRICE LIST

Sr. No	Images	Description	MRP (INR)
1.		<p>Eleganza Dustbin,          Material: Stainless Steel,          Grade: SS 304,          Size: H956 x L600 x W405mm          Colour: As per requirement.          *Material Option: Mild Steel</p>	27,500.00
2.		<p>Aux Dustbin,          Material: Stainless Style,          Contemporary Mounting:          Root fixed          Surface / baseplate fixed Wall /          post mounted, Features Ashtray          Capacity (litres) 60, 90          Size (w x d x h): 496x392x875, 496x392x1045, Material          Material Option: Mild Steel</p>	13,750.00
3.		<p>Claybin,          Material: Stainless Steel,          Grade: SS 304,          4mm thick steel hood and frame, galvanized and two-layer powder coated.          Front- and rear panel: 2,5mm steel plate, galvanized and two-layer powder coated in with heavy weight stainless steel piano hinge. Or optional: 5mm aluminium checker plate.          Capacity: 70 litre</p>	26,250.00
4.		<p>Spot Dustbin,          Material: Stainless Steel (304),          Style: Contemporary,          Mounting: Root Fixed, Surface/ Base Plate Fixed,          Size (w x d x h): 430 x 350 x 700mm,          Capacity: 50 Litres          Finishing: Matt.</p>	16,312.50

5.	 <p>Media Litter Bin,          Configuration: Integrated          Garbage Sorting Bins,          Independent Butt Bin,          Independent Buttery Bin,          Strengthened Integrated Framework from          Square Tubes,          Ground Integrated Protection Case,          Integrated Leakage-proof Doorframe          Tempered Glass,          Heat-resistant Ventilating Cover          Fluorescent Tube (120W)          Earth Leakage Protector          Timing Controller of Light Power          Automatic Rolling System (30W)          Digital Keyboard Rolling System Programmer          LED Display Device          LED Caption Input Interface          Solar- electric Power Conversion System          LED Light Source</p>	2,18,750.00
6.	 <p>Standa – Steel Waste Bin,          STANDA is a post-mounted litter bin with a          discharge container that is unlocked by a triangular          snap lock.          Volume (L): 30 &amp; 50          Material: Galvanized steel Surface: Galvanized          or Galvanized -painted Assembly: Fixing Approx.</p>	21,750.00
7.	 <p>X-Cross Bin,          As part of the Chevron Waste Bins range:-          Chevron waste container of steel plate,          approximately 50 litre capacity, up to 4mm          thickness, with lid. The container is completely of          metal. Frame of round pipe, 42 mm diameter.          Comes with a liner and 8mm triangular lock, self-          latching. Body completely galvanized and coated.          Style Contemporary          Mounting Root fixed          Surface / baseplate fixed          Material Stainless Steel          Grade: 304          Capacity (litres): 50          Size (w x d x h): 487 x 399 x 1138,          Material option: Mild Steel</p>	28,750.00

8.		<b>Papper Boat,</b> <b>Style Contemporary</b> <b>Material:</b> Stainless Steel (304) <b>Size( H x L x W ) :</b> 920 x 770 x 390mm, <b>Capacity:</b> 50 Litres, <b>Finishing:</b> Matt, <b>Material option:</b> Mild Steel.	<b>33,750.00</b>
9.		<b>SPLASH,</b> <b>Style: Contemporary,</b> <b>Mounting:</b> Surface/Baseplate Fixed, <b>Material:</b> Stainless Steel(304), <b>Capacity:</b> 100 Litres, <b>Size (w x d x h) :</b> 530 x 400 x1070mm,	<b>33,750.00</b>
10.		<b>Clato</b> 1,5mm thick steel hood and frame, galvanized and powder coated. Front- and rear panel: 1,5mm (smooth) steel plate, galvanized and powder coated. Inner bin: plastic inner bin. Capacity: 70 litres.	<b>23,750.00</b>
11.		<b>Aiko SS Dustbins</b> 304 grade stainless steel with mat finish outer construction on level adjustment galvanized base. Height 1070mm, width 530mm, depth 400mm. Capacity: 90L.	<b>33,750.00</b>
12.		<b>Haito Dustbin</b> 1,5mm thick steel hood and frame, galvanized and powder coated, Front- and rear panel: 1,5mm (smooth) steel plate, galvanized and powder coated, Inner bin: plastic inner bin, Capacity: 50 litres.	<b>22,500.00</b>

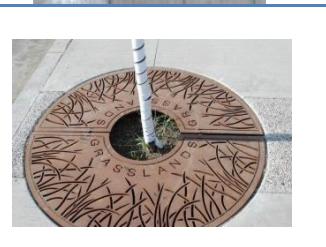
13.		<p><b>Cylinder Bin,</b>  <b>Mould Finish concrete base.</b>  <b>Black Standard Ribbed polyethylene tube body,</b>  <b>Hot Dip Galvanised steel,</b>  <b>Bin Material: Stainless Steel,</b>  <b>Size: Ø 27cm/36 L,</b>  <b>Size: Ø36cm/ 52 L.</b></p>	36,250.00
14.		<p><b>Isoba Litter Bin,</b>  <b>Material: Mild Steel</b>  <b>Bag Litter bin for urban areas</b>  <b>60L and 40L available versions</b>  <b>Excellent resistance to external environmental conditions 40L</b>  <b>version adaptable to walls</b>  <b>Entirely made from metal materials</b>  <b>Great sturdiness and resistance against vandal act.</b> *Material Option: Stainless Steel</p>	22,500.00
15.		<p><b>Taima Dustbin</b>  <b>3 MM and 4 MM steel hot dipped galvanized throughout, powder coated finish on panels.</b>  <b>Height 1172mm, width 550mm, depth 386mm.</b>  <b>Capacity 115L,</b>  <b>Material Option: M.S / Stainless Steel</b></p>	33,750.00
16.		<p><b>X Crossover Litter Bin,</b>  <b>Material: Stainless Steel,</b>  <b>Grade: SS 304,</b>  <b>Capacity: 50 Litres,</b>  <b>Height: 1069mm,</b>  <b>Width: 343mm,</b>  <b>Length: 513mm.</b></p>	26,250.00
17.		<p><b>Empara Bin,</b>  <b>Material: M.S,</b>  <b>Models Available:</b>  <b>Capacity      Length      Depth</b>  <b>50 Litres-      310mm      310mm</b></p>	28,750.00

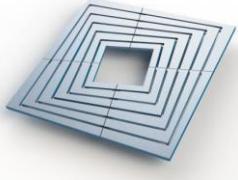
	<p><b>Twin Bin</b>            Painted in a single Derby Double Litter Bin            Capacity: 240 litres (2 x 120 litres)            Height: 1020mm Width: 915mm Depth: 535mm            Weight: 120kg 2mm</p> <p>Zintec steel with heavy duty front opening doors,            Laser cut LITTER lettering beneath each posting            aperture, with a gold backing plate 3 gold Vinyl            Tape bands as standard Vinyl TIDYMAN logo            applied to four sides,</p> <p>0.7mm galvanised steel liners with safety top edge            and 2 handles 10mm heavy duty solid steel base            20mm heavy duty stainless steel pivot hinge            Stainless steel slam lock mechanism Hexagonal key            operated heavy duty lock Powder galvanized prime            and polyester powder coat (black as standard)            Angled litter direction plates Stainless steel            escutcheons 6 posting apertures</p>	
18.		40,000.00
19.		31,250.00
20.		18,750.00
21.		23,750.00

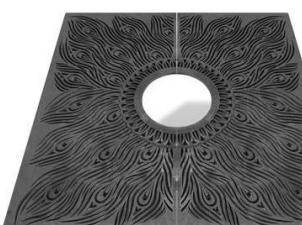
22.		<p>Share SS Table,          Material: Stainless Steel,          Size: 1760 x 1760 x 745mm,          Fixing: Base Plate Fixing/Free Standing,          Shape: Square Shape.</p>	48,750.00
23.		<p>WC- 451 Waiting Chair,          Material: Stainless Steel,          Seat Size: 71" W x 27" D,          Back Size: 27" D x 31" H,          Overall Dimension: 71" W x 27"D x 31" H,          Weight: 32 – 34 KG.</p>	16,250.00
24.		<p>WC – 452 Waiting Chair,          Material: Stainless Steel,          Seat Size: 71" W x 27" D,          Back Size: 27" D x 31" H,          Overall Dimension: 71" W x 27"D x 31" H,          Weight: 32 – 34 KG.</p>	11,250.00
25.		<p>WC – 453 Waiting Chair,          Material: Stainless Steel,          Seat Size: 71" W x 27" D,          Back Size: 27" D x 31" H,          Overall Dimension: 71" W x 27"D x 31" H,          Weight: 50 KG.</p>	16,250.00
26.		<p>WC – 454 Waiting Chair,          Material: Stainless Steel,          Seat Size: 71" W x 27" D,          Back Size: 27" D x 31" H,          Overall Dimension: 71" W x 27"D x 31" H,          Weight: 45 KG.</p>	11,250.00
27.		<p>FENTA – Steel Chair,          Material: Stainless Steel,          Grade: SS 304,          Size: L 1410 x W 400 x H 525mm</p>	33,750.00
28.		<p>POITA - steel chair,          Material: Stainless Steel,          Seat Length: 505mm,          Seat Depth: 315,          Seat Height: 446mm</p>	31,250.00

29.		<b>Tree Sit- Stainless Steel Chair,</b> Material: Stainless Steel, Grade: SS 304, Size(L, D, H) : 820mm, 480mm, 2250mm Shape: Circular Finish Type: Matt/Mirror	56,250.00
30.		<b>OPIYUM – Stainless Steel Chair,</b> Material: Stainless Steel, Grade: SS 304, Finish Type: Matt/Mirror, Size(L, D, H): 1800mm, 700mm, 470	18,000.00
31.		<b>HOT- Stainless Steel Chair,</b> Seat length (mm) 1715 Seat depth (mm) 550 Above ground height (mm) 875 Seat height (mm) 510 Weight (kg) 31.9	25,000.00
32.		<b>SS Bench – KAZE,</b> Material: Stainless Steel, Grade: SS 304, Finish Type: Matt/Mirror, Size(L,D, H): 1800mm, 564mm, 2400mm	28,000.00
33.		<b>Colourful Seating – Waiting Chair</b> Material: M.s, Seat Length: 2000mm, Seat Height: 430mm, Total Height: 792mm, Depth: 520mm, Finishing: Powder Coating.	25,000.00
34.		<b>PURE STEEL BENCH,</b> Material: Stainless Steel, Grade: SS 304, Style: Contemporary Fixings: Surface / baseplate fixed Seat length (mm): 2100 Seat depth (mm): 519 Above ground height (mm): 445 Seat height (mm): 445	43,750.00

35.	Park Bench, Material: Stainless Steel, Grade: SS 304, Fixings: Root fixed Fixing: Surface / base plate fixed Seat length (mm):2000/2600 Seat depth (mm) 480 Above ground height (mm) 427 Seat height (mm) 427	18,750.00
36.	 Park Seating's, Material: M.S. Fixings: Surface / baseplate fixed Seat length (mm) 1500 (trapezoidal); 2000 (straight) Seat depth (mm) 520 Aboveground height (mm) 430 Seat height (mm) 430	23,750.00
37.	 CHEVI STRATA WAITING CHAIR, Material: M.S, Size: 1920mm Width 640mm X Height 920mm.	16,250.00
38.	 CLASSICO WAITING CHAIR, Material: Stainless Steel, Grade: SS 304	17,500.00
39.	 ZOTASBENCHO Bench, Material: Stainless Steel, Grade: SS 304, Seating: expanded metal thickness 3 mm, round off edging thickness 8 mm, hot-dip galvanized.	27,500.00

40.		<b>CHEVI BENDU BENCH,</b> Material: Stainless Steel, Grade: SS 304, <span style="float: right;">18,750.00</span> Dimensions: Length 1800mm X Width: 570mm X Height: 470mm X Root Length: 450mm,
41.		<b>STEELWOOD BENCH</b> Material: Stainless Steel, Grade: SS 304, <span style="float: right;">52,486.75</span> Size: 6 feet length X 2.5 Feet height X 1.5 feet depth, Backrest Size: 6ft lenght x 400mm Height.
42.		<b>CHEVIOPAMA WAITING CHAIRS</b> Material: Stainless Steel, Grade: SS 304, <span style="float: right;">18,750.00</span> Length: 2700mm Width: 600mm Height: 460mm
43.		<b>Multi Seat (Advertising Bench),</b> Material: Stainless Steel, Grade: SS 304, <span style="float: right;">36,250.00</span> Seating Capacity: 4 Person, Length: 2188 mm, Height: 1000mm,
44.		<b>Squash Tree Grates,</b> Material: Cast Iron, Size1: 1200 x 1200, <span style="float: right;">22,500.00</span> Clear opening: 400 x 400mm, Thickness: 15mm. With Frame.
45.		<b>Vimov Laser Cut,</b> Material: Stainless Steel, Size: 1200mm Dia, <span style="float: right;">45,000.00</span> Clear Opening: 400mm Dia, Thickness: 15mm. With Frame.
46.		<b>Namono Laser Cut,</b> Material: Stainless Steel, Size: 1200 x 1200mm, <span style="float: right;">45,000.00</span> Clear Opening: 400 x 400mm, Thickness: 15mm. With Frame,

47.		Whoosh Laser Cut, Material: Stainless Steel, Size: 1200 x 1200mm, Clear Opening: 400 x 400mm, Thickness: 15mm. With Frame,	47,500.00
48.		<b>Oppo Cast Iron Tree Grate</b> The Oppo Tree Grates are perforated with flora motifs and available in 3 shapes: Circular   Square   Rectangular, Laser cut steel sheet galvanised and powder coated frames 40 x 30 x 4mm galvanised L-Profile steel with brackets, Circular: Ø1200mm (with 400mm diameter Hole),	20,000.00
49.		<b>Tree Grade HIMP</b> , Material: Cast Iron, Size: 1200 x 1200mm Clear Opening: Ø 400mm, Thickness: 15mm.	18,750.00
50.		<b>TOYOTO Tree Grate</b> , Material: Cast Iron, Dimension: 1200 x 1200mm Clear Opening: Ø400mm, Thickness: 15mm.	20,000.00
51.		<b>CIRCULAR Tree grate</b> , Material: Cast Iron, Dimension: Ø1200mm, Clear Opening: Ø400mm, Thickness: 15mm.	20,000.00
52.		<b>CHECKERED Tree Grates</b> , Material Cast Iron, Size 1200 x 1200mm, Clear Opening Diameter 400mm, Thickness: 15mm.	20,000.00
53.		<b>Version Tree Grates</b> , Material M.S, Shape Round, Size 1200mm Diameter, Clear opening 500mm Diameter, Height 40mm, Colour As per requirement	35,000.00

54.		<p>Vadira Cast Iron Tree Grates          Size 1200 x 1200mm,          Clear Opening 400mm x 400mm,          Frame Depth 15mm,          Colour As per requirement,</p>	31,250.00
55.		<p>Vaiko Cast Iron Tree Grade          Size Dia 1200mm,          Inner Dia 400mm,          Frame Depth 15mm,          Colour as per your requirement,</p>	20,000.00
56.		<p>Cast Iron Tree Grade,          Size 1200mm x 1200mm,          Clear Opening Dia 600mm,          Thickness: 15mm.          With Frame.</p>	20,000.00
57.		<p>Bulls SS Bollards,          Material: M.S With Black P.U Coating,          Above ground height: 1000mm or to site          requirement,          Below ground height: 300mm or to site          requirement,          Diameter: 114mm.</p>	4,168.00
58.		<p>Steel Bollard,          Material: Stainless Steel,          Grade: SS 304,          Above ground height: 1000mm,          Below ground height: 300mm,          Diameter: 114mm.</p>	5,000.00
59.		<p>BLACKEYE,          Material: Stainless Steel,          Grade: SS 304,          Diameter: 100mm,          Height: 4Ft.          Finish: Mat/Mirror,</p>	5,000.00
60.		<p>Pencil Bollard,          Size: 100mm x 4 Ft Height,          Finishing: Powder Coated.</p>	18,750.00

61.	 <p>A white, curved cigarette-shaped bollard with a red cigarette butt at the top. A curved arrow on the side points to the word "no smoking".</p>	<p><b>Cigarette Bollard,</b>          Size: H 1020 x W 180 x L 235mm,          Finishing: Powder Coated.</p>	18,750.00
62.	 <p>A modern bus stop shelter with a blue bench and a clear acrylic panel.</p>	<p><b>SOBER,</b>          Material: Stainless Steel,          Grade: SS 304,          Size: 12' Long x 5' Width x 8' Height,          Roof: 12' Long x 5' Width,          Base: Length 8' x Width 3' x Height 6',          Seating Arrangement Bench Size: 10' x 8'</p>	3,12,500.00
63.	 <p>A green bus stop shelter with a curved roof and a blue bench.</p>	<p><b>GRASSI,</b>          Material: Stainless Steel,          Grade: SS 304,          Size: 8' Long x 3' Width x 8' Height,          Roof: 8' Long x 3' Width,</p>	1,81,250.00
64.	 <p>A blue bus stop shelter with a curved roof and a blue bench.</p>	<p><b>RIVERTO,</b>          Material: Stainless Steel,          Grade: SS 304,          Size: 10' Length x 5' Width x 8' Height,          Roof: Roof Length 10' x Roof Width 5',          Base: Length 8' x Width 3' x Height 6',          Seating Arrangement 13' x 6'</p>	2,56,250.00
65.	 <p>A white bus stop shelter with a curved roof and a blue bench.</p>	<p><b>OPAL Model A/c,</b>          Material: Stainless Steel,          Grade: SS 304,          Duct A/c,          10 Seater Bench,          CCTV Camera.</p>	36,25,000.00
66.	 <p>A row of stainless steel bicycle racks.</p>	<p><b>Bicycle Steel Stand,</b>          Material: Stainless Steel,          Grade: SS 304,          Dimension (H x L): 875 x 790mm.</p>	31,250.00
67.	 <p>A row of stainless steel bicycle racks.</p>	<p><b>Bicycle Steel Stand,</b>          Material: Stainless Steel,          Grade: SS 304,          Dimension (H x L): 875 x 950mm.</p>	31,250.00
68.	 <p>A row of stainless steel bicycle racks.</p>	<p><b>Bicycle Steel Stand,</b>          Material: Stainless Steel,          Grade: SS 304,          Size: 10Ft.</p>	18,750.00

69.		<p><b>Key Bicycle Stand,</b>  <b>Material:</b> M.S,  <b>Finishing:</b> Powder Coating,  <b>Dimension:</b> H 895 x W 386 x L 90mm.</p> <p style="text-align: right;">27,500.00</p>
70.		<p><b>Wall Mounted Bicycle Stand</b>  <b>Material:</b> G.I,  <b>Dimension:</b> 335 x 90 x285mm,  <b>Finishing:</b> Mat Finish.</p> <p style="text-align: right;">4,000.00</p>
71.		<p><b>Planto Stainless Steel Planter,</b>  <b>Material:</b> Stainless Steel,  <b>Grade:</b> SS 304,  <b>Dimension:</b> H 745 x W 1200 x D 1200mm,</p> <p style="text-align: right;">43,750.00</p>
72.		<p><b>Stainless Steel Planter,</b>  <b>Material:</b> Stainless Steel,  <b>Grade:</b> SS 304,  <b>Shape:</b> Cylindrical Shape.</p> <p style="text-align: right;">18,750.00</p>
23.		<p><b>Stainless Steel Planter,</b>  <b>Material:</b> Stainless Steel,  <b>Grade:</b> SS 304,  <b>Shape:</b> Rectangular.</p> <p style="text-align: right;">18,750.00</p>
24.		<p><b>Planter With Bench,</b>  <b>Material:</b> Stainless Steel,  <b>Grade:</b> SS 304,  <b>Size:</b> H 745 x W 1600 x D 1600mm,  <b>With Seating Bench.</b></p> <p style="text-align: right;">48,750.00</p>

25.		<b>Chevi Direction,</b> Features: Chevron's Signage Column Submerged fixing Vinyl finger arm text grade 304 Stainless Steel,	18,750.00
26.		<b>Airport Trolley,</b> Main Body Material: Aluminium Loading Capacity: 250 kgs, Overall Size(LxWxH): 950 x 670 x 1050, Basket Size(LxWxH): 525 x 220 x 150mm.	28,500.00
27.		<b>Seating Tree Grate,</b> Material: Cast Iron, Size: Ø1000mm, Clear Opening: Ø400mm, Thickness: 20mm	37,500.00
28.		<b>Expresso LED Bollard,</b> Material: M.S, Size: Ø180 x 1000mm Height, Finishing: Powder Coating,	11,250.00
29.		<b>Hot Dog Push Cart,</b> Material: Stainless Steel, Grade: SS 304 Size: 79 x 55 x 24".	1,31,250.00
30.		<b>E-Toilet,</b> Material: GI Profile, Size: L 1380 x W 3520 x H 3110mm Weight: 1400 Kg.	15,00,000.00



### Commercial Terms and Conditions:-

Payment	50% Advance and the balance 50% against P.I.
GST	18% Extra.
Delivery	Within 3 weeks after receipt of P.O along with advance.
Freight	Extra.
Brand	Chevron Inc.

Thanks & Regards,  
From Chevron Inc.,  
Karen Fernandez



#### Sales & Marketing Director

T: +912223686777

M: +918767230851

karen.chevroninc@gmail.com

www.chevroninc.co.in

111, Floor-1, 15A, Supariwala Estate, Tata Road,

No.2 Roxy Cinema, Opera House, Girgaon.

Mumbai - 400 004, Maharashtra, India.





## MNX PCM 95/60 G



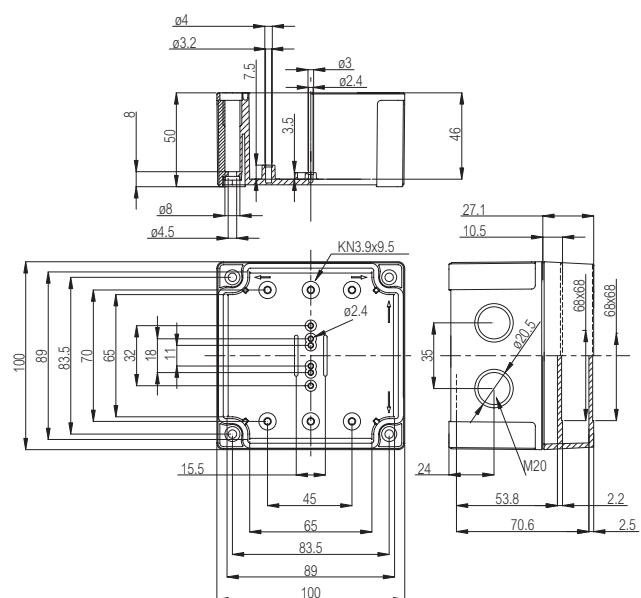
**Order symbol:** PCM 95/60 G  
**Product nbr:** 6016331  
**Description:** Enclosure, PC  
**Remarks:** Grey cover

**EAN:** 6418074054777  
**EI. number:**  
 Finland: 3421392  
 Electric No. 8212027569  
 Denmark:  
 Electric No. Sweden: 2535300

Including: Base with metric knock-outs and PUR gasket, screws for mounting plate/DIN-rail and cover with polyamide cover screws.

Sample photo

Dimensions:	Length	Width	Height	Accessories:				
mm:	100	100	60					
inch:	3.9	3.9	2.4					
<b>Materials:</b>								
<b>Material:</b>	Polycarbonate							
<b>Base colour:</b>	RAL 7035 -light grey							
<b>Cover screws material:</b>	Polyamide							
<b>Cover colour:</b>	RAL 7035 -light grey							
<b>Cover screws colour:</b>	Grey							
<b>Gasket material:</b>	Polyurethane							
<b>Temperatures:</b>								
<b>Temperature °C (short term):</b>	-40 ... 120 °C							
<b>Temperature °C (continuous):</b>	-40 ... 80 °C							
<b>Temperature °F (short term):</b>	-40 ... 250 °F							
<b>Temperature °F (continuous):</b>	-40 ... 175 °F							
<b>Accessories:</b>								
MIV 95	Mounting plate (Galvanized steel)							
<b>Rating:</b>								
Ingress Protection (EN 60529): IP66/IP67								
Impact Resistance (EN 62262): IK08								
Electrical insulation: Totally insulated								
Halogen free (DIN/VDE 0472, Part 815): 1								
UV resistance: UL 508								
Flammability Rating: UL 746C 5"								
Glow Wire Test (IEC 695-2-1) °C: 960								
NEMA Class: NEMA 1, 4, 4X, 6, 12, 13								
<b>Certificates:</b>								
Germanischer Lloyd (GL)								
SGS Fimko								
Gost R								



**Kind Attention: Mr. Kunal**

M/s. TCE  
Pune

Dear Sir

Thank you for your interest in Fibox products. Please find below the prices for the required products.

S.No	Product No.	Order Symbol	Description	Dimension	Qty.	Unit Price	Amount
1	6016332	PCM 95/75 G	PC Enclosure as per the attached technical data sheet	100x100x75	1	359	359.00
<b>Total in INR</b>							<b>359.00</b>

**Terms and Conditions:-**

**Discount** Above prices quoted are special discounted price

**GST** GST Extra at 18%

**Delivery Schedule** Immediate exstock from the date of technically & commercially clear PO.

**Payment** 100% advance against PI

**Freight** Freight Extra at Actual.

**Price basis** FOR Chakan

**Validity** 7 days

**Warranty** 12 months.

**Order clause** We can route the order through our authorised channel partner.

We are confident that you will find our offer most competitive and will place your valuable order with us.

For any further assistance/clarification please feel free to contact us anytime.

With best regards,

**For Fibox India Pvt Ltd**

**Gaurav Jadhav**

**Asst. Manager - Sales**

**(M)9075085745**

**Email:** gaurav.jadhav@fibox.co.in



# K-LITE INDUSTRIES = India's Lighting Company =

D-10, Ambattur Industrial Estate, Chennai - 600 058. :-

Tel : 26257710, 42281950. Fax : 26257866, 26243500

Cell : 95000 79797, 95000 85511

Email : info@klite.in, klite@vsnl.com, Website : www.klite.in

**KIND ATTN : MR HARJOT SINGH**

**SUB. : OFFER FOR LIGHTING FIXTURE**

Dear Sir,

We are pleased to submit an offer of Lighting as per your requirement, we hope that you will find an offer as per your expectations.

BOQ	General Description	Qty	Unit	Price discounted	Dis%	Basic Price	Basic Amount
	Up down light led fixture, 12Watts, size 150x100x160, 3000°K color temperature with power supply.	1	Nos.	5140		5140	5140
		1					5140

### **TERMS AND CONDITIONS**

- 1 GST : Extra as applicable at the time of billing.
- 2 Availability : Within 4-5 Weeks
- 3 Delivery : Ex-ware house, destination
- 4 Freight : Extra as actual.
- 5 Validity Only : Seven Days
- 6 Payment : 50% Advance balance Against Proforma Invoice before delivery.
- 7 Warranty : 12 months on luminaries only for manufacturing defects, EXCLUDING Faulty/Incorrect Installation.  
: EXCLUDING Voltage & Frequency Fluctuations.
- 8 Note :- : Any Changes in BOQ and Technical Changes in quoted Standard Items will cost Extra



Any other information in this regard is highly appreciated.

**REGARDS,**

**FOR K.Lite industries**

With Regards,

Sanjay Sharma Manager - Sales & Marketing

Cell : 8360187087

Email : sanjay@klite.in

[https://www.facebook.com/India  
sLightingCompany](https://www.facebook.com/India<br/>sLightingCompany)

# Quotation



To,	Date	May 14, 2021
Tata Consulting Engineers Limited (Noida)	Quotation #:	NP/21-22/SQ64.1.
Green Boulevard, Ground Floor Tower B & C, Plot No. 100	Enquiry Date	05/14/2021 00:00:00
Noida, Uttar Pradesh - 201309	Enquiry No	

## **Terms And Condition**

GST 18% Extra

Rates are FOR Site Delivery

Prices are inclusive of required Coupler for Cable Ducting

## Third Party Inspection on Buyers Scope

Supply will be as per IS 16205 Part 24 / IS 14930

Payment as per mutually agreed terms.

One-year manufacturer's warranty especially for this product. Warranty covers manufacturing defects for a period of one year from invoice date.

For NOBLE POLYTEC.

### **Authorized Signatory**

**Price list 04/2019****Hensel Electric India Pvt. Ltd.**

Industrial Electrical Power Distribution Systems

35, Kunnam Village  
Sunguvarchathram-Walajabad Road  
Sriperumbudur 631 604  
Kanchipuram Dist., Tamil Nadu  
INDIA

Tel: +91 44 6712 7700  
Fax: +91 44 6712 7724  
Email: [info@hensel-electric.in](mailto:info@hensel-electric.in)  
Web: [www.hensel.in](http://www.hensel.in)

**w.e.f. April 15, 2019**



### Cable Junction Boxes IP 55 with membranes for cable entry

SI.No.	Cable Size	Box Dimensions (LxBxH) (mm)	Packing Quantity (Nos.)	Catalog No. WITHOUT TERMINALS	Price ₹/- Each	Catalog No. WITH TERMINALS	Price ₹/- Each
1.	2.5 sq.mm	88 x 88 x 47	5	DE 9320	175.00	DE 9325	305.00
2.	4 sq.mm	98 x 98 x 52	5	DE 9340	220.00	DE 9345	340.00

### Cable Junction Boxes IP 65 with "plain walls"

1.	2.5 sq.mm	88 x 88 x 53	5	D 8020	220.00		
2.	2.5 sq.mm	88 x 88 x 53	5	D 8120	220.00		
3.	4 sq.mm	98 x 98 x 58	5	D 8040	310.00		
4.	6 sq.mm	139 x 119 x 70	5	K 8060	565.00		
5.	10 sq.mm	167 x 125 x 82	5	K 8100	640.00		
6.	16/25 sq.mm	200 x 160 x 98	2	K 8250	1120.00		
7.	16/35 sq.mm	260 x 210 x 116	1	K 8350	1980.00		
8.	25/35/50 sq.mm	210 x 310 x 116	1	K 8500	3380.00		

### Cable Junction Boxes IP 66 with metric knockouts for cable entry

1.	1.5-2.5 sq.mm	93 x 93 x 62	5	DK 0200 G	300.00	DK 0202 G	395.00
2.	1.5-2.5 sq.mm	104 x 104 x 70	5			DK 0402 G	425.00
3.	1.5-4 sq.mm	104 x 104 x 70	5	DK 0400 G	370.00	DK 0404 G	460.00
4.	1.5-4 sq.mm	130 x 130 x 77	5			DK 0604 G	575.00
5.	2.5-6 sq.mm	130 x 130 x 77	5	DK 0600 G	675.00	DK 0606 G	915.00
6.	2.5-6 sq.mm	130 x 180 x 77	5			DK 1006 G	1065.00
7.	4-10 sq.mm	130 x 180 x 77	5	DK 1000 G	760.00	DK 1010 G	1200.00
8.	4-10 sq.mm	155 x 210 x 92	2			DK 1610 G	1845.00
9.	10-16 sq.mm	155 x 210 x 92	2	DK 1600 G	1295.00	DK 1616 G	2295.00
10.	10-25 sq.mm	205 x 255 x 112	2	DK 2500 G	2145.00	DK 2525 G	3450.00
11.	16-35 sq.mm	225 x 295 x 122	1	DK 3500 G	2940.00	DK 3535 G	11505.00
12.	16-50 sq.mm	255 x 355 x 122	1	DK 5000 G	3615.00	DK 5054 G	10225.00
13.	16-50 sq.mm	255 x 355 x 122	1			DK 5055 G	12080.00

### Cable Junction Boxes IP 65 with metric knockouts for cable entry

1.	50/70 sq.mm	300 x 450 x 170	1			K 7004 (4 terminals)	14850.00
2.	50/70 sq.mm	300 x 450 x 170	1			K 7005 (5 terminals)	16255.00
3.	150 sq.mm	300 x 450 x 170	1			K 1204 (4 terminals)	28240.00
4.	150 sq.mm	300 x 450 x 170	1			K 1205 (5 terminals)	30765.00
5.	240 sq.mm	300 x 600 x 170	1			K 2404 (4 terminals)	36585.00
6.	240 sq.mm	300 x 600 x 170	1			K 2405 (5 terminals)	42160.00



**ENYCASE****DK THERMOPLASTIC CABLE JUNCTION BOXES****HENSEL**

**Cable Junction Boxes IP 66/67 “weather proof”, for outdoor installation  
(with knockouts for cable entry)**

Sl.No.	Cable Size	Box Dimensions (LxBxH) (mm)	Packing Quantity (Nos.)	Catalog No. WITHOUT TERMINALS	Price ₹/- Each	Catalog No. WITH TERMINALS	Price ₹/- Each
1.	1.5-2.5 sq.mm	93 x 93 x 62	5	KF 0200 G	400.00	KF 0202 G	590.00
2.	1.5-2.5 sq.mm	104 x 104 x 70	5			KF 0402 G	695.00
3.	1.5-4 sq.mm	104 x 104 x 70	5	KF 0400 G	475.00	KF 0404 G	725.00
4.	1.5-4 sq.mm	130 x 130 x 77	5			KF 0604 G	950.00
5.	2.5-6 sq.mm	130 x 130 x 77	5	KF 0600 G	905.00	KF 0606 G	1315.00
6.	2.5-6 sq.mm	130 x 180 x 77	5			KF 1006 G	1540.00
7.	4-10 sq.mm	130 x 180 x 77	5	KF 1000 G	1055.00	KF 1010 G	1695.00
8.	4-10 sq.mm	155 x 210 x 92	2			KF 1610 G	1970.00
9.	10-16 sq.mm	155 x 210 x 92	2	KF 1600 G	1430.00	KF 1616 G	2205.00
10.	10-25 sq.mm	205 x 255 x 112	2	KF 2500 G	2255.00	KF 2525 G	3125.00
11.	16-35 sq.mm	225 x 295 x 122	1	KF 3500 G	2655.00	KF 3535 G	11260.00
12.	16-50 sq.mm	255 x 355 x 122	1	KF 5000 G	4260.00	KF 5050 G	12325.00



**Cable Junction Boxes IP 66/67 “weather proof”, for outdoor installation  
(with knockouts for cable entry - Black colour )**

1.	1.5-2.5 sq.mm	93 x 93 x 62	5	KF 0200 B	400.00	KF 0202 B	590.00
2.	1.5-2.5 sq.mm	104 x 104 x 70	5			KF 0402 B	695.00
3.	1.5-4 sq.mm	104 x 104 x 70	5	KF 0400 B	475.00	KF 0404 B	725.00
4.	1.5-4 sq.mm	130 x 130 x 77	5			KF 0604 B	950.00
5.	2.5-6 sq.mm	130 x 130 x 77	5	KF 0600 B	905.00	KF 0606 B	1315.00
6.	2.5-6 sq.mm	130 x 180 x 77	5			KF 1006 B	1540.00
7.	4-10 sq.mm	130 x 180 x 77	5	KF 1000 B	1055.00	KF 1010 B	1695.00
8.	4-10 sq.mm	155 x 210 x 92	2			KF 1610 B	1970.00
9.	10-16 sq.mm	155 x 210 x 92	2	KF 1600 B	1430.00	KF 1616 B	2205.00
10.	10-25 sq.mm	205 x 255 x 112	2	KF 2500 B	2255.00	KF 2525 B	3125.00
11.	16-35 sq.mm	225 x 295 x 122	1	KF 3500 B	2655.00	KF 3535 B	11260.00
12.	16-50 sq.mm	255 x 355 x 122	1	KF 5000 B	4260.00	KF 5050 B	12325.00



**Cable Junction Boxes IP 66/67 “weather proof”, for outdoor installation  
(with plain walls )**

1.	1.5-2.5 sq.mm	93 x 93 x 62	5	KF 0200 H	360.00		
2.	1.5-4 sq.mm	104 x 104 x 70	5	KF 0400 H	435.00		
3.	2.5-6 sq.mm	130 x 130 x 77	5	KF 0600 H	745.00		
4.	4-10 sq.mm	130 x 180 x 77	5	KF 1000 H	950.00		
5.	10-16 sq.mm	155 x 210 x 92	2	KF 1600 H	1290.00		
6.	10-25 sq.mm	205 x 255 x 112	2	KF 2500 H	2255.00		
7.	16-35 sq.mm	225 x 295 x 122	1	KF 3500 H	2655.00		
8.	16-50 sq.mm	255 x 355 x 122	1	KF 5000 H	4260.00		



**Cable Junction Boxes IP 66/67 “weather proof”, for outdoor installation  
(with plain walls - Black colour)**

1.	1.5-2.5 sq.mm	93 x 93 x 62	5	KF 0200 C	360.00		
2.	1.5-4 sq.mm	104 x 104 x 70	5	KF 0400 C	435.00		
3.	2.5-6 sq.mm	130 x 130 x 77	5	KF 0600 C	745.00		
4.	4-10 sq.mm	130 x 180 x 77	5	KF 1000 C	950.00		
5.	10-16 sq.mm	155 x 210 x 92	2	KF 1600 C	1290.00		
6.	10-25 sq.mm	205 x 255 x 112	2	KF 2500 C	2255.00		
7.	16-35 sq.mm	225 x 295 x 122	1	KF 3500 C	2655.00		
8.	16-50 sq.mm	255 x 355 x 122	1	KF 5000 C	4260.00		

**ENYCASE****DK THERMOPLASTIC CABLE JUNCTION BOXES****HENSEL**

Sl.No.	Cable Size	Box Dimensions (LxBxH) (mm)	Catalog No. (Grey)	Price ₹ /- Each	Catalog No. (Black)	Price ₹ /- Each
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**Cable Junction Boxes (Grey & Black) IP 68 "Water proof", for Encapsulating**

1.	1.5-2.5 sq.mm	93 x 93 x 62	WP 0202 G	4065.00	WP 0202 B	4065.00
2.	1.5-2.5 sq.mm	104 x 104 x 70	WP 0402 G	4885.00	WP 0402 B	4885.00
3.	1.5-4 sq.mm	104 x 104 x 70	WP 0404 G	4930.00	WP 0404 B	4930.00
4.	1.5-4 sq.mm	130 x 130 x 77	WP 0604 G	6330.00	WP 0604 B	6330.00
5.	2.5-6 sq.mm	130 x 130 x 77	WP 0606 G	6515.00	WP 0606 B	6515.00
6.	2.5-6 sq.mm	130 x 180 x 77	WP 1006 G	7755.00	WP 1006 B	7755.00
7.	4-10 sq.mm	130 x 180 x 77	WP 1010 G	8275.00	WP 1010 B	8275.00

**ISO-FILL BRW Two component gel**

1.	Set sealing compound 350 ml	GH 0350	3645.00
2.	Set sealing compound 500 ml	GH 0500	4390.00
3.	Set sealing compound 850 ml	GH 0850	5825.00
4.	Set sealing compound 1200 ml	GH 1200	6720.00
5.	Set sealing compound 5000 ml	GH 5000	14060.00
6.	Set sealing compound 10000 ml	GH 10000	27490.00

**DK Cable Junction Boxes IP 55 for "Functional integrity" - (Communication Box E30)**

1.	255 x 255 x 155	FK 5000 Price on request
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**DK Cable Junction Boxes IP 65 for "Functional integrity" - (Orange colour - Stainless steel)**

1.	16 - 35 sq.mm	262 x 513 x 130	FK 6505 Price on request
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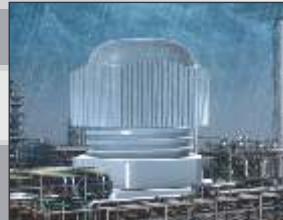
**DK Cable Junction Boxes IP 66 for "Functional integrity" - (Orange colour - polycarbonate)**

1.	1.5 sq.mm	104 x 104 x 70	FK 0402 Price on request
2.	1.5 - 2.5 sq.mm	104 x 104 x 70	FK 0404 Price on request
3.	1.5 - 2.5 sq.mm	130 x 130 x 77	FK 0604 Price on request
4.	1.5 - 6 sq.mm	130 x 130 x 77	FK 0606 Price on request
5.	1.5 - 6 sq.mm	210 x 155 x 92	FK 1606 Price on request
6.	1.5 - 6 sq.mm	210 x 155 x 92	FK 1616 Price on request

**DK Cable Junction Boxes IP 66 for "Functional integrity" - (Orange colour - Sheet steel)**

1.	0.5 - 1.5 sq.mm	150 x 150 x 80	FK 9025 Price on request
2.	1.5 - 4 sq.mm	200 x 150 x 80	FK 9105 Price on request
3.	1.5 - 6 sq.mm	200 x 200 x 80	FK 9255 Price on request
4.	1.5 - 10 sq.mm	200 x 200 x 80	FK 9259 Price on request





Catalog No.	Cable Entry	Sealing Range (mm dia)	Packing Quantity (Nos.)	Price ₹ /- Each
<b>Stepped Glands IP 54</b>				
STM 16	M 16	3.5 - 12	50	23.00
STM 20	M 20	5 - 16	20	23.00
STM 25	M 25	5 - 21	20	34.00
STM 32	M 32	13 - 26.5	10	40.00
STM 40	M 40	13 - 34	5	59.00



ESM 16	M 16	4.5 - 11	50	23.00
ESM 20	M 20	6 - 13	20	23.00
ESM 25	M 25	9 - 17	20	23.00
ESM 32	M 32	9 - 23	10	24.00
ESM 40	M 40	17 - 30	5	84.00



EDK 16	M 16	5 - 10	50	20.00
EDK 20	M 20	6 - 13	20	28.00
EDK 25	M 25	9 - 17	20	42.00
EDK 32	M 32	12 - 23	10	59.00
EDK 40	M 40	17 - 30	5	107.00



EDR 16	M 16	M 16	50	28.00
EDR 20	M 20	M 20	20	34.00
EDR 25	M 25	M 25	20	45.00
EDR 32	M 32	M 32	10	99.00
EDR 40	M 40	M 40	5	194.00

NEW


**Insulated Cable Glands For SWA Cables IP 66 / 67 / 68**  
for corrosive and wet locations

GSC 20	M 20	11.5-16 mm	10	670.00
GSC 21	M 20	14.5-20.5 mm	10	700.00
GSC 25	M 25	20.5-26.5 mm	5	1040.00
GSC 32	M 32	26.5-33.5 mm	5	1495.00



ET 20	M 20	10	40.00
ET 25	M 25	10	55.00
ET 32	M 32	10	95.00



Sl.No.	Description	Box Dimensions (LxBxH) (mm)	TRANSPARENT LID Catalog No.	Price ₹/- Each	OPAQUE LID Catalog No.	Price ₹ / - Each
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### Enystar Empty Enclosures

1.	Size 1 box	276 x 186 x 186	FP 0101	4740.00	FP 0121	4740.00
2.	Size 2 box	276 x 366 x 186	FP 0211	6195.00	FP 0231	6140.00
3.	Size 3 box	276 x 546 x 186	FP 0311	8195.00	FP 0331	8195.00
4.	Size 4 box	366 x 546 x 186	FP 0411	9060.00	FP 0431	9195.00



### Enystar Circuit Breaker Boxes with closing plates

1.	Size 1 box	276 x 186 x 186	FP 1108	10915.00
2.	Size 2 box	276 x 366 x 186	FP 1218	15655.00
3.	Size 3 box	276 x 546 x 186	FP 1318	24945.00
4.	Size 4 box	366 x 546 x 186	FP 1418	29675.00

## ENYSTAR Modular VTPN Distribution Board System up to 250 A IP 66

Combinable enclosure system for self-assembly of distribution boards, intended to be operated by ordinary persons according to IEC 61439-3

Protection Class 1, Earthed.

Available in 4 way, 8 way, 12 way, 16 way versions





## ENYBOARD KV SMALL TYPE DISTRIBUTION BOARDS

**HENSEL**

Sl.No.	Description	Box Dimensions (LxBxH) (mm)	Catalog No. WITH PE + N TERMINALS	Price ₹/- Each	Catalog No. WITHOUT PE + N TERMINALS	Price ₹/- Each
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### KV Thermoplastic Circuit Breaker Boxes IP 65 (with metric knockouts for cable entry)

1.	1 row 3 modules	102 x 197 x 92	KV 7103	1605.00	KV 6103	1450.00
2.	1 row 4 modules	126 x 228 x 111	KV 7104	2020.00	KV 6104	1810.00
3.	1 row 6 modules	146 x 238 x 111	KV 7106	2315.00	KV 6106	2080.00
4.	1 row 9 modules	202 x 238 x 111	KV 7109	2895.00	KV 6109	2610.00
5.	1 row 12 modules	295 x 333 x 129	KV 9112 M	4790.00	KV 8112 M	4060.00
6.	1 row 18 modules	400 x 333 x 129	KV 9118 M	5380.00	KV 8118 M	4395.00
7.	2 rows 24 modules	295 x 458 x 129	KV 9224 M	6805.00	KV 8224 M	5330.00
8.	2 rows 36 modules	403 x 483 x 129	KV 9236 M	8790.00	KV 8236 M	6870.00
9.	3 rows 36 modules	295 x 583 x 129	KV 9336 M	8405.00	KV 8336 M	7145.00
10.	4 rows 48 modules	295 x 708 x 129	KV 9448 M	11110.00	KV 8448 M	10200.00
11.	3 rows 54 modules	403 x 630 x 129	KV 9354 M	12315.00	KV 8354 M	11545.00



### KV PC Small - type Distribution Boards IP 65 "Weather proof"

1.	4.5 modules	126 x 228 x 111	KV PC 8104	2395.00
2.	9 modules	200 x 238 x 111	KV PC 8109	3000.00
3.	12 modules	295 x 333 x 129	KV PC 9112	5505.00
4.	24 modules	295 x 458 x 129	KV PC 9224	8265.00
5.	36 modules	295 x 583 x 129	KV PC 9336	11195.00
6.	48 modules	295 x 708 x 129	KV PC 9448	14700.00

## ENYFLEX

Empty enclosures in accordance with IEC62208  
for customized solutions and individual application



### Empty Boxes IP 66

Sl.No.	Description	Box Dimensions (LxBxH) (mm)	Catalog No.	Price ₹/- Each
1.	Box without mounting plate (with transparent lid)	136 x 253 x 115	KG 9001	1700.00
2.	Box without mounting plate (with transparent lid)	168 x 253 x 115	KG 9002	1785.00
3.	Box without mounting plate (with transparent lid)	217 x 253 x 115	KG 9003	1915.00
4.	Box without mounting plate (with opaque lid)	136 x 253 x 115	KG 9001 IN	1700.00
5.	Box without mounting plate (with opaque lid)	168 x 253 x 115	KG 9002 IN	1785.00
6.	Box without mounting plate (with opaque lid)	217 x 253 x 115	KG 9003 IN	1915.00
7.	Box with mounting plate (with transparent lid)	295 x 583 x 182	KV 9331	11825.00



### Empty Boxes IP 66 (with plain walls)

Sl.No.	Description	Box Dimensions (LxBxH) (mm)	TRANSPARENT LID Catalog No.	Price ₹/- Each	OPAQUE LID Catalog No.	Price ₹/- Each
1.	Size 1 box	300 x 150 x 170	K 0100	2485.00	K 0101	2485.00
2.	Size 2 box	300 x 300 x 170	K 0200	3540.00	K 0201	3540.00
3.	Size 3 box	300 x 450 x 170	K 0300	4725.00	K 0301	4725.00
4.	Size 4 box	300 x 600 x 170	K 0400	5530.00	K 0401	5530.00

Sl.No.	Description	Box Dimensions	TRANSPARENT LID		OPAQUE LID	
			Catalog No.	Price ₹/- Each	Catalog No.	Price ₹/- Each

### Mi - Empty Boxes



1.	Size 1 box	300 x 150 x 170	Mi 0100	2825.00	Mi 0101	2825.00
2.	Size 2 box	300 x 300 x 170	Mi 0200	4060.00	Mi 0201	4060.00
3.	Size 3 box	300 x 450 x 170	Mi 0300	5345.00	Mi 0301	5345.00
4.	Size 4 box	300 x 600 x 170	Mi 0400	6635.00	Mi 0401	6635.00
5.	Size 6 box	450 x 600 x 170	Mi 0600	11620.00	Mi 0601	11620.00
6.	Size 8 box	600 x 600 x 170	Mi 0800	14685.00	Mi 0801	14685.00
7.	Size 2 box with high lid	300 x 300 x 214	Mi 0210	4365.00	Mi 0211	4365.00
8.	Size 3 box with high lid	300 x 450 x 214	Mi 0310	5810.00	Mi 0311	5810.00
9.	Size 4 box with high lid	300 x 600 x 214	Mi 0410	7250.00	Mi 0411	7250.00



### Mi Boxes with hinged doors

1.	Size 2 box	300 x 300 x 182	Mi 0220	4605.00	Mi 0221	4605.00
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### Mi Boxes with hinged lids

1.	Size 1 box	300 x 165 x 170	Mi 9100	4740.00	Mi 9101	4740.00
2.	Size 2 box	300 x 315 x 170	Mi 9200	5910.00	Mi 9201	5910.00
3.	Size 2 box with high lid	300 x 315 x 214	Mi 9210	6200.00	Mi 9211	6200.00
4.	Size 3 box	315 x 450 x 170	Mi 9300	7095.00	Mi 9301	7095.00
5.	Size 3 box with high lid	315 x 450 x 214	Mi 9310	7545.00	Mi 9311	7545.00
6.	Size 4 box	315 x 600 x 170	Mi 9400	8355.00	Mi 9401	8355.00
7.	Size 4 box with high lid	315 x 600 x 214	Mi 9410	8955.00	Mi 9411	8955.00

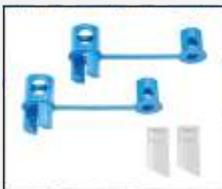
### Available with different locking provisions



Mi Key Lock



Mi Manual Operation



Mi Padlocking



Mi Sealing

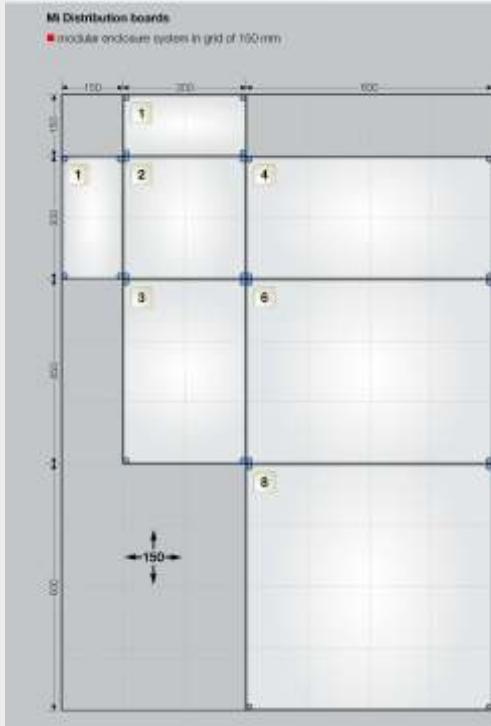


Mi Triangular key



Mi Tool Operation

**Mi Distribution boards**  
 Modular enclosure system in grid of 100 mm



- For the assembly of power switchgear and controlgear assemblies (PSC) up to 630 A
- Enclosures can be used as well as single boxes



Mi Busbar box



MI Circuit breaker box



Mi KWH meter box



MI isolator boxes,  
MI MCCB circuit - breaker boxes with thermal and magnetic release up to 630 A

Sl.No.	Cable Entry	Sealing range (mm dia)	Catalog No. RAL 7035 (Grey)	Catalog No. RAL 9005 (Black)	Packing Qty (Nos.)	Price ₹/- Each
<b>Synthetic short entry thread metric (with one piece sealing ring)</b>						
1.	M 12 x 1.5	2.5 - 6.5	1555.12.06	1545.12.06	100	28.00
2.	M 16 x 1.5	4.5 - 10	1555.17.10	1545.17.10	50	30.00
3.	M 20 x 1.5	7.0 - 13.0	1555.20.13	1545.20.13	50	36.00
4.	M 25 x 1.5	10.0 - 17.0	1555.25.17	1545.25.17	25	50.00
5.	M 32 x 1.5	17.0 - 25.0	1555.32.25	1545.32.25	20	88.00


**Synthetic short entry thread metric (with reducing sealing ring)**

1.	M 16 x 1.5	2.0 - 6.0	1555.17.06	1545.17.06	50	36.00
2.	M 20 x 1.5	3.5 - 8.0	1555.20.08	1545.20.08	50	42.00
3.	M 25 x 1.5	5.0 - 11.0	1555.25.11	1545.25.11	25	57.00


**Synthetic long entry thread metric (with one piece sealing ring)**

1.	M 12 x 1.5	2.5 - 6.5	1555.12.1.06	1545.12.1.06	100	32.00
2.	M 16 x 1.5	4.5 - 10	1555.17.1.10	1545.17.1.10	50	34.00
3.	M 20 x 1.5	7.0 - 13.0	1555.20.1.13	1545.20.1.13	50	45.00
4.	M 25 x 1.5	10.0 - 17.0	1555.25.1.17	1545.25.1.17	25	78.00
5.	M 32 x 1.5	17.0 - 25.0	1555.32.1.25	1545.32.1.25	20	105.00
6.	M 40 x 1.5	22.0 - 33.0	1555.40.1.33	1545.40.1.33	10	220.00
7.	M 50 x 1.5	28.0 - 38.0	1555.50.1.38	1545.50.1.38	5	342.00
8.	M 63 x 1.5	32.0 - 44.0	1555.63.1.44	1545.63.1.44	5	535.00


**Synthetic long entry thread metric (with reducing sealing ring)**

1.	M 16 x 1.5	2.0 - 6.0	1555.17.1.06	1545.17.1.06	50	39.00
2.	M 20 x 1.5	3.5 - 8.0	1555.20.1.08	1545.20.1.08	50	48.00
3.	M 25 x 1.5	5.0 - 11.0	1555.25.1.11	1545.25.1.11	25	84.00


**Locknuts**

1.	M 12 x 1.5		8212	8212.40	100	8.00
2.	M 16 x 1.5		8217	8217.40	100	8.00
3.	M 20 x 1.5		8220	8220.40	100	10.00
4.	M 25 x 1.5		8225	8225.40	100	15.00
5.	M 32 x 1.5		8232	8232.40	100	20.00
6.	M 40 x 1.5		8240	8240.40	50	34.00
7.	M 50 x 1.5		8250	8250.40	10	77.00
8.	M 63 x 1.5		8255.63	8245.63	10	105.00


**Synthetic entry thread Pg (with one piece sealing ring)**

1.	Pg 7	2.5 - 6.5	1555.07.06	1545.07.06	100	24.00
2.	Pg 9	3.0 - 8.0	1555.09.08	1545.09.08	50	28.00
3.	Pg 11	2.0 - 7.0	1555.11.07	1545.11.07	50	41.00
4.	Pg 11	4.0 - 10.0	1555.11.10	1545.11.10	50	32.00
5.	Pg 13	3.0 - 7.0	1555.13.07	1545.13.07	50	48.00
6.	Pg 13	5.5 - 12.0	1555.13.12	1545.13.12	50	34.00
7.	Pg 16	5.0 - 11.0	1555.16.11	1545.16.11	50	54.00
8.	Pg 16	8.5 - 14.0	1555.16.14	1545.16.14	50	38.00
9.	Pg 21	6.5 - 14.0	1555.21.14	1545.21.14	25	88.00
10.	Pg 21	11.5 - 18.0	1555.21.18	1545.21.18	25	72.00
11.	Pg 29	17.0 - 25.0	1555.29.25	1545.29.25	20	140.00
12.	Pg 36	22.0 - 33.0	1555.36.33	1545.36.33	10	438.00
13.	Pg 42	28.0 - 38.0	1555.42.38	1545.42.38	5	591.00
14.	Pg 48	32.0 - 44.0	1555.48.44	1545.48.44	5	669.00





**AGRO**  
... your quality connection!

## SYNTEC THREADED CABLE GLANDS IP 68 WITH LAMELLAR TECHNOLOGY

**HENSEL**

Sl.No.	Cable Entry	Sealing range (mm dia)	Catalog No. RAL 7035 (Grey)	Catalog No. RAL 9005 (Black)	Packing Qty (Nos.)	Price ₹/- Each
<b>Locknuts for Thread Pg</b>						
1.	Pg 7	8207	8207.40	100	11.00	
2.	Pg 9	8209	8209.40	100	9.00	
3.	Pg 11	8211	8211.40	100	9.00	
4.	Pg 13	8213	8213.40	100	11.00	
5.	Pg 16	8216	8216.40	100	16.00	
6.	Pg 21	8221	8221.40	100	22.00	
7.	Pg 29	8229	8229.40	50	35.00	
8.	Pg 36	8236	8236.40	25	98.00	
9.	Pg 42	8242	8242.40	25	119.00	
10.	Pg 48	8248.48	8248.48.40	25	135.00	



### Syntec entry thread NPT (with one piece sealing ring)



1.	NPT 3/8"	3.0 - 8.0	1555.N0375.08	1545.N0375.08	50	34.00
2.	NPT 1/2"	3.0 - 7.0	1555.N0500.07	1545.N0500.07	50	54.00
3.	NPT 1/2"	5.5 - 12.0	1555.N0500.12	1545.N0500.12	50	48.00
4.	NPT 3/4"	6.5 - 14.0	1555.N0750.14	1545.N0750.14	25	92.00
5.	NPT 3/4"	11.0 - 18.0	1555.N0750.18	1545.N0750.18	25	82.00
6.	NPT 1"	17.0 - 22.0	1555.N1000.22	1545.N1000.22	20	108.00



### Synthetic pressure balance element with membrane

1.	M 12x1.5		2445.12	1	405.00
2.	M 12x1.5		8245.12 (Checknut)	1	8.00



### Synthetic Locking Plug

1.	M 12 x 1.5	8855.12	8845.12	100	7.00
2.	M 16 x 1.5	8855.17	8845.17	100	7.00
3.	M 20 x 1.5	8855.20	8845.20	100	8.00
4.	M 25 x 1.5	8855.25	8845.25	100	10.00
5.	M 32 x 1.5	8855.32	8845.32	50	14.00
6.	M 40 x 1.5	8855.40	8845.40	50	24.00
7.	M 50 x 1.5	8855.50	8845.50	10	33.00
8.	M 63 x 1.5	8855.63	8845.63	10	45.00

\* Available in PG range also.

\* Use with Corresponding Locknut.

### Synthetic Enlarging Fittings



1.	M 12 x 1.5 to M 16 x 1.5	3755.12.17	100	54.00
2.	M 16 x 1.5 to M 20 x 1.5	3755.17.20	100	60.00
3.	M 20 x 1.5 to M 25x 1.5	3755.20.25	100	74.00
4.	M 25 x 1.5 to M 32 x 1.5	3755.25.32	50	202.00
5.	M 32 x 1.5 to M 40 x 1.5	3755.32.40	25	313.00
6.	M 40 x 1.5 to M 50 x 1.5	3755.40.50	10	603.00
7.	M 50 x 1.5 to M 63 x 1.5	3755.50.63	10	733.00

\* Available in PG range also.

Sl.No.	Cable Entry	Sealing range (mm dia)	Catalog No. RAL 7035 (Grey)	Packing Qty (Nos.)	Price ₹/- Each
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### Synthetic Reduction Fittings

1.	M 16 x 1.5	to	M 12 x 1.5	3455.17.12	100	47.00
2.	M 20 x 1.5	to	M 12 x 1.5	3455.20.12	100	49.00
3.	M 20 x 1.5	to	M 16 x 1.5	3455.20.17	100	49.00
4.	M 25 x 1.5	to	M 12 x 1.5	3455.25.12	100	75.00
5.	M 25 x 1.5	to	M 16 x 1.5	3455.25.17	100	75.00
6.	M 25 x 1.5	to	M 20 x 1.5	3455.25.20	100	75.00
7.	M 32 x 1.5	to	M 12 x 1.5	3455.32.12	50	144.00
8.	M 32 x 1.5	to	M 16 x 1.5	3455.32.17	50	144.00
9.	M 32 x 1.5	to	M 20 x 1.5	3455.32.20	50	144.00
10.	M 32 x 1.5	to	M 25 x 1.5	3455.32.25	50	144.00
11.	M 40 x 1.5	to	M 16 x 1.5	3455.40.17	50	281.00
12.	M 40 x 1.5	to	M 20 x 1.5	3455.40.20	50	281.00
13.	M 40 x 1.5	to	M 25 x 1.5	3455.40.25	25	281.00
14.	M 40 x 1.5	to	M 32 x 1.5	3455.40.32	25	281.00
15.	M 50 x 1.5	to	M 20 x 1.5	3455.50.20	5	328.00
16.	M 50 x 1.5	to	M 25 x 1.5	3455.50.25	5	328.00
17.	M 50 x 1.5	to	M 32 x 1.5	3455.50.32	5	328.00
18.	M 50 x 1.5	to	M 40 x 1.5	3455.50.40	5	328.00
19.	M 63 x 1.5	to	M 25 x 1.5	3455.63.25	5	397.00
20.	M 63 x 1.5	to	M 32 x 1.5	3455.63.32	5	397.00
21.	M 63 x 1.5	to	M 40 x 1.5	3455.63.40	5	397.00
22.	M 63 x 1.5	to	M 50 x 1.5	3455.63.50	5	397.00

\* Available in PG range also.

### Sealing Washers - Green Color

1.	M 6	1006.00.16	50	15.00
2.	M 8	1008.00.16	50	16.00
3.	M 10	1010.00.16	50	19.00
4.	M 12	1012.00.16	50	20.00
5.	M 16	1017.00.16	50	29.00
6.	M 20	1013.00.16	50	37.00
7.	M 25	1025.00.16	50	57.00
8.	M 32	1032.00.16	50	77.00
9.	M 40	1040.00.16	50	103.00
10.	M 50	1050.00.16	50	158.00
11.	M 63	1063.00.16	50	380.00

\* Products available in PG range also

NEW

### AGRO Progress EMC Cable Gland

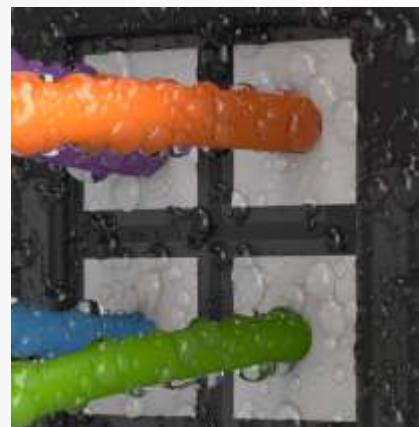


KDS  
CLICK

## KDSClick MODULAR CABLE ENTRY SYSTEM

HENSEL

Sl.No.	Type	Description	Catalog No.	Packing Quantity (Nos.)	Price ₹/- Each
1.	KDS-Set 1-4BK	Set consist of:			
		1 x KDS-SR 1-4BK,	28602.4	1	1645.00
		1 x KDS-Inlay 4BK	28506.4	1	925.00
			28518.4	5	320.00
2.	KDS-Set 6/10BK	Set consist of:			
		1 x KDS-SR 6/10BK,	28603.4	1	2145.00
		1 x KDS-Inlay 2BK,	28500.4	1	1055.00
		1 x KDS-Inlay 6BK	28517.4	5	265.00
			28519.4	5	320.00
3.	KDS-Set 8/16BK	Set consist of:			
		1 x KDS-SR 8/16BK,	28604.4	1	2375.00
		1 x KDS-Inlay 1BK,	28502.4	1	1235.00
		2 x KDS-Inlay 4BK,	28516.4	5	265.00
			28518.4	5	320.00
4.	KDS-Set 10/24BK	Set consist of:			
		1 x KDS-SR 10/24BK,	28605.4	1	3265.00
		1 x KDS-Inlay 1BK,	28504.4	1	1340.00
		1 x KDS-Inlay 2BK	28516.4	5	265.00
		1 x KDS-Inlay 4BK	28517.4	5	265.00
		1 x KDS-Inlay 6BK	28518.4	5	320.00
			28519.4	5	320.00
5.	KDS service box		28764.0	1	63440.00




**walther CEEtyp INSULATED PLUG SOCKETS**
**HENSEL**


Description	Rating Amp	No. of Poles	Degree of Protection	Catalog No.	Price ₹/- Each
Wall Socket Outlet	16/20 A	2P + E	IP 44	110306	720.00
		3P + E	IP 44	110406	785.00
		3P + N + E	IP 44	110	750.00
	32 A	2P + E	IP 44	130306	915.00
		3P + E	IP 44	130406	965.00
		3P + N + E	IP 44	130	915.00
	63 A	2P + E	IP 44	161306	4180.00
		3P + E	IP 44	161406	3520.00
		3P + N + E	IP 44	161	3520.00
	16/20 A	2P + E	IP 67	119306	1555.00
Wall Socket Outlet Watertight		3P + E	IP 67	119406	1705.00
		3P + N + E	IP 67	119	1705.00
	32 A	2P + E	IP 67	139306	1765.00
		3P + E	IP 67	139406	1980.00
		3P + N + E	IP 67	139	1980.00
	63 A	2P + E	IP 67	169306	4530.00
		3P + E	IP 67	169406	4135.00
		3P + N + E	IP 67	169	4135.00
	125 A	2P + E	IP 67	178306 OK	23345.00
		3P + E	IP 67	178406 OK	33915.00
Panel Mounting Socket Angled		3P + N + E	IP 67	178 OK	26470.00
	2P + E	IP 44		510306	455.00
	3P + E	IP 44		510406	715.00
	3P + N + E	IP 44		510	655.00
	2P + E	IP 44		530306	760.00
	3P + E	IP 44		530406	885.00
	3P + N + E	IP 44		530	810.00
	2P + E	IP 44		560306	3580.00
	3P + E	IP 44		560406	2990.00
	3P + N + E	IP 44		560	2990.00
Panel Mounting Socket Straight	16/20 A	2P + E	IP 44	410306	455.00
		3P + E	IP 44	410406	715.00
		3P + N + E	IP 44	410	715.00
	32 A	2P + E	IP 44	430306	760.00
		3P + E	IP 44	430406	885.00
		3P + N + E	IP 44	430	810.00
	63 A	2P + E	IP 44	460306	3580.00
		3P + E	IP 44	460406	2990.00
		3P + N + E	IP 44	460	2990.00
	32 A	3P + E	IP 67	439403	1550.00
Panel Socket Straight for container applications	32 A	3P + E	IP 67	239403	2075.00
	32 A	3P + E	IP 67	339403	2355.00




**walther CEEtyp INSULATED PLUG SOCKETS**
**HENSEL**

Description	Rating Amp	No. of Poles	Degree of Protection	Catalog No.	Price ₹/- Each
Coupler for container applications	16/20 A	2P + E	IP 67	519306	920.00
		3P + E	IP 67	519406	1030.00
		3P + N + E	IP 67	519	1030.00
	32 A	2P + E	IP 67	539306	1420.00
		3P + E	IP 67	539406	1380.00
		3P + N + E	IP 67	539	1380.00
	63 A	2P + E	IP 67	569306	4100.00
		3P + E	IP 67	569406	3600.00
		3P + N + E	IP 67	569	3600.00
	125 A	2P + E	IP 67	579306	12975.00
Panel Mounting Socket Angled Watertight		3P + E	IP 67	579406	11950.00
		3P + N + E	IP 67	579	11950.00
Panel Mounting Socket Straight Watertight	16/20 A	2P + E	IP 67	419306	920.00
		3P + E	IP 67	419406	1055.00
		3P + N + E	IP 67	419	1030.00
	32 A	2P + E	IP 67	439306	1420.00
		3P + E	IP 67	439406	1380.00
		3P + N + E	IP 67	439	1380.00
	63 A	2P + E	IP 67	469306	4100.00
		3P + E	IP 67	469406	3600.00
		3P + N + E	IP 67	469	3600.00
	125 A	2P + E	IP 67	479306	12975.00
Plug		3P + E	IP 67	479406	11950.00
		3P + N + E	IP 67	479	11950.00
Plug Watertight	16/20 A	2P + E	IP 44	210306	320.00
		3P + E	IP 44	210406	445.00
		3P + N + E	IP 44	210	425.00
	32 A	2P + E	IP 44	230306	520.00
		3P + E	IP 44	230406	690.00
		3P + N + E	IP 44	230	540.00
	63 A	2P + E	IP 44	260306	3220.00
		3P + E	IP 44	260406	2835.00
		3P + N + E	IP 44	262	2395.00





## walther CEEtyp INSULATED PLUG SOCKETS

**HENSEL**



Description	Rating Amp	No. of Poles	Degree of Protection	Catalog No.	Price ₹/- Each
Plug Watertight		3P + E	IP 67	269406	3270.00
		3P + N + E	IP 67	268	3030.00
	125 A	2P + E	IP 67	279306	11620.00
		3P + E	IP 67	279406	11120.00
		3P + N + E	IP 67	279	11120.00
Schuko Socket Schuko Plug	16/20 A	2P + E	IP 44	10003	320.00
	16/20 A	2P + E	IP 44	1418060	415.00
	16/20 A	2P + E	IP 44	310306	475.00
		3P + E	IP 44	310406	640.00
		3P + N + E	IP 44	310	605.00
Coupler	32 A	2P + E	IP 44	330306	725.00
		3P + E	IP 44	330406	890.00
		3P + N + E	IP 44	330	780.00
	63 A	2P + E	IP 44	360306	4070.00
		3P + E	IP 44	360406	3825.00
Coupler with gland entry Watertight		3P + N + E	IP 44	362	3825.00
	16/20 A	2P + E	IP 67	319306	1190.00
		3P + E	IP 67	319406	1355.00
		3P + N + E	IP 67	319	1355.00
	32 A	2P + E	IP 67	339306	1735.00
		3P + E	IP 67	339406	1665.00
		3P + N + E	IP 67	339	1680.00
	63 A	2P + E	IP 67	369306	4070.00
		3P + E	IP 67	369406	3825.00
		3P + N + E	IP 67	368	4435.00
	125 A	2P + E	IP 67	379306	13195.00
		3P + E	IP 67	379406	12670.00
		3P + N + E	IP 67	379	12670.00

## Interlocked Sockets / Wall Sockets with DIN Rail



Switched wall socket, with interlocking, IP 44	16/20 A	2P + E	IP 44	AT 110 306	7165.00
		3P + E	IP 44	AT 110 406	10320.00
		3P + N + E	IP 44	AT 110	7635.00
	32 A	2P + E	IP 44	AT 130 306	10040.00
		3P + E	IP 44	AT 130 406	15240.00
Switched wall socket, with interlocking, IP 67		3P + N + E	IP 44	AT 130	10980.00
	63 A	2P + E	IP 44	AE 160 306	21520.00
		3P + E	IP 44	AE 160 406	28545.00
		3P + N + E	IP 44	AE 160	22460.00
	16/20 A	2P + E	IP 67	AT 119 306	8130.00
		3P + E	IP 67	AT 119 406	11560.00
		3P + N + E	IP 67	AT 119	8605.00
	32 A	2P + E	IP 67	AT 139 306	10980.00
		3P + E	IP 67	AT 139 406	15990.00
		3P + N + E	IP 67	AT 139	11950.00
	63 A	2P + E	IP 67	AE 169 306	22460.00





**walther** CEEtyp **INSULATED PLUG SOCKETS**

**HENSEL**

Description	Rating Amp	No. of Poles	Degree of Protection	Catalog No.	Price ₹/- Each
		3P + E	IP 67	AE 169 406	29015.00
		3P + N + E	IP 67	AE 169	23430.00
	125 A	2P + E	IP 67	AO 179 306	69290.00
		3P + E	IP 67	AO 179 406	111890.00
		3P + N + E	IP 67	AO 179	73110.00



Interlocking socket, with MCB provision, IP 44

16 A	2P + E	IP 44	AU 110 306 TS	11010.00
	3P + E	IP 44	AU 110 406 TS	11175.00
	3P + N + E	IP 44	AU 110 TS	11260.00
32 A	2P + E	IP 44	AU 130 306 TS	13885.00
	3P + E	IP 44	AU 130 406 TS	14855.00
	3P + N + E	IP 44	AU 130 TS	14855.00



Interlocking socket, with MCB provision, IP 67

16 A	2P + E	IP 67	AU 119 306 TS	11785.00
	3P + E	IP 67	AU 119 406 TS	11150.00
	3P + N + E	IP 67	AU 119 TS	11175.00
32 A	2P + E	IP 67	AU 139 306 TS	14660.00
	3P + E	IP 67	AU 139 406 TS	15575.00
	3P + N + E	IP 67	AU 139 TS	15575.00
63 A	2P + E	IP 67	AL 169 306 TS	27190.00
	3P + E	IP 67	AL 169 406 TS	27885.00
	3P + N + E	IP 67	AL 169 TS	27885.00

## Switched wall sockets



Wall socket, with IP 44

16/20 A	2P + E	IP 44	6001001	5960.00
	3P + E	IP 44	6000701	6575.00
	3P + N + E	IP 44	6000101	6505.00
32 A	2P + E	IP 44	6002001	6410.00
	3P + E	IP 44	6001701	6230.00
	3P + N + E	IP 44	6001101	6740.00



Wall socket, with IP 67

16/20 A	2P + E	IP 67	6001001X7	6435.00
	3P + E	IP 67	6000701X7	6575.00
	3P + N + E	IP 67	6000101X7	6825.00
32 A	2P + E	IP 67	6002001X7	7090.00
	3P + E	IP 67	6001701X7	7045.00
	3P + N + E	IP 67	6001101X7	7320.00

Prices available on request



Appliance plug for Wall mounting



Appliance plug for Panel mounting



## Walther CEEtyp INSULATED PLUG SOCKETS

**HENSEL**



Wall socket,  
with DIN - rail, IP 44



Wall socket,  
with DIN - rail, IP 67

Description	Rating Amp	No. of Poles	Degree of Protection	Catalog No.	Price ₹/- Each
Wall socket, with DIN - rail, IP 44	16/20 A	2P + E	IP 44	AR 110 306 TS	4995.00
		3P + E	IP 44	AR 110 406 TS	5255.00
		3P + N + E	IP 44	AR 110 TS	5255.00
	32 A	2P + E	IP 44	AR 130 306 TS	5295.00
		3P + E	IP 44	AR 130 406 TS	5425.00
		3P + N + E	IP 44	AR 130 TS	5350.00
	63 A	2P + E	IP 44	AS 160 306 TS	10500.00
		3P + E	IP 44	AS 160 406 TS	9910.00
		3P + N + E	IP 44	AS 160 TS	9910.00
Wall socket, with DIN - rail, IP 67	16/20 A	2P + E	IP 67	AR 119 306 TS	5460.00
		3P + E	IP 67	AR 119 406 TS	5595.00
		3P + N + E	IP 67	AR 119 TS	5570.00
	32 A	2P + E	IP 67	AR 139 306 TS	5960.00
		3P + E	IP 67	AR 139 406 TS	5920.00
		3P + N + E	IP 67	AR 139 TS	5920.00
	63 A	2P + E	IP 67	AS 169 306 TS	11020.00
		3P + E	IP 67	AS 169 406 TS	10515.00
		3P + N + E	IP 67	AS 169 TS	10515.00

### Wall Sockets with DIN - Rail, IP 44 / IP 66



Wall socket, with  
DIN - Rail, IP 44



Wall socket, with  
DIN - Rail, IP 66

16/20 A	2P + E	IP 44	TR 110 306 TS	2255.00
	3P + E	IP 44	TR 110 406 TS	2515.00
	3P + N + E	IP 44	TR 110 TS	2515.00
32 A	2P + E	IP 44	TR 130 306 TS	2560.00
	3P + E	IP 44	TR 130 406 TS	2685.00
	3P + N + E	IP 44	TR 130 TS	2610.00
16/20 A	2P + E	IP 66	TR 119 306 TS	2720.00
	3P + E	IP 66	TR 119 406 TS	2855.00
	3P + N + E	IP 66	TR 119 TS	2830.00
32 A	2P + E	IP 66	TR 139 306 TS	3225.00
	3P + E	IP 66	TR 139 406 TS	3180.00
	3P + N + E	IP 66	TR 139 TS	3180.00

\* Items in red are long lead products. Kindly check exact delivery dates with us before placing orders.



The NEO range of CEE devices.



RUBBER CABLE DRUMS

HENSEL



Sl.No.	Description	Catalog No.	Price ₹/- Each
1.	Empty Cable Drum 235mm dia	GT 235.SO	4645.00
2.	Empty Cable Drum 310mm dia	GT 310.SO	7205.00
3.	Empty Cable Drum 380mm dia	GT 380.SO	16045.00
4.	Empty Cable Drum 450mm dia	GT 450.SO	18630.00
5.	Cable trolley	397 00 010	15290.00

Customised solutions available as per individual requirements

Price on  
Request

### Cable Winders and Cable Dispensers





## GRP ENCLOSURES IP54 / IP 66

**HENSEL**



### Cabinets IP54

Sl.No.	HxWxD (mm)	Cabinet IP 54	Base 950mm
1.	850 x 440 x 200	0596.1.54	0327.ST
2.	850 x 440 x 250	1451.1.54	1457.ST
3.	850 x 440 x 320	0579.1.54	SX311
4.	1080 x 440 x 250	1452.54	1457.ST
5.	1080 x 400 x 320	0580.1.54	SX311
6.	850 x 590 x 250	1453.54	1458.ST
7.	850 x 590 x 320	0284.1.54	SX411
8.	850 x 590 x 470	1189.54	0668
9.	850 x 590 x 635	0164.54	SX4DT10
10.	1080 x 590 x 250	1454.54	1458.ST
11.	1080 x 590 x 320	0318.1.54	SX411
12.	1080 x 590 x 470	1188.54	0668
13.	1080 x 590 x 635	0180.54	SX4DT10
14.	850 x 785 x 250	1455.54	1459.ST
15.	850 x 785 x 320	0285.1.54	Sx511
16.	850 x 785 x 470	1186.54	0670
17.	850 x 785 x 635	0174.54	SX5DT10
18.	1080 x 785 x 250	1456.54	1459.ST
19.	1080 x 785 x 320	0319.1.54	SX511
20.	1080 x 785 x 470	1187.54	0670
21.	1080 x 785 x 635	0182.1.54	SX5DT10
22.	850 x 1115 x 320	0537.1.54	SX611
23.	850 x 1115 x 470	1191.54	0669
24.	850 x 1115 x 635	0952.1.54	SX6DT10
25.	1080 x 1115 x 320	0552.1.54	SX611
26.	1080 x 1115 x 470	1190.54	0669
27.	1080 x 1115 x 635	0953.1.54	SX6DT10

### Cabinets IP 65 / 66

Sl.No.	HxWxD (mm)	Cabinet IP 65 / IP 66	Pedestal	Short base
1.	618 x 438 x 251	HYDRA 465	FH46	KKH 46
2.	618 x 438 x 251	HYDRA 466	FH 46	KKH 46
3.	816 x 616 x 323	HYDRA 685	FH68	KKH 68
4.	816 x 616 x 323	HYDRA 686	FH68	KKH 68
5.	1004 x 850 x 323	HYDRA 815	FH81	KKH 81
6.	1004 x 850 x 323	HYDRA 816	FH81	KKH 81



### TERMS AND CONDITIONS

- This price list supersedes all previous price lists.
- GST / levies are extra as applicable.
- Freight & Insurance: Extra at actuals.
- Prices are subject to change without notice.
- Disputes, if any, are subject to Chennai jurisdiction.



### Resident Engineers in

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Kanchipuram District, Tamil Nadu

Tel: +91 44 6712 7700  
Fax: +91 44 6712 7724

E mail: info@hensel-electric.in  
Website: www.hensel.in



## **Puri pgmc Street Lighting**

Date: 21.07.2021  
Operator: Lighting Technologies India Pvt. Limited

Lighting Technologies India Pvt. Limited  
 1st Floor, Midland Park, Sector V, Salt lake  
 Kolkata

Operator Lighting Technologies India Pvt. Limited  
 Telephone 9163304907  
 Fax 08067303701  
 e-Mail sirshendu.pal@ltcompany.com

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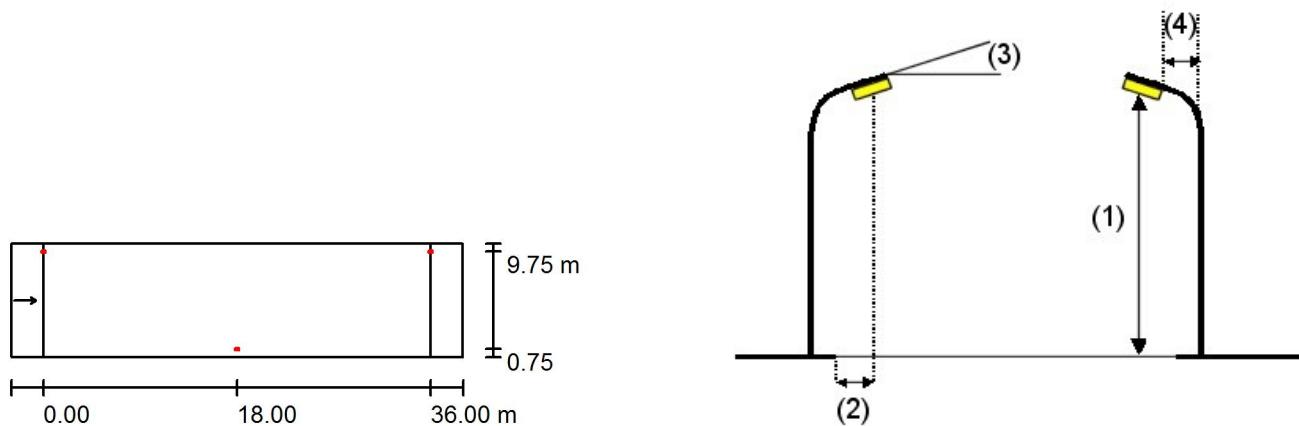
## Beach front Street -Option 1 / Planning data

### Street Profile

Roadway 1 (Width: 10.500 m, Number of lanes: 1, tarmac: R3, q0: 0.070)

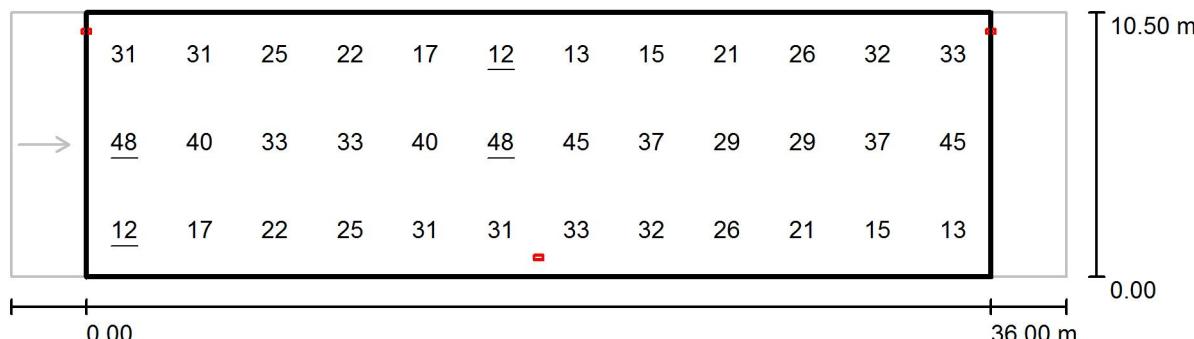
Light loss factor: 0.85

### Luminaire Arrangements



Luminaire:	LIGHTING TECHNOLOGIES STA0N04557NDGYP00050 ADORNIS MIN 45W CW
Luminous flux (Luminaire):	7318 lm
Luminous flux (Lamps):	7318 lm
Luminaire Wattage:	45.0 W
Arrangement:	Double row, with offset
Pole Distance:	36.000 m
Mounting Height (1):	6.000 m
Height:	5.943 m
Overhang (2):	0.765 m
Boom Angle (3):	15.0 °
Boom Length (4):	0.750 m

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 e-Mail sirshendu.pal@ltcompany.com
**Beach front Street -Option 1 / Valuation Field Roadway 1 / Value Chart (E)**

Values in Lux, Scale 1 : 301

Grid: 12 x 3 Points

$E_{av}$ [lx]	$E_{min}$ [lx]	$E_{max}$ [lx]	$u_0$	$E_{min} / E_{max}$
28	12	48	0.433	0.259

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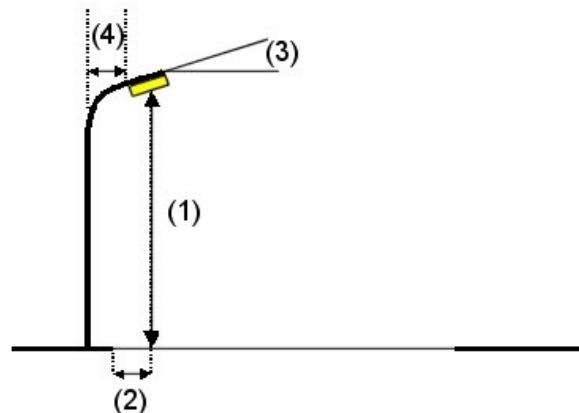
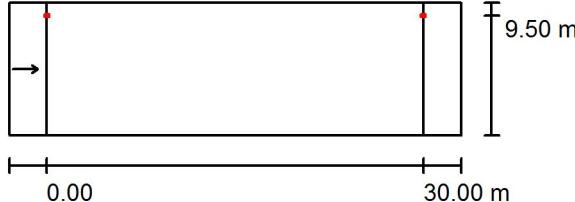
## Beach front Street-Option 2 / Planning data

### Street Profile

Roadway 1 (Width: 10.500 m, Number of lanes: 1, tarmac: R3, q0: 0.070)

Light loss factor: 0.85

### Luminaire Arrangements

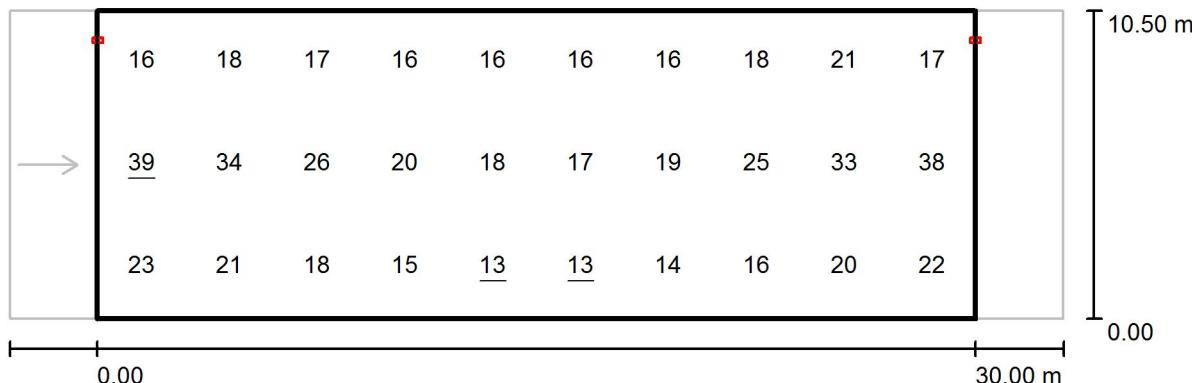


Luminaire:	LIGHTING TECHNOLOGIES STA0N06557NDGYP00050 ADORNIS MIN 65W CW
Luminous flux (Luminaire):	9721 lm
Luminous flux (Lamps):	9721 lm
Luminaire Wattage:	66.5 W
Arrangement:	Single row, top
Pole Distance:	30.000 m
Mounting Height (1):	8.000 m
Height:	7.943 m
Overhang (2):	1.015 m
Boom Angle (3):	15.0 °
Boom Length (4):	1.000 m

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**Beach front Street-Option 2 / Valuation Field Roadway 1 / Value Chart (E)**

Values in Lux, Scale 1 : 258

Grid: 10 x 3 Points

$E_{av}$ [lx] 20	$E_{min}$ [lx] 13	$E_{max}$ [lx] 39	$u_0$ 0.623	$E_{min} / E_{max}$ 0.324
---------------------	----------------------	----------------------	----------------	------------------------------

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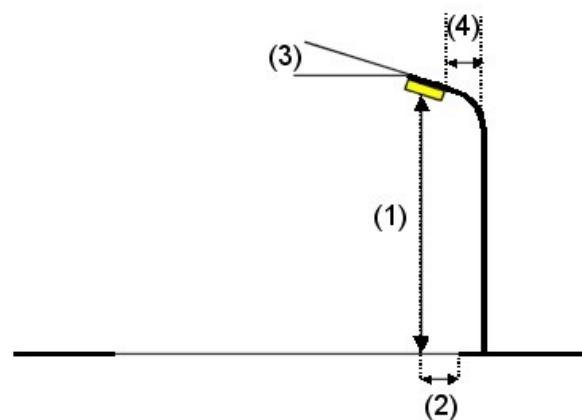
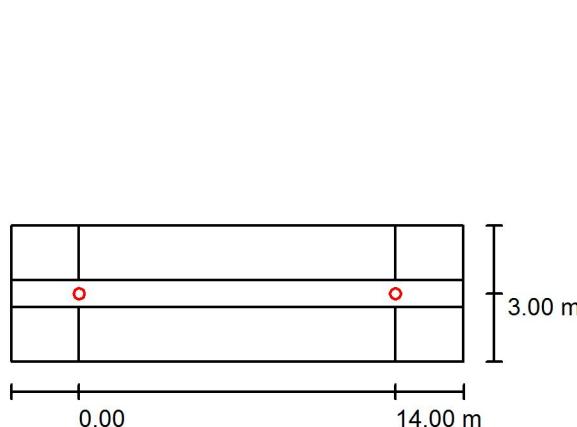
## Musa River Street / Planning data

### Street Profile

Bicycle Lane 1	(Width: 2.400 m)
Grass Strip 1	(Width: 1.200 m)
Sidewalk 1	(Width: 2.400 m)

Light loss factor: 0.85

### Luminaire Arrangements

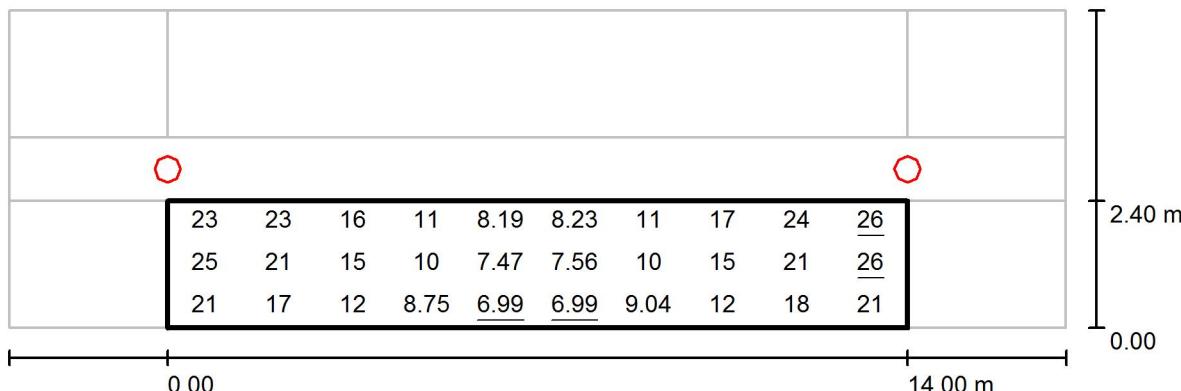


Luminaire:	LIGHTING TECHNOLOGIES P04057L000 PRIMUS POST TOP 40W CW
Luminous flux (Luminaire):	2734 lm
Luminous flux (Lamps):	2735 lm
Luminaire Wattage:	40.1 W
Arrangement:	Single row, bottom
Pole Distance:	14.000 m
Mounting Height (1):	4.500 m
Height:	4.300 m
Overhang (2):	3.000 m
Boom Angle (3):	0.0 °
Boom Length (4):	0.000 m

Lighting Technologies India Pvt. Limited

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**Musa River Street / Valuation Field Sidewalk 1 / Value Chart (E)**

Values in Lux, Scale 1 : 143

Grid: 10 x 3 Points

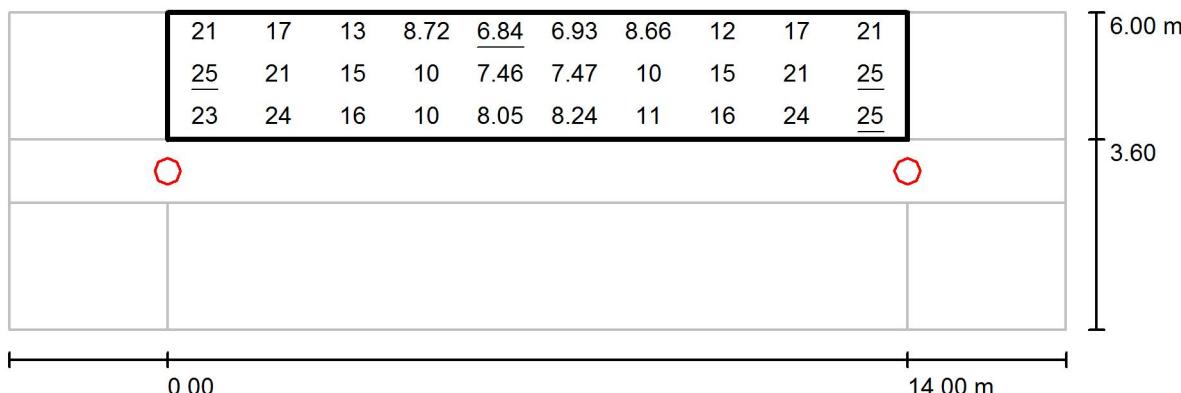
$E_{av}$ [lx]	$E_{min}$ [lx]	$E_{max}$ [lx]	$u_0$	$E_{min} / E_{max}$
15	6.99	26	0.457	0.268

Lighting Technologies India Pvt. Limited

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Kolkata

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### Musa River Street / Valuation Field Bicycle Lane 1 / Value Chart (E)



Values in Lux, Scale 1 : 143

Grid: 10 x 3 Points

$E_{av}$ [lx]	$E_{min}$ [lx]	$E_{max}$ [lx]	$u_0$	$E_{min} / E_{max}$
15	6.84	25	0.451	0.270

Kavita Rani <kavita.rani@signify.com>  
Thu 5/6/2021 2:34 PM



To:

- Chandresh Bhardwaj

**CAUTION: This email originated from outside of TCE. Do not click links or open attachments unless you recognize the sender and know the content is safe.**

Dear Chandresh,

Please find below unit rates:

<b>SR. NO.</b>	<b>PHILIPS CAT. REF.</b>	<b>UNIT PRICE</b>
1	TMC100 1xTLED 18W Batten	210 + GST
	MAS LED TUBE-LIGHT 18W/2100 lumens	350 + GST
2	SM250C LED12S-6500 PSU WH	950 + GST
3	TMC100 1xTLED 18W Batten	210+ GST
	MAS LED TUBE-LIGHT 30W/4000 lumens	660+ GST

Regards,  
Kavita

Philips Quotation				
SI No	Areas	Specification	Images	Unit Rate
1	<b>Up lighting on murals</b>	Supply, Installation, Testing and Commissioning of LED Inground luminaire with a system lumen output of 3600 lumens and a minimum system efficacy of >100 lm/W. The luminaire shall have a rated system lifetime of 50,000 burning hours at L70. The luminaire should have a color temperature of 4000K and CRI > 70. The luminaire shall meet IP67/IK10 with THD < 10% and PF > 0.9. SDCM Value should be less than 5. The luminaire shall have closed diffused optics with PMMA diffuser board. The total power consumption should not exceed 36W (including driver). Similar to Philips Make LED UNI Inground "BBP342 LED3600/WW 36W 20D 100-240V"		9245
2	<b>Step highlighter (for staircase)</b>	Supply, Installation, Testing and Commissioning of integral driver LED Steplight with a system lumen output of 40 lumens and a minimum system efficacy of 10 lm/W. The luminaire shall have a rated system lifetime of 25,000 burning hours at L70. The luminaire should have a color temperature of 4000K and CRI > 75. The luminaire shall meet IP67 rating with THD < 20% and PF > 0.9. The luminaire shall have polycarbonate diffuser. The total power consumption should not exceed 4W (including driver). Similar to Philips Make LED STEPLIGHT "BWG150 LED4000/NW PSU 220-240V"		5500

Date: 11/9/21

**To,**
**TCE,**

**SUB: Quotation for KESSLEC Make Decorative Pole, Bracket & LED Light Fixtures For Puri Smart city**

Respected Sir,

:

No.	DESCRIPTION	Price
01	<p>Supply of Decorative Luminaires BIS approved ( alongwith BIS certification of same model confirming to IS 10322 /IEC60598 &amp; LM79 parameters as per tender specs) for Urban lighting, body made of painted spun aluminium with Top spun aluminium minimum thickness of 1.5 mm,Dia should not exceed 435 mm and height should not exceed 265 mm ,weight should not be less than 1.28 kg and Lower spun aluminium of minimum thickness of 1.5 mm ,dia should not exceed 595 mm ,height should not exceed 40 mm and weight should not be less than 0.9 kg.Body of the fixture must be in two parts and fixture opening of the fixture is from front side for the ease of operation . The protector is made of single piece injection moulded polycarbonate with thickness of 3 mm and weight should not exceed 1 kg.Diamteter and height of the protector should not be more than 320 mm..Protector grade with UV resistant IK 09 ( Confirm by IS10322 report from Third party NABL approved lab) Protector holding aluminium ring with a thickness of 3 mm with a minimum diameter of 420 mm and weight more than 0.3 kg. ring Permanently sealed optical compartment with IP66 protection.( Confirmed by IS10322/IEC60598 report from Third party NABL approved lab). Luminaire offers tool free access to gear compartment with IP65 protection( Confirmed by IS10322 report from Third party NABL approved lab) Foam gasket for control gear assembly .Minimum Luminaire dimensions of 545* 550 mm . Luminaire can be installed as a suspended luminaire with 1 inch BSP stainless steel pipe with 2 chuck nuts is provided..The luminaire must be provided with Air vent plug in optical compartment.The luminaire is equipped with PC lenses with wide photometry for increased pole spacing. The luminaire is provided with disconnector to avoid electrical shocks. Easy access to control gear compartment by opening special draw latch with zinc plated material and hinge kind of arrangement.</p> <p>Fixture is having external surge protection of 10KV. Electronic driver is having power factor&gt;0.90*, THD&lt;15*%, CRI&gt;80 and input voltage range</p>	26500

from 120-227V AC at 50Hz. **Driver with IP67 rating with maximum power consumption of luminaire of 60 watt confirming Minimum 7800 lumen at system level** (Confirmed by LM79 report from Third party NABL approved lab) in CCT range of 4000 as per ANSI. presented with Dialux report and IES file of the luminaire System life of 50000 burning hours with 70% of initial lumens maintained.

Luminaire is suitable for operating temperature (Ta) from -20° to 50°C. Driver can withstand 320V AC for 48 hours and 440 V AC for 8 hours. WATT-60W. **Make : Kesslec Porto-NU- /Rosa OW/Ligman/Simes**

02	<p>Supply of Decorative light pole 5 mt ( Full cast iron) shall be of 'composite' construction designed to withstand specified 'dead load' pertaining to the luminaire and its mounting accessories and 'wind load' corresponding to a basic wind speed of <b>300 kmph</b> without any deformation or damage to the structure.. Pole pipe should be provided with <b>Spikes</b>. Structurally designed base plate of Steel A36/A572-50 or equivalent should be welded with the pole shaft. The welding shall be of high quality, carried out by qualified welders using approved welding procedures and tested for its quality through NDT method, such as DP Test. The pole shall be provided with an opening at the bottom with removable cover for providing connectors, MCB, etc. (to be supplied by others) The <b>pole complete shaft structure shall be hot dip galvanized through single dip process as per ASTM A123</b> and minimum average coating shall not be less than 80 microns. No mechanical operation, such as welding, drilling, etc. should be carried out on the pole structure post hot dip galvanizing. Poles using pre galvanized steel tubes or hot dip galvanized through double dip process are not acceptable. Complete pole shall be treated with high quality primer and thereafter coated with Polyurethane <b>paint ( Marine grade)</b> to minimum average DFT of 70 microns. The painting shall be carried out by experienced and trained technicians using proven and established painting procedure. controlled' paint drying process shall be used to ensure proper adhesion and finish of the paint. Make : Kesslec /Rosa/Ligman/Simes as per drawing and matching specification</p>	43000
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GST & Freight Extra.

Thanks

Kalpesh Ray

Kesslec Lighting

General Manager ( West)

9376239433

Date: 30/9/21

**To,**

**TCE,**

**SUB: Quotation for KESSLEC Make Decorative Pole**

Respected Sir,

:

No.	DESCRIPTION	Price
	<p>Supply of Decorative light pole 6 mt ( Full cast iron) shall be of 'composite' construction designed to withstand specified 'dead load' pertaining to the luminaire and its mounting accessories and 'wind load' corresponding to a basic wind speed of <b>300 kmph</b> without any deformation or damage to the structure.. Pole pipe should be provided with <b>Spikes</b>. Structurally designed base plate of Steel A36/A572-50 or equivalent should be welded with the pole shaft. The welding shall be of high quality, carried out by qualified welders using approved welding procedures and tested for its quality through NDT method, such as DP Test. The pole shall be provided with an opening at the bottom with removable cover for providing connectors, MCB, etc. (to be supplied by others) The <b>pole complete shaft structure shall be hot dip galvanized through single dip process as per ASTM A123</b> and minimum average coating shall not be less than 80 microns. No mechanical operation, such as welding, drilling, etc. should be carried out on the pole structure post hot dip galvanizing. Poles using pre galvanized steel tubes or hot dip galvanized through double dip process are not acceptable.</p> <p>Complete pole shall be treated with high quality primer and thereafter coated with Polyurethane <b>paint ( Marine grade)</b> to minimum average DFT of 70 microns. The painting shall be carried out by experienced and trained technicians using proven and established painting procedure. controlled' paint drying process shall be used to ensure proper adhesion and finish of the paint. Make : Keselec /Rosa/Ligman/Simes as per drawing and matching specification</p>	50,000

GST & Freight Extra.

Thanks

Kalpesh Ray

Kesslec Lighting

General Manager ( West)

9376239433

Date: 14/9/21

**To,**
**TCE,**

**SUB: Quotation for KESSLEC Make Decorative Pole, Bracket & LED Light Fixtures For Puri Smart city**

Respected Sir,

:

No.	DESCRIPTION	Price
01	<p>Supply of Decorative Luminaires BIS approved ( alongwith BIS certification of same model confirming to IS 10322 /IEC60598 &amp; LM79 parameters as per tender specs) for Urban lighting, body made of painted spun aluminium with Top spun aluminium minimum thickness of 1.5 mm,Dia should not exceed 435 mm and height should not exceed 265 mm ,weight should not be less than 1.28 kg and Lower spun aluminium of minimum thickness of 1.5 mm ,dia should not exceed 595 mm ,height should not exceed 40 mm and weight should not be less than 0.9 kg.Body of the fixture must be in two parts and fixture opening of the fixture is from front side for the ease of operation . The protector is made of single piece injection moulded polycarbonate with thickness of 3 mm and weight should not exceed 1 kg.Diamteter and height of the protector should not be more than 320 mm..Protector grade with UV resistant IK 09 ( Confirm by IS10322 report from Third party NABL approved lab) Protector holding aluminium ring with a thickness of 3 mm with a minimum diameter of 420 mm and weight more than 0.3 kg. ring Permanently sealed optical compartment with IP66 protection.( Confirmed by IS10322/IEC60598 report from Third party NABL approved lab). Luminaire offers tool free access to gear compartment with IP65 protection( Confirmed by IS10322 report from Third party NABL approved lab) Foam gasket for control gear assembly .Minimum Luminaire dimensions of 545* 550 mm . Luminaire can be installed as a suspended luminaire with 1 inch BSP stainless steel pipe with 2 chuck nuts is provided..The luminaire must be provided with Air vent plug in optical compartment.The luminaire is equipped with PC lenses with wide photometry for increased pole spacing. The luminaire is provided with disconnector to avoid electrical shocks. Easy access to control gear compartment by opening special draw latch with zinc plated material and hinge kind of arrangement.</p> <p>Fixture is having external surge protection of 10KV. Electronic driver is having power factor&gt;0.90*, THD&lt;15*%, CRI&gt;80 and input voltage range</p>	26500

	<p>from 120-227V AC at 50Hz. <b>Driver with IP67 rating with power consumption of luminaire of 45 watt confirming Minimum 6000 lumen at system level</b> (Confirmed by LM79 report from Third party NABL approved lab) in CCT range of 4000 as per ANSI. presented with Dialux report and IES file of the luminaire System life of 50000 burning hours with 70% of initial lumens maintained.</p> <p>Luminaire is suitable for operating temperature (Ta) from -20° to 50°C. Driver can withstand 320V AC for 48 hours and 440 V AC for 8 hours. WATT-45W. <b>Make : Kesslec Porto-NU- /Rosa OW/Ligman/Simes</b></p>	
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#### Terms & Conditions:

Price: FOR site

GST: Extra

Kesslec Smart lighting technologies Pvt Ltd

Kalpesh Ray

Sr General Manager

