

# SABARMATI RIVER FRONT DEVELOPMENT



Sabarmati River Front Development  
Corporation Limited

2<sup>nd</sup> Floor, Riverfront House,  
B/h H. K. Arts College,  
Between Gandhi Bridge and Nehru Bridge,  
Puja Pramukh Swami Marg (River Front Road –  
West)  
Ahmedabad - 380 009

## BID DOCUMENT

**SRFD PHASE 1 –  
CONSTRUCTION OF RESIDUAL  
SPACE ELEMENTS FROM VASNA  
BARRAGE TO DAFNALA ON  
EAST BANK AND VASNA  
BARRAGE TO TORRENT POWER  
ON WEST BANK OF RIVER  
SABARMATI**

Contract Package: SRFDCL

**VOLUME- 03**

**V) Form of Bid  
VI) Bill of Quantities**



**~~SECTION V~~  
~~FORM OF BID~~**



**Contractor's Bid**

**Description of the Works:** \_\_\_\_\_

**BID for**

**To** \_\_\_\_\_ : The Chairman,  
Sabarmati River Front Development Corporation Limited  
**Address** \_\_\_\_\_ : 1st Floor, Dr. Ramanbhai Patel House, West Zone Office, Ahmedabad  
Municipal Corporation, Usmanpura, Ahmedabad 13

**Gentlemen,**

Having examined the bidding documents including addendum, visited the site of works, we offer to execute the Works described above in accordance with the Conditions of Contract, Specifications, Drawings and Bill of Quantities accompanying this Bid at the quoted percentage above/below\* the contract price mention in Bid BOQ at arrived contract Price of \_\_\_\_\_ [in figures] \_\_\_\_\_ [in letters]<sup>1</sup>.

The advance Payment required is: Rupees \_\_\_\_\_.

This Bid and your written acceptance of it shall constitute a binding contract between us. We understand that you are not bound to accept the lowest or any Bid you receive.

We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely "Prevention of Corruption Act 1988".

Commissions or gratuities, if any, paid or to be paid by us to agents relating to this Bid, and to contract execution if we are awarded the contract, are listed below:

Name and address of agent	Amount	Purpose of Commission or gratuity
_____	_____	_____
_____	_____	_____
_____	_____	_____

(if none, state "none")

We hereby confirm that this Bid complies with the Bid Validity and Bid Security required by the Bidding documents.

\*: **Strike out which is not applicable.**

We attached herewith proof of submission of income tax returns along with profit & loss statement attached with tax returns.

Yours faithfully,

Authorised Signature : \_\_\_\_\_

Name & Title of Signatory : \_\_\_\_\_

Name of Bidder : \_\_\_\_\_

Address : \_\_\_\_\_

<sup>1</sup> To be filled in by the Bidder, together with his particulars and date of submission at the bottom of the Form of Bid.



---

**SECTION VI**  
**BILL OF QUANTITIES**



### **MEASUREMENT PREAMBLE**

1. All quantities in the Bill of Quantities are estimated quantities. For all payment purposes measurements, as prescribed in the contract document shall be taken and quantities shall be computed from such measurements.
2. The inclusions and exclusions from quoted rates are specified in the details of each item of work in the specifications and the Bill of Quantities. In case there is no specific mention of a particular detail, the mode of measurements as prescribed in MORTH specifications or other standard specification for such an item shall be followed.
3. In the event of contradiction between the MORTH specifications or other standard specification referred to above and this Contract document, the provisions of this Contract document shall prevail.

## SECTION VI

### BILL OF QUANTITIES

#### SRFD PHASE 1 – CONSTRUCTION OF RESIDUAL SPACE ELEMENTS FROM VASNA BARRAGE TO DAFNALA ON EAST BANK AND VASNA BARRAGE TO TORRENT POWER ON WEST BANK OF RIVER SABARMATI

#### SUMMARY SHEET

Section		Amount (Rs.) As per SOR
<b>Sub Section 6.1: CIVIL WORKS</b>		
1	EARTH WORK & CARRIAGE OF MATERIAL	35,235
2	PLAIN & REINFORCEMENT CEMENT CONCRETE WORK	32,73,473
3	WATERPROOFING WORK	2,24,816
4	PAINTING/POLISHING WORKS	54,089
5	METAL WORK	85,104
6	EXTERNAL DEVELOPMENT WORK	32,43,714
7	PREPARATORY WORKS	17,69,452
<b>Grand Total</b>		<b>86,85,883</b>

**BILL OF QUANTITIES**  
**SUB SECTION**  
**6.1 - CIVIL WORKS**

Sr. No.	Description	Unit	Total Quantity estimated but may be more or less	Unit Rate (In Rs.)	Total amount (In Rs.)
1	<b>EARTH WORK &amp; CARRIAGE OF MATERIAL</b>				
	<p><b>Note:</b></p> <p>1) The method of excavation shall be approved by the Engineer in charge before execution.</p> <p>2) Excavation shall be carried out very carefully without damaging existing structures and surrounding if any.</p> <p>3) If required, the contractor shall provide stabilization by any means to protect the foundation of the existing structure and building without any extra cost.</p> <p>4) Rate shall include dewatering work (pumping out and removing slush) while execution in underwater condition if required.</p>				
1	<b>Excavation for all kinds of soil</b> Earthwork in <b>excavation for all kind of soil</b> by any means including getting out the excavated soil, sorting and stacking of useful material, dressing of the sides, ramming of bottom, and disposal of surplus excavated earth for all lead within the site area at non objectionable place and <b>lift up to 1.5 mt depth</b> , including dewatering and working in or under water and /or liquid mud, including pumping out water/slush as required etc complete as directed by engineer-in-charge. In case of excavation for pipe, cable, any services trenches, making base for road work, pavement works walkway, etc, proper slop and camber by any means shall be maintain and dressing of the sides shall be made as per requirement and as directed by engineer-in-charge.	Cum	135	261.00	35,235
	<b>Total Carried Over to Summary</b>				<b>35,235</b>
	<b>PLAIN &amp; REINFORCEMENT CEMENT CONCRETE WORK</b>				
	<p><b>Note -</b></p> <p>1) All types of shuttering shall be designed by the contractor and submitted to the Engineer in charge along with design calculations (if required) and approved by the Engineer in charge. However, the Stability and compatibility of shuttering shall be the responsibility of the contractor. Shuttering shall be executed as per the approved shop drawing. No extra payment shall be made for the above.</p> <p>2) Rate shall be inclusive of dewatering work (pumping out and removing slush) while execution in underwater conditions. The contractor shall not claim for dewatering if required.</p> <p>3) Rate shall be inclusive of providing grooves, drip moulds, pockets, cut-outs, etc., and co-ordination of insert sleeves, insert plate (cost of insert sleeves/ plate shall be paid separately), encasing if any wherever required while casting for all level all height.</p> <p>4) If required concrete batching and mixing plant of minimum 60 cum/hr capacity shall be set up by contractor.</p> <p>5) Mould release agent of approved make shall be used at every repeatation on formwork material.</p> <p>6) Shuttering shall be compatible with self-compacting concrete (SCC) work, wherever required.</p> <p>7) Shuttering shall be compatible with heavy/bulky RCC elements, wherever required.</p>				

**BILL OF QUANTITIES**  
**SUB SECTION**  
**6.1 - CIVIL WORKS**

Sr. No.	Description	Unit	Total Quantity estimated but may be more or less	Unit Rate (In Rs.)	Total amount (In Rs.)
2	<p><b>Concrete (PCC) of grade - M15</b>  Providing and laying in position <b>Controlled cement concrete</b> /<b>Ready mix concrete/ batch mix concrete</b> of cement concrete (PCC) of grade - M15 cement concrete work, using cement content as per approved design mix (Min cementitious level as per latest IS 456 shall be maintained) manufactured in fully automatic batching plant and transported to the site of work in transit mixer for all lead having a continuous agitated mixer, for reinforced cement concrete work including pumping from transit mixer to site of laying; cost of admixtures in recommended proportions as per IS: 9103 to accelerate, retard the setting of concrete, improve workability without impairing strength and durability; finishing, compacting, vibrating, curing, dewatering (if required), etc, including the cost of form work and removal of formwork, dewatering (if required), etc. complete for all level, all height/ depth and for all lead and lift and as directed by the Engineer.</p>	Cum	42	4,290.00	1,80,180
	<p>Providing and laying in position <b>Exposed Finish</b> controlled cement concrete/ Ready Mix concrete/ batch mixed concrete for reinforced cement concrete work as per design mix of specified grade using graded black trap stone aggregates of maximum 20mm nominal (down graded) size including fine aggregates conforming to latest IS 383 with minimum cement content (without fly ash) for durability (followed as per IS-456 and technical specification) shall be followed as per approved design mix for all elements of any shape and size, at all places and heights/ depths including transporting by transit mixer for any lead having continuous agitated mixer, laying of concrete to site by any means i.e like pumping, tower crane or boom placer, or any other etc., vibrating, finishing and curing etc. and including admixtures in recommended proportions as per IS 9103 to accelerate, retard setting of concrete, to improve workability without impairing strength and durability as per direction of Engineer-in-charge. Rate shall be inclusive of providing grooves, drip moulds, ghisis, pockets, cutouts etc. and labour for insert sleeves if any wherever required while casting.</p>				
	<p>Rate shall be inclusive of shuttering and centering/ formwork for exposed finish concrete with pattern, lift charges, scaffolding, staging, propping, etc and tie rod assembly of PVC cone and coil on both sides of the concrete walls, filling the same with non-shrink grout or polymer mortar and excluding cost of steel reinforcement. Full height shuttering with a single pour system shall be followed. Contractor to prepare the shuttering drawing as per the shuttering pattern given by the architect. All concrete work shall be exposed finish (without any honeycomb). Contractor shall use the mould release agent of approved make before use of the shuttering material every time.</p> <p>A sample of each element shall be prepared with and without a shuttering pattern at the location as per the instructions of the Architect and SRFDCL Engineer in charge for review and approval before mass execution.</p> <p>If instructed for the exposed finish shuttering, the contractor is to follow the detailed technical specification for exposed finish shuttering and concrete given in the tender package.</p>				
3	Concrete of M 30 grade	Cum	108	7,447.00	8,04,276

**BILL OF QUANTITIES**

**SUB SECTION**

**6.1 - CIVIL WORKS**

Sr. No.	Description	Unit	Total Quantity estimated but may be more or less	Unit Rate (In Rs.)	Total amount (In Rs.)
4	Providing and fixing <b>Thermo-Mechanically Treated bars (Fe 550 D)</b> Reinforcement for R.C.C. work including transporting to the work site, straightening, cutting, bending, cranking, fabricating to required shape, placing/ lowering in position by suitable method, and tying / binding the system (with GI wire) all complete for all leads and lifts, all levels, all floors, all heights/ depth, etc complete and as directed by the Engineer in charge. Measurement will be made on the length basis and converted into weight by using standard co-efficient (rolling margin's and wastage shall not be paid). No separate payment shall be made for laps, chairs, pins, lifting hooks, spacers, and binding wire.	Kg.	24314	94.00	22,85,516
	Providing and fixing <b>110 mm dia PVC pipe</b> having capacity of 6 Kg/cm <sup>2</sup> with ISI mark of required length as shown in the structure drawing wherever pipes pass through walls as weep hole before concreting for all level/ all depth/ height. All pipes shall be accurately cut to the required sizes, laid as per drawing, kept in the position while laying reinforcement and shuttering, sleeves shall not get displaced while concreting, and burrs removed before laying. Open ends of the pipe shall be closed as the pipe is installed to avoid clogging while concreting. At one side of pipe, SS 304 mesh shall be placed to protect filled soil. Rate shall be inclusive of pipe and SS 304 mesh. Item shall not be used for diaphragm wall construction. Actual installed length of pipe shall be measured for payment.				
5	PVC sleeve - Up to 110 mm Diameter	Rmt	9	389.00	3,501
	<b>Total Carried Over to Summary</b>				<b>32,73,473</b>
	<b>WATERPROOFING WORK</b>				
	<p><b>Note:-</b></p> <p>1) The Contractor shall repair the concrete elements by injection grouting of suitable non-shrink grout and other suitable methods in case of defective concreting of retaining walls, water tanks, slabs, beams, etc., for which no extra costs shall be payable.</p> <p>2) Rate shall be inclusive of surface preparation, repairing, injection grouting, saw cutting of construction joints and filling with patch repair mortar, making polymer mortar/Polymer CC fillets at horizontal as well as vertical corners, etc complete. The rate shall be inclusive of testing of elements and the system before and after waterproofing application.</p> <p>3) The latest technical system/product shall be adopted at the time of execution.</p>				

**BILL OF QUANTITIES**

**SUB SECTION**

**6.1 - CIVIL WORKS**

Sr. No.	Description	Unit	Total Quantity estimated but may be more or less	Unit Rate (In Rs.)	Total amount (In Rs.)
6	<b>Planter waterproofing (screed + Drain board)</b> Supplying and laying M25 grade vibrated concrete screed (admixed with water proofing compound conforming to IS: 2645 and approved by the Engineer-in-charge) in proper slope and gradient including saw cutting (if required), making angle fillet of 50mm x 50mm at the corners/Junction using M25 grade concrete and filling the grooves/joints/junctions (internal& external) with PU sealant (minimum 20 mm depth over PE backer rod). If Screed concrete shall be laid over on existing concrete surface/existing laid stone surface, a bonding agent shall be applied before laying of concrete. After the laying of the required thickness screed, polypropylene HDPE dimpled drain board (with inbuilt geo textile drainage membrane of 100 gsm at top) shall be laid, with a minimum overlap of 100 mm, based on soil characteristics and height of soil overburden. Cost includes all material, labour, T&P, and wastage involved as mentioned in the item. Actual volume of laid concrete shall be measured for payment without considering wastage	cum	26	6,368.00	1,65,568
7	<b>12 to 15 mm thick water proof Plaster</b> Providing and laying 12 to 15 mm thick water proof single coat smooth / wired finish cement plaster on sides of masonry work / block work / RCC work, in any shape, in CM 1:3 (1 cement : 3 fine sand) and water proofing compound of approved make in proportions recommended by the manufacturer, finishing the surface wired finish/ smooth finish with a floating coat of neat cement slurry for all floors, all height including hacking to RCC surface, scaffolding, curing etc. complete as directed by engineer-in-charge.	Sqm	322	184.00	59,248
	<b>Total Carried Over to Summary</b>				2,24,816
	<b>PAINTING/POLISHING WORKS</b>				
	<b>Note:-</b> 1) All adhesives, sealants & paint shall be water based, with low VOC with acceptable VOC content as per Green Building Norms requirements and lead free. 2) Paint shall be applied after thoroughly brushing the surfaces, free from mortar dropping and other foreign matter, preparing the surface even and sand papered smooth etc, after applying every coat of putty and primer complete. 3) Contractor shall furnish warranty paper, wherever applicable. 4) If necessary more coats shall be applied till the surface presents a uniform appearance without any extra cost. 5) Paint shall be applied with any means (i.e. brush, roller, spray etc) 6) Contractor shall prepare sample of minimum three shades as suggested by engineer in charge for approval. 7) The rate shall be applicable for all floor, all level, all height by any means of scaffolding.				
8	<b>Acrylic emulsion paint with primer - Exterior grade</b> Providing and applying 100% Acrylic Smooth exterior paint with exterior primer of Two or more coats of paint including required number of priming coat of exterior primer as per manufacturer's specification of approved make and shade, having VOC (Volatile Organic Compound) content less than 50 grams/ litre of required shade over any surface etc complete for all floors all heights all levels. Exterior paint and primer shall have minimum 7 years warranty.	Sqm	2	112.00	224

**BILL OF QUANTITIES**

**SUB SECTION**

**6.1 - CIVIL WORKS**

Sr. No.	Description	Unit	Total Quantity estimated but may be more or less	Unit Rate (In Rs.)	Total amount (In Rs.)
9	<b>Stain-repellent transparent coating - For exposed concrete work</b> Providing and applying (solvent/ water based), low VOC, breathable and biodegradable, water, oil, and stain-repellent transparent fluorocarbon-based coating with anti-graffiti properties (suitable product according to natural stone, exposed concrete work) of approved make having fluoro carbon-based nanotechnology at all heights & leads and wherever instructed by Engineer-In-Charge. The treatment shall be in two coats wet-on-wet or as recommended by the approved manufacturer including preparation of surfaces by cleaning, curing, protecting, scaffolding, etc complete. The rate includes the cost of all materials, their application by specialized applicators by spray coating with an airless sprayer, cleaning the substrate of all laitance, construction dust, contaminants, scaffolding, labour, etc., all complete and at all levels, leads and heights as per particular specification & directions of Engineer-in-Charge. Guarantee Bond in the prescribed proforma shall be executed by the contractor for the satisfactory performance of the application for 5 years. The look and feel of the natural stone surface, and exposed concrete shall not be affected by coating.	Sqm	315	171.00	53,865
	<b>Total Carried Over to Summary</b>				<b>54,089</b>
	<b>METAL WORK</b>				
	<p><b>Note -</b></p> <p>1. Contractor shall prepare shop drawing base on concept design/drawing for any type of fabrication work and get approved. Contractor shall prepare mock-up/ prototype (as suggested) as per approved shop drawing for approval. Work shall be carried out as per approved shop drawing, approved mock-up/ prototype and as suggested by Engineer in charge.</p> <p>2. Rate shall be for all floor, all level all height.</p> <p>3. The rate shall include cost of all types of fasteners (ETA approved) to be used for fixing.</p> <p>4. Structural stability shall be responsibility of contractor for all kind of metal work.</p> <p>5. All elements shall be factory fabricated and finished, only final finishing to be made on site with all precautions.</p> <p>6. Contractor shall coordinate all services work (cut-outs and provisions) in metal work. All cut-out and services provisions shall be finished at factory/ work shop.</p> <p>7. contractor shall provide PVC/ nylon seprator, where two different metals connect to avoid galvanic reactions.</p>				

**BILL OF QUANTITIES**

**SUB SECTION**

**6.1 - CIVIL WORKS**

<b>Sr. No.</b>	<b>Description</b>	<b>Unit</b>	<b>Total Quantity estimated but may be more or less</b>	<b>Unit Rate (In Rs.)</b>	<b>Total amount (In Rs.)</b>
10	Structural steel work - Fabrication works - with paint Providing, fabricating, assembling, hoisting, erecting and fixing in position structural steel work at all heights/ all levels/ all shapes & sizes with all leads & lifts using any type of MS section like rolled steel sections, hollow sections, plates, chequered plates, bar, sheet, rod, threaded bolt, railing etc. all confirming to latest relevant IS codes for the metal elements i.e. cycling channeling, window grill, transom bar, bright bar in wooden door - window frame, railings, gates, grills, bracings, foundation plate & bolt, support at truss system, truss, purlin, rafter, cleat, platforms, brackets, fencing pole, platform, trench cover, flag fixing sleeve pole, garbage box, signage pole, service elements, Jali, clamp, logo, metal dustbin as per design intent etc. including straightening, cutting, bending, profile cutting, embossing, bolting and welding, etching (if required) the members all as per structural drawings and as per detailed specifications (for materials & workmanship) including profile cutting, smooth grinding, machining of edges/ faces, necessary welding (electric arc welding) for required weld lengths and sizes, machine drilling of holes for joining/ anchoring/bolting, necessary arrangements of templates to keep the foundation bolts in position dry sanding, degreasing (wet cleaning) & preparation of rust-free surface manually or mechanically, metal putty to make the surface even and smooth, necessary scaffolding/ staging, anchor fasteners, extra for bending elements for fixing etc complete. Incase of Metal dustbin, openable MS Shutter shall be with invisible self-closing hinge of required capacity and locking arrangement inside the shutter as per design intent. Contractor shall prepare mock-up of any element wherever required as directed by the Engineer-in-charge.	Kg.	394	158.00	62,252
	Contractor shop/ fabrication prepare shop drawing and get approved. The fabrication work shall start only after approval of the fabrication drawings. Fabrication shall be in a perfect Architectural workmanship manner and as provided in Section V & VI of IS 800 & IS 7215. Contractor shall responsible against stability, safety etc all complete The rate shall include for applying (on all surfaces of MS member) two or more coats PU paint (DFT min 40 micron per coat) of approved make and shade over two coat (DFT min 50 micron per coat) of anti corrosive epoxy base primer for PU paint, as per manufacturer's specification, anchor fastener etc all complete.				
11	Extra charges for providing hot dip galvanizing work conforming to IS 4759/2629/2633 with a zinc coating of 610 GSM thickness on any type of MS sections for various elements like Dustbins, Railing, Handrail, gate, grill, platform, trench cover, flag fixing sleeve pole, garbage box, signage pole, Street furniture and similar works etc. made for all locations, heights, and levels as per the drawings and as instructed by the Engineer-in-Charge. The rate includes surface preparation by shot blasting or acid washing prior to hot dip galvanizing, as well as all necessary labour, tools, and machinery (sample to be approved). The weight of the steel sections before galvanization shall be measured for payment without considering any wastage. A sample and mock-up shall be prepared for approval by the Engineer-in-Charge before mass execution.	Kg.	394	58.00	22,852
	<b>Total Carried Over to Summary</b>				<b>85,104</b>

**BILL OF QUANTITIES**

**SUB SECTION**

**6.1 - CIVIL WORKS**

Sr. No.	Description	Unit	Total Quantity estimated but may be more or less	Unit Rate (In Rs.)	Total amount (In Rs.)
	<b>EXTERNAL DEVELOPMENT WORK</b>				
	<p><b>Note -</b></p> <p>1) Stones shall be free from cracks, lines, stains, white spots of efflorescence and even in shade for all kind of stone work.</p> <p>2) Stones shall be selected and sorted for uniform colour, figure and thickness and approved by Engineer in charge prior to procurement.</p> <p>3) Stone shall be from same lot and/ or source (stone quarry) for same kind of work and as approved by Engineer in charge.</p> <p>4) Contractor shall apply Stone Impregnation primer/ sealer coat on back side and all edges (after cutting and finishing of the stone as per size) of stones of approved make. Stone Impregnation primer/ sealer coat shall be of water based with pH value 7 to 10 in minimum two coat as per manufacturer's specification and as directed by Engineer in charge. No extra shall be paid for the same.</p> <p>5) Contractor shall prepare and submit shop drawing for all kind of stone work with sub base/ framing work/ fixing arrangement/ joinery with all required fasteners and get approval from Engineer in charge.</p> <p>6) Mock up/ sample shall be prepared as per approved shop drawing and get approved by Engineer in charge before execution of work.</p> <p>7) All adhesives and sealants shall be with low VOC and lead free with acceptable VOC content as per Green Building requirements.</p> <p>8) Stone work shall be carried out for all floor, all level, all height, all places including loading, unloading, stacking, transporting, hoisting, erecting by any means (mechanical or manual).</p>				
	<p>9) All type of stones shall be cut to size with help of with water jet cutting/ laser cut/ CNC machine according to the design and shape for best workmanship as per shop drawing.</p> <p>10) Granite shall be mirror polished/ flame finished/ sand blasted/ river wash finish or other as per specified.</p> <p>11) All type of stone/ stone elements shall be factory cut and factory finished. Finish on any stone shall be as per satisfaction of Engineer in charge. If required, final finish/ touch-up shall be executed at site as per direction of Engineer in charge.</p> <p>12) Structural stability of solid stone work shall be responsibility of contractor.</p> <p>13) Contractor shall make necessary provision for any services cut-out/ other required provision, co-ordinate with all services work and making good etc complete.</p> <p>14) All visible surfaces of stone shall be same finished.</p>				

**BILL OF QUANTITIES**

**SUB SECTION**

**6.1 - CIVIL WORKS**

<b>Sr. No.</b>	<b>Description</b>	<b>Unit</b>	<b>Total Quantity estimated but may be more or less</b>	<b>Unit Rate (In Rs.)</b>	<b>Total amount (In Rs.)</b>
12	<p><b>Kota Stone - For treads/copping/seating - fixing with Cement Mortar</b></p> <p>Providing and laying machine-cut Kota stone 40 mm thick any type of Polished/ Textured (i.e. river wash finish, leather finish, linen finish, canvas finish etc) finish Kota stone in a single piece of any shade (uniform), any size, and any shape in treads of steps, coping and seating, etc as per the drawings. Kota stone slab having pencil corner and same polished at the exposed edge in even and uniform thickness and laid overupto 20 mm thick base of cement mortar 1: 6 (1 cement: 6 coarse sand)/ suitable adhesive as per manufacturer specification, and jointed (paper joint) with grey/ white cement slurry mixed with pigment to match the shade of the slabs, including finishing, rubbing, curing, polishing, cleaning, protection, scaffolding, wastage, etc. all complete for all levels, all floor, all height, and as directed by the Engineer-in-Charge. The joint between the tread and riser shall be finished as per the drawing.</p> <p>The rate shall be inclusive of Kota stone (as per the approved sample), fixed with cement mortar bedding/ adhesive, cement slurry, matching pigment, all labour, etc complete. The contractor shall arrange loose Samples for approval from the Engineer-in-Charge before mass execution.</p> <p>The actual laid area of the Kota stone shall be measured for payment without considering any wastage.</p>	Sqm	63	1,600.00	1,00,800
13	<p><b>Kota Stone - For risers of steps, dado etc. or similar - fixing with cement mortar</b></p> <p>Providing and laying machine-cut Kota stone 25 mm thick any type of Polished/ Textured (i.e. river wash finish, leather finish, linen finish, canvas finish etc) finish Kota stone in a single piece of any shade (uniform), any size, and any shape in the risers of steps, dado or similar etc. as per the drawings. Kota stone slab having pencil corner and same polished at the exposed edge in even and uniform thickness and laid in any pattern fixed on any type of leveled surface with approximate 12 mm thick (average) cement mortar 1:3 (1 cement : 3 coarse sand)/suitable adhesive as per manufacturer specification, and jointed (paper joint) with grey/ white cement slurry mixed with pigment to match the shade of the slabs, including finishing, rubbing, curing, polishing, cleaning, protection, scaffolding, wastage, etc. all complete for all levels, all floor, all height, and as directed by the Engineer-in-Charge. The joint between the tread and riser shall be finished as per the drawing. The rate shall be inclusive of Kota stone (as per the approved sample), cement mortar for fixing/ adhesive, cement slurry, matching pigment, all labour, etc complete. The contractor shall arrange loose Samples for approval from the Engineer-in-Charge before mass execution.</p> <p>The actual laid area of the Kota stone shall be measured for payment without considering any wastage.</p>	Sqm	32	1,286.00	41,152

**BILL OF QUANTITIES**  
**SUB SECTION**  
**6.1 - CIVIL WORKS**

Sr. No.	Description	Unit	Total Quantity estimated but may be more or less	Unit Rate (In Rs.)	Total amount (In Rs.)
14	<p><b>Kota Stone - For risers of steps, dado etc. or similar - fixing with cement mortar</b></p> <p>Providing and laying machine-cut Kota stone 55 to 65 mm thick any type of Polished/ Textured (i.e. river wash finish, leather finish, linen finish, canvas finish etc) finish Kota stone in a single piece of any shade (uniform), any size, and any shape in the risers of steps, dado, planter sides, or similar etc. as per the drawings. Kota stone slab having pencil corner and same polished at the exposed edge in even and uniform thickness and laid in any pattern fixed on any type of leveled surface with approximate 12 mm thick (average) cement mortar 1:3 (1 cement : 3 coarse sand)/suitable adhesive as per manufacturer specification, and jointed (paper joint) with grey/ white cement slurry mixed with pigment to match the shade of the slabs, including finishing, rubbing, curing, polishing, cleaning, protection, scaffolding, wastage, etc. all complete for all levels, all floor, all height, and as directed by the Engineer-in-Charge. The joint between the tread and riser shall be finished as per the drawing. The rate shall be inclusive of Kota stone (as per the approved sample), cement mortar for fixing/adhesive, cement slurry, matching pigment, all labour, etc complete. The contractor shall arrange loose Samples for approval from the Engineer-in-Charge before mass execution. The actual laid area of the Kota stone shall be measured for payment without considering any wastage.</p>	Sqm	5	1,834.00	9,170
15	<p><b>18 mm thick WPC Plank/board - coping/seating on bench etc.</b></p> <p>Providing &amp; laying 18 mm thick machine-cut External category WPC Pank/board of any finish, any texture, any color, any shade, any size and any shape, wpc board /plank having density 550 kg/cum for coping, seating on bench in required design and patterns as per the drawings, fixed with suitable adhesive of minimum 6 mm thickness fixing adhesive as per IS-15477 of an approved make, including making groove as per drawing, exposed edge treatment and champharing/ making pencil corner if required, rounded corner treatment in even thickness and finished same as plank/board finish as per drawing and as approved and directed by Engineer in charge, WPC board/plank shall be used in single possible length/as per drawing for coping / seating on bench. Necessary anchoring shall be done if required as per design intent.</p> <p>The actual laid area of the WPC Board/Plank shall be measured for payment without considering any wastage.</p>	Sqm	132	1,792.00	2,36,544

**BILL OF QUANTITIES**

**SUB SECTION**

**6.1 - CIVIL WORKS**

<b>Sr. No.</b>	<b>Description</b>	<b>Unit</b>	<b>Total Quantity estimated but may be more or less</b>	<b>Unit Rate (In Rs.)</b>	<b>Total amount (In Rs.)</b>
16	<b>Precast RCC Bench - modular type linear/ curvature in Plan and elevation, Tube type</b> Providing, hoisting, stacking and arranging in position, precast exposed fair finished modular type linear/ curvature in Plan and elevation, bench as per design intent, made of minimum M-30 grade RCC, with/ without a back rest of approximate size and shape as per the design intent, as directed by the Engineer-in-charge. The Contractor shall submit a methodology for the erection of the precast bench and get approval from the Engineer-in-Charge. Installed precast bench shall not be damaged in any way. The sample shall be approved by the Engineer-in-charge before mass production. The rate shall include for erecting and fixing the precast bench in position as per the drawing, finishing, necessary TMT reinforcement bars etc., complete, as directed by the Engineer-in-Charge. The location and type of each lifting hook for erecting the bench shall be as per the design intent and as approved by the Engineer-in-Charge. The Architect and the Engineer-in-Charge reserve the right to reject part or all work found to be sub standard or not as per the approved sample and the mock-up. The sample and the mockup shall not be payable if rejected or cast in another location (not in scope of work area). if required bench shall be in coloured/ pigmented concrete however additional cost of for pigment shall be paid relevant tender item. The actual laid volume shall be measured for payment without any wastage.	cum	66	36,208.00	23,89,728
17	<b>ACP sheet signage on Existing Pole/ New Pole for Vehicular Direction Signages:</b> Providing, making and fixing 4 mm thick ACP sign of any shape and size and of approved make to be cut on CNC router cutting and smoothen all corners and edges. Matter shall be cut in 3M High intensity prismatic Reflective vinyl ASTM Type 4 and paste on it as per design and detail and as per manufacturer's specifications. UV stabilized lamination (exterior grade) shall be done on it. The ACP sheet shall be fixed with clamp and angle on new or any type of Pole as per drawing. Content of sign shall be letters (in any language),	Sqm	8	8,305.00	66,440
18	<b>Vinyl Stickers:</b> Providing, Cutting & pasting of <b>vinyl stickers</b> of approved make and shade <b>with digitally printed graphic/ letter</b> as per design and as directed by engineer in charge. Pasting of vinyl must be accurate as per the design on the approved size ACP without any kind of bubbles. The rate shall also include cost of scaffolding, drilling, fabrication, finishing, adhesive material etc at all height and all lead. Only out to out area elevation vinyl stickers shall be measured and paid in sqmt. The contractor should submit the drawings based on concept design and do the sampling and get it approval before execution.	Sqm	8	4,239.00	33,912

**BILL OF QUANTITIES**  
**SUB SECTION**  
**6.1 - CIVIL WORKS**

Sr. No.	Description	Unit	Total Quantity estimated but may be more or less	Unit Rate (In Rs.)	Total amount (In Rs.)
19	<p><b>SS Plate Signs :</b>  Providing Making and fixing SS plate signs on 2mm thick ISI Brushed S.S. Grade 304 plate with acid etching and duco painting. All plates will be made in CNC Water Jet Cutting, with all edges smoothen and all corner to be cute round. Acid etching should be done 0.3mm deep and Use ICI duco paint for colour infill of approved colour. The letters of made of Vinyl stickers. The font colour shall be of as per drawing and specified by Architect. The plate will be fixed on wall with the stud/ fastener/ adhesive tape of 3M, jointing sealant as per design as per specification and approved by Architect or Engineer in charge. The rate shall be inclusive of scaffolding, drilling, fasteners/ adhesive material etc. at all heights as directed by engineer in charge. Only elevation area shall be measured and paid. The rate shall also include cost of scaffolding, drilling, fabrication, finishing, adhesive material etc at all height and all lead. The contractor should submit the drawings based on concept design and do the sampling and get it approval before execution.</p>	Sqm	8	45,746.00	3,65,968
	<b>Total Carried Over to Summary</b>				<b>32,43,714</b>
	<b>PREPARATORY WORKS</b>				
	<p><i>Note: -</i></p> <p>1) The method of demolition work shall be approved by the Engineer-in-charge before execution of work.</p> <p>2) Demolition work shall be carried out by any means and as per approved method without damaging adjoining elements/ building and any building/ campus property.</p> <p>3) The rate includes all necessary machinery, labour, tools, and tackles for the dismantling of specified elements in any condition, by any means, etc. complete as directed by the Engineer-in-charge including disposing of serviceable material within the campus and unserviceable material outside the campus for all lead and lift at the non-objectional place as directed by Engineer-in-charge.</p>				
20	<p><b>Cutting in stone, concrete, or bituminous surface</b>  Labour charge for cutting in stone, concrete, or bituminous surface to facilitate further execution work using heavy duty cutting machine consist of diamond blade or any other required means. cutting depth &amp; width shall be as per actual requirement. Cutting shall be perfectly in line. dismentle material shall be carefully removed so that the cutting edge shall not be disturbed. all debris shall be disposed for all lead and lift at non objectional place and as per the direction of the engineer in charge. Surroundings shall be cleaned up to the satisfaction of engineer in charge.</p>	Sqm	425	290.00	1,23,250
21	<p><b>Dismantling</b> of existing <b>reinforced cement concrete (RCC)</b> work of any grade and any type, using mechanical or manual methods as advised by the Engineer-in-Charge. This includes cutting reinforcement, and providing necessary tools, plant, and scaffolding. The work also involves sorting the dismantled material, disposing of unserviceable material at an approved location, and stacking the serviceable material with all necessary all lifts and all leads, as directed by the Engineer-in-Charge.</p> <p>The volume of the existing RCC work shall be measured for payment before the dismantling begins. The method for calculating the volume for payment shall be approved by the Engineer-in-Charge.</p>	Cum	72	1,526.00	1,09,872

**BILL OF QUANTITIES**  
**SUB SECTION**  
**6.1 - CIVIL WORKS**

Sr. No.	Description	Unit	Total Quantity estimated but may be more or less	Unit Rate (In Rs.)	Total amount (In Rs.)
22	<b>Chemical Anchor:</b> Supplying, Drilling/ Cleaning hole and injecting grouting chemical with the help of dispenser, into a hole of dia & depth as per manufacturer/ structural consultant's specification and fixing rebar of the required diameter subsequently. Fixing methodology shall be followed as per manufacturer's guidelines. Steel will be paid under relevant item. Manufacturer to submit Rebar Depth Calculation based on design loads & other parameters as provided by consultant and in accordance with EOTA-TR-023/029 "guidelines for post installed rebar connections" for approval. Rate shall be inclusive of all material, labour, necessary scaffolding etc complete for all height as directed by engineer in charge.				
22.1	a) 10mm x 150mm	No	120	400.00	48,000
22.2	b) 12mm x 180mm	No	120	575.00	69,000
22.3	c) 16mm x 240mm	No	120	880.00	1,05,600
22.4	d) 20mm x 300mm	No	120	1,475.00	1,77,000
22.5	e) 25mm x 375mm	No	120	1,940.00	2,32,800
23	<b>Rebaring :</b> Providing material and labour for Drilling/ Cleaning hole and injecting grouting chemical with the help of dispenser, into a hole as per manufacturer/ structural consultant's specification and fixing rebar of the required diameter subsequently. Fixing methodology shall be followed as per manufacturer's guidelines. Steel will be paid under relevant item. Manufacture to submit Rebar Depth Calculation based on design loads & other parameters as provided by consultant and in accordance with EOTA-TR-023/029 "guidelines for post installed rebar connections" for approval. Rate shall be inclusive of all material, labour, necessary scaffolding etc complete for all floors, all height as directed by engineer in charge.				
23.1	a) hole of dia 8mm and depth min 120mm	No	610	197.00	1,20,170
23.2	b) hole of dia 10mm and depth min 150mm	No	1230	273.00	3,35,790
23.3	c) hole of dia 12mm and depth min 180mm	No	610	360.00	2,19,600
23.4	d) hole of dia 16mm and depth min 240mm	No	410	557.00	2,28,370
	<b>Total Carried Over to Summary</b>				<b>17,69,452</b>
	<b>SUB TOTAL OF CIVIL WORKS</b>				<b>86,85,883</b>
	<b>TOTAL OF SUB SECTION 6.1 - CIVIL WORKS</b>				<b>86,85,883</b>