

**Name of work:- CONSTRUCTION OF THREE ARM FLYOVER AT HOSPITAL CHOWK
IN RAJKOT CITY**

**SCHEDULE - B
Memorandum showing items of works to be carried out**

RECAPITULATION SHEET

SECTION NO.	DESCRIPTION	AMOUNT (Rs.)
SECTION-A1	BRIDGE SOLID APPROACHES SERVICE ROAD AND PAVING AREA ESTIMATE	580,269,350.00
SECTION-A2	UTILITY SHIFTING WORKS	6,474,968.00
SECTION-A3	ELECTRIFICATION WORKS	5,634,382.00
	Total Amount	592,378,700.00
	Total Amount put to Tender Rs. =	592,378,700
In word : Rupees Fifty Nine Crore Twenty Three Lacs Seventy Eight Thousand Six Hundred Ninety Eight Rupees Only		

I/We am/are willing to carry out the work at _____% above / below _____% to the amount put to tender.

(should be written in figures and words below/above the estimated rates mentioned above.)

Amount of my/our tender works out as under :

Notes :

1) % above / below is to be submitted online only.

2) All work shall be carried out as per the specifications or as directed.

3) Rates quoted include cleaning of site (prior to commencement of work and at its close) in all respects and hold for work under all conditions, site moisture, weather, etc.

**Signature
Contractor**

**Signature
City Engineer**

Name of Work :- CONSTRUCTION OF THREE ARM FLYOVER AT HOSPITAL CHOWK IN RAJKOT CITY

Construction Division :-Rajkot Municipal Corporation

SCHEDULE A1 : BRIDGE, SOLID APPROACHES , SERVICE ROAD

Sr No.	Quantity	UNIT	Item of work	Estimated Rates (Rs.)	Total Amount according to estimated quantities (Rs.)
1	3.09	Ha	Clearing and grubbing road land including uprooting trunk vegetation, grass bushes, shrubs, saplings and tree girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials (C) by mechanical means in area of light jungle.	32019.02	98939.00
2	1.00	LS	Marking out the center line of the Bridge and various other component structures and complete lining out and leveling with theodolite, levels, including constructing necessary masonry pillars for lines and levels and establishing necessary bench marks etc. complete as directed.	50500.00	50500.00
3	50.00	Nos	Felling trees of the girth (measured at a height of 1 m above ground (level), including cutting of trunks and branches, removing the roots and stacking of serviceable material and disposal of unserviceable material. Beyond 60cm girth upto & including 120cm girth.	879.81	43991.00
4	210.00	Nos	Shifting of Telephone /Electric poles and Lines (Removal of telephone/Electric poles including excavation and dismantling of foundation concrete and lines under the supervision of concerned department, disposal with all lifts and up to any lead and stacking the serviceable and unserviceable material included)	119.18	25028.00

SCHEDULE A1 : BRIDGE, SOLID APPROACHES , SERVICE ROAD

Sr No.	Quantity	UNIT	Item of work	Estimated Rates (Rs.)	Total Amount according to estimated quantities (Rs.)
5	6905.00	sqm	Providing and installation of barricading with retro-reflective paint /film /tapes as specified in the drawing @ 3m high & specifications on rental basis only for the construction of bridge, along with necessary diversion arrangement for existing traffic movement in an unobstructed condition, all relevant markings, sign boards and illumination as per relevant MORT&H specification. Rate to be inclusive of all materials, fabrication works, paint works, foundation works, transportation, loading, unloading, installation, removing & relocating and inclusive of all taxes and including the same design for providing openable gates. No extra rental will be given to the contractor in case of any delays from his part for construction or due to any valid time limit extensions. Each barricading sheet is to be numbered with a unique number. The contractor may reuse the same sheet for barricading else where with in the project boundaries, however in such case, he will not been titled for separate rent for reuse. After the completion of project, the owner ship of barricading will remain with the contractor. Blinkers are to be installed on the barricading . Barricading is to be cleaned by means of washing with water on a weekly basis or a sand when required as per the instructions of Engineer in charge.	1351.38	9331279.00
6a	1670.70	Cum	Dismantling of existing structures like Footpath, Pavers, Kerb and other structure comprising of masonry, cement concrete, steelwork, including tools, plants and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and leads & as directed by engineer in charge. (RCC Work)	562.57	939886.00
6b	1764.56	Cum	Dismantling of existing structures like Footpath, Pavers, Kerb and other structure comprising of masonry, cement concrete, steelwork, including tools, plants and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and leads & as directed by engineer in charge. (Brick Work)	247.45	436640.00
7	6233.00	sqm	Dismantling of Flexible Pavements (Dismantling of flexible pavements and disposal of dismantled materials up to a lead as directed by Engineer-in-Charge, stacking serviceable and unserviceable materials separately).	69.69	434378.00
8	15217.00	Cum	Excavation for foundation in sand, gravel, clay soft soils and murrum etc. Including shoring, strutting dewatering as necessary and disposing of the excavated stuff as directed.	309.06	4702966.00
9	11072.00	Cum	Excavation in large boulders and soft rock by chisseling including shoring, strutting and dewatering as necessary and disposing of the excavated stuff as directed by Engineer in Charge.	433.29	4797387.00

SCHEDULE A1 : BRIDGE, SOLID APPROACHES , SERVICE ROAD

Sr No.	Quantity	UNIT	Item of work	Estimated Rates (Rs.)	Total Amount according to estimated quantities (Rs.)
10	12507.00	Cum	Excavation in hard rock by dry-wet blasting and chiselling (B) prohibited Blasting work, including dewatering preparing foundation base by proper benching and stepping and disposing of the excavated stuff as directed by Engineer in Charge.	1013.03	12669966.00
11	43477.86	Cum	Carting of excavated material such as murrum, earth,kapachi, gravel, brickbats, kankar, debris, sand, dismantled material, including loading, unloading, stacking etc.complete at non objectional place as directed by engineer in charge.	101.00	4391264.00
12	1398.00	Cum	Providing & filling in foundation with ordinary cement concrete M15 mix and providing necessary vertical pin headers including formwork vibrating ramming & curing complete.	2447.23	3421228.00
13	8818.00	Cum	Providing and filling trenches of Labour charges - Excavator in rocky strata with ordinary cement concrete M-150	2450.26	21606393.00
14	3772.00	Cum	Providing and casting in-situ controlled cement concrete of M35 grade for RCC work for Pier,Abutment Foundation work with 20/40mm down coarse aggregate of the required size for any depth including dewatering, scaffolding centring, shuttering, mixing, placing in position, consolidating with mechanical vibrators, curing, deshuttering carefully, making good the damages, fixing embedment, inserts, pockets, wherever necessary as per specification and drawing.	3492.58	13174012.00
15	2726.00	Cum	Providing and casting in-situ controlled cement concrete of M30 grade for RCC work for Retaining wall foundation with 20/40mm down coarse aggregate of the required size for any depth including dewatering, scaffolding centring, shuttering, mixing, placing in position, consolidating with mechanical vibrators, curing, deshuttering carefully, making good the damages, fixing embedment, inserts, pockets, wherever necessary as per specification and drawing.	3419.86	9322538.00
16	1668.00	Sqm	Providing and laying filter media 600mm thick as directed at the back of abutments, returns and wing walls as per detailed specifications.	749.42	1250033.00

SCHEDULE A1 : BRIDGE, SOLID APPROACHES , SERVICE ROAD

Sr No.	Quantity	UNIT	Item of work	Estimated Rates (Rs.)	Total Amount according to estimated quantities (Rs.)
17A	1768.00	Cum	Providing and casting in situ controlled cement concrete of M35 for RCC work in piers and abutment return wall as per drawing including centering shuttering scaffolding where necessary laying vibrating curing and finishing complete . Note: The rate is inclusive of all materials, including necessary mixing in fully automatic batch mix plant, transport, curing, vibrating, placing in position, scaffolding, staging, shuttering, formworks, deshuttering carefully, engrooving RMC logo, making good the damages, fixing embedment, inserts, pockets, , wherever necessary, with all lead and lift with contractor's labour, tools & plants, machineries, as required, with F3 type exposed concrete finish and form mark. Any honeycombing / Undulation found shall be rectify to match F3 class finish. Rates in items shall include cost of providing grooves, chamfers, moulding, cut-out etc. in formwork. . (Height 0 to 5 m)	3798.61	6715942.00
17B	553.00	Cum	Providing and casting in situ controlled cement concrete of M35 for RCC work in piers and abutment return wall as per drawing including centering shuttering scaffolding where necessary laying vibrating curing and finishing complete . Note: The rate is inclusive of all materials, including necessary mixing in fully automatic batch mix plant, transport, curing, vibrating, placing in position, scaffolding, staging, shuttering, formworks, deshuttering carefully, engrooving RMC logo, making good the damages, fixing embedment, inserts, pockets, , wherever necessary, with all lead and lift with contractor's labour, tools & plants, machineries, as required, with F3 type exposed concrete finish and form mark. Any honeycombing / Undulation found shall be rectify to match F3 class finish. Rates in items shall include cost of providing grooves, chamfers, moulding, cut-out etc. in formwork. (Height 5 to 10 m)	4018.79	2222391.00

SCHEDULE A1 : BRIDGE, SOLID APPROACHES , SERVICE ROAD

Sr No.	Quantity	UNIT	Item of work	Estimated Rates (Rs.)	Total Amount according to estimated quantities (Rs.)
18	2427.00	Cum	Providing and casting in situ controlled cement concrete of M35 for RCC works on pier cap, abutment cap and dirt wall as per detailed drawings, centering shuttering, scaffolding wherever necessary laying vibrating curing and finishing complete. Note: The rate is inclusive of all materials, including necessary mixing in fully automatic batch mix plant, transport, curing, vibrating, placing in position, scaffolding, staging, shuttering, formworks, deshuttering carefully, engrooving RMC logo, making good the damages, fixing embedment, inserts, pockets, wherever necessary, with all lead and lift with contractor's labour, tools & plants, machineries, as required, with F3 type exposed concrete finish and form mark. Any honeycombing / Undulation found shall be rectify to match F3 class finish. Rates in items shall include cost of providing grooves, chamfers, moulding, cut-out etc. in formwork	3851.13	9346693.00
19	167.00	Cum	Providing and casting in situ controlled cement concrete of M40 for RCC works on pedestal below bearings and seismic arrestor with elastomeric cushion pad as per details drawings, centering shuttering, scaffolding wherever necessary laying, vibrating, curing and finishing complete. Note: The rate is inclusive of all materials, including necessary mixing in fully automatic batch mix plant, transport, curing, vibrating, placing in position, scaffolding, staging, shuttering, formworks, deshuttering carefully, making good the damages, fixing embedment, inserts, pockets, wherever necessary, with all lead and lift with contractor's labour, tools & plants, machineries, as required, with F3 type exposed concrete finish and form mark. Any honeycombing / Undulation found shall be rectify to match F3 class finish.	3803.66	635211.00
20	3859.00	Cum	Providing and casting in situ or precast controlled Cement Concrete M-400 for Reinforced concrete work in Super structure including centering, shuttering, curing, scaffolding, ramming, vibrating, finishing, launching or shifting complete.(I) Deck Slab. Note: The rate is inclusive of all materials, including necessary mixing in fully automatic batch mix plant, transport, curing, vibrating, placing in position, scaffolding, staging, shuttering, formworks, deshuttering carefully, making good the damages, fixing embedment, inserts, pockets, wherever necessary, with all lead and lift with contractor's labour, tools & plants, machineries, as required, with F3 type exposed concrete finish and form mark. Any honeycombing / Undulation found shall be rectify to match F3 class finish.	5214.63	20123257.00

SCHEDULE A1 : BRIDGE, SOLID APPROACHES , SERVICE ROAD

Sr No.	Quantity	UNIT	Item of work	Estimated Rates (Rs.)	Total Amount according to estimated quantities (Rs.)
21	6342.00	Cum	Providing and casting in situ or precast controlled Cement Concrete M-400 for Reinforced concrete work in Super structure including centering, shuttering, curing, scaffolding, ramming, vibrating, finishing, launching or shifting complete. (I) Main Girders. (II) Diaphragm or Cross Girder. Note: The rate is inclusive of all materials, including necessary mixing in fully automatic batch mix plant, transport, curing, vibrating, placing in position, scaffolding, staging, shuttering, formworks, deshuttering carefully, making good the damages, fixing embedment, inserts, pockets, wherever necessary, with all lead and lift with contractor's labour, tools & plants, machineries, as required, with F3 type exposed concrete finish and form mark. Any honeycombing / Undulation found shall be rectify to match F3 class finish.	5214.63	33071183.00
22	2465.00	Cum	Providing and casting in situ controlled cement concrete of M30 for RCC work in retaining wall stem as per drawing including centering shuttering scaffolding where necessary laying vibrating curing and finishing complete.	3725.89	9184319.00
23	190.00	Sq.m.	Providing Pre-moulded asphalt filler joints as per drawings.	733.26	139319.00
24	830.00	Cum	Providing and casting in-situ controlled cement concrete of M40 grade for RCC crash Barrier / Friction slab with 20 mm down coarse aggregate of the required size including formwork, shuttering, placing in position, consolidation with mechanical vibrators curing finishing, deshuttering carefully, marking good the damages, fixing embedment, inserts, pockets, wherever necessary as directed and as per drawing with F3 type exposed concrete finish and formwork as directed by Engineer - in -charge, etc. complete as per specification.	3803.66	3157038.00
25	51.00	Cum	Providing and casting in-situ controlled cement concrete of M30 grade with 20mm downgraded crushed stone aggregates of required size in super structure for approach slab including required formwork, shuttering and supporting arrangement (excluding cost of reinforcement) and transporting concrete from batching plant by transit mixture placing it in position, compacting with needle vibrator including curing with all labour, material, machinery all lead, lift etc. complete as per drawing and technical specification of MORTH & as directed by Engineer In charge.	3838.00	195738.00

SCHEDULE A1 : BRIDGE, SOLID APPROACHES , SERVICE ROAD					
Sr No.	Quantity	UNIT	Item of work	Estimated Rates (Rs.)	Total Amount according to estimated quantities (Rs.)
26	4093.00	MT	Providing and placing in position (TMT Fe 500D grade) conforming to IS 1786 of all categories for foundation, sub structure, super structure including cutting, bending, hooking and tying with 18 gauge mild steel binding wires, supporting in position to ensure lines and levels during concreting, maintaining proper cover / spacing etc. complete as per specification and detailed drawing.	65117.73	266526869.00
27	1515.00	SQM	Road marking with hot applied thermoplastic compound with reflectorising glass beads on road surface providing and laying hot applied thermoplastic compound 2.5 CM thick including reflectorising glass bends @ 250 gms/sq mt area thickness of surface applied glass bend as per IRC .35 the finished surface to be level uniform and free from streaks and holes.	298.96	452924.00
28	1746.00	Nos	Make out acrylic strene acrylonitrile or high impact polysteren fitted with molded of methacrylate (MMC prismatic type) reflector cube corners reflection design filled with tightly adhering potting compound as per ASTM D 788 size 11.5 x 7.0 x 1.6 cms or 10 x 10 x 1.75 cms provided with bituminous adhesive in sufficient quality with each unit for fixing . no nail shall allow for fixing . Reflection on both side, min reflection on both side, min reflective area 12.90 sq cms on each face . coefficient of lamination as per specification and compressive strength 13 tons at 23 degree centigrade (B) double side lenses	375.72	656007.00
29A	5589.00	SQM	Providing and applying two coats of 100% Acrylic breathable, Anti-carbonation, Waterproof, Heat insulating, decorative external coating "SUNEXT 8" or equivalent of approved shade after applying a primer coat of same material. Acrylic paint shall be spray/brush/roller applied and shall conform to the following properties. Carbon dioxide diffusion equivalent air layer thickness (DIN EN 1062-6) > 100 m.; Carbon dioxide diffusion resistance coefficient (DIN EN1062-6) >105; Elongation of cured film shall be as per ASTM D 2370/98 > 400%; Chloride Ion Diffusion (ASTM C 1202) = Zero Penetration; Adhesion to concrete (ASTM D 4541) > 2 N/mm ² ; Solar Reflective Index (ASTM E 1980-11, EN 673:2011, EN 410:2011) > 104. The inter-coat gap to be 24 hours. The rate shall include complete treatment mentioned above. For Substructure	182.35	1019154.00
29B	39672.00	SQM	Providing and applying two coats of 100% Acrylic breathable, Anti-carbonation, Waterproof, Heat	182.35	7234189.00
30	1752.00	Nos	Providing Weep holes in RCC abutment,Return wall and retaining wall with 100 mm dia PVC pipe with geotextile and decorative grating, extending through the full width of the structure with slope of 1V:20H etc. complete as per drawing and technical specification.	52.44	91875.00

SCHEDULE A1 : BRIDGE, SOLID APPROACHES , SERVICE ROAD

Sr No.	Quantity	UNIT	Item of work	Estimated Rates (Rs.)	Total Amount according to estimated quantities (Rs.)
31	588.00	Rmt	Providing and fixing in position Strip Seal Type Expansion Joint (for movement upto 60mm) as per detailed drawing MORTH specification. The rate is inclusive of supplying, fixing with contractor's own materials, equipments, machineries, labour, transport, testing, bolts, socket tubes, neoprene sheet/cap etc. complete. The rate is finished item complete and will be paid after fixing in all respect. The Contractor shall procure Strip Seal Expansion Joint, confirming to relevant MORTH specification from M/s. Sanfield (India) Ltd. / METCO or from reputed manufactures of Strip Seal Expansion Joint with prior approval of Engineer-in-charge.	5263.11	3094709.00
32	7814621.00	Cu.cm	Providing and fixing in position fully moulded restrained elastometric Bearings as per detailed drawings.	1.11	8674229.00
33	5.00	MT	Fabricating, supply and erecting in position Standard Structural steel sections conforming to IS 2062 for railing, gates of underspace or other works using ISMB, ISA, ISMC, MS plate, flat, square bars, pipe, square pipe ,etc. including welding, cutting, wastage, etc. complete. The rate is inclusive of welding road, supply & fixing of correct size nut, bolts, washers, paint, with all contractor's materials, labour, tools & plants, in bolted / welded construction as directed by Engineer-in-Charge. Anticorrosive paint must be applied before applied any paint. The rate shall inclusive of providing and applying Epoxy Coating of approved shade, brand and manufacture on new structural steel work with one coat of 30 micron (DFT) of Epilux 4 Zinc Rich primer of Berger Paint India Ltd or equivalent as primer and Two coat each of 35 micron (DFT) of Epilux 84 High Gloss CR enamel of Berger Paint India Ltd or equivalent at all levels. (Total DFT is 30+35+35=100 microns) The waste cut pieces shall not be included in the paying quantity. The work shall be done as per drawing and specification. The work shall be carried out as per IS:800, IS:816	45419.70	227099.00
34	3.00	Nos	Providing Pylon consist of cast-in-situ concrete of M30 grade exposed finish as per drawing and as directed by engineer in charge. Rate includes providing required shuttering and form work but excluding stone slab & carving. (Reinforcement shall be paid in respective item.)	3659.23	10978.00
35	3.00	Nos	Providing and fixing marble slab including transporting ,engraving and painting all complete. (ii) Size 75cm x 60cm x 4cm	955.46	2866.00

SCHEDULE A1 : BRIDGE, SOLID APPROACHES , SERVICE ROAD					
Sr No.	Quantity	UNIT	Item of work	Estimated Rates (Rs.)	Total Amount according to estimated quantities (Rs.)
36	2014.00	Cum	Providing and casting in situ reinforced controlled cement concrete of M30 grade in Kerb, protection wall around pier, Duct drain, etc. using 6mm to 20mm machine crushed well graded stone aggregate, sand of approved quality, OPC 53 grade cement with contractor's own concrete mix design as approved by client etc complete as per specification The rate is inclusive of all materials, including necessary mixing in fully automatic batch mix plant, transportation, curing, vibrating, placing in position, shuttering, formwork, deshuttering carefully , making good the damages, fixing embedment, inserts, pockets, wherever necessary, with all lead & lift with contractors labour, tools & plants machineries, as required with F3/U3 type exposed concrete finish and form mark.	3659.23	7369689.00
37	20223.03	cum	Providing and Laying Spreading & compacting coarse clean sharp specified sand (CBR NOT LESS THAN 10%) BELOW Sub Base Course including carriage of material,spreading in uniform layers on prepared base and compected with vibratory roller to achieve desired density including all material labours etc. complete.	945.36	19118046.00
38	452.00	Nos	Providing, fabricating and fixing in position GI Drainage Spout arrangements having 100 mm dia. Pipe B class with necessary bend, fixing to GI chamber, GI grating, providing and applying one coat of primer & two coat of anticorrosive paint, etc. complete as per drawing and as per specifications.	506.01	228717.00
39	13427.00	Sq.m.	Providing and laying 25 mm thick mastic asphalt wearing course with paving grade bitumen meeting the requirements given in table 500-29, prepared by using mastic cooker and laid to required level and slope after cleaning the surface, including providing antiskid surface with bitumen precoated finegrained hard stone chipping of 13.2 mm nominal size at the rate of 0.005cum per 10 sqm and at an approximate spacing of 10 cm center to center in both directions, pressed into surface when the temperature of surfaces is not less than 1000C, protruding 1 mm to 4 mm over mastic surface, all complete as per clause 515.	431.27	5790662.00
40	18464.00	cum	Providing earth work for embankment for SUBGRADE by mechanical means with approved material from private land , including all lead & lifts laying in layers 500mm thick including breaking clods, dressing to the required lines, curves, grades, camber, watering and compaction to 97% of standard proctor density with vibratory roller having roller 80 -100 KN static weight including all material, labour, machinery with all leads & lifts complete as per MORT&H specification.	188.87	3487296.00

SCHEDULE A1 : BRIDGE, SOLID APPROACHES , SERVICE ROAD

Sr No.	Quantity	UNIT	Item of work	Estimated Rates (Rs.)	Total Amount according to estimated quantities (Rs.)
41	11148.00	Cum	Construction of Granular Sub Base (GSB) by providing coarse graded material of grading-II, 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 MORTH specification.	1026.67	11445317.00
42	11148.00	Cum	Providing, laying, spreading and compacting graded stone aggregate to Wet Mix Macadam (WMM) specification including premixing the material with water at OMC in mechanical mix plant carriage of mixed material by tripper 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.	1074.14	11974513.00
43	37159.00	SQM	Providing and applying PRIMER COAT with bitumen emulsion using emulsion pressure distributor at the rate of 0.75 kg/sqm on prepared surface of granular base including clearing of road surface using mechanical brooms.	41.41	1538754.00
44	11095.00	MT	Providing and laying dense graded bituminous macadam with 100-120 TPH batch type HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 4.0 to 4.5 per cent by weight of total 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. 507 complete in all respects.	2233.11	24776355.00
45	5287.00	MT	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.	2450.26	12954525.00
46	3.00	Nos	Supplying & fixing road sign board of MS plates and angle iron including painting , lettering , etc. complete including fixing in CC 1:4:8 with necessary excavation etc complete as per IRC Type A) Non reflective type.	1903.85	5712.00

SCHEDULE A1 : BRIDGE, SOLID APPROACHES , SERVICE ROAD

Sr No.	Quantity	UNIT	Item of work	Estimated Rates (Rs.)	Total Amount according to estimated quantities (Rs.)
47	9563.00	SQ.M.	Paver Block -Supply & Fixing of 60mm M-30 Grade cement concrete rubber mold paving inter locking paving block (Grey colour) as per ISI mark after beding of Bhogavo sand in line and CC on the edge in proportion of 1:2:4 with curing etc. complete. The work of the paving blocks shall be executed in line and level by skilled mason of flooring work only. It should be laid in such a way that the no cutting of the paver block to be necessary. If cutting of paver block shall be required, than cut by machine only and laying to be done by skilled flooring mason. The Finished surface of the Paver Block shall have Coarse Sand Texture Finish. Paver blocks shall be compacted and shall be re-laid if necessary. Actual laid area shall be measured and paid without any wastage.	519.14	4964536.00
48	1728.00	liter	Providing & applying synthetic Enamel paint alternate black & yellow on crash barrier, median and Kerb with one coat of primer and two or more coat of paint as per manufacture's specification including cleaning all dust, dirt and other foreign matters with all material labour equipments with all leads & lift etc complete.	180.79	312405.00
49	6.00	Nos	Providing and fixing sign boards made out of 2mm aluminum sheet; size 80 x 60cms. rectangle as per the design of IRC-67-1977 pre treated with phospheting process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint; reflectorised with retro reflective sheeting as per latest MOST Specifications; 3.1m long stand post and frame fabricated from suitable size iron angle of 35 x 35 x 3mm75x75x6mm as required; painted with best quality epoxy coatings in black and white bends. the details of symbol for each board shall details of symbol for each board shall be as per the instruction of engineer in charge. The fixing at site shall be in 1:2:4 CC block of size 45 x45 x 60cms. for each leg. including excavation curing tec. complete under the supervision of engineer in charge. informatory sign high intensity grade	3338.05	20028.00

SCHEDULE A1 : BRIDGE, SOLID APPROACHES , SERVICE ROAD

Sr No.	Quantity	UNIT	Item of work	Estimated Rates (Rs.)	Total Amount according to estimated quantities (Rs.)
50	3.00	Nos	Providing and fixing sign boards made out of 2mm aluminum sheet; size 60cms. diameter circle as per the design of IRC-67-1977 pre treated with phospheting process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint; reflectorised with retro reflective sheeting as per latest MOST Specifications; 3.1m long stand post and frame fabricated from suitable size iron angle of 35 x 35 x 3mm 75x75x6mm as required; painted with best quality epoxy coatings in black and white bends. the details of symbol for each board shall be as per the instruction of engineer in charge. The fixing at site shall be in 1:2:4 CC block of size 45 x 45 x 60cms. for each leg. including excavation curing etc. complete under the supervision of engineer in charge. high intensity grade regulatory/ mandatory sign	2967.38	8902.00
51	12.00	Nos	Providing and fixing sign boards made out of 2mm aluminum sheet; size 244 x 122cms. rectangle as per the design of IRC-67-1977 pre treated with phospheting process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint; reflectorised with retro reflective sheeting as per latest MOST Specifications; Letters and numerals should be as per IRC-30-1968, 3.1m long (2 nos) stand post and frame fabricated from suitable size iron angle of 50 x 50 x 5mm 75x75x6mm as required; painted with best quality epoxy coatings in black and white bends. the details of symbol or inscription / numerals for each board shall be as per the instruction of engineer in charge. The fixing at site shall be in 1:2:4 CC block of size 45 x 45 x 60cms. for each leg. including excavation curing etc. complete under the supervision of engineer in charge. High intensity grade direction sign (junction board)	2374.51	28494.00

SCHEDULE A1 : BRIDGE, SOLID APPROACHES , SERVICE ROAD

Sr No.	Quantity	UNIT	Item of work	Estimated Rates (Rs.)	Total Amount according to estimated quantities (Rs.)
52	3.00	Nos	Providing and fixing sign boards made out of 2mm aluminum sheet; size 180 x 120cms. rectangle as per the design of IRC-67-1977 pre treated with phosphating process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint; reflectorised with retro reflective sheeting as per latest MOST Specifications; Letters and numerals should be as per IRC-30-1968, 3.1m long (2 nos) stand post and frame fabricated from suitable size iron angle of 50 x 50 x 5mm 75 x 75 x 6mm as required; painted with best quality epoxy coatings in black and white bends. the details of symbol or inscription / numerals for each board shall be as per the instruction of engineer in charge. The fixing at site shall be in 1:2:4 CC block of size 45 x 45 x 60cms. for each leg. including excavation curing etc. complete under the supervision of engineer in charge. high intensity grade distance informatory/ distance sign	15538.85	46617.00
53	4400000.00	Cu.cm	Supplying and fixing of Elastomeric pad groud with epoxy etc. Complete as directed by Engineer-in-charge.	2.83	12452000.00
54	246.00	Nos	Supplying & fixing Delinator (small) made out of 62.5mm dia/25mm dia circular hollow section closed at top end:height 18cms fabricated as per attached drawing,painted with epoxy coatings colour with protective grill reflectorised retro reflective sheetings side as per M.O.S.T. latest	161.60	39754.00
55	316.80	Kg	J type M24 Anchor bolt with nuts & washer plates including threading as shown in the drawing all complete	39.90	12640.00
56	699.44	Kg	Structural Steel :- Base plate of 225 x 225 x 16 mm thick with adjustment of hole. MS plate 6mm thick 20mm wide 150mm long including welding to the base plate all complete.	6027.68	4215970.00
				Total of Schedule - A1	580,269,350.00

Name of Work :- CONSTRUCTION OF THREE ARM FLYOVER AT HOSPITAL CHOWK IN RAJKOT CITY

Construction Division :-Rajkot Municipal Corporation

SCHEDULE A2 : UTILITY SHIFTING WORKS

Sr No.	Quantity	UNIT	Item of work	Estimated Rates (Rs.)	Total Amount according to estimated quantities (Rs.)
55	3769.00	rmt	PVC SWR pipes IS 13592 for Drain - 160 mmdia	602.00	2268938.00
56	449.00	rmt	G.I. Pipe 100mm Dia	800.00	359200.00
57	370.00	rmt	R.C.C. Heavy Duty Non-Pressure pipe I.S. Class NP=2 150mm dia.	120.00	44400.00
58	500.00	rmt	R.C.C. Heavy Duty Non-Pressure pipe I.S. Class NP=2 250mm dia.	175.00	87500.00
59	700.00	rmt	R.C.C. Heavy Duty Non-Pressure pipe I.S. Class NP=2 300mm dia.	309.00	216300.00
60	210.00	rmt	R.C.C. Heavy Duty Non-Pressure pipe I.S. Class NP=2 450mm dia.	561.00	117810.00
61	400.00	rmt	R.C.C. Heavy Duty Non-Pressure pipe I.S. Class NP=2 500mm dia.	655.00	262000.00
62	44.00	Each	Constructing Brick masonry road gully chamber 500mmx450mmx600mm including 500mmx450mm C.I. horizontal grating with frame complete. (up to 10 ton)	1532.00	67408.00
63	44.00	Each	Constructing brick masonry road gully chamber 1100mmx775mm including 500mmx450mm (C.I.horizontal grating with frame and vertical grating complete.) (upto 10	8510.00	374440.00
64	25.00	Each	Constructing brick masonry road gully chamber 900mm x 1200mm including 600mm x 600mm cover (C.I.horizontal grating with frame and vertical grating complete.) (upto 10 ton)	10454.00	261350.00

SCHEDULE A2 : UTILITY SHIFTING WORKS					
Sr No.	Quantity	UNIT	Item of work	Estimated Rates (Rs.)	Total Amount according to estimated quantities (Rs.)
65	25.00	Each	Constructing brick masonry road gully chamber 800mm x 900mm including 600mm x 600mm cover (C.I.horizontal grating with frame and vertical grating complete.) (upto 10 ton)	6969.00	174225.00
66	44.00	rmt	Extra over items for every additional depth of 0.1M. of part thereof beyond 600 mm depth for Brick masonry chamber.(i) for 450mm x 500mm Size.	320.00	14080.00
67	44.00	rmt	Extra over items for every additional depth of 0.1M. of part thereof beyond 800 mm depth for Brick masonry chamber.(i) for 775mm x 1100mm Size.	436.00	19184.00
68	25.00	rmt	Extra over items for every additional depth of 0.1M. of part thereof beyond 1000mm depth for Brick masonry chamber.(i) for 900MM x 1200mm Size.	552.00	13800.00
69	25.00	rmt	Extra over items for every additional depth of 0.1M. of part thereof beyond 1200 mm depth for Brick masonry chamber.(i) for 800MM x 900mm Size.	668.00	16700.00
70	44.00	Each	Providing and fixing C.I. Manhole cover 0.60 M. x 0.45M. size having weight not less than 35Kg.	1101.00	48444.00
71	200.00	Each	Providing and fixing iron steps of size 500 mm x 150 mm x 22.5 mm and painting with two coats of anticorrosive paint etc.complete.	177.00	35400.00
72	45.00	Each	Repairing damaged M.H. and rasing M.H. up to road level incl. removing damaged brick work and repairing by brick masonry in C.M. 1:5 and plaster in C.M. 1:3 and fixing C.I. steps and existing MH sheet cover, removing the debris from MH and carting the same as	2420.00	108900.00
73	100.00	rmt	Providing and laying in trenches galvanised mild steel tubes (Heavy grade) Class 'C' of the following nominal bore, and tube fitting (Earthwork in trenches to be measured and paid for separately)(A) 150mm (upto 20 ton)	1604.00	160400.00
74	790.00	Each	Excavation of Foundation in Soft Murrum, Soil or Sand from 0.0 mtr. to 1.50 mtr depth including lifting and laying in 90 mtr. lead area as instructed	96.60	76314.00

SCHEDULE A2 : UTILITY SHIFTING WORKS					
Sr No.	Quantity	UNIT	Item of work	Estimated Rates (Rs.)	Total Amount according to estimated quantities (Rs.)
75A	1300.00	rmt	Providing laying (to level or slopes) and jointing RCC spun non-pressure pipes I.S. class NP3 of the following internal diameter with collars and butt ends prepared for collar joints including tax, insurance, transportation, loading, unloading, storage, reaching the stock to site, inspection, jointing with CM 1:1 (1 - cement: 1 - fine sand), laying the pipes in required curing, testing of joints complete. 300mm Dia NP3 Pipe	783.00	1017900.00
75B	325.00	rmt	Providing laying (to level or slopes) and jointing RCC spun non-pressure pipes I.S. class NP3 of the following internal diameter with collars and butt ends prepared for collar joints including tax, insurance, transportation, loading, unloading, storage, reaching the stock to site, inspection, jointing with CM 1:1 (1 - cement: 1 - fine sand), laying the pipes in required curing, testing of joints complete. 600mm Dia NP3 Pipe	2247.00	730275.00
				Total of Schedule - A2	6,474,968.00

Name of Work :- CONSTRUCTION OF THREE ARM FLYOVER AT HOSPITAL CHOWK IN RAJKOT CITY					
Construction Division :-Rajkot Municipal Corporation					
<u>SCHEDULE A3 : Electrical Works</u>					
Sr No.	Quantity	UNIT	Item of work	Estimated Rates (Rs.)	Total Amount according to estimated quantities (Rs.)
76	4.00	No.	<p>6.0 Panels Section Feeder Pillar (Outdoor Type) The Scope shall cover design, manufacture supply,test,installation and commission of outdoor type section pillar/feedar pillar for light with all material and labour. The feedar pillar must be made up of 16 SWG CRC Sheet with powder coating inner gasckets,8mm thick hylam sheet with RYB Indication lamps with necessary protection ,auto/manual swith,suiatable cable alley ,DIN rail earth link,neatural link,locking arrangement canopy, single side opening, hinged door arrangement, danger board, gland plate with appropriate entry holes as per cable size, to be mounted on ground or wall as suggested with necessary mounting clamps/arrangement/foundation with all internal wiring to be done by using 6mm2 FR copper wire. (As per attached Single line diagram) Space Provision For 'Supply Co' Energy meter in section feeder pillar. 1) incomer Isolator-4 P,63 A-1 Nos 2) I/C -4 P,32A,10KA,MCB,B CURVE-1 Nos 3) I/C -4 P,32A,30mA ELCB -1 Nos 4) O/G-SP,10KA, MCB, 6-32A ,B Curve-6 Nos 5) Astronommical Timer, 2C/O, USB Interface-1 Nos 6) ML Series or equivalanet power contactor, 2NO + 2NC,70A,AC3 Rating, 3Nos</p>	30360.00	121440.00

SCHEDULE A3 : Electrical Works					
Sr No.	Quantity	UNIT	Item of work	Estimated Rates (Rs.)	Total Amount according to estimated quantities (Rs.)
77	16.00	No.	SITC of 139mm x 119mm x 70 mm Water tight junction box (equivalent to Hensel make Cat No. KF 9065) having Degree of Protection IP 67 with 4 Nos. 4 way terminal suitable up to 6 Sq.mm with necessary accessories with din rail channel complete in all respect.	1545.00	24720.00
78	150.00	rmt	Cable Trench Making trench in soft soil of suitable width of 90 cms deep for laying cable or locating the fault all over the run and backfilling the same and making the surface as normal ground.	40.00	6000.00
79	150.00	rmt	Covering of cable with second class bricks or cement tiles laid cover the cable crosswise & also on both sides with covering of 7.5 Cms. layer of sand above & below cable (16 bricks per meter)	130.00	19500.00
80	15.00	Each	Providing and erecting iron clad cable route marker duly marked with ELE.CABLE of size 23 cms.X 12 cms. Flushed with ground in cement foundation as directed by Engineer in charge.	280.00	4200.00
81	50.00	rmt	LT Cabling Providing and erecting XLPE (IS:7098)(I)-88 ISI armoured cable multistrand Copper conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables (b) 4 core 6 Sq. mm	130.00	6500.00
82	3080.00	rmt	Providing and erecting XLPE (IS:7098)(I)-88 ISI armoured cable multistrand Copper conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables (d) 4 core 4 Sq. mm	350.00	1078000.00

SCHEDULE A3 : Electrical Works					
Sr No.	Quantity	UNIT	Item of work	Estimated Rates (Rs.)	Total Amount according to estimated quantities (Rs.)
83	150.00	rmt	Providing and erecting XLPE (IS:7098)(I)-88 ISI armoured cable multistrand Copper conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables (A-1) 4 core 10 Sq. mm	780.00	117000.00
84	50.00	rmt	Providing and erecting XLPE (IS:7098)(I)-88 ISI armoured cable multistrand Copper conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables 4 Sq.mm x 4 c Copper. Round Flexible Cable	230.00	11500.00
85	50.00	rmt	Supplying and Laying 1 no 4 sqmm Cu. PVC insulated flexible wires in existing Pipe as earth wires.	25.00	1250.00
86	2.00	No.	LT Cable glands Providing and, fixing heavy duty flange type brass cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables. (b) 2 to 4 core 4 Sq. mm	35.00	70.00
87	2.00	No.	Providing and, fixing heavy duty flange type brass cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables. (c) 2 to 4 core 6 Sq. mm	40.00	80.00
88	240.00	No.	Providing and, fixing heavy duty flange type brass cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables. (e) 2 to 4 core 16 Sq. mm	50.00	12000.00

SCHEDULE A3 : Electrical Works					
Sr No.	Quantity	UNIT	Item of work	Estimated Rates (Rs.)	Total Amount according to estimated quantities (Rs.)
89	6.00	No.	Providing and, fixing heavy duty flange type brass cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables. (B) 3 & 1/2 core 35 Sq. mm	80.00	480.00
90	5.00	No.	LT Cable Lugs Solderless crimping type Aluminium lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner. (A) 1.5/2.5 to 6 Sq.mm	5.00	25.00
91	960.00	No.	Solderless crimping type Aluminium lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner. (C) 16 Sq.mm.	15.00	14400.00
92	24.00	No.	Solderless crimping type Aluminium lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner. (E) 35 Sq.mm.	20.00	480.00
93	12.00	No.	Solderless crimping type Copper lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner. (A) 1.5/2.5 to 6 Sq.mm	8.00	96.00

SCHEDULE A3 : Electrical Works					
Sr No.	Quantity	UNIT	Item of work	Estimated Rates (Rs.)	Total Amount according to estimated quantities (Rs.)
94	150.00	kg	<p>Fabrication Supplying, fabricating and installation of various sizes junction boxes/clamps/hangers for light fixtures/ for cable trays etc. made out of 14 gauge sheet/Angle/Flat/rod/ channel/box section etc with all necessary accessories like bend, junction boxes, coupler, supporting clamps, elbows, hardware, anchor fasteners etc All the necessary fabrication required will be included in the scope of contractor. Scope also includes two coat of primer and two coat of painting of each items on all the sides complete in all respect.</p>	90.00	13500.00
95	7.00	No.	<p>Earthing Providing earthing stations for equipment earthing as shown and specified in drawing for equipment complete with : Supplying & erecting earth pit of minimum bore dia.150mm size approved make Earthing Electrode consisting Pipe-in-Pipe Technology as per IS 3043-1987 made of corrosion free G.I.Pipes having Outer pipe dia of 50mm having 80-200 Micron galvanising, Inner pipe dia of 25 mm having 200-250 Micron galvanising, connection terminal dia of 12mm with constant ohmic value surrounded by highly conductive compound with high charge dissipation suitable for following type of applications. (c) For Electrical Installation covering Transformer Neutrals, Lightning arrester Earthing, A.C.Plant & Sensitive Computer System(like Automation, SCADA) i.e independent Earthing in normal soil. Length of Pipe : 3.00 mtrs Back filling Compound :2 nos Bags of 25 Kg.</p>	13450.00	94150.00

SCHEDULE A3 : Electrical Works					
Sr No.	Quantity	UNIT	Item of work	Estimated Rates (Rs.)	Total Amount according to estimated quantities (Rs.)
96	91.00	Kg	Earth strips: Supply and laying GI. earthing required size strips for interconnecting the earthing stations, panels, DB's etc. in built up trenches, on walls/ceiling, buried in ground generally as specified and shown on drawings complete with : a) Fixing accessories. b) Corrosion protection of buried conductors with bituminous coating and covered with PVC tapes. 25 x 6 mm HOT deep Galvanised iron strip	90.00	8190.00
97	34.57	Kg	Earth wire/strips: Providing and erecting HOT deep Galvanised iron strip wire 8 SWG.	90.00	3111.00
98	50.00	rmt	Miscellaneous PVC PIPES Providing & laying ISI marked Rigid PVC pipe having 6Kg / cm ² (Class-3) to be erected at road crossing on or floor as directed for laying of cable. The pipes as following size of dia & weight per 6 mtr. (a) 25 mm	32.00	1600.00
99	50.00	rmt	Providing & laying ISI marked Rigid PVC pipe having 6Kg / cm ² (Class-3) to be erected at road crossing on or floor as directed for laying of cable. The pipes as following size of dia & weight per 6 mtr. (b) 40 mm Dia. (1.68 Kg / 6 RMT)	60.00	3000.00
100	50.00	rmt	Providing & laying ISI marked Rigid PVC pipe having 6Kg / cm ² (Class-3) to be erected at road crossing on or floor as directed for laying of cable. The pipes as following size of dia & weight per 6 mtr. (c) 50 mm Dia. (2.5Kg/6RMT)	80.00	4000.00
101	50.00	rmt	Providing & laying ISI marked Rigid PVC pipe having 6Kg / cm ² (Class-3) to be erected at road crossing on or floor as directed for laying of cable. The pipes as following size of dia & weight per 6 mtr. (d) 110 mm Dia. (11.63 Kg/6 RMT)	275.00	13750.00

SCHEDULE A3 : Electrical Works					
Sr No.	Quantity	UNIT	Item of work	Estimated Rates (Rs.)	Total Amount according to estimated quantities (Rs.)
102	50.00	rmt	Providing & laying. R.C.C. Hume pipe for cable to be laid 90 cms. below ground across the road crossing or on floor with necessary material in an approved manner and making the ground as per original. (a) 250 mm dia	275.00	13750.00
103	50.00	rmt	Providing & laying. R.C.C. Hume pipe for cable to be laid 90 cms. below ground across the road crossing or on floor with necessary material in an approved manner and making the ground as per original. (b)150 mm dia	245.00	12250.00
104	100.00	rmt	Providing & laying approved make Double walled corrugated pipes (DWC) of polyethylene(conforming to IS 14930 II)with necessary connecting accessories of same material at required depth for laying of cable. below ground / road surface for enclosing cable and back filling the same to make ground as per original. (a) 50 mm dia	145.00	14500.00
105	3080.00	rmt	Providing & laying approved make Double walled corrugated pipes (DWC) of polyethylene(conforming to IS 14930 II)with necessary connecting accessories of same material at required depth for laying of cable. below ground / road surface for enclosing cable and back filling the same to make ground as per original. (b) 90 mm dia	215.00	662200.00
106	150.00	rmt	Providing & laying approved make Double walled corrugated pipes (DWC) of polyethylene(conforming to IS 14930 II)with necessary connecting accessories of same material at required depth for laying of cable. below ground / road surface for enclosing cable and back filling the same to make ground as per original. (c)120 mm dia	300.00	45000.00

SCHEDULE A3 : Electrical Works					
Sr No.	Quantity	UNIT	Item of work	Estimated Rates (Rs.)	Total Amount according to estimated quantities (Rs.)
107	3.00	Job	Follow Up with supply co. for getting supply to various Section Pillar. The scope also covers laying of L.T. cable from Section Pillar to company's cut-out. This also covers to obtain any permission required for road crossing from any authority (if required), Filling the necessary application to supply co., following up and getting the supply filling the necessary test report to the supply co. All official fees shall be paid by client on presentation of documentary proof and all other out of pocket expenses shall be of contractor.	1500.00	4500.00
108	10.00	No.	External Lighting Street Light Pole Supply & installation of 3.0 Mtr long, approx 114 mm outer uniform dia. GI light pole with medium class GI pipe with zinc coating and two coats of paint / pu coats of approved shed as per architect complete with base plate as per requirement complete in all respect as per drawing. complete in all respect as per requirement and instruction of engineer in charge. Scope also includes necessary foundation, spiral earthing, mcb, junction box, connector, cable entry pipes, 3 core round flexible wire from junction box to light fixture etc. Make:- (Philips, Transrail, ABB, Bajaj)	7713.00	77130.00
109	110.00	No.	Providing and fixing approved make Octagonal poles. Made from HT steel. The pole should be made as per IS. and shall be coated with hot dip galvanizing as per IS. with required base plate (240x240x16 mm) suitable suspend local wind speed to be erected on existing foundation complete in all respect equivalent to Bajaj / Crompton / Surya make (G) 8 Mtr. Long 76 mm Top X 150 mm bottom dia, 3 mm thickness Make:- (Philips, Transrail, ABB, Bajaj)	10918.00	1200980.00

SCHEDULE A3 : Electrical Works					
Sr No.	Quantity	UNIT	Item of work	Estimated Rates (Rs.)	Total Amount according to estimated quantities (Rs.)
110	10.00	No.	Street / Decorative light fixture Supplying, erecting, connecting, testing and commissioning of following type Deocreative LED Light Fixture with all necessary Hardware, Internal Wiring with control gear / Driver etc. all required accessories Complete in all respect. Decorative LED Street Light Fixture (IP 66 - 5500 K (IP 66 - 5500 Pluse or Mines 10%) with 65 to 75 Watt as per Instruction of Engineer-in-Charge Make:- (Keselec, Philips,Crompton,Havells,Bajaj)	7500.00	75000.00
111	220.00	No.	Decorative symmetric LED Tunnel Light fixture (IP 66 - 5500 Pluse or Mines 10%) with Having 65 to 75 Watt as per Instruction of Engineer-in-Charge Make:- (Keselec, Philips,Crompton,Havells,Bajaj)	7500.00	1650000.00
112	10.00	No.	Providing and fixing of street light pole bracket made from HT Steel, hot dip galvanized having galvanising thickness 70 microns Avg. , having 48.3 outside dia.x 3.25mm thick complete with suitable sleeve tubing of approximate 40 cms. and length suitable for 76 mm / 80mm. / require size pole top or suitable for mounting at various height of pole having sufficient fastners for fixing the brackets and having spread of 1 mtr. length with suitable rise as per site condition & suitable welded stiffener reducer and nipple with check nut complete in all respect with following nos of arms. [A] Single Arm bracket 1 Mtr Make:- (Philips,Transrail,ABB,Bajaj)	1941.00	19410.00
113	110.00	No.	[B] Double Arm bracket 1 Mtr (Make:- (Philips,Transrail,ABB,Bajaj)	2482.00	273020.00
114	230.00	No.	MCB Miniature circuit breaker single pole 6A to 32A suitable to operate on 240 V A.C. system and having breaking capacity 10 KA to be erected in existing box. confirming to IS 8828/1996 with ISI Mark	120.00	27600.00
Total of Schedule - A3					5,634,382.00

<u>SCHEDULE A3 : Electrical Works</u>					
Sr No.	Quantity	UNIT	Item of work	Estimated Rates (Rs.)	Total Amount according to estimated quantities (Rs.)

RAJKOT MUNICIPAL CORPORATION
(RMC)

BID DOCUMENT FOR

**CONSTRUCTION OF THREE ARM FLYOVER AT HOSPITAL CHOWK IN
RAJKOT CITY**

C O N T E N T S

VOLUME – II: QUALIFICATION DOCUMENT

Sr. No	Particulars	Page No.
1.0	Instruction to bidders	2-3
2.0	Evaluation Criteria	4-8
3.0	Forms	9-23

CONSTRUCTION OF THREE ARM FLYOVER AT HOSPITAL CHOWK IN RAJKOT CITY

1 INSTRUCTIONS TO BIDDERS:

- 1.1** The PQ of the bidders is being done to assess the capability and capacity of the bidder for the work of construction of flyover as mentioned above. The information shall be given in the prescribed forms as under.
- 1.2 Documents Contains following Forms**
- a) Form 'A' - Structure & Organization
 - a) Form 'B' - Available Bid Capacity
 - b) Form 'C' - Financial Statement
 - c) Form 'D' - Details of Personnel
 - d) Form 'E' - Plant and Equipment
 - e) Form 'F' - Work Experience
 - f) Form 'G' - Information pertaining to Quality Assurance System.
 - g) Form 'H' - Work Plan / Construction Methodology
 - h) Form 'I' - Details of Projects under Litigation /Arbitrations / lost
 - i) Form 'J' - Undertaking by the applicant
- 1.3** Additional sheets can be added to the forms, if required. All the sheets of each of the forms shall be clearly marked in the right top corner in the following manner :Form - 'A' Page -1, Form - 'A' Page - 2, Form - 'A' - Page - 3 etc.
- 1.4** If bidder wishes to submit any additional information in addition to the mentioned formats such information shall be submitted in form of attachments or supplements which shall be marked clearly in the manner indicated below:Attachment-1 to Form -'A', Attachment-2 to Form -'A' etc.
- 1.5** While submitting the forms, bidder shall enclose latest copies of brochures and technical information giving additional information about the organization.
- 1.6** The enclosed forms should be filled-in completely, in all respects answering all the questions. If any particular query is not relevant, it shall be replied as 'not applicable'.
- 1.7** Contractor shall not sublet any part of the work other than the specialized work without prior written consent of the Employer. In no case Contractor will

be permitted to sublet more than 25% (Twenty five percent) of the value of works, including those to specialized sub-contractors.

- 1.8** Financial data, project costs, value of works etc., should be given in Indian Rupees only. These shall be indexed as per foot note for clause 1.3 of II (pg.3).
- 1.9** For any clarification contact:
Office of the City Engineer, Rajkot Municipal Corporation, Central Zone,
Dr. Ambedkar Bhavan, Dhebarbhai Road, Rajkot – 360001.Gujarat.
- 1.10** If the application is made by a partnership firm it shall be signed by all the partners of the firm, with their full names and current addresses, or by a partner holding the power of attorney for the firm for signing the application, in which case a certified copy of the power of attorney shall accompany the application. A certified copy of the partnership deed, documents proof for current address of the firm and the full names and current addresses of all the partners of the firm shall also accompany the application.
- 1.11** If the application is made by a limited company or a limited corporation it shall be signed by a duly authorized person holding the power of attorney for signing the application in which case a certified copy of the power of attorney shall accompany the application. Such limited company or corporation will be required to furnish satisfactory evidence of its existence before the contract is awarded.
- 1.12** The information furnished must be sufficient to show that the applicant is capable in all respects to successfully complete the envisaged work.
- 1.13** The Applicant is expected to furnish additional information or clarification as required by the Employer or his Consultants
- 1.14** Joint venture shall not be permitted.
- 1.15** All documents must be self-attested or attested by gazette officer.

2 EVALUATION CRITERIA FOR QUALIFICATION

1.1 The qualification shall be considered to ascertain whether the submission:

- i) Meet the eligibility requirements;
- ii) Have been properly prepared and signed;
- iii) Contain all the details called for and are in proper format
- iv) Are accompanied by required authorization, and
- v) Are otherwise generally in order.

1.2 Minimum Eligibility / Qualifying Criteria

- i) Only single bidder permitted for bidding.
- ii) No Joint venture/Consortium permitted for bidding.
- iii) Contractor registered with Government of Gujarat in class 'AA' category and special Category-1 for Bridges, contractors registered in Other State Government/ Central Government in appropriate class and meeting the qualifying criteria as specified.
- iv) Average Annual Turnover of last seven financial years should not be less than the 50% of the tender amount.
- v) Experience of having successfully completed similar works during last seven years should be either of the following. Details like monetary value, clients and proof of satisfactory completion should be submitted for establishing eligibility.

(1) Bidder should have completed at least one work of similar nature of 60% or two works of 40% or three works of 30% each of tender amount is completed in last seven years.

Similar nature work shall mean construction of Fly over bridge (FOB) or Railway over bridge (ROB) in city area only.

Additionally the agency should have carried out the followings:

- i. Open foundation in rocky strata for any bridge work
- ii. At least one completed work of 24m or larger span of RCC box / RCC Girder for 2 or more lane vehicular traffic

(2) Bidder should have enough machinery and experienced personnel to supervise the work.

Note: - Enhancement factor at 10% per year for last seven years will be applicable to arrive average annual turnover and finalized the magnitude of work done in last seven years.

1.3 The criteria for making assessment of the capability of the firms which have applied will also include the following items:

Bid capacity: Bidders who meet the minimum qualification criteria shall be qualified only if their available bid capacity is more than the total value of the works for which he has offered his bid. Available bid capacity- ABC must be more than the estimated tender amount.

ABC is to be calculated as: - $ABC = 2 * A * N - B$

A = Maximum Value of works executed in any one year during the last seven years (updated to present price level by applying enhancement factor) taking into account the completed as well as works in progress.

N = No. of Years prescribed for completion of the works for which tender is invited

B = Value (*Price level) of existing commitments and ongoing works to be completed during the next N Years (Period of completion of the work for which the tenders are invited).

For the purpose of updating amount of works executed in any year, enhancement factor as above shall mutatis mutandis apply.

Existing commitments shall include all such works for which letters of acceptance of the tenders have been received by bidder till the date on which bidder has submitted his bid for the proposed work.

- i) Structure and organization of the firm shall be presented in a way to provide the evidence of ability of handling large and complex projects.
- ii) Financial status of the firm including ability to finance the construction as judged on the basis of line of credit from any Nationalized/Scheduled Bank not less than Rs. 3.0Cr.
- iii) Resources of the firm including personnel of requisite qualification and project management using computerized techniques, and equipment in sufficient quantity of the required type.
- iv) Experience of the firm for constructing bridges and other similar projects as applicable as well as timely and qualitatively completion of works undertaken.

Contractor shall have experience of construction of Flyover Bridge/Major Bridge for road or for railways or on river, in which they have successfully carried out the execution like open foundation in rocky strata during last seven years.

- v) A quality assurance scheme as stipulated in Form 'H' of this document. The Form 'H' will be adopted to assess and to evaluate periodically, the quality assurance, generally in accordance with ISO: 9001/9002 procedures. List of projects where quality assurance schemes has been adopted earlier shall be submitted.
- vi) Any other information supplied by the firms applying for qualification.
- vii) Contractor should have registration with Employee's Provident Fund organization.

viii) Other Requirements:

Solvency Certificate

Minimum solvency required Rs 300.00 lacs from Nationalized / Schedule Bank only.

Working Capital

Working capital must not be less than 25% of the estimated cost.

Net-worth

Bidder shall have to submit the Net-worth of last seven financial years and it should be positive.

• Litigation History

The applicant should provide accurate information on litigation and / or arbitration resulting from Contracts completed or under execution by him over the last seven years. A consistent history of arbitration awards/ judgments against the applicant or any partner of a joint venture may result in disqualification for proposed work. If the details of Litigation History is hidden by the applicant and later on it comes to knowledge of the employer the bidder shall be disqualified for the proposed work and other appropriate actions shall be taken against the bidder.

• Machinery / Equipment

Bidder shall have to assure availability of machinery / equipment's in working condition as per Appendix -B. If bidder fails to provide proof of assured availability of required machinery, he will be disqualified for the proposed work. Machinery ownership document or lease / hire agreement for the work under tender shall be considered as valid proof for assured availability.

• Bidding in E-tendering

Submission of application must be through e-tendering i.e. electronic form Bidder shall have to submit the bid in E-tendering form only.

Bids of those bidders who have submitted all information, statistical details as required in the bid documents through E-tendering will only be considered. If the employer desires any clarification, for verification / clarification, ambiguity or difference found in the documents/ statistical details submitted online (by E-Tendering) by the bidder the same shall be furnished within stipulated time otherwise further processing will be carried out in absence of above and the bidders shall be liable for any consequence.

- **Submission of documents**

Following documents/papers shall form part of the bid.

Annual turnover certificates issued by chartered accountant for last seven financial years

Form 3A issued by employer to substantiate successful experience of similar work.

Existing commitments and ongoing works.

Litigation / Arbitration history

Proof of assured availability of required Machinery / equipment.

An undertaking for truthfulness of information furnished.

Any information, data statistics etc. which are not related to bid document will not be considered in evaluation even though furnished by the applicant.

Employer reserves the right to call any information / document which is mandatory, essential and critical for the purpose of evaluation. Any information provided by the applicant after last date of Electronic submission will not be considered in evaluation, unless except the employer has specifically asked for any information / document, which is mandatory, essential and critical for evaluation of PQ document. If required information is not furnished within stipulated time, proposal will be liable for rejection.

If any of the information provided by the bidder is found false during scrutiny or at the later stage, his EMD shall be forfeited and he shall be disqualified for the proposed work. If any of the information provided by the bidder is found false after award of work, performance security of the bidder shall be forfeited and the contract shall be terminated.

Even though the bidders meet the qualifying criteria, they are subject to be disqualified if they have:

- made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirements; and/or
- record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.; and/or

- Participated in previous bidding for the same work and have quoted unreasonably high Bid prices and could not furnish rational justification to the employer.
- Colluded with other prospective bidders for this work to arrive at quoted prices for the purpose of restricting competition.
- Indulged in inducement of any official of RMC and/or their consulting engineer and other advisors in any manner whatsoever.
- not submitted a Safety Manual
- not submitted pert chart
- not submitted a proposed site organization chart
- not submitted anti-black listing affidavit.

FORM -'A'

1. STRUCTURE OF ORGANISATION:
2. Name of Applicant :
3. Address :
 - (Head Office)
 - Telephone No.:
 - Fax No. :
 - E-mail Address:
 - Local Office Address:
 - Telephone No.:
 - Fax No. :
 - E-mail Address:
4. Description of Company :
(e.g. General, Civil Engineer, Contractor, supplier of equipment etc.)
5. Registration and Classification :
With Gujarat State PWD/MES/CPWD/Any other State PWD.
6. Name and Address of Bankers :
7. Number of years of experience :
as a General Contractor.
In Own Country:
Internationally:
8. Number of years of experience :
as a Sub-Contractor
In Own Country:
Internationally:
7. Name and address of:
Principals of company to be associated in the project and whether
parent/subsidiary/others.
8. Attach Organization chart:
Showing the structure of the Company including names and position of
Directors and key personnel
Please submit all supporting documents.

FORM -'B1'
Available Bid Capacity

Available bid capacity- ABC must be more than the estimated tender amount.

ABC is to be calculated as: - $ABC = 2 * A * N - B$

A = Maximum Value of works executed in any one year during the last seven years (updated to present price level by applying enhancement factor) taking into account the completed as well as works in progress.

N = No. of Years prescribed for completion of the works for which tender is invited

B = Value (*Price level) of existing commitments and ongoing works to be completed during the next N Years (Period of completion of the work for which the tenders are invited).

Please submit all supporting document

FORM -'B2'

List of project having cost more than 60 % of estimated amount put to tender during last seven years.

Please submit all supporting documents.

FORM -'C'
FINANCIAL STATEMENT

1. The summary of Assets and Liabilities on the basis of the audited financial statement of the last seven financial years. (Attach copies of the audited financial statements of the last seven financial years)

		Annual Turnover in Cr. (Rs)						
		2017 - 2018	2016 - 2017	2015 - 2016	2014- 2015	2013 - 2014	2012 - 2013	2011 - 2012
A	Total assets							
B	Current assets							
C	Cash, temporary investments and current receivable							
D	Total liabilities							
E	Current liabilities							
F	Net worth							
G	Working capital							
H	Authorized capital							
I	Capital issued and paid-up							
J	Current ratio (b) ÷ (e)							
K	Total liability to net worth (d)÷(f)							
L	Total turnover							
I	Turnover from Similar Projects							
II	Turnover from Other Projects							
III	Turnover from Trading							

2. Actual value of construction works, undertaken for each of the last seven years, and projected for current year : (Rupees Cr.)

Year	2017 - 2018	2016 - 2017	2015 - 2016	2014- 2015	2013 - 2014	2012 - 2013	2011- 2012
India							
Abroad							
Total							

3. Net Profit after Tax

(a) 2018 – 2017:

(b) 2017 – 2016:

(c) 2016 -2015 :

(d) 2015 -2014:

(e) 2014-2013:

(f) 2013-2012:

(g) 2012-2011:

The Profit and Loss statements have been certified

4. Applicants financial arrangements :
(mention amount in Rupees Cr.)

(a) Own Resource :

(b) Bank Credits :

(c) Others (specify) :

5. Certificate of financial soundness from bankers of applicants together with their full address.

6. Credit Facilities:

(a) Name/Address of :
Nationalized Bank providing credit line.

(b) Total amount of credit line :
(attach certificate from the bank)

7. Approximate value of works in hand :

Notes:

- 1) Details of Item '7' are to be given in Form '-F'- Work Experience.
2) All items should be properly filled in. Where any particular item is not applicable it should be clearly mentioned as 'not applicable'.

FORM – 'D'

DETAILS OF PERSONNEL

Sr No	Description	Numbers likely to be made available for work
1	Project In-charge capable of handling projects of magnitude of the project under consideration.	CV of Project Manager should be supplied. He should be a minimum graduate in civil Engineering and shall have adequate experience of more than 15 years in bridge construction at responsible capacity.
2	Site Engineers (Main Civil Works) (a) Civil Works open foundation RCC superstructure & PSC superstructure RCC substructure RCC Retaining wall (b) Material & quantity engineer (c) Electrification & others	Minimum 7 years' experience in similar type of work
3	Technical Officers for Construction Supervisor	
4	Administrative Officers	
5	Skilled Employees	
6	Unskilled Employees	

Note: In the case of personnel of Sr.No.1 and 2, please furnish names, qualifications, present posting, professional experience, and ability relevant to the project only in respect of those who are likely to be posted on the present work.

**FORM -'E'
PLANT AND EQUIPMENT**

Sr No	Name of Equipment	Capacity	Numbers of each equipment	Year of manufacture and present condition	Present location	Owned or leased
1						
2						
3						

a. Construct Equipment necessary for this bridge like

Concrete Batching Plant
 Concrete Mixers
 Concrete Pump
 Transit Mixers
 Prestressing Equipments
 Steel fabrication yard
 Crane
 Truck / Tippers/Dumpers/
 Form works / Centering/ Shuttering with accessories
 Dewatering pump sets
 Fabrication
 Miscellaneous

****Equipment for road works like:-**

Excavator
 Motor Grader
 Dumper
 WMM Mixing plant
 Hot mix plant
 Mechanical paver
 8 to 10 tonne static roller
 Vibratory roller of 8 to 10 tonne static weight
 Pneumatic Tyre roller
 Testing Equipment

**In case of lease contract for above tools/equipment, bidder shall mention the details of lease agreements with start and end dates.

FORM -'F1'

Name of the Firm :

1 Total Number of years of experience in Civil Construction Work :

2 Total Number of years of experience in specialized construction work (Indicate works that are relevant to the works for which this qualification application is sought).

Details of works

Sr. No.	Name of work	Name of Projects completed	Value of Contract		Schedule Time of Completion	Actual Time of Completion	Reason for Delay, if any	Client Details	*Details of each work Salient features
			Percentage of company	Participation in project					
a)	Bridge where PSC girder, Box are provided.								
b)	Bridges where RCC T beam girders, solid slabs are provided.								
c)	Bridges where RCC Retaining wall in Approaches are Provided								

Attach separate sheet if required.

5.1 "The details of work shall be good enough to assess the magnitude of work." Ref. from F2.

5.2 Submission of all supporting document/proof is must.

FORM – 'F2'

Details of relevant Projects as per clause 2C.

Please fill information about the relevant projects completed.

(a) Works costing equal to or more than 30 % of estimated amount put to tender.

Name of Employer	Name, Location & Type of Contract	Name of Engineer responsible for Supervision	Contract price and date (Rs.Crores)	Percentage of Participation of Company in Project Provision	Was contract satisfactorily completed including actual time for completion and reasons for extension, if any	Whether any penalty was levied, if so, how much and for what reason

(b) Works costing equal to or more than 40% & less than 60% of estimated amount put to tender.

Name of Employer	Name, Location & Type of Contract	Name of Engineer responsible for Supervision	Contract price and date (Rs.Crores)	Percentage of Participation of Company in Project provision	Was contract satisfactorily completed including actual time for completion and reasons for extension, if any	Whether any penalty was levied, if so, how much and for what reason

(c) Works costing equal to or more than 60% of estimated amount put to tender.

Name of Employer	Name, Location & Type of Contract	Name of Engineer responsible for Supervision	Contract price and date (Rs.Crores)	Percentage of Participation of Company in Project provision	Was contract satisfactorily completed including actual time for completion and reasons for extension, if any	Whether any penalty was levied, if so, how much and for what reason

NOTE:- Certificates from the Employers' officers of rank 'Executive Engineer' or equivalent to be attached for individual works indicating that the work has been done under single contract.

FORM – 'F3'

Details of works in hand

Give information about all projects in progress including those where the Company has received a Letter of Intent but a formal contract has not yet been awarded.

Name of Employer	Engineer Responsible for Supervision	Location and Description of work	Percentage Participation of company in the project	Value of Contract	Value completed and certified	Percentage of work physically completed	Scheduled Date Completion of work
1	2	3	4	5	6	7	8

NOTE:- In the case of on-going works the Bidder should submit Certificate from the concerned employers' officer of rank Executive Engineer or equivalent that the work is progressing satisfactorily as per the approved work programmed.

FORM - 'G'
INFORMATION PERTAINING TO QUALITY ASSURANCE (ISO:9001)

The applicant(s) are required to provide details of their Quality Assurance Systems for criteria stipulated below, preferably in the form of their Quality Manual to be enclosed separately. In case the same is not finalized in total, the extent to which it is completed and documented may be submitted.

1 Management Responsibility

- 1.1 Quality Policy Responsibility
- 1.2 Organization
 - a) Responsibility and authority
 - b) Resources
 - c) Management Representative
- 1.3 Management Review

2 Contract Review

- 2.0 General Documented Procedure
- 2.1 Review
- 2.2 Amendment to a Contract
- 2.3 Records

3 Document and Data Control

- 3.1 **General**
(Documented Control Procedures to Control Documents & Data)
- 3.2 Document and Data Approval and Issue
- 3.3 Document and Data Changes

4 Quality Assurance Manual

- 4.1 Quality Assurance Plan
- 4.2 Method Statement for each activity
- 4.3 Survey Control and Settlement
- 4.4 Quality Control Plan for Materials
- 4.5 Temporary Works
- 4.6 Inspection & Testing
 - 4.6.1 General Documented for Procedures for Inspection and Testing
 - 4.6.2 Receiving Inspection and Testing
 - 4.6.3 In-process Inspection and Testing
 - 4.6.4 Final Inspection and Testing
 - 4.6.5 Inspection and Test Records
 - 4.6.6 Formats for Inspection of Cement, HYSO/TMT, HTS, Soil
- 4.7 Measurement Book
- 4.8 Formats for :
 - 4.8.1 Mix Design
 - 4.8.2 Pour Card / Concreting Report
 - 4.8.3 Bar Bending Schedule
- 4.9 Formats for :
 - 4.9.1 Sieve Analysis for all aggregates
 - 4.9.2 Slump test (Flakiness and elongation test)
 - 4.9.3 Crushing strength of concrete cubes
 - 4.9.4 Field test of earth workmanship

- 4.9.5 Accident record
- 4.9.6 Damage at site due to natural calamities
- 4.9.7 Deliveries of materials
- 4.9.8 Daily / weekly progress report.
- 4.10 Check List :
- 4.10.1 For HYSD/TMT
- 4.10.2 For Concrete Pouring
- 4.10.3 For Shuttering
- 4.10.4 For Plastering
- 4.10.5 For Launching
- 4.10.6 For Pre casting/fabricating activities

Signature of the Bidder:

Name & Designation of the Bidder

Name of the company

Rubber stamp of company

Date :

FORM - 'H'
WORK PLAN / CONSTRUCTION METHODOLOGY

The bidder shall have to provide a brief but comprehensive note of his approach and methodology to handle the Project construction including his detail work plan. The note should specifically deal with following aspects.

Sr. No.	Component
1	Methodology – General Approach i) Foundation - Open RCC Foundation ii) Sub-structure - RCC piers iii) Super Structure - RCC Girder 15m span , RCC Girder 20m span RCC Girder 24 m span iv) Bearing –Elastomeric bearings v) Approaches –RCC Retaining Wall vi) Service road & footpath vii) Electrical component for bridge & service Road viii) Under space development ix) Wearing coat of the bridge x) Storm Water Drainage disposal & utility shifting works
2	PERT CHART

Notes:

For each of the above note, the bidder shall give all detailed information along with sketches / drawing etc. consideration of site condition including traffic diversion / barricade & other safety aspects to be looked after during execution stages. It may be noted that only after approval of the above details, the execution drawings shall be released.

Signature of the Bidder:

Name & Designation of the Bidder

Rubber stamp of company

Date:

FORM - 'I'
DETAILS OF THE PROJECTS UNDER LITIGATION / ARBITRATION / LOST
EVEN CONTRACTOR'S PRICE IS LOWEST

Sr No	Name of the Project	Location	Value of the Project	Reason for litigation / arbitration
1				
2				
3				
4				
5				
6				

Note:

The bidder shall furnish separate Table for individual project.

Signature of the Bidder:

Name & Designation of the Bidder

Name of the company

Rubber stamp of company

Date

FORM - 'J'
UNDERTAKING BY THE APPLICANT

The Municipal Commissioner,
Rajkot Municipal Corporation,
Rajkot

Dear Sir,

Having examined the qualification document including scope of works and time frame of construction, we hereby submit all the necessary information and relevant documents for qualifying us for bidding for the work.

It is certified that the information furnished in this document is authentic. We understand that Employer reserves the right to reject any or all applications without assigning any reason thereof.

Date : (Signature of Applicant)
Including title and capacity in which application is made.

Encl: 1) Forms duly filled in the prescribed form.
2) Evidence of authority to sign.
3) Latest Brochures.