

**REPLACEMENT OF DAMAGED PQC PANELS ON MUMBAI PUNE
EXPRESSWAY (YCEW) KM. 00/000 TO 94/000 IN BOTH CORRIDORS**

Volume - III

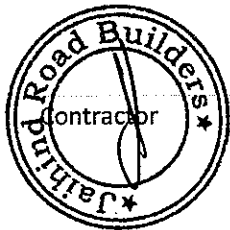
(Financial Bid)



REPLACEMENT OF DAMAGED PQC PANELS ON MUMBAI PUNE EXPRESSWAY (YCEW) KM. 00/000 TO 94/000 INBOTH CORRIDORS

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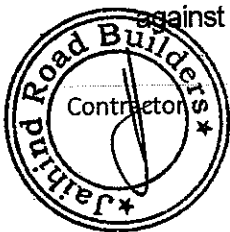
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REPLACEMENT OF DAMAGED PQC PANELS ON MUMBAI PUNE EXPRESSWAY (YCEW) KM. 00/000 TO 94/000 IN BOTH CORRIDORS

PREAMBLE

1. In the Bill of Quantities Part-B (3), the description is given for the items of works as estimated.
2. The Bill of Quantities shall be read in conjunction with the instruction to Bidders, General and Special conditions of contract, Technical Specifications, drawings etc.
3. The quantities given in the Bill of Quantities are estimated and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the contractor and verified by the Engineer, and valued at the rates and prices tendered in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Engineer may fix within the terms of the contract.
4. The bidder must quote his rate percentage above or below both in words and figures at specified place. Also the total amount tendered for, obtained by increasing or decreasing the percentage quoted and must be written in words as well as in figures.
5. The tendered amount shall except in so far as it is otherwise provided under the contract, include all constructional plant, labour, supervision, materials, all leads and lifts, erection, maintenance, insurance, profits, taxes, octroi, Vat, royalties and duties together with all general risks, liabilities and obligations set out or implied in the contract. Materials to be used in embankments and unserviceable materials to be disposed should be with all leads and lifts.
6. The whole cost of complying with the provisions of the contract shall be included in the items provided in the price Bill of Quantities, and where no items are specifically provided the cost shall be deemed to be distributed among the rates for the all items of work.
7. The specification numbers stated in the detailed description of items of works against each item are indicated for guidance of the Bidders. However, any of the



specification alluded to in the specifications referred to in the Bill of Quantities and / or any other specifications from Volume-IV Section - "Technical Specifications" which in the opinion of the Engineer are applicable for a particular item is deemed to have been included in the scope of item and fully covered by the rates for the items. In case of any discrepancies between provisions stated in the description of individual items and those covered by the technical specifications / drawings the provisions in the description of item shall have preference.

8. The bid offer will be inclusive of defect liability period of 5 years for free replacement of damaged PQC panels, when informed by MSRDC, within a period of 7 days on such intimation.

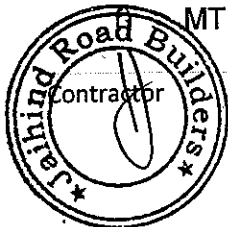
9. Bidders shall submit offers that comply with requirements of bidding documents, including Technical design and indicated in the drawing and specifications.

10. The successful bidder shall arrange a visit of 3 Engineering officials designated by VC & MD, MSRDC Mumbai, within a period of thirty days from date of work order to similar project carried out by the bidder whether in India or outside India. The entire cost of such Visit shall be borne by Successful bidder. The successful bidder should also provide one suitable inspection vehicle / Car to MSRDC Engineering staff for inspection of work during the entire execution period with Driver and fuel limited to 3000Km per month and such other facilities listed elsewhere in the Bid document.

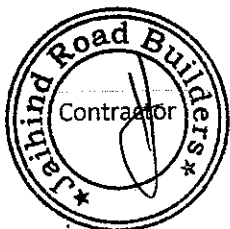
11. The bidders shall price the bill of Quantities in Indian Rupees only.

12. Abbreviations Used

a) LM/Lm/RMT	=	Linear Metre / Running Metre
b) Cum.	=	Cubic Metre.
c) Sqm.	=	Square Metre.
d) CC	=	Cubic Centimetre
e) No.	=	Numbers
MT / Tonne	=	Metric Tonne



g) Hr = Hours
h) Ha = Hector



SAMPLE FORM OF BID

(For Percentage Rate Bid)

Note:-This form in Volume-III to be filled up, signed and sealed as per Cl. 18.4 of ITB

Name of Work:-

To,
The _____
Maharashtra State Road
Development Corporation Ltd.
(As per Invitation for Bid)

1. Having examined the Conditions of Contract, Specifications, Drawings and Addenda for the execution of the above named work within the time specified, we the undersigned offer to execute and complete such works and remedy any defects there in conformity with the conditions of Contract, Specifications, Design, Drawings, Scope of work and addenda at the +29.34 %



Twenty Nine point Thirty four percentage above in figures as well as in word, percentage below / above the estimated cost of work as per Bill of Quantities in Volume-III with the said conditions which comes to net of Rs 19,05,23,413=00 Rs. Nineteen Cr. Five lakhs Twenty in figures as well as in word. Three Thousand four Hundred Thirteen only.

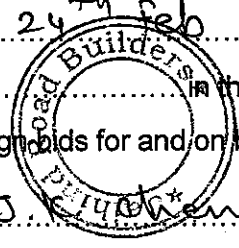
2. We acknowledge that the Volume I, Volume II, Volume III and Volume IV together with any addendum and common set of deviations thereto form part of Bid.
3. We undertake, if our bid is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Notice to commence (Work-Order), and to complete the whole of the Works comprised in the contract within the time stipulated.
4. We agree to abide by this bid for the validity period stipulated in the bidding documents and the bid shall remain binding upon us and may be accepted at any time before the expiration of that period.
5. Unless and until a formal Agreement is prepared and executed, this bid,



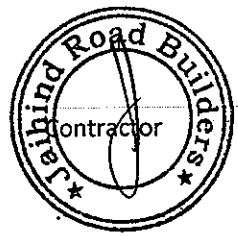
together with your written acceptance thereof, shall constitute a binding contract between us.

6. We understand that you are not bound to accept the lowest or any bid you may receive.

Dated this 24th Feb 2014
Signature [Signature] in the capacity of Proj. (owner)
Duly authorised to sign bids for and on behalf of
Address 306, J. K. Chawhan, Sector-17, Vashi
Occupation.



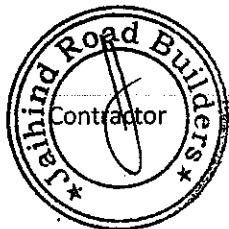
(To be filled in by the Bidder, together with his particulars and date of submission at the bottom of the form of Bid)



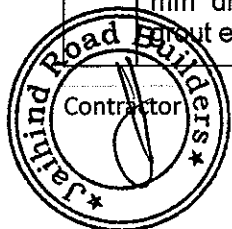
REPLACEMENT OF DAMAGED PQC PANELS ON MUMBAI PUNE EXPRESSWAY (YCEW) KM. 00/000 TO 94/000 IN BOTH CORRIDORS

Bill of Quantities as estimated

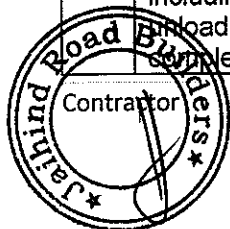
Sr. No.	Descriptions of Item	Quantity	Rate in Rupees	Amount in rupees
1	Cutting of Cement Concrete Pavement by means of Mechanical saw cutting tools in convenient volume etc.complete.	12117.70 Rmt	153.80 Per Rmt.	1863702.26
2	Dismantling of Cement Concrete Pavement (Mechanical means using pneumatic tools, Breaking to pieces not exceeding 0.02 Cum in volume & stock piling at designed locations and disposal of materials up to ahead of 1000 meters, stacking serviceable and unserviceable materials separately)	6602.54 Cum	1933.70 Per Cum.	12767337.30
3	Excavation for road way in H.R. by wedging & chiseling or line drilling including dressing section to the required grade, camber and side slopes and converning the excavated materials with all lifts and leads. Etc. complete.	1775.94 Cum	1157.65 Per Cum	2055918.00
4	Excavation for road way in soft rock.Including dressing section to the required grade, camber and side slopes and converning the excavated materials with all lifts and leadsEtc. complete.	261.25 Cum	557.33 Per Cum	145605.00
5	Sand blasting to the concrete surface including all materials, machinery and labour etc. complete.	1710.20S qm	94.10 Per Sqm.	160929.82
6	Granular Sub Base : Construction of granular sub base by providing grading -III material, mixing in Mechanical mix Plant at OMC, carriage of mixed material to work site , spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve desire density, complete as per clause 401 and Table 400-1.	1980.76 Cum	1530.25 per cum	3031058.00



7	Providing, laying, spreading and compacting graded stone aggregates to wet mix macadam specification, including premixing the materials with water at OMC in mechanical mix plant carriage of mixed materials by tippers to site of work, laying in uniform layers with pavers in sub-base course on well prepared surface and compacting with vibratory roller to achieve the desire density.	333.39 Cum	1431.69	477310.96
8	Providing and laying in situ Dry lean cement concrete sub-base of RMC M15 grade of trap metal of specified gradation using, mixing as per approved design mix, compaction with vibratory roller of minimum 80-100 KN static weight to give desired compacted density, providing construction joints, and curing with liquid curing compound and sprinkling water for 7 days including all materials, labour, machinery with all leads and lifts, bailing out water manually and formwork etc. complete.	1980.76 Cum	5864.00 Per Cum.	11615193.56
9	Providing & fixing in position separation member of 125 micron on DLC as per the directions of Engineer In Charge.	13205.09 Sqm	18.50 Per Sqm.	244294.09
10	Providing steel anchor dowel bars including drilling holes of 75 mm dia. (one no.) in rock / concrete placing the dowel in position and effectively grouting the holes 32 mm dia. Anchor steel rod taking out the removable M. S. pipe etc. complete.			
	A)For adjoining Existing PQC Panel	4860.00R mt	1368.80 Per Rmt..	6652368.00
	B)For adjoining New Panel	7632.00R mt	906.60 Per Rmt.	6919171.20
11	Providing and fixing in position TMT-FE - 500 bar reinforcement of various diameters for R. C. C. pile caps, footings, foundations, slabs, beams, columns, canopies, staircase, newels, chhajjas, lintels, pardis, copings, fins, arches etc. as per detailed designs and drawings and schedules including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete.	32.854 M.T.	63054.10 Per M.T..	2071585.92
12	Drilling & grouting in position Tie Bars of 12 mm dia. using Fosco-Rock lock set epoxy grout etc. complete.	7634.00 Nos	211.10 Per No.	1611537.40



13	Providing and Applying Black Anticorrosive Paint to Dowel Bar portion in the Cap etc. complete.	2183.33 Sqm	31.10 Per Sqm.	67901.41
14	Providing & fixing in position Plastic Cap for Dowel bar in traffic direction etc. complete.	20820.00 Nos	6.70 Per No.	139494.00
15	Providing and laying in situ cement concrete road pavement of RMC M50 grade including supplying all materials, providing steel form work compaction by plate vibrator, providing joints at every thirty meters internal and filling the joints with bitumen, curing etc. complete. (Excluding cost of reinforcement) (Newly laid concrete shall be covered by gunny bag/plastic sheet/tarpaulin etc. for curing period complete.)	4621.78 Cum	8264.90 Per Cum.	38198550.06
16	Providing and spraying curing compound like Shalitex or other brand approved by the Engineer, in two coats @ 250 ml per Sqm. First coat just after finishing the concrete texture work and after drying the first coat spray the second coat etc. complete.	13205.09 Sqm	43.30 Per Sqm.	571780.22
17	Providing & Cutting initial grooves in PQC of size 3 mm X 100 mm etc. complete.	8195.87R mt	38.90 Per Rmt.	318819.15
18	Providing & Cutting Final grooves in PQC of size 10 mm X 25 mm etc. complete.	8195.87R mt	33.30 Per Rmt.	272922.30
19	Filling in position the traverse and longitudinal joints of cement concrete pavement of size 10 mm X 12 mm with fresh sealant of Poly-sulphide Tech-seal RDL 941 including 2 coat of primer RDL 942, back up rod, de-bonding strip etc. complete.	8195.87R mt	205.50 Per Rmt.	1684250.26
20	Painting the road surface using approved quality Thermo Plastic material (Homogeneously composed of aggregates, pigment, resins and glass reflect rising beads) confirming to Clause-803.4.2.2 applied hot either by screening or extension process at the rate of 5 kg/Sqm. of painted surface using suitable machine capable of controlled preparation and laying with surface applicator of glass beads at 250 Gms/Sqm. allowing cooling to ambient pavement temperature, that shall produce an adherent pavement marking of minimum specified thickness of 2.50 mm including barricading for traffic diversion as per IRC: 35 cleaning the surface of dirt, dust and other foreign matter, demarcation at site, barricading for traffic diversion, traffic control including cost of all material, labour, loading, unloading lead lift, transporting etc. complete.	651.71 Sqm	666.60 Per Sqm.	434431.55



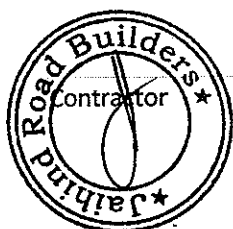
21	Providing Safety at the time of construction up to completion of work by fixing cautionary, mandatory and inforamatory boards, Traffic cones, safety barricades, Blinkers, battery, red flags etc. as per IRC requirement including labours required for safety regulation etc complete.	694 Nos	30085.47 Per No.	20879312.76
22	Providing Weep hole 20 mm Diameter at Built-up Gutter at G.S.B. Layer including Drilling & providing PVC pipe etc complete	70636 Nos	55.55 Per No.	3923829.80
23	Providing under sealing treatment for improvement of base / stabilization by using Pozzolona/cement/ polyurethane as per relevant provisions & guidelines of IRC SP 83:2008 including all material, machinery, labour etc complete	166560 Kg	205.50 Per Kg.	34228080.00
			Total Rs.	147304324.95



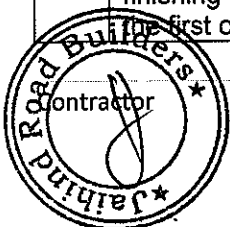
**REPLACEMENT OF DAMAGED PQC PANELS ON MUMBAI PUNE XPRESSWAY
(YCEW) KM. 00/000 TO 94/000 IN BOTH CORRIDORS**

Detailed Specification

Sr. No.	Description of Item	Specification
1	Cutting of Cement Concrete Pavement by means of Mechanical saw cutting tools in convenient volume etc complete.	As Directed by Engineer In Charge.
2	Dismantling of Cement Concrete Pavement (Mechanical means using pneumatic tools, Breaking to pieces not exceeding 0.02 Cum in volume & stock piling at designed locations and disposal of materials up to all lead and lifts stacking serviceable and unserviceable materials separately)	MORT & H Page no.202 Clause No.2.6 As Directed by Engineer In Charge.
3	Sand blasting to the concrete surface including all materials, machinery and labour etc. complete.	As Directed by Engineer In Charge.
4	Excavation for road way in H.R. by wedging & chiseling or line drilling including dressing section to the required grade, camber and side slopes and conveying the excavated materials with all lifts and leads. Etc complete.	Sp.No. RD 7 Page 186 & As Directed by Engineer In Charge.
5	Excavation for road way in soft rock. Including dressing section to the required grade, camber and side slopes and conveying the excavated materials with all lifts and leads. Etc complete	Sp.No. RD 5 Page 184 & As Directed by Engineer In Charge.
6	Granular Sub Base : Construction of granular sub base by providing grading -III material, mixing in Mechanical mix Plant at OMC, carriage of mixed material to work site , spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve desire density, complete as per clause 401 and Table 400-1.	Specification No MORTH -401 As Directed by Engineer In Charge
7	Providing, laying, spreading and compacting graded stone aggregates to wet mix macadam specification, including premixing the materials with water at OMC in mechanical mix plant carriage of mixed materials by tippers to site of work, laying in uniform layers with pavers in sub-base course on well prepared surface and compacting with vibratory roller to achieve the desire density.	MORT & H , Clause No.406 As Directed by Engineer In Charge



8	Providing and laying in situ Dry lean cement concrete sub-base of RMC M15 grade of trap metal of specified gradation using, mixing as per approved design mix, compaction with vibratory roller of minimum 80-100 KN static weight to give desired compacted density, providing construction joints, and curing with liquid curing compound and sprinkling water for 7 days including all materials, labour, machinery with all leads and lifts, bailing out water manually and formwork etc. complete.	MORT & H Page no.601 Clause No.6.1 As Directed by Engineer In Charge.
9	Providing & fixing in position separation member of 125 micron on DLC as per the directions of Engineer In Charge.	As Directed by Engineer In Charge.
10	Providing steel anchor dowel bars including drilling holes of 75 mm dia. (one no.) in rock / concrete placing the dowel in position and effectively grouting the hole 32 mm dia. Anchor steel rod taking out the removable M. S. pipe etc. complete.	As Directed by Engineer In Charge.
11	Providing and fixing in position TMT-FE - 500 bar reinforcement of various diameters for R. C. C. pile caps, footings, foundations, slabs, beams, columns, canopies, staircase, newels, chhajjas, lintels, pardis, copings, fins, arches etc. as per detailed designs and drawings and schedules including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete.	Bd.F.17 Page no307
12	Drilling & grouting in position Tie Bars of 12 mm dia. using Fosco-Rock lock set epoxy grout etc. complete.	As Directed by Engineer In Charge.
13	Providing and Applying Black Anticorrosive Paint to Dowel Bars portion in the Cap etc. complete.	As Directed by Engineer In Charge.
14	Providing & fixing in position Plastic Cap for Dowel bar in traffic direction etc. complete.	As Directed by Engineer In Charge.
15	Providing and laying in situ cement concrete road pavement of RMC M50 grade including supplying all materials, providing steel form work compaction by plate vibrator, providing joints at every thirty meters internal and filling the joints with bitumen, curing etc. complete. (Excluding cost of reinforcement) (Newly laid concrete shall be covered by gunny bag/plastic sheet/tarpaulin etc. for curing period complete.)	MORT & H Page no.602 Clause No.6.2 As Directed by Engineer In Charge.
16	Providing and spraying curing compound like Shalitek or other brand approved by the Engineer, in two coats @ 250 ml per Sqm. First coat just after finishing the concrete texture work and after drying first coat spray the second coat etc. complete.	As Directed by Engineer In Charge.



17	Providing & Cutting initial grooves in PQC of size 3 mm X 100 mm etc. complete.	As Directed by Engineer In Charge.
18	Providing & Cutting Final grooves in PQC of size 10 mm X 25 mm etc. complete.	As Directed by Engineer In Charge.
19	Filling in position the traverse and longitudinal joints of cement concrete pavement of size 10 mm X 12 mm with fresh sealant of Silicon sealant including , back up rod, de-bonding strip etc. complete .	As Directed by Engineer In Charge.
20	Painting the road surface using approved quality Thermo Plastic material (homogeneously composed of aggregates, pigment, resins and glass reflectorsingbeads) confirming to Clause-803.4.2.2 applied hot either by screening or extension process at the rate of 5 kg/Sqm. of painted surface using suitable machine capable of controlled preparation and laying with surface applicator of glass beads at 250 Gm/Sqm. allowing cooling to ambient pavement temperature, that shall produce an adherent pavement marking of minimum specified thickness of 2.50 mm including barricading for traffic diversion as per IRC: 35 cleaning the surface of dirt, dust and other foreign matter, demarcation at site, barricading for traffic diversion, traffic control including cost of all material, labour, loading, unloading lead lift, transporting etc. complete.	MORT & H Page no.803 Clause No.8.13 As Directed by Engineer In Charge.
21	Providing Safety at the time of construction up to completion of work by fixing cautionary, mandatory, informatory boards, Traffic cones, safety barricades, Blinkers, battery, red flags etc. as per IRC requirement including labours required for safety regulation etc complete.	MORT & H Page no.801 Clause No.8.4 As Directed by Engineer In Charge.
22	Providing Weep hole 20 mm Diameter at Built-up Gutter at G.S.B. Layer including Drilling & providing PVC pipe etc complete	As Directed by Engineer In Charge.
23	Providing under sealing treatment for improvement of base / stabilization by using pozzolona/cement/ polyurethane as per relevant provisions & guidelines of IRC SP 83:2008 including all material, machinery, labour etc complete	As Directed by Engineer In Charge.

