

**NAME OF WORK :- CONSTRUCTION OF MAJOR BRIDGES ON ANKLESHWAR-RAJPIPLA ROAD (SH-64) UNDER HIGH SPEED CORRIDOR SCHEME (PHASE-1) DIST .BHARUCH IN THE STATE OF GUJARAT (W.S. (1) MAJOR BRIDGE NEAR UCHHALI AT CH 06+785 RHS (2) MAJOR BRIDGES ON KAVERI RIVER AT CH 14+720 LHS (3) MAJOR BRIDGE NEAR RANIPOR AT CH 23+180 LHS & RHS (4) MAJOR BRIDGE NEAR RAJPARDI AT CH 30+490 RHS.**

<b>Specification Index</b>		
<b>Item No.</b>	<b>Item of work</b>	<b>Applicable Specification referancees</b>
<b>1</b>	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.(A) Depth upto 3.0 M.	As Per Separate Sheet Attached.
<b>2</b>	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.(A) Depth 3.0 M to 6.0 M.	As Per Separate Sheet Attached.
<b>3</b>	Empty boring through all sorts of strata for providing 1.20 Mt. diameter R.C.C. bored piles to required depth required depth including providing necessary casing pipe with all plants and equipments as required complete.	As Per Separate Sheet Attached.
<b>4</b>	Providing and laying controlled cement concrete M 35 for R.C.C. bored piles of 1.20M dia. including ramming , vibrating and finishing excluding cost of T.M.T reinforcement etc. complete.	As Per Separate Sheet Attached.
<b>5</b>	Providing steel Liner for pile including fabricating and setting out as per detailed drawing as directed.	As Per Separate Sheet Attached.
<b>6</b>	Load testing of foundation piles including loading with necessary kentledge or any other suitable method as directed.	As Per Separate Sheet Attached.
<b>7</b>	Conducting Pile low strain integrity test as per ASTM D 5882- 96 code of American Society for Testing on cast -in situ RCC pile of 1200 mm diameter inclusive of analysis with all contractor's equipment, manpower, site preparation, lead and lifts etc. complete as per standard procedure, and as directed by the Engineer in charge. Note:- Rate is inclusive All equipment, All labour and consumable required & Mobilization of equipment.	As Per Separate Sheet Attached.
<b>8</b>	Dynamic Load testing of foundation piles including loading with necessary kentledge or any other suitable method as directed.	As Per Separate Sheet Attached.
<b>9</b>	Providing & filling in foundation with ordinary cement concrete M 15 mix and providing necessary vertical pin headers including formwork vibrating ramming & curing complete.	As Per Separate Sheet Attached.
<b>10</b>	Providing and casting in-situ controlled cement concrete M 35 For R.C.C. pile cap including necessary form work vibrating, curing and finishing complete.	As Per Separate Sheet Attached.
<b>11</b>	Providing and casting in situ controlled cement concrete M-35 for R.C.C. return as per drawings including centering shuttering, scaffolding where necessary, laying vibrating, curing and finishing complete.(A) Height from 0.0 to 5.0 M. (1) Piers (2) Abutment (3) RCC return	As Per Separate Sheet Attached.

## Specification Index

Item No.	Item of work	Applicable Specification referancees
<b>12</b>	Providing and casting in situ controlled cement concrete M-35 for R.C.C. return as per drawings including centering shuttering, scaffolding where necessary, laying vibrating, curing and finishing complete.(A) Height from 5.0 to 10.0 M. (1) Piers (2) Abutment (3) RCC return	As Per Separate Sheet Attached.
<b>13</b>	Providing and casting in situ controlled cement M-35 for R.C.C. works in pier cap abutment cap and dirt wall including controlled cement concrete M-40 Bed block or pedestal or required size below bearings as per detailed drawings, centering, shuttering, scaffolding, wherever necessary, laying vibrating curing and finishing complete.	As Per Separate Sheet Attached.
<b>14</b>	Providing and casting in situ or precast controlled Cement Concrete M-45 for prestressed concrete work in Super structure including centering, shuttering, curing, scaffolding, ramming, vibrating, finishing complete.(I) Solid Slab.(II) Deck Slab.(III) Main Girders.(IV) Diaphragm or cross girder.	As Per Separate Sheet Attached.
<b>15</b>	Launching of Precast PSC I Girders using suitable capacity of cranes/truss including transportation, loading & Unloading etc. complete as per sepecification.	As Per Separate Sheet Attached.
<b>16</b>	Providing and fixing in position Fe 550D TMT for R.C.C. bored piles as per detailed drawing, including cutting, bending hooking tying and welding complete and including forming the cage and lowering it in position. and including Providing fusion bonded Epoxy coating not less than 175 micron thickness and up to 300 micron to reinforcement bars as per IS-13620-1993/ASTM-775 M including testing of coating at plant and all taxes.	As Per Separate Sheet Attached.
<b>17</b>	Providing and fixing in position Fe 550D TMT for R.C.C. Pile Cap as per detailed drawing, including cutting, bending hooking tying and welding complete and including forming the cage and lowering it in position. and including Providing fusion bonded Epoxy coating not less than 175 micron thickness and up to 300 micron to reinforcement bars as per IS-13620-1993/ASTM-775 M including testing of coating at plant and all taxes.	As Per Separate Sheet Attached.
<b>18</b>	Providing and laying in position FE 550D TMT bar reinforcement including cutting, bending, hooking and tying complete as per detailed for the following. (A) Abutment cap & Dirt wall. (B) Pier Cap. and including Providing fusion bonded Epoxy coating not less than 175 micron thickness and up to 300 micron to reinforcement bars as per IS-13620-1993/ASTM-775 M including testing of coating at plant and all taxes.	As Per Separate Sheet Attached.
<b>19</b>	Providing and placing in position FE 550D TMT bar reinforcement including cutting, bending, hooking, and tying complete as per detailed drawing.(B) T-Beam and Deck slab type of superstructure (I) Deck slab (II) Main and cross Girder and including Providing fusion bonded Epoxy coating not less than 175 micron thickness and up to 300 micron to reinforcement bars as per IS-13620-1993/ASTM-775 M including testing of coating at plant and all taxes.	As Per Separate Sheet Attached.
<b>20</b>	Providing and fixing in position to exact profile high tensile steel wires of required ultimate strength including bending, cutting, tying providing necessary standard and anchorages, sheathing, stressing, grouting, ducts as per detailed drawing including necessary plant and machinery complete.	As Per Separate Sheet Attached.

## Specification Index

Item No.	Item of work	Applicable Specification referancees
<b>21</b>	Supplying, fitting and fixing in position true to line and level elastomeric bearing conforming to IRC: 83 (Part-II) section IX and clause 2005 of MoRTH specifications complete including all accessories as per drawing and Technical Specifications.	As Per Separate Sheet Attached.
<b>22</b>	Providing and fixing metal modular strip seal expansion joints as per drawings. Details of expansion joint 50 x 50 x 6mm size two IS and 100 x 6mm MS plate with 6 x 20 x 25mm long hold fast @ 50 cm / cc on both sides of expansion joints.	As Per Separate Sheet Attached.
<b>23</b>	Construction of precast RCC railing of M30 Grade, aggregate size not exceeding 12 mm, true to line and grade, tolerance of vertical RCC post not to exceed 1 in 500, centre to centre spacing between vertical post not to exceed 2000 mm, leaving adequate space between vertical post for expansion, complete as per approved drawings and technical specifications.	As Per Separate Sheet Attached.
<b>24</b>	Provision of an Reinforced cement concrete crash barrier at the edges of the road, approaches to bridge structures and medians, constructed with M-40 grade concrete with Fe-550D with fusion bonded epoxy coating with reinforcement conforming to IRC:21 and dowel bars 25 mm dia, 450 mm long at expansion joints filled with pre-moulded asphalt filler board, keyed to the structure on which it is built and installed as per design given in the enclosure to MOST circular No. RW/NH - 33022/1/94-DO III dated 24 June 1994 as per dimensions in the approved drawing and at locations directed by the Engineer, all as specified as per drawing attached.(i) cast in situ	As Per Separate Sheet Attached.
<b>25</b>	Providing weep holes in Brick masonry/Plain/ Reinforced concrete abutment, wing wall/ return wall with 100 mm dia PVC pipe, extending through the full width of the structure with slope of 1V:20H towards drawing face Complete as per drawing and Technical Specifications	As Per Separate Sheet Attached.
<b>26</b>	Providing P.V.C. 100 mm diameter water spouts including necessary iron gratings as per drawings.	As Per Separate Sheet Attached.
<b>27</b>	Providing, laying and jointing in true line and level 110 diameter U.P.V.C (Type B) conforming to IS 13592-1992 with one end plain and other end socketed with rubber ring, & fittings conforming to ISI 14735-1999 of approved make for drainage system pipe line, pipe shall be jointed with each other with rubber lubricant, pipe shall be fixed on wall using of PVC clamp of the size 110 mm diameter x 149 mm length x 145 mm height at every 2000 mm center to center or shall be concealed in walls as directed including necessary fittings such as bends, shoes etc. including testing of pipes and joints and jointed with adhesive solvent cement including cost of all materials. (For connecting all the water spouts at Flyover & Approach complete)	As Per Separate Sheet Attached.
<b>28</b>	Providing and laying - Filter Media 600mm thick directed at the back of abutments, returns and wing walls as per detailed specifications.	As Per Separate Sheet Attached.
<b>29</b>	Providing and casting in situ controlled cement concrete concrete M-35 for approach slab including formwork curing and finishing complete.	As Per Separate Sheet Attached.

## Specification Index

Item No.	Item of work	Applicable Specification referancees
<b>30</b>	Providing and fixing in position FE 550D TMT bar reinforcement including cutting, bending and tying complete as per detailed drawings. (A) R.C.C. Kerb. (B) R.C.C. Footpath.(C) R.C.C. Approach slab.(D)Wearing Coat. and including Providing fusion bonded Epoxy coating not less than 175 micron thickness and up to 300 micron to reinforcement bars as per IS-13620-1993/ASTM-775 M including testing of coating at plant and all taxes.	As Per Separate Sheet Attached.
<b>31</b>	Providing and casting in situ controlled cement concrete M 40 for average 100 mm. thick wearing coat laid as directed including tamping vibrating finishing curing and filling in joints with bitumen complete.	As Per Separate Sheet Attached.
<b>32</b>	Providing and laying Pitching on slopes laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and Technical specifications (A) Stone/Boulder	As Per Separate Sheet Attached.
<b>33</b>	Providing and laying Filter material underneath pitching in slopes complete as per drawing and Technical specification	As Per Separate Sheet Attached.
<b>34</b>	Filling available excavated earth (excluding rock) in trenches. plinth, sides of foundations etc. in layers not exceeding 20 cm. in depth consolidating each disposed layer by ramming and watering.	As Per Separate Sheet Attached.
<b>35</b>	Finishing wall with weather proof exterior emulsion paint on wall surface (two coats) to give an required shape even shade after thoroughly brushing the surface to remove all dirt, and remains of loose powdered materials.etc complete (On exposed surfaces of Pier/Abutment/Pier Cap/Deck Slab/RE Wall etc.)	As Per Separate Sheet Attached.
<b>36</b>	Carryout soil investigation work including drilling 150 mm dia bore holes in all sorts of soil, ordinary rock and hard rock, upto maximum depth as mentioned, collection undisturbed samples and conduction standard penetration tests alternate at an interval of 1.5 to 2.0 m depth, conducting necessary laboratory tests for all type of classification and determination of soil parameters like density, shear and consolidation parameters if required, including submission of report in three copies covering investigation data and recommendation for SBC & and pile capacity considering the design criteria, all as per specification.	As Per Separate Sheet Attached.
<b>37</b>	Providing and fixing post and pipe railing as per detailed drawing including 3 coats of painting to steel works complete.	As Per Separate Sheet Attached.

**Deputy Executive Engineer  
(R&B) Sub Division  
Ankleshwar**

**Deputy Executive Engineer  
City (R&B) Sub Division  
Bharuch**

**Executive Engineer  
Bharuch (R&B) Division  
Bharuch**