

Name of work :-

**Repairing of some stretches on Ghaduli-Fulra-Pandhro Road km
10/00 to 20/00, Ta. Lakhapat, Dist. Kachchh**

Specification Index

It. No.	Description of Item	Booklet of general technical specifications	Remarks.
		Item No./ Page No.	
1	2	3	4
1	Clearing and grubbing road land including uprooting rank vegetation grass bushes, shrubs, sapling and trees 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.	It. No. 1 C / Page No.10	Road work
2	Scarifying gravelled macadam or bitumen macadam surface 6 cm to 10 cm. depth including stacking useful materials on road side and disposing off remaining stuff.	It. No. 28 Page No. 44	Road work
3	Box cutting the road surface to proper slope and camber for making a base of road work including removing the excavated stuff and depositing on the road side slope as directed upto 50 mts, lead.	It. No. 9 Page No. 22	Road work
4	Construction of Grannular sub base of 150 mm thick in by providing GSB Gr - I coarse graded material using B.T Metal 26.5mm to 53 mm @ 35 % , 26.5mm to 4.75mm 45% & Below 2.36mm 20 % in uniform layer with motor grader on prepared surface mixing by mix in place method with vibratory roller to achieve the desired density complete as per close 401.	As per separate sheet attached as per the MORT & H Section - 401 (Fifth revised)	
5	Providing, laying, spreading and compacting 150 mm thick stone aggregates of specific sizes Grade - I (45 mm to 63 mm) to water bound macadam specification including spreading in uniform thickness, hand packing , rolling with vibratory roller 80-100 kN static wt. to proper grade and camber, applying and brooming, stone screening/binding materials to fill-up the interstices of coarse aggregate, watering and compacting etc. complete as per Specification.	As per separate sheet attached as per the MORT & H Section - 404 (Fifth revised)	

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6	Providing and laying, spreading and compacting 150mm thick graded stone aggregate to Wet Mix Macadam specification including premixing the material with water at OMC in mechanical mix plant carriage of mixed material by tipper tip site, laying in uniform layers with mechanical means in sub-base /base course on well prepared surface and compacting with vibratory roller to achieve the desired density.	As per separate sheet attached as per the MORT & H Section - 406 (Fifth revised)	
7	Earth work Embankment including brecking of clods,dressing with all lead and lift including watering rolling and consolidation of subgrade in layers at O.M.C to required dry density including filling the depressing which occur during the process using vibratory roller 8 T to 10 T.(B) From Borrow area within 0.5 Km Lead	It. No. 5 / Page No. 16	Road work
8	Providing 100mm thick compacted side shoulder of quarry spall on road site including collection of material spreading, rolling of watering etc. complete as directed.	It. No.16 e / Page.29+ It. No.19 / Page.31+ It. No.20 / Page.32	Road work
9	Providing & applying evenly priming coat with bitumen Emulsion (SS-1) on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 7.50 Kg. / 10 Smt using using mechanical means.	As per separate sheet attached as per the MORT & H Section - 502 (Fifth revised)	
10	Providing & Laying Bituminus Grouting 37.50mm Thick Compacted with asphalt VG-30 grade at the rate of 1.99% by wt of total mixing & tack coat @ 2.5Kg/10sqmt on B.T Surface & using B.T chips of required gradation including cleaning & heating the aggregate & asphalt by continuous batching of drum mix plant and spreading the same by paver finisher and consolidation with vibrator roller and power roller including providing all materials equipment tools and plants, oil kerosine, fire wood, labor charges etc. using contractor own drum mixplant and paver finisher etc, Complete in all respects.	As per separate sheet attached as per the MORT & H Section - 503 (Fifth revised) & 506 (Fourth revised)	

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11	Providing and laying 50 mm thick compacted bitumenous macadam (BM) with Emulsion tack coat @ 2.50 Kg./ 10 Sqmt using crushed stone aggregate as per MORTH gradation VG-30 grade bitumen at the rate of 3.40% by weight of total mix (i.e. 34kg/mt by wt. of total mix) for binding including heating and mixing the asphalt and aggregates by continuous Drum mix plant and transporting the mix and spreading the same by paver finisher and consolidation with vibratory road roller including using all necessary equipments, tools, plants, including cost of all materials, firewood, oil, lubricants, labour charges etc. complete.	As per separate sheet attached as per the MORT & H Section - 503 & 504 (Fifth revised) (Emulsion tack coat @ 2.50 Kg./ 10 Sqmt & VG-30 grade bitumen at the rate of 3.40% by weight of total mix)	
12	Providing and laying 25 mm thick compacted S.D.B.C with B.T. stone chips as per MORTH gradation and asphalt VG - 30 for mixing at the rate of 5.00 % by weight of total mix i.e (50.00 kg/MT by weight of total mix) including heating the asphalt and aggregates by continuous Drum mix plant & spreading the same by paver finisher including rolling & consolidation with 10-12 tones vibratory and power roller & providing all materials, equipments, tools & plants, fire wood, oil, kerosene, labour charges etc. and using contractor's own machineries hot mix plant and paver finisher etc. complete.	As per separate sheet attached as per the MORT & H Section - 508 (Fourth revised)	
13	Providing and Fixing GUARD STONE as per I.R.C.type design including white washing etc complete. Fixing in C.C 1:5:10	It. No.44 / Page No.67	Guard Stone fixing in C.C. 1:5:10

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14	Cat Eye / Road Stud / RPM : Supplying of Moulded Twin Shanks Raised Pavement Markers made of Polycarbonate and ABS moulded body and reflective panels with micro prismatic lens capable of providing total internal reflection of the light entering the lens face and shall support a load of 13635 kgs. tested in accordance to ASTM D 4280 Type H and complying to specification of Category A of MORTH Circular No. RW/NH/33023/10-97-DO III Dt. 11.06.1997. The height, width and length shall not exceed 20mm, 130mm and 130mm and with minimum reflective area of 13 sqcm on each side and the slope to the base shall be 35 +/- 5 degree. The strength of detachment of the integrated cylindrical shanks, (of diameter not less than 19 +/- 2mm and height not less than 30 +/- 2mm) from the body is to be a minimum value of 500 kgf. Fixing will be by drilling holes on the road for the shanks to go inside, without nails and using epoxy resin based adhesive as per manufacture's recommendation and the color of the marker should be as per the IRC 35-2015 and as directed by Engineer-in-charge.	It. No. 41 / Page No. 66	Road work
15	Road Marking with Hot Applied Thermoplastic paint with Reflectorising Glass Bends on Bituminous surface Providing and laying of hot applied thermoplastic compound 2.5 mm. thick including reflectorising glass beads @ 250 gms per sqm. area, Thickness of 2.5 mm is excluding of surface applied glass beads as per IRC:35-2015. The Finished surface to be level, Uniform and free from streaks and holes. zebra patta patta / bump patta lane /center line / edge line / cut patta. the white color marking should provide luminance coefficient on cement road shall be min. 130 mcd/m ² /lux and asphalt road shall be min. 100 mcd/m ² /lux during the service life during the day time. The marking should meet the performance criteria for night time reflectivity, wet reflectivity and skid resistance as mentioned in the section-15 of IRC 35-2015. Warranty for the Retro reflectivity should be two years.	As per separate sheet attached as per the MORT & H Section - 803 (Forth revised)	

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16	Chevron sign :-Providing and fixing sign boards made out of 1.5mm aluminium sheet / 3mm ACP (Aluminum composite Panel); size 60x50 cm as per design of IRC-67-2012. Pre treated with phospheting process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint ;reflectorised with Micro Prismatic Grade retro reflectivesheeting of Type-11 as per ASTM D-4956 and latest M.O.S.T.Specifications; 3.3 mtr long stand post of 75 x 75 x 6mm / 65NB Circular MS Pipe as required and frame fabricated from suitable size iron angle of 50 x 50 x 5mm; painted with bestquality 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 blockof size 45 x 45 x 60 Cms. for each leg.including excavation, curing etc.complete under the supervision of engineer in charge. A warranty for 10 years for the Retro reflective sheeting from originaa manufacturer & a certified copy of 3 year outdoor exposure test report from third party test lab for the product offered shall be submitted by contractor. (A) Class-C Type-11 Retro Reflective sheeting	As per separate sheet attached as per the MORT & H Section - 801 (Fifth reveised)	

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