

JAIPUR DEVELOPMENT AUTHORITY, JAIPUR

**Name of Work :- Survey, Demarcation & Construction of various sector roads in Zone 14, JDA Jaipur (Under RC)
PHASE -I**

BSR For 2016 JDA BSR (Building Works) 2015-2016
2016 JDA BSR (Road Works) 2015-2016
NH BSR (Bridge) 2013
RUIDP BSR 2013
Amount And Rate In (Rs)

G-SCHEDULE					
Item No.	Item Description	Quantity	Rate	Unit	Amount
1	<p>Conducting fresh detailed physical Machine (DGPS) with built-up area upto 10% per Hectare, General conditions: 1. For built-up area more than 10% the rates shall be as under : Sr. No. Type Of Area Rates Payable A) Fresh Works Upto 10% Built Up Quoted Rate 1 For Built Up Area 10% To 50% - 1.5 Times of Quoted Rate 2 For Built Up Area Above 50% - 2.0 Times of Quoted Rate B) Updation Works 1 For Built Up Area Up To 10% 0.25 Times Of Quoted Rate 2 For Built Up Area Up To 10% To 50% - 0.375 Times Of Quoted Rate 3 For Built Up Area Above 50% 0.5 Times Of Quoted Rate 2. The survey work shall include Total Station Machine Survey (DGPS), Revenue Map, MDP-2025 and relevant ZDP, MDP-2011 and Schemes approved on or adjacent to the site, boundary walls, built up, other structures & features on or adjacent to the site and any other layer as required by JDA. 4. The Absolute accuracy of the survey shall be less then 10 cm. 5. Work shall be done</p>	143.580	613.00	Hectare	88,014.54
2	<p>"Demarcation (by Total station) of schemes, Nallha, road, sector plan, master plan road and marking alignment or road with fixing of the center line by wooden pegs (5x5x45 cm) on ground as per respective drawings and master plan including fixing of pillars size up to (10cm dia at the top & 15mm dia at bottom 75cm height) for demarcation of corners center lines as per the direction Engineering in Charge Open area schemes, Nallha, road, sector plan, master plan road and marking alignment or road" with fixing of the center line by wooden pegs (5x5x45 cm) on ground as per respective drawings and master plan including fixing of pre cast pillars supplied by JDA at JDA store pillar size up to (15 cm at the top & 22.5 cm at bottom 2.4 mt height) for demarcation of roads as per the direction Engineering in Charge Open area</p>	143.580	1,300.00	Per Hect	186,654.00
3	<p>Clearing Grass and Removal of Rubbish Clearing Grass and Removal of Rubbish up to a distance of 30 m outside the periphery of the area as per MoRD Specification Clause 201. <u>By Manual Means</u></p>	143.580	5,400.00	Hectare	775,332.00
4	<p>Supply and fixing of NP-2 pipes 200mm dia and 2 meter length on 60-75 cm with filling of earth in pipes. Pipe should be painted with enamel paint in alternate strips of 20cm width and in one meter length with Red/White colour complete as per direction of Engineer In Charge.</p>	1,515.000	1,013.00	Each	1,534,695.00
5	<p>Supply of JCB (excavator cum loader) Type 3D on hire including POL & driver at different sites as Directed by Engineer in charge.</p>	892.000	745.00	Per Hour	664,540.00

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6	Supplying of 35 HP Diesel Tractor with blade on hire with driver, cleaner and POL at different sites of JDA region at Directed by Engineer in charge.	279.000	1,050.00	Per Shift of 8 hrs	292,950.00
7	Lettering with black Japan paint of approved brand and manufacture.	90,900.000	1.26	P.Letter P.Cm height	114,534.00
8	Providing and fixing of retro-reflectorised cautionary, mandatory and informatory sign as per IRC:67 made of encapsulated lens type reflective sheeting vide Clause 1701.2.3, fixed over aluminium sheeting, 1.5 mm thick supported on GI pipe 50 mm dia firmly, fixed to the ground by means of properly designed foundation with M-15 grade cement concrete 450 mm x 450 mm x 600 mm, 600 mm below ground level as per drawings and MoRD Specification Clause 1701 900 mm equilateral triangle	95.700	3,825.00	Each	366,052.50
9	Supplying & Fixing cautionary / Warning Reflective sign boards made out of 2 mm thick M.S. sheet as per IRC -67-1977, stove enamelled and reflective symbol fixed on Angle Iron of size 65 x 65 x 6mm of 3 meter long : 90 cm equilateral triangle	95.700	1,575.00	Each	150,727.50
10	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRD specifications clause 802, 803, 1202 & 1203 P.C.C grade M 10 Nominal mix 1:3:6	1,817.010	2,646.00	Cum	4,807,808.46
11	Construction of Embankment with Material Obtained from Borrow Pits Construction of embankment with approved material obtained from borrow pits with a lift upto 1.5 m, transporting to site, spreading, grading to required slope and compacting to meet requirement of Tables 300.1 and 300.2 with a lead upto 1000 m as per MoRD Specification Clause 301.5	772,080.000	94.50	cum	72,961,560.00
12	Excavation for roadwork in soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross-sections, and transporting to the embankment location with a lift upto 1.5 m and lead upto 1000 m as per MoRD Specification Clause 302.3	772,080.000	26.10	cum	20,151,288.00
13	Carriage of material from quarry/crusher to work site including loading, unloading and stacking all complete. Earth, Sand, Lime, Morrum manure or sludge For all lead & lift	779,615.000	23.85	cum	18,593,817.75
14	Construction of granular sub-base by providing well graded material, spreading in uniform layers with Tractor Mount Grader on prepared surface, mixing by mix in place method with rotavator at GMC, and compacting with smooth wheel roller to achieve the desired density, complete as per MoRD Specification Clause 401. For Grading I Material	113,610.000	400.50	cum	45,500,805.00

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15	<p>Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tipper to site, laying in uniform layers in sub-base/base course on a well prepared sub-base and compacting with smooth wheel roller of 80 to 100kN weight to achieve the desired density including lighting, barricading and maintenance of diversion, etc as per Tables 400.11 & 400.12 and MoRD Specification Clause 406. By Mechanical Means with 1 km lead</p>	50,175.000	1,071.00	cum	53,737,425.00
16	<p>Providing and applying primer coat with bitumen emulsion (SS-1) on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.70-1.0 kg/sqm using mechanical means as per MoRD Specification Clause 502</p>	200,700.000	31.50	sqm	6,322,050.00
17	<p>Providing and applying tack coat with Bitumen emulsion (RS-1) using emulsion distributor at the rate of 0.25 to 0.30 kg per sqm on the prepared granular surfaces treated with primer & cleaned with Hydraulic broom as per MoRD Specification Clause 503.</p>	200,700.000	10.80	sqm	2,167,560.00
18	<p>Providing and applying tack coat with Bitumen emulsion (RS-1) using emulsion distributor at the rate of 0.20 to 0.25 kg per sqm on the prepared bituminous surface cleaned with Hydraulic broom as per MoRD Specification Clause 503.</p>	200,700.000	9.00	sqm	1,806,300.00
19	<p>Providing and laying dense graded bituminous macadam with 100-120 TPH batch type HMP producing an average output of 75 tones 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 MoRT&H Specifications Clause 507 complete in all respects. for Grading II (19 mm nominal size)</p>	22,879.800	2,722.50	MT	62,290,255.50
20	<p>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 MoRT & H Specifications Clause 509 complete in all respects for Grading-II (13 mm nominal size) Bitumen (VG-30)</p>	18,464.400	2,934.00	MT	54,174,549.60

14

21	<p>Providing and fixing reinforced concrete precast kerb stone or dand R Mtr of M 20 grade cement concrete 120 cm long having 4 Nos bars of 8 mm dia hyd and stirrups 6 Nos of 6 mm dia as per IS with in built provision of interlocking of jointing and lifting compaction of reinforced concrete by mechanical and lifting compaction of reinforced concrete by mechanical and table vibrators jointing at site with cement mortar 1:4 complete in all respect as directed by Engineer incharge on: 100 mm thick cement concrete 1:4:8 (1 Cement : 4 Coarse sand : 8 stone aggregate 20 mm thick nominal size) including excavation of earth and cutting of BT road cutting of WBM road etc. and disposal of surplus material with all lead and lift. The size of kerb shall be $(11.5+16.5)/2*30+(16.5*7.5)$</p>	26,760.000	617.00	P. Rmt	16,510,920.00
22	<p>Marking Centre Line and stop lines etc. on road as per IRC pattern with thermoplastic paint of approved quality and make with 8% glass beads laid on the road surface at temperature 160° C with a special applicator machine complete with a special applicator machine complete with labour material and traffic diversion arrangements.</p>	10,884.000	436.50	sqm	4,750,866.00
23	<p>Granular sub-base/base/surface course with local materials (Table 400.13) by mix in place method normalConstructionof granularsub base by providing local material spreading in uniform layers with motor grader on prepared surface, mixing bymix inplacemethodwith rotavatoratonceandcompactingwith smooth wheel roller to achieve the desireddensitycompleteasperClause 401.4 as per MoRD Specification Clause 408. Using naturally occurring gravel</p>	21,537.000	360.00	Cum	7,753,320.00
24	<p>Supplying and fixing of Single Molded twin Shank 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 16000 kg tested in accordance to ASTM D 4280 Type H and complying to Specifications 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 50 mm, 100 mm and 100 mm 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 +/- 2 mm and height not less than 30+/- 2 mm) from the body is to be a minimum value of 700 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 manufacturer's recommendation and complete as directed by the engineer. (manufactured from 3M, Avery or equivalent)</p>	35,375.000	183.00	Each	6,473,625.00

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25	Plain/reinforced cement concrete in substructure complete as per drawings and MoRD specification Clause R.C.C. grade M 25	11.520	4,027.50	cum	46,396.80
26	Supplying, fitting and placing TMT bar reinforcement (Fe 415) in substructure complete as per drawings and MoRD specification Clauses 1002, 1005, 1010 & 1202	385.786	58,788.00	tonne	22,679,587.37
27	Supply of Swiss type of Hazard marker, made out of 2 mm thick M.S. sheet size of box is 15x15 cm with hold fast at bottom, the body is painted in orange stoving enamel paint with white/high intensity grade micro-prismatic type sheeting, on all four side	64.000	787.50	Each	50,400.00
28	Painting Two Coats on New Concrete Surfaces Painting two coats including primer coat after filling the surface with synthetic enamel paint in all shades on new, plastered / concrete surfaces as per drawing and MoRD Specification Clause 1701	10,725.120	52.20	sqm	559,851.26
29	Supply of 'L' type Bollard made out of 1.25 mm thick sheet height 134 cm, welded in circular type ring section having upper dia 15 cm. and lower dia 21 cm with another attachment of 15x15 cm circular section with 15 cm. face plate and hold fast at bottom, whole body is processed in white stoving enamel and red reflective 3 hands, each of 7.5 cm end one reflective sheet of 15 cm. dia provided to it complete in all respect.	16.000	1,435.50	Each	22,968.00
30	Providing cutting, hoisting and fixing in position including fabrication of 4mm thick aluminium composite panel sheet (ACP) made of two aluminium sheet of 0.50mm thick each having a distance of 3.00mm filled with rubber polymer to the entire satisfaction of engineer in charge confirming to various concerned ASTM standards includes nuts and bolts/ riveting	21.600	1,180.00	Per Sqm	25,488.00
31	Supplying and fixing of micro prismatic retro reflective sheeting confirming to type XI of ASTM D4956, shall be pressure fixed to the full face of the ACP sheet as back ground sheet (in approved colour) and the top layer will be overlaid with electro cut transparent film of approved make and colour to create the desired road sign including cutting, cleaning and pasting etc. Complete as per design, drawing and direction of engineer in charge. (Payment shall be made for flat area of sheet), Make 3M/Avery Dennison or equivalent as approved by EIC, Confirming to type XI of ASTM D4956	21.600	4,620.00	Per Sqm	99,792.00

44

32	Providing and fixing in position high board (VIII) double tape 24mm wide 2.3mm thick for jointing ACP sheet with SS/MS frame including all processes like cleaning, cutting, chemical application, pressing etc. as per sample approved by the engineer-in-charge.	84.000	236.00	Per RM	19,824.00
33	Providing and fixing steel gate, grating, and grills made of angles, tees, square bars, flats, or black pipe with holdfast and fittings complete as per design and drawing including cutting welding and fabrication with priming coat of red oxide	1,000.000	66.60	Kg	66,600.00
34	Providing and Laying Reinforced cement concrete pipe NP4/ prestressed concrete pipe for culverts including jointing ends and fixing collar with cement mortar 1:2 complete as per clause 1000 & 2900 of MoRT&H specification including all material, labour form work, machinery. 600 mm internal diameter	1,500.000	3,360.00	mtr	5,040,000.00
35	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and MoRD specifications Clause 802, 803, 1202 & 1203 P.C.C. grade M 20 Nominal mix (1:2:4)	7,547.100	3,136.50	cum	23,671,479.15
36	Laying Reinforced Cement Concrete Pipe NP4 as per MoRD specification Clause 1402.6 Providing and Laying Reinforced Cement Concrete Pipe NP4 as per design in Single Row Providing and laying reinforced cement concrete pipe NP4 for culverts on first class bedding of granular material in single row including	1,590.000	4,230.00	R.Mtr.	6,725,700.00
37	Earthwork in excavation for structures as per drawing and MoRD specification Clause 305. Excavation for Structures Erthwork in excavation for structures as per drawing and MoRD specifications Clause 305.1 including setting out, construction of shoring and bracing,	7,535.000	111.60	cum	840,906.00
38	Structural cement concrete (Design Mix) in open foundations, with form work, at any level. Cement concrete for plain/reinforced concrete in open foundation as per drawing and technical specification. [MoRTH Specification : Section 1700(N)&1500(N)]. Using Batching Plant,	2,962.710	4,840.00	Cum	14,339,516.40
39	Providing and laying of boulder apron laid in wire crates with 4 mm dia GI wire conforming to IS:280 and IS:4826 in 100 mm x 100 mm mesh (woven diagonally) including 10 per cent extra for laps and joints laid with stone boulders weighing not less than 25 kg each as per drawing and MoRD	551.250	1,305.00	Cum	719,381.25
		TOTAL=			457,083,540.08


 Executive Engineer -14
 JDA, Jaipur

