

### Original Estimate

N/W Widening of road stretch from Institute Nursery to 33 KVA substation including development of footpath work.

Estimate ID : road widening of upto sac chaurah

SLNo	Description	Qty	Unit	Rate	Amount
1	EARTH WORK				
1.1	Earth work in surface excavation not exceeding 30 cm in depth but exceeding 1.5 m in width as well as 10 sqm on plan including getting out and disposal of excavated earth upto 50 m and lif upto 1.5 m, as directed by Engineer-in-Charge:				
1.1.1	All kinds of soil	8880.00	sqm	129.85	1153068.00
1.2	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, for all lift, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.				
1.2.1	All kinds of soil.	1620.00	cum	260.30	421686.00
1.3	Excavating trenches by mechanical / manual means of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, for all depth, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m:				
1.3.1	All kinds of soil				
1.3.1.1	Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia	240.00	metre	352.15	84516.00
1.4	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 and for all lif.	40.00	cum	196.00	7840.00
1.5	Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete.	30.00	cum	2123.75	63713.00
	Sub-Total				1730823.00
2	CEMENT CONCRETE (CAST IN SITU)				
2.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
2.1.1	1:4:8 (1 Cement : 4 coarse sand (zone-III) derived from natural sources: 8 graded stone aggregate 40 mm nominal size derived from natural sources)	10.00	cum	6812.00	68120.00

	Sub-Total				68120.00
3	REINFORCED CEMENT CONCRETE				
3.1	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				
3.1.1	Thermo-Mechanically Treated bars of grade Fe-500D or more.	8000.00	kg	107.85	862800.00
	Sub-Total				862800.00
4	MASONRY WORK				
4.1	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in:				
4.1.1	Cement mortar 1:6(1 cement :6 coarse sand)	5.00	cum	7132.25	35661.00
	Sub-Total				35661.00
5	Dismantling and Demolishing				
5.1	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge.				
5.1.1	Nominal concrete 1:3:6 or richer mix (including equivalent design mix)	360.00	cum	2434.25	876330.00
5.1.2	Nominal concrete 1:4:8 or leaner mix (including equivalent design mix)	20.00	cum	1503.60	30072.00
5.2	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in- charge.	2.00	cum	3551.25	7103.00
5.3	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.				
5.3.1	In cement mortar	10.00	cum	2060.20	20602.00
5.4	Dismantling and stacking within 50 metres lead, fencing posts or struts including all earth work and dismantling of concrete etc. in base of:				
5.4.1	T' or 'L' iron or pipe	200.00	each	230.90	46180.00
5.5	Dismantling barbed wire or flexible wire rope in fencing including making rolls and stacking within 50 metres lead.	50.00	kg	36.80	1840.00
5.6	Dismantling C.I. or asbestos rain water pipe with fittings and clamps including stacking the material within 50 metres lead :				
5.6.1	150 mm dia pipe	200.00	metre	80.25	16050.00
5.7	Dismantling of road gully chamber of various sizes including C.I. grating with frame including stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead including refilling the excavated gap.	80.00	each	958.75	76700.00

5.8	Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials by mechanical means, including loading, transporting, unloading to approved municipal dumping ground or as approved by Engineer-in-charge, beyond 50 m initial lead, for all leads including all lifts involved.	2200.00	cum	263.95	580690.00
	Sub-Total				1655567.00
6	ROAD WORK				
6.1	Supplying and stacking at site.				
6.1.1	53 mm to 22.4 mm size stone aggregate	357.00	cum	1842.30	657701.00
6.1.2	Stone screening 13.2 mm nominal size (Type A)	269.00	cum	2034.35	547240.00
6.1.3	Moorum	269.00	cum	768.25	206659.00
6.2	Laying, spreading and compacting stone aggregate of specified sizes to WBM specifications in uniform thickness, hand picking, rolling with 3 wheeled road/vibratory roller 8-10 tonne capacity in stages to proper grade and camber, applying and brooming requisite type of screening / binding material to fill up interstices of coarse aggregate, watering and compacting to the required density .	895.00	cum	1046.95	937020.00
6.3	Fencing with angle iron post placed at required distance embedded in cement concrete blocks, every 15th post, last but one end post and corner post shall be strutted on both sides and end post on one side only and provided with horizontal lines and two diagonals interwoven with horizontal wires, of barbed wire weighing 9.38 kg per 100 m (minimum), between the two posts fitted and fixed with G.I. staples, turn buckles etc. complete. (Cost of posts, struts, earth work and concrete work to be paid for separately). Payment to be made per metre cost of total length of barbed wire used.				
6.3.1	With G.I. barbed wire	500.00	metre	22.10	11050.00
6.4	Supplying at site Angle iron post & strut of required size including bottom to be split and bent at right angle in opposite direction for 10 cm length and drilling holes upto 10 mm dia. etc. complete.	100.00	kg	125.75	12575.00
6.5	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 40 mm nominal size) in pavements, laid to required slope and camber in panels as required including consolidation finishing and tamping complete.	4.00	cum	7993.80	31975.00

6.6	Providing and laying design mix cement concrete of M-30 grade, in roads/ taxi tracks/ runways, using cement content as per design mix, using coarse sand and graded stone aggregate of 40 mm nominal size in appropriate proportions as per approved & specified design criteria, providing dowel bars with sleeve/ tie bars wherever required, laying at site, spreading and compacting mechanically by using needle and surface vibrators, levelling to required slope/ camber, finishing with required texture, including steel form work with sturdy M.S. channel sections, curing, making provision for contraction/ expansion, construction & longitudinal joints (10 mm wide x 50 mm deep) by groove cutting machine, providing and filling joints with approved joint filler and sealants, complete all as per direction of Engineer-in-charge (Item of joint fillers, sealants, dowel bars with sleeve/ tie bars to be paid separately). Note:- Cement content considered in M-30 is @ 340 kg/cum. Excess/ less cement used as per design mix is payable/ recoverable separately.				
6.6.1	Cement concrete manufactured in automatic batching plant (RMC plant) including transportation to site in transit mixer	648.00	cum	11098.45	7191796.00
6.7	Providing and fixing pre-moulded joint filler in expansion joints of RCC roads / CC pavements after making the joints dust free with high pressure air jet cleaners, all complete as per direction of the Engineer-in-Charge. (Pre-moulded joint fillers shall be made of bitumen hot sealing compound impregnated fibre board having impregnation more than 35%, conforming to IS:1838 for fibre board and IS: 1834 for hot sealing bitumen compound grade A.)	2000.00	per cm depth per cm width per metre length	5.30	10600.00
6.8	Painting road surface marking with adequate nos of coats to give uniform finish with ready mixed road marking paint conforming to IS : 164, on bituminous surface in white/yellow shade, including cleaning the surface of all dirt, scales, oil, grease and foreign material etc. complete.				
6.8.1	New work (Two or more coats)	720.00	sqm	288.90	208008.00

6.9	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5 mm), including making drainage opening wherever required complete etc. as per direction of Engineer- in-charge (length of finished kerb edging shall be measured to calculate volume for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	200.00	cum	10117.60	2023520.00
6.1	Construction of granular sub-base by providing close graded Material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by tippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer- in-Charge.				
6.10. 1	With material conforming to Grade-II (size range 53 mm to 0.075 mm ) having CBR Value-25	648.00	cum	2924.85	1895303.00
6.11	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm ) to wet mix macadam (WMM) specification including premixing the material with water at OMC in for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub-base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achievethe desired density, complete as per specifications and directions of Engineer-in-Charge.	432.00	cum	2914.30	1258978.00
6.12	Taking out existing kerb stones of all types from footpath/ central verge, including removal of mortar etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.	4080.00	metre	39.35	160548.00
6.13	Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.	3600.00	sqm	131.75	474300.00

6.14	Providing and laying factory made chamfered edge Cement Concrete paver blocks in footpath, parks, lawns, drive ways or light traffic parking etc, of required strength, thickness & size/ shape, made by table vibratory method using PU mould, laid in required colour & pattern over 50 mm thick compacted bed of sand, compacting and proper embedding/laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand. complete all as per direction of Engineer-in-Charge.				
6.14.1	80 mm thick C.C. paver block of M-35 grade with approved colour design and pattern.	8880.00	sqm	1091.50	9692520.00
	Sub-Total				25319793.00
7	DRAINAGE				
7.1	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete :				
7.1.1	150 mm dia. R.C.C. pipe	120.00	metre	556.45	66774.00
7.1.2	250 mm dia. R.C.C. pipe	120.00	metre	899.80	107976.00
7.2	Constructing brick masonry manhole in cement mortar 1:4 ( 1 cement : 4 coarse sand ) with R.C.C. top slab with 1:1.5:3 mix (1 cement : 1.5 coarse sand (zone-III) : 3 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand (zone-III) : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design :				
7.2.1	Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) :				
7.2.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	4.00	each	12770.55	51082.00

7.3	Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cement mortar 1:3 (1 cement : 3 coarse sand), finished with a floating coat of neat cement and making necessary channels for the drain etc. complete :				
7.3.1	For pipes 100 to 250 mm diameter	120.00	each	810.45	97254.00
7.4	Raising manhole cover and frame slab to required level including dismantling existing slab and making good the damage as required (Raising depth of manhole to be paid separately) :				
7.4.1	Rectangular manhole 90x80 cm with rectangular cover 600 x 450 mm of grade LD - 2.5	4.00	each	2625.50	10502.00
7.4.2	Rectangular manhole 120x90 cm with circular cover 500 mm dia of grade MD - 10	4.00	each	4168.05	16672.00
7.5	Constructing brick masonry road gully chamber 50x45x60 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm pre-cast R.C.C. horizontal grating with frame complete as per standard design :				
7.5.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	40.00	each	5957.90	238316.00
7.6	Constructing brick masonry road gully chamber 45x45x77.5 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand ) with precast R.C.C. vertical grating complete as per standard design :				
7.6.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	40.00	each	6889.80	275592.00
7.7	Constructing brick masonry road gully chamber 110x50x77.5 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm precast R.C.C. horizontal grating with frame and vertical grating complete as per standard design :				
7.7.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	20.00	each	11520.55	230411.00
7.8	Extra for depth beyond 45 cm of brick masonry chamber :				
7.8.1	For 455x610 mm size				
7.8.1.	With common burnt clay F.P.S. (non modular) bricks of 1 class designation 7.5	20.00	metre	6117.00	122340.00
7.8.2	For 500x700 mm size				
7.8.2.	With common burnt clay F.P.S. (non modular) bricks of 1 class designation 7.5	10.00	metre	6680.60	66806.00
7.8.3	For 600x850 mm size				

7.8.3.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	20.00	metre	7789.85	155797.00
	Sub-Total				1439522.00
8	MINOR CIVIL MAINTENANCE ITEM				
8.1	<p>"Supply of Pre-cast concrete benches (Chair Type bench with back rest).</p> <p>Specifications: The benches consist of 2 nos. L shape base support in grey cement colour of thickness-100 mm back height-1000 mm &amp; front height -450 mm base width 620 mm and 5 nos. reinforced concrete planks in red colour of size 1500x100x50 mm and 1 no. reinforced concrete plank of size 1500x200x50 mm manufactured by using M-30 grade of concrete &amp; inforced suitably to prevent damaged during handing transportation, erection &amp; long use. All parts are jointed together with galvanized nuts &amp; bolts of suitable size.</p> <p>All bolts are sealed after assembling, seating length of the bench-1500 mm, seated height of the bench 450 mm. total height of the bench-1000 mm.</p> <p>Bench top and back planks are treated with special anti corrosive, water proofing coating so as to make surface glossy and water proof.</p>	10.00	Each	10210.00	102100.00
8.2	"Supplying and Laying of Cellular Confinement System (EW 100/660) made from high-density polyethylene (HDPE) strips of minimum 1.5 mm thickness, perforated with horizontal rows of circular holes not exceeding 10 mm diameter, and ultrasonically welded at 660 mm center-to-center spacing to form a three-dimensional honeycomb structure with a cell depth of 100 mm. "	8880.00	Sqm	221.50	1966920.00
8.3	Supplying and Laying of non-woven geotextile of 200 gsm having trapezoidal tear strength 180N, Tensile strength 7 KN/m, elongation 50 % grab tensile strength 420N and puncture resistance of 1200 N.	8880.00	Sqm	69.20	614496.00
8.4	Watering and rolling of earthen surface with road roller etc. complete including preparation of the surface .	27840.00	Sqm	12.00	334080.00
	Sub-Total				3017596.00
	Total				34129882.00
	Modified Estimated Cost after using correction factor on DSR 2023 on account of GST @ 0.973 * 31112286 = 30272254				33289850.00