

**Bill of Quantities for various infrastructures (regular/concrete works and prefab works) for Leh Police in the Union Territory of Ladakh.**

Sr. No.	Discipline	Amount (Rs.)
	<u>Civil Works</u>	
1	Architectural Works	121,355,229.48
2	Civil Works	230,699,291.82
	<b>Total - Works ( A +B)</b>	<b>352,054,521.30</b>

**Bill of Quantities for Construction of SP OFFICE BAROO, POLICE STATION BAROO, HOUSING UNIT TYPE 2,HOUSING UNITTYPE3,BARRACK 40PAX BAROO,BARRACK 200PAX DPL, MULTIPURPOSE HALL DPL**

Sr. No.	JKSRNO. 2020	Description of item	Quantity	Unit	Rate (In Figures)	Rate (In Words)	Amount(Rs.)
<b>1</b>		<b>Architectural</b>					
		Summary					
1.1		Plaster					25,322,496.58
1.2		Flooring, skirting, Dado					12,493,904.25
1.3		Painting					2,641,328.92
1.3		Doors, Windows, Glazing, cladding, façade,Polishing					41,235,503.21
1.4		Insulated sandwich panels PEB skeleton					39,661,996.53
		<b>Total : Architectural</b>					<b>121,355,229.48</b>
1.1		Plaster					
1.1.1		Wall Plaster					
1.1.1.1		Pebble dash plaster					
	13.23	Pebble dash plaster up to 10m height above ground floor with a mixture of washed pebble or crushed stone 6mm to 12.5mm nominal size dashed over and including fresh plaster in two layers, under layer 12mm cement plaster 1:4 (1 cement : 4 coarse sand) and top layer 10mm cement plaster with cement mortar 1:3 (1 cement : 3 fine sand) mix with 10% finally grounded hydrated lime by volume of cement. Length of outer wall for all three floors	6,126.20	sq.m	2,146.95		13,152,645.09

Sr. No.	JKSRNO. 2020	Description of item	Quantity	Unit	Rate (In Figures)	Rate (In Words)	Amount(Rs.)
1.1.2		<b>Internal Wall Plaster</b>					
	13.8	15mm cement plaster on the rough side of single or half brick wall finish with a floating coat of need cement of mix. 1:3 (1 cement : 3 fine sand)	26,068.10	sq.m	387.75		10,107,905.78
1.1.3		<b>Ceiling Plaster</b>					
1.1.3.1	13.17	6 mm cement plaster of mix : 1:3 (1 cement : 3 fine sand)	9,309.01	sq.m	221.50		2,061,945.72
1.2		<b>Flooring, skirting, Dado</b>					
1.2.1		<b>Precast terrazzo tiles Flooring</b>					
1.2.1.1	11.23	Precast terrazzo tiles 22mm thick with graded marble chips of size upto 12mm in skirting and risers of step not exceeding 30cm in height on 12mm thick cement plaster 1:3 (1 cement : 3 coarse sand) jointed with neat cement slurry mix with pigment to match the shade of tiles, including rubbing and polishing complete with tiles of : Light shade using white cement	2,225.08	sq.m	1,437.25		3,197,996.23
1.2.2		<b>Ceramic tile - Flooring</b>					
	11.51	Providing and laying Ceramic glazed floor tiles of size 300x300 mm (thickness to be specified by the manufacturer), of 1st quality conforming to IS : 15622, of approved make, in all colours, shades, except White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick bed of cement mortar 1:4 (1 Cement : 4 Coarse sand), including pointing the joints with white cement and matching pigments etc., complete.	638.72	sq.m	1,216.05		776,715.46
1.2.3		<b>Ceramic tile - Dado</b>					
	11.50A	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete.	1,709.14	sq.m	1,052.25		1,798,442.57
1.2.3		<b>Epoxy Flooring</b>					
1.2.3.1	NS	prelaminated ready mate wooden flooring	6,720.75	sq.m	1,000.00		6,720,750.00

Sr. No.	JKSRNO. 2020	Description of item	Quantity	Unit	Rate (In Figures)	Rate (In Words)	Amount(Rs.)
<b>1.3</b>		<b>Painting</b>					
		<b>OBD</b>					
<b>1.3.1</b>	13.98	Distempering with dry distemper of approved brand and manufacture (one or more coats) and of required shade on old work to give an even shade.	54,460.39	sq.m	48.50		2,641,328.92
<b>1.4</b>		<b>Doors, Windows, Glazing, cladding, facade</b>					
<b>1.4.1</b>		<b>Door /window Frame</b>					
	9.1.	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length ( hold fast lugs or dash fastener shall be paid for separately).					
	9.1.5	First class kail wood	106.04	cum	106,894.15		11,335,056.00
<b>1.4.2</b>		<b>Door/window Shutter</b>					
	9.6	Providing and fixing panelled or panelled and glazed shutters for doors, windows and clerestory windows fixing with butt hinges of required size with necessary screws, excluding panelling which will be paid for separately, all complete as per direction of Engineer-in-charge. (Note: -Butt hinges and necessary screws shall be paid separately).					
	9.6.4	First class kail wood	1,594.48	sq.m	3,093.80		4,933,002.22
	NS	Ladakhi style sun shader (shingstags) of first class wood	1,444.88	ft	2,800.00		4,045,664.00
<b>1.4.3</b>		<b>Door/window Polishing</b>					
	13.77	Polishing of wood work with readymade wax polish of approved brand and manufacture on new work.	6,198.27	sq.m	144.30		894,410.36

Sr. No.	JKSRNO. 2020	Description of item	Quantity	Unit	Rate (In Figures)	Rate (In Words)	Amount(Rs.)
<b>1.4.4</b>		<b>Glazing</b>					
<b>1.4.4.1</b>	NS	Providing and fixing double paneling or paneling and double glazing First class kail wood.	24,833.85	Sq.ft	380.00		9,436,863.00
<b>1.4.4.2</b>	9.1	Providing and fixing panelled or panelled and glazed shutters for doors, windows and clerestory windows fixing with butt hinges of required size with necessary screws, excluding panelling which will be paid for separately, all complete as per direction of Engineer-in-charge. (Note: -Butt hinges and necessary screws shall be paid separately).	18.59	cum	106,894.15		
<b>1.4.4.3</b>	NS	Providing and fixing double paneling or paneling and double glazing in partion wall First class kail wood.	12,264.00	Sq.ft	380.00		4,660,320.00
<b>1.4.4.4</b>		<b>Spider Glazing</b>					
	25.8	(DSR 2019): Design supply & installation of suspended Spider Glazing system designed to withstand the wind pressure as per IS 875 (Part-III). The Suspended System held with Spider Fittings of SS-316 Grade Steel of approved manufacturer with glass panel having 12 mm thick clear toughened glass held together with SS- 316 Grade Stainless steel Spider & bolt assembly with laminated glass fins 21 mm thick. The Glass fins and glass panel assembly shall be connected to Slab/beams by means of SS- 316 Grade stainless steel brackets & Anchor bolts and at the bottom using SS channel of 50x25x2mm using fastener & anchor bolts, non staining weather sealants of approved make, Teflon/ nylon bushes and separators to prevent bi-metallic contacts, all complete to perform as per specification and approved drawings. The complete system to be designed to accommodate thermal expansion & seismic movements etc. The joints between glass panels (6 to 8 mm) and gaps at the perimeter & in U channel of the assembly to be filled with non staining weather sealant, so as to make the entire system fully water proof & dust proof. The rate shall include all design, Engineering and shop drawing including approval from structural designer, labour, T&P, scaffolding, other incidental charges including wastage, enabling temporary services all fitting fixers nut bolts, washer, Buffer plates, fastener, anchors, SS channel laminated glass etc. all complete. For the purpose of payment, actual elevation area of Glazing including thickness of joints and the portion of Glass panel inside the SS channel shall be measured.	729.38	Sq.m	8,130.45		5,930,187.62

Sr. No.	JKSRNO. 2020	Description of item	Quantity	Unit	Rate (In Figures)	Rate (In Words)	Amount(Rs.)
1.4.4.5		<b>Spandrel Glass</b>					
	25.6	<p>(DSR 2019) :Providing and supplying Spandrel Glass Panels comprising of 6 mm thick heat strengthened monolithic float glass of approved colour and shade with reflective soft coating on surface # 2 of approved colour and shade so as to match the colour and shade of the IGUs in the vision panels etc. ,all complete for the required performances as specified, as per the Architectural drawings, as per the approved shop drawings, as specified, and as directed by the Engineer- in- Charge.</p> <p>For payment, only the actual area of glass on face # 1 of the glass panels (but excluding the area of grooves and weather silicone sealant) provided and fixed in position, shall be measured in sqm. (Payment for fixing of Spandrel Glass Panels in the curtain glazing is included in cost of relevent Item*)."(i) Coloured tinted float glass 6mm thick substrate with reflective soft coating on face # 2, having properties as visible Light transmittance (VLT) of 25 to 35 %, Light reflection internal 10 to 15%, light reflection external 10 to 20 %, shading coefficient (0.25- 0.28) and U value of 3.0 to 3.3 W/m2 K etc. . The properties of performance glass shall be decided by technical sanctioning authority as per the site requirement.</p>	358.23	Sq.m	2,127.95		762,295.53

Sr. No.	JKSRNO. 2020	Description of item	Quantity	Unit	Rate (In Figures)	Rate (In Words)	Amount(Rs.)
1.5		<b>Insulated sandwich panels PEB skeleton</b>					
1.5.1	NS	Insulation of wall Providing and fixing (PU) Polyurethane 50mm thick of density 28kg -38 kg/ CU .M in between cavity wall.	15,453.80	sq.m	1,500.00		23,180,700.00
1.5.2	12.53.2	Insulation of ceiling Thermal insulation of roofing with expanded polystyrene Fixed with suitable adhesive To the false ceiling as per the directions of the Engineer – in – charge b) with Type SE – self Extinguishing type 50	7,616.83	Sq.m	308.35		2,348,649.53
1.5.3	12.47.1	Providing, fixing and applying plaster of Paris (POP) False ceiling consisting of frame work made with 50mm Sq M.S tubes of 18 G thickness as main runner at 600 mm C/C Both way, -I suspended/ supported with M.S. flats 25x4 mm from existing R.C.C. slab including providing and fixing expanded metal of size 5.25mmx 1.25mm thickness welded to main runner and applying POP ( calciumsulphatesemihydrate variety) to the smooth to line and level including necessary supports scaffolding etc. as required and also including a coat of red oxide zinc chromate primer over the M.S. frame work and suspenders complete.	7,616.83	Sq.m	1,855.45		14,132,647.00
		<b>Total Amount : Architectural Works</b>					<b>122,117,525.01</b>

Sr. No.	JKSRNO. 2020	Description of item	Quantity	Unit	Rate (In Figures)	Rate (In Words)	Amount(Rs.)
<b>2</b>		<b>Civil</b>					
		Summary of Civil Works					
2.2		EARTH WORK					1,403,592.53
2.3		CONCRETE WORK					10,131,247.02
2.4		REINFORCEMENT CEMENT CONCRETE WORK					59,819,497.34
2.5		STEEL WORK					127,477,079.47
2.6		MASONRY WORK					21,217,830.60
2.7		WATERPROOFING WORK					2,992,267.24
2.8		LANDSCAPE WORK					920,640.90
2.9		DISMANTLING AND DEMOLISHING					6,737,136.73
		<b>TOTAL</b>					<b>230,699,291.82</b>
2.2		EARTH WORK					
2.2.1	2.7	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50m and lift up to 1.5m, disposed earth to be levelled and neatly dressed.					
2.2.1.1	2.7.1	All kinds of soil	3,936.23	cum	188.75		742,963.00
2.2.2	2.9	Earth work in excavation by mechanical means (hydraulic excavator) in trenches for foundations, drains, pipes, cables etc. (not exceeding 1.5 m in width) and for shafts, wells, cesspits and the like not exceeding 10 sqm on plan, including dressing of sides and ramming of bottoms lift upto 1.5 m, including getting out excavated earth and disposal of surplus excavated earth as directed, within a lead of 50 metres:	2,185.33	cum	150.00		327,799.50
	2.9.1	<b>All kinds of soil :</b>					
2.2.3	24.4.1	Dry stone pitching (any thickness) including cost of stone. On Horizontal. In the foundation of trenches of base	683.71	cum	486.80		332,830.03
		<b>Total for Earthwork</b>					<b>1,403,592.53</b>

Sr. No.	JKSRNO. 2020	Description of item	Quantity	Unit	Rate (In Figures)	Rate (In Words)	Amount(Rs.)
2.3		<b>CONCRETE WORK</b>					
2.3.1	4.4	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :					
2.3.1.1	4.4.7	1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size)	451.23	cum	4,419.85		1,994,368.92
2.3.2	4.8.1	Providing and fixing up to floor five level precast cement concrete solid blocks including hoisting and seating in position with cement mortar 1:3 (1: cement 3: coarse sand), cost of centering, Shuttering and complete. Crushed 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20mm nominal size)	1,031.29	cum	7,890.00		8,136,878.10
		<b>Total for Concrete Work</b>					<b>10,131,247.02</b>
2.4		<b>REINFORCEMENT CEMENT CONCRETE WORK</b>					
2.4.1	5.9	Centering and shuttering including strutting, propping etc. and removal of form for :					
2.4.1.1	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete.	2,992.15	sq.m	262.30		784,841.00
2.4.1.2	5.9.2	Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.	6,945.89	sq.m	573.85		3,985,898.98
2.4.1.3	5.9.3	Suspended floors, roofs, landings, balconies and access platform.	9,196.04	sq.m	573.85		5,277,147.55
2.4.1.4	5.9.4	Lintels, beams, plinth beams, girders, bressumers and cantilevers.	3,237.42	sq.m	502.85		1,627,936.65
2.4.1.5	5.9.7	Stairs (excluding landings) except spiral staircases.	2,458.74	sq.m	807.50		1,985,432.55
2.4.2	5.3.1	R.C.C work in beam suspended floors , roofs having slopes up to 15 degree, landings, balconies,shelves, chajjas,lintels, bends,plain window sills Staircase and spiral stair cases up to floor five level excluding cost of centering, shuttering, finishing and reinforcement with 1:1.5:3 (1cement: 1.5 coarse sand: 3 graded stone aggregate 20mm nominal size.)	4,086.24	cum	8,953.95		36,587,988.65



Sr. No.	JKSRNO. 2020	Description of item	Quantity	Unit	Rate (In Figures)	Rate (In Words)	Amount(Rs.)
2.4.3	5.2.	Providing and laying cement concrete for retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets, sunken floor, etc., up to floor five level, excluding the cost of centering, shuttering and finishing :					
2.4.3.1		1:1.5:3 (1 cement : 1.5 coarse sand: 3 graded stone	679.81	cum	8,552.85		5,814,312.96
2.4.4	5.1.2	Providing and laying in position specified grade of reinforced, cement concrete excluding the cost of centering, shuttering, (RCC) Finishing and reinforcement – All work upto plinth level. 1:1.5:3 (1 cement: 1.5 coarse sand: 3 graded stone aggregate 40 mm nominal size)	530.38	cum	7,081.60		3,755,939.01
		<b>REINFORCEMENT CEMENT CONCRETE WORK</b>					<b>59,819,497.34</b>
2.5		<b>STEEL WORK</b>					
2.5.1	5.22.1	Reinforcement for RCC work including straightening, cutting, bending, placing in position and binding all, complete.	1,622,878.16	kg	78.55		127,477,079.47
		<b>Total for Steel Work</b>					<b>127,477,079.47</b>
2.6.		<b>MASONRY WORK</b>					
2.6.1	7.1.	Random Rubble masonry with hard stone in foundation and plinth including leveling up with cement concrete 1:6:12 (1 Cement : 6 coarse sand : 12 graded stone aggregate 20mm nominal size) upto plinth level and curing complete with: 7.1.1 Cement mortar 1:6 (1 Cement : 6 coarse sand)	503.18	cum	4,435.25		2,231,729.10
2.6.2	N.S	Compress Brick work in superstructure above plinth level upto floor five level and curing complete in:  Cement mortar 1:6(1cement : 6 coarse sand)	2,406.35		7,890.00		18,986,101.50
		<b>Total for Masonry Work</b>					<b>21,217,830.60</b>

Sr. No.	JKSRNO. 2020	Description of item	Quantity	Unit	Rate (In Figures)	Rate (In Words)	Amount(Rs.)
2.7.		<b>WATER PROOFING WORK</b>					
2.7.1	23.6.	<p>Providing and laying water proofing treatment on roofs of slabs by applying cement slurry mixed with water proofing cement compound consisting of applying :</p> <p>(a) after surface preparation, first layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm.</p> <p>(b) laying second layer of Fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm.</p> <p>(c) third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm. and coarse sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours.</p> <p>The entire treatment will be taken upto 30cm on parapet wall and tucked into groove in parapet all around.</p> <p>(d) fourth and final layer of brick tiling with cement mortar (which will be paid for separately)</p> <p>For the purpose of measurement the entire treated surface will be measured. sqm 518.60</p> <p>23.7 Providing and laying integral cement based water</p>	4,677.29	sq.m	518.60		2,425,642.59
2.7.2	23.17	<p>Providing and mixing integral crystalline admixture for water proofing treatment to RCC structures like basement raft, retaining walls, reservoir, sewage &amp; water treatment plant, tunnels / subway and bridge deck etc. at the time of transporting of concrete into the drum of the ready-mix truck, using integral crystalline admixture @ 0.80% (minimum) to the weight of cement content per cubic meter of concrete) or higher as recommended by the manufacturer's specification in reinforced cement concrete at site of work. The material shall meet the requirements as specified in ACI-212-3R- 2010 i.e. by reducing permeability of concrete by more than 90%, compared with control concrete as per DIN 1048 and resistant to 16bar hydrostatic pressure. The crystalline admixture shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out all complete as per specification and the direction of the Engineer-in-charge. The product performance shall carry guarantee for 10 years against any leakage.</p>	1,485.06	k.g	381.55		566,624.64
		<b>Total for Waterproofing Work</b>					<b>2,992,267.24</b>

Sr. No.	JKSRNO. 2020	Description of item	Quantity	Unit	Rate (In Figures)	Rate (In Words)	Amount(Rs.)
2.8.		<b>LANDSCAPE WORK</b>					
2.8.1	7.6.	Coursed Rubble Masonry with hard stone in retaining wall, foundation and plinth and curing complete with: 7.6.1 Cement mortar 1:6 (1 Cement : 6 coarse Sand)	170.24	cum	5,407.90		920,640.90
		<b>Total for LANDSCAPE</b>					<b>920,640.90</b>
2.9.		<b>DISMANTLING AND DEMOLISHING</b>					
2.9.1	15.3.	Demolishing R.C.C. work manually/by mechanical means including stacking of steel bars and disposal of Unserviceable material within 50metrelead.	1,067.19	cum	2289.25		2,443,064.71
2.9.2	15.9.	Demolishing stone rubble masonry manually/by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead : In cement mortar	4,342.46	cum	820.45		3,562,771.31
2.9.3	15.12	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead: 15.12.2 Of area beyond 3 sq. metres. For each	347.00	OTY	354.75		123,098.25
2.9.4	15.28	Dismantling roofing including ridges, hips valleys and gutters etc., and stacking the material within 50 metres lead of: 15.28.1 G.S. Sheet	2,888.97	sq.m	113.9		329,053.68
2.9.5	15.14	Dismantling wood work in frames, trusses, purlins and rafters upto 10 metres span and 5 metres height including stacking the material within 50 metres lead : 15.14.1 Of sectional area 40 square centimetres and above.	157.97	cum	1767.1		279148.787

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		<b>Total for DISMANTLING AND DEMOLISHING</b>					<b>6,737,136.73</b>