

**PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS
SUPERVISION IN 16 CITIES OF PUNJAB**

ROAD WORKS

MC KHANEWAL

DETAILED COST ESTIMATE

SUMMARY

Sr. No.	Description	Amount (Rs.)
1	ROAD WORKS	160,691,344
2	DRAINAGE SYSTEM	3,758,195
3	ELECTRICAL WORKS	51,990,219
4	ENVIRONMENTAL HEALTH SAFETY BUDGET	291,925
	Total Amount (Rs.)	216,731,683
	Contingencies @ 2%	4,334,634
	PRA Charges @ 5%	10,836,584
	Total Amount. Rs.	231,902,901

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INFRASTRUCTURE WORK

MC KHANEWAL

DETAILED COST ESTIMATE

SUMMARY

Sr. No.	Description	Amount (Rs.)
1	ROAD WORKS	
1.1	P-1 SP CHOWK TO JASWANT NAGAR ROAD	69,098,020
1.2	P-2 SP CHOWK TO RAILWAY CHOWK TO UNDER PASS	50,301,595
1.3	P-3 FOOTBALL CHOWK TO STADIUM ROAD	41,291,729
	1) Total Amount. Rs.	160,691,344
2	DRAINAGE SYSTEM	
2.1	P-1 SP CHOWK TO JASWANT NAGAR ROAD	1,679,240
2.2	P-2 SP CHOWK TO RAILWAY CHOWK TO UNDER PASS	1,234,102
2.3	P-3 FOOTBALL CHOWK TO STADIUM ROAD	844,853
	2) Total Amount. Rs.	3,758,195
3	ELECTRICAL WORKS	
3.1	P-1 SP CHOWK TO JASWANT NAGAR ROAD	11,398,006
3.2	P-2 SP CHOWK TO RAILWAY CHOWK TO UNDER PASS	21,976,524
3.3	P-3 FOOTBALL CHOWK TO STADIUM ROAD	18,615,688
	3) Total Amount. Rs.	51,990,219
4	ENVIRONMENTAL HEALTH SAFETY BUDGET	291,925
	Total Amount (Rs.) "1+2+3+4"	216,731,683
	Say Millions	216.732

ROAD WORKS

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P-1 SP CHOWK TO JASWANT NAGAR CHOWK

ROADS NETWORK

Sr. No	2nd BI-Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		ROAD WORK				
		Dismantling				
1	4/45	Dismantling and removing road metalling.	100Cft	51.67	2,031.75	104,981
2	4/11	Dismantling dry brick masonry.	100Cft	11.63	863.50	10,043
		Compaction of Existing Road Surface				
3	N.S	Ploughing and Compaction of Existing road surface upto 6" depth i/c dressing, leveling, supplying and spreading of stone screening (Khaka) and compaction to achieve to 100% maximum ASSHO dry density complete in all respects.	100Cft	263.50	5,808.29	1,530,484
		Excavation				
4	3/1	Earthwork excavation undressed lead upto a single throw of Kassi, phaorah or shovel:- i) ordinary	1000Cft	99.20	4,571.40	453,483
		Borrow Earth				
5	3/5/i + 3/17	Earthwork in ordinary soil for embankment including ploughing and mixing with blade grade or disc harrow or other suitable equipment and compaction by mechanical means at optimum moisture content and dressing to designed section, complete in all respects:- 90% to 95% maximum modified dry density as determined according to AASHTO T-180 method-D including Transportation of earth.	1000Cft	24.03	15,530.30	373,193
		Sub Base Course				
6	18/3/a/ (ii) + 1/1	Providing and laying sub-base course of stone product of approved quality and grade including, placing, mixing, spreading and compaction of sub base material to required depth, camber and grade to achieve 98% maximum dry density determined according to AASHTO T-180 method-D, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sakhi Sarwar quarry to site, actual compacted depth shall be considered for payment)	100Cft	539.09	22,254.30	11,997,071

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ROADS NETWORK

Sr. No	2nd BI-Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Water Bound Macadam				
7	18/4/a + 1/1	Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sakhi Sarwar quarry to site, actual compacted depth shall be considered for payment)	100Cft	682.00	25,148.52	17,151,291
		Prime Coat				
8	18/6	Providing and laying bituminous priming coat, using 10 lbs. kerosene oil and 10 lbs. binder per 100 Sft. or 0.5 Kg kerosene and 0.5 Kg binder per square metre.	100Sft	1,240.00	2,291.95	2,842,018
9	18/7	Providing and laying bituminous tack coat, using 10 lbs. of bitumen per 100 Sft (0.49 Kg of bitumen per sq.m.)	100Sft	204.08	1,038.15	211,866
		Carpeting				
		AWC				
10	18/10/a + 1/1	Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (2 inch thick) (iv) 4.5% Bitumen	Per inch thickness per 100Sft.	1,444.08	16,525.36	23,863,942
		Paint For Traffic Lanes				
11	13/36	Painting Traffic Lane Marking of specified width (1.5mm thick), with Thermoplastic (TP) Paint including Glass Beads, complete in all respect, as approved and directed by Engineer incharge.				
		ii) 6" wide	Rft	12,792.00	56.20	718,910

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ROADS NETWORK

Sr. No	2nd BI-Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Kerb Stone				
12	6/52/b	Providing and fixing precast Edge Kerb Stone (4" to 6" thick), of 3500 PSI Compressive Strength, embedded in PCC 1:2:4 over lean concrete 1:4:8 etc. complete in all respect.				
		b) With Painting				
		(i) 14" high	P.Rft	6,200.00	516.65	3,203,230
		Tuff Paver				
13	10/41	Providing and laying Tuff pavers, having 7000 PSI, crushing strength of approved manufacturer, over 2" to 3" sand cushion i/c grouting with sand in joints i/c finishing to require slope. complete in all respect. (50% Grey / 50% Coloured)				
		c) 80-mm thick (For Shoulder)	Sft	18,600.00	194.65	3,620,490
		b) 60-mm thick (For Median)	Sft	6,200.00	156.15	968,130
		Road Edging				
14	18/5	Providing and laying road edging of 3" (75 mm) wide and 9" (225 mm) deep brick on end, complete in all respects.	Rft	6,200.00	51.05	316,510
		P.C.C (Between Asphalt and Tuff Paver)				
15	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(f) Ratio 1: 2: 4	100Cft	20.46	38,126.10	780,060
		Cat Eyes				
16	18/28	Providing & fixing Cat Eyes of size 4"x4"x3/4" duly casted with specified material having plastic strip containing mini retro-reflective glass beads of color white /red/ yellow having specifid reflections, quality & shape i/c the cost of self built in12mm dia x120mm long steel zinc plate dnail, fixing to road with epoxy/ hammering with separate nail complete.				
		b) Aluminium Alloy				
		(B) Uni-Directional				
		(ii) 43 Glass beads a side	Each	1,600.00	543.80	870,080

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ROADS NETWORK

Sr. No	2nd BI-Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
17	18/25/a	Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.				
		(a) G.I Sheet 14 SWG				
		CIRCULAR/TRIANGULAR				
		3 ft size	P. Sft	30.00	948.15	28,445
18	18/27/b	Providing, fabrication and fixing Vertical Post comprising of medium quality G.I Pipe of specified diameter, including the cost of clamping arrangements, top cover,hold fasts embedded in PCC 1:2:4 etc, complete in all respect				
		(b) 3 inch diameter	Rft	55.00	1,259.85	69,292
19	13/42/a	Lettering and printing of signage /direction boards/ road delineators of any colour by machine i/c cost of Digital Lettering, Lamination & pasting etc complete in all respect.				
		a) High Intensity Prismatic (HIP) Tape	P. Sft	30.00	1,111.65	33,350
		Deduction				
20	06.004	Brick Bats to be made from dismantling of brick edging. (Input Rate)	100Cft	11.63	4,200.00	(48,846)
		Total Amount Rs.				69,098,020
		DRAINAGE SYSTEM				
		Dismantling				
1	4/19/c	c) Dismantling cement concrete 1:2:4 plain.	100Cft	1.23	11,174.60	13,759

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ROADS NETWORK

Sr. No	2nd BI-Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
Excavation						
2	3/7/i	Earthwork excavation in open cutting upto 5'-0" (1.5 m) depth for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water from trenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:- i) in ordinary soil.	1000Cft	3.50	9,016.70	31,558
P.C.C						
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 2: 4	100Cft	7.53	38,126.10	287,090
Brick Work						
4	7/7/i	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3	100Cft	2.46	31,959.10	78,701
5	7/10	Extra for pacca brick work in steining of wells or any other circular masonry.	100Cft	2.46	2,634.00	6,486
Plaster						
6	11/8/b	Cement plaster 1:3 upto 20' (6.00 m) height:- b) ½" (13 mm) thick	100Sft	6.57	3,420.40	22,461
R.C.C Work						
7	6/6/a/i/3	Providing and laying reinforced cement concrete (i/c pre-stressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, i/c forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, complete				

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ROADS NETWORK

Sr. No	2nd BI- Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		a).(i) Reinforced cement concrete in roof slab, beams, columns, lintels, girders and other structural members laid in situ or pre-cast laid in position, or pre-stressed members cast in situ, complete in all respect. Type C (nominal mix 1:2:4)	P Cft	35.00	556.50	19,478
		Steel				
8	6/12/c	Fabrication of mild steel reinforcement for cement concrete, i/c cutting, bending, laying in position, making joints and fastening, i/c cost of bending wire and labour charges for bending of steel reinforcement (also includes removal of rust from deformed bars) Gade 60	100Kg	1.07	31,801.40	34,052
		Gully Grating Chamber				
9	21/8	Constructing standard gully grating chamber, 3'x2½' (900x750 mm), with chinaware trap as per PHED Drawing STD/PD No. 3 of 1977, complete in all respects.	Each	28.00	16,370.90	458,385
10	7/30	Supplying and filling sand under floor; or plugging in wells.	100Cft	14.00	2,823.30	39,526
		uPVC Pipe				
11	19/47	Providing, fixing, testing and commissioning of uPVC (Unplasticized polyvinyl Chloride) Nikasi /waste pipe make of dadex / Popular / Beta/ BBJ plain / socket ended conforming to code EN-1401 of specified SDR (Standard Dimension Ratio) including the cost of specials and Solvents complete in all respect as approved and directed by the Engineer Incharge.				
		Type (SDR 41/SN-4)				
		(vii) 8"(200 mm)	Rft	560.00	451.15	252,644

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Sr. No	2nd BI- Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		RPC Manhole Cover				
12	N.S	Providing and fixing RPC Manhole Cover Manufactured with 100% Reinforced Plastic Composite Material, 650 mm dia with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (Complete) (Certified under ISO 9001-2015)	Each	38.00	10,950.00	416,100
		Manhole Cover				
13	MR	Old/existing Manhole cover and Frame complete set shift to MC store.	Set	38.00	500.00	19,000
		Total Amount (Rs)				1,679,240
		ELECTRICAL WORKS				
		Scheduled Items (A)				
		Excavation				
1	3/21	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling around structure with excavated earth, watering and ramming lead upto one chain (30 m) and lift upto 5 ft. (1.5 m)				
		a) By Manual				
		ii) in ordinary soil.	%oCft	9.76	10,677.75	104,215

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Sr. No	2nd BI-Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		RCC Foundation for Poles				
2	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-				
		(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-				
		3) Type C (nominal mix 1: 2: 4)	Cft	696.00	457.75	318,594
		Steel Work				
3	6/12/b	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-				
		(b) Deformed bars (Grade-40)	100Kg	17.40	31,411.60	546,562
4	24/6	Supply and erection PVC pipe for recessed wiring (main and sub-main) purpose, including bends, specials, etc. in floor, wall or trenches:-				
		i) 50 mm i/d	Rft	3,625.00	185.85	673,706
5	24/12	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaid G.I. pipe/M.S. conduits /PVC pipe/G.I. wire/ trenches, etc (rate for cable only):-				
		ii) 6 mm sq (7/0.044")	Rft	580.00	117.70	68,266
6	24/13	Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire / trenches, etc. (rate for cable only):-				

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Sr. No	2nd BI-Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		b) PVC insulated, PVC sheathed 3 core, 660/1100 volt cable:-				
		iii) 7/0.74 mm (7/0.029")	Rft	1,160.00	105.15	121,974
		c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-				
		vi) 10 mm (7/0.052")	Rft	3,625.00	523.85	1,898,956
		vii) 16 mm (7/0.064")	Rft	100.00	642.90	64,290
7	24/68	Supplying, installation testing and commissioning of Octagonal shape electric street light pole, made of hot dipped 4.5 mm thick (7 SWG) galvanized steel ,tappered from 225 mm at bottom to 100 mm at top,with 1500 mmx60 mm dia. arm for luminaire installation, duly G.I.welded with 470x470x20 mm base plate with the help of 4 no triangular stiffeners 100x350x20 mm of GI sheet,with built in junction box with shutter,i/c the cost of nuts & J-rag bolts, duly fixed in prelaid concrete foundation, foundation will be paid additionally as approved and directed by the Engineer Incharge.				
		b) Double Arm				
		(i) 10 mtr height	Each	29.00	109,878.55	3,186,478
8	24/69/c	Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming to IP 65, Philips/ Osram /Thorn with corrosion resistant die casted aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection i/c the cost of all accessories/components required for proper operation , fully flexible for future upgradation and easy replacements for maintenance purposes,bucket elevator charges as approved and directed by the Engineer Incharge.				
		c) 120 Lm/Watt				
		(v) 90 Watt with 10800 Lumens	Each	58.00	51,675.00	2,997,150
9	24/77	Supply and erection of electric energy meter, including meter testing fee, etc.				
		b) three phase, 4 wires:				

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Sr. No	2nd BI- Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		ii) 3x50 Amp, 400 volts	Each	1.00	14,659.25	14,659
10	24/105/iii	Supply, insatllation, commissioning and testing of oil cooled type, Step down Power Transformer of specified rating,11/0.415 kV, i/c the cost of lifting hooks, thermometers, LT & HT bushing 5-steps, tap changer, imported double float buchholz relay, 2 earthing terminals, roller wheels, connecting terminals for cables M.S box on transformer in order to cover complete L.T side, all necessary materials required for connections on H.T & L.T side, rated voltage 11000/415/240 V impedance 6.25% or as specified by WAPDA/IEC system earth: Delta / Star, neutral solidly earthed, i/c Wapda testing charges,complete in all respects made of PEL, Siemens, as approved and directed by the Engineer Incharge				
		(iii) 25 KVA	Each	1.00	329,487.70	329,488
11	24/70	Earthing of iron clad/aluminum switches, etc. with G.I. wire No. 8 SWG in G.I. pipe 15 mm (½") dia, recessed or on surface of wall and floor, complete with 1.5 metre long G.I. pipe, 50 mm (2") dia with reducing socket 4 to 5 metre below ground level, and 2 metre away from building plinth.	Job	32.00	9,592.45	306,958
Sub Total Scheduled Items: (A)						10,631,296

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Sr. No	2nd BI- Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
Non Schedule		Part-B				
12	N.S	Fabrication, Supply, testing and commissioning of following Light control panels (LCP), floor standing weather proof, IP 65 Rated of appropriate size, made of MS Sheet 16 SWG with hinged door, handle, catcher, 2 coats of antirust and powder coated paint of approved colour, AC3 megnetic contactor, photocell for automatic operation of lights, CBs, Hand/Off/Auto switch, push button and all necessary accessories complete in all respects. LCP shall be manufactured as per specifications, single line diagram complete in all respect up to the satisfaction of Engineer incharge.				
	(a)	LCP-3 Phase	No.	1.00	266,710	266,710
13	N.S	Shifting of 3 Nos. Telecommunication Poles	Job			150,000
14	N.S	Electric Connection Charges	Each	1.00	350,000	350,000
		Total Cost (Part B)			Rs.	766,710
		Grand Total (Part A + Part B)			Rs.	11,398,006
		Grand Total Amount Rs.				82,175,267

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P-1 SP CHOWK TO JASWANT NAGAR CHOWK
CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Dismantling						
1	Dismantling and removing road metalling.						
	RD 0+000 to 3+100	1	3,100	20.00	0.08	5,167	Cft
					Total	5,167	Cft
					Total.	51.67	%Cft
2	Dismantling dry brick masonry.						
	RD 0+000 to 3+100	2	3,100	0.25	0.75	1,163	Cft
					Total	1,163	Cft
					Total.	11.63	%Cft
3	Ploughing and Compaction of Existing road surface upto 6" depth i/c dressing, leveling, supplying and spreading of stone screening (Khaka) and compaction to achieve to 100% maximum ASSHO dry density complete in all respects.						
	RD 0+000 to 3+100	1	3,100	17.00	0.50	26,350	Cft
					Total	26,350	Cft
					Total.	263.50	%Cft
4	Earthwork excavation undressed lead upto a single throw of Kassi, phaorah or shovel:- i) ordinary						
	For widening Road						
	RD 0+000 to 3+100	2	3,100	11.50	1.00	71,300	Cft
	For Tuff Paver Shoulders						
	RD 0+000 to 3+100	2	3,100	3.00	0.75	13,950	Cft
					Total	85,250	Cft
					Total.	99.20	%Cft
	Borrow Earth						
5	Earthwork in ordinary soil for embankment including ploughing and mixing with blade grade or disc harrow or other suitable equipment and compaction by mechanical means at optimum moisture content and dressing to designed section, complete in all respects:- 90% to 95% maximum modified dry density as determined according to AASHTO T-180 method-D including Transportation of earth.						

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CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	For widening Road						
	RD 0+000 to 3+100	2	3,100	11.50	0.25	17,825	Cft
	For Tuff Paver Shoulders						
	RD 0+000 to 3+100	2	3,100	3.00	0.25	4,650	Cft
	For Median						
	RD 0+000 to 3+100	1	3,100	2.00	0.25	1,550	Cft
					Total	24,025	Cft
					Total.	24.03	%oCft
	Sub Base Course						
6	Providing and laying sub-base course of stone product of approved quality and grade including, placing, mixing, spreading and compaction of sub base material to required depth, camber and grade to achieve 98% maximum dry density determined according to AASHTO T-180 method-D, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sakhi Sarwar quarry to site, actual compacted depth shall be considered for payment)						
	For widening Road						
	RD 0+000 to 3+100	2	3,100	11.50	0.67	47,771	Cft
	For Tuff Paver Shoulders						
	RD 0+000 to 3+100	2	3,100	3.00	0.33	6,138	Cft
					Total	53,909	Cft
					Total.	539.09	%Cft
	Water Bound Macadam						
7	Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sakhi Sarwar quarry to site, actual compacted depth shall be considered for payment)						
	Crushed stone aggregate from approved quarry						
	For Road						
	RD 0+000 to 3+100	2	3,100	20.00	0.50	62,000	Cft

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS
SUPERVISION IN 16 CITIES OF PUNJAB

P-1 SP CHOWK TO JASWANT NAGAR CHOWK
CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	For Tuff Paver						
	RD 0+000 to 3+100	2	3,100	3.00	0.33	6,200	Cft
					Total	68,200	Cft
					Total.	682.00	%Cft
	Prime Coat						
8	Providing and laying bituminous priming coat, using 10 lbs. kerosene oil and 10 lbs. binder per 100 Sft. or 0.5 Kg kerosene and 0.5 Kg binder per square metre.						
	RD 0+000 to 3+100	2	3,100	20.00		124,000	Sft
					Total	124,000	Sft
					Total.	1,240.00	%Sft
9	Providing and laying bituminous tack coat, using 10 lbs. of bitumen per 100 Sft (0.49 Kg of bitumen per sq.m.)						
	RD 3+100 to 3+198	2	98	23.00		4,508	Sft
	Approach Roads total Area	1	15,900	1.00		15,900	Sft
					Total	20,408	Sft
					Total.	204.08	%Sft
	Carpeting						
	AWC						
10	Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (2 inch thick) (iv) 4.5% Bitumen						
	RD 0+000 to 3+100	2	3,100	20.00		124,000	Sft
	RD 3+100 to 3+198	2	98	23.00		4,508	Sft
	Approach Roads total Area	1	15,900	1.00		15,900	Sft
					Total	144,408	Sft
					Total.	1,444.08	%Sft
	Paint For Traffic Lanes						
11	Painting Traffic Lane Marking of specified width (1.5mm thick), with Thermoplastic (TP) Paint including Glass Beads, complete in all respect, as approved and directed by Engineer incharge.						
	RD 0+000 to 3+100	4	3,100			12,400	Rft
		4	98			392	Rft
					Total.	12,792	Rft

PUNJAB CITIES PROGRAM (PCP)
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SUPERVISION IN 16 CITIES OF PUNJAB

P-1 SP CHOWK TO JASWANT NAGAR CHOWK
CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
12	Providing and fixing precast Edge Kerb Stone (4" to 6" thick), of 3500 PSI Compressive Strength, embedded in PCC 1:2:4 over lean concrete 1:4:8 etc. complete in all respect.						
	b) With Painting						
	(i) 14" high						
	RD 0+000 to 3+100	2	3,100			6,200	Rft
						Total.	6,200 Rft
	Tuff Paver						
13	Providing and laying Tuff pavers, having 7000 PSI, crushing strength of approved manufacturer, over 2" to 3" sand cushion i/c grouting with sand in joints i/c finishing to require slope. complete in all respect. (50% Grey / 50% Coloured)						
	c) 80-mm thick (For Shoulder)						
	RD 0+000 to 3+100	2	3,100	3.00		18,600	Sft
						Total.	18,600 Sft
	b) 60-mm thick (For Median)						
	RD 0+000 to 3+100	1	3,100	2.00		6,200	Sft
						Total.	6,200 Sft
	Road Edging						
14	Providing and laying road edging of 3" (75 mm) wide and 9" (225 mm) deep brick on end, complete in all respects.						
	RD 0+000 to 3+100	2	3,100			6,200	Rft
						Total.	6,200 Rft
	P.C.C (Between Asphalt and Tuff Paver)						
15	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(f) Ratio 1: 2: 4						
	RD 0+000 to 3+100	4	3,100	0.33	0.50	2,046	Cft
						Total.	20.46 %Cft
	Cat Eyes						

PUNJAB CITIES PROGRAM (PCP)
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SUPERVISION IN 16 CITIES OF PUNJAB

P-1 SP CHOWK TO JASWANT NAGAR CHOWK
CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
16	Providing & fixing Cat Eyes of size 4"x4"x3/4" duly casted with specified material having plastic strip containing mini retro-reflective glass beads of color white /red/ yellow having specifid reflections, quality & shape i/c the cost of self built in 12mm dia x 120mm long steel zinc plate dnail, fixing to road with epoxy/hammering with separate nail complete.						
	b) Aluminium Alloy						
	(B) Uni-Directional						
	(ii) 43 Glass beads a side	1600				1,600	Each
17	Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.						
	(a) G.I Sheet 14 SWG						
	CIRCULAR/TRIANGULAR						
	3 ft size	5	3.00	2.00		30	Sft
18	Providing, fabrication and fixing Vertical Post comprising of medium quality G.I Pipe of specified diameter, including the cost of clamping arrangements, top cover, hold fasts embedded in PCC 1:2:4 etc, complete in all respect						
	(b) 3 inch diameter	5	11			55	Rft
19	Lettering and printing of signage /direction boards/ road delineators of any colour by machine i/c cost of Digital Lettering, Lamination & pasting etc complete in all respect.						
	a) High Intensity Prismatic (HIP) Tape					30	Sft
	Deduction						
20	Brick Bats to be made from dismantling of brick edging. (Input Rate)						
	Total Qty.					11.63	%Cft
						Total	11.63 %Cft
DRAINAGE SYSTEM							
Dismantling							
1	c) Dismantling cement concrete 1:2:4 plain.						
	Manhole Neck	38	8.64	0.75	0.50	123	Cft
						Total	1.23 %Cft

PUNJAB CITIES PROGRAM (PCP)
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SUPERVISION IN 16 CITIES OF PUNJAB

P-1 SP CHOWK TO JASWANT NAGAR CHOWK
CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Excavation						
2	Earthwork excavation in open cutting upto 5'-0" (1.5 m) depth for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water from trenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:- i) in ordinary soil.						
	Pipe Laying	28	20.00	2.50	2.50	3,500	Cft
					Total	3,500	Cft
					Total	3.50	%oCft
	P.C.C						
3	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 2: 4						
	Pipe Laying	28	10	1.50	1.50	630	Cft
	For manhole neck	38	8.64	0.75	0.50	123	Cft
					Total	753	Cft
					Total	7.53	%Cft
	Brick Work						
4	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3						
	For manhole neck	38	8.64	0.75	1.00	246	Cft
					Total	246	Cft
					Total	2.46	%Cft
5	Extra for pacca brick work in steining of wells or any other circular masonry.						
					Total	2.46	%Cft
6	Cement plaster 1:3 upto 20' (6.00 m) height:- b) ½" (13 mm) thick						
	For manhole neck (38 x 2 = 76)	76	8.64		1.00	657	Sft
					Total	657	Sft
					Total	6.57	%Sft

PUNJAB CITIES PROGRAM (PCP)
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SUPERVISION IN 16 CITIES OF PUNJAB

P-1 SP CHOWK TO JASWANT NAGAR CHOWK

CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
R.C.C Work							
7	Providing and laying reinforced cement concrete (i/c pre-stressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, i/c forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, complete						
	a).(i) Reinforced cement concrete in roof slab, beams, columns, lintels, girders and other structural members laid in situ or pre-cast laid in position, or pre-stressed members cast in situ, complete in all respect. Type C (nominal mix 1:2:4)						
	Culvert Slab	1	15.00	3.50	0.67	35.00	Cft
						Total	35.00
							Cft
Steel							
8	Fabrication of mild steel reinforcement for cement concrete, i/c cutting, bending, laying in position, making joints and fastening, i/c cost of bending wire and labour charges for bending of steel reinforcement (also includes removal of rust from deformed bars) Gade 60						
	Concrete Qty		35	Cft @	6.75	236	lbs/cft
						107	kg
						Total	1.07
							Kg
Gully Grating Chamber							
9	Constructing standard gully grating chamber, 3'x2½' (900x750 mm), with chinaware trap as per PHED Drawing STD/PD No. 3 of 1977, complete in all respects.	28				28.00	Each
10	Supplying and filling sand under floor; or plugging in wells.	28	20.00	2.50	1.00	14.00	%Cft
uPVC Pipe							
11	Providing, fixing, testing and commissioning of u-PVC (Unplasticized polyvinyl Chloride)Nikasi /waste pipe make of dadex / Popular / Beta/ BBJ plain / socket ended conforming to code EN-1401 of specified SDR (Standard Dimension Ratio) including the cost of specials and Solvents complete in all respect as approved and directed by the Engineer Incharge.						
	Type (SDR 41/SN-4)						
	(vii) 8"(200 mm)	28	20.00			560	Rft

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SUPERVISION IN 16 CITIES OF PUNJAB

P-1 SP CHOWK TO JASWANT NAGAR CHOWK
CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	RPC Manhole Cover						
12	Providing and fixing RPC Manhole Cover Manufactured with 100% Reinforced Plastic Composite Material, 650 mm dia with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (Complete) (Certified under ISO 9001-2015)	38				38	Each
	ELECTRICAL WORKS						
	Scheduled Items (A)						
	Excavation						
1	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling around structure with excavated earth, watering and ramming lead upto one chain (30 m) and lift upto 5 ft. (1.5 m)						
	a) By Manual						
	ii) in ordinary soil.						
	For pipe 50mm dia from TR to LCP and LCP to poles	1	3,625	1.00	2.50	9,063	Cft
	Light Poles	29	2.00	2.00	6.00	696	Cft
					Total	9,759	Cft
					Total	9.76	%oCft
	RCC Foundation for Poles						
2	Providing and laying reinforced cement concrete (including prestressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-						
	(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-						
	3) Type C (nominal mix 1: 2: 4)						
	Light Poles	29	2.00	2.00	6.00	696	Cft
					Total	696.00	Cft

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SUPERVISION IN 16 CITIES OF PUNJAB

P-1 SP CHOWK TO JASWANT NAGAR CHOWK

CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Steel Work						
3	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-						
	(b) Deformed bars (Grade-40)		2.50Kg/Cft			1,740	Kg
						Total	17.40
							Kg
4	Supply and erection PVC pipe for recessed wiring (main and sub-main) purpose, including bends, specials, etc. in floor, wall or trenches:-						
	i) 50 mm i/d						
	From LCP to Pole and pole to pole (Up + Down)	29	125.00			3,625	Rft
5	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaid G.I. pipe/M.S. conduits/PVC pipe/G.I. wire/trenches, etc (rate for cable only):-						
	ii) 6 mm sq (7/0.044")						
	For two nos. Earthing lead	29	20.00			580	Rft
6	Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire / trenches, etc. (rate for cable only):-						
	b) PVC insulated, PVC sheathed 3 core, 660/1100 volt cable:-						
	iii) 7/0.74 mm (7/0.029")						
	From Terminal Box to light fixture on pole (P+N+E)	29	40.00			1,160	Rft
	c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-						
	vi) 10 mm (7/0.052")	29	125.00			3,625	Rft
	vii) 16 mm (7/0.064")	1	100.00			100	Rft

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SUPERVISION IN 16 CITIES OF PUNJAB

P-1 SP CHOWK TO JASWANT NAGAR CHOWK

CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
7	Supplying, installation testing and commissioning of Octagonal shape electric street light pole, made of hot dipped 4.5 mm thick (7 SWG) galvanized steel ,tapered from 225 mm at bottom to 100 mm at top,with 1500 mmx60 mm dia. arm for luminaire installation, duly G.I.welded with 470x470x20 mm base plate with the help of 4 no triangular stiffeners 100x350x20 mm of GI sheet,with built in junction box with shutter,i/c the cost of nuts & J-rag bolts, duly fixed in prelaid concrete foundation, foundation will be paid additionally as approved and directed by the Engineer Incharge.						
	b) Double Arm						
	(i) 10 mtr height	29				29	Nos
8	Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming to IP 65, Philips/ Osram /Thorn with corrosion resistant die casted aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection i/c the cost of all accessories/components required for proper operation , fully flexible for future upgradation and easy replacements for maintenance purposes,bucket elevator charges as approved and directed by the Engineer Incharge.						
	c) 120 Lm/Watt						
	(v) 90 Watt with 10800 Lumens	58				58	Nos
9	Supply and erection of electric energy meter, including meter testing fee, etc.						
	b) three phase, 4 wires:						
	ii) 3x50 Amp, 400 volts	1				1.00	Nos

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SUPERVISION IN 16 CITIES OF PUNJAB

P-1 SP CHOWK TO JASWANT NAGAR CHOWK

CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
10	Supply, insatllation, commissioning and testing of oil cooled type, Step down Power Transformer of specified rating,11/0.415 kV, i/c the cost of lifting hooks, thermometers, LT & HT bushing 5-steps, tap changer, imported double float buchholz relay, 2 earthing terminals, roller wheels, connecting terminals for cables M.S box on transformer in order to cover complete L.T side, all necessary materials required for connections on H.T & L.T side, rated voltage 11000/415/240 V impedance 6.25% or as specified by WAPDA/IEC system earth: Delta / Star, neutral solidly earthed, i/c Wapda testing charges,complete in all respects made of PEL, Siemens, as approved and directed by the Engineer Incharge						
	(iii) 25 KVA	1				1.00	Nos.
11	Earthing of iron clad/aluminum switches, etc. with G.I. wire No. 8 SWG in G.I. pipe 15 mm (½") dia, recessed or on surface of wall and floor, complete with 1.5 metre long G.I. pipe, 50 mm (2") dia with reducing socket 4 to 5 metre below ground level, and 2 metre away from building plinth.	32				32.00	No.
12	Fabrication, Supply, testing and commissioning of following Light control panels (LCP), floor standing weather proof, IP 65 Rated of appropriate size, made of MS Sheet 16 SWG with hinged door, handle, catcher, 2 coats of antirust and powder coated paint of approved colour, AC3 megnatic contactor, photocell for automatic operation of lights, CBs, Hand/Off/Auto switch, push button and all necessary accessories complete in all respects. LCP shall be manufactured as per specifications, single line diagram complete in all respect up to the satisfaction of Engineer incharge.						
	LCP-3 Phase	1				1.00	Nos.
13	Shifting of 3 Nos. Telecommunication Poles						
14	Electric Connection Charges	1				1.00	Each

**PUNJAB CITIES PROGRAM (PCP)
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 SUPERVISION IN 16 CITIES OF PUNJAB**

DETAILED COST ESTIMATE

P-2 SP CHOWK TO RAILWAY CHOWK TO UNDER PASS

ROADS NETWORK

Sr. No	2nd BI- Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		ROAD WORK				
		Scarifying				
1	18/11	Scarifying old road surface including removal of debris within 1 chain (30 m).	100Sft	1,583.38	423.30	670,245
		Dismantling				
2	4/20	Dismantling cement concrete reinforced, separating reinforcement from concrete cleaning and straightening the same.	100Cft	16.60	18,285.70	303,543
3	N.S	Dismantling / Demolishing of existing kerb stone as directed by Engineer's Incharge, Complete in all respect	Rft	340.00	25.40	8,636
4	4/29	Dismantling brick or flagged flooring without concrete foundation.	100Sft	41.88	863.50	36,163
		Compaction of Existing Road Surface				
5	N.S	Ploughing and Compaction of Existing road surface upto 6" depth i/c dressing, leveling, supplying and spreading of stone screening (Khaka) and compaction to achieve to 100% maximum ASSHO dry density complete in all respects.	100Cft	10.00	5,808.29	58,083
		Excavation				
6	3/1	Earthwork excavation undressed lead upto a single throw of Kassi, phaorah or shovel:- i) ordinary	1000Cft	63.35	4,571.40	289,598
		Borrow Earth				
7	3/5/i + 3/17	Earthwork in ordinary soil for embankment including ploughing and mixing with blade grade or disc harrow or other suitable equipment and compaction by mechanical means at optimum moisture content and dressing to designed section, complete in all respects:- 90% to 95% maximum modified dry density as determined according to AASHTO T-180 method-D including Transportation of earth.	1000Cft	7.87	15,530.30	122,223

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DETAILED COST ESTIMATE

P-2 SP CHOWK TO RAILWAY CHOWK TO UNDER PASS

ROADS NETWORK

Sr. No	2nd BI-Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
Sub Base Course						
8	18/3/a/ (ii) + 1/1	Providing and laying sub-base course of stone product of approved quality and grade including, placing, mixing, spreading and compaction of sub base material to required depth, camber and grade to achieve 98% maximum dry density determined according to AASHTO T-180 method-D, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sakhi Sarwar quarry to site, actual compacted depth shall be considered for payment)	100Cft	111.83	22,254.30	2,488,698
Water Bound Macadam						
9	18/4/a + 1/1	Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sakhi Sarwar quarry to site, actual compacted depth shall be considered for payment)	100Cft	124.96	25,148.52	3,142,559
Prime Coat						
10	18/6	Providing and laying bituminous priming coat, using 10 lbs. kerosene oil and 10 lbs. binder per 100 Sft. or 0.5 Kg kerosene and 0.5 Kg binder per square metre.	100Sft	1,379.88	2,291.95	3,162,616
11	18/7	Providing and laying bituminous tack coat, using 10 lbs. of bitumen per 100 Sft (0.49 Kg of bitumen per sq.m.)	100Sft	276.75	1,038.15	287,308

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SUPERVISION IN 16 CITIES OF PUNJAB**

DETAILED COST ESTIMATE

P-2 SP CHOWK TO RAILWAY CHOWK TO UNDER PASS

ROADS NETWORK

Sr. No	2nd BI- Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Carpeting				
		AWC				
12	18/10/a + 1/1	Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (2 inch thick) (iv) 4.5% Bitumen	Per inch thickness per 100Sft.	1,656.63	16,525.36	27,376,407
		R.C.C Work				
13	6/6/a/i/3	Providing and laying reinforced cement concrete (i/c pre-stressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, i/c forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, complete				
		(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-				
		(2) Type B (nominal mix 1: 1½: 3)	P Cft	1,660.00	513.65	852,659
		Steel				
14	6/12/c	Fabrication of mild steel reinforcement for cement concrete, i/c cutting, bending, laying in position, making joints and fastening, i/c cost of bending wire and labour charges for bending of steel reinforcement (also includes removal of rust from deformed bars) Gade 60	100Kg	49.80	28,991.05	1,443,754
		Paint For Traffic Lanes				
15	13/36	Painting Traffic Lane Marking of specified width (1.5mm thick), with Thermoplastic (TP) Paint including Glass Beads, complete in all respect, as approved and directed by Engineer incharge.				
		ii) 6" wide	Rft	12,275.00	56.20	689,855

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DETAILED COST ESTIMATE

P-2 SP CHOWK TO RAILWAY CHOWK TO UNDER PASS

ROADS NETWORK

Sr. No	2nd BI- Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Kerb Stone				
16	6/52/b	Providing and fixing precast Edge Kerb Stone (4" to 6" thick), of 3500 PSI Compressive Strength, embedded in PCC 1:2:4 over lean concrete 1:4:8 etc. complete in all respect.				
		b) With Painting				
		(i) 14" high	P.Rft	340.00	516.65	175,661
		Tuff Paver				
17	10/41	Providing and laying Tuff pavers, having 7000 PSI, crushing strength of approved manufacturer, over 2" to 3" sand cushion i/c grouting with sand in joints i/c finishing to require slope. complete in all respect. (50% Grey / 50% Coloured)				
		c) 80-mm thick	Sft	33,888.00	194.65	6,596,299
		Road Edging				
18	18/5	Providing and laying road edging of 3" (75 mm) wide and 9" (225 mm) deep brick on end, complete in all respects.	Rft	200.00	51.05	10,210
		P.C.C (Between Asphalt and Tuff Paver)				
19	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(f) Ratio 1: 2: 4	100Cft	38.92	38,126.10	1,483,868
		Cat Eyes				
20	18/28	Providing & fixing Cat Eyes of size 4"x4"x3/4" duly casted with specified material having plastic strip containing mini retro-reflective glass beads of color white /red/ yellow having specifid reflections, quality & shape i/c the cost of self built in12mm dia x120mm long steel zinc plate dnail, fixing to road with epoxy/ hammering with separate nail complete.				
		b) Aluminium Alloy				
		(A) Dual-Directional				
		(ii) 43x2=86 Glass beads a side	Each	1,112.00	693.80	771,506
		(B) Uni-Directional				
		(ii) 43 Glass beads a side	Each	100.00	543.80	54,380

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DETAILED COST ESTIMATE

P-2 SP CHOWK TO RAILWAY CHOWK TO UNDER PASS

ROADS NETWORK

Sr. No	2nd BI- Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
21	18/25/a	Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.				
		(a) G.I Sheet 14 SWG CIRCULAR/TRIANGULAR				
		3 ft size	P. Sft	66.00	948.15	62,578
22	18/27/b	Providing, fabrication and fixing Vertical Post comprising of medium quality G.I Pipe of specified diameter, including the cost of clamping arrangements, top cover, hold fasts embedded in PCC 1:2:4 etc, complete in all respect				
		(b) 3 inch diameter	Rft	121.00	1,259.85	152,442
23	13/42/a	Lettering and printing of signage /direction boards/ road delineators of any colour by machine i/c cost of Digital Lettering, Lamination & pasting etc complete in all respect.				
		a) High Intensity Prismatic (HIP) Tape	P. Sft	66.00	1,111.65	73,369
		For Green Belt				
24	3/32	Turfing slopes of banks or lawns with grass sods including ploughing, laying, setting and watering (Turf got from within a distance of 5 miles (8 Km.) and maintenance for 15 days).	100Sft	5.10	1,693.10	8,635
		Deduction				
25	6/2	Dry rammed brick or stone ballast, 1½" to 2" (40 mm to 50 mm) gauge.	100Cft	15.71	1,254.00	(19,700)
		Total Amount Rs.				50,301,595
		DRAINAGE SYSTEM				
		Dismantling				
1	4/19/c	c) Dismantling cement concrete 1:2:4 plain.	100Cft	0.26	11,174.60	2,897

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ROADS NETWORK

Sr. No	2nd BI- Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Excavation				
2	3/7/i	Earthwork excavation in open cutting upto 5'-0" (1.5 m) depth for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water from trenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:- i) in ordinary soil.	1000Cft	1.63	9,016.70	14,652
		P.C.C				
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 2: 4	100Cft	3.19	38,126.10	121,622
		Brick Work				
4	7/7/i	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3	100Cft	0.61	31,959.10	19,445
5	7/10	Extra for pacca brick work in steining of wells or any other circular masonry.	100Cft	0.52	2,634.00	1,366
		Plaster				
6	11/8/b	Cement plaster 1:3 upto 20' (6.00 m) height:- b) ½" (13 mm) thick	100Sft	6.90	3,420.40	23,609
		R.C.C Work				
7	6/6/a/i/3	Providing and laying reinforced cement concrete (i/c pre-stressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, i/c forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, complete				

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ROADS NETWORK

Sr. No	2nd BI-Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		a). Reinforced cement concrete in roof slab, beams, columns, lintels, girders and other structural members laid in situ or pre-cast laid in position, or pre-stressed members cast in situ, complete in all respect. Type C (nominal mix 1:2:4)	P Cft	7.00	556.50	3,896
		Steel				
8	6/12/c	Fabrication of mild steel reinforcement for cement concrete, i/c cutting, bending, laying in position, making joints and fastening, i/c cost of bending wire and labour charges for bending of steel reinforcement (also includes removal of rust from deformed bars) Gade 60	100Kg	0.21	31,801.40	6,782
		Gully Grating Chamber				
9	21/8	Constructing standard gully grating chamber, 3'x2½' (900x750 mm), with chinaware trap as per PHED Drawing STD/PD No. 3 of 1977, complete in all respects.	Each	13.00	16,370.90	212,822
10	7/30	Supplying and filling sand under floor; or plugging in wells.	100Cft	6.50	2,823.30	18,351
		uPVC Pipe				
11	19/47	Providing, fixing, testing and commissioning of uPVC (Unplasticized polyvinyl Chloride)Nikasi /waste pipe make of dadex / Popular / Beta/ BBJ plain / socket ended conforming to code EN-1401 of specified SDR (Standard Dimension Ratio) including the cost of specials and Solvents complete in all respect as approved and directed by the Engineer Incharge.				
		Type (SDR 41/SN-4)				
		(v) 4"(110 mm)	Rft	100.00	217.25	21,725
		(vii) 8"(200 mm)	Rft	260.00	451.15	117,299

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ROADS NETWORK

Sr. No	2nd BI- Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		RPC Manhole Cover				
12	N.S	Providing and fixing RPC Manhole Cover Manufactured with 100% Reinforced Plastic Composite Material, 650 mm dia with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (Complete) (Certified under ISO 9001-2015)	Each	8.00	10,950.00	87,600
		M.S Grating				
13	18/23	Providing and fixing M.S Grating comprising of Angle Iron frame size 1.50"x1.50"x3/16" and 1/2" square bars duly welded @ 4"c/c, including painting charges etc complete in all respect.	P.Sft	312.50	1,663.95	519,984
		G.I Pipe				
14	23/23	Providing, laying, cutting, jointing, testing and disinfecting G.I. pipeline in trenches, with socket joints, using G.I. pipes of B.S.S. 1387-1967 complete in all respects, with specials and valves.				
		iii) Heavy Quality				
		i) 4" i/d (100 mm) 5.4mm thick	Rft	30.00	1,935.10	58,053
		Manhole Cover				
15	MR	Old/existing Manhole cover and Frame complete set shift to MC store.	Set	8.00	500.00	4,000
		Total Amount (Rs)				1,234,102

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ROADS NETWORK

Sr. No	2nd BI- Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		ELECTRICAL WORKS				
		Scheduled Items (A)				
		Excavation				
1	3/21	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling around structure with excavated earth, watering and ramming lead upto one chain (30 m) and lift upto 5 ft. (1.5 m)				
		a) By Manual				
		ii) in ordinary soil.	%oCft	23.22	10,677.75	247,937
		RCC Foundation for Poles				
2	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-				
		(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-				
		3) Type C (nominal mix 1: 2: 4)	Cft	1,656.00	457.75	758,034
		Steel Work				
3	6/12/b	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-				
		(b) Deformed bars (Grade-40)	100Kg	41.40	31,411.60	1,300,440
4	24/6	Supply and erection PVC pipe for recessed wiring (main and sub-main) purpose, including bends, specials, etc. in floor, wall or trenches:-				
		i) 50 mm i/d	Rft	8,625.00	185.85	1,602,956

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Sr. No	2nd BI- Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
5	24/12	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in pre-laid G.I. pipe/M.S. conduits /PVC pipe/G.I. wire/trenches, etc (rate for cable only):-				
		ii) 6 mm sq (7/0.044")	Rft	1,380.00	117.70	162,426
6	24/13/c	Supply and erection of copper conductor cables for service connection, in pre-laid pipe/G.I. wire / trenches, etc. (rate for cable only):-				
		b) PVC insulated, PVC sheathed 3 core, 660/1100 volt cable:-				
		iii) 7/0.74 mm (7/0.029")	Rft	2,760.00	105.15	290,214
		c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-				
		vi) 10 mm (7/0.052")	Rft	8,625.00	523.85	4,518,206
		vii) 16 mm (7/0.064")	Rft	100.00	642.90	64,290
7	24/68	Supplying, installation testing and commissioning of Octagonal shape electric street light pole, made of hot dipped 4.5 mm thick (7 SWG) galvanized steel ,tapered from 225 mm at bottom to 100 mm at top, with 1500 mmx60 mm dia. arm for luminaire installation, duly G.I.welded with 470x470x20 mm base plate with the help of 4 no triangular stiffeners 100x350x20 mm of GI sheet, with built in junction box with shutter, i/c the cost of nuts & J-rag bolts, duly fixed in pre-laid concrete foundation, foundation will be paid additionally as approved and directed by the Engineer Incharge.				
		a) Single Arm				
		(i) 10 mtr height	Each	64.00	106,236.55	6,799,139
		b) Double Arm				
		(i) 10 mtr height	Each	5.00	109,878.55	549,393

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Sr. No	2nd BI- Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
8	24/69/c	Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming to IP 65, Philips/ Osram /Thorn with corrosion resistant die casted aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection i/c the cost of all accessories/components required for proper operation , fully flexible for future upgradation and easy replacements for maintenance purposes,bucket elevator charges as approved and directed by the Engineer Incharge.				
		c) 120 Lm/Watt				
		(v) 90 Watt with 10800 Lumens	Each	74.00	51,675.00	3,823,950
9	24/77	Supply and erection of electric energy meter, including meter testing fee, etc.				
		b) three phase, 4 wires:				
		ii) 3x50 Amp, 400 volts	Each	1.00	14,659.25	14,659
10	24/105/iii	Supply, insatllation, commissioning and testing of oil cooled type, Step down Power Transformer of specified rating,11/0.415 kV, i/c the cost of lifting hooks, thermometers, LT & HT bushing 5-steps, tap changer, imported double float buchholz relay, 2 earthing terminals, roller wheels, connecting terminals for cables M.S box on transformer in order to cover complete L.T side, all necessary materials required for connections on H.T & L.T side, rated voltage 11000/415/240 V impedance 6.25% or as specified by WAPDA/IEC system earth: Delta / Star, neutral solidly earthed, i/c Wapda testing charges,complete in all respects made of PEL, Siemens, as approved and directed by the Engineer Incharge				
		(iii) 25 KVA	Each	1.00	329,487.70	329,488

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ROADS NETWORK

Sr. No	2nd BI- Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
11	24/70	Earthing of iron clad/aluminum switches, etc. with G.I. wire No. 8 SWG in G.I. pipe 15 mm (½") dia, recessed or on surface of wall and floor, complete with 1.5 metre long G.I. pipe, 50 mm (2") dia with reducing socket 4 to 5 metre below ground level, and 2 metre away from building plinth.	Job	72.00	9,592.45	690,656
Sub Total Scheduled Items: (A)						21,151,789
Non Schedule		Part-B				
12	N.S	Fabrication, Supply, testing and commissioning of following Light control panels (LCP), floor standing weather proof, IP 65 Rated of appropriate size, made of MS Sheet 16 SWG with hinged door, handle, catcher, 2 coats of antirust and powder coated paint of approved colour, AC3 megnatic contactor, photocell for automatic operation of lights, CBs, Hand/Off/Auto switch, push button and all necessary accessories complete in all respects. LCP shall be manufactured as per specifications, single line diagram complete in all respect up to the satisfaction of Engineer incharge.				
	(a)	LCP-3 Phase	No.	1.00	374,735	374,735
13	N.S	Providing, installing and testing submersible pump 4 hp with motor controle unit including wire 7/0.029 150 ft length, foot valve 3 inch dia all necessary accessories complete in all respects.	Set	1.00	100,000	100,000
14	N.S	Electric Connection Charges	Each	1.00	350,000	350,000
Total Cost (Part B)					Rs.	824,735
Grand Total (Part A + Part B)					Rs.	21,976,524
Grand Total Amount Rs.						73,512,222

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CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	ROAD WORK						
	Scarifying						
1	Scarifying old road surface including removal of debris within 1 chain (30 m).						
	RD 0+000 to 1+100	1	1,100	24.00		26,400	Sft
	RD 1+350 to 1+550	1	200	34.00		6,800	Sft
	RD 1+550 to 1+950	1	400	24.00		9,600	Sft
	RD 1+950 to 2+250	1	300	24.00		7,200	Sft
	RD 2+250 to 2+600 W-(45+35+24+50+24)/5	1	350	35.60		12,460	Sft
	RD 2+600 to 4+600	1	2,000	24.00		48,000	Sft
	RD 4+600 to 4+700	1	100	24.00		2,400	Sft
	RD 4+700 to 5+100	2	400	20.00		16,000	Sft
	RD 5+100 to 6+247 (100 ft RCC rigid pavement reduced)	1	1,047	24.00		25,128	Sft
	Station More (Additional area in front of Booking Office)	1	150	29.00		4,350	Sft
					Total	158,338	Sft
					Total	1,583	%Sft
	Dismantling						
2	Dismantling cement concrete reinforced, separating reinforcement from concrete cleaning and straightening the same.						
	Underpass	2	100	10.00	0.83	1,660	Cft
					Total.	16.60	%Cft
3	Dismantling / Demolishing of existing kerb stone as directed by Engineer's Incharge, Complete in all respect						
	RD 4+700 to 4+870	2	170			340	Rft
4	Dismantling brick or flagged flooring without concrete foundation.						
	RD 5+100 to 6+247 (100 ft RCC rigid pavement reduced)	2	1,047	2.00		4,188	Sft
					Total	41.88	%Sft

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ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
5	Ploughing and Compaction of Existing road surface upto 6" depth i/c dressing, leveling, supplying and spreading of stone screening (Khaka) and compaction to achieve to 100% maximum ASSHO dry density complete in all respects.						
	Underpass	2	100	10.00	0.50	1,000	Cft
					Total	1,000	Cft
					Total.	10.00	%Cft
6	Earthwork excavation undressed lead upto a single throw of Kassi, phaorah or shovel:- i) ordinary						
	For Tuff Paver Shoulders						
	RD 0+000 to 1+100	2	1,100	3.00	1.25	8,250	Cft
	RD 1+350 to 1+550	2	200	3.00	1.25	1,500	Cft
	RD 1+550 to 1+950	2	400	3.00	1.25	3,000	Cft
	RD 2+250 to 2+600	2	350	3.00	1.25	2,625	Cft
	RD 2+600 to 4+600	2	2,000	3.00	1.25	15,000	Cft
	RD 4+600 to 4+700	2	100	3.00	1.25	750	Cft
	RD 4+700 to 5+100	2	400	3.00	1.25	3,000	Cft
	RD 5+100 to 6+247 (100 ft RCC rigid pavement reduced)	2	1,047	2.00	1.25	5,235	Cft
					Total	39,360	Cft
					Total.	63.35	%Cft
	Borrow Earth						
7	Earthwork in ordinary soil for embankment including ploughing and mixing with blade grade or disc harrow or other suitable equipment and compaction by mechanical means at optimum moisture content and dressing to designed section, complete in all respects:- 90% to 95% maximum modified dry density as determined according to AASHTO T-180 method-D including Transportation of earth.						
	For Tuff Paver Shoulders						
	RD 0+000 to 1+100	2	1,100	3.00	0.25	1,650	Cft
	RD 1+350 to 1+550	2	200	3.00	0.25	300	Cft
	RD 1+550 to 1+950	2	400	3.00	0.25	600	Cft
	RD 2+250 to 2+600	2	350	3.00	0.25	525	Cft
	RD 2+600 to 4+600	2	2,000	3.00	0.25	3,000	Cft
	RD 4+600 to 4+700	2	100	3.00	0.25	150	Cft
	RD 4+700 to 5+100	2	400	3.00	0.25	600	Cft
	RD 5+100 to 6+247 (100 ft RCC rigid pavement reduced)	2	1,047	2.00	0.25	1,047	Cft

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ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
					Total	7,872	Cft
					Total.	7.87	%Cft
	Sub Base Course						
8	Providing and laying sub-base course of stone product of approved quality and grade including, placing, mixing, spreading and compaction of sub base material to required depth, camber and grade to achieve 98% maximum dry density determined according to AASHTO T-180 method-D, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sakhi Sarwar quarry to site, actual compacted depth shall be considered for payment)						
	For Tuff Paver Shoulders						
	RD 0+000 to 1+100	2	1,100	3.00	0.33	2,178	Cft
	RD 1+350 to 1+550	2	200	3.00	0.33	396	Cft
	RD 1+550 to 1+950	2	400	3.00	0.33	792	Cft
	RD 2+250 to 2+600	2	350	3.00	0.33	693	Cft
	RD 2+600 to 4+600	2	2,000	3.00	0.33	3,960	Cft
	RD 4+600 to 4+700	2	100	3.00	0.33	198	Cft
	RD 4+700 to 5+100	2	400	3.00	0.33	792	Cft
	RD 5+100 to 6+247 (100 ft RCC rigid pavement reduced)	2	1,047	2.00	0.33	1,382	Cft
	Underpass Approaches	4	300	2.00	0.33	792	Cft
					Total	11,183	Cft
					Total.	111.83	%Cft
	Water Bound Macadam						
9	Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sakhi Sarwar quarry to site, actual compacted depth shall be considered for payment)						
	Crushed stone aggregate from approved quarry						
	For Road						

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ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	RD 4+600 to 4+700	1	100	24.00	0.50	1,200	Cft
	For Tuff Paver						
	RD 0+000 to 1+100	2	1,100	3.00	0.33	2,200	Cft
	RD 1+350 to 1+550	2	200	3.00	0.33	400	Cft
	RD 1+550 to 1+950	2	400	3.00	0.33	800	Cft
	RD 2+250 to 2+600	2	350	3.00	0.33	700	Cft
	RD 2+600 to 4+600	2	2,000	3.00	0.33	4,000	Cft
	RD 4+600 to 4+700	2	100	3.00	0.33	200	Cft
	RD 4+700 to 5+100	2	400	3.00	0.33	800	Cft
	RD 5+100 to 6+247 (100 ft RCC rigid pavement reduced)	2	1,047	2.00	0.33	1,396	Cft
	Underpass Approaches	4	300	2.00	0.33	800	Cft
					Total	12,496	Cft
					Total.	124.96	%Cft
	Prime Coat						
10	Providing and laying bituminous priming coat, using 10 lbs. kerosene oil and 10 lbs. binder per 100 Sft. or 0.5 Kg kerosene and 0.5 Kg binder per square metre.						
	RD 0+000 to 1+100	1	1,100	24.00		26,400	Sft
	RD 1+350 to 1+550	1	200	34.00		6,800	Sft
	RD 1+550 to 1+950	1	400	24.00		9,600	Sft
	RD 1+950 to 2+250	1	300	24.00		7,200	Sft
	RD 2+250 to 2+600 W-(45+35+24+50+24)/5	1	350	35.60		12,460	Sft
	RD 2+600 to 4+600	1	2,000	24.00		48,000	Sft
	RD 4+600 to 4+700	1	100	24.00		2,400	Sft
	RD 5+100 to 6+247 (100 ft RCC rigid pavement reduced)	1	1,047	24.00		25,128	Sft
					Total	137,988	Sft
					Total.	1,379.88	%Sft
11	Providing and laying bituminous tack coat, using 10 lbs. of bitumen per 100 Sft (0.49 Kg of bitumen per sq.m.)						
	RD 4+700 to 5+100	2	400	20.00		16,000	Sft
	Approach Roads total Area	1	11,675	1.00		11,675	Sft
					Total.	276.75	%Sft
	Carpeting						
	AWC						

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ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
12	Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (2 inch thick) (iv) 4.5% Bitumen						
	RD 0+000 to 1+100	1	1,100	24.00		26,400	Sft
	RD 1+350 to 1+550	1	200	34.00		6,800	Sft
	RD 1+550 to 1+950	1	400	24.00		9,600	Sft
	RD 1+950 to 2+250	1	300	24.00		7,200	Sft
	RD 2+250 to 2+600	1	350	35.60		12,460	Sft
	RD 2+600 to 4+600	1	2,000	24.00		48,000	Sft
	RD 4+600 to 4+700	1	100	24.00		2,400	Sft
	RD 4+700 to 5+100	2	400	20.00		16,000	Sft
	RD 5+100 to 6+247 (100 ft RCC rigid pavement reduced)	1	1,047	24.00		25,128	Sft
	Approach Roads total Area	1	11,675	1.00		11,675	Sft
					Total	165,663	Sft
					Total.	1,656.63	%Sft
	R.C.C Work						
13	Providing and laying reinforced cement concrete (i/c pre-stressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, i/c forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, complete						
	(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-						
	(2) Type B (nominal mix 1: 1½: 3)	2	100	10.00	0.83	1,660.00	Cft
					Total	1,660.00	Cft
	Steel						
14	Fabrication of mild steel reinforcement for cement concrete, i/c cutting, bending, laying in position, making joints and fastening, i/c cost of bending wire and labour charges for bending of steel reinforcement (also includes removal of rust from deformed bars) Gade 60						
					Total	49.80	%Kg

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SUPERVISION IN 16 CITIES OF PUNJAB

P-2 SP CHOWK TO RAILWAY CHOWK TO UNDER PASS

CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Paint For Traffic Lanes						
15	Painting Traffic Lane Marking of specified width (1.5mm thick), with Thermoplastic (TP) Paint including Glass Beads, complete in all respect, as approved and directed by Engineer incharge.						
	RD 0+000 to 1+100	2.5	1,100			2,750	Rft
	RD 1+350 to 1+550	2.5	200			500	Rft
	RD 1+550 to 1+950	2.5	400			1,000	Rft
	RD 1+950 to 2+250	2.5	300			750	Rft
	RD 2+250 to 2+600	2.5	350			875	Rft
	RD 2+600 to 4+600	2.5	2,000			5,000	Rft
	RD 4+600 to 4+700	4	100			400	Rft
	RD 4+700 to 5+100	2.5	400			1,000	Rft
						Total.	12,275 Rft
16	Providing and fixing precast Edge Kerb Stone (4" to 6" thick), of 3500 PSI Compressive Strength, embeded in PCC 1:2:4 over lean concrete 1:4:8 etc. complete in all respect.						
	b) With Painting						
	(i) 14" high						
		2	170			340	Rft
						Total.	340 Rft
	Tuff Paver						
17	Providing and laying Tuff pavers, having 7000 PSI, crushing strength of approved manufacturer, over 2" to 3" sand cushion i/c grouting with sand in joints i/c finishing to require slope. complete in all respect. (50% Grey / 50% Coloured)						
	c) 80-mm thick						
	RD 0+000 to 1+100	2	1,100	3.00		6,600	Sft
	RD 1+350 to 1+550	2	200	3.00		1,200	Sft
	RD 1+550 to 1+950	2	400	3.00		2,400	Sft
	RD 2+250 to 2+600	2	350	3.00		2,100	Sft
	RD 2+600 to 4+600	2	2,000	3.00		12,000	Sft
	RD 4+600 to 4+700	2	100	3.00		600	Sft
	RD 4+700 to 5+100	2	400	3.00		2,400	Sft
	RD 5+100 to 6+247 (100 ft RCC rigid pavement reduced)	2	1,047	2.00		4,188	Sft
	Underpass Approaches	4	300	2.00		2,400	Sft

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SUPERVISION IN 16 CITIES OF PUNJAB

P-2 SP CHOWK TO RAILWAY CHOWK TO UNDER PASS
CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
					Total.	33,888	Sft
	Road Edging						
18	Providing and laying road edging of 3" (75 mm) wide and 9" (225 mm) deep brick on end, complete in all respects.						
	RD 4+600 to 4+700	2	100			200	Rft
					Total.	200	Rft
	P.C.C (Between Asphalt and Tuff Paver)						
19	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(f) Ratio 1: 2: 4						
	RD 0+000 to 1+100	4	1,100	0.33	0.50	726	Cft
	RD 1+350 to 1+550	4	200	0.33	0.50	132	Cft
	RD 1+550 to 1+950	4	400	0.33	0.50	264	Cft
	RD 2+250 to 2+600	4	350	0.33	0.50	231	Cft
	RD 2+600 to 4+600	4	2,000	0.33	0.50	1,320	Cft
	RD 4+600 to 4+700	4	100	0.33	0.50	66	Cft
	RD 4+700 to 5+100	4	400	0.33	0.50	264	Cft
	RD 5+100 to 6+247 (100 ft RCC rigid pavement reduced)	4	1,047	0.33	0.50	691	Cft
	Underpass Approaches	4	300	0.33	0.50	198	Cft
					Total	3,892	Cft
					Total.	38.92	%Cft
	Cat Eyes						
20	Providing & fixing Cat Eyes of size 4"x4"x3/4" duly casted with specified material having plastic strip containing mini retro-reflective glass beads of color white /red/ yellow having specifid reflections, quality & shape i/c the cost of self built in12mm dia x120mm long steel zinc plate dnail, fixing to road with epoxy/hammering with separate nail complete.						
	b) Aluminium Alloy						
	(A) Dual-Directional						
	(ii) 43x2=86 Glass beads a side	1112				1,112	Each
	(B) Uni-Directional						
	(ii) 43 Glass beads a side	100				100	Each

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SUPERVISION IN 16 CITIES OF PUNJAB

P-2 SP CHOWK TO RAILWAY CHOWK TO UNDER PASS

CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
21	Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.						
	(a) G.I Sheet 14 SWG CIRCULAR/TRIANGULAR 3 ft size	11	3.00	2.00		66	Sft
22	Providing, fabrication and fixing Vertical Post comprising of medium quality G.I Pipe of specified diameter, including the cost of clamping arrangements, top cover, hold fasts embedded in PCC 1:2:4 etc, complete in all respect						
	(b) 3 inch diameter	11	11			121	Rft
23	Lettering and printing of signage /direction boards/ road delineators of any colour by machine i/c cost of Digital Lettering, Lamination & pasting etc complete in all respect.						
	a) High Intensity Prismatic (HIP) Tape					66	Sft
	For Green Belt						
24	Turfing slopes of banks or lawns with grass sods including ploughing, laying, setting and watering (Turf got from within a distance of 5 miles (8 Km.) and maintenance for 15 days).						
		1	170	3.00		510	Sft
						Total.	5.10 %Sft
	Deduction						
25	Dry rammmed brick or stone ballast, 1½" to 2"(40 mm to 50 mm) gauge.					1,571	Cft
	Total Qty.					15.71	%Cft
						Total	15.71 %Cft
	DRAINAGE SYSTEM						
	Dismantling						
1	c) Dismantling cement concrete 1:2:4 plain.						
	Manhole Neck	8	8.64	0.75	0.50	25.92	Cft
						Total	0.26 %Cft

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P-2 SP CHOWK TO RAILWAY CHOWK TO UNDER PASS
CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Excavation						
2	Earthwork excavation in open cutting upto 5'-0" (1.5 m) depth for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water from trenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:- i) in ordinary soil.						
	Pipe Laying	13	20.00	2.50	2.50	1,625	Cft
					Total	1,625	Cft
					Total	1.63	%Cft
3	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 2: 4						
	Pipe Laying	13	10	1.50	1.50	293	Cft
	For manhole neck	8	8.64	0.75	0.50	26	Cft
					Total	319	Cft
					Total	3.19	%Cft
4	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3						
	Culvert Widening	2	3.00	0.75	2.00	9	Cft
	For manhole neck	8	8.64	0.75	1.00	52	Cft
					Total	61	Cft
					Total	0.61	%Cft
5	Extra for pacca brick work in steining of wells or any other circular masonry.						
					Total	0.52	%Cft
6	Cement plaster 1:3 upto 20' (6.00 m) height:- b) ½" (13 mm) thick						
	Underpass drain	2	125.00		2.00	500	Sft
	Collection Chamber	1	10.00		4.00	40	Sft
	Culvert Widening	2	3.00		2.00	12	Sft
	For manhole neck	16	8.64		1.00	138	Sft
					Total	690	Sft
					Total	6.90	%Sft

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P-2 SP CHOWK TO RAILWAY CHOWK TO UNDER PASS

CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	uPVC Pipe						
11	Providing, fixing, testing and commissioning of u-PVC (Unplasticized polyvinyl Chloride) Nikasi /waste pipe make of dadex / Popular / Beta/ BBJ plain / socket ended conforming to code EN-1401 of specified SDR (Standard Dimension Ratio) including the cost of specials and Solvents complete in all respect as approved and directed by the Engineer Incharge.						
	Type (SDR 41/SN-4)						
	(v) 4"(110 mm)	1	100.00			100	Rft
	(vii) 8"(200 mm)	13	20.00			260	Rft
	RPC Manhole Cover						
12	Providing and fixing RPC Manhole Cover Manufactured with 100% Reinforced Plastic Composite Material, 650 mm dia with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (Complete) (Certified under ISO 9001-2015)	8				8	Each
	M.S Grating						
13	Providing and fixing M.S Grating comprising of Angle Iron frame size 1.50"x1.50"x3/16" and 1/2" square bars duly welded @ 4"c/c, including painting charges etc complete in all respect.						
	Underpass	2	125	1.25		313	Sft
	G.I Pipe						
14	Providing, laying, cutting, jointing, testing and disinfecting G.I. pipeline in trenches, with socket joints, using G.I. pipes of B.S.S. 1387-1967 complete in all respects, with specials and valves.						
	iii) Heavy Quality						
	i) 4" i/d (100 mm) 5.4mm thick	1	30			30	Rft
	ELECTRICAL WORKS						
	Scheduled Items (A)						
	Excavation						
1	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling around structure with excavated earth, watering and ramming lead upto one chain (30 m) and lift upto 5 ft. (1.5 m)						
	a) By Manual						
	ii) in ordinary soil.						

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CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	For pipe 50mm dia from TR to LCP and LCP to poles	1	8,625	1.00	2.50	21,563	Cft
	Light Poles	69	2.00	2.00	6.00	1,656	Cft
					Total	23,219	Cft
					Total	23.22	%oCft
	RCC Foundation for Poles						
2	Providing and laying reinforced cement concrete (including prestressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-						
	(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-						
	3) Type C (nominal mix 1: 2: 4)						
	Light Poles	69	2.00	2.00	6.00	1,656	Cft
					Total	1,656.00	Cft
	Steel Work						
3	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-						
	(b) Deformed bars (Grade-40)		2.50Kg/Cft			4,140	Kg
					Total	41.40	Kg
4	Supply and erection PVC pipe for recessed wiring (main and sub-main) purpose, including bends, specials, etc. in floor, wall or trenches:-						
	i) 50 mm i/d						
	From LCP to Pole and pole to pole (Up + Down)	69	125.00			8,625	Rft
5	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaidd G.I. pipe/M.S. conduits/PVC pipe/G.I. wire/trenches, etc (rate for cable only):-						

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P-2 SP CHOWK TO RAILWAY CHOWK TO UNDER PASS

CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	ii) 6 mm sq (7/0.044")						
	For two nos. Earthing lead	69	20.00			1,380	Rft
6	Supply and erection of copper conductor cables for service connection, in pre-laid pipe/G.I. wire / trenches, etc. (rate for cable only):-						
	b) PVC insulated, PVC sheathed 3 core, 660/1100 volt cable:-						
	iii) 7/0.74 mm (7/0.029")						
	From Terminal Box to light fixture on pole (P+N+E)	69	40.00			2,760	Rft
	c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-						
	vi) 10 mm (7/0.052")	69	125.00			8,625	Rft
	vii) 16 mm (7/0.064")	1	100.00			100	Rft
7	Supplying, installation testing and commissioning of Octagonal shape electric street light pole, made of hot dipped 4.5 mm thick (7 SWG) galvanized steel, tapered from 225 mm at bottom to 100 mm at top, with 1500 mm x 60 mm dia. arm for luminaire installation, duly G.I. welded with 470x470x20 mm base plate with the help of 4 no triangular stiffeners 100x350x20 mm of GI sheet, with built in junction box with shutter, i/c the cost of nuts & J-rag bolts, duly fixed in pre-laid concrete foundation, foundation will be paid additionally as approved and directed by the Engineer Incharge.						
	a) Single Arm						
	(i) 10 mtr height	64				64	Nos
	b) Double Arm						
	(i) 10 mtr height	5				5	Nos
8	Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming to IP 65, Philips/ Osram /Thorn with corrosion resistant die casted aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection i/c the cost of all accessories/components required for proper operation, fully flexible for future upgradation and easy replacements for maintenance purposes, bucket elevator charges as approved and directed by the Engineer Incharge.						
	c) 120 Lm/Watt						
	(v) 90 Watt with 10800 Lumens	74				74	Nos

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P-2 SP CHOWK TO RAILWAY CHOWK TO UNDER PASS

CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
9	Supply and erection of electric energy meter, including meter testing fee, etc.						
	b) three phase, 4 wires:						
	ii) 3x50 Amp, 400 volts	1				1.00	Nos
10	Supply, insatllation, commissioning and testing of oil cooled type, Step down Power Transformer of specified rating,11/0.415 kV, i/c the cost of lifting hooks, thermometers, LT & HT bushing 5-steps, tap changer, imported double float buchholz relay, 2 earthing terminals, roller wheels, connecting terminals for cables M.S box on transformer in order to cover complete L.T side, all necessary materials required for connections on H.T & L.T side, rated voltage 11000/415/240 V impedance 6.25% or as specified by WAPDA/IEC system earth: Delta / Star, neutral solidly earthed, i/c Wapda testing charges,complete in all respects made of PEL, Siemens, as approved and directed by the Engineer Incharge						
	(iii) 25 KVA	1				1.00	Nos.
11	Earthing of iron clad/aluminum switches, etc. with G.I. wire No. 8 SWG in G.I. pipe 15 mm (½") dia, recessed or on surface of wall and floor, complete with 1.5 metre long G.I. pipe, 50 mm (2") dia with reducing socket 4 to 5 metre below ground level, and 2 metre away from building plinth.	72				72.00	No.
12	Fabrication, Supply, testing and commissioning of following Light control panels (LCP), floor standing weather proof, IP 65 Rated of appropriate size, made of MS Sheet 16 SWG with hinged door, handle, catcher, 2 coats of antirust and powder coated paint of approved colour, AC3 megnatic contactor, photocell for automatic operation of lights, CBs, Hand/Off/Auto switch, push button and all necessary accessories complete in all respects. LCP shall be manufactured as per specifications, single line diagram complete in all respect up to the satisfaction of Engineer incharge.						
	LCP-3 Phase	1				1.00	Nos.
13	Electric Connection Charges	1				1.00	Each

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DETAILED COST ESTIMATE

P-3 FOOTBALL CHOWK TO STADIUM ROAD

ROADS NETWORK

Sr. No	2nd BI- Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		ROAD WORK				
		Dismantling				
1	4/45	Dismantling and removing road metalling.	100Cft	34.67	2,031.75	70,441
2	4/11	Dismantling dry brick masonry.	100Cft	9.75	863.50	8,419
		Compaction of Existing Road Surface				
3	N.S	Ploughing and Compaction of Existing road surface upto 6" depth i/c dressing, leveling, supplying and spreading of stone screening (Khaka) and compaction to achieve to 100% maximum ASSHO dry density complete in all respects.	100Cft	189.00	5,808.29	1,097,767
		Excavation				
4	3/1	Earthwork excavation undressed lead upto a single throw of Kassi, phaorah or shovel:- i) ordinary	1000Cft	56.85	4,571.40	259,884
		Borrow Earth				
5	3/5/i + 3/17	Earthwork in ordinary soil for embankment including ploughing and mixing with blade grade or disc harrow or other suitable equipment and compaction by mechanical means at optimum moisture content and dressing to designed section, complete in all respects:- 90% to 95% maximum modified dry density as determined according to AASHTO T-180 method-D including Transportation of earth.	1000Cft	12.80	15,530.30	198,788
		Sub Base Course				
6	18/3/a/ (ii) + 1/1	Providing and laying sub-base course of stone product of approved quality and grade including, placing, mixing, spreading and compaction of sub base material to required depth, camber and grade to achieve 98% maximum dry density determined according to AASHTO T-180 method-D, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sakhi Sarwar quarry to site, actual compacted depth shall be considered for payment)	100Cft	247.84	22,254.30	5,515,506

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DETAILED COST ESTIMATE

P-3 FOOTBALL CHOWK TO STADIUM ROAD

ROADS NETWORK

Sr. No	2nd BI- Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Water Bound Macadam				
7	18/4/a + 1/1	Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sakhi Sarwar quarry to site, actual compacted depth shall be considered for payment)	100Cft	437.33	25,148.52	10,998,202
		Prime Coat				
8	18/6	Providing and laying bituminous priming coat, using 10 lbs. kerosene oil and 10 lbs. binder per 100 Sft. or 0.5 Kg kerosene and 0.5 Kg binder per square metre.	100Sft	688.00	2,291.95	1,576,862
9	18/7	Providing and laying bituminous tack coat, using 10 lbs. of bitumen per 100 Sft (0.49 Kg of bitumen per sq.m.)	100Sft	148.72	1,038.15	154,394
		Carpeting				
		AWC				
10	18/10/a + 1/1	Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (2 inch thick) (iv) 4.5% Bitumen	Per inch thickness per 100Sft.	836.72	16,525.36	13,827,099
		Paint For Traffic Lanes				
12	13/36	Painting Traffic Lane Marking of specified width (1.5mm thick), with Thermoplastic (TP) Paint including Glass Beads, complete in all respect, as approved and directed by Engineer incharge.				
		ii) 6" wide	Rft	8,034.00	56.20	451,511

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DETAILED COST ESTIMATE

P-3 FOOTBALL CHOWK TO STADIUM ROAD

ROADS NETWORK

Sr. No	2nd BI- Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Tuff Paver				
13	10/41	Providing and laying Tuff pavers, having 7000 PSI, crushing strength of approved manufacturer, over 2" to 3" sand cushion i/c grouting with sand in joints i/c finishing to require slope. complete in all respect. (50% Grey / 50% Coloured)				
		c) 80-mm thick (For Shoulder)	Sft	28,000.00	194.65	5,450,200
		Road Edging				
14	18/5	Providing and laying road edging of 3" (75 mm) wide and 9" (225 mm) deep brick on end, complete in all respects.	Rft	5,600.00	51.05	285,880
		P.C.C (Between Asphalt and Tuff Paver)				
15	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(f) Ratio 1: 2: 4	100Cft	18.48	38,126.10	704,570
		Cat Eyes				
16	18/28	Providing & fixing Cat Eyes of size 4"x4"x3/4" duly casted with specified material having plastic strip containing mini retro-reflective glass beads of color white /red/ yellow having specifid reflections, quality & shape i/c the cost of self built in12mm dia x120mm long steel zinc plate dnail, fixing to road with epoxy/ hammering with separate nail complete.				
		b) Aluminium Alloy				
		A) Dual-Directional				
		(ii) 43x2=86 Glass beads a side	Each	830.00	693.80	575,854
17	18/25/a	Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.				
		(a) G.I Sheet 14 SWG				
		CIRCULAR/TRIANGULAR				
		3 ft size	P. Sft	36.00	948.15	34,133

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DETAILED COST ESTIMATE

P-3 FOOTBALL CHOWK TO STADIUM ROAD

ROADS NETWORK

Sr. No	2nd BI- Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
18	18/27/b	Providing, fabrication and fixing Vertical Post comprising of medium quality G.I Pipe of specified diameter, including the cost of clamping arrangements, top cover, hold fasts embedded in PCC 1:2:4 etc, complete in all respect				
		(b) 3 inch diameter	Rft	66.00	1,259.85	83,150
19	13/42/a	Lettering and printing of signage /direction boards/ road delineators of any colour by machine i/c cost of Digital Lettering, Lamination & pasting etc complete in all respect.				
		a) High Intensity Prismatic (HIP) Tape	P. Sft	36.00	1,111.65	40,019
		Deduction				
20	06.004	Brick Bats to be made from dismantling of brick edging. (Input Rate)	100Cft	9.75	4,200.00	(40,950)
		Total Amount Rs.				41,291,729
		DRAINAGE SYSTEM				
		Dismantling				
1	4/19/c	c) Dismantling cement concrete 1:2:4 plain.	100Cft	0.52	11,174.60	5,793
		Excavation				
2	3/7/i	Earthwork excavation in open cutting upto 5'-0" (1.5 m) depth for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water from trenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:- i) in ordinary soil.	1000Cft	1.88	9,016.70	16,906
		P.C.C				
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(f) Ratio 1: 2: 4	100Cft	3.90	38,126.10	148,692

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DETAILED COST ESTIMATE

P-3 FOOTBALL CHOWK TO STADIUM ROAD

ROADS NETWORK

Sr. No	2nd BI- Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Brick Work				
4	7/7/i	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3	100Cft	1.04	31,959.10	33,137
5	7/10	Extra for pacca brick work in steining of wells or any other circular masonry.	100Cft	1.04	2,634.00	2,731
		Plaster				
6	11/8/b	Cement plaster 1:3 upto 20' (6.00 m) height:- b) ½" (13 mm) thick	100Sft	2.76	3,420.40	9,457
		R.C.C Work				
7	6/6/a/i/3	Providing and laying reinforced cement concrete (i/c pre-stressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, i/c forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, complete				
		a). Reinforced cement concrete in roof slab, beams, columns, lintels, girders and other structural members laid in situ or pre-cast laid in position, or pre-stressed members cast in situ, complete in all respect. Type C (nominal mix 1:2:4)	P Cft	28.00	556.50	15,582
		Steel				
8	6/12/c	Fabrication of mild steel reinforcement for cement concrete, i/c cutting, bending, laying in position, making joints and fastening, i/c cost of bending wire and labour charges for bending of steel reinforcement (also includes removal of rust from deformed bars) Gade 60	100Kg	0.86	31,801.40	27,271
		Gully Grating Chamber				
9	21/8	Constructing standard gully grating chamber, 3'x2½' (900x750 mm), with chinaware trap as per PHED Drawing STD/PD No. 3 of 1977, complete in all respects.	Each	15.00	16,370.90	245,564
10	7/30	Supplying and filling sand under floor; or plugging in wells.	100Cft	7.50	2,823.30	21,175

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ROADS NETWORK

Sr. No	2nd BI- Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		uPVC Pipe				
11	19/47	Providing, fixing, testing and commissioning of μ -PVC (Unplasticized polyvinyl Chloride) Nikasi /waste pipe make of dadex / Popular / Beta/ BBJ plain / socket ended conforming to code EN-1401 of specified SDR (Standard Dimension Ratio) including the cost of specials and Solvents complete in all respect as approved and directed by the Engineer Incharge.				
		Type (SDR 41/SN-4)				
		(vii) 8"(200 mm)	Rft	300.00	451.15	135,345
		RPC Manhole Cover				
12	N.S	Providing and fixing RPC Manhole Cover Manufactured with 100% Reinforced Plastic Composite Material, 650 mm dia with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (Complete) (Certified under ISO 9001-2015)	Each	16.00	10,950.00	175,200
		Manhole cover				
13	MR	Old/existing Manhole cover and Frame complete set shift to MC store.	Set	16.00	500.00	8,000
		Total Amount (Rs)				844,853
		ELECTRICAL WORKS				
		Scheduled Items (A)				
		Excavation				
1	3/21	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling around structure with excavated earth, watering and ramming lead upto one chain (30 m) and lift upto 5 ft. (1.5 m)				
		a) By Manual				
		ii) in ordinary soil.	%oCft	19.18	10,677.75	204,799

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ROADS NETWORK

Sr. No	2nd BI- Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		RCC Foundation for Poles				
2	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-				
		(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-				
		3) Type C (nominal mix 1: 2: 4)	Cft	1,368.00	457.75	626,202
		Steel Work				
3	6/12/b	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-				
		(b) Deformed bars (Grade-40)	100Kg	34.20	31,411.60	1,074,277
4	24/6	Supply and erection PVC pipe for recessed wiring (main and sub-main) purpose, including bends, specials, etc. in floor, wall or trenches:-				
		i) 50 mm i/d	Rft	7,125.00	185.85	1,324,181
5	24/12	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaid G.I. pipe/M.S. conduits/PVC pipe/G.I. wire/trenches, etc (rate for cable only):-				
		ii) 6 mm sq (7/0.044")	Rft	1,140.00	117.70	134,178
6	24/13/c	Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire / trenches, etc. (rate for cable only):-				

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ROADS NETWORK

Sr. No	2nd BI- Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		b) PVC insulated, PVC sheathed 3 core, 660/1100 volt cable:-				
		iii) 7/0.74 mm (7/0.029")	Rft	2,280.00	105.15	239,742
		c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-				
		vi) 10 mm (7/0.052")	Rft	7,125.00	523.85	3,732,431
		vii) 16 mm (7/0.064")	Rft	100.00	642.90	64,290
7	24/68	Supplying, installation testing and commissioning of Octagonal shape electric street light pole, made of hot dipped 4.5 mm thick (7 SWG) galvanized steel, tapered from 225 mm at bottom to 100 mm at top, with 1500 mm x 60 mm dia. arm for luminaire installation, duly G.I. welded with 470x470x20 mm base plate with the help of 4 no triangular stiffeners 100x350x20 mm of GI sheet, with built in junction box with shutter, i/c the cost of nuts & J-rag bolts, duly fixed in pre-laid concrete foundation, foundation will be paid additionally as approved and directed by the Engineer Incharge.				
		Single Arm				
		(i) 10 mtr height	Each	57.00	106,236.55	6,055,483
8	24/69/c	Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming to IP 65, Philips/ Osram /Thorn with corrosion resistant die casted aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection i/c the cost of all accessories/components required for proper operation, fully flexible for future upgradation and easy replacements for maintenance purposes, bucket elevator charges as approved and directed by the Engineer Incharge.				
		c) 120 Lm/Watt				
		(v) 90 Watt with 10800 Lumens	Each	57.00	51,675.00	2,945,475
9	24/77	Supply and erection of electric energy meter, including meter testing fee, etc.				
		b) three phase, 4 wires:				
		ii) 3x50 Amp, 400 volts	Each	1.00	14,659.25	14,659

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ROADS NETWORK

Sr. No	2nd BI- Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
10	24/105/iii	Supply, insatllation, commissioning and testing of oil cooled type, Step down Power Transformer of specified rating,11/0.415 kV, i/c the cost of lifting hooks, thermometers, LT & HT bushing 5-steps, tap changer, imported double float buchholz relay, 2 earthing terminals, roller wheels, connecting terminals for cables M.S box on transformer in order to cover complete L.T side, all necessary materials required for connections on H.T & L.T side, rated voltage 11000/415/240 V impedance 6.25% or as specified by WAPDA/IEC system earth: Delta / Star, neutral solidly earthed, i/c Wapda testing charges,complete in all respects made of PEL, Siemens, as approved and directed by the Engineer Incharge				
		(iii) 25 KVA	Each	1.00	329,487.70	329,488
11	24/70	Earthing of iron clad / aluminum switches, etc. with G.I. wire No. 8 SWG in G.I. pipe 15 mm (½") dia, recessed or on surface of wall and floor, complete with 1.5 metre long G.I. pipe, 50 mm (2") dia with reducing socket 4 to 5 metre below ground level, and 2 metre away from building plinth.	Job	60.00	9,592.45	575,547
		Sub Total Scheduled Items: (A)				17,320,753
Non Schedule		Part-B				
12	N.S	Fabrication, Supply, testing and commissioning of following Light control panels (LCP), floor standing weather proof, IP 65 Rated of appropriate size, made of MS Sheet 16 SWG with hinged door, handle, catcher, 2 coats of antirust and powder coated paint of approved colour, AC3 megnatic contactor, photocell for automatic operation of lights, CBs, Hand/Off/Auto switch, push button and all necessary accessories complete in all respects. LCP shall be manufactured as per specifications, single line diagram complete in all respect up to the satisfaction of Engineer incharge.				
	(a)	LCP-3 Phase	No.	1.00	344,935	344,935

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ROADS NETWORK

Sr. No	2nd BI- Annual-2022 (July to Dec) Khanewal	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
13	N.S	Shifting of 4 Nos. Wapda Electric Poles	Job			600,000
14	N.S	Electric Connection Charges from wapda	Each	1.00	350,000	350,000
		Total Cost (Part B)			Rs.	1,294,935
		Grand Total (Part A + Part B)			Rs.	18,615,688
		Grand Total Amount Rs.				60,752,270

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CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Dismantling						
1	Dismantling and removing road metalling.						
	RD 0+000 to 2+600	1	2,600	16.00	0.08	3,467	Cft
						Total	3,467 Cft
						Total.	34.67 %Cft
2	Dismantling dry brick masonry.						
	RD 0+000 to 2+600	2	2,600	0.25	0.75	975	Cft
						Total	975 Cft
						Total.	9.75 %Cft
3	Ploughing and Compaction of Existing road surface upto 6" depth i/c dressing, leveling, supplying and spreading of stone screening (Khaka) and compaction to achieve to 100% maximum ASSHO dry density complete in all respects.						
	RD 0+000 to 2+600	1	2,600	13.00	0.50	16,900	Cft
	RD 2+600 to 2+800	1	200	20.00	0.50	2,000	Cft
						Total	18,900 Cft
						Total.	189.00 %Cft
4	Earthwork excavation undressed lead upto a single throw of Kassi, phaorah or shovel:- i) ordinary						
	For widening Road						
	RD 0+000 to 2+600	2	2,600	4.00	0.83	17,333	Cft
	RD 2+600 to 2+800	2	200	6.00	0.83	2,000	Cft
	For Tuff Paver Shoulders						
	RD 0+000 to 2+600	2	2,600	5.00	0.67	17,420	Cft
	RD 2+600 to 2+800	2	200	5.00	0.67	1,340	Cft
						Total	38,093 Cft
						Total.	56.85 %Cft

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CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Borrow Earth						
5	Earthwork in ordinary soil for embankment including ploughing and mixing with blade grade or disc harrow or other suitable equipment and compaction by mechanical means at optimum moisture content and dressing to designed section, complete in all respects:- 90% to 95% maximum modified dry density as determined according to AASHTO T-180 method-D including Transportation of earth.						
	For widening Road						
	RD 0+000 to 2+600	2	2,600	4.00	0.25	5,200	Cft
	RD 2+600 to 2+800	2	200	6.00	0.25	600	Cft
	For Tuff Paver Shoulders						
	RD 0+000 to 2+600	2	2,600	5.00	0.25	6,500	Cft
	RD 2+600 to 2+800	2	200	5.00	0.25	500	Cft
						Total	12,800 Cft
						Total.	12.80 %oCft
	Sub Base Course						
6	Providing and laying sub-base course of stone product of approved quality and grade including, placing, mixing, spreading and compaction of sub base material to required depth, camber and grade to achieve 98% maximum dry density determined according to AASHTO T-180 method-D, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sakhi Sarwar quarry to site, actual compacted depth shall be considered for payment)						
	For widening Road						
	RD 0+000 to 2+600	2	2,600	4.00	0.67	13,936	Cft
	RD 2+600 to 2+800	2	200	6.00	0.67	1,608	Cft
	For Tuff Paver Shoulders						
	RD 0+000 to 2+600	2	2,600	5.00	0.33	8,580	Cft
	RD 2+600 to 2+800	2	200	5.00	0.33	660	Cft
						Total	24,784 Cft
						Total.	247.84 %Cft

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CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Water Bound Macadam						
7	Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sakhi Sarwar quarry to site, actual compacted depth shall be considered for payment)						
	Crushed stone aggregate from approved quarry						
	For Road						
	RD 0+000 to 2+600	1	2,600	24.00	0.50	31,200	Cft
	RD 2+600 to 2+800	1	200	32.00	0.50	3,200	Cft
	For Tuff Paver						
	RD 0+000 to 2+600	2	2,600	5.00	0.33	8,667	Cft
	RD 2+600 to 2+800	2	200	5.00	0.33	667	Cft
					Total	43,733	Cft
					Total.	437.33	%Cft
	Prime Coat						
8	Providing and laying bituminous priming coat, using 10 lbs. kerosene oil and 10 lbs. binder per 100 Sft. or 0.5 Kg kerosene and 0.5 Kg binder per square metre.						
	RD 0+000 to 2+600	1	2,600	24.00		62,400	Sft
	RD 2+600 to 2+800	1	200	32.00		6,400	Sft
					Total	68,800	Sft
					Total.	688.00	%Sft
9	Providing and laying bituminous tack coat, using 10 lbs. of bitumen per 100 Sft (0.49 Kg of bitumen per sq.m.)						
	RD 2+800 to 3+317	1	517	16.00		8,272	Sft
	Approach Roads total Area	1	6,600	1.00		6,600	Sft
					Total.	148.72	%Sft

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CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Carpeting						
	AWC						
10	Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (2 inch thick) (iv) 4.5% Bitumen						
	RD 0+000 to 2+600	1	2,600	24.00		62,400	Sft
	RD 2+600 to 2+800	1	200	32.00		6,400	Sft
	RD 2+800 to 3+317	1	517	16.00		8,272	Sft
	Approach Roads total Area	1	6,600	1.00		6,600	Sft
					Total	83,672	Sft
					Total.	836.72	%Sft
	Paint For Traffic Lanes						
11	Painting Traffic Lane Marking of specified width (1.5mm thick), with Thermoplastic (TP) Paint including Glass Beads, complete in all respect, as approved and directed by Engineer incharge.						
	RD 0+000 to 2+600	2.5	2,600			6,500	Rft
	RD 2+600 to 2+800	2.5	200			500	Rft
	RD 2+800 to 3+317	2	517			1,034	Rft
					Total	8,034	Rft
	Tuff Paver						
12	Providing and laying Tuff pavers, having 7000 PSI, crushing strength of approved manufacturer, over 2" to 3" sand cushion i/c grouting with sand in joints i/c finishing to require slope. complete in all respect. (50% Grey / 50% Coloured)						
	c) 80-mm thick (For Shoulder)						
	RD 0+000 to 2+600	2	2,600	5.00		26,000	Sft
	RD 2+600 to 2+800	2	200	5.00		2,000	Sft
					Total	28,000	Sft
	Road Edging						
13	Providing and laying road edging of 3" (75 mm) wide and 9" (225 mm) deep brick on end, complete in all respects.						
	RD 0+000 to 2+600	2	2,600			5,200	Rft
	RD 2+600 to 2+800	2	200			400	Rft
					Total	5,600	Rft

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CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
P.C.C (Between Asphalt and Tuff Paver)							
14	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 2: 4						
	RD 0+000 to 2+600	4	2,600	0.33	0.50	1,716	Cft
	RD 2+600 to 2+800	4	200	0.33	0.50	132	Cft
						Total	1,848 Cft
						Total.	18.48 %Cft
Cat Eyes							
15	Providing & fixing Cat Eyes of size 4"x4"x3/4" duly casted with specified material having plastic strip containing mini retro-reflective glass beads of color white /red/ yellow having specifid reflections, quality & shape i/c the cost of self built in 12mm dia x 120mm long steel zinc plate dnail, fixing to road with epoxy/hammering with separate nail complete.						
	b) Aluminium Alloy						
	A) Dual-Directional						
	(ii) 43x2=86 Glass beads a side	830				830	Each
16	Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.						
	(a) G.I Sheet 14 SWG						
	CIRCULAR/TRIANGULAR						
	3 ft size	6	3.00	2.00		36	Sft
17	Providing, fabrication and fixing Vertical Post comprising of medium quality G.I Pipe of specified diameter, including the cost of clamping arrangements, top cover, hold fasts embeded in PCC 1:2:4 etc, complete in all respect						
	(b) 3 inch diameter	6	11			66	Rft
18	Lettering and printing of signage /direction boards/ road delineators of any colour by machine i/c cost of Digital Lettering, Lamination & pasting etc complete in all respect.						
	a) High Intensity Prismatic (HIP) Tape					36	Sft

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CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Deduction						
19	Brick Bats to be made from dismantling of brick edging. (Input Rate)						
	Total Qty.					9.75	%Cft
						Total	9.75 %Cft
	DRAINAGE SYSTEM						
	Dismantling						
1	c) Dismantling cement concrete 1:2:4 plain.						
	Manhole Neck	16	8.64	0.75	0.50	52	Cft
						Total	0.52 %Cft
	Excavation						
2	Earthwork excavation in open cutting upto 5'-0" (1.5 m) depth for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water from trenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:- i) in ordinary soil.						
	Pipe Laying	15	20.00	2.50	2.50	1,875	Cft
						Total	1,875 Cft
						Total	1.88 %oCft
3	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 2: 4						
	Pipe Laying	15	10	1.50	1.50	338	Cft
	For manhole neck	16	8.64	0.75	0.50	52	Cft
						Total	390 Cft
						Total	3.90 %Cft
4	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3						
	For manhole neck	16	8.64	0.75	1.00	104	Cft
						Total	104 Cft
						Total	1.04 %Cft

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CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
5	Extra for pacca brick work in steining of wells or any other circular masonry.					Total	1.04 %Cft
6	Cement plaster 1:3 upto 20' (6.00 m) height:- b) ½" (13 mm) thick For manhole neck	32	8.64		1.00	276	Sft
						Total	276 Sft
						Total	2.76 %Sft
7	Providing and laying reinforced cement concrete (i/c pre-stressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, i/c forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, complete a). Reinforced cement concrete in roof slab, beams, columns, lintels, girders and other structural members laid in situ or pre-cast laid in position, or pre-stressed members cast in situ, complete in all respect. Type C (nominal mix 1:2:4) For Culvert Slab	1	12	3.50	0.67	28.00	Cft
						Total	28.00 Cft
8	Fabrication of mild steel reinforcement for cement concrete, i/c cutting, bending, laying in position, making joints and fastening, i/c cost of bending wire and labour charges for bending of steel reinforcement (also includes removal of rust from deformed bars) Gade 60 Concrete Qty		28	Cft @	6.75	189	lbs/cft
						86	kg
						Total	0.86 Kg
Gully Grating Chamber							
9	Constructing standard gully grating chamber, 3'x2½' (900x750 mm), with chinaware trap as per PHED Drawing STD/PD No. 3 of 1977, complete in all respects.	15				15.00	Each

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SUPERVISION IN 16 CITIES OF PUNJAB

P-3 FOOTBALL CHOWK TO STADIUM ROAD

CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
10	Supplying and filling sand under floor; or plugging in wells.	15	20.00	2.50	1.00	7.50	%Cft
	uPVC Pipe						
11	Providing, fixing, testing and commissioning of u-PVC (Unplasticized polyvinyl Chloride) Nikasi /waste pipe make of dadex / Popular / Beta/ BBJ plain / socket ended conforming to code EN-1401 of specified SDR (Standard Dimension Ratio) including the cost of specials and Solvents complete in all respect as approved and directed by the Engineer Incharge.						
	Type (SDR 41/SN-4)						
	(vii) 8"(200 mm)	15	20.00			300	Rft
	RPC Manhole Cover						
12	Providing and fixing RPC Manhole Cover Manufactured with 100% Reinforced Plastic Composite Material, 650 mm dia with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (Complete) (Certified under ISO 9001-2015)	16				16	Each
	ELECTRICAL WORKS						
	Scheduled Items (A)						
	Excavation						
1	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling around structure with excavated earth, watering and ramming lead upto one chain (30 m) and lift upto 5 ft. (1.5 m)						
	a) By Manual						
	ii) in ordinary soil.						
	For pipe 50mm dia from TR to LCP and LCP to poles	1	7,125	1.00	2.50	17,813	Cft
	Light Poles	57	2.00	2.00	6.00	1,368	Cft
					Total	19,181	Cft
					Total	19.18	%oCft

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P-3 FOOTBALL CHOWK TO STADIUM ROAD

CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
RCC Foundation for Poles							
2	Providing and laying reinforced cement concrete (including prestressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-						
	(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-						
	3) Type C (nominal mix 1: 2: 4)						
	Light Poles	57	2.00	2.00	6.00	1,368	Cft
						Total	1,368.00 Cft
Steel Work							
3	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-						
	(b) Deformed bars (Grade-40)		2.50Kg/Cft			3,420	Kg
						Total	34.20 Kg
4	Supply and erection PVC pipe for recessed wiring (main and sub-main) purpose, including bends, specials, etc. in floor, wall or trenches:-						
	i) 50 mm i/d						
	From LCP to Pole and pole to pole (Up + Down)	57	125.00			7,125	Rft
5	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaid G.I. pipe/M.S. conduits/PVC pipe/G.I. wire/trenches, etc (rate for cable only):-						
	ii) 6 mm sq (7/0.044")						
	For two nos. Earthing lead	57	20.00			1,140	Rft

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P-3 FOOTBALL CHOWK TO STADIUM ROAD

CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
6	Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire / trenches, etc. (rate for cable only):-						
	b) PVC insulated, PVC sheathed 3 core, 660/1100 volt cable:-						
	iii) 7/0.74 mm (7/0.029")						
	From Terminal Box to light fixture on pole (P+N+E)	57	40.00			2,280	Rft
	c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-						
	vi) 10 mm (7/0.052")	57	125.00			7,125	Rft
	vii) 16 mm (7/0.064")	1	100.00			100	Rft
7	Supplying, installation testing and commissioning of Octagonal shape electric street light pole, made of hot dipped 4.5 mm thick (7 SWG) galvanized steel ,tapered from 225 mm at bottom to 100 mm at top,with 1500 mmx60 mm dia. arm for luminaire installation, duly G.I.welded with 470x470x20 mm base plate with the help of 4 no triangular stiffeners 100x350x20 mm of GI sheet,with built in junction box with shutter,i/c the cost of nuts & J-rag bolts, duly fixed in prelaid concrete foundation, foundation will be paid additionally as approved and directed by the Engineer Incharge.						
	Single Arm						
	(i) 10 mtr height	57				57	Nos
8	Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming to IP 65, Philips/ Osram /Thorn with corrosion resistant die casted aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection i/c the cost of all accessories/components required for proper operation , fully flexible for future upgradation and easy replacements for maintenance purposes,bucket elevator charges as approved and directed by the Engineer Incharge.						
	c) 120 Lm/Watt						
	(v) 90 Watt with 10800 Lumens	57				57	Nos
9	Supply and erection of electric energy meter, including meter testing fee, etc.						
	b) three phase, 4 wires:						
	ii) 3x50 Amp, 400 volts	1				1.00	Nos

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SUPERVISION IN 16 CITIES OF PUNJAB

P-3 FOOTBALL CHOWK TO STADIUM ROAD

CALCULATION OF QUANTITIES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
10	Supply, insatllation, commissioning and testing of oil cooled type, Step down Power Transformer of specified rating,11/0.415 kV, i/c the cost of lifting hooks, thermometers, LT & HT bushing 5-steps, tap changer, imported double float buchholz relay, 2 earthing terminals, roller wheels, connecting terminals for cables M.S box on transformer in order to cover complete L.T side, all necessary materials required for connections on H.T & L.T side, rated voltage 11000/415/240 V impedance 6.25% or as specified by WAPDA/IEC system earth: Delta / Star, neutral solidly earthed, i/c Wapda testing charges,complete in all respects made of PEL, Siemens, as approved and directed by the Engineer Incharge						
	(iii) 25 KVA	1				1.00	Nos.
11	Earthing of iron clad / aluminum switches, etc. with G.I. wire No. 8 SWG in G.I. pipe 15 mm (½") dia, recessed or on surface of wall and floor, complete with 1.5 metre long G.I. pipe, 50 mm (2") dia with reducing socket 4 to 5 metre below ground level, and 2 metre away from building plinth.	60				60.00	No.
12	Fabrication, Supply, testing and commissioning of following Light control panels (LCP), floor standing weather proof, IP 65 Rated of appropriate size, made of MS Sheet 16 SWG with hinged door, handle, catcher, 2 coats of antirust and powder coated paint of approved colour, AC3 megnatic contactor, photocell for automatic operation of lights, CBs, Hand/Off/Auto switch, push button and all necessary accessories complete in all respects. LCP shall be manufactured as per specifications, single line diagram complete in all respect up to the satisfaction of Engineer incharge.						
	LCP-3 Phase	1				1.00	Nos.
13	Shifting of 4 Nos. Wapda Electric Poles						
14	Electric Connection Charges from wapda	1				1.00	Each

ENVIRONMENTAL HEALTH SAFETY BUDGET

**PUNJAB CITIES PROGRAM (PCP)
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DETAILED COST ESTIMATE

ENVIRONMENTAL HEALTH SAFETY BUDGET

Sr No	Description	Unit	Quantity	Unit Rate (Rs.)	Amount Rs.
	Labor Safety				
1	Face Masks (3 PLY)	Nos	15.00	700.00	10,500
2	Safety Gum Shoes	Nos	15.00	1,350.00	20,250
3	Hand Gloves	Nos	15.00	245.00	3,675
4	First Aid Box (Including essential Medicine)	Nos	3.00	5,000.00	15,000
5	Safety Hard Helmets MSA	Nos	15.00	2,000.00	30,000
6	Safety Goggles	Nos	15.00	550.00	8,250
7	Reflective Safety Vests	Nos	15.00	550.00	8,250
				Sub Total	95,925
	Working Site Safety				
1	Reflective Safety Signs Boards	Nos	6.00	10,000.00	60,000
2	Reflective Safety Barricading Tape	Nos	24.00	1,500.00	36,000
				Sub Total	96,000
	Others				
3	Water Sprinkling (Dust Abatement)	L.S	1.00	100,000	100,000
				Sub Total	100,000
	Total Amount (Rs)				291,925

RATE ANALYSIS

PUNJAB CITIES PROGRAM (PCP)
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EARTH WORK LEAD CHART

Rate Analysis Road- 1

Sr. No.	2nd BI-Annual-2022 (July to Dec) Khanewal	Description	Lead	Unit.	Qty	Rate (Rs)	Amount (Rs)
1	3/5/i	Earthwork in ordinary soil for embankments lead upto 100 ft. (30 m), including ploughing and mixing with blade grade or disc harrow or other suitable equipment, and compaction by mechanical means at optimum moisture content and dressing to designed section, complete in all respects:-					
		i) 95% to 100% maximum modified AASHO dry density.	1	1000Cft	1	9,527.90	9,527.90
2	3/17a.b.c	Carriage					
		upto ¼ mile (400 m).	1	1000 Cft	1	4,248.00	4,248.00
		for every 330 ft. (100 m) additional lead or part thereof, beyond ¼ mile (400 m) upto one mile. (1.6 Km.)	12	1000 Cft	1	47.50	570.00
		for every ¼ mile (400 m) additional lead or part thereof, beyond one mile (1.6 Km.) upto 5 mile (8 Km).	3.5	1000 Cft	1	338.40	1,184.40
		for every ½ mile (800 m) additional lead or part thereof, beyond 5 miles (8 Km).	0	1000 Cft	1	320.35	-
		Total Amount 1,000 (Rs.).					15,530.30
		Total Amount Per Cft					15.53

PUNJAB CITIES PROGRAM (PCP)
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Rate Analysis Road- 2

Description							
Providing and laying sub-base course of stone product of approved quality and grade including, placing, mixing, spreading and compaction of sub base material to required depth, camber and grade to achieve 98% maximum dry density determined according to AASHTO T-180 method-D, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sakhi Sarwar quarry to site, actual compacted depth shall be considered for payment)							
Crush Stone							185 KM
Sr. No.	2nd BI-Annual-2022 (July to Dec) Khanewal	Description	Unit	Lead (Km)	Qty	Rate (Rs)	Amount (Rs)
1		Material					
	18-3 a(ii)	Crushed stone aggregate.	100 Cft	1	1	8,925.00	8,925.00
2	1/1	Carriage					
		1st KM	100 Cft	1	1.20	299.40	359.28
		2nd KM	100 Cft	1	1.20	145.25	174.30
		3rd KM	100 Cft	1	1.20	116.85	140.22
		4th KM	100 Cft	1	1.20	85.30	102.36
		5th KM	100 Cft	1	1.20	80.20	96.24
		6th KM	100 Cft	1	1.20	79.00	94.80
		7th KM	100 Cft	1	1.20	74.25	89.10
		8th KM	100 Cft	1	1.20	73.50	88.20
		9th KM	100 Cft	1	1.20	69.55	83.46
		10th KM	100 Cft	1	1.20	65.70	78.84
		From 11 km to 200 km	100 Cft	175.00	1.20	57.25	12,022.50
		Total.					22,254.30
		Total Amount per 100 Cft					22,254.30
		Total cast for Per Cft					222.54

PUNJAB CITIES PROGRAM (PCP)
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Rate Analysis Road - 3

Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sakhi Sarwar quarry to site, actual compacted depth shall be considered for payment)

185 KM

Sr. No.	2nd BI-Annual-2022 (July to Dec) Khanewal	Description	Unit	Lead (Km)	Qty	Rate (Rs)	Amount (Rs.)
1	18/4(a)	Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from sargodha quarry to site, actual compacted depth shall be considered for payment)	100 Cft		1	11,806.60	11,806.60
2	1/1	Carriage of 100 cft of all materials like stone aggregate spawl kanker lime surkhi etc or 150 cft of timber by truck or by any other means owned by the contractor.					
		1st KM	100 Cft	1	1.22	299.40	365.27
		2nd KM	100 Cft	1	1.22	145.25	177.21
		3rd KM	100 Cft	1	1.22	116.85	142.56
		4th KM	100 Cft	1	1.22	85.30	104.07
		5th KM	100 Cft	1	1.22	80.20	97.84
		6th KM	100 Cft	1	1.22	79.00	96.38
		7th KM	100 Cft	1	1.22	74.25	90.59
		8th KM	100 Cft	1	1.22	73.50	89.67
		9th KM	100 Cft	1	1.22	69.55	84.85
		10th KM	100 Cft	1	1.22	65.70	80.15
		From 11 km to 200 km	100 Cft	172.00	1.22	57.25	12,013.34
		Total.					25,148.52
		Total Amount per 100 Cft					25,148.52
		Total cast for Per Cft					251.49

PUNJAB CITIES PROGRAM (PCP)
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Rate Analysis Road - 5

Ploughing and Compaction of Existing road surface upto 6" depth i/c dressing, leveling, supplying and spreading of stone screening (Khaka) and compaction to achieve to 100% maximum ASSHO dry density complete in all respects.

MRS 2nd Bi-Annual July 2022 to Dec 2022

Taking = 100CFT

Unit rate =Per 100 CFT

Sr. No.	Details	Qty	Unit	Rate (Rs)	Amount (Rs)
A	Material				
1	Ploughing with tractor up to 6" depth for 100 Cft (Input Rate EQ-18)	1	P.Hour	1,608.00	1,608.00
2	Cost of Stone Screening (Khaka) at quarry for 100 Cft = (Input Rate 18.005)	17	%CFT	4,836.00	822.12
3	Labour charges for spreading of Khaka dressing and levelling etc skilled 2 No's for 1.5 Hours (Input Rate lb-024)		P.Day	1,250.00	468.75
4	Compaction of existing road surface with 12 to roller and watering etc. for 100Cft (Input Rate EQ-05)	0.75	P.Hour	3,660.00	2,745.00
Total					5,643.87
Add 20% Contractor Profit on Item No.2					164.42
Composite Rate Per 100Cft					5,808.29

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Rate Analysis Road - 6

Description									
Dismantling / Demolishing of existing kerb stone as directed by Engineer's Incharge, Complete in all respect									
Dismantling Kerb stone								Unit.	100 Rft
Sr. No.	Ref Input Rate	Detail			Unit Rate (British System) per 100 Rft				
					Qty		Rate Per Unit		Amount (Rs.)
		<u>LABOUR</u>							
2	LB-015	Cooly un-skilled			2.00	Nos.	962.00	per day	1,924.00
								Total.	1,924.00
		Sundries			10	%			192.40
								Total Rs.	2,116.40
		Contractor's Profit			20	%			423.28
		Total							2,539.68
		<u>ITEM RATES</u>							
		Composite rate per 100 Rft						Rs.	2,539.68
		Composite rate per Rft						Rs.	25.40

**PUNJAB CITIES PROGRAM (PCP)
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Rate Analysis Road - 7

Description

Providing and fixing RPC Manhole Cover Manufactured with 100% Reinforced Plastic Composite Material, 650 mm dia with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (Complete) (Certified under ISO 9001-2015)

Manhole Cover

Sr. No.	Ref Input Rate	Detail	Unit Rate (British System) per 100 Rft		
			Qty	Rate Per Unit	Amount (Rs.)
	Page No112				
1	A	RPC Manhole Cover	1.00	No	7000
		Carriage			No
					7,000.00
					1,163
					Total
					8,162.50
		<u>LABOUR</u>			
2	LB-024	Skilled Cooly	0.70	Nos.	1,250.00
					per day
					875.00
					Total.
					875.00
		Sundries	10	%	
					87.50
					Total Rs.
					962.50
					Total (1+2)
					9,125.00
		Contractor's Profit	20	%	
					1,825.00
		Total			10,950
		<u>ITEM RATES</u>			
		Composite rate Set			Rs.
					10,950

**PUNJAB CITIES PROGRAM (PCP)
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Rate Analysis Road - 8

Description

Fabrication, Supply, testing and commissioning of following Light control panels (LCP), floor standing weather proof, IP 65 Rated of appropriate size, made of MS Sheet 16 SWG with hinged door, handle, catcher, 2 coats of antirust and powder coated paint of approved colour, AC3 magnetic contactor, photocell for automatic operation of lights, CBs, Hand/Off/Auto switch, push button and all necessary accessories complete in all respects. LCP shall be manufactured as per specifications, single line diagram complete in all respect up to the satisfaction of Engineer incharge.

LCP

Unit. Each

Sr. No.	Ref Input Rate	Detail	Unit Rate (British System) per Each						
			Qty	Rate Per Unit		Amount (Rs.)			
1	MR	LCP	1.00	No	179,000	No.	179,000.00		
2		Loading, Unloading & Installation Charges	10	%			17,900		
							Total	196,900.00	
		GST on item No.2	17	%				30,430.00	
		Contractor's Profit on Item No. 1 & 2	20	%				39,380.00	
		Total						266,710	
		<u>ITEM RATES</u>							
		Composite rate Set					Rs.	266,710	

**PUNJAB CITIES PROGRAM (PCP)
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Rate Analysis Road - 9

Description

Fabrication, Supply, testing and commissioning of following Light control panels (LCP), floor standing weather proof, IP 65 Rated of appropriate size, made of MS Sheet 16 SWG with hinged door, handle, catcher, 2 coats of antirust and powder coated paint of approved colour, AC3 magnetic contactor, photocell for automatic operation of lights, CBs, Hand/Off/Auto switch, push button and all necessary accessories complete in all respects. LCP shall be manufactured as per specifications, single line diagram complete in all respect up to the satisfaction of Engineer incharge.

LCP

Unit. Each

Sr. No.	Ref Input Rate	Detail	Unit Rate (British System) per Each						
			Qty	Rate Per Unit		Amount (Rs.)			
1	MR	LCP	1.00	No	251,500	No.	251,500		
2		Loading, Unloading & Installation Charges	10	%			25,150		
							Total	276,650	
		GST on item No.2	17	%				42,755	
		Contractor's Profit on Item No. 1 & 2	20	%				55,330	
		Total						374,735	
		<u>ITEM RATES</u>							
		Composite rate Set					Rs.	374,735	

