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PORT MUHAMMAD-BIN-QASIM PROJECT

DETAILED DESIGN REPORT

SUMMARY OF COST ESTIMATES

DECEMBER 1975

JAPAN INTERNATIONAL COOPERATION AGENCY

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C O N T E N T S

I. FORWARD

Construction costs of the Iron and Ore Coal Berth and related facilities, navigation channel dredging, and navigation side as proposed in the Detailed Design of the Port Muhammad-Bin-Qasim Project have been estimated on the basis of the following terms and calculation.

II. TERMS OF ESTIMATION

II-1 Locally available products will be used as construction material as far as possible.

1. Local Products

Cement, sand, gravel, wood for molds, paints, and steel bars (round bars and deformed bars of 1/4" - 2" in diameter)

2. Imported Materials

Shape steel, steel pipe piles, sheet piles, steel plates, mooring bitts, fenders, and waterstops.

II-2 Price of Materials at Site

1. Prices of local products at the construction site have been taken from data supplied by the Authority in August, 1975.

2. Prices of imported materials will be calculated on the basis of unit prices as of September, 1975, considering transport cost from the Far East or Europe. Future price changes will be considered at the time of construction, and this will apply to local products as well.

3. Taxes on imported goods have been calculated on the basis of "Pakistan Customs Tariff" of September, 1974. Reasonable rates have been considered for articles not indicated in the publication.

II-3 Various Insurance for Local Hire

1. Workers and corporate taxes for construction works are not included in the estimate of unit costs.

2. Materials and equipment for temporary erection have been assumed to be imported tax-free.

3. The cost of fixed temporary facilities has been calculated as complete loss, and the cost of equipment to be used for the facilities has been calculated on the basis of depreciation of the facilities.

4. Assuming that dredging plants and principle equipment will be navigated and transported from the Far East or Europe, the round trip cost of navigation and transport has been calculated.

III. COST ESTIMATION

Summary of Cost Estimates

	Description	Estimate Cost	Remarks
(I)	Iron-Ore & Coal Berth and Related Facilities	209,608	Refer to Estimate No.(I)
(II)	Navigation Channel Dredging	455,460	Refer to Estimate No.(II)
(III)	Navigation Aids	26,716	Refer to Estimate No.(III)
(IV)	Engineering	30,000	
	(Supervision Fee)	(18,000)	
	(Survey)	(12,000)	
	Total	721,784	

(I) IRON-ORE & COAL BERTH AND RELATED FACILITIES

	ITEM OF WORKS		COST
PART I	TEMPORARY AND PREPARATORY WORKS	RS.	60,150,000
PART II	MAIN BERTH STRUCTURE	RS.	90,984,611
PART III	APPROACH TRESTLE	RS.	15,251,228
PART IV	SMALL CRAFTS PIER	RS.	3,467,760
PART V	LAND RECLAMATION	RS.	24,368,029
PART VI	WATER AND OIL SUPPLY AND FIRE FIGHTING..	RS.	4,895,984
PART VII	ELECTRIC FACILITIES AND POWER SUPPLY ...	RS.	5,869,861
PART VIII	BUILDINGS	RS.	4,620,906
	TOTAL	RS.	209,608,379

BILL OF QUANTITIES

PART 1

TEMPORARY AND PREPARATORY WORKS

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	PART-I TEMPORARY AND PREPARATORY WORKS						
	Installation of the construction Site and all working and storage areas and the like, inside or outside the P.Q.A. premises, required for the entire construction work described in the Specifications.						
	The prices below contain the costs for the following and any other performances in respect to the haulage, erection and installation of all items, considered necessary for the satisfactory execution of the Works, whether or not mentioned hereunder.						
	The detail breakdown of the cost shall be attached.						
1.	Preparation of Working Yard						
	All works as listed in part-2, Form of Tender, appendix "M", Works for Test Laboratory and Temporary Facilities and equipments for the Engineer, as specified in the Technical Specification.	Sum	1	-		14,300,000	
2.	Mobilization of Constructional Machines and Plants						
	The haulage and import of all constructional plants and machinaries as listed in Part.2, Form of Tender appendix "B".	Sum	1	-		25,300,000	
3.	Demobilization of Constructional Machines and Plants.						
	This price includes the costs for the dismantling, removal and transporting away of any Constructional plant, Temporary Works and all other items used for the execution of the Works, whether or not specifically mentioned in Item 1 and 2 beyond.	Sum	1	-		20,400,000	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
4.	Soil Investigation:						
	Boring and tests as specified in the Technical Specification, Division I Section 4.	Lin.m	250	600		150,000	
	Total					60,150,000	

BILL OF QUANTITIES

PART II

MAIN BERTH STRUCTURE

S U M M A R Y

PART II MAIN BERTH STRUCTURE

Section 1.	Piling Work	RS.	47,103,559.70
Section 2.	Corrosion Protection	RS.	4,502,392.52
Section 3.	Precast Concrete Work	RS.	14,994,931.68
Section 4.	Cast In-situ Concrete Work	RS.	15,945,291.72
Section 5.	Metal Work	RS.	203,463.88
Section 6.	Installation Work of Equipment . .	RS.	8,067,593.00
Section 7.	Ancillary Work	RS.	167,383.32
	Sum Total	RS.	90,984,610.82

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION 1: PILING WORK						
	1.1 PILING FOR MOORING DOLPHINS						
1.1.1	Supply, delivery, unloading, handling and stacking on site of steel pipe piles, including joint welding of pipes at the workyard of site as shown in the Drawings.						
	1,016m/m dia. x 25 - 22m/m thick x 28m long x 30 nos. A.S.T.M. - A252 Grade 2.	Ton	478	9,516	72	4,548,992	16
1.1.2	Transportation, handling and pitching in position.						
	1,016m/m dia. x 28m long vertical pile.	Each	30	26,414	48	792,434	40
1.1.3	Penetration of piles into the hard stratum from the dredged sea bed to a depth of -25 meters as indicated in the Drawings or to a greater depth to the satisfaction of the Engineer, A pilot hole with a smaller diameter will be drilled below the pile tip to a depth of -25meters in addition to pile driving.						
	1,016m/m dia. x 28m long vertical pile.	Nos of pile	30	102,575	16	3,077,254	80
1.1.4	Filling sand into piles up to the level as specified from the bottom of -25 meters. For 1,016m/m dia. vertical pile x 30 nos.	Cu.m	540	315	20	170,208	00
1.1.5	Fixing of reinforcement steel bars for pile head and plate pieces by welding as shown in the Drawings.						
	For 1,016m/m dia. pile	Nos of pile	30	8,631	82	258,954	60
	Sub Total:					8,847,843	96

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	1.2 PILING FOR PILE BENTS						
1.2.1	Supply, delivery, unloading, handling and stacking on site of steel pipe piles reinforced at the ends with ring plates, including joint welding of pipes at the workyard of site as shown in the Drawings. 914.4m/m dia. x 16m/m thick, x 23.5m long 26 nos. x 24m long 26 nos. x 25m long 156 nos. x 21.5m long 6 nos. x 22m long 6 nos. x 23m long 36 nos. A.S.T.M - A252 Grade 2.	Ton	2,278	8,169	03	18,609,050	34
1.2.2	Transportation from Karachi Port, handling, and stacking on site of steel pipe piles supplied by P.Q.A. 647.7m/m dia. x 12.7m/m thick x 12.65m, 10.0m and 6.0m long.	Lin.m	258	51	76	13,354	08
1.2.3	Manufacturing of 647.7m/m diameter steel pipe pile as shown in the Drawings using the piles of item 1.2.2 at the workyard of site, including cutting and processing of piles, fitting up of joint materials, joint welding, reinforcement of pile ends with ring plates and painting. 647.7m/m dia. x 12.7m/m thick x 21.5m long.	Nos of Pile	10	12,220	64	122,206	40
1.2.4	Transportation, handling and pitching in position 914.4m/m dia. x 23.5 - 21.5m long vertical pile.	Each	32	14,770	24	472,647	68
1.2.5	Ditto, but 914.4m/m dia. x 25 - 22m long raking pile.	Each	224	19,286	12	4,320,090	88
1.2.6	Ditto, but 647.7m/m dia. x 21.5 long vertical pile.	Each	10	6,079	72	60,797	20

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
1.2.7	Direct driving of piles from the dredged sea bed to a depth of -20 meters as indicated in the Drawings.						
	914.4m/m dia. vertical pile.	Nos of Pile	26	16,213	68	421,555	68
1.2.8	Ditto as item 1.2.7, but						
	914.4m/m dia. raking pile.	Nos of Pile	182	21,618	16	3,934,505	12
1.2.9	Additional pile driving to item 1.2.7 and 1.2.8, to a depth where the required pile bearing capacity can be obtained, including splicing as indicated in the Specification. The rate per extension length of 2 meters.						
	For 914.4m/m dia. vertical pile	Nos of splicing		20,391	72		
	For 914.4m/m dia. raking pile.	Nos of splicing		24,605	20		
1.2.10	Direct driving of piles from the dredged sea bed to a depth of -18 meters as indicated in the Drawings.						
	647.7m/m dia. vertical pile.	Nos of Pile	8	7,915	00	63,320	00
1.2.11	Penetration of piles into the hard stratum from the dredged sea bed to a depth of -18 meters as indicated in the Drawings A pit with a larger diameter will be drilled from the dredged sea bed to a depth of -18 meters and will be filled with sand. Then the pile will be driven into the pit.						
	914.4m/m dia. vertical pile.	Nos of Pile	6	70,724	96	424,349	76

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
1.2.12	Ditto as item 1.2.11, but 914.4m/m dia raking pile.	Nos of pile	42	132,606	08	5,569,455	36
1.2.13	Ditto as item 1.2.11, but 647.7m/m dia vertical pile.	Nos of pile	2	65,374	24	130,748	48
1.2.14	Filling sand into piles up to the level as specified. For 914.4m/m dia pile.	Cu.m	2,336	315	20	736,307	20
1.2.15	Ditto as item 1.2.13, but for 647.7m/m dia pile.	Cu.m	39	315	20	12,292	80
1.2.16	Cutting off the top of pile driven in at the required level, including fixing of reinforcement steel bars for pile head and plate pieces as shown in the Drawings For 914.4m/m dia. pile.	Nos of pile	256	7,234	91	1,852,136	96
1.2.17	Ditto as item 1.2.15, but for 647.7m/m dia. pile	Nos of pile	10	4,634	36	46,343	60
	Sub Total:					36,789,161	54
	1.3 PILING FOR MAINTENANCE PLATFORM						
1.3.1	Supply, delivery, unloading, handling and stacking on site of steel pipe piles reinforced at the ends with ring plates, including joint welding of pipes at the work yard of site as shown in the Drawings. 812.8m/m dia x 12.7m/m thick x 24mlong x 20 nos. A.S.T.M-A252 grade 2.	Ton	125	8,130	04	1,016,255	00
1.3.2	Transportation, handling and pitching in position. 812.8m/m dia x 24m long vertical pile.	Each	20	9,539	60	190,792	00

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
1.3.3	Direct driving of piles from the dredged sea bed to a depth of -18 meters as indicated in the Drawings. 812.8m/m dia. vertical pile.	Nos of Pile	20	8,428	04	168,560	80
1.3.4	Additional pile driving to item 1.3.3, to a depth where the required pile bearing capacity can be obtained, including splicing as indicated in the Specification. The rate per extension length of 2 meters.						
	For 812.8m/m dia. vertical pile.	Nos of splic-ing		13,223	48		
1.3.5	Filling sand into piles up to the level as specified. For 812.8m/m dia. pile.	Cu.m	159	315	20	50,116	80
1.3.6	Cutting off the top of piles driven in at the required level, including fixing of plate pieces as shown in the Drawings. For 812.8m/m dia. pile.	Nos of Pile	20	2,041	48	40,829	60
	Sub Total:					1,466,554	20
	Total:					47,103,559	70

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION 2: CORROSION PROTECTION						
	2.1 PROTECTION FOR THE FOUNDATION PILE OF MOORING DOLPHIN						
2.1.1	Supply, delivery and fixing of (to steel pipe) pile Aluminium alloy anodes manufactured by "Nippon Corrosion Protection Co., Ltd., Japan", complete with fittings as shown in the Drawings or other equivalent as approved by the Engineer, Type P-D104, anode weight 98 kg.	Each	60	5,950	68	357,040	80
2.1.2	Fixing of potential measuring terminals to steel pipe pile for "Cathodic Protection" as shown in the Drawings and test Operation.	Each	2	580	44	1,160	88
2.1.3	Installation of piles jacket to steel pipe pile including cement mortar grouting as shown in the Drawings. For 1,016m/m dia. pile, 1.0m long.	Nos of pile	6	1,941	88	11,651	28
2.1.4	Ditto as item 2.1.3, but 1.7m long.	Nos of pile	24	3,175	72	76,217	28
	Sub Total:					446,070	24
	2.2 PROTECTION FOR THE FOUNDATION PILE OF PILE BENT						
2.2.1	Ditto as item 2.1.1. Type P-D104, anode weight 98 kg	Each	449	5,950	68	2,671,855	32
2.2.2	Ditto as item 2.1.2.	Each	16	580	44	9,287	04
2.2.3	Ditto as item 2.1.3, but for 914.4m/m dia. pile, 2.44m long.	Nos of pile	32	4,089	64	130,868	48
2.2.4	Ditto as item 2.1.3, but for 914.4m/m dia. pile, 2.55m long.	Nos of pile	192	4,281	32	822,013	44

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
2.2.5	Ditto as item 2.1.3, but for 914.4m/m dia. pile, 2.4m long.	Nos of pile	32	4,040	60	129,299	20
2.2.6	Ditto as item 2.1.3, but for 647.7m/m dia. pile, 1.0m long.	Nos of pile	10	1,340	96	13,409	60
	Sub Total:					3,776,733	08
	2.3 PROTECTION FOR THE FOUNDATION PILE OF MAINTENANCE PLANT FORM						
2.3.1	Ditto as item 2.1.1. Type P-D104, anode weight 98 kg	Each	24	5,950	68	142,816	32
2.3.2	Ditto as item 2.1.2.	Each	2	580	44	1,160	88
2.3.3	Ditto as item 2.1.3, but for 812.8m/m dia. pile, 4.5m long.	Nos of pile	20	6,780	60	135,612	00
	Sub Total:					279,589	20
	Total:					4,502,392	52

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION 3: PRECAST CONCRETE WORK						
	3.1 P.S. CRANE GIRDER:						
	190cm deep x 2.3m wide x 11.9m long x 28 nos.						
3.1.1	Concrete for girders, including formwork. class A.	Cu.m	698	2,028	72	1,416,046	56
3.1.2	Setting up of prestressing wire strands, sheethes and fastening cones, and also post-tensioning including cement mortar grouting						
	12T-12.4m/m dia. strand, A.S.T.M-A416.	Ton of strand	37	48,843	20	1,807,198	40
3.1.3	Reinforcing bars for girder 16m/m dia. or more, mild steel.	Ton	51	8,546	48	435,870	48
3.1.4	Ditto, but 13m/m dia. or less, mild steel.	Ton	35	8,956	24	313,468	40
3.1.5	Transportation and Installation of girders on pile bents.	Each	28	33,154	32	928,320	96
3.1.6	Supply and setting of the bearing for girders on pile bents. including mortar placing as shown in the Drawing.						
	500m/m sq. x 30m/m thick lead plate.	Sheet	112	2,361	72	264,512	64
3.1.7	Supply and setting of the elastic joint sealant for girders on pile bents.						
	2,300-1,400m/m wide x 1,900m/m long x 30m/m thick rubber plate	Sheet	56	17,544	96	982,517	76
	Sub Total:					6,147,935	20

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	3.2 P.S. BEAM FOR SLAB 60cm deep x 32cm wide x 11m long x 507 nos.						
3.2.1	Concrete for beam, including formwork. Class A.	Cu.m	578	2,520	48	1,456,837	44
3.2.2	Setting up of prestressing wire strands and pre-tensioning. 1/4"dia. strand, A.S.T.M-A416.	Ton of strand	41	23,488	68	963,035	88
3.2.3	Reinforcing bars for beam. 16m/m dia. or more, mild steel.	Ton	6	8,546	48	51,278	88
3.2.4	Ditto, but 13m/m dia. or less, mild steel.	Ton	21	8,956	24	188,081	04
3.2.5	Transportation and installation of beams on pile bents.	Each	507	1,633	52	828,194	64
3.2.6	Supply and setting of the bearing for beams on pile bents. 200m/m wide x 11.0m long x 30m/m thick rubber plate.	Sheet	28	12,313	56	344,779	68
3.2.7	Ditto, but 200m/m wide x 12.6m long x 30m/m thick rubber plate.	Sheet	2	14,112	60	28,225	20
3.2.8	Ditto, but 200m/m wide x 2.3m long x 30m/m thick rubber plate.	Sheet	2	2,574	24	5,148	48
3.2.9	Supply and fixing of the fixed end anchor rod for beams on pile bents. 26m/m dia. x 500m/m long anchor rod.	Each	171	37	72	6,450	12
3.2.10	Supply and fixing of the movable end anchor rod for beams on pile bents. 26m/m dia. x 500m/m long capped anchor rod as shown in the Drawings.	Each	93	67	24	6,253	32
3.2.11	Filling class F concrete in between P.S. beams, including formwork for sides and sealing of the soffit gaps of the beams.	Cu.m	543	901	20	489,351	60

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
3.2.12	Setting up of prestressing steel bars, sheethes and fastening assembly, and also post-tensioning in the crossing direction of P.S. beams including cement mortar grouting. 23m/m dia. steel bar, high tensile.	Nos of bar	272	1,887	60	513,427	20
	Sub Total:					4,881,063	48
	3.3 DUCT FOR ELECTRICAL CABLE AND WATER: 185cm deep x 289cm wide x 1.9m long x 14 nos.						
3.3.1	Concrete for duct, including formwork. Class B.	Cu.m	458	1,617	16	740,659	28
3.3.2	Reinforcing bars for duct, including fixing of pieces of steel pipe for duct and others as shown in the Drawings. 16m/m dia. and more, High tensile.	Ton	27	10,316	88	278,555	76
3.3.3	Ditto, but 13m/m dia. or less, mild steel.	Ton	11	9,231	08	101,541	88
3.3.4	Transportation and installation of duct on pile bents.	Each	14	29,752	24	416,531	36
3.3.5	Supply and setting of the bearing for ducts on pile bents including fixing of anchor assembly as shown in the Drawings. 500m/m wide x 500m/m long x 10m/m thick rubber plate.	Sheet	56	713	06	39,931	36
3.3.6	Precasting, transportation and installation of concrete duct covers, including all materials as shown in the Drawings and formwork. Type A: 149cm wide x 199.5cm long x 15cm thick.	Each	107	1,363	72	145,918	04
3.3.7	Ditto, but, Type B: 69cm wide x 199.5cm long x 15cm thick	Each	113	757	24	85,568	12

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
3.3.8	Ditto, but Type C: 100cm wide x 355cm long x 25-35cm thick.	Each	32	3,397	52	108,720	64
	Sub Total:					1,917,426	44
	3.4 DUCT FOR OIL AND WATER SUPPLY PIPING: 160cm deep x 268cm wide x 11.99m long x 15 nos.						
3.4.1	Concrete for duct, including formwork, class B.	Cu.m	443	1,356	32	600,849	76
3.4.2	Reinforcing bars for duct, including fixing of pieces of steel pipe for duct and the angles for corner protection of duct as shown in the Drawings. 16m/m dia. or more, high tensile.	Ton	35	10,316	88	361,090	80
3.4.3	Transportation and installation of duct on pile bents.	Each	15	30,773	76	461,606	40
3.4.4	Supply and setting of the bearing on pile bents for ducts including fixing of anchor assembly as shown in the Drawings. 500m/m wide x 500m/m long x 10m/m thick rubber plate.	Sheet	60	723	59	43,415	40
3.4.5	Precasting, transportation and installation of the concrete duct covers, including all materials as shwon in the Drawings and formwork. Type A: 179cm wide x 199.5cm long x 20cm thick.	Each	142	4,040	80	573,793	60
3.4.6	Ditto, but Type B: 179cm wide x 224.5cm long x 20cm thick.	Each	1	4,400	36	4,400	36
3.4.7	Ditto, but Type C: 179-201.2cm wide x 220.9-50cm long x 20cm thick.	Each	1	3,350	24	3,350	24
	Sub Total:					2,048,506	56
	Total:					14,994,931	68

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION 4: CAST IN-SITU CONCRETE WORK						
	4.1 TOP CONCRETE OF MOORING DOLPHINS						
4.1.1	Filling concrete into steel pipe piles. 2.0m filling depth, class F. For 1,016m/m dia. piles.	Nos of pile	30	1,508	52	45,255	60
4.1.2	Concrete for dolphin top, including formwork. Class C.	Cu.m	622	1,198	16	745,255	52
4.1.3	Reinforcing bars, 16m/m dia. or more, high tensile.	Ton	28	10,316	88	288,872	64
	Sub Total:					1,079,383	76
	4.2 TOP CONCRETE OF PILE BENTS						
	TYPE A: 1 No.						
	TYPE B: 1 no.						
	TYPE C: 8 nos.						
	TYPE C': 1 no.						
	TYPE D: 4 nos.						
	TYPE D': 1 no.						
4.2.1	Filling concrete in steel pipe piles. 1.0m filling depth, class F. For 914.4m/m dia. piles.	Nos of pile	256	661	01	169,218	56
4.2.2	Ditto, but for 647.7m/m dia. piles.	Nos of pile	10	312	80	3,128	00
4.2.3	Concrete for top of pile bents including formwork. Class C.	Cu.m	9,490	1,151	16	10924,508	40
4.2.4	Reinforcing bars, 16m/m dia. or more, high tensile.	Ton	261	10,316	88	2,692,705	68

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
4.2.5	Ditto, but 13m/m dia. or less, high tensile.	Ton	11	10,726	64	117,993	04
	Sub Total:					13,907,553	68
	4.3 CONCRETE PAVEMENT FOR SLAB						
	TYPE A: 11m wide x 11m long x 14 parts.						
	TYPE B: 12.65m wide x 11m long x 1 part.						
	TYPE C: 2.3m wide x 11m long x 1 part.						
4.3.1	Concrete pavement including joint sealant as shown in the drawings. 15cm thick	Cu.m	279	935	64	261,043	56
4.3.2	Reinforcing bars for pavement 6m/m dia. mild steel	Ton	6	9,231	08	55,386	48
	Sub Total:					316,430	04
	4.4 FLOOR CONCRETE OF MAINTENANCE PLATFORM: 5.9m wide x 24m long x 2 parts						
4.4.1	Filling concrete in steel pipe piles, 1.0m filling depth, Class F . For 812.8m/m dia. piles.	Nos of pile	20	501	12	10,022	40
4.4.2	Concrete for beams and slabs, including formwork. Class C.	Cu.m	224	2,019	72	452,417	28
4.4.3	Reinforcing bars. 16m/m dia. or more, high tensile.	Ton	7	10,316.	88	72,218	16
4.4.4	Ditto, but 13m.m dia. or more, high tensile.	Ton	10	10,726	64	107,266	40
	Sut Total:					641,924	24
	Total:					15,945,291	72

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION 5: METAL WORK						
	5.1 LADDER						
5.1.1	Supply and installation of Ladder with fixing material as shown in the Drawings or using equivalent materials as approved by the Engineer, including painting. TYPE A: 4.30m long.	Each	10	1,483	96	14,839	60
5.1.2	Ditto, but TYPE B: 4m long.	Each	2	1,421	68	2,843	36
5.1.3	Ditto, but TYPE C: 2.15m long.	Each	12	687	76	8,253	12
	Sub Total:					25,936	08
	5.2 WHEEL GUARD AND GUARD RAIL						
5.2.1	Supply and fixing in position of wheel guard using Class F concrete as shown in the Drawings or as approved by the Engineer including painting complete in all respects. Type A: 3.0m long.	Each	13	1,629	04	21,177	52
5.2.2	Ditto, but Type B: 1.5m long.	Each	3	907	64	2,722	92
5.2.3	Supply and fixing of Guard Rail in position as shown in the Drawings or approved by the Engineer, including painting complete in all respects.	Lin.m	70	993.	76	69,563	20
	Sub Total:					93,463	64
	5.3 METAL WORKS FOR THE DUCT FORMED IN-SITU ON THE TOP CONCRETE OF PILE BENT						
5.3.1	Supply and fixing protection angle for duct corner in position as shown in the Drawings. 24m long.	Nos of pile bent	16	1,845	56	29,528	96
5.3.2	Supply and installation of Box cover for Electric Cable as shown in the Drawings, including paints. 1.49m wide x 0.995m long.	Each	12	2,518	24	30,218	88

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
5.3.3	Supply and fixing of out-let sleeve pipes for oil and water supply piping as shown in the Drawings. 300mm/m dia. x 3.1m long, mild steel.	Nos of pile	12	2,026	36	24,316	32
	Sub Total:					84,064	16
	Total:					203,463	88

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION 6: INSTALLATION WORK OF EQUIPMENT						
	6.1 FENDERING SYSTEM						
6.1.1	Supply and fixing in position "Cell Type" 1,700m/m dia. rubber fender units fabricated by "Bridgestone Tire Co., Ltd., Japan", complete with fittings as shown in the Drawings or other similar equivalent as approved by the Engineer.	Sets	12	529,712	80	6,356,553	60
	Sub Total:					6,356,553	60
	6.2 MOORING FACILITIES						
6.2.1	Supply and installation of bitts and anchor assembly, including use of concrete Class F as shown in the Drawings or as approved by the Engineer. Cast steel, line pull capacity of 100 ton.	Sets	12	35,485	56	425,826	72
6.2.2	Ditto, but For line pull capacity of 70 ton.	Sets	6	25,812	48	154,874	88
6.2.3	Supply and fixing in position motor driven type Capstans with control box stand and anchor assembly as shown in the Drawings or as approved by the Engineer. 2 ton x 12 HP in puppling force capacity.	Sets	12	94,194	40	1,130,332	80
	Sub Total:					1,711,034	40
	Total:					8,067,588	00

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION 7: ANCILLARY WORK						
	7.1 CRANE RAIL TRACK						
	Transportation from _____, unloading, handling, installation and fixing in position, the crane rails, fittings and other accessaries supplied by P.Q.A. 264m long x 4 rails.						
7.1.1	Installation and fixing of crane rails on P.S. girders with fittings including use of Class C concrete placing as shown in the Drawings. weight _____.	Lin.m	984	120	24	118,316	16
7.1.2	Installation of rail end stoppers as shown in the Drawings. Dimensions _____.	Sets	4	2,371	40	9,485	60
7.1.3	Installation of Unloader stoppers as shown in the Drawings. Dimensions _____.	Sets	8	884	96	7,079	68
7.1.4	Installation of jack up plates as shown in the Drawings. Dimensions _____.	Sets	16	392	68	6,282	88
	Sub Total:					141,164	32
	7.2 ANCHOR HOLE FOR POST OF CONVEYER FRAME						
7.2.1	Forming of Anchor holes required for the erection of the post of conveyer frame and others on the top of pile bents, on the pavement of P.S. beams, and on the wall of ducts. 200m/m sq. x 150-300m/m deep.	Each	157	167	00	26,219	00
	Sub Total:					26,219	00
	Total					167,383	32
						90,984,610	82

BILL OF QUANTITIES

PART III

APPROACH TRESTLE

S U M M A R Y

PART III APPRACH TRESTLE

Section 1.	Piling Work	RS.	6,673,593.98
Section 2.	Corrosion Protection	RS.	1,005,675.04
Section 3.	Precast Concrete Work	RS.	4,799,506.80
Section 4.	Cast In-situ Concrete Work. .	RS.	2,655,914.29
Section 5.	Metal Work	RS.	108,188.08
Section 6.	Ancillary Work	RS.	8,350.00
	Sum Total	RS.	15,251,228.19

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION 1: PILING WORK						
	1.1 PILING FOR PILE BENT						
	TYPE I						
1.1.1	Supply, delivery, unloading, handling and stacking on site of steel pipe piles reinforced at the ends with ring plates, including joint welding of pipes at the workyard of site as shown in the Drawings. 812.8m/m dia. x 12.7m/m thick x 24m long x 18 nos. x 22.5m long x 5 nos. A.S.T.M-A252 Grade 2.	Ton	142	8,138	09	1,155,608	78
1.1.2	Transportation, handling and pitching in position. 812.8m/m dia. x 24m long raking pile.	Each	18	11,225	16	202,052	88
1.1.3	Ditto as item 1.1.2, but 812.8m/m dia x 22.5m long vertical pile.	Each	5	7,870	84	39,354	20
1.1.4	Direct driving of piles from the dredged sea bed to a depth of-18 meters as indicated in the Drawings. 812.8m/m dia. raking pile.	Nos of pile	18	10,113	60	182,044	80
1.1.5	Ditto as item 1.1.4, but 812.8m/m dia. vertical pile.	Nos of pile	5	8,343	72	41,718	60
1.1.6	Additional pile driving to item 1.1.4 and 1.1.5, to a depth where the required pile bearing capacity can be obtained, including splicing as indicated in the Specification. The rate per extension length of 2 meters.						
	For 812.8m/m dia. raking pile	Nos of splicing		14,285	40		
	For 812.8m/m dia. vertical pile.	Nos of splicing		13,223	48		

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
1.1.7	Filling sand into piles up to the level as specified. For 812.8m/m dia. pile.	Cu.m	192	315	20	60,518	40
1.1.8	Cutting off the top of pile driven in at the required level, including fixing of reinforcement steel bars for pile head as shown in the Drawings. For 812.8m/m dia. pile.	Nos of pile	23	2,888	64	66,438	72
	Sub Total:					1,747,736	38
	1.2 PILING FOR PILE BENT						
	TYPE II						
1.2.1	Supply, delivery, unloading, handling and stacking on site of steel pipe piles reinforced at the ends with ring plates, including joint welding of pipes at the workyard of site as shown in the Drawings. 812.8m/m dia x 12.7m/m thick x 24m long x 60 nox. A.S.T.M-A252 Grade 2.	Ton	376	8,134	44	3,058,549	44
1.2.2	Transportation, handling and pitching in position. 812.8m/m dia x 24m long raking pile.	Each	60	11,225	16	673,509	60
1.2.3	Direct driving of piles from the dredged sea bed to a depth of -18 meters as indicated in the Drawings. 812.8m/m dia. raking pile.	Nos of pile	60	10,113	60	606,816	00
1.2.4	Filling sand into piles up to the level as specified. For 812.8m/m dia. pile.	Cu.m	271	315	20	85,419	20
1.2.5	Cutting off the top of pile driven in at the required level, including fixing reinforcement steel bars for pile head as shown in the Drawings. For 812.8m/m dia. pile.	Nos of pile	60	2,624	88	157,492	80
	Sub Total:					4,581,787	04

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	1.3 PILING FOR PILE BENT						
	TYPE III						
1.3.1	Transportation from Karachi Port, unloading and stacking on site of steel pipe piles supplied by P.O.A. 647.4m/m dia x 12.7m/m thick x 12.65m, 10.0m and 6.0 long.	Lim.m	276	51	76	14,285	76
1.3.2	Manufacturing of 647.7m/m diameter steel pipe pile as shown in the Drawings using the piles of item 1.3.1 at the workyard of site, including cutting and processing of piles, fitting up of joint materials, joint welding, reinforcement of pile ends with ring plates and painting, 647.7m/m dia x 12.7m/m thick x 23m long.	Nos. of pile	10	12,182	24	121,822	40
1.3.3	Transportation, handling and pitching in position. 647.7m/m dia. 23m long raking pile	Each	10	9,438	56	94,385	60
1.3.4	Driving piles directly from the dredged sea bed to a depth of -18 meters as indicated in the Drawings. 647.7m/m dia. raking pile.	Nos of pile	10	8,428	04	84,280	40
1.3.5	Filling sand into piles up to the level as specified. For 647.7m/m dia. pile.	Cu.m	24	315	20	7,564	80
1.3.6	Cutting off the top of pile driven in at the required level including fixing of reinforcement steel bars for pile head as shown in the Drawings. For 647.7m/m dia. pile.	Nos of pile	10	2,173	16	21,731	60
	Sub Total:					344,070	56
	Total :					6,673,593	98

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION 2: CORROSION PROTECTION						
	2.1 PROTECTION FOR THE FOUNDATION PILE OF PILE BENT TYPE I						
2.1.1	Supply, delivery and fixing of (to steel pipe pile)Alminium alloy anodes manufactured by "Nippon Corrosion Protection Co., Ltd., Japan," complete with fittings as shown in the Drawings or other equivalent as approved by the Engineer. Type P-D104 anode weight 98 kg.	Each	29	5,950	68	172,569	72
2.1.2	Fixing of Potential measuring terminal to steel pipe pile for "Cathodic Protection" as shown in the Drawings and test operation.	Each	1	580	44	580	44
2.1.3	Installation of pile jacket to steel pipe piles including cement mortar grouting as shown in the Drawings. For 812.8m/m dia. pile, 3.83m long.	Nos of pile	14	5,768	56	80,759	84
2.1.4	Ditto as item 2.1.3, but 3.60m long.	Nos of pile	4	5,434	20	21,736	80
2.1.5	Ditto as item 2.1.3, but 3.20m long.	Nos of pile	1	4,843	56	4,843	56
2.1.6	Ditto as item 2.1.3, but 3.40m long.	Nos of pile	4	5,130	08	20,520	32
	Sub Total:					301,010	68
	2.2 PROTECTION FOR THE FOUNDATION PILE OF PILE BENT TYPE II						
2.2.1	Ditto as item 2.1.1 Type P-D104, anode weight 48 kg.	Each	62	5,950	18	368,942	16
2.2.2	Ditto as item 2.1.2	Each	6	580	44	3,482	64

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
2.2.3	Ditto as item 2.1.3, but For 812.8 m/m dia. pile, 3.40m long	Nos of pile	60	5,130	08	307,804	80
	Sub Total:					680,229	60
	2.3 PROTECTION FOR THE FOUNDATION PILE OF PILE BENT TYPE III						
2.3.1	Ditto as item 2.1.1 Type SA-2, anode weight 4 kg.	Each	42	567	96	23,854	32
2.3.2	Ditto as item 2.1.2	Each	1	580	44	580	44
	Sub Total:					24,434	76
	Total :					1,005,675	04

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION 3: PRECAST CONCRETE WORK						
	3.1 P.S. BEAM FOR SLAB: 60 cm deep x 23 - 32 cm wide x 15m long x 252 nos.						
3.1.1	Concrete for beam, including formwork. Class A.	Cu.m	390	2,508	80	978,432	00
3.1.2	Setting up of prestressing wire strands and pre-tensioning. 1/4" dia. strand, ASTM-A416.	Ton of strand	28	23,393	12	655,007	36
3.1.3	Reinforcing bars for beam 16m/m dia. or more, mild steel.	Ton	3	8,546	48	25,639	44
3.1.4	Ditto, but 13m/m dia or less, mild steel	Ton	14	8,956	24	125,387	36
3.1.5	Transportation and installation of beams on pile bents .	Each	252	2,226	80	561,153	60
3.1.6	Supply and setting of the bearing for beams on pile bents. 200m/m wide x 12m long x 30m/m thick rubber plate.	Sheet	14	13,431	44	188,040	16
3.1.7	Supply and fixing of the fixed end anchor rod for beams on pile bents. 26m/m dia x 500m/m long anchor rod.	Each	119	37	72	4,488	68
3.1.8	Supply and fixing of the movable end anchor rod for beams on pile bents. 26m/m dia. x 500m/m long capped anchor rod as shown in the Drawings.	Each	63	67	24	4,236	12
3.1.9	Filling concrete in between P.S. beams, including formwork for sides and sealing of the soffit gaps of the beams. Class C.	Cu.m	367	888	12	325,940	04
3.1.10	Setting up of prestressing steel bars, sheeethes and fastening assembly, and also post-tensioning in the crossing direction of P.S. beams including cement mortar grouting. 23m/m dia steel bar, high tensile.	Nos of bar	161	2,087	72	336,122	92
	Sub Total:					3,204,447	68

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	3.2 DUCT FOR ELECTRIC CABLE AND WATER						
	TYPE A:						
	120cm deep x 259cm wide x 17.99m long x 5 nos.						
	TYPE B:						
	120cm deep x 259cm wide x 16.49m long x 2 nos.						
	TYPE C:						
	120cm deep x 289-259 cm wide x 5.605m long x 1 nos.						
3.2.1	Concrete for Duct, including formwork. Class B .	Cu.m	195	1,702	24	331,936	80
3.2.2	Reinforcing bars for Duct, including fixing of pieces of steel pipe for duct as shown in the Drawings. 16m/m dia and more, High tensile .	Ton	17	10,316	88	175,386	96
3.2.3	Ditto, but 13m/m dia and less, mild steel.	Ton	8	9,231	08	73,848	64
3.2.4	Transportation and installation of Duct on pile bents.	Each	8	25,463	92	203,711	36
3.2.5	Supply and setting of the bearing for Duct on pile bents including fixing of anchor assembly as shown in the Drawings. 500m/m wide x 500m/m long x 10m/m thick rubber plate.	Sheet	32	713	06	22,817	92
3.2.6	Precasting, transportation and installation of concrete duct covers, including all materials as shown in the Drawings and formwork. 114.25cm wide x 199.5cm long x 10cm thick .	Each	74	1,138	92	84,280	08
3.2.7	Ditto, but 97.5cm wide x 199.5cm long x 10cm thick	Each	74	1,073	76	79,458	24
3.2.8	Ditto, but 144.25-104.25cm wide x 39.1-235.7cm long x 15cm thick .	Each	4	775	23	3,100	92
	Sub Total:					974,540	92

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	3.3 DUCT FOR OIL AND WATER SUPPLY PIPING						
	TYPE A:						
	145cm deep x 189cm wide x 17.99m long x 5 nos.						
	TYPE B:						
	145cm deep x 189cm wide x 16.49m long x 2 nos.						
	TYPE C:						
	145cm deep x 189cm wide x 3.69m long x 1 no.						
3.3.1	Concrete for Duct, including formwork, Class B .	Cu.m	117	1,734	00	202,878	00
3.3.2	Reinforcing bars for Duct, including fixing of pieces of steel pipe for duct as shown in the Drawings. 16m/m dia.and more, High tensile.	Ton	11	10,316	88	113,485	08
3.3.3	Ditto, but 13m/m dia. or less, mild steel.	Ton	4	9,231	08	36,924	32
3.3.4	Transportation and installation of ducts on pile bents.	Each	8	15,280	50	122,244	00
3.3.5	Supply and setting of the bearing for ducts on pile bents, including fixing of anchor assembly as shown in the Drawings. 500m/m wide x 500m/m long x 10m/m thick rubber plate.	Sheet	32	691	81	22,137	92
3.3.6	Precasting, transportation and installation of the concrete duct covers, including all materials as shown in the Drawings and formwork . 169cm wide x 199.5cm long x 15cm thick.	Each	69	1,917	72	132,322	68
3.3.7	Ditto, but 169cm wide x 149.5cm long x 15cm thick.	Each	1	1,525	60	1,525	60
	Sub Total:					620,518	20
	Total :					4,799,506	80

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION 4: CAST IN-SITU CONCRETE WORK						
	4.1 FLOOR CONCRETE OF PILE BENT TYPE I						
4.1.1	Filling concrete into steel pipe piles. 1.0m filling deptth, class F. For 812.8m/m dia. piles.	Nos of pile	23	444	43	10,221	89
4.1.2	Concrete for the floor of pile bents, including formwork. Class C.	Cu.m	333	1,890	28	629,463	24
4.1.3	Reinforcing bars. 16m/m dia or more, high tensile.	Ton	14	10,316	88	144,436	32
4.1.4	Ditto, but 13m/m dia or less, high tensile.	Ton	10	10,726	64	107,266	40
	Sub Total:					891,387	85
	4.2 TOP CONCRETE OF PILE BENT TYPE II						
4.2.1	Filling concrete into steel pipe piles. 1.0m filling depth, class F. For 812.8m/m dia. piles.	Nos of pile	60	533	00	31,980	00
4.2.2	Concrete for the top of pile bents, including formwork. class C.	Cu.m	777	1,350	20	1,049,105	40
4.2.3	Reinforcing bars. 16m/m dia. or more, high tensile.	Ton	21	10,316	88	216,654	48
4.2.4	Ditto, but 13m/m dia. or less, high tensile.	Ton	6	10,726	64	64,359	84
	Sub Total:					1,362,099	72

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	4.3 BODY CONCRETE OF PILE BENT TYPE III						
4.3.1	Filling concrete into steel pipe piles. 1.0m filling depth, class F. For 647.7m/m dia. piles.	Nos of pile	10	332	40	3,324	00
4.3.2	Levelling concrete on the riprap mound of the Terminal embankment as shown in the Drawings, including necessary levelling of the top of the mound.	Cu.m	74	99	40	7,355	60
4.3.3	Concrete for the body of pile bent, including formwork. class C.	Cu.m	110	1,157	56	127,331	60
4.3.4	Reinforcing bars. 16m/m dia. or more, high tensile.	Ton	4	10,316	68	41,266	72
4.3.5	Ditto, but 13m/m dia. or less high tensile.	Ton	1	10,726	64	10,726	64
	Sub Total:					190,004	56
	4.4 CONCRETE PAVEMENT FOR SLAB: 12cm wide x 15m long x 7 parts.						
4.4.1	Concrete pavement including joint sealant as shown in the Drawing. 15cm thick.	Cu.m	189	928	56	175,497	84
4.4.2	Reinforcing bars for pavement, 6m/m dia. mild steel.	Ton	4	9,231	08	36,924	.32
	Sub Total:					212,422	16
	Total:					2,655,914	29

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION 5: METAL WORK						
	5.1 GUARD RAIL						
5.1.1	Supply and fixing of Guard Rail in position as shown in the Drawings or as approved by the Engineer, including painting complete in all respects.	Lim.m	137	782	60	107,216	20
	Sub Total:					107,216	20
	5.2 METAL WORKS FOR THE DUCT FORMED IN SITU ON THE BODY CONCRETE OF PILE BENT TYPE III						
5.2.1	Supply and fixing of in-let sleeve pipes for oil and water supply piping as shown in the Drawings 300m/m dia x 0.2m long, mild steel.	Nos of pipe	7	138	84	971	88
	Sub Total:					971	88
	Total:					108,188	08

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION 6: ANCILLARY WORK						
	6.1 ANCHOR HOLE FOR POST OF CONVEYER FRAME						
6.1.1	Forming of Anchor holes required for the erection of the Post of conveyer frame on the top of pile bents and the pavement of P.S. beams. 200m/m sq x 150-300 m/m deep.	Each	50	167	00	8,350	00
	Total:					8,350	00
						15,251,228	19

BILL OF QUANTITIES

PART IV

SMALL CRAFTS PIER

SUMMARY

PART IV SMALL CRAFTS PIER

Section 1	Steel Pipe Pile Works	RS.	934,769.95
Section 2	In-Situ Concrete	RS.	1,576,943.90
Section 3	Precast Concrete	RS.	827,591.84
Section 4	Pavement	RS.	24,081.03
Section 5	Accessories	RS.	104,373.05
	Total	RS.	3,467,759.60

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	PART IV SMALL CRAFTS PIER						
	SECTION 1: Steel Pipe Pile Works						
1.1	Transportation of Steel Pipe Piles supplied by the P.Q.A. ϕ = 647.7 mm (2'-11/2"), t = 12.7 mm (1/2") from Karachi Port to the Site 11.60m long ... 72 pcs. 10.00m long ... 54 pcs. 6.00 - 6.65m long ... 18 pcs.	Lin.m	1,489.05	51	84	77,192	35
1.2	Fabrication of piles including cutting of deformed parts and jointing by welding	Each	72	1,076	8	77,529	6
1.3	Driving up to the designated depth including pile head treatment	Each	72	10,834		780,048	
1.4	Additional pile driving to Item 1.1 to 1.3, extension length within 5 meters	Lin.m	-----	471	3	-------	
	Sub-Total :					934,769	95
	SECTION 2: In-Situ Concrete						
2.1	Reinforcement of pile top	Each	72.	743	86	53,557	92
2.2	Reinforcing bars, 16mm dia. and over in pile cap, beams, step, duct and bitt.	tons	73.95	8,651	24	639,759	19
2.3	Ditto, but 13mm dia. and under	tons	15.13	9,060	92	137,091	71
2.4	Anchor bolts, nuts and washers for fixing precast slab to beams	Each	315.	104	66	32,967	90
2.5	Class C concrete in pile jacket and cap	cu.m	192.7	1,569	55	302,452	28
2.6	Ditto, but in beams, step and duct	cu.m	351.6	1,253	62	404,772	79
2.7	Bitt including material and installation	Each	7.	906	03	6,342	21
	Sub-Total:					1,576,943	90
	SECTION 3: Precast Concrete						
3.1	Reinforcing bars, 16mm dia. and over in precast slabs	tons	60.86	8,546	84	520,160	68
3.2	Holes for anchor bolts including materials	Each	315.	91	63	28,863	45

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
3.3	Class B concrete in precast concrete slab	cu.m	182.1	812	71	147,994	49
3.4	Installation of precast concrete slab max. size 5.0m x 6.0m x 0.2m	Each	42.	2,559	98	107,519	16
3.5	Levelling mortar on upper surface of beam	cu.m	8.	679	84	5,438	72
3.6	Precast concrete duct cover including material and installation	cu.m	7.9	2,229	79	17,615	34
	Sub-Total:					827,591	84
	SECTION 4: Pavement						
4.1	Concrete pavement	sq.m	938.1	25	67	24,081	03
	Sub-Total:					24,081	03
	SECTION 5: Accessories						
5.1	Wooden fender creosoted with anchor bolts, nuts and washers	Each	18.	5,479	05	98,622	90
5.2	Guard rail with base plate, anchor bolts, nuts and washers including coating	Lin.m	171.8	33	47	5,750	15
	Sub-Total:					104,373	05

BILL OF QUANTITIES

PART V

LAND RECLAMATION

SUMMARY

PART V LAND RECLAMATION

Section 1	Banking and Riprapping	RS.	22,732,905.8
Section 2	Sea Wall Work	RS.	256,735.9
Section 3	Drainage	RS.	455,777.8
Section 4	Pavement	RS.	717,795.2
Section 5	Sodding	RS.	11,814.0
Section 6	Gate and Fencing	RS.	193,000.0
	Total	RS.	24,368,028.7

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	PART V: LAND RECLAMATION						
	SECTION 1: Banking and Riprapping						
1.1	Riprapping with filter course in Part I, 5kg - 10kg in weight	cu.m	40,250	215	71	8,682,327	5
1.2	Ditto, but in Part II	cu.m	18,830	251	66	4,738,757	8
1.3	Sand fill below +0.50m	cu.m	70,570	62	21	4,390,159	7
1.4	Ditto, but in elevation +0.50 to +4.00	cu.m	32,300	68	56	2,214,488	0
1.5	Ditto, but in elevation +4.00 to +5.00 with compaction	cu.m	7,720	70	97	547,888	4
1.6	Armour stone pitching below +1.00	cu.m	4,720	236	27	1,115,194	4
1.7	Ditto, but above +1.00	cu.m	2,700	386	70	1,044,090	0
	Sub-Total:					22,732,905	8
	SECTION 2: Sea Wall Work						
2.1	Reinforcing bars in type-A sea wall	tons	1.7	8,651	24	14,707	1
2.2	Ditto, but in type-B sea wall	tons	7.9	9,060	92	71,581	3
2.3	Class C concrete in type-A sea wall	cu.m	26.3	1,679	95	44,182	7
2.4	Ditto, but in type-B sea wall	cu.m	40.5	2,231	70	90,383	9
2.5	Crushed stone for backfilling behind sea wall	cu.m	162.6	220	67	35,880	9
	Sub-Total:					256,735	9
	SECTION 3: Drainage						
3.1	L-type ditch, type-I including all materials, excavations and installation	Lin.m	241.	62	97	15,175	8
3.2	Ditto, but type-II	Lin.m	240.	252	46	60,590	4
3.3	U-type ditch, including all materials, excavations & installation	Lin.m	379.	382	24	144,869	0
3.4	Asbestos cement drain pipe with joint and protector under road, 300 mm dia.	Lin.m	21.48	1,494	13	32,093	9

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
3.5	Ditto, but 300mm dia. except above	Lin.m	21.56	724	88	15,628	4
3.6	Asbestos cement drain pipe with joint and protector under road, 400mm dia.	Lin.m	19.0	1,882	00	35,758	0
3.7	Ditto, but 400mm dia. except above	Lin.m	17.6	1,152	32	20,280	8
3.8	Manhole including all materials, excavation and installation. Type-A & B	Each	10.	11,375	63	113,756	3
3.9	Ditto, but type-C	Each	2.	8,812	60	17,625	2
	Sub-Total:					455,777	8
	SECTION 4: Pavement						
4.1	Penetration Macadam Pavement (t = 35 cm)	sq.m	6,643.1	89	13	592,099	5
4.2	Concrete pavement	sq.m	137.1	227	82	31,234	1
4.3	Precast curb stone	Lin.m	557.	169	59	94,461	6
	Sub-Total:					717,795	2
	SECTION 5: Sodding						
5.1	Sodding	sq.m	196.9	60	0	11,814	0
	Sub-Total:					11,814	0
	SECTION 6: Gate and Fencing						
6.1	Steel sliding gate, including track rail and painting, type-A, 15.200m x 1.200m	Each	1	30,000		30,000	
6.2	Ditto, type-B, 13.600m x 1.200m	Each	1	27,000		27,000	
6.3	Chain link neting gate: Double swing, including concrete foundation with excavation and disposal 6m wide x 2m high	Each	2	6,720		13,440	
6.4	Concrete block fence, hollow core concrete block fence, including reinforced concrete foundation and excavation with disposal 2.000m high	Lin.m	86	560		48,160	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
6.5	Chain link fencing galv. steel post and galv. neting including conc, foundation with excavation and disposal	Lin.m	240	310		74,000	
	Sub-Total:					193,000	

BILL OF QUANTITIES

PART VI

WATER AND OIL SUPPLY AND FIRE FIGHTING

DIVISION-1 SERVICE RESERVOIR AND INLET PIPING

SECTION 1. Precast Reinforced Concrete Piles
2. Main Body of Service Reservoir
3. Accessories of Service Reservoir
4. Valve and Fittings to Service Reservoir
5. Inlet Piping

DIVISION-2 EQUIPMENT AND PIPELINE FOR DISTRIBUTION

SECTION 1. Potable Water Distribution system

1-1 Distributing Pipes
1-2 Outlets
1-3 Hoses and Nozzles
1-4 Expansion and Flexible Joints
1-5 Miscellaneous

SECTION 2. Fuel Oil Distribution system

2-1 Distributing Pipes
2-2 Valve and Outlets
2-3 Hoses
2-4 Expansion and Flexible Joint
2-5 Pits and Covers
2-6 Heating and Duct for "C" Heavy Oil Pipe

SECTION 3. Mechanical Works

3-1 Pump and Its Accessories
3-2 Gasoline Station

DIVISION-3 PUMP HOUSE

SECTION 1. Concrete Work
2. Concrete Masonry
3. Miscellaneous Metal
4. Moisture Protection
5. Doors, Window and Frame
6. Finishes
7. Plumbing

SUMMARY

PART VI WATER AND OIL SUPPLY AND FIRE FIGHTING

Division	1	Service Reservoir and Inlet Piping	RS. 1,719,438
Division	2	Equipment and Pipeline for Distribution.	RS. 3,094,811
Division	3	Pump House	RS. 81,735
		Total	RS. 4,895,984

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	PART VI: WATER AND OIL SUPPLY AND FIRE FIGHTING						
	DIVISION-1 SERVICE RESERVOIR AND INLET PIPING						
	SECTION 1: Precast Reinforced Concrete Piles						
1.1	Reinforcing bars, dia. 16mm and over	ton	25.4	6,373	7	161,892	
1.2	Ditto, but in 13mm and 9mm	ton	7.1	6,373	7	45,253	3
1.3	Class C concrete $\sigma ck = 240$	cu.m	181.4	1,192	2	216,265	1
1.4	Shoes and caps by steel plate thickness: 12mm weight of unit shoe and cap: 46.10 kg	Each	50	687	5	34,375	
1.5	Joint rings by steel plate thickness: 12mm weight of unit joint ring: 67.84 kg	Each	50	1,011	7	50,585	
1.6	Driving piles pile length: 23.0 m	Each	50	1,222	7	61,135	
1.7	Site connection of piles by welding	Each	50	43	5	2,175	
1.8	Cutting off or stripping heads of piles	Each	50	13	1	655	
	Sub-Total:					572,335	4
	SECTION 2: Main Body of Service Reservoir						
2.1	Excavation including fill and disposal	cu.m	797.4	28	9	23,044	9
2.2	Blinding crushed stone and compaction minimum thickness: 20cm	Sg.m	364.4	22	2	8,089	7
2.3	Class E leveling concrete $\sigma ck = 180$ minimum thickness: 10 cm	Sg.m	364.4	53	9	19,641	2
2.4	Reinforcing bars dia. 13mm and 9mm	ton	22.5	6,373	7	143,408	3

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
2.5	Reinforcing bars dia 16mm	ton	19.6	6,373	7	124,924	5
2.6	Class C concrete	cu.m	364.2	1,131	7	412,165	1
2.7	Class E plain concrete for protecting pipes and drainage $\sigma ch = 180$	cu.m	50.6	539		27,273	4
2.8	Water proof mortar in walls thickness in 30mm	sq.m	473.2	44	9	21,246	7
2.9	Ditto, but 30 to 80mm on roof	sq.m	294.3	64	6	19,011	8
	Sub-Total:					798,805	6
	SECTION 3: Accessories of Service Reservoir						
3.1	Maintenance step on inner surface round bar dia. 22mm with painting	kg	116.7	7	2	820	2
3.2	Handrail for stairs steel pipes dia. 1-1/4" and 3/4" with painting	kg	63.5	14	5	920	8
3.3	Floor drain in the pump house dia. 50mm	sum	1			719	4
3.4	Ventilation on roof natural ventilation type dia. 300mm	sum	1			1,416	
3.5	Cast iron cover for manhole waterproof type dia. 600mm	Each	3	3,183	4	9,550	2
3.6	Cover on power supply pit, cast iron grating size: 450mm x 700mm x 20mm	Each	10	477	9	4,779	
3.7	Ditto, but in size 450mm x 500mm x 20 mm	Each	7	348	9	2,442	3
3.8	Water level indicator float type	Each	1	15,159	5	15,159	5
3.9	Polyvinyl chloride pipe in well for item 3.8, dia. 300mm	Lin.m	2.7	436	3	1,178	
3.10	Ditto, but in sleeve pipe, dia. 150mm	Lin.m	2.8	115	4	323	1
3.11	Ditto, but in sleeve pipe, dia. 75mm	Lin.m	0.7	39	9	27	9
3.12	Supporting metal for Item 3.9 with painting	kg	31.3	522	7	522	7

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	Sub-Total:					37,879	1
	SECTION 4: Valve and Fittings to Service Reservoir						
4.1	Sluice gate and accessories in suction well size, 500mm x 500mm	Each	2	22,383	3	44,766	6
4.2	Gate valve, allowable operating pressure 7.5 kg/cm^2 in dia. 300mm	Each	1	8,463	4	8,463	4
4.3	Ditto, but in dia. 100mm	Each	2	1,672		3,344	
4.4	Ditto, but in dia. 75mm	Each	3	1,317	5	3,952	5
4.5	Float valve, allowable operating pressure 3.0 kg/cm^2 in dia. 100mm	Each	2	12,348		24,696	
4.6	Manual operating stand for item 4.1	Each	2	7,852		15,704	
4.7	Ditto, but for Item 4.2	Each	1	4,079	4	4,079	4
4.8	Ditto, but for Items 4.3 and 4.4	Each	5	2,167	5	10,837	5
4.9	Water supply steel pipe including joint and fittings in dia. 300mm	Lin.m	0.9	3,752	6	3,377	3
4.10	Ditto, but in 100mm	Lin.m	4.0	1,626	4	6,505	6
4.11	Ditto, but in 80mm	Lin.m	9.7	1,115	9	10,824	2
	Sub-Total:					136,550	5
	SECTION 5: Inlet Piping						
5.1	Excavation for water supply pipes including fill and disposal	cu.m	139.5	20	7	2,887	7
5.2	Water supply steel pipes including joint and fittings, in dia. 150mm	Lin.m	71.0	532	1	37,779	1
5.3	Ditto, but in dia. 100mm	Lin.m	18.0	2,588	5	46,589	4
5.4	Ditto, but in dia. 75mm	Lin.m	98.7	844	7	83,371	8
5.5	Gate valve, allowable operating pressure 7.5 kg/cm^2 in dia. 100mm	Each	1	1,672		1,672	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
5.6	Valve cover for Item 5.5 including plain concrete, crushed stone and form	sum	1			1,567	5
	Sub-Total:					173,867	5
	Total:					1,719,438	1

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	DIVISION-2 EQUIPMENT AND PIPELINE FOR DISTRIBUTION						
	SECTION 1: Potable Water Distribution System						
1-1	Distributing Pipes						
1.1	200mm protective coating and covering steel pipe						
	under the ground	Lin.m	130	721		93,730	
	in concrete duct	Lin.m	410	620		254,200	
1.2	150mm, ditto	Lin.m	25	548		13,700	
1.3	100mm, ditto	Lin.m	115	356		40,940	
1.4	80mm, ditto	Lin.m	85	314		26,690	
1.5	65mm galvanized steel pipe	Lin.m	25	125		3,125	
1.6	32mm, ditto	Lin.m	290	84		24,360	
1.7	25mm, ditto	Lin.m	60	75		4,500	
1.8	90^{o} bend	lot	1	-		115,100	
1.9	Tee	lot	1	-		37,600	
1.10	Reducer	lot	1	-		180	
1.11	Blind flange	lot	1	-		710	
1.12	Flange with bolt and nut	lot	1	-		15,900	
1.13	200mm gate valve 10 kg/cm^2 pressure manually operated, outside screw type	pcs.	4	4,524		18,096	
1.14	150mm, ditto	pcs.	4	3,000		12,000	
1.15	100mm, ditto	pcs.	1	-		1,664	
1.16	80mm, ditto	pcs.	6	1,290		7,740	
1.17	65mm, ditto	pcs.	1	-		1,151	
1.18	32mm, ditto	pcs.	1	-		260	
1.19	25mm, ditto	pcs.	3	169		507	
1.20	65mm solenoid valve 10kg/cm^2 pressure 380V, 50Hz, 3 phase	pcs.	1	-		2,477	
1.21	32mm, ditto	pcs.	1	208		2,008	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
1-2	Outlets						
1.2.1	200mm water meter wet dial, round reading register vertical vane propeller type accuracy: within ±0.5% flow range: 52 - 160 m^3/hr working pressure: 10 kg/cm^2	pcs.	1	-		22,822	
1.2.2	150mm water meter flow range: 30 - 100 m^3/hr others: same as Item 1.2.1	pcs.	4	16,302		65,208	
1.2.3	80mm water meter flow range: 10 - 30 m^3/hr others: ditto	pcs.	3	6,352		19,056	
1.2.4	100mm fire hydrant underground, double nozzle type working pressure: 10 kg/cm^2	pcs.	4	5,362		21,448	
1.2.5	80mm fire hydrant underground, single nozzle type	pcs.	3	3,087		9,261	
1.2.6	150mm outlet with cap and chain working pressure: 10 kg/cm^2	pcs.	4	2,302		9,208	
1.2.7	80mm outlet same as Item 1.2.5	pcs.	2	3,087		6,174	
1-3	Hoses and Nozzles						
1.3.1	Hose and nozzle for Item 1.2.4. hose: dia. 65mm x length 20m x 2 roll nozzle dia.: 20mm working pressure: 10 kg/cm^2	set	2	6,560		13,120	
1.3.2	Hose and nozzle for Item 1.2.5. hose: dia. 65mm x length 20m x 1 roll nozzle dia.: 20mm working pressure: 10 kg/cm^2	set	2	3,682		7,364	
1.3.3	150mm water supply rubber hose length: 40m with flange and connector working pressure: 10 kg/cm^2	set	4	50,054		200,216	
1.3.4	80mm water supply rubber hose length: 20m with flange and connector working pressure: 10 kg/cm^2	set	2	10,932		21,864	
1-4	Expansion and Flexible Joints						

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
1.4.1	200mm expansion joint axial movement: 60mm bellows type with cover working pressure: 10 kg/cm^2	pcs.	1	-		9,417	
1.4.2	200mm expansion joint axial movement: 40mm others: ditto	pcs.	3	7,691		23,073	
1.4.3	200mm expansion joint axial movement: 20mm others: ditto	pcs.	1	-		7,115	
1.4.4	100mm expansion joint axial movement: 40mm others: same as Item 1.4.1.	pcs.	1	-		4,750	
1.4.5	200 flexible joint lateral deflection: 300mm bellows type with cover working pressure: 10 kg/cm^2	pcs.	1	-		19,773	
1.4.6	100mm flexible joint ditto	pcs.	1	-		14,128	
1.4.7	80mm flexible joint ditto	pcs.	1	-		12,335	
1.4.8	65mm flexible joint ditto	pcs.	1	-		11,145	
1-5	Miscellaneous						
1.5.1	Pipe support including those of fuel oil pipe	lot	1	-		35,600	
1.5.2	Cover plate of steel checker plate for outlet pit in Main Berth	pcs.	4	3,627		14,508	
1.5.3	Cover plate of steel checker plate for outlet pit in Small Craft Pier	pcs.	2	2,800		5,600	
1.5.4	Manhole of cast iron for utilities duct in Main Berth	pcs.	8	864		6,912	
1.5.5	Wire net fence for water meter complete with foundation and anchor bolt	set	1	-		5,674	
1.5.6	Water service tank for wash basin in pump house and sub station for electric power supply complete with ball tap and bracket	set	2	594		1,188	
1.5.7	Drainage valve pit of asbestos cement pipe with steel plate cover	set	4	196		784	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
1.5.8	Concrete pit for outdoor hydrant with steel cover plate	set	1	-		1,356	
	Sub-Total:						
	SECTION 2: Fuel Oil Distribution System						
2-1	Distributing Pipes						
2.1.1	200mm seamless block carbon steel pipe						
	for "A" heavy oil (underground)	L.M.	170	349		59,330	
	(concrete duct)	L.M.	380	375		142,500	
	for "C" heavy oil	L.M.	550	304		167,200	
2.1.2	150mm, ditto	L.M.	50	252		12,600	
2.1.3	100mm, ditto	L.M.	235	148		34,780	
2.1.4	80mm, ditto	L.M.	25	129		3,225	
2.1.5	90^{o} bend	lot	1	-		12,906	
2.1.6	Tee	lot	1	-		6,048	
2.1.7	Blind flange	lot	1	-		1,420	
2.1.8	Flange with bolt and nut	lot	1	-		10,900	
2-2	Valves and Outlets						
2.2.1	150mm cast steel gate valve, 10 kg/cm^2 pressure manually operated, outside screw type	pcs.	8	5,977		47,816	
2.2.2	100mm, ditto	pcs.	2	4,929		9,858	
2.2.3	80mm, ditto	pcs.	2	3,501		7,002	
2.2.4	200mm, ditto	pcs.	2	8,488		16,976	
2.2.5	150mm flow meter for "A" heavy oil non-circular gear, digital zero resetting, straight reading totalizer type accuracy: $\pm 0.2\%$ flow range: 20 - 260 m^3/hr working pressure: 10 kg/cm^2	pcs.	4	42,336		169,344	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
2.2.3	150mm flow meter for "C" heavy oil flow range: 20 - 180 m^3/hr others: same as Item 2.2.5	pcs.	4	44,551		178,204	
2.2.4	80mm flow meter for "A" heavy oil flow range: 6 - 70 m^3/hr others: same as Item 2.2.5	pcs.	2	17,859		35,718	
2.2.7	150mm outlet with cap and chain working pressure: 10 kg/cm^2	pcs.	8	2,304		18,432	
2.2.9	80mm outlet ditto	pcs.	2	1,154		2,308	
2-3	Hoses						
2.3.1	150mm fuel oil supply rubber hose length: 40m with flange and connector working pressure: 10 kg/cm^2	set	2	50,054		100,108	
2.3.2	80mm fuel oil supply rubber hose length: 10m with flange and connector working pressure: 10 kg/cm^2	set	2	10,932		21,864	
2-4	Expansion and Flexible Joints						
2.4.1	200mm expansion joint axial movement: 50mm bellows type with cover working pressure: 10 kg/cm^2	pcs.	3	9,412		28,254	
2.4.2	200mm expansion joint axial movement: 50mm others: same as Item 2.4.1	pcs.	6	7,691		46,146	
2.4.3	200mm expansion joint axial movement: 20mm others: same as Item 2.4.1	pcs.	2	7,115		14,230	
2.4.4	100mm expansion joint axial movement: 50mm others: same as Item 2.4.1	pce	1	-		4,750	
2.4.5	200mm flexible joint lateral deflection: 300mm bellows type with cover working pressure: 10 kg/cm^2	pcs.	2	19,773		39,546	
2.4.6	100mm flexible joint lateral deflection: 300mm others: same as Item 2.4.5	pce	1	-		14,128	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
2-5	Pits and Covers						
2.5.1	Cover plate of steel checker plate for outlet pit in Main Berth	pcs.	4	3,627		14,508	
2.5.2	Concrete pit for fuel oil drainage	pce	1	-		21,500	
2.5.3	Cover plate of steel checker plate for Item 2.5.2	pcs.	2	1,773		3,546	
2.5.4	Drainage valve pit of asbestos cement pipe with steel plate cover	set	2	196		392	
2-6	Heating and duct for "C" Heavy Oil Pipe						
2.6.1	Heating wire and thermostat for "C" heavy oil pipe	m	580	292		169,360	
2.6.2	Concrete duct for "C" heavy oil pipe	L.M.	170	543		92,310	
	Sub-Total:						
	SECTION 3: Mechanical Works						
3-1	Pump and Its Accessories						
3.1.1	Potable water pump for water supply and fire fighting type: two-stage, horizontal shaft centrifugal pump total discharge head: 58m discharge quantity: 1 m^3/min. revolution at rated operating condition: 1,450 r.p.m. motor capacity: 30 KW (in case of total discharge head 33m) electric source: 380V, 50Hz, 3 phase accessories: 1) common base plate with anchor bolt 2) flexible coupling with guard 3) three phase squirrel cage induction motor indoor use 30KW, 50Hz, 380V, 4P, 1,500 r.p.m.	set	3	37,668		113,004	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
3.1.2	Pipes and valves for Item 3.1.1 foot valve, motorized gate valve check valve (rapid-closing type) pipe with flange, 90° bend, taper pipe	set	3	13,870		41,610	
3.1.3	Pipe support and bracket for Item 3.1.1	lot	1	-		1,005	
3.1.4	Cover plate for suction pipe for Item 3.1.1	lot	1	-		618	
3.1.5	Potable water pump for miscellaneous use type: single stage, horizontal shaft centrifugal pump total discharge head: 25m discharge quantity: 400 ℓ/min. revolution at rated operating condition: 1,450 r.p.m. motor capacity: 3.7 KW electric source: 380V, 50Hz, 3 phase accessories: 1) common base plate with anchor bolt 2) flexible coupling with guard 3) three phase squirrel cage induction motor indoor use 3.7 KW, 50Hz, 380V, 4P, 1,500 r.p.m.	set	2	16,994		33,988	
3.1.6	Pipes and valves for Item 3.1.5 same as Item 3.1.2	set	2	5,707		11,414	
3.1.7	Pipe support and bracket for Item 3.1.5	lot	1	-		603	
3.1.8	cover plate for suction pipe for Item 3.1.5	lot	1	-		310	
3-2	Gasoline Station						
3.2.1	Gasoline Meter type: selfstand, key type No. of key: Approx. 100 discharge quantity: 50 ℓ/min. flow meter: roots or piston type electric meter: 400W, 220V, 50Hz 3 phase	set	2	30,203		60,406	
3.2.2	Gasoline tank type: underground type capacity: approx. 10 kl	set	1	-		31,967	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
3.2.3	Pipes and accessories for Items 3.2.1 and 3.2.2	lot	1	-		10,087	
3.2.4	Civil work for Item 3.2.2	lot	1	-		32,720	
3.2.5	Fire extinguisher	set	4	1,034		4,136	
	Sub-Total:						
	Total					3,094,811	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	DIVISION-3 PUMP HOUSE						
	SECTION 1: Concrete Work						
1-1	Reinforced concrete, Class-A including forming, in place roof beam and roof	cu.m	14.8	640		9,472	
1.2	Lightweight concrete, Class E including forming, in place floor slab	cu.m	5.4	515		2,781	
1-3	Reinforcing mild steel bars, deformed, 13mm dia. and less	kg	964	9	30	8,965	
1-4	Ditto, 19mm dia. and up	kg	450	9	20	4,140	
	Sub-Total:					25,358	
	SECTION 2: Concrete Masonry						
2-1	Hollow core concrete block including setting and grouting cement mortar, 200mm thick wall	sq.m	69	133		9,177	
2-2	Reinforcing mild steel bars, deformed, 13mm and 16mm	kg	270	9	3	2,511	
	Sub-Total:					11,688	
	SECTION 3: Miscellaneous Metal						
3.1	Cable trench cover, 4.5mm thick. checkered steel plate 560mm wide	Lin.m	12.5	148		1,850	
3.2	Cable trench corner angle, L-50x50x6 with edging and anchors	Lin.m	26	44		1,144	
	Sub-Total:					2,994	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION 4: Moisture Protection						
4.1	Elastomeric roofing on concrete roof slab	sq.m	94	116		10,904	
4.2	Caulking and sealing, to around door and window opening	Lin.m	29	24		696	
	Sub-Total:					11,600	
	SECTION 5: Doors, Windows and Frame						
5.1	Double hinged aluminum flush door, louvered bottom incl. frame and hardware Type-1/AD, 1,700 x 2,000	pair	1	5,440		5,440	
5.2	Sliding aluminum window, including insect screen section, frame and hardware Type-1/AW, 1,500 x 900	Each	4	2,110		8,440	
5.3	Glass and glazing, 3mm thick. clear sheet glass, double strength	sq.m	6.3	76		479	
	Sub-Total:					14,359	
	SECTION 6: Finishes						
	EXTERIOR						
6.1	Sprayed colored cement mortar finish. to wall	sq.m	88	58		5,104	
6.2	Ditto, to soffit	sq.m	49	63		3,087	
	INTERIOR						
6.3	Cement mortar steel trowel finish, on floor	sq.m	32	20		640	
6.4	Vinyl paint finish, to base (100H)	sq.m	2.4	33		79	
6.5	Vinyl paint finish, to exposed concrete wall	sq.m	75	30		2,250	
6.6	Ditto, to exposed concrete ceiling	sq.m	38	32		1,216	
	Sub-Total:					12,376	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION 7: Plumbing						
7.1	Lavatory Vitrous-chino, flat-top with anti-splash, cold water supply only, supply and waste trim assembly	set	1	990		990	
7.2	Glass shelf, 457mmx 127mm	Each	1	60		60	
7.3	Mirror, 455mm x 608mm	Each	1	170		170	
7.4	Soil, waste and vent piping	sum	1	-		1,850	
7.5	Cold water piping	sum	1	-		290	
	Sub-Total					3,360	
	Total					81,735	

BILL OF QUANTITIES

PART VII

ELECTRIC FACILITIES AND

POWER SUPPLY

Page

Page

Division 6. Sub Station (Architectural Works)

SUMMARY

PART VII ELECTRIC FACILITIES AND POWER SUPPLY

Division 1	Power Supply System	RS.	3,110,586
Division 2	Power Supply and Control System for Pumps .	RS.	318,445
Division 3	Lighting and Plug Socket System	RS.	1,186,800
Division 4	Telephone System	RS.	107,366
Division 5	Fire Alarm System	RS.	194,369
Division 6	Sub Station (Architectural Works)	RS.	952,295
	Total	RS.	5,869,861

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	PART VII: ELECTRICAL FACILITIES AND POWER SUPPLY						
	DIVISION-1 POWER SUPPLY SYSTEM						
	SECTION 1: Power Incoming Facility						
1.1.1	SUPPLY AND INSTALLATION OF THE TERMINAL POLE AND ACCESSARIES AS SHOWN ON THE DRAWING.	Set	1			10,800	
	SUPPLY, INSTALLATION, TERMINATION JOINTING AND CONNECTION OF THE FOLLOWING CABLES.						
1.1.2	3 x 40 mm^2 Single core for earthing power cable between Terminal pole and H.V. Switch board	m	75	54		4,050	
1.1.3	2 x 25mm^2 Single core 11,000 V power cable between Terminal pole and H.V. Switch board.	m	75	43		3,225	
1.1.4	Cable head for 40 mm^2 Single core 11,000 V power cable.	Sets	6	2,375		14,250	
	SUPPLY AND INSTALLATION OF THE CABLE DUCTS AND HANDHOLES AS SHOWN ON THE DRAWINGS, INCLUDE NECESSARY ACCESSARIES, EXCAVATION AND FILLING.						
1.1.5	Between handhole "A" and "E" asbest cement pipe 100 mm DIA. not exceeded 1.5 m deep.	m	60	389		23,340	
1.1.6	Handhole A, B, D and E 1,500 x 1,500 x 1,500 mm	Sets	4	6,300		25,200	
	Sub Total:					80,865	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION 2: SUB STATION						
	SUPPLY, INSTALLATION, TERMINATION, JOINTING AND CONNECTION OF THE FOLLOWING CABLES LAID IN TRENCHES.						
1.2.1	11,000 volts insulated power cable, Three core 40 mm^2 connection between H.V. incoming Switchboard and power transformer No.1	m	45	54		2,430	
1.2.2	Ditto, but between H.V. incoming Switchboard and power transformer No.2	m	35	54		1,890	
1.2.3	660 volts PVC insulated SWA power cables, Single core 195 mm^2 between power transformer No.1 and L.V. feeder switchboard.	m	25	77		1,925	
1.2.4	Ditto,but power transformer No.2	m	35	77		2,695	
1.2.5	660 volts PVC insulated SWA power cables, Single core 195 mm^2 inter connection between A.C. generator control board and LV.feeder panel	m	24	77		1,848	
1.2.6	660 volts PVC insulated SWA power cables 2 - Single core 25 mm^2 for earthing including other necessary equipments.	Set	1			29,500	
1.2.7	Incoming power supply cable head for 40mm^2 single conductor (11,000 volts)	Sets	12	2,375		28,500	
1.2.8	Ditto but for 600V,195mm^2 cable	"	18	666		11,988	
	SUPPLY INSTALLATIO AND CONNECTION OF THE FOLLOWING H.V. INCOMING PANEL (11,000 volts) SWITCHBOARD.						
1.2.9	11,000 volts incoming panel switchboards provided with horizontal drawout type triple pole gang operated, oil circuit breakers, small oil content, having a continous rating of 400 amps, and a rupurting capacity of 350 MVA incoming power supply panel switchboard equipped with inductuon type over current and earth fault protection relays, indicating and recording instruments as shown on power supply drawing.	Set	1			366,420	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION 2 (Cont'd) SUPPLY, ERECTION AND CONNECTION OF POWER TRANSFORMERS COMPLETE WITH OIL TEMPERATURES INDICATOR, BURSTING DISC AND INCLUDING OTHER NECESSARY EQUIPMENTS.						
L2.10	Power transformer No.1 outdoor type oil immersed and natural cooled having A-Class insulation, incoming primary voltage 11,000 volts . Secondary voltage 400/231 volts 50 cycles 3 phase and neutral with a capacity of 250 KVA	Set	1			41,200	
L2.11	Ditto for power transformed No.2	"	1			41,200	
	SUPPLY ERECTION AND CONNECTION OF THE FOLLOWING 400 VOLTS FEEDER PANEL SWITCHBOARDS.						
L2.12	Low voltage switch boards 380/220 volts 3 phase and neutral of totally enclosed metal clad construction with air circuit breaker unit in each panel comprising of the following panels.						
	No. 1 L.V. incoming panel A.C.B. 600 amp trip free closing mechanism complete with armmeter voltmeter and 2 nos triple poles and 2 nos fourth poles moulded case circuit breakers.	Set	1			507,420	
	No.2 L.V. incoming panel ACB 600 amp trip free closing mechanism complete with ammeter voltmeter and 1 nos triple poles and 2 nos fourth poles moulded case circuit breakers.						
	No.3 L.V. incoming panel ACB 600 amp trip free closing mechanism complete with ammeter voltmeter and 1 nos double poles and 4 nos fourth poles moulded case circuit breakers.						
	Sub Total:					1037,016	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION 3 POWER STATION SUPPLY, INSTALLATION AND CONNECTION OF THE A.C. GENERATOR UNIT AND ALL OTHER NECESSARY EQUIPMENTS INCLUDING CONNECTING WIRES, AIR, WATER, AND OIL PIPES AND SPECIFIED IN DRAWINGS.						
1.3.1	A.C. diesel generator 6 pole 250 KVA 3 phase 50 cycle 400/231 volt output, fuel oil main tank 2,000 litors, fuel oil tank 490 liters, wing pump, fuel oil feed motor pump 0.4 kw, cooling tower, cooling water tank 500 liters, motor air compressor 3.7 kw, air reservoir 150 liters x 2, air contorl board, generator control board, battery and charging panel, exhaust gas pipe, silencer. etc	Set	1			1,348,800	
	Sub Total:					1,348,800	
	SECTION 4: DISTRIBUTION SUPPLY INSTALLATION AND CONNECTION OF FOLLOWING 600 VOLTS PVC INSULATED SWA POWER CABLES, BETWEEN, L.V. FEEDER PANELS (380/220 VOLTS) SWITCHBOARDS AND EACH LOCAL DISTRIBUTION BOARDS OR CONTROL PANEL INCLUDING OTHER NECESSARY EQUIPMENT						
1.4.1	3 Core 10 mm^2 inter connection between L.V feeder panels (380/220 volts) switchboard and capstanboard No.1	m	410	121		49,610	
1.4.2	Ditto, but 2 x single core 25 mm^2 for earthing	m	410	43		17,630	
1.4.3	3 core 95 mm^2 inter connection between L.V. feeder panels (380/220 volts) switchboard and capstanboard No.1 and No.2	m	600	153		91,800	
1.4.4	2 x single core 25 mm^2 for earthing between capstanboard No.1 and No.2	m	200	43		8,600	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION 4 (Cont'd)						
L4.5	4 core 50 mm^2 inter connection between L.V. feeder panels (380/220 volts) switch board and distribution "L-1" of terminal office	m	70	121		8,470	
L4.6	Ditto, but 4 core 25 mm^2	m	70	70		4,900	
L4.7	2 x single core 25 mm^2 for earthing between handhole "H" and distribution "L-1" of terminal office.	m	10	43		430	
L4.8	4 core 50 mm^2 inter connection between L.V. feeder panels (380/220 volts) switchboard and distribution "L-2" of terminal office	m	75	121		9,075	
1.4.9	Ditto, but 2 x single core 25 mm^2 for earthing	m	4	43		175	
14.10	3 core 70 mm^2 inter connection between L.V. feeder panels (380/220 volts) switchboard and control panel "P-P" of pump house	m	120	121		14,520	
14.11	Ditto, but 4 core 25 mm^2	m	120	70		8,400	
14.12	2 x single core 25 mm^2 for earthing between handhole No."J" and control panel "P-P" of pump house	m	20	43		860	
14.13	4 core 16 mm^2 inter connection between distribution board "L-1" and "L-G"	m	130	51		6,630	
14.14	2 x single core 4mm^2 for earthing between handhole "N" and distribution board "L-G" of gate house	m	2	15		30	
14.15	3 core 4mm^2 inter connection between distribution board "L-1" of terminal office and VHF facility	m	20	16		320	
14.16	2 x single core 4mm^2 for earthing between handhole "N" and VHF facility.	m	40	15		600	
14.16'	4 core 4mm^2 inter connection "L-1" and "L-2"	m	5	22		110	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION 4 (Cont'd)						
4.17	3 core 4mm^2 inter connection between distribution board "L-1" of terminal office and septic tank panel	m	5	16		80	
4.18	Ditto, but 2 x single core 4 mm^2 for earthing.	m	5	15		75	
4.19	4 core 25mm^2 inter connection between L.V. feeder panels (380/220 volts) switchboard and pipe heating board. No.1	m	132	70		9,240	
4.20	2 x single core 25mm^2 for earthing between handhole "L" and pipe heating board No.1	m	35	43		1,505	
4.21	2 core 25mm^2 inter connection between L.V. feeder panels (380/220 volts) switchboard and pipe heating board No.2	m	176	38		6,688	
4.22	2 x single core 25mm^2 for earthing between handhole "N" and pipe heating board No.2	m	5	43		215	
4.23	4 core 50mm^2 inter connection between L.V. feeder panels (380/220 volts) switchboard and pipe heating board	m	550	121		66,550	
4.24	2 x single core 25mm^2 for earthing between trenches and pipe heating board No.3	m	2	43		86	
4.25	4 core 16mm^2 inter connection between L.V. feeder panels (380/220 volts) switchboard and distribution board "L-S" of substation.	m	10	51		510	
4.26	Ditto, but 2 x single core 25mm^2 for earthing	m	10	43		430	
4.27	3 core 4mm^2 inter connection between distribution board "L-1" of terminal office and oil station	m	35	16		560	
4.28	Ditto	m	35	16		560	
4.29	Ditto, but 2 x single core 4mm^2 for earthing.	m	35	15		525	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION 4 (Cont'd)						
14.30	Cables duct between handhole "F and G", "G and H" as specified in drawing excavate for cables duct not exceeding 1.3M deep, 4 nos asbest cement pipes 100mm diameter including other necessary joint parts.	m	45	1,325		59,265	
14.31	Ditto, but not exceeding 0.8M deep between handhole "G" and "G"	m	5	1,288		6,440	
14.32	Ditto, but not exceeding 1.5M deep between handhole "H" and "J"	m	20	1,325		16,500	
14.33	Ditto, but 1 nos asbest cement pipe 100mm diameter between handhole "J" and "L"	m	10	1,033		10,330	
14.34	Ditto, but not exceeding 1.5M deep between handhole, "L" and "M"	m	35	1,013		35,455	
14.35	Ditto, but between handhole "M" and "N"	m	35	1,013		35,455	
14.36	Ditto, but 1 nos asbest cement pipe 75mm diameter between handhole "L" and VHF facility (handhole"R")	m	20	285		5,700	
14.37	Ditto, but 2 nos asbest cement pipes 100mm diameter between handhole "N" and "O"	m	25	701		17,525	
14.38	Ditto, but between handhole "O" and "P"	m	22	701		15,422	
14.39	Ditto, but 1 nos asbest cement pipes 75mm diameter between handhole "I" and oil station.	m	20	208		4,160	
14.40	Cables duct between handhole "P" and trenches of berth, as specified in drawing 1 nos flexible pipe 70mm diameter and 2 nos flexible pipe 54mm diameter.	m	1			319	
14.41	Cables duct between handhole "L" and "C" as specified in drawing excavate for cable duct not exceeding 1.9M deep 1 nos asbest cement pipe 100mm diameter including other necessary joint parts.	m	35	409		15,315	
14.41'	Cables duct between handhole "J" and "K" not exceeding 1.5 m deep 1 nos asbest cement pipe 100 mm dia. including other necessary joint parts.	m	20	389		7,780	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION 4 (Cont'd)						
14.42	Cables duct between handhole "K" and pipe heating panel No.1, 1 nos conduit 54mm diameter.	m	3	74		222	
14.43	Cables duct between distribution board "L-1" of terminal office and septic tank panel 1 nos conduit 36mm diameter	m	5	40		200	
14.44	Cables duct between handhole "H" and distribution "L-1" of terminal office 2 nos conduit 54mm diameter, 3 nos conduit 36mm diameter	m	8	267		2,136	
14.45	Cables duct between distribution "L-1" and "L-2" of terminal office 1 nos conduit 54mm diameter, 1 nos conduit 36mm diameter, 1 nos conduit 22mm diameter	m	4	128		512	
14.46	Cables duct between distribution board "L-1" and handhole "I" 1 nos conduit 42mm diameter	m	10	62		620	
14.47	Cables duct between handhole "K" and control panel "P-P" of pump house, 2 nos conduit 54mm diameter	m	15	148		2,220	
14.48	Cables duct between handhole "N" and distribution board "L-G" of gate house, 1 nos conduit 54mm diameter.	m	2	74		148	
	SUPPLY INSTALLATION AND CONNECTION OF HANDHOLE INCLUDING OTHER NECESSARY EQUIPMENT.						
14.49	Concreate handhole "F", "J", "R", "G","G","H","K","M","N" and "O" for cable duct as specified in drawing 1,500 x 1,500 x 1,500	Sets	10	6,300		63,000	
14.50	Ditto, but handhole "J","L","C" and "R" 1,500 x 1,500 x 2,000	"	4	6,500		26,000	
	Sub Total:					643,905	
	Total					3,110,586	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	DIVISION-2 POWER SUPPLY AND CONTROL SYSTEM FOR PUMPS						
	SUPPLY INSTALLATION AND CONNECTION OF 660 VOLTS PVC INSULATED SWA POWER CABLES. BETWEEN EACH LOCAL DISTRIBUTION BOARDS CONTROL PANEL AND EACH POWER LOAD. INCLUDING OTHER NECESSARY EQUIPMENT.						
2.1	3 core 50mm^2, 3 core 4mm^2 and 2 x single core 25mm^2 for earthing inter connection between control panel "P-P" and water fire pump No.1 in trench.	m	12	144		1,728	
2.2	Ditto, but water fire pump No.2	m	11	144		1,584	
2.3	Ditto, but water fire pump No.3	m	9	144		1,296	
2.4	3 core 4mm^2, 3 core, 4mm^2 and 2 x single core 4mm^2 for earthing inter connection between control panel "P-P and water pump No.4 in trench	m	7	47		329	
2.5	Ditto, but water pump No.5	m	6	47		282	
2.6	3 core 25mm^2 and 2 x single core 25mm^2 for earthing inter connection between capston No.1	m	30	93		2,790	
2.7	Ditto, but between capston board No.1 and capston No.2	m	50	93		4,650	
2.8	Ditto, but between capston board No.1 and capston No.3	m	120	93		11,160	
2.9	Ditto, but between capston board No.2 and capston No.4	m	20	93		1,860	
2.10	Ditto, but between capston board No.2 and capston No.5	m	110	93		10,230	
2.11	Ditto, but between capston board No.2 and capston No.6	m	130	93		12,090	
2.12	2 core 16mm^2 and 2 x single core 4mm^2 for earthing inter connection between pipe heating wire	m	12	41		492	
2.13	Ditto, but pipe heating panel No.2	m	6	41		246	
2.14	Ditto, but pipe heating panel No.3	m	12	41		492	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	DIVISION-2 (Cont'd)						
2.15	3 core 4mm^2 inter connection between magnet valve of unload and control panel of pump house.	m	350	16		5,600	
2.16	3 core 4mm^2 inter connection between magnet valve of terminal office and control panel of pump house.	m	80	16		1,280	
2.17	2 core 2.5mm^2 inter connection between pipe heating panel No.1 and thermometer.	m	9	11		99	
2.18	Ditto, but pipe heating panel No.2	m	9	11		99	
2.19	Ditto, but pipe heating panel No.3	m	9	11		99	
2.20	4 core 2.5mm^2 for erectrode inter connection between unload and control panel of pump house.	m	350	19		6,650	
2.21	4 core 2.5mm^2 for erectrode inter connection between high water tank of terminal office and control panels "P-P" of pump house.	m	80	19		1,520	
2.22	15 x single core 2.5mm^2 inter connection between remote control board of terminal office and control panel "P-P" of pump house.	m	70	104		7,280	
2.23	20 x single core 2.5mm^2 inter connection between alarm signal board of terminal office and control panel "P-P" of pump house.	m	70	138		9,660	
2.24	4 core 2.5mm^2 inter connection between alarm signal board of terminal office and generator control board.	m	70	19		1,330	
2.25	4 core 2.5mm^2 inter connection between alarm signal board of terminal office and H.V. incoming panels L.V. feeder panels of substation.	m	70	19		1,330	
2.26	Cables duct between handhole "F" and "G" as specified in drawing, 1 nos asbest cement pipe 100mm diameter including other necessary joint parts.	m	25	312		7,800	
2.27	Ditto, but between handhole "G" and "H"	m	25	312		7,800	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	DIVISION-2(Cont'd)						
2.28	Ditto, but between handhole "H" and "J"	m	20	312		6,240	
2.29	Ditto, but between handhole "J" and "K"	m	20	312		6,240	
2.30	Ditto, but between handhole "J" and "L"	m	10	312		3,120	
2.31	Ditto, but between handhole "L" and "M"	m	35	312		10,920	
2.32	Ditto, but between handhole "M" and "N"	m	35	312		10,920	
2.33	Ditto, but between handhole "N" and "O"	m	25	312		7,800	
2.34	Ditto, but between handhole "O" and "P"	m	22	312		6,864	
2.35	Cables duct between handhole "P" and trenches of berth 1 nos flexible pipe 54mm diameter.	m	1			99	
2.36	Cables duct between capston board No.1 and trench. 2 nos conduit 54mm diameter.	m	2	148		296	
2.37	Cables duct between capston board No.2 and trench. 2 nos conduit 54mm diameter.	m	2	148		296	
2.38	Cables duct between capston board No.1 and capston No.1, 1 nos conduit pipe 54mm diameter including other necessary support	m	30	74		2,220	
2.39	Cables duct between trench and capston No.2. 1 nos conduit pipe 54mm diameter including other necessary support.	m	25	74		1,850	
2.40	Ditto,but between trench and capston No.3	m	25	74		1,850	
2.41	Cables duct between capston board No.2 and Capston No.4. 1 nos conduit pipe 54mm diameter, including other necessary support.	m	20	74		1,480	
2.42	Cables duct between trench and capston No.5. 1 nos conduit pipe 54mm diameter including other necessary support.	m	25	74		1,850	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
	DIVISION-2 (Cont'd)			RS.	Paisa	RS.	Paisa
2.43	Ditto, but between trench and capston No.6	m	25	74		1,850	
2.44	Cables duct between pipe heating panel No.1 and oil pipe heating wire, 4 nos flexible pipe 28mm diameter.	m	8	184		1,472	
2.45	Ditto, but between pipe heating panel No.2 and oil pipe heating wire, 2 nos flexible pipe 28mm diameter.	m	4	92		368	
2.46	Ditto, but between pipe heating panel No.3 and oil pipe heating wire, 4 nos flexible pipe 28mm diameter.	m	8	184		1,472	
2.47	Cables duct between pipe heating panel No.1 and thermometer,1 nos flexible pipe 22mm diameter.	m	2	37		74	
2.48	Ditto, but between pipe heating panel No.2 and thermometer, 1 nos flexible pipe 22mm diameter.	m	2	37		74	
2.49	Ditto, but between pipe heating panel No.3 and thermometer, 1 nos flexible pipe 22mm diameter.	m	2	37		74	
2.50	Cables duct between handhole "H" and magnet valve of terminal office, 1 nos conduit 22mm diameter.	m	15	15		225	
2.51	Ditto, but between handhole "H" and high water tank of terminal office, 1 nos conduit 22mm diameter.	m	15	15		225	
2.52	Ditto, but between handhole "H" and remote control board of terminal office, 1 nos conduit 42mm diameter	m	20	62		1,240	
2.53	Ditto, but between handhole "H" and alarm signal board of terminal office, 1 nos conduit 36mm diameter, 1 nos conduit 42mm diameter.	m	20	101		2,020	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
	DIVISION-2 (Cont'd)			RS.	Paisa	RS.	Paisa
	SUPPLY, INSTALLATION AND CONNECTION OF THE FOLLOWING CONTROL POWER BOARDS.						
2.54	Control board "P-P" 380 volts 3 phase and neutral service, totally enclosed metal cabinet comprising the following panel equipped with 400A 3 pole M.C.C.B main isolator. 100A 4 pole M.C.C.B main isolator 3 nos 100A 3 pole M.B. 30 kw 3 nos 30A 3 pole M.B. 0.4 kw 2 nos 50A 3 pole M.B. 3.7 kw 50A 3 pole M.C.C.B main isolator 4 nos 20A 1 pole M.C.C.B. 3 nos condenser 9 KVA 2 nos condenser 1.5 KVA	Set	1			68,350	
2.55	Capston board No.1, 380 volts 3 phase service, totally enclosed metal cabinet comprising the following panel, water proof equipped with 100A 3 pole M.C.C.B main isolator, 3 nos 50A 3 pole M.C.C.B. 11 KW 3 nos condenser 4KVA	Set	1			19,270	
2.56	Ditto, but capston board No.2	Set	1			19,270	
2.57	Pipe heating panel No.1 380 volts 3 phase service, totally enclosed metal cabinet comprising the following panel water proof equipped with 100A 3 pole M.C.C.B main isolator, 4 nos 50A 2 pole M.C.C.B.	Set	1			13,853	
2.58	Ditto, but pipe heating panel No.3	Set	1			13,853	
2.59	Pipe heating panel No.2 380 volts single phase service totally enclosed metal cabinet comprising the following panel water proof equipped with 100A 3 pole M.C.C.B main isolator. 2 nos 50A 2 pole M.C.C.B.	Set	1			7,152	
2.60	Alarm signal board totally enclosed metal cabinet comprising the following panel equipped with 7 x orange colour lamps, one buzzer and one switch.	Set	1			4,427	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	DIVISION-2 (Cont'd)						
2.61	Remote control board totally enclosed metal cabinet comprising the following panel equipped with 3 x on switches and 3 x off switches.	Set	1			1,355	
	Sub-Total:					318,445	
	DIVISION-3 LIGHTING AND PLUG SOCKET SYSTEM						
	SECTION 1 TERMINAL OFFICE						
3.1.1	Distribution board "L-1", 380/220 volts 3 phase and neutral service. Totally enclosed metal cabinet comprising the following panel equipped with normal power 100A 3 pole M.C.C.B. main isolator 60A site rating busbar, 2 nos 50A 3 pole M.C.C.B. 20 nos 50A 2 pole M.C.C.B emergency power 100A 3 pole M.C.C.B main isolator 60A site rating busbar 4 nos 50A 3 pole M.C.C.B. 14 nos 50A 2 pole M.C.C.B.	Set	1			33,400	
3.1.2	Distribution board "L-2" 380/220 volts 3 phase and neutral service Totally enclosed metal cabinet comprising the following panel equipped with normal power. 100A 3 pole M.C.C.B. main isolator 60 site rating busbar 20 nos 50A 2 pole M.C.C.B. emergency power 50A 3 pole M.C.C.B. main isolator 50A site rating busbar 8 nos 50A 2 pole M.C.C.B.	Set	1			27,000	
	SUPPLY INSTALLATION AND CONNECTION OF THE FOLLOWING NORMAL AND EMERGENCY LIGHTING FIXTURES 220 VOLTS A.C. SUPPLY COMPLETE WITH LAMPS, TERMINALS, INTERNAL WIRING AND ELECTRICAL CONNECTIONS						
3.1.3	Vapour proof bracket ceiling mounting light with ball globe one 40w incandescent lamp IBG 40 (A)	no	6	534		3,204	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION- 1 (Cont'd)						
3.1.4	Water proof bracket wall mounting light with ball globe, one 40w incandescent lamp 1BG 40 (B)	no	14	534		7,476	
3.1.5	Open bottom recessed mounting fluorescent light with one 40w lamp FRO401	no	33	818		26,994	
3.1.6	Ditto, but with two 40w lamps FRO402	no	80	1,141		91,280	
3.1.7	Ditto, but with four 40w lamps FRO404	no	4	1,808		7,232	
3.1.8	Deflector type ceiling mounting fluorescent with one 40w lamp FCD 401	no	21	578		12,138	
3.1.9	Deflector type ceiling mounting fluorescent with two 40w lamps FCD402	no	12	848		10,176	
3.110	Ceiling mounted fluorescent fixture with two 40w lamps FCA402	no	1	587		877	
3,111	Exit sign, surface mounting, no arrow indication one 10w fluorescent lamps FWE101	no	4			2.348	
	SUPPLY INSTALLATION AND CONNECTION OF FOLLOWING SOCKET OUTLETS 3PIN PATTERN SWITCH COMBINED 230 VOLTS 15 AMPERE SINGLE PASE WITH EARTH PIN PLUG TOP SHALL BE SUPPLIED WITH SOCKET OUTLET.						
3.1.12	Socket outlet single outlet wall mounting pattern	no	90	135		12,150	
31.13	Ditto single outlet wall mounting pattern for fan coil unit power supply	no	23	135		3,105	
31.14	Ditto single outlet ceiling mounting pattern.	no	1			135	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS,	Paisa
	SECTION- 1 (Cont'd)						
	SUPPLY INSTALLATION AND CONNECTION OF FOLLOWING LOCAL SWITCHES FOR LIGHTING CONTROL 230 VOLTS 10A RATING						
3.1.15	Lighting control switch single pole pattern flush mounting	no	2	89		178	
3.1.16	Ditto double switches	no	23	137		3,151	
3.1.17	Ditto treble switches	no	12	185		2,220	
	SUPPLY AND INSTALLATION OF INSULATED WIRES IN SIZES OF 2.5mm^2 and 4mm^2 RIGID PVC CONDUITS, CONDUIT FITTINGS JUNCTION BOXES AND ALL NECESSARY ITEMS FOR THE CABLING BETWEEN FOLLOWING POINTS.						
3.1.18	Distribution board and lighting fixtures	m	640	28		17,920	
3.1.19	Ditto, socket outlets	m	715	28		20,020	
3.1.20	Ditto, local lighting control switches	m	360	21		7,560	
3.1.21	Ditto, fan coil units	m	330	32		10,564	
	Sub Total:					299,128	
	SECTION -2 SUB-STATION						
	SUPPLY INSTALLATION AND CONNECTION OF THE FOLLOWING DISTRIBUTION BOARD						
3.2.1	Distribution board "L-S" 380/220 volts 3 phase and neutral service totally enclosed metal cabinet comprising the following panel equipped emergency power. 50A 3 pole M.C.C.B. main isolator 30A site rating busbar 10 nos 50A 2 pole M.C.C.B.	Set	1			5,600	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SUPPLY INSTALLATION AND CONNECTION OF THE FOLLOWING EMERGENCY LIGHTING FIXTURES 220 VOLTS A.C. SUPPLY COMPLETE WITH LAMPS TERMINALS, INTERNAL WIRING AND ELECTRICAL CONNECTIONS.						
3.2.2	Deflector type ceiling mounting fluorescent with one 40w lamp FCD401	no	20	578		11,560	
	SUPPLY, INSTALLATION AND CONNECTION OF FOLLOWING SOCKET OUTLETS 3 PIN PATTERN SWITCH COMBINED 230 VOLTS 15 AMPERE SINGLE PHASE WITH EARTH PIN. PLUG TOP SHALL BE SUPPLIED WITH SOCKET OUTLET.						
3.2.3	Socket outlet single outlet wall mounting pattern.	no	11	135		1,485	
3.2.4	Ditto single outlet ceiling mounting pattern for roof fan unit power supply	no	1			135	
	SUPPLY INSTALLATION AND CONNECTION OF FOLLOWING LOCAL SWITCHES FOR LIGHTING CONTROL, 230 VOLTS, 10A RATING.						
3.2.5	Lighting control double switches single pole pattern flush mounting	no	5	137		685	
	SUPPLY AND INSTALLATION OF INSULATED WIRES IN SIZES OF 2.5mm^2 AND 4MM^2 RIGID PVC CONDUCTS, CONDUIT FITTINGS, JUNCTION BOXES AND ALL NECESSARY ITEMS FOR THE CABLING BETWEEN FOLLOWING POINTS.						
3.2.6	Distribution board and lighting fixtures	m	80	28		2,240	
3.2.7	Ditto, socket outlets	m	106	28		2,968	
3.2.8	Ditto, Local lighting control switches,	m	25	21		525	
3.2.9	Ditto, roof fan	m	7	32		224	
	Sub Total:					25,422	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION-3 GATE HOUSE						
	SUPPLY INSTALLATION AND CONNECTION OF THE FOLLOWING DISTRIBUTION BOARD						
3.3.1	Distribution board "L-G" 380/220 volts, 3 phase and neutral service totally enclosed metal cabinet comprising the following panel equipped emergency power. 50A 3 pole M.C.C.B. main isolator 30A site rating busbar 6 nos 50A 2 pole M.C.C.B.	Set	1			5,600	
	SUPPLY INSTALLATION AND CONNECTION OF THE FOLLOWING EMERGENCY LIGHTING, FIXTURES 220 VOLTS AC SUPPLY COMPLETE WITH LAMPS TERMINALS INTERNAL WIRING AND ELECTRICAL CONNECTIONS.						
3.3.2	Open bottom recessed mounting fluorescent light with one 40w lamp FRO401	no	9	818		7,362	
3.3.3	Water proof bracket wall mounting light with ball globe, one 40w incandescent lamp 1BG 40(B)	no	1			534	
	SUPPLY INSTALLATION AND CONNECTION OF FOLLOWING SOCKET OUTLETS 3 PIN PATTERN SWITCH COMBINED 230 VOLTS 15 AMPERE SINGLE PHASE WITH EARTH PIN, PLUG TOP SHALL BE SUPPLIED WITH SOCKET OUTLET						
3.3.4	Socket outlet single outlet wall mounting pattern.	no	5	135		675	
3.3.5	Ditto single outlet wall mounting pattern for fan coil unit power supply	no	2	135		270	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SUPPLY INSTALLATION AND CONNECTION OF FOLLOWING LOCAL SWITCHES FOR LIGHTING CONTROL 230 VOLTS 10A RATING.						
3.3.6	Lighting control switch single pole pattern flush mounting	no	2	89		178	
3.3.7	Ditto, double switch	no	1			137	
	SUPPLY AND INSTALLATION OF INSULATED WIRES IN SIZES OF 2.5mm^2 AND 4.0MM^2 RIGID PVC CONDUITS CONDUIT FITTINGS, JUNCTION BOXES AND ALL NECESSARY ITEMS FOR THE CABLING BETWEEN FOLLOWING POINTS.						
3.3.8	Distribution board and lighting fixture	m	30	28		840	
3.3.9	Ditto, but socket outlets	m	20	28		560	
3.3.10	Ditto, but local lighting control switches	m	10	21		210	
3.3.11	Ditto, but fan coil units	m	24	32		768	
3.3.12	Ditto, but control wire of water pump	m	9	87		783	
	Sub Total:					17,917	
	SECTION-4 PUMP HOUSE						
	SUPPLY INSTALLATION AND CONNECTION OF THE FOLLOWING EMERGENCY LIGHTING FIXTURES 220 VOLTS A.C. SUPPLY COMPLETE WITH LAMPS, TERMINALS INTERNAL WIRING AND ELECTRICAL CONNECTIONS INCLUDING SUPPORTS.						
4.4.1	Deflector type ceiling mounting fluorescent with one 40w lamp FCD401	no	4	578		2,312	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
	SECTION-4 (Cont'd)			RS.	Paisa	RS.	Paisa
3.4.2	Socket outlet single outlet wall mounting pattern	no	2	135		270	
3.4.3	Ditto, water proof type	no	1			167	
	SUPPLY INSTALLATION AND CONNECTION OF FOLLOWING LOCAL SWITCHES FOR LIGHTING CONTROL 230 VOLTS 10A RATING						
3.4.4	Lighting control double switch single pole pattern flush mounting	no	1			137	
	SUPPLY AND INSTALLATION OF INSULATED WIRES IN SIZES OF AND 2.5MM^2 RIGID PVC CONDUITS, CONDUIT FITTINGS, JUNCTION BOXES, AND ALL NECESSARY ITEMS FOR THE CABLING BETWEEN FOLLOWING POINTS.						
3.4.5	Distribution board and lighting fixtures	m	16	28		448	
3.4.6	Ditto, Socket outlets	m	15	28		420	
3.4.7	Ditto, local lighting control switches.	m	5	21		105	
	Sub Total:					3,859	
	SECTION-5 AREA LIGHTS						
	SUPPLY INSTALLATION AND CONNECTION OF THE FOLLOWING ITEMS IN CONNECTION WITH TERMINAL BUILDING AREA LIGHTS INSTALLED ON POLE WITH CONCRETE FOUNDATION.						
3.5.1	250 watt colour-corrected mercury discharge two lamps 5 meter pole including mercury lamp ballasts closed type and automatic switch	sets	12	11,154		133,848	
3.5.2	Ditto, one lamp 10 meter pole	sets	4	9,868		39,472	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION-5 (Cont'd)						
	SUPPLY INSTALLATION CONNECTION JOINT AND TERMINATION OF THE FOLLOWING 660 VOLTS PVC INSULATED SWA POWER CABLES. FOR AREA LIGHTS, CABLE FIXINGS SUCH AS SADDLES SUPPORTS ETC., UNDER GROUND CABLE DUCTS MEASURED SEPARATELY.						
3.5.3	2 x 2 core 16mm^2 inter connection	m	280	83		23,240	
3.5.4	2 core 16mm^2 inter connection	m	160	57		9,120	
3.5.5	Cables duct as specified in drawing excavate for cable duct not exceeding 1.2M deep 1 nos conduit pipe 70mm diameter including other necessary joint parts.	m	440	150		66,000	
	SUPPLY INSTALLATION AND CONNECTION OF HANDHOLE INCLUDING OTHER NECESSARY EQUIPMENT.						
3.5.6	Concrete handhole for cable duct as specified in drawing. 600 x 600 x 600	set	16	2,200		35,200	
	Sub Total:					306,880	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION-6 BERTH						
	SUPPLY, INSTALLATION AND CONNECTION OF THE FOLLOWING ITEMS IN CONNECTION WITH EACH LIGHTS.						
3.6.1	1,000 watt colour - corrected sodum discharge three lamps. 12 meter pole including mercury lamp ballasts closed type and automatic switch. FLOOD LIGHT	set	1			88,116	
3.6.2	250 watt colour - corrected mercury discharge two lamps 5 meter pole including mercury lamp ballasts closed type and automatic.switch BERTH LIGHT	sets	9	11,154		100,386	
3.6.3	100 watt red - coloured incandescent lamp 2.5 meter concreat pole.BEACON	set	1			1,690	
3.6.4	Water proof wall of berth mounting fluorescent light with water proof glassy shield plate with two 20w lamps. FWA 202	sets	6	5,386		32,316	
3.6.5	250 watt colour-corrected mercury discharge two lamp 5 meter pole including mercury lamp ballasts closed type and automatic switch for small berth. SMALL BERTH LIGHT	sets	3	11,154		33,462	
3.6.6	250 watt colour - corrected mercury discharge two lamps 10 meter pole including mercury lamp ballasts closed type and automatic switch for ACCESS BRIDGE LIGHT	sets	2	9,868		19,736	
	SUPPLY INSTALLATION AND CONNECTION OF FOLLOWING 660 VOLTS PVC INSULATED SWA POWER CABLES. BETWEEN DISTRIBUTION BOARD "L-1" OF TERMINAL OFFICE AND EACH LIGHTS.						
3.6.7	2 core 50mm^2 inter connection between distribution board "L-1" of terminal office and flood light of berth	m	350	62		21,700	
3.6.8	2 x single core 16mm^2 inter connection between trenches and floodlight of berth	m	30	32		960	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION-6 (Cont'd)						
3.6.9	2 x 2 core 50mm^2 and 2 x single core 16mm^2 inter connection between distribution board "L-1" and terminal office and berth light.	m	560	155		86,800	
3.6.10	2 core 50mm^2 and 2 x single core 16mm^2 inter connection between distribution board "L-1" and terminal office and berth light.	m	80	93		7,440	
3.6.11	2 core 50mm^2 and 2 x single core 16mm^2 inter connection between berth light and beacon	m	15	93		1,395	
3.6.12	2 core 16mm^2 and 2 x single core 16mm^2 inter connection between distribution board "L-1" and terminal office and approach light.	m	630	57		35,910	
3.6.13	2 core 16mm^2 and 2 x single core 16mm^2 inter connection between distribution board "L-1" and terminal office and small berth light.	m	270	57		15,390	
3.6.14	2 core 16mm^2 and 2 x single core 16mm^2 inter connection between handhole "O" and access bridge light	m	190	57		10,830	
3.6.15	Cables duct between handhole "H" and "J" 1 nos asbest cement pipe 100mm diameter including other necessary joint parts.	m	20	312		6,240	
3.6.16	Ditto, but between handhole "J" and "L"	m	10	312		3,120	
3.6.17	Ditto, but between handhole "L" and "M"	m	35	312		10,920	
3.6.18	Ditto, but between handhole "M" and "N"	m	35	312		10,920	
3.6.19	Ditto, but between handhole "N" and "O"	m	25	312		7,800	
3.6.20	Ditto, but between handhole "O" and "P"	m	23	312		7,176	
3.6.21	Cable duct between handhole "O" and "Q" excavate for cables duct not exceeding 1.2 meter deep, 1 nos 75mm diameter including other necessary joint parts.	m	8	169		1,352	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION-6 (Cont'd)						
3.6.22	Cables duct between distribution board "L-1" of terminal office and handhole "H" 2 nos conduit pipe 54mm diameter including other necessary joint parts.	m	10	148		1,480	
3.6.23	Cables duct between trenches and flood light 1 nos conduit pipe 54mm diameter including other necessary support.	m	40	74		2,960	
3.6.24	Cables duct between trenches and berth light 9 nos conduit pipe 54mm diameter.	m	4	665		2,660	
3.6.25	Cables duct between tenches and beacon 1 nos condit pipe 54mm diameter.	m	15	74		1,110	
3.6.26	Cables duct between trenches and approach light 1 nos conduit pipe 36mm diameter.	m	300	40		12,000	
3.6.27	Cables duct between trenches of small berth and small berth light 3 nos conduit pipe 36mm diameter.	m	1			119	
3.6.28	Cables duct between trenches and access bridge light 2 nos conduit pipe 36mm diameter.	m	14	79		1,106	
	SUPPLY INSTALLATION AND CONNECTION OF HANDHOLE INCLUDING OTHER NECESSARY EQUIPMENT.						
3.6.29	Concreat handhole "D" for cables duct as specified in drawing 600 x 600 x 600	set	1			6,300	
3.6.30	Ditto, 1,500 x 1,500 x 1,500	set	1			2,200	
	Sub Total:					533,594	
	Total:					1,186,800	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	DIVISION-4 TELEPHONE SYSTEM						
	SECTION-1 OUT DOOR CABLING						
4.1.1	Cables duct between handhole "C" and "L" as specified in drawing. 1 nos asbest cement pipe 75mm diameter including other necessary joint part.	m	35	208		7,280	
4.1.2	Ditto, but between handhole "F" and "G"	m	15	208		3,120	
4.1.3	Ditto, but between handhole "G" and "H"	m	25	208		5,200	
4.1.4	Ditto, but between handhole "H" and "J"	m	20	208		4,160	
4.1.5	Ditto, but between handhole "J" and "K"	m	25	208		5,200	
4.1.6	Ditto, but between handhole "J" and "L"	m	10	208		2,080	
4.1.7	Ditto, but between handhole "L" and "M"	m	35	208		7,280	
4.1.8	Ditto, but between handhole "M" and "N"	m	35	208		7,280	
4.1.9	Ditto, but between handhole "N" and "O"	m	25	208		5,200	
4.1.10	Ditto, but between handhole "O" and "P"	m	22	208		4,576	
4.1.11	Ditto, but between handhole "O" and "O"	m	8	208		1,664	
4.1.12	Ditto, but between handhole "P" and trenches 1 nos flexible pipe 54mm diameter including other necessary joint part.	m	1			99	
4.1.13	Cables duct between handhole "C" and handhole "A" as specified in drawing excavate for cable duct not exceeding 1.2 meter deep 1 nos asbest cement pipe 75mm diameter	m	15	269		4,035	
4.1.14	Supply and installation conduit pipe for protection of trank line cable, including other necessary fittings.	Set	1			120	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION-1 (Cont'd)						
	SUPPLY INSTALLATION AND CONNECTION OF HANDHOLE INCLUDING OTHER NECESSARY EQUIPMENT.						
4.1.15	Concrete handhole "A" and "F" for cable duct as specified in drawing 600 x 600 x 600	set	2	2,200		4,400	
	Sub Total:					61,694	
	SECTION-2 TERMINAL OFFICE						
	SUPPLY ERECTION AND CONNECTION OF THE FOLLOWING ITEMS FOR TELEPHONE SYSTEM						
4.2.1	Telephone outlet boxes wall mounted pattern complete with plug top socket and cover plate as described	no	22	39		858	
4.2.2	Terminal board with terminal of 20 pair pattern.	set	1			1,900	
4.2.3	Rigid P.V.C. conduits and conduit fitting complete including other necessary supports, between each outlets boxes and distribution box. conduit 28mm diameter.	m	185	19		3,515	
4.2.4	Ditto, but between handhole "H" and distribution box 2 nos conduit 54mm diameter.	m	18	148		2,664	
	Sub Total:					8,937	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION-3 SUB STATION						
	SUPPLY ERECTION AND CONNECTION OF THE FOLLOWING ITEMS FOR TELEPHONE SYSTEM.						
4.3.1	Telephone outlet box wall mounted pattern complete with plug top, socket and cover plate as described.	no	1			39	
4.3.2	Rigid P.V.C. conduits and conduit fitting complete including other necessary supports, between outlet box and handhole "F" 1 nos conduit 28mm diameter.	m	5	19		95	
	Sub Total:					134	
	SECTION-4 GATE HOUSE						
	SUPPLY ERECTION AND CONNECTION OF THE FOLLOWING ITEMS FOR TELEPHONE SYSTEM.						
3.4.1	Telephone outlet box wall mounted pattern complete with plug top socket and cover plate as described	no	2	39		78	
3.4.2	Rigid P.V.C. conduits and conduit fitting complete including other necessary supports between outlet box and handhole "N" 1 nos conduit 28mm diameter.	m	12	19		228	
	Sub Total:					306	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION-5 PUMP HOUSE						
	SUPPLY ERECTION AND CONNECTION OF THE FOLLOWING ITEMS FOR TELEPHONE SYSTEM.						
4.5.1	Telephone outlet box wall mounted pattern complete with plug top socket and cover plate as described.	no	1			39	
4.5.2	Rigid P.V.C. conduit and conduit fitting complete including other necessary supports between outlet box and handhole "K" 1 nos conduit 28mm diameter.	m	10	19		190	
	Sub Total:					229	
	SECTION-6 BERTH						
	SUPPLY ERECTION AND CONNECTION OF THE FOLLOWING ITEMS FOR TELEPHONE SYSTEM.						
4.6.1	Out-door telephone stands water proof type.	set	4	8,796		35,184	
4.6.2	Cable duct between trenches oi berth and outdoor telephone stands 3 nos rigid PVC conduit 28mm diameter.	m	15	55		825	
4.6.3	Cable duct between trenches of small berth and outdoor telephone stand. 1 nos rigid PVC conduit 28mm diameter.	m	3	19		57	
	Sub Total:					36,066	
	Total:					107,366	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	DIVISION-5 FIRE ALARM SYSTEM						
	SECTION-1 OUT DOOR CABLING						
	SUPPLY INSTALLATION AND CONNECTION OF FOLLOWING PVC INSULATED CONTROL CABLES AND ASBEST CEMENT PIPE 75MM DIAMETER BETWEEN MAIN DISPLAY PANEL OF TERMINAL OFFICE AND EACH ALARME PANEL.						
5.1.1	38 x single core 1.5mm^2 inter connection and asbest cement pipe 75mm diameter between handhole "H" and "J"	m	20	332		6,640	
5.1.2	16 x single core 1.5mm^2 inter connection and asbest cement pipe 75mm diameter between handhole "J" and "K"	m	20	261		5,220	
5.1.3	28 x single core 1.5mm^2 inter connection and asbest cement pipe 75mm diameter between handhole 'J" and "L"	m	10	302		3,020	
5.1.4	Ditto, but between handhole "L" and "M"	m	35	302		10,570	
5.1.5	Ditto, but between handhole "M" and "L"	m	35	302		10,570	
5.1.6	24 x single core 1.5mm^2 inter connection and asbest cement pipe 75mm diameter between handhole "N" and "O"	m	25	287		7,175	
5.1.7	20 x single core 1.5mm^2 inter connection and asbest cement pipe 75mm diameter between handhole "O" and "P".	m	22	274		6,028	
5.1.8	8 x single core 1.5mm^2 inter connection and asbest cement pipe 75mm diameter between handhole "O" and "Q".	m	8	235		1,880	
5.1.9	Ditto, but between handhole "H" and "G"	m	25	235		5,875	
5.1.10	Ditto, but between handhole "G" and "F"	m	18	235		4,230	
5.1.11	20 x single core 1.5mm^2 inter connection and flexible pipe 54mm diameter between handhole "P" and trenches of berth.	m	1			165	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION-1 (Cont'd)						
5.1.12	8 x single core 1.5mm^2 inter connection and PVC conduit 28mm diameter between handhole "H" and alarm panel of open space for packing area.	m	5	45		225	
	SUPPLY INSTALLATION AND CONNECTION OF HANDHOLE INCLUDING OTHER NECESSARY EQUIPMENT						
5.1.13	Concreat handhole for cable duct as specified in drawing 500 x 600 x 600	set	1			2,200	
	SUPPLY ELECTION AND CONNECTION OF MANUAL FIRE STATION.						
5.1.14	Manual fire station, water proof type	set	1			6,440	
	Sub Total:					70,238	
	SECTION-2 TERMINAL OFFICE						
	SUPPLY, ELECTION AND CONNECTION OF SYSTEM CONTROL AND MAIN DISPLAY PANEL AS SPECIFIED.						
5.2.1	MAIN DISPLAY panel complete with indication lamps for trouble, detector trip, manual fire station operated, main alarm, switches accept, reset complete with emergency fire master telephone set and D.C. power supply unit.	set	1			30,100	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION-2 (Cont'd)						
	SUPPLY, ERECTION AND CONNECTION OF FIRE AND SMOKE DETECTORS, ALARM BELLS, MANUAL FIRE STATIONS, EMERGENCY TELEPHONES ETC., AS, INDICATED.						
5.2.2	Fire detector, fixed temperature type ceiling mounted with individual trip indicator.	no	31	231		7,161	
5.2.3	Smoke detector, ceiling mounted with individual trip indicator	no	7	1,120		7,840	
5.2.4	Manual fire station, wall mounted	no	2	1,780		3,560	
	CIRCUIT WIRING FOR FIRE ALARM SYSTEM WITHIN THE TERMINAL OFFICE INCLUDING SUPPLY, INSTALLATION AND CONNECTION OF RIGID PVC CONDUIT, CONDUIT FITTINGS, TRUNKINGS, CABLE TRAYS, JUNCTION BOXES, MULTICORE AND SINGLE CORE CABLES AND WIRES ALL AS DESCRIBED, BETWEEN FOLLOWING POINTS.						
5.2.5	System control and main display panel and following points: fire detector, smoke detector, manual fire station	m	350	21		7,350	
5.2.6	System control and main display panel and manual fire station. 9 x single core 1.5mm^2 and PVC conduit 28mm diameter.	m	8	48		384	
5.2.7	Ditto, but8 x single core 1.5mm^2 and PVC conduit 28mm diameter.	m	30	45		1,350	
5.2.8	System control and main display panel and handhole "H" 38 x single core 1.5mm^2 8 x single core 1.5mm^2 PVC conduit 54mm diameter	m	19	224		4,256	
	Sub Total:					62,001	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION-3 SUB STATION						
	SUPPLY ERECTION CONNECTION OF FIRE AND SMOKE DETECTORS, ALARM BELLS, MANUAL FIRE STATION EMERGENCY TELEPHONES ETC AS INDICATED.						
5.3.1	Fire detector, fixed temperature type ceiling mounted with individual trip indicator.	no	1			231	
5.3.2	Smoke detector, ceiling mounted with individual trip indicator.	m	4	1.120		4,480	
5.3.3	Manual fire station, wall mounted	set	1			1,780	
	CIRCUIT WIRING FOR FIRE ALARM SYSTEMS WITHIN THE SUB STATION INCLUDING SUPPLY, INSTALLATION AND CONNECTION OF RIGID PVC CONDUIT, CONDUIT FITTINGS TRUNKINGS CABLE TRAYS. MULTICORE AND SINGLE CORE CABLES AND WIRES ALL AS DISCRIBED BETWEEN FOLLOWING POINTS.						
5.3.4	Manual fire station and fire detector	m	35	21		735	
5.3.5	Manual fire station and handhole "F" 8 x single core 1.5mm^2 PVC conduit 28mm diameter.	m	2	45		90	
	Sub Total:					7,316	
	SECTION-4 GATE HOUSE						
	SUPPLY ERECTION CONNECTION OF FIRE DETECTORS ALARM BELL MANUAL FIRE STATION EMERGENCY TELEPHONE ETC., AS INDICATED						
5.4.1	Fire detector, fixed temperature type ceiling mounted with individual trip indicator.	no	2	231		462	
5.4.2	Manual fire station, wall mounted	set	1			1,780	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION-4 (Cont'd)						
	CIRCUIT WIRING FOR FIRE ALARM SYSTEMS WITHIN THE SUB STATION, INCLUDING SUPPLY INSTALLATION AND CONNECTION OF RIGID PVC CONDUIT CONDUIT FITTINGS TRUNKINGS CABLE TRAYS, MULTICORE AND SINGLE CORE CABLES AND WIRES ALL AS DISCRIBED BETWEEN FOLLOWING POINTS.						
5.4.3	Manual fire station and fire detector smoke detector	m	14	21		294	
5.4.4	Manual fire station and handhole "N" 8 x single core 1.5mm^2 PVC CONDUIT 28mm diameter.	m	2	45		90	
	Sub Total:					2,626	
	SECTION-5 PUMP HOUSE						
	SUPPLY ERECTION CONNECTION OF FIRE DETECTORS ALARM BELL MANUAL FIRE STATION EMERGENCY TELEPHONE ETC., AS INDICATED.						
5.5.1	Fire detector, fixed temperature type ceiling mounted with individual trip indicator.	no	1			231	
5.5.2	Manual fire station, wall mounted	set	1			1,780	
	CIRCUIT WIRING FOR FIRE ALARM SYSTEMS WITHIN THE SUB STATION INCLUDING SUPPLY INSTALLATION AND CONNECTION OF RIGID PVC CONDUIT CONDUIT FITTINGS TRUNKINGS CABLE TRAYS MULTICORE AND SINGLE CORE CABLES AND WIRES ALL AS DISCRIBED BETWEEN FOLLOWING POINTS.						
5.5.3	Manual fire station and fire detector	m	9	21		189	
5.5.4	Manual fire station and handhole "K" 14 x single core 1.5mm^2 PVC CONDUIT 36mm diameter.	m	5	86		430	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION-5 (Cont'd)						
5.5.5	Manual fire station and control panel 6 x single core 1.5mm^2 PVC conduit 28mm diameter.	m	8	38		304	
	Sub Total:					2,934	
	SECTION-6 BERTH						
	SUPPLY INSTALLATION AND CONNECTION OF FOLLOWING PVC INSLATED CONTROL CABLES.						
5.6.1	20 x single core 1.5mm^2 inter connection between handhole "P" and manual fire station No.4.	m	195	66		12,870	
5.6.2	16 x single core 1.5mm^2 inter connection between manual fire station No.4 and No.3	m	65	53		3,445	
5.6.3	12 x single core 1.5mm^2 inter connection between manual fire station No.3 and No.2	m	65	40		2,600	
5.6.4	8 x single core 1.5mm^2 inter connection between manual fire station No.2 and No.1.	m	65	27		1,755	
5.6.5	Ditto, but between handhole "Q" and manual fire station No.5	m	75	27		2,025	
5.6.6	Cables duct rigid PVC conduit 28mm diameter between trenches and manual fire station No.4.	m	4	19		76	
5.6.7	Ditto rigid PVC conduit 36mm diameter between trenches and manual fire station No.3	m	4	40		160	
5.6.8	Ditto rigid PVC conduit 42mm diameter between trenches and manual fire station No.2	m	4	62		248	
5.6.9	Ditto rigid PVC conduit 54mm diameter between trenches and manual fire station No.1.	m	4	74		296	
5.6.10	Ditto rigid PVC conduit 28mm diameter between trenches of small berth and manual fire station No.5.	m	1			19	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION-6 (Cont'd)						
	SUPPLY ERECTION CONNECTION OF ALARM BELL MANUAL FIRE STATION EMERGENCY TELEPHONES ETC., AS INDICATED.						
5.6.11	Manual fire station water proof type, push bottom for fire pump starting and local alarm bell.	set	4	6,440		25,760	
	Sub Total:					49,254	
	Total:					194,369	
	DIVISION-6 SUB STATION						
	SECTION-1 PILING						
1-1	Piling, reinforced concrete, precast, 400mm x 400mm x 22M including joint splice	ea	25	14,155		353,875	
1-2	Test pile and loading test, 400mm x 400mm x 22M test load cap. 200 Ton (see spec.)	ea	1	29,155		29,155	
	Sub Total:					383,030	
	SECTION-2 EARTH WORK						
2-1	Excavation	cu.m	254	7	60	1,930	
2-2	Backfill with compaction	"	146	6	10	891	
2-3	Disposal of soil (in site)	"	108	6	60	713	
2-4	Compacted rock rubble fill, under floor slab and foundation	"	45	182		8,190	
2-5	Gravel fill, to transformer Rm.	"	21.3	145		3,098	
2-6	Ditto, to around Bldg. 60mm thick.	"	6	152		912	
2-7	Planting concrete block, including excavation and disposal 150mm x 200mm	Lin.m	75.2	28		2,106	
	Sub Total:					17,840	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION-3 CONCRETE WORK						
3-1	Concrete, leveling, class-C in place top of compacted fill.	Cu.m	5.7	450		2,565	
3-2	Reinforced concrete, class-A including forming. in place pile caps.	"	8.5	628		5,338	
3-3	Ditto, in place grade beams.	"	32.6	628		20,473	
3-4	Ditto, in place columns.	"	11.9	645		7,676	
3-5	Ditto, in place walls.	"	6.2	640		3,968	
3-6	Ditto, in place roof beams.	"	19.2	640		12,288	
3-7	Ditto, in place roof slabs.	"	40.2	635		25,527	
3-8	Ditto, in place generator bed	"	8.2	628		5,150	
3-9	Reinforced concrete, Class-B including forming, in place floor slab on grade.	"	12.7	515		6,541	
3-10	Ditto, in place cable trench	"	6.2	610		3,782	
3-11	Ditto, in place stoops.	"	2.1	530		1,113	
3-12	Reinforcing mild steel bars, deformed 12mm dia and less	kg	5,354	9	3	49,792	
3-13	Ditto, 16mm dia up to 25mm dia	kg	8,750	9	2	80,500	
3-14	E.W.W.F., install floor slab on grade, 150 x 150/#8 x #8	sq.m	127	20		2,540	
3-15	Expansion joint filler and seal, around generator bed, 12mmx100mm	Lin.m	15	7	4	110	
	Sub Total:					227,364	
	SECTION 4-CONCRETE MASONRY						
4-1	Hollow core concrete block, including setting and grouting cement mortor. 200mm thick wall.	sq.m	371	133		49,343	
4-2	Reinforcing mild steel bars, deformed, 13mm dia.	kg	272	9	3	2,530	
4-3	Ditto, 16mm dia.	kg	916	9	2	8,427	
	Sub Total:					60,300	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION-5 MISCELLANEOUS METAL						
5-1	Cable trench cover, 4.5mm checkered steel plate 560mm wide	Lin.m	15.4	148		2,279	
5-2	Ditto, 660mm wide	"	3.5	174		609	
5-3	Ditto, 760mm wide	"	3	200		600	
5-4	Ditto, 1,030mm wide	"	4.7	272		1,278	
5-5	Cable trench corner angle L-50 x 50 x 6 with edging and anchors	"	68.2	44		3,001	
	Sub Total:					7,767	
	SECTION-6 MOISTURE PROTECTION						
6-1	Elastomeric roofing, on concrete roof slab.	sq.m	351	116		40,716	
6-2	Caulking and sealing, to around door and window opening.	Lin.m	99	24		2,376	
	Sub Total:					43,092	
	SECTION-7 DOORS, WINDOWS AND FRAME						
7-1	Double hinged steel angle framed wire mesh door, including frame and hardware. type-1/SD, 2,950 x 2,500	pair	3	11,500		34,500	
7-2	Sliding metal hanger door, including frame and hardware type-2/SD, 2,100 x 3,100	each	1	15,600		15,600	
7-3	Ditto, type-3/SD, 1,800 x 3,100	each	2	13,400		26,800	
7-4	Double hinged aluminum flush door, louvered bottom, incl. frame and hardware type-1/AD, 1,600 x 2,000	pair	2	5,120		10,240	
7-5	Single hinged aluminum flush door, incl. frame and hardware type-2/AD, 800 x 2,000	each	2	2,510		5,020	
7-6	Sliding aluminum window, including insect screen section, frame and hardware. type-1/AW, 1,500 x 900	each	6	2,110		12,660	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION-7 (Cont'd)						
7-7	Air intake aluminum louver, including frame. type-1/AL, 1,900 x 1,500	each	2	7,060		14,120	
7-8	Glass and glazing, 6,8mm thick wire plate glass	sq.m	9	120		1,080	
	Sub Total:					120,020	
	SECTION-8 FINISHES						
	Exterior						
8-1	Cement mortar steel trowel finished base, 400 High	Lin.m	42	30		1,260	
8-2	Ditto,300 High	"	9.2	30		276	
8-3	Sprayed colored cement mortar finish, to wall	sq.m	273	58		15,834	
8-4	Ditto, to soffit	"	124	63		7,812	
8-5	Cement mortar broomed finish, on stoops	"	19	18		342	
8-6	Exterior-oil paint finish, to metal surfaces	"	77	30		2,310	
	INTERIOR						
8-7	Cement mortar steel trowel finish, on floor	"	127	20		2,540	
8-8	Vinyl paint finish, to exposed conc. and block base.	"	14	33		462	
8-9	Ditto, to exposed conc. and conc. block wall.	"	660	30		19,800	
8-10	Ditto, to exposed conc. ceiling	"	198	32		6,336	
8-11	Oil paint finish, to metal surface	"	77	30		2,310	
	Sub Total:					59,282	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION-9 VENTILATION						
9-1	Roof ventilator, roof-mounted, direct-driven propeller fan, complete with weather-proof housing and base, gravity operated back-draft damper and disconnecting switch, cap. 490 CMM at 12mm S.P. 3.7 kw, 3ϕ - 380V, 50 Hz	set.	1	25,300		25,300	
9-2	Wall exhaust fan, wall mounted, direct-driven propeller fan with automatic shutter. cap. 85 CMM at 6mm S.P. 400 watts, 1ϕ-220V, 50 Hz.	set	2	2,340		4,680	
9-3	Ditto, cap. 34 CMM at 6mm S.P. 80 watts, 1ϕ 220V, 50 Hz.	set	1	1,520		1,520	
9-4	Ditto, But explosion - proof type cap. 18 CMM at 6mm S.P. 50 watts, 1ϕ-220V, 50 Hz.	set	1	2,100		2,100	
	Sub Total:					33,600	
	Total:					952,295	

BILL OF QUANTITIES

PART VIII

BUILDINGS

Page

SUMMARY

PART VIII BUILDINGS

Division 1	Terminal Office Building	RS.	3,768,809
Division 2	Gate House	RS.	208,510
Division 3	Sewer System	RS.	643,587
	Total	RS.	4,620,906

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	PART VIII: BUILDINGS						
	DIVISION-1 TERMINAL OFFICE BUILDING						
	SECTION 1: Piling						
1.1	Piling, reinforced concrete, precast 400mm x 400mm x 22m including joint splice	Each	70	14,155		990,850	
1.2	Test pile and loading test 400mm x 400mm x 22m test load cap. 200 Ton (see spec.)	Each	2	29,155		58,310	
	Sub Total:					1,049,160	
	SECTION 2: Earth Work						
2.1	Excavation	cu.m	578	7	60	4,393	
2.2	Backfill with compaction	cu.m	391	6	10	2,385	
2.3	Disposal of soil (in Site)	cu.m	187	6	60	1,234	
2.4	Compacted rock rubber fill under floor slab and foundation	cu.m	130	182		23,660	
2.5	Gravel fill, to around Bldg. 60mm thick	cu.m	12.4	152		1,885	
2.6	Planting concrete block, including excavation on disposal 150mm x 200mm	Lin.m	134	28		3,752	
	Sub Total:					37,309	
	SECTION 3: Concrete Work						
3.1	Concrete, leveling, class-C in place top of compacted fill	cu.m	10.2	450		4,590	
3.2	Reinforced concrete, class-A including forming in place pile caps	cu.m	38	628		23,864	
3.3	Ditto, in place grade beams	cu.m	62.7	628		39,376	
3.4	Ditto, in place girders and beams-1st floor	cu.m	53.5	640		34,240	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
	(SECTION 3 cont'd)			RS.	Paisa	RS.	Paisa
3.5	Ditto, in place girders and beams-roof slab	cu.m	54.7	640		53,008	
3.6	Ditto, in place columns	cu.m	51.9	645		33,476	
3.7	Ditto, in place lst floor slab	cu.m	88.5	635		56,198	
3.8	Ditto, in place roof slab	cu.m	118	635		74,930	
3.9	Ditto, in place wall (stair-case)	cu.m	17.4	650		11,310	
3.10	Ditto, in place main stair	cu.m	4.4	655		2,882	
3.11	Ditto, in place fire escapes	cu.m	6	655		3,930	
3.12	Lihgt-weight concrete, class-E in place lst floor toilet area	cu.m	1.1	520		572	
3.13	Reinforced concrete, class-B including forming in place floor slab on grade and stoops	cu.m	75	515		38,625	
3.14	Reinforcing mild steel bars, deformed 13mm dia and less	kg	26,311	9	30	244,692	
3.15	Ditto, 16mm dia up to 25 mm dia. (Electric Welding wire Fabricate)	kg	33,376	9	20	307,059	
3.16	E.W.W.F., install floor slab on grade, 150 x 150/#8 x #8	sq.m	660	20		13,200	
	Sub Total:					923,952	
	SECTION 4: Concrete Masonry						
4.1	Hollow core concrete block, including setting and grouting cement mortar 200mm thick wall	sq.m	476	133		63,308	
4.2	Ditto, 100mm thick wall	sq.m	833	86		71,638	
4.3	Reinforcing mild steel bars, deformed 13mm dia	kg	4,220	9	30	39,246	
	Sub Total:					174,192	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION 5: Miscellaneous Metal						
5.1	Handrail, 2.3mm x 50mm x 150mm SQ. steel pipe handrail and SQ pipe balusters anchored to conc. treads 1,100m High install to main stairway	Lin.m	11.2	940		10,528	
5.2	Ditto, install to fire escapes	Lin.m	19	940		17,860	
5.3	Roof hatch cover, steel angle framed 1.6mm steel plate cover hinged to metal frame and anchored to conc. curb with bolts Size, 1,000 x 1,000	Each	1	1,250		1,250	
5.4	Ceiling suspension system, consists of light-weight steel channels, clamps, rods, runners and nailers	sq.m	1,249	88		109,912	
5.5	Steel ladder rungs, 19mm dia.	Each	13	25		325	
	Sub Total:					139,875	
	SECTION 6: Carpentry						
6.1	Finish lummber, install to window trims	cu.m	0.36	5,460		1,966	
6.2	Wood bench, 25mm thick plywood top with edging incl. metal brackets 400 wide x 1,650 long (Rm.102)	Each	1	250		250	
6.3	Ditto, 400 wide x 2,750 long (Rm. 111)	Each	1	410		410	
6.4	Kitchen Counter 25mm thick plywood counter for with edging Size, 500 wide x 1,500 long	Each	1	950		950	
6.5	Information Counter 25mm thick plywood counter with edging Size, 500 wide x 2,000 long	Each	1	1,270		1,270	
	Sub Total:					4,846	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION 7: Moisture Protection						
7.1	Elastomeric roofing, on concrete roof slab	sq.m	882	116		102,312	
7.2	40mm thick rigid insulation, fastened under roof slab	sq.m	569	105		59,745	
7.3	Caulking and sealing, to around door and window opening	Lin.m	270	24		6,480	
7.4	Metal water-proofing sheet, on 1st floor toilet room area	sq.m	35	95		3,325	
	Sub Total:					171,862	
	SECTION 8: Doors, Windows, and Frame						
8.1	Double hinged aluminum glazed door with full glazed side partition and transom; including frame and hardware Type - 1/AD, $4,600^{W}$ x $2,600^{H}$	Pair	1	26,980		26,980	
8.2	Ditto Type; 2/AD, $4,600^{W}$ x $2,600^{H}$	Pair	1	26,980		26,980	
8.3	Double hinged aluminum glazed top flash doow with transom including frame and hardware Type - 3/AD, $1,600^{W}$ x $2,600^{H}$	Pair	4	14,170		56,680	
8.4	Double hinged plywood flush door including frame and trim and hardware Type - 1/WD, $1,900^{W}$ x $1,920^{H}$	Pair	3	1,950		5,850	
8.5	Single hinged plywood flush door with sightglass, including frame and trim, and hardware Type - 2/WD and 2A/WD, 900^{W} X $1,920^{H}$	Each	33	970		32,010	
8.6	Ditto, Type - 5/WD, 900^{W} x $1,826^{H}$	Each	1	950		950	
8.7	Sliding aluminum window, including insect screen section, frame and hardware Type - 1/AW, $1,700^{W}$ x $1,500^{H}$	Each	30	4,230		126,900	
8.8	Ditto Type - 2/AW, $1,700^{W}$ x 900^{H}	Each	2	2,412		4,824	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
	(SECTION 8 cont'd)			RS.	Paisa	RS.	Paisa
8.9	Ditto Type - 3/AW, 1,000^{W} x 900^{H}	Each	1	1,570		1,570	
8.10	Project-out aluminum window, including frame and hardware Type - 4/AW, 700^{W} x 900^{H}	Each	4	4,120		16,480	
8.11	Sliding wood window, including wood frame and hardware Type - 1/WW, 1,900^{W} x 885^{H}	Each	1	480		480	
8.12	Aluminum louver, including frame Type - 1/AL, 900W x 600H	Each	1	1,080		1,080	
8.13	Glass and glazing 6mm thick polished plate glass	sq.m	26	190		4,940	
8.14	Ditto 6.8mm thick wired plate glass	sq.m	5	120		600	
8.15	Ditto 3mm thick clear sheet glass double strength	sq.m	79	76		6,004	
8.16	Ditto 3mm thick frosted sheet glass double strength	sq.m	4	79		316	
	Sub Total:					312,644	
	SECTION 9: Finishes Exterior						
9.1	Sprayed colored cement mortar finish, to wall	sq.m	750	58		43,500	
9.2	Ditto, to soffit	sq.m	192	63		12,096	
9.3	Ditto, to fire escapes	sq.m	33	63		2,079	
9.4	Cement mortar steel trowel finished base, 400mm high	Lin.m	112	30		3,360	
9.5	Ditto, 100mm high, (fire escapes)	Lin.m	6.2	20		124	
9.6	Ditto, 400mm high (fire escapes)	Lin.m	13	45		585	
9.7	Cement mortar steel trowel finished treads and risers (fire escapes)	sq.m	9	26		234	
9.8	Ditto, to landing and wall (fire escapes)	sq.m	10	24		240	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	(SECTION 9 cont'd)						
9.9	Cement mortar broomed finish, on stoops	sq.m	15	18		270	
	Interior						
9.10	Cement mortar steel trowel finish, on floor	sq.m	1,115	20		22,300	
9.11	Ditto, on tread and riser	sq.m	17.8	26		463	
9.12	Ceramic mosaic tile floor, including setting bed	sq.m	71.3	255		18,182	
9.13	Terrazzo tile floor with setting bed	sq.m	28.7	316		9,069	
9.14	Cement mortar base, 100mm high	Lin.m	763	20		15,260	
9.15	Ditto, 200mm high in stairway	Lin.m	6.8	30		204	
9.16	Cement mortar border, 100 x 45 in stairway	Lin.m	14	30		420	
9.17	Gypsum plaster wall	sq.m	1,905	25		47,625	
9.18	Glazed ceramic tile wall, including setting bed	sq.m	271	335		90,785	
9.19	Gypsum plaster ceiling	sq.m	24	27		648	
9.20	Acoustic tile ceiling, w/metal edgeing	sq.m	973	126		122,598	
9.21	Asb. cem. bd. ceiling w/metal edging	sq.m	252	30		7,560	
9.22	Ceramic tile non-slip tile on stairs	Lin.m	69	76		5,244	
9.23	Exterior oil paint finish to metal surfaces	sq.m	55	30		1,650	
9.24	Interior vinyl paint finish, to cem. mortar base surface	sq.m	79	33		2,607	
9.25	Ditto, to gypsum plaster wall surface	sq.m	1,905	30		57,150	
9.26	Ditto, to gypsum plaster ceiling surface	sq.m	24	32		768	
9.27	Ditto, to asb. cem. bd., ceiling surface	sq.m	252	32		8,064	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	(SECTION 9 cont'd)						
9.28	Oil painting finish, to wood surfaces	sq.m	234	31		7,254	
9.29	Ditto, to metal surfaces	sq.m	36	30		1,080	
	Sub Total:					481,419	
	SECTION 10: Specialties						
10.1	Metal toilet partition, including doors and hardware	sum	1	12,140		12,140	
10.2	Soap dish	Each	9	36		324	
10.3	Cartain rod, chrom plated brass pipe, 25mm dia. 920 long	Each	2	105		210	
10.4	Coat hook brass	Each	8	9		72	
	Sub Total:					12,746	
	SECTION 11: Plumbing						
11.1	Water closet (No.1) Vitreous-china, flush valve, siphnic wash down with supply and waste trim assembly incl. peper holder	set	1	2,110		2,110	
11.2	Ditto (No. 2) Except flush valve siphnic wash down but with flush tank	set	1	1,960		1,960	
11.3	Watercloset (No. 3) Vitreous-china, Asia type, with flush tank supply and waste trim assembly ind. paper holder	set	4	1,480		5,920	
11.4	Urinal (No. 1) Vitreous-china, wall hung, integral trap with flush valve, supply & waste trim assembly	set	4	1,260		5,040	
11.5	Urinal (No. 2) Same as UR-1	set	4	1,260		5,040	
11.6	Labatory Vitreous-china, flat top with anti-splash, cold water supply only, supply & waste trim assembly	set	8	1,220		9,760	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	(SECTION 11 cont'd)						
11.7	Service sink Vitreous-china, on "S"-type trap, cold water supply only with supply and waste trim assembly	set	2	1,810		3,620	
11.8	Shower assembly Concealed type, cold water supply only	Each	9	740		6,660	
11.9	Glass shelf, 457mm x 127mm	Each	8	60		480	
11-10	Mirro, 455mm x 608mm	Each	8	170		1,360	
11-11	Electric water cooler Babble type, air-cooled condenser freestanding, tank cap, 2.5 liters 1ϕ - 220V - 50 Hz	Each	2	5,690		11,380	
11-12	Water storage tank, installed on roof slab with reinforced concrete found, storage cap, 10,000 liters, FRP type including pipe connections, manhole, and ladders	Each	1	34,600		34,600	
11-13	Cold waterservice piping including fittings, insulation, and metal supports and misc. materials 3" dia.	Lin.m	5	145		725	
11.14	Ditto 2" dia.	Lin.m	45	115		5,175	
11.15	Ditto 1-1/2" dia.	Lin.m	45	85		3,825	
11.16	Ditto 1-1/4" dia.	Lin.m	40	72		2,880	
11.17	Ditto 1" dia.	Lin.m	20	56		1,120	
11.18	Ditto 3/4" dia.	Lin.m	6	43		258	
11.19	Ditto 1/2" dia.	lin.m	55	31		1,705	
11.20	Gate valve with valve box 2" dia.	Each	1	480		480	
11.21	Gate valve, 2" dia.	Each	1	390		390	
11.22	Ditto 1/2" dia.	Each	5	115		575	
11.23	Float valve, 2" dia.	Each	1	470		470	
11.24	Glove valve, 1/2" dia.	Each	4	110		440	
11.25	Hose bibb, 3/4" dia.	Each	1	170		170	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	(SECTION 11 cont'd)						
11.26	Soil, waste & drain piping, cast-iron pipe including fittings and joint materials 4" dia. pipe	Lin.m	22	570		12,540	
11.27	Ditto, 3" dia. pipe	Lin.m	21	455		9,555	
11.28	Ditto, 2-1/2" dia. pipe	Lin.m	7	380		2,660	
11.29	Ditto, 2" dia. pipe	Lin.m	20	230		4,600	
11.30	Ditto, 1-1/2" dia. pipe	Lin.m	12	152		1,824	
11.31	Floor drain, 2" dia. w/trap	Each	4	810		3,240	
11.32	Shower drain, 3" dia. w/trap	Each	3	1,020		3,060	
11.33	Floor cleanout, 4" dia.	Each	1	690		690	
11.34	Ditto, 3" dia.	Each	3	600		1,800	
11.35	Funnel drain, 1-1/4" dia.	Each	2	540		1,080	
11.36	Vent piping, incl. pipe fittings and pipe supports 4" dia. pipe	Lin.m	6	115		690	
11.37	Ditto, 2-1/2" dia.	Lin.m	5	88		440	
11.38	Ditto, 2" dia.	Lin.m	18	77		1,386	
11.39	Ditto, 1-1/2" dia.	Lin.m	19	57		1,083	
11.40	Ditto, 1-1/4" dia.	Lin.m	12	48		576	
11.41	Vent cap, 4" dia cast-iron	Each	1	130		130	
	Sub Total:					151,497	
	SECTION 12: Air Conditioning and Ventilation						
12.1	Room air conditioner, wall mounted, self-contained, cooling cap, 5,390 KCAL/HR fan cap, 12.7 cmm, air thru 15.2 meter 2.9 liters per hour moisture removal, 15.5Amps, 1ø-220V-50Hz	set	24	12,400		297,600	
12.2	Wall exhaust fan, (No.1) Wall mounted, direct-driven, propeller fan with gravity shutters, Rated cap. 16.0 cmm, 41.0 wattes, 1ø-220V-50Hz	set	8	1,010		8,080	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	(SECTION 12 cont'd)						
12.3	Wall exhaust fan, (No.2) same as exhaust fan No.1 except rated cap. 6.0 cmm, 37.0 wattes, 1ϕ-220-50Hz	set	1	890		890	
12.4	Wall exhaust fan (No.3) same as exhaust fan No.1 except moisture-proof type and cap. 12.0 cmm, 35.0 wattes, 1ϕ-220V-50Hz	set	2	1,090		2,180	
12.5	Condensate drain piping 1/2" dia. PVC pipe including fittings, supports and sleeves	Lin.m	105	5	30	557	
	Sub Total:					309,307	
	TOTAL:					3,768,809	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	DIVISION 2: GATE HOUSE						
	SECTION 1: Earth Work						
1.1	Excavation	cu.m	49	7	60	372	
1.2	Backfill with compaction	cu.m	10	6	60	61	
1.3	Disposal of soil (in Site)	cu.m	39	6	10	257	
1.4	Compacted rock rubble fill, under floor slab and foundation	cu.m	17	182		3,094	
	Sub Total:					3,784	
	SECTION 2: Concrete Work						
2.1	Reinforced concrete, class-A including forming, in place grade beam and floor slab	cu.m	35.8	610		21,838	
2.2	Ditto, in place column	cu.m	0.3	645		194	
2.3	Ditto, in place roof beams	cu.m	5.8	640		3,712	
2.4	Ditto, in place roof slab	cu.m	13.8	635		8,763	
2.5	Reinforcing mild steel bars, deformed 13mm dia. and less	kg	2,660	9	30	24,738	
2.6	Ditto 19mm dia. and up to 22mm dia.	kg	1,305	9	20	12,006	
	Sub Total:					71,251	
	SECTION 3: Concrete Masonry						
3.1	Hollow core concrete block including setting and grouting cement mortar 200mm thick wall	sq.m	81	133		10,773	
3.2	Ditto, 100mm thick wall	sq.m	12	86		1,032	
3.3	Reinforcing mild steel bars, deformed 13mm dia. and 16mm dia.	kg	376	9	30	3,497	
	Sub Total:					15,302	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION 4: Miscellaneous Metal						
4.1	Ceiling suspension system consists of lightweight steel channels, clamps, rods, runnerers and nailers	sq.m	53	88		4,664	
	Sub Total:					4,664	
	SECTION 5: MOISTURE PROTECTION						
5.1	Elastomeric roofing, on concrete roof slab	sq.m	122	116		14,152	
5.2	40mm thick rigid insulation fastened under roof slab	sq.m	48	105		5,040	
5.3	Caulking and sealing, to around door and window opening	Lin.m	54	24		1,296	
	Sub Total:					20,488	
	SECTION 6: Doors, Windows, and Frame						
6.1	Single hinged aluminum flash door, including frame and hardware Type - 1/AD, 800 x 2,000	Each	3	2,510		7.530	
6.2	Single hinged plywood flush door, including wood frame and trim, and hardware Type - 1/WD, 900 x 1,920	Each	2	975		1,950	
6.3	Sliding aluminum window, including insect screen section, frame and hardware Type - 1/AW, 1,700 x 1,500	Each	5	4,230		21,150	
6.4	Ditto, Type - 2/AW, 1,100 x 900	Each	1	1,570		1,570	
6.5	Glass and glazing 3mm thick clear sheet glass, double strength	sq.m	13	76		988	
6.6	Ditto, 3mm thick frosted sheet glass, double strength	sq.m	1.2	79		95	
	Sub Total:					33,283	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION 7: Finishes Exterior and Interior						
7.1	Sprayed colored cement mortar finish, to wall	sq.m	94	58		5,452	
7.2	Ditto, to soffit	sq.m	60	63		3,780	
7.3	Cement mortar steel trowel finished base, 250mm high	Lin.m	8	30		240	
7.4	Ditto, 150mm high	Lin.m	0.5	20		10	
7.5	Cement mortar broomed finish on stoops	sq.m	47	18		846	
7.6	Cement mortar steel trowel finish on floor	sq.m	49	20		980	
7.7	Ceramic mosaic tile floor, including setting bed	sq.m	4	255		1,020	
7.8	Cement mortar base, 100mm high	Lin.m	37	20		740	
7.9	Glazed ceramic tile wall, including setting bed	sq.m	16.1	335		5.394	
7.10	Gypsum plaster wall	sq.m	81	25		2,025	
7.11	Acoustic tile ceiling	sq.m	49	126		6,174	
7.12	Asb. cem. bd. ceiling	sq.m	4	30		120	
7.13	Vinyl paint finish, to mortar base	sq.m	4	33		132	
7.14	Ditto, to gypsum plaster wall	sq.m	81	30		2,430	
7.15	Ditto, to sb. cem. bd. ceiling	sq.m	4	32		128	
7.16	Oil paint finish, wood surfaces	sq.m	9	31		279	
	Sub Total:					29,750	
	SECTION 8: Plumbing						
8.1	Water closet, Vitreous-china, asia type with flush tank, supply & waste trim assembly incl. paper holder	set	1	2,110		2,110	
8.2	Lavatory Vitreous-china, flat-top with anti-splash, cold water supply only, supply & waste trim assembly	set	1	1,220		1,220	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	(SECTION 8 cont'd)						
8.3	Glass shelf, 457mm x 127mm	Each	1	60		60	
8.4	Mirror, 455mm x 608mm	Each	1	170		170	
8.5	Cold water piping, including fittings, insulation, and metal supports and misc. materials 3/4" dia. pipe	Lin.m	6	43		258	
8.6	Ditto, 1/2" dia. pipe	Lin.m	5	31		155	
8.7	Gate valve w/box, 3/4" dia.	Each	1	210		210	
8.8	Globe valve, 1/2" dia.	Each	1	110		110	
8.9	Soil, waste & drain piping, cast-iron pipe including fittings and joint materials 4" dia. pipe	Lin.m	3.5	570		1,995	
8.10	Ditto, 2" dia. pipe	Lin.m	1.5	230		345	
8.11	Floor cleanout, 4" dia.	Each	1	690		690	
8.12	Vent piping, incl. pipe fittings and pipe supports 2" dia.	Lin.m	5	77		385	
	Sub Total:					7,708	
	SECTION 9: Air Conditioning						
9.1	Room air conditioner, (No.1) wall mounted, self-contained, cooling cap, 5,390 KCAL/HR fan cap. 12.7 cmm, air thru 15.2 meter, 2.9 liters per hour moisture removal, 15.5Amps, 1ø-220V-50Hz	set	1	12,400		12,400	
9.2	Room air conditioner (No.2) same as No.1 except cooling cap 3,030 KCAL/HR fan cap 9.9 cmm, air thru 11.6 meter, 1.04 liters per hour moisture removal 10 Amps, 1ø-220V-50Hz	set	1	9,150		9,150	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	(SECTION 9 cont'd)						
9.3	Wall exhaust fan Wall mounted, direct-driven propeller fan with exhaust louver cap. 2.3 cmm 200 watts, 1ø-220V-50Hz	set	1	730		730	
	Sub Total:					22,280	
	TOTAL:					208,510	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	DIVISION-3 SEWER SYSTEM						
	SECTION 1: Sewer System						
1.1	Sewer line, incl. excavation and disposal, and joint materials CIP, 4" dia.	Lin.m	30.8	310		9,548	
1.2	Ditto, CIP, 6" dia.	Lin.m	80.9	445		36,001	
1.3	Ditto, ACP, 6" dia.	Lin.m	52.9	220		11,638	
1.4	Sewer manhole, reinforced concrete including forming, rebars, medium duty manhole cover with frame, and excavation with disposal. 950 x 950 x 1,100 depth (No.1)	Each	1	1,950		1,950	
1.5	Ditto, 950 x 950 x 800 depth (No.3)	Each	1	1,850		1,850	
1.6	Ditto, 950 x 950 x 950 depth (No.4)	Each	1	1,900		1,900	
1.7	Ditto, 950 x 950 x 1,100 depth (No.5)	Each	1	1,950		1,950	
1.8	Ditto, 950 x 950 x 1,258 depth (No.6)	Each	1	2,100		2,100	
1.9	Ditto, 950 x 950 x 1,363 depth (No.7)	Each	1	2,250		2,250	
1.10	Ditto, 950 x 950 x 1,411 depth (No.8)	Each	1	2,300		2,300	
1.11	Sewer manhole, same as manhole No.1 except deep type and sand pump cap. 3.7 KW, 5 HP, 0.4 m^3/min. Size, 950 x 950 x 1,900 depth (No.2)	Each	1	5,450		5,450	
1.12	Waste type manhole reinforced concrete including forming, rebars, cover, vent piping, and excavation with disposal Size, 600 x 600 x 700 depth	Each	1	480		480	
1.13	Grease intercepter reinforced concrete including forming, rebars, cover, and removable battle, and excavation with disposal Size, 650 x 960 x 800 depth	Each	1	2,950		2,950	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	(SECTION 1 cont'd)						
1.14	Septic tank reinforced concrete, including forming, rebars, sand fill, and mechanical pumping, air blowering, control, and piping in complete	set	1			555,030	
	Sub Total:					635,397	
	SECTION 2: Water Service Line						
2.1	Water service line, including trenching and disposal PVC pipe, 1" dia.	Lin.m	78	96		7,488	
2.2	Concrete encasement 200 x 200 section	Lin.m	27	26		702	
	Sub Total:					8,190	
	TOTAL:					643,587	

(II) NAVIGATION CHANNEL DREDGING

BILL OF QUANTITIES

NAVIGATION CHANNEL DREDGING

DIVISION 1 Preliminaries

Section 1. Temporary and Preparatory Works for the Approach Channel

Section 2. Temporary and Preparatory Works for the Inner Channel, The Turning Basin, Berth Area and Land Reclamation Area

DIVISION 2 Early Completion Dredging

DIVISION 3 First Phase Dredging

DIVISION 4 Second Phase Dredging

DIVISION 5 Third Phase Dredging

SUMMARY

NAVIGATION CHANNEL DREDGING

DIVISION 1	Preliminaries	RS. 58,504,100
DIVISION 2	Early Completion Dredging	RS. 5,114,400
DIVISION 3	First Phase Dredging	RS. 181,614,900
DIVISION 4	Second Phase Dredging	RS. 59,131,600
DIVISION 5	Third Phase Dredging	RS. 151,095,000
	Total	RS. 455,460,000

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	DIVISION I PRELIMINARIES						
	SECTION 1 Temporary and Preparatory Works for the Approach Channel						
1.1.1	Mobilization of all plant and equipment for the whole of the works with the exception of the following items shown separately.	Sum				11,506,000	
1.1.2	Provide and maintain all temporary facility and equipment for the Contractor.	Sum				10,900,000	
1.1.3	Provide and maintain and service all facility and equipment for use by the Engineer.	Sum				1,280,000	
1.1.4	Demobilization of all plant and equipment.	Sum				9,414,000	
	Sub Total					33,100,000	
	SECTION 2 Temporary and Preparatory Works for the Inner Channel, the Turning Basin, Berth Area and Land Reclamation Area.						
1.2.1	Mobilization of all plant and equipment for the whole of the works with the exception of the following items shown separately.	Sum				12,353,000	
1.2.2	Provide and maintain all temporary facility and equipment for the Contractor.	Sum				2,624,100	
1.2.3	Provide and maintain and service all facility and equipment for use by the Engineer.	Sum				320,000	
1.2.4	Demobilization of all plant and equipment.	Sum				10,107,000	
	Sub Total					25,404,100	
	Total					58,504,100	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	DIVISION 2 EARLY COMPLETION DREDGING						
	DREDGE AND DISPOSE DREDGED MATERIAL AS FOLLOWS:						
2.1	Land Reclamation Area to a depth of 5.0M below datum.	Cu.m	180,000	18	70	3,366,000	
2.2	Iron-ore Coal Berth Area to a depth of 12.8M below datum.	Cu.m	93,000	18	80	1,748,400	
	Total					5,114,400	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	DIVISION 3 FIRST PHASE DREDGING						
	DREDGE AND DISPOSE DREDGED MATERIAL AS FOLLOWS:						
3.1	Approach Channel to a depth of 11.80M below datum.	Cu.m	14,131,000	11	90	168,158,900	
3.2	Inner Channel to a depth of 9.5M below datum.	Cu.m	480,000	16	00	7,680,000	
3.3	Turning Basin to a depth of 11.0M below datum.	Cu.m	361,000	16	00	5,776,000	
	Total					181,614,900	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	DIVISION 4 SECOND PHASE DREDGING						
	DREDGE AND DISPOSE DREDGED MATERIAL AS FOLLOWS:						
4.1	Inner Channel to a depth of 11.3M below datum.	Cu.m	3,043,000	15	20	46,253,600	
4.2	Turning Basin to a depth of 12.8M below datum.	Cu.m	815,000	15	20	12,388,000	
4.3	Remove and re-locate light buoys in Inner Channel.	Nos.	35	14,000		490,000	
	Total					59,131,600	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	DIVISION 5 THIRD PHASE DREDGING						
	DREDGE AND DISPOSE DREDGED MATERIAL AS FOLLOWS:						
5.1	Approach Channel to a depth of 13.6M below datum.	Cu.m	12,062,000	12	50	150,775,000	
5.2	Remove and relocate lighted buoys in Approach Channel.	Nos.	16	20,000		32 320,000	
	Total					151,095,000	

(III) NAVIGATION AIDS

BILL OF QUANTITIES

NAVIGATION AIDS

SUMMARY

NAVIGATION AIDS

Division 1	Lighthouses	RS. 9,428,750
Division 2	Lighted Buoy System	RS. 10,666,705
Division 3	Port Radio System	RS. 6,621,003
	Total	RS. 26,716,458

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	DIVISION 1 LIGHTHOUSES						
	SECTION 1: Lighthouse	- - -	- - - - -	- - - - -	- -	4,793,000	
1.1	Building works		1				
1.2	Jitty and Access road		1				
1.3	Lighting equipment		1				
1.4	Normal equipment		1				
	Emergency equipment		1				
	SECTION 2: Leading Light	- - -	- - - - -	- - - - -	- -	2,459,750	
2.1	Front light tower		1				
2.2	Rear light tower		1				
2.3	Lighting equipment		1				
2.4	Normal equipment		1				
2.5	Emergency equipment		1				
	SECTION 3: Lighted Beacon	- - -	- - - - -	- - - - -	- -	2,176,000	
3.1	Light tower		13				
3.2	Lighting equipment		15				
	Total					9,428,750	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	DIVISION 2 LIGHTED BUOY SYSTEM						
	SECTION 1: Buoy Body	- - -	- - - - -	- - - - -	- - -	5,983,000	
1•1	Entrance buoy	Sets	2				
1•2	Approach Channel buoy:						
	with daymarke	Sets	18				
	non-daymarke	Sets	3				
1•3	Inner Channel buoy	Sets	50				
	SECTION 2: Mooving Equipment	- - -	- - - - -	- - - - -	- - -	1,533,805	
2•1	Main chain						
2•2	Bridle chain						
2•3	Anchor chain						
2•4	Swivel						
2•5	Joining shakle						
2•6	Anchor shakle						
2•7	Joining steel ring						
2•8	Chain for sinker						
2•9	Concrete sinker						
2•10	Single fluke stock anchor						
	SECTION 3: Lighting Equipment	- - -	- - - - -	- - - - -	- - -	2,971,300	
3•1	Lantern LFPA-220 or LBPA-140	Sets	72				
3•2	Flasher						
	KAG-130 25-1	Sets	2				
	KAG-130 20-1	Sets	8				
	KAS-130 20-1	Sets	12				
	KAG-130 15-1	Sets	35				
	KAS-130 15-1	Sets	25				

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
3•3	Gas cylinder	Bottle	270				
3•4	Glass cylinder						
	Red	Pcs.	40				
	Green	Pcs.	45				
3•5	Installation material	Sets	80				
	SECTION 4: Radar Reflector	- - -	- - -	- - -	- - -	28,600	
4•1	Radar reflector	Sets	22				
	SECTION 5: Spare Parts	- - -	- - -	- - -	- - -	100,000	
	SECTION 6: Assembly of the Equipment	- - -	- - -	- - -	- - -	25,000	
	SECTION 7: Training	- - -	- - -	- - -	- - -	25,000	
	Total					10,666,705	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	DIVISION 3 PORT RADIO SYSTEM						
	SECTION 1: VHF radio communications equipment	- - -	- - - - -	- - - - -	- - -	3,782,614	
1-1	1. Supervisory control center station					1,145,500	
1-1-1	Radio apparatus 50 watt	Set	4				
2	Remote controller for above	Set	8				
3	Iron tower to install antenna (with warning light)	Set	1				
4	Interference removing appliance	Set	1				
5	Omnidirectional antenna	Set	8				
6	Antenna feeder cables	Set	8				
7	Other cable	Set	1				
8	Power supply equipment	Set	1				
1-2	2. Port station (ship station)			89,625		1,613,250	
1-2-1	Radio apparatus 10 watts	Set	18				
2	Antenna duplexer	Set	18				
3	Tower to install antenna (portable type)	Set	18				
4	Omnidirectional antenna	Set	18				
5	Antenna feeder cable	Set	18				
6	Power unit	Set	18				
1-3	3. Land mobile station			27,916		111,664	
1-3-1	Radio apparatus 10 watts	Set	4				
2	Omnidirectional antenna (with cable)	Set	4				
1-4	4. Walkie-Talkie 1 watt (with battery)	Set	6	1,200		7,200	
1-5	5. Consumable spare (for two years operation)	Set	1	5,000		5,000	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
1-6	6. Spare unit and kit	Set	1	100,000		100,000	
1-7	7. Installation (except tower foundation)	Set	1	600,000		600,000	
1-8	8. Training	Set	1	200,000		200,000	
	SECTION 2: Decca Sea Fix Equipment					2,401,529	
2-1	1. Master station					277,117	
2-1-1	Master control unit type 9431 or equivalent	Set	1				
2	Transmitter type 9430 or equivalent	Set	1				
3	Matching coil type 9438F or equivalent	Set	1				
4	10m antenna (c/w earth mat)	Set	1				
5	Junction box with connecting cable	Set	1				
6	Equipment case	Set	1				
7	Power supply (thermo-generator)	Set	1				
8	Battery	Set	1				
2-2	2. Slave station			303,194		606,388	
2-2-1	Slave control unit type 9413 or equivalent	Set	2				
2	Transmitter type 9430 or equivalent	Set	2				
3	Matching coil type 9438F or equivalent	Set	2				
4	30ft antenna (c/w earth mat)	Set	2				
5	Junction box with connecting cable	Set	2				
6	Equipment case	Set	2				
7	Power supply device (thermo-generator)	Set	2				
8	Battery	Set	2				

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
2-3	3. Ship station			232,988		698,964	
2-3.1	. Receiver type 80402B or equivalent	Set	3				
2	Antenna type 9928 or equivalent	Set	3				
3	Connecting cable (c/w junction box)	Set	3				
4	. Track plotter type 350TS or equivalent	Set	3				
5	Power supply device (with battery)	Set	3				
6	. Print log (c/w junction box and cable)	Set	3				
2-4	4. Lattice Chart	Sheet	25	5,148		128,700	
2-5	5. Consumable spare (for two years operation)	Set	1			5,000	
2-6	6. Spare unit and kit	Set	1			200,000	
2-7	7. Installation and calibration	Set	1			285,360	
2-8	8. Training	Set	1			200,000	
	SECTION 3: Radar Transponder Equipment					93,200	
3-1	1. X-band radar transponder with antenna	Set	1	67,200		67,200	
3-2	2. Battery	Set	1	20,000		20,000	
3-3	3. Consumable spare (for two years operation)	Set	1	1,000		1,000	
3-4	4. Installation	Set	1	2,500		2,500	
3-5	5. Training	Set	1	2,500		2,500	

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	SECTION 4 Test Gear and Equipment					343,660	
4-1	1. Circuit tester	Set	4	400		1,600	
4-2	2. Through line watt meter	Set	4	6,791		27,164	
4-3	3. Terminating watt meter for high power	Set	4	3,291		13,164	
4-4	4. Terminating watt meter for low power	Set	4	2,375		9,500	
4-5	5. Wide band VTVM	Set	4	11,325		45,300	
4-6	6. Frequency meter	Set	1	28,450		28,450	
4-7	7. Field intensity meter	Set	1	34,416		34,416	
4-8	8. Mobile radio test set	Set	1	39,333		39,333	
4-9	9. Oscilloscope	Set	1	32,000		32,000	
4-10	10. Test unit type 9800 or equivalent	Set	1	17,600		17,600	
4-11	11. Monitor box type 9426E or equivalent	Set	1	20,000		20,000	
4-12	12. Monitor recorder type 9996 or equivalent	Set	1	20,133		20,133	
4-13	13. Pattern recorder type 9995 or equivalent	Set	1	28,000		28,000	
4-14	14. Tool set	Set	2	5,000		10,000	
4-15	15. Spare part cabinet	Set	1	14,000		14,000	
4-16	16. Rack for test equipment	Set	1	3,000		3,000	
	Total					6,621,003