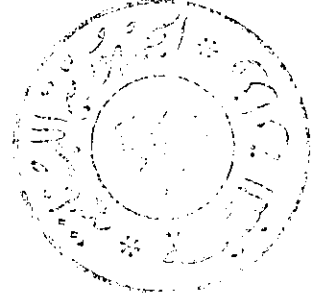


NFM 2115

NORTH BEIRUT OUTFALL HEADWORKS
NORTH AND WEST-SOUTH COASTAL COLLECTORS
AND PUMPING STATIONS

الجمهورية اللبنانية
مكتب وزير الدولة لشؤون التنمية الإدارية
مركز مشاريع ودراسات القطاع العام

Republic of Lebanon
Office of the Minister of State for Administrative Reform
Center for Public Sector Projects and Studies
(C.P.S.P.S.)



VOLUME III

BILLS OF QUANTITIES

ADDENDUM No.1

ADDITIONAL WORKS

**NORTH BEIRUT OUTFALL HEADWORKS
NORTH AND WEST-SOUTH COASTAL COLLECTORS
AND PUMPING STATIONS**

ADDENDUM NO. 1

ADDITIONAL WORKS

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VOLUME III BILLS OF QUANTITIES
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**1. LINE A CULVERT CONNECTION TO
HEADWORKS**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	<p><u>LINE A CULVERT CONNECTION TO HEADWORKS</u></p> <p><u>Trench work including all necessary excavation, in all kinds of materials, grading or levelling and compacting or trimming bottom of excavation, planking and strutting or trimming sides, dewatering excavation of all water sources, backfilling and compacting in layers up to the formation levels (including extra fill at ground level if required), removing surplus excavated materials from site, all as described.</u></p> <p>Excavate trenches for sewer culverts over 8m but n.e.10m deep.</p> <p>Per Cubic Meter U.S. Dollars</p> <p>.....</p> <p>.....</p>	C.M	3095	21	64995
B	<p><u>Reinforced concrete box culverts, including reinforcement, formwork, sulphate resistant concrete, surface treatments, protective coatings incidental labor etc. complete as described.</u></p> <p>Box culverts with internal dimensions 3.0 x 2.0 m.</p> <p>Per Linear Meter U.S. Dollars.</p> <p>.....</p> <p>.....</p>	L.M	65	1080	70200
C	<p>PVC Liner to internal surfaces of box culverts including all preparatory work, jointing etc., all as described</p> <p>Per Square Meter U.S. Dollars.</p> <p>.....</p> <p>.....</p>	S.M	650	24	15600
KAI/1- 1 CARRIED TO COLLECTION					150795

**NORTH BEIRUT OUTFALL HEADWORKS
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**1. LINE A CULVERT CONNECTION TO
HEADWORKS**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	50 mm thick concrete blinding bed class C, laid in trenches to receive concrete culverts including all necessary formwork and sundry labour as described. Per Square Meter U.S. Dollars.	S.M	377	3	1131
B	Breaking up existing asphalt paving and reinstating with new asphalt Per Square Meter U.S. Dollars.	S.M	377	15	5655
C	Breaking up existing decorative concrete tile paving and reinstating with new tiles to match existing Per Square Meter U.S. Dollars.	S.M	50	12	600
D	Breaking up existing reinforced concrete paving and reinstating with new reinforced concrete with new sub-base complete Per Square Meter U.S. Dollars.	S.M	10	15	150
KA1/1- 2 CARRIED TO COLLECTION					7536

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ADDENDUM NO. 1

**1. LINE A CULVERT CONNECTION TO
HEADWORKS**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	Removing and reinstating concrete curbs Per Linear Meter U.S. Dollars.	L.M	60	15	900
B	Removing and reinstating concrete planters, litter bins, benches and other items of street furniture Per Number U.S. Dollars.	No.	5	75	375
C	Removing and reinstating street lighting poles Per Number U.S. Dollars.	No.	5	200	1000
D	Reinstatement of landscaped areas Per Square Meter U.S. Dollars.	S.M	10	2	20
E	Removing and reinstating trees Per Number U.S. Dollars.	No.	5	250	1250
KAI/I- 3 CARRIED TO COLLECTION					3545

**NORTH BEIRUT OUTFALL HEADWORKS
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ADDENDUM NO.1

**2. LINE A - EMERGENCY OVERFLOW
TO EXISTING OUTFALL**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE S	TOTAL PRICE S
A	<u>LINE A - EMERGENCY OVERFLOW TO EXISTING OUTFALL</u> <u>Trench work including all necessary excavation in all kinds of materials, grading or levelling and compacing or trimming bottom of excavation, planking and strutting or trimming sides, dewatering excavation of all water sources, backfilling and compacting in layers up to the formation levels (including extra fill at ground level if required), removing surplus excavated materials from site, all as described.</u>	L.M	42	85	3570
	Trench for pipes 1000 mm diameter, average depth over 2m but n.e. 3 m Per Linear Meter U.S. Dollars.				
	<u>GRP pipes or reinforced concrete pipes with PVC linings (as Contractor's preferred option ref Section 3-Sewer Pipes) including all necessary fittings, jointing all necessary fittings, jointing materials and fixing accessories, all as described</u>				
B	Pipes 1000 mm diameter Per Linear Meter U.S. Dollars.	L.M	42	316	13272
<u>Pipe Bedding</u> Concrete encasement Class A for pipes 1000 mm diameter, including all necessary reinforcement Per Linear Meter U.S. Dollars					
C	Concrete encasement Class A for pipes 1000 mm diameter, including all necessary reinforcement Per Linear Meter U.S. Dollars	L.M	42	141	5922
KA1/2-1 CARRIED TO COLLECTION					22764

**NORTH BEIRUT OUTFALL HEADWORKS
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ADDENDUM NO.1

2. LINE A - EMERGENCY OVERFLOW
TO EXISTING OUTFALL

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	<u>Surface Restoration</u> Breaking up existing asphalt paving and reinstating with new asphalt Per Square Meter U.S. Dollars CARRIED TO COLLECTION <u>COLLECTION</u> <u>PAGE</u> KA1/2-1 KA1/2-2 TOTAL CARRIED TO SUMMARY	S.M	76	15	1140 1140 22764 1140 23904
KA1/2- 2					

**NORTH BEIRUT OUTFALL HEADWORKS
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ADDENDUM NO.1

**3. LINE S - CONNECTION TO PUMPING
STATION A2 - SOUTH**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	<p><u>LINE S - CONNECTION TO PUMPING STATION A2 - SOUTH</u></p> <p><u>Trench work including all necessary excavation in all kinds of materials, grading or levelling and compacting or trimming bottom of excavation, planking and strutting or trimming sides, dewatering excavation of all water sources, backfilling and compacting in layers up to the formation levels (including extra fill at ground level if required), removing surplus excavated materials from site, all as described.</u></p> <p>Trench for pipes 1200 mm diameter, average depth over 5m but n.e. 6 m</p> <p>Per Linear Meter U.S. Dollars.</p> <p>.....</p> <p>.....</p> <p><u>Pits for manholes including all necessary excavation in all kinds of materials, grading or levelling and compacting or trimming bottom of excavation planking and strutting or trimming sides, dewatering excavation of all water sources, backfilling and compacting in layers up to the formation level (including extra fill at ground level if required), removing surplus excavated materials from site, all as described</u></p> <p>Excavate pits n.e. 6m deep</p> <p>Per Cubic Meter U.S. Dollars.</p> <p>.....</p> <p>.....</p>	L.M	45	432	19440
B	<p>.....</p> <p>.....</p>	C.M	101	13	1313
KA1/3- 1		CARRIED TO COLLECTION			20753

**NORTH BEIRUT OUTFALL HEADWORKS
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ADDENDUM NO.1

3. LINE S - CONNECTION TO PUMPING
STATION A2 - SOUTH

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICES \$
A	<p><u>GRP pipes or reinforced concrete pipes with PVC linings (as Contractor's preferred option ref. Section 3-Sewer Pipes) including all necessary fittings, jointing all necessary fittings, jointing materials and fixing accessories, all as described</u></p> <p>Pipes 1200 mm diameter</p> <p>Per Linear Meter U.S. Dollars</p>	LM	45	419	18855
B	<p><u>Pipe Bedding</u></p> <p>Concrete encasement Class A for pipes 1200 mm diameter including all necessary reinforcement</p> <p>Per Linear Meter U.S. Dollars</p>	LM	45	204	9180
C	<p><u>Reinforced concrete manholes complete, including all concrete work (using sulphate resistant cement), blinding, all necessary formwork, reinforcement, benchings, pipe sleeves, couplings, concrete plugs for future use, making good around pipes, surface treatments, admixtures, grading concrete bricks to manhole shaft as required, cast iron steps and 840x840mm heavy duty cast iron manhole cover and frame, all as detailed and as described</u></p> <p>1.90 x 1.90 m internally; depth 5.5 - 6m</p> <p>Per Number U.S. Dollars</p>	No	2	2470	4940
KA1/3- 2 CARRIED TO COLLECTION					32975

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ADDENDUM NO.1

3. LINE S - CONNECTION TO PUMPING
STATION A2 - SOUTH

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICES \$	
	<u>Waterproofing</u>					
A	Protect internal surfaces of concrete manholes with P.V.C. linings as described					
	Per Square Meter U.S. Dollars	S.M	51	24	1224	
B	Prepare and install torch applied bitumen waterproofing membrane to external surfaces of concrete manholes including priming concrete surfaces and application of required protection to waterproofing membrane all as described					
	Per Square Meter U.S. Dollars	S.M	106	27	2862	
	<u>Surface Restoration</u>					
C	Breaking up existing asphalt paving and reinstating with new asphalt					
	Per Square Meter U.S. Dollars	S.M	111	15	1665	
	<u>Sundries</u>					
D	Coarse aggregate sub-base 150 mm thick under manholes where poor soil conditions are encountered					
	Per Square Meter U.S. Dollars	S.M	17	2	34	
KA1/3-3					CARRIED TO COLLECTION	5785

**NORTH BEIRUT OUTFALL HEADWORKS
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**VOLUME III BILLS OF QUANTITIES
ADDENDUM NO.1**

**4. CONNECTIONS OF EXISTING SEWERS
TO NEW MANHOLES**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE S	TOTAL PRICE S
	<u>CONNECTIONS OF EXISTING SEWERS TO NEW MANHOLES</u>				
	<u>Excavate to expose existing sewers and connect to new manholes including excavation in all types of ground, temporary supports to excavations, disposal of surplus materials, breaking into existing sewers, removal of temporary plugs in manholes or stub pipes as required, overpumping and flow diversion of existing sewage flow, all pipes, fittings, backdrops and connections, new beds and surrounds as required, backfilling with approved material and reinstatement of surfaces to match existing (Provisional).</u>				
A	Connection of existing 200mm diameter pipe to new manholes, depth over 1m but n.e. 2m, including backdrop.	No.	4	800	3200
	Per Number U.S. Dollars.				
B	Ditto, depth over 2m but n.e. 3m, level soffit connection	No.	10	545	5450
	Per Number U.S. Dollars.				
C	Connection of existing 300mm diameter pipe to new manholes, depth over 1m but n.e. 2m, including backdrop.	No.	15	970	14550
	Per Number U.S. Dollars.				
KA1/4- 1		CARRIED TO COLLECTION			23200

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**4. CONNECTIONS OF EXISTING SEWERS
TO NEW MANHOLES**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	Connection of existing 300mm diameter pipe to new manholes, depth over 2m but n.e. 3m, , level soffit connection Per Number U.S. Dollars.	No.	18	610	10980
B	Connection of existing 400mm diameter pipe to new manholes, depth over 2m but n.e. 3m, including backdrop. Per Number U.S. Dollars.	No.	15	1330	19950
C	Ditto, depth over 3m but n.e. 4m, level soffit connection Per Number U.S. Dollars.	No.	15	870	13050
D	Connection of existing 500mm diameter pipe to new manhole, depth over 2m but n.e. 3m, including backdrop. Per Number U.S. Dollars.	No.	5	1745	8725
E	Connection of existing 600mm diameter pipe to new manhole, depth over 2m but n.e. 3m, including backdrop. Per Number U.S. Dollars.	No.	5	1885	9425
KA1/4- 2 CARRIED TO COLLECTION					62130

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ADDENDUM NO.1

**4. CONNECTIONS OF EXISTING SEWERS
TO NEW MANHOLES**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	Connection of existing 600mm diameter pipe to new manhole, depth over 3m but n.e. 4m, level soffit connection Per Number U.S. Dollars.	No.	4	1110	4440
B	Connection of existing 800mm diameter pipe to new manhole, depth over 2m but n.e. 3m, including backdrop. Per Number U.S. Dollars.	No.	1	2460	2460
C	Ditto, depth over 3m but n.e. 4m, level soffit connection Per Number U.S. Dollars.	No.	1	1350	1350
D	Connection of existing combined box sewer 1.02m x 2.60m to new manhole, depth over 2m but n.e. 3m, level soffit connection Per Number U.S. Dollars.	No.	1	1560	1560
KA1/4-3 CARRIED TO COLLECTION					9810

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4. CONNECTIONS OF EXISTING SEWERS
 TO NEW MANHOLES

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
	<u>COLLECTION</u>				
	<u>PAGE</u>				
	KA1/4-1.....				23200
	KA1/4-2.....				62130
	KA1/4-3.....				9810
	TOTAL CARRIED TO SUMMARY				<hr/> 95140
	KA1/4-4				

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5. WORKSHOP

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
<u>WORKSHOP</u>					
<u>Earthwork</u>					
A	Excavation for foundation bases and ground beams	C.M	139	7	973
	Per Cubic Meter U.S. Dollars				
B	150 mm thick hardcore bed including spreading and compacting	S.M	240	4	960
	Per Square Meter U.S. Dollars				
<u>Concrete Work</u>					
C	Sulphate resistant lean concrete class C in 50 mm thick blinding bed.	S.M	240	3	720
	Per Square Meter U.S. Dollars				
D	Ditto in 30mm thick bed on top of waterproofing membrane.	S.M	240	2	480
	Per Square Meter U.S. Dollars				
E	Sulphate resistant reinforced concrete class A in foundation bases and ground beams	C.M	47	80	3760
	Per Cubic Meter U.S. Dollars				
KAI/5-1 CARRIED TO COLLECTION					6893

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5. WORKSHOP

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	Sulphate resistant reinforced concrete class A in slab on ground				
	Per Cubic Meter U.S. Dollars	C.M	36	80	2880
B	Reinforced concrete class A in columns				
	Per Cubic Meter U.S. Dollars	C.M	22	130	2860
C	Ditto in beams and lintels				
	Per Cubic Meter U.S. Dollars	C.M	18	120	2160
D	Ditto in 200 mm thick solid suspended slab				
	Per Square Meter U.S. Dollars	S.M	224	20	4480
E	Ditto in 200 mm thick parapet wall				
	Per Square Meter U.S. Dollars	S.M	48	24	1152
	<u>Steel reinforcement bent, hooked and fixed in position with and including laps, spacers, tying wires all as described.</u>				
F	Plain mild steel bars.				
	Per Kilogram U.S. Dollars	Kg	3190	.45	1436
KA1/5-2		CARRIED TO COLLECTION			14968

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5. WORKSHOP

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	High tensile deformed steel bars. Per Kilogram U.S. Dollars <u>Blockwork</u>	Kg	12760	.45	5742
B	Precast concrete hollow blocks in 100 mm thick wall. Per Square Meter U.S. Dollars	S.M	86	7	602
C	Ditto in 200 mm thick wall Per Square Meter U.S. Dollars <u>Waterproofing</u>	S.M	235	10	2350
D	Waterproofing membrane to base slabs consisting of polymer modified bitumen membrane min 4mm thick applied over blinding bed with all necessary surface preparation, priming and bitumen coatings, all as described. Per Square Meter U.S. Dollars	S.M	240	20	4800
KA1/5-3 CARRIED TO COLLECTION					13494

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5. WORKSHOP

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	Waterproofing membrane to underground footings consisting of polymer modified bitumen membrane min 4mm thick including turning edge of membrane at top into notch and sealing with mastic, surface preparation, priming and bitumen coatings, all as described.				
	Per Square Meter U.S. Dollars	S.M	67	20	1340
	<u>Roofing</u>				
B	Lightweight concrete, minimum 50mm thick, laid to falls and cross falls.				
	Per Square Meter U.S. Dollars	S.M	229	6	1374
C	Cement screed (1:4) 30 mm thick, laid over lightweight concrete.				
	Per Square Meter U.S. Dollars	S.M	229	2	458
D	Waterproofing membrane, consisting of two layers of roofing felt embedded solidly in bitumen compound and protected with well-graded limestone chippings				
	Per Square Meter U.S. Dollars	S.M	229	30	6870
KA1/5-4 CARRIED TO COLLECTION					10042

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5. WORKSHOP

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	Forming waterproofing skirting by bending and tucking into reglets the roofing felt and fixing aluminium flashings, including fixing the plastic reglet in concrete and filling it with sealant. Per Linear Meter U.S. Dollars	L.M	110	22	2420
B	4" diameter rainwater roof drain pipe 40 cm long built into parapet Per Number U.S. Dollars	No.	4	5	20
C	Extra over for rainwater outlet in roofing system Per Number U.S. Dollars <u>Drainage</u>	No	4	10	40
D	Cast iron drain pipe 100 mm φ Per Linear Meter U.S. Dollars	L.M	2	18	36
E	Ditto 80 mm φ Per Linear Meter U.S. Dollars	L.M	4	14	56
KA1/5-5 CARRIED TO COLLECTION					2572

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5. WORKSHOP

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	Galvanized steel drain pipe 65 mm ϕ Per Linear Meter U.S. Dollars	L.M	3	21	63
B	Ditto vent pipe 50mm ϕ Per Linear Meter U.S. Dollars	L.M	4	14	56
C	Clean out box, with chrome-plated brass frame and cover. Per Number U.S. Dollars	L.M No	1	60	60
D	15 x 15 cms chrome plated frame and strainer at floor drain. Per Number U.S. Dollars	No	1	60	60
	<u>Plumbing</u>				
E	Seamless galvanised steel water pipes 40mm ϕ . Per Linear Meter U.S. Dollars	L.M	4	13	52
F	Ditto 20 mm ϕ . Per Linear Meter U.S. Dollars	L.M	5	5	25
KA1/5-6		CARRIED TO COLLECTION			316

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5. WORKSHOP

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	Seamless galvanised steel water pipes 15 mm ϕ . Per Linear Meter U.S. Dollars <u>Plumbing Accessories</u>	L.M	18	4	72
B	Gate valve 25 mm ϕ . Per Number U.S. Dollars <u>Doors, Windows and Louvers</u>	No	1	35	35
C	Hollow core wood door type D3 for structural opening 90 x 220 cms. Per Number U.S. Dollars 	No	4	210	840
D	Ditto type D4 for structural opening 80 x 220 cms Per Number U.S. Dollars 	No.	1	190	190
E	Ditto type D6 for structural opening 70 x 220 cms Per Number U.S. Dollars 	No	4	170	680
KA1/5-7 CARRIED TO COLLECTION					1817

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5. WORKSHOP

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE S	TOTAL PRICE S
A	Anodized aluminium door type D1 for structural opening 100 x 220 cms. Per Number U.S. Dollars	No	1	235	235
B	Ditto type D7, double stable type door for structural opening 200 x 220cms Per Number U.S. Dollars	No.	1	470	470
C	Anodized aluminium window type W4 for structural opening 60 x 60 cms Per Number U.S. Dollars	No	2	50	100
D	Ditto type W5 for structural opening 250 x 250 cms. Per Number U.S. Dollars	No	4	660	2640
E	Ditto type W8 for structural opening 420 x 80 cms. Per Number U.S. Dollars	No	4	355	1420
F	Anodized aluminium rolling shutter door type RS3 for structural opening 420 x 420 cms Per Number U.S. Dollars	No	1	1855	1855
KA1/5-8 CARRIED TO COLLECTION					6720

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**VOLUME III BILLS OF QUANTITIES
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5. WORKSHOP

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE S	TOTAL PRICE S	
	<u>Sanitary Fixtures</u>					
A	Single bowl stainless steel sink, complete with kitchen cupboards 280cm long x 60cm wide x 90 cm high and accessories.					
	Per Number U.S. Dollars	No	1	785	785	
B	Lavatory basin, white vitreous china 560 x405 mm for wall fixing , complete with all accessories.					
	Per Number U.S. Dollars	No	2	250	450	
C	European water closets, white vitreous china siphonic action, ditto					
	Per Number U.S. Dollars	No	2	250	500	
D	Shower tray of white ceramic glazed fireclay 760 x 760 mm , ditto					
	Per Number U.S. Dollars	No	2	300	600	
E	Electric water heater 30 Lt./3KW, with all Valves , pipework insulation,ditto					
	Per Number U.S. Dollars	No	2	125	250	
KA1/5-9					CARRIED TO COLLECTION	2535

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5. WORKSHOP

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	Fiber reinforced water tank 0.5 m ³ net capacity, with all valves, pipework, insulation, accessories and the like Per Number U.S. Dollars <u>Accessories</u>	No	1	300	300
B	Toilet paper holder. Per Number U.S. Dollars	No	2	10	20
C	Towel rail Per Number U.S. Dollars	No	2	10	20
D	Wall mirror 450 x 450 mm. Per Number U.S. Dollars <u>Floor Finishings</u>	No	2	25	50
E	Terrazzo tiles 200 x 200 x 20 mm laid to falls on sand fill and mortar bed 80 mm thick Per Square Meter U.S. Dollars	S.M	58	10	580
KA1/5-10 CARRIED TO COLLECTION					970

**NORTH BEIRUT OUTFALL HEADWORKS
NORTH AND WEST - SOUTH COASTAL
COLLECTORS AND PUMPING STATIONS**

**VOLUME III BILLS OF QUANTITIES
ADDENDUM No. 1**

5. WORKSHOP

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$	
A	Terrazzo skirting 100 mm high 20 mm thick Per Linear Meter U.S. Dollars	L.M	76	4	304	
B	Cement screed with hardener additive, trowelled finish Per Square Meter U.S. Dollars	S.M	160	6	960	
C	Ceramic tiles 100 x 100 x 10 mm laid to falls on sand and mortar bed 90 mm thick Per Square Meter U.S. Dollars	S.M	13	15	195	
D	Ceramic skirting 100 mm high 10 mm thick Per Linear Meter U.S. Dollars	L.M	27	4	108	
E	Marble threshold, cut to fit between door frames. Per Linear Meter U.S. Dollars	L.M	2	10	20	
	<u>Wall Finishings - Internally</u>					
F	Plasterwork to all kind of wall surfaces Per Square Meter U.S. Dollars	S.M	455	4	1820	
KA1/5-11					CARRIED TO COLLECTION	3407

**NORTH BEIRUT OUTFALL HEADWORKS
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**VOLUME III BILLS OF QUANTITIES
ADDENDUM No. 1**

5. WORKSHOP

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	Prepare and apply emulsion paint of polyvinyl acetate (PVA) type to plastered walls. Per Square Meter U.S. Dollars	S.M	428	4	1712
B	Prepare and apply resin base paint to plastered walls Per Square Meter U.S. Dollars	S.M	27	4	108
C	Ceramic tiles 150x150x6mm with mortar backing to walls Per Square Meter U.S. Dollars <u>Ceiling Finishings</u>	S.M	56	16	896
D	Plasterwork to all soffits of horizontal slabs. Per Square Meter U.S. Dollars	S.M	225	4	900
E	Prepare and apply emulsion paint of polyvinyl acetate (PVA) type to plastered ceilings Per Square Meter U.S. Dollars	S.M	212	4	848
KA1/5-12 CARRIED TO COLLECTION					4464

**NORTH BEIRUT OUTFALL HEADWORKS
NORTH AND WEST - SOUTH COASTAL
COLLECTORS AND PUMPING STATIONS**

VOLUME III BILLS OF QUANTITIES
ADDENDUM No. 1

5. WORKSHOP

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE S	TOTAL PRICE S	
A	Prepare and apply resin base paint to plastered ceilings					
	Per Square Meter U.S. Dollars	S.M	13	4	52	
					
					
	<u>Wall Finishings - Externally</u>					
B	Prepare and apply white cement plaster to walls.					
	Per Square Meter U.S. Dollars	S.M	251	5	1255	
					
					
C	Prepare and apply silicone clear paint to exposed concrete finish.					
	Per Square Meter U.S. Dollars	S.M	116	4	464	
					
					
	<u>Mechanical Works</u>					
D	Portable dry chemical fire extinguisher 6 kg. capacity, complete with the necessary fixing, labour and materials.					
	Per Number U.S. Dollars	No.	4	75	300	
					
					
KA1/5-13					CARRIED TO COLLECTION	2071

**NORTH BEIRUT OUTFALL HEADWORKS
NORTH AND WEST - SOUTH COASTAL
COLLECTORS AND PUMPING STATIONS**

**VOLUME III BILLS OF QUANTITIES
ADDENDUM No. 1**

5. WORKSHOP

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	Split system heat pump air conditioning unit 3500 W total cooling capacity, 2000W heating capacity, installed and tested complete with all connections and controls, indoor and outdoor units, fans, compressor, evaporator, condenser, supply and return air grilles, hangers and supports and all fittings and accessories complete Per Number U.S Dollars	No.	4	2500	10 000
B	Ceiling exhaust air grille type EG, installed and tested including all ductwork, fittings and accessories overall size 500 x 200mm Per Number U.S Dollars	No.	6	75	450
C	Transfer grilles type TG , installed and tested including all duckwork, fittings and accessories overall size 350 x 200mm Per Number U.S Dollars	No.	2	150	300
D	Ditto overall size 600 x 200mm Per Number U.S Dollars	No.	2	300	600
KA1/5-14 CARRIED TO COLLECTION					11350

**NORTH BEIRUT OUTFALL HEADWORKS
NORTH AND WEST - SOUTH COASTAL
COLLECTORS AND PUMPING STATIONS**

VOLUME III BILLS OF QUANTITIES
ADDENDUM No. 1

5. WORKSHOP

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	Wall mounted exhaust air fan, 100 lps @ 30W installed and tested including all ductwork, supports, controls, shutters, bird screens and all fittings and accessories Per Number U.S Dollars	No.	3	240	720
B	Roof mounted exhaust air fan, 1080 lps @ 250W, installed and tested, including all ductwork, supports, controls, backdraft dampers and all fittings and accessories Per Number U.S Dollars	No.	1	600	600
C	10 tonne overhead travelling crane, installed complete with the necessary fixing, labour and accessories, steel I beam supports, rails, main travelling bridge, drive unit, hoist unit etc. Per Set U.S. Dollars	Set	1		33755
KA1/5-15 CARRIED TO COLLECTION					35075

**NORTH BEIRUT OUTFALL HEADWORKS
NORTH AND WEST - SOUTH COASTAL
COLLECTORS AND PUMPING STATIONS**

VOLUME III BILLS OF QUANTITIES
ADDENDUM No. 1

5. WORKSHOP

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	<u>Electrical Works</u> <u>Earthing and Lightning Protection System</u> Lightning protection conductors as described Per Lump Sum U.S. Dollars	L.S	1		5000
B	Earthing conductors & bonding of equipment as described Per Lump Sum U.S. Dollars	L.S	1		5000
C	<u>Submain Distribution Board</u> SMDB/WS as described Per Number U.S. Dollars	No	1		5000
KA1/5-16 CARRIED TO COLLECTION					15000

**NORTH BEIRUT OUTFALL HEADWORKS
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VOLUME III BILLS OF QUANTITIES
ADDENDUM No. 1

5. WORKSHOP

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	<u>Subpanel Board</u> SPB/WS as described Per Number U.S. Dollars	No	1		2000
B	<u>Data Acquisition System Including SCP/WS</u> Complete System as described Per Lump Sum U.S. Dollar	L.S	1		10000
C	<u>Control System Cabling & Connections to Equipment & Devices</u> Complete system as described Per Lump Sum U.S. Dollars	L.S	1		4000
D	<u>Lighting Points</u> Lighting point, domestic type as described Per Number U.S. Dollars	No	50	10	500
KA1/5-17 CARRIED TO COLLECTION					16500

**NORTH BEIRUT OUTFALL HEADWORKS
NORTH AND WEST - SOUTH COASTAL
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**VOLUME III BILLS OF QUANTITIES
ADDENDUM No. 1**

5. WORKSHOP

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
	<u>Accessories</u>				
A	One gang, one way lighting switch 15 A, 220 V, domestic type as described				
	Per Number U.S. Dollars	No.	7	30	210
B	Ditto but weatherproof				
	Per Number U.S. Dollars	No.	4	50	200
C	Fan switch combined with starter and disconnecting switch as described				
	Per Number U.S. Dollars	No	1	70	70
D	Single phase single socket outlet 15A, 220V, 3 pin domestic type as described				
	Per Number U.S. Dollars	No	11	30	330
E	Ditto but duplex as described				
	Per Number U.S. Dollars	No	5	30	150
KAI/5- 18 CARRIED TO COLLECTION					960

**NORTH BEIRUT OUTFALL HEADWORKS
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VOLUME III BILLS OF QUANTITIES
ADDENDUM No. 1

5. WORKSHOP

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	Single phase, power socket outlet 20 A/220V 3-pin, weather proof type as described Per Number U.S. Dollars	No	3	50	150
B	Three phase single socket outlet 16 A/220&380V 4 pin, weatherproof type as described Per Number U.S. Dollars	No	2	110	220
C	Fire alarm breakglass station, weatherproof type as described Per Number U.S. Dollars	No.	2	300	600
D	Single phase single socket outlet 15A, 220V 3-pin domestic type as described Per Number U.S. Dollars	No	2	30	60
E	Fire alarm siren, weatherproof type as described Per Number U.S. Dollars	No	1	300	300
F	Smoke detector as described Per Number U.S. Dollars	No.	7	100	700
KA1/5-19 CARRIED TO COLLECTION					2030

**NORTH BEIRUT OUTFALL HEADWORKS
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VOLUME III BILLS OF QUANTITIES
ADDENDUM No. 1

5. WORKSHOP

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$	
A	Door contact, occupancy detector and key coded reset as described Per Number U.S. Dollars	No	1		1500	
	<u>Lighting Fittings</u>					
B	Lighting fitting type K1 as described Per Number U.S. Dollars	No.	47	150	7050	
	<u>Disconnect Switches with Auxiliary Contacts.</u>					
C	20A TP&N, as described Per Number U.S. Dollars	No	2	60	120	
D	10A SP&N, as described Per Number U.S. Dollars	No	1	50	50	
E	15A SP&N, as described Per Number U.S. Dollars	No	5	50	250	
F	20A SP&N, as described Per Number U.S. Dollars	No.	2	50	100	
KA1/5-20					CARRIED TO COLLECTION	9070

**NORTH BEIRUT OUTFALL HEADWORKS
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VOLUME III BILLS OF QUANTITIES
ADDENDUM No. 1

5. WORKSHOP

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	30A SP&N, as described				
	Per Number U.S. Dollars	No	2	60	120
B	15A DP, as described				
	Per Number U.S. Dollars	No	1	50	50
	<u>Telephone System</u>				
C	Telephone point, as described				
	Per Number U.S. Dollars	No	5	35	175
D	Desk type telephone hand-set with enclosures as described				
	Per Number U.S. Dollars	No.	5	50	250
E	Telephone Terminal cabinet for 20 pairs,				
	Per Number U.S. Dollars	No.	1	150	150
F	100mm dia PVC duct laid in trenches				
	Per Linear Meter U.S. Dollars	L.M	30	15	450
KAI/5-21					
CARRIED TO COLLECTION					1195

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5. WORKSHOP

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	Connection to SMDB/WS Per Lump Sum U.S. Dollars <u>Equipment</u>	L.S	1		1000
B	Include the Provisional Sum of \$ 150,000 for the supply of equipment to workshop and stores Per Lump Sum U.S. Dollars 	L.S	1		150,000.00
KA1/5-22 CARRIED TO COLLECTION					151 000

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5. WORKSHOP

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
	<u>COLLECTION</u>				
	<u>Pages</u>				
	KA1/5-1.....				6893
	KA1/5-2.....				14968
	KA1/5-3.....				13494
	KA1/5-4.....				10042
	KA1/5-5.....				2572
	KA1/5-6.....				316
	KA1/5-7.....				1817
	KA1/5-8.....				6720
	KA1/5-9.....				2535
	KA1/5-10.....				970
	KA1/5-11.....				3407
	KA1/5-12.....				4464
	KA1/5-13.....				2071
	KA1/5-14.....				11350
	KA1/5-15.....				35075
	KA1/5-16.....				15000
	KA1/5-17.....				16500
	KA1/5-18.....				960
	KA1/5-19.....				2030
	KA1/5-20.....				9070
	KA1/5-21.....				1195
	KA1/5-22.....				151000
	TOTAL CARRIED TO SUMMARY				<u>312449</u>
	KA1/5-23				

**NORTH BEIRUT OUTFALL HEADWORKS
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**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

**6. PUMPING STATIONS EXTERNAL
WORKS**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
<u>PUMPING STATIONS EXTERNAL WORKS (PROVISIONAL)</u>					
<u>Earthwork</u>					
A	General excavation to reduce levels	C.M	660	7	4620
	Per Cubic Meter U.S. Dollars				
<u>Asphalt Works</u>					
B	Aggregate base course 150 mm thick, spread and compacted as described	S.M	2645	4	10580
	Per Square Meter U.S. Dollars				
C	Asphalt binder course 60 mm thick including prime coat, spread and compacted as described	S.M	2645	5	13225
	Per Square Meter U.S. Dollars				
D	Tack coat between asphalt courses.	S.M	2645	.15	397
	Per Square Meter U.S Dollars				
KA1/6-1 CARRIED TO COLLECTION					28822

**NORTH BEIRUT OUTFALL HEADWORKS
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COLLECTORS AND PUMPING STATIONS**

**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

**6. PUMPING STATIONS EXTERNAL
WORKS**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	Asphalt wearing course 40 mm thick, spread and compacted as described.				
	Per Square Meter U.S. Dollars	S.M	2645	5	13225
	<u>Kerbstone</u>				
B	Kerbstone consisting of and including 380 x 80 mm ground footing, 170 x 280 mm kerb set over footing with the necessary mortar and earthwork all as described.				
	Per Linear Meter U.S. Dollars	L.M	773	15	11595
	<u>Markings</u>				
C	Road Marking strips 150 mm wide.				
	Per Linear Meter U.S. Dollars	L.M	450	.50	225
D	Road marking strips to car parking area				
	Per Linear Meter U.S. Dollars	L.M	100	.50	50

KA1/6-2

CARRIED TO COLLECTION

25095

**NORTH BEIRUT OUTFALL HEADWORKS
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**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

**6. PUMPING STATIONS EXTERNAL
WORKS**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	<u>Paving slabs</u> 400 x 400 x 60 mm thick concrete paving slabs as walkways set on 20 mm mortar and 30 mm sand bed. Per Square Meter U.S. Dollars	S.M	400	20	8000
B	Ditto to open areas. Per Square Meter U.S. Dollars	S.M	250	20	5000
C	<u>Landscaping</u> Landscaping area including grassing, planting, planting earth and compaction etc. Per Square Meter U.S. Dollars	S.M	2500	5	12500
D	Include the Provisional Sum of \$25,000 for the supply of plants for land scaping Per Lump Sum U.S. Dollars	L.S			25,000.00
KA1/6-3 CARRIED TO COLLECTION					50500

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**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

**6. PUMPING STATIONS EXTERNAL
WORKS**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE S	TOTAL PRICE S
A	<p><u>Fencing</u></p> <p>Boundary wall, 20 cm thick x 250 cm approximate height consisting of and including : earthwork, lean concrete blinding, concrete footings, ground beams, columns, beams, fair faced hollow blocks, reinforcement, formwork, ties and the like.</p> <p>Per Linear Meter U.S. Dollars</p>	L M	306	72	22032
B	<p>Double leaf steel gate 615 cm wide x 250 cm approx. height including steel, frame fixing accessories, wheels, tracks, bolts, inserts, hinges, locks, painting, coating and the like.</p> <p>Per Number U.S. Dollars</p>	No	5	2800	14000
C	<p>Ditto 115 cm wide x 250 cm approx. height, ditto.</p> <p>Per Number U.S. Dollars</p>	No	5	390	1950
D	<p>Wire mesh fence 250 cm approximate height consisting of and including: earthwork, concrete work, posts, wire mesh, tension wire, barbed wire, top rail, braces, bars, bands, truss rods, brackets, and the like</p> <p>Per Linear Meter U.S. Dollars</p>	L M	370	15	5550
KA1/6-4 CARRIED TO COLLECTION					43532

Republic of Lebanon

Office of the Minister of State for Administrative Reform

Center for Public Sector Projects and Studies

(C.P.S.P.S.)

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VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1

6. PUMPING STATIONS EXTERNAL
WORKS

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
	<u>COLLECTION</u>				
	<u>Page</u>				
	KA1/6-1.....				28822
	KA1/6-2.....				25095
	KA1/6-3.....				50500
	KA1/6-4.....				43532
	TOTAL CARRIED TO SUMMARY				<hr/> 147949 <hr/>
	KA1/6-5				

**NORTH BEIRUT OUTFALL HEADWORKS
NORTH AND WEST - SOUTH COASTAL
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**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

7. FUEL TANKS

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	<p><u>FUEL TANKS</u></p> <p><u>Underground fuel tanks including all valves, pipes to generators, pumps, meters, strainers, couplings, dispensing units and all associated fittings and accessories, testing and commissioning, corrosion protection to tanks, pipes and fittings and all associated civil works including excavation, concrete work and the like all as described</u></p> <p>5000 liter capacity</p> <p>Per Number U.S. Dollars</p> <p>.....</p> <p>.....</p>	No	3	9610	28830
	<p><u>Free standing vertical fuel tanks including all valves, pipes to generators, pumps, meters, strainers, couplings, dispensing units and all associated fittings and accessories, testing and commissioning, sacrificial anode or other equivalent system for corrosion protection and all associated civil works including excavation, bases, supports and the like all as described</u></p> <p>9600 liter capacity</p> <p>Per Number U.S. Dollars</p> <p>.....</p> <p>.....</p>				
KA1/7-1		CARRIED TO SUMMARY			54 080

**NORTH BEIRUT OUTFALL HEADWORKS
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COLLECTORS AND PUMPING STATIONS**

**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

**8. RECLAIMED LAND AND
FOUNDATIONS AT HEADWORKS**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	<u>RECLAIMED LAND AND FOUNDATIONS AT HEADWORKS (PROVISIONAL)</u> <u>Land Reclamation</u>				
	Dense well-graded, clean, sand-gravel imported fill, compacted to 97.5 % modified AASHTO test, to reclaim land for solid waste; average sea bed level 3.5m below mean sea level; finished level 3.0m above mean sea level (any extra above this stated finished level required by the contractor shall be to his account)	C.M	50000	15	750 000
B	<u>Sea Wall</u>				
	Design and construct sea wall for average sea bed level 3.5m below mean sea level, finished level of reclaimed land 3.0m above mean sea level and top of wave wall 4.5m above mean sea level	L.M	250	15000	3 750 000
KA1/8-1 CARRIED TO COLLECTION				4 500 000	

**NORTH BEIRUT OUTFALL HEADWORKS
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COLLECTORS AND PUMPING STATIONS**

**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

**8. RECLAIMED LAND AND
FOUNDATIONS AT HEADWORKS**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	Design and construct all necessary additional works to provide foundations in the location of the existing sea wall Per Lump Sum U.S. Dollars <u>Piling</u>	L.S			250 000
B	Precast concrete piles of section equivalent to 700mm diameter x 30 meters long to the cut-off level complete including all necessary geotechnical investigation, design, manufacture, reinforcement, joints, caps, pre- auguring, driving, trimming to the required cut-off level, test piles and tests all in connection with major structures on the solid waste site. Per Number U.S. Dollars	No	400	3700	1 480 000
C	Ditto in connection with major structures on the wastewater site Per Number U.S. Dollars	No	600	3700	2 220 000
KA1/8-2 CARRIED TO COLLECTION					3 950 000

**NORTH BEIRUT OUTFALL HEADWORKS
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**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

**8. RECLAIMED LAND AND
FOUNDATIONS AT HEADWORKS**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE S	TOTAL PRICE S
	<u>COLLECTION</u>				
	<u>Page</u>				
	KA1/8-1.....		4 500 000
	KA1/8-2.....		3 950 000
	KA1/8-3.....		3 625 000
	TOTAL CARRIED TO SUMMARY				<hr/> 12 075 000 <hr/>
	KA1/8-4				

**NORTH BEIRUT OUTFALL HEADWORKS
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**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

**10. REMOVAL OF GROUND
UNSUITABLE FOR FOUNDATIONS**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE S	TOTAL PRICE S
	<u>COLLECTION</u>				
	<u>Page</u>				
	KA1/10-1.....				160 000
	KA1/10-2.....				375 000
	TOTAL CARRIED TO SUMMARY				<hr/> 535 000 <hr/>
	KA1/10-3				

**NORTH BEIRUT OUTFALL HEADWORKS
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**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

11. ELECTRICAL SUNDRIES

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
	<u>ELECTRICAL SUNDRIES</u>				
	<u>Spare Parts</u>				
A	Allow for the provision of particular spare parts for electric motors all as detailed in clause 7.8.6.J of the Specifications				
	Per Lump Sum U.S. Dollars	L.S			20 000
				
				
B	Allow for the provision of particular spare parts for diesel generator set all as detailed in clause 7.10.5L of the Specification.				
	Per Lump Sum U.S. Dollars	L.S			10 000
				
				
KA1/11-1 CARRIED TO SUMMARY					30 000

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**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

**12. HEADWORKS ADDITIONAL
EXTERNAL WORKS**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
	<u>HEADWORKS ADDITIONAL EXTERNAL WORKS (PROVISIONAL)</u>				
	<u>Earthwork</u>				
A	General excavation to reduce levels				
	Per Cubic Meter U.S. Dollars	C.M	5050	7	35350
B	Dense well-graded, clean, sand-gravel imported fill, compacted to 97.5 % modified AASHTO test, to make up levels over the site				
	Per Cubic Meter U.S. Dollars	C.M	30750	15	461250
	<u>Asphalt Works</u>				
C	Aggregate base course 150 mm thick, spread and compacted as described				
	Per Square Meter U.S. Dollars	S.M	25760	4	103040
D	Asphalt binder course 60 mm thick including prime coat, spread and compacted as described				
	Per Square Meter U.S. Dollars	S.M	25760	5	128800
E	Tack coat between asphalt courses.				
	Per Square Meter U.S Dollars	S.M	25760	.15	3864
KA1/12-1		CARRIED TO COLLECTION			732304

**NORTH BEIRUT OUTFALL HEADWORKS
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COLLECTORS AND PUMPING STATIONS**

**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

**12.HEADWORKS ADDITIONAL
EXTERNAL WORKS**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	Asphalt wearing course 40 mm thick, spread and compacted as described. Per Square Meter U.S. Dollars	S.M	25760	5	128800
B	<u>Kerbstone</u> Kerbstone consisting of and including 380 x 80 mm ground footing, 170 x 280 mm kerb set over footing with the necessary mortar and earthwork all as described. Per Linear Meter U.S. Dollars	L.M	2480	15	37200
C	<u>Markings</u> Road Marking strips 150 mm wide. Per Linear Meter U.S. Dollars	L.M	1000	.50	500
KA1/12-2 CARRIED TO COLLECTION					166500

**NORTH BEIRUT OUTFALL HEADWORKS
NORTH AND WEST - SOUTH COASTAL
COLLECTORS AND PUMPING STATIONS**

**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

**12.HEADWORKS ADDITIONAL
EXTERNAL WORKS**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	<u>Paving slabs</u> 400 x 400 x 60 mm thick concrete paving slabs as walkways set on 20 mm mortar and 30 mm sand bed.				
	Per Square Meter U.S. Dollars	S.M	750	20	15000
B	Ditto to open areas.				
	Per Square Meter U.S. Dollars	S.M	500	20	10000
C	<u>Landscaping</u> Landscaping area including grassing, planting, planting earth and compaction etc.				
	Per Square Meter U.S. Dollars	S.M	5000	5	25000
D	Include the Provisional Sum of \$ 50,000 for the supply of plants for landscaping				
	Per Lump Sum U.S. Dollars	L.S		-	50,000.00
E	<u>Fencing</u> Boundary wall, 20 cm thick x 250 cm approximate height consisting of and including : earthwork, lean concrete blinding, concrete footings, ground beams, columns, beams, fair faced hollow blocks, reinforcement, formwork, ties and the like.				
	Per Linear Meter U.S. Dollars	L.M	1000	72	72000
KA1/12-3 CARRIED TO COLLECTION					172 000

**NORTH BEIRUT OUTFALL HEADWORKS
NORTH AND WEST - SOUTH COASTAL
COLLECTORS AND PUMPING STATIONS**

**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

**12.HEADWORKS ADDITIONAL
EXTERNAL WORKS**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	Double leaf steel gate 615 cm wide x 250 cm approx. height, including steel frame, fixing accessories, wheels, tracks, bolts, inserts, hinges, locks, painting, coating and the like. Per Number U.S. Dollars	No	1	2800	2800
B	Ditto 115 cm wide x 250 cm approx. height, ditto. Per Number U.S. Dollars	No	1	390	390
C	Wire mesh fence 250 cm approximate height consisting of and including: earthwork, concrete work, posts, wire mesh, tension wire, barbed wire, top rail, braces, bars, bands, truss rods, brackets, and the like Per Linear Meter U.S. Dollars <u>Stormwater Drainage</u>	L.M	350	15	5250
D	Asbestos Cement stormwater pipe and fittings 300 mm ϕ , including excavating trench, sand bed, backfilling, compacting and removing surplus excavated materials. Per Linear Meter U.S. Dollars	L.M	120	80	9600
KAI/12-4 CARRIED TO COLLECTION					18040

**NORTH BEIRUT OUTFALL HEADWORKS
NORTH AND WEST - SOUTH COASTAL
COLLECTORS AND PUMPING STATIONS**

**VOLUME III BILLS OF QUANTITIES
SECTION 17 EXTERNAL WORKS**

**12.HEADWORKS ADDITIONAL
EXTERNAL WORKS**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE S	TOTAL PRICE SUNIT
A	Asbestos Cement stormwater pipe and fittings 400mm ϕ , including excavating trench, sand bed, backfilling, compacting and removing surplus excavated materials. Per Linear Meter U.S. Dollars	L.M	1060	112	118720
B	Ditto 500mm ϕ Per Linear Meter U.S. Dollars	L.M	140	127	17780
C	Stormwater inlet chamber, ditto. Per Number U.S. Dollars	No	40	500	20000
	<u>Electrical Works</u> <u>M.V. Cables (20 KV) as described</u>				
D	3 1/2 C35 mm ² PVC/SWA/PVC Per Linear Meter U.S. Dollars	L.M	1200	55	66000
E	<u>Duct Banks</u> Four core 100mm diameter duct bank Per Linear Meter U.S. Dollars	L.M	1000	25	25000
KA1/12-5 CARRIED TO COLLECTION					247500

**NORTH BEIRUT OUTFALL HEADWORKS
NORTH AND WEST - SOUTH COASTAL
COLLECTORS AND PUMPING STATIONS**

VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1

**12. HEADWORKS ADDITIONAL
EXTERNAL WORKS**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE S	TOTAL PRICE S
A	Two core 100mm diameter duct bank Per Linear Meter U.S. Dollars <u>Manholes as described</u>	L.M	480	20	9600
B	Type HH3, MPT specification Per Number U.S.Dollars	No.	8	300	2400
C	Type HH1, MPT specification Per Number U.S. Dollars <u>Lighting Points as described</u>	No.	16	150	2400
D	Lighting point, weatherproof IP54 Per Number U.S. Dollars <u>Accessories as described</u>	No.	50	200	10000
E	Street lighting feeder pillar for outdoor installations IP54, complete with 3x60A main circuit breaker and 4no. 3x30A outgoing circuit breakers Per Number U.S. Dollars	No.	2	3000	6000
KA1/12-6 CARRIED TO COLLECTION					30400

**NORTH BEIRUT OUTFALL HEADWORKS
NORTH AND WEST - SOUTH COASTAL
COLLECTORS AND PUMPING STATIONS**

**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

**12. HEADWORKS ADDITIONAL
EXTERNAL WORKS**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	<u>Lighting Fittings as described</u> Lighting fitting type K19 Per Number U.S. Dollars TOTAL CARRIED TO COLLECTION <u>COLLECTION</u> <u>Page</u> KA1/12-1..... KA1/12-2..... KA1/12-3..... KA1/12-4..... KA1/12-5..... KA1/12-6..... KA1/12-7..... TOTAL CARRIED TO SUMMARY	No.	50	2000	100 000 100 000 732 304 166 500 172 000 18 000 247 500 30 000 100 000 1 466 744
KA1/12-7					

**NORTH BEIRUT OUTFALL HEADWORKS
NORTH AND WEST - SOUTH COASTAL
COLLECTORS AND PUMPING STATIONS**

**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

**13 TEMPORARY AND PERMANENT RE-
LOCATION OF EXISTING UTILITIES**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
	<u>TEMPORARY AND PERMANENT RE-LOCATION OF EXISTING UTILITIES</u>				
	Telephone cables 0.4mm ² laid within ducts (measured separately) including all terminations, connections, removal of redundant cables, protection of existing utilities and the like all to the approval of the engineer and the appropriate authorities, all temporary works and testing of completed re-located utilities (provisional)				
A	10 pairs				
	Per Linear Meter U.S. Dollars	L.M	5000	1	5000
				
				
B	50 pairs				
	Per Linear Meter U.S. Dollars	L.M	5000	2	10000
				
				
C	100 pairs				
	Per Linear Meter U.S. Dollars	L.M	5000	3	15000
				
				
D	200 pairs				
	Per Linear Meter U.S. Dollars	L.M	3000	4	12000
				
				
KA1/13-1 CARRIED TO COLLECTION					42000

**NORTH BEIRUT OUTFALL HEADWORKS
NORTH AND WEST - SOUTH COASTAL
COLLECTORS AND PUMPING STATIONS**

**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

13 TEMPORARY AND PERMANENT RE-
LOCATION OF EXISTING UTILITIES

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	300 pairs Per Linear Meter U.S. Dollars	L.M	3000	5	15000
B	500 pairs Per Linear Meter U.S. Dollars	L.M	3000	9	27000
C	800 pairs Per Linear Meter U.S. Dollars	L.M	3000	12	36000
D	1000 pairs Per Linear Meter U.S. Dollars	L.M	3000	15	45000
E	1200 pairs Per Linear Meter U.S. Dollars	L.M	3000	17	51000
F	1500 pairs Per Linear Meter U.S. Dollars	L.M	3000	21	63000
G	1800 pairs Per Linear Meter U.S. Dollars	L.M	2650	23	60950
KA1/13-2 CARRIED TO COLLECTION					297 950

**NORTH BEIRUT OUTFALL HEADWORKS
NORTH AND WEST - SOUTH COASTAL
COLLECTORS AND PUMPING STATIONS**

**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

**13 TEMPORARY AND PERMANENT RE-
LOCATION OF EXISTING UTILITIES**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
	<u>Relocation of existing overhead power cables including dismantling, and removal and disposal of redundant cables as necessary, protection of existing utilities and the provision of new cables, fittings and the like all to the approval of the Engineer and the appropriate authorities, temporary re-connecting and all works in connection with reinstating re-located utilities to their original position as directed by the Engineer, permanent re-connecting and testing of completed re-located and reinstated utilities (Provisional).</u>				
A	25mm ² bare copper conductor for overhead power transmission				
	Per Linear Meter U.S. Dollars	L.M	900	4	3600
				
				
B	35mm ² ditto				
	Per Linear Meter U.S. Dollars	L.M	1000	4	4000
				
				
C	50mm ² ditto				
	Per Linear Meter U.S. Dollars	L.M	1000	5	5000
				
				
D	70mm ² ditto				
	Per Linear Meter U.S. Dollars	L.M	1000	5	5000
				
				
KA1/13-3 CARRIED TO COLLECTION					17600

**NORTH BEIRUT OUTFALL HEADWORKS
NORTH AND WEST - SOUTH COASTAL
COLLECTORS AND PUMPING STATIONS**

**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

**13 TEMPORARY AND PERMANENT RE-
LOCATION OF EXISTING UTILITIES**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE S	TOTAL PRICE S
	<u>Relocation of existing overhead power cable poles as directed by the Engineer, including dismantling, removal of pole foundation, excavation in all kinds of material including rock, planking and strutting, placing poles in new position, new concrete foundations, backfilling and compacting in layers, disposal of surplus excavated material, temporary protection and support of overhead power cables and the like all to the approval of the Engineer and the appropriate authorities (Provisional).</u>				
A	10 meter high steel pole with all cable supports/ isolators Per Number U.S. Dollars	No.	150	200	30 000
B	12 meter high ditto Per Number U.S. Dollars	No.	150	200	30 000
KA1/13-4 CARRIED TO COLLECTION					60 000

**NORTH BEIRUT OUTFALL HEADWORKS
NORTH AND WEST - SOUTH COASTAL
COLLECTORS AND PUMPING STATIONS**

**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

**13 TEMPORARY AND PERMANENT RE-
LOCATION OF EXISTING UTILITIES**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	<u>Supply and fix new overhead power cable poles as directed by the Engineer including excavation in all kinds of material including rock, planking and strutting, concrete foundations, backfilling and compacting in layers, disposal of surplus excavated materials, reinstatement of surfaces to match existing all to the approval of the Engineer and the appropriate authorities (Provisional)</u>				
	10 meter high steel pole complete with all cable supports/isolators Per Number U.S. Dollars				
B	10 meter high steel pole ditto Per Number U.S. Dollars	No.	100	500	50000
Republic of Lebanon Office of the Minister of State for Administrative Reform Center for Public Sector Projects and Studies (C.P.S.P.S.)					KA1/13-5 CARRIED TO COLLECTION 105000

**NORTH BEIRUT OUTFALL HEADWORKS
NORTH AND WEST - SOUTH COASTAL
COLLECTORS AND PUMPING STATIONS**

**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

13 TEMPORARY AND PERMANENT RE-
LOCATION OF EXISTING UTILITIES

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
	<u>Bedding to temporary and permanent relocated utilities (Provisional)</u>				
A	50mm thick concrete blinding bed class C, laid in trenches to receive concrete encasement to utilities				
	Per Square Meter U.S. Dollars	S.M	11610	3	34830
B	Concrete encasement class A for pipes 200mm diameter, including all necessary reinforcement				
	Per Linear Meter U.S. Dollars	L.M	950	31	29450
C	Ditto for pipes 300mm diameter				
	Per Linear Meter U.S. Dollars	L.M	700	42	29400
D	Ditto for pipes 500mm diameter				
	Per Linear Meter U.S. Dollars	L.M	500	68	34000
E	Ditto for pipes 600mm diameter				
	Per Linear Meter U.S. Dollars	L.M	500	82	41000
KA1/13-6 CARRIED TO COLLECTION					168680

**NORTH BEIRUT OUTFALL HEADWORKS
NORTH AND WEST - SOUTH COASTAL
COLLECTORS AND PUMPING STATIONS**

**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

13 TEMPORARY AND PERMANENT RE-
LOCATION OF EXISTING UTILITIES

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	Concrete encasement class A for pipes 800mm diameter, including all necessary reinforcement				
	Per Linear Meter U.S. Dollars	L.M	800	116	92800
B	Ditto for pipes 1000mm diameter				
	Per Linear Meter U.S. Dollars	L.M	850	141	119850
C	Ditto for pipes 1200mm diameter				
	Per Linear Meter U.S. Dollars	L.M	200	204	40800
D	Ditto for UPVC telephone ducts 100 mm diameter				
	Per Linear Meter U.S. Dollars	L.M	1150	19	21850
E	Ditto for banks of 2no. ducts ditto				
	Per Linear Meter U.S. Dollars	L.M	650	34	22100
F	Ditto for banks of 4no. ducts ditto				
	Per Linear Meter U.S. Dollars	L.M	1000	50	50000
KA1/13-7 CARRIED TO COLLECTION					347400

**NORTH BEIRUT OUTFALL HEADWORKS
NORTH AND WEST - SOUTH COASTAL
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**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

13 TEMPORARY AND PERMANENT RE-
LOCATION OF EXISTING UTILITIES

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	Concrete encasement class A for banks of 6.no 100mm diameter,UPVC telephone ducts				
	Per Linear Meter U.S. Dollars	L.M	400	56	22400
B	Ditto for banks of 8no. ducts ditto				
	Per Linear Meter U.S. Dollars	L.M	1000	67	67000
C	Ditto for banks of 10 no. ducts ditto				
	Per Linear Meter U.S. Dollars	L.M	700	78	54600
D	Ditto for banks of 12 no. ducts ditto				
	Per Linear Meter U.S. Dollars	L.M	750	89	66750
E	Ditto for banks of 16no. ducts ditto				
	Per Linear Meter U.S. Dollars	L.M	400	110	44000
KAI/13-8 CARRIED TO COLLECTION					254750

**NORTH BEIRUT OUTFALL HEADWORKS
NORTH AND WEST - SOUTH COASTAL
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**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

**13 TEMPORARY AND PERMANENT RE-
LOCATION OF EXISTING UTILITIES**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	Sand and cement bed and surround for 200mm diameter pipes Per Linear Meter U.S. Dollars	L.M	1000	19	19000
B	Ditto for 300mm diameter pipes Per Linear Meter U.S. Dollars	L.M	650	25	16250
C	Ditto for 500mm diameter pipes Per Linear Meter U.S. Dollars	L.M	500	41	20500
D	Ditto for 600mm diameter pipes Per Linear Meter U.S. Dollars	L.M	450	49	22050
E	Ditto for 800mm diameter pipes Per Linear Meter U.S. Dollars	L.M	1000	70	70000
F	Ditto for 1000mm diameter pipes Per Linear Meter U.S. Dollars	L.M	800	92	73600
G	Ditto for 1200mm diameter pipes Per Linear Meter U.S. Dollars	L.M	200	122	24400
KA1/13-9 CARRIED TO COLLECTION					245800

**NORTH BEIRUT OUTFALL HEADWORKS
NORTH AND WEST - SOUTH COASTAL
COLLECTORS AND PUMPING STATIONS**

**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

**13 TEMPORARY AND PERMANENT RE-
LOCATION OF EXISTING UTILITIES**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	Selected granular material bed and surround for 200mm diameter pipes				
	Per Linear Meter U.S. Dollars	L.M	1000	11	11000
B	Ditto for 300mm diameter pipes				
	Per Linear Meter U.S. Dollars	L.M	650	15	9750
C	Ditto for 500mm diameter pipes				
	Per Linear Meter U.S. Dollars	L.M	500	24	12000
D	Ditto for 600mm diameter pipes				
	Per Linear Meter U.S. Dollars	L.M	450	29	13050
E	Ditto for 800mm diameter pipes				
	Per Linear Meter U.S. Dollars	L.M	1000	41	41000
F	Ditto for 1000mm diameter pipes				
	Per Linear Meter U.S. Dollars	L.M	800	49	39200
G	Ditto for 1200mm diameter pipes				
	Per Linear Meter U.S. Dollars	L.M	200	71	14200
KA1/13-10 CARRIED TO COLLECTION					140200

**NORTH BEIRUT OUTFALL HEADWORKS
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**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

**14 PROPRIETARY ODOUR CONTROL
SYSTEM**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
	<p><u>PROPRIETARY ODOUR CONTROL SYSTEM</u></p> <p>Include the Provisional Sum of \$50,000 for the provision of proprietary odour control system as instructed by the Engineer (amount to be expended solely at the direction of the Engineer)</p> <p>Per Lump Sum U.S. Dollars</p> <p>.....</p> <p>.....</p>	L.S			50,000.00
KA1/14-1	CARRIED TO SUMMARY				50 000

**NORTH BEIRUT OUTFALL HEADWORKS
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**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

15. FIELD INSTRUMENTATION

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	<p><u>FIELD INSTRUMENTATION</u></p> <p>Include for the design, supply, installation, connection, testing and commissioning of process field instrumentation and equipment all as detailed in clause 7.18 of the Specification (a detailed breakdown of the Contractor's price is to be submitted with tender)</p>	L.S			250 000
	Per Lump Sum U.S. Dollars				
KA1/15-1 CARRIED TO SUMMARY					250 000

**NORTH BEIRUT OUTFALL HEADWORKS
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COLLECTORS AND PUMPING STATIONS**

**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

**16 DATA ACQUISITION MASTER
STATION**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	<p><u>DATA ACQUISITION MASTER STATION</u></p> <p>Include for the design, supply, installation, connection, testing and commissioning of the data acquisition master station complete all as detailed in clause 7.17 of the Specification</p> <p>Per Lump Sum U.S. Dollars</p> <p>.....</p> <p>.....</p>	L.S			50000
KA1/16-1 CARRIED TO SUMMARY					50000

**NORTH BEIRUT OUTFALL HEADWORKS
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**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

**17. MAJOR LABORATORY EQUIPMENT
AND FURNITURE**

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	<p><u>MAJOR LABORATORY EQUIPMENT AND FURNITURE</u></p> <p>Include for the provision of all major laboratory equipment and furniture, including furniture to Workshop and Maintenance building, all as detailed in Section 24 of the Specification (a complete list of all equipment together with their respective prices is to be submitted with tender)</p> <p>Per Lump Sum U.S. Dollars</p>	L.S	1		400 000
KA1/17-1 CARRIED TO SUMMARY					400 000

**NORTH BEIRUT OUTFALL HEADWORKS
NORTH AND WEST-SOUTH COASTAL COLLECTORS
AND PUMPING STATIONS**

ADDENDUM NO 1

ADDITIONAL WORKS
SUMMARY

<u>DESCRIPTION</u>	<u>AMOUNT \$</u>	
A Culvert Connection To Headworks.....	161 876	
A- Emergency Overflow to Existing Outfall.....	23 904	he a
S - Connection to Pumping Station A2- South	59 513	
ec on of Existing Sewers to New Manholes.....	95 140	or nit
k shop.....	312 449	
ng Stations External Works.....	147 949	ut
ar s	54 080	re or m d
me' Land and Foundations at Headworks	12 075 000	
onal Special Items	25 000	
va' of Ground Unsuitable for Foundations	535 000	
ca' Sundries	30 000	
orks Additional External Works.....	1 466 744	
ra y and Permanent Relocation of Existing Utilities.....	1 679 380	
et y Odour Control System.....	50 000	
Instrumentation	250 000	
Acquisition Master station.....	50 000	
La oratory Equipment and Furniture.....	400 000	
CARRIED TO GENERAL SUMMARY	17,416,035	

**NORTH BEIRUT OUTFALL HEADWORKS
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**VOLUME III BILLS OF QUANTITIES
ADDENDUM NO. 1**

TUNNELLING ALTERNATIVE

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
	<u>TUNNELLING ALTERNATIVE</u> <u>Tunnelling for pipes, where directed by the Engineer, by means of a construction method to be proposed by the Contractor, including all excavation, supply and installation of pipes for tunnelling, grouting, inside casings, pits for tunnelling and all other associated works complete (Provisional)</u>				
A	Line E, pipe diameter 1800mm, average depth over 6m but n.e.7m				
	Per Linear Meter U.S. Dollars	L.M	719		
				
				
B	Ditto, average depth over 7m but n.e.8m				
	Per Linear Meter U.S. Dollars	L.M	618		
				
				
C	Ditto, average depth over 8m but n.e.9m				
	Per Linear Meter U.S. Dollars	L.M	881		
				
				
KA1/A1		CARRIED TO COLLECTION			

**NORTH BEIRUT OUTFALL HEADWORKS
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**VOLUME III BILLS OF QUANTITIES
ADDENDUM No.1**

TUNNELLING ALTERNATIVE

ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE \$	TOTAL PRICE \$
A	Line E, pipe diameter 1800mm, average depth over 9m but n.e.10m Per Linear Meter U.S. Dollars	L.M	158		
B	Ditto, average depth over 10m but n.e.11m Per Linear Meter U.S. Dollars	L.M	135		
C	Line G, pipe diameter 1000mm, average depth over 6m but n.e.7m Per Linear Meter U.S. Dollars	L.M	165		
D	Ditto, pipe diameter 1400mm, average depth over 6 m but n.e.7m Per Linear Meter U.S. Dollars	L.M	210		
KA1/A2					CARRIED TO COLLECTION

