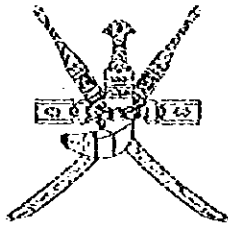


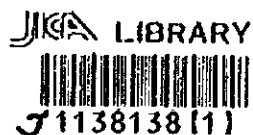
**SULTANATE OF OMAN**  
**MINISTRY OF COMMUNICATIONS**  
**DIRECTORATE GENERAL OF ROADS**



**CONSTRUCTION OF**  
**FLYOVER**  
**AT**  
**AL MULLADAH ROUNDABOUT**  
**BATINAH HIGHWAY**

**TENDER DOCUMENTS**

**BILL OF QUANTITIES**



SSF
CR(5)
97-015



1138138(1)

1997-1998

1997-1998

1997-1998

1997-1998

CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 1 - PRELIMINARIES

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	SECTION 100 PRELIMINARIES						
	101 Bonds and Insurance						
101.1	Performance Bond (Clause 10 of Standard Conditions of Contract)	lump sum					
101.2	Insurance of the Works (Clause 21 of Standard Conditions of Contract)	lump sum					
101.3	Damage to Persons and Property (Clause 22 of Standard Condition of Contract)	lump sum					
101.4	Third Party Insurance (Clause 23 of Standard Conditions of Contract)	lump sum					
101.5	Accident or injury to Workmen (Clause 24 of Standard Condition of Contract)	lump sum					
				1-1	Carried to summary		44250.000

**CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 1 - PRELIMINARIES**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	<b>104 Facilities for the Engineer</b>						
104.1	Provision of Engineer's office (Type A, 1 unit x 20)	month	20	250.000		5000.000	
104.2	Maintenance of Engineer's office (Type A, 1 unit x 20)	month	20	150.000		3000.000	
104.3	Provision of surveying instruments	month	18	300.000		5400.000	
104.4	Maintenance of surveying instruments	month	18	150.000		2700.000	
104.5	Provision of Engineer's accommodation						
	(i) Resident Engineer's accommodation (Type B, 2 unit )	month	38	250.000		9500.000	
	(ii) Engineer's accommodation (Type C, 4 units )	month	74	150.000		11100.000	
	(iv) Dining/Kitchen (Type D, 1 unit x 18)	month	18	250.000		4500.000	
		1-2		Carried to summary		41200.000	

**CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 1 - PRELIMINARIES**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Ez	R.O.	Ez
104.6	Maintenance of Engineer's accommodation						
	(i) Resident Engineer's accommodation (Type B, 2 unit)	month	20	150.000		3000.000	
	(ii) Engineer's accommodation (Type C, 4 unit)	month	20	250.000		5000.000	
	(iii) Engineer's accommodation (Type B, 1 unit x 18)	month	20	150.000		3000.000	
	(iv) Dining/Kitchen (Type D, 1 unit x 24)	month	20	250.000		5000.000	
104.7	Provision of laboratory	month	18	400.000		7200.000	
104.8	Maintenance of laboratory	month	18	150.000		2700.000	
104.10	In situ soil bearing capacity tests	n.r.	20	20.000		400.000	
104.11	Sub-soil investigation by specialist Contractor	prov. sum		8,000.000		8000.000	
				Carried to summary		34300.000	

**CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 1 - PRELIMINARIES**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
105.1	105 Assistance for Engineer Laborers to assist the Engineer ( no x months)	man month	N/A				
106.1	106 Contractor's Compound Mobilization and demobilization of Contractor's facility	lump sum				100000.000	
106.2	Maintenance of Contractor's facility	month	18		5,000.000	90000.000	
107.1	107 Maintenance and Protection of Traffic Maintenance and protection of traffic	lump sum				100000.000	
107.2	Extra over item 107.1 for supply and compaction of subbase on diversions where ordered by the Engineer (10 cm. thick)	cu. m.					
107.3	Extra over item 107.1 for supply and compaction of bituminous basecourse on diversions where ordered by the Engineer ( 3 cm. thick)	cu. m.					
			1-4	Carried to summary		290000.000	



**CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 1 - PRELIMINARIES**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	<b>108 Progress Photographs</b>						
108.1	Provision of negatives and 5 sets of photographs (14 photos max.) (Mountable-Size 100 x 150 mm.)	month	18		30.000		540.000
	<b>109 Sign Boards</b>						
109.1	Provision, erection, moving and maintenance of signboard (Wooden Type)	n.r.	2		300.000		600.000
	<b>110 Commemoration Plaque and Opening Ceremony</b>						
110.1	Supply and erection of commemoration plaque (Optional)	n.r.	1		Option		
110.2	Opening ceremony (Optional)	lump sum					
			1-5	Carried to summary			1140.000

**CONSTRUCTION OF FLYOVER AT  
 AL MULADDAH  
 BILL OF QUANTITIES  
 BILL 1 - PRELIMINARIES**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
115.1	115 Compliance with the Tender Documents  Allow for all costs and expense for complying with all the conditions and requirements stipulated in the Tender Documents, including all Clause of the Standard Conditions of Contract, which the Tenderer considers have financial implications on his tender and which are not covered separately in the various pay items of the Bill of Quantities					
	Clause No .....	lump sum				
	Clause No .....	lump sum				
	Clause No .....	lump sum				
	Clause No .....	lump sum				
	Clause No .....	lump sum				
	Clause No .....	lump sum				
	Clause No .....	lump sum				
	Clause No .....	lump sum				
	Clause No .....	lump sum				
	Clause No .....	lump sum				

1-6 Carried to summary

CONSTRUCTION OF FLYOVER AT  
 AL MULADDAH  
 BILL OF QUANTITIES  
 BILL 1 - PRELIMINARIES

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	SUMMARY						
	Page 1-1					44250.000	
	Page 1-2					41200.000	
	Page 1-3					34300.000	
	Page 1-4					290000.000	
	Page 1-5					1140.000	
	Page 1-6					0.000	
				1-7	To Ground Summary		410890.000

**CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 2 - EARTHWORKS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	<b>200 EARTHWORKS</b>						
	<b>201 Clearing and Grubbing</b>						
201.1	Removal and delivery of trees of 300mm trunk diameter or greater	n.r.	111	15.000		1665.000	
	<b>202 Removal of Structures and Obstructions</b>						
202.1	Removal of existing building (Shop)	n.r.	3	200.000		600.000	
202.2	Removal of misc. reinforced concrete structures	cu. m.	51	5.000		255.000	
202.3	Removal of pipe culvert (D=0.6,0.75,0.9)	lin. m.	33	2.000		66.000	
202.4	Removal of asphaltic concrete pavement (T=10 cm)	cu. m.	4831	2.000		9662.000	
202.5	Removal of damaged steel safety barrier (Girdrail)	lin. m.	1279	1.500		2302.200	
		<b>2-1</b>		<b>Carried to summary</b>		<b>14550.200</b>	

**CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 2 - EARTHWORKS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
202.6	Remove carefully and relocate sign boards and road signs (size)	n.r.	23	3.500		80.500
202.7	Removal of damaged Irish crossing marker posts	n.r.	N/A	2.500		
202.8	Removal of damaged drainage protection works (gabions, conc. tiles, mortared riprap, dry rip rap)	cu. m.	N/A	3.500		
202.9	Removal of existing fences (wire mesh, chicken wire)	lin.m.	571	1.500		856.500
202.10	Removal of existing fences (block or masonry wall)	lin.m.	N/A	2.000		
202.11	Removal of existing box culvert (2 x 1 m)	lin.m.	54	5.000		270.000
202.12	Removal of existing interlocking tiles	sq. m	375	1.200		450.000
202.13	Removal of existing crush stone	lin.m.	N/A	1.000		
202.14	Removal of existing plain concrete	cu. m.	N/A	2.000		
202.15	Removal of Curb Stone	m	600	1.500		900.000
			2-2	Carried to summary		2557.000

**CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 2 - EARTHWORKS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Ez	R.O.	Ez
203	Earthworks Excavation						
203.1	Suitable excavation to embankment	cu. m.	30733	0.600		18439.800	
203.2	Suitable excavation to waste	cu. m.	33906	0.300		10171.800	
203.3	Unsuitable excavation to waste	cu. m.	N/A	0.400			
203.4	Borrow excavation to embankment	cu. m.	54414	1.500		81621.000	
203.5	Extra over item 203.1 ,2, 3 for excavation under water	cu. m.	N/A	3.000			
206	Excavation and Backfilling for Structures						
206.1	Structure excavation in soils to a depth of 2m	cu. m.	913	1.000		913.000	
206.2	Structure excavation in soils to a depth more than 2m	cu. m.	N/A	1.700			
				2-3	Carried to summary		11145.600

CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 2 - EARTHWORKS

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
206.3	Structural excavation in rock to a depth of 2m	cu. m.	N/A		1.100		
206.4	Structural excavation in rock to a depth more than 2m	cu. m.	N/A		2.600		
206.5	Extra over 206.1.2.3,4 for excavation under water	cu. m.	N/A		2.900		
				2-4	Carried to summary		0.000

CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 2 - EARTHWORKS

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	SUMMARY						
	Page 2-1					14550.200	
	Page 2-2					2557.000	
	Page 2-3					111145.600	
	Page 2-4					0.000	
2-5						To Grand Summary	128252.800



**CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 3 - GRANULAR AND STABILIZED SUBBASE, BASE COURSE, STABILIZED SUBGRADE**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
	<b>300 GRANULAR AND STABILIZED SUBBASE, BASECOURSE AND STABILIZED SUBGRADE</b>					
	<b>302 Granular Subbase</b>					
302.1	Granular subbase (class B) (150 mm thick)	cu. m.	4412	2.000		8824.000
	<b>303 Aggregate Basecourse</b>					
303.1	Aggregate basecourse (class B) (300 mm thick)	cu. m.	N/A	3.600		
303.2	Aggregate basecourse (class B) (250 mm thick)	cu. m.	N/A	3.500		
303.3	Aggregate basecourse (class E) (200 mm thick)	cu. m.	9879	3.300		32600.700
303.4	Aggregate basecourse (class B) (150 mm thick)	cu. m.	3392	3.000		10176.000
		3-1		Carried to summary		51600.700

**CONSTRUCTION OF FLYOVER AT  
 AL MULADDAH  
 BILL OF QUANTITIES  
 BILL 3 - GRANULAR AND STABILIZED SUBBASE, BASE COURSE, STABILIZED SUBGRADE**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
	SUMMARY					51600.700
	Page 3-1					
				3-2	Carried to summary	51600.700

**CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 4 - BITUMINOUS PAVEMENT**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
<b>400 BITUMINOUS PAVEMENT</b>						
<b>401 Bituminous Prime Coat and Tack Coat</b>						
401.1	Bituminous prime coat (MC 70)	kg	57608	0.250		14402.000
401.2	Bituminous tack coat (RC 250)	kg	9879	0.300		2963.700
<b>402 Bituminous Basecourse</b>						
402.1	Bituminous basecourse (class B) 70 mm.thick	cu. m.	701	24.000		16824.000
402.2	Bituminous basecourse (class B) 100 mm.thick	cu.m.	3937	28.000		110236.000
402.4	Increase or decrease in bituminous content from nominal rate	kg	rate only	0.050		
			4-1	Carried to summary		144425.700

CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 4 - BITUMINOUS PAVEMENT

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	405 Bituminous Wearing Course						
405.1	Bituminous wearing course (class B) (50 mm thick)	cu. m.	3856	28.000		107968.000	
405.2	Increase or decrease in bitumen content from nominal rate	kg	rate only	0.050			
				4-2	Carried to summary	107968.000	

CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 4 - BITUMINOUS PAVEMENT

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	SUMMARY						
	Page 4-1					144425.700	
	Page 4-2					107968.000	
				4-3	Carried to summary		252393.700

**CONSTRUCTION OF FLYOVER AT**

**AL MULADDAH**

**BILL OF QUANTITIES**

**BILL 5 - CONCRETE AND CONCRETE STRUCTURE**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	<b>500 CONCRETE AND CONCRETE STRUCTURE</b>						
	<b>504 Concrete for Structure</b>						
504.1	Concrete Class 16/20 (OPC cement) Blinding, Gravity Wall	cu. m.	1892		30.000		56760.000
504.2	Concrete Class A 24/20 for retaining wall, abutment and piers (OPC)	cu.m	9240		35.000		323400.000
504.3	Concrete Class S2/20 for bridge deck, cross beam and joint	cu.m	353		50.000		17650.000
504.4	Cast-in-Situ Concrete Class 24/20 for bridge deck for cantilever	cu.m	1605		38.000		60990.000
				5-1	Carried to summary		458800.000

**CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 5 - CONCRETE AND CONCRETE STRUCTURE**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
506.1	506 Prestressed Concrete for Bridge <u>Precast pre-stressed bridge beam reinforced concrete class AA40 including all reinforcement tendons, tension cable strands, approved anchorage points "Freyssinet" system or equal and approved sheaths, de-watering pipes, crouting in accordance with manufacturers recommendations, all complete and as detailed on tender drawings</u>						
	a) PS Box girders (Internal) 26 m long	n.r.	198	2,400.000		475200.000	
	b) PS Box girders (External) 26 m long	n.r.	44	2,700.000		118800.000	
				5-2	Carried to summary	594000.000	

CONSTRUCTION OF FLYOVER AT

AL MULADDAH

BILL OF QUANTITIES

BILL 5 - CONCRETE AND CONCRETE STRUCTURE

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
509	Reinforcing Steel						
509.1	High yield steel bar reinforcement of any diameter	tone	978	285.000		278730.000	
509.2	Mild steel bar reinforcement of any diameter	tone	N/A	300.000			
509.3	Mesh reinforcement of any size	tone	N/A	400.000			
				5-3		Carried to summary	278730.000



CONSTRUCTION OF FLYOVER AT

AL MULADDAH

BILL OF QUANTITIES

BILL 5 - CONCRETE AND CONCRETE STRUCTURE

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	SUMMARY						
	Page 5-1					458800.000	
	Page 5-2					594000.000	
	Page 5-3					278730.000	
				5-4	Carried to summary		1331530.000

CONSTRUCTION OF FLYOVER AT

AL MULADDAH

BILL OF QUANTITIES

BILL 6 - STRUCTURAL STEEL AND OTHER METALWORK

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
600	STRUCTURAL STEEL AND OTHER METALWORK					
603	Bridge Parapets					
603.1	Bridge Handrails (Aluminum) (H=500 mm)	lin.m.	2194	45.000		98730.000
				6-1	Carried to summary	98730.000

CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 6 - STRUCTURAL STEEL AND OTHER METALWORK

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	SUMMARY						
	Page 6-1						98730.000
			6-2	Carried to summary		98730.000	

**CONSTRUCTION OF FLYOVER AT**

**AL MULADDAH**

**BILL OF QUANTITIES**

**BILL 8 - DRAINAGE AND SERVICE DUCTS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
<b>800 DRAINAGE AND SERVICE DUCTS</b>							
<b>801 Pipe Culverts</b>							
801.1	Reinforced concrete pipe culvert ( 600 mm. dia.)	lin.m	135		35.000		4725.000
801.2	Reinforced concrete pipe culvert ( 750 mm. dia.)	lin.m	N/A		45.000		
<b>802 Reinforced Concrete Box Culverts, Box Culverts and Pipe Culverts Headwalls, Wingwalls and Aprons (SRP cement)</b>							
802.1	Concrete (Class 24/20), Box Culverts, Box Culverts and Pipe Culverts Headwalls, Wingwalls, Wingwalls and Aprons (SRP Cement), all complete and as detailed on drawings						
802.1.1	Box culvert 2 x 1 m 1 cell	lin.m	31		60.000		1860.000
802.1.2	Box culvert 2 x 1 m 2 cell	lin.m	42		110.000		4620.000
802.1.3	Box culvert 2 x 1 m 12 cell	lin.m	N/A		650.000		
				8-1	Carried to summary		11205.000

CONSTRUCTION OF FLYOVER AT

AL MULADDAH

BILL OF QUANTITIES

BILL 8 - DRAINAGE AND SERVICE DUCTE

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Ez	
	S04 Catch Basins, Catch Pits, Manholes, Curb Inlets, Ditch Inlets and Outlets					
	Reinforced concrete catch pit comprising excavation, backfilling, disposal, 100 mm thick plain in-situ sulphate resisting concrete class (12/20) blinding concrete class (24/20) for structure, all complete and as detailed on drawing					
S04.1	Catch Pits 1 x 1 x 2 m	n.r.	4	180.000		720.000
	Reinforced concrete gullies comprising excavation, backfilling, disposal, 150 mm bed and walls of reinforces sulphate resisting concrete class (24/20) all complete and as detailed on drawings					
S04.2	Gullies 300 x 300 mm	lin.m	677	25.000		16925.000
				8-2	Carried to summary	17645.000

**CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 8 - DRAINAGE AND SERVICE DUCTE**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
	805 Water proofing for structure					
805.1	Waterproofing membrane	sq.m.	N/A	1.800		
805.2	Mastic asphalt waterproofing	sq.m.	N/A	8.000		
805.3	Bituminous paint	sq.m.	3000	0.350		1050.000
	807 Service Ducts					
807.1	Service duct (A.C. 150 mm dia. -1 way with concrete surround), including duct markers	lin.m.	N/A	2.200		
807.1.1	Service duct (A.C. 150 mm dia. -2 way with concrete surround), including duct markers	lin.m.	75	4.000		300.000
807.2	Extra over for excavation in rock for service ducte	cu.m.	N/A			
				8-3	Carried to summary	1350.000

**CONSTRUCTION OF FLYOVER AT**  
**AL MULADDAH**  
**BILL OF QUANTITIES**  
**BILL 8 - DRAINAGE AND SERVICE DUCTE**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	<b>SUMMARY</b>						
	Page 8-1					11205.000	
	Page 8-2					17645.000	
	Page 8-3					1350.000	
				8.4	Carried to summary	30200.000	

CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 9 - SLOPE PROTECTION AND STABILISATION

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
900	SLOPE PROTECTION AND STABILISATION					
901	Riprap					
901.2	Mortared stone riprap (Class A), in Irish Crossing	cu.m.	N/A	13.000		
901.2.1	Mortared stone riprap (Class A), other than Irish Crossing	cu.m.	695	16.000		11120.000
				9-1	Carried to summary	11120.000



CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 9 - SLOPE PROTECTION AND STABILISATION

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	SUMMARY						
	Page 9-1						11120.000
			9-2	Carried to summary		11120.000	

**CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 11 - BRIDGE BEARINGS, EXPANSION JOINT, JOINTS SEAL AND FILLERS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	<b>1100 BRIDGE BEARINGS, EXPANSION JOINT, JOINTS SEALS AND FILLERS</b>						
	<b>1101 Bridge Bearings</b>						
1101.1	Synthetic Rubber Shoe 460 x 360 x 80 mm including anchor bar, cap, filler reinforcing bar, spiral bar and shrinkage mortar	n.r.	484		40.000		19360.000
	<b>1102 Bridge Expansion Joints</b>						
1102.1	Bridge expansion joint Movement Range W=50 mm	m	44		150.000		6600.000
1102.1.1	Bridge expansion joint Movement Range W=100 mm	m	222		280.000		62160.000
				<b>To Grand Summary</b>			<b>88120.000</b>

11-1

**CONSTRUCTION OF FLYOVER AT**  
**AL MULADDAH**  
**BILL OF QUANTITIES**  
**BILL 11 - BRIDGE BEARINGS, EXPANSION JOINT, JOINTS SEAL AND FILLERS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
SUMMARY							
Page 11-1						88120.000	
		11-2			To Grand Summary		88120.000

**CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 12 - SIDEWALKS, PAVED AREAS AND CURBS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	1200 SIDE WALKS, PAVED AREAS AND CURBS						
	1201 Sidewalks						
1201.1	Interlocking Block Pavement including granular Basecourse 150 mm thick	sq. m	4412		4.000		17648.000
	1202 Curbs						
1202.1.1	Curb 100 x 200 (Mountable)	lin. m.	3936		3.500		13776.000
1202.1.2	Curb 150 x 350 (Mountable)	lin. m	1663		5.000		8315.000
1202.1.3	Curb 150 x 350 (None mountable)	lin. m.	80		4.000		320.000
	All curbs are hydraulically pressed sulphate resisting concrete class A (45/20) bedded, jointed and pointed in 10 mm thick sand cement grout, including all necessary excavation, backfill, dispose, formwork and all necessary works for complete						
			12-1	Carried to summary			40059.000

CONSTRUCTION OF FLYOVER AT

AL MULADDAH

BILL OF QUANTITIES

BILL 12 - SIDEWALKS, PAVED AREAS AND CURBS

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	SUMMARY						
	Page 12-1						40059.000
			12-2	Carried to summary			40059.000

**CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 13 - SAFETY BARRIERS, DELINEATORS AND FENCES**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
1300	SAFETY BARRIERS, DELINEATORS AND FENCE						
1301	Corrugated Steel Beam Safety Barrier						
1301.1.1	Safety barrier beam (Type-A) including posts and end anchor	lin.m.	2483		12.000		29796.000
1301.1.2	Safety barrier beam (Type-C) including posts and end anchor	lin.m	1338		13.000		17394.000
1302	Reflectorised Markers for Safety Barriers						
1303.1	Reflectorised markers attached to guardrail	n.r.	251		8.000		2008.000
1303.2	Reflectorised markers attached to concrete	n.r.	N/A				
				13-1	Carried to summary		49198.000

CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 13 - SAFETY BARRIERS, DELINEATORS AND FENCES

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
	SUMMARY					
	Page 13-1					49198.000
		13-2			Carried to summary	49198.000

CONSTRUCTION OF FLYOVER AT

AL MULADDAH

BILL OF QUANTITIES

BILL 14 - HIGHWAY SIGNS AND ROAD MARKING

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	1400 HIGHWAY SIGNS AND ROAD MARKING						
	1401 Highway Signs						
1401.1	Highway sign, triangular, size (900 mm)	n.r.	11		40.000		440.000
1401.2	Highway sign, circular, diameter (900 mm)	n.r.	10		50.000		500.000
1401.3	Highway sign, rectangular, (600 x 2400, 750 x 1400 mm)	n.r.	10		200.000		2000.000
1401.4	Highway sign, square	n.r.	5		50.000		250.000
1401.6.1	Overhead sign post and support assembling cantilever	n.r.	4		2,000.000		8000.000
1401.6.2	Overhead sign post and support assembling gantry	n.r.	2		10,000.000		20000.000
			14-1		Carried to summary		31190.000



CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES

BILL 14 - HIGHWAY SIGNS AND ROAD MARKING

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
	1402 Road Markings					
1402.1	Traffic lines (Mechanically sprayed)	sq. m	2259	1.500		3388.500
1402.2	Special markings (Hand sprayed)	sq. m	892	5.000		4460.000
1402.3	Curb painting (Black and yellow)	sq. m	1377	1.600		2203.200
1402.4	Reflecting road studs type red	n.r.	1257	4.410		5543.370
1402.7	Non-reflecting ceramic buttons	n.r.				
			14.2	Carried to summary		15595.070

**CONSTRUCTION OF FLYOVER AT  
 AL MULADDAH  
 BILL OF QUANTITIES  
 BILL 14 - HIGHWAY SIGNS AND ROAD MARKING**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	<b>SUMMARY</b>						
	Page 14-1					31190.000	
	Page 14-2					15595.070	
				14-3	To Grand Summary	46785.070	

CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 15 - ELECTRICAL INSTALLATION

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	1500 ELECTRICAL INSTALLATION						
	1502 Medium Voltage Switching Stations	prov sum				50000.000	
1502.1	Medium Voltage Switching Stations	n.r.					
	1503 Package Sub-stations						
1503.1	Package sub-station	n.r.					
	1504 Package Medium Voltage Switching Stations						
1504.1	Packing medium voltage switching station	n.r.					
		15-1		Carried to summary		50000.000	

CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 15 - ELECTRICAL INSTALLATION

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
	1505 33kV and 11kV Pole Mounted Transformer Stations					
1505.1	33kV pole mounted transformer station	n.r.				
1505.2	11kV pole mounted transformer station	n.r.				
	1506 Feeder Pillars					
1506.1	Feeder pillar	n.r.				
	1507 Cables					
1507.1	Cable (type) (size)	lin.m.				
				15-2	Carried to summary	

CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 15 - ELECTRICAL INSTALLATION

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
1508.1	1508 Road Lighting Masts and Column High mast assembly (type) (height)	n.r.					
1508.2	Lighting columns (type) (number of arms) (Height)	n.r.					
1509.1	1509 Traffic Sign Illumination Overhead sign lighting (gantry or cantilever ref no)	n.r.					
1509.2	Roadside sign lighting (sign ref no)	n.r.					
1510.1	1510 Recessed Lighting Recessed lighting (type)	n.r.					
				15-3	Carried to summary		

CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 15 - ELECTRICAL INSTALLATION

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
	1511 Traffic Signals					
1511.1	Traffic signal installation (location)	lump sum				
	1512 Earthing					
1512.1	Twin rod earthing installation (location)	n.r.				
1512.2	Single rod earthing installation (location)	n.r.				
				15-4	Carried to summary	

**CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 15 - ELECTRICAL INSTALLATION**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
	<b>SUMMARY</b>					
	Page 15-1					
	Page 15-2					
	Page 15-3					
	Page 15-4					
	Provisional Sum	Prov Sum				50000.000
			15-5	To Grand Summary		50000.000

CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 17 - UTILITIES

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
1700	UTILITIES						
1701	Utilities						
1701.1	Remove carefully and relocate low voltage electric poles, telephone poles, including removal of lines, excavation, backfilling and other related works as directed by the Engineer	prov sum				50000.000	
1701.1.1	Protect of existing utilities crossing the roadway as shown in Drawing, or as directed by the Engineer	lin. m.					
				17-1	Carried to summary	50000.000	



CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 17 - UTILITIES

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	SUMMARY						
	Page 17-1	Prov Sum					50000.000
				17-2	To Grand Summary		50000.000

**CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 19 - DAYWORKS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
<b>A. WAGES</b>						
These include proper wages, all used allowance, medical expense and all other charges provided for by local laws						
A.1	Supervisor	hour	100	4.000		400.000
A.2	Site Surveyor	hour	1000	3.500		3500.000
A.3	Foreman	hour	480	3.200		1536.000
A.4	1st Class Operator	hour	480	1.100		528.000
A.5	2nd Class Operator	hour	100	0.950		95.000
A.6	Mechanic	hour	190	1.000		190.000
A.7	Driver	hour	480	1.000		480.000
A.8	Skilled Labour	hour	1000	0.650		650.000
A.9	Semi Skilled Labour	hour	1000	0.600		600.000
				Carried to Summary		7979.000

19-1

CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 19 - DAYWORKS

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
A.10	Ordinary Labour	hour	1000	0.550		550.000	
A.11	Mason	hour	200	0.650		130.000	
A.12	Painter	hour	100	0.750		75.000	
A.13	Carpenter	hour	200	0.650		130.000	
A.14	Steel Fitter	hour	100	0.650		65.000	
A.15	Electrician	hour	20	0.850		17.000	
			19-2	Carried to Summary		967.000	

**CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 19 - DAYWORKS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
<b>B. OPERATING EQUIPMENT ON SITE</b>						
These rate include : fuel and lubricants cost, charges for depreciation interest, repairs, maintenance, spare parts, tyres, insurance, etc. Payment will not be made for mechanics or maintenance time which shall be include in and spread over the rates.						
B.1	Motorgrader from 100 hp up to 120 hp	hour	5	9.500		47.500
B.2	Motorgrader from 120 hp up to 150 hp	hour	11	11.500		126.500
B.3	Tractor from 60 to 100 hp	hour	5	4.000		20.000
B.4	Bulldozer with ripper from 100 hp to 150 hp	hour	5	7.000		35.000
B.5	Bulldozer with ripper from 150 hp to 200 hp	hour	7	8.000		56.000
B.6	Bulldozer with ripper from 200 hp to 250 hp	hour	6	18.000		108.000
B.7	Bulldozer with ripper from 250 hp to 300 hp	hour	4	19.500		78.000
B.8	Wheel tractor up to 50 hp	hour	10	4.000		40.000
				Carried to Summary		511.000

**CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 19 - DAYWORKS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
B.9	Wheel tractor over 50 hp	hour	10	7.000		70.000	
B.10	Motor scraper capacity up to 18 cu.m.	hour	10	19.000		190.000	
B.11	Motor scraper capacity from 18 to 24 cu.m.	hour	10	19.000		190.000	
B.12	Sheeps foot roller, from 5 tonnes to 10 tonnes	hour	10	5.000		50.000	
B.13	Grid roller	hour	4	7.000		28.000	
B.14	Vibratory compactor with prime mover up to 5 tonnes	hour	4	5.000		20.000	
B.15	Vibratory compactor with prime mover from 5 to 10 tonnes	hour	4	7.000		28.000	
B.16	Pneumatic compactor with prime mover from 30 to 50 tonnes	hour	4	7.000		28.000	
B.17	Pneumatic self-propelled rollers from 15 to 20 tonnes	hour	8	4.500		36.000	
B.18	Tandem roller up to 8 tonnes	hour	24	4.500		108.000	
B.19	Tandem roller from 8 to 12 tonnes	hour	8	5.000		40.000	
19-4						Carried to Summary	788.000

**CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 19 - DAYWORKS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
B.20	Triaxle roller from 10 to 15 tonnes	hour	24	5.000		120.000
B.21	Light frog-rammer 0.1 tonne	hour	20	0.500		10.000
B.22	Heavy frog-rammer 0.5 tonne	hour	20	0.700		14.000
B.23	Wheel loader 1.2 to 1.6 cu.m.	hour	20	9.500		190.000
B.24	Wheel loader 1.6 to 2.0 cu.m.	hour	20	10.000		200.000
B.25	Wheel loader 2.0 to 2.5 cu.m.	hour	20	11.000		220.000
B.26	Excavator up to 0.8 cu.m.	hour	15	5.500		82.500
B.27	Excavator from 0.8 to 1.2 cu.m.	hour	15	7.500		112.500
B.28	Bituminous mixing plant with batching apparatus up to 80 t/h.	hour	5	18.000		90.000
B.29	Bituminous mixing plant with batching apparatus from 80 to 150 t/h.	hour	5	23.000		115.000
B.30	Finisher up to 80 t/h.	hour	10	9.000		90.000
			19-5	Carried to Summary		1244.000

**CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 19 - DAYWORKS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
B.31	Finisher from 80 t/h to 120 t/h.	hour	10	10,000		100,000	
B.32	Bitumen sprayer up to 6 tonnes	hour	10	5,000		50,000	
B.33	Tanker truck up to 6 cu.m.	hour	15	5,000		75,000	
B.34	Dump truck up to 10 tonnes	hour	17	5,500		93,500	
B.35	Dump truck from 10 to 15 tonnes	hour	20	6,000		120,000	
B.36	Screening plant from 80 to 100 t/h.	hour	5	16,000		80,000	
B.37	Crushing plant from 40 to 60 t/h.	hour	5	20,000		100,000	
B.38	Crushing plant with primary and secondary from 60 to 100 t/h.	hour	5	30,000		150,000	
B.39	Air compressor up to 6000 l/m.	hour	15	1,500		22,500	
B.40	Air compressor over 6000 l/m.	hour	15	2,000		30,000	
B.41	Mechanical broom	hour	7	4,000		28,000	
			19-6	Carried to Summary		849,000	

**CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 19 - DAYWORKS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
B.42	Power water pump	hour	118	0.700		82.600
B.43	Steel cutting machine	hour	5	0.800		4.000
B.44	Steel bending machine	hour	5	1.200		6.000
B.45	Belt conveyer	hour	5	7.000		35.000
B.46	Concrete mixer up to 0.5 cu.m.	hour	10	2.000		20.000
B.47	Concrete mixer over 0.5 cu.m.	hour	12	4.000		48.000
B.48	Automatic concrete batch plant without mixing drum	hour	5	7.500		37.500
B.49	Transmixer up to 5 cu.m.	hour	10	6.500		65.000
B.50	Concrete vibrators	hour	59	0.150		8.850
B.51	Crane up to 5 tonnes.	hour	9	4.500		40.500
B.52	Crane with broom and jib 5 to 10 tonnes	hour	7	8.000		56.000
			19-7	Carried to Summary		403.450



CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 19 - DAYWORKS

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
B.53	Crane with boom and jib over 10 tonnes	hour	7	11.000		77.000	
B.54	Generator 60 kw	hour	5	1.500		7.500	
B.55	Generator 75 kw	hour	5	1.800		9.000	
B.56	Drilling equipment	hour	5	0.200		1.000	
B.57	Generator 100 kw	hour	5	3.000		15.000	
B.58	Generator 150 kw	hour	5	4.000		20.000	
B.59	Generator 200 kw	hour	5	5.000		25.000	
B.60	Gravel strewer	hour	5	10.000		50.000	
			19-8	Carried to Summary			204.500

**CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 19 - DAYWORKS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	<b>C. MATERIALS</b>						
	These rates include all the charges for the supply of the materials, loading, transport to site, unloading and stores as well as all the charges provided for in the General and Special Specifications and in the Contract.						
C.1	Aggregate for granular sub-base course in accordance with the General and Special Specifications, in place as specified.	cu.m.	50	1.000		50.000	
C.2	Aggregate for granular aggregate base course in accordance with the General and Special Specifications, in place as specified.	cu.m.	25	2.000		50.000	
C.3	Aggregate for bituminous base course in accordance with the General and Special Specifications, near the asphalt plant, in bulk	cu.m.	50	2.000		100.000	
C.4	Fine aggregate for concrete, in accordance with the General and Special Specifications, in place, in bulk	cu.m.	25	2.000		50.000	
C.5	Coarse aggregates for concrete, in accordance with the General and Special specifications, in place, in bulk	cu.m.	50	1.200		60.000	
			19-9	Carried to Summary			310.000

**CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 19 - DAYWORKS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
C.6	Stone for drainage, masonry and slope protection, in accordance with the General and Special Specifications in place	cu.m.	25	2.500		62.500	
C.7	Asphalt cement, grade 60-70 on site	ton	1	44.000		44.000	
C.8	Asphalt cement, grade 50-60 on site	ton	1	48.000		48.000	
C.9	Emulsified asphalt, grade RS-1 on site	ton	1	70.000		70.000	
C.10	Curback asphalt, MC and RC type on site	ton	1	75.000		75.000	
C.11	Portland cement on site	ton	1	25.000		25.000	
C.12	Deformed billet steel bars, AASHTO M 31 grade 60 (High Yield) of any diameter	ton	1	135.000		135.000	
C.13	Deformed billet steel bars AASHTO M 31 grade 40 (Mild) of any diameter	ton	1	135.000		135.000	
C.14	Highway signs	sq.m.	3	32.000		96.000	
C.15	Highway sign supports - 1 post	nr.	4	15.000		60.000	
			19-10	Carried to Summary		750.500	

CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 19 - DAYWORKS

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
C.16	Highway sign supports - 2 post	nr.	2	20.000		40.000	
C.17	Timber plank, on site	cu.m.	2	105.000		210.000	
C.18	Timber props, on site	cu.m.	2	105.000		210.000	
C.19	Wire mesh gabgions, on site	ton	0.5	320.000		160.000	
C.20	Explosive, on site	kg.	5	20.000		100.000	
C.21	Gas oil, on site	litre	100	0.080		8.000	
C.22	Gasoline, on site	litre	500	0.120		60.000	
C.23	Lubricant	kg.	5	0.300		1.500	
			19-11	Carried to Summary		789.500	

CONSTRUCTION OF FLYOVER AT  
AL MULADDAH  
BILL OF QUANTITIES  
BILL 19 - DAYWORKS

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	<b>SUMMARY</b>						
	Page 19-1						7979.000
	Page 19-2						967.000
	Page 19-3						511.000
	Page 19-4						788.000
	Page 19-5						1244.000
	Page 19-6						849.000
	Page 19-7						403.450
	Page 19-8						204.500
	Page 19-9						310.000
	Page 19-10						750.500
	Page 19-11						789.500
				19.12	To Grand Summary		14795.950

**BILL OF QUANTITIES****GRAND SUMMARY**

Bill No	Description	Amount
		R.O.
1	Preliminaries	410890.000
2	Earthworks	128252.800
3	Granular and stabilized subbase, basecourse and stabilized subgrade	51600.700
4	Bituminous Pavement	252393.700
5	Concrete and concrete structure	1331530.000
6	Structural steel and other metal work	98730.000
7	Paint	N/A
8	Drainage and service ducts	30200.000
9	Slope protection and stabilization	11120.000
10	Piling	N/A
11	Bridge bearing, expansion joints, joint seals and fillers	88120.000
12	Sidewalks, paved areas and kerbs	40059.000
13	Safety barriers, delineators and fences	49198.000
14	Highway signs and road marking	46785.070
15	Electrical installations	50000.000
16	Landscape and irrigation	N/A
17	Utilities	50000.000
18	Plant and Equipment	N/A
19	Dayworks	14795.950
	Sub-total	2653675.220
	Contingencies (10%)	265367.522
	<b>TOTAL CONTRACT VALUE (R.O)</b>	<b>2919042.742</b>

(IN WORDS, THE TOTAL VALUE IS RIAL OMANI

NAME OF TENDERER

DATE

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SIGNATURE OF TENDERER  
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