

Unit Cost Study Sheet

(5)

Works	Specification	Quantity	Unit Rate	Unit Cost	Remarks US\$ Material Plant Labor	M - P - L
C. Omland						
Pavement(1)Light						
	Subgrade CBR10			\$/m ² 4.0	0	3.0 1.0 0-75-25
	Subbase t=0.3m	m ³ /m ² 0.3	\$/m ³ 38.5	\$/m ² 11.6	7.0	2.9 1.7 60-25-15
	CrushRock t=0.2m	m ³ /m ² 0.2	\$/m ³ 94.0	\$/m ² 18.8	11.3	4.7 2.8 60-25-15
	Curb	m/m 0.1	\$/m 46.0	\$/m ² 4.6	3.2	0.2 1.2 70-5-25
			Sub-Total	\$/m ² 39.0	21.5	10.8 6.7 55-29-16
Pavement(2)Normal Asphalt						
	Subgrade CBR7			\$/m ² 4.0	0	3.0 1.0 0-75-25
	Subbase t=0.5m	m ³ /m ² 0.5	\$/m ³ 38.5	\$/m ² 19.3	11.6	4.8 2.9 60-25-15
	Asphalt t=0.1m	m ³ /m ² 0.1	\$/m ³ 420.0	\$/m ² 42.0	27.3	0.4 6.3 55-20-15
	Curb	m/m 0.05	\$/m 16.0	\$/m ² 2.3	1.6	0.1 0.6 70-5-25
	Road Sign/Paint			\$/m ² 2.0	1.0	0.5 0.5 50-25-25
			Sub-Total	\$/m ² 69.6	41.5	16.8 11.3 60-24-16
Pavement(2)Normal Concrete						
	Subgrade CBR5			\$/m ² 5.0	0	4.0 1.0 0-80-20
	Subbase t=0.35m	m ³ /m ² 0.35	\$/m ³ 38.5	\$/m ² 13.5	8.1	2.9 2.5 60-25-15
	Re Con t=0.25m	m ³ /m ² 0.25	\$/m ³ 330.0	\$/m ² 82.5	48.8	13.8 19.9 59-17-24
	Curb	m/m 0.05	\$/m 16.0	\$/m ² 2.3	1.6	0.1 0.6 70-5-25
	Road Sign/Paint			\$/m ² 2.0	1.0	0.5 0.5 50-25-25
			Sub-Total	\$/m ² 105.3	59.5	21.3 24.5 56-20-16

Unit Cost Study Sheet

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Works	Specification	Quantity	Unit Rate	Unit Cost	Remarks US\$ Material Plant Labor	M - P - L
Pavement(2)Normal Interlock						
	Subgrade CBR7			\$/m ² 4.0	0	3.0 1.0 0-75-25
	Subbase t=0.5m	m ³ /m ² 0.5	\$/m ³ 38.5	\$/m ² 19.3	11.6	4.8 2.9 60-25-15
	Re Con t=0.12m	m ³ /m ² 0.25	\$/m ³ 350.0	\$/m ² 42.0	25.2	8.4 6.4 60-20-20
	Curb	m/m 0.05	\$/m 46.0	\$/m ² 2.3	1.6	0.1 0.6 70-5-25
	Road Sign/Paint			\$/m ² 2.0	1.0	0.5 0.5 50-25-25
			Sub-Total	\$/m ² 69.6	39.4	16.8 13.4 56-24-20
Pavement(2)Heavy Concrete						
	Subgrade CBR5			\$/m ² 4.0	0	3.0 1.0 0-75-25
	Subbase t=0.45m	m ³ /m ² 0.45	\$/m ³ 38.5	\$/m ² 17.3	19.4	4.3 2.6 60-25-15
	Re Con t=0.3m	m ³ /m ² 0.30	\$/m ³ 330.0	\$/m ² 99.0	58.5	16.5 24.0 59-17-24
	Curb	m/m 0.05	\$/m 16.0	\$/m ² 9.2	6.0	0.5 2.7 65-5-30
	Road Sign/Paint			\$/m ² 2.0	1.0	0.5 0.5 50-25-25
			Sub-Total	\$/m ² 131.5	75.9	24.8 30.8 58-19-23
Pavement(4)Heavy Concrete						
	Subgrade CBR5			\$/m ² 4.0	0	3.0 1.0 0-75-25
	Subbase t=0.5m	m ³ /m ² 0.50	\$/m ³ 38.5	\$/m ² 19.3	11.6	4.8 2.9 60-25-15
	Re Con t=0.35m	m ³ /m ² 0.35	\$/m ³ 330.0	\$/m ² 115.5	68.3	19.3 27.9 59-17-24
	Curb	m/m 0.05	\$/m 16.0	\$/m ² 9.2	6.0	0.5 2.7 65-5-30
	Road Sign/Paint			\$/m ² 2.0	1.0	0.5 0.5 50-25-25
			Sub-Total	\$/m ² 150.0	86.9	28.1 35.0 58-19-23

Unit Cost Study Sheet

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Works	Specification	Quantity	Unit Rate	Unit Cost	Remarks Material Plant Labor	Remarks Material Plant Labor	Remarks Material Plant Labor	Remarks Material Plant Labor
Pavement(5) Heavy	Concrete							
	Subgrade CBR>5		\$/m ²	4.0	0	3.0	1.0	0-75-25
	Subbase t=0.3m	m ² /m ²	\$/m ³	38.5	7.0	2.9	1.7	60-25-15
	Re Con t=1.20m	m ² /m ²	\$/m ³	330.0	234.0	66.0	96.0	59-17-14
			Sub-Total	\$/m ²	241.0	71.9	98.7	59-17-24
Stormwater Drain	Re Con Pipe 432"	m/ha	\$/m	32,300	21,000	6,460	4,840	65-20-15
	Earth Work	m ² /ha	\$/m ³	20.0	4,620	4,620	2,320	40-40-20
	Mandole	ea/ha	\$/ea	3,500	3,850	1,050	2,100	55-15-30
	Miscellaneous		\$/ha	2,140	1,070	535	535	50-25-25
			Sub-Total	\$/ha	30,540	12,665	9,795	58-24-18
Plyover	Superstructure		\$/m ²	1,700	935	340	475	55-20-25
	Substructure		\$/m ²	800	440	160	200	55-20-25
			Sub-Total	\$/m ²	1,375	500	625	55-20-25
Soil Improvement	Peper Drain							
	Drain	m/m ²	\$/m	0.8	8.0	28.0	4.0	20-70-10
	Sand Mat t=0.1m	m ² /m ²	\$/m ²	10.0	5.0	4.0	1.0	50-40-10
	Earth Load t=0.3m	m ² /m ²	\$/m ³	5.0	6.0	7.5	1.5	40-50-10
	Miscellaneous		\$/m ²	5.0	2.5	1.2	1.2	50-20-20
			Sub-Total	\$/m ²	21.6	40.7	7.7	31-58-11

Unit Cost Study Sheet

(8)

Works	Specification	Quantity	Unit Rate	Unit Cost	Remarks Material Plant Labor	Remarks Material Plant Labor	Remarks Material Plant Labor	
D. Building								
	Main Gate		\$/m ²	500.0	325.0	50.0	125.0	65-10-25
	Power / Lighting		\$/m ²	50.0	32.5	2.5	15.0	65-5-30
	Water Supply		\$/m ²	10.0	6.5	0.5	3.0	65-5-30
	Furniture		\$/m ²	2.0	1.8	0	0.2	90-0-10
	Equipment		\$/m ²	5.0	4.5	0	0.5	90-0-10
			Sub-Total	\$/m ²	370.2	53.0	143.7	65-9-26
Control House	ConcStruc 2story		\$/m ²	900.0	585.0	90.0	225.0	65-10-25
	Power / Lighting		\$/m ²	150.0	98.0	7.5	44.5	65-5-30
	Water Supply		\$/m ²	50.0	32.5	2.5	15.0	65-5-30
	Furniture		\$/m ²	20.0	18.0	0	2.0	90-0-10
	Equipment		\$/m ²	50.0	45.0	0	5.0	90-0-10
			Sub-Total	\$/m ²	778.5	100.0	291.5	67-9-24
Maintenance Shop	Steel Frame		\$/m ²	750.0	525.0	75.0	150.0	70-10-20
	Power / Lighting		\$/m ²	120.0	78.0	6.0	36.0	65-5-30
	Water Supply		\$/m ²	20.0	13.0	1.0	6.0	65-5-30
	Furniture		\$/m ²	2.0	1.8	0	0.2	90-0-10
	Equipment		\$/m ²	150.0	121.5	0	28.5	90-0-10
			Sub-Total	\$/m ²	739.3	82.0	226.7	71-7-22

Unit Cost Study Sheet

(9)

Works	Specification	Quantity	Unit Rate	Unit Cost	Material	BSS	Remarks	H - P - L
CFS	Steel Frame			\$/m2 750.0	525.0	75.0	150.0	70-10-20
	Power / Lighting			\$/m2 20.0	52.0	4.0	24.0	65-5-30
	Water Supply			\$/m2 30.0	6.5	0.5	3.0	65-5-30
	Furniture			\$/m2 1.0	0.9	0	0.1	90-0-10
	Equipment			\$/m2 5.0	4.5	0	0.5	90-0-10
			Sub-Total	\$/m2 846.0	588.9	79.5	177.6	70-9-21
Control House	Conc Structure			\$/m2 500.0	325.0	50.0	125.0	65-10-25
	Power / Lighting			\$/m2 80.0	52.0	4.0	24.0	65-5-30
	Water Supply			\$/m2 20.0	13.0	1.0	6.0	65-5-30
	Furniture			\$/m2 2.0	1.8	0	2.0	90-0-10
	Equipment			\$/m2 -	-	-	-	-
			Sub-Total	\$/m2 602.0	391.8	55.0	155.2	65-9-26
Power House	Conc Structure			\$/m2 500.0	325.0	50.0	125.0	65-10-25
	Power / Lighting			\$/m2 80.0	52.0	4.0	24.0	65-5-30
	Water Supply			\$/m2 20.0	13.0	1.0	6.0	65-5-30
	Furniture			\$/m2 2.0	1.8	0	0.2	90-0-10
	Equipment			\$/m2 -	-	-	-	-
			Sub-Total	\$/m2 602.0	391.8	55.0	155.2	65-9-26

Unit Cost Study Sheet

(10)

Works	Specification	Quantity	Unit Rate	Unit Cost	Material	BSS	Remarks	H - P - L
Misc. Building	Conc/Conc Block			\$/m2 500.0	325.0	50.0	125.0	65-10-25
	Power / Lighting			\$/m2 50.0	32.5	2.5	15.0	65-5-30
	Water Supply			\$/m2 20.0	13.0	1.0	6.0	65-5-30
	Furniture			\$/m2 -	-	-	-	-
	Equipment			\$/m2 -	-	-	-	-
			Sub-Total	\$/m2 570.0	370.5	53.5	146.0	65-9-26
Weigh Bridge	Conc Structure	m3/set 35.0	\$/m3 440.0	\$/set 15,400	10,780	770	3,850	70-9-25
	Foundation Piles			\$/set 8,000	4,800	2,000	1,200	60-25-15
	Earth Work	m3/set 70.0	\$/m3 20.0	\$/set 1,400	560	560	280	40-40-20
	Power / Lighting			\$/set 1,000	900	0	100	90-0-10
	Water Supply			\$/set 500	375	75	150	65-5-30
	Equipment			\$/set 50,000	48,000	1,000	1,000	95-2-2
			Sub-Total	\$/set 76,300	65,365	4,355	6,580	80-6-8
Gate	Steel 8=10m	t/set 1.0	\$/t 3,000	\$/set 3,000	2,250	150	500	75-5-20
Fence	Steel 8=2.1m			\$/m 90.0	72.0	4.5	13.5	80-5-15
	Foundation Conc	m3/m 0.1	\$/m3 330.0	\$/m 33.0	16.5	6.6	9.9	50-20-30
			Sub-Total	\$/m 123.0	88.5	11.1	23.4	72-9-19

Unit Cost Study Sheet

(11)

Works	Specification	Quantity	Unit Rate	Unit Cost	Remarks US\$ Material Plant Labor	H - P - L
Landscaping	Grading / Lawn		\$/m ²	10.0	5.0 1.0 4.0	50-10-40
	Ground Prepr.	m ³ /m ²	\$/m ³	30.0	5.9 0.9 2.2	65-10-25
			Sub-Total	19.0	10.9 1.9 6.2	57-10-33
Landscaping	Plant		\$/m ²	20.0	13.0 2.0 5.0	65-10-25
	Ground Prepr.	m ³ /m ²	\$/m ²	50.0	9.8 1.5 3.7	65-10-25
			Sub-Total	35.0	22.8 3.5 8.7	65-10-25
Utilities						
Water Sup. Main	Connection Fee		\$/B	20,000	0 0 20,000	0-0-100
	Connect. Main d12"	m/B	\$/B	45,000	31,500 4,500 9,000	70-10-20
	Undergr. Recr. Tank	m ³ /B	\$/B	60,000	39,000 6,000 15,000	65-10-25
	Press. Tank w/Pump	set/B	\$/set	50,000	42,500 2,500 5,000	85-5-10
			Sub-Total	175,000	113,000 13,000 49,000	65-7-28
Water Sup. Distr.	Distr. Pipe d10"	m/ha	\$/m	115	9,600 1,380 2,760	70-10-20
	Earth Work	m ³ /ha	\$/m ³	20	1,940 1,040 520	40-10-20
	Fittings		\$/ha	3,600	2,520 360 720	70-10-20
			Sub-Total	20,000	13,220 2,760 4,000	66-14-20

Unit Cost Study Sheet

(12)

Works	Specification	Quantity	Unit Rate	Unit Cost	Remarks US\$ Material Plant Labor	H - P - L
Fire Fighting	Hydrant / Hoses	ea/ha	\$/ea	2,000	1,500 100 400	75-15-20
Sewerage	Septic Tank 20m ³	set/ha	\$/set	20,000	4,290 660 1,850	65-10-25
	Collect. Pipe 80"	m/ha	\$/m	40.0	280 20 300	70-5-25
	Effluent Pipe d12"	m/ha	\$/m	70.0	980 70 350	70-5-25
	Earth Work	m ³ /ha	\$/m ³	24.0	360 360 180	40-40-20
			Sub-Total	9,300	5,910 1,110 2,280	64-20-16
Power Supply	Connection Fee	set/B	\$/set	100,000	0 0 100,000	0-0-100
	Ductbank (concr)	m/B	\$/m	300	315,000 4,500 90,000	70-10-20
	Manholes	ea/B	\$/ea	7,000	77,000 21,000 42,000	55-15-30
	Cables	m/B	\$/m	15	210,000 15,000 75,000	70-5-25
	Miscellaneous		\$/B	30,000	21,000 1,500 7,500	70-5-25
			Sub-Total	1,020,000	623,000 82,500 314,500	61-8-31
Power Plant	Panel	set/B	\$/set	120,000	117,000 3,900 9,100	90-3-7
	Study. Geater 600KVA	set/B	\$/set	390,000	351,000 19,500 19,500	90-5-5
	Miscellaneous		\$/B	10,000	7,000 500 2,500	70-5-25
			Sub-Total	530,000	475,000 23,900 31,000	90-5-5

Unit Cost Study Sheet

(13)

Works	Specification	Quantity	Unit Rate	Unit Cost	Material	Plant	Labor	Remarks
Power to Crane	Collect Feed SKY	m/B	\$/m	\$/B	216,750	12,750	25,500	85-5-10
	Trolley	set/B	\$/set	\$/B	170,000	10,000	20,000	85-5-10
			Sub-Total	\$/B	386,750	22,750	45,500	85-5-10
Lighting (1)	High Pole Light	ea/B	\$/ea	\$/B	168,000	36,000	36,000	70-15-15
Lighting (2)	Road		\$/ha	\$/ha	16,800	2,400	4,800	70-10-20
Telecom.			\$/ha	\$/ha	2,800	200	1,000	70-5-25
Reefor System	Reefor Points	ea/B	\$/ea	\$/B	85,000	5,800	18,000	85-5-10
Banker System	Two Lines d10"	t/m	\$/t	\$/m	360	90	150	80-15-25
	Fitting / Pump			\$/m	300	40	60	75-10-15
			Sub-Total	\$/m	650	130	210	65-13-21

Unit Cost Study Sheet

(14)

Works	Specification	Quantity	Unit Rate	Unit Cost	Remarks
P. Basic Material					
Steel Pipe Pile					
Material	Steel		\$/t	820.8	Y114,000 x 0.90 / 125 = 820.8
Transport			\$/t	150.0	
Allowance			\$/t	97.1	(821 + 150) x 0.1 = 97.1
			Sub-Total	\$/t	1,067.9
Overhead	20%		\$/t	214.1	
			Total	\$/t	1,282.0
Driving Marine	d=1,000		\$/m	185.0	
	d= 800		\$/m	144.0	
	d= 600		\$/m	108.0	
	d= 400		\$/m	72.0	
Driving land	d=1,000		\$/B	60.0	
	d= 800		\$/m	48.0	
	d= 600		\$/m	36.0	
	d= 400		\$/m	24.0	

Unit Cost Study Sheet

(15)

Works	Specification	Quantity	Unit Rate	Unit Cost	Remarks
Steel Pipe Joint					
Material		t/m 0.04	\$/t 2,000	\$/m 80.0	
Transport		t/m 0.04	\$/t 150	\$/m 6.6	
Allowance				\$/m 8.7	(800 + 606) x 0.1 = 8.7
			Sub-Total	\$/m 95.3	
Overhead	20%			\$/m 19.1	
			Total	\$/m 114.4	
E-300x300x10x15	94.5kg/m			\$/t 464.0	¥58,000 / 125 = 464
I-300x10x10	38.1kg/m			\$/t 584.0	¥73,000 / 125 = 584
I-100x100x10	14.9kg/m			\$/t 496.0	¥62,000 / 125 = 496
Average Material				\$/t 515.0	
Transport				\$/t 150.0	
Overhead	20%			\$/t 133.0	
			Total	\$/t 798.0	
tie Rope	90 ton			\$/ea 4,752.0	¥594,000 / 125 = 4,752
Overhead	30%			\$/ea 1,426.0	
			Total	\$/ea 6,178.0	

JICA

