Supporting Facilities Guidance

FYs 05, 06

Metric

11-Dec-2002

Using the Jun-2002 Escalation Index

Price Includes Contractor's Overhead and Profit
Escalation is to the midpoint of construction, Oct 1 (assumes 1 year of construction)
ACF (Area Cost Factor) = 1.0

DESCRIPTION	U/M	UNIT COST	
		FY 2005	FY 2006
WBS 01.02 LAND PILING			
Treated wood piling 12m (40')to 15m (50')long 305mm (12") butt 178mm (7")tip 12 lb creosote	M	55.19	56.24
Piling prestressed conc 254mm (10") sq, more than 12m (40') long, truck delivery	M	61.35	62.54
Piling prestressed conc 254mm (10") sq, more than 15m (50') long, truck delivery	M	64.50	65.75
Piling prestressed conc 305mm (12") sq, more than 12m (40') long, truck delivery	M	72.44	73.86
Piling prestressed conc 305mm (12") sq, 15m (50') long, truck delivery	M	77.43	78.91
Pile load test for 100 ton pile test to 200 tons	EA	4,347	4,430
WBS 17.02 DEMOLITION			
Grub unwooded, medium-brush area	HA	7,811	7,960
Clear & grub light woods w/disposal	HA	24,113	24,575
Clear & grub medium woods w/disposal	HA	32,304	32,924
Clear & grub heavy woods w/disposal	HA	49,677	50,634

DESCRIPTION	U/M	UNIT COST	
		FY 2005	FY 2006
Light Site Clearing: Sundry Surface Items, excluding woods & paving/slabs	M2	0.20	0.20
Medium Site Clearing: Sundry Surface Items, excluding woods & paving/slabs	M2	0.73	0.74
Heavy Site Clearing: Sundry Surface Items, excluding woods & paving/slabs	M2	1.22	1.23
Demolition: Masonry structure, standing bldg, no fdn, 32km (20 mi) haul, no disposal	M3	6.67	6.82
Demolition: Wood frame, standing bldg, no fdn, 32km (20 mi) haul, no disposal	M3	5.65	5.76
Demolition: Concrete structure, standing bldg, no fdn, 32km (20 mi) haul, no disposal	M3	8.76	8.93
Demolition: Steel frame, standing bldg, no fdn, 32km (20 mi) haul, no disposal	M3	6.25	6.36
Disposal Fee: Assume volume at 20% of bldg mass volume. Recycling may greatly reduce disposal costs.	M3	14.65	14.94
Subbase Removal	M3	6.16	6.28
Removal of conc sidewalk 102mm (4")thick w/disposal	M2	1.97	2.01
Removal of bituminous paving up to 78mm (3")thick w/disposal	M2	4.21	4.29
Removal of reinforced concrete pavement w/disposal: Up to 152mm (6")thick	M2	13.57	13.84
Removal of non-reinforced concrete pavement w/disposal: 152mm (6") to 610mm (24")	M3	90	92
Removal of reinforced concrete pavement w/disposal: 152mm (6") to 610mm (24")	M3	120	122
Removal of concrete curb & gutter	M	9.58	9.78
Remove catch basin or manhole	EA	211	215
WBS 17.03 EARTHWORK			
Grading, shaping w/small dozer, small area, , 48 KW (65 HP)	M2	1.24	1.27
Rough grade, large areas, dozer, 250 KW (335 HP), +/- 150 mm (6")	M2	0.18	0.18
Excavating, bulk, dozer, medium matl, 150' push, 48 KW (65 HP)	M3	4.49	4.58
Excavating, bulk, dozer, 150' push,mdm matl, 250 KW (335 HP)	M3	1.62	1.65
Excavating, bulk, dozer, mdm matl, 150' push, 522 KW (700 HP)	M3	1.36	1.39
Hauling, hwy haulers, 8 CY, 1 mi round trip @ 20 MPH	M3	2.92	2.97
Hauling, hwy haulers, 8 CY, 6 mi round trip @ 40 MPH	M3	4.80	4.89
Sub-Base, prepare & roll sub-base, small areas up to 2,090 SM (2,500 SY)	M2	1.32	1.34

DESCRIPTION	U/M	UNIT COST	
		FY 2005	FY 2006
Sub-Base, prepare & roll sub-base, large areas over 2,090 SM (2,500 SY)	M2	0.94	0.97
WBS 17.03 BORROW			
Flyash for building foundations	M3	51.08	52.06
Sand for building foundations, washed & graded	M3	18.12	18.47
Gravel cover or fill	M3	17.76	18.10
Sand for site/pavement-bases, select granular	M3	9.88	10.07
Clay-silt fill for earthen-surface areas	M3	7.30	7.44
WBS 18.01/02 ROADS AND PARKING			
Utilize WBS 17.03 EARTHWORK line items above for paving excavations and preparation			
Stone aggregate base 152mm (6")thick	M2	12.82	13.07
Stone aggregate base 203mm (8")thick	M2	15.92	16.23
Asphalt surface course, 38mm (1.5")	M2	5.04	5.13
Asphalt surface course, 51mm (2")	M2	6.73	6.87
Asphalt surface course, 76mm (3")	M2	10.09	10.29
Surface treatment, prime coat, bituminous	M2	0.526	0.536
Slurry seal	M2	0.969	0.988
Conc paving non-reinforced 20.7mPa (3000psi) 152mm (6")	M2	40.40	41.18
Conc paving non-reinforced 20.7mPa (3000psi) 203mm (8")	M2	50.38	51.34
Conc paving non-reinforced 20.7mPa (3000psi) 254mm (10")	M2	60.34	61.50
Conc paving reinforced w/joints, 27.6mPa (4000psi) 152mm (6")	M2	50.97	51.95
Conc paving reinforced w/joints, 27.6mPa (4000psi) 203mm (8")	M2	61.45	62.63
Conc paving reinforced w/joints, 27.6mPa (4000psi) 254mm (10")	M2	72.17	73.55
Concrete curb 152x457mm (152mm (6")18") cast-in-place	M	41.54	42.32
Concrete curb & gutter cast-in-place, 610mm (24") wide	M	64.18	65.42
Painting 102mm (4")lines on pavement	M	0.709	0.722

DESCRIPTION	U/M	UNIT COST	
		FY 2005	FY 2006
WBS 18.02 AIRCRAFT PAVING			
Utilize WBS 17.02 DEMOLITION line items above for paving demolition			
Utilize WBS 17.03 EARTHWORK line items above for paving excavations			
Stone aggregate base 203mm (8")thick	M2	15.92	16.23
Stone aggregate base 254mm (10")thick	M2	19.00	19.38
Stone aggregate base 305mm (12")thick	M2	22.10	22.53
Asphalt surface course, 76mm (3")	M2	10.09	10.29
Conc paving reinforced w/joints, 34.5mPa (5000psi) 152mm (12")	M2	77.64	79.14
Conc paving reinforced w/joints, 34.5mPa (5000psi) 203mm (14")	M2	87.88	89.57
Conc paving reinforced w/joints, 34.5mPa (5000psi) 254mm (16")	M2	98.12	101.00
Airfield Lighting: Per LF of Runway/Taxiway	M	170.00	173.00
Airfield Paint Striping: Non-Reflective	M2	9.47	9.66
Airfield Paint Striping: Retroreflective	M2	13.67	13.89
Barriers and FOD Protection	M2	13.19	13.44
WBS 18.03 SIDEWALKS			
Conc sidewalks 102mm (4") cast-in-place no base	M2	50.58	51.55
WBS 18.04 FENCING			
Chain link fence 9 ga galv steel 1200mm (4') high	M	39.27	40.03
Chain link fence 9 ga galv steel 1800 (6') high	M	57.25	58.37
Chain link fence 9 ga galv steel 2400mm (8') high	M	75.23	76.68
Swing gate, single, 914mm (3') wide, chain link 9 ga galv steel 1200mm (4') high w/gate posts	EA	166	169
Swing gate, single, 914mm (3') wide, chain link 9 ga galv steel 1800 (6') high w/gate posts	EA	186	189
Swing gate, single, 914mm (3') wide, chain link 9 ga galv steel 2400mm (8') high w/gate posts	EA	228	232
Swing gate, double, 3.05M (10') wide, chain link 9 ga galv steel 2400mm (8') high w/gate posts	EA	643	655
Sliding gate, cantilever, manual, 7.315M (24') w x 2.438M (8') h, chain link 9 ga galv steel	EA	3,303	3,366
Barbed wire, 3-strand	M	17.65	17.98

DESCRIPTION	U/M	UNIT COST	
		FY 2005	FY 2006
WBS 18.05 TOPSOIL SEED, LANDSCAPING			
Topsoil Imported, Seeded, Fertilized, 100mm (4") deep	M2	10.81	11.02
Topsoil Strip, Spread From Piles 102mm (4"), Seeded, Fertilized	M2	7.80	7.95
Seeding/Fertilizing Topsoil or Disturbed Areas	M2	6.71	6.84
WBS 19.01 WATER DISTRIBUTION			
PVC water pipe, 25mm (1") AWWA C-900 Class 150 w/excav backfill & compaction	M	12.47	12.70
PVC water pipe, 37mm (1") AWWA C-900 Class 150 w/excav backfill & compaction	M	13.62	13.88
PVC water pipe, 50mm (2") AWWA C-900 Class 150 w/excav backfill & compaction	M	15.81	16.11
PVC water pipe, 100mm (4")PVC water pipe AWWA C-900 Class 150 w/excav backfill & compaction	M	30.05	30.64
PVC water pipe, 150mm (6") PVC water pipe AWWA C-900 Class 150 w/excav backfill & compaction	M	47.31	48.23
PVC water pipe, 200mm (8") AWWA C-900 Class 150 w/excav backfill & compaction	M	68.08	69.39
DI water pipe, 300mm (12") AWWA Class 50 w/excav backfill & compaction	M	174.00	178.00
DI water pipe, 450mm (18") AWWA Class 50 w/excav backfill & compaction	M	287.00	292.00
DI water pipe, 600mm (24") AWWA C-900 Class 150 w/excav backfill & compaction	M	424	430
90 deg bend PVC, 25mm (1")	EA	16.08	16.39
90 deg bend PVC, 50mm (2")	EA	25.46	25.95
90 deg bend PVC, 100mm (4")	EA	66.58	67.86
90 deg bend PVC, 150mm (6")	EA	116.00	118.00
90 deg bend PVC, 200mm (8")	EA	197.00	200.00
Corporation stop, 25 mm (1")	EA	171.00	174.00
Corporation stop, 50 mm (2")	EA	328.00	334.00
Reducer, PVC, 100 mm (4") to 50 mm (2"), schedule 40	EA	5.11	5.21
Reducer, PVC, 150 mm (6") to 50 mm (2"), schedule 40	EA	33.45	34.09
Reducer, PVC, 200 mm (8") to 50 mm (2"), schedule 40	EA	59.73	60.88

DESCRIPTION	U/M	UNIT COST	
		FY 2005	FY 2006
Tee, DI, mech joint, 100 mm (4") to 100 mm (4")	EA	682	695
Tee, DI, mech joint, 150 mm (6") to 100 mm (4")	EA	793	808
Tee, DI, mech joint, 200 mm (8") to 100 mm (4")	EA	1,166	1,188
Tee, DI, mech joint, 300 mm (12") to 100 mm (4")	EA	1,722	1,755
Fire hydrant standard 3 way post type w/152mm (6")valve and thrust block	EA	1,983	2,021
Gate valve with box, MJ, 100 mm (4")	EA	313	319
Gate valve with box, MJ, 150 mm (6")	EA	372	379
Gate valve with box, MJ, 200 mm (8")	EA	503	512
Gate valve with box, MJ, 300 mm (12")	EA	933	950
Gate valve with box, MJ, 400 mm (16")	EA	1,363	1,389
Pavement Patch, Asphalt: Tear-out/Replace 50 mm (2") asphalt and 200 mm (8") stone. No Mob/Demob included. 150 mm (6") pipe diameter assumed: Increase unit cost by 5.6% for each 25 mm (1 inch) of decrease from 150 mm (6") diameter; decrease unit cost by 5.6% for each 25 mm (1 inch) of increase from 150 mm (6") diameter.	M2	138	140
Pavement Patch, PCC: Tear-out/Replace 150 mm (6") PCC and 150 mm (6") stone. No Mob/Demob included. 150 mm (6") pipe diameter assumed: See asphalt patch note just above for pipe diameter variances.	M2	183	187

WBS 19.02 SANITARY SEWERS

PVC Sanitary Sewer Pipe, 100 mm (4"), w/excav, backfill & compaction	M	29.00	29.56
PVC Sanitary Sewer Pipe, 150 mm (6"), w/excav, backfill & compaction	M	32.84	33.47
PVC Sanitary Sewer Pipe, 200 mm (8"), w/excav, backfill & compaction	M	38.81	39.57
PVC Sanitary Sewer Pipe, 250 mm (10"), w/excav, backfill & compaction	M	46.36	47.25
PVC Sanitary Sewer Pipe, 300 mm (12"), w/excav, backfill & compaction	M	54.30	55.35
PVC Sanitary Sewer Pipe, 450 mm (18"), w/excav, backfill & compaction	M	80.81	82.35
PVC Sanitary Sewer Pipe, 600 mm (24"), w/excav, backfill & compaction	M	103.00	105.00
PVC Cleanout, 100 mm (4")	EA	38.08	38.81
PVC Cleanout, 150 mm (6")	EA	69.90	71.25
PVC Cleanout, 200 mm (8")	EA	102.00	104.00
Manhole, 1200 mm (4') deep	EA	2,857	2,912
Manhole, 1800 mm (6') deep	EA	3,168	3,228
Manhole, 2400 mm (8') deep	EA	3,456	3,522

DESCRIPTION	U/M	UNIT COST	
		FY 2005	FY 2006
Sewage pumping package unit, 37.8 liter/min (10 gal/min), simplex	EA	11,400	11,619
Sewage pumping package unit, 75.7 liter/min (20 gal/min), simplex	EA	16,300	16,613
Sewage pumping package unit, 189.2 liter/min (50 gal/min), duplex	EA	38,800	39,547
Sewage pumping package unit, 378.5 liter/min (100 gal/min), duplex	EA	70,600	71,959
Sewage pumping package unit, 757 liter/min (200 gal/min), duplex	EA	113,000	115,176
Pavement patch: Utilize WBS 19.01 Water Distribution line items			
WBS 19.03 STORM DRAINAGE			
RCP Pipe, 300 mm (12"), w/excav & backfill	M	85.93	87.57
RCP Pipe, 375 mm (15"), w/excav & backfill	M	102.00	104.00
RCP Pipe, 450 mm (18"), w/excav & backfill	M	119.00	121.00
RCP Pipe, 600 mm (24"), w/excav & backfill	M	164.00	167.00
RCP Pipe, 750 mm (30"), w/excav & backfill	M	253.00	258.00
RCP Pipe, 900 mm (36"), w/excav & backfill	M	335	342
Curb inlet or catch basin, 1200 mm (4') deep	EA	817	832
Curb inlet or catch basin, 1800 mm (6') deep	EA	1,127	1,148
Curb inlet or catch basin, 2400 mm (8') deep	EA	1,416	1,443
Manhole, 1200 mm (4') deep	EA	2,857	2,912
Manhole, 1800 mm (6') deep	EA	3,168	3,228
Manhole, 2400 mm (8') deep	EA	3,456	3,522
Pavement patch: Utilize WBS 19.01 Water Distribution line items			
WBS 19.05 HEAT DISTRIBUTION			
Aboveground			
254mm (10") steam & 152mm (6")condensate heat distribution piping aboveground	M	1,480	1,510
203mm (8")steam & 102mm (4")condensate heat distribution piping aboveground	M	1,319	1,342
152mm (6")steam & 102mm (4")condensate heat distribution piping aboveground	M	1,221	1,244
102mm (4")steam & 64mm (2.5") condensate heat distribution piping aboveground	M	1,113	1,136

DESCRIPTION	U/M	UNIT COST	
		FY 2005	FY 2006
Underground			
254mm (10") steam & 152mm (6")condensate heat distribution piping underground	M	1,539	1,569
203mm (8")steam & 102mm (4")condensate heat distribution piping underground	M	1,487	1,516
152mm (6")steam & 102mm (4")condensate heat distribution piping underground	M	1,434	1,461
102mm (4")steam & 64mm (2.5") condensate heat distribution piping underground	M	1,359	1,385
For areas with unstable soil conditions increase unit prices by 20%.			
WBS 19.08 FUEL STORAGE			
Underground tanks for hazardous waste oil storage tanks increase cost by 120%			
Underground oil storage tank 2,082 liter (550 gal) fiberglass double wall (incl excav)	L	6.91	7.04
Underground oil storage tank 3,785 liter (1,000 gal) fiberglass double wall (incl excav)	L	4.41	4.49
Underground oil storage tank 9.5 kliter (2,500 gal) fiberglass double wall (incl excav)	L	2.41	2.46
15.142 kliter (4,000 gal) underground fiberglass fuel oil tank double wall (incl excav)	L	1.87	1.91
22.3 kliter (6,000 gal) underground fiberglass fuel oil tank double wall (incl excav)	L	1.50	1.53
30.3 kliter (8,000 gal) underground fiberglass fuel oil tank double wall (incl excav)	L	1.24	1.26
37.9 kliter (10,000 gal) underground fiberglass fuel oil tank double wall (incl excav)	L	1.09	1.11
45.4 kliter (12,000 gal) underground fiberglass fuel oil tank double wall (incl excav)	L	1.03	1.05
56.8 kliter (15,000 gal) underground fiberglass fuel oil tank double wall (incl excav)	L	1.02	1.04
75.7 kliter (20,000 gal) underground fiberglass fuel oil tank double wall (incl excav)	L	0.89	0.91
WBS 20.01 ELECTRICAL SUBSTATION			
15KVA 1PH pad mtd xfmr w/conc pad & grnd'g	EA	7,342	7,483
25KVA 1PH pad mtd xfmr w/conc pad & grnd'g	EA	8,669	8,835

DESCRIPTION	U/M	UNIT COST	
		FY 2005	FY 2006
37.5KVA 1PH pad mtd xfmr w/conc pad & grnd'g	EA	8,919	9,090
50KVA 1PH pad mtd xfmr w/conc pad & grnd'g	EA	9,231	9,408
75KVA 1PH pad mtd xfmr w/conc pad & grnd'g	EA	10,417	10,617
100KVA 1PH pad mtd xfmr w/conc pad & grnd'g	EA	11,436	11,656
167KVA 1PH pad mtd xfmr w/conc pad & grnd'g	EA	11,892	12,121
75KVA 3PH pad mtd xfmr w/conc pad & grnd'g	EA	16,339	16,653
112KVA 3PH pad mtd xfmr w/conc pad & grnd'g	EA	17,207	17,538
150KVA 3PH pad mtd xfmr w/conc pad & grnd'g	EA	18,226	18,577
225KVA 3PH pad mtd xfmr w/conc pad & grnd'g	EA	20,677	21,075
300KVA 3PH pad mtd xfmr w/conc pad & grnd'g	EA	21,351	21,762
500KVA 3PH pad mtd xfmr w/conc pad & grnd'g	EA	25,723	26,218
750KVA 3PH pad mtd xfmr w/conc pad & grnd'g	EA	29,935	30,511
1000KVA 3PH pad mtd xfmr w/conc pad & grnd'g	EA	34,113	34,770
1500KVA 3PH pad mtd xfmr w/conc pad & grnd'g	EA	42,946	43,773
1, 1PH 10KVA xfmr w/term cutouts arresters 51mm (2")rscriser 12m (40')pole w/guy	EA	6,296	6,417
1, 1PH 15KVA xfmr w/term cutouts arresters 51mm (2")rscriser 12m (40')pole w/guy	EA	6,296	6,417
1, 1PH 25KVA xfmr w/term cutouts arresters 51mm (2")rscriser 12m (40')pole w/guy	EA	6,328	6,449
WBS 20.02 ELECTRICAL DISTRIBUTION			
Note: Normal duct size is 102mm (4"). For 35KV circuit use 127mm (5") duct			
Note: For quantities less than 61M (200 LF) add 20%; less than 30M (100 LF) add 50%			
4-1/C #2 THW str al. w/1-1/C#8 CU ground secondary w/termination	M	14.63	14.93
4-1/C #1/0 THW str al. w/1-1/C#6 CU ground secondary w/termination	M	20.41	20.80
4-1/C #2/0 THW str al. w/1-1/C#4 CU ground secondary w/termination	M	24.67	25.13
4-1/C #4/0 THW str al. w/1-1/C#2 CU ground secondary w/termination	M	32.45	33.07
4-1/C 250 MCM THW str al. w/1-1/C#2 CU ground secondary w/termination	M	35.34	36.03
4-1/C 500 MCM THW str al. w/1-1/C#1/0 CU ground secondary w/termination	M	58.76	59.88
4-1/C 750 MCM THW str al. w/1-1/C#1/0 CU ground secondary w/termination	M	77.79	79.30

DESCRIPTION	U/M	UNIT COST	
		FY 2005	FY 2006
4-1/C #2 CU USE wire 600V w/1-1/C#8 CU ground secondary w/termination	M	24.74	25.23
4-1/C #1/0 CU USE wire 600V w/1-1/C#6 CU ground secondary w/termination	M	37.83	38.55
4-1/C #2/0 CU USE wire 600V w/1-1/C#4 CU ground secondary w/termination	M	45.67	46.56
4-1/C #4/0 CU USE wire 600V w/1-1/C#2 CU ground secondary w/termination	M	63.91	65.16
4-1/C 250 MCM CU USE wire 600V w/1-1/C#2 CU ground secondary w/termination	M	80.48	82.03
4-1/C 500 MCM CU USE wire 600V w/1-1/C#1/0 CU grd. secondary w/termination	M	141.00	144.00
3-1/C #4 AWG CU XLP 5KV shielded cable primary w/o termination	M	49.74	50.69
3-1/C #2 AWG CU XLP 5KV shielded cable primary w/o termination	M	59.68	60.83
3-1/C #1/0 AWG CU XLP 5KV shielded cable primary w/o termination	M	65.92	67.19
3-1/C #2/0 AWG CU XLP 5KV shielded cable primary w/o termination	M	68.21	69.52
3-1/C #4/0 AWG CU XLP 5KV shielded cable primary w/o termination	M	89.83	91.57
3-1/C 250 MCM AWG CU XLP 5KV shielded cable primary w/o termination	M	114.00	116.00
3-1/C 500 MCM AWG CU XLP 5KV shielded cable primary w/o termination	M	175.00	179.00
3-1/C #2 AWG CU XLP 15KV shielded cable primary w/o termination	M	65.29	66.54
3-1/C #1 AWG CU XLP 15KV shielded cable primary w/o termination	M	71.49	72.87
3-1/C #1/0 AWG CU XLP 15KV shielded cable primary w/o termination	M	84.39	86.03
3-1/C #2/0 AWG CU XLP 15KV shielded cable primary w/o termination	M	93.31	95.12
3-1/C #4/0 AWG CU XLP 15KV shielded cable primary w/o termination	M	123.00	125.00
3-1/C 250 MCM AWG CU XLP 15KV shielded cable primary w/o termination	M	145.00	148.00
3-1/C 500 MCM AWG CU XLP 15KV shielded cable primary w/o termination	M	213.00	217.00
Cable termination size no. 2 thru 4/0 0-15KV porcelain	EA	382	389
Cable termination size 250 MCM thru 500 MCM 0-15KV porcelain	EA	511	520

DESCRIPTION	U/M	UNIT COST	
		FY 2005	FY 2006
Cable termination size 500 MCM thru 750 MCM 0-15KV porcelain	EA	742	756
Duct bank 1 way 51mm (2")grs duct w/exca & backfill does not incl pave remvl	M	37.21	37.93
Duct bank 1 way 78mm (3")grs duct w/exca & backfill does not incl pave remvl	M	62.93	64.14
Duct bank 1 way 102mm (4")grs duct w/exca & backfill does not incl pave remvl	M	87.73	89.44
Duct bank 1 way 127mm (5") grs duct w/exca & backfill does not incl pave remvl	M	155.00	158.00
Duct bank 1 way 152mm (6")grs duct w/exca & backfill does not incl pave remvl	M	214.00	218.00
Duct bank 2 way 51mm (2")grs duct w/exca & backfill does not incl pave remvl	M	70.25	71.59
Duct bank 2 way 78mm (3")grs duct w/exca & backfill does not incl pave remvl	M	122.00	124.00
Duct bank 2 way 102mm (4")grs duct w/exca & backfill does not incl pave remvl	M	171.00	174.00
Duct bank 2 way 127 mm (5") grs duct w/exca & backfill oes not incl pave remvl	M	304.00	310.00
Duct bank 2 way 152mm (6")grs duct w/exca & backfill oes not incl pave remvl	M	427	434
Duct bank 3 way 51mm (2")grs duct w/exca & backfill oes not incl pave remvl	M	104.00	106.00
Duct bank 3 way 78mm (3")grs duct w/exca & backfill oes not incl pave remvl	M	179.00	183.00
Duct bank 3 way 102mm (4")grs duct w/exca & backfill does not incl pave remvl	M	253.00	258.00
Duct bank 3 way 127 mm (5") grs duct w/exca & backfill does not incl pave remvl	M	457	463
Duct bank 3 way 152mm (6")grs duct w/exca & backfill does not incl pave remvl	M	634	644
Duct bank 4 way 51mm (2")grs duct w/exca & backfill does not incl pave remvl	M	132.00	135.00
Duct bank 4 way 78mm (3")grs duct w/exca & backfill does not incl pave remvl	M	216.00	220.00
Duct bank 4 way 102mm (4")grs duct w/exca & backfill does not incl pave remvl	M	335.00	338.00
Duct bank 4 way 127mm (5") grs duct w/exca & backfill does not incl pave remvl	M	601	611
Duct bank 4 way 152mm (6")grs duct w/exca & backfill does not incl pave remvl	M	837	850
Duct bank 1 way 51mm (2")PVC duct w/exca & backfill does not incl pave remvl	M	21.00	21.39

DESCRIPTION	U/M	UNIT COST	
		FY 2005	FY 2006
Duct bank 1 way 78mm (3")PVC duct w/exca & backfill does not incl pave remvl	M	26.08	26.58
Duct bank 1 way 102mm (4")PVC duct w/exca & backfill does not incl pave remvl	M	33.30	33.96
Duct bank 1 way 127mm (5")PVC duct w/exca & backfill does not incl pave remvl	M	43.15	43.97
Duct bank 1 way 152mm (6")PVC duct w/exca & backfill does not incl pave remvl	M	54.04	55.09
Duct bank 2 way 51mm (2")PVC duct w/exca & backfill does not incl pave remvl	M	38.03	38.75
Duct bank 2 way 78mm (3")PVC duct w/exca & backfill does not incl pave remvl	M	47.25	48.17
Duct bank 2 way 102mm (4")PVC duct w/exca & backfill does not incl pave remvl	M	61.16	62.34
Duct bank 2 way 127mm (5")PVC duct w/exca & backfill does not incl pave remvl	M	79.93	81.47
Duct bank 2 way 152mm (6")PVC duct w/exca & backfill does not incl pave remvl	M	103.00	105.00
Duct bank 3 way 51mm (2")PVC duct w/exca & backfill does not incl pave remvl	M	54.73	55.78
Duct bank 3 way 78mm (3")PVC duct w/exca & backfill does not incl pave remvl	M	68.24	69.56
Duct bank 3 way 102mm (4")PVC duct w/exca & backfill does not incl pave remvl	M	89.08	90.79
Duct bank 3 way 127mm (5") PVC duct w/exca & backfill does not incl pave remvl	M	117.00	120.00
Duct bank 3 way 152mm (6")PVC duct w/exca & backfill does not incl pave remvl	M	151.00	154.00
Duct bank 4 way 51mm (2")PVC duct w/exca & backfill does not incl pave remvl	M	67.29	68.61
Duct bank 4 way 78mm (3")PVC duct w/exca & backfill does not incl pave remvl	M	84.49	86.13
Duct bank 4 way 102mm (4")PVC duct w/exca & backfill does not incl pave remvl	M	111.00	113.00
Duct bank 4 way 127 mm (5") PVC duct w/exca & backfill does not incl pave remvl	M	148.00	151.00
Duct bank 4 way 152mm (6")PVC duct w/exca & backfill does not incl pave remvl	M	193.00	197.00
Duct bank 6 way 51mm (2")PVC duct w/exca & backfill does not incl pave remvl	M	96.99	98.86
Duct bank 6 way 78mm (3")PVC duct w/exca & backfill does not incl pave remvl	M	122.00	125.00

DESCRIPTION	U/M	UNIT COST	
		FY 2005	FY 2006
Duct bank 6 way 102mm (4")PVC duct w/exca & backfill does not incl pave remvl	M	161.00	164.00
Duct bank 6 way 127mm (5") PVC duct w/exca & backfill does not incl pave remvl	M	215.00	220.00
Duct bank 6 way 152mm (6")PVC duct w/exca & backfill does not incl pave remvl	M	284.00	290.00
Duct bank 8 way 51mm (2")PVC duct w/exca & backfill does not incl pave remvl	M	127.00	129.00
Duct bank 8 way 78mm (3")PVC duct w/exca & backfill does not incl pave remvl	M	157.00	160.00
Duct bank 8 way 102mm (4")PVC duct w/exca & backfill does not incl pave remvl	M	211.00	215.00
Duct bank 8 way 127 mm (5") PVC duct w/exca & backfill does not incl pave remvl	M	283.00	288.00
Duct bank 8 way 152mm (6")PVC duct w/exca & backfill does not incl pave remvl	M	381	388
Duct bank 12 way 51mm (2")PVC duct w/exca & backfill does not incl pave remvl	M	185.00	189.00
Duct bank 12 way 78mm (3")PVC duct w/exca & backfill does not incl pave remvl	M	234.00	238.00
Duct bank 12 way 102mm (4")PVC duct w/exca & backfill does not incl pave remvl	M	310.00	316.00
Duct bank 12 way 127 mm (5") PVC duct w/exca & backfill does not incl pave remvl	M	420	427
Duct bank 12 way 152mm (6")PVC duct w/exca & backfill does not incl pave remvl	M	558	568
Duct bank 16 way 51mm (2")PVC duct w/exca & backfill does not incl pave remvl	M	244.00	248.00
Duct bank 16 way 78mm (3")PVC duct w/exca & backfill does not incl pave remvl	M	308.00	313.00
Duct bank 16 way 102mm (4")PVC duct w/exca & backfill does not incl pave remvl	M	414	420
Duct bank 16 way 127 mm (5") PVC duct w/exca & backfill does not incl pave remvl	M	555	565
Duct bank 16 way 152mm (6")PVC duct w/exca & backfill does not incl pave remvl	M	739	752
15KV feeder w/4 way 102mm (4")DB, 4/0 CP grd, 3-1800x2400x1800D mm (6'x8'x6'D) MHS & 3-250 MCM cab w/spl	M	287.00	292.00
35KV feeder w/4 way 152mm (6")DB, 4/0 CP grd, 3-2745x3658x1829D mm (9'x12'x6'D) MHS & 3-500 MCM cab w/spl	M	290.00	296.00
Handhole 1.2 x 1.2 x 0.9 (4'x4'x3)	EA	6,183	6,302
Manhole 2.7 x 3.6 x 1.9 (9' x 12' x 6.5')	EA	14,052	14,322

DESCRIPTION	U/M	UNIT COST	
		FY 2005	FY 2006
Power Manhole 1.8 x 1.8 x 1.9 (6'x6'x6.5')	EA	10,995	11,206
Signal Manhole 1.2 x 1.2 x 1.5 (6'x6'x6.5')	EA	8,976	9,148

Supporting Facilities Guidance

FYs 05, 06

English

11-Dec-2002

Using the Jun-2002 Escalation Index

Price Includes Contractor's Overhead and Profit
Escalation is to the midpoint of construction, Oct 1 (assumes 1 year of construction)
ACF (Area Cost Factor) = 1.0

DESCRIPTION	U/M	UNIT COST	
		FY 2005	FY 2006
WBS 01.02 LAND PILING			
Treated wood piling 12m (40')to 15m (50')long 305mm (12") butt 178mm (7")tip 12 lb creosote	LF	16.82	17.14
Piling prestressed conc 254mm (10") sq, more than 12m (40') long, truck delivery	LF	18.70	19.06
Piling prestressed conc 254mm (10") sq, more than 15m (50') long, truck delivery	LF	19.66	20.04
Piling prestressed conc 305mm (12") sq, more than 12m (40') long, truck delivery	LF	22.08	22.51
Piling prestressed conc 305mm (12") sq, 15m (50') long, truck delivery	LF	23.60	24.05
Pile load test for 100 ton pile test to 200 tons	EA	4,347	4,430
WBS 17.02 DEMOLITION			
Grub unwooded, medium-brush area	AC	3,161	3,221
Clear & grub light woods w/disposal	AC	9,758	9,945
Clear & grub medium woods w/disposal	AC	13,073	13,324
Clear & grub heavy woods w/disposal	AC	20,104	20,491

DESCRIPTION	U/M	UNIT COST	
		FY 2005	FY 2006
Light Site Clearing: Sundry Surface Items, excluding woods & paving/slabs	SY	0.17	0.17
Medium Site Clearing: Sundry Surface Items, excluding woods & paving/slabs	SY	0.61	0.62
Heavy Site Clearing: Sundry Surface Items, excluding woods & paving/slabs	SY	1.02	1.03
Demolition: Masonry structure, standing bldg, no fdn, 32km (20 mi) haul, no disposal	CF	0.189	0.193
Demolition: Wood frame, standing bldg, no fdn, 32km (20 mi) haul, no disposal	CF	0.160	0.163
Demolition: Concrete structure, standing bldg, no fdn, 32km (20 mi) haul, no disposal	CF	0.248	0.253
Demolition: Steel frame, standing bldg, no fdn, 32km (20 mi) haul, no disposal	CF	0.177	0.180
Disposal Fee: Assume volume at 20% of bldg mass volume. Recycling may greatly reduce disposal costs.	CY	11.20	11.42
Subbase Removal	CY	4.71	4.80
Removal of conc sidewalk 102mm (4")thick w/disposal	SY	1.65	1.68
Removal of bituminous paving up to 78mm (3")thick w/disposal	SY	3.52	3.59
Removal of reinforced concrete pavement w/disposal: Up to 152mm (6")thick	SY	11.35	11.57
Removal of non-reinforced concrete pavement w/disposal: 152mm (6") to 610mm (24")	CY	69	70
Removal of reinforced concrete pavement w/disposal: 152mm (6") to 610mm (24")	CY	91	93
Removal of concrete curb & gutter	LF	2.92	2.98
Remove catch basin or manhole	EA	211	215
WBS 17.03 EARTHWORK			
Grading, shaping w/small dozer, small area, , 48 KW (65 HP)	SY	1.04	1.06
Rough grade, large areas, dozer, 250 KW (335 HP), +/- 150 mm (6")	SY	0.15	0.15
Excavating, bulk, dozer, medium matl, 150' push, 48 KW (65 HP)	CY	3.43	3.50
Excavating, bulk, dozer, 150' push,mdm matl, 250 KW (335 HP)	CY	1.24	1.26
Excavating, bulk, dozer, mdm matl, 150' push, 522 KW (700 HP)	CY	1.04	1.06
Hauling, hwy haulers, 8 CY, 1 mi round trip @ 20 MPH	CY	2.23	2.27
Hauling, hwy haulers, 8 CY, 6 mi round trip @ 40 MPH	CY	3.67	3.74
Sub-Base, prepare & roll sub-base, small areas up to 2,090 SM (2,500 SY)	SY	1.10	1.12

DESCRIPTION	U/M	UNIT COST	
		FY 2005	FY 2006
Sub-Base, prepare & roll sub-base, large areas over 2,090 SM (2,500 SY)	SY	0.79	0.81
WBS 17.03 BORROW			
Flyash for building foundations	CY	39.05	39.80
Sand for building foundations, washed & graded	CY	13.85	14.12
Gravel cover or fill	CY	13.58	13.84
Sand for site/pavement-bases, select granular	CY	7.55	7.70
Clay-silt fill for earthen-surface areas	CY	5.58	5.69
WBS 18.01/02 ROADS AND PARKING			
Utilize WBS 17.03 EARTHWORK line items above for paving excavations and preparation			
Stone aggregate base 152mm (6")thick	SY	10.72	10.93
Stone aggregate base 203mm (8")thick	SY	13.31	13.57
Asphalt surface course, 38mm (1.5")	SY	4.21	4.29
Asphalt surface course, 51mm (2")	SY	5.63	5.74
Asphalt surface course, 76mm (3")	SY	8.44	8.60
Surface treatment, prime coat, bituminous	SY	0.440	0.448
Slurry seal	SY	0.810	0.826
Conc paving non-reinforced 20.7mPa (3000psi) 152mm (6")	SY	33.78	34.43
Conc paving non-reinforced 20.7mPa (3000psi) 203mm (8")	SY	42.12	42.93
Conc paving non-reinforced 20.7mPa (3000psi) 254mm (10")	SY	50.45	51.42
Conc paving reinforced w/joints, 27.6mPa (4000psi) 152mm (6")	SY	42.62	43.44
Conc paving reinforced w/joints, 27.6mPa (4000psi) 203mm (8")	SY	51.38	52.37
Conc paving reinforced w/joints, 27.6mPa (4000psi) 254mm (10")	SY	60.34	61.50
Concrete curb 152x457mm (152mm (6")18") cast-in-place	LF	12.66	12.90
Concrete curb & gutter cast-in-place, 610mm (24") wide	LF	19.56	19.94
Painting 102mm (4")lines on pavement	LF	0.216	0.220

DESCRIPTION	U/M	UNIT COST	
		FY 2005	FY 2006
WBS 18.02 AIRCRAFT PAVING			
Utilize WBS 17.02 DEMOLITION line items above for paving demolition			
Utilize WBS 17.03 EARTHWORK line items above for paving excavations and preparation			
Stone aggregate base 203mm (8")thick	SY	13.31	13.57
Stone aggregate base 254mm (10")thick	SY	15.89	16.20
Stone aggregate base 305mm (12")thick	SY	18.48	18.84
Asphalt surface course, 76mm (3")	SY	8.44	8.60
Conc paving reinforced w/joints, 34.5mPa (5000psi) 152mm (12")	SY	64.92	66.17
Conc paving reinforced w/joints, 34.5mPa (5000psi) 203mm (14")	SY	73.48	74.89
Conc paving reinforced w/joints, 34.5mPa (5000psi) 254mm (16")	SY	82.04	83.62
Airfield Lighting: Per LF of Runway/Taxiway	LF	51.56	52.55
Airfield Paint Striping: Non-Reflective	SF	0.880	0.897
Airfield Paint Striping: Retroreflective	SF	1.27	1.29
Barriers and FOD Protection	SY	11.03	11.24
WBS 18.03 SIDEWALKS			
Conc sidewalks 102mm (4") cast-in-place no base	SY	42.29	43.10
WBS 18.04 FENCING			
Chain link fence 9 ga galv steel 1200mm (4') high	LF	11.97	12.20
Chain link fence 9 ga galv steel 1800 (6') high	LF	17.45	17.79
Chain link fence 9 ga galv steel 2400mm (8') high	LF	22.93	23.37
Swing gate, single, 914mm (3') wide, chain link 9 ga galv steel 1200mm (4') high w/gate posts	EA	166	169
Swing gate, single, 914mm (3') wide, chain link 9 ga galv steel 1800 (6') high w/gate posts	EA	186	189
Swing gate, single, 914mm (3') wide, chain link 9 ga galv steel 2400mm (8') high w/gate posts	EA	228	232
Swing gate, double, 3.05M (10') wide, chain link 9 ga galv steel 2400mm (8') high w/gate posts	EA	643	655
Sliding gate, cantilever, manual, 7.315M (24') w x 2.438M (8') h, chain link 9 ga galv steel	EA	3,303	3,366

DESCRIPTION	U/M	UNIT COST	
		FY 2005	FY 2006
Barbed wire, 3-strand	LF	5.38	5.48
WBS 18.05 TOPSOIL SEED, LANDSCAPING			
Topsoil Imported, Seeded, Fertilized, 100mm (4") deep	SY	9.04	9.21
Topsoil Strip, Spread From Piles 102mm (4"), Seeded, Fertilized	SY	6.52	6.65
Seeding/Fertilizing Topsoil or Disturbed Areas	SY	5.61	5.72
WBS 19.01 WATER DISTRIBUTION			
PVC water pipe, 25mm (1") AWWA C-900 Class 150 w/excav backfill & compaction	LF	3.80	3.87
PVC water pipe, 37mm (1") AWWA C-900 Class 150 w/excav backfill & compaction	LF	4.15	4.23
PVC water pipe, 50mm (2") AWWA C-900 Class 150 w/excav backfill & compaction	LF	4.82	4.91
PVC water pipe, 100mm (4")PVC water pipe AWWA C-900 Class 150 w/excav backfill & compaction	LF	9.16	9.34
PVC water pipe, 150mm (6") PVC water pipe AWWA C-900 Class 150 w/excav backfill & compaction	LF	14.42	14.70
PVC water pipe, 200mm (8") AWWA C-900 Class 150 w/excav backfill & compaction	LF	20.75	21.15
DI water pipe, 300mm (12") AWWA Class 50 w/excav backfill & compaction	LF	52.95	53.97
DI water pipe, 450mm (18") AWWA Class 50 w/excav backfill & compaction	LF	87.27	88.95
DI water pipe, 600mm (24") AWWA C-900 Class 150 w/excav backfill & compaction	LF	129	131
90 deg bend PVC, 25mm (1")	EA	16.08	16.39
90 deg bend PVC, 50mm (2")	EA	25.46	25.95
90 deg bend PVC, 100mm (4")	EA	66.58	67.86
90 deg bend PVC, 150mm (6")	EA	116.00	118.00
90 deg bend PVC, 200mm (8")	EA	197.00	200.00
Corporation stop, 25 mm (1")	EA	171.00	174.00
Corporation stop, 50 mm (2")	EA	328.00	334.00
Reducer, PVC, 100 mm (4") to 50 mm (2"), schedule 40	EA	5.11	5.21
Reducer, PVC, 150 mm (6") to 50 mm (2"), schedule 40	EA	33.45	34.09

DESCRIPTION	U/M	UNIT COST	
		FY 2005	FY 2006
Reducer, PVC, 200 mm (8") to 50 mm (2"), schedule 40	EA	59.73	60.88
Tee, DI, mech joint, 100 mm (4") to 100 mm (4")	EA	682	695
Tee, DI, mech joint, 150 mm (6") to 100 mm (4")	EA	793	808
Tee, DI, mech joint, 200 mm (8") to 100 mm (4")	EA	1,166	1,188
Tee, DI, mech joint, 300 mm (12") to 100 mm (4")	EA	1,722	1,755
Fire hydrant standard 3 way post type w/152mm (6")valve and thrust block	EA	1,983	2,021
Gate valve with box, MJ, 100 mm (4")	EA	313	319
Gate valve with box, MJ, 150 mm (6")	EA	372	379
Gate valve with box, MJ, 200 mm (8")	EA	503	512
Gate valve with box, MJ, 300 mm (12")	EA	933	950
Gate valve with box, MJ, 400 mm (16")	EA	1,363	1,389
Pavement Patch, Asphalt: Tear-out/Replace 50 mm (2") asphalt and 200 mm (8") stone. No Mob/Demob included. 150 mm (6") pipe diameter assumed: Increase unit cost by 5.6% for each 25 mm (1 inch) of decrease from 150 mm (6") diameter; decrease unit cost by 5.6% for each 25 mm (1 inch) of increase from 150 mm (6") diameter.	SY	115	117
Pavement Patch, PCC: Tear-out/Replace 150 mm (6") PCC and 150 mm (6") stone. No Mob/Demob included. 150 mm (6") pipe diameter assumed: See asphalt patch note just above for pipe diameter variances.	SY	153	156
WBS 19.02 SANITARY SEWERS			
PVC Sanitary Sewer Pipe, 100 mm (4"), w/excav, backfill & compaction	LF	8.84	9.01
PVC Sanitary Sewer Pipe, 150 mm (6"), w/excav, backfill & compaction	LF	10.01	10.20
PVC Sanitary Sewer Pipe, 200 mm (8"), w/excav, backfill & compaction	LF	11.83	12.06
PVC Sanitary Sewer Pipe, 250 mm (10"), w/excav, backfill & compaction	LF	14.13	14.40
PVC Sanitary Sewer Pipe, 300 mm (12"), w/excav, backfill & compaction	LF	16.55	16.87
PVC Sanitary Sewer Pipe, 450 mm (18"), w/excav, backfill & compaction	LF	24.63	25.10
PVC Sanitary Sewer Pipe, 600 mm (24"), w/excav, backfill & compaction	LF	31.33	31.93
PVC Cleanout, 100 mm (4")	EA	38.08	38.81
PVC Cleanout, 150 mm (6")	EA	69.90	71.25
PVC Cleanout, 200 mm (8")	EA	102.00	104.00
Manhole, 1200 mm (4') deep	EA	2,857	2,912
Manhole, 1800 mm (6') deep	EA	3,168	3,228

DESCRIPTION	U/M	UNIT COST	
		FY 2005	FY 2006
Manhole, 2400 mm (8') deep	EA	3,456	3,522
Sewage pumping package unit, 37.8 liter/min (10 gal/min), simplex	EA	11,400	11,619
Sewage pumping package unit, 75.7 liter/min (20 gal/min), simplex	EA	16,300	16,613
Sewage pumping package unit, 189.2 liter/min (50 gal/min), duplex	EA	38,800	39,547
Sewage pumping package unit, 378.5 liter/min (100 gal/min), duplex	EA	70,600	71,959
Sewage pumping package unit, 757 liter/min (200 gal/min), duplex	EA	113,000	115,176
Pavement patch: Utilize WBS 19.01 Water Distribution line items			
WBS 19.03 STORM DRAINAGE			
RCP Pipe, 300 mm (12"), w/excav & backfill	LF	26.19	26.69
RCP Pipe, 375 mm (15"), w/excav & backfill	LF	31.07	31.67
RCP Pipe, 450 mm (18"), w/excav & backfill	LF	35.98	36.67
RCP Pipe, 600 mm (24"), w/excav & backfill	LF	49.72	50.68
RCP Pipe, 750 mm (30"), w/excav & backfill	LF	77.07	78.55
RCP Pipe, 900 mm (36"), w/excav & backfill	LF	102	104
Curb inlet or catch basin, 1200 mm (4') deep	EA	817	832
Curb inlet or catch basin, 1800 mm (6') deep	EA	1,127	1,148
Curb inlet or catch basin, 2400 mm (8') deep	EA	1,416	1,443
Manhole, 1200 mm (4') deep	EA	2,857	2,912
Manhole, 1800 mm (6') deep	EA	3,168	3,228
Manhole, 2400 mm (8') deep	EA	3,456	3,522
Pavement patch: Utilize WBS 19.01 Water Distribution line items			
WBS 19.05 HEAT DISTRIBUTION			
Aboveground			
254mm (10") steam & 152mm (6")condensate heat distribution piping aboveground	LF	451	460
203mm (8")steam & 102mm (4")condensate heat distribution piping aboveground	LF	402	409
152mm (6")steam & 102mm (4")condensate heat distribution piping aboveground	LF	372	379
102mm (4")steam & 64mm (2.5") condensate heat distribution piping aboveground	LF	339	346

DESCRIPTION	U/M	UNIT COST FY 2005	FY 2006
Underground			
254mm (10") steam & 152mm (6")condensate heat distribution piping underground	LF	469	478
203mm (8")steam & 102mm (4")condensate heat distribution piping underground	LF	453	462
152mm (6")steam & 102mm (4")condensate heat distribution piping underground	LF	437	445
102mm (4")steam & 64mm (2.5") condensate heat distribution piping underground	LF	414	422
For areas with unstable soil conditions increase unit prices by 20%.			
WBS 19.08 FUEL STORAGE			
Underground tanks for hazardous waste oil storage tanks increase cost by 120%			
Underground oil storage tank 2,082 liter (550 gal) fiberglass double wall (incl excav)	GAL	26.16	26.66
Underground oil storage tank 3,785 liter (1,000 gal) fiberglass double wall (incl excav)	GAL	16.69	17.01
Underground oil storage tank 9.5 kliter (2,500 gal) fiberglass double wall (incl excav)	GAL	9.12	9.30
15.142 kliter (4,000 gal) underground fiberglass fuel oil tank double wall (incl excav)	GAL	7.08	7.22
22.3 kliter (6,000 gal) underground fiberglass fuel oil tank double wall (incl excav)	GAL	5.68	5.79
30.3 kliter (8,000 gal) underground fiberglass fuel oil tank double wall (incl excav)	GAL	4.69	4.78
37.9 kliter (10,000 gal) underground fiberglass fuel oil tank double wall (incl excav)	GAL	4.13	4.21
45.4 kliter (12,000 gal) underground fiberglass fuel oil tank double wall (incl excav)	GAL	3.90	3.98
56.8 kliter (15,000 gal) underground fiberglass fuel oil tank double wall (incl excav)	GAL	3.86	3.93
75.7 kliter (20,000 gal) underground fiberglass fuel oil tank double wall (incl excav)	GAL	3.37	3.43
WBS 20.01 ELECTRICAL SUBSTATION			
15KVA 1PH pad mtd xfmr w/conc pad & grnd'g	EA	7,342	7,483
25KVA 1PH pad mtd xfmr w/conc pad & grnd'g	EA	8,669	8,835

DESCRIPTION	U/M	UNIT COST	
		FY 2005	FY 2006
37.5KVA 1PH pad mtd xfmr w/conc pad & grnd'g	EA	8,919	9,090
50KVA 1PH pad mtd xfmr w/conc pad & grnd'g	EA	9,231	9,408
75KVA 1PH pad mtd xfmr w/conc pad & grnd'g	EA	10,417	10,617
100KVA 1PH pad mtd xfmr w/conc pad & grnd'g	EA	11,436	11,656
167KVA 1PH pad mtd xfmr w/conc pad & grnd'g	EA	11,892	12,121
75KVA 3PH pad mtd xfmr w/conc pad & grnd'g	EA	16,339	16,653
112KVA 3PH pad mtd xfmr w/conc pad & grnd'g	EA	17,207	17,538
150KVA 3PH pad mtd xfmr w/conc pad & grnd'g	EA	18,226	18,577
225KVA 3PH pad mtd xfmr w/conc pad & grnd'g	EA	20,677	21,075
300KVA 3PH pad mtd xfmr w/conc pad & grnd'g	EA	21,351	21,762
500KVA 3PH pad mtd xfmr w/conc pad & grnd'g	EA	25,723	26,218
750KVA 3PH pad mtd xfmr w/conc pad & grnd'g	EA	29,935	30,511
1000KVA 3PH pad mtd xfmr w/conc pad & grnd'g	EA	34,113	34,770
1500KVA 3PH pad mtd xfmr w/conc pad & grnd'g	EA	42,946	43,773
1, 1PH 10KVA xfmr w/term cutouts arresters 51mm (2")rscriser 12m (40')pole w/guy	EA	6,296	6,417
1, 1PH 15KVA xfmr w/term cutouts arresters 51mm (2")rscriser 12m (40')pole w/guy	EA	6,296	6,417
1, 1PH 25KVA xfmr w/term cutouts arresters 51mm (2")rscriser 12m (40')pole w/guy	EA	6,328	6,449
WBS 20.02 ELECTRICAL DISTRIBUTION			
Note: Normal duct size is 102mm (4"). For 35KV circuit use 127mm (5") duct			
Note: For quantities less than 61M (200 LF) add 20%; less than 30M (100 LF) add 50%			
4-1/C #2 THW str al. w/1-1/C#8 CU ground secondary w/termination	LF	4.46	4.55
4-1/C #1/0 THW str al. w/1-1/C#6 CU ground secondary w/termination	LF	6.22	6.34
4-1/C #2/0 THW str al. w/1-1/C#4 CU ground secondary w/termination	LF	7.52	7.66
4-1/C #4/0 THW str al. w/1-1/C#2 CU ground secondary w/termination	LF	9.89	10.08
4-1/C 250 MCM THW str al. w/1-1/C#2 CU ground secondary w/termination	LF	10.77	10.98
4-1/C 500 MCM THW str al. w/1-1/C#1/0 CU ground secondary w/termination	LF	17.91	18.25
4-1/C 750 MCM THW str al. w/1-1/C#1/0 CU ground secondary w/termination	LF	23.71	24.17

DESCRIPTION	U/M	UNIT COST	
		FY 2005	FY 2006
4-1/C #2 CU USE wire 600V w/1-1/C#8 CU ground secondary w/termination	LF	7.54	7.69
4-1/C #1/0 CU USE wire 600V w/1-1/C#6 CU ground secondary w/termination	LF	11.53	11.75
4-1/C #2/0 CU USE wire 600V w/1-1/C#4 CU ground secondary w/termination	LF	13.92	14.19
4-1/C #4/0 CU USE wire 600V w/1-1/C#2 CU ground secondary w/termination	LF	19.48	19.86
4-1/C 250 MCM CU USE wire 600V w/1-1/C#2 CU ground secondary w/termination	LF	24.53	25.00
4-1/C 500 MCM CU USE wire 600V w/1-1/C#1/0 CU grd. secondary w/termination	LF	42.79	43.61
3-1/C #4 AWG CU XLP 5KV shielded cable primary w/o termination	LF	15.16	15.45
3-1/C #2 AWG CU XLP 5KV shielded cable primary w/o termination	LF	18.19	18.54
3-1/C #1/0 AWG CU XLP 5KV shielded cable primary w/o termination	LF	20.09	20.48
3-1/C #2/0 AWG CU XLP 5KV shielded cable primary w/o termination	LF	20.79	21.19
3-1/C #4/0 AWG CU XLP 5KV shielded cable primary w/o termination	LF	27.38	27.91
3-1/C 250 MCM AWG CU XLP 5KV shielded cable primary w/o termination	LF	34.66	35.33
3-1/C 500 MCM AWG CU XLP 5KV shielded cable primary w/o termination	LF	53.28	54.31
3-1/C #2 AWG CU XLP 15KV shielded cable primary w/o termination	LF	19.90	20.28
3-1/C #1 AWG CU XLP 15KV shielded cable primary w/o termination	LF	21.79	22.21
3-1/C #1/0 AWG CU XLP 15KV shielded cable primary w/o termination	LF	25.72	26.22
3-1/C #2/0 AWG CU XLP 15KV shielded cable primary w/o termination	LF	28.44	28.99
3-1/C #4/0 AWG CU XLP 15KV shielded cable primary w/o termination	LF	37.28	38.00
3-1/C 250 MCM AWG CU XLP 15KV shielded cable primary w/o termination	LF	44.09	44.94
3-1/C 500 MCM AWG CU XLP 15KV shielded cable primary w/o termination	LF	64.85	66.10
Cable termination size no. 2 thru 4/0 0-15KV porcelain	EA	382	389
Cable termination size 250 MCM thru 500 MCM 0-15KV porcelain	EA	511	520

DESCRIPTION	U/M	UNIT COST	
		FY 2005	FY 2006
Cable termination size 500 MCM thru 750 MCM 0-15KV porcelain	EA	742	756
Duct bank 1 way 51mm (2")grs duct w/exca & backfill does not incl pave remvl	LF	11.34	11.56
Duct bank 1 way 78mm (3")grs duct w/exca & backfill does not incl pave remvl	LF	19.18	19.55
Duct bank 1 way 102mm (4")grs duct w/exca & backfill does not incl pave remvl	LF	26.74	27.26
Duct bank 1 way 127mm (5") grs duct w/exca & backfill does not incl pave remvl	LF	47.12	48.03
Duct bank 1 way 152mm (6")grs duct w/exca & backfill does not incl pave remvl	LF	65.06	66.31
Duct bank 2 way 51mm (2")grs duct w/exca & backfill does not incl pave remvl	LF	21.41	21.82
Duct bank 2 way 78mm (3")grs duct w/exca & backfill does not incl pave remvl	LF	36.89	37.60
Duct bank 2 way 102mm (4")grs duct w/exca & backfill does not incl pave remvl	LF	51.82	52.82
Duct bank 2 way 127 mm (5") grs duct w/exca & backfill oes not incl pave remvl	LF	92.56	94.34
Duct bank 2 way 152mm (6")grs duct w/exca & backfill oes not incl pave remvl	LF	130	132
Duct bank 3 way 51mm (2")grs duct w/exca & backfill oes not incl pave remvl	LF	31.41	32.01
Duct bank 3 way 78mm (3")grs duct w/exca & backfill oes not incl pave remvl	LF	54.44	55.49
Duct bank 3 way 102mm (4")grs duct w/exca & backfill does not incl pave remvl	LF	76.91	78.39
Duct bank 3 way 127 mm (5") grs duct w/exca & backfill does not incl pave remvl	LF	139	141
Duct bank 3 way 152mm (6")grs duct w/exca & backfill does not incl pave remvl	LF	193	196
Duct bank 4 way 51mm (2")grs duct w/exca & backfill does not incl pave remvl	LF	40.16	40.93
Duct bank 4 way 78mm (3")grs duct w/exca & backfill does not incl pave remvl	LF	65.73	67.00
Duct bank 4 way 102mm (4")grs duct w/exca & backfill does not incl pave remvl	LF	102.00	103.00
Duct bank 4 way 127mm (5") grs duct w/exca & backfill does not incl pave remvl	LF	183	186
Duct bank 4 way 152mm (6")grs duct w/exca & backfill does not incl pave remvl	LF	255	259
Duct bank 1 way 51mm (2")PVC duct w/exca & backfill does not incl pave remvl	LF	6.40	6.52

DESCRIPTION	U/M	UNIT COST	
		FY 2005	FY 2006
Duct bank 1 way 78mm (3")PVC duct w/exca & backfill does not incl pave remvl	LF	7.95	8.10
Duct bank 1 way 102mm (4")PVC duct w/exca & backfill does not incl pave remvl	LF	10.15	10.35
Duct bank 1 way 127mm (5")PVC duct w/exca & backfill does not incl pave remvl	LF	13.15	13.40
Duct bank 1 way 152mm (6")PVC duct w/exca & backfill does not incl pave remvl	LF	16.47	16.79
Duct bank 2 way 51mm (2")PVC duct w/exca & backfill does not incl pave remvl	LF	11.59	11.81
Duct bank 2 way 78mm (3")PVC duct w/exca & backfill does not incl pave remvl	LF	14.40	14.68
Duct bank 2 way 102mm (4")PVC duct w/exca & backfill does not incl pave remvl	LF	18.64	19.00
Duct bank 2 way 127mm (5")PVC duct w/exca & backfill does not incl pave remvl	LF	24.36	24.83
Duct bank 2 way 152mm (6")PVC duct w/exca & backfill does not incl pave remvl	LF	31.19	31.79
Duct bank 3 way 51mm (2")PVC duct w/exca & backfill does not incl pave remvl	LF	16.68	17.00
Duct bank 3 way 78mm (3")PVC duct w/exca & backfill does not incl pave remvl	LF	20.80	21.20
Duct bank 3 way 102mm (4")PVC duct w/exca & backfill does not incl pave remvl	LF	27.15	27.67
Duct bank 3 way 127mm (5") PVC duct w/exca & backfill does not incl pave remvl	LF	35.62	36.31
Duct bank 3 way 152mm (6")PVC duct w/exca & backfill does not incl pave remvl	LF	45.88	46.76
Duct bank 4 way 51mm (2")PVC duct w/exca & backfill does not incl pave remvl	LF	20.51	20.91
Duct bank 4 way 78mm (3")PVC duct w/exca & backfill does not incl pave remvl	LF	25.75	26.25
Duct bank 4 way 102mm (4")PVC duct w/exca & backfill does not incl pave remvl	LF	33.78	34.43
Duct bank 4 way 127 mm (5") PVC duct w/exca & backfill does not incl pave remvl	LF	44.95	45.82
Duct bank 4 way 152mm (6")PVC duct w/exca & backfill does not incl pave remvl	LF	58.77	59.90
Duct bank 6 way 51mm (2")PVC duct w/exca & backfill does not incl pave remvl	LF	29.56	30.13
Duct bank 6 way 78mm (3")PVC duct w/exca & backfill does not incl pave remvl	LF	37.15	37.87

DESCRIPTION	U/M	UNIT COST	
		FY 2005	FY 2006
Duct bank 6 way 102mm (4")PVC duct w/exca & backfill does not incl pave remvl	LF	49.04	49.98
Duct bank 6 way 127mm (5") PVC duct w/exca & backfill does not incl pave remvl	LF	65.51	66.77
Duct bank 6 way 152mm (6")PVC duct w/exca & backfill does not incl pave remvl	LF	86.54	88.21
Duct bank 8 way 51mm (2")PVC duct w/exca & backfill does not incl pave remvl	LF	38.55	39.29
Duct bank 8 way 78mm (3")PVC duct w/exca & backfill does not incl pave remvl	LF	47.57	48.49
Duct bank 8 way 102mm (4")PVC duct w/exca & backfill does not incl pave remvl	LF	64.19	65.43
Duct bank 8 way 127 mm (5") PVC duct w/exca & backfill does not incl pave remvl	LF	86.07	87.73
Duct bank 8 way 152mm (6")PVC duct w/exca & backfill does not incl pave remvl	LF	116	118
Duct bank 12 way 51mm (2")PVC duct w/exca & backfill does not incl pave remvl	LF	56.29	57.37
Duct bank 12 way 78mm (3")PVC duct w/exca & backfill does not incl pave remvl	LF	71.10	72.47
Duct bank 12 way 102mm (4")PVC duct w/exca & backfill does not incl pave remvl	LF	94.41	96.23
Duct bank 12 way 127 mm (5") PVC duct w/exca & backfill does not incl pave remvl	LF	128	130
Duct bank 12 way 152mm (6")PVC duct w/exca & backfill does not incl pave remvl	LF	170	173
Duct bank 16 way 51mm (2")PVC duct w/exca & backfill does not incl pave remvl	LF	74.12	75.55
Duct bank 16 way 78mm (3")PVC duct w/exca & backfill does not incl pave remvl	LF	93.57	95.37
Duct bank 16 way 102mm (4")PVC duct w/exca & backfill does not incl pave remvl	LF	126	128
Duct bank 16 way 127 mm (5") PVC duct w/exca & backfill does not incl pave remvl	LF	169	172
Duct bank 16 way 152mm (6")PVC duct w/exca & backfill does not incl pave remvl	LF	225	229
15KV feeder w/4 way 102mm (4")DB, 4/0 CP grd, 3-1800x2400x1800D mm (6'x8'x6'D) MHS & 3-250 MCM cab w/spl	LF	87.19	88.87
35KV feeder w/4 way 152mm (6")DB, 4/0 CP grd, 3-2745x3658x1829D mm (9'x12'x6'D) MHS & 3-500 MCM cab w/spl	LF	88.29	89.99
Handhole 1.2 x 1.2 x 0.9 (4'x4'x3)	EA	6,183	6,302
Manhole 2.7 x 3.6 x 1.9 (9' x 12' x 6.5')	EA	14,052	14,322

DESCRIPTION	U/M	UNIT COST	
		FY 2005	FY 2006
Power Manhole 1.8 x 1.8 x 1.9 (6'x6'x6.5')	EA	10,995	11,206
Signal Manhole 1.2 x 1.2 x 1.5 (6'x6'x6.5')	EA	8,976	9,148