

Every Day Counts - Case Study 6

Project name	Conventional Alt. CS 6 Fla.
Labor rate table	Labor 2011
Equipment rate table	Equip 2011
Notes	<ol style="list-style-type: none">1. Pricing is 2011 \$.2. Construction Schedule of 36 mos.3. Rates reflect majority of work performed in restricted work area4. Center pier w/2 bounds of traffic.5. Labor Cost/Unit - This reflects the cost of Labor to put one unit of measure of work in place. This is comprised of a typical crew with associated productivity required to perform the activity. Labor is priced up to include base rate, fringes, taxes, insurance, etc.6. Material Cost/Unit - This cost represents the final installed cost for all the materials associated with the item of work.7. Sub Contract Cost/Unit - this represents the Sub Contract all in Cost to put one unit of work in place. This cost includes all costs necessary to reflect a total installed cost (incls. Labor, equipment and material).8. Equipment Cost/Unit - This represents the cost of Construction Equipment necessary to put one unit of work in place. This cost includes equipment ownership and maintenance and operational costs.9. Other Cost/Unit - This cost represents all other costs necessary to perform the item of work and not covered by the abovementioned costs.10. Total cost/unit - This is the summation of all unit costs to arrive at a total cost per unit to put one one item of work in place.11. Total Amount - Total cost to put the quantity of units specified in place.
Report format	Sorted by 'LOCATION/Pay Item/Group phase/Phase' 'Detail' summary Allocate addons

Spreadsheet Level	Takeoff Quantity	Labor Cost/Unit	Material Cost/Unit	Sub Cost/Unit	Equip Cost/Unit	Other Cost/Unit	Total Cost/Unit	Total Amount
Approach Slab Approach Slab								
400-2-10 Concrete Class II								
<i>03-30-00.00 Cast-In-Place Concrete</i>								
<i>03-30-53.40 Concrete In Place</i>								
Approach Slab	190.00 cy	188.92	178.89	-	25.89	-	393.70	74,803
Concrete In Place								74,803
Cast-In-Place Concrete								74,803
400-2-10 Concrete Class II								74,803
415-1-9 Reinforcing Steel								
<i>03-21-05.00 Reinforcing Steel Accessories</i>								
<i>03-21-10.60 Reinforcing In Place</i>								
Reinforcing Steel Approach Slabs	38,950.00 lb	0.48	0.52	-	0.10	-	1.10	42,922
Reinforcing In Place								42,922
Reinforcing Steel								42,922
Accessories								
415-1-9 Reinforcing Steel								42,922
Approach Slab								117,725
Approach Slab								
General Conditions General Conditions								
* unassigned *								
<i>01-31-00.00 Project Management And Coordination</i>								
<i>01-31-13.20 Field Personnel</i>								
Field Personnel, clerk, average	290.00 week	950.23	-	-	-	-	950.23	275,568
Field engineer	580.00 week	2,692.33	-	-	-	-	2,692.33	1,561,551
Field Personnel, general purpose laborer, average	580.00 week	1,900.47	-	-	-	-	1,900.47	1,102,271
Field Personnel, project manager	290.00 week	3,959.31	-	-	-	-	3,959.31	1,148,199
Field Personnel, superintendent	580.00 week	2,692.33	-	-	-	-	2,692.33	1,561,551
Field Personnel, timekeeper, average	155.00 week	1,591.64	-	-	-	-	1,591.64	246,704
Field Personnel								5,895,843
Project Management And Coordination								5,895,843
<i>01-32-33.00 Photographic Documentation</i>								
<i>01-32-33.50 Photographs</i>								

Spreadsheet Level	Takeoff Quantity	Labor Cost/Unit	Material Cost/Unit	Sub Cost/Unit	Equip Cost/Unit	Other Cost/Unit	Total Cost/Unit	Total Amount
<i>01-32-33.50 Photographs</i>								
Construction Photographs	155.00 set	-	586.02	-	-	-	586.02	90,833
Photographs								90,833
Photographic Documentation								90,833
<i>01-45-00.00 Quality Control</i>								
<i>01-45-23.50 Testing</i>								
Field Testing	1.00 prjc	-	-	-	-	370,930.67	370,930.67	370,931
Testing								370,931
Quality Control								370,931
<i>01-52-13.00 Field Offices And Sheds</i>								
<i>01-52-13.20 Office And Storage Space</i>								
Office Trailer, furnished, rent per month, 32' x 8', excl. hookups	72.00 ea	-	297.33	-	-	-	297.33	21,408
Storage Boxes, rent per month, 20' x 8'	144.00 ea	-	90.68	-	-	-	90.68	13,058
Office And Storage Space								34,465
<i>01-52-13.40 Field Office Expense</i>								
Field Office Expense, office equipment rental, average	72.00 mo	-	185.06	-	-	-	185.06	13,324
Field Office Expense, office supplies, average	72.00 mo	-	117.20	-	-	-	117.20	8,439
Field Office Expense, telephone bill; avg. bill/month, incl. long dist.	72.00 mo	-	259.08	-	-	-	259.08	18,654
Field Office Expense, field office lights & HVAC	72.00 mo	-	135.71	-	-	-	135.71	9,771
Field Office Expense								50,188
Field Offices And Sheds								84,653
<i>01-56-26.00 Temporary Fencing</i>								
<i>01-56-26.50 Temporary Fencing</i>								
Temporary Fencing, chain link, 6' high, 11 ga	1,000.00 lf	4.20	8.64	-	-	-	12.83	12,832
Temporary Fencing								12,832
Temporary Fencing								12,832
<i>01-58-00.00 Project Identification</i>								
<i>01-58-13.50 Signs</i>								

Spreadsheet Level	Takeoff Quantity	Labor Cost/Unit	Material Cost/Unit	Sub Cost/Unit	Equip Cost/Unit	Other Cost/Unit	Total Cost/Unit	Total Amount
455-143-5 Test Piles								31,244
455-34-5 Concrete Piling Prestressed								
<i>31-62-00.00 Driven Piles</i>								
<i>31-62-13.23 Prestressed Concrete Piles</i>								
Prestressed concrete piles, 24" square, Prestressed Concrete Piles Driven Piles	1,540.00 vlf	14.30	67.86	-	8.37	-	90.52	139,400
								<u>139,400</u>
								139,400
455-34-5 Concrete Piling Prestressed								139,400
Substructure-End								274,225
Substructure-End								
Bents								
Substructure-Piers Substructure-Piers								
400-4-25 Concrete Class IV (Substructure)								
<i>03-30-00.00 Cast-In-Place Concrete</i>								
<i>03-30-53.40 Concrete In Place</i>								
CIP Footings	4,625.00 cy	215.91	185.06	-	29.59	-	430.56	1,991,334
Concrete Class IV (Substructure) CIP Column Concrete	4,354.50 cy	503.80	209.73	-	69.04	-	782.57	3,407,688
CIP Column Cap	2,238.90 cy	604.56	370.12	-	82.85	-	1,057.52	2,367,676
CIP Beam Pedestals Concrete In Place Cast-In-Place Concrete	50.90 cy	604.56	370.12	-	82.85	-	1,057.52	<u>53,828</u> 7,820,526 7,820,526
400-4-25 Concrete Class IV (Substructure)								7,820,526
415-1-5 Reinforcing Steel Substructure								
<i>03-21-05.00 Reinforcing Steel Accessories</i>								
<i>03-21-10.60 Reinforcing In Place</i>								
Reinforcing Steel Reinforcing In Place Reinforcing Steel Accessories	2,469,321.00 lb	0.65	0.51	-	0.13	-	1.29	<u>3,186,385</u> 3,186,385 3,186,385
415-1-5 Reinforcing Steel Substructure								3,186,385
455-111 Core/Pilot Hole-Drilled Shaft Excavation								
<i>31-63-26.00 Drilled Caissons</i>								

Spreadsheet Level	Takeoff Quantity	Labor Cost/Unit	Material Cost/Unit	Sub Cost/Unit	Equip Cost/Unit	Other Cost/Unit	Total Cost/Unit	Total Amount
<i>31-63-26.13 Fixed End Cassion Piles</i>								
Core/Pilot Hole	18,000.00 vlf	12.29		-	9.28	-	21.57	388,194
<i>Fixed End Cassion Piles</i>								388,194
<i>Drilled Caissons</i>								388,194
455-111 Core/Pilot Hole-Drilled Shaft Excavation								388,194
455-122-5 Unclassified Shaft Excavation								
<i>31-63-26.00 Drilled Caissons</i>								
<i>31-63-26.13 Fixed End Cassion Piles</i>								
Unclassified Shaft Excavation	15,000.00 vlf	24.57	0.00	-	18.56	-	43.13	646,991
<i>Fixed End Cassion Piles</i>								646,991
<i>Drilled Caissons</i>								646,991
455-122-5 Unclassified Shaft Excavation								646,991
455-142 Crosshole Sonic Logging/Drilled Shaft Testing								
<i>31-06-00.00 Schedules For Earthwork</i>								
<i>31-06-60.14 Piling Special Costs</i>								
Crosshole Sonic Logging/Drilled Shaft Testing	25.00 ea	-	-	-	-	3,709.31	3,709.31	92,733
<i>Piling Special Costs</i>								92,733
<i>Schedules For Earthwork</i>								92,733
455-142 Crosshole Sonic Logging/Drilled Shaft Testing								92,733
455-88-5 Drilled Shafts								
<i>31-63-26.00 Drilled Caissons</i>								
<i>31-63-26.13 Fixed End Cassion Piles</i>								
Drilled Shaft, 48" Dia.	15,000.00 vlf	245.71	70.94	-	185.62	-	502.27	7,533,991
<i>Fixed End Cassion Piles</i>								7,533,991
<i>Drilled Caissons</i>								7,533,991
455-88-5 Drilled Shafts								7,533,991
* unassigned *								
<i>01-54-23.00 Temporary Scaffolding And Platforms</i>								
<i>01-54-23.70 Scaffolding</i>								
Temporary Supports for Pier Cap Construction	1.00 ls	791,861.34	308,430.68	-	-	-	1,100,292.02	1,100,292

Estimate Totals

Description	Amount	Cuts/Adds	Net Amount	Totals	Hours	Cost Basis	Percent of Total
Labor	24,607,244		24,607,244		117,572.959 ch		51.68%
Material	16,909,623		16,909,623				35.51%
Subcontract							
Equipment	5,637,580		5,637,580		18,437.446 ch		11.84%
Other	463,663		463,663				0.97%
	47,618,110			47,618,110			100.00
Total				47,618,110			100.00%