

Every Day Counts Case Study 4

Project name	Prefabricated Alt. CS 4 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 14 mos. 3. Rates reflect majority of work performed days with the exception of actual installation of bridges. 4. 2 Bridges. 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

Cost Estimating Spreadsheet Report
Prefabricated Alt. CS 4

Spreadsheet Level	Takeoff Quantity	Labor Cost/Unit	Material Cost/Unit	Sub Cost/Unit	Equip Cost/Unit	Other Cost/Unit	Total Cost/Unit	Total Amount
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Additional Cost Additional Cost SPMT's

* unassigned *

01-54-23.00 Temporary Scaffolding And Platforms

01-54-23.70 Scaffolding

Scaffolding, steel tubular, heavy duty shoring for elev slab forms, floor area, rent/month of complete system, to 14'-8" H	300.00 csf	-	51.29	-	-	-	51.29	15,386
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Scaffolding 15,386

Temporary Scaffolding 15,386

And Platforms

02-43-00.00 Structure Moving

02-43-13.13 Bridge Relocation

Remove Existing Bridges Out & Install New Bridges SPMT	1.00 totl	-	-	524,804.50	-	-	524,804.50	524,805
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Remove Existing Bridges Out & Install New Bridges SPMT 2nd Bridge	1.00 totl	-	-	524,804.49	-	-	524,804.49	524,804
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Bridge Relocation 1,049,609

Structure Moving 1,049,609

32-12-16.00 Asphalt Paving

32-12-16.13 Plant-Mix Asphalt Paving

Allow for additional Paving etc.	1,000.00 ton	6.21	62.02	-	3.45	-	71.68	71,678
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Plant-Mix Asphalt Paving 71,678

Asphalt Paving 71,678

32-34-00.00 Fabricated Bridges

32-34-10.10 Bridges, Highway

Temporary Concrete	100.00 cy	270.26	197.99	-	18.97	-	487.22	48,722
Temporary Concrete	100.00 cy			-		149.09	149.09	14,909

Remove 63,631

Bridges, Highway 63,631

Fabricated Bridges

34-71-13.00 Vehicle Barriers

34-71-13.17 Security Vehicle Barriers

Jersey Barriers	64.00 ea	79.12	119.27	-	31.42	-	229.81	14,708
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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>34-71-13.17 Security Vehicle Barriers</i>								
Jersey Barriers Pier Expansion	200.00 ea	79.12	119.27	-	31.42	-	229.81	45,963
Detour	2.00 Day	-	-	-	-	3,816.77	3,816.77	7,634
<i>Security Vehicle Barriers</i>								68,304
<i>Vehicle Barriers</i>								68,304
* unassigned *								1,268,609
Additional Cost								1,268,609
Additional Cost								
SPMT's								

Additional Cost Det Additional Cost Detour

*** unassigned ***

34-71-13.00 Vehicle Barriers

34-71-13.17 Security Vehicle Barriers

Maintain Detour Local Roads	300.00 day	-	-	-	-	89.46	89.46	26,837
<i>Security Vehicle Barriers</i>								26,837
<i>Vehicle Barriers</i>								26,837
* unassigned *								26,837
Additional Cost Det								26,837
Additional Cost								
Detour								

General Conditions General Conditions

*** unassigned ***

01-31-00.00 Project Management And Coordination

01-31-13.20 Field Personnel

Field Personnel, clerk, average	49.00 week	435.35	-	-	-	-	435.35	21,332
Field engineer, average	55.00 week	1,341.83	-	-	-	-	1,341.83	73,801
Field Personnel, project manager, average	55.00 week	2,206.56	-	-	-	-	2,206.56	121,361
Field Personnel, superintendent, average	49.00 week	2,027.65	-	-	-	-	2,027.65	99,355
<i>Field Personnel</i>								315,849
<i>Project Management And Coordination</i>								315,849

01-32-33.00 Photographic Documentation

01-32-33.50 Photographs

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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	49.00 set	-	566.55	-	-	-	566.55	27,761
Photographs								27,761
Photographic Documentation								27,761
<i>01-45-00.00 Quality Control</i>								
<i>01-45-23.50 Testing</i>								
Field Testing	2.00 prjc	-	-	-	-	35,890.66	35,890.66	71,781
Testing								71,781
Quality Control								71,781
<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	14.00 ea	-	287.45	-	-	-	287.45	4,024
Storage Boxes, rent per month, 20' x 8'	28.00 ea	-	87.67	-	-	-	87.67	2,455
Office And Storage Space								6,479
<i>01-52-13.40 Field Office Expense</i>								
Field Office Expense, office equipment rental, average	14.00 mo	-	178.91	-	-	-	178.91	2,505
Field Office Expense, office supplies, average	14.00 mo	-	113.31	-	-	-	113.31	1,586
Field Office Expense, telephone bill; avg. bill/month, incl. long dist.	14.00 mo	-	250.47	-	-	-	250.47	3,507
Field Office Expense, field office lights & HVAC	14.00 mo	-	131.20	-	-	-	131.20	1,837
Field Office Expense								9,435
Field Offices And Sheds								15,914
<i>01-56-26.00 Temporary Fencing</i>								
<i>01-56-26.50 Temporary Fencing</i>								
Temporary Fencing, chain link, 6' high, 11 ga	2,000.00 lf	3.16	8.35	-	-	-	11.51	23,019
Temporary Fencing								23,019
Temporary Fencing								23,019
<i>01-58-00.00 Project Identification</i>								
<i>01-58-13.50 Signs</i>								

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Spreadsheet Level	Takeoff Quantity	Labor Cost/Unit	Material Cost/Unit	Sub Cost/Unit	Equip Cost/Unit	Other Cost/Unit	Total Cost/Unit	Total Amount
455-34-5 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	2,240.00 vlf	10.77	65.60	-	6.72	-	83.10	186,132
								<u>186,132</u>
								186,132
455-34-5 Concrete Piling Prestressed								186,132
Substructure-End Substructure-End Bents								325,803
 Substructure-Piers Substructure-Piers								
400-4-5 Concrete Class IV (Substructure)								
<i>03-30-00.00 Cast-In-Place Concrete</i>								
<i>03-30-53.40 Concrete In Place</i>								
Concrete Class IV Concrete In Place Cast-In-Place Concrete	306.00 cy	284.57	196.80	-	41.62	-	522.99	160,035
								<u>160,035</u>
								160,035
400-4-5 Concrete Class IV (Substructure)								160,035
 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	45,900.00 lb	0.49	0.50	-	0.11	-	1.09	49,939
								<u>49,939</u>
								49,939
415-1-5 Reinforcing Steel Substructure								49,939
 455-143-5 Test Piles								
<i>31-62-00.00 Driven Piles</i>								
<i>31-62-13.23 Prestressed Concrete Piles</i>								
Prestressed concrete piles, 24" square, Test Pile Prestressed Concrete Piles	170.00 vlf	29.62	65.60	-	18.49	-	113.71	19,331
								<u>19,331</u>

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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>Driven Piles</i>								19,331
455-143-5 Test Piles								19,331
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, <i>Prestressed Concrete Piles</i>	1,960.00 vlf	10.77	65.60	-	6.72	-	83.10	162,866
<i>Driven Piles</i>								162,866
455-34-5 Concrete Piling Prestressed								162,866
Substructure-Piers								392,170
Substructure-Piers								
Superstructure Superstructure								
110-3 Structure Removal of Existing								
<i>02-41-16.00 Structure Demolition</i>								
<i>02-41-16.33 Bridge Demolition</i>								
Bridge demolition <i>Bridge Demolition Structure Demolition</i>	21,048.00 sf	12.91	-	-	8.39	-	21.30	448,399
								448,399
								448,399
110-3 Structure Removal of Existing								448,399
400-147 Composite Neoprene Pads								
<i>05-05-23.00 Metal Fastenings</i>								
<i>05-05-23.80 Vibration & Bearing Pads</i>								
Bearing Pads <i>Vibration & Bearing Pads Metal Fastenings</i>	37.80 cf	71.73	715.64	-	-	-	787.37	29,762
								29,762
								29,762
400-147 Composite Neoprene Pads								29,762
400-2-4 Concrete Class II								
<i>03-30-00.00 Cast-In-Place Concrete</i>								
<i>03-30-53.40 Concrete In Place</i>								
Concrete Class II <i>Concrete In Place Cast-In-Place Concrete</i>	905.20 cy	130.35	172.95	-	19.07	-	322.37	291,807
								291,807
								291,807

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Spreadsheet Level	Takeoff Quantity	Labor Cost/Unit	Material Cost/Unit	Sub Cost/Unit	Equip Cost/Unit	Other Cost/Unit	Total Cost/Unit	Total Amount
400-2-4 Concrete Class II								291,807
400-9 Bridge Floor Grooving								
32-13-13.00 Concrete Paving								
32-13-13.23 Concrete Paving Surface Treatment								
Concrete grooving	4,158.00 sy	2.11	-	-	4.76	-	6.87	28,563
Concrete Paving Surface Treatment								28,563
Concrete Paving								28,563
400-9 Bridge Floor Grooving								28,563
415-1-4 Reinforcing Steel								
03-21-05.00 Reinforcing Steel Accessories								
03-21-10.60 Reinforcing In Place								
Reinforcing Steel Superstructure	185,566.00 lb	0.33	0.06	-	0.07	-	0.47	86,679
Reinforcing In Place								86,679
Reinforcing Steel Accessories								86,679
415-1-4 Reinforcing Steel								86,679
450-2-54 Prestressed Beams								
32-34-00.00 Fabricated Bridges								
32-34-10.10 Bridges, Highway								
Fabricated highway bridges, precast, prestressed concrete, I beams	4,224.00 lf	-	-	-	-	190.84	190.84	806,100
Bridges, Highway								806,100
Fabricated Bridges								806,100
450-2-54 Prestressed Beams								806,100
458-1-12 Bridge Deck Expansion Joint								
32-34-00.00 Fabricated Bridges								
32-34-10.10 Bridges, Highway								
Bridge Deck Expansion Joint	274.00 lf	96.31	325.62	-	3.37	-	425.30	116,533
Bridges, Highway								116,533
Fabricated Bridges								116,533
458-1-12 Bridge Deck Expansion Joint								116,533

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Spreadsheet Level	Takeoff Quantity	Labor Cost/Unit	Material Cost/Unit	Sub Cost/Unit	Equip Cost/Unit	Other Cost/Unit	Total Cost/Unit	Total Amount
521-5-1 Concrete Traffic Railing								
34-71-13.00 Vehicle Barriers								
34-71-13.26 Vehicle Guide Rails								
Concrete Traffic Railing	1,296.00 lf	11.77	48.90	-	4.06	-	64.73	83,895
Barrier Bridge								
Vehicle Guide Rails								83,895
Vehicle Barriers								83,895
521-5-1 Concrete Traffic Railing								83,895
Superstructure								
Superstructure								1,891,738

Estimate Totals

Description	Amount	Net Amount	Totals	Hours	Rate	Cost Basis	Percent of Total
Labor	1,397,375	1,397,375		10,578.838 ch			27.22%
Material	1,339,634	1,339,634					26.10%
Subcontract	1,049,609	1,049,609					20.45%
Equipment	418,944	418,944		2,190.383 ch			8.16%
Other	927,260	927,260					18.07%
	5,132,822		5,132,822				100.00
Total			5,132,822				100.00%