

**Every Day Counts Case Study 3**

<b>Project name</b>	Prefabricated Alt. CS 3 Fla.
<b>Labor rate table</b>	Labor 2011
<b>Equipment rate table</b>	Equip 2011
<b>Notes</b>	<ol style="list-style-type: none"><li>1. Pricing is 2011 \$.</li><li>2. Construction Schedule of 28 mos.</li><li>3. Rates reflect majority of work performed days with the exception of actual installation of bridges.</li><li>4. 6 Bridges.</li><li>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.</li><li>6. Material Cost/Unit - This cost represents the final installed cost for all the materials associated with the item of work.</li><li>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).</li><li>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.</li><li>9. Other Cost/Unit - This cost represents all other costs necessary to perform the item of work and not covered by the abovementioned costs.</li><li>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.</li><li>11. Total Amount - Total cost to put the quantity of units specified in place.</li></ol>
<b>Report format</b>	Sorted by 'LOCATION/Pay Item/Group phase/Phase' 'Detail' summary Allocate addons

**Cost Estimating Spreadsheet Report**  
**Prefabricated Alt. CS 3**

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	900.00 csf	-	51.19	-	-	-	51.19	46,071
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Scaffolding 46,071

Temporary Scaffolding 46,071

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	-	-	523,807.83	-	-	523,807.83	523,808
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Remove Existing Bridges Out & Install New Bridges SPMT 2nd Bridge	1.00 totl	-	-	261,903.92	-	-	261,903.92	261,904
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Remove Existing Bridges Out & Install New Bridges SPMT 3rd Bridge	1.00 totl	-	-	261,903.92	-	-	261,903.92	261,904
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Remove Existing Bridges Out & Install New Bridges SPMT 4th Bridge	1.00 totl	-	-	261,903.92	-	-	261,903.92	261,904
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Remove Existing Bridges Out & Install New Bridges SPMT 5th Bridge	1.00 totl	-	-	261,903.93	-	-	261,903.93	261,904
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Remove Existing Bridges Out & Install New Bridges SPMT 6th Bridge	1.00 totl	-	-	261,903.92	-	-	261,903.92	261,904
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Bridge Relocation 1,833,327

Structure Moving 1,833,327

32-12-16.00 Asphalt Paving

32-12-16.13 Plant-Mix Asphalt Paving

Allow for additional Paving etc.	3,000.00 ton	6.20	61.91	-	3.44	-	71.54	214,626
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Plant-Mix Asphalt Paving 214,626

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**Prefabricated Alt. CS 3**

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>Asphalt Paving</i>								214,626
<i>32-34-00.00 Fabricated Bridges</i>								
<i>32-34-10.10 Bridges, Highway</i>								
Temporary Concrete	300.00 cy	269.75	197.62	-	18.93	-	486.29	145,888
Temporary Concrete Remove	300.00 cy			-		148.81	148.81	44,643
<i>Bridges, Highway Fabricated Bridges</i>								<u>190,531</u>
<i>34-71-13.00 Vehicle Barriers</i>								
<i>34-71-13.17 Security Vehicle Barriers</i>								
Jersey Barriers	128.00 ea	78.97	119.05	-	31.36	-	229.38	29,360
Jersey Barriers Pier Expansion	600.00 ea	78.97	119.05	-	31.36	-	229.38	137,626
Detour	6.00 Day	-	-	-	-	3,809.51	3,809.51	22,857
<i>Security Vehicle Barriers Vehicle Barriers</i>								<u>189,843</u>
<i>* unassigned *</i>								189,843
<b>Additional Cost</b>								<b>2,474,399</b>
<b>Additional Cost</b>								<b>2,474,399</b>
<b>SPMT's</b>								
<b>Additional Cost Det Additional Cost Detour</b>								
<i>* unassigned *</i>								
<i>01-54-36.00 Equipment Mobilization</i>								
<i>01-54-36.50 Mobilization Or Demob.</i>								
Transport Bridge to Site	12.00 ea	475.71	-	-	813.48	-	1,289.20	15,470
Transport Bridge back to FDOT	12.00 ea	475.71	-	-	813.48	-	1,289.20	15,470
<i>Mobilization Or Demob. Equipment Mobilization</i>								<u>30,941</u>
<i>01-55-00.00 Vehicular Access And Parking</i>								
<i>01-55-23.50 Roads And Sidewalks</i>								
Temporary, roads	6,000.00 lf			-		1,130.95	1,130.95	6,785,692
Temporary, roads Remove	6,000.00 lf			-		154.76	154.76	928,568
<i>Roads And Sidewalks Vehicular Access And Parking</i>								<u>7,714,261</u>
<i>32-34-00.00 Fabricated Bridges</i>								7,714,261

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*Prefabricated Alt. CS 3*

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>32-34-10.10 Bridges, Highway</i>								
Fabricated highway bridges, Install	990.00 lf	46.53		-	13.91	-	60.43	59,830
Fabricated highway bridges, Remove	990.00 lf	46.53		-	13.91	-	60.43	59,830
Fabricated highway bridges, concrete in place, abutment	1,050.00 cy	269.75	197.62	-	18.93	-	486.29	510,609
Fabricated highway bridges, concrete in place, abutment Remove	1,050.00 cy			-		148.81	148.81	156,250
								<u>786,518</u>
<i>Bridges, Highway Fabricated Bridges</i>								786,518
<i>34-71-13.00 Vehicle Barriers</i>								
<i>34-71-13.17 Security Vehicle Barriers</i>								
Maintain Detour Security Vehicle Barriers Vehicle Barriers	900.00 day	-	-	-	-	89.29	89.29	<u>80,357</u>
								80,357
								80,357
<b>* unassigned *</b>								<b>8,612,077</b>
<b>Additional Cost Detour</b>								<b>8,612,077</b>
<b>Additional Cost Detour</b>								
<b>General Conditions General Conditions</b>								
<b>* unassigned *</b>								
<i>01-31-00.00 Project Management And Coordination</i>								
<i>01-31-13.20 Field Personnel</i>								
Field Personnel, clerk, average	49.00 week	434.52	-	-	-	-	434.52	21,292
Field engineer, average	165.00 week	1,339.28	-	-	-	-	1,339.28	220,981
Field Personnel, project manager, average	55.00 week	2,202.37	-	-	-	-	2,202.37	121,131
Field Personnel, superintendent, average	147.00 week	2,023.80	-	-	-	-	2,023.80	297,499
								<u>660,903</u>
<i>Field Personnel Project Management And Coordination</i>								660,903
<i>01-32-33.00 Photographic Documentation</i>								
<i>01-32-33.50 Photographs</i>								
Construction Photographs	49.00 set	-	773.81	-	-	-	773.81	37,917

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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
Photographs								37,917
Photographic Documentation								37,917
<i>01-45-00.00 Quality Control</i>								
<i>01-45-23.50 Testing</i>								
Field Testing	6.00 prjc	-	-	-	-	35,822.50	35,822.50	214,935
Testing								214,935
Quality Control								214,935
<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	28.00 ea	-	286.90	-	-	-	286.90	8,033
Storage Boxes, rent per month, 20' x 8'	56.00 ea	-	87.50	-	-	-	87.50	4,900
Office And Storage Space								12,933
<i>01-52-13.40 Field Office Expense</i>								
Field Office Expense, office equipment rental, average	28.00 mo	-	178.57	-	-	-	178.57	5,000
Field Office Expense, office supplies, average	28.00 mo	-	113.10	-	-	-	113.10	3,167
Field Office Expense, telephone bill; avg. bill/month, incl. long dist.	28.00 mo	-	250.00	-	-	-	250.00	7,000
Field Office Expense, field office lights & HVAC	28.00 mo	-	130.95	-	-	-	130.95	3,667
Field Office Expense								18,833
Field Offices And Sheds								31,767
<i>01-56-26.00 Temporary Fencing</i>								
<i>01-56-26.50 Temporary Fencing</i>								
Temporary Fencing, chain link, 6' high, 11 ga	3,000.00 lf	3.15	8.33	-	-	-	11.49	34,463
Temporary Fencing								34,463
Temporary Fencing								34,463
<i>01-58-00.00 Project Identification</i>								
<i>01-58-13.50 Signs</i>								
Project Signs	100.00 sf	-	21.31	-	-	-	21.31	2,131

**Cost Estimating Spreadsheet Report**  
**Prefabricated Alt. CS 3**

Spreadsheet Level	Takeoff Quantity	Labor Cost/Unit	Material Cost/Unit	Sub Cost/Unit	Equip Cost/Unit	Other Cost/Unit	Total Cost/Unit	Total Amount
Signs								2,131
Project Identification								2,131
<i>01-71-23.00 Field Engineering</i>								
<i>01-71-23.13 Construction Layout</i>								
Survey Crew	50.00 day	1,890.05	-	-	90.23	-	1,980.28	99,014
Construction Layout								99,014
Field Engineering								99,014
* unassigned *								1,081,128
<b>General Conditions</b>								<b>1,081,128</b>
<b>General Conditions</b>								
<b>Permanent Walls Permanent Walls</b>								
<b>400-2-10 Concrete Class II</b>								
<i>03-30-00.00 Cast-In-Place Concrete</i>								
<i>03-30-53.40 Concrete In Place</i>								
Approach Slab	787.80 cy	142.01	172.62	-	20.77	-	335.40	264,231
Concrete In Place								264,231
Cast-In-Place Concrete								264,231
<b>400-2-10 Concrete Class II</b>								<b>264,231</b>
<b>415-1-9 Reinforcing Steel</b>								
<i>03-21-05.00 Reinforcing Steel Accessories</i>								
<i>03-21-10.60 Reinforcing In Place</i>								
Reinforcing Steel Approach Slabs	161,496.00 lb	0.36	0.06	-	0.08	-	0.50	81,303
Reinforcing In Place								81,303
Reinforcing Steel								81,303
Accessories								
<b>415-1-9 Reinforcing Steel</b>								<b>81,303</b>
<b>521-8-1 Concrete Traffic Railing</b>								
<i>34-71-13.00 Vehicle Barriers</i>								
<i>34-71-13.26 Vehicle Guide Rails</i>								
Concrete Traffic Railing	660.00 lf	12.83	48.81	-	4.42	-	66.06	43,597
Barrier Retaining Wall								
Vehicle Guide Rails								43,597
Vehicle Barriers								43,597
<b>521-8-1 Concrete Traffic Railing</b>								<b>43,597</b>

548-12 Retainig Wall System

**Cost Estimating Spreadsheet Report**  
**Prefabricated Alt. CS 3**

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>32-32-23.00 Retaining Walls</i>								
<i>32-32-23.13 Retaining Walls</i>								
Retaining Wall System	66,432.00 sf	7.61	13.99	-	4.22	-	25.82	1,715,365
Retaining Walls								1,715,365
Retaining Walls								1,715,365
<b>548-12 Retainig Wall System</b>								<b>1,715,365</b>
<b>Permanent Walls</b>								<b>2,104,496</b>
<b>Permanent Walls</b>								
<b>Substructure-End Substructure-End Bents</b>								
<b>400-4-5 Concrete Class IV (Substructure)</b>								
<i>03-30-00.00 Cast-In-Place Concrete</i>								
<i>03-30-53.40 Concrete In Place</i>								
Concrete Class IV	432.00 cy	284.03	196.43	-	41.55	-	522.00	225,503
Concrete In Place								225,503
Cast-In-Place Concrete								225,503
<b>400-4-5 Concrete Class IV (Substructure)</b>								<b>225,503</b>
<b>415-1-5 Reinforcing Steel Substructure</b>								
<i>03-21-05.00 Reinforcing Steel Accessories</i>								
<i>03-21-10.60 Reinforcing In Place</i>								
Reinforcing Steel	58,320.00 lb	0.49	0.49	-	0.11	-	1.09	63,331
Reinforcing In Place								63,331
Reinforcing Steel								63,331
Accessories								
<b>415-1-5 Reinforcing Steel Substructure</b>								<b>63,331</b>
<b>455-143-5 Test Piles</b>								
<i>31-62-00.00 Driven Piles</i>								
<i>31-62-13.23 Prestressed Concrete Piles</i>								
Prestressed concrete piles, 24" square, Test Pile	1,140.00 vlf	29.56	65.48	-	18.46	-	113.49	129,382
Prestressed Concrete Piles								129,382
Driven Piles								129,382
<b>455-143-5 Test Piles</b>								<b>129,382</b>
<b>455-34-5 Concrete Piling Prestressed</b>								
<i>31-62-00.00 Driven Piles</i>								





**Cost Estimating Spreadsheet Report**  
*Prefabricated Alt. CS 3*

Spreadsheet Level	Takeoff Quantity	Labor Cost/Unit	Material Cost/Unit	Sub Cost/Unit	Equip Cost/Unit	Other Cost/Unit	Total Cost/Unit	Total Amount
<b>455-34-5 Concrete Piling Prestressed</b>								
<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> <i>Driven Piles</i>	5,880.00 vlf	10.75	65.48	-	6.71	-	82.94	487,669
								<u>487,669</u>
								487,669
<b>455-34-5 Concrete Piling Prestressed</b>								<b>487,669</b>
<b>Substructure-Piers Substructure-Piers</b>								<b>1,174,276</b>
<b>Superstructure Superstructure</b>								
<b>110-3 Structure Removal of Existing</b>								
<i>02-41-16.00 Structure Demolition</i>								
<i>02-41-16.33 Bridge Demolition</i>								
Bridge demolition <i>Bridge Demolition</i> <i>Structure Demolition</i>	63,144.00 sf	11.11	-	-	7.22	-	18.34	<u>1,157,753</u>
								1,157,753
								1,157,753
<b>110-3 Structure Removal of Existing</b>								<b>1,157,753</b>
<b>400-147 Composite Neoprene Pads</b>								
<i>05-05-23.00 Metal Fastenings</i>								
<i>05-05-23.80 Vibration &amp; Bearing Pads</i>								
Bearing Pads <i>Vibration &amp; Bearing Pads</i> <i>Metal Fastenings</i>	113.40 cf	61.73	714.28	-	-	-	776.01	<u>88,000</u>
								88,000
								88,000
<b>400-147 Composite Neoprene Pads</b>								<b>88,000</b>
<b>400-2-4 Concrete Class II</b>								
<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</i> <i>Cast-In-Place Concrete</i>	2,715.60 cy	112.19	172.62	-	16.41	-	301.22	<u>817,988</u>
								817,988
								817,988
<b>400-2-4 Concrete Class II</b>								<b>817,988</b>

400-9 Bridge Floor Grooving

**Cost Estimating Spreadsheet Report**  
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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>32-13-13.00 Concrete Paving</i>								
<i>32-13-13.23 Concrete Paving Surface Treatment</i>								
Concrete grooving	12,474.00 sy	1.82	-	-	4.09	-	5.91	73,749
<i>Concrete Paving Surface Treatment</i>								73,749
<i>Concrete Paving</i>								73,749
<b>400-9 Bridge Floor Grooving</b>								<b>73,749</b>
<b>415-1-4 Reinforcing Steel</b>								
<i>03-21-05.00 Reinforcing Steel Accessories</i>								
<i>03-21-10.60 Reinforcing In Place</i>								
Reinforcing Steel	556,698.00 lb	0.29	0.06	-	0.06	-	0.41	228,365
<i>Superstructure Reinforcing In Place Reinforcing Steel Accessories</i>								228,365
<b>415-1-4 Reinforcing Steel</b>								<b>228,365</b>
<b>450-2-54 Prestressed Beams</b>								
<i>32-34-00.00 Fabricated Bridges</i>								
<i>32-34-10.10 Bridges, Highway</i>								
Fabricated highway bridges, precast, prestressed concrete, I beams	12,672.00 lf	-	-	-	-	190.48	190.48	2,413,707
<i>Bridges, Highway Fabricated Bridges</i>								2,413,707
<b>450-2-54 Prestressed Beams</b>								<b>2,413,707</b>
<b>458-1-12 Bridge Deck Expansion Joint</b>								
<i>32-34-00.00 Fabricated Bridges</i>								
<i>32-34-10.10 Bridges, Highway</i>								
Bridge Deck Expansion Joint	822.00 lf	82.89	325.00	-	2.90	-	410.79	337,673
<i>Bridges, Highway Fabricated Bridges</i>								337,673
<b>458-1-12 Bridge Deck Expansion Joint</b>								<b>337,673</b>
<b>521-5-1 Concrete Traffic Railing</b>								
<i>34-71-13.00 Vehicle Barriers</i>								



**Estimate Totals**

<b>Description</b>	<b>Amount</b>	<b>Net Amount</b>	<b>Totals</b>	<b>Hours</b>	<b>Rate</b>	<b>Cost Basis</b>	<b>Percent of Total</b>
Labor	3,959,455	3,959,455		23,536.726	ch		18.18%
Material	4,123,993	4,123,993					18.93%
Subcontract	1,833,327	1,833,327					8.42%
Equipment	1,218,128	1,218,128		6,771.361	ch		5.59%
Other	10,647,009	10,647,009					48.88%
	<b>21,781,912</b>		<b>21,781,912</b>				<b>100.00</b>
<b>Total</b>			<b>21,781,912</b>				<b>100.00%</b>