

**CONSTRUCTION DIVISION**

**SPECIFICATION NO. 2743**  
**MARINE IMPROVEMENTS 2012-2014**  
**PROJ. MGR.: KEVIN HARBOR**

**ENGINEERING ESTIMATE: \$21,019,950.00**  
**ADVERTISED DATE: FEBRUARY 22, 2012**  
**BID OPENING DATE: MAY 24, 2012**

	GRAND TOTOAL		ITEM 1	
	BID ITEMS 1 - 98		CONSTRUCTION	
			LUMP SUM	
ENGINEERING ESTIMATE	\$	21,019,950.00	\$	500,000.00
1) MANSON CONSTRUCTION CO.	\$	22,217,400.00	\$	820,000.00
2) VORTEX MARINE CONST. INC.	\$	24,336,400.00	\$	2,300,000.00

1) AVERAGE BID		\$	1,560,000.00
2) STANDARD DEVIATION		\$	1,046,518.04
3) ENG. EST. - LOW BIDDER		\$	(320,000.00)

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	ITEM 2		ITEM 3	
	TIMBER WHARF DISPOSAL		CONCRETE WHARF DISPOSAL	
	Tons Approx. Qty. =	1000	Cu. Yds. Approx. Qty. =	2500
ENGINEERING ESTIMATE	\$/tons	\$	\$/cu yds	\$
1) MANSON CONSTRUCTION CO.	\$ 225.00	\$ 225,000.00	\$ 20.00	\$ 50,000.00
2) VORTEX MARINE CONST. INC.	\$ 330.00	\$ 330,000.00	\$ 50.00	\$ 125,000.00

1) AVERAGE BID	\$ 277.50	\$ 277,500.00	\$ 35.00	\$ 87,500.00
2) STANDARD DEVIATION	\$ 74.25	\$ 74,246.21	\$ 21.21	\$ 53,033.01
3) ENG. EST. - LOW BIDDER	\$ (225.00)	\$ (225,000.00)	\$ (20.00)	\$ (50,000.00)

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	ITEM 4		ITEM 5	
	TIMBER FENDER PILE REMOVAL (MINIMUM ORDER 2)		TIMBER BEARING PILE REMOVAL	
	Each Approx. Qty. =	200	Each Approx. Qty. =	250
	\$/ea	\$	\$/ea	\$
ENGINEERING ESTIMATE		-		-
1) MANSON CONSTRUCTION CO.	\$ 1,100.00	\$ 220,000.00	\$ 1,200.00	\$ 300,000.00
2) VORTEX MARINE CONST. INC.	\$ 980.00	\$ 196,000.00	\$ 1,000.00	\$ 250,000.00

1) AVERAGE BID	\$ 1,040.00	\$ 208,000.00	\$ 1,100.00	\$ 275,000.00
2) STANDARD DEVIATION	\$ 84.85	\$ 16,970.56	\$ 141.42	\$ 35,355.34
3) ENG. EST. - LOW BIDDER	\$ (1,100.00)	\$ (220,000.00)	\$ (1,200.00)	\$ (300,000.00)

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	ITEM 6		ITEM 7	
	24 INCH CONCRETE PILE REMOVAL (MINIMUM ORDER 5)		18 INCH CONCRETE PILE REMOVAL (MINIMUM ORDER 5)	
	Each Approx. Qty.	100	Each Approx. No. =	100
	\$/ea	\$	\$/ea	\$
ENGINEERING ESTIMATE		\$ -		\$ -
1) MANSON CONSTRUCTION CO.	\$ 1,800.00	\$ 180,000.00	\$ 1,600.00	\$ 160,000.00
2) VORTEX MARINE CONST. INC.	\$ 2,500.00	\$ 250,000.00	\$ 1,700.00	\$ 170,000.00

1) AVERAGE BID	\$ 2,150.00	\$ 215,000.00	\$ 1,650.00	\$ 165,000.00
2) STANDARD DEVIATION	\$ 494.97	\$ 49,497.47	\$ 70.71	\$ 7,071.07
3) ENG. EST. - LOW BIDDER	\$ (1,800.00)	\$ (180,000.00)	\$ (1,600.00)	\$ (160,000.00)

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	ITEM 8		ITEM 9	
	DIVING		MOBILIZATION & DEMOBILIZATION FOR TIMBER PILE REMOVAL	
	Days Approx. Qty. =	8	Each Approx. Qty. =	5
	\$/days	\$	\$/ea	\$
ENGINEERING ESTIMATE		-		-
1) MANSON CONSTRUCTION CO.	\$ 3,000.00	\$ 24,000.00	\$ 27,000.00	\$ 135,000.00
2) VORTEX MARINE CONST. INC.	\$ 3,000.00	\$ 24,000.00	\$ 25,000.00	\$ 125,000.00

1) AVERAGE BID	\$ 3,000.00	\$ 24,000.00	\$ 26,000.00	\$ 130,000.00
2) STANDARD DEVIATION	\$ -	\$ -	\$ 1,414.21	\$ 7,071.07
3) ENG. EST. - LOW BIDDER	\$ (3,000.00)	\$ (24,000.00)	\$ (27,000.00)	\$ (135,000.00)

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	ITEM 10		ITEM 11	
	MOBILIZATION & DEMOBILIZATION FOR CONCRETE PILE REMOVAL		FURNISH 24-INCH OCTAGONAL 24A CONCRETE PILES (MINIMUM ORDER 1,000 LF)	
	Each Approx. Qty. =		5 Lin. Ft. Approx. Qty. =	2500
ENGINEERING ESTIMATE	\$/days	\$	\$/lin ft	\$
1) MANSON CONSTRUCTION CO.	\$ 30,000.00	\$ 150,000.00	\$ 115.00	\$ 287,500.00
2) VORTEX MARINE CONST. INC.	\$ 25,000.00	\$ 125,000.00	\$ 100.00	\$ 250,000.00

1) AVERAGE BID	\$ 27,500.00	\$ 137,500.00	\$ 107.50	\$ 268,750.00
2) STANDARD DEVIATION	\$ 3,535.53	\$ 17,677.67	\$ 10.61	\$ 26,516.50
3) ENG. EST. - LOW BIDDER	\$ (30,000.00)	\$ (150,000.00)	\$ (115.00)	\$ (287,500.00)

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	ITEM 12		ITEM 13	
	INSTALL 24-INCH OCTAGONAL 24A CONCRETE PILES (MINIMUM ORDER 5)		FURNISH 24-INCH 24B OCTAGONAL CONCRETE PILES (MINIMUM ORDER 1,000 L.F.)	
	Each Approx. No. =	50	Each Approx. Qty. =	2500
ENGINEERING ESTIMATE	\$/ea	\$ -	\$/ea	\$ -
1) MANSON CONSTRUCTION CO.	\$ 5,000.00	\$ 250,000.00	\$ 110.00	\$ 275,000.00
2) VORTEX MARINE CONST. INC.	\$ 5,000.00	\$ 250,000.00	\$ 110.00	\$ 275,000.00

1) AVERAGE BID	\$ 5,000.00	\$ 250,000.00	\$ 110.00	\$ 275,000.00
2) STANDARD DEVIATION	\$ -	\$ -	\$ -	\$ -
3) ENG. EST. - LOW BIDDER	\$ (5,000.00)	\$ (250,000.00)	\$ (110.00)	\$ (275,000.00)

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	ITEM 14		ITEM 15	
	INSTALL 24-INCH OCTAGONAL CONCRETE BATTER PILES (MINIMUM ORDER 5)		INSTALL 24-INCH 24B OCTAGONAL CONCRETE PILES (MINIMUM ORDER 5)	
	Each Approx. Qty. =	50	Each Approx. Qty. =	30
	\$/ea	\$	\$/ea	\$
ENGINEERING ESTIMATE		-		-
1) MANSON CONSTRUCTION CO.	\$ 4,800.00	\$ 240,000.00	\$ 5,000.00	\$ 150,000.00
2) VORTEX MARINE CONST. INC.	\$ 4,900.00	\$ 245,000.00	\$ 5,000.00	\$ 150,000.00

1) AVERAGE BID	\$ 4,850.00	\$ 242,500.00	\$ 5,000.00	\$ 150,000.00
2) STANDARD DEVIATION	\$ 70.71	\$ 3,535.53	\$ -	\$ -
3) ENG. EST. - LOW BIDDER	\$ (4,800.00)	\$ (240,000.00)	\$ (5,000.00)	\$ (150,000.00)

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	ITEM 16		ITEM 17		
	FURNISH 18-INCH OCTAGONAL 18A CONCRETE PILES (MINIMUM ORDER 1,000 L.F.)		INSTALL 18-INCH OCTAGONAL 18A CONCRETE PILES (MINIMUM ORDER 5)		
	Lin. Ft.	Approx. Qty. =	2500	Each Approx. Qty. =	30
ENGINEERING ESTIMATE	\$/lin ft	\$	-	\$/ea	\$
1) MANSON CONSTRUCTION CO.	\$ 80.00	\$	200,000.00	\$ 4,600.00	\$ 138,000.00
2) VORTEX MARINE CONST. INC.	\$ 80.00	\$	200,000.00	\$ 4,000.00	\$ 120,000.00

1) AVERAGE BID	\$ 80.00	\$	200,000.00	\$ 4,300.00	\$ 129,000.00
2) STANDARD DEVIATION	\$ -	\$	-	\$ 424.26	\$ 12,727.92
3) ENG. EST. - LOW BIDDER	\$ (80.00)	\$	(200,000.00)	\$ (4,600.00)	\$ (138,000.00)

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	ITEM 18		ITEM 19	
	FURNISH 18-INCH 18B OCTAGONAL CONCRETE PILES (MINIMUM ORDER 1,000 LF)		INSTALL 18-INCH 18B OCTAGONAL CONCRETE PILES (MINIMUM ORDER 5)	
	Lin. Ft. Approx. Qty. =	2500	Each Approx. Qty. =	20
ENGINEERING ESTIMATE	\$/lin ft	\$ -	\$/ea	\$ -
1) MANSON CONSTRUCTION CO.	\$ 84.00	\$ 210,000.00	\$ 4,600.00	\$ 92,000.00
2) VORTEX MARINE CONST. INC.	\$ 95.00	\$ 237,500.00	\$ 4,500.00	\$ 90,000.00

1) AVERAGE BID	\$ 89.50	\$ 223,750.00	\$ 4,550.00	\$ 91,000.00
2) STANDARD DEVIATION	\$ 7.78	\$ 19,445.44	\$ 70.71	\$ 1,414.21
3) ENG. EST. - LOW BIDDER	\$ (84.00)	\$ (210,000.00)	\$ (4,600.00)	\$ (92,000.00)

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	ITEM 20		ITEM 21	
	INSTALL 18-INCH OCTAGONAL BATTER PILES (MINIMUM ORDER 5)		DIFFERENTIAL COSTS TO DRIVE ONCRETE PILES THROUGH WHARF DECK	
	Each Approx. Qty. =		Each Approx. Qty.=	
	30	100		
	\$/ea	\$	\$/ea	\$
ENGINEERING ESTIMATE		\$ -		\$ -
1) MANSON CONSTRUCTION CO.	\$ 4,600.00	\$ 138,000.00	\$ 1,800.00	\$ 180,000.00
2) VORTEX MARINE CONST. INC.	\$ 4,500.00	\$ 135,000.00	\$ 1,800.00	\$ 180,000.00

1) AVERAGE BID	\$ 4,550.00	\$ 136,500.00	\$ 1,800.00	\$ 180,000.00
2) STANDARD DEVIATION	\$ 70.71	\$ 2,121.32	\$ -	\$ -
3) ENG. EST. - LOW BIDDER	\$ (4,600.00)	\$ (138,000.00)	\$ (1,800.00)	\$ (180,000.00)

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	ITEM 22		ITEM 23	
	BREAK OFF & DISPOSE OF OCTAGONAL CONCRETE PILES (MINIMUM ORDER 5)		RESTRIKE OCTAGONAL CONCRETE PILES	
	Each Approx. Qty. =		50	Each Approx. Qty. = 10
	\$/ea	\$	\$/ea	\$
ENGINEERING ESTIMATE		-		-
1) MANSON CONSTRUCTION CO.	\$ 4,400.00	\$ 220,000.00	\$ 2,400.00	\$ 24,000.00
2) VORTEX MARINE CONST. INC.	\$ 3,600.00	\$ 180,000.00	\$ 3,200.00	\$ 32,000.00

1) AVERAGE BID	\$ 4,000.00	\$ 200,000.00	\$ 2,800.00	\$ 28,000.00
2) STANDARD DEVIATION	\$ 565.69	\$ 28,284.27	\$ 565.69	\$ 5,656.85
3) ENG. EST. - LOW BIDDER	\$ (4,400.00)	\$ (220,000.00)	\$ (2,400.00)	\$ (24,000.00)

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	ITEM 24		ITEM 25	
	CONCRETE PILE BUILD UPS LESS THAN 4 FEET IN HEIGHT (MINIMUM ORDER 5)		CONCRETE PILE BUILD UPS GREATER THAN 4 FEET IN HEIGHT & LESS THAN 7 FEET IN HEIGHT (MINIMUM ORDER 5)	
	Each Approx. Qty. = 50		Each Approx. Qty. = 50	
	\$/ea	\$	\$/ea	\$
ENGINEERING ESTIMATE		-		-
1) MANSON CONSTRUCTION CO.	\$ 800.00	\$ 40,000.00	\$ 1,100.00	\$ 55,000.00
2) VORTEX MARINE CONST. INC.	\$ 1,000.00	\$ 50,000.00	\$ 1,600.00	\$ 80,000.00

1) AVERAGE BID	\$ 900.00	\$ 45,000.00	\$ 1,350.00	\$ 67,500.00
2) STANDARD DEVIATION	\$ 141.42	\$ 7,071.07	\$ 353.55	\$ 17,677.67
3) ENG. EST. - LOW BIDDER	\$ (800.00)	\$ (40,000.00)	\$ (1,100.00)	\$ (55,000.00)

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	ITEM 26		ITEM 27	
	PERFORM CONCRETE PILE CUTOFFS OVER 6 FEET LONG & LESS THAN 10 FEET LONG (MINIMUM ORDER 5)		FURNISH TIMBER FENDER PILES (MINIMUM ORDER 10)	
	Each Approx. Qty. =	50	Lin. Ft. Approx. Qty. =	2500
ENGINEERING ESTIMATE	\$/ea	\$	\$/lin ft	\$
1) MANSON CONSTRUCTION CO.	\$ 350.00	\$ 17,500.00	\$ 32.00	\$ 80,000.00
2) VORTEX MARINE CONST. INC.	\$ 1,000.00	\$ 50,000.00	\$ 30.00	\$ 75,000.00

1) AVERAGE BID	\$ 675.00	\$ 33,750.00	\$ 31.00	\$ 77,500.00
2) STANDARD DEVIATION	\$ 459.62	\$ 22,980.97	\$ 1.41	\$ 3,535.53
3) ENG. EST. - LOW BIDDER	\$ (350.00)	\$ (17,500.00)	\$ (32.00)	\$ (80,000.00)

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	ITEM 28		ITEM 29	
	INSTALL TIMBER FENDER PILES (MINIMUM ORDER 5)		FURNISH AND INSTALL RUBBER FENDERS	
	Each Approx. Qty. = 100		Each Approx. Qty. = 25	
	\$/ea	\$	\$/ea	\$
ENGINEERING ESTIMATE		\$ -		\$ -
1) MANSON CONSTRUCTION CO.	\$ 4,000.00	\$ 400,000.00	\$ 22,640.00	\$ 566,000.00
2) VORTEX MARINE CONST. INC.	\$ 2,300.00	\$ 230,000.00	\$ 25,000.00	\$ 625,000.00

1) AVERAGE BID	\$ 3,150.00	\$ 315,000.00	\$ 23,820.00	\$ 595,500.00
2) STANDARD DEVIATION	\$ 1,202.08	\$ 120,208.15	\$ 1,668.77	\$ 41,719.30
3) ENG. EST. - LOW BIDDER	\$ (4,000.00)	\$ (400,000.00)	\$ (22,640.00)	\$ (566,000.00)

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	ITEM 30		ITEM 31	
	FURNISH TIMBER BEARING & BATTER PILES (MINIMUM ORDER 10)		TIMBER BEARING PILE REPAIR (MINIMUM ORDER 5)	
	Lin. Ft. Approx. Qty. =	2500	Each Approx. Qty. =	25
ENGINEERING ESTIMATE	\$/lin ft	\$ -	\$/ea	\$ -
1) MANSON CONSTRUCTION CO.	\$ 33.00	\$ 82,500.00	\$ 9,000.00	\$ 225,000.00
2) VORTEX MARINE CONST. INC.	\$ 30.00	\$ 75,000.00	\$ 6,500.00	\$ 162,500.00

1) AVERAGE BID	\$ 31.50	\$ 78,750.00	\$ 7,750.00	\$ 193,750.00
2) STANDARD DEVIATION	\$ 2.12	\$ 5,303.30	\$ 1,767.77	\$ 44,194.17
3) ENG. EST. - LOW BIDDER	\$ (33.00)	\$ (82,500.00)	\$ (9,000.00)	\$ (225,000.00)

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	ITEM 32		ITEM 33		
	TIMBER BEARING PILE OFFSET INSTALLATION REPAIR (MINIMUM ORDER 5)		INSTALL TIMBER BATTER PILES (MINIMUM ORDER 5)		
	Each Apprx. Qty. =		40	Each Apprx. Qty. =	25
ENGINEERING ESTIMATE	\$/ea	\$ -	\$/ea	\$ -	
1) MANSON CONSTRUCTION CO.	\$ 5,800.00	\$ 232,000.00	\$ 4,200.00	\$ 105,000.00	
2) VORTEX MARINE CONST. INC.	\$ 4,400.00	\$ 176,000.00	\$ 2,300.00	\$ 57,500.00	

1) AVERAGE BID	\$ 5,100.00	\$ 204,000.00	\$ 3,250.00	\$ 81,250.00	
2) STANDARD DEVIATION	\$ 989.95	\$ 39,597.98	\$ 1,343.50	\$ 33,587.57	
3) ENG. EST. - LOW BIDDER	\$ (5,800.00)	\$ (232,000.00)	\$ (4,200.00)	\$ (105,000.00)	

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	ITEM 34		ITEM 35	
	INSTALL TIMBER BATTER PILES (MINIMUM ORDER 5)		MOBILIZATION & DEMOBILIZATION FOR TIMBER PILE DRIVING	
	Each Approx. Qty. = 50		Each Approx. Qty. = 10	
ENGINEERING ESTIMATE	\$/ea	\$ -	\$/ea	\$ -
1) MANSON CONSTRUCTION CO.	\$ 6,000.00	\$ 300,000.00	\$ 20,000.00	\$ 200,000.00
2) VORTEX MARINE CONST. INC.	\$ 4,600.00	\$ 230,000.00	\$ 20,000.00	\$ 200,000.00

1) AVERAGE BID	\$ 5,300.00	\$ 265,000.00	\$ 20,000.00	\$ 200,000.00
2) STANDARD DEVIATION	\$ 989.95	\$ 49,497.47	\$ -	\$ -
3) ENG. EST. - LOW BIDDER	\$ (6,000.00)	\$ (300,000.00)	\$ -	\$ (200,000.00)

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	ITEM 36		ITEM 37	
	MOBILIZATION AND DEMOBILIZATION FOR CONCRETE PILE DRIVING		NEW TIMBER PILE WRAPPING (MINIMUM ORDER 5)	
	Each Approx. Qty. =	10	Each Approx. Qty. =	100
	\$/ea	\$	\$/ea	\$
ENGINEERING ESTIMATE		\$ -		\$ -
1) MANSON CONSTRUCTION CO.	\$ 45,000.00	\$ 450,000.00	\$ 1,400.00	\$ 140,000.00
2) VORTEX MARINE CONST. INC.	\$ 49,000.00	\$ 490,000.00	\$ 1,500.00	\$ 150,000.00

1) AVERAGE BID	\$ 47,000.00	\$ 470,000.00	\$ 1,450.00	\$ 145,000.00
2) STANDARD DEVIATION	\$ 2,828.43	\$ 28,284.27	\$ 70.71	\$ 7,071.07
3) ENG. EST. - LOW BIDDER	\$ (45,000.00)	\$ (450,000.00)	\$ (1,400.00)	\$ (140,000.00)

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	ITEM 38		ITEM 39	
	TIMBER PILE TIDAL WRAP (MINIMUM ORDER 5)		TIMBER PILE SUBMERGED WRAP (MINIMUM ORDER 5)	
	Each Approx. Qty. = 100		Each Approx. Qty. = 100	
	\$/ea	\$	\$/ea	\$
ENGINEERING ESTIMATE		-		-
1) MANSON CONSTRUCTION CO.	\$ 630.00	\$ 63,000.00	\$ 750.00	\$ 75,000.00
2) VORTEX MARINE CONST. INC.	\$ 600.00	\$ 60,000.00	\$ 1,200.00	\$ 120,000.00

1) AVERAGE BID	\$ 615.00	\$ 61,500.00	\$ 975.00	\$ 97,500.00
2) STANDARD DEVIATION	\$ 21.21	\$ 2,121.32	\$ 318.20	\$ 31,819.81
3) ENG. EST. - LOW BIDDER	\$ (630.00)	\$ (63,000.00)	\$ (750.00)	\$ (75,000.00)

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	ITEM 40		ITEM 41	
	TIMBER PILE ROCKLINE CRATER DIGGING & SUBMERGED WRAP TERMINATION (MINIMUM ORDER 5)		TIMBER BULLRAIL (MINIMUM ORDER 20 LF)	
	Each Approx. Qty. = 100		Each Approx. Qty. = 1000	
ENGINEERING ESTIMATE	\$/ea	\$	\$/ea	\$
1) MANSON CONSTRUCTION CO.	\$ 790.00	\$ 79,000.00	\$ 60.00	\$ 60,000.00
2) VORTEX MARINE CONST. INC.	\$ 500.00	\$ 50,000.00	\$ 70.00	\$ 70,000.00

1) AVERAGE BID	\$ 645.00	\$ 64,500.00	\$ 65.00	\$ 65,000.00
2) STANDARD DEVIATION	\$ 205.06	\$ 20,506.10	\$ 7.07	\$ 7,071.07
3) ENG. EST. - LOW BIDDER	\$ (790.00)	\$ (79,000.00)	\$ (60.00)	\$ (60,000.00)

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	ITEM 42		ITEM 43	
	FURNISH AND PLACE QUARRY RUN, LESS THAN 2,000 TONS PER ORDER		FURNISH AND PLACE RIPRAP (MINIMUM ORDER 500 TONS)	
	Tons Approx. Qty. = 3000		Tons Approx. Qty. = 3000	
ENGINEERING ESTIMATE	\$/tons	\$	\$/tons	\$
1) MANSON CONSTRUCTION CO.	\$ 65.00	\$ 195,000.00	\$ 75.00	\$ 225,000.00
2) VORTEX MARINE CONST. INC.	\$ 60.00	\$ 180,000.00	\$ 70.00	\$ 210,000.00

1) AVERAGE BID	\$ 62.50	\$ 187,500.00	\$ 72.50	\$ 217,500.00
2) STANDARD DEVIATION	\$ 3.54	\$ 10,606.60	\$ 3.54	\$ 10,606.60
3) ENG. EST. - LOW BIDDER	\$ (65.00)	\$ (195,000.00)	\$ (75.00)	\$ (225,000.00)

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	ITEM 44		ITEM 45	
	MOBILIZATION AND DEMOBILIZATION FOR PLACING QUARRY RUN AND RIPRAP		FURNISH AND INSTALL SHEET PILES IN WATER 25 TONS OR LESS PER ORDER	
	Each Approx. Qty. =		7 Tons Approx. Qty. =	50
ENGINEERING ESTIMATE	\$/ea	\$	\$/tons	\$
1) MANSON CONSTRUCTION CO.	\$ 20,000.00	\$ 140,000.00	\$ 4,800.00	\$ 240,000.00
2) VORTEX MARINE CONST. INC.	\$ 20,000.00	\$ 140,000.00	\$ 6,000.00	\$ 300,000.00

1) AVERAGE BID	\$ 20,000.00	\$ 140,000.00	\$ 5,400.00	\$ 270,000.00
2) STANDARD DEVIATION	\$ -	\$ -	\$ 848.53	\$ 42,426.41
3) ENG. EST. - LOW BIDDER	\$ (20,000.00)	\$ (140,000.00)	\$ (4,800.00)	\$ (240,000.00)

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	ITEM 46		ITEM 47	
	FURNISH AND INSTALL SHEET PILES IN WATER MORE THAN 25 TONS PER ORDER		MOBILIZATION AND DEMOBILIZATION FOR SHEET PILE DRIVING	
	Tons Approx. Qty. =	50	Each Approx. Qty. =	3
	\$/tons	\$	\$/ea	\$
ENGINEERING ESTIMATE		-		-
1) MANSON CONSTRUCTION CO.	\$ 4,600.00	\$ 230,000.00	\$ 40,000.00	\$ 120,000.00
2) VORTEX MARINE CONST. INC.	\$ 5,800.00	\$ 290,000.00	\$ 40,000.00	\$ 120,000.00

1) AVERAGE BID	\$ 5,200.00	\$ 260,000.00	\$ 40,000.00	\$ 120,000.00
2) STANDARD DEVIATION	\$ 848.53	\$ 42,426.41	\$ -	\$ -
3) ENG. EST. - LOW BIDDER	\$ (4,600.00)	\$ (230,000.00)	\$ (40,000.00)	\$ (120,000.00)

**SPECIFICATION NO. 2743**  
**MARINE IMPROVEMENTS 2012-2014**  
**PROJ. MGR.: KEVIN HARBOR**

	ITEM 48		ITEM 49	
	SHOTCRETE REPAIRS		MOBILIZATION AND DEMOBILIZATION SHOTCRETE	
	Sq. Ft-In Approx. Qty. =	2500	Each Approx. Qty. =	5
	\$/sq ft in	\$	\$/ea	\$
ENGINEERING ESTIMATE		-		-
1) MANSON CONSTRUCTION CO.	\$ 55.00	\$ 137,500.00	\$ 10,000.00	\$ 50,000.00
2) VORTEX MARINE CONST. INC.	\$ 60.00	\$ 150,000.00	\$ 10,000.00	\$ 50,000.00

1) AVERAGE BID	\$ 57.50	\$ 143,750.00	\$ 10,000.00	\$ 50,000.00
2) STANDARD DEVIATION	\$ 3.54	\$ 8,838.83	\$ -	\$ -
3) ENG. EST. - LOW BIDDER	\$ (55.00)	\$ (137,500.00)	\$ (10,000.00)	\$ (50,000.00)

**SPECIFICATION NO. 2743**  
**MARINE IMPROVEMENTS 2012-2014**  
**PROJ. MGR.: KEVIN HARBOR**

	ITEM 50		ITEM 51	
	CAST-IN PLACE CONCRETE (MINIMUM ORDER 5 CY)		FURNISH REINFORCING BARS	
	Cu. Yds. Approx. Qty. = 500		Pounds Approx. Qty. = 12000	
ENGINEERING ESTIMATE	\$/cu yds	\$ -	\$/pounds	\$ -
1) MANSON CONSTRUCTION CO.	\$ 750.00	\$ 375,000.00	\$ 5.00	\$ 60,000.00
2) VORTEX MARINE CONST. INC.	\$ 1,500.00	\$ 750,000.00	\$ 2.00	\$ 24,000.00

1) AVERAGE BID	\$ 1,125.00	\$ 562,500.00	\$ 3.50	\$ 42,000.00
2) STANDARD DEVIATION	\$ 530.33	\$ 265,165.04	\$ 2.12	\$ 25,455.84
3) ENG. EST. - LOW BIDDER	\$ (750.00)	\$ (375,000.00)	\$ (5.00)	\$ (60,000.00)

**SPECIFICATION NO. 2743**  
**MARINE IMPROVEMENTS 2012-2014**  
**PROJ. MGR.: KEVIN HARBOR**

	ITEM 52		ITEM 53	
	REPLACEMENT OF REINFORCING BARS - WELD SPLICED		REPLACEMENT OF REINFORCING BARS - LAP SPLICED	
	Each Approx. Qty. =	50	Each Approx. Qty. =	200
ENGINEERING ESTIMATE	\$/each	\$	\$/ea	\$
1) MANSON CONSTRUCTION CO.	\$ 400.00	\$ 20,000.00	\$ 20.00	\$ 4,000.00
2) VORTEX MARINE CONST. INC.	\$ 400.00	\$ 20,000.00	\$ 30.00	\$ 6,000.00

1) AVERAGE BID	\$ 400.00	\$ 20,000.00	\$ 25.00	\$ 5,000.00
2) STANDARD DEVIATION	\$ -	\$ -	\$ 7.07	\$ 1,414.21
3) ENG. EST. - LOW BIDDER	\$ (400.00)	\$ (20,000.00)	\$ (20.00)	\$ (4,000.00)

**SPECIFICATION NO. 2743**  
**MARINE IMPROVEMENTS 2012-2014**  
**PROJ. MGR.: KEVIN HARBOR**

	ITEM 54		ITEM 55	
	REPLACEMENT OF REINFORCING BARS - DOWELS		EPOXY INJECTION REPAIRS (MINIMUM ORDER 10 CU. FT.)	
	Each Approx. Qty. =	150	Cu. Ft. Approx. Qty. =	80
ENGINEERING ESTIMATE	\$/ea	\$ -	\$/cu ft	\$ -
1) MANSON CONSTRUCTION CO.	\$ 200.00	\$ 30,000.00	\$ 2,000.00	\$ 160,000.00
2) VORTEX MARINE CONST. INC.	\$ 340.00	\$ 51,000.00	\$ 1,400.00	\$ 112,000.00

1) AVERAGE BID	\$ 270.00	\$ 40,500.00	\$ 1,700.00	\$ 136,000.00
2) STANDARD DEVIATION	\$ 98.99	\$ 14,849.24	\$ 424.26	\$ 33,941.13
3) ENG. EST. - LOW BIDDER	\$ (200.00)	\$ (30,000.00)	\$ (2,000.00)	\$ (160,000.00)

**SPECIFICATION NO. 2743**  
**MARINE IMPROVEMENTS 2012-2014**  
**PROJ. MGR.: KEVIN HARBOR**

	ITEM 56		ITEM 57	
	ASPHALT CONCRETE PAVEMENT (LESS THAN 250 TONS PER ORDER)		ASPHALT CONCRETE PAVEMENT (LESS THAN 250 TONS PER ORDER)	
	Tons Approx. Qty. = 5000		Tons Approx. Qty. = 7500	
ENGINEERING ESTIMATE	\$/tons	\$	\$/tons	\$
1) MANSON CONSTRUCTION CO.	\$ 128.00	\$ 640,000.00	\$ 113.00	\$ 847,500.00
2) VORTEX MARINE CONST. INC.	\$ 132.00	\$ 660,000.00	\$ 120.00	\$ 900,000.00

1) AVERAGE BID	\$ 130.00	\$ 650,000.00	\$ 116.50	\$ 873,750.00
2) STANDARD DEVIATION	\$ 2.83	\$ 14,142.14	\$ 4.95	\$ 37,123.11
3) ENG. EST. - LOW BIDDER	\$ (128.00)	\$ (640,000.00)	\$ (113.00)	\$ (847,500.00)

**SPECIFICATION NO. 2743**  
**MARINE IMPROVEMENTS 2012-2014**  
**PROJ. MGR.: KEVIN HARBOR**

	ITEM 58		ITEM 59	
	DEMOLISH & DISPOSE OFF DEPT PROPERTY CONCRETE PAVEMENT 2" TO 7" THICK BERTH 93		MOVE-IN AND MOVE-OUT PAVING EQUIPMENT	
	Cu. Yds. Approx. Qty. = 1500		Each Approx. Qty. = 10	
ENGINEERING ESTIMATE	\$/cu yds	\$ -	\$/ea	\$ -
1) MANSON CONSTRUCTION CO.	\$ 45.00	\$ 67,500.00	\$ 4,000.00	\$ 40,000.00
2) VORTEX MARINE CONST. INC.	\$ 70.00	\$ 105,000.00	\$ 8,000.00	\$ 80,000.00

1) AVERAGE BID	\$ 57.50	\$ 86,250.00	\$ 6,000.00	\$ 60,000.00
2) STANDARD DEVIATION	\$ 17.68	\$ 26,516.50	\$ 2,828.43	\$ 28,284.27
3) ENG. EST. - LOW BIDDER	\$ (45.00)	\$ (67,500.00)	\$ (4,000.00)	\$ (40,000.00)

**SPECIFICATION NO. 2743**  
**MARINE IMPROVEMENTS 2012-2014**  
**PROJ. MGR.: KEVIN HARBOR**

	ITEM 60		ITEM 61	
	PAVEMENT RAISING BY MUDJACKING		CRACK SEALING REPAIRS (MINIMUM ORDER 50 LF)	
	Cu. Ft. Approx. Qty. = 1500		Lin. Ft. Approx. Qty. = 1000	
	\$/cu ft	\$	\$/lin ft	\$
ENGINEERING ESTIMATE		-		-
1) MANSON CONSTRUCTION CO.	\$ 100.00	\$ 150,000.00	\$ 34.00	\$ 34,000.00
2) VORTEX MARINE CONST. INC.	\$ 200.00	\$ 300,000.00	\$ 110.00	\$ 110,000.00

1) AVERAGE BID	\$ 150.00	\$ 225,000.00	\$ 72.00	\$ 72,000.00
2) STANDARD DEVIATION	\$ 70.71	\$ 106,066.02	\$ 53.74	\$ 53,740.12
3) ENG. EST. - LOW BIDDER	\$ (100.00)	\$ (150,000.00)	\$ (34.00)	\$ (34,000.00)

**SPECIFICATION NO. 2743**  
**MARINE IMPROVEMENTS 2012-2014**  
**PROJ. MGR.: KEVIN HARBOR**

	ITEM 62		ITEM 63	
	REMOVE AND REPLACE TIMBER DECKING (MINIMUM ORDER 25 SQ. FT.)		MOBILIZATION & DEMOBILIZATION FOR REMOVING & REPLACING TIMBER DECKING	
	Sq. Ft. Approx. Qty. = 7500		Each Approx. Qty. = 7	
ENGINEERING ESTIMATE	\$/sq ft	\$ -	\$/ea	\$ -
1) MANSON CONSTRUCTION CO.	\$ 38.00	\$ 285,000.00	\$ 1,200.00	\$ 8,400.00
2) VORTEX MARINE CONST. INC.	\$ 30.00	\$ 225,000.00	\$ 700.00	\$ 4,900.00

1) AVERAGE BID	\$ 34.00	\$ 255,000.00	\$ 950.00	\$ 6,650.00
2) STANDARD DEVIATION	\$ 5.66	\$ 42,426.41	\$ 353.55	\$ 2,474.87
3) ENG. EST. - LOW BIDDER	\$ (38.00)	\$ (285,000.00)	\$ (1,200.00)	\$ (8,400.00)

**SPECIFICATION NO. 2743**  
**MARINE IMPROVEMENTS 2012-2014**  
**PROJ. MGR.: KEVIN HARBOR**

	ITEM 64		ITEM 65	
	MOBILIZATION AND DEMOBILIZATION FOR EXCAVATION		SOIL EXCAVATION (MINIMUM ORDER 1,000 C.Y.)	
	Each Approx. Qty. =	10	Cu. Yds. Approx. Qty. =	5000
ENGINEERING ESTIMATE	\$/ea	\$	\$/cu yds	
1) MANSON CONSTRUCTION CO.	\$ 6,000.00	\$ 60,000.00	\$ 33.00	\$ 165,000.00
2) VORTEX MARINE CONST. INC.	\$ 10,000.00	\$ 100,000.00	\$ 25.00	\$ 125,000.00

1) AVERAGE BID	\$ 8,000.00	\$ 80,000.00	\$ 29.00	\$ 145,000.00
2) STANDARD DEVIATION	\$ 2,828.43	\$ 28,284.27	\$ 5.66	\$ 28,284.27
3) ENG. EST. - LOW BIDDER	\$ (6,000.00)	\$ (60,000.00)	\$ (33.00)	\$ (165,000.00)

**SPECIFICATION NO. 2743**  
**MARINE IMPROVEMENTS 2012-2014**  
**PROJ. MGR.: KEVIN HARBOR**

	ITEM 66		ITEM 67	
	EXCAVATE & REUSE SOILS AS FILLS (MINIMUM ORDER 500 C.Y.)		DEPARTMENT-FURNISHED CRUSHED MISCELLANEOUS BASE (MINIMUM ORDER 250 C.Y.)	
	Cu. Yds. Approx. Qty. = 5000		Cu. Yds. Approx. Qty. = 3000	
ENGINEERING ESTIMATE	\$/cu yds	\$	\$/cu yds	\$
1) MANSON CONSTRUCTION CO.	\$ 15.00	\$ 75,000.00	\$ 36.00	\$ 108,000.00
2) VORTEX MARINE CONST. INC.	\$ 15.00	\$ 75,000.00	\$ 15.00	\$ 45,000.00

1) AVERAGE BID	\$ 15.00	\$ 75,000.00	\$ 25.50	\$ 76,500.00
2) STANDARD DEVIATION	\$ -	\$ -	\$ 14.85	\$ 44,547.73
3) ENG. EST. - LOW BIDDER	\$ (15.00)	\$ (75,000.00)	\$ (36.00)	\$ (108,000.00)

**SPECIFICATION NO. 2743**  
**MARINE IMPROVEMENTS 2012-2014**  
**PROJ. MGR.: KEVIN HARBOR**

	ITEM 68		ITEM 69	
	MOBILIZATION AND DEMOBILIZATION FOR EXCAVATING & REUSING SOILS AS FILL		MOBILIZATION AND DEMOBILIZATION FOR CRUSHED MISCELLANEOUS BASE	
	Each Approx. Qty. =	10	Each Approx. Qty. =	10
	\$/each	\$	\$/ea	\$
ENGINEERING ESTIMATE		-		-
1) MANSON CONSTRUCTION CO.	\$ 6,200.00	\$ 62,000.00	\$ 7,200.00	\$ 72,000.00
2) VORTEX MARINE CONST. INC.	\$ 10,000.00	\$ 100,000.00	\$ 10,000.00	\$ 100,000.00

1) AVERAGE BID	\$ 8,100.00	\$ 81,000.00	\$ 8,600.00	\$ 86,000.00
2) STANDARD DEVIATION	\$ 2,687.01	\$ 26,870.06	\$ 1,979.90	\$ 19,798.99
3) ENG. EST. - LOW BIDDER	\$ (6,200.00)	\$ (62,000.00)	\$ (7,200.00)	\$ (72,000.00)

**SPECIFICATION NO. 2743**  
**MARINE IMPROVEMENTS 2012-2014**  
**PROJ. MGR.: KEVIN HARBOR**

	ITEM 70		ITEM 71	
	DREDGING - SOUTHWEST MARINE (LESS THAN 2,500 CY PER ORDER, MIN ORDER 100 CY)		DREDGING - SOUTHWEST MARINE (MIN ORDER 2,500 CUBIC YARDS)	
	Cu. Yds. Approx. Qty. = 10000		Cu. Yds. Approx. Qty. = 12000	
	\$/lcu yds	\$	\$/cu yds	\$
ENGINEERING ESTIMATE		-		-
1) MANSON CONSTRUCTION CO.	\$ 49.00	\$ 490,000.00	\$ 47.00	\$ 564,000.00
2) VORTEX MARINE CONST. INC.	\$ 38.00	\$ 380,000.00	\$ 37.00	\$ 444,000.00

1) AVERAGE BID	\$ 43.50	\$ 435,000.00	\$ 42.00	\$ 504,000.00
2) STANDARD DEVIATION	\$ 7.78	\$ 77,781.75	\$ 7.07	\$ 84,852.81
3) ENG. EST. - LOW BIDDER	\$ (49.00)	\$ (490,000.00)	\$ (47.00)	\$ (564,000.00)

**SPECIFICATION NO. 2743**  
**MARINE IMPROVEMENTS 2012-2014**  
**PROJ. MGR.: KEVIN HARBOR**

	ITEM 72		ITEM 73	
	DREDGING - MATERIAL TRANSPORTED OFF-SITE (LESS THAN 2,500 CY PER ORDER, MIN ORDER 100 CY)		DREDGING - MATERIAL TRANSPORTED OFF-SITE (MIN ORDER 2,500 CY)	
	Cu. Yds. Approx. Qty. = 10000		Cu. Yds. Approx. Qty. = 12000	
ENGINEERING ESTIMATE	\$/cu yds	\$ -	\$/cu yds	\$ -
1) MANSON CONSTRUCTION CO.	\$ 54.00	\$ 540,000.00	\$ 51.00	\$ 612,000.00
2) VORTEX MARINE CONST. INC.	\$ 48.00	\$ 480,000.00	\$ 47.00	\$ 564,000.00

1) AVERAGE BID	\$ 51.00	\$ 510,000.00	\$ 49.00	\$ 588,000.00
2) STANDARD DEVIATION	\$ 4.24	\$ 42,426.41	\$ 2.83	\$ 33,941.13
3) ENG. EST. - LOW BIDDER	\$ (54.00)	\$ (540,000.00)	\$ (51.00)	\$ (612,000.00)

**SPECIFICATION NO. 2743**  
**MARINE IMPROVEMENTS 2012-2014**  
**PROJ. MGR.: KEVIN HARBOR**

	ITEM 74		ITEM 75	ITEM 76
	MOBILIZATION AND DEMOBILIZATION FOR DREDGING		BERTH 239 MOORING POINT NO. 1	INNER CABRILLO BEACH - BIRD EXCLUSION STRUCTURE
	Each Approx. Qty. =	10	LUMP SUM	LUMP SUM
ENGINEERING ESTIMATE	\$/ea	\$ -		
1) MANSON CONSTRUCTION CO.	\$ 47,000.00	\$ 470,000.00	\$ 2,710,000.00	\$ 500,000.00
2) VORTEX MARINE CONST. INC.	\$ 70,000.00	\$ 700,000.00	\$ 2,000,000.00	\$ 800,000.00

1) AVERAGE BID	\$ 58,500.00	\$ 585,000.00	\$ 2,355,000.00	\$ 650,000.00
2) STANDARD DEVIATION	\$ 16,263.46	\$ 162,634.56	\$ 502,045.81	\$ 212,132.03
3) ENG. EST. - LOW BIDDER	\$ (47,000.00)	\$ (470,000.00)	\$ (2,710,000.00)	\$ (500,000.00)

**SPECIFICATION NO. 2743**  
**MARINE IMPROVEMENTS 2012-2014**  
**PROJ. MGR.: KEVIN HARBOR**

	ITEM 77 INNER CABRILLO BEACH SAND EXCAVATION & DISPOSAL LUMP SUM	ITEM 78 BERTH 144-145 UNDERWATER BULKHEAD REPAIR LUMP SUM	ITEM 79 BERTH 47 MOORING PLATFORM REPAIRS LUMP SUM
ENGINEERING ESTIMATE			
1) MANSON CONSTRUCTION CO.	\$ 637,000.00	\$ 45,000.00	\$ 350,000.00
2) VORTEX MARINE CONST. INC.	\$ 1,200,000.00	\$ 75,000.00	\$ 300,000.00

1) AVERAGE BID	\$ 918,500.00	\$ 60,000.00	\$ 325,000.00
2) STANDARD DEVIATION	\$ 398,101.12	\$ 21,213.20	\$ 35,355.34
3) ENG. EST. - LOW BIDDER	\$ (637,000.00)	\$ (45,000.00)	\$ (350,000.00)

**SPECIFICATION NO. 2743**  
**MARINE IMPROVEMENTS 2012-2014**  
**PROJ. MGR.: KEVIN HARBOR**

	ITEM 80	ITEM 81	ITEM 82
	BERTH 206 REPAIR	CONCRETE WHARF DEMOLITION & REPAIRS	TIMBER WHARF DEMOLITION & REPAIRS
	LUMP SUM	(ALLOWANCE ITEM)	(ALLOWANCE ITEM)
ENGINEERING ESTIMATE		\$ 200,000.00	\$ 200,000.00
1) MANSON CONSTRUCTION CO.	\$ 15,000.00	\$ 200,000.00	\$ 200,000.00
2) VORTEX MARINE CONST. INC.	\$ 25,000.00	\$ 200,000.00	\$ 200,000.00

1) AVERAGE BID	\$ 20,000.00	\$ 200,000.00	\$ 200,000.00
2) STANDARD DEVIATION	\$ 7,071.07	\$ -	\$ -
3) ENG. EST. - LOW BIDDER	\$ (15,000.00)	\$ -	\$ -

**SPECIFICATION NO. 2743**  
**MARINE IMPROVEMENTS 2012-2014**  
**PROJ. MGR.: KEVIN HARBOR**

	ITEM 83	ITEM 84	ITEM 85
	PERFORM MISCELLANEOUS UTILITY WORK  (ALLOWANCE ITEM)	EXCAVATE, STOCKPILE & DISPOSE OF CHEMICALLY IMPACTED SOIL (ALLOWANCE ITEM)	ACCELERATION/OVERTIME  (ALLOWANCE ITEM)
ENGINEERING ESTIMATE	\$ 700,000.00	\$ 75,000.00	\$ 75,000.00
1) MANSON CONSTRUCTION CO.	\$ 700,000.00	\$ 75,000.00	\$ 75,000.00
2) VORTEX MARINE CONST. INC.	\$ 700,000.00	\$ 75,000.00	\$ 75,000.00

1) AVERAGE BID	\$ 700,000.00	\$ 75,000.00	\$ 75,000.00
2) STANDARD DEVIATION	\$ -	\$ -	\$ -
3) ENG. EST. - LOW BIDDER	\$ -	\$ -	\$ -

**SPECIFICATION NO. 2743**  
**MARINE IMPROVEMENTS 2012-2014**  
**PROJ. MGR.: KEVIN HARBOR**

	ITEM 86	ITEM 87	ITEM 88
	WATERPROOFING	CAULERPA TAXIFOLIA SERVICES	PILE DRIVING TEMPLATES AND FOLLOWERS
	(ALLOWANCE ITEM)	(ALLOWANCE ITEM)	(ALLOWANCE ITEM)
ENGINEERING ESTIMATE	\$ 100,000.00	\$ 75,000.00	\$ 100,000.00
1) MANSON CONSTRUCTION CO.	\$ 100,000.00	\$ 75,000.00	\$ 100,000.00
2) VORTEX MARINE CONST. INC.	\$ 100,000.00	\$ 75,000.00	\$ 100,000.00

1) AVERAGE BID	\$ 100,000.00	\$ 75,000.00	\$ 100,000.00
2) STANDARD DEVIATION	\$ -	\$ -	\$ -
3) ENG. EST. - LOW BIDDER	\$ -	\$ -	\$ -

**SPECIFICATION NO. 2743**  
**MARINE IMPROVEMENTS 2012-2014**  
**PROJ. MGR.: KEVIN HARBOR**

	ITEM 89	ITEM 90	ITEM 91
	INTERNET-BASED PROJECT COLLABORATION  (ALLOWANCE ITEM)	PERFORM WORK ASSOCIATED W/REGULATORY AGENCY CHANGES & ADD'L REQ.  (ALLOWANCE ITEM)	PROVIDE CATHODIC PROTECTION  (ALLOWANCE ITEM)
ENGINEERING ESTIMATE	\$ 45,000.00	\$ 150,000.00	\$ 50,000.00
1) MANSON CONSTRUCTION CO.	\$ 45,000.00	\$ 150,000.00	\$ 50,000.00
2) VORTEX MARINE CONST. INC.	\$ 45,000.00	\$ 150,000.00	\$ 50,000.00
1) AVERAGE BID	\$ 45,000.00	\$ 150,000.00	\$ 50,000.00
2) STANDARD DEVIATION	\$ -	\$ -	\$ -
3) ENG. EST. - LOW BIDDER	\$ -	\$ -	\$ -

**SPECIFICATION NO. 2743**  
**MARINE IMPROVEMENTS 2012-2014**  
**PROJ. MGR.: KEVIN HARBOR**

	ITEM 92	ITEM 93	ITEM 94
	UNDERWATER ROCK REMOVAL  (ALLOWANCE ITEM)	DISPOSAL OF EXCESS EARTH & DREDGE MATERIAL OFF-SITE  (ALLOWANCE ITEM)	SIGNAGE AND PAVEMENT MARKINGS  (ALLOWANCE ITEM)
ENGINEERING ESTIMATE	\$ 100,000.00	\$ 50,000.00	\$ 300,000.00
1) MANSON CONSTRUCTION CO.	\$ 100,000.00	\$ 50,000.00	\$ 300,000.00
2) VORTEX MARINE CONST. INC.	\$ 100,000.00	\$ 50,000.00	\$ 300,000.00

1) AVERAGE BID	\$ 100,000.00	\$ 50,000.00	\$ 300,000.00
2) STANDARD DEVIATION	\$ -	\$ -	\$ -
3) ENG. EST. - LOW BIDDER	\$ -	\$ -	\$ -

**SPECIFICATION NO. 2743**  
**MARINE IMPROVEMENTS 2012-2014**  
**PROJ. MGR.: KEVIN HARBOR**

	ITEM 95 PAY STATE WATER RESOURCES CONTROL BOARD STORMWATER POLLUTION PREVENTION PLAN (ALLOWANCE ITEM)	ITEM 96 MECHANICAL SYSTEMS  (ALLOWANCE ITEM)	ITEM 97 BERTH 93 DECK MODIFICATIONS  (ALLOWANCE ITEM)
ENGINEERING ESTIMATE	\$ 25,000.00	\$ 300,000.00	\$ 300,000.00
1) MANSON CONSTRUCTION CO.	\$ 25,000.00	\$ 300,000.00	\$ 300,000.00
2) VORTEX MARINE CONST. INC.	\$ 25,000.00	\$ 300,000.00	\$ 300,000.00
1) AVERAGE BID	\$ 25,000.00	\$ 300,000.00	\$ 300,000.00
2) STANDARD DEVIATION	\$ -	\$ -	\$ -
3) ENG. EST. - LOW BIDDER	\$ -	\$ -	\$ -

**SPECIFICATION NO. 2743**  
**MARINE IMPROVEMENTS 2012-2014**  
**PROJ. MGR.: KEVIN HARBOR**

	GRAND TOTAL ITEMS 1 - 98	
ENGINEERING ESTIMATE	\$	21,019,950.00
1) MANSON CONSTRUCTION CO.	\$	22,217,400.00
2) VORTEX MARINE CONST. INC.	\$	24,336,400.00

1) AVERAGE BID	\$	23,276,900.00
2) STANDARD DEVIATION	\$	1,498,359.27
3) ENG. EST. - LOW BIDDER	\$	(1,197,450.00)



SHAUN SHAHRESTANI  
 Chief Harbor Engineer  
 Construction Division