

Preliminary Economic Cost Estimate Update May 15, 2013

MARKUPS ARE AS FOLLOWS: JOOH - 15%, - HOOH -5% - Profit - 10%. Bond 2%

The stone would be transported to the beach by trucks from the quarries. All materials will be unloaded by heavy equipment and placed according to the designed profile placement profile for resisting the tidal erosion action on this beach.

This resort beach is very active through all seasons of the year. the contractor is required to proceed with all construction activities, taking into consideration the public safety. The estimator assumes that the contractor will make excavations taking into consideration the tides, and take advantage the tides as he excavates and backfills after installing the geomembrane and stone layers. It is also assumed that the contractor will backfill all deep excavation properly and rough grade the construction site everyday. The revetment structure is to built along 2,100 linear feet of beach that extends to the ocean side approximately 60 feet. It is assumed the contractor will not receive approvals to stockpile significant quantities of stone on the beach. Coordination and scheduling stone deliveries is critical.

This preliminary estimate is the (A). TEN YEAR PLAN option: Riprap (Stone) placements.

THIS IS A PRELIMINARY ESTIMATE COVERING a plan referred to as the " Nantasket Concept Revetment dated November 2009. This cost estimate incorporates the revetment design for Nantasket's zone 2. (A), this location does not have wall protection. The length of the protection is 2,100 feet.

Estimated by CENAE-EP-DE

Designed by

Prepared by William McIntyre

Preparation Date 5/16/2013

Effective Date of Pricing 5/16/2013

Estimated Construction Time 200 Days

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Description	Quantity	UOM	LaborCost	MatlCost	EQCost	SubBidCost	BareCost	ContractCost	ProjectCost
<b>Project Cost Summary</b>			<b>1,129,648.68</b>	<b>1,167,408.58</b>	<b>589,319.52</b>	<b>0.00</b>	<b>2,886,376.78</b>	<b>4,418,487.50</b>	<b>4,418,487.50</b>
			25.8744	26.7392	13.4982	0.0000	66.1118	101.2045	101.2045
<b>STONE - Modified - 10 Year Option</b>	<b>43,659.0000</b>	<b>CY</b>	<b>1,129,648.68</b>	<b>1,167,408.58</b>	<b>589,319.52</b>	<b>0.00</b>	<b>2,886,376.78</b>	<b>4,418,487.50</b>	<b>4,418,487.50</b>
			38,300.3394	4,333.5800	572.7264	0.0000	43,206.6458	66,662.2348	66,662.2348
<b>0001 GENERAL CONDITIONS</b>	<b>1.0000</b>	<b>EA</b>	<b>38,300.34</b>	<b>4,333.58</b>	<b>572.73</b>	<b>0.00</b>	<b>43,206.65</b>	<b>66,662.23</b>	<b>66,662.23</b>
			736.8000	0.0000	572.7264	0.0000	1,309.5264	1,908.0509	1,908.0509
<b>0001A Mobilization and Demobilization</b>	<b>1.0000</b>	<b>EA</b>	<b>736.80</b>	<b>0.00</b>	<b>572.73</b>	<b>0.00</b>	<b>1,309.53</b>	<b>1,908.05</b>	<b>1,908.05</b>
			37,563.5394	2,665.5800	0.0000	0.0000	40,229.1194	62,563.0991	62,563.0991
<b>0001B Survey Work and Equipment</b>	<b>1.0000</b>	<b>EA</b>	<b>37,563.54</b>	<b>2,665.58</b>	<b>0.00</b>	<b>0.00</b>	<b>40,229.12</b>	<b>62,563.10</b>	<b>62,563.10</b>
			43,342.8980	150,880.0000	83,673.7193	0.0000	277,896.6173	376,221.9788	376,221.9788
<b>0002 REVETMENT EXCAVATIONS</b>	<b>1.0000</b>	<b>EA</b>	<b>43,342.90</b>	<b>150,880.00</b>	<b>83,673.72</b>	<b>0.00</b>	<b>277,896.62</b>	<b>376,221.98</b>	<b>376,221.98</b>
			38,681.8980	150,880.0000	71,359.7885	0.0000	260,921.6865	352,723.3383	352,723.3383
<b>0002A Excavation for toe of Rip Rap</b>	<b>1.0000</b>	<b>EA</b>	<b>38,681.90</b>	<b>150,880.00</b>	<b>71,359.79</b>	<b>0.00</b>	<b>260,921.69</b>	<b>352,723.34</b>	<b>352,723.34</b>
			4,661.0000	0.0000	12,313.9308	0.0000	16,974.9308	23,498.6405	23,498.6405
<b>0002B Grade Base for Rip Rap</b>	<b>1.0000</b>	<b>EA</b>	<b>4,661.00</b>	<b>0.00</b>	<b>12,313.93</b>	<b>0.00</b>	<b>16,974.93</b>	<b>23,498.64</b>	<b>23,498.64</b>
			0.7753	1.2606	0.0323	0.0000	2.0682	3.2040	3.2040
<b>0003 GEOTEXTILE PLACEMENT</b>	<b>20,130.0000</b>	<b>SY</b>	<b>15,607.16</b>	<b>25,375.00</b>	<b>650.33</b>	<b>0.00</b>	<b>41,632.49</b>	<b>64,496.10</b>	<b>64,496.10</b>
			1,016,346.3886	984,975.0000	473,125.6658	0.0000	2,474,447.0544	3,839,555.7926	3,839,555.7926
<b>0004 STONE</b>	<b>1.0000</b>	<b>EA</b>	<b>1,016,346.39</b>	<b>984,975.00</b>	<b>473,125.67</b>	<b>0.00</b>	<b>2,474,447.05</b>	<b>3,839,555.79</b>	<b>3,839,555.79</b>
			30,980.0000	0.0000	101,138.8962	0.0000	132,118.8962	181,456.5793	181,456.5793
<b>0004A SITE TRUCKING</b>	<b>1.0000</b>	<b>EA</b>	<b>30,980.00</b>	<b>0.00</b>	<b>101,138.90</b>	<b>0.00</b>	<b>132,118.90</b>	<b>181,456.58</b>	<b>181,456.58</b>
			24,345.0000	0.0000	12,114.0598	0.0000	36,459.0598	59,468.2076	59,468.2076
<b>0004B STOCKPILE OPERATIONS</b>	<b>1.0000</b>	<b>EA</b>	<b>24,345.00</b>	<b>0.00</b>	<b>12,114.06</b>	<b>0.00</b>	<b>36,459.06</b>	<b>59,468.21</b>	<b>59,468.21</b>
			3.1274	14.5000	3.7101	0.0000	21.3375	31.6415	31.6415
<b>0004C CRUSHED STONE</b>	<b>1,850.0000</b>	<b>CY</b>	<b>5,785.67</b>	<b>26,825.00</b>	<b>6,863.68</b>	<b>0.00</b>	<b>39,474.35</b>	<b>58,536.68</b>	<b>58,536.68</b>
			23.7628	37.0000	21.0061	0.0000	81.7689	124.6590	124.6590
<b>0004D FILTER LAYER (Gabion Stone )</b>	<b>1,850.0000</b>	<b>CY</b>	<b>43,961.12</b>	<b>68,450.00</b>	<b>38,861.32</b>	<b>0.00</b>	<b>151,272.44</b>	<b>230,619.21</b>	<b>230,619.21</b>
			11.6671	28.0000	17.6579	0.0000	57.3250	85.9460	85.9460
<b>0004E UNDERLAYER</b>	<b>8,900.0000</b>	<b>CY</b>	<b>103,837.16</b>	<b>249,200.00</b>	<b>157,155.19</b>	<b>0.00</b>	<b>510,192.35</b>	<b>764,919.54</b>	<b>764,919.54</b>
			30.8606	24.4802	6.0003	0.0000	61.3412	97.2541	97.2541
<b>0004F ARMOR LAYER</b>	<b>26,164.0000</b>	<b>CY</b>	<b>807,437.43</b>	<b>640,500.00</b>	<b>156,992.52</b>	<b>0.00</b>	<b>1,604,929.96</b>	<b>2,544,555.57</b>	<b>2,544,555.57</b>
			1,096.7175	184.5000	676.0236	0.0000	1,957.2411	3,133.1009	3,133.1009
<b>0005 CONCRETE LANDINGS</b>	<b>10.0000</b>	<b>EA</b>	<b>10,967.18</b>	<b>1,845.00</b>	<b>6,760.24</b>	<b>0.00</b>	<b>19,572.41</b>	<b>31,331.01</b>	<b>31,331.01</b>
			5,084.7273	0.0000	24,536.8377	0.0000	29,621.5650	40,220.3838	40,220.3838
<b>0006 BACKFILLS AT NEW STRUCTURE</b>	<b>1.0000</b>	<b>EA</b>	<b>5,084.73</b>	<b>0.00</b>	<b>24,536.84</b>	<b>0.00</b>	<b>29,621.56</b>	<b>40,220.38</b>	<b>40,220.38</b>