



**HUMISTON  
& MOORE  
ENGINEERS**

COASTAL  
ENGINEERING DESIGN  
AND PERMITTING

5679 STRAND COURT  
NAPLES, FLORIDA 34110  
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December 10, 2019

Gary McAlpin, Manager  
Coastal Zone Management  
Collier County Government  
2685 South Horseshoe Drive Unit 103  
Naples, FL 34104

**Re: Proposal for Collier County Beaches and Inlets Annual Monitoring for 2020**  
Collier County Contract 15-6382; HM File No 25-026.2019Beach-Monitor

Dear Gary:

Enclosed is a proposal for the Collier County Beaches and Inlets monitoring surveys and monitoring reports for 2020. The completion date for all work is estimated to be 360 days from the date of the Notice to Proceed. Rectified aerial images acquired for 2020, provided by the Collier County Property Appraiser’s Office, are to be submitted to the DEP as part of the work described below for all projects.

Note, the dates shown in the Task Description Title Line for the Scope of Work (SOW) and Budget reflect an anticipated date for the survey and are dependent upon the authorization date, project construction timing, release of the rectified aerial images, and other unforeseen conditions such as weather.

**Task 1 Collier Beach- SOW and Budget – Anticipated January/February 2020**

Conduct the annual monitoring survey for Collier Beach Nourishment Project consistent with the monitoring plan approved by the Department of Environmental Protection (DEP). This scope of work consists of DEP monuments R-10 to R-84\*. (90 profiles). A summary including beach profiles will be issued to the County for the preliminary assessment of beach fill needs for Collier County Beaches per the *Design Standard* beach width, established in 2003, and a complete monitoring report is to be submitted to the DEP in compliance with the annual monitoring.

Task 1a. Sub Total Data Collection Budget (SDI) .....	\$ 47,520 LS
Task 1b Final Report (H&M) .....	\$ 34,977 TM
<b>Total Task 1 Subtotal (SDI + H&amp;M) .....</b>	<b>\$ 82,497.50</b>

Deliverable: Copy of Monitoring Report in hard copy and provided electronically in pdf format

\*Includes beach profiles R58A, R60+518, R61+408, R61+816, and half monuments from R10 to R22.

**Task 2 Wiggins Pass - SOW and Budget – Anticipated January/February 2020**

Conduct the annual monitoring survey for the Wiggins Pass Navigation Channel Expansion and Maintenance Dredging Project consistent with the monitoring plan approved by DEP. This scope of work consists of FDEP monuments R-10 to R-22 including half monuments\*, the MHWL from R-17 NE for a minimum of 1500 feet. Stations -2+00 to 15+00 (from R-15 to R-18.5) and the navigation channel with grid lines 100 feet apart (C-3 thru C-34, CN-35 thru CN37). A complete monitoring report is to be submitted to the DEP in compliance with the annual monitoring.

Task 2a. Sub Total Data Collection Budget (SDI) ..... \$ 17,510 LS (\*Included in 1a)

Task 2b Final Report (H&M) ..... \$ 16,243 TM

**Total Task 2 Subtotal (SDI + H&M) .....\$ 33,753**

Deliverable: Copy of Monitoring Report in hard copy and provided electronically in pdf format

\*Beach profile surveys for R10 to R22 collected as part of Task 1a.

**Task 3 Doctors Pass - SOW and Budget – Anticipated January/February 2020**

Conduct the annual monitoring survey for Doctors Pass Maintenance Dredging Project consistent with the monitoring plan approved by the DEP. This scope of work consists of 77 Dredge Template Profiles and 9 beach profiles R-58A, R-58, R-59, R-60, R-60+518, R-61, R-61+408, R-61+816, and R-62.\*

A complete monitoring report is to be submitted to the DEP in compliance with the annual monitoring.

Task 3a. Sub Total Data Collection Budget (SDI) ..... \$ 11,439 LS (\*Included in 1a)

Task 3b Final Report (H&M) ..... \$ 12,125.50 TM

**Total Task 3 Subtotal (SDI + H&M) .....\$ 23,564.50**

Deliverable: Copy of Monitoring Report in hard copy and provided electronically in pdf format

\*Beach profile surveys for R58A to R62 collected as part of Task 1a.

**Task 4 Doctors Pass Erosion Control Structures - SOW and Budget – Anticipated September 2020**

Provide the annual monitoring report for the Doctors Pass Erosion Control Structures Project consistent with the monitoring plan approved by the DEP. This scope of work is based on the survey of DEP monuments R58A-400 south to R-64 (17 profiles)\*. One report is to be submitted to the DEP in compliance with the annual monitoring.

Task 4a. Sub Total Data Collection Budget (SDI) ..... \$ 9,900 LS

Task 4b Final Report (H&M) ..... \$ 11,543.50 TM

**Total Task 4 Subtotal (SDI + H&M) .....\$ 21,443.50**

Deliverable: Copy of Monitoring Report in hard copy and provided electronically in pdf format

\*Includes beach profiles R58A-400, R58A-300, R58A-150, R58A, R58A+150, R58A+300, R58A+425, R58, R58+150, R58+300, R58+600, and R59 to R64.

**Task 5 Central Marco Beach- SOW and Budget – Anticipated February/March 2020**

Conduct the annual monitoring survey for the Central Marco Beach Regrade Project consistent with the DEP permit and the requirements of the US Fish & Wildlife Service (FWS). This scope of work consists of DEP monuments R-130 to R-146\*. One report is to be submitted to the DEP and FWS in compliance with the annual monitoring.

Task 5a. Sub Total Data Collection Budget (SDI).....	\$ 17,550 LS
Task 5b Final Report (H&M) .....	\$ 9,750.50 TM
<b>Total Task 5 Subtotal (SDI + H&amp;M) .....</b>	<b>\$ 27,300.50</b>

Deliverable: Copy of Monitoring Report in hard copy and provided electronically in pdf format.

\*Survey to include R130 thru R135, R135.5, R136, R136.5, R137, R137.5, and R138 thru R148, G1 thru G5, K1 and K2 for a total of 29 profiles.

**Task 6 South Marco Beach- SOW and Budget – Anticipated February/March 2020**

Conduct the annual monitoring survey for South Marco Beach Nourishment Project consistent with the monitoring plan approved by the DEP. This scope of work consists of DEP monuments R-139 to R-148, G-1 thru G-5, and K-1 thru K-2\*. This survey scope does not include the Caxambas Pass borrow area surveyed pre and post-construction for the 2019/2020 project. One report is to be submitted to the DEP in compliance with the annual monitoring.

Task 6a. Sub Total Data Collection Budget (SDI).....	No Charge (Included in 5a)
Task 6b Final Report (H&M) .....	\$ 10,204.50 TM
<b>Total Task 6 Subtotal (SDI + H&amp;M) .....</b>	<b>\$ 10,204.50</b>

Deliverable: Copy of Monitoring Report in hard copy and provided electronically in pdf format

\*Beach profile surveys for R139 south to K2 collected as part of Task 5a.

**Task 7 The Entrance to Collier Bay - SOW and Budget – Anticipated January/February 2020**

Conduct the annual monitoring survey for the Collier Bay Entrance Channel Dredging Project to be consistent with the monitoring plan approved by the DEP as described in the permit. This scope of work consists of (1) Hideaway Beach Profile: H-15; and (13) Channel profiles: C1 thru C11, and H16\*. A report is to be submitted to the County.

Task 7a. Sub Total Data Collection Budget (SDI).....	\$ 11,250 LS
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Task 7b Final Report (H&M) ..... \$ 10,186 TM

**Total Task 7 Subtotal (SDI + H&M) .....\$ 21,436**

\*Survey to include H15, C1, C2, C3, C3.5, H16 (3), C6, C7, C8, C9, C10, C11. (14 Profiles)

**Task 8 2020 Aerial Image Book - SOW and Budget – Anticipated May/June 2020**

Prepare an aerial image book for the Collier County Beaches ranging from DEP reference monument R-1 south to R-89 and from Hideaway Beach reference monument H-16 including the entrance to Collier Bay south to DEP reference monument R-148 including Caxambas Pass. The monument locations will be overlaid along with the names of existing structures as noted in the 2019 book. The rectified images will be the latest available from the County Appraiser’s Office. The ECL, latest MHWL, and vegetation line will be shown along with the distance from each to the 2003 Baseline. A CD/DVD will be supplied containing the pdf file for the book and a total of three hardcopies will be supplied.

Task Option 8. Aerial Image Book (3 and CD) (H&M) ..... \$ 6,721TM

**Task 8 Subtotal (HM – No SDI).....\$ 6,721**

Deliverable: Copy of Aerial Book in hard copy and provided electronically in pdf format

**Grand Total (SDI + H&M) \$ 226,920.50 Tasks 1 thru 8**

Tasks will be billed on a time and materials basis, unless otherwise noted. The budgets for these tasks may therefore be considered as not-to-exceed amounts with the understanding that in the event regulatory requirements or requests from County staff result in Additional Services exceeding the estimated budget amounts, a budget amendment will be requested.

Please call if you have any questions.

Sincerely yours,

**HUMISTON & MOORE ENGINEERS**



Brett D. Moore, P.E.  
President

Estimated Summary									
SUMMARY BREAKDOWN BY TASK									
Task 1 Collier Beach							\$ 82,497.50		
Task 2 Wiggins Pass							\$ 33,753.00		
Task 3 Doctors Pass							\$ 23,564.50		
Task 4 Doctors Pass - Structures							\$ 21,443.50		
Task 5 Central Marco							\$ 27,300.50		
Task 6 South Marco							\$ 10,204.50		
Task 7 Entrance to Collier Bay							\$ 21,436.00		
Task 8 2020 Aerial Image Book							\$ 6,721.00		
							\$ 226,920.50		
SUMMARY BREAKDOWN BY SUB-TASK									
Task 1a	Collier Beach Data collection						\$ 47,520.00	LS	
Task 1b	Final Report						\$ 34,977.50	TM	
Task 2a	Wiggins Pass Data Collection						\$ 17,510.00	LS	
Task 2b	Final Report						\$ 16,243.00	TM	
Task 3a	Doctors Pass Data Collection						\$ 11,439.00	LS	
Task 3b	Final Report						\$ 12,125.50	TM	
Task 4a	Doctors Pass Structures Data Collection						\$ 9,900.00	LS	
Task 4b	Final Report						\$ 11,543.50	TM	
Task 5a	Central Marco Data Collection						\$ 17,550.00	LS	
Task 5b	Final Report						\$ 9,750.50	TM	
Task 6a	South Marco Data Collection						\$ -	LS	
Task 6b	Final Report						\$ 10,204.50	TM	
Task 7a	Entrance to Collier Bay Data Collection						\$ 11,250.00	LS	
Task 7b	Final Report						\$ 10,186.00	TM	
Task 8	2020 Aerial Image Book						\$ 6,721.00	TM	
SUMMARY									
	Sea Diversified Survey						\$ 115,169.00	(LS)	

		Rate	Time				Budget	
	Principle Engineer	\$ 206.00	67.75				\$ 13,956.50	
	Engineer	\$ 123.00	598.5				\$ 73,615.50	
	Senior Designer	\$ 114.00	100				\$ 11,400.00	
	Senior Technician	\$ 85.00	113.5				\$ 9,647.50	
	Technician	\$ 72.00	43.5				\$ 3,132.00	
	Humiston & Moore Engineers						\$ 111,751.50	(TM)
	TOTAL						\$ 226,920.50	