



Morgan & Eklund, Inc.

4909 US Highway 1
Vero Beach, Florida 32967

Phone: 772-388-5364
Fax: 772-388-3165

April 1, 2020

Indian River County
Attn: Mr. Quintin Bergman, M.S.
1801 27th Street
Vero Beach, FL 32960

**RE: 2020 Summer Semi-Annual Indian River County Coastal Monitoring Survey;
Onshore/Offshore Profiles along FDEP Range Lines R-15 to R-119**

Dear Quintin:

Morgan & Eklund, Inc. is pleased to provide you with the following proposal to furnish professional land and hydrographic survey services for the above referenced project.

Beach profiles will include R-15 through R-119, a total of 105 profile lines. All data collected will be in accordance with the FDEP-approved Physical Monitoring Plan. Morgan & Eklund, Inc. will provide the County with beach profile data in ASCII file format together with AutoCAD drawings signed by the surveyor. We will also provide FDEP submittal package. The survey will be performed in July/August 2020 with drawings and reports completed in September 2020.

In accordance with the scope of work as provided, I estimate our costs to be as follows:

I. Summer 2020 Sector 3 (R-15 to R-60, 46 Onshore/Offshore Profile Lines)

A. Establish and verify onshore horizontal/vertical survey control

Chief Surveyor		
2 hours @ \$125/hr.....	\$	250.00
 Project Surveyor/Manager		
8 hours @ \$95/hr.....	\$	760.00
 Three Man GPS Crew (RTK/GPS)		
12 hours @ \$165/hr.....	\$	1,980.00
	\$	<u>2,990.00</u>

B. Upland/onshore profile with RTK/GPS and set hubs on line for nearshore (wading) survey

Senior Survey Computer Technician 8 hours @ \$85/hr.....	\$ 680.00
Field Operations Supervisor 12 hours @ \$85/hr.....	\$ 1,020.00
Three Man GPS Crew (RTK/GPS) 24 hours @ \$165/hr.....	\$ 3,960.00
Polaris Beach Vehicle 3 days @ \$85/day.....	\$ 255.00
	<u>\$ 5,915.00</u>

C. Wading profiles +3 NAVD88 to -7 NAVD88

Three Man GPS Crew (RTK/GPS) 24 hours @ \$165/hr.....	\$ 3,960.00
Polaris Beach Vehicle 3 days @ \$85/day.....	\$ 255.00
	<u>\$ 4,215.00</u>

D. Offshore profiles -5 NAVD88 to -30 NAVD88 (46 lines)

Field Operations Supervisor 2 hours @ \$85/hr.....	\$ 170.00
Project Surveyor/Manager (Boat Operator) 24 hours @ \$95/hr.....	\$ 2,280.00
Three Man Survey Crew 20 hours @ \$125/hr.....	\$ 2,500.00
26' Parker Survey Boat 2 days @ \$500/day.....	\$ 1,000.00
Trimble RTK 2 days @ \$300/day.....	\$ 600.00
Motion Compensator 2 days @ \$200/day.....	\$ 400.00
Digital Fathometer 2 days @ \$85/day.....	\$ 170.00

Hypack Navigation Software & Computer	
2 days @ \$50/day.....	\$ 100.00
	\$ 7,220.00

E. Data reduction / drafting, FDEP format files and reports (46 lines)

Chief Surveyor	
2 hours @ \$125/hr.....	\$ 250.00
Project Surveyor/Manager	
20 hours @ \$95/hr.....	\$ 1,900.00
Senior Survey Computer Technician	
32 hours @ \$85/hr.....	\$ 2,720.00
	\$ 4,870.00
Total I A-E.....	\$ 25,210.00

II. Summer 2020 Sector 5 (R-65 to R-91, 27 Onshore/Offshore Lines)

A. Establish and verify onshore horizontal/vertical survey control

Chief Surveyor	
1.5 hours @ \$125/hr.....	\$ 187.50
Project Surveyor/Manager	
6 hours @ \$95/hr.....	\$ 570.00
Three Man GPS Crew (RTK/GPS)	
8 hours @ \$165/hr.....	\$ 1,320.00
	\$ 2,077.50

B. Upland/onshore profile with RTK/GPS and set hubs on line for nearshore (wading) survey

Senior Survey Computer Technician	
6 hours @ \$85/hr.....	\$ 510.00
Field Operations Supervisor	
8 hours @ \$85/hr.....	\$ 680.00
Three Man GPS Crew (RTK/GPS)	
12 hours @ \$165/hr.....	\$ 1,980.00
Polaris Beach Vehicle	
1.5 days @ \$85/day.....	\$ 127.50
	\$ 3,297.50

C. Wading profiles +3 NAVD88 to -7 NAVD88

Three Man GPS Crew (RTK/GPS)	
12 hours @ \$165/hr.....	\$ 1,980.00
 Polaris Beach Vehicle	
1.5 days @ \$85/day.....	\$ 127.50
	<u>\$ 2,107.50</u>

D. Offshore profiles -5 NAVD88 to -30 NAVD88 (27 lines)

Field Operations Supervisor	
1 hour @ \$85/hr	\$ 85.00
 Project Surveyor/Manager (Boat Operator)	
16 hours @ \$95/hr.....	\$ 1,520.00
 Three Man Survey Crew	
12 hours @ \$125/hr.....	\$ 1,500.00
 26' Parker Survey Boat	
1 day @ \$500/day	\$ 500.00
 Trimble RTK	
1 day @ \$300/day	\$ 300.00
 Motion Compensator	
1 day @ \$200/day	\$ 200.00
 Digital Fathometer	
1 day @ \$85/day	\$ 85.00
 Hypack Navigation Software & Computer	
1 day @ \$50/day	\$ 50.00
	<u>\$ 4,240.00</u>

E. Data reduction / drafting, FDEP format files and reports (27 lines)

Chief Surveyor	
1.5 hours @ \$125/hr.....	\$ 187.50
 Project Surveyor/Manager	
12 hours @ \$95/hr.....	\$ 1,140.00
 Senior Survey Computer Technician	
21 hours @ \$85/hr.....	\$ 1,785.00
	<u>\$ 3,112.50</u>
 Total II A-E	\$ 14,835.00

III. Summer 2020 Sector 7 (R-97 to R-108, 12 Onshore/Offshore Lines)**A. Establish and verify onshore horizontal/vertical survey control**

Chief Surveyor		
1 hour @ \$125/hr	\$	125.00
 Project Surveyor/Manager		
2 hours @ \$95/hr.....	\$	190.00
 Three Man GPS Crew (RTK/GPS)		
3 hours @ \$165/hr.....	\$	495.00
	\$	<u>810.00</u>

B. Upland/onshore profile with RTK/GPS and set hubs on line for nearshore (wading) survey

Senior Survey Computer Technician		
2 hours @ \$85/hr.....	\$	170.00
 Field Operations Supervisor		
3 hours @ \$85/hr.....	\$	255.00
 Three Man GPS Crew (RTK/GPS)		
6 hours @ \$165/hr.....	\$	990.00
 Polaris Beach Vehicle		
1 days @ \$85/day.....	\$	85.00
	\$	<u>1,500.00</u>

C. Wading profiles +3 NAVD88 to -7 NAVD88

Three Man GPS Crew (RTK/GPS)		
6 hours @ \$165/hr.....	\$	990.00
 Polaris Beach Vehicle		
1 days @ \$85/day.....	\$	85.00
	\$	<u>1,075.00</u>

D. Offshore profiles -5 NAVD88 to -30 NAVD88 (12 lines)

Field Operations Supervisor		
1 hour @ \$85/hr	\$	85.00
 Project Surveyor/Manager (Boat Operator)		
6 hours @ \$95/hr.....	\$	570.00

Three Man Survey Crew 5 hours @ \$125/hr.....	\$	625.00
26' Parker Survey Boat .5 day @ \$500/day	\$	250.00
Trimble RTK .5 day @ \$300/day	\$	150.00
Motion Compensator .5 day @ \$200/day	\$	100.00
Digital Fathometer .5 day @ \$85/day	\$	42.50
Hypack Navigation Software & Computer .5 day @ \$50/day	\$	25.00
	\$	<u>1,847.50</u>

E. Data reduction / drafting, FDEP format files and reports (12 lines)

Chief Surveyor 1 hours @ \$125/hr.....	\$	125.00
Project Surveyor/Manager 5 hours @ \$95/hr.....	\$	475.00
Senior Survey Computer Technician 9 hours @ \$85/hr.....	\$	<u>765.00</u>
	\$	<u>1,365.00</u>
Total III A-E.....	\$	6,597.50

IV. Summer 2020 Countywide (R-61 to R-64, R-92 to R-96, and R-109 to R-119, 20 Onshore/Offshore Lines)

A. Establish and verify onshore horizontal/vertical survey control

Chief Surveyor 1 hour @ \$125/hr	\$	125.00
Project Surveyor/Manager 4 hours @ \$95/hr.....	\$	380.00
Three Man GPS Crew (RTK/GPS) 6 hours @ \$165/hr.....	\$	<u>990.00</u>
	\$	<u>1,495.00</u>

B. Upland/onshore profile with RTK/GPS and set hubs on line for nearshore (wading) survey

Senior Survey Computer Technician		
2 hours @ \$85/hr.....	\$	170.00
Field Operations Supervisor		
4 hours @ \$85/hr.....	\$	340.00
Three Man GPS Crew (RTK/GPS)		
10 hours @ \$165/hr.....	\$	1,650.00
Polaris Beach Vehicle		
1 days @ \$85/day.....	\$	85.00
	\$	<u>2,245.00</u>

C. Wading profiles +3 NAVD88 to -7 NAVD88

Three Man GPS Crew (RTK/GPS)		
10 hours @ \$165/hr.....	\$	1,650.00
Polaris Beach Vehicle		
1 days @ \$85/day.....	\$	85.00
	\$	<u>1,735.00</u>

D. Offshore profiles -5 NAVD88 to -30 NAVD88 (20 lines)

Field Operations Supervisor		
1 hour @ \$85/hr	\$	85.00
Project Surveyor/Manager (Boat Operator)		
11 hours @ \$95/hr.....	\$	1,045.00
Three Man Survey Crew		
10 hours @ \$125/hr.....	\$	1,250.00
26' Parker Survey Boat		
1 day @ \$500/day	\$	500.00
Trimble RTK		
1 day @ \$300/day	\$	300.00
Motion Compensator		
1 day @ \$200/day	\$	200.00
Digital Fathometer		
1 day @ \$85/day	\$	85.00

Hypack Navigation Software & Computer	
1 day @ \$50/day	\$ 50.00
	\$ 3,515.00

E. Data reduction / drafting, FDEP format files and reports (20 lines)

Chief Surveyor	
1 hours @ \$125/hr.....	\$ 125.00

Project Surveyor/Manager	
8 hours @ \$95/hr.....	\$ 760.00

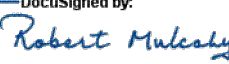
Senior Survey Computer Technician	
14 hours @ \$85/hr.....	\$ 1,190.00
	\$ 2,075.00

Total IV A-E	\$ 11,065.00
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TOTAL COST I-IV	\$ 57,707.50
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As always, Morgan & Eklund, Inc. is looking forward to working with you and Indian River County on this project.

Sincerely,

DocuSigned by:

 4D7733659248422...
 Robert Mulcahy
 CEO

DWC:dmc

Billing: project will be invoiced monthly