Julien Devisse
Project Manager
Aptim Coastal Planning & Engineering of North Carolina, Inc.

4038 Masonboro Loop Road
Wilmington, North Carolina
Tel: +1 910-791-9494
Julien.Devisse@aptim.com

December 22, 2017

Robert L. Outten
Dare County
954 Marshall C Collins Dr. Room 286
Manteo, NC 27954

Re: Dare County Beach Nourishment Project
Recommendation for Payment of Invoice 008 (Revised December 20, 2017)
Great Lakes Dredge and Dock (GLDD)

Dear Mr. Outten:

Attached is GLDD's invoice for work performed through December 20, 2017. **We recommend final payment in the amount of $113,386.09.** The line items contained in the invoice are discussed below.

Item # I.C: Compliance Surveys of the Borrow Area

GLDD has conducted post-construction compliance surveys of the borrow areas and submitted the surveys to the Engineer. GLDD has met the specifications of GC-12 and is therefore eligible for payment of 50% of the lump sum price. Therefore, we recommend payment in the requested amount of $32,000.

Item # III.C: Dune Realignment (Kitty Hawk)

GLDD requested payment for the relocation of the Kitty Hawk dune between Stations 35+00 and 46+00 as detailed in Change Order #3. The cost for 2 bulldozers and beach security to realign the dune between Stations 35+00 and 46+00 was estimated at $572.38 per hour. It was documented that the dune realignment took a total of 5.50 hours to complete. Therefore, we recommend payment in the requested amount of $3,148.09.

Item # V.A: Sand Fencing (Kitty Hawk)

GLDD requested payment for the installation of 17 10-Foot Sections of sand fencing at $40.00 per section for a total cost of $680.00. We have verified that a total of 1,917 sections were installed within the Town of Kitty Hawk. GLDD has met the specification SGC-19; therefore, we recommend payment of the requested amount, which is $680.00.

Retainage

The contract specifies a 5% retainage on all payments. The cost of the work performed during this pay period is $35,829.09; however, no retainage is recommended to be held as this is the final pay application.

As previously discussed, GLDD has agreed that the County should retain $9,755 of the retainage to correct items included in the tentative list of items to be completed associated with the Duck project. Therefore, the $9,755 was documented in Change Order #4 and was deducted from Item I.A.

Following the release of retainage in the amount of $77,558.00, the balance of the retainage held by the County is $0.00 and all contract items have been paid in full. No additional pay applications are eligible for payment.

Payment Summary

Item No.	Item	Unit	CO #4 Quantity	Unit Prices	CO#4 Cost	Quantity To Date	Invoice #8 Earnings
I. A.	Mobilization/Demobilization	L.S.	1	$8,140,245.00	$8,140,245.00	100%	$0.00
I.A-1	Mobilization/Demobilization (Southern Shores)	L.S.	1	$85,000.00	$85,000.00	100%	$0.00
I. B.	Performance and Payment Bond	L.S.	1	$300,000.00	$300,000.00	100%	$0.00
I. C.	Compliance Surveys of Borrow Area	L.S.	1	$64,000.00	$64,000.00	100%	$32,000.00
I. D.	Sea Turtle Abundance Trawling	Days	0	$4,600.00	$0.00	0	$0.00
II. A.	Hydraulic Beach Fill (Town of Duck)	C.Y.	1,129,747	$8.60	$9,715,824.20	1,129,747.00	$0.00
II. A-1.	Optional Additional 20% Beach Fill if only Borrow Area C is used to Construct the Town of Duck	C.Y.	133,768	$0.00	$0.00	133,768.00	$0.00
II. B.	Staging Area Beach Access Mats	L.F.	735	$105.00	$77,175.00	735.00	$0.00
III. A.	Hydraulic Beach Fill (Town of Kitty Hawk)	C.Y.	1,765,000	$7.65	$13,502,250.00	1,765,000.00	$0.00
III. B.	Hydraulic Beach Fill (Southern Shores)	C.Y.	80,000	$9.70	$776,000.00	80,000.00	$0.00
III. C.	Kitty Hawk Dune Realignment (Stations 35+00 to 46+00)	Hours	5.50	$572.38	$3,148.09	5.50	$3,148.09
IV. A.	Hydraulic Beach Fill (Town of Kill Devil Hills)	C.Y.	817,359	$7.40	$6,048,456.60	817,359.00	$0.00
	Additive Items						
V. A.	Sand Fencing (Kitty Hawk)	10 Ft Sections	1,917	$40.00	$76,680.00	1,917	$680.00
	Discretionary Items						
VI. A.	Mobilization/Demobilization for Beach Discharge Screening	L.S.	0	$70,000.00	$0.00	0	$0.00
VI. B.	Beach Discharge Screening	Days	0	$3,500.00	$0.00	0	$0.00
VI. C.	Removal of Screened Beach Discharge Material	C.Y.	0	$11.55	$0.00	0	$0.00
VI. D.	Dredge Intake Screening	C.Y.	0	$2.30	$0.00	0	$0.00
VI. E.	Mobilization for Removal of Oversized Material from Constructed Beach	L.S.	0	$8,000.00	$0.00	0	$0.00

VI. F.	Removal of Oversized Material from Constructed Beach	Days	0	$3,200.00	$0.00	0	$0.00
VII. A.	Turbidity Monitoring	Days	0	$2,250.00	$0.00	0	$0.00
VII. B.	Mobilization/Demobilization for Tilling	L.S.	0	$5,500.00	$0.00	0	$0.00
VII. C.	Beach Tilling	Acre	0	$585.00	$0.00	0	$0.00
VII. D.	Sea Turtle Relocation Trawling	Days	163.1625	$4,550.00	$742,389.38	163.1625	$0.00
VII. E.	Hopper Dredge Standby Rate (Per Dredge)	Days	0	$210,000.00	$0.00	0	$0.00
VII. F.	Cutterhead Dredge Standby Rate (Per Dredge)	Days	0	$177,500.00	$0.00	0	$0.00
VIII. A.	Sand Fencing (Kill Devil Hills)	10 Ft Sections	0	$40.00	$0.00	0	$0.00
VIII. B.	Sand Fencing (Duck)	10 Ft Sections	0	$40.00	$0.00	0	$0.00

Total Earned To Date:	**$39,531,168.27**
Total Retainage Withheld:	**$0.00**
Earnings Minus Retainage:	**$39,531,168.27**
Previous Paid:	**$39,417,782.18**
Earnings This Period:	**$35,828.09**
Retainage This Period:	**$0.00**
Retainage Released:	**$77,558.00**
Amount Due This Invoice:	**$113,386.09**

Note Quantities and Unit Price represent values established in CO #4.

The following table provides a breakdown of costs incurred for each Town's project based on Invoice 008. Items I.A through I.D, excluding item I.A-1, are being paid for at a pro-rated basis by the Towns of Duck, Kitty Hawk and Kill Devil Hills. These pro-rated percentages, which are based on the initial contract volume being placed in each Town, are Town of Duck – 31.2%, Town of Kitty Hawk – 46.6%, and Town of Kill Devil Hills – 22.2%. As established by CO#2, the Town of Southern Shores has a separate mobilization and demobilization fee for which it will pay 100% of the cost.

Town	Item	Invoice #8 Total
Duck	Items I.A. - I.D.	$9,984.00
	Staging Areas Beach Access Mats	$0.00
	Hydraulic Beach Fill	$0.00
	Relocation Trawling	$0.00
	SUB TOTAL:	$9,984.00
	RETAINAGE (5%)	$0.00
	RETAINAGE RELEASED:	$0.00
	TOTAL DUE:	**$9,984.00**
Southern Shores	Items I.A. - I.D.	$0.00
	Hydraulic Beach Fill	$0.00
	Relocation Trawling	$0.00
	SUB TOTAL:	$0.00
	RETAINAGE (5%)	$0.00
	RETAINAGE RELEASED:	$0.00
	TOTAL DUE:	**$0.00**
Kitty Hawk	Items I.A. - I.D.	$14,912.00
	Hydraulic Beach Fill	$0.00
	Dune Relocation	$3,148.09
	Sand Fencing	$680.00
	Relocation Trawling	$0.00
	SUB TOTAL:	$18,740.09
	RETAINAGE (5%)	$0.00
	RETAINAGE RELEASED	$77,558.00
	TOTAL DUE:	**$96,298.09**
Kill Devil Hills	Items I.A. - I.D.	$7,104.00
	Hydraulic Beach Fill	$0.00
	Relocation Trawling	$0.00
	SUB TOTAL:	$7,104.00
	RETAINAGE (5%)	$0.00
	RETAINAGE RELEASED:	$0.00
	TOTAL DUE:	**$7,104.00**
	Earnings This Period:	**$35,828.09**
	Retainage This Period:	**$0.00**
	Retainage Released This Period:	**$77,558.00**
	Amount Due This Invoice:	**$113,386.09**

Additionally, the following table provides a breakdown by Town of the total payout to Great Lakes incurred by each Town's project. This includes construction costs to Great Lakes only, additional costs such as construction administration and turtle monitoring are not included.

Town	Item	Project Total
Duck	Items I.A. - I.D.	$2,646,613.00
	Staging Areas Beach Access Mats	$77,175.00
	Hydraulic Beach Fill	$9,715,824.20
	Relocation Trawling	$273,739.38
	TOTAL PAID:	**$12,713,351.58**
Southern Shores	Items I.A. - I.D.	$85,000.00
	Hydraulic Beach Fill	$776,000.00
	Relocation Trawling	$18,200.00
	TOTAL PAID:	**$879,200.00**
Kitty Hawk	Items I.A. - I.D.	$3,967,524.00
	Hydraulic Beach Fill	$13,502,250.00
	Dune Relocation	$3,148.09
	Sand Fencing	$76,680.00
	Relocation Trawling	$309,400.00
	TOTAL PAID:	**$17,859,002.09**
Kill Devil Hills	Items I.A. - I.D.	$1,890,108.00
	Hydraulic Beach Fill	$6,048,456.60
	Relocation Trawling	$141,050.00
	TOTAL PAID:	**$8,079,614.60**
	Project Total Paid:	**$39,531,168.27**

Please call me if you have any questions.

Sincerely,

APTIM COASTAL PLANNING & ENGINEERING OF NORTH CAROLINA, INC.

Julien Devisse, P.E.
Project Manager

cc: Ken Willson, Aptim
Chris Layton, Town of Duck
Peter Rascoe, Town of Southern Shores
Andy Stewart, Town of Kitty Hawk
Debbie Diaz, Town of Kill Devil Hills

P:\North Carolina\DARE COUNTY PROJECTS\6362089241_Dare County Construction Services\Correspondence\Pay Recommendation Letters\Pay App #8\GLDD Payment Request Recommendation #8.docx