AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT	1. CONTRACT ID CODE	PAGE	OF PAGES
		1	1

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE NO.	5. PROJECT NO. *(If applicable)*
0007	June 20, 2001	W32CS510401967	

6. ISSUED BY CODE	W32RY2	7. ADMINISTERED BY CODE	

JACKSONVILLE DISTRICT OFFICE
US ARMY CORPS OF ENGINEERS
PO BOX 4970
JACKSONVILLE, FL 32232-0019

8. NAME AND ADDRESS OF CONTRACTOR *(No., street county state & zip code)*		9A. AMENDMENT OF SOLICITATION NO.
	X	DACW17-01-B-0007
		9B. DATED *(SEE ITEM 11)* June 20, 2001
		10A. MODIFICATION OF CONTRACT/ ORDER NO.
		10B. DATED *(SEE ITEM 13)*
CODE FACILITY CODE		

11. THIS ITEM ONLY APPLIES TO AMENDMENT OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is ☐ extended, ☐ not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted: or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(If required)*

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

☐	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: *(Specify authority)* THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A
☐	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES *(such as changes in paying office, appropriation date, etc.)* SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
☐	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
☐	D. OTHER *(Specify type of modification and authority)*

E. IMPORTANT: Contractor ☒ is not, ☐ is required to sign this document and return -0- copies to the issuing office

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible).*

Jacksonville Harbor, Construction Dredging (Phase 1), 38-Foot Project, Cut-F-through Cut-G, Duval County, Florida

Above Solicitation Bid Opening Date Remains: Monday, June 25, 2001, 2:00pm, Room 205. (Bids must be delivered to room 867 before 2:00pm, June 25, 2001.)

This amendment posted on Jacksonville District Web Site Only.

15A. NAME AND TITLE OF SIGNER *(Type or print)*		16A. NAME AND TITLE OF CONTRACTING OFFICER *(Type or print)*	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
_____ *(Signature of person authorized to sign)*		BY _____ *(Signature of Contracting Officer)*	

SF 30 CONTINUATION SHEET

1. SPECIFICATION CHANGES: None

2. DRAWING CHANGE: None

3. BID OPENING DATE: Remains the Same.

Great Lakes Dredge and Dock Company has provided this information from exploration of Cuts "F" and "G", consisting of jet probes and vibrocores. These results are attached. The Corps of Engineers is making this information available to prospective bidders for "information purposes only". The Corps of Engineers is making no representations concerning the Great Lakes investigation. It is the responsibility of the bidders to evaluate this data and to use it as appropriate.

JET PROBING OPERATIONS AT BLOUNT ISLAND CHANNEL

Probing operations were carried out on 8 May 2001. Work was performed from a 46 ft survey vessel held on location with an anchor. Jet probes were taken using a diesel-powered 2 in centrifugal trash pump and a 1 in pipe.

Positioning was obtained using a differential GPS and Hypac software. Penetration was measured as depth below water level and a tide correction was applied by taking a reading from the Corps of Engineers' tide board near the mouth of the Blount Island Channel.

To make a probe, the vessel was placed near the desired location and an anchor was dropped. The vessel was allowed to sit on one anchor until its position stabilized. Then the pipe was lowered over the side. The pipe was marked with electrical tape in 1 ft intervals so that penetration could be measured. The pump was started and the pipe was allowed to penetrate the sediment. Generally the pipe penetrated easily under its own weight at first. With depth the pipe had to be surged up and down to get further penetration. This surging was performed with two men lifting and pushing the pipe down.

Once the maximum penetration was reached, the crew attempted further penetration for about a minute before terminating the probing.

The final penetration was read from the markings on the pipe, and the tide reading was subtracted from this. Jet probe locations for this project were as follows:

Florida East Zone (NAD83)		
Easting, ft	**Northing, ft**	**Level of Refusal, ft MLW**
483386	2206304	41.5
483440	2206960	46.2
483112	2205749	36.7
482806	2204770	49.2

VIBROCORING OPERATIONS AT BLOUNT ISLAND CHANNEL

Description of Equipment
Cores were taken using the P-291 pneumatic corer manufactured by Conrad-Stanen BV. This is a rigid frame unit with a footprint of approximately 15 ft x 6 ft and it can be configured to take cores of either 10 ft or 20 ft length. Both configurations were used for this project, with VC-11 and VC-15 thru VC-17 taken as 20 ft cores and all others as 10 ft cores. The frame is connected by hoses to a control panel that is in turn powered by an air compressor. For this work an air compressor that delivered 180 cfm at 80 psi was used. Cores are taken in a rigid steel core barrel with a clear plastic liner and the recovered cores are approximately 2-5/8" in diameter.

During coring the unit itself sits on the seabed and is connected to the control panel on the deck of the support vessel by an umbilical. The umbilical contains the air supply and return hoses and the differential pressure hoses for measuring penetration of the unit. Penetration is measured with a simple differential manometer where one end is fixed to the top of the frame and the other to the coring head. As the corer penetrates the sediment, the difference in level between the coring head and the top of the frame increases. Penetration is monitored on the control panel.

Coring Operations
Coring operations were carried out from 22 to 24 May 2001. Work was performed from a crane barge. The barge measured 120 ft x 45 ft and was equipped with a 100 ton American crane. The barge was moved from location to location with a tug boat and kept at the coring location with spuds.

Positioning was obtained using a Trimble GPS Pathfinder Pro XRS differential GPS. This unit was mounted in a backpack and obtained differential signals from satellites. Elevation was obtained by measuring depth of penetration and taking the surface elevation from the survey in the tender documents.

To obtain a core, the vessel was placed at the desired location and the corer suspended over the side of the barge. Airflow was started to the core barrel and the entire coring unit was lowered to the bottom of the channel. This corer has no outlet ports at the top of the barrel, so water had to be kept from the inside of the barrel with air pressure before the sample was taken. Once on bottom, the airflow to the vibrating head was started and airflow to the barrel was stopped. After a short penetration the residual pressure in the barrel was relieved to allow the sample to enter the core barrel freely.

Penetration was monitored on the control panel on deck. When penetration was complete or if the penetration did not increase significantly for some time, the airflow was stopped and the unit was returned to the deck. The core barrel and liner were removed and the liner was split longitudinally. A measurement of recovery was made and the material was logged and photographed.

Borehole: VC-1
Date Drilled: 22 May 2001
Elevation: -34.5 ft MLW

Easting: 480974 ft
Northing: 2200908 ft

Coordinates are in Florida East Zone (NAD83)

Depth, ft / Elev, ft	Description	Legend	Sampler	N blows/foot	Fines, %	+ + Atterberg Limits, % ● Moisture Content, % 15 30 45 60 75 ■ Wet Unit Weight, pcf 110 120 130 140 150	● Penetrometer, s_u, ksf 1.0 2.0 3.0 4.0 ■ UCS, q_u, ksi 0.6 1.2 1.8 2.4 3.0	TCR	RQD	fractures/ft
-35	Light brown and gray silty fine SAND (SM), assumed loose to medium dense - with shell fragements and occasional gravel, 3 to 3.5ft depth									
-5 -40	Light brown fine SAND (SP), with occasional light gray clay nodules, assumed medium dense - with organic stains at 7.5ft depth									
-10 -45	Penetration = 9.8 ft Recovery = 9.8 ft									
-15 -50										
-20 -55										
-25 -60										
-30 -65										
-35 -70										
-40 -75										

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PROJECT: Jacksonville Harbor, Cuts F thru G

KDJ_PAPER_LOG BLOUNT.GPJ MASTER.GDT 6-15-01

Borehole: VC-2
Date Drilled: 23 May 2001
Elevation: -34.2 ft MLW

Easting: 481298 ft
Northing: 2200983 ft

Coordinates are in Florida East Zone (NAD83)

Depth, ft / Elev, ft	Description	Legend	Sampler	N blows/foot	Fines, %	+ + Atterberg Limits, % ● Moisture Content, % 15 30 45 60 75 ■ Wet Unit Weight, pcf 110 120 130 140 150	● Penetrometer, s_u, ksf 1.0 2.0 3.0 4.0 ■ UCS, q_u, ksi 0.6 1.2 1.8 2.4 3.0	TCR	RQD	fractures/ft
-35	Dark gray silty fine to medium SAND with shell fragments (SM), assumed medium dense									
	Light gray fine SAND with silt and occasional gravel and clay nodules, with organic partings throughout (SP-SM) - with organic seam at 1.8ft depth									
5 -40										
	Penetration = 8 ft Recovery = 4.8 ft Loss assumed distributed throughout penetration interval. Results reported are from attempt 5 at this location.									
10 -45										
15 -50										
20 -55										
25 -60										
30 -65										
35 -70										
40 -75										

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PROJECT: Jacksonville Harbor, Cuts F thru G

Borehole: VC-3
Date Drilled: 22 May 2001
Elevation: -35.8 ft MLW

Easting: 481472 ft
Northing: 2201192 ft

Coordinates are in Florida East Zone (NAD83)

Depth, ft / Elev, ft	Description	Legend	Sampler	N blows/foot	Fines, %	+ + Atterberg Limits, % / ● Moisture Content, % (15 30 45 60 75) / ■ Wet Unit Weight, pcf (110 120 130 140 150)	● Penetrometer, s_u, ksf (1.0 2.0 3.0 4.0) / ■ UCS, q_u, ksi (0.6 1.2 1.8 2.4 3.0)	TCR	RQD	fractures/ft
-40 / -5	Dark brown silty fine to medium SAND (SM)									
	Light gray very silty SAND (SM), likely medium dense to dense (completey weathered LIMESTONE)									
	Light brown silty SAND to fine GRAVEL (completely to highly weathered LIMESTONE)									
	- with layers of very weak to weak LIMESTONE 2" thick from 2ft to 3ft depth									
	- shoe packed with coarse sand/fine gravel with little silt									
	Penetration = 4.9 ft									
	Recovery = 4.9 ft									
-45 / -10										
-50 / -15										
-55 / -20										
-60 / -25										
-65 / -30										
-70 / -35										
-75 / -40										
-80										

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PROJECT: Jacksonville Harbor, Cuts F thru G

Borehole: VC-4
Date Drilled: 23 May 2001
Elevation: -35.0 ft MLW

Easting: 481780 ft
Northing: 2201914 ft

Coordinates are in Florida East Zone (NAD83)

Depth, ft / Elev, ft	Description	Legend	Sampler	N blows/foot	Fines, %	+ + Atterberg Limits, % ● Moisture Content, % 15 30 45 60 75 ■ Wet Unit Weight, pcf 110 120 130 140 150	● Penetrometer, s_u, ksf 1.0 2.0 3.0 4.0 ■ UCS, q_u, ksi 0.6 1.2 1.8 2.4 3.0	TCR	RQD	fractures/ft
	Dark gray silty fine SAND (SM)									
	Dark gray silty SAND and GRAVEL (completely weathered LIMESTONE)									
	Penetration = 2.5 ft Recovery = 1.1 ft Loss assumed to be distributed above 2ft depth.									
-5 -40										
-10-45										
-15-50										
-20-55										
-25-60										
-30-65										
-35-70										
-40-75										

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PROJECT: Jacksonville Harbor, Cuts F thru G

Borehole: VC-5
Date Drilled: 23 May 2001
Elevation: -33.8 ft MLW

Easting: 481972 ft
Northing: 2202591 ft

Coordinates are in Florida East Zone (NAD83)

Depth, ft / Elev, ft	Description	Legend	Sampler	N blows/foot	Fines, %	+ + Atterberg Limits, % ● Moisture Content, % 15 30 45 60 75 ■ Wet Unit Weight, pcf 110 120 130 140 150	● Penetrometer, s_u, ksf 1.0 2.0 3.0 4.0 ■ UCS, q_u, ksi 0.6 1.2 1.8 2.4 3.0	TCR	RQD	fractures/ft
-35	Light gray fine to medium SAND with silt (SP-SM) and shell fragments - silty at surface									
-5 / -40	Light gray silty fine to coarse SAND with gravel (SM) (completely weathered LIMESTONE) - becoming gray sandy GRAVEL (highly to moderately weathered LIMESTONE) below 5.3ft depth - very weak to weak rock below 5.3ft Penetration = 6 ft Recovery = 4.2 ft Loss assumed to be distributed above 3.3ft depth									
-10 / -45										
-15 / -50										
-20 / -55										
-25 / -60										
-30 / -65										
-35 / -70										
-40 / -75										

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PROJECT: Jacksonville Harbor, Cuts F thru G

Borehole: VC-6
Date Drilled: 23 May 2001
Elevation: -33.7 ft MLW

Easting: 482114 ft
Northing: 2203091 ft

Coordinates are in Florida East Zone (NAD83)

Depth, ft / Elev, ft	Description	Legend	Sampler	N blows/foot	Fines, %	+ + Atterberg Limits, % ● Moisture Content, % 15 30 45 60 75 ■ Wet Unit Weight, pcf 110 120 130 140 150	● Penetrometer, s_u, ksf 1.0 2.0 3.0 4.0 ■ UCS, q_u, ksi 0.6 1.2 1.8 2.4 3.0	TCR	RQD	fractures/ft
-35	Light brown fine SAND (SP), assumed loose to medium dense - thin layer of dark gray silt at surface - becoming gravelly with occasional cobbles of shelly LIMESTONE below 0.8ft depth									
-5 / -40	Light brown, weak, moderately to highly weathered SANDSTONE - recovered in layers of rock up to 4" thick with some sand									
-10 / -45	Light gray, SAND and GRAVEL alternating with silty SAND (highly to completely weathered LIMESTONE) - layers alternate with approx. 6" thickness - becoming silty sand and gravel with depth, with coarse gravel and fine cobbles throughout - rock is very weak to weak Penetration = 7.1 ft Recovery = 7.1 ft									
-15 / -50										
-20 / -55										
-25 / -60										
-30 / -65										
-35 / -70										
-40 / -75										

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PROJECT: Jacksonville Harbor, Cuts F thru G

Borehole: VC-7
Date Drilled: 22 May 2001
Elevation: -39.0 ft MLW

Easting: 481631 ft
Northing: 2200928 ft

Coordinates are in Florida East Zone (NAD83)

Depth, ft / Elev, ft	Description	Legend	Sampler	N blows/foot	Fines, %	+ + Atterberg Limits, % / ● Moisture Content, % (15 30 45 60 75) / ■ Wet Unit Weight, pcf (110 120 130 140 150)	● Penetrometer, s_u, ksf (1.0 2.0 3.0 4.0) / ■ UCS, q_u, ksi (0.6 1.2 1.8 2.4 3.0)	TCR	RQD	fractures/ft
-40	Dark gray to light gray sandy CLAY (CL) with fine gravel									
	Light brown fine to coarse GRAVEL (GP) (highly weathered LIMESTONE)									
	Penetration = 1.2 ft									
	Recovery = 1.2 ft									
-5 -45										
-10 -50										
-15 -55										
-20 -60										
-25 -65										
-30 -70										
-35 -75										
-40 -80										

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PROJECT: Jacksonville Harbor, Cuts F thru G

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Borehole: VC-8
Date Drilled: 23 May 2001
Elevation: -36.5 ft MLW

Easting: 481783 ft
Northing: 2201397 ft

Coordinates are in Florida East Zone (NAD83)

Depth, ft / Elev, ft	Description	Legend	Sampler	N blows/foot	Fines, %	+ + Atterberg Limits, % / ● Moisture Content, % (15 30 45 60 75) / ■ Wet Unit Weight, pcf (110 120 130 140 150)	● Penetrometer, s_u, ksf (1.0 2.0 3.0 4.0) / ■ UCS, q_u, ksi (0.6 1.2 1.8 2.4 3.0)	TCR	RQD	fractures/ft
-40 / -5	Dark gray, very loose, sandy SILT (ML) - mixed with sandstone gravel at bottom									
	Light brown, very weak to weak, highly weathered SANDSTONE with sand seams									
	Light gray, very weak to weak, completely to highly weathered LIMESTONE									
	Penetration = 4.5 ft Recovery = 4.0 ft Loss assumed above 1.3ft depth.									
-45 / -10										
-50 / -15										
-55 / -20										
-60 / -25										
-65 / -30										
-70 / -35										
-75 / -40										
-80										

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PROJECT: Jacksonville Harbor, Cuts F thru G

Borehole: VC-9
Date Drilled: 23 May 2001
Elevation: -34.8 ft MLW

Easting: 481916 ft
Northing: 2201872 ft

Coordinates are in Florida East Zone (NAD83)

Depth, ft / Elev, ft	Description	Legend	Sampler	N blows/foot	Fines, %	+ + Atterberg Limits, % / ● Moisture Content, % (15 30 45 60 75) / ■ Wet Unit Weight, pcf (110 120 130 140 150)	● Penetrometer, s_u, ksf (1.0 2.0 3.0 4.0) / ■ UCS, q_u, ksi (0.6 1.2 1.8 2.4 3.0)	TCR	RQD	fractures/ft
-35	Light gray silty fine SAND (SM)									
	Light gray angular SAND and GRAVEL (completely weathered SANDSTONE)									
-5 -40	Light brown GRAVEL and COBBLES of limestone with silty sand seams (highly weathered LIMESTONE)									
	Penetration = 4.3 ft Recovery = 2.3 ft Loss assumed distributed above 3.3ft depth.									
-10 -45										
-15 -50										
-20 -55										
-25 -60										
-30 -65										
-35 -70										
-40 -75										

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PROJECT: Jacksonville Harbor, Cuts F thru G

Borehole: VC-10
Date Drilled: 23 May 2001
Elevation: -33.0 ft MLW

Easting: 482073 ft
Northing: 2202351 ft

Coordinates are in Florida East Zone (NAD83)

Depth, ft / Elev, ft	Description	Legend	Sampler	N blows/foot	Fines, %	+ + Atterberg Limits, % ● Moisture Content, % 15 30 45 60 75 ■ Wet Unit Weight, pcf 110 120 130 140 150	● Penetrometer, s_u, ksf 1.0 2.0 3.0 4.0 ■ UCS, q_u, ksi 0.6 1.2 1.8 2.4 3.0	TCR	RQD	fractures/ft
-35	Dark gray silty fine SAND (SM), assumed loose									
	Dark gray moderately weak LIMESTONE with silty sand									
-5	Light brown silty fine SAND with occasional gravel (completely weathered LIMESTONE)									
	Penetration = 5 ft Recovery = 3.9 ft Loss assumed to be distributed above 2.6ft depth									

-40 -10 -45 -15 -50 -20 -55 -25 -60 -30 -65 -35 -70 -40 -75

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PROJECT: Jacksonville Harbor, Cuts F thru G

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Borehole: VC-11
Date Drilled: 24 May 2001
Elevation: -30.2 ft MLW

Easting: 482328 ft
Northing: 2203216 ft

Coordinates are in Florida East Zone (NAD83)

Depth, ft / Elev, ft	Description	Legend	Sampler	N blows/foot	Fines, %	++ Atterberg Limits, % / ● Moisture Content, % (15 30 45 60 75) / ■ Wet Unit Weight, pcf (110 120 130 140 150)	● Penetrometer, s_u, ksf (1.0 2.0 3.0 4.0) / ■ UCS, q_u, ksi (0.6 1.2 1.8 2.4 3.0)	TCR	RQD	fractures/ft
0	Dark gray, very loose, sandy SILT (ML)									
	Dark gray, very silty SAND (SM), assumed loose									
	- becoming light gray and dark gray below 2.5 ft depth									
5 -35	Light gray fine to coarse SAND with silt and fine to coarse gravel (completely weathered LIMESTONE)									
	Penetration = 6.9 ft Recovery = 6.9 ft									
10 -40										
15 -45										
20 -50										
25 -55										
30 -60										
35 -65										
40 -70										
-75										

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PROJECT: Jacksonville Harbor, Cuts F thru G

Borehole: VC-12
Date Drilled: 23 May 2001
Elevation: -35.5 ft MLW

Easting: 482304 ft
Northing: 2200903 ft

Coordinates are in Florida East Zone (NAD83)

Depth, ft / Elev, ft	Description	Legend	Sampler	N blows/foot	Fines, %	+ + Atterberg Limits, % / ● Moisture Content, % (15 30 45 60 75) / ■ Wet Unit Weight, pcf (110 120 130 140 150)	● Penetrometer, s_u, ksf (1.0 2.0 3.0 4.0) / ■ UCS, q_u, ksi (0.6 1.2 1.8 2.4 3.0)	TCR	RQD	fractures/ft
-40 / -5	Dark gray silty SAND - becoming laminated sandy SILT below about 3ft depth									
-45 / -10	Light brown silty SAND and GRAVEL with cobbles (highly weathered LIMESTONE) - cobbles are very weak to weak Penetration = 6.5 ft Recovery = 5.0 ft Loss assumed distributed above 5 ft depth									
-50 / -15										
-55 / -20										
-60 / -25										
-65 / -30										
-70 / -35										
-75 / -40										
-80										

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PROJECT: Jacksonville Harbor, Cuts F thru G

KDJ_PAPER_LOG BLOUNT.GPJ MASTER.GDT 6-15-01

Borehole: VC-13
Date Drilled: 23 May 2001
Elevation: -36.5 ft MLW

Easting: 482578 ft
Northing: 2200897 ft

Coordinates are in Florida East Zone (NAD83)

Depth, ft / Elev, ft	Description	Legend	Sampler	N blows/foot	Fines, %	+ + Atterberg Limits, % / ● Moisture Content, % (15 30 45 60 75) / ■ Wet Unit Weight, pcf (110 120 130 140 150)	● Penetrometer, s_u, ksf (1.0 2.0 3.0 4.0) / ■ UCS, q_u, ksi (0.6 1.2 1.8 2.4 3.0)	TCR	RQD	fractures/ft
-40 / -5	Light gray and dark gray silty fine SAND (SM)									
-45 / -10	Light gray very clayey SAND/sandy CLAY with gravel (completely weathered LIMESTONE)									
-50 / -15	Penetration = 1.7 ft Recovery = 1.7 ft									
-55 / -20										
-60 / -25										
-65 / -30										
-70 / -35										
-75 / -40										
-80										

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PROJECT: Jacksonville Harbor, Cuts F thru G

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Borehole: VC-14
Date Drilled: 23 May 2001
Elevation: -37.0 ft MLW

Easting: 483113 ft
Northing: 2200908 ft

Coordinates are in Florida East Zone (NAD83)

Depth, ft / Elev, ft	Description	Legend	Sampler	N blows/foot	Fines, %	+ + Atterberg Limits, % ● Moisture Content, % 15 30 45 60 75 ■ Wet Unit Weight, pcf 110 120 130 140 150	● Penetrometer, s_u, ksf 1.0 2.0 3.0 4.0 ■ UCS, q_u, ksi 0.6 1.2 1.8 2.4 3.0	TCR	RQD	fractures/ft
-40	Gray silty fine SAND (SM), assumed loose to medium dense - with organic seam at 1ft depth - light gray below 1ft depth - with thin clay partings at 2.5ft depth									
-5	Light gray very silty SAND with gravel (completely weathered LIMESTONE) - 3" cobble of very weak to weak LIMESTONE recovered at 3.3ft depth Penetration = 4.3 ft Recovery = 4.3 ft									
-45										
10										
-50										
15										
-55										
20										
-60										
25										
-65										
30										
-70										
35										
-75										
40										
-80										

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PROJECT: Jacksonville Harbor, Cuts F thru G

Borehole: VC-15
Date Drilled: 24 May 2001
Elevation: -31.4 ft MLW

Easting: 482456 ft
Northing: 2203710 ft

Coordinates are in Florida East Zone (NAD83)

Depth, ft / Elev, ft	Description	Legend	Sampler	N blows/foot	Fines, %	+ + Atterberg Limits, % ● Moisture Content, % 15 30 45 60 75 ■ Wet Unit Weight, pcf 110 120 130 140 150	● Penetrometer, s_u, ksf 1.0 2.0 3.0 4.0 ■ UCS, q_u, ksi 0.6 1.2 1.8 2.4 3.0	TCR	RQD	fractures/ft
	Dark gray, very loose, slightly sandy SILT (ML)									
	Light grayish brown fine to medium SAND (SP)									
-35 / -5	Light brown very weak to weak highly to completely weathered LIMESTONE - recovered as fine to coarse sand and fine to coarse gravel - rock is in layers 1" to 2" thick below 4.2ft depth									
	Penetration = 6.8 ft Recovery = 6.6 ft Loss is assumed to be above 2ft depth									
-40 / -10										
-45 / -15										
-50 / -20										
-55 / -25										
-60 / -30										
-65 / -35										
-70 / -40										
-75										

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PROJECT: Jacksonville Harbor, Cuts F thru G

Borehole: VC-16
Date Drilled: 24 May 2001
Elevation: -28.2 ft MLW

Easting: 483222 ft
Northing: 2205936 ft

Coordinates are in Florida East Zone (NAD83)

Depth, ft / Elev, ft	Description	Legend	Sampler	N blows/foot	Fines, %	+ + Atterberg Limits, % ● Moisture Content, % 15 30 45 60 75 ■ Wet Unit Weight, pcf 110 120 130 140 150	● Penetrometer, s_u, ksf 1.0 2.0 3.0 4.0 ■ UCS, q_u, ksi 0.6 1.2 1.8 2.4 3.0	TCR	RQD	fractures/ft
-30	Dark gray, very loose, SILT (ML)									
-5	- becoming sandy with depth									
-35	Light gray silty SAND and GRAVEL with shells									
	Light brown to brownish yellow silty fine to medium SAND with shells (SM) assumed medium dense									
-10	Grayish brown silty fine SAND (SM), assumed dense									
	Olive gray silty fine SAND (SM), assumed very dense									
-40	Penetration = 11.2 ft Recovery = 7.7 ft An earlier core penetrated to 13.8ft depth, but the liner was stuck in the core barrel and could not be removed for logging; corer refused in olive gray silty sand.									
-15										
-45										
-20										
-50										
-25										
-55										
-30										
-60										
-35										
-65										
-40										
-70										

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PROJECT: Jacksonville Harbor, Cuts F thru G

KDJ_PAPER_LOG BLOUNT.GPJ MASTER.GDT 6-15-01

Borehole: VC-17
Date Drilled: 24 May 2001
Elevation: -31.4 ft MLW

Easting: 483338 ft
Northing: 2206413 ft

Coordinates are in Florida East Zone (NAD83)

Depth, ft / Elev, ft	Description	Legend	Sampler	N blows/foot	Fines, %	+ + Atterberg Limits, % / ● Moisture Content, % (15 30 45 60 75) / ■ Wet Unit Weight, pcf (110 120 130 140 150)	● Penetrometer, s_u, ksf (1.0 2.0 3.0 4.0) / ■ UCS, q_u, ksi (0.6 1.2 1.8 2.4 3.0)	TCR	RQD	fractures/ft
-35	Dark gray very soft sandy SILT (ML)									
-5	Light brown silty fine SAND (SM) - with organic seams and fine to coarse sand parting at 4.1ft depth									
-40	Olive gray clayey SAND (SC), assumed dense to very dense - becoming sandy CLAY below 5.5ft depth Penetration = 6.4 ft Recovery = 6.4 ft									
10										
-45										
15										
-50										
20										
-55										
25										
-60										
30										
-65										
35										
-70										
40										
-75										

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PROJECT: Jacksonville Harbor, Cuts F thru G

Borehole: VC-18
Date Drilled: 23 May 2001
Elevation: -34.5 ft MLW

Easting: 483607 ft
Northing: 2207269 ft

Coordinates are in Florida East Zone (NAD83)

Depth, ft / Elev, ft	Description	Legend	Sampler	N blows/foot	Fines, %	+ + Atterberg Limits, % / ● Moisture Content, % (15 30 45 60 75) / ■ Wet Unit Weight, pcf (110 120 130 140 150)	● Penetrometer, s_u, ksf (1.0 2.0 3.0 4.0) / ■ UCS, q_u, ksi (0.6 1.2 1.8 2.4 3.0)	TCR	RQD	fractures/ft
-35	Very loose dark gray sandy SILT (ML)									
	Light gray fine to medium SAND (SP) with shell fragments and organic partings, assumed loose									
	Grayish brown and light gray clayey fine SAND (CL), assumed medium dense to dense									
	- brown below 1.8ft depth									
-5 -40	Light brown silty SAND and fine GRAVEL, with occasional coarse gravel and layers of weak rock to 1" thick (completely weathered LIMESTONE)									
	- light gray below 6ft depth									
	Penetration = 6.3 ft									
	Recovery = 6.3 ft									
-10 -45										
-15 -50										
-20 -55										
-25 -60										
-30 -65										
-35 -70										
-40 -75										

KDJ_PAPER_LOG BLOUNT.GPJ MASTER.GDT 6-15-01

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PROJECT: Jacksonville Harbor, Cuts F thru G