DRI	LLING	LOG	DIVIS			IN	ISTAL					SHEET 1		1
1. PRO		LUC	So So	uth Atlantic		<u> </u>				istrict		OF 1 SF	HEETS	
	St. Johns C	ounty	FI SDD			_				E OF BIT See Rema	RIZONTAL	i VERTICAL		-
	Borrow Area	•	, 1 2 01 1							ļ	IAD83	MLW		
	ING DESIGN		N	LOCATION COO		11	1. M			RER'S DESIGNATION OF D	RILL A	UTO HAMME	ER	1
	/B-SJSP06	_			Y = 1,993,564	┖		Alpir	ne 27	O Vibracore on D/B Snel		MANUAL HAN		-
	LING AGEN		rs - CFSA	1	ONTRACTOR FILE NO.	12	2. TC	TAL:	SAMP	LES DISTUR	RED ! OL	NDISTURBED) (UD)	
	E OF DRILL		020.	1		13	3. TC	TAL	NUME	ER CORE BOXES 0				
	Gaughf						4 FI	FVAT	ION G	ROUND WATER N/A				1
	ECTION OF I	BORIN	G	DEG. FROM VERTICAL	BEARING	H				STA	RTED	COMPLETE	ED.	1
_	INCLINED			<u> </u>		15	5. DA	TE B	ORING	0	7-27-06	07-27-0	06	
6. THI	CKNESS OF	OVER	BURDEN	N/A		10	6. EL	EVAT	TION T	OP OF BORING -51.2	: Ft.			
7. DEP	TH DRILLED	INTO	ROCK	N/A		╙					ot Recorded	t		
8. TOT	AL DEPTH C	DE BOI	RING 7	".5 Ft.		18	B. SI	GNAT	URE A	AND TITLE OF INSPECTOR	?			
-		_						, ~!!!	1				Ш	1
ELEV.	DEPTH	LEGEND	(CLASSIFICATION	OF MATERIALS		% REC.	BOX OR SAMPLE	RQD OR UD	RE	EMARKS	BLOWS/	N-VALUE	
-51.2	0.0									-51.2				
-51.2	- 0.0				nostly fine-grained					-31.2				0
	_	::::		zed quartz, trace zed shell, 10YR :	medium-grained 5/1 gray (SP)		NR	1			bracore			Ŀ
-52.3	_1.1	11111			grained sand-sized		┝	2	┨	-52.2				t
-52.8	- 1.6	11111	、quartz, l		I dark greenish gray	/	NR	_	┨		bracore			Ŀ
	F	[:∵:]	\(SM)	poorly-graded, m	nostly fine-grained	_/			┨	-53.2				\vdash
	- - -		sand-siz shell up gray (S	zed quartz, little : to 3/8", trace sil P)	sand to gravel-sized t, 10Y 5/1 greenish									- - -
	_		sand-siz		ne-grained sand to gravel-sized t, 10Y 5/1 greenish			3						E
	_		gray	4.9 Ft., mostly fi										Ŀ
-56.2	5.0		sand-siz	ed quartz, little:	sand to gravel-sized	١,	NR]	Vil	bracore			- -5
	E		\shell up \gray	to 3/8", trace sil	t, 10Y 5/1 greenish									Ŀ
	F		CLAY, f		gravel-sized shell up	_								F
	F		∖ to 3/8", t 5BG 5/1	few fine-grained greenish gray	sand-sized quartz,									F
	-		LAt El5	7.2 Ft., few fine-	grained sand-sized									F
-58.7	- 7.5			race medium-gr)G 5/1 greenish	ained sand-sized grav					-58.7				<u> </u>
00.7	- 7.0		<u> </u>		<u> </u>					Abbreviations:				‡
	- -		NOTES		is the custodian for					NR = Not Recorded	d.			Ė
	<u>-</u>		these or	iginal files.										F
				are field visually										E
	- -			cation System.										-10
	_			ation based on p										Ē
	-		4. Labo	ratory Testing R	lesults									L
	- - -		SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION									F
	-		1	0.0/1.0	SP*									ţ.
	-		2	1.0/1.5 2.0/5.0	SP-SM* SP-SM*									F
	<u> </u>		•											ţ
	-		*Lab vis curve. I	ual classificatior No Atterberg limi	n based on gradatior its.	1								F
	‡			5										ţ

DRI	LLING	LOG	DIVISI					LATIO				SHEET 1		1
1. PRO			So	uth Atlantic		_				istrict F OF BIT See Re	marks	OF 2 SH	LETS	-
S	St. Johns C	ounty	, FL SPP								ORIZONTAL	VERTICAL		┨
Е	Borrow Area	a								ne, FLE (U.S. Ft.)	NAD83	MLW		
	ING DESIGN		N	LOCATION COOR! X = 611,688	OINATES Y = 1,995,127	11.				RER'S DESIGNATION O		AUTO HAMME		
	LING AGEN				TRACTOR FILE NO.	\vdash				O Vibracore on D/B Si		MANUAL HAM		┨
	Corps of En	_	rs - CESA	J		12.	ТО	TAL S	SAMP	LES 2	į	0		
	1E OF DRILL	.ER				13.	то	TAL	NUMB	ER CORE BOXES 0)			
	Gaughf	BORIN	G	DEG. FROM	BEARING	14.	ELI	EVAT	ION G	ROUND WATER N	/A			
\boxtimes	VERTICAL INCLINED			VERTICAL		15.	DA	TE B	ORING	S	TARTED 07-27-06	COMPLETE 07-27-0		
6. THI	CKNESS OF	OVER	BURDEN	N/A		16.	ELI	EVAT	ION T	OP OF BORING -48	8.7 Ft.			
7. DEP	TH DRILLED	INTO	ROCK	N/A						VERY FOR BORING	Not Recorde	d		
8. TOT	AL DEPTH C	OF BOI	RING 9).7 Ft.		18.	SIC	SNAT	URE A	AND TITLE OF INSPECT	OR			
ELEV.	DEPTH	LEGEND	C	CLASSIFICATION OF	MATERIALS	R	% REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/ 1 FT.	N-VALUE	
-48.7	0.0									-48.7				1
-40.7	- 0.0			poorly-graded, mo		1				-40.7				-0
	- -	$ \cdots $		ed quartz, trace n ed shell, 10YR 7/										Ė
	_			•	3 3 7 ()	,	NR	1			Vibracore			F
	_					- ['	```\	'			VIDIACOIC			Ŀ
	_	[∷∴]												-
-51.2	2.5	$ \cdots $	`~SAND. r	ooorly-graded, mo	stly fine-grained	┝	-			-51.2				Ŧ
	- -	[∷:]	sand-siz	ed quartz, trace n	nedium-grained									F
	-	·```	sand-siz	ed shell, 10YR 6/	1 gray (SP)									Ė
	- -	 ∷∵:												L
	-	·:::												Ŀ
	_	 ∷∷												- -5
	-	·:::												F
	-	 ∷∷												F
	<u> </u>	.:.:.				1	NR	2			Vibracore			F
	-	 ∵∵												ļ.
	-	$ \cdots $												-
	- -	 ∷∵:												Ŀ
	_	 ∴∴												F
	_	<u> </u> :::												E
	_													F
-58.4	- - 9.7	<u> :::</u>								-58.4				F
	- - -		NOTES:							Abbreviations: NR = Not Record	ded.			- - 10
	<u>-</u>			CE Jacksonville is iginal files.	the custodian for					1417 - 1401 1760010				-
	- - - -		accorda	are field visually once with the Unifiestion System.										-
	- - -			ation based on pre	edicted tide									E
	<u>-</u>		4. Labo	ratory Testing Res	sults									Ė
	<u>-</u> -		SAMPLE ID	SAMPLE	LABORATORY CLASSIFICATION									-
	_													F

				INSTALLA	TION						- 1	SHEET 2		1
DR	ILLING	LOC	G (Cont. Sheet)	Jackso		Distr	ict					OF 2 SH	HEETS	
PROJEC	CT.			COORDINA				·UM	HORIZON	TAI	VERT			
	ohns Coun	tv. FL	. SPP	State F					NAD8			LW		
	ON COORDI			ELEVATIO							•			
			- ,995,127	-48.7 F										
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	LS	% REC.	BOX OR SAMPLE	RQD OR UD			REMARKS	,	BLOWS/ 1 FT.	N-VALUE	
		-	1 0.0/2.5 SP 2 2.5/9.5 SP	*		20)								- 15
			2 2.5/9.5 SP	*										-
			*Lab visual classification based on curve. No Atterberg limits.	gradation										
														L
														-
														_
														-
														F
														-
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														-20 -
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DRI	LLING	100	DIVISION	//		LATI				SHEET 1		1
1. PRO			South Atlantic					istrict	Damada	OF 2 SH	IEETS	
	St. Johns C	ounty	, FL SPP					E OF BIT See	Remarks	i VERTICAL		-
	Borrow Are	-	,			State	e Plar	ne, FLE (U.S. Ft.)	NAD83	MLW		
	ING DESIG		i	- 1	1. M	4 <i>NUF</i> ,	ACTU	RER'S DESIGNATIO	ON OF DRILL	AUTO HAMME		
	B-SJSP06	-	X = 617,490 Y = 1,997,032			Alpir	ne 270	0 Vibracore on D/		MANUAL HAN INDISTURBED		
			ers - CESAJ	VO. 12	2. TC	OTAL .	SAMP	LES !	0	O ORBEL	(00)	
	ME OF DRILL			13	3. TC	OTAL I	NUME	BER CORE BOXES	0	-		
	Gaughf		1222222	12	4. EL	.EVA7	TION C	GROUND WATER	N/A			
\boxtimes	ECTION OF VERTICAL INCLINED	BORIN	NG DEG. FROM BEARING VERTICAL	\vdash			ORING		STARTED 07-27-06	COMPLETE 07-27-0		1
6. THI	CKNESS OF	OVER	RBURDEN N/A	10	6. EL	EVA7	TION 7	TOP OF BORING	-51.1 Ft.	•		
7. DEP	TH DRILLE	D INTO	D ROCK N/A	1:	7. TC	TAL I	RECO	VERY FOR BORING	100 %			
			•	18	8. SI	GNAT	URE A	AND TITLE OF INSP	PECTOR			
8. 101	AL DEPTH	1	RING 20.0 Ft. T		_	, I		Γ			1.1	4
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS		ĸĚC.	BOX OR SAMPLE	ROD OR UD		REMARKS	BLOWS/ 1 FT.	N-VALUE	
-51.1	0.0							-51.1				
01.1	-		SAND, poorly-graded, mostly fine-grained					01.1				-0
	- -	· . · ·	sand-sized quartz, little sand to gravel-siz shell up to 1/2", 10YR 6/1 gray (SP)	zed								Ė
	_											-
	_	·:·:·										Ŀ
	_	 ∷∷										F
-53.6	2.5	∤ ःः	SAND, poorly-graded, mostly fine-grained	4								F
	- -	 ::::	sand-sized quartz, little sand to gravel-siz									Ė.
	- -	.::·	shell, 10YR 5/1 gray (SP)									Ŀ
	-	:::::										ŀ
	-	 .∵.										F
-56.1	5.0	·:::										F
	-		SAND, poorly-graded, mostly fine-grained									-5 -
	- -	· · · ·	sand-sized quartz, trace medium-grained sand-sized shell, 10Y 6/1 greenish gray									ţ
	_		(SP)									F
	_	·:·:·										Ŀ
	_	 ::::										F
-58.6	7.5		SAND, poorly-graded, mostly fine-grained	4	100				Vibracore			F
	- -	 ::::	sand-sized quartz, trace medium-grained									Ė.
	-	 .∷.	sand-sized shell, 10YR 5/1 gray (SP)									Ė
	<u> </u>											L
	E	-::·										E
	-	:::										F
	-	 										-10
	- -	::::										ţ
000	- 44.5											F
-62.6	11.5	/////	SAND, clayey, medium plasticity, mostly		ł							E
	-		fine-grained sand-sized quartz, some clay	y,								_
	- -		trace medium-grained sand-sized shell, 10Y 4/1 dark greenish gray (SC)									F
	<u> </u>		LAt El63.3 Ft., medium plasticity, mostly									L
-64.5	- 13.4 -		fine-grained sand-sized quartz, some clay 5G 4/1 dark greenish gray	y, 	-							Ė
	Ŀ	 :-	SAND, poorly-graded with silt, mostly									Ŀ
	-	 :	fine-grained sand-sized quartz, few silt, 10YR 5/1 gray (SP-SM)									F
	-	 :-										F

PROJECT		L	G (Cont. Sheet)	Jackso	TION	Dietr	iot			SHEET 2 OF 2 5	
FRUJEUI				COORDINA				⁻ UM	HORIZONTAL	VERTICAL	
St. Jo	hns Cour	ıty, FL	SPP	State F	lane,	FLE	(U.S.	. Ft.)	NAD83	MLW	
	ON COORDI			ELEVATIO		OF E	BORIN	'G			
$X = 6^{\circ}$	17,490		,997,032	-51.1 F	t.	****				_	111
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL	LS	REC.	BOX OR SAMPLE	ROD OR UD		REMARKS	BLOWS/	N-VALUE
-71.1	20.0		At El66.1 Ft., some fine-grained sand-sized quartz, some sand to gravel-sized shell up to 3/4", few silt 10Y 6/1 greenish gray At El68.5 Ft., mostly fine-grained sand-sized quartz, few sand to grave shell up to 3/8", few silt, 10YR 5/1 grained up to 3/8", few silt, 10YR 5/1 grained sand-sized quartz, few sand to grave shell up to 3/8", few silt, 10YR 5/1 grained	el-sized	100			-71.1	Vibracore	3	
			NOTES: 1. USACE Jacksonville is the custo these original files. 2. Soils are field visually classified i accordance with the Unified Soils Classification System. 3. Elevation based on predicted tide 4. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC 1 /20.0 SP* 2 /20.0 SP* *Lab visual classification based on gcurve. No Atterberg limits.	TORY CATION							

DRI	LLING	LOG	DIVISIO				INSTAL						SHEET	
1. PRO			Sou	uth Atlantic					lle Dis		Γ!! \ /; _{b=0}		OF 2	HEETS
											5" Vibracore		VEDTICA	
	t. Johns Co	-	rtsnore							SYSTEM/DATUM	-	AL	VERTICA	
	nvestigation			·						e, FLE (U.S. Ft.)			NAVE	
	ING DESIGN			LOCATION C						RER'S DESIGNATI	ON OF DRILL	=	TO HAMI	
	B-SJSP09-			X = 608,		= 1,997,234 ACTOR FILE NO.		AVS	Vibra	core	DISTURBED		NUAL HA	
	orps of Eng		- CESAJ		CONTR	ACTOR FILE NO.	12. TO	TAL S	SAMPL	LES	4	UNI		נטט)
	E OF DRILL						13. TO	TAL N	IUMB	ER CORE BOXES	0			
	merican Vil			DEG EROI	м ! і	BEARING	14. EL	EVAT	ION G	ROUND WATER				
⊠ v	VERTICAL INCLINED	JORING		DEG. FROI VERTICAL		BEARING	15. DA	TE BO	RING	ì	STARTED		COMPLE 11-19	
6. THIC	KNESS OF	OVERBU	JRDEN	N/A			16. EL	EVAT	ION T	OP OF BORING	-50.7 Ft.			
7. DEP	TH DRILLED	INTO R	оск	N/A			17. TO	TAL F	RECO\	ERY FOR BORIN	G 95 %			
							18. SIG			ND TITLE OF INS				
8. ТОТ	AL DEPTH C	F BORII	NG 2	0.0 Ft.					Selfri	dge, Geotechnic	al Engineer,			
ELEV.	DEPTH	LEGEND	С	LASSIFICATIO	ON OF MA	ATERIALS	ĸEC.	BOX OR SAMPLE	RQD OR UD		REMARKS	5	BLOWS/ 1 FT.	N-VALUE
-50.7	0.0									-50.7				
50.1	-	 	SAND, po	oorly-graded,	mostly f	ine-grained				00.7				
ŀ	_			ed quartz, few										
ļ	<u>-</u>		sand-size (SP)	ed snell, trace	e siit, wet	, 10YR 6/1 gray								
-	_	-::-	(31)											
ŀ	-	$[\cdot\cdot\cdot]$					100				Vibracore	9		
	_	[:::]												
ŀ	_	<u> .:: </u>												
	-	$ \cdot \cdot $								-53.7				
ŀ	_	· . ·						1		-50.7				
	_	:::						1						
ŀ	_	[:∵:												
	-	<u> </u> .::												
ŀ	_	.∵.					100				Vibracore	Э		
-	_	-:												
ŀ	_	$ \cdots $												
	_	[:::]								-56.7				
ŀ	-	.·.:						2		-50.7				
	-	:::												
	_	:::												
ŀ	_													
ļ	_	[:::: <u> </u>	-A+E' 50) 4 Et 1944 -	a a d!: ···	wainad	100				Vibracore	9		
.9	_	· · ·	-At El58 sand-size	3.4 Ft., little med shell	ieuium-g	ı ali leu								
	_									F0.7				
}	_	·: \	-At El59	0.7 Ft., trace t	fine to m	edium-grained				-59.7				+
	_	:·::	sand-size	ed shell	13 111	g. cca		3						
00.0	- 40.6	• •												
-60.9	- 10.2	1	SAND ~	oorly graded	with cilt	moetly								
ŀ	_	-	fine-grain	oorly-graded ned sand-size	with Silt, ed guartz	mostry , few silt, trace	100				Vibracore	Э		
	_	.•	fine to me	edium-graine	d sand-s	ized shell, wet,								
ŀ	_	.: 	10YR 5/1	1 gray (SP-S	M)									
		:: <u> </u>								62.7				
ŀ	_	·.								-62.7				+
	_	:.						4						
-	-	<u> </u> :- <u>†</u>												
	 -	[.∙]]∦												
}	_	.:					86				Vibracore	9		
ļ	- 	:: <u> </u>												
ŀ	_	:.												
l	_	:.												
ı	_	1. 111												

DR	LLING	LOC	G (Cont. Sheet)	INSTALLA Jackso		Dietri	~t		SHEET 2 OF 2 S	
PROJEC			·	COORDINA				UM HORIZONTAL	VERTICAL	
	ohns Coun	ty Offs	shore	State P				I	NAVD88	
	ON COORD			ELEVATIO		OF B	ORIN	G		
X = (608,394		997,234	-50.7 F	t.			Г		
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	ALS	REC.	BOX OR SAMPLE	RQD OR UD	REMARK	BLOWS/	N-VALUE
-67.0	16.3		CLAY, fat, high plasticity, firm, mostly trace fine-grained sand-sized quartz, 10YR 5/1 gray (CH)	y clay, wet,	86			Vibraco	e	
-69.6	18.9	~								
-70.7	20.0	N N	NOTES:		<u> </u>			-70.7		
			1. Soils are field visually classified in accordance with the Unified Soils Clasystem. 2. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFITM CLAS	ATORY CATION 						

	D	RILLING	LOG	DIVISI			INSTAI					SHEET		
ı		ROJECT		Sou	uth Atlantic				ille Dis			OF 2 S	HEETS	<u> </u>
			nunti /	Offeboro						SYSTEM/DATUM	Vibracore	VERTICA		-
		St. Johns Co Investigation	-				10. 6			e, FLE (U.S. Ft.)	-	ł		
ı	2. B	ORING DESIGN			LOCATION COOR	DINATES	11. M			RER'S DESIGNATIO	NAD83	NAVE		-
		VB-SJSP09-			1	Y = 1,995,524			Vibra			MANUAL HA		
ı	3. D	RILLING AGEN	CY			TRACTOR FILE NO.	40 -			¦ [DISTURBED U	JNDISTURB	D (UD)	7
١		Corps of Eng		s - CESAJ	<u> </u>		12. TO) I AL :	SAWPL	ES	4	0		
	4. N	AME OF DRILL					13. TO	TAL	NUMB	ER CORE BOXES	0			
		American Vib			' DEC EDOM	PEARING	14. EI	EVAT	ION G	ROUND WATER				
		IRECTION OF E	OKIN	G	DEG. FROM VERTICAL	BEARING					STARTED	COMPLET	ΓED	1
		INCLINED			!	!	15. D/	TE B	DRING	j	11-19-09	11-19	-09	
	6. T	HICKNESS OF	OVERI	BURDEN	N/A		16. EI	EVAT	ION T	OP OF BORING	-53.3 Ft.			
ı	7. D	EPTH DRILLED	INTO	ROCK	N/A					ERY FOR BORING	92 %			
ı	8. T	OTAL DEPTH O	F BOR	RING 1	5.1 Ft.		18. SI			ND TITLE OF INSP				
ı		1	_		0.111.		Ц			dge, Geotechnical	Engineer,		—ш	-
	ELE	V. DEPTH	LEGEND	c	CLASSIFICATION OF	MATERIALS	REC	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/ 1 FT.	N-VALUE	
ı	-53	.3 0.0								-53.3			\top	1
J	-55	- 0.0			oorly-graded, most		\top			-00.0			+	十
		t	ŀ∷·∣	sand-size	ed quartz, trace find ed shell, wet, 10YR	e to medium-grained	a							Ŀ
		F	[:::	541 IU-3120	od orion, wot, TOTA	Con gray (Or)	100				Vibracore			F
54	.8	<u> </u>	$ \cdots $										—	‡
		<u> </u>								-55.3				Ŀ
		-	l:∵:					1						ŀ
		F							1					F
	F.C	ه ا	· ·				100				Vibracore			þ
	-56	.8 3.5	!::::i	SAND. p	oorly-graded with s	silt. mostly					Vibracoro			ŀ
		F	.:]	fine-grain	ned sand-sized qua	artz, little fine to								F
		Ė	-:		·grained sand-sized 1 gray (SP-SM)	I shell, few silt, wet,				-57.8				丰
		Ł	:- <u> </u>	1011107	r gray (Or -OW)			2						Ł
		F	.:											F
		ļ	·:				100				Vibracore			ţ
		-	::											F
		-	$\ \cdot\ \ $					<u> </u>	1	-59.8			+	+
1		F	:.					3						F
		ţ	::											ţ
		Ł	ŀ∷⊞											F
	-61	.7 - 8.4	اللنا				100				Vibracore			F
	-62	.3 9.0			at, high plasticity, fire- e-grained sand-size									F
ı	-02	- 9.0		10YR 5/1 10	1 gray (CH)	·	И							F
		-		SAND, cl	layey, mostly sand		_							F
		F		little clay		sand-sized quartz,	<u> </u>	_	-	-63.3			+	Ŧ
		ţ			\ /			4						ţ
ı		Ł												E
		ŀ												F
- [F												F
		F												F
		ŀ					76				Vibracore			ŀ
		F												F
		ţ												ţ
	-67	.2 - 13.9												Ŀ
ı		F	W.											F
1		ļ.												F
ı		FORM 400	_						_				—	_

DRIL	LLING	LOC	G (Cont. Sheet)	INSTALLA Jackso		Dietri	~t			HEET 2 OF 2 SI	IFFT¢
ROJECT			<u>-</u>	COORDINA				JM HORIZONTAL	VERT		13
	hns County	Offs	hore	State P				l		VD88	
	N COORDIN			ELEVATIO							
X = 61	10,468 Y	_	995,524	-53.3 F	t.						
ELEV.	DEPTH	\LEGEND	CLASSIFICATION OF MATERIA	LS	ĸEC.	BOX OR SAMPLE	RQD OR UD	REM <i>i</i>	ARKS	BLOWS/ 1 FT.	N-VALUE
-68.4	15.1	N KITE	BORING TERMINATED IN REFUSAL NOTES: 1. Soils are field visually classified in accordance with the Unified Soils Clasystem. 2. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFICATION SP-S 2 4.5/5.0 SP-S 3 6.5/7.0 SP-S 4 10.0/10.5 SC *Lab visual classification based on gracurve. No Atterberg limits.	SSIFICATION STORY CATION STORY SM* SM*				-68.4		TO THE PROPERTY OF THE PROPERT	ż

DRI	LLING	ı ne	DIVISIO	ON		INSTAL	LATIC	ON	-		SHEET	1
			Sout	th Atlantic		_		ille Di			OF 2	SHEETS
1. PRO										Vibracore	. :	
	t. Johns Co	-	Offshore						SYSTEM/DATUM	HORIZONT		
	vestigation								e, FLE (U.S. Ft.)	NAD83	NAVI	
	NG DESIGN		' :	LOCATION COOR		l			RER'S DESIGNATION	N OF DRILL	AUTO HAM	
	B-SJSP09- LING AGEN		i		Y = 1,995,869 TRACTOR FILE NO.		AVS	Vibra		ISTURBED	UNDISTURB	
	orps of Eng		- CESAI		TRACTOR FILE NO.	12. TO	TAL S	SAMP	LES	5	0	LD (OD)
	E OF DRILL	_	0 0 0 0 10	I		13 TC	TAL 1	MIIMB	ER CORE BOXES	0	_ i	
Aı	merican Vi	bracore	e Services							0		
	CTION OF I	BORING	3	DEG. FROM	BEARING	14. EL	EVAT	ION G	ROUND WATER			
	/ERTICAL NCLINED			VERTICAL	İ	15. DA	TE B	ORING	•	STARTED	COMPLE	
				!	!					11-19-0	9 11-19	9-09
6. THIC	KNESS OF	OVERE	URDEN	N/A		16. EL	EVAT	ION T	OP OF BORING	-55.3 Ft.		
7. DEPT	TH DRILLED	INTO	ROCK	N/A					VERY FOR BORING	100 %		
				2.0.54		18. SI			AND TITLE OF INSPE			
8. 1012	AL DEPTH C	F BUR	ING 20	0.0 Ft.		Ц,		Selfr	idge, Geotechnical I	Engineer,		
ELEV.	DEPTH	LEGEND	CI	LASSIFICATION O	F MATERIALS	REC.	BOX OR SAMPLE	RQD OR UD		REMARK	BLOWS/	N-VALUE
-55.3	0.0								-55.3			
			SAND, po	oorly-graded, most	ly fine-grained							
ŀ	-	ŀ∷·l	sand-size	ed quartz, little med	dium-grained wet, 10YR 6/1 gray							
F	-	:::	(SP)	a orion, trace sit,	io iik o/ i giay							
t	- -	::::	` '									
F	-	.``.				100				Vibracore	е	
	- -	$ \cdots $										
F	-	$ \cdot \cdot $										
	- -											
F	-	$[\cdots]$							-58.8			
ļ	- -	.::.					1	1	55.5			
F	_	$ \cdot \cdot \cdot \cdot $					H'	1				
ļ	- -	$ \cdot \cdot \cdot $										
F	-											
F	-					100				Vibracore	е	
ŀ	-	$ \cdots $										
F	-											
b	-	:·::										
F	-	.∵.							-62.3			
t	<u> </u>	$ \cdots $				100	2-Pos	<u> </u>	-62.3	Vibracore	e	
2.9		·.··					2	Ţ				
	_											
ŀ	- -	.∵.										
F	-	$ \cdots $				100				Vibracore	е	
	-	$[\cdots]$										
F	=	[:::]										
-65.5	- 10 2	-:::										
55.5	- 10.2	 	SAND, po	oorly-graded with s	silt, mostly				-65.8			
ļ	- -	:' 	fine-grain	ed sand-sized qua	artz, little fine to		3					
ŀ	-	 :: }	medium-g	grained sand-sized gray (SP-SM)	shell, few silt, wet,			1				
F	-	$ \cdot $	10117 0/1	gray (OF-OIVI)								
	- -	[:]]#				100				Vibracore	е	
F	=	$\ \cdot\ $										
į	- -	:: <u> </u>							60.2			
	_	:.				-	 	1	-68.3			+
<u> </u>	- -	<u> </u> :-					4	1				
	-	[:]]				1,00				\ e1	_	
ļ	<u>-</u>	-: <u> </u>				100				Vibracore	е	
ŀ	-	·.										
	-	1- 111				- 1	l	I	1			

DRI	LLING	LOC	G (Cont. Sheet)	INSTALL	ATION onville					SHEET OF 2		
PROJEC	т			COORDIN				UM	HORIZONTAL	VERTICAL		1
St. Jo	ohns Count	y Offs	hore	State	Plane,	FLE (U.S. I	=t.)	NAD83	NAVD88		
	ON COORDI			ELEVATI		OF B	ORIN	G				
X = 6	311,280 °	1	995,869	-55.3	Ft.							4
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATER	IALS	REC.	BOX OR SAMPLE	RQD OR UD		REMARK	BLOWS/	N-VALUE	
-72.1	16.8											1 - - - - - -
			SAND, silty, mostly fine-grained san quartz, little fine to coarse-grained s shell, little silt, wet, 10YR 7/1 light g	id-sized and-sized ray (SM)	100				Vibracor	е		
-75.3	20.0	<u> </u>						-75.3				<u></u> +2
			ID DEPTH CLASSIF 1 3.5/4.0 S 2 7.0/7.5 S 2-Post 7.0/7.5 S 3 10.5/11.0 SP-	RATORY FICATION 								

DDI	LLING	LOG	DIVISION	ON		INSTAL	LATIC	ON			SHEET	1
			Sou	uth Atlantic				lle Di			OF 2	SHEETS
1. PRO										Vibracore		
	t. Johns Co		ffshore			l			SYSTEM/DATUM	HORIZONT	AL VERTICA	AL.
	nvestigation			'					e, FLE (U.S. Ft.) RER'S DESIGNATION	NAD83	NAV	
	ING DESIGN B-SJSP09			LOCATION COOR	Y = 1,996,285			Vibra		N OF DRILL	☐ AUTO HAM ☐ MANUAL H	
	LING AGEN				TRACTOR FILE NO.				¦ D	ISTURBED	UNDISTURE	
	Corps of En		- CESAJ			12. TO	TAL S	SAMP	LES	5	0	(- ,
	E OF DRILL			,		13. TO	TAL I	NUMB	ER CORE BOXES	0	•	
	merican Vi				_	14. EL	EVAT	ION G	ROUND WATER			
	CTION OF	BORING	ì	DEG. FROM VERTICAL	BEARING					STARTED	COMPLE	TED
	INCLINED					15. DA	TE BO	ORING	•	11-19-0	9 11-1	9-09
6. THIC	CKNESS OF	OVERB	URDEN	N/A		16. EL	EVAT	ION T	OP OF BORING	-53.7 Ft.		
- DED				N1/A		17. TO	TAL F	RECO	VERY FOR BORING	98 %		
7. DEP	TH DRILLED	INIU		N/A		18. SIG	NAT	URE A	AND TITLE OF INSPI			
8. TOT	AL DEPTH (OF BORI	NG 2	0.0 Ft.			Tom	Selfri	dge, Geotechnical	Engineer,		
ELEV.	DEPTH	EGEND	С	LASSIFICATION O	F MATERIALS	" REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/	N-VALUE
									50.7			<u></u>
-53.7	0.0	 	SAND. po	oorly-graded, most	ly fine-grained				-53.7			
	-	$ \cdot\cdot\cdot $	sand-size	ed quartz, some fin	ie to							
	<u>-</u>	:::	medium-	grained sand-sized I gray (SP)	snell, wet,							
	-	:-::		. g. a, (e.)		100				Vibracore	3	
-	_	-::-				1100				VIDIACOR	-	
	-	:::										
	_	 ∷∷ 							50.7			
	_	$ \cdots $						1	-56.7			
İ	_						1					
	_	:::										
	_	$ \cdots $				100				Vibracore	2	
	_					100				VIDIACOIR	-	
	-											
	-								50.7			
	E	$ \cdots $					_	ł	-59.7			
-	-	·:::					2	l				
.7												
	 -											
ŀ	L	:::				100				\/ibr====	•	
	-	$ \cdots $				100				Vibracore	3	
	-	:::										
ŀ	-	$ \cdot \cdot \cdot $										
	_	$ \cdots $										
	-	-:::							-63.7			
	- -	$ \cdots $					3					
ŀ	Ŀ	 ::: 				100				\/ibrooss	2	
	F	-::-				100				Vibracore	-	
	-	$ \cdots $							65.7			
	E	$ \cdots $					4		-65.7			+
	-	 ::::					4					
	- -	$[\cdot \cdot \cdot]$										
-67.2	13.5	<u> </u>				100				Vibracore	Э	
	-		SAND, po	oorly-graded with s	silt, mostly							
	- -	:.	medium-	ned sand-sized qua grained sand-sized	artz, few I shell, few silt, wet,				60.2			
}	E	$[\cdot]]$	10YR 5/1	gray (SP-SM)	,,,	91	5	1	-68.2	\/ibraa		-
İ	Γ	1 • 1 1 👭				91	כו	i	I	Vibracore	5	- 1

	Jackso	nville l	Distric	ct			OF	2 SH	IEETS		
ROJECT			COORDINA				JM	HORIZONTAL	VERTIC		
St. Johns Cour	nty Offs	hore	State P					NAD83	NA\	/D88	
OCATION COORE			ELEVATIO		OF B	ORING					
X = 612,094		996,285	-53.7 F	t.	1	_					
ELEV. DEPTH	LEGEND	CLASSIFICATION OF MATERIA	LS	REC.	BOX OR SAMPLE	RQD OR UD		REMARK	(S	BLOWS/ 1 FT.	N-VALUE
-69.7 16.0		CLAY, fat, high plasticity, firm, mostly trace fine-grained sand-sized quartz, v 10YR 5/1 gray (CH)	clay, wet,	91				Vibraco	re		
-72.2 18.5		SAND, silty, mostly fine-grained sand- quartz, little silt, wet, 10YR 5/3 brown	-sized (SM)	 							
-73.2 19.5	<u> </u>			4							
-73.7 20.0	NR NR	NOTES: 1. Soils are field visually classified in accordance with the Unified Soils Classystem. 2. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC CLASSIFI	TORY CATION * * * * * *				-73.7				

DDI	LLING	106	DIVISIO	DN		INSTAL	LATIC	ON			SHE	ET 1
			Sou	th Atlantic			sonvi				OF	2 SHEET
1. PRO										Vibracore	. :	
	t. Johns Co	-				10. CC			SYSTEM/DATUM	HORIZONT	AL VERT	ICAL
	nvestigation								ne, FLE (U.S. Ft.)	NAD83		AVD88
	ING DESIGN		4	LOCATION CO		11. MA			RER'S DESIGNATIO	N OF DRILL	AUTO H	
	B-SJSP09-		i		74 Y = 1,995,436 CONTRACTOR FILE NO	+	AVS	Vibra		ISTURBED	_	RBED (UD
	orps of Eng		s - CESAJ	i	CONTRACTOR FILE NO	12. TO	TAL S	SAMP		5	0	KBED (OL
	E OF DRILL		O OLO/10	<u> </u>		13 TC	TAL 1	MIIMB	SER CORE BOXES	0	<u> </u>	
Α	merican Vil	oracor	e Services							0		
	CTION OF E	BORIN	G	DEG. FROM	BEARING	14. EL	EVAT	ION G	ROUND WATER			
	VERTICAL			VERTICAL		15. DA	TE BO	ORING	3	STARTED	1	PLETED
	INCLINED			-!	!	+				11-19-0	9 1	l-19-09
6. THIC	KNESS OF	OVER	BURDEN	N/A		16. EL	EVAT	ION T	OP OF BORING	-56.3 Ft.		
7. DEP	TH DRILLED	INTO	ROCK	N/A					VERY FOR BORING	95 %		
	AL DEDTIL 6			2 0 54		- 18. SI			AND TITLE OF INSP			
8. 1017	AL DEPTH O	F BUR	ING Z	0.0 Ft.		<u> </u>		Selfr	idge, Geotechnical	Engineer,		
ELEV.	DEPTH	LEGEND	CI	LASSIFICATIO	N OF MATERIALS	REC.	BOX OR SAMPLE	RQD OR UD		REMARK	s	BLOWS/ 1 FT. N-VALUE
-56.3	0.0								-56.3			
-50.5	-	 			mostly fine-grained	 			-500.0			
-	-	$ \cdot \cdot $	sand-size	ed quartz, little	medium-grained							
	_	::::	sano-size	u shell, wet, 1	IOYR 6/1 gray (SP)				1			
ŀ	_					100				Vibracor	е	
	_	.``·										
	- -	ŀ∷·l							50.0			
	_	:·::				100	I-Pos		-58.8 -58.8	Vibracor	e.	
	_					133	1-208	1			-	
	<u> </u>	$ \cdots $						1				
-	_	:.::				1,5) ei	_	
).7		<u>[:::</u>]				100		L		Vibracor	е	
··		$ \cdot \cdot \cdot \cdot $				T						
-		<u> </u> :.::							1			
	_	[::: <u> </u>				<u> </u>			-61.8			
	_	.``.					2		1			
-62.6	6.3	<u> </u>	CAND	orly graded	vith silt, mostly	100			1	Vibracor	е	
	_	<u> </u> :-	fine-arain	ony-graded wied sand-sized	vith siit, mostly I quartz, few fine-grain	ed			62.2			
}	_	:-	sand-size	ed shell, few si	ilt, wet, 10YR 5/1 gray	·	3	1	-63.3			
		-: <u> </u>	(SP-SM)				ം	-				
	<u>-</u>	[:-[
}	<u></u>	:-				100				\/ibraac-	^	
-65.3	- 9.0	:: <u> </u>				100			1	Vibracor	-	
55.5	_ 0.0				ne-grained sand-sized				1			
ŀ	_			ome clay, som					1			
	_		5GY 6/1	ained sand-si greenish gray	zed limestone, wet, (SC)	<u> </u>	_	ł	-66.3			
ŀ	_			J	\ - - /		4]				
-67.2	- 10.9											
	_	;	SAND, sil	Ity, some fine-	-grained sand-sized ine-grained sand-sized	.						
ŀ	_				ine-grained sand-sized iht gray (SM)	`			1			
	_		,						1			
	<u> </u>					89			1	Vibracor	e	
-	_	$\parallel \parallel $				09				vibracul	C	
	_								1			
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	_								1			
ŀ	_	<u> </u>										
	_								1			

DRILLING LO	G (Cont. Sheet)	Jacksonv)istric			SHEET 2 OF 2 S	
ROJECT		COORDINAT				IM HORIZONTAL	VERTICAL	13
St. Johns County Off	shore	State Pla				1	NAVD88	
OCATION COORDINATE		ELEVATION	ТОР	OF B	ORING	<u> </u>		
X = 612,574 Y = 1	,995,436 T	-56.3 Ft.	_					
ELEV. DEPTH	CLASSIFICATION OF MATERIAL	LS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-75.2 18.9	From El72.1 to -73.3 Ft., some shel		89			Vibracore		
-76.3 20.0						-76.3		
	1. Soils are field visually classified in accordance with the Unified Soils Classystem. 2. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC 1 2.5/3.0 SP' 1-Post 2.5/3.0 SP' 2 5.5/6.0 SP' 3 7.0/7.5 SP-SI 4 10.0/10.5 SC' *Lab visual classification based on gracurve. No Atterberg limits.	TORY CATION * * * * * M*						

DRI	LLING	LOG	DIVISIO	N		INSTA	LLATI	ON	<u> </u>	s	HEET	1	٦
			Sout	h Atlantic		_	cksonv			0)F 2	SHEETS	s
1. PRO									E OF BIT 3.5" Vibracore				4
	St. Johns Co	-	Offshore			10. 0			SYSTEM/DATUM HORIZONT	1	ERTICA		
	nvestigation			LOCATION CO		44 .			ie, FLE (U.S. Ft.) NAD83 RER'S DESIGNATION OF DRILL		NAVE		4
	B-SJSP09-				14 Y = 1,994,695	11. K		Vibra		=	O HAMI	MER Ammer	
	LING AGEN		i		CONTRACTOR FILE NO.		AVG	VIDIA	DISTURBED			ED (UD)	_
	corps of Eng		- CESAJ	į		12. T	OTAL	SAMP		0		(,	
	E OF DRILL					13. T	OTAL	NUMB	ER CORE BOXES 0				1
Α	merican Vil	oracore	e Services										-
	CTION OF E	BORING	;	DEG. FROM	BEARING	14. E	LEVA	ION G	ROUND WATER				
	VERTICAL INCLINED			VERTICAL	į	15. 0	ATE B	ORING	STARTED 11-19-(i	OMPLE 11-19		
	CKNESS OF	OVERB	URDEN	N/A	i	16. E	LEVA	TION T	TOP OF BORING -60.0 Ft.	// 	11 10	, 00	1
7. DFP	TH DRILLED	INTO	BOCK I	V/A		17. T	OTAL	RECO	VERY FOR BORING 89 %				1
						18. S	IGNAT	URE A	AND TITLE OF INSPECTOR				1
8. TOT	AL DEPTH O	F BOR	ING 19	.8 Ft.			Tom	Selfri	idge, Geotechnical Engineer,				
ELEV.	DEPTH	LEGEND	CL	ASSIFICATIO	N OF MATERIALS	REC	BOX OR	RQD OR UD	REMARK	is.	BLOWS/	N-VALUE	
60.0	0.0								60.0				1
-60.0	0.0	 • • 	SAND no	orly-graded r	nostly fine-grained	\dashv	+	+	-60.0				+
	_	$ \cdots $	sand-sized	d quartz, little	medium-grained								F
	_	.···	sand-sized	d shell, wet, 1	0YR 6/1 gray (SP)								Ł
	_	·				10			Vibracor	·e			F
	_	• • •											ţ
	<u> </u>	$[\cdots]$											H
	- -	l.∷l						1	-62.5				丰
	_	:::					1						ŀ
	_	::::						1					F
	_	[:::]											Ŀ
	_	ŀ∷·l											F
	-	·.::				10			Vibracor	e			Ļ
	-	:-:											ŀ
	-												F
	_	ŀ∷⊹l											ŀ
	_	ľ∵∵¦	-∆+ EL _66	N Et little fin	e-grained sand-sized	-	-	-	-66.0				
-66.7	- - 6.7	: :::	shell	o i t., iitue iiii	e-grained sand-sized		2	1					Ė
50.1	- 0.7	 			ith silt, mostly	10	0	1	Vibracor	e			ŀ
	_	-	fine-graine	ed sand-sized	quartz, little fine to			1	-67.5				F
	_	·:		rained sand-s gray (SP-SM	sized shell, few silt, wet,		3	1	56				†
	-	:-		J. W.J. (OI OIV	• ,		۳	┨					\vdash
	- -	::											F
	_	: <u> </u>				10	ار		Vibracor	~ <u>~</u>			Ł
-69.4	- 9.4					''''	٦	1	VIDIACOI	U			F
					ne-grained sand-sized			1					ţ
	_		sand-sized	d shell, wet, 1	ne to medium-grained 0YR 5/1 gray (SC)			1					F
	L			,, -	J , (/	<u> </u>	-	1	-70.5				丰
	L						4	1					Ŀ
	L							1					ŀ
-71.8	11.8							1					ţ
		$H\Pi\Pi$			-grained sand-sized]		1					\vdash
	-	[quartz, iitti shell wet	ie siit, trace fi 10YR 7/1 lin	ne-grained sand-sized ht gray (SM)								F
	L		orion, wol,		g. a, (0111)	76	6	1	Vibracor	e			ŀ
	_												F
	<u>-</u>							1					E
	L	[[[]						1					F
	- -	[[]											ţ
	L	[[[]				- 1		1					F

DRILLING	5 LO	G (Cont. Sheet)	INSTALLA Jackso				<u> </u>	nation vb-000i		SHEET 2	
ROJECT			COORDINA				UM	HORIZONTAL	VER	TICAL	
St. Johns Cou	nty Offs	shore	State F	lane,	FLE (U.S. I	Ft.)	NAD83	N	IAVD88	
OCATION COOR	DINATE	S	ELEVATIO	N ТОР	OF B	ORIN	G				
X = 613,014	_	994,695	-60.0 F	t.							
ELEV. DEPTH	LEGEND	CLASSIFICATION OF MATE	RIALS	ĸEC.	BOX OR SAMPLE	RQD OR UD		REMARK	s	BLOWS/ 1 FT.	N-VALUE
-77.6 17.6				76				Vibracor	e		
-79.8 19.8	N. N.						-79.8				
		ID DEPTH CLASS 1 2.5/3.0 2 6.0/6.5 3 7.5/8.0 SI	In Classification								

DRILLIN	GIO	G	DIVISION		INSTAL	LATI	ON			SHEET	1
	G LU		South Atlantic				lle Dis			OF 2	SHEETS
1. PROJECT				7					Vibracore		
St. Johns			shore					SYSTEM/DATUM	HORIZONTA	AL VERTICA	L
Investiga								e, FLE (U.S. Ft.) RER'S DESIGNATION	NAD83	NAVE	
2. BORING DES VB-SJSF		ON	LOCATION COORD X = 612,152				Vibra		OF DRILL [MANUAL H	
B. DRILLING AC			·	RACTOR FILE NO.				¦ Di	ISTURBED	UNDISTURB	
Corps of	Engine	ers -	CESAJ		12. TO	TAL S	SAMPL	ES	5	0	
4. NAME OF DR	RILLER				13. TO	TAL I	NUMB	ER CORE BOXES	0		
Americar					14. EL	EVAT	ION G	ROUND WATER			
5. DIRECTION (NG	DEG. FROM VERTICAL	BEARING					STARTED	COMPLE	TED
INCLINE					15. DA	TE B	DRING	i	11-19-09	9 11-19	-09
. THICKNESS	OF OVE	RBU	RDEN N/A		16. EL	EVAT	ION T	OP OF BORING	-57.2 Ft.		
7. DEPTH DRIL	I ED INT	O PC	OCK NI/A		17. TO	TAL I	RECO\	ERY FOR BORING	93 %		
					18. SIC	SNAT	URE A	ND TITLE OF INSPE			
B. TOTAL DEPT	TH OF BO	ORIN	IG 18.0 Ft.			Tom	Selfri	dge, Geotechnical I	Engineer,		
ELEV. DEPT	T LEGEND		CLASSIFICATION OF I	MATERIALS	ĸEC.	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/	N-VALUE
-57.2 0.0		1						-57.2			
	─ ∵		SAND, poorly-graded, mostly								
ţ	:::	. 5	sand-sized quartz, few mediu sand-sized shell, wet, 10YR 6	m-grained 6/1 grav (SP)							
-	:::	·] `	5.255 551, 1700, 101100	g. ~, (Oi /	400				\		
F	· · ·				100				Vibracore	:	
Ė											
.6		-						-59.7			
 }					(100)	1-1 03	t	-59.7	Vibracore	!	_
F	∷	:				_1_	1				
į.	.::	<u>:</u>									
F	::	.			100				Vibracore		
ŀ	:::	·]			100				VIDIACOIE	•	
F	- .∷	:-									
-	::	.]									
Ł	.::	·-						-63.2			
}	:::	$\cdot \mid$				2					
F	.::	`.									
, F	·::	$ \cdot $			100				Vibracore	:	
-64.8 <u>- 7.6</u>	- ; ; ;		SAND, poorly-graded with silt	. mostly	-						
F		∐ f	fine-grained sand-sized quart	z, few fine-grained							
F	- - - -		sand-sized shell, few silt, wet (SP-SM)	, 10YR 5/1 gray		_		-65.7			
ļ.		' ⊪	, ,			3					
ţ	. .										
-67.2 10.0					100				Vibracore)	
-			SAND, clayey, some fine-graiguartz, little medium to coarse	ined sand-sized							
-			sand-sized limestone, wet, 10		,			-68.2			
-				,		4	1	00. <u>2</u>			
Ŀ						É					
F											
-69.7 12.5		4	CAND cilty mostly fine arein	and cond circd	_						
Ł		3	SAND, silty, mostly fine-grain quartz, some fine to coarse-g	rained sand-sized	81				Vibracore		
-			shell, little silt, wet, 10YR 7/1		01				VIDIACOFE	;	
ļ.	[1									
<u> </u>	[$\ \ $									
F		\dagger									
F	[[†]	11									- 1

SAJ FORM 1836 JUN 02

DRI	LLING	LOC	G (Cont. Sheet)	INSTALLA Jackso				ig Designation VB-		SHEET 2 OF 2 SH	IEETS
PROJEC	т			COORDINA				UM HORIZONTAL	VE	RTICAL	
	ohns Count	y Offs	hore	State F				l		NAVD88	
	ON COORDI			ELEVATIO							
X = 6	312,152	Y = 1,9	994,236	-57.2 F	t.						
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	ALS	ĸEC.	BOX OR SAMPLE	RQD OR UD	RE	MARKS	BLOWS/	N-VALUE
-73.9	16.7				81			Vib	racore		
		N R									
-75.2	18.0		BORING TERMINATED IN REFUSA	d				-75.2			\vdash
				·-							
			NOTES: 1. Soils are field visually classified in accordance with the Unified Soils Classystem.	ı assification							
			Laboratory Testing Results								
			SAMPLE SAMPLE LABORA ID DEPTH CLASSIF	ATORY ICATION							
			1 2.5/3.0 SF 1-Post 2.5/3.0 SF 2 6.0/6.5 SF 3 8.5/9.0 SP-5 4 11.0/11.5 SG	o* o* SM*							
			*Lab visual classification based on gr curve. No Atterberg limits.								

DR	ILLING	LOG	DIVISIO				INSTAL						SHEET		
1. PR			Sou	th Atlantic				sonvi			\		OF 2	SHEE	ΓS
		t. · ^	uffaha							E OF BIT 3.5" SYSTEM/DATUM	Vibracore HORIZONT	Λ1	VERTIC	ΛI	_
	St. Johns Co		ittsnore				10. CC				-	AL	!		
	Investigation		•	LOCATION C	OOBS	INATES	44 84			ne, FLE (U.S. Ft.) RER'S DESIGNATION	NAD83		NAV		_
	VB-SJSP09		ļ			Y = 1,993,806	11. IVI	AVS			N OF DRILL		UTO HAN ANUAL H		Ð
	LLING AGEN		i	X = 011,		TRACTOR FILE NO.		AVS	VIDIC		ISTURBED		DISTUR		
	Corps of Eng		- CESAJ				12. TO	TAL S	SAMP		4	i	0		-,
	ME OF DRILL				·		13. TO	TAL I	NUME	BER CORE BOXES	0				_
	American Vi	bracore	Services												_
	ECTION OF	BORING)	DEG. FROI	М	BEARING	14. EL	EVAI	ION	GROUND WATER	10-1				_
	VERTICAL INCLINED				-	1	15. DA	TE B	ORING	G	STARTED 11-19-0	۵	COMPL	9-09	
						<u>:</u>	40 -					3	11-1	3-03	_
6. THI	CKNESS OF	OVERB	URDEN	N/A						TOP OF BORING	-55.6 Ft.				_
7. DEF	TH DRILLED	INTO I	ROCK	N/A						VERY FOR BORING	93 %				_
8 TO	TAL DEPTH C	E BOR	NG 16	6.9 Ft.			18. SI			AND TITLE OF INSPI					
00	T	т т		J.J 1 t.			Ь	_	_	idge, Geotechnical	Engineer,				_
ELEV.	DEPTH	EGEND	C	LASSIFICATION	ON OF	MATERIALS	% REC	BOX OR SAMPLE	RQD OR UD		REMARK	S	BLOWS/		N-VALUE
							REC.	BO	UD				7.	- }	Ż
	1	1 1													_
-55.6	0.0	 	SAND m	oorly-graded	mosti	y fine-grained	_			-55.6				+	_
	ļ.	$[\cdots]$	sand-size	ed quartz, little	e med	ium-grained									
	L	$ \cdot \cdot \cdot $	sand-size	ed shell, wet,	10YR	.6/1 gray (SP)									
	-	::::					100				Vibracor	е			
	ļ.	[∷]													
	<u> </u>	$ \cdot \cdot \cdot $								== .					
	-	:::·						 	ł	-58.1				+	_
	ļ.	$[\cdots]$						1							
	E	···.													
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	F	[∷:]					100				Vibracor	е			
	t	.·:.										-			
	-	:::													
	F	$[\cdots]$													
	Ł	 .∵.								-61.6					_
	F	 ∷∴	At El61	.6 Ft., some ed shell, trace	fine to	medium-grained		2							
	ļ.	[∷]	3a11U-312E	ou silicil, lidCt	Sill				1						
	<u> </u>	$ \cdot \cdot \cdot $					100				Vibracor	е			
	-	-::-													
	ļ.	[::: <u>.</u>	-A+ E1 - CC	6 Lt 1:m - 4:	no ====	sined cond sined				-63.6					_
	ţ	$ \cdot \cdot \cdot $	Shell	.o Ft., little fl	ne-gra	ained sand-sized		3							
	-														
	F	$ \cdots $													
	<u>t</u>	$ \cdot\cdot\cdot $					100				Vibracor	е			
	-	:::													
-66.1	10.5		CAND		ٔ جائزی	ilt mooth:	_								
	L	[:		oorly-graded led sand-size						-66.6					
	-	$[\cdot]$	medium-o	arained sand	-sized	shell, few silt, wet,		4							
	F	 ::	10YR 5/1	gray (SP-S	M)				1						
	F	:.													
60 4	F 120	:-													
-68.4	12.8		SAND, cla	ayey, mostlv	fine-a	rained sand-sized	− 81				Vibracor	<u> </u>			
	-		quartz, so	ome clay, trad	ce fine	to medium-grained	ı °'				VIDIACON				
	ļ.		sand-size (SC)	ed shell, wet,	5GY 6	6/1 greenish gray									
	F		(30)												
	F														
	 														

COORDINATE SYSTEM/DATUM	DRI	LLING	LOG	G (Cont. Sheet)	INSTAL Jack	sonville	Distri	ct	·		SHEET 2 OF 2 S	
St. Johns County Offshore State Plane, FLE (U.S. Ft.) NAD83 NAVD88 Page 1,993,806 State Plane, FLE (U.S. Ft.) Page 2,55.6 Ft. CLASSIFICATION OF MATERIALS Page 2,55.6 Ft. Page 3,55.6 Ft. Page 2,55.6 Ft. Page 2,55.6 Ft. Page 2,55.6 Ft. Page 2,55.6 Ft. Page 3,55.6 Ft. Page 2,55.6 Ft. Page 3,55.6 Ft. Page 2,55.6 Ft. Page 3,55.6 Ft									UM HORIZO	ONTAL	, '	
CLASSIFICATION OF MATERIALS STANDED CLASSIFICATION OF MATERIALS STANDED CLASSIFICATION OF MATERIALS STANDED CLASSIFICATION OF MATERIALS STANDED CLASSIFICATION OF MATERIALS STANDED CLASSIFICATION OF MATERIALS STANDED CLASSIFICATION STANDED CLASSIFICATION STANDED CLASSIFICATION			y Offs	hore					ı		1	
CLASSIFICATION OF MATERIALS TO SET 15.8 CLASSIFICATION OF MATERIALS TO SET 15.8 CLASSIFICATION OF MATERIALS TO SET 15.8 BORING TERMINATED IN REFUSAL NOTES: 1. Soils are field visually classified in accordance with the Unified Soils Classification System. 2. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1 2.5/3.0 SP* 2 6.0/6.5 SP* 3 8.0/8.5 SP* 4 11.0/11.5 SP-SM* *Lab visual classification based on gradation *Lab visual classification based on gradation												
771.4 15.8	X = 6	11,338	Y = 1,9	993,806	-55.6	Ft.						
Total Process	ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATER	RIALS	REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/	N-VALUE
### Total Process of Section 1. Soils are field visually classified in accordance with the Unified Soils Classification System. 2. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1 2.5/3.0 SP* 2 6.0/6.5 SP* 3 8.0/8.5 SP* 4 11.0/11.5 SP-SM* *Lab visual classification based on gradation	-71.4	15.8				91				Vibracoro		
BORING TERMINATED IN REFUSAL NOTES: 1. Soils are field visually classified in accordance with the Unified Soils Classification System. 2. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1 2.5/3.0 SP* 2 6.0/6.5 SP* 3 8.0/8.5 SP* 4 11.0/11.5 SP-SM* *Lab visual classification based on gradation	-72 5	16.9	N N						-72 5	VIDIACOIE		
1. Soils are field visually classified in accordance with the Unified Soils Classification System. 2. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1 2.5/3.0 SP* 2 6.0/6.5 SP* 3 8.0/8.5 SP* 4 11.0/11.5 SP-SM* *Lab visual classification based on gradation	-12.0	10.5			SAL				-12.0			
2. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION				Soils are field visually classified accordance with the Unified Soils 0	in Classification							
ID DEPTH CLASSIFICATION												
2 6.0/6.5 SP* 3 8.0/8.5 SP* 4 11.0/11.5 SP-SM* *Lab visual classification based on gradation					RATORY IFICATION							
Lab visual classification based on gradation				2 6.0/6.5 3 8.0/8.5	SP SP*	•						
				*Lab visual classification based on								

DDI	LLING	LOG	DIVISIO	ON		INSTAL	LATIC	N			SHEE	IT 1
1. PRO			Sou	ıth Atlantic				lle Di			OF	2 SHEETS
										Vibracore	·	
	t. Johns C	-	Offshore						SYSTEM/DATUM	HORIZONT	AL VERT	ICAL
	nvestigation								e, FLE (U.S. Ft.)	NAD83		AVD88
	ING DESIG		l i	LOCATION CO		11. MA			RER'S DESIGNATIO	N OF DRILL	AUTO HA	
	B-SJSP09			<u> </u>	5 Y = 1,994,659 ONTRACTOR FILE NO.		AVS	Vibra		ISTURBED		. HAMMER RBED (UD)
	orps of En		- CESA I		ON I RACTOR FILE NO.	12. TO	TAL S	SAMPI		5	0	KBED (UD)
	E OF DRILL		- CLOAU			42 TO	TAL 1		ER CORE BOXES	0	<u> </u>	
А	merican Vi	bracore	e Services							0		
	CTION OF			DEG. FROM	BEARING	14. EL	EVAT	ION G	ROUND WATER			
	VERTICAL INCLINED			VERTICAL		15. DA	TE BO	ORING	•	STARTED 11-19-0	i	-19-09
	KNESS OF	OVERE	URDEN	: N/A	· ·	16. EL	EVAT	ION T	OP OF BORING	-56.4 Ft.	, , 11	-10-00
	TH DRILLEI								VERY FOR BORING	100 %		
				N/A		18. SI	SNAT	URE A	ND TITLE OF INSP	ECTOR		
8. TOT/	AL DEPTH (OF BOR	ING 17	7.1 Ft.				Selfri	dge, Geotechnical	Engineer,		
ELEV.	DEPTH	LEGEND	С	LASSIFICATION	OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD		REMARK	s	BLOWS/ 1 FT. N-VALUE
-56.4	0.0								-56.4			
33.7	-		SAND, po	oorly-graded, m	ostly fine-grained				ОО. Т			
}	-	$ \cdot \cdot $	sand-size	ed quartz, little r	medium-grained DYR 6/1 gray (SP)							
ļ	_		Sanu-Size	ed Shell, Wet, To	TR 6/1 gray (SP)							
t	_	::::				100				Vibracor	е	
- [-	.::.										
İ	_	$ \cdots $										
ŀ	-	$ \cdot : \cdot \cdot $				-		ł	-58.9			
ļ	-	$[\cdots]$					1					
ŀ	-	$ \cdots $										
<u>-</u>	_	::::				100				Vibracor	е	
0.3	_											
	_ =	$[\cdots]$										
	_	:::.	\ A+ E C1	4 F4 fa	lium anaises deserted si	, ,,,,			-61.4	V El-		
ŀ	_	:::	Shell	.4 Ft., Tew med	lium-grained sand-sized	100	Pos	t	-61.4	Vibracor	е	
ļ	_	$[\cdot,\cdot]$	311011				_2_	1				
ŀ	-	$ \cdot \cdot $										
-	_	$ \cdot \cdot $				1.5				\ r.		
	_	:.:				100				Vibracor	е	
ŀ	_	$[\cdots]$										
-64.3	- 7.9	<u> -: </u>										
	_			oorly-graded wit					64.0			
}	-	1:.	medium-	ned sand-sized orained sand-si	quartz, rew zed shell, few silt, trace	.	<u> </u>	1	-64.9			
	_	[·]]	medium-	grained sand-si	zed limestone, wet,		3	-				
ŀ	_	1:111	10YR 6/1	gray (SP-SM)		100				Vibracor	е	
-	- -	1.111							-66.4			
	- -	:.			t., few fine-grained		4	1				
ŀ	_	::	sand-size	ed shell, discont ed limestone, 10	inue medium-grained		H	ł				
ļ	<u> </u>	-: <u> </u>	3ai iu-8i26	a mnesione, It	Jiix Jii giay							
ŀ	- -	:.										
ŀ	_	::										
	_	1:111										
}	-	-:				100				Vibracor	е	
	_	1:-										
}	_	<u> </u> :										
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ļ	_	:.										
ŀ	-	1:.11#				1						

DRILLING LOG (Cont. Sheet)					ATION onville	Distri	ct				SHEET 2 OF 2 SI	
ROJEC	т			COORDIN				UM	HORIZONTAL	VE	RTICAL	
St. Jo	ohns Count	ty Offs	hore	State	Plane,	FLE (U.S. I	Ft.)	NAD83		NAVD88	
	ON COORDI			ELEVATION		OF B	ORIN	G				
X = 6	310,905		994,659	-56.4	Ft.							
LEV.	DEPTH	LEGEND	CLASSIFICATION OF MA	TERIALS	REC.	BOX OR SAMPLE	RQD OR UD		REMA	RKS	BLOWS/ 1 FT.	N-VALUE
					100				Vibra	core		
-73.5	17.1		BORING TERMINATED IN REF NOTES: 1. Soils are field visually classif accordance with the Unified Soi System. 2. Laboratory Testing Results SAMPLE SAMPLE LATE ID DEPTH CLATE ID SOI/5.5 2. Post 5.0/5.5 2. Post 5.0/5.5 3 8.5/9.0 4 10.0/10.5 *Lab visual classification based curve. No Atterberg limits.	BORATORY SSIFICATION SP* SP* SP* SP* SP-SM* SP-SM*				-73.5				

DDI	LLING		DIVISIO	N		INS	TAL	LATIC	N	<u> </u>		SHEET 1		1
		LUG	Soutl	h Atlantic		<u> </u>	Jack	sonvi	lle Dis	strict		OF 2 S	HEETS	
1. PRO						_					Vibracore			1
S	t. Johns Co	ounty C	offshore			10.	CO	ORDI	NATE	SYSTEM/DATUM	HORIZONT	AL VERTICAL	L	
	nvestigation					┺				e, FLE (U.S. Ft.)	NAD83	NAVD		1
	ING DESIGN				DORDINATES	111.				RER'S DESIGNATION	N OF DRILL	AUTO HAMN		
	B-SJSP09-		i		87 Y = 1,990,840 CONTRACTOR FILE NO.	+		AVS	Vibra		ISTURBED	MANUAL HA		-
	corps of Eng		- CESAJ	į	CONTINUOTOR TILL NO.	12.	TO	TAL S	SAMPL		4	0	.D (OD)	
	E OF DRILL			<u>'</u>		13.	TO	TAL N	NUMB	ER CORE BOXES	0			1
Д	merican Vi	bracore	Services			144	E11	=\/AT	ION G	ROUND WATER				1
	CTION OF I	BORING	•	DEG. FROM	BEARING	14 .	ELI	EVAI	ION G	ROUND WATER	STARTED	COMPLET	ED	-
	VERTICAL INCLINED				!	15.	DA [*]	TE BO	RING	ì	11-19-0	i		
	CKNESS OF	OVEDB	LIBBEN		·	16	E11	EVAT	ION T	OP OF BORING	-57.2 Ft.	5 ; 11 10	00	1
0. IIII	KNE33 UF	OVERD	OKDEN	IN/A		┿					94 %			1
7. DEP	TH DRILLED	INTO	ROCK	I/A						/ERY FOR BORING IND TITLE OF INSPE				-
8. ТОТ	AL DEPTH C	F BOR	ING 20.	0 Ft.] '° .				dge, Geotechnical				
						┰			OCIIII	age, Ocotechnical	Linginicoi,		Ш	1
ELEV.	DEPTH	LEGEND	CL	ASSIFICATIO	N OF MATERIALS	F	% REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/	N-VALUE	
E7.0	0.0									57.2				
-57.2	0.0	 	SAND. pod	orly-graded i	mostly fine-grained	\dashv				-57.2			+	$\pm c$
	_	.·:·.	sand-sized	l quartz, few	fine-grained sand-sized	1								F
	<u>-</u>	·:::	shell, wet,	10YR 6/1 gr	ay (SP)									L
	-					'	100				Vibracore	9		ŀ
	-	$ \cdots $												F
	_													F
	-	-::-				⊢	\dashv			-59.7				+
	_	[:::]						1						L
														F
	_	-:												F
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	-						100				Vibracore	•		ŀ
		-::-												F-5
-62.9	- - 5.7													Ė
-02.9	- 5.7	1.111			vith silt, mostly									F
	_	-			d quartz, few silt, few					-63.7				F
	-	:: 	10YR 5/1	ained sand-s gray (SP-SN	sized shell, wet, /l)	r	一	2						‡
	E	::		,, (S. SII	,		ŀ	_						F
														F
	_	:: 												L
	-	:-					100				Vibracore	•		ŀ
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	<u> </u>	:-				-	100				Vibracore	•		\vdash
	-	$\ \cdot\ $												ţ
-70.2	13.0	-:												ŀ
	-		SAND, cla	yey, some fir	ne-grained sand-sized	\Box								F
	_		quartz, sor	ne medium t	o coarse-grained clay, wet, 10YR 5/1 gray	,								Ł
	-		(SC)	i si icii, iitiie C	nay, wei, 10 113 5/ 1 glay	` -	\dashv			-71.2			+	+
	- -		. ,				78	4			Vibracore	ž		ţ
	L	V////					۱۲۱		1		v ibi accil c	•	1	L

DRI	LLING	LOC	G (Cont. Sheet)	Jackso					Hation VB-000i		SHEET 2 OF 2 SH	IEETS
PROJEC	т			COORDIN				JM	HORIZONTAL	VEF	RTICAL	
St. J	ohns Count	y Offs	shore	State F	Plane, I	FLE (U.S. I	=t.)	NAD83		NAVD88	
	ON COORDI			ELEVATIO		OF B	ORIN	3				
X = 6	606,187	_	990,840	-57.2 F	₹t.	ı —						
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERI	ALS	ĸĚC.	BOX OR SAMPLE	RQD OR UD		REMARKS	;	BLOWS/	N-VALUE
-75.9	18.7				78				Vibracore			
-77.2	20.0	A.						-77.2				
			ID DEPTH CLASSIF	RATORY FICATION 								

DDI	LLING	106	DIVISIO)N		INST	ALLATI	ON					SHEET	Г 1	
		LUG	Sout	th Atlantic			cksonv						OF 2	SHE	ETS
1. PRO					L				E OF BIT	See Ren					
		•	Sand Search	1	ľ	10. (COORDI	NATE	SYSTEM/DATU	JM ¦H	ORIZONT	AL	VERTI	CAL	
	ibracore B								e, FLN (U.S. I		NAD83			VD88	
	NG DESIG		'	LOCATION COORI	- I	11.	MANUF	ACTU	RER'S DESIGNA	ATION OF	DRILL		UTO HA		
	B-SJSP12 LING AGEI		<u> </u>		Y = 1,997,208					DIST	JRBED		ANUAL IDISTUR		
	orps of En		CESA I	1		12.	TOTAL :	SAMP	LES	5	JKBED	i	0 0	(BED ((טט
	E OF DRILL		5 - OLOAU	<u> </u>	-	42 .	TOTAL I		ER CORE BOXI	_		i_	0		
					-										
5. DIRE	CTION OF	BORIN	3	DEG. FROM	BEARING	14.	LEVAT	ION G	ROUND WATE						
	/ERTICAL NCLINED			VERTICAL		15.	DATE B	ORING	;	s s	TARTED 06-29-1	12	COMPI	LETED 29-12	
	KNESS OF	OVERE	BURDEN		·	16.	LEVAT	ION T	OP OF BORING	-52	2.7 Ft.	12	- 00	20 12	
7. DEPT	TH DRILLEI	D INTO	ROCK 1	N/A		17.	OTAL	RECO	VERY FOR BOR		97.50 %)			
			•			18. 3			AND TITLE OF	NSPECTO	OR				
8. 1012	AL DEPTH (ING 19).7 Ft.		_	_	Ousl	ey, Geologist						
ELEV.	DEPTH	LEGEND	CL	ASSIFICATION OI	F MATERIALS	RE	BOX OR	RQD OR UD			REMARK	s	BLOWS/	1 FT.	N-VALUE
-52.7	0.0			<u> </u>											
<u> </u>	-	 ∷:		orly-graded, most		7			1						
<u> </u>	- -	·.·	gravel-size	jrained sand-sized ed shell, strong re	d quartz, little sand to				50.7						
}	_	:::	moist, 2.5	Y 6/1 gray (SP)		\vdash	+.	1	-53.7 -53.7					+	
	- -	[:::]	^At El53.	.7 Ft., trace silt			1 1-Pos	,	55.7						
}	<u>-</u>	$ \cdot \cdot $					-1 08	ſ							
ļ	-	$ \cdot \cdot \cdot $													
ŀ	- -	:∵:	-At Fl -55	3 Ft few sand to	gravel-sized shell										
-	_	[. · · · .]	, tt L100.	.o. r, row sand to	, graver dized driell										
ļ	- -	$ \cdot \cdot $													
}	-	:••		3 Ft., sandy silt s	eams 1/2 inch in										
	-	$ \cdot\cdot\cdot $	thickness												
<u> </u>	-	$ \cdot \cdot \cdot $													
}	_	::	`-At El57	.7 Ft., little mediur	m-grained	\vdash	+_	1	-57.7					-+	
ļ	- -	<u> .:: </u>	sand-sized	d shell, 10Y 6/1 g	reenish gray		2	-							
ŀ	- -	.::.	\A+ E =0	6 Et mooth fire	grained acad sized										
F	-	$ \cdots $	guartz fev	.o rt., mostly tine- w fine to coarse-o	-grained sand-sized rained sand-sized										
<u> </u>	-	<u>[:::</u> }	shell, 2.5	Y 6/1 gray											
}	_	$ \cdots $.3 Ft., trace fine-g	rained sand-sized										
	- -		shell												
7.7	-	<u> ::::</u>						L							
···	-	[::::]													
ļ	- -	.::.							61.7						
}	-	:::	`-At El61.	.7 Ft., few mediun	n-grained sand-sized	\vdash	3	1	-61.7					\dashv	
ļ	- -	::::	shell	,	J : :: := :============================		3	1							
-62.7	10.0	<u> </u>				╛									
F	-	$\ \cdot\ \ $		orly-graded with s rained sand-sized											
<u> </u>	- -	:.	trace shell	l, strong reaction	with HCl, moist.										
ŀ	-	[:]		ark greenish gray											
ļ	- -	1:111													
}	- -	-: 				L			-64.7						
F	-	:		7 Ft., little fine-gr	ained sand-sized	Г	4								
ŀ	- -	::	shell					1							
F	-	:													
<u> </u>	- -	-: 													
-66.7	14.0	<u> </u> :-	`-At El66.	4 Ft., some sand	to gravel-sized shell										
-67.0	14.3		\up to 1-1/4	4"		/]									
	=		SAND, cla	ayey, mostly fine t	o medium-grained	//									
F	-		\ sand-sized	d quartz, some cla	ay, trace snell,	П	1	I	1						

	ATES = 1,9		Jackson COORDINA State P	TE SY	STEN	I/DAT	1	VERTICAL NAVD88	
X = 611,756 Y	ATES = 1,9			lane, I	FLN (us i	et) NAD83	NAVD88	
X = 611,756 Y	= 1,9					<u> </u>	1.7	1011200	
			ELEVATIO	N ТОР	OF B	ORING	3		
LEV. DEPTH		97,208	-52.7 F	t.					
	LEGEND	CLASSIFICATION OF MATERIAL	LS	ĸEC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-68.3 15.6 -71.2 18.5		strong reaction with HCl, moist, 10GY 5/1 greenish gray (SC) CLAY, fat, few fine-grained sand-sized weak reaction with HCl, moist, 10GY 4 greenish gray (CH) At El67.7 Ft., little fine to medium-grand-sized quartz SAND, clayey, mostly fine to medium-sand-sized quartz, some clay, weak rewith HCl, moist, 10GY 5/1 greenish grand-sized quartz, some clay, weak rewith HCl, moist, 10GY 5/1 greenish grand-sized quartz, some clay, weak rewith HCl, 1-69.0 Ft., no reaction with HCl, 5Y 4/3 olive	rained grained eaction						
-71.6 18.9 ·	111	∖At El70.2 Ft., 5Y 4/2 olive gray	/,	-					
-72.4 19.7	:: 	SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, tra	ace clay,				-72.4		
15.7	• 1	no reaction with HCl, moist, 2.5Y 5/2 gbrown (SP) SAND, poorly-graded with silt, mostly imedium-grained sand-sized quartz, litt gravel-sized shell, few silt, strong react HCl, moist, 5Y 6/1 gray (SP-SM) At El72.0 Ft., some sand to gravel-s NOTES: 1. USACE Jacksonville is the custodia these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC 1.0/1.5 SP* 1-Post 1.0/1.5 SP* 2 5.0/5.5 SP* 3 9.0/9.5 SP* 4 12.0/12.5 SP-SI *Lab visual classification based on gracurve. No Atterberg limits.	fine to le sand to tion with lized shell an for TORY CATION AND AND AND AND AND AND AND AND AND AN				Abbreviations: NR = Not Recorded.		

npi	LLING	LOG	DIVISION	[1	NSTA	LLATI	ON	_ 			SHEET 1	
			South Atlantic			ksonv					OF 2 S	HEETS
I. PRO									e Remarks			
		•	and Search	1	10. C			SYSTEM/DATUM	HORIZONT	AL	VERTICAL	•
	ibracore Bo							e, FLN (U.S. Ft.)	NAD83		NAVD	
	ING DESIGN				11. N	IANUF	ACTUI	RER'S DESIGNATIO	ON OF DRILL		ЈТО НАММ	
	B-SJSP12- LING AGEN			Y = 1,996,768				1	DISTURBED		ANUAL HAI	
	orps of Eng		1		12. T	OTAL :	SAMPI		5	i	01 310kbe 0	(טט)
	E OF DRILL		- 00000		12 7	OTAL		ER CORE BOXES	0	i'	<u> </u>	
				-					0			
5. DIRE	CTION OF	BORING	DEG. FROM	BEARING	14. E	LEVAT	ION G	ROUND WATER				
	VERTICAL		VERTICAL		15. D	ATE B	ORING	3	STARTED		COMPLET	
<u> </u>	NCLINED		<u> </u>	!					06-29-1	12	06-29-	12
6. THIC	KNESS OF	OVERB	URDEN N/A		16. E	LEVAT	ION T	OP OF BORING	-54.9 Ft.			
7. DEP1	TH DRILLED	INTO I	ROCK N/A		17. T	OTAL	RECO	VERY FOR BORING	92.00 %)		
					18. S	IGNAT	URE A	AND TITLE OF INSI	PECTOR			
8. тот/	AL DEPTH C	OF BOR	NG 18.6 Ft.			_	_	ey, Geologist				
ELEV.	DEPTH	LEGEND	CLASSIFICATION C	OF MATERIALS	% REG	BOX OR SAMPLE	RQD OR UD		REMARK	s	BLOWS/	N-VALUE
_					\top	+						T
-54.9	0.0	 	SAND, poorly-graded, mos	etly fine to	4		-					
ļ	- -	$ \cdot\cdot\cdot $	medium-grained sand-size	ed quartz, little sand to								
ŀ	-	$ \cdots $	gravel-sized shell, strong r					-55.9				
ļ	-	-::-	moist, 5Y 6/1 gray (SP)			1	1	-55.9				
ŀ	- -	$ \cdots $				-Pos	*					
F	_	[.:::1\	At El56.7 Ft., few sand t	to gravel-sized shell								
	- -	:::										
}	-	:::	At El57.5 Ft., trace shell									
ļ	-	$ \cdots $	HCI, (seams of sandy silt t 57.9)	from elevation 57.5 to								
ŀ	-	$[\cdots]$	51.3)									
ŀ	_	:::·										
	- -	:::										
ŀ	-	$[\cdots]$										
ļ	-	:::\r	At El59.9 Ft., few sand t	to gravel-sized shell								
ŀ	<u>-</u> -											
-	-	:::	At El60.9 Ft., trace silt		\vdash	<u> </u>	1	-60.9				+
ļ	- -		At El60.9 Ft., trace sitt	I, 5Y 7/1 light gray		2	1					
ŀ	-	$ \cdot \cdot $		5 5 ,								
ļ	- -	: :										
	- -	:·::										
.9		┼┼┼			+	+						+
	- -	 ∷:	At El63.2 Ft., 5GY 5/1 g	greenish gray								
ŀ	- 	: :::]	-63.9				
-	-	$\begin{bmatrix} \vdots & \vdots \end{bmatrix}$	At El63.9 Ft., little fine to sand-sized shell, strong re	o medium-grained		3						
64.0	- - 10.0	:::	sanu-sizeu sneli, strong re	SACION WILL TO			1					
-64.9	10.0	 :• 	SAND, poorly-graded with	silt, mostly fine to	+							
ļ	- -	 .: ∦	medium-grained sand-size	ed quartz, few silt,								
ŀ	- 	-: 	trace shell, weak reaction 10Y 6/1 greenish gray (SI									
ŀ	-	$\ \cdot\ $	TO TO THE GIRST GLAY (SI	i -OIVI)								
	- -	$[\cdot]$						66.0				
ŀ	_	 .:			-	1	1	-66.9				
ļ	-	 ::				4	-					
ŀ	-	:-										
	-	 [.:]∫∦										
ŀ	-	.: <u> </u>										
ŀ	_	1:111	A L C C C C L	An amount desired to the								
	- -	 -	At El69.0 Ft., little sand	to gravel-sized shell								
-69.9	15.0	-										

DRI	LLING	LO	G (Cont. Sheet)	Jackson			~t				SHEET	2 SHEETS	
PROJEC	т			COORDINA				UM	HORIZONTAL	VE	RTICAL		1
	hns Count	y San	d Search	State P					NAD83	1	NAVD88		
	ON COORDI			ELEVATIO					•	•			
X = 6	10,833	Y = 1,	996,768	-54.9 F	t.								
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	ıLS	REC.	BOX OR SAMPLE	RQD OR UD		REMARKS		BLOWS/	N-VALUE	
-70.9	16.0		SAND, silty, mostly fine to medium-gr sand-sized quartz, some fine to coars sand-sized shell, little silt, strong read HCI, moist, 10Y 6/1 greenish gray (S SAND, silty, mostly sand to gravel-siz little fine-grained sand-sized quartz (s	e-grained tion with SM) ted shell,									- 1:
-73.5	18.6	<u> </u>						-73.5					┇
			NOTES: 1. USACE Jacksonville is the custod these original files. 2. Soils are field visually classified in accordance with the Unified Soils Clasystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFITED SEPTH	ATORY CATION 				Abbrevia	ations: Not Recorded.				
	ORM 183	<u> </u>				<u> </u>							

DDI	LLING	1 06	DIVISION	l II	NSTAL	LATIC	N				SHEET 1	
			South Atlantic				lle Di				OF 2 SI	IEETS
1. PRO									Remarks			
		-	Sand Search	1	0. CC			SYSTEM/DATUM	HORIZONT	AL	VERTICAL	
	ibracore Bo							e, FLN (U.S. Ft.)	NAD83		NAVD8	
	ING DESIGN			I .	1. MA	NUFA	ACTUI	RER'S DESIGNATIO	N OF DRILL		JTO HAMMI	
	B-SJSP12-		X = 609,967 Y = 1,99					1,	DISTURBED		NUAL HAN	
	corps of Eng		1	14	2. TO	TAL S	SAMPI		5	i	DISTORBEI D	, (OD)
	E OF DRILL		1 0.00 12 0		3 TO	TAL 8	JIIMB	ER CORE BOXES	0	<u> </u>	<u> </u>	
				-					- 0			
5. DIRE	CTION OF E	BORIN	DEG. FROM BEARI	NG 1	4. EL	EVAT	ION G	ROUND WATER				
	VERTICAL		VERTICAL	1	5. DA	TE BO	ORING	i	STARTED	i	COMPLETI	
<u>'</u>	INCLINED								06-29-1	2	06-29-	12
6. THIC	KNESS OF	OVER	BURDEN N/A	1	6. EL	EVAT	ION T	OP OF BORING	-54.2 Ft.			
7. DEP	TH DRILLED	INTO	ROCK N/A	_1	7. TO	TAL F	RECO	VERY FOR BORING	100.00	%		
			00.4.54	1	8. SI			AND TITLE OF INSP	ECTOR			
8. 1017	AL DEPTH O	F BOR	ing 20.1 Ft.				Ousl	ey, Geologist				
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERI	ALS	% REC.	BOX OR SAMPLE	RQD OR UD		REMARK	s	BLOWS/ 1 FT.	N-VALUE
		Н			+							T
-54.2	0.0		CAND poorly graded mostly fire to		4							
ŀ	-	[:::	SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, I									
-	_	[. : :]	gravel-sized shell, strong reaction wi					-55.2				
	_	-:::	moist, 2.5Y 6/1 gray (SP)			1	1	-55.2				
ŀ	-	:::				-Pos	t					
	_	[:::: <u> </u>										
	-	.:::										
}	-							-57.2				
	- -	[:::				2	1					1
}	_	[.∵.]					1					
	_	∷:-										
	- -	:.::										
	_	[::::]										
).3	-	 			+							+
	<u>-</u>	· . · ·										
-	_	[:::	At El60.2 Ft., few medium-grained	sand-sized	-	_		-60.2				+
	-	[∷::	shell, trace silt	a cui iu sizcu		3						
-61.3	- _71	$ \cdots $	At El60.9 Ft., 10Y 6/1 greenish gra	ay								
-61.5	- 7.3		SILT, inorganic-H, some fine to		7							
-61.7	7.5	-'	medium-grained sand-sized quartz, t	few sand to	/d			62.2				
ŀ	-	╟┼┼╢	gravel-sized shell, strong reaction windows, 10Y 5/1 greenish gray (MH)	iii nui,	\parallel	<u> </u>	1	-62.2				+
	- -	·.	SAND, poorly-graded, mostly fine to			4						
ŀ		:: ‡	medium-grained sand-sized quartz, I	little sand to								
-	_	╟╟╗┩	gravel-sized shell, strong reaction wi moist, 5Y 6/1 gray (SP)	iii HCI,								
	_	ŀ∷⊹∭	SAND, poorly-graded with silt, mostly	y fine to								
ŀ	-	<u> :- </u>	medium-grained sand-sized quartz, t	few silt, few								
	-	.: ∐	fine to coarse gravel-sized shell, strowith HCl, moist, 10Y 4/1 dark greeni	ong reaction ish gray								
	<u> </u>	-: 	(SP-SM)									
-	-	<u> </u> -	At El62.2 Ft., little fine-grained sar	nd-sized								
	_	[:-] <u>†</u> ∦	shell									
-	 	.·										
	-	:: <u> </u>										
ŀ	_	`. † <u> </u>										
	_	<u> </u> [.][
}	_	[·][
	_	╟╢╣										
ŀ	-	·.										
-	-	`. †										

DRI	LLING	LO	G (Cont. Sheet)	Jackso		Distri	rt -		SHEET 2 OF 2 SI	
ROJEC			<u>-</u>	COORDINA				JM HORIZONTAL	VERTICAL	
	ohns Coun	ty San	nd Search	State F				1	NAVD88	
	ON COORDI			ELEVATIO						
X = 6	09,967	Y = 1,	996,331	-54.2 F	t.					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATE	RIALS	ĸEC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-71.0	16.8									
			SAND, silty, some sand to gravel-to 1-5/8", some sand to gravel-size up to 1-1/2", little fine-grained san quartz, strong reaction with HCl, n 10Y 6/1 greenish gray (SM)	ed limestone d-sized						
-74.3	20.1	<u> </u>	NOTES					-74.3 Abbreviations:		
			NOTES: 1. USACE Jacksonville is the cus these original files.	todian for				NR = Not Recorded.		
			Soils are field visually classified accordance with the Unified Soils System.	d in Classification						
			Laboratory Testing Results							
				DRATORY SIFICATION						
			1-Post 1.0/1.5 2 3.0/3.5 3 6.0/6.5	SP* SP* SP* SP* P-SM*						
			*Lab visual classification based on curve. No Atterberg limits.	gradation						

DRI	LLING	LOG	DIVISION	IN	STAL				SHEET 1
1. PRO		South Atlantic	+				istrict	OF 2 SHEETS	
		nuntu C-	and Search					E OF BIT See Remarks E SYSTEM/DATUM HORIZONTAI	L VERTICAL
		,	ind Search	10	, cu			<u> </u>	-
	ibracore Bo		LOCATION COORDINATES	144	B4.4			ne, FLN (U.S. Ft.) NAD83 RER'S DESIGNATION OF DRILL	NAVD88
	B-SJSP12		X = 609.097 Y = 1.995.981	1	. 1412-	NOF	4010	RER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
	LING AGEN		CONTRACTOR FILE NO	. -				L DISTURBED	UNDISTURBED (UD)
	orps of En		1	12	2. то	TAL S	SAMP	LES 5	0
	E OF DRILL		1 0.00 12 0.00	12	. TO	TAL N	JIIMB	BER CORE BOXES ()	
				13	. 10	IAL	TOMB	SER CORE BOXES	
5. DIRE	CTION OF	BORING	DEG. FROM BEARING VERTICAL	14	l. EL	EVAT	ION G	GROUND WATER	
	/ERTICAL NCLINED		VERTICAL	15	. DA	TE BO	ORING	STARTED 06-29-12	COMPLETED 06-29-12
	KNESS OF	OVERBU	i ; Irden N/A	16	. EL	EVAT	ION T	rop of Boring -55.6 Ft.	00-23-12
7. DEP1	TH DRILLED	INTO R	OCK N/A	17	. то	TAL F	RECO	VERY FOR BORING 91.92 %	
	AL DEPTH (18	s. SIG			AND TITLE OF INSPECTOR	
0. 1017	AL DEPIR	т т	10.5 Ft.	Ц,			Ousl	ley, Geologist	
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS		% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT. N-VALUE
-55.6	0.0								
-55.0	- 0.0		SAND, poorly-graded, mostly fine to					1	
ļ	-	.::.	medium-grained sand-sized quartz, few fine t	0					
ŀ	- -	- · · ·	coarse gravel-sized shell, strong reaction with HCI, moist, 5Y 6/2 light olive gray (SP)	1			[-56.6	
ļ	-	-::: \	HCI, moist, 5Y 6/2 light olive gray (SP) At El56.6 Ft., little sand to gravel-sized shel	, [1		-56.6	
<u> </u>	-	.	7 to Eli. 30.0 7 ti, milio dana to gravor dizoa dilor			-Pos	t		
F	_	::::							
ŀ	<u>-</u>								
ļ	-	-::-							
	-	-::-							
.9	-	·.::							
· · · ·	- -	::::k	At El 50 5 Et fourfine to ecores areins d					-59.6	
ŀ	-		At El59.5 Ft., few fine to coarse-grained sand-sized shell			2			
ļ	-	-∵- <i>\</i>	At El59.6 Ft., little medium-grained				1		
}	_	$ \cdot,\cdot $	sand-sized shell, trace silt						
ļ	- -	[At El60.9 Ft., 1-1/2" thick sandy silt seam						
ŀ	=	[.∵.]	-					-61.6	
-62.1	- - 6.5	-:::				3	1		
-∪∠. I	0.0	 :• 	SAND, poorly-graded with silt, mostly fine to			<u> </u>	l		
	_	1.:11#1	medium-grained sand-sized quartz, few silt, fe	ew					
ŀ	- -		sand to gravel-sized shell, strong reaction with HCI, moist, 10Y 4/1 dark greenish gray	n					
-	-	1. 1.1.	(SP-SM)					-63.6	
ļ	-	[::]] <u> </u>	,			4	1		
-64.4	8.8	[.·]]				_	ł		
J-7. - 7	_ 0.0	 	SAND, silty, mostly fine to medium-grained						
ŀ	-	111111 :	sand-sized quartz, little silt, little sand to						
65.0	- 10.0	HHH	gravel-sized shell, strong reaction with HCl,						
-65.6	10.0	╂┷┵┼┼╂╌	moist, 5GY 4/1 dark greenish gray (SM) SAND, poorly-graded with silt, mostly fine to	-					
ļ	- -	-	medium-grained sand-sized quartz, some sar	nd					
ŀ	_	1. 11111 1	to gravel-sized shell, few silt, strong reaction						
ļ	-		with HCl, moist, 10Y 5/1 greenish gray						
ŀ	-		(SP-SM) At El66.2 Ft., little sand to gravel-sized shel	,					
ļ	<u>-</u>	[:- <i> </i>							
}	-	[:·][
ļ	-	[::]							
}	_	- <u> </u>							
ţ	-	$\mathbb{H} \mathbb{H} \mathbb{N}$	At El68.9 Ft., some sand to gravel-sized sh	ell					
-69.5	- 13.9	·. †							
Ţ	-		SAND, silty, mostly sand to gravel-sized shell	,]					
ŀ	_		some fine to medium-grained sand-sized quartz, little silt, strong reaction with HCl, moi	_{st}					
-70.6	15.0	111111 '	quartz, inthe sint, strong reaction with mol, mol	οι,			l	I	

DRI	LLING	LOC	G (Cont. Sheet)	Jackson Jackson		Distric	ct		SHEET 2 OF 2 SI	IEETS
ROJEC	т			COORDINA				JM HORIZONTAL	VERTICAL	
St. Jo	ohns County	y San	d Search	State P				!	NAVD88	
OCATIO	ON COORDIN	NATES	•	ELEVATIO	N ТОР	OF B	ORING	3		
X = 6	09,097 Y	′ = 1,9	995,981	-55.6 F	t.					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERI	ALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-72.4 -73.9	16.8 18.3	TEGE	SAND, poorly-graded with silt, mostly medium-grained sand-sized quartz, sto gravel-sized shell, few silt, strong with HCl, moist (SP-SM) SAND, poorly-graded with silt, mostly gravel-sized shell, some fine to medi sand-sized quartz (SP-SM) NOTES: 1. USACE Jacksonville is the custod these original files. 2. Soils are field visually classified in accordance with the Unified Soils Cl. System. 3. Laboratory Testing Results	y fine to some sand reaction y sand to um-grained dian for nassification ATORY ICATION	REG.	BOX	C C C C C C C C C C	-73.9 Abbreviations: NR = Not Recorded.	BLOW 1 FIN	N-VAL

DBI	LLING	1.06	DIVISION	N		IN	STAL	LATIC	N	<u> </u>		SHEET 1		1
		LUG	South	n Atlantic		┸	Jack	sonvi	lle Dis	strict		OF 2 SH	IEETS	
1. PRO											Remarks			
	st. Johns Co	•	and Search			10	. сс			SYSTEM/DATUM	HORIZONTAL	ł		
	ibracore Bo		! •	OCATION C	OORDINATES	144	B/1 /			e, FLN (U.S. Ft.) RER'S DESIGNATIO	NAD83	NAVD8		-
_	B-SJSP12-		"		614 Y = 1,995,145	"	. 1412	INUFA	AC I UI	KER S DESIGNATIO	N OF DRILL	AUTO HAMME MANUAL HAM		
	LING AGEN		<u> </u>	71 000,0	CONTRACTOR FILE NO.						DISTURBED	UNDISTURBED		1
	Corps of Eng		- CESAJ	i	6738-12-5195	12	. то	TALS	AMPL	LES	5	0		
4. NAM	E OF DRILL	ER				13	. то	TAL I	IUMB	ER CORE BOXES	0			
5. DIRE	CTION OF I	RORING		DEG. FROM	BEARING	14	. EL	EVAT	ION G	ROUND WATER				
\boxtimes	VERTICAL			VERTICAL		15	D/	TE BO	DING		STARTED	COMPLETE	Đ	
	INCLINED			<u>i </u>		ļ.°					06-29-12	06-29-1	12	4
6. THIC	CKNESS OF	OVERB	JRDEN	N/A		16	. EL	EVAT	ION T	OP OF BORING	-58.9 Ft.			4
7. DEP	TH DRILLED	INTO R	OCK N	I/A						ERY FOR BORING				
8 TOT	AL DEPTH C	E ROPI	NG 17	4 Ft.		18	. SI			ND TITLE OF INSP	ECTOR			
0. 101	AL DEFIN C	т т	17.	711.		┷		_	Ousi	ey, Geologist				+
ELEV.	DEPTH	LEGEND	CLA	ASSIFICATIO	ON OF MATERIALS		« REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/	N-VALUE	
E0.0	0.0													
-58.9	0.0	 			mostly fine to	\dashv								-0
	_				sized quartz, trace silt,	ŀ		_		-59.4				Ŧ
	_		brownish g		Cl, moist, 2.5Y 6/2 light			1						F
	-				Ft., sandy silt seams									ļ
	_	$ \cdots $	-At El60.5	5 Ft., 2.5Y 6	/1 gray					-60.9				Ŀ
	-							2		-60.9				ŀ
-61.9	3.0	-::-						R-Pos	t					F
	-				vith silt, mostly fine to									F
	-				sized quartz, few silt, tion with HCl, moist,					62.0				ţ
	_		5GY 4/1 da	ark greenish	gray (SP-SM)	ŀ		3		-62.9				+
	_	·.	-At El62.9 shell	9 Ft., few fin	e-grained sand-sized			٦						-
	_		-At FL -63.9) Ft few sa	nd to gravel-sized shell,									-5
	-	$\ \cdot\ \ $		rk greenish										F
		∐ ::∐∦								-64.9				Ļ
		-						4						t
														Ŀ
	_		-At El65.9	Ft., some	sand to gravel-sized she	ell								F
	-	1:11	-A+EL 00 =	7 Et 00	and to are all sines									F
	-		limestone,	little fine to	sand to gravel-sized medium-grained									F
	- -				ak cementation									ţ
	┢	$\ \cdot\ $												F
	<u> </u>	:: 												F
60.0	10.3		-Δ+ El 60 C) Et mooth	fine to medium-grained	,								- -10
-69.2		$\parallel \parallel \parallel$	sand-sized	quartz, little	sand to gravel-sized	' Л								ţ
	r r	囯 '	shell, trace	limestone,	10Y 5/1 greenish gray	/								Ł
	Weal	曲	LIIVIES I ON	n⊏, nard, sli	ghtly weathered, up to 2	•								ŀ
-70.8	- - 11.9 [់]													F
	 -	HHH			to medium-grained ne sand to gravel-sized									F
	- 40.0		shell, little s	silt, strong r	eaction with HCl, moist,									Ė
-71.9	13.0	HHH	10G 5/1 gr	eenish gray	(SM)									F
	- -	HHII	SAND, Silty up to 1". lift	y, mostly sai tle silt. 10Y	nd to gravel-sized shell 5/1 greenish gray (SM)									ţ
	<u> </u>		, 110		3 g. w, (OIII)									L
	-													ŀ
		HHHII												F

DRILLING	LOG (Cont. Sh	neet)	INSTALLA				ng Designation VB-SJSF	SHEET 2	
PROJECT		,	Jackso				UM HORIZONTAL	OF 2 SI	HEETS
St. Johns Count	ty Sand Search		State F	lane, l	FLN (U.S. F		NAVD88	
LOCATION COORDI	NATES		ELEVATIO	N ТОР	OF B	ORING	G		
X = 609,614			-58.91	t.	_				
ELEV. DEPTH	Q CLASSI	IFICATION OF MATE	ERIALS	REC.	BOX OR SAMPLE	RQD OR UD	REMARK	BLOWS/	N-VALUE
-75.1 16.2 -76.3 17.4	SAND, poorly-gravel-sized lingravel-sized she few silt, strong 2.5y 6/2 light by NOTES: 1. USACE Jack these original for accordance with System. 3. Laboratory SAMPLE ID 1 2 2-Post 3 4	graded with silt, monestone up to 1", felell, few fine gravelreaction with HCl, prownish gray (SP-cksonville is the cusfiles. Eld visually classified the Unified Soils Testing Results SAMPLE LABO DEPTH CLASS 0.5/1.0 2.0/2.5 2.0/2.5 4.0/4.5 S 6.0/6.5 S ssification based or	estly sand to w sand to ws sand to sized quartz, moist, SM) stodian for d in Classification ORATORY SIFICATION SP* SP* SP* SP* SP-SM*	REC.	BOX SAM		-76.3 Abbreviations: NR = Not Recorded.		97· N

DDI	LLING	100	DIVISIO	N		INST	ALLATI	ON				SHEET	1
			South	h Atlantic			cksonv					OF 2 5	HEETS
1. PRO]				E OF BIT	See Remark	-		
		•	Sand Search	l		10.			SYSTEM/DATU		ZONTAL	VERTICA	L
	ibracore Bo								ne, FLN (U.S. F		D83	NAVE	
	ING DESIGN		۱ <u>ا</u>	LOCATION COOR		11.	MANUF	ACTU	RER'S DESIGNA	ATION OF DRI		AUTO HAMI	
	B-SJSP12-		<u> </u>		Y = 1,994,281 NTRACTOR FILE NO.					DISTURB		MANUAL HA	
	Corps of Eng		c CESA I		6738-12-5195	12.	TOTAL	SAMP	LES	5	ַ ל !	0 0	נעט) עב
	E OF DRILL		3 - OLOAU	1	5730-1 <u>Z</u> -3133	42	FOTAL	NII IRAD	ED CODE DOVE		i_	0	
					-				BER CORE BOXE	-			
5. DIRE	CTION OF	BORIN	G	DEG. FROM	BEARING	14.	ELEVA	TION C	ROUND WATE				
	VERTICAL INCLINED			VERTICAL		15.	DATE B	ORING	G	STAR 06	FED -29-12	COMPLE 06-29	
6. THIC	CKNESS OF	OVER	BURDEN	N/A	'	16.	ELEVA	TION 1	TOP OF BORING	<u> </u>			
7. DEP	TH DRILLED	INTO	ROCK	N/A		17.	TOTAL	RECO	VERY FOR BOR	RING 90.0	00 %		
8. TOT.	AL DEPTH C	OF BOF	RING 18.	.4 Ft.		18.			AND TITLE OF I	INSPECTOR			
		_				Т	_	_	ey, Geologist				
ELEV.	DEPTH	LEGEND	CL	ASSIFICATION O	F MATERIALS	RE	BOX OR SAMPLE	RQD OR UD		REM	IARKS	BLOWS/	N-VALUE
-52.0	0.0												
			SAND, poo	orly-graded, mos	tly fine to	1		1	1				
	_	$ \cdot $			d quartz, few fine to strong reaction with								
	_		\ HCI, moist	t, 10Y 7/1 light g	reenish gray (SP)	\vdash		4	-53.0 -53.0				—
			^L At El53.0	0 Ft., little mediu	m-grained		1	Į.	-55.0				
	-	l. :	sand-sized	d shell			(<u>-Po</u>	ar T					
	_												
	_	·											
	_												
	_	. ∷.											
	<u> </u>	 . · · .						1	50.0				
	_	$ \cdots $	~∆t El _56 (∩ Ft few mediu	m-grained sand-sized	\vdash	+	-	-56.0				+-
	<u>-</u>	·.::	shell, trace		granica sana-sizeu		2	1					
	L	$ \cdot \cdot \cdot $	- ,					1					
'.1	-		At El57.0	0 Ft., 5Y 6/1 gra	у	+	+	+					+-
	L							1					
	<u>L</u>	$ \cdot \cdot\cdot $						1					
	-	····							-58.5				
	F	$ \cdots $			medium-grained		3	1					
-59.1	<u> </u>	1	sand-sized	d shell	ailt macthifice to	\dashv	Ť	1					
	-	:-	DANU, POO medium-ar	ony-graded with rained sand-size	silt, mostly fine to d quartz, few silt, few			1					
	<u>-</u>	 [:]]	fine to coa	rse-grained sand	d-sized shell, strong			1					
	<u> </u>	.:	reaction wi		0Y 5/1 greenish gray								
	<u> </u>	·.	(SP-SM)					1	04.0				
	L	 •.	_∆t El _61 (∩ Ft little fine a	rained sand-sized	\vdash	-	1	-61.0				+-
	_	:-	shell	o i i., iiile iiile-gi	1 an 160 3al 10-31260		4	1					
	L	 [:]						1					
	-	-											
	L	·:						1					
	<u>-</u>	:-											
	Ļ	[::] <u>]</u>						1					
	_	$\ \cdot\ \ $											
	_	1::						1					
	_	-: <u> </u>											
	L	 •.	-At FI -64 7	7 Ft little sand t	to gravel-sized shell			1					
-65.4	_ - 13.4	1:-	/ 11UT.	, indic sailu t	o graver orzed oriell								
-00.4	- 13.4	 	SAND, silt	y, some fine to n	nedium-grained	\dashv		1					
	L		sand-sized	d quartz, some sa	and to gravel-sized								
	L	[+]	shell, little	silt, strong react	ion with HCI, moist,			1					
	<u> </u>	[+]	10Y 4/1 da	ark greenish gray	(SIM)								
-67.0	150	11111				- 1	1	1	1				1

SAJ FORM 1836 JUN 02

DRI	LLING	LOC	G (Cont. Sheet)	INSTALLA* Jackson		Distric	ct		SHEET 2 OF 2 SI	IEETS
PROJEC	т			COORDINA				JM HORIZONTAL	VERTICAL	
St. Jo	ohns Count	y San	d Search	State P				!!!	NAVD88	
LOCATIO	ON COORDI	NATES	S	ELEVATIO	N ТОР	OF B	ORING	3		
X = 6	10,025	Y = 1,	994,281	-52.0 F	t.	_				
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	LS	ĸEC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-68.9 -70.4	16.9 18.4	LEGENI	SAND, poorly-graded with silt, mostly medium-grained sand-sized quartz, lit coarse-grained sand-sized shell, few s reaction with HCl, moist, 10Y 4/1 dark gray (SP-SM) SAND, poorly-graded with silt, mostly gravel-sized shell, some fine-grained sand-sized quartz, 10Y 6/1 greenish (SP-SM) NOTES: 1. USACE Jacksonville is the custodi these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFICE SAMPLE SA	fine to ttle fine to silt, strong greenish sand to gray an for TORY CATION * * * * M*	% REC.	BOX OR SAMPLI	G90	-70.4 Abbreviations: NR = Not Recorded.	BLOWS	N-VALU
	ORM 183									

DRI	LLING	LOG	DIVISION	II.	NSTAL	LATIC	N				SHEET 1	
		South Atlantic	+			lle Di				OF 2 S	HEETS	
1. PRO									e Remarks			
	St. Johns Co	•	and Search	19	0. CC			SYSTEM/DATUM	HORIZONT		VERTICAL	
	/ibracore Bo		LOCATION COORDINATES	1	1 84			e, FLN (U.S. Ft.)			NAVD	
	/B-SJSP12		X = 610,467 Y = 1,993,402	Ι.	I. IVIA	MOFA	4010	RER S DESIGNATION	ON OF DRILL		UTO HAMM	
	LLING AGEN		CONTRACTOR FILE NO						DISTURBED		NDISTURBE	
	Corps of En		- CESAJ 6738-12-5195	12	2. TO	TAL S	SAMP	LES	5		0	
4. NAN	IE OF DRILL	.ER		1:	з. то	TAL I	NUMB	ER CORE BOXES	0			
			I I	1,	4. EL	EVAT	ION G	ROUND WATER				
	ECTION OF I	BORING	DEG. FROM BEARING VERTICAL	\vdash					STARTED		COMPLET	ED
	INCLINED			11	5. DA	TE BO	ORING	•	06-29-1	2	06-29-	12
6. THI	CKNESS OF	OVERBU	JRDEN N/A	10	6. EL	EVAT	ION T	OP OF BORING	-53.4 Ft.			
7 DED	TH DRILLE	INTO P	OCK N/A	1:	7. TO	TAL F	RECO	VERY FOR BORING	3 87.00 %			
7. DEF	TH DRILLER	, IN 10 K	N/A	17	8. SI	GNAT	URE A	AND TITLE OF INS	PECTOR			
8. ТОТ	AL DEPTH (OF BORI	NG 17.8 Ft.			Jase	Ousl	ey, Geologist				
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS		REC.	BOX OR SAMPLE	RQD OR UD		REMARK	s	BLOWS/	N-VALUE
-53.4	0.0	 	SAND, poorly-graded, mostly fine to		-			1				
	F	$ \cdots $	medium-grained sand-sized quartz, trace silt,									
	<u>L</u>	-::-	strong reaction with HCl, moist, 10Y 7/1 light greenish gray (SP)									
	է	:·::	groundinging (Or)									
	F	.::.						-55.4				
	<u> </u>	l∷⊦\	-At El55.4 Ft., little medium-grained			1		-55.4				
	Ł		sand-sized shell			-Pos	t					
	-											
4	F	:::										
.1	_	:::\t	A+ C	ام ما				-57.4				
	<u> </u>	∷: `	-At EI57.4 Ft., few medium-grained sand-siz shell	ea		2						
	L	[:::]										
	F	:::										
	ļ.	:::						50.4				
	<u> </u>	$ \cdot $				3	1	-59.4				+
-59.9	F 6.5	 	SAND, poorly-graded with silt, mostly fine to		-	\vdash	ł					
	F	1. 111	medium-grained sand-sized quartz, few silt,									
	ţ	 :: ∥	trace shell, strong reaction with HCl, moist, 10Y 5/1 greenish gray (SP-SM)									
	Ł	:-						-61.4				
	F		-At El61.4 Ft., few fine-grained sand-sized shell			4						
	F	:.	SHOIL				1					
	F	::										
	<u> </u>	 ∙:										
	H		-At El63.4 Ft., few fine to coarse-grained									
	F	:: <u> </u>	sand-sized shell									
	L											
	ŀ	$\ \cdot\ $										
	F	-: <u> </u>										
	<u> </u>	·.										
66.3	L 12.0	$[\cdot]$										
-66.3	_	1:1:11	SAND, silty, some fine to medium-grained		-							
-66.8	- 13.4 -	4	sand-sized quartz, some sand to gravel-sized									
	Ł	: : \	shell, little silt, strong reaction with HCl, moist 5GY 6/1 greenish gray (SM)	,								
	F		-SAND, silty, mostly sand to gravel-sized shell									
00 1	<u> </u>	$\parallel \parallel \parallel \parallel \parallel \parallel$	some fine to medium-grained sand-sized									
-68.4	15.0	11+1+1\	guartz, 5GY 7/1 light greenish gray (SM)		1	ı	ı	1				1

DRILLING LO	G (Cont. Sheet)	INSTALLATION SHEET 2 Jacksonville District OF 2 SHEETS								
PROJECT		COORDINA				UM HORIZONTAL	VERTICAL			
St. Johns County San	nd Search	State Pl	ane, I	FLN (U.S. I	Ft.) NAD83	NAVD88	_		
OCATION COORDINATE		ELEVATION		OF B	ORING	G				
X = 610,467 Y = 1,	,993,402	-53.4 F	t.			<u> </u>				
ELEV. DEPTH	CLASSIFICATION OF MATERIAL	LS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE		
-69.1 15.7 - 1	"At El68.0 Ft., some fine to coarse gravel-sized limestone up to 1", some signavel-sized shell, little fine to medium-sand-sized quartz SAND, poorly-graded with silt, mostly fine for medium-grained sand-sized quartz, so to gravel-sized limestone, little fine grashell, few silt, strong reaction with HCl 5GY 6/1 greenish gray (SP-SM) SAND, silty, mostly fine to medium-grasand-sized quartz, little sand to gravel-shell, little silt, few fine to coarse grave limestone, strong reaction with HCl, m 5GY 6/1 greenish gray (SM) At El70.4 Ft., some sand to gravel-sishell, 5GY 5/1 greenish gray NOTES: 1. USACE Jacksonville is the custodiathese original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA* ID DEPTH CLASSIFIC 1 2.0/2.5 SP* 1-Post 2.0/2.5 SP* 2 4.0/4.5 SP* 3 6.0/6.5 SP* 4 8.0/8.5 SP-SI* *Lab visual classification based on gracture. No Atterberg limits.	and avel-sized l, moist, alined sized el-sized loist, alized an for assification are carried with the control of the carried el-sized loist, alized an for assification are carried with the carried el-sized loist, alized an for assification are carried el-sized loist, alized an for assification are carried el-sized loist, alized an for assification are carried el-sized loist, alized loist, al				-71.2 Abbreviations: NR = Not Recorded.				

г	RII	LING	ı OG	DIVISI	ON			INS	TAL	LATIC	N					SHEET 1	
				So	uth Atlantic			+			lle Dis					OF 2 SH	IEETS
١.	PROJ) I O	-1-							E OF BIT		Remarks		VEDTION	
		. Johns Co	,	Sand Seard	ch			10.				SYSTEM/DA		HORIZONT		VERTICAL	
		oracore Bo		u .	LOCATION	COOR	DINATES	11				e, FLN (U.S RER'S DESIG		NAD83		NAVD8	
		3-SJSP12-		•	1		Y = 1,992,439	1	WA		.0.0.	KER O DEGIC	MAIIO	OI DILLE		AUTO HAMME WANUAL HAW	
3.		ING AGEN			1 / 0.0		ITRACTOR FILE NO.						D	ISTURBED	_	NDISTURBED	
		orps of Eng		s - CESAJ		6	738-12-5195	12.	то	TAL S	SAMPL	LES		5		0	
4.	NAME	OF DRILLE	ER					13.	то	TAL N	IUMB	ER CORE BO	XES	0			
_							1	14.	ELI	EVAT	ION G	ROUND WA	TER				
5.		CTION OF B	ORIN	G	DEG. FRO	AL	BEARING							STARTED		COMPLETE	ED
	<u> </u>	NCLINED					1	15.	DA	TE BO	ORING	•		06-29-	12	06-29-1	12
3.	тнісі	KNESS OF	OVER	BURDEN	N/A			16.	ELI	EVAT	ION T	OP OF BORI	NG	-57.7 Ft.			
7.	DEPT	H DRILLED	INTO	ROCK	N/A			17.	то	TAL F	RECOV	/ERY FOR B	ORING	85.00 %)		
_	<u> </u>	II DIVILLED		ROOK	IN/A			18.	SIG	NAT	URE A	ND TITLE O	F INSPE	CTOR			
В.	TOTA	L DEPTH O	F BOR	RING 1	17.8 Ft.					Jase	Ousle	ey, Geologi	st				
ELI	EV.	DEPTH	LEGEND	C	CLASSIFICAT	TION O	F MATERIALS	F	% REC.	BOX OR SAMPLE	RQD OR UD			REMARK	(S	BLOWS/ 1 FT.	N-VALUE
- -5	7.7	0.0															Ī
	-		\cdots		oorly-graded												
	ţ		$ \cdots $				d quartz, weak Y 7/1 light gray (SF	₎									
	_	-	::::			, -	5 . 5 , (0.	´									
1	-																₩
	┙┞	-	[::::]	^ Λ+ΕΙ 50	0.7 Et fow	modium	m-grained sand-siz	٦ŀ				-59.7 -59.7					₩
	þ		.: :.	shell	9.7 Ft., IEW I	mediui	n-graineu sanu-sizi	eu		1		-59.7					
	ŀ			`-At El60	0.4 Ft., 5Y 6	3/1 gray	У			-Pos	L						
-6	1.2	3.5	[::::]				•										
<u>-0</u>	1.2 -	0.0	. 111				silt, mostly fine to					04.7					
	Ŀ	-	- <u>.</u> }				d quartz, few silt, with HCl, moist,	H		2		-61.7					+-
	ŀ			5Y 4/2 o	live gray (Sl	P-SM)											
	F	_		^L At El6¹ \ sand-siz		mediur	m to coarse-grained										
	Ŀ		· <u>.</u>]		2.7 Ft., 10Y	5/1 gr	eenish gray										
	┝				,	Ū	0 7										
	F	=															
	þ		ŀ./∤∦									04.7					
	Ŀ	-	:- 	~At El64	4.7 Ft., little	fine to	coarse-grained	H		3		-64.7					+
<u>-6</u>	5.2	7.5		_sand-siz	ed shell		· ·	$ \bot $	ŀ	ა 							
	F	-	 	SAND, s	ılıty, mostly f ed guartz عر	ine to ome sa	medium-grained and to gravel-sized										
_	<u>, </u>		+:+:	shell, littl	le silt, strono	reacti	ion with HCI, moist,										
-6	6.5 [8.8		\ 10Y 4/1 \\ _{At Fl -} e	dark greenis	sh gray	/ (SM) ittle sand to	A				-66.7					<u></u>
	F	-	:	\gravel-si	zed shell			/[4							
	ţ		-: 		oorly-graded			_									
	Ŀ	-	:-				artz, little medium to shell, few silt, trace										
	F		:'	limeston	e, strong rea	action v	with HCl, moist,										
-6	8.9	11.2	: <u> </u>	10Y 4/1	dark greenis	sn gray	(SP-SM)										
_		-					medium-grained										
	F		 		ed quartz, lit IY 6/1 greeni		nd to gravel-sized										
	F	-	<u> </u>	5.1CII, 1U	. or i greetii	ion gra	., (0.11.)										
-7	0.5	12.8		_													
	Ŧ	-	 				gravel-sized shell,										
	Ė		<u> </u>		gravei-sized gray (SM)		z, 10Y 7/1 light										
			11111	J	J , ()							I					1
	Ŀ	_	l∔∐∔∐ I					- 1	ı								
	-	-															

DRI	LLING	LOC	G (Cont. Sheet)	INSTALLATION SHEET 2 Jacksonville District OF 2 SHEETS								
PROJEC	т			COORDINA				UM HORIZONTAL	VERTICAL			
St. Jo	ohns Count	y San	d Search	State P	lane,	FLN ((U.S. I	Ft.) NAD83	NAVD88			
	ON COORDI			ELEVATIO		OF B	ORIN	<u></u>				
X = 6	10,883	T	992,439 r	-57.7 F	t.	1						
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL	LS	REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE		
-73.2 -74.5	15.5		SAND, silty, mostly fine to medium-grasand-sized quartz, some silt, trace she reaction with HCl, 10Y 5/1 greenish grasaltr, inorganic-H, little fine-grained saquartz, trace shell, weak reaction with moist, 10Y 4/1 dark greenish gray (MSAND, silty, some fine to medium-grasand-silty).	ell, weak ray (SM) and-sized HCl, H)								
-75.5	17.8		sand-sized quartz, some silt, some san gravel-sized shell, strong reaction with moist, 10Y 4/1 dark greenish gray (SI	nd to HCl,				-75.5				
			NOTES:	on for				Abbreviations: NR = Not Recorded.				
			USACE Jacksonville is the custodic these original files. Soils are field visually classified in accordance with the Unified Soils Classystem.									
			Laboratory Testing Results SAMPLE SAMPLE LABORA	TORY								
			ID DEPTH CLASSIFIC 	CATION								
			1-Post 2.0/2.5 SP* 2 4.0/4.5 SP-SI 3 7.0/7.5 SP-SI 4 9.0/9.5 SP-SI	M* M*								
			*Lab visual classification based on gracurve. No Atterberg limits.	dation								

DRILLIN	IG I OG	DIVISION	!	INSTAL	LATIC	N			SHEET 1	
1. PROJECT		South Atlantic				lle Dis			OF 2 SH	IEETS
	- 0	d O					SYSTEM/DATUM	Remarks	VERTICAL	
	s County Sar e Borings	nd Search						NAD83	<u> </u>	
2. BORING DE		LOCATION COOR	DINATES				e, FLN (U.S. Ft.) RER'S DESIGNATION		NAVD8	
VB-SJSI		1	Y = 1,992,906					·	MANUAL HAN	
3. DRILLING A	GENCY	CON	TRACTOR FILE NO.	12. TO	TAL 6	AMDI	Ee D	ISTURBED U	INDISTURBED	(UD)
	Engineers -	CESAJ 6	6738-12-5195	12. 10	IALS	AIVIPL	-E3	5	0	
4. NAME OF D	RILLER		<u> </u>	13. TO	TAL N	IUMB	ER CORE BOXES	0		
5. DIRECTION	OF BORING	DEG. FROM	BEARING	14. EL	EVAT	ION G	ROUND WATER			
VERTIC	AL	VERTICAL		15. DA	TE BO	RING	•	STARTED 06-29-12	COMPLETE 06-29-1	
6. THICKNESS	OF OVERBU	RDEN N/A		16. EL	EVAT	ION T	OP OF BORING	-58.5 Ft.		
7. DEPTH DRIL	LED INTO RO	OCK N/A		17. TO	TAL F	RECO\	ERY FOR BORING	85.00 %		
				18. SIC	MAT	URE A	ND TITLE OF INSPE	ECTOR		
8. TOTAL DEP		IG 17.5 Ft.				Ousle	ey, Geologist			
ELEV. DEPT	H FEGEND	CLASSIFICATION O	F MATERIALS	REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/	N-VALUE
E0 E 0 0										
-58.5 0.0 L		SAND, poorly-graded, mos		\dashv						
}	ا ا∴∴ا	medium-grained sand-size	d quartz, trace shell,							
F		strong reaction with HCl, m (SP)	ioist, 2.31 b/1 gray				-59.5 -59.5			
[()			1		-59.5			
0.3					(-Pos	ι				Ь—
-63.5 5.0		At El62.0 Ft., 2.5Y 5/1 gr SAND, poorly-graded with medium-grained sand-sized shore-grained sand-sized shoreaction with HCl, moist, 10 (SP-SM)	silt, mostly fine to d quartz, little ell, few silt, strong		2		-63.5 -67.0			
-69.0 10.5		SAND, poorly-graded, mos	tly fine-grained	+			-69.0			+
-69.611.1	:	sand-sized quartz, few fine	grained sand-sized		4					
-71.0 12.5		shell, trace silt, weak reacti 10YR 6/1 gray (SP) CLAY, fat, some fine-grain quartz, little shell, 5Y 5/1 g	ed sand-sized ray (CH)							
- - - - - - - - -		SAND, clayey, mostly sand shell, little fine-grained san clay, 5Y 7/1 light gray (SC	d-sized quartz, little							

DRI	LLING	LOC	G (Cont. Sheet)	INSTALLA Jackso		Dietri	~t		SHEET 2 OF 2 SH	EETC
ROJEC			· ·	COORDINA				UM HORIZONTAL	VERTICAL	EEIJ
St. Jo	hns Count	y San	d Search	State F	lane, l	FLN (U.S. I	1	NAVD88	
	ON COORDI			ELEVATIO		OF B	ORIN	G		
X = 6	11,782		992,906	-58.5 F	t.	1				
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERI	ALS	REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-73.6	15.1		SAND, clayey, mostly fine-grained s quartz, little sand to gravel-sized she 5Y 5/1 gray (SC)	and-sized ell,						
-76.0	17.5	(/////	NOTES:					-76.0 Abbreviations:		
		dian for				NR = Not Recorded.				
		n assification								
			3. Laboratory Testing Results							
			SAMPLE SAMPLE LABOR ID DEPTH CLASSIF	RATORY FICATION						
			1-Post 1.0/1.5 S 2 5.0/5.5 SP- 3 8.5/9.0 SP-	P* P* -SM* -SM* P*						
			*Lab visual classification based on g curve. No Atterberg limits.	radation						

DBII	LING		DIVISION	V		INST	ALLATI	ON	<u>-</u>		SHEET 1	
		LUG	South	n Atlantic		_	cksonv				OF 2 S	HEETS
1. PROJE										Remarks		
		•	Sand Search			10. (SYSTEM/DATUM	HORIZONTAL	VERTICAL	
Vibr	racore Bo		1 31	OCATION COOR	DINATES	11. 1			e, FLN (U.S. Ft.) RER'S DESIGNATION	NAD83	NAVD:	
	SJSP12-		·		Y = 1,993,387						MANUAL HA	
3. DRILLII			•		TRACTOR FILE NO.	12. 1	OTAL :	SAMPI		STURBED	UNDISTURBE	D (UD)
Corp			- CESAJ	; 6	738-12-5195				!	5	0	
4. NAME	OF DRILLI	EK				13. 1	OTAL	NUMB	ER CORE BOXES	0		
5. DIRECT	TION OF B	ORING	3	DEG. FROM VERTICAL	BEARING	14. E	LEVAT	ION G	ROUND WATER			
_	RTICAL CLINED			VERTICAL	 	15. [DATE B	ORING	•	STARTED 06-29-12	COMPLET 06-29-	
6. THICK	NESS OF	OVERB	URDEN	N/A		16. E	LEVAT	ION T	OP OF BORING	-59.6 Ft.		
7. DEPTH	DRILLED	INTO	ROCK N	I/A					ERY FOR BORING	87.50 %		
8. TOTAL	DEPTH O	F ROP	ING 19	0 Ft.		18. 8			ND TITLE OF INSPE	CTOR		
5U.AL	J= 0		10.0	υ ι t.		\vdash			ey, Geologist			ш
ELEV.	DEPTH	LEGEND	CLA	ASSIFICATION O	F MATERIALS	RE	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/	N-VALUE
-59.6	0.0										<u></u>	
-55.0	0.0	 		orly-graded, most		\dashv						
<u> </u>		$ \cdots $			e-grained sand-sized on with HCl, moist,	d			00.0			
<u> </u>		∷:¦	5Y 6/1 gray	/ (SP)			+	┨	-60.6 -60.6			+
F			At El60.6 sand-sized	Ft., little mediur	m-grained		1 (-Pos	alt	33.3			
L			Juliu Jizou	Si icii				1				
-62.5 - 2	2.9		CAND noo	urly aradad with a	silt mooth.	_						
F				orly-graded with s d sand-sized qua	artz, few silt, trace							
		[:·]]	fine-grained	d sand-sized she					-63.6			
		- 	5Y 6/1 gray At El63.6	Ft., few fine to	medium-grained		2	1	00.0			
			sand-sized		o o			1				
		·:										
-		:-										
-65.6	6.0		SAND silty	/ mostly fine-ara	ined sand-sized		+-	-	-65.6			+
			quartz, little	e silt, few fine-gra	ained sand-sized		3					
		+‡+‡	shell, weak 5Y 6/1 gray	reaction with H	CI, moist,							
		[###]	5 . 5/ i giaj	, (0)								
-												
l F		[] []										
		[{ ;}]							-68.6			
			∽At El68.7	' Ft., little fine to	coarse-grained		4	1				+
-69.2 <u> </u>	9.6		sand-sized	shell, strong rea	ction with HCl	$ \prec $		1				
<u> </u>			ULAY, fat, little fine to	coarse-grained	l sand-sized quartz, sand-sized shell, no							
			reaction wit	th HCI, moist, 10	GY 7/1 light							
l F			greenish gr At El69.6	Ft., few fine to	medium-grained							
			sand-sized	shell	J :							
												
F												
-												
I F												
-74.6 h 1	15.0					- 1		1				

DRI	LLING	LOC	G (Cont. Sheet)	Jackson Jackson		Distri			SHEET 2 OF 2 S	
PROJEC [*]				COORDINA				UM HORIZONTAL	VERTICAL	13
	hns Coun	ty San	d Search	State P	lane,	FLN (<u>U.S.</u> [NAVD88	
LOCATIO	ON COORD	INATES	5	ELEVATIO	N ТОР	OF B	ORING	G		
X = 6	12,605	_	993,387	-59.6 F	t.					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	ıLS	REC.	BOX OR SAMPLE	RQD OR UD	REMARK	BLOWS/	N-VALUE
-75.9 -77.6	16.3 18.0	LEGEND	SAND, silty, some sand to gravel-size limestone, some fine-grained sand-si. little silt, strong reaction with HCl, mo (limestone fractured by sampling), 10GY 8/1 light greenish gray (SM) CLAY, fat, some fine-grained sand-si quartz, little fine to medium-grained s shell, weak reaction with HCl, moist of these original files. 1. USACE Jacksonville is the custod these original files. 2. Soils are field visually classified in accordance with the Unified Soils Clasystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIED DEPTH CLASSIFIED DEPTH CLASSIFIED SEP-STAND SEP-ST	ed zed quartz, ist, zed and-sized (CH) ian for assification at the control of the	REC.	BOX OR	ROPORD	-77.6 Abbreviations: NR = Not Recorded.	BLOWS:	N-VALUE

DBI	LLING	LOG	DIVISION	1		INS	TALLA ¹	ION			SHEET 1		1
		LUG	South	n Atlantic		J	acksor	ville D	istrict		OF 2 SH	IEETS	
1. PRO										Remarks			
	t. Johns Co		nd Search			10.			SYSTEM/DATUM	HORIZONTAL	VERTICAL		
V	ibracore Bo	rings		OCATION COOR	DINATES	44			ne, FLN (U.S. Ft.)	NAD83	NAVD8		4
	'B-SJSP12-		ļ.		Y = 1,993,902	11.	MANU	FACTU	RER'S DESIGNATIO		AUTO HAMME MANUAL HAN		
	LING AGEN				ITRACTOR FILE NO.	_					JNDISTURBED		ł
C	orps of Eng	gineers -	CESAJ	. 6	738-12-5195	12.	TOTA	. SAMP	LES	5	0	` ,	
4. NAM	E OF DRILL	ER		·		13.	TOTA	NUM	BER CORE BOXES	0			1
						14.	ELEV	TION	GROUND WATER				1
	CTION OF E	BORING		DEG. FROM VERTICAL	BEARING	<u> </u>				STARTED	COMPLETE	D	1
	INCLINED				İ	15.	DATE	BORIN	G	06-29-12	06-29-		
6. THIC	KNESS OF	OVERBU	RDEN	N/A	•	16.	ELEV	TION .	TOP OF BORING	-55.5 Ft.	•		1
7 DED	TH DRILLED	INTO PO	OCK N	I/A		17.	тота	RECO	VERY FOR BORING	87.50 %			1
7. DEF	III DRILLED	IN IO K	JOK N	I/A		18.	SIGNA	TURE	AND TITLE OF INSF	PECTOR			1
8. TOT	AL DEPTH O	F BORIN	I G 18.0	0 Ft.			Jas	e Ous	ley, Geologist				
ELEV.	DEPTH	LEGEND	CLA	ASSIFICATION O	F MATERIALS	R	%C. SON	RQE OR UD)	REMARKS	BLOWS/	N-VALUE	
FF -	0.0												
-55.5	0.0		SAND. poo	orly-graded, mos	tly fine to	-		+	-				-о
	- -	.∵∴ r	medium-gra	ained sand-size	d quartz, little fine to								F
	-			ained sand-size noist, 5Y 5/1 gra	d shell, no reaction				-56.5				L
	-	:::: `	WILLI I ICI, II	ioist, 51 5/1 gra	y (SF)		1						-
	-												F
	<u> </u>	-::-											L
	-												-
	-				medium-grained								L
	= =	s	sand-sized	shell									Ŀ
	-								-59.5				-
	-			Ft., little mediu	m-grained		2		-59.5				F
	- -	ŀ∷· '	sand-sized	shell, trace silt			<u>∤-P</u>	o s t					Ė
	_	:·::											-5
	-	.∵.											ŀ
	- -	l:::\	A+ EL G1 E	Et fourmodiu	m arainad aand aisa	, L		_	-61.5				Ļ.
	-		ALEI01.3 shell	Ft., rew mediui	m-grained sand-size	^u	3						Ŀ
-62.6	- 71												ŀ
-02.0	- / · · ·		SAND, poo	orly-graded with	silt, mostly fine to	_							F
	-				d quartz, few fine to d shell, few silt, wea								Ė
	<u> </u>				d shell, few slit, weal Y 6/1 gray (SP-SM)								F
	_	::		. , .	- , , ,								F
	_		A+ E1 - 64 5	Et little fine	rained sand sized		-	4	-64.5				ļ.
	- -		Al El04.5 shell	r i., iilie iiile-gi	ained sand-sized		4	_					ţ
	<u>-</u>	-:											Ł,
-65.8	10.3	<u> </u>	CAND SIL	, mooth, fine to	modium arsined	\dashv							1 -
	-				medium-grained no reaction with								ļ.
-66.7	- 11.2	∐∤∐∤∐ ⊩	HCI, moist,	5Y 6/1 gray (S	M)	\Box							F
	-		CLAY, fat,	few fine-grained 3/1 very dark gra	sand-sized quartz,								F
	_	//	At El67.0) Ft., trace fine-g	grained sand-sized								L
	_		quartz, moi										Ŀ
	-												F
	_												F
	_												Ŀ
	_												F
	<u>-</u>												ţ
	L											1	l-

DRI	Jackson		Distri	ct		SHEET 2 OF 2 SH	IEETS			
PROJEC	т			COORDINA				JM HORIZONTAL I	/ERTICAL	
St. Jo	ohns Count	ty San	d Search	State P					NAVD88	
LOCATIO	ON COORDI	NATES	3	ELEVATIO	N ТОР	OF B	ORING	3		
X = 6	13,487	Y = 1,9	993,902	-55.5 F	t.	_				
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	LS	REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			At El70.5 Ft., few fine gravel-sized I weak reaction with HCl, N 3/ very dark	imestone, c gray						
-73.5	18.0							-73.5		
			 USACE Jacksonville is the custodi these original files. Soils are field visually classified in accordance with the Unified Soils Clas System. Laboratory Testing Results 					Abbreviations: NR = Not Recorded.		
			SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC	TORY CATION						
			1 1.0/1.5 SP 2 4.0/4.5 SP 2-Post 4.0/4.5 SP 3 6.0/6.5 SP 4 9.0/9.5 SP-S *Lab visual classification based on gracurve. No Atterberg limits.	* * * M*						

DDI	LLING	LOG	DIVISION	N		INST	ALLATI	ON			SHEET	1
			South	n Atlantic			cksonv				OF 2 S	SHEETS
1. PRO										Remarks		
	t. Johns Co	-	and Search			10.			SYSTEM/DATUM	HORIZONTAL	VERTICA	
2. BOR	ibracore Bo	ATION	1	OCATION COORI	DINATES	11.			e, FLN (U.S. Ft.) RER'S DESIGNATION	NAD83	NAVD	
	B-SJSP12-		-		Y = 1,994,359						MANUAL HA	
	LING AGEN				TRACTOR FILE NO.	12.	TOTAL	SAMPI		i	UNDISTURBE	ED (UD)
	orps of Eng		- CESAJ	; 6	738-12-5195					5	0	
4. NAW	E OF DRILLI	EK				13.	TOTAL	NUMB	ER CORE BOXES	0		
-	CTION OF E	ORING	i	DEG. FROM	BEARING	14.	ELEVA1	ION G	ROUND WATER			
	VERTICAL INCLINED			VERTICAL		15.	DATE B	ORING	ì	STARTED 06-29-12	06-29	
	KNESS OF	OVERB	URDEN	N/A	•	16.	ELEVA	ION T	OP OF BORING	-55.9 Ft.	, 00 20	
7. DEP1	TH DRILLED	INTO F	ROCK N	I/A		17.	TOTAL	RECO\	ERY FOR BORING	87.50 %		
						18.			ND TITLE OF INSPE	CTOR		
8. 1017	AL DEPTH O	F BORI	NG 18.	3 Ft.			_	_	ey, Geologist			
ELEV.	DEPTH	LEGEND	CLA	ASSIFICATION OI	F MATERIALS	RE	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/	N-VALUE
-55.9	0.0											
-55.5	-		SAND, poo	orly-graded, most	ly fine to	_						
	- -		medium-gr	ained sand-sized ained sand-sized	d quartz, few fine to d shell, 5Y 8/1 white				50.0			
	-	╠┄∖∖	(SP)			\vdash	+	1	-56.9			
	-	·∷·	At El56.9 sand-sized	Ft., little mediur shell, trace silt	m-grained		1	-				F
	- -		odi id oizod	orion, trace one								
	- -											
ŀ	-											E
-	-	$ \cdots $										F
	- -	-::-							-59.9			
ŀ	-	$ \cdots $	-At El59.9	Ft., few mediun	n-grained sand-size	ⅎ┝	1 2	1	-59.9 -59.9			+ 1
-	_	$ \cdots $	shell		-		2 -Po:	at				
	- -	-: -:-										F
	- -	$ \cdots $										
ŀ	- -								-61.9			
ŀ	-	: . : h	-At El62.1	Ft., few fine-gra	ained sand-sized		3					
	-		shell, 5Y 5/	/1 gray								F
	- -	$ \cdots $										
	- -	::::										<u> </u>
ŀ	_	$ \cdot \cdot $										
	- -	:::										
	- 	:::				\perp	\perp	4	-64.9			\perp
	<u>-</u> -	$ \cdots $					4	1				
-65.9	10.0	<u> ::: </u>										
	-			some fine-graine								
	- -		shell, 5Y 3/	/11 very dark gray	grained sand-sized (CH)							
	<u> </u>		LAt El66.6	Ft., little sand to	gravel-sized shell,							
	-		rew rine-gra	airieu sand-sizeo	I quartz, N 6/ gray							
	<u>-</u>											
	- -											
	-											
	-											
	- -											
	-											E
	=											F
	-					- 1		1				1 F

DR	ILLING	LOC	G (Cont. Sheet)	INSTALLA Jackso		Dietri	~+		SHEET 2	
ROJEC			<u> </u>	COORDINA				JM HORIZONTAL	VERTICAL	E13
St. J	ohns Coun	ty San	d Search	State F	lane, l	FLN (U.S. I	Ft.) NAD83	NAVD88	
OCATI	ON COORD	INATES	3	ELEVATIO	N ТОР	OF B	ORIN	3		
X = 6	314,385	_	994,359	-55.9 F	t.					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATER	RIALS	ĸÉC.	BOX OR SAMPLE	RQD OR UD	REMARK	BLOWS/	N-VALUE
-72.8 -74.2	16.9	LEGEND	SAND, silty, mostly fine to medium-sand-sized quartz, little silt, little fine gravel-sized shell. SAND, silty, mostly fine to medium-sand-sized quartz, little silt, little fine gravel-sized shell, 5Y 7/1 light gray. NOTES: 1. USACE Jacksonville is the custof these original files. 2. Soils are field visually classified accordance with the Unified Soils C System. 3. Laboratory Testing Results SAMPLE SAMPLE LABOL ID DEPTH CLASSI 1 1.0/1.5 5 2 4.0/4.5 5 3 6.0/6.5	egrained egr	% REC.	BOX OR SAMPLE	POR DO DO DO DO DO DO DO DO DO DO DO DO DO	-74.2 Abbreviations: NR = Not Recorded.	BLOWS/	N-VALUE

			DIVISION	1		INS	STAL	LATIC	ON	<u> </u>		SHEET 1		1
	LLING	LUG	South	n Atlantic			Jack	sonvi	lle Di	strict		OF 2 SH	IEETS	
1. PRO											e Remarks			
		•	and Search			10.				SYSTEM/DATUM	HORIZONTAL	VERTICAL		
	/ibracore Bo		3.0	OCATION CO	ODDINATES	11				e, FLN (U.S. Ft.) RER'S DESIGNATIO	NAD83	NAVD8		-
	/B-SJSP12				62 Y = 1,995,185	١			-0.0.	ALK O DEGIGINATIO		AUTO HAMME MANUAL HAM		
3. DRII	LING AGEN	ICY	I		CONTRACTOR FILE NO.	42	Τ.	TAL 6	SAMPI		DISTURBED	JNDISTURBED	(UD)	1
	Corps of En		- CESAJ	<u> i i </u>	6738-12-5195	12.	. 10	TAL :	AIVIPI	LES	5	0		
4. NAN	IE OF DRILL	.ER				13.	. то	TAL I	NUMB	ER CORE BOXES	0			
5. DIRE	CTION OF	BORING		DEG. FROM	BEARING	14.	. EL	EVAT	ION G	ROUND WATER				
	VERTICAL			VERTICAL		15.	. DA	TE BO	DRING	.	STARTED	COMPLETE		
	INCLINED			<u> </u>	!	╀					06-30-12	06-30-1	12	4
6. THI	CKNESS OF	OVERB	URDEN	N/A		<u> </u>				OP OF BORING	-56.1 Ft.			4
7. DEP	TH DRILLED	INTO F	OCK N	I/A						VERY FOR BORING				4
8. TOT	AL DEPTH (OF BORI	NG 19.	4 Ft.		718.	. 510			AND TITLE OF INSE Gruber, Geologist				
						_						<u> </u>		1
ELEV.	DEPTH	EGEND	CL	ASSIFICATIO	N OF MATERIALS	ŀ	% REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/ 1 FT.	N-VALUE	
						\dashv		m _O				<u> </u>	Ż	4
-56.1	0.0					\Box								L
	-	:::			nostly fine-grained shell, no reaction with									F
	F	[:∴:	HCI, moist,	5Y 8/1 white	e (SP)									F
	_	-::-												F
	-									E0 1				ţ
	_	 ∴∴			edium-grained	ŀ		1		-58.1 -58.1				t
	-	:-::	sand-sized HCl	shell, trace s	silt, weak reaction with			-Pos	t					ŀ
	F		ПСІ											F
	-	-::-												Ė
	_	:::				L				-60.1				Ļ
	_	·::-						2						Ŀ
	_													Ł
-61.6	5.5													ŀ
-62.1	6.0	1.			ith clay, mostly					-62.1				F
<u> </u>	-	₩			quartz, few clay, few ICI, moist, 5Y 7/1 light	/t		3						F
-63.0	- - 6.9]]]]]]]	gray (SP-S		aroined send sized	_/								þ
	F		Quartz, little	, mostry fine silt, few me	-grained sand-sized dium-grained	/								F
	E	[: .][∦]	\sand-sized	shell, moist,	5Y 7/1 light gray (SM)	<u> </u>								Ŀ
	F	.: h	fine-graine	d sand-sized	ith silt, mostly quartz, few silt, few	ŀ		_	-	-64.1				+
	F	<u> </u> :. \	coarse grav	vel-sized she	II, moist, 5Y 4/2 olive			4						F
	Ė	[::][#\	gray (SP-9 At El64.1		e-grained sand-sized									F
	-	$\ \cdot\ \ $	shell											þ
	L	$[\cdot]$												Ł
	E	 ::												F
	F	:-												F
	F	 :												F
60.4	120													þ
-68.1	12.0		SAND, silty	, mostly fine	to medium-grained	\dashv								F
-68.9	[_ 12.8		sand-sized	quartz, some	e coarse gravel-sized									F
55.0	<u> </u>				7 5/2 olive gray (SM) ne to medium-grained	-1								F
	ļ.		sand-sized	quartz, little	clay, few coarse	΄΄								þ
	<u> </u>		gravel-size	a shell, mois	t, 5Y 4/1 dark gray (SC	;)								Ł
-70.4	14.3		SAND non	rly_aradad w	ith clay, mostly fine to	_								F
74.4	[45 0	·			ith clay, mostly line to ized quartz. little coarse	<u>,</u>		l						ţ

DR	ILLING	LOC	G (Cont. Sheet)	INSTALLA: Jackson		Distric	rt			IEET 2 2 Sh	IEETS
PROJEC	т			COORDINA				UM HORIZONTAL	VERTIC		
St. J	ohns Count	y San	d Search	State P	lane, l	FLN (U.S. I	Ft.) NAD83	1	/D88	
OCATI	ON COORDI	NATES	6	ELEVATIO	N ТОР	OF B	ORIN	G			
X = 6	613,962	Y = 1,	995,185	-56.1 F	t.						
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	ALS	ĸEC.	BOX OR SAMPLE	RQD OR UD	REMARKS	3	BLOWS/ 1 FT.	N-VALUE
-75.5	10.4		gravel-sized shell, few clay, moist, 5\(SP-SC) SAND, poorly-graded, mostly fine-grasand-sized quartz, little coarse gravel shell, trace silt, moist, 5Y 6/1 gray (\$\frac{5}{2}\)	ained I-sized				-75 5			-
/5.5	19.4		NOTES: 1. USACE Jacksonville is the custod these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORVID DEPTH CLASSIFITM CLAS	ATORY ICATION 				Abbreviations: NR = Not Recorded.			

			DIVISION		INST	ALLATI	ON			SHEET 1	
	LLING	LUG	South Atlantic		Ja	acksonv	ille Di	strict		OF 2 SH	IEETS
1. PRO									Remarks		
		•	and Search		10.			SYSTEM/DATUM	HORIZONTAL	VERTICAL	
	ibracore B		LOCATION COC	DDINATES	44			e, FLN (U.S. Ft.) RER'S DESIGNATION	NAD83	NAVD8	
	/B-SJSP12		1	9 Y = 1,996,081	11.	MANUF	ACTUI	KER'S DESIGNATION	OF DRILL	AUTO HAMME MANUAL HAN	
	LING AGEN			ONTRACTOR FILE NO.					ISTURBED :	UNDISTURBED	
	Corps of En		- CESAJ	6738-12-5195	12.	TOTAL	SAMPI	LES	5	0	
4. NAN	IE OF DRILL	.ER			13.	TOTAL	NUMB	ER CORE BOXES	0		
5 DIRE	CTION OF	PORING	DEC EROM	BEARING	14.	ELEVAT	ION G	ROUND WATER			
\boxtimes	VERTICAL INCLINED	BURING	DEG. FROM VERTICAL	BEARING	15.	DATE B	ORING)	STARTED 06-30-12	COMPLETE 06-30-1	
6. THI	CKNESS OF	OVERBU	URDEN N/A	'	16.	ELEVA1	ION T	OP OF BORING	-56.1 Ft.		
7. DEP	TH DRILLEI	D INTO R	ROCK N/A		17.	TOTAL	RECO	VERY FOR BORING	94.00 %		
					18.	SIGNAT	URE A	AND TITLE OF INSPE	CTOR		
8. ТОТ	AL DEPTH (OF BORII	NG 19.1 Ft.			_	_	Gruber, Geologist			
ELEV.	DEPTH	LEGEND	CLASSIFICATION	OF MATERIALS	RE	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/ 1 FT.	N-VALUE
-56.1	0.0										
-50.1	- 0.0		SAND, poorly-graded, mo		\dashv						
	E		medium-grained sand-siz gravel-sized shell, 5Y 8/1					,			
	_	1	At El57.1 Ft., few med	• •	, ⊢	+.	4	-57.1			
	-		shell, trace silt	iam gramea sana sizee	^	1					
	_	-:::									
	-										
	-										
	_	-:::									
	_	::: \	At El59.4 Ft., few fine	to medium-grained							
	_		sand-sized shell		<u> </u>	_	4	-60.1 -60.1			\sqcup
	-					2 1 2-Pos	1	-00.1			
	L					1-1-0	1				
	_	-::-									
-62.1	- 6.0							-62.1			
-02.1	- 0.0		SAND, poorly-graded wit			3	1	-02.1			
	_		medium-grained sand-siz medium-grained sand-siz		'	<u> </u>	┨				
	F		(SP-SM)	zeu siieli, o r b/ i gray							
	ļ.		,								
	Ł				L			-64.1			
	<u> </u>		At El64.1 Ft., few fine sand-sized shell	to medium-grained		4					
-65.0	- - 8.9						1				
			CLAY, fat, some fine-gra	ined sand-sized							
	}		quartz, trace fine to medi shell, 10Y 6/1 greenish g	ium-grained sand-sized irav (CH)	'						
	F) - J (=- 1)							
	<u> </u>										
	L										
	F		At El67.1 Ft., little fine								
	‡		sand-sized shell, 10Y 8/1	ı ilgini greenisri gray							
	<u> </u>										
-68.6	12.5		SAND, poorly-graded, mo	ostly fine to	\dashv						
	<u>L</u>	.·.·.	medium-grained sand-siz	zed quartz, few							
	E	l.∵.k	fine-grained sand-sized s	shell, trace silt,							
	-	-::: \	10Y 8/1 light greenish gr At El69.4 Ft., some fin	ay (SP) e to coarse							
	<u> </u>		gravel-sized shell								
	<u> </u>	$ \cdots $									
-71.1	15.0	$1 \cdot \cdot 1$			- 1	- 1	1	Ì			1

COORDINATE SYSTEM/DATUM State Plane, FLN (U.S. Ft.) CACATION COORDINATES X = 613,499 Y = 1,996,081 CLASSIFICATION OF MATERIALS SAND, silty, mostly fine-grained sand-sized quartz, some fine to coarse gravel-sized shell, little silt, 5Y 6/2 light olive gray (SM) CTA-3 18.2 COORDINATE SYSTEM/DATUM State Plane, FLN (U.S. Ft.) NAD83 NAVD88 ELEVATION TOP OF BORING -56.1 Ft. ROD ON ON ON ON ON ON ON ON ON ON ON ON ON	DRI	LLING	LOC	G (Cont. Sheet)	Jackson		Distric	et		SHEET OF 2	2 SHEETS
CLASSIFICATION OF MATERIALS Section Sect	ROJEC	т			_				JM HORIZONTAL	, '	
CLASSIFICATION OF MATERIALS SAND, silty, mostly fine-grained sand-sized quartz, some fine to coarse gravel-sized shell, little silt, 5Y 6/2 light olive gray (SM)	St. J	ohns Coun	ty San	d Search	State P	lane,	FLN (U.S. F	Ft.) NAD83	NAVD88	}
CLASSIFICATION OF MATERIALS CLAS	OCATI	ON COORD	NATES	3	ELEVATIO	н тор	OF B	ORING	3		
SAND, silty, mostly fine-grained sand-sized quartz, some fine to coarse gravel-sized shell, little silt, 5Y 6/2 light olive gray (SM) At El73.8 Ft., some fine-grained sand-sized quartz, some fine to coarse gravel-sized shell, 5Y 6/1 gray CLAY, fat, some fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell, 5Y 5/2 olive gray (CH) NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1 1.0/1.5 SP* 2 4.0/4.5 SP* 3 6.0/6.5 SP-SM* 4 8.0/8.5 SP-SM* *Lab visual classification based on gradation	X = 6	13,499		996,081	-56.1 F	t.					
quartz, some fine to coarse gravel-sized shell, little silt, 5Y 6/2 light olive gray (SM) At El73.8 Ft., some fine-grained sand-sized quartz, some fine to coarse gravel-sized shell, 5Y 6/1 gray CLAY, fat, some fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell, 5Y 5/2 olive gray (CH) NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1 1.0/1.5 SP* 2 4.0/4.5 SP* 2 -Post 4.0/4.5 SP* 3 6.0/6.5 SP-SM* 4 8.0/8.5 SP-SM* 1-Lab visual classification based on gradation	ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	LS	REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	/SMOTB	TFI. N-VALUE
The state of the s	-74.3	18.2		quartz, some fine to coarse gravel-sizinttle silt, 5Y 6/2 light olive gray (SM) At El73.8 Ft., some fine-grained sar	ed shell,						
Abbreviations: NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION		5Y 6/1 gray CLAY, fat, some fine-grained sand-									
NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION DEPTH CLASSIFICATION 1.0/1.5 SP* 2 4.0/4.5 SP* 2 2 4.0/4.5 SP* 3 6.0/6.5 SP-SM* 4 8.0/8.5 SP-SM* *Lab visual classification based on gradation	-75.2								-75.2		
				\shell, 5Y 5/2 olive gray (CH) NOTES: 1. USACE Jacksonville is the custodi these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFICATION OF SAMPLE CLASSIFICATION OF SAMPLE SAM	an for ssification TORY CATION * * * * M* M*				Abbreviations:		
		ORM 18:									

DDI	LLING	100	DIVISIO	N		INS	TALLA	TIO	N	<u> </u>		SHEET 1	
		LUG	Sout	h Atlantic		_	Jackso					OF 2 S	HEETS
1. PRO											e Remarks		
		•	and Search	l		10.				SYSTEM/DATUM	HORIZONTA	1	
	ibracore B		! !	LOCATION COOF	PRINATES	11				e, FLN (U.S. Ft.) RER'S DESIGNATION	NAD83	NAVD	
	/B-SJSP12		- '		Y = 1,996,939	' ' '	IVIAIN	JFA	CIOR	ER S DESIGNATION	DN OF DRILL [☐ AUTO HAMM ☐ MANUAL HA	
	LING AGE				NTRACTOR FILE NO.	40					DISTURBED	UNDISTURBE	D (UD)
	Corps of En		- CESAJ		6738-12-5195	12.	TOTA	IL S	AMPL	.ES	5	0	
4. NAM	IE OF DRILI	LER				13.	TOTA	L N	UMB	ER CORE BOXES	0		
5. DIRE	CTION OF	BORING	<u> </u>	DEG. FROM	BEARING	14.	ELEV	ATI	ON G	ROUND WATER			
	VERTICAL INCLINED			VERTICAL		15.	DATE	ВО	RING	i	STARTED 06-30-12	COMPLET 06-30-	
6. THI	CKNESS OF	OVERB	URDEN	N/A		16.	ELEV	ATI	ON T	OP OF BORING	-55.6 Ft.		
7. DEP	TH DRILLE	D INTO I	ROCK N	V/A		17.	TOTA	L R	ECO\	ERY FOR BORING	92.50 %		
			•			18.	SIGN	ATU	JRE A	ND TITLE OF INS	PECTOR		
8. ТОТ	AL DEPTH	OF BOR	NG 18	.7 Ft.		Ļ		_	nne (Gruber, Geologis	t		
ELEV.	DEPTH	LEGEND	CL	ASSIFICATION (OF MATERIALS	R	"EC.	SAMPLE	RQD OR UD		REMARKS	BLOWS/	N-VALUE
EE O	0.0												
-55.6	0.0	 		orly-graded, mos		\dashv	\vdash	\dashv					
	}	.::	medium-g	rained sand-size	ed quartz, few fine to								
	F	:::	medium-gi (SP)	raineu sand-size	ed shell, 5Y 8/1 white	·							
	_	:::	()										
	-	-::-								-57.6			
	-	:::		6 Ft., little mediu				1		-57.6			
	_		sand-sized	d shell, trace silt			<u> -F</u>	ost					
	_	.::.											
	-	$ \cdot \cdot $											
	_	:::								-59.6			
	F	. · · · [medium-grained			2					
	-	$ \cdot \cdot \cdot $	sand-sized	a sneli				ヿ					
	-												
	F												
	_	$ \cdot \cdot \cdot $				L		_		-61.6			
	-							3					
	-	. : :											
-62.8	-7.2 -	1	SVND 22	orly graded with	silt, mostly fine to	\dashv							
	Ł	<u> </u> :			ed quartz, few silt,								
	F	[:]]	trace fine t	to medium-grain	ed sand-sized shell,		_	\dashv		-63.6			+
	<u> </u>	-: <u> </u>	5Y 6/1 gra	y (SP-SM)			Ŀ	4					
	}	:-											
	F	:											
	ţ	::											
	F	:.											
	F	:-											
	L	1:11			to gravel-sized shell,								
-67.0	- 11.4		5Y 5/1 gra	•		\Box							
	F		CLAY, fat, N 6/ gray	, tew tine-graine (CH)	d sand-sized shell,								
<u>-6</u> 7.9	_ _ 12.3					[
	-				-grained sand-sized								
-68.8	- 13.2		quartz, littl	e clay, trace fine 6/1 greenish gra	e-grained sand-sized								
-69.2	_	1///	SAND, poo	orly-graded with	silt, mostly	ㅓ							
55.2	- 10.0	╫╫╢	fine-graine	ed sand-sized qu	artz, little fine to	И							
	 			rained sand-size nt gray(SP-SM)	ed shell, few silt,	/							
	}		SAND, silt	y, mostly fine-gr	ained sand-sized	-							
	Γ		quartz sor	me silt trace fin	e to medium-grained			- 1					

DRI	LLING	LOC	G (Cont. Sheet)	INSTALL	ATION Onville	Dietri	~t		SHEET OF 2	
ROJEC	т		·	COORDIN				UM HORIZONTAL	VERTICAL	13
St. J	ohns Count	y San	d Search	State	Plane,	FLN ((U.S. I	Ft.) NAD83	NAVD88	
DCATI	ON COORDI	NATES	S	ELEVATION	ON TOP	OF B	ORIN	G		
X = 6	313,020		996,939	-55.6	Ft.					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATI	ERIALS	REC.	BOX OR SAMPLE	RQD OR UD	REMAR	BLOWS/	N-VALUE
-70.8 -74.3	15.2		sand-sized shell, 10Y 7/1 light gre (SM) SAND, poorly-graded with silt, mo fine-grained sand-sized quartz, fe fine gravel-sized shell, 5Y 8/1 wh At El72.8 Ft., some fine gravel- 10Y 7/1 light greenish gray	ostly w silt, trace ite (SP-SM)				-74.3		
			ID DEPTH CLAS:	d in Classification ORATORY SIFICATION				Abbreviations: NR = Not Recorded.		

1. PROJECT St. Johns County Sand Search Vibracore Borings 9. SIZE AND TYPE OF BIT See Remarks 10. COORDINATE SYSTEM/DATUM HORIZONTAL VE	F 2 SHEETS
St. Johns County Sand Search Vibracore Borings St. Johns County Sand Search Vibracore Borings State Plane, FLN (U.S. Ft.) NAD83	
Vibracore Borings State Plane, FLN (U.S. Ft.) NAD83	
	ERTICAL
	NAVD88
	O HAMMER
	STURBED (UD)
Corps of Engineers - CESAJ 6738-12-5195 12. TOTAL SAMPLES 5 0	STORBED (OD)
4. NAME OF DRILLER 13. TOTAL NUMBER CORE BOXES 0	
5. DIRECTION OF BORING DEG. FROM BEARING 14. ELEVATION GROUND WATER STARTED CO.	
✓ VERTICAL VERTICAL INCLINED STARTED CO 15. DATE BORING 06-30-12	OMPLETED
	06-30-12
6. THICKNESS OF OVERBURDEN N/A 16. ELEVATION TOP OF BORING -54.1 Ft.	
7. DEPTH DRILLED INTO ROCK N/A 17. TOTAL RECOVERY FOR BORING 92.50 %	
8. TOTAL DEPTH OF BORING 18.9 Ft. 18. SIGNATURE AND TITLE OF INSPECTOR Marianne Gruber Geologist	
iviariante Gruber, Geologist	
ELEV. DEPTH OF CLASSIFICATION OF MATERIALS OF CLASSIFICATION OF CLAS	BLOWS/ 1 FT. N-VALUE
544 00	
-54.1 0.0 SAND, poorly-graded, mostly fine to	
_	
- medium-grained sand-sized shell, 5Y 8/1 white	-
(SP) At El55.1 Ft., little medium-grained	-
sand-sized shell	[
	[
At El57.1 Ft., few medium-grained sand-sized 2 -57.1	-
- shell, trace silt	[
	[
	
<u> </u>	
3 3	
-61.8 - 7.7 · · · · SAND, poorly-graded with silt, mostly fine to	
medium-grained sand-sized quartz, few silt,	
trace fine to medium-grained sand-sized shell, 5Y 6/2 light olive gray (SP-SM)	-
At El. 63.1 Et. little medium to gegree grained	
sand-sized shell	
-64.0 - 9.9 .'.	-
SAND, clayey, mostly fine-grained sand-sized quartz, little clay, few fine gravel-sized shell,	
N 6/ gray (SC)	
	-
-66.8 - 12.7	<u> </u>
CLAY, fat, some fine-grained sand-sized quartz, trace fine-grained sand-sized shell (CH)	
quartz, trace fine-grained sand-sized shell (CH) SAND, clayey, mostly fine to medium-grained	[
-68.1 14.0 ///// sand-sized quartz, some fine gravel-sized shell,	 -
L .∵∏ \little clay (SC)	
SAND, poorly-graded with silt, mostly	

DRI	LLING	LO	G (Cont. Sheet)	Jackso		Distric	ct			SHEET 2 OF 2 SI	IEETS
PROJEC	т			COORDINA				UM HORIZONTAL	VERTI		
St. Jo	ohns Count	y San	d Search	State F				l l	NA.	VD88	
LOCATIO	ON COORDI	NATES	S	ELEVATIO	N ТОР	OF B	ORING	G			
X = 6	12,589		997,860	-54.1 F	t.						
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL	LS	ĸÉC.	BOX OR SAMPLE	RQD OR UD	REMARK	:s	BLOWS/ 1 FT.	N-VALUE
-69.5 -73.0	15.4		5Y 8/1 white (SP-SM) SAND, silty, some fine-grained sand-squartz, some fine gravel-sized shell, lit 5Y 7/1 light gray (SM) NOTES: 1. USACE Jacksonville is the custodiathese original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFICATION CLASSIFI	an for ssification		98 85		-73.0 Abbreviations: NR = Not Recorded.		5	r-N
			2 3.0/3.5 SP ² 2-Post 3.0/3.5 SP ² 3 7.0/7.5 SP ² 4 9.0/9.5 SP-SI *Lab visual classification based on gracurve. No Atterberg limits.	* * M*							
	ORM 183										

DBI	LLING	106	DIVISION	N		INS	TALL	ATIC	N	<u>-</u>			SHEET	1	7
		LUG	South	n Atlantic		┕	Jacks	sonvi	lle Dis				OF 2 S	HEETS	<u> </u>
1. PRO											Remarks				4
	st. Johns Co		ind Search			10.				SYSTEM/DATUM	HORIZONTA	L :	VERTICA		
	ibracore Bo			OCATION COO	DDINATES	44				e, FLN (U.S. Ft.) RER'S DESIGNATIO	NAD83		NAVD		-
	B-SJSP12-		"		Y = 1,998,747	11.	WA	NUFA	CIO	KER S DESIGNATIO	N OF DRILL	_	TO HAMN		
	LING AGEN		<u> </u>		NTRACTOR FILE NO.	┢					ISTURBED		DISTURBE		1
C	corps of Eng	gineers -	- CESAJ		6738-12-5195	12.	тот	TAL S	SAMPL	LES	5)		
4. NAM	E OF DRILL	ER				13.	то	TAL N	NUMB	ER CORE BOXES	0				
				T		14.	ELE	VAT	ION G	ROUND WATER					
	ECTION OF E VERTICAL	BORING		DEG. FROM VERTICAL	BEARING	\vdash					STARTED	:	COMPLET	ΓED	-
	INCLINED			!	į	15.	DAT	ГЕ ВС	PRING	i	06-30-12	2	06-30	-12	
6. THIC	CKNESS OF	OVERBU	IRDEN	N/A		16.	ELE	VAT	ION T	OP OF BORING	-55.3 Ft.				
7. DEP	TH DRILLED	INTO R	OCK V	J/A		17.	тот	TAL F	RECO\	/ERY FOR BORING	96.50 %				
			-			18.	SIG	NAT	URE A	ND TITLE OF INSPI	ECTOR				
8. TOT	AL DEPTH O	F BORIN	NG 19.	7 Ft.		<u> </u>		Maria	anne (Gruber, Geologist					
ELEV.	DEPTH	LEGEND	CL	ASSIFICATION (OF MATERIALS	F	% REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	;	BLOWS/ 1 FT.	N-VALUE	
						\dashv									1
-55.3	0.0		SAND nor	orly-graded, mo	stly fine to	\dashv	ŀ								-0
	-	l.∵l	medium-gr	ained sand-size	ed quartz, few fine to										ļ
	_			ained sand-size noist, 5Y 8/1 w	ed shell, no reaction										Ŀ
	-		WILLI I ICI, II	1101St, 51 6/1 W	Tille (SF)										ŀ
	_									-57.3					F
	<u> </u>	 .∷-				F		1		-57.3					‡
	-						ł	-Pos	t						ŀ
															F
	- -	 .∷-													ţ
	_														Ł
	-	.``.													-
	- -	-::-													F
	-														-5
	_	-::-													ŀ
	_	l∷k	Δt EL _61.3	3 Ft., trace silt		F				-61.3					F
		:::	At Li01.0	or i., trace siii			ļ	2							ļ
-62.2	- 6.9 		SAND noo	orly-graded with	seilt moetly	4									Ł
	-	• 	fine-graine	d sand-sized qu	uartz, few fine										ŀ
	_	-	gravel-size	d shell, few silt	, no reaction with HC	l,									F
	<u> </u>	<u> :: </u>	1110151, 51 6	6/2 light olive gr	ay (OF-OIVI)										F
	_	[.· ∦								04.6					ţ
	_		At El64 ?	3 Ft., few medii	um-grained sand-size	_d	\dashv			-64.3				+	+
	- -		shell, 5Y 8			_	-	3							F
	-	.∙ ∦													-1
	E	:: 													£ '
	L	:·								-66.3					F
	_				o medium-grained	l		4							ŧ
-67.0	11.7	1 1 1 1		shell, 5Y 6/2 li		_	}	•							t
	L				ained sand-sized zed shell, weak										H
	-				5Y 5/1 gray (CL)										F
-68.3	13.0														L
	_		CLAY, fat,	some fine-grai	ned sand-sized sized limestone, trace										ŀ
-69.2	- - 13.9		fine to coar	rse-grained sar	nd-sized shell, strong										F
	_	<i>7////</i> //\	reaction wi	th HCI, moist, 5	5Y 5/1 gray (CH)	$\sqrt{}$									F
	<u>-</u> -		SAND, clay quartz, son	yey, mostly fine ne clay, no read	e-grained sand-sized ction with HCI, moist,										Ł

DRI	LLING	LOC	G (Cont. Sheet)	INSTALLA: Jackson		Distric	ct			SHEET 2	
ROJEC	т			COORDINA				JM HORIZONTAL	. VE	RTICAL	
	hns Count	y San	d Search	State P				!		NAVD88	
OCATIO	ON COORDI	NATES	3	ELEVATIO	N ТОР	OF B	ORIN	G			
X = 6	12,120	Y = 1,9	998,747	-55.3 F	t.						
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL	.s	ĸEC.	BOX OR SAMPLE	RQD OR UD	RI	MARKS	BLOWS/ 1 FT.	N-VALUE
-70.5	15.2		5Y 7/1 light gray (SC)								
-72.5	17.2		SAND, poorly-graded, mostly fine-grain sand-sized quartz, trace fine to mediunt sand-sized shell, trace silt, weak react HCl, moist (SP) At El71.8 Ft., some fine-grained sand shell, strong reaction with HCl	m-grained ion with							
-75.0	19.7		SAND, silty, mostly fine to medium-gra sand-sized quartz, some fine gravel-si. little silt, strong reaction with HCl, mois 5Y 7/1 light gray (SM) At El73.3 Ft., some fine-grained san quartz	zed shell, st,	-			-75.0			
-73.0	19.1	+ +	NOTE:					Abbreviations:			
			NOTES:	_				NR = Not Recorded.			
			 USACE Jacksonville is the custodia these original files. 	an tor							
			Soils are field visually classified in accordance with the Unified Soils Clas System.	sification							
			Laboratory Testing Results								
				TORV							
			SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC								
			1 2.0/2.5 SP*	:							
			1-Post 2.0/2.5 SP* 2 6.0/6.5 SP*								
			3 9.0/9.5 SP-SI 4 11.0/11.5 SP-SI	M*							
			*Lab visual classification based on gra curve. No Atterberg limits.	dation							
			, and the second								
					1	l					

DRI	LLING	ı ng	DIVISION		INSTAL	LATI	ON			SI	HEET 1	
1. PRO			South Atlantic			sonv				OI	F 2 SH	EETS
				L					Remarks		DTION	
		-	and Search		10. CC			SYSTEM/DATUM	HORIZONT		RTICAL	_
	ibracore Bo		LOCATION COO	ADDINATES	11 M			ne, FLN (U.S. Ft.) RER'S DESIGNATION	NAD83		NAVD8	
	B-SJSP12-		1	Y = 1,998,122	11. 1412	111017	4010	RER 3 DESIGNATION	OF DRILL	=	HAMME	
	LING AGEN			ONTRACTOR FILE NO.					ISTURBED		TURBED	
	orps of Eng		- CESAJ	6738-12-5195	12. TO	TAL :	SAMP	LES	5	0		
4. NAM	E OF DRILL	ER			13. TC	TAL I	NUME	BER CORE BOXES	0			
	071011 05 0		, peo enou		14. EL	EVAT	ION C	ROUND WATER				
	CTION OF E /ERTICAL	SORING	DEG. FROM VERTICAL	BEARING				_	STARTED	co	MPLETE	D
i	NCLINED				15. DA	TE B	ORING	G	06-30-1	2	06-30-1	2
. THIC	KNESS OF	OVERE	URDEN N/A		16. EL	EVAT	ION 1	TOP OF BORING	-56.1 Ft.			
7 DEDT	H DRILLED	INTO	ROCK N/A		17. TC	TAL	RECO	VERY FOR BORING	88.00 %			
. DEFI	H DRILLED		N/A		18. SI	GNAT	URE A	AND TITLE OF INSPE	CTOR			
3. TOT	AL DEPTH O	F BOR	ING 18.0 Ft.			Maria	anne	Gruber, Geologist				
ELEV.	DEPTH	LEGEND	CLASSIFICATION	OF MATERIALS	REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	S	BLOWS/ 1 FT.	N-VALUE
-56.1	0.0	 	SAND, poorly-graded, mo	ostly fine to	\dashv			1				
F	-	.∵.	medium-grained sand-siz	ed quartz, few fine to								
	- 	ŀ∷·∣	medium-grained sand-siz 5Y 8/1 white (SP)	eu sneii, moist,								
<u> </u>	- -	[::::	(5.)									
-	-	.::.						-58.1				
ļ	- -	ŀ∷⊹ľ	At El58.1 Ft., trace silt			1	1	-58.1				
E	-	:·::				-Pos	t					
-	_											
ļ	-	$ \cdots $										
ļ	- -	:·::										
).7	-	ŀ∷·∣										
<u>'.'</u>	-											
	-											
-	- -	-:::						00.4				
-	_	$ \cdots $					ł	-62.1				
F	-					2	ł					
<u> </u>	- -	∵:: <u>`</u>	At El62.8 Ft., trace fine									
	- -	[:::]	sand-sized shell, 5Y 6/1 (yray								
-	-							-64.1				
ļ	-	[∷:]				3]					
<u> </u>	- -	.;;.					1					
-	-	: : :										
F	=	[.∵.]										
	- -	.∷.										
-66.6	10.5				_							
-		·.	SAND, poorly-graded with fine-grained sand-sized q		L	L		-67.1				L
F	-	<u> </u> [:-]	medium-grained sand-siz	ed shell, little fine to		4						
<u> </u>	- -	:: <u> </u>	coarse-grained sand-size with HCl, moist, 5Y 7/2 lig	d shell, weak reaction			1					
}	_	 ¹. }	With HCI, moist, 5Y 7/2 iių ≻At El68.1 Ft., some fine	gin gray (SP-SIVI) e to coarse-grained								
	-	:• 	sand-sized shell, strong r									
<u> </u>	- -	<u> </u>	5Y 7/1 light gray									
}	<u>-</u>	·. 										
	- -	<u> </u> [:-]										
<u> </u>	-	:										
}	-	[:. ∄										
- I	-	I• ++∏			- [I	I					l

DRI	LLING	LOC	G (Cont. Sheet)	INSTALLA Jackso		Distric	ct			SHEET 2	
PROJEC	 :Т			COORDINA				UM HORIZONTA	AL VI	ERTICAL	
St. J	ohns Count	ty San	d Search	State P						NAVD88	
LOCATI	ON COORDI	NATES	s	ELEVATIO	N ТОР	OF B	ORIN	G			
X = 6	311,314	Y = 1,	998,122	-56.1 F	t.						
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	ALS	REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/	N-VALUE
		EGEND		sized dittle silt, // light sissification		BOX OR SAMPLE	RODE	-74.1 Abbreviations: NR = Not Recorded		BLOWS/	N-VALUE

)RII	LLING	ı ne	DIVISIO					LLATI					SHEET	Г 1	
	PROJ			Sout	th Atlantic				ksonv					OF 2	SHEE	TS
1.												e Remarks		·		
			-	and Search	ו			10. C			SYSTEM/DATUM	HORIZONT		VERTIC		
2		bracore Bo		, ,	LOCATION	2005-	MATEC	44 -			ne, FLN (U.S. Ft.)				√D88	
2.				' ¦				11. N	IANUF	ACTU	RER'S DESIGNATI	ON OF DRILL	_	UTO HA		
3.		B-SJSP12- LING AGEN		i	X = 610,		Y = 1,997,678 RACTOR FILE NO.					DISTURBED		NDISTUR		
J.		orps of Eng		- CESAJ		1	38-12-5195	12. T	OTAL	SAMP	LES	5	0.	0	DLD (O	,,
4.		OF DRILL		020/10		1 0.	00 .2 0.00	13 T	ОТАІ	NIIME	SER CORE BOXES	0	!			
5.		CTION OF E	BORING	;	DEG. FRO	М	BEARING	14. E	LEVAT	ION	GROUND WATER			1		
	_	ERTICAL NCLINED			VERTICAL	-	!	15. D	ATE B	ORIN	G	STARTED	10	COMPL		
					<u> </u>							06-30-1	12	06-	30-12	
6.	THIC	KNESS OF	OVERE	URDEN	N/A			16. E	LEVAT	ION 1	TOP OF BORING	-56.0 Ft.				
7.	DEPT	H DRILLED	INTO	ROCK	N/A			17. T	OTAL	RECO	VERY FOR BORIN	G 89.50 %)			
_					:			18. S	IGNAT	URE	AND TITLE OF INS	PECTOR				
8.	TOTA	L DEPTH O	F BOR	ING 18	3.3 Ft.				Mari	anne	Gruber, Geologia	st				
EL	EV.	DEPTH	LEGEND	CI	LASSIFICATI	ON OF	MATERIALS	% REG	BOX OR SAMPLE	RQD OR UD		REMARK	s	BLOWS/	<u>_</u> F	N-VALUE
	_							\top	+							_
-5	6.0	0.0		CVVID ~-	orly gradad	moc4l-	fine grained	_	<u> </u>	<u> </u>	4					
	Ŀ		$ \cdots $	sand-size	d quartz. tra	ce fine	fine-grained to medium-grained	ı								
	 -		$[\cdots]$	sand-size	d shell, no re	eaction	with HCI, moist,									
	ļ	-	.:::.	5Y 8/1 wh	nite (SP)											
	-															
	F	-		\	0.54 4	_:14		<u> </u>		4	-58.0					
	Ŀ	•	[. · ·]	-At El58.	.0 Ft., trace	SIII			1	Ĺ	-58.0					
	F	•	ŀ∷⊹l						1-Pos	¥t						
	Ė	-	:::													
	ŀ	•	:::													
	ļ	-	[∷∷]													
		•	ŀ∷·l													
	F		:::													
	Ė	-	[∷∷]													
	ŀ		 .∵.	`-At FL -61	5 Et trace	fine-ara	ained sand-sized									
	ļ	· -	$ \cdot \cdot $	shell, 5Y 6	6/2 light olive	e gray	airica daria dizea			1	-62.0					
	Ŀ	•	[:∵:]						2							
_	, ,	•	.∵.													
2.9	' <u> </u>	-	\cdots													
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	ļ	· -	[. ∷.]													
	 		[.∵.]													
	F		-∷								-65.0					
	Ė	-	$ \cdot\cdot\cdot $						3	1	33.0				\dashv	
	F		$[\cdots]$						ب	1						
	ļ	-	.:::													
	 		:::													
	F	•	[∷:]								-67.0					
	E	-	$[\cdots]$						4		-07.0					
	F		ŀ∷⊹l						 "	{						
	上	-	:::													
	ŀ		[:::	`-At El68.	.2 Ft., some	fine an	avel-sized shell,									
	Ė	•	[∷∷]	strong rea	action with H	ICI 3"										
	F	_	. : :													
			ı · · t	\A+ EI 60			and the state of the self-	1	1	1	1					
	Ŀ		'`.'.'	At Li09.	.2 Ft., trace	fine gra	avei-sizea sneii, no	- 1			1				ı	
	<u></u>			reaction w	.2 Ft., trace vith HCl, 5Y	fine gra 6/1 gra	avei-sized sneii, no iy									
-7	0.2	14.2	7777	reaction w	vith HCI, 5Y	6/1 gra	avei-sized sneil, no									

DRI	ILLING	LOC	G (Cont. She	eet)	INSTALL				ng Designation VB-SJS	SHEET 2	
ROJEC			, - ,	,	COORDIN	onville			UM HORIZONTAL	OF 2 S	HEETS
	ohns Count	ty San	d Search		l l	Plane,			l I	NAVD88	
	ON COORDI				ELEVATION					•	
X = 6	610,424	Y = 1,9	997,678		-56.0	Ft.					
LEV.	DEPTH	LEGEND	CLASSIF	FICATION OF MAT	ERIALS	REC.	BOX OR SAMPLE	RQD OR UD	REMARK	BLOWS,	N-VALUE
-74 3	18.3		shell, little clay, 5Y 6/1 gray (SC	no reaction with FC)	HCI, moist,				-74 3		
-74.3	18.3		these original file 2. Soils are field accordance with System. 3. Laboratory T SAMPLE S ID I 1-Post 2 3 4 1	d visually classified the Unified Soils resting Results SAMPLE LAB DEPTH CLAS	ed in s Classification				Abbreviations: NR = Not Recorded.		

DRI	ILLING	LOG	DIVISIO				ALLATI		ictrict			SHEET		Te
1. PRO	JECT		Sout	th Atlantic			ckson			ee Remarks		OF 2	SHEE	18
		ounty (Cond Coorob		L				E SYSTEM/DATUM		ΔΙ	VERTIC	ΔΙ	
		-	Sand Search	1		10.				-	AL	<u> </u>		
	/ibracore Bo		<u> </u>	LOCATION COOR	DINATES	11			ne, FLN (U.S. Ft.)			NAV		
	/B-SJSP12		• ;		Y = 1,997,283	• • • •	WAITOF	ACIO	KER 3 DESIGNATI	ON OF DRILL		NUTO HAN		R
	LLING AGEN		<u> </u>		TRACTOR FILE NO.					DISTURBED		NDISTURI		
C	Corps of Eng	gineer	s - CESAJ	6	738-12-5195	12.	TOTAL	SAMF	PLES	5	į	0	•	•
	NE OF DRILL					13.	TOTAL	NUMI	BER CORE BOXES	0				
					 	44	EL EV/A:	FION	GROUND WATER					
	ECTION OF	BORIN	G	DEG. FROM VERTICAL	BEARING	1-7.	LLEVA	11014	SKOOND WATER	STARTED		COMPL	ETEN	
	VERTICAL INCLINED				1	15.	DATE B	ORIN	G	06-30-1	2	i	0-12	
		OVER		NI/A	·	4.0	EL EV/A:	FION	TOP OF POPING	-55.0 Ft.		, 000	0 12	
6. THI	CKNESS OF	OVER	BURDEN	N/A					TOP OF BORING					
7. DEP	TH DRILLED	INTO	ROCK	N/A	L				VERY FOR BORIN					
8. TOT	AL DEPTH C)F BOE	ING 18	3.7 Ft.		18.			AND TITLE OF INS					
	A2 52: \	Т	10.	,,, , t.		_	_	_	Gruber, Geologia	SI				
ELEV.	DEPTH	LEGEND	CL	ASSIFICATION OF	F MATERIALS	RE	BOX OR	RQI OR UD		REMARK	s	BLOWS/		N-VALUE
		_				+	+-*	1						_
-55.0	0.0	 	CAND ~~	orly-graded, most	ly fino to	4	\vdash	1	4					
	<u> </u>	$ \cdot\cdot\cdot $	medium-gi	rained sand-sized	quartz, trace fine to									
	F	[:::]	medium-gi	rained sand-sized	shell, 5Y 8/1 white									
	F	.:::	(SP)				1							
	<u>L</u>	$ \cdots $												
	 	$[\cdots]$	-Δ+ E1 . 57 /	.0 Ft., little mediur	m_arained	\vdash	+	-	-57.0 -57.0				+	
	ţ	<u> ::: </u>	sand-sized		n-graineu		1 00	1	-57.0					
	-	:::		-			<u> </u>	SIT.						
	F	:::												
	 	$ \cdot\cdot $					1							
	F	···:												
.3	<u> </u>	· · · ·				+	+	\vdash	+				+	_
	-	$ \cdots $												
	F	[::::]												
	Ł	::::												
	F	:::	\Δ + ΕΙ	.0 Ft., trace silt		\vdash	+	-	-61.0				+	
	<u> </u>	[:·::	AL □101.	υ Γι., ιι ace siii			2]						
	-	. : :												
	F	·:::												
	Ł	<u> </u> :∵:												
-63.3	L_{83}	 .:::					1							
-00.0	- 0.0	Hiii	SAND, poo	orly-graded with s	silt, mostly	\dashv								
	Ł	 -:	fine-graine	ed sand-sized qua	artz, few silt, trace	L			-64.0					_
	F_	:: i	Time to med 5Y 6/1 ara	dium-grained san ay (SP-SM)	u-sizea sneii,		3							
	<u> </u>	 :-	J. Grigia	-, (C. Civi)			\vdash	1						
	-	 .:												
	ļ.	 -:					1							
	Ŀ	$\ \cdot\ \ $				L			-66.0					
	F	[:]]		0 Ft., little fine to	medium-grained	Г	4	1						
	ţ	.:	sand-sized	u sneli			\vdash	1						
	F	 ::					1							
	ļ.	[:.]]]												
	-	 [:]												
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	F	1:.												
	ţ	$\ \cdot\ $												
	F	 -	,											

DR	ILLING	LOC	G (Cont. Sheet)	INSTALL	ATION Onville	Dietri	·+		SHEET OF 2	2 SHEETS
ROJEC			·	COORDIN				UM HORIZONTAL	VERTICAL	JEE 13
St. J	ohns Count	ty San	d Search	State I	Plane,	FLN (U.S. I	Ft.) NAD83	NAVD88	
OCATI	ON COORDI	NATES	3	ELEVATION	ON TOP	OF B	ORIN	G		
X = 6	609,524	Y = 1,9	997,283	-55.0	Ft.	_				
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MA	TERIALS	REC.	BOX OR SAMPLE	RQD OR UD	REM <i>A</i>	rks Sylvania (Sylvania (Sy	N-VALUE
70.0	47.0		At El69.8 Ft., some fine grave 5Y 7/1 light gray	el-sized shell,						
<u>-72.0</u> -73.7			SAND, clayey, mostly fine-grain quartz, little clay, trace fine to m sand-sized shell, 5Y 7/1 light grant gr	edium-grained				-73.7		
-73.7	18.7			BORATORY SSIFICATION SP* SP* SP* SP* SP- SM* SP-SM*				Abbreviations: NR = Not Recorded.		

DRI	LLING	LOG	DIVISION	ON			IN	STAL	LATIC	N					SHEE	T 1	
			Sou	uth Atlantic							istrict				OF 2	2 SHE	ETS
1. PRO													emarks				
	t. Johns Co	-	and Searc	:h			10				SYSTEM/DATU		HORIZON		VERT		
	ibracore Bo		1	LOCATION	COORD	INATES	44				ne, FLN (U.S. FI		NAD8			VD88	
	B-SJSP12		ı	1		Y = 1,996,907	١	. WA	NOFF		RER 3 DESIGNA		OF DRILL		UTO HA		
	LING AGEN	-		71 000		RACTOR FILE NO.	.					DIS	TURBED		NDISTU		
	orps of En		- CESAJ		67	38-12-5195	12	. то	TAL S	AMP	LES	-	5		0		
4. NAM	E OF DRILL	.ER					13	. то	TAL N	IUME	BER CORE BOXES	S	0				
5 DIDE	CTION OF	BODING		DEG. FRO	NM.	BEARING	14	. ELI	EVAT	ON (GROUND WATER						
	VERTICAL	DOMINA	•	VERTICA	Ľ	DEARING	45	. DA	TE D	DIN			STARTED		COMP	LETE)
<u> </u>	NCLINED			-		<u> </u>	Ľ	. DA	I E BC	KIN			06-30-	-12	06	-30-12	2
6. THIC	KNESS OF	OVERE	URDEN	N/A			16	. EL	EVAT	ION 1	TOP OF BORING		52.0 Ft.				
7. DEP1	TH DRILLED	D INTO	ROCK	N/A			17	'. то	TAL F	RECO	VERY FOR BORI	NG	90.00 %	%			
9 TOT	AL DEPTH (OF BOD	INC 1	8.5 Ft.			18				AND TITLE OF IN		TOR				
8. 101 <i>7</i>	AL DEPIN		ing	0.5 Ft.			Ц				Gruber, Geolog	gist					
ELEV.	DEPTH	EGEND	С	LASSIFICAT	ION OF	MATERIALS		% REC.	BOX OR SAMPLE	RQD OR UD			REMAR	KS		PLOWS	N-VALUE
		+					4		шŊ							20	Ż
-52.0	0.0																
	-	F:::-	SAND, po	oorly-graded	, mostly	y fine to quartz, trace fine to	\Box										
ļ	- -	$ \cdots $	medium-	grained sand	d-sized	shell, 5Y 8/1 white	-										
ļ	- -	<u> ::: </u>	(SP)														
ŀ	-																
ŀ	_	[:::}	∽At El54	I.0 Ft., little r	medium	n-grained	ŀ		1		-54.0 -54.0						
Ī	-	-:	sand-size			. g. a ea			1 -Pos	t	00						
	- 	$ \cdots $															
	- -	$ \cdots $															
ŀ	-	<u> </u> :.::															
-	-	.::.															
ļ	- -	$ \cdots $															
	-	::::															
ŀ	- -	$ \cdots $															
F	_	$ \cdots $					ŀ				-58.0						
	-	:::							2								
.9	-	1	From FI	-58.9 to -59	.1 Ft o	clav seam	_										
 }	-	.::			,	,											
ŀ	- 	:::															
F	_	$ \cdots $															
ļ	-	-::-									-61.0						
ļ	-	∷:	∽At El61	I.0 Ft., trace	silt		Ì		3		T5						
ŀ	- -	$ \cdots $							-								
	_	<u> :-:: </u>															
-62.5	10.5	1	SAND n	oorly-graded	with si	lt mostly	\dashv										
ļ	- -	[:]]	fine-grain	ned sand-siz	ed quar	tz, few silt, few fine	e				-63.0						
ļ	- -	-: <u> </u>	to medium	m-grained sa ray (SP-SM)	and-size	ed shell,			4								
ŀ	<u>-</u>	:-	o. o. i gi	ay (OI -OIVI)	,												
F	=	.:															
ļ	- -	: <u> </u>															
ŀ	-	:-															
	-	-: <u> </u>															
-66.0	14.0	<u> </u>	SAND ei	ilty mostly fi	ne-arai	ned sand-sized	긕										
ļ	- -		quartz, so	ome fine to o	coarse-	grained sand-sized											
ŀ	-	11111	shell, little	e silt, 5Y 5/1	gray (SM)	- 1			l	1						

DRILLING LO	G (Cont. Sheet)	Jackson Jackson		Distric	et		SHEET 2 OF 2 SH	
PROJECT		COORDINA				JM HORIZONTAL	VERTICAL	
St. Johns County Sa	and Search	State Pl	ane, I	FLN (U.S. F	Ft.) NAD83	NAVD88	
LOCATION COORDINATE	ES	ELEVATION	N ТОР	OF B	ORING			
X = 608,645 Y = 1	1,996,907	-52.0 Ft	t.					
ELEV. DEPTH	CLASSIFICATION OF MATERIAL	LS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-68.0 16.0	SAND, poorly-graded, mostly fine-grains sand-sized quartz, trace fine to medium sand-sized shell, 5Y 6/2 light olive gray SAND, silty, mostly fine-grained sand-quartz, little fine to coarse-grained sand-shell, little silt, 5Y 7/2 light gray (SM) NOTES: 1. USACE Jacksonville is the custodiathese original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA' ID DEPTH CLASSIFIC 1 2.0/2.5 SP* 1-Post 2.0/2.5 SP* 2 6.0/6.5 SP* 3 9.0/9.5 SP* 4 11.0/11.5 SP-SI *Lab visual classification based on gracurve. No Atterberg limits.	ned m-grained y (SP) sized d-sized an for TORY CATION	REC.	SAMP SAMP	E262	-70.5 Abbreviations: NR = Not Recorded.	BLOW THE THE THE THE THE THE THE THE THE THE	N-VAL

DDI	LLING	LOG	DIVISIO	ON			IN	ISTAL	LATIC	N	-			SHEET	1	_
			Sou	uth Atlantic			4		sonvi	_				OF 2	SHEET	TS —
1. PRO								_				ee Remarks				
	St. Johns Co	•	and Searcl	:h			10				SYSTEM/DATUM	!		VERTIC		
	ibracore Bo			·			4.				ne, FLN (U.S. Ft.				/D88	_
	ING DESIGN			LOCATION			11	1. MA	NUFA	ACTUI	RER'S DESIGNAT	ION OF DRILL		AUTO HA		_
	/B-SJSP12- LING AGEN		i	X = 608		Y = 1,997,825 RACTOR FILE N	. 					DISTURBED		MANUAL I		
	Corps of Eng		- CESAI		1	38-12-5195	Ŭ. 12	2. TO	TAL S	AMPI	LES	5		0	BED (O	٠,
	IE OF DRILL		020/10		1 0.		11	3 TO	TAL N	JIIMR	SER CORE BOXES	1				_
							\vdash					, 0				—
	CTION OF I	BORING	;	DEG. FRO	ЭM	BEARING	1	4. EL	EVAT	ION G	ROUND WATER					
	VERTICAL			VERTICA	L		15	5. DA	TE BO	RING	3	STARTED		COMPL		
	INCLINED					!	+					06-30	-12	06-	30-12	—
6. THIC	CKNESS OF	OVERB	URDEN	N/A			16	6. EL	EVAT	ION T	OP OF BORING	-52.7 Ft.				_
7. DEP	TH DRILLED	INTO I	ROCK	N/A			17	7. ТО	TAL F	RECO	VERY FOR BORIN	IG 85.00 °	%			
							18	B. SIG	TAN	URE A	AND TITLE OF IN	SPECTOR				
8. тот	AL DEPTH C	F BOR	NG 1	7.5 Ft.					Maria	anne	Gruber, Geolog	ist				_
ELEV.	DEPTH	LEGEND	С	CLASSIFICAT	ION OF	MATERIALS		% REC.	BOX OR SAMPLE	RQD OR UD		REMAR	KS	BLOWS/	. <u>1</u>	N-VALUE
		<u> </u>							SA					<u> </u>	` 2	ź
[,]	0.0															_
-52.7	0.0	 	SAND. nr	oorly-graded	d, mostl	y fine to		1		-	1					
	-	[. · · ·]	medium-g	grained sand	d-sized	quartz, trace fin	e to									
	_		medium-(grained sand	d-sized	shell, weak 8/1 white (SP)										
	-		reaction v	with Files, Tric	JISI, J I	o/ i write (SF)										
	<u> </u>	[:::]									F 4 7					
	_	.∵.\	∽At FL -54	4.7 Ft., little r	medium	n-grained			_		-54.7 -54.7				_	_
	-		sand-size			. 9			1 L-Pos		0					
	_															
	-	<u>[∷:]</u>														
	<u> </u>	.::.														
	-															
	[$ \cdots $									1					
	Ł	[∷]									1					
	F	-::-														
	ţ	:-														
.9		·.::						\vdash		L	-58.7				_	
,.5	_	[::::							2							
	}	-::-														
	F	$ \cdots $														
	<u> </u>	:∵:	∽At El60	0.2 Ft., trace	shell, t	race fine to					1					
	<u> </u>	[.∵.]				shell, 5Y 6/1 gra	ay				1					
	<u> </u>	-::-														
	}	::									-61.7					
	F	<u> : : : </u>							3							
	<u> </u>	.∵.							-		1					
	-	-::- <u> </u>														
	<u> </u>	[···]`	∽At El62 shell	2.8 Ft., little f	tine-gra	ined sand-sized										
	}	$[\cdots]$	SHEII								-63.7					
	Γ	.:::							4							_
	ŀ	:::							-							
	F										1					
	<u>t</u>	$[\cdot \cdot \cdot]$									1					
	-	·:::														
	<u> </u>	:::									1					
-66.3	- 13.6		0415		c:		-1	1			1					
			~. \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\				ď	1							- 1	
	-		QUARTZ lift	layey, mostly	y tine-gi ned san	raineu sanu-size id-sized shell tr	ace									
-67.2	- - 14.5		guartz, litt	ttle fine-grain	ned san	rained sand-size id-sized shell, tra strong reaction v	ace									

DR	ILLING	LOC	G (Cont. Sheet)	Jackso		Distri	ct		SHEET 2 OF 2 SI	
PROJEC	СТ			COORDINA				JM HORIZONTAL	VERTICAL	
	ohns Coun	ty San	d Search	State P				!	NAVD88	
LOCATI	ON COORD	INATES	3	ELEVATIO	N TOP	OF B	ORING			
X = (608,234	Y = 1,9	997,825	-52.7 F	t.					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	LS	ĸ.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-70.2		LEGEND	CLAY, fat, little fine-grained sand-size little fine to coarse-grained sand-sized weak reaction with HCl, moist, 10GY greenish gray (CH) NOTES: 1. USACE Jacksonville is the custodicthese original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC	d quartz, shell, 7/1 light an for TORY CATION	%REC.	BOX OR SAMPLE	RGB C C C C C C C C C C C C C C C C C C C	-70.2 Abbreviations: NR = Not Recorded.	BLOWS/	N-VALUE
	ORM 18									

DRI	LLING	LOG	DIVISIO					ALLAT						SHEE		
			Sout	th Atlantic				ckson						OF 2	2 SHE	ETS
1. PRO												e Remarks				
	St. Johns Co	-	and Search	1			10.				SYSTEM/DATUM	HORIZON		VERT		
	ibracore Bo		Ι.,	100171011		MATEC	44				e, FLN (U.S. Ft.) RER'S DESIGNATIO	NAD83			VD88	
	I NG DESIGN /B-SJSP12			LOCATION (NATES Y = 1,998,154	11.	WANU	-AC	TUR	CER'S DESIGNATIO	ON OF DRILL		AUTO HA MANUAL		
	LING AGEN		i	A - 609,		RACTOR FILE NO.					! 1	DISTURBED		NDISTU		
	Corps of Eng		- CESAJ		1	38-12-5195	12.	ΓΟΤΑΙ	SAI	MPL		5		0		,,
	E OF DRILL	_					13.	ΓΟΤΑΙ	NU	IMBE	ER CORE BOXES	0				
	ECTION OF	BORING		DEG. FRO	М	BEARING	14.	ELEVA	TIO	N G	ROUND WATER	10		1.00		
	VERTICAL INCLINED			VERTICAL	-	!	15.	DATE	BOR	ING	ì	STARTED 06-30-	10	i	-30-12	
						!							12	; 00	-30-12	-
6. THIC	CKNESS OF	OVERB	URDEN	N/A							OP OF BORING	-53.0 Ft.				
7. DEP	TH DRILLED	INTO R	ROCK	N/A							ERY FOR BORING		ó			
° TOT	AL DEPTH C	E PORI	NG 16	5.7 Ft.			18.				ND TITLE OF INSE					
0. 101	AL DEFIN		10). <i>T</i> Ft.				_	_	ne (Gruber, Geologis	į				
ELEV.	DEPTH	LEGEND	CI	ASSIFICATI	ION OF	MATERIALS	9 RE	C. BOX OR	l R	QD OR UD		REMARI	cs		PLOWS	N-VALUE
		E	-				RE	c. ĝ	[ŭ	ŬĎ				ì	7_	ž
		+					+	+	+	\dashv						_
-53.0	0.0	 	0415		"	C	_		\perp							
	E	: : :	SAND, po	orly-graded,	, mostly I-sized (/ fine to quartz, few fine										
	F	[::::	gravel-size	ed shell, we	ak reac	tion with HCI,					-54.0					
	<u> </u>	l٠٠h	moist, 5Y	8/1 white (SP)		\vdash	1	\dashv	ŀ	-54.0					
	}	····	-Al ⊑I54.	υ Γι., IIIIe S	aiiu to	gravel-sized shell		(-P	et							
	ļ.	$ \cdot $							1							
	<u> </u>	[:::]														
	-	$ \cdot \cdot $														
	<u> </u>	·.::														
	}	$ \cdot\cdot\cdot $														
	Ę.	::: <u> </u>	_A+ E1	Λ Et fa	andi:	grained send size	, L	\perp	_	ļ	-57.0					
	ţ	· · `	Shell, trace	บ ฅเ., เew m e silt	ieululi)-	-grained sand-sized	'	2	╛							
	L	$ \cdots $, a doc													
	_	$ \cdots $														
	E	$ \cdot \cdot $														
	F	:::														
.3	<u> </u>						+	+	+	\dashv					-	
	}	$ \cdots $									-60.0					
	F	: : :						3	1	Ī						
	ţ	:::: <u> </u>	A4 E1 00	7	£:	-in-ad-a-m-d -! !			\dashv							
	-	∷: `	~તા ⊑ા60. shell 5Y ક	7 Ft., trace 5/2 light olive	ıme-gra e grav	ained sand-sized										
	F	: : :	o, o. c	g. it 0iivi	- g. w,											
	L	: ::					L			l	-62.0					
	F	$ \cdot \cdot $						4		[
	ļ.	$ \cdot \cdot $							7							
	 	:·::														
	F	$ \cdot\cdot\cdot $														
	L	$ \cdot\cdot\cdot $														
	}	$ \cdots $														
	<u> </u>	$[\cdots]$														
	-	$ \cdots $														
	F	·														
-66.0	13.0	· · · · · ·														
	-		SAND, silt	ty, strong re	action v	with HCI, moist,	7									
	ţ	$ \uparrow\downarrow\uparrow\downarrow $	5Y //2 ligh	nt gray (SM	1)											
	-															
	ļ.									ļ						
-67.9	- 14.9	HHH					- 1	- 1	1							

DRI	LLING	LOG	G (Cont. Sheet)	Jackso		Distri	ct			SHEET OF 2	
ROJEC	T			COORDINA				UM HORIZON	TAL V	ERTICAL	
	ohns Count	y Sano	d Search	State P				, I		NAVD88	
CATI	ON COORDI	NATES		ELEVATIO	N TOP	OF B	ORIN				
X = 6	09,081	Y = 1,9	998,154	-53.0 F	t.						
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	LS	ĸ.	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/	N-VALUE
-68.8	15.8		SAND, poorly-graded with silt, weak r with HCl, moist, 5Y 7/1 light gray (SF	P-SM)							
-69.7	16.7		SAND, clayey, strong reaction with H6 5Y 7/6 yellow (SC)	CI, moist,				-69.7			
			NOTES:					Abbreviations: NR = Not Record	ed		
			USACE Jacksonville is the custodi these original files.	an for				NIX - NOT NOON	cu.		
			Soils are field visually classified in accordance with the Unified Soils Cla System.	ssification							
			3. Laboratory Testing Results								
			SAMPLE SAMPLE LABORA ID DEPTH CLASSIFI								
			1 1.0/1.5 SP 1-Post 1.0/1.5 SP 2 4.0/4.5 SP 3 7.0/7.5 SP	* *							
			4 9.0/9.5 SP *Lab visual classification based on gracurve. No Atterberg limits.								

DR	ILLING	LOG	DIVISIO				IN	STAL							SHEE		
			Sout	h Atlantic						lle Di			_		OF	2 SH	EETS
1. PRO							Ŀ				OF BIT		Remarks				
	St. Johns Co	•	and Search				10				SYSTEM/DA		HORIZON		VERT		
	/ibracore Bo		Т.				_				e, FLN (U.S		NAD83			AVD88	
	/B-SJSP12			LOCATION C		= 1,998,586	11	. MA	NUFA	CTUI	RER'S DESIG	NATIO	N OF DRILL		NUTO H		
	LLING AGEN	-	i	A = 009,8		CTOR FILE NO.	_					! D	ISTURBED		NDISTU		
	Corps of En		- CESAJ		1	-12-5195	12	. то	TAL S	AMPI	LES .	-	5		0	11,525	(02)
	ME OF DRILL		0_0/10				13	то	TAI N	IUMR	ER CORE BO	XES	0				
							_										
	ECTION OF	BORING		DEG. FROM	M E	BEARING	14	. EL	EVAT	ON G	ROUND WAT	FER	1		1		
	VERTICAL INCLINED			VERTICAL	·		15	. DA	TE BO	RING	;		STARTED	40	i	PLETE	
				!			_						06-30-	12	. 00	30-1	
6. THI	CKNESS OF	OVERBU	JRDEN	N/A			16	. EL	EVAT	ION T	OP OF BORI	NG	-55.2 Ft.				
7. DEP	TH DRILLED	INTO R	OCK	N/A							ERY FOR B		92.00 %	o O			
			10	0.54			18				ND TITLE O						
8. 101	AL DEPTH (NG 18.	.8 Ft.			Ц			nne	Gruber, Ge	ologist					
ELEV.	DEPTH	EGEND	CL	ASSIFICATIO	ON OF MA	ATERIALS		% REC.	BOX OR SAMPLE	RQD OR UD			REMARK	(S		BLOWS/ 1 FT.	N-VALUE
		╁					\dashv		шv								
-55.2	0.0	 	SAND no	orly-graded,	moetly fi	ne to	\dashv										
	ļ.	l.∵.l	medium-gi	rained sand-	-sized qua	artz, trace fine to	,										
	-	$ \cdots $	medium-gi	rained sand-	-sized she	ell, no reaction					-56.2						
	F	<u> </u> \	With HCI, r -At FL -56 :	moist, 5Y 8/ 2 Ft., little m	1 Wnite (nedium-ai	SP) rained			1		-56.2						
	-		sand-sized		iodiaiii gi	airioa			(-Pos	t							
	F	$[\cdots]$															
	ļ.	-:::															
	-																
	F																
	Ŀ	[]															
	⊢	ŀ∷k	-Δ+ Fl _50 '	2 Ft few m	edium-ar	ained sand-size	۱ ۱				-59.2						
	Ľ.		shell, trace		icaiaiii gi	anica sana size	٦		2								
	-	[: · · ·]															
	F	-::-															
	Ė																
	┝										-61.2						
	ļ.	:·::							3								
	Ŀ					edium-grained											
	F		sand-sized	shell, 5Y 6	/2 light ol	ive gray											
.9	<u> </u>						4				-63.2						
	F						ł		4		-00.2						
	-	:::							-								
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	Ł	$ \cdot \cdot $															
	F	: :															
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	 	$ \cdots $															
-66.2	11.0		CLAY Is a	n nome fire	to mod!:	ım grainad											
	Ŀ	V//		n, some fine d quartz, son													
-67.2	12.0	1//	medium-gi	rained sand-	-sized she	ell, weak											
-01.2	- 12.0		reaction w	ith HCI, moi	ist, 5Y 5/2	2 olive gray (CL)/										
	F		SAND, cla	yey, some fi	ine-graine	ed sand-sized ined sand-sized											
	Ĺ					with HCl, moist,											
	-			nt gray (SC)													
	ļ.																
	-																
	Ę.																
70.2	F 150	V////															

DRI	LLING	LOC	G (Cont. Sheet)	INSTALLA: Jackson		Distric	ct		SHEET 2 OF 2 SI	HEETS
PROJEC	т			COORDINA				JM HORIZONTAL	VERTICAL	
St. Jo	hns Count	y San	d Search	State P	lane,	FLN (U.S. I	Ft.) NAD83	NAVD88	
	ON COORDI			ELEVATIO		OF B	ORING	3		
X = 6	09,996		998,586	-55.2 F	t.					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL	LS	REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
	SAND, poorly-graded with silt, mos									
-72.8	SAND, poorly-graded with silt, most fine-grained sand-sized quartz, few to coarse-grained sand-sized shell, reaction with HCl, moist, 5Y 7/2 light		t, few fine							
-74.0	reaction with HCl, moist, 5Y 7/2 light (SP-SM) NOTES:		gray /				-74.0 Abbreviations:			
							NR = Not Recorded.			
			USACE Jacksonville is the custodia these original files.	an for						
			Soils are field visually classified in accordance with the Unified Soils Clas System.	ssification						
			3. Laboratory Testing Results							
			SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC							
			1 1.0/1.5 SP ¹ 1-Post 1.0/1.5 SP ² 2 4.0/4.5 SP ² 3 6.0/6.5 SP ³ 4 8.0/8.5 SP ³	t t						
			*Lab visual classification based on gracurve. No Atterberg limits.							

DDI	LLING	LOG	DIVISIO	N		INS	TAL	LATIC	ON	<u> </u>		SHEET 1		1
		LUG	Sout	h Atlantic		-			lle Dis			OF 2 SH	IEETS	1
1. PRO						_					Remarks			_
		-	and Search			10.				SYSTEM/DATUM	HORIZONTAL	<u> </u>		
	ibracore Bo			LOCATION COO	ADDINATES	11				e, FLN (U.S. Ft.) RER'S DESIGNATION	NAD83	NAVD8		-
	B-SJSP12		'		Y = 1,998,720	'''	IVIA	NUF	40101	REK S DESIGNATIO		AUTO HAMME MANUAL HAN		
	LING AGE				ONTRACTOR FILE NO.	†					DISTURBED	UNDISTURBED		1
	orps of En		- CESAJ	<u> </u>	6738-12-5195	12.	10	TALS	SAMPI	LES	4	0		
4. NAM	E OF DRILL	.ER				13.	то	TAL N	NUMB	ER CORE BOXES	0			
5 DIRE	CTION OF	BODING		DEG EROM	BEARING	14.	ELI	EVAT	ION G	ROUND WATER				
\boxtimes	VERTICAL INCLINED			DEG. FROM VERTICAL		15.	DA	TE BO	ORING	•	STARTED 06-30-12	COMPLETE 06-30-1		
6. THIC	CKNESS OF	OVERB	URDEN	N/A		16.	ELI	EVAT	ION T	OP OF BORING	-54.9 Ft.			
7. DFP	TH DRILLEI	INTO	SOCK V	√/A		17.	то	TAL F	RECOV	ERY FOR BORING	96.50 %			1
			·			18.	SIG	NAT	URE A	ND TITLE OF INSP	PECTOR			1
8. ТОТ	AL DEPTH (OF BORI	NG 19.	.4 Ft.		<u>L</u>		Maria	anne	Gruber, Geologist	t			
ELEV.	DEPTH	LEGEND	CL	ASSIFICATION	OF MATERIALS	F	% REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/ 1 FT.	N-VALUE	
-54.9	0.0					\top								1
-54.9	0.0	 	SAND, poo	orly-graded, mo	ostly fine to	\dashv								-(
	-	$ \cdot \cdot \cdot $	medium-gr	rained sand-siz	zed quartz, trace fine t	0								F
	L	·∷·	medium-gr	rained sand-siz noist, 5Y 8/1 w	red shell, no reaction (SP)	L				-55.9				ļ
	_	:∵: \	-At El55.9	9 Ft., few medi	um-grained sand-size	ed		1		-55.9				ŀ
		.::	shell, trace	e silt			1	-Pos	t					F
	_	$ \cdot \cdot \cdot $												E
	_													F
	_	$[\cdots]$												L
	-													ŀ
	<u>-</u>	-::-								-58.9				F
	_	∵:\	-At El58.9	9 Ft., trace she	ell	H		2	ł	-30.9				t
	_	$ \cdots $												ŀ
	_	.::												Ŀ
	_	:::	A4 E1 00 (0 Ft . f f										-
	_		-At El60. sand-sized	3 Ft., few fine t I shell few fine	to coarse-grained to coarse-grained					-60.9				F
	-	.::.		shell, 5Y 6/2 I		F		3		00.0				t
	-								ł					F
	F	<u> </u> :∴:												F
.3	-	 				+							_	ţ
	_	:::												ŀ
	-	[::::]												F
	-	.;:.												ţ
64.0	-04	:::												H
-64.3	- 9.4 -	1/////	SAND. cla	vey, mostly fine	e-grained sand-sized	\dashv								F
			quartz, little	e clay, trace fir	ne to medium-grained									Ļ.
	<u> </u>				action with HCI, mois	t,								F
	<u>-</u> -		N 5/ gray	(30)										ţ
	F													H
	_													F
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DR	ILLING	LOC	G (Cont. Sheet)	Jackson Jackson		Distric	r:t				SHEET 2	
PROJE	CT			COORDINA				JM	HORIZONTAL	VEI	RTICAL	
St. J	lohns Coun	ty San	d Search	State P					NAD83	1	NAVD88	
OCAT	ON COORDI	NATES	3	ELEVATIO	N ТОР	OF B	ORIN	3				
X =	607,730		998,720	-54.9 F	t.							
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATER	IALS	ĸ REC.	BOX OR SAMPLE	RQD OR UD		REMARK	s	BLOWS/ 1 FT.	N-VALUE
-74.3		LEGEND	NOTES: 1. USACE Jacksonville is the custo these original files. 2. Soils are field visually classified is accordance with the Unified Soils C System. 3. Laboratory Testing Results SAMPLE SAMPLE LABOR ID DEPTH CLASSII 1 1.0/1.5 S 1-Post 1.0/1.5 S 2 4.0/4.5	-grained h HCl dian for n lassification RATORY FICATION	%REC.	BOX OR SAMPLE	ROD CHARGE	-74.3 Abbreviati NR = N		S	BLOWS/	N-VALUE

DRI	LLING	I OG	DIVISIO	N			INST	ALLAT	ON					SHEE	ET 1	
			Sout	th Atlantic				ckson			_			OF	2 SH I	EETS
1. PRO												emarks				
	t. Johns Co	•	and Search	า			10. (E SYSTEM/DATU	!	HORIZON	TAL	VERT	ICAL	
	ibracore Bo									ne, FLN (U.S. F		NAD83			AVD88	
	NG DESIGN			LOCATION			11. I	MANUF	ACTU	IRER'S DESIGNA	TION	OF DRILL	_	UTO H		
	B-SJSP12- LING AGEN		i	X = 606,		Y = 1,998,239 RACTOR FILE NO.					1 DIS	TURBED	_	IDISTU		
	orps of Eng		- CESA I		1	38-12-5195	12. 1	TOTAL	SAME	PLES	i	5 5	Or	0	KBED	(00)
	E OF DRILL		- 02070		1 07	30 12 0100	13	TOTAL	МПИ	BER CORE BOXE		0	<u> i </u>			
						ŀ						U				
	CTION OF I	BORING		DEG. FRO	М	BEARING	14.	LEVA	TION	GROUND WATER	ł ,					
	/ERTICAL NCLINED			VERTICAL	-	i 	15. I	ATE B	ORIN	G	į	STARTED			PLETE	
				!		!						06-30-	12	00	5-30-12	<u>-</u>
6. THIC	KNESS OF	OVERBU	JRDEN	N/A						TOP OF BORING		53.7 Ft.				
7. DEPT	H DRILLED	INTO R	OCK	N/A						VERY FOR BORI		81.50 %	6			
	AL DEPTH C	SE BORU	NC 16	. c [+			18. \$			AND TITLE OF II		TOR				
6. 101 <i>1</i>	AL DEPTH C	JF BURI	NG 10	6.6 Ft.				_	_	Gruber, Geolo	gist					
ELEV.	DEPTH	LEGEND	CI	LASSIFICATI	ON OF I	MATERIALS	% RE	BOX OR	RQI OR UD			REMARI	KS		BLOWS/ 1 FT.	N-VALUE
		Ě						BO	100						4	ź
-53.7	0.0	 	SAND no	orly-graded	mostly	fine to	\dashv	-	+	-						
ļ	- -	l.::.l	medium-g	rained sand	l-sized o	quartz, little fine to										
}	- -	.∵. <u> </u>	medium-g	rained sand	l-sized s	shell, weak	L	\perp		-54.7						
F	-	-::- \	reaction w -At El54	viui ⊓∪i, mo .7 Ft few m	าธเ, ๖४ โ nedium-	8/1 white (SP) grained sand-sized	, [1		-54.7						
<u> </u>	- -		shell, trac			G 1		(<u>-Po</u>	s t							
ŀ	_	$ \cdot\cdot\cdot $														
-	-	-:														
<u> </u>	- -	[:::\h	-At El56.	.4 Ft., trace	fine to r	medium-grained										
}	-	$ \cdots $	sand-size	d shell, no r	eaction	with HCI										
ļ	-	-::-								-57.7						
<u> </u>	- -	$[\cdot \cdot \cdot]$						2	1	J						
}	-	[···	-A+ EI - E-C	2 [4 4	no t	araa arai		<u> </u>	┨							
	- 	1	AL ⊏I58. sand-size	.3 Ft., few fi d shell, 5Y 6	ne to co 3/2 liaht	parse-grained olive grav										
.2	-	· · · · ·		, •		- 3,		\perp								
<u>:-</u>	-	$[\cdots]$								-59.7						
	- -	-::-						3	1							
ŀ	- -	$ \cdot\cdot\cdot $						Ť	1							
F	_	$[\cdots]$														
-61.3	- - 7.6	<u> </u>														
Ī	-	·.	SAND, po	orly-graded	with sill	t, mostly	L]	-61.7						
F	=	:.	coarse-ora	eu sand-size ained sand-	s u quaπ sized sh	z, little fine to nell, few silt, weak		4								
<u> </u>	- -		reaction w	vith HCl, mo	ist, 10Y	5/1 greenish gray			1							
ŀ	- -	·:	(SP-SM)													
F	-	·. 	A. F	0.51												
<u> </u>	- 	[::[] `	-At El63.	.3 Ft., little n	nedium	to coarse-grained medium-grained										
}	-	$\ \cdot\ \ $	sand-size	d shell, tract	7/1 light	gray										
-	-	 •.			-											
<u> </u>	- -															
-65.3	- 11.6		CI AV 4-4	nome fin-	to mad:	um grained	4									
	- -		sand-size	r, some fine d quartz. tra	ιο medi ce fine	um-grained to medium-grained										
}	-		sand-size	d shell, no re	eaction	with HCl, moist,										
F	-		10Y 5/1 g	reenish gray	y (CH)											
<u> </u>	-															
-	-															
<u> </u>	- 															
ŀ	-															
F	-															

DRILLING	LOG	G (Cont. S	Sheet)		INSTALLA Jackso		Distric	et			EET 2	
ROJECT					COORDINA				UM HORIZONTAL	VERTIC		
St. Johns Coun	ty Sand	d Search			State F	lane, l	FLN (U.S. I	Ft.) NAD83	NAV	D88	
OCATION COORDI	NATES	;			ELEVATIO	N ТОР	OF B	ORING	G			
X = 606,844	T T	998,239			-53.7 F	t.						
ELEV. DEPTH	LEGEND	CLA	SSIFICATION	OF MATERIAL	.S	REC.	BOX OR SAMPLE	RQD OR UD	REMA	RKS	BLOWS/ 1 FT.	N-VALUE
-69.3 15.6												
		SAND, silty, quartz, little 5Y 6/1 gray	r, mostly fine-g silt, no reaction (SM)	grained sand- on with HCl, r	sized moist,				-70.3			
-70.3 16.6		NOTES: 1. USACE these origin: 2. Soils are accordance System. 3. Laborato SAMPLE ID 1-Post 2 3 4 *Lab visual of the second	Jacksonville is	classified in ied Soils Classesults LABORA CLASSIFIC SP* SP* SP* SP-SP-SI-SP-	TORY CATION				Abbreviations: NR = Not Recorded.			

DRI	LLING	I OG	DIVISIO	N			ALLAT					SHEET	1
			Sout	h Atlantic			ickson					OF 2	SHEET
1. PRO										ee Remarks			
S	St. Johns Co	ounty Sa	and Search	ı		10.	COORI	INAT	E SYSTEM/DATUN	HORIZONT	AL	VERTIC	AL
	/ibracore Bo								ne, FLN (U.S. Ft.			NAV	D88
	ING DESIGN		į.	LOCATION COC	RDINATES	11.	MANU	ACT	JRER'S DESIGNAT	ION OF DRILL	_	NAH OTU	
	/B-SJSP12-	-			Y = 1,997,354						_	MANUAL H	
	LLING AGEN Corps of Eng		- CESAJ	C	6738-12-5195	12.	TOTAL	SAMI	PLES	DISTURBED 5	U	NDISTURE	BED (UD)
4. NAN	E OF DRILL	ER				13.	TOTAL	NUM	BER CORE BOXES	0			
5. DIRE	ECTION OF I	BORING		DEG. FROM	BEARING	14.	ELEVA	TION	GROUND WATER				
\boxtimes	VERTICAL INCLINED			VERTICAL		15.	DATE I	BORIN	IG	STARTED 06-30-1	2	COMPLI 06-3	ETED 0-12
6. THI	CKNESS OF	OVERBU	JRDEN	N/A		16.	ELEVA	TION	TOP OF BORING	-54.6 Ft.			
7. DEP	TH DRILLED	INTO R	OCK N	V/A		17.	TOTAL	REC	OVERY FOR BORIN	IG 92.00 %			
8. TOT	AL DEPTH C	OF BORI		.1 Ft.		18.			AND TITLE OF IN				
ELEV.	DEPTH	LEGEND			OF MATERIALS	, PE	8,	_	e Gruber, Geolog	REMARK	s	BLOWS/	N-VALUE
		Ľ					Si og	5 0				74	- >
-54.6	0.0												
	F			orly-graded, mo		\exists							
	t				red quartz, few fine to ed shell, no reaction								
	F	::	with HCl r	moist, 5Y 8/1 w	hite (SP)	<u> </u>	+	4	- <u>55.6</u>				
	 	l:∵:: \	-At El55.0	6 Ft., little med	ium-grained		1		-55.6				
	_	[.:::]	sand-sized	d shell, trace si	t		<u> 1-Po</u>	gt .					
	-	[:::]											
	-	$[\cdot \cdot \cdot]$											
		[:::]											
	L	.::.											
	ŀ	.··.											
	t	<u> </u> .∵											
	L	-: · ·	A4 E1 - E0 :	0.54 6		, L	_	4	-58.6				
	}			o ⊢τ., tew medi	um-grained sand-size	۱ ا	2						
.2	<u> </u>	1	shell At FL -59 (() Ft few fine 1	o medium-grained	+	+	1	-				
	⊢			d shell, 5Y 6/2									
	t	:::		,	5 · · · · · · · · · · · · · · · · · · ·								
	F	:::							60.6				
	F	[:::k	-At FL -60 4	6 Ft little med	ium to coarse-grained	\vdash	+	-	-60.6				+
	[d shell, trace si			3	_					
	-	 .∵∴ 			-								
	F	 .∵. 											
-62.3	F 7 7	-::-											
J2.U	<u> </u>	 	SAND, poo	orly-graded with	n silt, mostly	一	4		-62.6				
	<u> </u>	1]] [fine to med	dium-grained s	uartz, few silt, trace and-sized shell, no		4	4					
	L			ith HCI, moist,	5Y 6/2 light olive gray								
	F	-: <u> </u>	(SP-SM)										
	 	$\ \cdot\ \ $	-Δt FL -6/1	1 Ft some fin	e to coarse-grained								
	L				eaction with HCl,								
	F		5Y 7/2 ligh		action with Hol,								
	F	-	<u>–</u> gi	· 3· - ·)									
	L	:.											
	F_	['.											
	-	 ∷											
	L	 ∐∥											
	├	[:-]]											
	F	$[\cdot]]$											
	L	[::]											
	F	.: 											
-68.3	13.7	<u> </u>				╝							
		-:	SAND, poo	orly-graded, mo	ostly fine-grained								
	 		sand-sized	ı quartz, tew tir 1 shell weak ro	ne to coarse-grained eaction with HCl, moist								
	<u> </u>	:::	5Y 7/1 linh	nt gray (SP)	action with FIOI, HIUISI	'							
			2 1 1/ 1 HUI	IL GILLY (UI)									

DR	LLING	LO	G (Cont. Sheet)	Jackson		Distri	nt -		SHEET 2 OF 2 S	
ROJEC	т			COORDINA				JM HORIZONTAL	VERTICAL	
	ohns Coun	ty San	d Search	State P				1	NAVD88	
OCATI	ON COORDI	NATES	5	ELEVATIO	н тор	OF B	ORIN	;		
X = 6	07,300		997,354	-54.6 F	t.					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	LS	REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-69.7 -73.7	15.1 19.1		SAND, clayey, some fine-grained san quartz, some fine to coarse-grained sa shell, little clay, strong reaction with H 5Y 5/1 gray (SC)	and-sized				-73.7		
, O.,			NOTES: 1. USACE Jacksonville is the custodi these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFICE SAMPLE SAMP	TORY CATION 				Abbreviations: NR = Not Recorded.		

DDI	LLING	LOG	DIVISIO	N		II	NSTAL	LATIC	ON				SHEET	' 1	
		LUG	Sout	th Atlantic		┸	Jack	sonvi	ille Di	strict			OF 2	SHEET	ΓS
1. PRO											e Remarks				
S	t. Johns Co	ounty S	Sand Search	1		10	o. cc	ORDI	NATE	SYSTEM/DATUM	HORIZON	TAL	VERTIC	AL	
	ibracore Bo					┸				ne, FLN (U.S. Ft.)	NAD83	3	NA\	/D88	
	ING DESIGI		ı į		COORDINATES	1	1. MA	NUF	ACTU	RER'S DESIGNATIO	ON OF DRILL		UTO HAI		
	B-SJSP12		<u> </u>	X = 607, T	743 Y = 1,996,455 CONTRACTOR FILE NO	+					DISTURBED		IANUAL I		
	orps of En		- CESA I		6738-12-5195		2. TO	TAL S	SAMP		5 5	Ur	NDISTUR 0	RED (OI	(ט
	E OF DRILL		- CLOAJ		0730-12-3193	+	2 TO	TAL 1		ER CORE BOXES	0	i_	0		
						\vdash					U				
5. DIRE	CTION OF	BORING	3	DEG. FROM	M BEARING	11	4. EL	EVAT	ION G	ROUND WATER					
	VERTICAL			VERTICAL	i i	1:	5. DA	TE BO	ORING	3	STARTED	40	COMPL		
	NCLINED			!	<u>.</u>	+					06-30-	12	06-3	30-12	
6. THIC	KNESS OF	OVERE	URDEN	N/A		1	6. EL	EVAT	ION T	OP OF BORING	-51.9 Ft.				
7. DEP1	TH DRILLED	OTNI	ROCK	N/A		1	7. TO	TAL I	RECO	VERY FOR BORING	96.00 %	6			
				4.54		11	8. SI			AND TITLE OF INSI					
8. 1017	AL DEPTH (JF BUR	ING 19).4 Ft.			_		anne	Gruber, Geologis	t				_
		S					١,,	BOX OR SAMPLE	RQD				NS/	1 FT.	ם כ
ELEV.	DEPTH	LEGEND	CL	ASSIFICATION	ON OF MATERIALS		REC.	ĕ8	RQD OR UD		REMARK	(S	BLOWS/	- 3	\$
		-					_	m s						2	<u>ż</u>
-51.9	0.0						1								
<u> </u>	-	 	SAND, po	orly-graded,	mostly fine to		1			1					
}	-	.::	medium-g	rained sand-	-sized quartz, few fine to -sized shell, weak	0	1								
Ī	-				st, 5Y 8/1 white (SP)				ļ	-52.9					
ŀ	- -	:-::		,	,			1	Į.	-52.9					
ŀ	-							-Pos	ĮT.						
	-	$ \cdot \cdot $													
ŀ	-	$ \cdots $													
F	_	.::.													
į	-														
ŀ	-	:·::													
ļ	-	$ \cdots $													
ļ	- -	$ \cdot \cdot $								500					
ŀ	_	<u> </u> :}	`-At El56	9 Ft., trace s	shell, trace silt		\vdash	<u> </u>	1	-56.9					_
ļ	- -	<u> ::: </u>	00.	,	,		1	2	-						
ŀ	- -	$ \cdots $					1								
F	-	$ \cdot \cdot $					1								
ļ	- -	<u> </u> :::					1								
.2	- 	<u> </u> .∵.					1								
ا لــــــــــــــــــــــــــــــــــــ	-														
ļ	- -	[.::]													
ŀ	-	.::													
ŀ	-									-60.9					
	-	[∷:]		.9 Ft., few m	edium-grained sand-siz	ed		3	1						
-61.5	- 9.6 -	1:::	SAND no	orly-aradad s	with silt, mostly		1	Ť	1	1					
F	-	<u> [:] </u>	fine-graine	ed sand-size	d quartz, few silt, few fi	ne	1			1					
ļ	- -	1:44	to medium	n-grained sai	nd-sized shell, weak		1								
Ŀ	- -	$\ \cdot\ \ $	reaction w (SP-SM)	/ith HCI, moi	st, 5Y 6/2 light olive gra	ıy	1								
F	-	<u> [:] </u>	(C. CIVI)				1								
ļ	- -	1:44					1			62.0					
ŀ	_	[::]					-	1	1	-63.9				_	
ļ	-	1:-					1	4	-						
ŀ	- 	:·													
F	=	.: <u> </u>													
ļ	- -	:.]													
<u>, , </u>	_	:-													
-66.3	- 14.4 -		CLAY fat	some fine	grained sand-sized		1			1					
	_		guartz fo	w fine to me	granieu sanu-sizeu dium-arained sand-sizei	Ч	1	l	1						

DRILLING	2106	DIVISION				ALLA				SHEE	T 1
		South Atla	ntic					District		OF 2	SHEETS
1. PROJECT									Remarks		-
St. Johns	-	nd Search			10.			TE SYSTEM/DATUM	HORIZONTA	ł	
Vibracore								ane, FLN (U.S. Ft.)	NAD83		VD88
2. BORING DESI		,	TION COORD		11.	MANU	FACT	URER'S DESIGNATIO	N OF DRILL	AUTO HA	
VB-SJSP1		X =		Y = 1,995,564				1 -	L		HAMMER
3. DRILLING AGI		OF CAL		TRACTOR FILE NO. 38-12-5195	12.	TOTA	SAN		DISTURBED 5	UNDISTUE	KBED (UD)
Corps of E		CESAJ	; 07	30-12-3193				<u>i</u> _		0	
T. NAME OF BILL	LLLIN				13.	TOTA	. NUI	MBER CORE BOXES	0		
5. DIRECTION O	F BORING	DEG	. FROM	BEARING	14.	ELEV	TION	GROUND WATER			
	L	VER	TICAL		15.	DATE	BORI	NG	STARTED 06-30-12	i	-30-12
3. THICKNESS O		IRDEN N/A		<u>:</u>	16.	ELEV	TION	N TOP OF BORING	-54.3 Ft.		-50-12
7. DEPTH DRILL	ED INTO R	OCK N/A			17.	TOTA	REC	OVERY FOR BORING	90.00 %		
8. TOTAL DEPTH	I OF BORIN	IG 18.6 Ft.			18.			E AND TITLE OF INSP ne Gruber, Geologist			
					Т						
ELEV. DEPTH	LEGEND	CLASSIF	ICATION OF	MATERIALS	RE	SC. SOR	ROU U	DD R D	REMARKS	; §	N-VALUE
-54.3 0.0											
-		SAND, poorly-gr	aded, mostly	y fine to							
ŀ				quartz, trace fine to shell, no reaction	P						
F		medium-grained with HCl, moist,						1			
Ŀ	:-::	,	0. 0	(0.)							
F								-56.3			
F	$ \cdots $ \wedge	At El56.3 Ft.,	few medium	-grained sand-size	ⅎ⊢	1	\dashv	-56.3			-
Į.		shell		g		1 '	ost	33.3			
-						<u> </u>	-				
F	:::										
ŀ	$[\cdot \cdot \cdot]$							1			
ļ.	[::::]				\vdash	\perp	_	-58.3			\longrightarrow
ŀ	$ \cdots $					2					
<u> </u>	: : :						7	1			
9.2	::::				\top		\top				\neg
F	.·:.										
Ŀ	$ \cdot \cdot \cdot $				L	\perp	╛	-60.3			
F	\	At El60.3 Ft., 1	trace silt			3					
t							\dashv				
-61.3 7.0		SAND, poorly-gr	adad with ci	It mostly fine to	_						
<u> </u>				quartz, few silt, fev	, I						
-	 . -	fine gravel-sized	shell, no rea	action with HCI,				-62.3			
<u> </u>		moist, 5Y 6/2 lig				4		5=15			
ŀ		At El62.3 Ft., 1 shell	rew mealum	-grained sand-size	¹	F	-				
L		Silon									
ŀ											
ļ.	[:: ∐							1			
-	- <u> </u>										
F	·.							1			
ŀ	 :- ∱							1			
F	[.: ∬							1			
Ŀ	 .:							1			
F	[·: :]										
-66.8 12.5	<u> </u>							1			
-		SAND, silty, mos			\neg			1			
-	-	sand-sized quart	tz, some fine	to coarse				1			
ļ.		gravel-sized sne HCl, moist, 5Y 7		trong reaction with (SM)				1			
ŀ	[[]]		, = "gin gidy	(3141)				1			
F	[]							1			
-	ŢŢţŢţŢ										
-69.3 T 15.0	[]†]†[1					

DRI	LLING	LO	G (Cont. Sheet)	INSTALLA: Jackson		Distric	et -		SHEET 2 OF 2 SI	IEETS
PROJEC	т			COORDINA				UM HORIZONTAL	VERTICAL	
St. J	ohns Coun	ty San	d Search	State P				!	NAVD88	
LOCATI	ON COORD	NATE	s	ELEVATIO	N ТОР	OF B	ORING	G		
X = 6	08,196	Y = 1,	995,564	-54.3 F	t.	_				
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL	LS	ĸEC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
			SAND, poorly-graded with silt, mostly medium-grained sand-sized quartz, fe fine to medium-grained sand-sized shi 5Y 6/1 gray (SP-SM)	w silt, few						
-72.9	18.6	•: 	NOTES.					-72.9 Abbreviations:		
	NOTES: 1. USACE Jacksonville is the custo these original files.							NR = Not Recorded.		
			Soils are field visually classified in accordance with the Unified Soils Classystem.	ssification						
			Laboratory Testing Results							
			SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC	TORY CATION						
			1 2.0/2.5 SP ² 1-Post 2.0/2.5 SP ² 2 4.0/4.5 SP ² 3 6.0/6.5 SP ² 4 8.0/8.5 SP-S	* *						
			*Lab visual classification based on gra curve. No Atterberg limits.	dation						
A 1 = 4	DRM 183	100	<u> </u>							

DRI	LLING	I OG	DIVISION	II.	NSTAL					SHEET 1	
1. PRO			South Atlantic	+				strict		OF 2 SH	IEETS
			10					E OF BIT See Remark		VEDTION	
		-	and Search	1	0. CC			!	ONTAL	VERTICAL	_
	ibracore Bo		LOCATION COORDINATES	4				, , , , , , , , , , , , , , , , , , , ,	.D83	NAVD8	
	B-SJSP12-		LOCATION COORDINATES X = 608,649 Y = 1,994,681	1	1. MA	NUF	ACTU	RER'S DESIGNATION OF DRI		AUTO HAMME MANUAL HAN	
	LING AGEN		CONTRACTOR FILE NO	.				DISTURBE		JNDISTURBED	
	orps of Eng		1		2. TO	TAL S	SAMP		_	0	(0-)
	E OF DRILL		, , , , , , , , , , , , , , , , , , , ,	1:	3. TO	TAL I	NUME	BER CORE BOXES 0			
				\vdash							
	CTION OF E	BORING	DEG. FROM BEARING	۳.	4. EL	EVAI	ION	GROUND WATER		OOMBI ET	
	VERTICAL INCLINED			1	5. DA	TE B	ORING	STAR	-30-12	06-30-	
				+.				_		00-30-	
6. THIC	KNESS OF	OVERB	URDEN N/A	┵				TOP OF BORING -54.4 F			
7. DEP	TH DRILLED	INTO I	ROCK N/A						00 %		
8 TOT	AL DEPTH O	F ROPI	ING 16.7 Ft.	71	8. SI			AND TITLE OF INSPECTOR			
0. 1012	AL DEFINIO	— т	10.71 t.		1		anne	Gruber, Geologist			
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS		REC.	BOX OR SAMPLE	RQD OR UD	REN	IARKS	BLOWS/	N-VALUE
-54.4	0.0	 	SAND, poorly-graded, mostly fine to		1			1			
	_	<u>[∷:</u>]	medium-grained sand-sized quartz, few fine								
	- 	$ \cdot \cdot \cdot $	medium-grained sand-sized shell, no reaction with HCl, moist, 5Y 8/1 white (SP)	1							
-	-		with their, moist, 31 6/1 white (3F)								
	-	$[\cdots]$						-56.4			
	_					1	ł	-56.4			+-
-	_	· . · ·				ı L-Pos	ł				
	- 						ſ				
	_										
	_	-: :·						-58.4			
	 -	l∷∴h	At El58.4 Ft., trace silt, trace silt			2	1	00.4			t
	_					-					
	_										
	-										
).2	_				-			-60.4			—
-	_	ŀ∷⊹ľ	At El60.4 Ft., little medium-grained			3	1				
-61.2	6.8		sand-sized shell				1				
			SAND, poorly-graded with silt, mostly fine to								
	_	<u> </u> :.	medium-grained sand-sized quartz, few silt, f fine to coarse gravel-sized shell, no reaction	сw							
	<u> </u>	[:·][with HCl, moist, 5Y 6/2 light olive gray					-62.4			
ŀ	_	: <u> </u>	(SP-SM)			4					
	_	:.									
ŀ		[:·][
-	_	-: <u> </u>									
	_	·.									
ŀ	_	<u> </u> [::][
-	_	-: <u> </u>									
	_	·.									
	-	<u> </u> [::][
-66.4	12.0	1 1 1	SAND, silty, mostly fine to medium-grained		-						
	-	[[::]	sand-sized quartz, some fine gravel-sized she	ell,							
-	_		little silt, strong reaction with HCl, moist,	,							
	_	$\parallel \parallel \parallel \parallel \parallel$	5Y 6/2 light olive gray (SM)								
ŀ	_	[[[[∽At El67.7 Ft., 5Y 7/1 light gray								
	_										
	<u>-</u>										
-69.4	15.0	11111			1						

DRILLING LOC	G (Cont. Sheet)	INSTALLA				ng Designation VB-SJSP12	SHEET 2	
PROJECT	- (Jacksor				UM HORIZONTAL V	OF 2 SH	IEETS
St. Johns County San	nd Search	State P				!!!	NAVD88	
OCATION COORDINATES	s	ELEVATIO	и тор	OF B	ORING	G		
X = 608,649 Y = 1,	,994,681	-54.4 F	t.					
ELEV. DEPTH Q	CLASSIFICATION OF MATERIAL	LS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-70.1 15.7	SAND, poorly-graded with silt, mostly in medium-grained sand-sized quartz, fet trace fine to medium-grained sand-sized no reaction with HCl, moist, 5Y 7/2 light (SP-SM) SAND, clayey, mostly fine-grained sand quartz, little clay, little fine to coarse gravel-sized shell, strong reaction with moist, 5Y 6/2 light olive gray (SC) NOTES: 1. USACE Jacksonville is the custodia these original files. 2. Soils are field visually classified in accordance with the Unified Soils Class System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC 1 2.0/2.5 SP* 1-Post 2.0/2.5 SP* 2 4.0/4.5 SP* 3 6.0/6.5 SP* 4 8.0/8.5 SP-SI* *Lab visual classification based on gracurve. No Atterberg limits.	w silt, ed shell, ht gray did-sized at HCl, did-sized at HCl, did sift		15		-71.1 Abbreviations: NR = Not Recorded.		Ž

DD		100	DIVISION	N			IN	STAL	LATIC	ON				SHEET 1		7
	LLING	LUG	South	n Atlantic			$oxed{oxed}$		sonvi					OF 2 S	HEETS	<u> </u>
1. PRO							$\overline{}$					See Remarks				1
	St. Johns Co	•	and Search				10	. со			SYSTEM/DATU	-		VERTICAL		
	ibracore Bo			OCATION C	OORDINA	ΓES	11	. MA			ne, FLN (U.S. F1 RER'S DESIGNA			NAVD:		-
	/B-SJSP12-		į-			1,993,772	١				NEW O DEGIGNA		=	IANUAL HA		
3. DRII	LING AGEN	ICY		•	CONTRAC	TOR FILE NO.	12	т.	TAL S	: AMDI	I ES	DISTURBED	U	NDISTURBE	D (UD)	
	Corps of Eng		- CESAJ		6738-	12-5195	12	. 10	TAL S	AIVIP	LES	4		0		4
4. NAN	IE OF DRILL	.ER					13	. то	TAL I	NUMB	ER CORE BOXE	s 0				
5. DIRE	ECTION OF I	BORING		DEG. FROM	и ВЕ	ARING	14	. EL	EVAT	ION G	ROUND WATER	ł.				
\boxtimes	VERTICAL			VERTICAL			15	. D4	TE BO	ORING	3	STARTED		COMPLET		1
	INCLINED			!	<u> </u>		⊢					06-30-	12	06-30-	-12	4
6. THI	CKNESS OF	OVERBU	JRDEN	N/A			16	. EL	EVAT	ION T	OP OF BORING	• · · <u>-</u> · · · ·				4
7. DEP	TH DRILLED	INTO R	OCK N	I/A							VERY FOR BORI)			4
8. TOT	AL DEPTH C	OF BORII	NG 17	2 Ft.			18	. SI			AND TITLE OF IN					
0. 101			17	2 1 t.			┶		_	_	Gruber, Geolog	gist			ш	-
ELEV.	DEPTH	LEGEND	CLA	ASSIFICATIO	ON OF MAT	ERIALS		% REC.	BOX OR SAMPLE	RQD OR UD		REMARK	(S	BLOWS/	N-VALUE	
04.0	0.0										04.0					7
-61.2	0.0	 	SAND. poo	orly-graded,	mostly fin	e to	\dashv				-61.2 -61.2				+	\pm
-61.8	0.6	l.::.l	medium-gr	ained sand-	-sized qua	rtz, trace fine t			1 -Pos	t						F
	<u> </u>			ained sand- th HCl, moi		I, trace silt, no white (SP)	/									F
	<u> </u>	1	SAND, poo	orly-graded v	with silt, m	ostly	ا									ţ
	L					ew silt, few fin hell, no reactio					-63.2				\perp	ŀ
	-			noist, 5Y 6/2			" [2	1						F
	_		(SP-SM)		· ·	0 ,				1						ţ
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	F	 :-														F
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07 -	<u>-</u>	 .:														F
-67.7	6.5		SAND, clav	yey, mostly	fine-graine	ed sand-sized	\dashv									ŀ
	F		quartz, son	ne fine grav	el-sized sh	nell, little clay,										F
	<u> </u>		strong read		CI, moist,	5Y 6/2 light										ţ
	L		Saro gray	(30)												Ł
	-															F
-70.2	9.0															F
10.2				orly-graded,			\exists									F
	<u> </u>			quartz, trad		ined sand-size	d									Ł
-71.2	10.0	+	5Y 7/1 light	t gray (SP)			λ									F
	F	-	SAND, poo	orly-graded	with silt, m	ostly	_									F
	Ė	-: <u> </u>	rine-graine	d sand-size d shell. few	u quartz, li silt. strono	ttle fine g reaction with										L
	E	 :- 	HCI, moist,	, 5Y 6/2 ligh	t olive gra	y (SP-SM)										ŀ
	F	 .:														F
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-74.2	13.0		SAND cilt	, moetly fin	e_arainad	sand-sized	_									F
	-					sand-sized nell, little silt,										ţ
	L	11111	strong read	ction with H		5Y 7/2 light										ŀ
	F	 	gray (SM)													F
	ţ		-At El75.7	Ft., some	silt, little fi	ne-grained										ţ

PROJECT St. Johns County Sand Search State Plane, FLN (U.S. Pt.) CLOCATION COORDINATES **ELEVATION TOP OF BORNING** -61.2 Pt. -78.4 17.2 **NOTES: 1. USACE Jacksonwile is the custodian for these original files. 2. Soils are field visually classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION DESCRIPTION ILLING LOG (Cont. Sheet)	INSTALLAT Jackson				ig Designation VB-333P	SHEET 2 OF 2 SH	IEETS	
ELEV. DEPTH DEPTH CLASSIFICATION OF MATERIALS REC. REC. DEPTH CLASSIFICATION OF MATERIALS REC. REC. DEPTH DEPTH CLASSIFICATION OF MATERIALS REC. REC. REC. REC. REC. REC. REC. REC.	PROJECT					UM HORIZONTAL	.	
CLASSIFICATION OF MATERIALS NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1. Post 0.0/0.5 SP* 2 2.0/2.5 SP-SM* 3 4.0/4.5 SP-SM* * *Lab visual classification based on gradation **Tube Total Classification size of the control of the con	St. Johns County Sand Search	State Pl	ane, I	FLN (U.S. I	Ft.) NAD83	NAVD88	
CLASSIFICATION OF MATERIALS REC. OR OR OR OR OR OR OR OR OR OR OR OR OR	OCATION COORDINATES	ELEVATION	ч тор	OF B	ORIN	G		
-78.4 17.2 -78.4 NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 11-Post 0.0/0.5 SP* 1-Post 0.0/0.5 SP* 2 2.0/2.5 SP-SM* 3 4.0/4.5 SP-SM* 1-Lab visual classification based on gradation	X = 609,089 Y = 1,993,772	-61.2 F1	t.					
-78.4 17.2 -78.4 NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 11-Post 0.0/0.5 SP* 1-Post 0.0/0.5 SP-SM* 2 2.0/2.5 SP-SM* 3 4.0/4.5 SP-SM* *Lab visual classification based on gradation	ELEV. DEPTH DEPTH CLASSIFICATION OF MA	TERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
	-78.4 17.2 NOTES: 1. USACE Jacksonville is the these original files. 2. Soils are field visually class accordance with the Unified Sc System. 3. Laboratory Testing Results SAMPLE SAMPLE L/ ID DEPTH CL/ 1 0.0/0.5 1-Post 0.0/0.5 2 2.0/2.5 3 4.0/4.5 *Lab visual classification based	eustodian for fied in lls Classification BORATORY SSIFICATION SP* SP* SP-SM* SP-SM*	REC.	BOXOR	ROPE	-78.4 Abbreviations:	BLOWS/	N-VALUE

DDI	LLING	l OG	DIVISION	N	[1	NSTAL	LATIC	N			SHEET 1	
			South	n Atlantic			sonvi				OF 2 SI	HEETS
1. PRO										See Remarks		
S	t. Johns Co	unty Sa	and Search			10. CC	ORDI	NATE	SYSTEM/DATU	HORIZONTAL	VERTICAL	
	ibracore Bo								e, FLN (U.S. Ft		NAVD8	38
	ING DESIGN		į L	OCATION COORD		11. MA	NUF	CTUI	RER'S DESIGNA	TION OF DRILL	AUTO HAMM	
	B-SJSP12- LING AGEN		<u> </u>	X = 609,560	Y = 1,992,883 RACTOR FILE NO.					DISTURBED :	MANUAL HAM	
	orps of Eng		CESAI	1		12. TC	TAL S	AMPI	LES	bistorbed	UNDISTURBEI 0	(טט) כ
	E OF DRILL		- OLOAU	1 07		12 TO	TAL .		ER CORE BOXES			
					 					•		
5. DIRE	CTION OF E	ORING	i	DEG. FROM	BEARING	14. EL	EVAT	ION G	ROUND WATER			
_	VERTICAL			VERTICAL	ļ <i>[,</i>	15. DA	TE BO	RING	•	STARTED	COMPLET	
<u>'</u>	NCLINED			!	!					06-30-12	06-30-	12
6. THIC	KNESS OF	OVERB	URDEN	N/A	<u></u>	16. EL	EVAT	ION T	OP OF BORING	-54.2 Ft.		
7. DEPI	TH DRILLED	INTO R	ROCK N	I/A		17. TC	TAL F	RECO	VERY FOR BORI	NG 80.00 %		
			10			18. SI	GNAT	URE A	AND TITLE OF IN	ISPECTOR		
8. ТОТ	AL DEPTH O	F BORI	NG 16.	5 Ft.			Maria	anne	Gruber, Geolog	gist		
ELEV.	DEPTH	LEGEND	CLA	ASSIFICATION OF	MATERIALS	REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/ 1 FT.	N-VALUE
-54.2	0.0		SAND noo	orly-graded, mostly	v fine to	-	<u> </u>					1
ļ	- -	[:::]	medium-gra	ained sand-sized	quartz, trace fine to							
ŀ	-	$ \cdots $	medium-gra	ained sand-sized	shell, no reaction	L	L		-55.2			<u>L</u>
F	_	·· \	With HCI, m At FL -55.2	noist, 5Y 8/1 white	e (SP) -grained sand-sized		1					
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ŀ	-	·.·:							-57.2			
ļ	 -	[∷::I`		2 Ft., few fine to n	nedium-grained		2		-57.2			
, , ,	- -		sand-sized	shell, trace silt			-Pos	t				
3.1	_	· · · · ·				+						+
	- -	:::										
ŀ	- -	. : :							-59.2			
-	-	-::-					3					
-60.1	- - 5.9	$ \cdots $										1
				orly-graded with si		1						1
ļ	-	·: :	fine to med	d sand-sized quar lium-grained sand	tz, few silt, trace							1
ļ	- -	:.			6/2 light olive gray				-61.2			
}	-	:: \	(SP-SM)				4					
ļ	-	·:	⁴At El61.2 shell	2 Ft., few fine-grain	ned sand-sized							
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F	=	::										
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-67.2	13.0	الللز إ				_						
Ī	-		CLAY, lean	n, some fine-grain	ed sand-sized							
ļ	- -			e fine to medium-(c reaction with HC	grained sand-sized I, moist,							
-68.5	14.3		5G 6/1 gree	enish gray (CL)	,							
-55.5	<u> </u>	 	_	orly-graded, mostly	y fine to	1						
L	_	• •	medium-ar	ained sand-sized	quartz trace silt	1	I	1	I			1

DR	ILLING	LOC	G (Cont. S	heet)		INSTALLA Jackso		Distric	et .			SHEET OF 2	
PROJEC	т					COORDINA				UM HORIZONTAL	VE	RTICAL	
St. J	ohns Count	y San	d Search			State P				ı		NAVD88	
OCATI	ON COORDI	NATES	3			ELEVATIO	N ТОР	OF B	ORIN	G			
X = 6	609,560	Y = 1,9	992,883			-54.2 F	t.						
ELEV.	DEPTH	LEGEND	CLASS	SIFICATION	OF MATERIAL	.s	%REC.	BOX OR SAMPLE	ROD OR UD	REMAI	RKS	BLOWS/ 1 FT.	N-VALUE
-70.7	16.5		no reaction wi (SP)	ith HCI, moi	st, 5Y 7/1 ligh	nt gray				-70.7			_
<u>-70.7</u>	16.5		NOTES: 1. USACE Jathese original 2. Soils are fi accordance w System. 3. Laboratory SAMPLE ID 1 2 2-Post 3 4 *Lab visual clacurve. No Att	files. ield visually ith the Unifi Testing Re SAMPLE DEPTH 1.0/1.5 3.0/3.5 3.0/3.5 5.0/5.5 7.0/7.5 assification I	classified in ied Soils Classesults LABORA CLASSIFIC SP* SP* SP* SP-SI	Sification TORY CATION				Abbreviations: NR = Not Recorded.			

1. PROJECT SUCH Admitted	DRILLING	3 I OG	DIVISION	11	NSTAL					SHEET 1	
St. Johns County Sand Search Visitacine Spigs 2. Visitacine Spigs 2. Visitacine Spigs 3. Delta County Sand Search X = 609.960 Y = 1.992.016 3. Delta County Sand Search X = 609.960 Y = 1.992.016 3. Delta County Sand Search X = 609.960 Y = 1.992.016 3. Delta County Sand Search X = 609.960 Y = 1.992.016 3. Delta County Sand Search X = 609.960 Y = 1.992.016 3. Delta County Sand Search X = 609.960 Y = 1.992.016 3. Delta County Sand Search Corps of Engineers - CESAJ 4. NAME OF Delta Established Delta County Sand Search Sand Or Delta County Sand Search Sand Or Delta County Sand Search Sand Or Delta County Sand Search Sand Or Delta County Sand Search Sand Or Delta County Sand Search Sand Or Delta County Sand Search Sand Or Delta County Sand Search Sand Or Delta County Sand Search Sand Search			South Atlantic							OF 2 S	HEETS
Varacove Borings Varacove B		0	and Occupi	_						VERTION	
2. BORING DESIGNATION LOCATON COORDINATES 11. MANUFACTURER'S DESIGNATION OF DRILL		,	and Search	1					-	1	
S. DELLING AGENCY CORPS of Engineers - CESAJ 4. NAME OF DRILLER 12. TOTAL SAMPLES 4. SUPERIOR OF BORING 13. TOTAL NUMBER CORE BOXES 14. SUPERIOR OF BORING 15. DIRECTION OF BORING 16. SUPERIOR OF BORING 17. TOTAL RECOVERY FOR BORING 18. SIGNATURE AND TITLE OF BORING 19. TOTAL DEPTH OF BORING 19. SAND, poorly graded, mostly fine to medium-grained sand-sized shell, in or eaction with HCl, most, 57 771 light gray (SP) AX EL -64 0 Ft., trace fine to medium-grained sand-sized shell, 57 671 gray AX EL -62 CP, five fine-grained sand-sized shell, into locks on the sand-sized shell, in or eaction with HCl, most, 57 771 light gray (SP) AX EL -64 0 Ft., trace fine to medium-grained sand-sized shell, 57 671 gray AX EL -64 0 Ft., trace fine to medium-grained sand-sized shell, 57 671 gray AX EL -64 0 Ft., trace fine to medium-grained sand-sized shell, 57 671 gray AX EL -64 0 Ft., trace fine to medium-grained sand-sized shell, 57 671 gray AX EL -64 0 Ft., trace fine to medium-grained sand-sized shell, 57 671 gray AX EL -64 0 Ft., trace fine to medium-grained sand-sized shell, 57 671 gray AX EL -64 0 Ft., trace fine to medium-grained sand-sized shell, 57 671 gray AX EL -64 0 Ft., trace fine to medium-grained sand-sized shell, 57 671 gray AX EL -64 0 Ft., trace fine to medium-grained sand-sized shell, 57 671 gray AX EL -64 0 Ft., trace fine to medium-grained sand-sized shell, 57 671 gray AX EL -64 0 Ft., trace fine to medium-grained sand-sized shell, 57 671 gray AX EL -64 0 Ft., trace fine to medium-grained sand-sized shell, 57 671 gray AX EL -64 0 Ft., trace fine to medium-grained sand-sized shell, 57 671 gray AX EL -64 0 Ft., trace fine to medium-grained sand-sized sand-sized shell, 57 671 gray AX EL -64 0 Ft., trace fine to medium-grained sand-sized sand-sized shell, for exaction with HCl, most, 57 771 light gray (SP)			LOCATION COORD	INATES 1				,			
3. DRILING AGENCY Corps of Engineers - CESAU 6738-12-6195 4. NAME OF DRILLER 5. DIRECTION OF BORING PERTURAL BEARING PINCLINES S. DIRECTION OF BORING PERTURAL PERTURAL 15. DATE BORING STARTED (77-01-12 07-01				-				LIK O DEGIGNATIO			
A LOTE of Engineers - CESA)	3. DRILLING AG	ENCY		RACTOR FILE NO.	2 TO	TAL 6	AMBI		ISTURBED U	NDISTURBE) (UD)
S. DIRECTION OF BORING DEE, FRON BEARING 14. BLEAVATION OR ROUND WATER 15. DATE BORING 37 ANTED COMPLETED O7.01.12 O7.01.12 O7.01.12 O7.01.12 O7.01.12 O7.01.12 O7.01.12 O7.01.12 O7.01.12 O7.01.12 O7.01.12 O7.01.12			- CESAJ 67	38-12-5195 ¹	2. 10	IALS	AWPL	.E5	4	0	
S. DIRECTION OF BORNA STARTED COMPLETED 15. DATE BORING 17. DEPTH OF ILLED INTO ROCK N/A 17. TOTAL RECOVERY FOR BORING 18. TOTAL DEPTH OF BORING 15. DATE BORING 16. DATE POSITION 16. DATE POSITION 16. DATE POSITION 16. DATE POSITION 16. DATE POSITION 16. DATE POSITION 16. DATE POSITION 16. DATE POSITION 16. DATE POSITION 17. TOTAL RECOVERY FOR BORING 16. DATE POSITION 16. DATE POSIT	4. NAME OF DRI	LLER		1	3. TO	TAL N	IUMB	ER CORE BOXES	0		
SAND DOOR SAND DOOR SAND DOOR SAND SAND SAND SAND SAND SAND SAND SAND	5. DIRECTION O	F BORING	DEG. FROM	BEARING 1	4. EL	EVAT	ON G	ROUND WATER			
S. THICKNESS OF OVERBURDEN N/A Total Depth of Borning 15.9 Ft. Store Myers, Geologist LELV. Depth B CLASSIFICATION OF MATERIALS Store Myers, Geologist REMARKS Store Myers Store Myers Store Myers REMARKS Store Myers Store Myers REMARKS Store Myers Store Myers REMARKS Store Myers REMARKS Store Myers REMARKS Store Myers REMARKS Store Myers	▼ VERTICA	L	VERTICAL		5. DA	TF RC	RING	1	i -		
T. DEPTH DRILLED INTO ROCK N/A S. TOTAL DEPTH OF BORING 15.9 FL. CLASSIFICATION OF MATERIALS REC. 28 100 CLASSIFICATION OF MATERIALS REC. 28 100 REMARKS REMA	INCLINE)	<u> </u>	!					07-01-12	07-01-	12
8. TOTAL DEPTH OF BORNING 15.9 Ft. ELEV. DEPTH SCLASSIFICATION OF MATERIALS Sign Rob REMARKS Sign Rob Remarks Sign Rob Remarks Sign Rob Remarks Sign Rob Remarks Sign Rob Remarks Sign Rob Remarks Sign Rob Remarks Sign Rob Remarks Sign Rob	6. THICKNESS	OF OVERBU	URDEN N/A	1	6. EL	EVAT	ION T	OP OF BORING			
B. TOTAL DEPTH OF BORING 15.9 FL CLASSIFICATION OF MATERIALS SEVE Myers, Geologist REMARKS POB UP REMARKS REMARKS	7. DEPTH DRILL	ED INTO R	ROCK N/A	<u>L</u>							
ELEV. DEPTH B CLASSIFICATION OF MATERIALS REC. B ROD UP RE	8. TOTAL DEPTI	H OF BORIN	NG 15 9 Ft	1	8. SIC				ECTOR		
-88.5 0.0 SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, no reaction with HCI, moist, 5Y 7/1 light gray (SP) -80.5 2.5 At EI -60.0 Ft., few medium-grained sand-sized shell, trace still, trace still, trace fine-grained sand-sized dishell, no reaction with HCI, moist, 5Y 6/2 light olive gray (SP-SM) -4 EI -62.0 Ft., few fine-grained sand-sized shell, no reaction with HCI, moist, 5Y 6/1 gray -68.5 10.5 SAND, clayey, mostly fine-grained sand-sized shell, some fine to coarse gravel-sized shell, little clay, strong reaction with HCI, moist, 5Y 6/1 gray -68.5 10.5 SAND, clayey, mostly fine-grained sand-sized quartz, some fine to coarse gravel-sized shell, little clay, strong reaction with HCI, most, 5Y 4/1 dark gray (SC) -70.0 12.0 SAND, poorly-graded with size dishell, increaction with HCI, most, 5Y 7/1 light gray (SP)	1		10.01 t.		Т .		iviye	rs, Geologist			
SAND, poorly-graded, mostly fine-grained sand-sized quartz, some fine to medium-grained sand-sized sand-sized shell, trace fine-grained sand-sized shell, trace fine-grained sand-sized shell sh	ELEV. DEPTH	LEGEN	CLASSIFICATION OF	MATERIALS	REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS,	N-VALUI
SAND, poorly-graded, mostly fine-grained sand-sized quartz, some fine to medium-grained sand-sized sand-sized shell, trace fine-grained sand-sized shell, trace fine-grained sand-sized shell sh	500 00	\Box									T
medium-grained sand-sized quartz, no reaction with HCI, moist, 5Y 7/1 light gray (SP) At EI60.0 Ft., few medium-grained sand-sized shell, trace silt SAND, poonly-graded with silt, mostly fine-grained sand-sized shell. At EI62.0 Ft., few fine-grained sand-sized shell, no reaction with HCI, moist, 5Y 6/1 gray At EI64.0 Ft., trace fine to medium-grained sand-sized shell. At EI64.0 Ft., trace fine to medium-grained sand-sized shell, siltitle clay, strong reaction with HCI, moist, 5Y 4/1 dark gray (SC) SAND, poonly-graded, mostly fine-grained sand-sized quartz, some fine to coarse gravel-sized shell, little clay, strong reaction with HCI, moist, 5Y 4/1 dark gray (SC) SAND, poonly-graded, mostly fine-grained sand-sized quartz, some fine to medium-grained sand-sized shell, little clay, strong reaction with HCI, moist, 5Y 7/1 light gray (SP) SAND, poonly-graded, mostly fine-grained sand-sized quartz, trace silt, trace fine to medium-grained sand-sized shell, no reaction with HCI, moist, 5Y 7/1 light gray (SP)		 	SAND, poorly-graded, mostly	y fine to	1						+-
At El60.0 Ft., few medium-grained sand-sized shell, trace silt SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt, trace fine-grained sand-sized shell, no reaction with HCl, moist, 5Y 7/1 light gray At El64.0 Ft., trace fine to medium-grained sand-sized shell, silt else, strong reaction with HCl, moist, 5Y 7/1 light gray (SC) At El64.0 Ft., trace fine to medium-grained sand-sized shell, silt else, strong reaction with HCl, moist, 5Y 7/1 light gray (SC) SAND, clayey, mostly fine-grained sand-sized quartz, some fine to coarse gravel-sized shell, little clay, strong reaction with HCl, moist, 5Y 4/1 dark gray (SC) SAND, poorly-graded, mostly fine-grained sand-sized quartz trace fine to medium-grained sand-sized quartz trace fine to medium-grained sand-sized shell, no reaction with HCl, moist, 5Y 7/1 light gray (SP)	-58.1	.:::.	medium-grained sand-sized	quartz, no reaction							
At El60.0 Ft., few medium-grained sand-sized shell, trace sit fine-grained sand-sized quartz, some fine to coarse gravel-sized shell, interest of quartz, some fine to coarse gravel-sized shell, interest of sand-sized quartz, some fine to coarse gravel-sized shell, interest of sand-sized shell, interest of sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized sand-sized quartz, trace fine to most. SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt, trace fine to most. SAND, poorly-graded, mostly fine-grained sand-sized with HCl, moist, 5Y 7/1 light gray (SP)	F	:::	with HOI, HOIST, 5Y //T light	yiay (SP)							
At El60.0 Ft., few medium-grained sand-sized shell, trace sit fine-grained sand-sized quartz, some fine to coarse gravel-sized shell, interest of quartz, some fine to coarse gravel-sized shell, interest of sand-sized quartz, some fine to coarse gravel-sized shell, interest of sand-sized shell, interest of sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized sand-sized quartz, trace fine to most. SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt, trace fine to most. SAND, poorly-graded, mostly fine-grained sand-sized with HCl, moist, 5Y 7/1 light gray (SP)		:-::									
At El60.0 Ft., few medium-grained sand-sized shell, trace sit fine-grained sand-sized quartz, some fine to coarse gravel-sized shell, interest of quartz, some fine to coarse gravel-sized shell, interest of sand-sized quartz, some fine to coarse gravel-sized shell, interest of sand-sized shell, interest of sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized shell, some sand-sized sand-sized quartz, trace fine to most. SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt, trace fine to most. SAND, poorly-graded, mostly fine-grained sand-sized with HCl, moist, 5Y 7/1 light gray (SP)	-							-60.0			
SAND, poorly-graded with slit, mostly fine-grained sand-sized quartz, few slit, trace fine-grained sand-sized spell, no reaction with HCI, moist, 5Y 6/2 light olive gray (SP-SM) At EI62.0 Ft., few fine-grained sand-sized shell shell sand-sized shell, 5Y 6/1 gray At EI64.0 Ft., trace fine to medium-grained sand-sized shell, 5Y 6/1 gray SAND, clayey, mostly fine-grained sand-sized quartz, some fine to coarse gravel-sized shell, little clay, storage reaction with HCI, moist, 5Y 4/1 dark gray (SC) SAND, poorly-graded, mostly fine-grained sand-sized shell, interest gravel-sized shell, or reaction with HCI, moist, 5Y 7/1 light gray (SP)	-60.5 - 2.5			-grained sand-sized		1					
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At El62.0 Ft., few fine-grained sand-sized shell. At El64.0 Ft., trace fine to medium-grained sand-sized shell, 5Y 6/1 gray At El64.0 Ft., trace fine to medium-grained sand-sized quartz, some fine to coarse gravel-sized shell, little clay, strong reaction with HCl, moist, 5Y 7/1 light gray (SP) SAND, poorly-graded, mostly fine-grained sand-sized quartz, strace fine to medium-grained sand-sized quartz, trace fine to medium-grained sand-sized quartz, trace fine to medium-grained sand-sized quartz, trace silt, trace fine to medium-grained sand-sized shell, no reaction with HCl, moist, 5Y 7/1 light gray (SP)	 	 • †	fine-grained sand-sized quar	tz, few silt, trace							
At El62.0 Ft., few fine-grained sand-sized shell. At El64.0 Ft., trace fine to medium-grained sand-sized shell, 5Y 6/1 gray SAND, clayey, mostly fine-grained sand-sized quartz, some fine to coarse gravel-sized shell, little clay, strong reaction with HCl, moist, 5Y 4/1 dark gray (SC) SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt, trace fine to medium-grained sand-sized shell, no reaction with HCl, moist, 5Y 7/1 light gray (SP)	-										
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At El64.0 Ft., trace fine to medium-grained sand-sized shell, 5Y 6/1 gray SAND, clayey, mostly fine-grained sand-sized quartz, some fine to coarse gravel-sized shell, little clay, strong reaction with HCl, moist, 5Y 4/1 dark gray (SC) SAND, poorly-graded, mostly fine-grained sand-sized quartz trace silt, trace fine to medium-grained sand-sized shell, no reaction with HCl, moist, 5Y 7/1 light gray (SP)	-			ned sand-sized		2					
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At El64.0 Ft., trace fine to medium-grained sand-sized shell, 5Y 6/1 gray -68.5 10.5 SAND, clayey, mostly fine-grained sand-sized quartz, some fine to coarse gravel-sized shell, little clay, strong reaction with HCl, moist, 5Y 4/1 dark gray (SC) SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt, trace fine to medium-grained sand-sized quartz, trace silt, trace fine to medium-grained sand-sized shell, no reaction with HCl, moist, 5Y 7/1 light gray (SP)	-										
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SAND, clayey, mostly fine-grained sand-sized quartz, some fine to coarse gravel-sized shell, little clay, strong reaction with HCl, moist, 5Y 4/1 dark gray (SC) SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt, trace fine to medium-grained sand-sized shell, no reaction with HCl, moist, 5Y 7/1 light gray (SP)	 	- <u>:</u>									
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SAND, clayey, mostly fine-grained sand-sized quartz, some fine to coarse gravel-sized shell, little clay, strong reaction with HCl, moist, 5Y 4/1 dark gray (SC) SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt, trace fine to medium-grained sand-sized shell, no reaction with HCl, moist, 5Y 7/1 light gray (SP)		 ∷ ‡∦									
quartz, some fine to coarse gravel-sized shell, little clay, strong reaction with HCl, moist, 5Y 4/1 dark gray (SC) SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace fine to medium-grained sand-sized shell, no reaction with HCl, moist, 5Y 7/1 light gray (SP)	-68.5 10.5	(////	SAND, clavey mostly fine-or	ained sand-sized	-						
5Y 4/1 dark gray (SC) SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt, trace fine to medium-grained sand-sized shell, no reaction with HCI, moist, 5Y 7/1 light gray (SP)	F		quartz, some fine to coarse of	gravel-sized shell,							
-70.0 12.0 SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt, trace fine to medium-grained sand-sized shell, no reaction with HCl, moist, 5Y 7/1 light gray (SP)				h HCl, moist,							
SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt, trace fine to medium-grained sand-sized shell, no reaction with HCl, moist, 5Y 7/1 light gray (SP)	-70.0 12.0		or =/ ruank gray (30)								
medium-grained sand-sized shell, no reaction with HCl, moist, 5Y 7/1 light gray (SP)	-				1						
with HCl, moist, 5Y 7/1 light gray (SP)	l ţ										
	-		with HCl, moist, 5Y 7/1 light	gray (SP)							
			v	•							
	l Ł	::::									
	I F	[:::]									
	-73.0 15.0	::::									

DRILLING LO	G (Cont. Sheet)	INSTALLA Jackson		Dictric	·+		SHEET 2	
ROJECT	<u> </u>	COORDINA				UM HORIZONTAL	VERTICAL	IEE13
St. Johns County San	nd Search	State P					NAVD88	
OCATION COORDINATE		ELEVATIO				•		
X = 609,960 Y = 1,	,992,016	-58.0 F	t.					
ELEV. DEPTH	CLASSIFICATION OF MATERIAL	LS	ĸEC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-73.9 15.9	SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt reaction with HCl, moist, 5Y 7/1 light g (SP-SM) NOTES: 1. USACE Jacksonville is the custodia these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC 1 2.0/2.5 SP* 1-Post 2.0/2.5 SP-SI 2 4.0/4.5 SP-SI 3 6.0/6.5 SP-SI 3 6.0/6.5 SP-SI 3 holds a silication based on gracurve. No Atterberg limits.	an for TORY CATION M* M*				-73.9 Abbreviations: NR = Not Recorded.	CI CI CI CI CI CI CI CI CI CI CI CI CI C	Ż

ŊΡ	ILLING	LOG	DIVISION	N			INS	STAL	LATIC	N			SHEET 1		1
			South	n Atlantic			-			lle Dis			OF 2 SI	HEETS	
1. PRO								-				Remarks	•		
		•	Sand Search				10.				SYSTEM/DATUM	HORIZONTAL	VERTICAL		
	/ibracore Bo		. '.	00471011.0	00001		44				e, FLN (U.S. Ft.)	NAD83	NAVD		
	/B-SJSP12-		• ¦ •	OCATION C		' = 1,991,521	11.	. MA	NUFA	CTUR	RER'S DESIGNATIO		AUTO HAMMI MANUAL HAN		
	LLING AGEN		<u>i_</u>			ACTOR FILE NO.	┢				¦ D		NDISTURBEI		ł
(Corps of Eng	gineers	s - CESAJ	i		8-12-5195	12.	. то	TAL S	AMPL	LES	4	0	ν- ,	
4. NAN	E OF DRILL	ER		•			13.	. то	TAL N	IUMB	ER CORE BOXES	0			1
							14.	. ELI	EVAT	ION G	ROUND WATER				1
	ECTION OF I	BORING	G	DEG. FROM VERTICAL	Λ .	BEARING	H					STARTED	COMPLETI	ED	ł
	INCLINED				į		15.	. DA	TE BC	RING	ì	07-01-12	07-01-	12	
6. THI	CKNESS OF	OVERE	BURDEN	N/A			16.	. ELI	EVAT	ION T	OP OF BORING	-58.2 Ft.	II.		1
							17.	. то	TAL F	RECOV	/ERY FOR BORING	85.00 %			1
/. DEP	TH DRILLED	INTO	KUCK	I/A							ND TITLE OF INSPI				1
8. ТОТ	AL DEPTH C	F BOR	ing 17.	9 Ft.					Steve	е Муе	rs, Geologist				
ELEV.	DEPTH	LEGEND	CLA	ASSIFICATIO	ON OF M	IATERIALS		" REC.	BOX OR SAMPLE	RQD OR UD	·	REMARKS	BLOWS/ 1 FT.	N-VALUE	
		+-+					\dashv							T_	ł
-58.2	0.0		04115			.	\Box								-0
	ŀ			orly-graded, ained sand-		tine to uartz, trace fine to	۱ ،								Ŀ
	F	[:::: <u> </u>	medium-gr	ained sand-	sized sl	hell, no reaction	~				-59.2				F
-59.7	├- - 1.5	. : :		noist, 5Y 7/1		ray (SP) ed sand-sized	ı		1		-59.2				ţ
-59.7	1.5	 	Shell, trace		ie-grain	eu sariu-sizeu	И	•	-Pos	t					Ŀ
	F	.•	SAND, poo	orly-graded v	with silt,	mostly	~								F
	ļ	·:				z, few silt, few fine I shell, no reaction									Ė
	_	:-		noist, 5Y 5/1			" [-61.2				-
	F	.•			0,	,	Γ		2						F
	<u> </u>	- -													-
	F														_
	F	.•													F
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	<u>L</u>	:-													
	-										-64.2				-
	F	$\ \cdot\ $							3						F
	<u> </u>	:-													_
	F	╟╢													F
-65.7	7.5	7////	SAND day	vev moetly f	fine-ara	ined sand-sized	\dashv								F
	Ļ		quartz, son	ne clay, little	e fine gr	avel-sized shell,									L
	<u> </u>			ion with HC	I, moist	, 5Y 5/1 gray									Ł
	-		(SC)												ŀ
	F					ined sand-sized									F
	ţ					shell, little clay, st, 5Y 7/2 light									ţ
	⊢		gray		o.,oid	, 5 : 7/2 ligit									-10
-68.7	10.5	<i>[/////</i> //	SAND non	vrlv-aradod	moethy	fine-grained	4								F
	L	[:::]				nne-grained o medium-grained	b								L
	Ł	. .	sand-sized	shell, trace	silt, we	ak reaction with									E
	F	-:::	HCI, moist,	, 5Y 7/1 ligh	t gray	(SP)									F
70.7	- 10.5	$ \cdots $													F
-70.7	12.5		SAND non	orly-graded v	with silt	mostly fine to	\dashv								ŀ
	F	[:: <u> </u>	coarse-grai	ined sand-si	ized qua	artz, few silt, trace	e								Ē
	ţ	- <u> </u>				sized shell, no									ţ
	-	<u> </u> :-	(SP-SM)	ui i iOi, IIIOIS	ວເ, ປ ໂ /	/1 light gray									ŀ
-72.4	- 14.2		^L Àt El71.2			edium-grained	4								F
	ţ		\ sand-sized \moist	shell, stron	g reacti	on with HCI,	/								Ė

DRI	LLING	LOC	G (Cont. Sheet)	Jacksor		Distri	ct		SHEET 2 OF 2 SI	HEETS
PROJEC	т			COORDINA				UM HORIZONTAL	VERTICAL	
St. J	ohns Coun	ty San	d Search	State P	ane, l	FLN ((U.S. I	Ft.) NAD83	NAVD88	
LOCATI	ON COORD	INATES	:	ELEVATIO	N ТОР	OF B	ORIN	G		
X = 6	609,083	1 1	991,521	-58.2 F	t.					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL		« REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
74.1	15.0		CLAY, fat, little fine to medium-grainer sand-sized quartz, no reaction with HC 10Y 5/1 greenish gray (CH)							
-74.1	15.9		SAND, clayey, mostly fine-grained sar	nd-sized						
-74.6	16.4		quartz, some fine gravel-sized shell, lit strong reaction with HCl, moist, N 5/ g CLAY, fat, little fine-grained sand-size	ray (SC) /						
-75.5	17.3		$_{\chi}$ no reaction with HCl, moist, 10Y 5/1 g	reenish /						
-76.1	17.9	<u> [:]</u>	gray (CH) SAND, poorly-graded with silt, mostly medium-grained sand-sized quartz, litt coarse gravel-sized shell, few silt, stro reaction with HCl, moist, 5Y 6/1 gray NOTES:	tle fine to ng				-76.1 Abbreviations: NR = Not Recorded.		
			USACE Jacksonville is the custodia these original files.	an for						
			Soils are field visually classified in accordance with the Unified Soils Clas System.	ssification						
			3. Laboratory Testing Results							
			SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC							
			1 1.0/1.5 SP ² 1-Post 1.0/1.5 SP ² 2 3.0/3.5 SP-S 3 6.0/6.5 SP-S	М*						
			*Lab visual classification based on gracurve. No Atterberg limits.	dation						
SAJ FO										

DDI	LLING	LOG	DIVISION	N .		INS.	TALLA	TIC	N				SHEET	1	_
			South	n Atlantic			lackso						OF 2	SHEET	S
1. PRO							_				ee Remarks				_
		-	and Search			10.				SYSTEM/DATUM	!		VERTIC		
	ibracore Bo		2.0	OCATION COO	DDINATES	44				e, FLN (U.S. Ft. RER'S DESIGNAT				/D88	_
	B-SJSP12-				Y = 1,992,458	• • • •	WAN	JFA	CIOI	KER S DESIGNAT	ION OF DRILL		AUTO HAI MANUAL I		R
	LING AGEN				NTRACTOR FILE NO.						DISTURBED		NDISTUR		_
	orps of Eng		- CESAJ		6738-12-5195	12.	TOTA	L S	AMPI	LES	5		0		
4. NAM	E OF DRILL	ER				13.	TOTA	L N	IUMB	ER CORE BOXES	0				
E DIDE	CTION OF E	OBING	-	DEC EDOM	BEARING	14.	ELEV	ATI	ON G	ROUND WATER					_
⊠ \	/ERTICAL	OKING		DEG. FROM VERTICAL	BEARING	15.	DATE	ВС	RING)	STARTED		COMPL		_
	NCLINED KNESS OF	OVERR	IPDEN	! N/A	<u> </u>	16.	FLEV	ΔΤΙ	ON T	OP OF BORING	-51.0 Ft.	·12	07-0)1-12	_
	H DRILLED			I/A		_				/ERY FOR BORIN		%			_
	AL DEPTH O			7 Ft.		18.				ND TITLE OF IN	SPECTOR				_
8. 101 <i>2</i>	AL DEPTH O		10.1	7 г.		Т				rs, Geologist				Ш	_
ELEV.	DEPTH	LEGEND	CLA	ASSIFICATION (OF MATERIALS	R	EC.	SAMPLE	RQD OR UD		REMAR	KS	/SMOT8	1 FI.)
-51.0	0.0														
T		ŀ∷∵T	SAND, poo	orly-graded, mo	stly fine to ed quartz, trace fine to	T									
	- -	<u> </u> ∷::	medium-gra	ained sand-size	ed shell, weak	'									
<u> </u>	- -	<u> ::: </u>	reaction wit	th HCl, moist, s	5Y 8/1 white (SP)										
}	-	:::													
ļ	- -	[∷:k	-Δt El _53 Ω	Ft., trace silt		\vdash	+	\dashv		-53.0 -53.0				-	_
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}	-	[∵∵[`	-At El56.0 shell	רנ., tew mediu	um-grained sand-sized	¹	L	2							
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<u> </u>	-	[:::]				一		3							-
_	-	$ \cdots $					H	\dashv							
-61.0	10.0		SAND noo	nrly-graded with	silt, mostly fine to	\dashv									
ļ	• •	[:·] <u>†</u> ∦	medium-gra	ained sand-size	ed quartz, few fine to										
}	<u>-</u>	.·	medium-gra	ained sand-size	ed shell, few silt,										
F	-	 ∙: ∦	strong reac gray (SP-S	aion with HCl, 1 SM)	moist, 5Y 5/2 olive										
ļ	• •	[:·] <u> </u>	J. 2., (3, C	· · · ·						62.0					
}	_	.·				\vdash	+	4		-63.0				+	_
	-	·:					<u> </u>	+							
<u> </u>	-	<u> </u> :-													
}	-	$\ \cdot\ \ $													
	-	 :: ∦													
<u> </u>	 -	<u> </u> :∙ ∦													
-	-	[::]]∦													
F	-	I • ∐													

DR	ILLING	LOC	 ∋t)	Jackso		Dietric	- -		SHEET OF 2	2 SHEETS	
ROJE					COORDIN				JM HORIZONTAL	VERTICAL	JIIEEIJ
	ohns Coun	ty San	d Search		State F				I .	NAVD88	}
	ON COORD				ELEVATIO					•	
X = (608,684	Y = 1,	992,458		-51.0	t.					
ELEV.	DEPTH	LEGEND	CLASSIFIC	ATION OF MATE	RIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMAR	KS S	T F I.
-69.7	18.7								-69.7		
			ID DE	visually classified ne Unified Soils ting Results MPLE LABOR CLASS OVERNOR OVERNO	DRATORY SIFICATION SP* SP* SP* SP* SP* SP- SP*				Abbreviations: NR = Not Recorded.		

DRILLI	NG LO	OG	DIVISIO				1		LATIC		-4-2-4			SHEET]
1. PROJECT			South	h Atlantic			-			lle Di		See Remarks		OF 2	SHEETS	H
	ne Coun	ty Sar	nd Search				_				SYSTEM/DATUN		. i	VERTICA	\I	-
	ore Borin	•	iu Searcii				'				e, FLN (U.S. Ft	-	- ¦	NAVI		
2. BORING D			11	LOCATION (COORD	INATES	11	. MA			RER'S DESIGNAT			JTO HAM		1
VB-SJ:	SP12-03	6				Y = 1,993,355							=	ANUAL H		
3. DRILLING	AGENCY	,		,		RACTOR FILE NO.						DISTURBED	UN	DISTURB	ED (UD)	
Corps	of Engine	eers -	CESAJ		67	38-12-5195	12	. то	TAL S	SAMPI	LES	3		0		
4. NAME OF	DRILLER						13	. то	TAL I	NUMB	ER CORE BOXES	0				
							14	. FL	EVAT	ION G	ROUND WATER					1
5. DIRECTIO		RING		DEG. FRO	M	BEARING	H					STARTED		COMPLE	TFD	-
INCLI				-		 	15.	. DA	TE BO	ORING	•	07-01-12	2	07-01		
6. THICKNES	SS OF OV	FRRU	RDFN	N/A		1	16	. EL	EVAT	ION T	OP OF BORING	-58.3 Ft.	I			1
0				11//			ᅪ				VERY FOR BORI					1
7. DEPTH DR	ILLED IN	TO RO	OCK /	I/A							AND TITLE OF IN					-
8. TOTAL DE	PTH OF E	BORIN	G 18.	2 Ft.			٦'°'	. 310			ers, Geologist	SPECIOR				
ı	Τ,	$\overline{}$		-			┷		_	-	l deologist				ш	┪
ELEV. DE	ртн	LEGEND	CL	ASSIFICATI	ON OF	MATERIALS		ĸĚC.	BOX OR SAMPLE	RQD OR UD		REMARKS	•	BLOWS/ 1 FT.	N-VALUE	
E0 0 0 0																1
-58.3 0.0	 	 .	SAND. pod	orly-graded,	, mostly	/ fine to	\dashv				1					F
F	[.·]	.:. r	nedium-gr	ained sand	l-sized	quartz, no reaction	n									F
Ł	.·	- 'L		noist, 5Y 8/		` ,	L			1	-59.3					上
-	·:			3 Ft., few fii I shell, trace		nedium-grained			1		-59.3					F
-60.1 1.8		_ا_							(-Pos	t						F
-	·:		SAND, poo	orly-graded	with si	lt, mostly tz, few silt, few fir	.									H
F						ed shell, no reaction										F
Ł	[:·]]∥ ∨	with HCI, n	noist, 5Y 6/							-61.3					Ŀ
-		((SP-SM)						2							F
į.		 								1						Ė
-		11														\vdash
F	:-															F
Ŀ	· .:	 														L
-63.9 - 5.6		11														ŀ
-03.9 = 3.0	i i	 	SAND, silty	y, mostly fir	ne-graii	ned sand-sized										F
F						nedium-grained										F
-	 		sand-sized 5Y 5/2 oliv	i snell, no re e gray (SM	eaction 11	with HCI, moist,										ŀ
-65.3 7.0	[]	111				-11										L
ŀ			JLAY, lear	n, some tine	e-grain I-sized	ed sand-sized shell, no reaction										ŀ
-66.3 8.0				noist, N 4/												F
- 00.0			CLAY, fat,	some fine-	graine	d sand-sized	\dashv									F
-				reaction wit												ŀ
F			iui b/igh	eenish gray	y (CH)											F
-67.8 9.5																t
-68.2 - 9.9						ained sand-sized gravel-sized shel	,]									ŀ
F	·:			ction with H			'' /									F
ŀ		∵ \′	10Y 6/1 gr	eenish gray	y (SC)	,	_/									ŀ
F	[<u>:</u> -	$ \cdot ^{\frac{3}{2}}$	SAND, poo	orly-graded,	, mostly	/ fine-grained	,									F
ţ						o medium-grained eak reaction with										ţ
-70.3 T 12.1	o li	∴lì	HCI, moist	, 5Y 7/2 ligh	ht gray	(SP)										F
- 12.	7,7	////	SAND, clay	yey, mostly	fine-gr	ained sand-sized	\exists									F
-, - 			quartz, son	ne fine to c	oarse-	grained sand-size										F
-71.2 - 12.	9 1/2			clay, strong it gray (SC		on with HCl, mois	t, /									L
F						ed sand-sized	-/									ŀ
ļ.			quartz, no	reaction wit	th HCl,											þ
-		// '	10Y 6/1 gr	eenish gray	y (CL)											\vdash
ļ.																ļ
-73 3 F 15	n 1/	//							1	1	I				- 1	F

DR	ILLING	LOC	G (Cont. Sheet)	Jackso		Dietri	~ -		SHEET 2 OF 2 SI	IEETS
ROJE			<u> </u>	COORDIN				UM HORIZONTAL	VERTICAL	13
	ohns Coun	ty San	d Search	State F					NAVD88	
	ON COORD			ELEVATIO						
X = (508,230		993,355	-58.3 I	t.					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATER	RIALS	"REC.	BOX OR SAMPLE	RQD OR UD	REMARK	BLOWS/	N-VALUE
			CLAY, fat, little fine-grained sand-s no reaction with HCl, moist, N 4/ da (CH)	ized quartz, ark gray						
<u>-76.5</u>	18.2		ID DEPTH CLASSI 	in Classification RATORY FICATION SP* SP*SM*				Abbreviations: NR = Not Recorded.		

DRI	LLING	LOG	DIVISION	11	ISTAI	LATIC	N				SHEET 1	
1. PRO			South Atlantic			sonvi					OF 2 S	HEETS
			10						Remarks		VEDTICAL	
		•	and Search	1	0. C			SYSTEM/DATUM	HORIZONT		VERTICAL	
	ibracore Bo		LOCATION COORE	NINATES 1	1 M			e, FLN (U.S. Ft.) RER'S DESIGNATIO	NAD83		NAVD	
	/B-SJSP12		1	Y = 1,994,250			.0.0.	KER O DEGICINATIO	N OI DILLE	_	UTO HAMM ANUAL HAI	
	LING AGEN			TRACTOR FILE NO.					DISTURBED	UN	IDISTURBE	D (UD)
	Corps of En		- CESAJ 6	738-12-5195	2. TO	TAL S	SAMPI	LES	5	!	0	
4. NAM	IE OF DRILL	.ER		1	3. Т	TAL I	NUMB	ER CORE BOXES	0			
E DIDE	CTION OF	PORING	DEG. FROM	BEARING	4. EL	EVAT	ION G	ROUND WATER				
	VERTICAL	BORING	VERTICAL	!	- D	TE D	DING		STARTED		COMPLET	ED
	INCLINED			1	5. DA	TE BO	KING	•	07-01-1	2	07-01-	12
6. THIC	CKNESS OF	OVERB	URDEN N/A	1	6. EI	.EVAT	ION T	OP OF BORING	-52.6 Ft.			
7. DEP	TH DRILLED	INTO F	ROCK N/A	1	7. TO	TAL F	RECOV	ERY FOR BORING	92.00 %			
				1	8. SI			ND TITLE OF INSP	ECTOR			
8. 101	AL DEPTH (JF BORI	NG 19.0 Ft.			_	<u> </u>	rs, Geologist				
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF	F MATERIALS	REC	BOX OR SAMPLE	RQD OR UD		REMARK	s	BLOWS/	N-VALUE
-52.6	0.0											
-JZ.U	- 0.0	 	SAND, poorly-graded, most	ly fine to	1							
	E	-::-	medium-grained sand-sized with HCl, moist, 5Y 8/1 white									
	_		with thoi, moiot, or or will	(01)								
	-											
	_	l∷¦	A L E L E A O E A A D D D D D D D D D D D D D D D D D	4				-54.6				
	_		At El54.6 Ft., trace shell,	trace slit		1		-54.6				
	_					(-Pos	L					
	F											
	-	-::-						-56.6				
.8	_					2		-50.0				
	<u> </u>	$ \cdot\cdot\cdot $				Ė						
	F	:·::										
	F	$ \cdot \cdot $										
	F	:::			<u> </u>			-58.6				+
	<u> </u>	::::				3						
	L	-:::										
-59.9	7.3	1 11	SAND, poorly-graded with s	silt mostly	-							
	-	$[\cdot]$	fine-grained sand-sized qua	rtz, few fine to				-60.6				
	F	-:	medium-grained sand-sized reaction with HCl, moist, 5Y	Shell, few silt, no ' 6/2 light olive grav		4						
	<u> </u>	:-	(SP-SM)	=g. 11 O.110 gray								
	<u> </u>	 ::										
	E											
	F											
-63.2	10.6		OANID **		1							
	Ļ		SAND, clayey, mostly fine-g quartz, little clay, few fine to									
	<u> </u>		sand-sized shell, no reaction	n with HCl, moist,								
-64.6	12.0		5Y 4/1 dark gray (SC)]							
	_		CLAY, fat, some fine-graine quartz, no reaction with HC	ed sand-sized								
	F		gray (CH)	i, moist, of 4/1 dafK								
-66.0	_ - 13.4											
-00.0	- 10.4		SAND, clayey, mostly fine-g	grained sand-sized	1							
	F		quartz, little clay, trace fine sand-sized shell, weak reac	to medium-grained								
	ļ.		5Y 5/2 olive gray (SC)	aon with HOI, HOISI,								
	}		3 , 1 ,									

DRI	LLING	G (Cont. Sheet)	INSTALLA* Jackson		Distri	nt .		SHEET 2 OF 2 SI		
PROJEC				COORDINA				JM HORIZONTAL	VERTICAL	13
	ohns Coun	ty San	d Search	State P				!	NAVD88	
LOCATION	ON COORD	NATES	<u> </u>	ELEVATIO	N ТОР	OF B	ORIN			
X = 6	07,805		994,250	-52.6 F	t.					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL	LS	REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-68.6	16.0		SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few sil	t, trace	-					
-71.6	19.0		fine to medium-grained sand-sized she reaction with HCI, moist, 5Y 8/1 white	(SP-SM)				-71.6		
-1 1.0	19.0	1	NOTES:					Abbreviations:		
			USACE Jacksonville is the custodia these original files.	an for				NR = Not Recorded.		
		ssification								
			System. 3. Laboratory Testing Results							
			SAMPLE SAMPLE LABORA							
			1 2.0/2.5 SP ² 1-Post 2.0/2.5 SP ² 2 4.0/4.5 SP ² 3 6.0/6.5 SP ³	•						
			4 8.0/8.5 SP-Si *Lab visual classification based on gra	M*						
			curve. No Atterberg limits.							

DRII	LLING	LOG	DIVISIO	N		INST	ALLAT	ON				SHEET	1
1. PROJ			Sout	h Atlantic			ckson					OF 2	SHEETS
										See Remarks			
		•	and Search	1		10.			E SYSTEM/DATUN	!		VERTICA	
	bracore Bo			LOCATION COOR	DINATES	44			ne, FLN (U.S. Ft			NAVI	
	B-SJSP12-		' ¦'		Y = 1,995,092	• • • •	WANUI	ACIO	RER 3 DESIGNAT	ION OF DRILL	_	UTO HAMI ANUAL H	
	LING AGEN		I_		TRACTOR FILE NO.					DISTURBED		DISTURB	
Co	orps of Eng	gineers	- CESAJ	6	6738-12-5195	12.	TOTAL	SAMP	PLES	5		0	
4. NAMI	E OF DRILL	ER				13.	TOTAL	NUME	BER CORE BOXES	0			
- DIDE	CTION OF I	2001116		1050 5004	BEARING	14.	LEVA	TION (GROUND WATER				
	ETION OF I	DOKING	•	DEG. FROM VERTICAL	BEARING					STARTED		COMPLE	TED
	NCLINED				 	15.	DATE E	ORIN	G 	07-01-	12	07-01	I-12
. THIC	KNESS OF	OVERB	URDEN	N/A		16.	ELEVA	LION .	TOP OF BORING	-51.8 Ft.			
7. DEPT	'H DRILLED	INTO	ROCK N	V/A		17.	TOTAL	RECO	VERY FOR BORIN	NG 91.50 %	, 0		
						18.	SIGNA	URE .	AND TITLE OF IN	SPECTOR			
в. тота	L DEPTH C	F BOR	ING 19	.0 Ft.			Ste	е Му	ers, Geologist				
ELEV.	DEPTH	LEGEND	CL	ASSIFICATION O	F MATERIALS	RE	BOXOR RIGHT	RQD OR UD		REMARK	(S	BLOWS/ 1 FT.	N-VALUE
54.0	0.0												
-51.8	0.0	 	SAND, po	orly-graded, mos	tly fine-grained	\dashv	\vdash	1	1				
F		-::-	sand-sized	d quartz, no react	tion with HCI, moist,								
F	-	:::	5Y 8/1 wh	ile (3P)									
ļ	•	:•::											
Ŀ	_	ŀ∷·[-53.8				
F	-	∵∵[`	At El53.5 sand-sized		medium-grained		1	1	-53.8				
		:::	Sanu-Sizec	ı srieli			<u> </u>	salt .					
Ŀ	_	$ \cdots $											
ŀ													
ļ	-	:::											
<u> </u>	•	:::											
6.8		[::: <u>]</u>							-56.8				
ا لـــــــ			`At El56.	8 Ft., trace silt			2						
ļ	•	[:::						1					
ļ	-	.;;.											
		:.:											
-58.8	7.0	<u> </u>	SAND no	orly-graded with	silt mostly	\dashv							
ļ	•	[:]]#	fine-graine	ed sand-sized qua	artz, few silt, few fine	:							
ļ	-	ŀ: }}∦		grained sand-size moist, 5Y 6/2 ligh	ed shell, no reaction		\bot	1	-59.8				\perp
ŀ		:- <u> </u>	(SP-SM)	•	• •		3						
F	•	- <u> </u>	At El59.8 shell	8 Ft., few mediur	m-grained sand-sized	1							
ļ	-			4 Et 1900 6									
Ŀ	:	 :-	At El61.	1 Ft., little fine to	coarse-grained ction with HCl, moist								
	-	-: <u> </u>	303 0.200										
F	•	:.											
ļ	-							4	-62.8				
Ŀ		: <u> </u>					4						
F		<u> </u> :-											
F	- ·	-: <u> </u>											
, L	. 12.0	·.											
-64.8	13.0		SAND. cla	vey, mostly fine-	grained sand-sized	\dashv							
F	• •		quartz, littl	e clay, little fine t	to coarse-grained								
ļ	-			d shell, weak read greenish gray (S	ction with HCl, moist								
-			10010/1	greensi gray (c	50)								
ļ	•												
		1/////					- 1						ı

		G (Cont. Sheet)	Jackson	nville I	Distric	ct			OF 2 S	HEETS I	
ROJECT	г			COORDINA				JM HORIZONTA	L V	/ERTICAL	
St. Jo	hns Count	y San	d Search	State P	lane, l	FLN (U.S. I	Ft.) NAD83	<u> </u>	NAVD88	
OCATIO	N COORDI	NATES	3	ELEVATIO		OF B	ORING	3			
X = 60	07,300		995,092	-51.8 F	t.						
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	LS	ĸEC.	BOX OR SAMPLE	RQD OR UD	F	REMARKS	BLOWS/	N-VALUE
			At El67.8 Ft., some fine to coarse-g sand-sized shell, strong reaction with At El69.5 Ft., some fine-grained sar quartz, 10Y 7/1 light greenish gray	HCI							
-70.8	19.0							-70.8			
-70.8	19.0		NOTES: 1. USACE Jacksonville is the custodicthese original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC CONTROL SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC SAMPLE	TORY CATION * * * M* M*				Abbreviations: NR = Not Recorded	l.		

DDI	RILLING LOG South Atlantic				IN	STAL	LATIC	N			SHEET	1	7	
		LUG	Sou	uth Atlantic		+			lle Dis			OF 2	SHEETS	S
											Remarks	:		4
	t. Johns C	•	ind Searc	:n		10				SYSTEM/DATUM	HORIZONTAL	VERTIC		
	ibracore B			LOCATION	COORDINATES	11				e, FLN (U.S. Ft.) RER'S DESIGNATIO	NAD83	NAV		4
	B-SJSP12			1	829 Y = 1,995,999	'''	. 14174	NOF	AC I OF	RER S DESIGNATIO		AUTO HAN		
	LING AGE			1 70 000,	CONTRACTOR FILE NO.	+-						UNDISTURE		_
	orps of En		- CESAJ		6738-12-5195	12	. то	TAL S	SAMPL	.ES	4	0		
. NAM	E OF DRILL	LER				13	. то	TAL N	NUMB	ER CORE BOXES	0			
						14	. EL	EVAT	ION G	ROUND WATER				1
	CTION OF	BORING		DEG. FROI VERTICAL	M BEARING	\vdash					STARTED	COMPLI	ETED	1
	INCLINED			İ	į	15	. DA	TE BO	DRING	1	07-01-12	07-0	1-12	
. THIC	KNESS OF	OVERBU	IRDEN	N/A		16	. EL	EVAT	ION T	OP OF BORING	-58.1 Ft.			
		- INITO D		N1/A		17.	. то	TAL F	RECOV	ERY FOR BORING	99.50 %			1
. DEP	TH DRILLEI	DINTOR	OCK	N/A		_				ND TITLE OF INSP				1
в. тот	AL DEPTH (OF BORIN	NG 2	0.0 Ft.				Steve	е Муе	rs, Geologist				
ELEV.	DEPTH	LEGEND	c	LASSIFICATI	ON OF MATERIALS		% REC.	BOX OR SAMPLE	RQD OR UD	-	REMARKS	BLOWS/	N-VALUE	
		+-+											一	┪
-58.1	0.0	 	CAND :-	00mly 6:	mostly fine to	_				-58.1			\bot	_
	_				mostly fine to -sized quartz, few			1		-58.1				Ŀ
	_	1 1	medium-	grained sand	-sized shell, no reaction			(-Pos	١					ŀ
	_	-:::	with HCl,	, moist, 5Y 8/	Tiwhite (SP)									ļ
7	_									00.4				_
<u>'</u>	_	\mathbb{R}^{n}	At El60).1 Ft few m	edium-grained sand-size	ed L				-60.1			-	+
	_				light olive gray	_		2						ļ
	-													t
	_													ŀ
62.1	- - 4.0	-:::								-62.1				ļ
<u> 1</u>					with silt, mostly	\dashv		3		V£. I			+	†
	<u>_</u> _				ed quartz, few silt, few fir nd-sized shell, no reaction									ŀ
	_				nd-sized shell, no reaction 2 light olive gray	/II								F
63.6	5.5		(SP-SM)			\dashv								ţ
	_				fine-grained sand-sized eaction with HCl, moist,									ŀ
	_		(clay sea	ims), 5Y 6/1 (gray (SC)									ŀ
	_													ļ
65.4	7.3				fine-grained sand-sized									ŀ
			quartz, lit	ttle fine grave	I-sized limestone, strong									
	_		CLAY. fa	with HOI, MOI at, some fine-	ist, 10Y 5/1 greenish gra grained sand-sized	y /								
	_		quartz, lit	ttle fine grave	I-sized limestone, trace									
37.0	- 8.9		tine-grain	ned sand-size	ed shell, strong reaction (1) greenish gray (CH)	لر								
67.6	 - 9.5				fine-grained sand-sized	-/								
,,,,	-	 	quartz, lit	ttle clay, trace	e fine-grained sand-sized	· /								
	_		shell, we: 5Y 6/1 gr		rith HCl, moist,	-/1								
	_		SAND, p	oorly-graded	with silt, mostly	-/								
	_	:-	fine-grain	ned sand-size	ed quartz, some fine									
	_				silt, strong reaction with tolive gray (SP-SM)	'								
	_	:-	- ,	,	- 5 - 7 ()									
	- -													
	_	-: <u> </u>												
	_	·:												Ì
	_	:- ‡∦												ŀ
	_	-:												ſ
	- -	 :: }												ţ
	<u>_</u> 	:-												ŀ
	_	1 - 1				- 1			ı					t

	NG LO	G (Cont. Sheet)	INSTALLA Jackso		Distric	et		SHEET 2 OF 2 SI	
ROJECT			COORDINA				M HORIZONTAL	VERTICAL	
St. Johns (County Sar	nd Search	State P	lane,	FLN (U.S. I	t.) NAD83	NAVD88	
OCATION CO	ORDINATE	s	ELEVATIO	N ТОР	OF B	ORING	1		
X = 606,82	29 Y = 1,	995,999	-58.1 F	t.					
ELEV. DEF	LEGEND HT4	CLASSIFICATION OF MATE	RIALS	REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-73.4 15.3	3								T
-75.1 17.0		SAND, clayey, mostly fine-grained quartz, little clay, few fine to mediu sand-sized shell, weak reaction wit 5Y 7/1 light gray (SC)	m-grained						
		SAND, silty, mostly fine-grained sa quartz, some fine gravel-sized she strong reaction with HCI, moist, 5\ (SM)	ll, little silt,	-					
-78.1 20.0	0						-78.1		
		ID DEPTH CLASS 1 0.0/0.5 1-Post 0.0/0.5 2 2.0/2.5	In Classification				Abbreviations: NR = Not Recorded.		

DRI	LLING	LING LOG South Atlantic				INS	TAL	ATIC	N				SHEET 1	
			Sout	h Atlantic		-			lle Di				OF 2 S	HEETS
1. PRO											See Remai			
	st. Johns Co	-	and Search	1		10.				SYSTEM/DATUR		IZONTAL	VERTICA	
	ibracore Bo		1,			44				e, FLN (U.S. Ft rer's designat		IAD83	NAVD	
	B-SJSP12-		! '	Y = 606 442	Y = 1,996,925	11.	IVIA	NUFA	CIUI	KER'S DESIGNA	IION OF D		AUTO HAMN MANUAL HA	
	LING AGEN		i		TRACTOR FILE NO.	┢					DISTUR		NDISTURBE	
С	Corps of Eng	gineers	- CESAJ	6	738-12-5195	12.	TO	TAL S	AMPI	LES	5		0	` ,
4. NAM	E OF DRILL	ER				13.	то	TAL N	IUMB	ER CORE BOXES	0	•		
					T======	14.	ELI	VAT	ION G	ROUND WATER				
	ECTION OF I	BORING	i	DEG. FROM VERTICAL	BEARING						STA	RTED	COMPLET	ED
	INCLINED				İ	15.	DA.	ГЕ ВС	ORING	3	0	7-01-12	07-01	-12
6. THIC	CKNESS OF	OVERB	URDEN	N/A		16.	ELI	VAT	ION T	OP OF BORING	-56.3	Ft.	•	
			2001/	\.\.\.\		17.	то	TAL F	RECO	VERY FOR BORII	NG 98	3.58 %		
/. DEP	TH DRILLED	INIUR	TOCK	N/A		18.	SIG	NAT	URE A	AND TITLE OF IN	SPECTOR			
в. тот	AL DEPTH C	F BORI	NG 20	.1 Ft.				Steve	е Муе	ers, Geologist				
ELEV.	DEPTH	EGEND	CL	ASSIFICATION OF	MATERIALS	F	«REC.	BOX OR SAMPLE	RQD OR UD		RE	EMARKS	BLOWS/	N-VALUE
		-				+		⊞S						Z
-56.3	0.0					_			L					
	_			orly-graded, most		\Box	İ							
ļ	<u>-</u>	:::	medium-gi	rained sand-sized	quartz, few fine to shell, no reaction					-57.3				
ŀ	-		with HCI, r	moist, 5Y 8/1 whit	e (SP)	F		1		-57.5				
}	-	-:					- }	_						
Ī	Ē	l∷k	-A+ E1 - 50 ·	3 Ft., trace silt										
	-	.::.	At Li30.	3 Ft., trace siit										
ŀ	_									-59.3				
77	-	$ \cdots $				Γ		2		-59.3				
9.7	_						1	-Pos	t					
ŀ	_	[∵·\	-At El60.	3 Ft., few fine to	coarse-grained									
ŀ	_		sand-sized	d shell										
ļ	-	-:				F	_			-61.3				-
ļ	- -	$ \cdots $					ļ	3						
ŀ	<u>-</u>	$ \cdot \cdot \cdot $												
F	-													
ļ	- -	<u> . : : </u>								-63.3				
ļ	- -	·:::				F		4		00.0				
ŀ	<u>-</u>	:·::					ŀ	-						
-	-	ŀ∷·ŀ	-At El64	3 Ft., little fine to	coarse-grained									
ļ	F	:::			tion with HCl, moist	:								
-65.3	9.0	····	CAND	nan magth fin	main ad an at at at at	_								
ŀ	- -			ayey, mostly fine-g le clay, few fine to	rained sand-sized medium-grained									
}	L		sand-sized	d shell, no reaction	n with HCI, moist,									
	-		occasional	I seams of clay, 5	Y 6/1 gray (SC)									
-66.9	- 1U.b -		SAND, poo	orly-graded with s	ilt, mostly fine to	\dashv								
ŀ	 -	.:	medium-gr	rained sand-sized	quartz, few silt,									
}	_	:: 		grained sand-size moist, 5Y 7/1 light	d shell, no reaction gray (SP-SM)									
-68 6	_ 	:·	, 1	,	3 - 7 (2- 3)									
-68.6	_ 12.3 -		CLAY, fat,	, little fine-grained	sand-sized quartz,	\dashv								
ŀ	_		trace fine t	to medium-graine	d sand-sized shell, 10Y 6/1 greenish									
F	_		gray (CH)		io i o/ i greenish									
ļ	- -		5 7 ()											
-70.5	- 14.2		CAND		alacal area de la lacal	_								
		<i>V////</i>		yey, some fine-gr	ained sand-sized -grained sand-sized				1	1				

DRILLING LO	G (Cont. Sheet)	Jackson		Distric	rt .		SHEET 2 OF 2 SI	HEETS
PROJECT		COORDINA				IM HORIZONTAL	VERTICAL	
St. Johns County Sa	nd Search	State Pla				1	NAVD88	
OCATION COORDINATE	ES	ELEVATION	і тор	OF B	ORING	1		
X = 606,442 Y = 1	1,996,925	-56.3 Ft						
ELEV. DEPTH	CLASSIFICATION OF MATERIA	ALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-71.9 15.6	shell, strong reaction with HCl, moist, 10Y 6/1 greenish gray (SC) CLAY, fat, little fine-grained sand-size no reaction with HCl, moist, 10GY 6/1 gray (CH)	ed quartz,						
-74.6 18.3 76.4 20.1	SAND, clayey, mostly fine-grained sar quartz, some sand to gravel-sized she clay, strong reaction with HCl, moist, 5Y 6/2 light olive gray (SC)	nd-sized ell, little				76.4		
-76.4 20.1 <i>[///////////////////////////////////</i>	NOTES: 1. USACE Jacksonville is the custodithese original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFICATION	ATORY CATION 				Abbreviations: NR = Not Recorded.		

DRII	LLING	LOG	DIVISION			INSTA	LLATI	ON			s	HEET 1	
1. PROJ			South	Atlantic			ksonv				0	F 2 SH	IEETS
					L					ee Remarks			
		•	and Search			10. C			SYSTEM/DATUM	!		ERTICAL	_
	bracore Bo		:10	OCATION COORE	INATES	11 N			e, FLN (U.S. Ft.)			NAVD8	
	B-SJSP12-		-		Y = 1,997,804	"	ANOF	4010	KER 3 DESIGNATI	ION OF DRILL		O HAMME UAL HAN	
	LING AGEN				TRACTOR FILE NO.					DISTURBED		STURBED	
Co	orps of Eng	gineers	- CESAJ	6	738-12-5195	12. T	OTAL :	SAMP	LES	5	0		
4. NAME	E OF DRILL	ER				13. T	OTAL	NUMB	ER CORE BOXES	0			
						14. E	LEVAT	ION G	ROUND WATER				
	CTION OF E ERTICAL	BORING	i	DEG. FROM VERTICAL	BEARING					STARTED	C	OMPLETE	D
	NCLINED		į		1	15. D	ATE B	ORING	•	07-01-1	2	07-01-1	12
6. THIC	KNESS OF	OVERB	URDEN	N/A		16. E	LEVAT	ION T	OP OF BORING	-53.5 Ft.			
						17. T	OTAL	RECO	VERY FOR BORIN	G 80.00 %			
7. DEPT	H DRILLED	INTO	ROCK N/	<u>'A</u>	L				AND TITLE OF INS				
8. TOTA	L DEPTH O	F BOR	NG 16.7	Ft.			Stev	е Мує	ers, Geologist				
ELEV.	DEPTH	EGEND	CLA	SSIFICATION OF	MATERIALS	REC	E	RQD OR UD		REMARK	s	BLOWS/ 1 FT.	N-VALUE
		=				_	m s					<u>m</u>	ż
-53.5	0.0												
-			SAND, poor	ly-graded, most	ly fine to				1				
E	•	$ \cdot \cdot $			quartz, trace fine to shell, no reaction								[
	_	:::		oist, 5Y 8/1 whit									
þ				•	` '								
⊦													
	= :	$ \cdot \cdot $											
⊢	•												
F	-	.∵. .	-A+ EL EG E	Et fourmodium	a arainad aand ai - ad		-		-56.5				<u> </u>
Ŀ		$ \cdot \cdot \cdot $	Shell, trace s		n-grained sand-sized	'	1		-56.5				
F		$ \cdot,\cdot\cdot $,	-			1-Pos	1					[
ļ	-	$ \cdot\cdot\cdot $											[
Ŀ		$ \cdot \cdot \cdot $											
-	-												[
ļ		$ \cdot\cdot\cdot $											[
<u> </u>	-	$ \cdots $											[
).7		 				+	+	\vdash					\vdash
 ∤	•	$[\cdots]$							60.5				
-	<u> </u>	.∵.\	-At El60.5	Ft., little mediur	n-grained	\vdash	2	1	-60.5				1
F	•	$ \cdot \cdot $	sand-sized s	shell	-		 _	ł					
	- o o	$ \cdots $											
-61.8	8.3	 	SAND noor	ly-graded with s	ilt. mostly	\dashv							
F	•	$\ \cdot\ $	fine-grained	I sand-sized qua	rtz, few silt, trace				-62.5				
ļ	-	-: <u> </u>	fine to media	um-grained san	d-sized shell, no		3	1					
-		-: '	At El62.5	n ⊓∪ı, molst, 5Y Ft few fine-ara	' 5/1 gray (SP-SM) nined sand-sized		۳	1					
ļ	-	[:·] <u> </u> ∦	shell	,									
Ŀ		.: #											
-	-	-: 							-64.5				1
ļ	- ·	[:·]] <u> </u>		Ft., little fine to	coarse-grained		4	1	-				
 		[.·]]	sand-sized s	shell			⊢ <u>'</u>	1					
F	_	-: <u> </u>											
ļ	•												
F		[::] <u> </u>			medium-grained								
<u> </u>	-	$\ \cdot\ $			ams throughout,								[
-	-	-: <u> </u>	5Y 7/1 light	yıay									
-67.5	14.0	17/7/	SAND along	ev some fine an	rained cand cized	_							
Ŀ					rained sand-sized -sized shell, little								[
-68.5	15.0		clay, strong	reaction with H	CI, moist,								

DRILLING LOG	G (Cont. Sheet)	Jackson		Distric	et				SHEET 2	
PROJECT		COORDINA				UM	HORIZONTAL	VE	RTICAL	
St. Johns County Sand	d Search	State Pla					NAD83	1	NAVD88	
OCATION COORDINATES	<u> </u>	ELEVATION	ТОР	OF B	ORING					
X = 605,989 Y = 1,9	997,804	-53.5 Ft								
ELEV. DEPTH	CLASSIFICATION OF MATERIAL	LS	ĸEC.	BOX OR SAMPLE	RQD OR UD		REMARKS	6	BLOWS/ 1 FT.	N-VALUE
-69.6 16.1	SAND, poorly-graded with silt, mostly in medium-grained sand-sized quartz, so to gravel-sized shell, few silt, trace fine coarse gravel-sized sandstone, strong with HCl, moist, 5Y 7/1 light gray (SP SAND, clayey, mostly fine to medium-sand-sized quartz, some sand to graveshell, little clay, strong reaction with HCl 10YR 5/6 yellowish brown (SC) NOTES: 1. USACE Jacksonville is the custodia these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC 1 3.0/3.5 SP*1-Post 3.0/3.5 SP*2 7.0/7.5 SP*3 9.0/9.5 SP-SI 1 1.0/11.5 SP-S	ome sand e to reaction -(-SM) grained el-sized CI, moist, an for TORY CATION				-70.2 Abbreviat NR = N	ions: Not Recorded.			N N N N N N N N N N N N N N N N N N N

DRI	LLING	LOG	DIVISI				ALLATI				SHEET		7
1. PRO			Sou	uth Atlantic			ackson			D .	OF 2	SHEETS	4
		ount · O	and Comm	ah.					SYSTEM/DATUM	Remarks	VERTICA	<u> </u>	4
	it. Johns C ′ibracore B	•	anu searc	A1		10.			e, FLN (U.S. Ft.)	NAD83	NAVI		
	ING DESIG		<u> </u>	LOCATION CO	ORDINATES	11.			RER'S DESIGNATION		AUTO HAMI		1
V	B-SJSP12	-042			6 Y = 1,998,699					_	MANUAL H		
_	LING AGE			C	ONTRACTOR FILE NO.	12.	TOTAL	SAMP	LES	i	JNDISTURB	ED (UD)	1
	orps of En		- CESAJ	<u> </u>	6738-12-5195				!	5	0		4
4. NAW	E OF DRILL	LEK				13.	TOTAL	NUMB	ER CORE BOXES	0			4
5. DIRE	CTION OF	BORING	•	DEG. FROM	BEARING	14.	ELEVA	TION G	ROUND WATER				
	VERTICAL INCLINED			VERTICAL		15.	DATE B	ORING	•	STARTED 07-01-12	COMPLE 07-01		
6. THIC	KNESS OF	OVERB	URDEN	N/A		16.	ELEVA	TION T	OP OF BORING	-58.7 Ft.			
7. DEP	TH DRILLEI	D INTO	ROCK	N/A					VERY FOR BORING	62.50 %			
8 707	AL DEPTH (OF BOD	ING 1	3.2 Ft.		18.			ND TITLE OF INSPI	ECTOR			1
3. 101/	as per in t			U. Z I I.		_	_	, 	ers, Geologist I				4
ELEV.	DEPTH	LEGEND	C	CLASSIFICATION	OF MATERIALS	RÉ	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/	N-VALUE	
-58.7	0.0												
50.7	-	 	SAND, p	oorly-graded, mo	ostly fine-grained	\dashv							F
	-	:::	sand-size 5Y 6/1 gr		action with HCI, moist,								Ł
9.7			9	J (**)		+		+-				+-	t
	-	$ \cdots $											ŀ
	-	∷:¦	-Δt El _60	7 Ft little fine	to coarse-grained	-	+-	4	-60.7 -60.7			_	╀
	- -	-::-		ed shell, trace si			1 (-Po	alt	-00.7				ţ
-61.7	3.0		0.11.15					1					Ŀ
	_	1.		oorly-graded wit	h silt, mostly quartz, few silt, few fine	,							Ŀ
	-	:-	to coarse	gravel-sized sh	ell, weak reaction with				-62.7				F
	-	-:	HCI, moi	st (SP-SM)			2						Ŧ
	-	:-						1					ţ
	-	-:											F
	_	:-											Ł
	_	-:					+	-	-64.7			+	+
	-	$\ \cdot\ $					3	4					F
	-												Ė
	-												ţ
	<u> </u>								-66.7				上
	_	1:.					4	_					Ŀ
	-	 :											F
	-	-:											F
	_	 [:]											þ
	-	-: 											F
-69.6	- - 10 0	:·											Ŀ
33.0			SAND, cl	layey, mostly fin	e-grained sand-sized	\dashv							H
-70.5	11 8		quartz, so	ome sand to gra ong reaction with	vel-sized shell, little HCL moist								F
, 0.0			√5Y 5/1 gr	ray (SC)		Λ							F
	- -				ned sand-sized quartz, ist, N 5/ gray (CH)								ţ
74.0	- 12.0		no reaction	on with moi, illo	ist, IN 3/ glay (CI)				71.0				Ł
-71.9	13.2					+			-71.9			+-	Ŧ
	- -		NOTES:						Abbreviations: NR = Not Rec	corded			F
	- -		1. USAC	E Jacksonville i	is the custodian for				INIX - INOLINEC	oraca.			F
	<u>-</u>			ginal files.									Ł
		1 1				ı	- 1	1	l			- 1	ľ

DRILLING LO	G (Cont. Sheet)	INSTALLAT Jacksor		Dietri	~+	· · · · · · · · · · · · · · · · · · ·			
ROJECT	•	COORDINA				HORIZONTAL		-EE13	
St. Johns County Sar	nd Search	1			U.S. Ft.)				
OCATION COORDINATE		ELEVATIO		OF B	ORING				
X = 605,536 Y = 1	1,998,699 T	-58.7 F	t.						
ELEV. DEPTH	CLASSIFICATION OF MATERIAL	LS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE	
	2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC CLASSI	TORY CATION * * M* M* M*		DA SA SA SA SA SA SA SA SA SA SA SA SA SA			18	YN YN YN YN YN YN YN YN YN YN YN YN YN Y	

			DIVISIO	N			INST	ALLATI	ON			SHEET 1		1
DK	LLING	LUG	South	n Atlantic			Ja	acksonv	ille Di	strict		OF 2 SI	HEETS	
1. PRO											See Remarks			
	St. Johns Co	•	and Search				10.			SYSTEM/DATUN	:	ł		
	/ibracore Bo			OCATION 6	OORDINATES		44			e, FLN (U.S. Ft RER'S DESIGNAT	<u>, </u>	NAVD8		
	/B-SJSP12-		"		607 Y = 1,998		11.	MANUF	ACTO	RER S DESIGNA	TION OF DRILL	AUTO HAMMI MANUAL HAM		
	LING AGEN		<u> </u>	7. 00.,	CONTRACTOR	FILE NO.				. = 0	DISTURBED	UNDISTURBEI		
	Corps of Eng		- CESAJ		6738-12-51	195	12.	TOTAL :	SAMP	LES 	2	0		
4. NAN	IE OF DRILL	ER					13.	TOTAL	NUMB	ER CORE BOXES	0			
5 DIRI	ECTION OF I	ROPING		DEG. FRO	VI BEARIN	IG.	14.	ELEVAT	ION G	ROUND WATER				
	VERTICAL	OKING		VERTICAL		· [45	DATE B	OBING	2	STARTED	COMPLETI	ED	
	INCLINED			!			13.	DAIED	OKING	• 	07-01-12	07-01-	12	
6. THI	CKNESS OF	OVERBL	JRDEN	N/A		L	16.	ELEVAT	ION T	OP OF BORING	-62.6 Ft.			
7. DEP	TH DRILLED	INTO R	OCK N	I/A			17.	TOTAL	RECO	VERY FOR BORIN	NG 93.00 %			
	AL DERTH C	E BODU	10	2 [4			18.			AND TITLE OF IN	SPECTOR			
o. 101	AL DEPTH C		19.	3 Ft.			_	_	Ť	ers, Geologist				ł
ELEV.	DEPTH	LEGEND	CL	ASSIFICATIO	ON OF MATERIA	ıLS	RE	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/	N-VALUE	
CO C	0.0													
-62.6	0.0	 	SAND, silty	y, mostly fir	e-grained sand	-sized	\dashv	\vdash		-				-0
	F		quartz, little	e silt, few fir	ne to medium-g	rained								F
	<u> </u>		10YR 5/1 g		eaction with HCI	i, moist,	L		4	-63.6			+	Ļ.
	_	-		g. wy (0)				1		-63.6				Ŀ
	-							-Pos	AT.					ŀ
	-				ne to medium-g									-
-65.5	- - 2.9	-	sand-sized	shell, weal	reaction with F	HCI, moist								Ŀ
-00.0	- 2.3		CLAY, fat,	little fine to	medium-graine	ed	-							F
	<u> </u>		sand-sized	quartz, few	/ sand to gravel- ith HCl, moist, I	-sized								ļ.
	L		(CH)	reaction w	illi nci, moisi, i	N 5/ gray								L
	}		,											-
	F													F
	_													-5
	-		At El67.9 sand-sized		fine to medium-	-grained								ŀ
	F		Sai iu-Sizeu	quartz									[F
	_													ļ.
	L													Ŀ
	-			6 Ft., some tion with HC	fine gravel-sized	d shell,								ŀ
-70.6	- 8.0		wear react	.ioi i vviui i IC	/ 1									F
, 0.0	- 0.0				fine-grained sar		\dashv							F
	Ŀ		quartz, little 5Y 6/1 gray	e clay, no re	eaction with HCI	l, moist,								Ŀ
	F		Ji Wilgia	y (30)										É
	ļ.													ļ.
	L													- - 10
-73.1	10.5													۱ '`
	-		CLAY, fat,	little fine-gr	ained sand-size	ed quartz,	7							F
	F		no reaction	ı with HCI, i	moist, 5Y 5/1 gr	ay (CH)								F
	F													ŀ
-74.8	12.2													F
	<u> </u>		SAND, clay	yey, mostly	fine-grained sar	nd-sized								ţ
	<u> </u>		quartz, little 5Y 6/1 gray	e clay, no re	eaction with HCI	ı, moist,								Ŀ
	F		or or i gra	, (00)										F
	ţ.													ţ.
-76.8	14.2						_							F
	E				e-grained sand- l-sized limeston									E

DRI	LLING	LOC	G (Cont. Sheet)	Jackso		Diot=i	~t		SHEET 2	
ROJEC			<u> </u>	COORDINA				UM HORIZONTAL	VERTICAL	EE13
St. Jo	hns Count	ty San	d Search	State P	lane, l	FLN (U.S.	Ft.) NAD83	NAVD88	
	ON COORDI			ELEVATIO	N ТОР	OF B	ORIN	G		
X = 6	04,607		998,250	-62.6 F	t.	1		<u> </u>		
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL	LS	REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
			silt, strong reaction with HCl, moist, 10YR 6/2 light brownish gray (SM) At El80.3 Ft., few fine to coarse gray limestone, 10YR 6/3 pale brown	vel-sized						
-81.9	19.3	<u> </u>	NOTES:					-81.9 Abbreviations: NR = Not Recorded.		
			USACE Jacksonville is the custodic these original files. Soils are field visually classified in accordance with the Unified Soils Class System.							
			Laboratory Testing Results							
			SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC	TORY CATION						
			1 1.0/1.5 SM 1-Post 1.0/1.5 SP	*						
			*Lab visual classification based on gracurve. No Atterberg limits.	dation						

DRII	LING	LOG	DIVISIO				l	TAL							SHEET 1	
I. PROJE			Sou	th Atlantic			_			le Dis					OF 2 SI	HEETS
		nuntu C	and Scare	h							SYSTEM/D		Remarks HORIZON	ITAI	VERTICAL	
	Johns Co racore Bo	•	and Search	11			'".				e, FLN (U.		NAD8		NAVD8	
2. BORIN			i	LOCATION C	COORDINA	TES	11.						OF DRILL		NAVDO	
VB-	-SJSP12-	-044	ļ	X = 605,0	054 Y=	= 1,997,329								_	MANUAL HAN	
	NG AGEN				1	CTOR FILE NO.	12.	TO.	TAL S	AMPL	.ES	D	ISTURBED	ļυ	NDISTURBE	(UD)
	ps of Eng	_	- CESAJ		¦ 6738-	-12-5195	_					<u> </u>	5		0	
. NAME	OF DRILL	EK					13.	TO	TAL N	IUMB	ER CORE B	OXES	0			
. DIREC	TION OF E	BORING		DEG. FROI	м в	EARING	14.	ELI	VAT	ON G	ROUND WA	ATER				
	RTICAL CLINED			VERTICAL	-		15.	DA ⁻	ГЕ ВС	RING	ì		STARTED 07-01		07-01-	
. тніск	NESS OF	OVERB	URDEN	N/A			⊢				OP OF BOR		-57.6 Ft.			
. DEPTH	DRILLED	INTO F	ROCK	N/A							/ERY FOR I		96.46	%		
. TOTAL	DEPTH O	F BORI	ING 19	9.5 Ft.			18.				nd title or rs, Geolog		CTOR			
		т т					Т	\exists		iviye	is, Geolog	yisi.				ш
ELEV.	DEPTH	LEGEND	CI	LASSIFICATIO	ON OF MA	TERIALS	F	«REC.	BOX OR SAMPLE	RQD OR UD			REMAR	KS	BLOWS/	N-VALUE
-57.6	0.0		04115													
F			SAND, po	oorly-graded, grained sand-	mostly fir	ne to artz, trace fine to	,									
╧		::::	coarse-gr	ained sand-s	sized shell	, no reaction	+									
F		-:::	with HCI,	moist, 5Y 8/	1 white (SP)										
ţ		[:::									E0 6					
F		ŀ∷ŀ	∽At El59	.6 Ft., few m	nedium-gra	ained sand-size	d ├	\dashv	1		-59.6 -59.6					
F		<u> </u> :-::	shell, trac		ŭ			ŀ	-Pos	t						
F		$ \cdots $														
ļ.		$ \cdots $														
L		::::					L				-61.6					
F		:::							2							
-62.6 F	5.0															
F			SAND, po	orly-graded	with silt, n	nostly										
F		[:.]]	to coarse-	-grained sand	d-sized sh	few silt, few fine nell, no reaction	=				-63.6					
F				moist, 5Y 6/					3		-00.0					
Ł								ł	<u> </u>							
F		[::]] <u> </u>														
F		:: 														
Ļ		$[\cdot]$					L				-65.6					
ţ		:: #						ļ	4							
Ŀ		:-														
F				.7 Ft., little fi												
ļ.		:.	sand-size	d shell, weak	k reaction	with HCI										
-67.9	10.3						\perp									
F						ed sand-sized dium-grained										
-68.9	11.3		sand-size	ed shell, no re	eaction wit	th HCl, moist,										
-			5BG 5/1 (greenish gray t, some fine-	y (SC)	and-sized	1									
Ļ			quartz, tra	ace fine-grair	ned sand-:	sized shell,										
Ŀ				greenish gray												
-																
-71.0	13.4															
			SAND, cla	ayey, mostly	fine-grain	ed sand-sized ravel-sized shel	П									
F			strong rea	action with H	sand to gi ICI, moist,	raver-sized sher 10Y 7/1 light	,									
F				gray (SC)	•	ŭ										

DRI	LLING	LOC	G (Cont. Sheet)	Jackson				ig Designation VB-5JSP	SHEET 2 OF 2 SI	IEETS
ROJEC	т			COORDINA				UM HORIZONTAL	VERTICAL	
	ohns Count	y San	d Search	State P					NAVD88	
OCATIO	ON COORDI	NATES	.	ELEVATIO					•	
X = 6	05,054		997,329	-57.6 F	t.					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	LS	REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			At El72.6 Ft., some fine to coarse gravel-sized shell							
-77.1	19.5		NOTES:					-77.1 Abbreviations:		
			USACE Jacksonville is the custodicthese original files. Soils are field visually classified in accordance with the Unified Soils Classystem. Laboratory Testing Results SAMPLE SAMPLE LABORA D DEPTH CLASSIFIC CLASS	TORY CATION 				NR = Not Recorded.		
			curve. No Atterberg limits.							
	DRM 183									

npi	LLING	LOG	DIVISIO	ON		INS	TALL	ATIC	N				SHEET 1	
		LUG	Sout	th Atlantic		_		_	_	strict			OF 2 S	HEETS
1. PRO					L						Remarks		•	
		•	and Search	h		10.	COC	RDII	NATE	SYSTEM/DATUM	HORIZONT	AL	VERTICAL	-
	ibracore Bo									e, FLN (U.S. Ft.)	NAD83		NAVD	88
	ING DESIGN		ı į	LOCATION COORD	-	11.	MAI	IUFA	CTUI	RER'S DESIGNATIO	N OF DRILL	_	UTO HAMN	
	B-SJSP12		<u> </u>		Y = 1,996,460								IANUAL HA	
	LING AGEN		05041	1	TRACTOR FILE NO.	12.	тот	AL S	АМРІ		DISTURBED	UN	IDISTURBE	D (UD)
	Corps of Eng		- CESAJ	6	738-12-5195					<u> </u>	5		0	
4. NAIVI	IE OF DRILL	EK				13.	тот	AL N	IUMB	ER CORE BOXES	0			
5 DIRE	CTION OF	BORING	<u> </u>	DEG. FROM	BEARING	14.	ELE	VATI	ON G	ROUND WATER				
	VERTICAL			VERTICAL	! Г						STARTED		COMPLET	ED
	INCLINED				1	15.	DAT	E BC	RING	•	07-01-1	2	07-01-	-12
6. THIC	CKNESS OF	OVERE	URDEN	N/A		16.	ELE	VAT	ON T	OP OF BORING	-54.5 Ft.			
						17.	тот	AL R	ECO	VERY FOR BORING	94.92 %			
/. DEP	TH DRILLED	INIO	RUCK	N/A		18.	SIG	NATI	JRE A	AND TITLE OF INSP				
в. тот	AL DEPTH C	F BOR	ING 18	8.7 Ft.			9	Steve	Mve	ers, Geologist				
ELEV.	DEPTH	EGEND	CI	LASSIFICATION OF	MATERIALS	R	_	αШ	RQD OR UD		REMARK	s	BLOWS/	N-VALUE
		Ě						SA	UD				4	ź
						1								
-54.5	0.0	 	SAND no	oorly-graded, mostl	ly fine to	\dashv	ŀ							
	_	$[\cdots]$	medium-g	grained sand-sized	quartz, trace fine to									
	L	$[\cdots]$	medium-g	grained sand-sized	shell, no reaction									
	_	.;;.	with HCI,	moist, 5Y 7/1 light	gray (SP)									
	-	::::												
	<u> </u>		\			L				-56.5				
	_	$[\cdots]$		5.5 Ft., few fine to red shell, trace silt	nealum-grainea			1		-56.5				
			34114-3126	d Silon, trace Silt			1.	Pos	t					
	_	$ \cdots $												
.1														
						L				-58.5				
	L	$ \cdot\cdot\cdot $						2						
	<u> </u>	$ \cdot \cdot $					ļ							
	-	$ \cdot \cdot \cdot $												
	_	$ \cdots $												
	L	$ \cdots $								-60.5				
	-	$ \cdots $				Г		3						
		$[\cdots]$												
	L	$[\cdots]$												
-62.2	- - 7.7	.;;.												
02.2	<u> </u>	1.111	SAND, po	oorly-graded with s	ilt, mostly	\dashv				-62.5				
	L ⁻	1.111	fine-grain	ed sand-sized qua	rtz, few silt, trace		T	4						
	_	:: <u> </u>	reaction w	edium-grained sand	d-sized shell, no GY 4/1 dark greenish									
	<u> </u>	:-	gray (SP-	-SM)	zi in i dain groomsii									
	- -	$\ \cdot\ $	- , \	•										
	-	1:44												
	F	-: 												
	- -	[:·] <u> </u>												
	L.,.	$\ \cdot\ \ $												
-65.9	- 11.4 -	 : 	CVVID e:	lty moetly fine and	inod sand sized	4								
	L	[[]]	OAND, SII	Ity, mostly fine-gra tle silt, trace fine to	medium-arained									
	_	111111	sand-size	ed shell, no reaction	n with HCI, moist,									
	<u> </u>	$\parallel \parallel \parallel \parallel \parallel$	5GY 4/1 d	dark greenish gray	(SM)									
		11111												
	<u> </u>	$\parallel \parallel \parallel \parallel \parallel \parallel$												
	- 44.0	 												
-68.5	14.0		CLAY fat	t few fine-grained	sand-sized quartz,	\dashv								
	<u>-</u>		trace fine	to medium-graine	d sand-sized shell,									
	<u> </u>		no reactio	on with HCI, moist,	5B 5/1 bluish gray									

DRI	LLING	LOC	G (Cont. Sheet)	INSTALLA Jackson		Distri			SHEET 2 OF 2 SH	HEETS
PROJEC	т			COORDINA				JM HORIZONTAL	VERTICAL	
St. Jo	ohns Count	ty San	d Search	State P				!	NAVD88	_
LOCATIO	ON COORDI	NATES	•	ELEVATIO	N ТОР	OF B	ORING	3		
X = 6	05,490	Y = 1,9	996,460	-54.5 F	t.	_				
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL	LS	REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-70.5	16.0		(CH)							
			SAND, clayey, mostly fine to medium- sand-sized quartz, little clay, little sand gravel-sized shell, strong reaction with moist, 5Y 7/1 light gray (SC)	l to				70.0		
-73.2	18.7	(7/4/27)	NOTES:					-73.2 Abbreviations: NR = Not Recorded.		
			USACE Jacksonville is the custodia these original files.	an for				140010001000		
			Soils are field visually classified in accordance with the Unified Soils Clas System.	ssification						
			3. Laboratory Testing Results							
			SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC	TORY CATION						
			1 2.0/2.5 SP ² 1-Post 2.0/2.5 SP ² 2 4.0/4.5 SP ² 3 6.0/6.5 SP ² 4 8.0/8.5 SP-S	k k						
			*Lab visual classification based on gracurve. No Atterberg limits.	dation						

DDI	LLING	LOG	DIVISION	IN	ISTAL					SH	EET 1	
1. PRO.			South Atlantic	\vdash				istrict		OF	2 SH	EETS
				_					emarks			
		-	and Search	10					HORIZONTA	1	RTICAL	_
	ibracore Bo		LOCATION COORDINATES	11				ne, FLN (U.S. Ft.) RER'S DESIGNATION	NAD83		NAVD88	
	B-SJSP12-		X = 605,939 Y = 1,995,569	١	i. W.A	NOFF	4010	RER 3 DESIGNATION	DKILL		HAMME AL HAM	
	LING AGEN		CONTRACTOR FILE NO.	1					TURBED		TURBED	
	orps of Eng		- CESAJ 6738-12-5195	12	2. то	TAL S	SAMP	LES	6	0		
4. NAM	E OF DRILL	ER		13	з. то	TAL N	NUME	BER CORE BOXES	0			
E DIDE	CTION OF E	OBING	DEG. FROM BEARING	14	1. EL	EVAT	ION (GROUND WATER				
	ERTICAL	OKING	VERTICAL	<u>ا</u>				_	STARTED	COI	MPLETE	D
ı	NCLINED			15	5. DA	TE BC	ORING	G	07-01-12	2 (07-01-1	2
3. THIC	KNESS OF	OVERB	URDEN N/A	16	6. EL	EVAT	ION 1	TOP OF BORING -	53.3 Ft.			
7. DEPT	TH DRILLED	INTO	ROCK N/A	17	7. ТО	TAL F	RECO	VERY FOR BORING	95.00 %			
				18	3. SIG	TAN	URE	AND TITLE OF INSPEC	TOR			
8. TOT <i>i</i>	AL DEPTH O	F BOR	ING 19.5 Ft.	L		Steve	е Му	ers, Geologist				
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS		% REC.	BOX OR SAMPLE	RQD OR UD		REMARKS		BLOWS/ 1 FT.	N-VALUE
50.0	0.0											
-53.3	0.0 -	 	SAND, poorly-graded, mostly fine to		1			†				
-	-	-::-	medium-grained sand-sized quartz, trace fine t	0								
ļ	- -	:::	medium-grained sand-sized shell, no reaction with HCl, moist, 5Y 6/1 gray (SP)									
	- -	:·::	, , ,									
-	<u>-</u>	ŀ∷·[-55.3				
F	-	· ∵ · [At El55.3 Ft., few medium-grained sand-size	d		1		-55.3				
- [- -	::::	shell		•	(-Pos	t					
	_	ŀ∷·l										
-	_											
-	-	ŀ∷⊹k	∽At El57.3 Ft., trace silt				ļ	-57.3				
<u> </u>	- -	·.·:	At Li57.51 t., trace siit			2						
3.1												
	-	::::										
-	- -	<u> </u> ∷:						-59.3				
	-	.::.				3	İ	00.0				
	.	:::					ł					
-60.3	7.0		SAND, poorly-graded with silt, mostly fine to									
ļ	-	.:	medium-grained sand-sized guartz, few silt,									
<u></u>	- -	┟╢╢	trace fine to medium-grained sand-sized shell, no reaction with HCl, moist, 5GY 5/1 greenish					-61.3				
	- -	:-	gray (SP-SM)			4						
-	-	-:	LAt Él61.3 Ft., few fine-grained sand-sized shell					-62.3				
ļ	-	: <u> </u>	SIGN			5	1					
ļ	- -	:-					1					
-	-	ŀ∷∰										
F	-	:-										
	- -											
<u> </u>	- -	·.										
}	<u>-</u>	<u> [:] </u>										
F	-	:: #										
	- -	[:.]]]]										
}	- -	<u> </u> [:]										
F	-	:: #										
-67.4	- <u>- 14.1</u>	<u> :. </u>										
	-		SAND, clayey, mostly fine to medium-grained sand-sized quartz, some fine to coarse									
F	-		gravel-sized shell, little clay, strong reaction									

DR	LLING	LOC	G (Cont. Sheet)	Jackso		Distric	nt .		SHEET 2 OF 2 SH	IEETS
ROJEC	:т			COORDINA				JM HORIZONTAL	VERTICAL	
St. J	ohns Count	ty San	d Search	State P				I .	NAVD88	
	ON COORDI			ELEVATIO						
X = 6	605,939	Y = 1,9	995,569	-53.3 F	t.					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	LS	ĸEC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
			with HCl, moist, 10Y 6/1 greenish grag	y (SC)						
<u>-72.8</u>	19.5	1////	NOTES:					-72.8 Abbreviations:		
			USACE Jacksonville is the custodicthese original files.	an for				NR = Not Recorded.		
			Soils are field visually classified in accordance with the Unified Soils Class System.	ssification						
			3. Laboratory Testing Results							
			SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC	TORY CATION						
			1 2.0/2.5 SP 1-Post 2.0/2.5 SP 2 4.0/4.5 SP 3 6.0/6.5 SP 4 8.0/8.5 SP-S 5 9.0/9.5 SP-S	* * * M*						
			*Lab visual classification based on gracurve. No Atterberg limits.	dation						

DRILLING LOG South Atlantic 1. PROJECT St. Johns County Sand Search Vibragers Parings	9.	Jack sızı		lle Di		- D '		OF 2 S	HEETS
St. Johns County Sand Search	9.	SIZE	AND	TVD	E OE BIT So	- D			
, and the second	_					e Remarks			
Vibracara Paringa	10				SYSTEM/DATUM	HORIZONT	:	VERTICAL	
Vibracore Borings 2. BORING DESIGNATION LOCATION COORDINAT					e, FLN (U.S. Ft.)			NAVD	
2. BORING DESIGNATION VB-SJSP12-047 VB-SJSP12-047 LOCATION COORDINAT X = 606,385 Y =		1. WA	NUFA	AC I UI	RER'S DESIGNATIO	ON OF DRILL		JTO HAMM ANUAL HAI	
· · · · · · · · · · · · · · · · · · ·	TOR FILE NO.				1	DISTURBED		DISTURBE	
Corps of Engineers - CESAJ 6738-	12-5195	2. TO	TAL S	SAMPI	LES	5	- (0	
4. NAME OF DRILLER	13	з. то	TAL N	NUMB	ER CORE BOXES	0			
5. DIRECTION OF BORING DEG. FROM BE	EARING 14	4. EL	EVAT	ION G	ROUND WATER				
5. DIRECTION OF BORING DEG. FROM BE VERTICAL						STARTED	ļ	COMPLET	ED
☐ INCLINED	13	5. DA	IE BC	JKING	•	07-01-1	2	07-01-	12
6. THICKNESS OF OVERBURDEN N/A	10	6. EL	EVAT	ION T	OP OF BORING	-53.0 Ft.			
7. DEPTH DRILLED INTO ROCK N/A	17	7. ТО	TAL F	RECO	VERY FOR BORING	94.00 %			
	18	B. SIC	NAT	URE A	AND TITLE OF INS	PECTOR			
8. TOTAL DEPTH OF BORING 19.0 Ft.				е Муе	ers, Geologist				
ELEV. DEPTH O CLASSIFICATION OF MAT	ΓERIALS	ĸEC.	BOX OR SAMPLE	RQD OR UD		REMARK	s	BLOWS/ 1 FT.	N-VALUE
-53.0 0.0 SAND, poorly-graded, mostly fin	e to	-		<u> </u>	1				
L medium-grained sand-sized qua	rtz, trace fine to								
- medium-grained sand-sized shell with HCl, moist, 5Y 6/1 gray (SI									
	,								
E K∷l									
At El55.0 Ft., few medium-gra	ined sand-sized								
					-56.0				
F kid			1	1	-56.0				1
			-Pos	t					
At El57.0 Ft., trace silt									
8.1									
 [∷:]									
L I∷I					-59.0				_
<u> </u>			2						
-60.1 - 7.1 ···									
- SAND, poorly-graded with silt, m	nostly	1							
fine-grained sand-sized quartz, f	ew silt, few reaction with				-61.0				
☐ [·] HCl, moist, 10Y 4/1 dark greenis			3						
- [: (SP-SM)					-62.0				
			4		-02.0				+
<u> </u>			7						
F [::!!									
F I∴HII									
-64.0 11.0 CLAY for little fine grained con	d aizad aug-t-								
CLAY, fat, little fine-grained sand trace fine to medium-grained sand	nd-sized shell,								
no reaction with HCl, moist, 10Y	4/1 dark								
greenish gray (CH)									
‡ //									
 									
- //									
F //									
-67.5 14.5 SAND, poorly-graded with silt, m									

DR	ILLING	LOC	G (Cont. Sheet)	INSTALLA* Jackson					12 0001		SHEET OF 2		FTS
PROJEC	• •			COORDINA				ш	HORIZONTAL	VE	RTICAL	0	
	ohns Coun	hy San	d Search	State P					NAD83	1	NAVD8	2	
	ON COORDI			ELEVATIO					I NADOO	!	IVAVDO		
			994,653	-53.0 F		OF B	UKIN	G					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA		REC.	BOX OR SAMPLE	RQD OR UD		REMARKS		BLOWS/	- F	N-VALUE
-72.0	19.0		fine-grained sand-sized quartz, few sil reaction with HCl, moist, 10Y 7/1 light gray (SP-SM)	t, strong greenish				-72.0					_
			NOTES: 1. USACE Jacksonville is the custodic these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC CONTROL SAMPLE SAM	TORY CATION * * * M* M*				Abbrevia	tions: Not Recorded.				

DRI	LLING	I OG	DIVISION		NSTA	LLATI	ON				SHEET 1	
			South Atlantic			ksonv					OF 2 SI	HEETS
I. PRO		, -							Remarks		\	
			and Search	ľ	10. C			SYSTEM/DATUM	HORIZONT	:	VERTICAL	
	ibracore Bo		'	COORDINATES				e, FLN (U.S. Ft.)	NAD83		NAVD8	
	B-SJSP12-		i	815 Y = 1,993,765	17. W	ANUF	AC I UI	RER'S DESIGNATIO	N OF DRILL		JTO HAMMI ANUAL HAI	
	LING AGEN		1 7 - 000,0	CONTRACTOR FILE NO.				<u> </u>	DISTURBED		DISTURBE	
	orps of Eng		- CESAJ	6738-12-5195	12. T	OTAL S	SAMPI	LES	5	i	0	(- ,
. NAM	E OF DRILL	ER			13. T	OTAL I	NUMB	ER CORE BOXES	0	•		
					14. E	LEVAT	ION G	ROUND WATER				
	CTION OF I	BORING	DEG. FROM	M BEARING					STARTED	!	COMPLET	ED
	NCLINED				15. D	ATE B	DRING	ì	07-01-1	12	07-01-	12
. THIC	KNESS OF	OVERB	URDEN N/A		16. E	LEVAT	ION T	OP OF BORING	-49.8 Ft.			
			200K N/A		17. T	OTAL I	RECO	/ERY FOR BORING	95.00 %)		
. DEP	TH DRILLED	INIO	ROCK N/A		18. S	GNAT	URE A	ND TITLE OF INSP				
в. тот	AL DEPTH C	F BOR	NG 19.5 Ft.			Stev	е Муе	rs, Geologist				
ELEV.	DEPTH	LEGEND	CLASSIFICATIO	ON OF MATERIALS	% REC	BOX OR SAMPLE	RQD OR UD		REMARK	(S	BLOWS/ 1 FT.	N-VALUE
		╀			+	1 20						
-49.8	0.0		CANID	0.6	_							
ŀ	<u>-</u>	:::	SAND, poorly-graded, medium-grained sand-	mostly fine to -sized quartz, trace fine to								
F	=	$ \cdots $	medium-grained sand-	-sized shell, no reaction								
ļ	- -	:::	with HCI, moist, 5Y 8/	1 white (SP)								
ŀ	- -	$ \cdot \cdot \cdot $										
F	_	$[\cdots]$										
ļ	- -					1						
ŀ	- 	$ \cdot\cdot $						-52.8				
ŀ	_	$[\cdots]$	∽At El52.8 Ft., trace s	silt, 5Y 5/1 gray		1		-52.8				
ļ	- -	-:::				-Pos	t					
<u></u>	-					1						
.2	-											
F	_	: :										
ļ	- -	$[\cdots]$										
ŀ	- -	$ \cdot \cdot \cdot $						-55.8				
F	-					2						
-56.8	- - 70	$ \cdot\cdot\cdot $					1					
50.0	- 7.0 -	 	SAND, poorly-graded	with silt, mostly	1							
ŀ	- -	:: <u> </u>	fine-grained sand-size	ed quartz, few -sized shell, few silt, no								
F	_	[:]	reaction with HCI, moi	ist, 5Y 5/1 gray (SP-SM)								
ļ	- -	-										
ļ	- -					1		-58.8				_
ŀ	-	[::[]] 				3						
ļ	- -	-:										
ļ	-	:.				1						
ŀ	<u>-</u>	$\ \cdot\ $										
F	-	·.				1						
ļ	- -	[:]]										
ŀ	- -	$\ \cdot\ $				1		-61.8				
F	_	·. #				4			<u> </u>			
ļ	- -	:.					1					
ŀ	-	$\ \cdot\ $										
-63.6	- _ 13.8	: #										
55.0			CLAY, fat, few fine-gra	ained sand-sized quartz,	1							
ŀ	- -		trace fine to medium-g no reaction with HCl, r	grained sand-sized shell,		1						1
-	-		greenish gray (CH)	moist, 100 t 4/1 dalk		1						1

	t.) NAD83 NAVD88
St. Johns County Sand Search COCATION COORDINATES X = 606,815 Y = 1,993,765 CLASSIFICATION OF MATERIALS SAND, clayey, mostly fine to medium-grained sand-sized quartz, some fine to coarse-grained sand-sized shell, little clay, strong reaction with HCl, moist, 10Y 5/1 greenish gray (SC) NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1 3.0/3.5 SP* 2 6.0/6.5 SP* 2 6.0/6.5 SP*	REMARKS REMARK
A = 606,815 Y = 1,993,765 CLASSIFICATION OF MATERIALS SAND, clayey, mostly fine to medium-grained sand-sized quartz, some fine to coarse-grained sand-sized shell, little clay, strong reaction with HCI, moist, 10Y 5/1 greenish gray (SC) NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION ————————————————————————————————————	REMARKS OF THE PROPERTY OF THE
CLASSIFICATION OF MATERIALS **C. 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	-69.3 Abbreviations:
SAND, clayey, mostly fine to medium-grained sand-sized quartz, some fine to coarse-grained sand-sized shell, little clay, strong reaction with HCl, moist, 10Y 5/1 greenish gray (SC) NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1 3.0/3.5 SP* 1-Post 3.0/3.5 SP* 2 6.0/6.5 SP*	-69.3 Abbreviations:
SAND, clayey, mostly fine to medium-grained sand-sized quartz, some fine to coarse-grained sand-sized shell, little clay, strong reaction with HCl, moist, 10Y 5/1 greenish gray (SC) NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1 3.0/3.5 SP* 1-Post 3.0/3.5 SP* 2 6.0/6.5 SP*	Abbreviations:
1-Post 3.0/3.5 SP* 2 6.0/6.5 SP*	
4 12.0/12.5 SP-SM* *Lab visual classification based on gradation curve. No Atterberg limits.	

ı	DRILLING	LOG	DIVISION			INSTA					SHEET 1	
			Sou	uth Atlantic			ksonv				OF 2 SI	HEETS
1.	PROJECT]					Remarks		
	St. Johns C	•	and Searc	n		1U. C			SYSTEM/DATUM	HORIZONTAL	VERTICAL	
_	Vibracore B BORING DESIG			LOCATION COORD	INATES	44 N			ie, FLN (U.S. Ft.) RER'S DESIGNATION	NAD83	NAVD8	
۷.	VB-SJSP12		•	X = 607,297	-	11. W	ANUF	ACTO	RER 5 DESIGNATIO	N OF DRILL] AUTO HAMMI] MANUAL HAN	
3.	DRILLING AGE			<u> </u>	TRACTOR FILE NO.				¦ D	ISTURBED :	UNDISTURBE	
	Corps of En	gineers	- CESAJ	1	738-12-5195	12. T	OTAL S	SAMP		5	0	- (,
١.	NAME OF DRILL	LER				13. T	OTAL I	NUMB	ER CORE BOXES	0		
5.	DIRECTION OF	BORING	3	DEG. FROM	BEARING	14. E	LEVAT	ION G	ROUND WATER			
	□ VERTICAL □ INCLINED			VERTICAL		15. D	ATE B	ORING	•	STARTED 07-01-12	07-01-	
i.	THICKNESS OF	OVERE	URDEN	N/A		16. E	LEVAT	ION T	OP OF BORING	-53.3 Ft.	•	
7.	DEPTH DRILLE	D INTO	ROCK	N/A					VERY FOR BORING	87.50 %		
_	TOTAL DEPTH	05 000	INC 1	7.0 🗗		18. S			AND TITLE OF INSPI	ECTOR		
·-	TOTAL DEPTH		ING	7.8 Ft.			_	, 	ers, Geologist			
EL	EV. DEPTH	LEGEND	С	LASSIFICATION OF	MATERIALS	" REC	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/	N-VALUE
-5	53.3 0.0								-53.3			
_	-	:::		oorly-graded, mostly								
-	2	$ \cdot \cdot \cdot $	medium-	grained sand-sized	quartz, trace fine to shell, no reaction							
• • •	᠘ ┣──		with HCI,	, moist, 5Y 8/1 white	e (SP)							\top
	F	$ \cdots $										1
	ļ.		\^+ E' = E	2 Ct four-fine	inad aand -:	<u> </u>	_	1	-55.3			
	<u>t</u>	[∷:]	Shell, trad	5.3 Ft., few fine-gra	iriea sana-sizea		1		-55.3			
-5	6.2 - 2.9		,				-Pos	AC				
	F	$\ \cdot\ \ $	SAND, po	oorly-graded with si	ilt, mostly rtz, few silt, few fine							
	Ł		to mediu	m-grained sand-size	ed shell, no reaction							1
	F	$\ \cdot\ $	with HCI,	, moist, 5Y 6/2 light		\vdash	+ -	ł	-57.3			-
	F	1:. 1	(SP-SM)				2	-				1
	L	:-										1
	-	1.:										
	F	1:. 1							-59.3			
	<u> </u>	:-					3	1	00.0			1
	Ł	-: <u> </u>					٣	1				1
	F	1:. 1										
	ļ.	:: 										
	Ė.						<u> </u>	-	-61.3			
-6	52.1 <u> </u>						4	-				
	_		SAND, cl	layey, mostly fine-g	rained sand-sized							
-6	<u> </u>		quartz, lit sand-size	ttle clay, trace fine t ed shell, no reaction	o mealum-grained with HCI moist	Н						1
	Ł		\5Y 5/1 gr	ray (SC)		/						1
	F		CLAY, fa	nt, some fine-graine	d sand-sized							
	ļ.			ace fine-grained sa with HCl, moist, 5Y								
	F		(CH)		= 5 5. 4)							
	F											1
_	,, L											1
-6	<u>55.6 12.3</u>		SAND d	layey, mostly fine-g	rained sand-sized	\dashv						
	F		quartz, so	ome clay, trace fine	-grained sand-sized							
	<u> </u>		shell, no	reaction with HCl, r	moist, 5Y 6/2 light							1
	F		olive gray	y (SC)								
	Ļ											
	E											1
	88.3 T 15.0											1

COORDINATE SYSTEM/DATUM St. Johns County Sand Search State Plane, FLN (U.S. Ft.) COCATION COORDINATES ELEVATION TOP OF BORING X = 607,297 Y = 1,992,874 CORDINATE SYSTEM/DATUM HORIZONTAL VERTICAL NAVD88 ELEVATION TOP OF BORING -53.3 Ft.	DR	LLING	LOC	G (Cont. Sh	eet)		LLATION ksonville	Dietri	ct		SHEET 2 OF 2 S	
St. Johns County Sand Search State Plane, FLN (U.S. Ft.) NAD83 NAVD88 Count County						_				UM HORIZONTAL	_	13
CLASSIFICATION OF MATERIALS SAND, silty, mostly fine-grained sand-sized quartz, little silt, few fine to medium-grained sand-sized sand-sized sand-sized sand-sized shell, no reaction with HCI, moist, 5Y 7/2 light gray (SM) -71.1 17.8			nty San	d Search						!	1	
CLASSIFICATION OF MATERIALS ROD REMARKS ROD ROD REMARKS ROD REMARKS ROD ROD REMARKS ROD	LOCATI	ON COORD	INATES	3		ELEVA	TION TO	OF E	ORING	G		
SAND, silty, mostly fine-grained sand-sized quartz, little silt, few fine to medium-grained sand-sized shell, no reaction with HCl, moist, 57 7/2 light gray (SM) CLAY, fat, little fine-grained sand-sized quartz, few fine-grained sand-sized shell, no reaction with HCl, moist, 57 6/2 light olive gray (CH) -71.1 17.8 NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION	X = 6	607,297		992,874		-53	.3 Ft.					
SAND, silty, mostly fine-grained sand-sized quartz, little silt, few fine to medium-grained sand-sized shell, no reaction with HCI, moist, 5Y 7/2 light gray (SM) CLAY, fat, little fine-grained sand-sized quartz, few fine-grained sand-sized quartz, few fine-grained sand-sized quartz, few fine-grained sand-sized shell, no reaction with HCI, moist, 5Y 6/2 light olive gray (CH) 771.1 NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1 2.0/2.5 SP* 1-Post 2.0/2.5 SP* 2 4.0/4.5 SP-SM* 3 6.0/6.5 SP-SM* 4 8.0/8.5 SP-SM* *Lab visual classification based on gradation	ELEV.	DEPTH	LEGEND	CLASSIF	FICATION OF MAT	ERIALS	REC	BOX OR SAMPLE	RQD OR UD	REMARK	BLOWS,	N-VALUE
NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1 2.0/2.5 SP* 1-Post 2.0/2.5 SP* 2 4.0/4.5 SP-SM* 3 6.0/6.5 SP-SM* 4 8.0/8.5 SP-SM* *Lab visual classification based on gradation	-69.6	16.3		quartz, little silt, sand-sized shell 5Y 7/2 light gray CLAY, fat, little few fine-grained	few fine to mediu I, no reaction with y (SM) fine-grained sand d sand-sized shell	um-grained n HCl, moist, d-sized quartz , no reaction	7,					
1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1 2.0/2.5 SP* 1-Post 2.0/2.5 SP* 2 4.0/4.5 SP-SM* 3 6.0/6.5 SP-SM* 4 8.0/8.5 SP-SM* *Lab visual classification based on gradation	-71.1	17.8		NOTES:						Abbreviations:		
2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION				1. USACE Jack		stodian for				NR = Not Recorded.		
SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION				Soils are field accordance with	d visually classifie	ed in s Classificatio	on					
ID DEPTH CLASSIFICATION 1 2.0/2.5 SP* 1-Post 2.0/2.5 SP* 2 4.0/4.5 SP-SM* 3 6.0/6.5 SP-SM* 4 8.0/8.5 SP-SM* *Lab visual classification based on gradation				-	_	ORATORY						
1-Post 2.0/2.5 SP* 2 4.0/4.5 SP-SM* 3 6.0/6.5 SP-SM* 4 8.0/8.5 SP-SM* *Lab visual classification based on gradation				ID I	DEPTH CLAS	SIFICATION	I 					
Lab visual classification based on gradation curve. No Atterberg limits.				1-Post 2 3	SP SP-SM* SP-SM*							
				*Lab visual class curve. No Atter	n gradation							

ŊΡ	ILLING	LOG	DIVISIO	N		INS	TALL	ATIC	N	<u> </u>			SHEET	1	7
		LUG	South	n Atlantic		J	lacks	sonvi	le Dis	strict			OF 2	SHEETS	<u> </u>
1. PRO		, -									emarks		\/EB=: 6		4
		-	Sand Search			10.				:	HORIZONT	AL .	VERTICA		
	/ibracore Bo		. :	LOCATION COOR	DINATES	11.				e, FLN (U.S. Ft.)	NAD83	;	NAVI TO HAM		-
	/B-SJSP12-				Y = 1,991,976	٠	WAI			LIK O DEGICINATION	JI DRILL	_	NUAL H		
3. DRI	LLING AGEN	CY	<u> </u>		TRACTOR FILE NO.	40					TURBED	UN	DISTURE	ED (UD)	
	Corps of Eng		s - CESAJ	6	738-12-5195	12.	101	TAL S	AMPL	.ES	3		0		
4. NAI	ME OF DRILL	ER				13.	тот	TAL N	IUMB	ER CORE BOXES	0				
5 DID		200111		' DEC - FDOM	' n= 1 nu	14.	ELE	VATI	ON G	ROUND WATER					
	ECTION OF E VERTICAL	SURING	•	DEG. FROM VERTICAL	BEARING						STARTED		COMPLE	TED	1
	INCLINED			!		15.	DAT	re Bo	RING	i I	07-01-12	2	07-0	1-12	
6. THI	CKNESS OF	OVERE	BURDEN	N/A		16.	ELE	VAT	ON T	OP OF BORING -	59.9 Ft.				
7. DEF	TH DRILLED	INTO	ROCK N			17.	тот	TAL R	ECO	ERY FOR BORING	92.50 %				
						18.	SIG	NAT	JRE A	ND TITLE OF INSPEC	TOR				
8. TO	AL DEPTH O	F BOR	ING 18.	8 Ft.		Ц,	_		Муе	rs, Geologist					_
ELEV.	DEPTH	LEGEND	CL	ASSIFICATION O	F MATERIALS	R	% EC.	BOX OR SAMPLE	RQD OR UD		REMARKS	6	BLOWS/	N-VALUE	
F0.0	0.0														1
-59.9	0.0	 	SAND. poo	orly-graded, most	tly fine to	-	ŀ								-0
	F		medium-gr	ained sand-sized	guartz, little										F
	L	ŀ∷·ŀ	medium-gr	rained sand-sized	d shell, trace silt, bist, 5Y 6/2 light olive										L
	-		gray (SP)	,	,	'									ŀ
	F	.··.	^L At El60.7	7 Ft., few fine gra	avel-sized shell					-61.9					F
	E					F	\dashv	1		-61.9					士
	-						1	-Pos	t						ŀ
-62.9	3.0		CAND poor	orly aradad with a	ailt maath.	_									F
	E	•	fine-graine	orly-graded with set sand-sized guar	artz, few silt, few										Ŀ
	-	:-	medium-gr	ained sand-sized	d shell, weak					-63.9					-
	F	-: <u> </u>	reaction wi	ith HCI, moist, 5	7 6/2 light olive gray			2							Ŧ
	E	$\ \cdot\ \ $	(OI -OIVI)				f								Ė
	-	:-													-5
-65.6	5.7	-:													F
	<u> </u>		SAND, clay	yey, mostly fine-	grained sand-sized										L
	Ŀ		quartz, little	e clay, few fine-g eaction with HCl	rained sand-sized moist, (little seams										Ŀ
	F		of clay), 5Y	7 5/1 gray (SC)	moiot, (iitao oodiiio										F
	F														F
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-74.1	14.2		SAND silts	y, mostly fine to i	medium-grained	\dashv									F
	ļ.		sand-sized	quartz, some sa	and to gravel-sized										þ

DRI	LLING	LOC	G (Cont. Sheet)	Jackso		Distric	ct		SHEET 2 OF 2 SI	
PROJEC	т			COORDINA				UM HORIZONTAL	VERTICAL	
St. Jo	ohns Coun	ty San	d Search	State P				!	NAVD88	
OCATIO	ON COORD	NATES	3	ELEVATIO	N ТОР	OF B	ORING	G		
X = 6	07,765	Y = 1,9	991,976	-59.9 F	t.					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	LS	ĸEC.	BOX OR SAMPLE	RQD OR UD	REMARK	BLOWS.	N-VALUE
			shell, little silt, strong reaction with HC 5Y 7/1 light gray (SM)	Cl, moist,						
<u>-77.0</u>	17.1		CLAY, fat, few fine-grained sand-sized trace fine to medium-grained sand-sizeno reaction with HCl, moist, 10GY 5/1 gray (CH)	ed shell,						
-78.7	18.8		gray (C⊓)					-78.7		
			NOTES:					Abbreviations: NR = Not Recorded.		
			USACE Jacksonville is the custodic these original files.	an for				NR – Not Recorded.		
			Soils are field visually classified in accordance with the Unified Soils Classystem.	ssification						
			3. Laboratory Testing Results							
			SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC	TORY CATION						
			1 2.0/2.5 SP 1-Post 2.0/2.5 SP 2 4.0/4.5 SP-S	*						
			*Lab visual classification based on gracurve. No Atterberg limits.	adation						
	DM 19									

DRILLING LOG South Atlantic Jacksonville District	SHEET 1
St. Johns County Sand Search Vibracore Borings 2. BORING DESIGNATION VB-SJSP12-051 X = 606,868 Y = 1,991,528 3. DRILLING AGENCY Corps of Engineers - CESAJ	OF 2 SHEETS
Vibracore Borings 2. BORING DESIGNATION LOCATION COORDINATES VB-SJSP12-051 X = 606,868 Y = 1,991,528 3. DRILLING AGENCY CONTRACTOR FILE NO. COrps of Engineers - CESAJ 6738-12-5195 12. TOTAL SAMPLES 5 4. NAME OF DRILLER 13. TOTAL NUMBER CORE BOXES 0 5. DIRECTION OF BORING DEG. FROM VERTICAL VERTICAL INCLINED INCLINED INCLINED ITOTAL SAMPLES 5 6. THICKNESS OF OVERBURDEN N/A INCLINED ITOTAL SAMPLES	
2. BORING DESIGNATION LOCATION COORDINATES VB-SJSP12-051 X = 606,868 Y = 1,991,528 VE-SJSP12-051 X = 606,868 Y = 1,991,528 VE-SJSP12-051 X = 606,868 Y = 1,991,528 VE-SJSP12-051 VE-SJSP12-051 VE-SJSP12-05195 VE-SJSP12-	· ·
VB-SJSP12-051 X = 606,868 Y = 1,991,528 3. DRILLING AGENCY Corps of Engineers - CESAJ 6738-12-5195 4. NAME OF DRILLER 13. TOTAL NUMBER CORE BOXES 0 14. ELEVATION GROUND WATER STARTE 15. DATE BORING 97-0 6. THICKNESS OF OVERBURDEN N/A 7. DEPTH DRILLED INTO ROCK N/A 8. TOTAL DEPTH OF BORING 15.5 Ft. CLASSIFICATION OF MATERIALS CLASSIFICATION OF MATERIALS VERTICAL 98-1991,528 12. TOTAL SAMPLES 5 13. TOTAL NUMBER CORE BOXES 0 14. ELEVATION GROUND WATER 15. DATE BORING -50.6 Ft. 17. TOTAL RECOVERY FOR BORING 77.00 18. SIGNATURE AND TITLE OF INSPECTOR Steve Myers, Geologist REMA -50.6 0.0	NAVD88
Corps of Engineers - CESAJ 6738-12-5195 12. TOTAL SAMPLES 5 4. NAME OF DRILLER 13. TOTAL NUMBER CORE BOXES 0 5. DIRECTION OF BORING VERTICAL 15. DATE BORING 15. DATE BORING 17. DATE BORING 17. OP-0 6. THICKNESS OF OVERBURDEN N/A 16. ELEVATION TOP OF BORING 77.00 7. DEPTH DRILLED INTO ROCK N/A 17. TOTAL RECOVERY FOR BORING 77.00 8. TOTAL DEPTH OF BORING 15.5 Ft. Steve Myers, Geologist 15.5 Ft. Steve Myers, Geologist 15.5 Ft. REMA -50.6 0.0	MANUAL HAMMER
4. NAME OF DRILLER 13. TOTAL NUMBER CORE BOXES 0 14. ELEVATION GROUND WATER 15. DATE BORING STARTE 15. DATE BORING O7-0 6. THICKNESS OF OVERBURDEN N/A 16. ELEVATION TOP OF BORING 77.00 7. DEPTH DRILLED INTO ROCK N/A 8. TOTAL DEPTH OF BORING 15.5 Ft. ELEV. DEPTH OF BORING 15.5 Ft. CLASSIFICATION OF MATERIALS ROD OR OR OR OR OR OR OR OR OR OR OR OR OR	UNDISTURBED (UD)
5. DIRECTION OF BORING VERTICAL DEG. FROM VERTICAL 15. DATE BORING 97-0 6. THICKNESS OF OVERBURDEN N/A 16. ELEVATION TOP OF BORING -50.6 Ft. 7. DEPTH DRILLED INTO ROCK N/A 17. TOTAL RECOVERY FOR BORING 77.00 8. TOTAL DEPTH OF BORING 15.5 Ft. Steve Myers, Geologist ELEV. DEPTH OF BORING 15.5 Ft. REMA	j 0
5. DIRECTION OF BORING DEG. FROM VERTICAL 15. DATE BORING 15. DATE BORING 07-0 6. THICKNESS OF OVERBURDEN N/A 16. ELEVATION TOP OF BORING -50.6 Ft. -50.6 0.0 15.5 Ft. 17. TOTAL RECOVERY FOR BORING 77.00 18. SIGNATURE AND TITLE OF INSPECTOR 18. SIGNATURE AND TIT	
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7. DEPTH DRILLED INTO ROCK N/A 8. TOTAL DEPTH OF BORING 15.5 Ft. 17. TOTAL RECOVERY FOR BORING 77.00 18. SIGNATURE AND TITLE OF INSPECTOR Steve Myers, Geologist PRODUCT OF REMANSIFICATION OF MATERIALS OF REC. OF REC. OF REMANSIFICATION OF MATERIALS OF REC. OF REC. OF REMANSIFICATION OF MATERIALS OF REMAINS OF REMANSIFICATION OF MATERIALS OF REMAINS OF REMA	COMPLETED 12 07-01-12
8. TOTAL DEPTH OF BORING 15.5 Ft. 18. SIGNATURE AND TITLE OF INSPECTOR Steve Myers, Geologist CLASSIFICATION OF MATERIALS REMA -50.6 0.0	
8. TOTAL DEPTH OF BORING 15.5 Ft. Steve Myers, Geologist ELEV. DEPTH SUBJECTION OF MATERIALS REMA -50.6 0.0	,)
ELEV. DEPTH SUN CLASSIFICATION OF MATERIALS REMA -50.6 0.0	
-50.6 0.0	
	BLOWS/ 1 FT.
- medium-grained sand-sized quartz, no reaction with HCl, moist, 5Y 8/1 white (SP)	
	
F ∷	
53.6	
At El53.6 Ft., few medium-grained sand-sized 53.6 shell, trace silt	
- Sileii, trace siit	[
	<u> </u>
At El55.6 Ft., trace shell	
At Lit50.0 Ft., trace shell	
	[
<u> </u>	
	<u> </u>
-58.6 8.0	F
SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt, trace	
	[
HCI, moist, 5Y 6/2 light olive gray (SP-SM) At El59.6 Ft., few fine-grained sand-sized	
Shell Shell	<u> </u>
	F
F : †	[
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<u>├</u> :· !	<u> </u>
 	F
-63.4 12.8 11.8 SAND clavey mostly fine grained conditions	
SAND, clayey, mostly fine-grained sand-sized quartz, some clay, no reaction with HCl, moist,	
5Y 5/1 gray (SC)	<u> </u>

DRII	LLING	LOC	G (Cont. Sheet)	INSTALLA Jackso		Dietri	·+		SHEET 2 OF 2 S	
ROJECT			-	COORDINA				JM HORIZONTAL	VERTICAL	
	hns Count	y San	d Search	State P				I .	NAVD88	
	N COORDI			ELEVATIO						
X = 60	06,868		991,528	-50.6 F	t.					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	ALS	ĸ.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-66.1	15.5							-66.1		
-66.1	15.5		NOTES: 1. USACE Jacksonville is the custod these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABOR, ID DEPTH CLASSIF 1 3.0/3.5 SF 1-Post 3.0/3.5 SF 2 5.0/5.5 SF 3 7.0/7.5 SF 4 9.0/9.5 SP-5 *Lab visual classification based on grourve. No Atterberg limits.	ATORY ICATION 				Abbreviations: NR = Not Recorded.		

	LLING		DIVISION	N		INS	TALLA	TIOI	N	<u> </u>			SHEET 1		1
		LUG	South	n Atlantic		J	Jackso	nville	e Dis	strict			OF 2 S	HEETS	
1. PRO											Remarks				1
		-	and Search			10.				SYSTEM/DATUM	HORIZONTA	VL	VERTICA		
2. BOR	ibracore Bo	rings	11	OCATION COOR	DINATES	11.				e, FLN (U.S. Ft.) RER'S DESIGNATION	NAD83		NAVD TO HAMN		-
	B-SJSP12-		i -		Y = 1,992,441					LIK O DEGIONATIO			NUAL HA		
3. DRIL	LING AGEN	CY	<u> </u>	CON	TRACTOR FILE NO.	12	TOTA	1 6/	A MDI		ISTURBED	UND	ISTURBE	D (UD)	
	orps of Eng		- CESAJ	6	738-12-5195	12.	1012	L 3A	AIVIPL	ES	5	0	1		
4. NAM	E OF DRILL	ER				13.	TOTA	LN	UMBI	ER CORE BOXES	0				
5. DIRE	CTION OF E	ORING	<u> </u>	DEG. FROM	BEARING	14.	ELEV	ATIC	ON G	ROUND WATER					
	VERTICAL INCLINED			VERTICAL		15.	DATE	воі	RING	i	STARTED 07-01-12	- 1	07-01		
6. THIC	KNESS OF	OVERB	URDEN	N/A		16.	ELEV	ATIC	ON T	OP OF BORING	-47.8 Ft.				
7. DEP	TH DRILLED	INTO I	ROCK N	I/A		17.	TOTA	L RI	ECOV	ERY FOR BORING	72.50 %				
						18.				ND TITLE OF INSPE	CTOR				
8. тот	AL DEPTH O	F BORI	ING 15.	4 Ft.		Щ		_	Mye	rs, Geologist					4
ELEV.	DEPTH	LEGEND	CL	ASSIFICATION O	F MATERIALS	R	% EC.	SAMPLE	RQD OR UD		REMARKS	i	BLOWS/ 1 FT.	N-VALUE	
-47.8	0.0														
-47.8			SAND, poo	orly-graded, mos	tly fine to	\dashv	\vdash	+							-0
	-	-:::		ained sand-size	d quartz, trace ell, no reaction with										ŀ
	_			u sand-sized sin , 5Y 8/1 white (\$											F
	-														ļ
	-														L
	_	: ::													ŀ
	-	$ \cdots $								-50.8					F
	-		At El50.8	Ft., few mediur	m-grained sand-size	d		П		-50.8					ŧ
	-		shell, trace	silt			<u> -F</u>	ost							t
	_														F
	=	$ \cdots $													F
	-														-5
	-	$ \cdots $													ţ
	- -	ŀ∷↓				L		╝		-53.8					上
	_	[: : : [`At El53.8	3 Ft., trace shell				2							Ŀ
	-														F
	-														F
	-	: ::													ţ
	 -	· . · .													þ
	-	$ \cdots $								50.0					Ł
	_	ŀ∷·ŀ	∽At El56 8	3 Ft., little mediu	m to coarse-grained	\vdash	+	\dashv		-56.8					+
	F	[:::	sand-sized				L.	3							F
	_	.:::													<u>-</u> 1
	- -	<u>[∷:</u>]													<u> </u>
	_	$ \cdots $			grained sand-sized										Ł
	-	· . :·	shell, trace 5Y 6/1 gray	fine-grained sar y	iu-sizeu snell,										F
	- -	[.∵.	J	•						-59.8					F
	- -	ŀ∷ŀ		B Ft., few fine-gr	ained sand-sized	F	1.	1		55.6					†
	_	: .:	shell				H	\exists							Ŀ
	<u> </u>	$ \cdots $													F
	= =	$ \cdots $													F
	_	: :::													L
	_	-:::													ŀ
	_	$ \cdot \cdot $													E

DRI	LLING	LOC	G (Cont. Sheet)	Jackso		Dietria	* †		SHEET 2 OF 2 S	
PROJEC			•	COORDINA				JM HORIZONTAL	VERTICAL	E13
	ohns Count	y San	d Search	State F				l l	NAVD88	
	ON COORDI			ELEVATIO						
X = 6	06,436	1 1	992,441	-47.8 F	t.					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATER	RIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-63.2	15.4							-63.2		
<u>-63.2</u>	15.4		1 3.0/3.5 1-Post 3.0/3.5 2 6.0/6.5 3 9.0/9.5	in Classification RATORY IFICATION				Abbreviations: NR = Not Recorded.		

DR	ILLING	l OG	DIVISION			INST	TALLA1	ION	<u> </u>		SHEET	1	1
1. PR			South	n Atlantic			acksor				OF 2	SHEETS	4
			ا دی است						E OF BIT See	Remarks HORIZONTAL	VERTICA		-
	St. Johns Co	•	and Search			10.							
	Vibracore Bo		:.	OCATION COOF	PRINATES	11			ne, FLN (U.S. Ft.) RER'S DESIGNATION	NAD83	NAVI AUTO HAMI		-
	VB-SJSP12-		-		Y = 1,998,329	l	A.IIO	40.0	KER O DEGIGNATIO		MANUAL H		
	LLING AGEN		I		NTRACTOR FILE NO.					DISTURBED	UNDISTURB		1
	Corps of Eng	gineers -	- CESAJ		6738-12-5195	12.	TOTA	SAMP	LES	5	0		
4. NA	ME OF DRILL	ER				13.	TOTA	NUME	BER CORE BOXES	0			
						14	EI EV/	TION (GROUND WATER	-			1
	ECTION OF E	BORING		DEG. FROM VERTICAL	BEARING	<u> </u>			OROGINATER	STARTED	COMPLE	TED	
	VERTICAL INCLINED				-	15.	DATE	BORIN	G	07-03-12	07-03		
	CKNESS OF	OVERBL	JRDEN	N/A	•	16.	ELEV	TION .	TOP OF BORING	-57.8 Ft.	, 07 00	, 12	1
7. DEI	TH DRILLED	INTO R	OCK N	I/A		17.	TOTA	RECO	VERY FOR BORING	87.18 %			
						18.			AND TITLE OF INSP				1
8. TO	TAL DEPTH O	F BORII	NG 17.	1 Ft.		<u> </u>		_	Gruber, Geologis	t			4
ELEV.	DEPTH	LEGEND	CLA	ASSIFICATION C	OF MATERIALS	RI	*C. XO	RQD OR UD		REMARKS	BLOWS/	N-VALUE	
^						\top							1
-57.8	0.0	 -	SAND. poo	orly-graded, mos	stly fine to	\dashv	\vdash	+	1				-0
	F	l. : . · . l	medium-gr	ained sand-size	ed quartz, few fine to								F
	Ŀ			ined sand-sized noist, 5Y 8/1 wh	shell, no reaction								Ł
	-		WILLI I ICI, II	11013t, 31 0/1 WI	inte (Si)								ŀ
	-	[···]							-59.8				ļ
	F	.∵. \	At El59.8	3 Ft., little mediu	ım-grained	H	1	-	-59.8			+	t
-60.6	2.8			shell, trace silt	Ü		' -P	ost					F
-00.0		Hill	SAND, poo	orly-graded with	silt, mostly			7					L
	-	.•]]	fine-graine	d sand-sized qu	artz, few silt, few fine	∍							ŀ
	F			grained sand-siz noist, 5Y 6/2 lig	red shell, no reaction				-61.8				F
	-	I∷I∐∖∖	(SP-SM)		0 ,		2		-01.0				士
	-				medium-grained		<u> </u>						ŀ
	F	·	sand-sized	SHEII									– 5
		 :-											t
	-	.:							-63.8				ŀ
	F	-					3						Ŧ
	<u> </u>	:·											Ė
-64.8	7.0		SAND silty	/ mostly fine-ar	ained sand-sized								H
	F		quartz, son	ne silt, few fine-	grained sand-sized								F
	L		shell, no re gray (SM)		, moist, 5Y 7/1 light	L			-65.8				上
	}	\	Ăt Él65.8	3 Ft., some fine	to medium-grained		4						ŀ
	F]] 	sand-sized	shell, some fin	e-grained sand-sized								F
	<u> </u>		quartz, little with HCl	e siit, trace lime	stone, strong reaction	۱							F
	F	[ŀ
	F		A+ EL 07 0) Et some fice	to accres								<u>-</u> 1
	Ŀ			B Ft., some fine d shell, few fine									Ŀ
	}			d limestone									F
	F	[]}]}]											F
	ŀ	[ŀ
	F												F
	t	[Ł
	F	[]											F
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	}	[[]]											ŀ
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PROJECT COORDINATE SYSTEM/DATUM HORIZONTAL VERTICAL St. Johns County Sand Search State Plane, FLN (U.S. Ft.) NAD83 NAVD88 LOCATION COORDINATES ELEVATION TOP OF BORING X = 613,452 Y = 1,998,329 -57.8 Ft.		INSTALL	ΔΤΙΩΝ	-	Borir	ng Designation VB-SJSP1	2-064 SHEET 2
St. Johns County Sand Search State Plane, FLN (U.S. Ft.) NAD83 NAVD88 LOCATION COORDINATES X = 613,452 Y = 1,998,329 CLASSIFICATION OF MATERIALS RELEV. DEPTH NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION DEPTH CLASSIFICATION 1 1. 2.0/2.5 SP* 2. 4.0/4.5 SP-SM* 3. 6.0/6.5 SP-SM* 4. 8.0/8.5 SP-SM* 4. 8.	DRILLING LOG (Cont. Sheet)	ı		Distri	ct		OF 2 SHEETS
CLASSIFICATION OF MATERIALS CLAS		I				l l	
X = 613,452 Y = 1,998,329 -57.8 Ft. -74.9 17.1						<u> </u>	NAVD88
CLASSIFICATION OF MATERIALS REC. DEPTH OF DEPTH CLASSIFICATION OF MATERIALS -74.9 17.1		I		OF B	ORIN	G	
-74.9 17.1 NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1 2.0/2.5 SP* 1-Post 2.0/2.5 SP* 2 4.0/4.5 SP-SM* 3 6.0/6.5 SP-SM* 4 8.0/8.5 SM* *Lab visual classification based on gradation		-57.0	rı.	νШ			- W
NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION	ELEV. DEPTH X CLASSIFICATION OF MATE	ERIALS	REC.	BOX OI SAMPL	RQD OR UD	REMARKS	BLOWS/ 1 FT. N-VALUE
NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1 2.0/2.5 SP* 1-Post 2.0/2.5 SP* 2 4.0/4.5 SP-SM* 3 6.0/6.5 SP-SM* 4 8.0/8.5 SM* *Lab visual classification based on gradation	-74.9 17.1					-74.9	
	NOTES: 1. USACE Jacksonville is the cust these original files. 2. Soils are field visually classifie accordance with the Unified Soils System. 3. Laboratory Testing Results SAMPLE SAMPLE LABOR ID DEPTH CLASSING ID DEPTH CLAS	ord in ORATORY SIFICATION SP* SP* SP-SM* SP-SM* SM*				Abbreviations:	

DDI		100	DIVISION	1		INS	TALLA	TION	1	<u> </u>		s	HEET 1		7
	LLING	LUG	South	n Atlantic			Jackso	nville	Dis	strict		0	F 2 S	HEETS	
1. PRO	JECT										Remarks]
S	t. Johns C	ounty Sa	and Search			10.	COO	RDIN	ATE	SYSTEM/DATUM	HORIZONT	AL V	ERTICAL		1
	ibracore B					L				e, FLN (U.S. Ft.)	NAD83	i_	NAVD		4
	ING DESIG		ļ.	OCATION CO		11.	MAN	JFAC	TUF	RER'S DESIGNATION	OF DRILL	=	MMAH C		
	B-SJSP12		i		Y = 1,997,452 ONTRACTOR FILE NO.	┢				! ni	STURBED		UAL HAI		-
	corps of En		- CESAJ		6738-12-5195	12.	TOT	L SA	MPL		5	0		J (UZ)	
	E OF DRILL					13.	TOTA	L NU	JMB	ER CORE BOXES	0	-			1
						-				ROUND WATER					1
	CTION OF	BORING		DEG. FROM	BEARING	L	ELEV	A110		ROOND WATER	STARTED	' C	OMPLET	ED	4
_	INCLINED			! !		15.	DATE	BOR	RING	i	07-02-1	i	07-02-		
<u> </u>	KNESS OF	OVEDBI	IDDEN	N/A		16	FI F\	ATIO	N T	OP OF BORING	-56.9 Ft.		0. 02	· <u>-</u>	1
0. 11110	KNE33 OF	OVERD	JRDEN	IN/A		⊢				ERY FOR BORING	96.32 %				1
7. DEP	TH DRILLEI	INTO F	OCK N	/A						ND TITLE OF INSPE					-
8. TOT	AL DEPTH (OF BORI	NG 18.6	6 Ft.						Gruber, Geologist	JOION				
ELEV.	DEPTH	EGEND	CLA	ASSIFICATION	OF MATERIALS	R		ш	QD OR UD	o. about, "Goologist"	REMARKS	S	BLOWS/ 1 FT.	N-VALUE	1
						4	٠,	8						Z	4
-56.9	0.0														
	-	:::	SAND, poo	rly-graded, m	ostly fine to										F
	- -	:::			zed quartz, few fine to ed shell, no reaction										ţ
	_			noist, 5Y 8/1 v											\vdash
	- -														F
	<u>-</u>	::: <u>:</u>	A. E. 50.0	. E		L		_		-58.9					Ļ
	-	[:::]`		Ft., little med shell, trace si				1		-58.9					ŀ
	-	-::-	ourid dized	orion, trace of	ı		1-1	ost							F
	_														F
	-														ŀ
	_	$ \cdots $	-Δ+ EL 60 0	Et fow mod	ium-grained sand-size	٦	$-\!\!\!\!\!+$	\dashv		-60.9					Ŧ
-61.4	4.5		shell	, i t., iew illed	ium-graineu sanu-size	ٔ ["	L	2							ţ
	<u> </u>	:. <u> </u>	SAND, poo	rly-graded wit		_									E.
	-	:-			quartz, few silt, few fin- ized shell, no reaction										-
	-	 :	with HCI, m		ght olive gray					-62.9					F
	- -	1:111	(SP-SM)	Et little fine	to medium-grained	\vdash	-+	3		-UL.3					t
	-	$ \cdot $		shell, trace lii			\vdash	\dashv							F
	_	 :		,											L
	_	$ \cdot $													Ł
	-	$[\cdot]$								-64.9					F
	_	1:11		Ft., few fine-	grained sand-sized	r	$\neg \vdash$	4							F
-65.8	- - 8.9	$ \cdot $	shell				\vdash	\dashv							ţ
55.0	-				e-grained sand-sized	\dashv									H
	- -				ne-grained sand-sized										F
-66.9	10.0		snell, no re gray (SC)	aciion with H	CI, moist, 5Y 5/2 olive										L.
	-		CLAY, fat,		ined sand-sized										F
	- -				I sand-sized shell, no 5GY 5/1 greenish gra	,									F
	-		(CH)	u i i iOi, IIIOISI,	Joi ori greenish gra	y									F
	-		. ,												ŀ
	_														F
	_														Ł
-69.8	- - 12.9														F
	 -				grained sand-sized	\neg									F
	-				d to gravel-sized shell, moist, 5Y 5/2 olive gra										ŀ
	_		(SM)			′									F
	-		_A+ E 74 0	Et some fin	o arginad cand sized										Ł
	-		quartz. som	า - เ., รบกษาไท ne fine to coal	e-grained sand-sized se gravel-sized shell,										F

		LU	G (Cont. Sheet)	Jacksor	ville l	Distric	:t		OF 2 SI	IEETS
ROJEC	т			COORDINA				JM HORIZONTAL	VERTICAL	
St. Jc	ohns Count	y San	d Search	State Pl	ane, I	FLN (U.S. F	Ft.) NAD83	NAVD88	
	ON COORDI			ELEVATIO		OF B	ORING		<u> </u>	
X = 6	13,924		997,452	-56.9 F	t.					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL	.S	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-75.5	18.6		strong reaction with HCl					-75.5		
70.0			NOTES:					Abbreviations:		
			USACE Jacksonville is the custodia these original files.	an for				NR = Not Recorded.		
			Soils are field visually classified in accordance with the Unified Soils Classystem.	sification						
			3. Laboratory Testing Results							
		SAMPLE SAMPLE LABOR ID DEPTH CLASSIF								
			1 2.0/2.5 SP* 1-Post 2.0/2.5 SP* 2 4.0/4.5 SP* 3 6.0/6.5 SP-SI 4 8.0/8.5 SP-SI	: : M *						
			*Lab visual classification based on gra curve. No Atterberg limits.	dation						

DBI	LLING	l OG	DIVISION	IN	NSTAL	LATIC	N			SHEET 1		ì
			South Atlantic				lle Dis			OF 2 SH	EETS	1
1. PRO					_				Remarks			1
		•	and Search	10				SYSTEM/DATUM	HORIZONTAL	VERTICAL	_	Ì
	ibracore Bo		LOCATION COORDINA	ATES 11				e, FLN (U.S. Ft.) RER'S DESIGNATION	NAD83	NAVD8		Ì
	B-SJSP12-		X = 614,402 Y					LIK O DEGICALION		IANUAL HAM		1
3. DRIL	LING AGEN	CY	CONTRA	CTOR FILE NO.	2. TO	TAI 9	SAMDI		STURBED U	NDISTURBED	(UD)	1
	orps of Eng		- CESAJ 6738	-12-5195	2. 10	IAL	PAIVIPL	E3	5	0		1
4. NAM	E OF DRILL	ER		13	3. то	TAL I	NUMB	ER CORE BOXES	0			1
5. DIRE	CTION OF E	BORING	DEG. FROM	BEARING 14	4. EL	EVAT	ION G	ROUND WATER				1
\boxtimes	VERTICAL INCLINED		DEG. FROM PERFORMENT OF THE PE		5. DA	TE BO	ORING	i	STARTED 07-02-12	07-02-1		Ī
6. THIC	KNESS OF	OVERB	URDEN N/A	10	6. EL	EVAT	ION T	OP OF BORING	-54.6 Ft.			
7. DEP1	TH DRILLED	INTO	ROCK N/A	17	7. то	TAL F	RECOV	ERY FOR BORING	89.50 %			1
° TOT	AL DEPTH O	E POD	ING 17.9 Ft.	18				ND TITLE OF INSPE	CTOR			1
8. 1017	AL DEPTH C	— т	17.9 Ft.					Gruber, Geologist				1
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MA	ATERIALS	ĸEC.	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/	N-VALUE	
-54.6	0.0											
-34.0			SAND, poorly-graded, mostly fi	ne to	1							-0 -
	-	-::-	medium-grained sand-sized qui gravel-sized shell, no reaction v									- L
	_		5Y 8/1 white (SP)	viti i i i i i i i i i i i i i i i i i i								_
	- -	:::										-
	- -	ŀ∷·∐						-56.6				-
	_	[:::[`At El56.6 Ft., little medium-g sand-sized shell	rained		1						-
	-		Saliu-Sizeu Sileli									- r
											1 1	_
	_											-
	-											_
	- -											- -
-	-	: ::						-59.6				
	-	$\left[\cdots \right]$	At El59.6 Ft., few medium-gr	ained sand-sized		2	1	-59.6			-	-5 -
	-	·.·.	shell		:	2-pos	ŧ					- -
ŀ	-	:-:									H	_
-	-	ŀ∷·∣										-
	- -											-
	- -											- -
}	-							-62.6				_
	-	[∷:]				3						-
-63.6	- - 9.0	:::					1					-
-03.0	_ 9.0	 : 	SAND, poorly-graded with silt,	mostly	1							<u>-</u>
	_	- <u>:</u>	fine-grained sand-sized quartz,	few silt, few fine								-
	-	·.	to medium-grained sand-sized with HCl, moist, 5Y 5/1 gray (\$\)		<u> </u>			-64.6			 	- 10
<u> </u>	- -	::		··· •····/		4]				t	- -
-	_	.: <u> </u>										_
	- -	:.										_
	- -	::									E	- -
	_	-: 										_
-67.1	12.5		CAND alovov same fine main	od oond si-s-d	1							-
	- -		SAND, clayey, some fine-grain quartz, some clay, little fine to c	eu sand-sized coarse-grained								- -
	=		sand-sized shell, weak reaction	with HCI, moist,							F	-
	- -		10Y 7/1 light greenish gray (So At El68.1 Ft., some sand to g	C)								- -
	-		shell, little clay, strong reaction									<u>-</u>
	=		5Y 8/3 pale yellow								F	-
 	-	V////			1		1				1 F	-

DRILLING LO	G (Cont. Sheet)	INSTALLA* Jackson		Dietric	- -		SHEET 2 OF 2 SH	4FFT¢
ROJECT	<u> </u>	COORDINA				UM HORIZONTAL VI	RTICAL	LLIJ
St. Johns County San	nd Search	State P				1 1	NAVD88	
OCATION COORDINATE		ELEVATIO						
X = 614,402 Y = 1,	,996,553	-54.6 F	t.					
ELEV. DEPTH Q	CLASSIFICATION OF MATERIAL	LS	REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-70.6 16.0 -72.5 17.9 -72.5 17.9	SAND, silty, mostly fine-grained sand-quartz, little silt, few sand to gravel-siz weak reaction with HCl, moist, 5Y 8/1 (SM) NOTES: 1. USACE Jacksonville is the custodia these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC 1 2.0/2.5 SP* 2 5.0/5.5 SP* 2-post 5.0/5.5 SP* 3 8.0/8.5 SP* 4 10.0/10.5 SP-SI* *Lab visual classification based on gracurve. No Atterberg limits.	an for TORY CATION TORY M*				-72.5 Abbreviations: NR = Not Recorded.		

	RILLING		DIVISIO	N		INS	TALLA	ION	<u> </u>		SHEET	1	1
		LUG	South	n Atlantic		J	lacksor	ville D	istrict		OF 2	SHEETS	<u>.</u>
1. PF	OJECT									e Remarks			
	St. Johns Co	•	and Search			10.			SYSTEM/DATUM	HORIZONTAL	VERTICA	4L	
	Vibracore Bo								ne, FLN (U.S. Ft.)	NAD83	NAVI		4
2. BC	RING DESIGN		!"	OCATION COOR		11.	MANU	FACTU	RER'S DESIGNATIO	ON OF DRILL] AUTO HAM] MANUAL H		
3. DF	ILLING AGEN		i_		Y = 1,995,665				!	DISTURBED ;	UNDISTURB		-
	Corps of Eng		- CESAJ		6738-12-5195	12.	TOTA	. SAMP		5	0	(,	
4. N	ME OF DRILL					13.	тота	NUME	BER CORE BOXES	0	_		1
													1
	RECTION OF I	BORING	i	DEG. FROM	BEARING	14.	ELEV	HION	GROUND WATER	CTARTER	LOOMEN E		-
	VERTICAL INCLINED					15.	DATE	BORIN	G	STARTED 07-02-12	07-02		
6 TL	ICKNESS OF	OVEDR	UDDEN	N/A		16	EI EV	TION :	TOP OF BORING	-57.9 Ft.	1 07-02	-12	1
									VERY FOR BORING				1
7. DE	PTH DRILLED	INTO F	ROCK	I/A					AND TITLE OF INSI				-
8. TO	TAL DEPTH C	F BORI	NG 19.	5 Ft.					Gruber, Geologis				
ELEV	. DEPTH	LEGEND	CL	ASSIFICATION O	F MATERIALS	R	%C. XO			REMARKS	BLOWS/	N-VALUE	
\vdash		+				+	\dashv	+				$\overline{}$	1
-57.	0.0	 	CAND poor	arly araded mass	thy fine to	_		_					L ₀
	t			orly-graded, mos rained sand-size	d quartz, trace fine to	,							E
	F	$[\cdots]$	medium-gr	ained sand-size	d shell, no reaction								ŀ
	F	.::.	with HCl, n	noist, 5Y 8/1 wh	ite (SP)								F
	-												-
	L	$ \cdots $	A + E E C C) [1 fav.,		, L	_	_	-59.9				Į.
	L	$[\cdots]$	shell, trace		m-grained sand-sized	¹	[1		-59.9				Ł
	-	:::	oo, a.doo	· • • • • • • • • • • • • • • • • • • •			(<u>-p</u>	<u>os</u> t					F
													F
	ŀ	:::											ŀ
	Ĺ	[:::]							-61.9				Ļ
	-	$ \cdots $					2						ŀ
-62.	F 5.0	:::											F
	-	 		orly-graded with									-5
	-	 -:	fine-graine	d sand-sized quarse-grained sand	artz, few silt, trace								ŀ
	F	1:111	reaction wi	th HCI, moist, 5	Y 5/1 gray (SP-SM)	H	_	4	-63.9			$+\!\!-\!\!\!-$	F
		:: <u> </u>	LAt El63.9	Ft., few mediu	m-grained sand-sizéd	t	3						ļ
	-	 -:	shell										F
	F												F
	Ė	:-							05.0				Ė
	-					H	+		-65.9				+
	F	-					4						F
	Ł	:-											Ł
	-	.											ŀ
	ļ.	: <u> </u>											F
-68.	- 3 - 10.4	 :- <u>†</u>											-1
-00.	- 10.4		CLAY, fat.	some fine-grain	ed sand-sized	\dashv							F
	L		quartz, son	ne sand to grave	el-sized shell, weak								L
	-		reaction wi gray (CH)		OGY 6/1 greenish								ŀ
	F		gray (OII)										F
	F												F
	F												F
	L												L
	F												F
74	F 14.0												F
-71.	9		SAND. clay	yey, mostly fine-	grained sand-sized	\dashv							\vdash
	E		quartz, son		el-sized shell, little								F

PROJECT				HVIII⊟ I	JISTU	TT .		UF ∠ SF	IEETS
KUJECI			Jackso				JM HORIZONTAL	VERTICAL	
St. Johns Count	y Sanc	l Search	State P				!	NAVD88	
OCATION COORDI	NATES		ELEVATIO	N ТОР	OF B	ORING	3		
X = 614,874	T T	95,665	-57.9 F	t.					
ELEV. DEPTH	LEGEND	CLASSIFICATION OF MATERIA	ALS	ĸEC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-76.4 18.5 -77.4 19.5		At El74.0 Ft., 5Y 5/6 olive SILT, inorganic-L, some fine-grained sand-sized quartz, some sand to grashell, no reaction with HCl, moist, N	vel-sized	-			-77.4		
		dark gray (ML) NOTES: 1. USACE Jacksonville is the custor these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABOR ID DEPTH CLASSIF 1 2.0/2.5 SI 1-post 2.0/2.5 SI 2 4.0/4.5 SI 3 6.0/6.5 SP-1 4 8.0/8.5 SP-1 *Lab visual classification based on grourve. No Atterberg limits.	ATORY ICATION 				Abbreviations: NR = Not Recorded.		

np	ILLING	1 00	DIVISIO	N		INS	TALLAT	ON	<u> </u>			SHEET	1	7
			South	h Atlantic		_	ackson					OF 2	SHEETS	<u> </u>
1. PR										Remarks				4
	St. Johns Co	-	Sand Search	l		10.			SYSTEM/DATUM	HORIZONTA	AL.	VERTIC		
	Vibracore Bo		v :1	LOCATION COOR	DINATES	11.			e, FLN (U.S. Ft.) RER'S DESIGNATIO	NAD83		NAV UTO HAM		-
	VB-SJSP12-		`		Y = 1,994,777	• • •	III.ZII	A010.	NER O DEGIONALIO		=	ANUAL H		
3. DR	ILLING AGEN	CY			ITRACTOR FILE NO.					DISTURBED	UN	DISTURE	BED (UD)	
	Corps of Eng		s - CESAJ	. 6	738-12-5195	12.	TOTAL	SAMP	LES	5		0		
4. NA	ME OF DRILL	ER				13.	TOTAL	NUMB	ER CORE BOXES	0				
- DIE	ECTION OF I	20011		' DEG EDGM		14.	ELEVA	TION G	ROUND WATER					
\boxtimes	VERTICAL INCLINED	BURIN	G	DEG. FROM VERTICAL	BEARING	15.	DATE E	ORING	3	STARTED 07-02-12	2	COMPLE 07-0		
6. TH	ICKNESS OF	OVERI	BURDEN	N/A	1	16.	ELEVA	TION T	OP OF BORING	-55.2 Ft.	<u>' </u>			
7. DEI	PTH DRILLED	INTO	ROCK N	V/A		17.	TOTAL	RECO	ERY FOR BORING	88.50 %				
8. TO	TAL DEPTH O	F BOR	ING 18	.4 Ft.		18.			ND TITLE OF INSP					
-			10.			$\overline{}$			Gruber, Geologist	ı			ш	-
ELEV.	DEPTH	LEGEND	CL	ASSIFICATION O	F MATERIALS	R	SC. SON SON SON SON SON SON SON SON SON SON	RQD OR UD		REMARKS	3	BLOWS/	N-VALUE	
-55.2	0.0													
	-		SAND, poo	orly-graded, mos	tly fine to									-0
	E	ŀ∷·∣	medium-gr	rained sand-sized	d quartz, little fine to shell, weak reaction									Ł
	-	:::		moist, 5Y 8/1 wh										-
	ļ	:::												ļ.
	Ŀ	$ \cdots $	_						-57.2					上
	-	:::			m-grained sand-sized	¹ [1		-57.2					-
	ļ.	$ \cdots $	shell, trace	e Siit			(<u>-pc</u>	<u>s</u> t						ļ
	-	ŀ∷ŀ												-
	F													F
	L	:·::						_	-59.2					上
	-	::::					2							ŀ
	F							1						F
		:·::												-5
	-	-::-		9 Et traca fina t	o occreo grained									ŀ
	F		sand-sized	d shell, no reaction	o coarse-grained on with HCI,	-	_	4	-61.2					╄
		: : :	5Y 5/1 gray	ıy			3	_						ţ
	-	$ \cdots $	sand-sized		medium-grained									ŀ
	F		30110-312GU											F
	‡	[::::							62.2					ţ
	F	ŀ∷·∣				\vdash	4	1	-63.2					\pm
	-	:::					4	4						F
	Ļ	[::::												L
	t	::::												Ł
	F	: :												F
	<u> </u>	: : :												-1
	-	ŀ∷·l												ŀ
	F		_Δ+ EL _66 3	2 Ft., little fine to	coarse grained									F
	‡	[::::			ction with HCI, moist									ļ
	Ł	$ \cdots $,									ŀ
	F	:::												F
	ţ	[: : :												t
	-	.;::												H
	ļ.	ŀ∷·∣												F
-69.1	- 13.9		CI V/\ t-t	little fine service	d aand sizad aa.d	4								Ł
	-		no reaction	inue ime-grained n with HCl. moist	d sand-sized quartz, , 10GY 6/1 greenish									F
	F		gray (CH)	,										F

DRI	LLING	LOC	G (Cont. Sheet)		TALLAT Jackson				ig Designation VB-53SP	SHEET 2 OF 2 SI	
PROJEC	т			_	ORDINA				UM HORIZONTAL	VERTICAL	
St. Jo	ohns Coun	ty San	d Search		State Pla					NAVD88	
	ON COORD				VATION		OF B	ORING	G		
X = 6	15,369	1 1	994,777		·55.2 Ft						
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATE	RIALS		ĸEC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-73.6	18.4	TEGE	NOTES: 1. USACE Jacksonville is the cust these original files. 2. Soils are field visually classified accordance with the Unified Soils System. 3. Laboratory Testing Results SAMPLE SAMPLE LABO ID DEPTH CLASS 1 2.0/2.5 1-Post 2.0/2.5 2 4.0/4.5 3 6.0/6.5	todian for d in Classifica DRATOR' SIFICATIO SP* SP* SP* SP* SP* SP* SP*	r ation Y ON	REC.	BOX	G C C C C C C C C C C C C C C C C C C C	-73.6 Abbreviations: NR = Not Recorded.	BLOW	N-VAI
	ORM 18:										

DE	ILLING	100	<u>.</u>	DIVISION	4		INS	STAL	LATIC	N			SHEE	Г 1	
		LUC	_	South	n Atlantic		<u> </u>	Jack	sonvi	lle Dis			OF 2	SHEETS	s
1. PR			_									Remarks			_
	St. Johns Co	•		Search			10.				SYSTEM/DATUM	HORIZONTAL			
2 BC	Vibracore Bo	rings	N	: 1	OCATION CO	ORDINATES	11				e, FLN (U.S. Ft.) RER'S DESIGNATION	NAD83		VD88	_
2. 50	VB-SJSP12-		•			33 Y = 1,993,871	١	IVIZ		.0.0.	LIK O DEGICINATIO		☐ AUTO HA ☐ MANUAL		
3. DR	ILLING AGEN	CY				CONTRACTOR FILE NO.	42	Τ.	TAL 6	AMDI		ISTURBED	UNDISTU	RBED (UD))
	Corps of Eng		s - C	ESAJ	i	6738-12-5195	12.		IAL	AMPL	.E3	4	0		
4. NA	ME OF DRILL	ER					13.	то	TAL N	IUMB	ER CORE BOXES	0			
5. DI	RECTION OF I	BORIN	G		DEG. FROM	BEARING	14.	EL	EVAT	ON G	ROUND WATER				
\geq	VERTICAL INCLINED				DEG. FROM VERTICAL		15.	. DA	TE BO	RING	1	STARTED 07-02-12	COMP 07-	LETED 02-12	
6. TH	ICKNESS OF	OVER	BURE	DEN	N/A		16.	. EL	EVAT	ION T	OP OF BORING	-56.0 Ft.			
7. DE	PTH DRILLED	INTO	ROC	K N	I/A		17.	то	TAL F	RECO\	ERY FOR BORING	100.00 %			
							18.				ND TITLE OF INSPI	ECTOR			
8. TO	TAL DEPTH C	F BOF	RING	20.0	0 Ft.		Ц			nne (Gruber, Geologist				4
ELEV	DEPTH	LEGEND		CLA	ASSIFICATIO	N OF MATERIALS	ŀ	" REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	SWO IS	7 FT.	
-56.0	0.0						П]
-56.0	<u> </u>		SA	ND, poo	orly-graded, r	nostly fine to	\dashv								-0
	-		me	edium-gra	ained sand-s	sized quartz, trace fine t zed shell, no reaction	0								ŀ
	F		\ wit	th HCĬ, m	noist, 5Y 8/1	white (SP)	-				-57.0 -57.0				∔
	<u> </u>		_At	El57.0) Ft., trace si	lt '			1 \-Pos		-57.0				Ė
	Ł	-:::·							(<u>-1-03</u>						Ŀ
	F														F
	ļ	:·::				e-grained sand-sized					50.0				Ė
	F	-:::	sh	ell, 5Y 5/	/1 gray		H		2		-59.0				+
	F								2						F
-60.0	4.0														Ŀ
	E	·.]				ith silt, mostly quartz, few silt, trace									Ŀ
	-	:-	fin	e to coar	se-grained s	and-sized shell, no					-61.0				
	F	.: <u> </u>	rea	action wit	th HCI, mois	t, 5Y 5/1 gray (SP-SM)	'		3						+ 5
	ţ	[:•]] 													ţ
	-	$ \cdot $													\vdash
-62.8	E 6.8	$\left\ \cdot \cdot \right\ \left\ \cdot \right\ $													F
		11111	SA	ND, silty	, mostly fine	-grained sand-sized									L
-63.3	7.3					avel-sized shell, little HCl, moist, 5Y 5/2 olive	\mathcal{A}								Ŀ
	-		gra	ay (SM)	eaction with	i ioi, iiioist, 31 3/2 olive	· /								ŀ
	F		CL	AY, fat,	little fine-gra	ined sand-sized quartz,									F
	ţ			reaction H)	with HCI, m	oist, N 3/ very dark gray	y								ţ
	\vdash		, ,	٠٠,											F
	F														F
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DR	ILLING	LOC	G (Cont. Sheet)	Jackson		Dietric	×t				SHEET 2	
PROJEC	т			COORDINA				JM ¦H	ORIZONTAL	¦ VE	RTICAL	
St. J	ohns Coun	ty San	d Search	State P					NAD83		NAVD88	
LOCATI	ON COORDI	NATES	•	ELEVATIO								
X = 6	615,783	Y = 1,9	993,871	-56.0 F	t.							
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	ALS	ĸEC.	BOX OR SAMPLE	RQD OR UD		REMARK	s	BLOWS/ 1 FT.	N-VALUE
-73.8	17.8		SAND, silty, some fine-grained sand-	.sized								
70.0	00.0		quartz, little silt, little fine to coarse gr limestone, strong reaction with HCl, r 10Y 7/1 light greenish gray (SM)	avel-sized				70.0				
-76.0	20.0		NOTES: 1. USACE Jacksonville is the custod these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFITH CLA	ATORY ICATION 				Abbreviation NR = Not	is: Recorded.			

DBI	LLING	106	DIVISION	N		INS	TALL	ATIC	N	<u> </u>		SHEET 1		7
		LUG	South	n Atlantic		١,	Jacks	onvi	lle Dis	strict		OF 2 SF	IEETS	
1. PRO											Remarks			
	St. Johns Co	•	nd Search			10.				SYSTEM/DATUM	HORIZONTAL	1		
	ibracore Bo		! •	OCATION (COORDINATES	44				e, FLN (U.S. Ft.) RER'S DESIGNATION	NAD83	NAVD8		-
	B-SJSP12-		-		369 Y = 1,993,411	l'''	WIAI	IOF		REK S DESIGNATIO	N OF DRILL [☐ AUTO HAMME ☐ MANUAL HAN		
	LING AGEN		<u> </u>	7. 0.1,	CONTRACTOR FILE NO.	1.0					DISTURBED	UNDISTURBED	(UD)	1
	corps of Eng		· CESAJ		6738-12-5195	12.	тот	AL S	SAMPI	LES	5	0		
4. NAM	E OF DRILL	ER				13.	тот	'AL N	IUMB	ER CORE BOXES	0			
5 DIPE	CTION OF I	ROPING		DEG. FRO	M BEARING	14.	ELE	VAT	ION G	ROUND WATER				
	VERTICAL	JORING		VERTICAL		15	DAT	E D/	DING	<u> </u>	STARTED	COMPLETE	D	
	INCLINED			<u> </u>							07-02-12	07-02-1	12	4
6. THIC	CKNESS OF	OVERBU	RDEN	N/A		16.	ELE	VAT	ION T	OP OF BORING	-59.6 Ft.			_
7. DEP	TH DRILLED	INTO R	OCK N	I/A						ERY FOR BORING				
8 TOT	AL DEPTH C	E BODIA	JG 15	1 Ft.		18.				AND TITLE OF INSP				
8. 101	AL DEPIR C		10.	1 Γ ι .		Ц_	_		anne	Gruber, Geologist I	i			-
ELEV.	DEPTH	LEGEND	CLA	ASSIFICATION	ON OF MATERIALS	F	«EC.	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/	N-VALUE	
E0.6	0.0													1
-59.6	0.0				mostly fine to	\dashv	 							-0
		l.:::l	medium-gr	ained sand	-sized quartz, no reactior	1								F
	_	1, , ,1	-	-	1 white (SP)	., L				-60.6				丰
			Al El60.0 Shell	rt., iew iii	edium-grained sand-size	iu	Ţ	1		-60.6				Ŀ
	_						Ľ	-Pos	L					ŀ
	-	····												F
	-													Ŀ
	_	ŀ∷k	Δt FL -62 6	6 Ft., 5Y 5/	l grav	F		_		-62.6				╁
	- -	-::-	At L102.0	71 (., 51 5/	gray		L	2						Ė
-63.6	4.0													Ŀ
	-				with silt, mostly d quartz, few silt, trace									ŀ
	_	.·	fine to med	lium-graine	d sand-sized shell, no					-64.6				F
	_	-: <u> </u>	reaction wi	th HCI, moi	st, 5Y 5/1 gray (SP-SM))		3						- 5
		$\ \cdot\ \ $					F							Ŀ
	_													F
	_	 -:												F
		$\ \cdot\ \ $	At FL -66.5	Ft (few s	eams of silt),	_				-66.6				Ļ
	 -		5Y 8/1 whit					4						ţ
-67.6	8.0													Ł
	-		CLAY, fat,	little fine-gr	rained sand-sized quartz,									F
	_		no reaction gray (CH)	ı Willi HCi, I	moist, 10Y 6/1 greenish									ļ.
	_		5 7 (- 1)											F
	_													F
	<u> </u>													-10
	_													Ė
	-													ŀ
	-				fine-grained sand-sized									F
74.0	- 10.0			tine to coa reaction w	rse-grained sand-sized ith HCl									ţ
-71.6	12.0				e-grained sand-sized	\dashv								F
	_	11111	quartz, son	ne sand to	gravel-sized limestone,									F
	_				coarse-grained sand-size with HCl, moist,	d								L
	E			ght gray (S										Ł
	-		_	- •										F
	_													F
	<u> </u>	[###												Ł

DRILLING L	LOG (Cont. Sheet)	INSTALLATIO Jacksonvi		ict		SHEET 2 OF 2 SH	IFFTS
ROJECT		COORDINATE			UM HORIZONTAL V	ERTICAL	13
St. Johns County	Sand Search	State Plan			1	NAVD88	
OCATION COORDIN	ATES	ELEVATION 1	гор оғ	BORIN			
X = 614,869 Y		-59.6 Ft.					
ELEV. DEPTH	CLASSIFICATION OF MATERIAL	LS	% EC. BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-74.7 15.1	NOTES: 1. USACE Jacksonville is the custodia these original files. 2. Soils are field visually classified in accordance with the Unified Soils Class System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATID DEPTH CLASSIFIC TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL THE TOTAL TO TH	an for sification TORY CATION			-74.7 Abbreviations: NR = Not Recorded.	80	\\ \text{\tinx{\text{\tinx{\tint{\text{\text{\text{\tinx{\tint{\text{\text{\text{\text{\text{\text{\text{\text{\tinx{\tint{\text{\text{\text{\text{\texi{\text{\tinx{\tinx{\tinx{\tinx{\tinx{\tinx{\tinx{\tinx{\text{\tinx{\ti

			DIVISION	N		INS	TALLA	TION	ı	<u> </u>			SHEET	1	7
	LLING	LUG	South	n Atlantic		L.	Jackso	<u>nville</u>	Dis	strict			OF 2	SHEETS	s
1. PRO	JECT					9.	SIZE A	ND T	YPE	OF BIT See	Remarks				
S	St. Johns Co	ounty S	and Search			10.	COO	RDINA	ATE	SYSTEM/DATUM	HORIZONT	AL	VERTICA	\L	
	/ibracore Bo									e, FLN (U.S. Ft.)	NAD83		NAVI	D88	
	ING DESIGN		L	OCATION COOR		11.	MAN	JFAC	TUF	RER'S DESIGNATION	OF DRILL	=	UTO НАМ		
	/B-SJSP12- LLING AGEN		<u> </u>		Y = 1,992,944 NTRACTOR FILE NO.	_					ISTURBED	_	ANUAL H		_
_	Corps of Eng		CESAL		6738-12-5195	12.	TOT	L SA	MPL		4	Ur	idisturb 0	ED (UD)	Ή.
	IE OF DRILL		- OLOAO		7700 12 0100	12	TOT	I MII	IMP	ER CORE BOXES	0	<u> </u>			1
						\vdash					0				-
	ECTION OF I	BORING	;	DEG. FROM VERTICAL	BEARING	14.	ELEV	ATIO	N G	ROUND WATER	1		I		
_	VERTICAL INCLINED			LKIIOAL	į	15.	DATE	BOR	RING	•	STARTED 07-02-1	2	07-02		
					<u>'</u>	10					-		01-02	2-12	-
6. THI	CKNESS OF	OVERB	URDEN	N/A		⊢				OP OF BORING	-59.2 Ft.				-
7. DEP	TH DRILLED	INTO I	ROCK N	I/A						ERY FOR BORING	92.50 %				4
8. тот	AL DEPTH C	F BORI	ING 18	8 Ft.		18.				IND TITLE OF INSPE Gruber, Geologist	CIUK				1
	<u> </u>	— т				┰		_	iic (oraber, Geologist				ш	+
ELEV.	DEPTH	LEGEND	CLA	ASSIFICATION O	F MATERIALS	R	ec.	SAMPLE	QD OR UD		REMARK	s	BLOWS/	N-VALUE	
50.0															1
-59.2	0.0	 	SAND non	orly-graded, mos	tly fine to	\dashv	\vdash	+							-0
	F	<u> ::: </u>	medium-gr	ained sand-size	d quartz, few fine to										F
	L	$ \cdot \cdot $		ined sand-sized noist, 5Y 8/1 wh	shell, no reaction	L				-60.2					上
	-		WILLI I ICI, II	noist, 51 6/1 wii	ile (SF)			1		-60.2					ŀ
	ļ	[∷:]					<u> </u>	ost							F
	<u> </u>	$ \cdot \cdot $													F
	-														ŀ
	<u> </u>	[.∵. .	N+ □ 60 0) Et trace silt t	race shall	L	_	_		-62.2				_	+
	<u> </u>	$ \cdot \cdot $	ALEI02.2	2 Ft., trace silt, to	ace shell		L	2							Ŀ
-63.2	4.0														ŀ
	-			orly-graded with											F
	<u> </u>	·. †	sand to gra	a sana-sizea qui avel-sized shell	artz, few silt, trace no reaction with HCl					64.0					þ
	_	$\ \cdot\ \ $, moist, 5Ÿ 5	5/1 gray (SP-SN	1)	´	-	3		-64.2					士:
	-	·:	Shell	2 Ft., few fine-gr	ained sand-sized		\vdash	4							ŀ
	_	:-	OHOH												F
	t	$\ \cdot\ \ $													Ŀ
	-	·:													ŀ
	F	<u> </u> :-];													F
	ţ	$\ \cdot\ $													ţ
	-	:.													\vdash
	F	:: l k	-Δ+ El . 67.7	7 Et some sone	I to gravel-sized										F
-68.2	9.0		shell, weak	reaction with H	CI										L
	}		SAND, silty	y, mostly fine-gra	ained sand-sized	-									ŀ
	F	[[:]	quartz, little	e silt, trace fine t shell no reaction	o medium-grained on with HCl, moist,										F
	<u> </u>			e gray (SM)	on with Fiol, Holst,										-1
	}			, ,											+
	F	[###													F
	<u> </u>]													ţ
-71.0	11.8		SAND non	orly-graded with	silt mostly	_									+
	F	<u> </u> :-]			siit, mostiy artz, few silt, no										F
	<u> </u>	[:·][reaction with	th HCl, moist, 5											Ł
	H	:: <u> </u>	(SP-SM)												F
	ļ.	<u> </u> [::]													ţ
-73.2	14.0	<u>[:]]</u>													E
	-	ШШ			ained sand-sized										F
	ţ	 	quartz, little 5Y 6/1 grav		n with HCl, moist,										ţ

DRILLING LOG (Cont. Sheet)						INSTALLA Jackso		Distric	~†			12-	SHEET 2	
PROJEC	т					COORDINA				JM	HORIZONTAL	¦ VE	RTICAL	
	ohns Count	y San	d Search			State P					NAD83		NAVD88	
OCATI	ON COORDI	NATES	3			ELEVATIO	N ТОР	OF B	ORIN	3	•	•		
X = 6	614,008	Y = 1,	992,944			-59.2 F	t.							
ELEV.	DEPTH	LEGEND	CLAS	SSIFICATION	OF MATERIAL	.s	REC.	BOX OR SAMPLE	RQD OR UD		REMARK	s	BLOWS/ 1 FT.	N-VALUE
-75.1	15.9		SAND, claye quartz, some	ey, some fine-	-grained sand	l-sized								
-76.2			clay, strong r 5Y 5/1 gray SAND, silty, quartz, some limestone, st 10Y 7/1 light	reaction with (SC) some fine-gree fine to coars trong reaction	HCI, moist, rained sand-s se gravel-size n with HCI, me	ized ed	-							
-78.0	18.8		NOTES: 1. USACE J these origina 2. Soils are accordance of System. 3. Laborator SAMPLE ID 1 1-Post 2 3 *Lab visual c curve. No Affine No Aff	Jacksonville is al files. field visually with the Unifiery Testing ReSAMPLE DEPTH 1.0/1.5 1.0/1.5 3.0/3.5 5.0/5.5	classified in ed Soils Class sults LABORA* CLASSIFIC SP* SP* SP-SP-Sh	TORY CATION				-78.0 Abbrevia NR =	ations: Not Recorded.			

DRII	LLING	LOG	DIVISION	III	NSTAL					SHEET 1	
			South Atlantic	\perp		sonvi				OF 2 SI	HEETS
I. PRO									emarks		
		•	and Search	1	0. CC			SYSTEM/DATUM	HORIZONTAL	VERTICAL	
	ibracore Bo		LOCATION COORDINATES		4 M/			ne, FLN (U.S. Ft.)	NAD83	NAVD8	
	B-SJSP12		X = 613,127 Y = 1,992,46	- 1	1. IVIA	MUFA	AC I U	RER 5 DESIGNATION	OF DRILL] AUTO HAMMI] MANUAL HAN	
	LING AGEN		CONTRACTOR FILE					DIS	TURBED	UNDISTURBE	
С	orps of En	gineers	- CESAJ 6738-12-5195	1	2. TO	TAL S	SAMP	LES	5	0	` ,
4. NAM	E OF DRILL	.ER	·	1	з. то	TAL I	NUMB	SER CORE BOXES	0		
				1	4. EL	EVAT	ION G	ROUND WATER			
	CTION OF	BORING	DEG. FROM BEARING VERTICAL	-					STARTED	COMPLET	ED
	NCLINED			1	5. DA	TE BO	ORING	3	07-02-12	07-02-	12
6. THIC	KNESS OF	OVERBU	URDEN N/A	1	6. EL	EVAT	ION 1	OP OF BORING	56.6 Ft.		
7 DEDT		LINTO	DOCK NI/A	─ 1	7. TO	TAL F	RECO	VERY FOR BORING	82.50 %		
7. DEPI	TH DRILLED	INIUR	ROCK N/A	1	8. SI	SNAT	URE A	AND TITLE OF INSPEC	TOR		
8. TOT <i>i</i>	AL DEPTH (OF BORI	NG 17.3 Ft.			Maria	anne	Gruber, Geologist			
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS		% REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/	N-VALUE
\dashv		+-+			+						┰
-56.6	0.0	├ ├	CAND poorly graded mostly fire surfaced		4			-			
<u> </u>	- -	$ \cdot\cdot\cdot $	SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace fine to medium-grained								1
}	-	$ \cdots $	sand-sized shell, no reaction with HCI, mo								
F	-	-:	5Y 8/1 white (SP)								
<u> </u>	- -	$ \cdots $						-58.6			1
-	-	···	∽At El58.6 Ft., trace silt			1		-58.6			+
F	-					ı (-Poş	t				
.6					+		_				╀
	- -	-::-									
}	-	:·::				L		-60.6			
F	-	:::\	∽At El60.8 Ft., 5Y 5/1 gray			2					
-61.6	- 5.0	:::	· • • • • • • • • • • • • • • • • • • •				1				1
<u> </u>		 	SAND, poorly-graded with silt, mostly		1						
ŀ	- -	·: 	fine-grained sand-sized quartz, few silt, tra sand to gravel-sized shell, no reaction with	ace h HC!							
F	_	$\ \cdot\ \ _{\mathcal{K}}$	moist, 5Y 5/1 gray (SP-SM)			<u> </u>	1	-62.6			
ļ	- -	[:]]]\	At El62.6 Ft., few fine to medium-graine sand-sized shell	ed		3					
<u> </u>	<u>-</u>		3a114-31254 311511								
}	- -	[:-]]∦									
F	-	·:						-64.6			
ļ	- -	 :- ∦				4]				
<u> </u>	- -	 .:									1
ŀ	-	:. 									
F	_	[:-]]∦									
-66.6	10.0	 - -	SAND, silty, some fine-grained sand-sized	4	4						
-67.3	- - 10.7		quartz, some sand to gravel-sized shell, lit	tle							
-07.3	- 10. <i>1</i>	╫╨╫	silt, strong reaction with HCl, moist, 5Y 5/	1 gray	/						
F	-	∷: '	\(SM) SAND, poorly-graded, mostly fine to	/							
ļ	- -	:::	medium-grained sand-sized quartz, trace								
E	_		coarse-grained sand-sized shell, no reactivith HCl, moist, 5Y 7/1 light gray (SP)	on							
F	-	$ \cdots $	with 1101, 1101st, 31 1/1 light gray (3F)								
ļ	- -	:::									
-70.1	13.5				4						
}	-		SAND, clayey, some fine-grained sand-siz quartz, some sand to gravel-sized shell, lit								
ļ	- -		clay, weak reaction with HCl, moist, N 5/ g	gray							
_, _ <u></u>	- 450		(SĆ)	-							1
-71.6	15.0	V////			1	Ī	l	1			

DRI	LLING	LOC	G (Cont. Sheet)	Jackso		Distri	ct		SHEET 2 OF 2 SI	IEETS
PROJEC	т			COORDINA				UM HORIZONTAL	VERTICAL	
St. J	ohns Count	y San	d Search	State P				l l	NAVD88	
OCATI	ON COORDI	NATES	3	ELEVATIO	N ТОР	OF B	ORIN	G		
X = 6	13,127	Y = 1,	992,464	-56.6 F	t.		_			
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL	LS	REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
			SAND, silty, some fine-grained sand-s quartz, some sand to gravel-sized shel silt, weak reaction with HCl, moist, N 7 gray (SM)	II. little						
-73.9	17.3	11111	NOTES:					-73.9 Abbreviations:		
			USACE Jacksonville is the custodia these original files.	an for				NR = Not Recorded.		
			Soils are field visually classified in accordance with the Unified Soils Classystem.	ssification						
			3. Laboratory Testing Results							
			SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC	TORY CATION						
			1 2.0/2.5 SP* 1-Post 2.0/2.5 SP* 2 4.0/4.5 SP* 3 6.0/6.5 SP-SI 4 8.0/8.5 SP-SI	: М*						
			*Lab visual classification based on gra curve. No Atterberg limits.	dation						
	ORM 183									

	ופט	LLING	l UG	DIVISI				ı	TALL						SHEET 1		1
		ROJECT South Atlantic						_			lle Dis				OF 2 SH	IEETS	٤
1.			, -										Remarks		\/ED=:0:-		4
		it. Johns Co	-	and Seard	cn			10.				SYSTEM/DATUM	HORIZONT	AL	VERTICAL	•	I
2.		ibracore Bo		<u> </u>	LOCATION	COORI	DINATES	11.				e, FLN (U.S. Ft.) RER'S DESIGNATIO	N OF DRILL		NAVD8		\dashv
		B-SJSP12-		•	1		Y = 1,992,026	l	IVIA	10.7	.0.0.	LK O DEGIONATIO	N OI DILLE	_	ANUAL HAN		
3.		LING AGEN			1 / 0		TRACTOR FILE NO.	<u> </u>					DISTURBED		IDISTURBED		_
		orps of Eng	_	- CESAJ		6	738-12-5195	12.	то	TAL S	SAMPL	.ES	4	-	0		
4.	NAM	E OF DRILL	ER					13.	TO	TAL N	IUMB	ER CORE BOXES	0				
L					'		1	14.	ELE	VAT	ION G	ROUND WATER					1
5.		CTION OF E	BURING	•	DEG. FRO	L	BEARING						STARTED		COMPLETE	:D	1
	<u> </u>	INCLINED					1	15.	DAT	E BC	ORING	i	07-02-1	2	07-02-1	12	
6.	THIC	KNESS OF	OVERB	URDEN	N/A			16.	ELE	VAT	ION T	OP OF BORING	-59.3 Ft.				
7.	DEP	TH DRILLED	INTO	ROCK	N/A			17.	тот	TAL F	RECOV	ERY FOR BORING	90.00 %				1
								18.	SIG	NAT	URE A	ND TITLE OF INSP	ECTOR				1
8.	тот	AL DEPTH O	F BOR	ing 1	8.8 Ft.			<u>L_</u>	ا	Maria	nne (Gruber, Geologist					
E	LEV.	DEPTH	LEGEND	c	CLASSIFICAT	ION OI	MATERIALS	R	% REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	5	BLOWS/ 1 FT.	N-VALUE	
		-															1
-	59.3	0.0	 	SAND. p	oorly-graded	l. most	ly fine to	\dashv	ŀ								ŀ
		-		medium-	grained san	d-sized	quartz, no reaction										F
<u>)</u> .:	3	_	$ \cdots $, moist, 5Y 8		, ,					-60.3					┇
		- -			ed shell, trac		medium-grained			1		-60.3					ŀ
	- 1	-	$ \cdots $, , , , , , , , , , , , ,				١	-Pos	L						┢
		- -	::::														F
	<u> </u>	-	[::::									00.0					ŀ
-	62.3	3.0		SAND. p	oorly-graded	l with s	silt. mostly	+	-	2		-62.3					+
		= =		fine-grain	ned sand-siz	ed qua	rtz, few silt, few		-	2							F
			-:				ell, no reaction with e gray (SP-SM)										ţ
	ŀ	-	:• ∦	1101, 11101	3t, 31 0/2 lig	ji it Oliv	c gray (or -own)										┢
		-	.									-64.3					F
		-	 		4.3 Ft., little	mediur	m-grained			3							Ŧ
		-	:-	sand-size	ed shell				ŀ								t
-	65.3	6.0		SAND. s	iltv. mostly f	ine-gra	ined sand-sized	-									ŀ
		-]	quartz, s	ome sand to	grave	-sized shell, little										F
		- 		(0)	4.	th HCI	moist, 5Y 7/1 light										ţ
-	66.6	_ 7.3 -		GLAY, fa		araineo	sand-sized quartz,	\dashv									ŀ
	-	-		no reacti	on with HCI	moist	N 4/ dark gray										F
		- -		(CH)													Į
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PROJECT St. Johns County Send Search St. Johns County Send Search St. Johns County Send Search State Plane, FLN (U.S. Ft.) NAD83 NAVD88 LELV. DEPTH CLASSIFICATION OF MATERIALS SAMD, Legy, mostly fine-grained sand-sized gaintz, N (Gray) SAMD, Legy, mostly fine-grained sand-sized gaintz, N (Gray) SAMD, Legy, mostly fine-grained sand-sized gaintz, N (Gray) SAMD, Legy, mostly fine-grained sand-sized gaintz, N (Gray) SAMD, Legy, mostly fine-grained sand-sized gaintz, N (Gray) SAMD, Legy, mostly fine-grained sand-sized gaintz, or section with H (L) midst, (some seams of clay), 10Y 6/1 greenish gray (SC) 778.1 18.8 NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are fled visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1 1 10/15 SP 1-Post 1 0/15 SP 1-Post 1 0/15 SP 1-Dost 1 0/15 SP 1-Soult 1 10/15 SP 1-Bost 1 0/15 SP 1-Bost 1 0/15 SP 1-Bost 1 0/15 SP 1-Bost 1 0/15 SP 1-Bost 1 0/15 SP-SM* 1-But visual classification based on gradation curve. No Atterberg limits.	DRI	LLING	LOC	G (Cont. Sheet)	INSTALLA		Dietri	ct		SHEET 2 OF 2 S	
St. Johns County Sand Search State Plane, FLN (U.S. Ft.) NAD83 NAVD88 LOCATION COORDINATES X = 612,254 Y = 1,992,026 CLASSIFICATION OF MATERIALS PLEV. DEPTH CLASSIFICATION OF MATERIALS At EL74.3 Ft., some fine-grained sand-sized quartz, N 5/ gray SAND, clayey, mostly fine-grained sand-sized quartz, some clay, trace fine-grained sand-sized shell, no reaction with HCl, moist, (some seams of clay), 10Y 6/1 greenish gray (SC) NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1 1.0/1.5 SP* 1Post 1.0/1.5 SP* 2 3.0/3.5 SP-SM* 3 5.0/5.5 SP-SM* "Lab visual classification based on gradation	PROJEC	т			_				UM HORIZONTAL		EE.TO
ELEV. DEPTH OCCUPIED THE PART OF THE PROPERTY			ty San	d Search					ı	!	
CLASSIFICATION OF MATERIALS CLAS					1					•	
-75.3 16.0 SAND, clayey, mostly fine-grained sand-sized quartz, N 5/ gray SAND, clayey, mostly fine-grained sand-sized quartz, some clay, trace fine-grained sand-sized shell, no reaction with HCl, moist, (some seams of clay), 10Y 6/1 greenish gray (SC) -78.1 18.8 NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION	X = 6	12,254		992,026	-59.3 F	t.					
At El74.3 Ft., some fine-grained sand-sized quartz, N 5/ gray SAND, clayey, mostly fine-grained sand-sized quartz, some clay, trace fine-grained sand-sized shell, no reaction with HCl, moist, (some seams of clay), 10Y 6/1 greenish gray (SC) -78.1 18.8 NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1 1.0/1.5 SP* 1-Post 1.0/1.5 SP- 1-Post 1.0/1.5 SP-SM* 3 5.0/5.5 SP-SM* *Lab visual classification based on gradation	ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	ıLS	REC.	BOX OR SAMPLE	RQD OR UD	REMA	RKS (S)	N-VALUE
quartz, some clay, trace fine-grained sand-sized shell, no reaction with HCl, moist, (some seams of clay), 10Y 6/1 greenish gray (SC) -78.1 18.8 NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1. 1.0/1.5 SP* 1-Post 1.0/1.5 SP-SM* 3 5.0/5.5 SP-SM* *Lab visual classification based on gradation	-75.3	16.0		quartz, N 5/ gray							
NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1.0/1.5 SP* 1-Post 1.0/1.5 SP* 2 3.0/3.5 SP-SM* 3 5.0/5.5 SP-SM* *Lab visual classification based on gradation				quartz, some clay, trace fine-grained shell, no reaction with HCl, moist, (so	sand-sized						
1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1 1.0/1.5 SP* 1-Post 1.0/1.5 SP* 2 3.0/3.5 SP-SM* *Lab visual classification based on gradation	-78.1	18.8	(/////								
2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION				USACE Jacksonville is the custod	ian for						
SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION				Soils are field visually classified in accordance with the Unified Soils Cla	ssification						
ID DEPTH CLASSIFICATION				3. Laboratory Testing Results							
1-Post 1.0/1.5 SP* 2 3.0/3.5 SP-SM* 3 5.0/5.5 SP-SM* *Lab visual classification based on gradation											
Lab visual classification based on gradation curve. No Atterberg limits.				1-Post 1.0/1.5 SP 2 3.0/3.5 SP-S	o 6M*						
				*Lab visual classification based on gracurve. No Atterberg limits.	adation						

DRILLIN	G I OG	DIVISION	IN	STALL	ATIO	ON			SHEET 1	
1. PROJECT	- LUG	South Atlantic				lle Dis			OF 2 SI	IEETS
	n Count : C=	and Coarob					SYSTEM/DATUM	Remarks	VERTICAL	
	s County Sa e Borings	inu search	10				e, FLN (U.S. Ft.)	NAD83	NAVD8	
2. BORING DES		LOCATION COORDINATE	S 11				RER'S DESIGNATIO		NAVDO	
VB-SJSF		X = 611,398 Y = 1,							MANUAL HAI	
3. DRILLING A		CONTRACTO	112	2. то	TAL S	SAMPL	ES	i	NDISTURBE) (UD)
Corps of 4. NAME OF DE	Engineers -	CESAJ 6738-12	2-5195				-	5	0	
4. NAME OF DE	KILLEK		13	в. то	TAL I	NUMB	ER CORE BOXES	0		
5. DIRECTION	OF BORING	DEG. FROM BEA	RING 14	. ELE	VAT	ION G	ROUND WATER			
□ VERTICA □ INCLINE		VERTICAL	15	. DAT	ГЕ ВС	ORING)	STARTED 07-02-12	07-02-	
6. THICKNESS	OF OVERBU	IRDEN N/A					OP OF BORING	-58.9 Ft.		
7. DEPTH DRIL	LED INTO R	OCK N/A					ERY FOR BORING	75.00 %		
8. TOTAL DEPI	TH OF BORIN	IG 15.9 Ft.	18				IND TITLE OF INSP Gruber, Geologist			
ELEV. DEPT	EGEND	CLASSIFICATION OF MATE	RIALS	%REC.	BOX OR SAMPLE	RQD OR UD	Gruber, Geologist	REMARKS	BLOWS/	N-VALUE
					ΜĞ				<u>m</u>	Ž
-58.9 0.0										
7.1		SAND, poorly-graded, mostly fine t medium-grained sand-sized quartz								+-
<u>'''</u>		medium-grained sand-sized quartz with HCl, moist, 5Y 8/1 white (SP)								
<u> -</u>	[:::]	,								
Ł	:::									
F		At El60.9 Ft., few fine-grained sa	and-sized	\vdash			-60.9 -60.9			+-
ļ.		shell, trace silt	aria-sizea		1 -Pos	.	-00.9			
L	:::				, US					
-	_ [.::.]\ _.	At El62.1 Ft., 5Y 6/2 light olive g	ray							
ļ	:::: `	-,					-62.9			
F	:::				2		-UL.3			+
-	[::::]									
-63.9 5.0	1::1	SAND, poorly-graded with silt, mos	stlv							
ļ.	.: 	fine-grained sand-sized quartz, few	v silt, few fine							
Ł		to medium-grained sand-sized she with HCI, moist, 5Y 6/2 light olive of					-64.9			\perp
F		with HCI, moist, 54 6/2 light olive g (SP-SM)	yıay		3					
ļ	[::][,								
<u> </u>	- <u>:</u>									
ŀ	 ::									
F	.: 			\vdash			-66.9			+-
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Ŀ	 :∙ <u>†</u>									
}	- <u> </u>									
 -	·: t]									
<u> </u>	:·									
-69.7 10.8	[-: + <u>i</u>]									
-69.9 11.0		SAND, clayey, mostly fine-grained								
ļ		quartz, little clay, few fine-grained s shell, no reaction with HCl, moist, (
71 1 - 10 0		of clay), 5Y 5/2 olive gray (SC)	` /							
-71.1 <u>12.2</u>		SAND, silty, mostly fine-grained sa	and-sized							
ļ		quartz, some sand to gravel-sized silt, weak reaction with HCl, moist,								
<u> </u>		gray (SM)	/ [
-72.7 T 13.8		CLAY, fat, little fine-grained sand-s no reaction with HCl, moist, 5GY 5								
- 12.1 - 13.0		no reaction with HCI, moist, 5GY 5 gray (CH)	n greensn /							
ţ		SAND, silty, mostly fine-grained sa								
F		quartz, little silt, trace fine to mediu sand-sized shell no reaction with h								

DRILLING LO	OG (Cont. Sheet)	Jacksonville		ct		SHEET 2 OF 2 SH	
PROJECT		COORDINATE			JM HORIZONTAL	VERTICAL	
St. Johns County Sa		State Plane			l .	NAVD88	
OCATION COORDINAT	res	ELEVATION TO	P OF B	ORING			
X = 611,398 Y =	1,991,564	-58.9 Ft.					
ELEV. DEPTH 0	CLASSIFICATION OF MATERIALS	.s Rec	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-74.8 15.9	5Y 5/2 olive gray (SM)				-74.8		
-17.0	NOTES: 1. USACE Jacksonville is the custodiar these original files. 2. Soils are field visually classified in accordance with the Unified Soils Class System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORAT ID DEPTH CLASSIFICATION DE	sification FORY CATION			Abbreviations: NR = Not Recorded.		

DBI	LLING	LOG	DIVISIO	N		INS	STAL	LATIC	ON			SHEET 1		i
		LUG	South	n Atlantic			Jack	sonvi	lle Dis	strict		OF 2 SH	IEETS	İ
1. PRO											e Remarks			İ
	St. Johns Co	•	and Search			10.				SYSTEM/DATUM	HORIZONTAL	VERTICAL		İ
	/ibracore Bo		3.0	OCATION C	OORDINATES	44				e, FLN (U.S. Ft.) RER'S DESIGNATIO	NAD83	NAVD8		
	/B-SJSP12-				667 Y = 1,991,654	l	. IVIA	NUF	40101	KER S DESIGNATIO		AUTO HAMME MANUAL HAM		i
	LING AGEN			71 0.0,0	CONTRACTOR FILE NO.	1						JNDISTURBED		l
	Corps of Eng		- CESAJ	į	6738-12-5195	12.	. 10	TALS	SAMPI	LES	3	0		
4. NAN	IE OF DRILL	ER				13.	. то	TAL N	NUMB	ER CORE BOXES	0			İ
5. DIRI	ECTION OF E	RORING		DEG. FROM	BEARING	14.	. ELI	EVAT	ION G	ROUND WATER				i
	VERTICAL			VERTICAL		15	DA.	TE RO	ORING		STARTED	COMPLETE	:D	i
	INCLINED			<u>i </u>	<u> </u>	ļ					07-04-12	07-04-1	2	
6. THI	CKNESS OF	OVERBU	JRDEN	N/A		16.	. ELI	EVAT	ION T	OP OF BORING	-59.3 Ft.			
7. DEP	TH DRILLED	INTO R	OCK N	I/A						ERY FOR BORING				İ
8 TOT	AL DEPTH O	E BODI	NG 19	8 Ft.		18.				AND TITLE OF INSI	PECTOR			İ
0. 101	AL DEPTH O		10.	ο Γι.		Ц,			-luggi I	ns, Geologist				
ELEV.	DEPTH	LEGEND	CL	ASSIFICATIO	ON OF MATERIALS	ŀ	ĸEC.	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/	N-VALUE	
F0.0	0.0					一								
-59.3	0.0	 	SAND. poo	orly-graded.	mostly fine to	\dashv								-о
	F	.··.	medium-gr	ained sand-	sized quartz, no reaction	۱							[F
	<u> </u>	·::·	with HCl, n	noist, 5Y 8/1	I white (SP)									Ė
-60.8	1.5													Ė
	-				with silt, mostly d quartz, few silt, trace					-61.3				F
	-	:- <u> </u>	fine to med	dium-grained	d quartz, rew siit, trace d sand-sized shell, no	Ī		1						F
	_	$\ \cdot\ \ $	reaction wi	th HČI, mois	st, 5Y 6/2 light olive gray	′			ł					t
	_	:: <u> </u>	(SP-SM)	RFt few fin	e-grained sand-sized									H
	<u> </u>	:-	shell) i t., iCvv iiii	ic-grained sand-sized									Ė
	Ŀ	$\ \cdot\ \ $				L				-63.3				Ŀ
	-	:. `	-At El63.3 shell	3 Ft., little fir	ne-grained sand-sized			2		-63.3				ŀ
	-	:-	SHEII				1	-Pos	t					F
-64.6	5.3													-5
	- - - -		quartz, few	fine to med	-grained sand-sized lium-grained sand-sized HCl, moist, N 7/ light									- - - -
İ	<u> </u>													F
-67.1	F - 0													F
-07.1	_ 7.0 _ - - - - - -		medium-gr fine-graine	ained sand- d sand-size	with silt, mostly fine to sized quartz, few silt, fer d shell, no reaction with t gray (SP-SM)	W								- - - - -
	- - -		-At El69.3 quartz, 5Y		fine-grained sand-sized									1(- - -
	- - - -				e gravel-sized shell, I, 5Y 6/1 gray									- - - -
-74.1	- - - - - - - - - - - - - - - - - - -													- - - - - -

DR	ILLING	LO	G (Cont. Sheet)	Jackso		Dietri			SHEET 2 OF 2 S	
ROJE			·	COORDINA				JM HORIZONTAL	VERTICAL	
	ohns Count	y San	nd Search	State F				1	NAVD88	
	ON COORDI			ELEVATIO				•		
X = (613,567	Y = 1,	991,654	-59.3 F	t.					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATER	RIALS	ĸEC.	BOX OR SAMPLE	RQD OR UD	REMAR	BLOWS,	N-VALUE
-78.1	18.8		SAND, silty, mostly fine-grained sa quartz, little silt, little fine to coarse sand-sized shell, weak reaction wit 5Y 5/1 gray (SM) At El76.6 Ft., some fine-grained quartz, some sand to gravel-sized I strong reaction with HCl, N 8/ white	grained h HCI, moist, sand-sized imestone,				-78.1		
			ID DEPTH CLASS	in Classification RATORY IFICATION				Abbreviations: NR = Not Recorded.		

DBI	LLING	100	DIVISION	N		INS	TALL	ATIC	N			S	HEET 1		1
		LUG	South	n Atlantic		J	Jacks	onvi	lle Dis	strict		0	F 2 SH	IEETS	
1. PRO											Remarks				
		•	and Search			10.				SYSTEM/DATUM	HORIZONTA	L VI	ERTICAL		
	ibracore Bo			OCATION COOR	DINATES	44				e, FLN (U.S. Ft.) RER'S DESIGNATIO	NAD83		NAVD8	_	-
	B-SJSP12-				Y = 1,992,018	11.	WAN	IUFF	CIO	RER S DESIGNATIO	N OF DRILL [=	O HAMME		
	LING AGEN		<u> </u>		TRACTOR FILE NO.						ISTURBED		STURBE		1
C	corps of Eng	gineers	- CESAJ	(6738-12-5195	12.	тот	AL S	AMPL	ES	4	0			
4. NAM	E OF DRILL	ER				13.	тот	AL N	IUMB	ER CORE BOXES	0				1
					T	14.	ELE	VAT	ON G	ROUND WATER					1
	ECTION OF E VERTICAL	BORING	•	DEG. FROM VERTICAL	BEARING						STARTED	¦ C	OMPLETE	D	1
	INCLINED			į	į	15.	DAT	E BC	RING	i	07-04-12		07-04-	12	
6. THIC	CKNESS OF	OVERB	URDEN	N/A		16.	ELE	VAT	ION T	OP OF BORING	-60.1 Ft.				1
7. DEP	TH DRILLED	INTO	ROCK N	I/A		17.	тот	AL F	RECO\	ERY FOR BORING	100.00 %				
			-			18.	SIGI	NAT	URE A	ND TITLE OF INSP	ECTOR				
8. TOT	AL DEPTH O	F BOR	ING 20.	0 Ft.		<u> </u>	E	ve I	luggi	ns, Geologist					_
ELEV.	DEPTH	LEGEND	CLA	ASSIFICATION O	F MATERIALS	R	% REC.	BOX OR SAMPLE	RQD OR UD		REMARKS		BLOWS/ 1 FT.	N-VALUE	
															1
-60.1	0.0	 	SAND. poo	orly-graded, mos	tly fine to	\dashv	-								-0
	_	.	medium-gr	ained sand-size	d quartz, trace sand										F
	- -	ŀ∷·∖	to gravel-si	zed shell, no rea 7/1 light gray (S	action with HCI, P)	L				-61.1					Ļ
	_	<u>[</u> : ∵ : ['	LAt El61.1	I Ft., few fine-gr	ained sand-sized		l	1		-61.1					ŀ
	_	.∵.	shell, trace	silt			1-	Pos	t						F
	_	· : :													F
	_	: · : ·													Ŀ
	_	. .				H	+	_		-63.1					F
	- -	·∵·					L	2							ţ
-64.1	4.0	<u> :-:: </u>													Ŀ
	-	·:		orly-graded with	silt, mostly artz, few silt, few fine										ŀ
	_	:-	to medium-	-grained sand-si	zed shell, no reaction					-65.1					F
	_	::	with HCl, m	noist, 5Y 5/2 oliv	e gray (SP-SM)			3							- 5
	_	:.					⊢	_							Ŀ
	_	:-													H
-66.8	- - 6.7	 ∴													F
	_				grained sand-sized										L
-67.6	7.5				to gravel-sized shell t, (little seams of	,]									E
		$\mathbb{H}\mathbb{H}$	∖clay), 5Y 5/	/1 gray (SC)		/									F
	-	[###			ained sand-sized coarse-grained										F
	<u>-</u>	 	sand-sized	shell, no reaction	on with HCl, moist,										Ė
	⊦	[[][[]	5Y 6/1 gray	y (SM)	I to gravel-sized										F
	_	[[::]	shell, stron	g reaction with	i to gravei-sized HCl, 5Y 5/1 gray										F
-70.1	10.0					_									-10
	-	:-	fine-graine	orly-graded with d sand-sized au	artz, little sand to										<u> </u>
	-	:-	gravel-size	d shell, few silt,	strong reaction with										ŀ
	_	:: <u> </u>	HCI, moist,	, 5Y 6/2 light oliv	ve gray (SP-SM)										F
	-	[<u>:</u> -] <u>†</u> ∦													Ė
	F	.·													F
	_	:: <u> </u>													F
	<u>-</u>	<u>[:-]</u> [#													L
	E	-:													Ł
	_	:: 													F
	-	[:·] <u> </u>													F
	- -	-: 													Ė

DRI	LLING	LOC	G (Cont. Sheet)	Jackso		Dietri	ct				SHEET 2 Of 2 SI	(EFTC
PROJEC			<u> </u>	COORDIN				JM	HORIZONTAL	VERT		13
	hns Count	ty San	d Search	State F					NAD83	!	AVD88	
	ON COORDI			ELEVATIO					•	•		
X = 6	314,441	Y = 1,9	992,018	-60.1 F	₹t.							
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	ALS	ĸEC.	BOX OR SAMPLE	RQD OR UD		REMARI	KS	BLOWS/ 1 FT.	N-VALUE
-75.2 -76.6	15.1 16.5		CLAY, fat, some fine-grained sand-si quartz, few fine to coarse-grained san shell, no reaction with HCl, moist, 5Y (CH)	nd-sized 75/1 gray								
-77.9	17.8		SAND, clayey, mostly fine-grained sa quartz, little clay, little sand to gravel- weak reaction with HCl, moist, 5Y 5/ (SC) SAND, silty, some fine-grained sand-	sized shell, 1 gray								
90.1	20.0		quartz, some sand to gravel-sized lim few sand to gravel-sized shell, strong with HCl, moist, 5Y 7/1 light gray (SI	estone, reaction				90.1				
-80.1	20.0		NOTES: 1. USACE Jacksonville is the custod these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFITH CLA	ATORY ICATION 				-80.1 Abbrevi NR =	ations: Not Recorded.			

DBI	LLING	LOG	DIVISIO	N		INS	TALL	ATIC	N				SHEET 1		1
		LUG	South	h Atlantic		٠	Jacks	onvi	le Dis	strict			OF 2 S	HEETS	
1. PRO											Remarks				
			Sand Search			10.				SYSTEM/DATUM	HORIZONTA	VL '	VERTICAL		
2 BOB	ibracore Bo	rings	. :	LOCATION COOR	DINATES	11				e, FLN (U.S. Ft.) RER'S DESIGNATIO	NAD83		NAVD		4
	B-SJSP12-				Y = 1,992,535	'''	WAIN	017	CIO	CER 3 DESIGNATIO	N OF DRILL	=	TO HAMM		
	LING AGEN		<u> </u>		TRACTOR FILE NO.	42	тот	A1 6	AMDI		DISTURBED	UNE	DISTURBE	D (UD)	1
	Corps of Eng		s - CESAJ	; 6	6738-12-5195	12.	101	AL 3	AIVIPL	ES	5	<u> </u>)		
4. NAM	E OF DRILL	ER				13.	тот	AL N	IUMB	ER CORE BOXES	0				
5. DIRE	CTION OF E	BORING		DEG. FROM	BEARING	14.	ELE	/AT	ON G	ROUND WATER					
_	VERTICAL INCLINED			VERTICAL		15.	DAT	Е ВС	RING	ì	STARTED 07-04-12	- :	COMPLET 07-04-		
6. THIC	CKNESS OF	OVERE	BURDEN	N/A		16.	ELE	VAT	ON T	OP OF BORING	-57.9 Ft.				
7. DEP	TH DRILLED	INTO	ROCK N	√A		17.	TOT	AL F	ECO\	ERY FOR BORING	94.42 %				
	AL DERTH O	F POP	10	о Г 1		18.				ND TITLE OF INSP	ECTOR				
8. 101	AL DEPTH O		ING 18.	.8 Ft.		ᄂ			luggii	ns, Geologist					4
ELEV.	DEPTH	LEGEND	CL	ASSIFICATION O	F MATERIALS	R	%REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	ì	BLOWS/	N-VALUE	
-57.9	0.0														
-51.8	-			orly-graded, mos		\dashv	F								-0
		-::-	medium-gr	rained sand-size	d quartz, few fine to d shell, no reaction										Ŀ
	_			noist, 5Y 8/1 wh											F
	-	::::													F
	-					L				-59.9					Ļ
	_	: · ·						1		-59.9					Ł
		$ \cdots $					<u> </u> -	Pos	t						F
	-	: :::													F
	- -														ţ
	_	·∵·¦	`-At El61.9	9 Ft., 5Y 5/1 gra	у										F
	_	$ \cdots $				H		0		-62.4				+	ŧ
	_	·. :·					⊢	2							-5
	-	[: ::													F
	- -	-::-				L				-63.9					Ļ
	-	: ·::					L	3							Ŀ
-64.9	7.0	-:::													ŀ
	-		SAND, poo	orly-graded with	silt, mostly artz, few silt, few fine	\Box									F
	-	[:•] <u>†</u> ∦	to medium	grained sand-si	zed shell, no reaction	n				-65.9					F
	_	:: <u> </u>	with HCl, n	noist, 5Y 5/1 gra	ay (SP-SM)	F		4						1	t
	- -	<u> :- </u>					┝								ţ
	_	-: <u> </u>													F
	-	<u> :: </u>													F
-67.9	10.0	1////	SAND da	vev mostly fina	grained sand-sized	\dashv									-1
	-		quartz, little	e clay, few fine t	o medium-grained										F
	- -		sand-sized 5Y 5/1 gra		on with HCI, moist,										L
	_		J. J. I gla	, (00)											E
-69.7	11.8		SAND nor	orly-graded with	eilt moetly	\dashv									F
	- -	[:·]]	fine-graine	ed sand-sized qu	artz, few silt, no										F
	<u>-</u>	-	reaction wi	ith HCl, moist, 5	Y 6/1 gray (SP-SM)										ţ
	<u> </u>	<u> :: </u>													F
	_		`At El71.2	2 Ft., few fine gr	avel-sized shell										F
	_	:: 													F
	- -	<u> :: </u>													ţ
	L	I •∐∄					- 1								L

DRI	LLING	LO	G (Cont. Sheet)	Jackson Jackson		Distric	ct		SHEET 2 OF 2 SI	HEETS
PROJEC	т			COORDINA				JM HORIZONTAL	VERTICAL	
St. J	ohns Count	y San	d Search	State P	lane,	FLN (U.S. I	Ft.) NAD83	NAVD88	
LOCATI	ON COORDI	NATES	3	ELEVATIO	н тор	OF B	ORIN	•		
X = 6	15,330	Y = 1,	992,535	-57.9 F	t.					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATER	IALS	REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-73.7	15.8		CAND eith, month fine grained on	ad aizad						
-74.5	16.6		SAND, silty, mostly fine-grained sar quartz, some sand to gravel-sized s silt, strong reaction with HCl, moist, (SM) SAND, clayey, some fine-grained sa quartz, little clay, little sand to grave	hell, little 5Y 6/1 gray and-sized						
-75.9	18.0		strong reaction with HCl, moist, 5Y (SC)	6/1 gray /						
-76.7	18.8	<u> </u>	SAND, silty, some fine-grained sand quartz, some fine to coarse-grained shell, little silt, few fine to coarse-grained sand-sized limestone, strong reaction	sand-sized ained				-76.7 Abbreviations:		
			moist, 10Y 6/1 greenish gray (SM) NOTES:	on with HCi,				NR = Not Recorded.		
			USACE Jacksonville is the custo these original files.	odian for						
			Soils are field visually classified accordance with the Unified Soils C System.							
			Laboratory Testing Results							
				RATORY FICATION						
			1-Post 2.0/2.5 S 2 4.5/5.0 S 3 6.0/6.5 S	6P* 6P* 6P* 6P* -SM*						
			*Lab visual classification based on c curve. No Atterberg limits.	gradation						

	DRILLING LOG					INS	TALLAT	ION	<u> </u>		SHEET 1	
	South Atlantic						Jackson	ville Di	strict		OF 2 SI	IEETS
1. PRO	JECT					9.	SIZE AN	D TYP	E OF BIT See	Remarks		
S	t. Johns C	ounty S	and Search	1		10.	COOR	DINATE	SYSTEM/DATUM	HORIZONTA	L VERTICAL	
	ibracore B								ne, FLN (U.S. Ft.)	NAD83	NAVD8	38
	ING DESIG		ı	LOCATION CO		11.	MANU	FACTU	RER'S DESIGNATION	N OF DRILL	 AUTO НАММІ	
	B-SJSP12		<u> </u>		3 Y = 1,992,952	╄					MANUAL HAN	
_	LING AGE		CECAL	6	ONTRACTOR FILE NO. 6738-12-5195	12.	TOTAL	SAMP		ISTURBED 5	UNDISTURBE) (UD) [
	orps of En		- CESAJ	i	0736-12-3193	 _					0	
	0. 5					13.	TOTAL	NUME	BER CORE BOXES	0		
5. DIRE	CTION OF	BORING	3	DEG. FROM	BEARING	14.	ELEVA	TION	ROUND WATER			
_	VERTICAL			VERTICAL		15.	DATE	BORING	G	STARTED	COMPLETI	
	INCLINED			<u> </u>	i					07-04-12	07-04-	12
6. THIC	CKNESS OF	OVERB	URDEN	N/A		16.	ELEVA	TION	OP OF BORING	-53.5 Ft.		
7. DEP	TH DRILLEI	D INTO	ROCK	N/A		17.	TOTAL	RECO	VERY FOR BORING	78.28 %		
						18.	SIGNA	TURE	AND TITLE OF INSPI	ECTOR		
8. TOT	AL DEPTH (OF BOR	ING 15	5.8 Ft.		<u>L.</u>	Eve	Hugg	ins, Geologist			
ELEV.	DEPTH	LEGEND	CL	.ASSIFICATION	OF MATERIALS	R	% CONTRACTOR	RQD OR UD		REMARKS	BLOWS/ 1 FT.	N-VALUE
-53.5	0.0	+	SAND no	orly-graded, me	ostly fine to	-	-	-	-			
	Ē	[.::]	medium-g	rained sand-siz	zed quartz, few fine to							
	_				red shell, no reaction				-54.5			
	-	-:::· `		moist, 5Y 8/1 v 5 Ft., trace silt			1	1				
	<u> </u>	$[\cdots]$						1				
	_											
	<u>-</u>	$ \cdot $										
	_							╝	-56.5			
	_	$ \cdots $					2		-56.5			
	_	.::.					<u>∤-P</u>	o s t				
	_											H
	Ē	$ \cdots $										
	_					L			-58.5			
	-						3					
	_	.··.	\ A. E. = -	754 5757								
	-	$ \cdots $	-At El59.	7 Ft., 5Y 5/1 g	ay							
	Ľ	[:::				L		4	-60.5			
	_	[::: <u>]</u>					4					
	<u> </u>	$ \cdot \cdot $						1				
	<u> </u>	:::										
	E	$[\cdots]$										
	_	$ \cdot \cdot $										
	- -	:::										
	-	$ \cdot $										
-63.9	- - 10.4	···:										
	- -				ined sand-sized							
	<u> </u>				vel-sized shell, strong 10Y 5/1 greenish gra							
			(CH)	, 1110101,	g. comon gra	'						
-65.5	12.0		<u> </u>									
-66.0	12.5				-grained sand-sized							
-00.0	12.5			me clay, no rea reenish gray(\$	action with HCl, moist,	Λ						
	<u>L</u>		SAND, silt	ty, mostly fine t	o medium-grained	-/						[
-67.0	13.5	<u> </u>	sand-sized	d quartz, little s	ilt, few fine to	,						
	-	1:. 1			zed shell, weak	/						
	_	1:-	(SM)	nu i iioi, iiioist,	5Y 5/2 olive gray	/						
60 4	140	$\ \cdot\ $	SAND, po	orly-graded wit		- '						
-68.4	- 14.9	4			martz few silt few fin	e 4	- 1	1				1

DRILI	LING	LOC	G (Cont. Sheet)	INSTALLA* Jacksor		Distric	rt -		SHEET 2 OF 2 S	
PROJECT				COORDINA				UM HORIZONTAL	VERTICAL	
St. John	ns County	/ San	d Search	State P	ane, l	FLN (U.S. I	Ft.) NAD83	NAVD88	
OCATION				ELEVATIO		OF B	ORING			
X = 616	6,228 Y		992,952	-53.5 F	t.					
ELEV. [DEPTH	LEGEND	CLASSIFICATION OF MATERIAL		% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-69.3	15.8		to medium-grained sand-sized shell, we reaction with HCI, moist, 5Y 7/1 light of (SP-SM) SAND, silty, mostly fine to medium-grasand-sized quartz, little silt, little sand to gravel-sized shell, strong reaction with moist (SM) NOTES: 1. USACE Jacksonville is the custodia these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC 1 1.0/1.5 SP* 2 3.0/3.5 SP* 3 5.0/5.5 SP* 4 7.0/7.5 SP* 4 7.0/7.5 SP* *Lab visual classification based on gracurve. No Atterberg limits.	ained to HCI, HCI, HCI, HCI, HCI, HCI, HCI, HCI,				-69.3 Abbreviations: NR = Not Recorded.		

DPI	LLING	DIVISION	INS	STALLA	TION	1		SHEET 1		
		South Atlantic	_	Jackso				OF 2 SHEE	ETS	
1. PRO		<u>-</u>	Sand Casush					SYSTEM/DATUM HORIZONTAL	. VERTICAL	_
	t. Jonns C ibracore B	•	Sand Search	10.				!	1	
	ING DESIG		LOCATION COORDINATES	11.				e, FLN (U.S. Ft.) NAD83 RER'S DESIGNATION OF DRILL	NAVD88	\dashv
	B-SJSP12		X = 616,681 Y = 1,992,104						☐ MANUAL HAMMI	
	LING AGEN		CONTRACTOR FILE NO		TOTA	1 54	MDI	DISTURBED	UNDISTURBED (L	JD)
	orps of En		s - CESAJ 6738-12-5195	'z.	1012	LJA	IVIP	5	0	_
4. NAM	E OF DRILL	.ER		13.	TOTA	LNU	JMB	ER CORE BOXES 0		
5. DIRE	CTION OF	BORING	DEG. FROM BEARING	14.	ELEV	ATIO	N G	ROUND WATER		
	VERTICAL		VERTICAL	15.	DATE	BOF	RING	STARTED	COMPLETED	
	INCLINED		i	+				1 07-04-12	07-04-12	
6. THIC	KNESS OF	OVERB	BURDEN N/A	16.	ELEV	ATIC	N T	OP OF BORING -58.6 Ft.		_
7. DEP	TH DRILLEI	I OTNI D	ROCK N/A					VERY FOR BORING 97.94 %		
8. TOT	AL DEPTH (OF BORI	ING 19.4 Ft.	18.				AND TITLE OF INSPECTOR		
			10.41 t.	ᅪ		_	Jggii	ns, Geologist		ш
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	F	REC.	SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
50.0	0.0									
-58.6	0.0	 ∵ 	SAND, poorly-graded, mostly fine to		\vdash	+				Ŀ
	_	$ \cdots $	medium-grained sand-sized quartz, few fine to							F
	_	$ \cdots $	medium-grained sand-sized shell, no reaction with HCl, moist, 5Y 8/1 white (SP)							Ļ
	_	:::	warrier, melec, er er winte (er)							Ŀ
	_	.::						-60.6		┢
	-	::: \	At El60.6 Ft., trace silt			1		-60.6		丁
	_	:::			<u> -F</u>	ost				Ŀ
	_	.::								F
	<u>-</u> -	$ \cdot \cdot \cdot \cdot $								ţ
	_	:::						-62.6		
	_	.::				2				-
	= -	$ \cdots $								ļ
	-	:::								Ŀ
	_	.::								┢
	_	$ \cdots $	\	L		_		-64.6		ţ
	_	:-::	At El64.6 Ft., 5Y 5/1 gray		;	3				Ŀ
	_	.::								┢
	_	$ \cdot \cdot $								F
	_									Ŀ
		.::		-	\dashv	\dashv		-66.6	+	\dashv
	<u>-</u> -	:::			Ľ	4				ļ
	<u>-</u>	::::[`	At El67.2 Ft., some sand to gravel-sized shell, strong reaction with HCl, 5Y 6/1 gray							Ŀ
-68.0	- 9.4		, , ,							ŀ
		HHH	SAND, silty, mostly fine-grained sand-sized quartz, little silt, no reaction with HCl, moist,							F
-69.0	 - 10.4		5Y 5/2 olive gray (SM)							F
30.0		1:::1	SAND, poorly-graded, mostly fine-grained	\Box						ŀ
	_	$ \cdot,\cdot $	sand-sized quartz, few fine to medium-grained sand-sized shell, no reaction with HCl, moist,	a						F
	_	:::	5Y 8/1 white (SP)							ţ
	_	$ \cdot \cdot $								┟
	_	$ \cdot \cdot $								F
	_	:::								Ł
	_	:::								F
	_	$ \cdot \cdot $								ţ
-72.6	14.0	<u> -:</u> -:-								
	_		SAND, silty, mostly fine-grained sand-sized							F
	_		quartz, little silt, few fine to coarse-grained sand-sized shell, no reaction with HCl, moist,							ţ

ILLING	LO	G (Cont. Sheet)	I			3orir		SHEET	
		• •					UM HORIZONTAL		SHEETS
	ty San	nd Search	l l				1	NAVD88	
616,681	Y = 1,	992,104	-58.6 F	t.					
DEPTH	LEGEND	CLASSIFICATION OF MATE	RIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMAR	BLOWS,	N-VALUE
19.4	LEGEN	At El76.7 Ft., some sand to grav shell, strong reaction with HCl NOTES: 1. USACE Jacksonville is the custhese original files. 2. Soils are field visually classified accordance with the Unified Soils System. 3. Laboratory Testing Results SAMPLE SAMPLE LABCE ID DEPTH CLASS 1 2.0/2.5 1-Post 2.0/2.5 2 4.0/4.5 3 6.0/6.5 4 8.0/8.5	todian for Lin Classification PRATORY SIFICATION SP* SP* SP* SP* SP* SP* SP* SP*	%REC.	BOXO	RORD	-78.0 Abbreviations: NR = Not Recorded.	R PLOW	N-VALI
	ohns Count ON COORDI 616,681 DEPTH	ohns County Sar ON COORDINATE 616,681 Y = 1,	DEPTH SY 6/2 light olive gray (SM) At El76.7 Ft., some sand to grav shell, strong reaction with HCl NOTES: 1. USACE Jacksonville is the cust these original files. 2. Soils are field visually classified accordance with the Unified Soils of System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORD ID DEPTH CLASS 1. 2.0/2.5 1Post 2.0/2.5 2. 4.0/4.5 3. 6.0/6.5 4. 8.0/8.5 *Lab visual classification based on	DEPTH CLASSIFICATION OF MATERIALS At El76.7 Ft., some sand to gravel-sized shell, strong reaction with HCl NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classification system. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION OF SP* 1. Post 2.0/2.5 SP* 2. 4.0/4.5 SP* 3. 6.0/6.5 SP* 4. 8.0/8.5 SP* *Lab visual classification based on gradation	COORDINATE SY State Plane, DEPTH DEPTH CLASSIFICATION OF MATERIALS SY 6/2 light olive gray (SM) At El76.7 Ft., some sand to gravel-sized shell, strong reaction with HCl NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1 2.0/2.5 SP* 1 2.0/2.5 SP* 2 4.0/4.5 SP* 3 6.0/6.5 SP* 4 8.0/8.5 SP* *Lab visual classification based on gradation	Sacksonville Districe Coordinate system	Second Cont. Sheet Coordinate System/DATE	Jacksonville District Jacksonville District	DEPTH STATE DISTRICT DIST

DDI	LLING	106	DIVISIO	DN			INS	STAL	LATIC	N	<u> </u>			SHEET	1	٦
	DRILLING LOG South Atlantic									lle Di				OF 2	SHEETS	s
) I O	L			_					ee Remarks		\/FB=:-	<u>. </u>	4
		•	Sand Searc	h			10.				SYSTEM/DATUN	!	\L	VERTICA		
	ibracore B			LOCATION	COORD	INATES	11				e, FLN (U.S. Ft. RER'S DESIGNAT	<u> </u>		NAV UTO HAM		-
	B-SJSP12					Y = 1,991,596	'''	. 1412-			ALK O DEGIGITAT			ANUAL H		
	LING AGE					RACTOR FILE NO.					. =0	DISTURBED	UN	DISTURE	ED (UD)	7
	orps of En		- CESAJ		67	38-12-5195	12.	. 10	TALS	AMPI	LES	4		0		
4. NAN	E OF DRILL	LER					13.	. то	TAL N	IUMB	ER CORE BOXES	0				
5 DID!		DODING		' DEC. EDO		PEARING	14.	. EL	EVAT	ION G	ROUND WATER					
\boxtimes	CTION OF VERTICAL	BORING	,	DEG. FRO	L	BEARING	15.	. DA	TE BO	ORING		STARTED		COMPLE		
	CKNESS OF	OVEDE	HIPDEN	 N/A		!	16	FI	EVAT	ION T	OP OF BORING	07-04-12 -59.5 Ft.	<u>2</u>	07-0	4-12	-
	TH DRILLEI			N/A			ᅪ				VERY FOR BORIN					1
							18.	. SIC			AND TITLE OF IN	SPECTOR				1
8. 101	AL DEPTH (ING 18	8.5 Ft.			Ц,			-luggi	ns, Geologist					4
ELEV.	DEPTH	LEGEND	С	LASSIFICATI	ION OF	MATERIALS	I	ĸEC.	BOX OR SAMPLE	RQD OR UD		REMARKS	3	BLOWS/	N-VALUE	
-59.5	0.0		<u> </u>													
	-	1		oorly-graded			\Box				1					F
	_	$ \cdot,\cdot $				quartz, trace fine t shell, no reaction	10				00.5					ţ
	_		with HCI,	moist, 5Y 8/	/1 white		ŀ				-60.5 -60.5					+
	_		^At El60	.5 Ft., trace	silt				1 I-Pos		00.0					Ė
	_															Ł
	_															ŀ
	_	:::}	`-At El62	.1 Ft few fi	ne to c	oarse-grained					60.5					ţ
	_			ed shell, 5Y 5			ŀ				-62.5				_	+
	_	$ \cdot \cdot $							2							F
	_	::::														Ł
	_															F
	- -	$ \cdot : \cdot \cdot $									64.5					ţ
	_						ŀ				-64.5					+
		. `							3							F
	_	$ \cdot \cdot \cdot \cdot $														Ŀ
	_															ŀ
-66.5	7.0															F
-00.0	- 7.0	///	CLAY, fa	t, little fine-g	rained	sand-sized quartz	,									F
	_		no reaction	on with HCI,	moist,	10GY 6/1 greenis	h									ŀ
	_		gray (CH	1)												L
	_															F
	L															F
	<u> </u>		\A+ = 00	7 🗗	. .	rainad caret attack										F
	-					rained sand-sized ized shell, weak										ŀ
-69.7	- 10.2		reaction v			, Woun										Ė
55.1			SAND, cl	ayey, mostly	fine-gr	rained sand-sized	\dashv									Ŀ
	<u> </u>					with HCl, moist,										F
	_		1001 6/1	greenish gr	ay (50	~)										F
	<u> </u>															H
-71.7	- 12.2		`-At El71	.4 Ft., some	sand t	o gravel-sized										F
	- · <u>- ·-</u>		\shell, stro	ong reaction	with Ho	Cl	_/I									Ł
	F	<u> </u>				edium-grained	_									F
	<u> </u>			ed quartz, littl red shell we		ittle sand to ction with HCI,										F
	-	<u> </u>		Y 7/1 light g												ŀ
	_	[F
-74.0	14.5	<u> </u>					_									ŀ
			SILT, ino	rganic-L, sor	me fine	-grained				1						F

DRILLING LO	G (Cont. Sheet)	INSTALLAT		Notric	*		SHEET 2 OF 2 SI	HEETE
PROJECT	· ·	Jackson				IM HORIZONTAL	VERTICAL	1513
St. Johns County Sa	nd Search	State Pla	ane, F	ELN (U.S. F	1	NAVD88	
LOCATION COORDINATI		ELEVATION		OF B	ORING	<u> </u>		
X = 615,782 Y = 1	I,991,596	-59.5 Ft			-			
ELEV. DEPTH G	CLASSIFICATION OF MATERIAL	LS	ĸEC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-74.6 15.1	sand-sized quartz, little sand to gravel-shell, weak reaction with HCl, moist, (loccasional seams of sand), N 5/ gray SAND, poorly-graded with silt, mostly medium-grained sand-sized quartz, so to gravel-sized shell, few silt, strong rewith HCl, moist, 5Y 7/1 light gray (SP SAND, silty, mostly fine-grained sand-quartz, some sand to gravel-sized shell, strong reaction with HCl, moist, 5GY 5/1 greenish gray (SM) NOTES: 1. USACE Jacksonville is the custodia these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC Theost 1.0/1.5 SP' 1-Post 1.0/1.5 SP' 3 5.0/5.5 SP' *Lab visual classification based on gracurve. No Atterberg limits.	(ML) fine to me sand eaction -SM) sized II, little TORY CATION		S S S S S S S S S S S S S S S S S S S		_78.0 Abbreviations: NR = Not Recorded.		ż

<u> </u>		١		IN	STAL	LATIC	ON			SHEET 1		7		
_ DRI	South Atlantic							sonvi	ille Dis	strict		OF 2 SH	IEETS	
1. PRO	JECT										e Remarks			
S	St. Johns Co	ounty Sa	and Search			10	. сс	ORDI	NATE	SYSTEM/DATUM	HORIZONTAL	VERTICAL		
	/ibracore Bo					١.,				e, FLN (U.S. Ft.)	NAD83	NAVD8		4
	ING DESIGN B-SJSP12				COORDINATES 590 Y = 1,992,562	11	. MA	ANUF	ACTU	RER'S DESIGNATIO	ON OF DRILL	AUTO HAMME MANUAL HAN		
	LING AGEN		<u> </u>	7 - 017,0	CONTRACTOR FILE NO						DISTURBED	UNDISTURBED		1
	Corps of Eng		- CESAJ		6738-12-5195	12	. тс	TAL S	SAMPI	LES	5	0		
4. NAM	IE OF DRILL	ER.				13	. тс	TAL I	NUMB	ER CORE BOXES	0			
E DIRE	CTION OF	PODING		DEG. FROI	M BEARING	14	. EL	EVAT	ION G	ROUND WATER				1
	VERTICAL	BURING		VERTICAL				D			STARTED	COMPLETE	D	
	INCLINED			!		13	. DA	VIE B	ORING	•	07-04-12	07-04-1	2	
6. THIC	CKNESS OF	OVERBL	JRDEN	N/A		16	. EL	EVAT	ION T	OP OF BORING	-52.6 Ft.			
7. DEP	TH DRILLED	INTO R	OCK N	I/A		17	. тс	TAL I	RECO	ERY FOR BORING	76.88 %			
° TOT	AL DEPTH C	SE PORII	NG 15	7 Ft.		18	. SI			ND TITLE OF INSE	PECTOR			
8. 101	AL DEPIN		15.	/ Γι.		Ц,		_		ns, Geologist				-
ELEV.	DEPTH	LEGEND	CLA	ASSIFICATIO	ON OF MATERIALS		% REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/	N-VALUE	
E0.0	0.0													
-52.6	0.0				mostly fine to									-0
	F	l.:::l	medium-gra	ained sand-	-sized quartz, trace fine									F
	Ē				-sized shell, no reaction 1 white (SP)									F
	_			•	, ,									ţ
	_	$ \cdots $								-54.6				上
	-		-At El54.6 shell, trace		edium-grained sand-siz	zed		1		-54.6				ŀ
	-		Sileli, liace	SIIL				(-Pos	t					F
	-													F
	_													Ł
	_	-::-												H
	- -													F
	_	.:::								-57.6				<u> </u>
	_							2						Ŀ
	_													ŀ
	F													F
	F	[:::]								-59.6				F
	-	:::						3	1	55.6				t
	<u> </u>	<u> </u> : ∵:						Ť	1					E
64.0	L _{0.4}	:::												H
-61.0	- 8.4 -	 ::: 	SAND, poo	orly-graded,	mostly fine-grained									F
	<u> </u>		sand-sized	quartz, trad	ce silt, trace fine to -sized shell, no reaction				-	-61.6				丰
	<u> </u>		with HCl, m	anieu sand noist, 5Y 6/	-sized snell, no reaction 1 gray (SP)	'		4						ţ
-62.7	_ 10.1		- ,	,	- , , ,									<u>-</u> 1
J,		<u> </u>	SAND, silty	, some fine	e-grained sand-sized									F '
	F				gravel-sized shell, little n HCl, moist, 5Y 5/2 oliv	/e								F
	<u> </u>		gray (SM)	CACCOLL WILL										F
	E	H H H												Ŀ
-64.7	_12.1	<u> </u>	CAND "		a analysis services to the									F
	<u> </u>				ne-grained sand-sized arse gravel-sized									F
-65.6	13.0		limestone,		tion with HCl, N 7/ light									L
	<u> </u>	1:11	gray (SM)	rly_aradad	with silt, mostly fine to	_/]								ŀ
-66 6	14.0	1. 111	medium-gra	ained sand	-sized quartz, no reaction	on								F
-66.8	14.0		with HCI, m		7/1 light greenish gray	Λ								F
	E	[:- <u> </u> \	(SP-SM) SAND. siltv	/. mostly fin	ne-grained sand-sized	-/								Ł

DRILLING LO	G (Cont. Sheet)	Jackson Jackson		Distric	ct		SHEET 2 OF 2 SI	
PROJECT		COORDINA				JM HORIZONTAL	VERTICAL	
St. Johns County San	nd Search	State P				!	NAVD88	
LOCATION COORDINATES	s	ELEVATIO	N ТОР	OF B	ORING			
X = 617,590 Y = 1,	992,562	-52.6 F	t.		, ,			
ELEV. DEPTH Q	CLASSIFICATION OF MATERIAL		REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
68.3 15.7 SAJ FORM 1836-A	quartz, some sand to gravel-sized shel silt, strong reaction with HCI, moist, 10Y 6/1 greenish gray (SM) SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt sand to gravel-sized shell, weak reactic HCI, moist, 5Y 6/2 light olive gray (SP NOTES: 1. USACE Jacksonville is the custodia these original files. 2. Soils are field visually classified in accordance with the Unified Soils Class System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC 1 2.0/2.5 SP* 1-Post 2.0/2.5 SP* 2 5.0/5.5 SP* 3 7.0/7.5 SP* 4 9.0/9.5 SP* *Lab visual classification based on grac curve. No Atterberg limits.	t, few on with 2-SM) an for esification TORY CATION		NA CONTRACTOR OF THE PROPERTY		-68.3 Abbreviations: NR = Not Recorded.		YN STATE OF THE ST

		DIVISIO	N		INS	TAL	LATIC	ON	<u> </u>		SHEET 1		7	
DKI	LLING	South	n Atlantic		١,	Jack	sonvi	lle Dis	strict		OF 2 S	HEETS	3	
1. PRO	JECT					9.	SIZE	AND	TYPE	OF BIT See	Remarks			
S	t. Johns Co	ounty S	and Search			10.	СО	ORDI	NATE	SYSTEM/DATUM	HORIZONTAL	VERTICAL		1
V	ibracore Bo	rings						State	Plan	e, FLN (U.S. Ft.)	NAD83	NAVD	88	
	ING DESIGN		ı jı	LOCATION COOR		11.	MA	NUF	ACTUR	RER'S DESIGNATIO	N OF DRILL	AUTO HAMN		
	B-SJSP12-		1		Y = 1,993,475							MANUAL HA		_
	LING AGEN		CECAL		TRACTOR FILE NO.	12.	то	TAL S	SAMPL		DISTURBED	UNDISTURBE	:D (UD)	
	Corps of Eng		S - CESAJ	i	3738-12-5195	-				<u> </u>	5	0		-
J. IVAIII	IL OI DIVILL					13.	то	TAL I	NUMB	ER CORE BOXES	0			
5. DIRE	CTION OF E	BORING		DEG. FROM	BEARING	14.	ELI	EVAT	ION G	ROUND WATER				
\boxtimes	VERTICAL			VERTICAL	!	15	DΔ	TE R	DRING		STARTED	COMPLET	ED	
	INCLINED			<u> </u>	i					•	07-04-12	07-04	-12	4
6. THIC	CKNESS OF	OVERB	URDEN	N/A		16.	ELI	EVAT	ION T	OP OF BORING	-54.9 Ft.			
7. DEP	TH DRILLED	INTO	ROCK N	√A		17.	то	TAL F	RECOV	ERY FOR BORING	87.31 %			
						18.	SIC	TAN	URE A	ND TITLE OF INSP	ECTOR			
8. TOT	AL DEPTH O	F BOR	ING 17.	8 Ft.				Eve I	Huggii	ns, Geologist				
ELEV.	DEPTH	LEGEND	CL	ASSIFICATION O	F MATERIALS	F	« REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/ 1 FT.	N-VALUE	
													\top	1
-54.9	0.0	 	CAND see	orly-graded, mos	thy fine to	_								- 0
	_				d quartz, trace fine to									Ė
	_	$ \cdots $	medium-gr	ained sand-sized	d shell, no reaction									ŀ
	-	l: ::l	with HCl, n	noist, 5Y 8/1 wh	ite (SP)									F
	-	· . · ·												ŀ
	-	l∵∵∖	\ A+ E+ E0 () F4		. L				-56.9				Ļ
	_	<u> </u> : ::	shell, trace		m-grained sand-sized	a		1		-56.9				ŀ
	<u> </u>	·:::	oricii, tracc	Jone			1	(-Pos	t					F
	<u></u>	·```												F
	_	:::												ŀ
	-	: : :												L
	_													ŀ
	-	$ \cdot \cdot $								-59.9				Ē
		: · :				H		2		-59.9			+	- 5
	_	. : : .												F
	_	$ \cdot \cdot $												L
	-	· · ·												ŀ
		. .												F
	_	. · · ·												E
	_	·. :·												ŀ
	Ĺ	[.∵.]				L				-62.9				‡
	_	.∵.						3						Ł
	-	·												F
	-	[:::∱			o medium-grained									F
	_	<u> .··. </u>	sand-sized	shell, 5Y 5/1 gr	ay									ŀ
	<u> </u>	-∷-				F				-64.9			+	₽1
	_	$ \cdots $						4						Ė
	_	[:::]												F
66.4	- 11 5	:::												F
-66.4	11.5	7///	SAND. clay	yey, mostly fine-	grained sand-sized	\dashv								ŀ
	_		quartz, little	e clay, few sand	to gravel-sized shell,	,								F
	_		weak react	tion with HCI, mo	oist, 5Y 5/1 gray									Ł
	_		(SC)											F
	-													F
22.2	L 40 0													ŀ
-68.8	- 13.9 -	<i>(////</i> /	SAND nor	orly-graded, mos	tly fine to	\dashv								L
	-	[:::]	medium-gr	ained sand-sized	d quartz, trace fine to	o								ŀ
	- -	<u> : : : </u>	medium-gr	ained sand-size	d shell, no reaction									Ė

DRI	LLING	LOC	G (Cont. Sheet)	Jackson		Dietri	nt .		SHEET 2 OF 2 SH	IFFTS
PROJEC			<u> </u>	COORDINA				UM HORIZONTAL V	ERTICAL	13
	ohns Coun	ty San	d Search	State P				1	NAVD88	
OCATIO	ON COORD	NATES	<u> </u>	ELEVATIO						
X = 6	17,098	Y = 1,	993,475	-54.9 F	t.					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	LS	REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-70.0	15.1		with HCl, moist, 5Y 8/1 white (SP) SAND, clayey, mostly fine-grained sar quartz, little clay, little fine to coarse-g sand-sized shell, strong reaction with moist, (little clay seams throughout), 5Y 6/2 light olive gray (SC)	rained				72.7		
-72.7	17.8		NOTES: 1. USACE Jacksonville is the custodi these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFICATION DEPTH C	STORY CATION				Abbreviations: NR = Not Recorded.		

DRI	DRILLING LOG							ON	<u> </u>		SH	EET 1		
			South	n Atlantic			cksonv				OF	2 SH	EETS	Į
1. PRO					<u> </u>					Remarks	. :	TIO * :		Į
	it. Johns Co	-	and Search			10. (SYSTEM/DATUM	HORIZONTA	1	RTICAL	,	
2. BOR	ibracore Bo	IATION	1	OCATION COOR	DINATES	11. [e, FLN (U.S. Ft.) RER'S DESIGNATION	NAD83		NAVD88		ł
	B-SJSP12-		-		Y = 1,994,334					[_	AL HAM		
	LING AGEN				TRACTOR FILE NO.	12. 1	TOTAL S	SAMPI		ISTURBED	i	URBED	(UD)	
	orps of Eng		- CESAJ	; 6	738-12-5195				ER CORE BOXES	0	0			
						14. 1	I FVAT	ION G	ROUND WATER					1
\boxtimes	ECTION OF E VERTICAL INCLINED	BORING	i	DEG. FROM VERTICAL	BEARING		DATE B			STARTED		MPLETE		
	KNESS OF	OVERB	URDEN	! N/A		16. I	ELEVAT	ION T	OP OF BORING	i 07-03-12 -55.4 Ft.	=	07-03-1		
	TH DRILLED			I/A		17. 1	TOTAL I	RECO\	/ERY FOR BORING	152.50 %	1			
						18. \$			ND TITLE OF INSPE	CTOR				
в. тот	AL DEPTH O		NG 18.	6 Ft.					Gruber, Geologist					ļ
ELEV.	DEPTH	LEGEND	CLA	ASSIFICATION OF	MATERIALS	RE	BOX OR	RQD OR UD		REMARKS	i	BLOWS/ 1 FT.	N-VALUE	
-55.4	0.0													
00.4	-		SAND, poo	orly-graded, most	ly fine to	7								−0 -
	- -	$ \cdots $			l quartz, trace fine to I shell, no reaction									Ŀ
	_	 ∷:	with HCl, m	noist, 5Y 8/1 whit	te (SP)									_
	-													F
	- -	$ \cdots $	A4 E1 E7 4	1 - 					-57.4 -57.4					Ļ
	-		Shell, trace		n-grained sand-sized		1		-57.4					-
	-		,				1-Pos	1						-
	-	[:::: <u> </u>												_
	-	l.: :.l							FO 4					_
	_					\vdash	+	1	-59.4					H
	= =	[:::: <u> </u>					2							Ē
	-	.:::												- -5
	_													Ŀĭ
	=	[∷:	-Λ+ El 61 3	2 Ft., 5Y 5/1 gray					-61.4					-
	-	-:::	AL EI01.2	2 Ft., 51 5/1 gray			3	1						_
	-	: : :						1						Ė
	_	$[\cdots]$												_
	-	-:::												F
	_	[:::							-63.4					Ļ
	_	$ \cdots $					4							ţ
0.10	_ 0.0	<u> :-:: </u>												Ŀ
-64.6	-9.2 -		CLAY fat	little fine-grained	sand-sized quartz,	\dashv								F
	-		no reaction	with HCI, moist,	10Y 5/1 greenish									ţ
	-		gray (CH)											-1
	-													F
	= -													_
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DRI	LLING	LOC	G (Cont. Sheet)	Jackson				Designation VB-0001	SHEET 2 OF 2 SI	HEETS
PROJEC	т			COORDINA				UM HORIZONTAL	VERTICAL	
St. Jo	hns Coun	ty San	d Search	State P	ane, I	FLN (U.S. I	Ft.) NAD83	NAVD88	
LOCATIO	ON COORD	INATES	1	ELEVATIO	н тор	OF B	ORIN	G		
X = 6	16,623		994,334	-55.4 F	t.					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	LS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-74.0	18.6	LEGENI	NOTES: 1. USACE Jacksonville is the custodicthese original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFICATION OF SAMPLE 1-Post 2.0/2.5 SP11-Post 2.0/2.5 SP12 4.0/4.5 SP13 6.0/6.5 SP14 8.0/8.5 SP15 SP15 SP16 SP16 SP16 SP16 SP16 SP16 SP16 SP16	an for Sification TORY CATION	% REC.	BOX OF	ROS ROS	-74.0 Abbreviations: NR = Not Recorded.	BLOWS	N-VALU

DBI	LLING	106	DIVISION	N		INS	TALL	ATIC	N	<u> </u>			SHEET 1		1
		LUG	South	n Atlantic			Jacks	onvi	le Dis				OF 2 S	HEETS	1
1. PRO											Remarks				1
	st. Johns Co	-	nd Search			10.				SYSTEM/DATUM	HORIZONT	AL .	VERTICAL		
2 POP	ibracore Bo	rings	! •	OCATION COOF	DINATES	44				e, FLN (U.S. Ft.) RER'S DESIGNATION	NAD83	_ 	NAVD		4
	B-SJSP12-				Y = 1,995,220	11.	WAN	IUFA	CIUR	KER S DESIGNATION	I OF DRILL	_	TO HAMM		
	LING AGEN		<u> </u>		NTRACTOR FILE NO.	<u> </u>					ISTURBED	UNI	DISTURBE	D (UD)	1
	Corps of Eng		CESAJ		6738-12-5195	12.	тот	AL S	AMPL	.ES	5	()		
4. NAM	E OF DRILLI	ER				13.	тот	AL N	IUMB	ER CORE BOXES	0				
5 DIDE	CTION OF E	OBING		DEC FROM	BEARING	14.	ELE	VATI	ON G	ROUND WATER					1
\boxtimes	VERTICAL INCLINED	OKING		DEG. FROM VERTICAL	BEARING	15.	DAT	ЕВС	RING	i	STARTED 07-03-12	i	COMPLET 07-03-		
6. THIC	CKNESS OF	OVERBU	RDEN	N/A	1	16.	ELE	VAT	ON T	OP OF BORING	-55.4 Ft.				1
7. DFP	TH DRILLED	INTO R	OCK V	I/A		17.	тот	AL R	ECOV	ERY FOR BORING	94.36 %				1
						18.	SIGI	NAT	JRE A	ND TITLE OF INSPI	CTOR				
8. TOT	AL DEPTH O	F BORIN	IG 18.	6 Ft.		L_			nne (Gruber, Geologist					
ELEV.	DEPTH	LEGEND	CLA	ASSIFICATION (OF MATERIALS	R	%REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	6	BLOWS/ 1 FT.	N-VALUE	
-55.4	0.0					\top									1
-55.4			SAND, poo	orly-graded, mos	stly fine to	\dashv	H								-0
	-				ed quartz, trace fine to	>									F
	- -			ained sand-size noist, 5Y 8/1 wh	ed shell, no reaction nite (SP)										F
	_	:·::	,		(0.)										t
	-									-57.4					ŀ
	-			Ft., few mediu	ım-grained sand-size	d		1		-57.4					Ŧ
	-	: : :	shell				1-	Pos	t						t
	_														H
	= =	$ \cdot \cdot $													ţ
	_	: :: <u> </u>								-59.4					Ŀ
	-			Ft., little mediu		Γ		2							F
	= =	· · · '	sanu-sizeu	shell, trace silt											ļ
	-														-5
	_														ŀ
	<u>-</u>	$ \cdots $	A+ E+ O4 4			L				-61.4					Ļ
	-		at El61.4 sand-sized		o medium-grained		L	3							Ŀ
	_	. · . · .													ŀ
	_				to medium-grained										F
	-	[: :: [†]	sand-sized	shell, 5Y 5/1 g	ray					00.4					t
	-	- : :				\vdash	+	$\overline{}$		-63.4					+
	- -	- : :					F	4							F
	_	[: : : 													Ł
	_	.;;;													ŀ
	Ē	-:::													ļ.
	_	[: : :													-1
	_														ŀ
-66.6	- 11.2	·:::													F
33.0	- · · · <u>-</u>				ained sand-sized	\dashv									Ė
	_				to medium-grained on with HCl, moist,										ŀ
	Γ				on with HCI, moist, SY 5/1 gray (SM)										F
	-		2	,	J - J ()										Ŀ
	<u> </u>														F
	- -	[ţ
	L	[]													Ł
700	F 44.0														F
-70.0	- 14.6 -		CLAY fat	some fine-grain	ned sand-sized	\dashv									ţ

DRIL	LING	LOG	G (Cont. Sheet)	Jackso		Diota:	ot.		SHEET 2	
ROJECT			•	COORDINA				JM HORIZONTAL	VERTICAL	HEE 13
	ins Count	y Sano	d Search	State P				ı	NAVD88	
CATION	COORDII	NATES	•	ELEVATIO	N ТОР	OF B	ORIN	3		
X = 616	6,143	Т	995,220	-55.4 F	t.					
LEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL	LS	ĸEC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
			quartz, some sand to gravel-sized she reaction with HCl, moist, 10Y 6/1 gree (CH)	ll, weak nish gray						
74.0	18.6		NOTES: 1. USACE Jacksonville is the custodia these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC 1 2.0/2.5 SP ² 1-Post 2.0/2.5 SP ² 2 4.0/4.5 SP ² 3 6.0/6.5 SP ² 4 8.0/8.5 SP ² *Lab visual classification based on gracurve. No Atterberg limits.	TORY CATION				Abbreviations: NR = Not Recorded.		

			DIVISIO	N		INS	TALLA	ION	3 3			SHEET	1	7
DRI	LLING	LOG	i	h Atlantic		l	acksor		strict			_	SHEETS	3
1. PRO	JECT		1							Remarks				1
5	St. Johns Co	ountv S	Sand Search	1					SYSTEM/DATUM	HORIZONTA	AL	VERTIC	AL	1
	ibracore Bo	•					Sta	te Plar	ne, FLN (U.S. Ft.)	NAD83	į	NAV	D88	
	ING DESIGN		ı į	LOCATION COOR	DINATES	11.			RER'S DESIGNATIO			JTO HAN		1
V	/B-SJSP12-	086	į	X = 615,686	Y = 1,996,064						<u> </u>	ANUAL H	IAMMER	
3. DRII	LING AGEN	CY		CON	ITRACTOR FILE NO.	12	TOTAL	SAMD		DISTURBED	UN	DISTURE	BED (UD)	
	Corps of Eng		s - CESAJ	; 6	738-12-5195	12.	IUIA	JAMP	LES	5	<u> </u>	0		_
4. NAN	IE OF DRILL	ER				13.	TOTA	. NUME	ER CORE BOXES	0				
				'	1	14.	ELEVA	TION	ROUND WATER					
	ECTION OF E VERTICAL	BORING	5	DEG. FROM VERTICAL	BEARING					STARTED		COMPLI	ETED	1
_	INCLINED			į	į	15.	DATE	BORING	3	07-03-1	2	07-0	3-12	
6. THI	CKNESS OF	OVERE	BURDEN	N/A	•	16.	ELEV	TION 1	OP OF BORING	-55.9 Ft.				
						┝			VERY FOR BORING	192.86 %	<u>'</u>			1
7. DEP	TH DRILLED	INTO	ROCK	V/A					AND TITLE OF INSP		0			-
8. ТОТ	AL DEPTH O	F BOR	ING 14	.4 Ft.		''			Gruber, Geologist					
						┰		_	T Gruber, Geologist				ш	┪
ELEV.	DEPTH	LEGEND	CL	ASSIFICATION O	F MATERIALS	R	EC. XO	RQD OR UD		REMARKS	5	BLOWS/	N-VALUE	
						T								1
-55.9	0.0	 	SAND no	orly-graded, mos	tly fine to	\dashv	\vdash	+	-					-0
	<u> </u>	[∷:]	medium-g	rained sand-sized	quartz, few fine to									ţ
	-	<u> . : : .</u>	medium-g	rained sand-sized	d shell, no reaction				-56.9					ŀ
	F	-:::-	With HCl, I	moist, 5Y 8/1 whi 9 Ft., little mediu	ite (SP) m-grained		1							Ŧ
	<u>t</u>	:::		d shell, trace silt	m grameu		H		1					t
	F	<u>[::::</u>]		,										F
	ţ	<u> . ; · .</u>							1					ţ
	ŀ	ŀ∷·l							-58.9					ŀ
	_	l::::t			to medium-grained		1 2		-58.9					‡
	-	$ \cdots $		d quartz, few med	dium-grained		1 -P							ŀ
	_	$ \cdots $	sand-sized	d snell										L
	-	$ \cdot \cdot $												ŀ
	F	· ·							-60.9					F
	_	[::::¦		9 Ft., mostly fine	-grained sand-sized		3		00.0					士:
	_	. · · · .	quartz				F	_						ŀ
	<u>-</u>	$ \cdot \cdot $												L
-62.5	- - 6.6													ŀ
02.0	- 0.0	[]] 	SAND, po	orly-graded with	silt, mostly fine to	\dashv			-62.9					F
	<u> </u>	-	medium-g	rained sand-sized	d quartz, few silt, fev	v	4		02.0					t
	}	·	reaction w	arse-grained sand with HCL moist 5	l-sized shell, no Y 6/1 gray (SP-SM)		-	\dashv						F
-63.9	8.0					_								L
	Ė			, little fine-grained to gravel-sized sh	d sand-sized quartz, nell_little sand to				1					Ŀ
	-		gravel-size	ed limestone, stro	ng reaction with				1					F
	<u> </u>			t, 10GY 6/1 greei										F
	<u> </u>								1					ŀ
	L													<u></u>
	}													
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	F													H
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	}								1					ŀ
	F													F
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	<u>L</u>								1					L
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70.0	L , , ,								70.0					\vdash
-70.3	- 14.4 -	11				+	+	+	-70.3					‡
Ī	F		NOTES:			- 1			Abbreviations:					F

DRI	LLING	LOC	G (Cont. Sheet)	INSTALLA Jackso		Distri	nt .		SHEET 2	
PROJEC				COORDINA				M HORIZONTAL	VERTICAL	
	ohns Count	y San	d Search	State P				1	NAVD88	
LOCATI	ON COORDI	NATES	3	ELEVATIO		OF B	ORING			
X = 6	315,686	1	996,064	-55.9 F	t.	_				
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL	LS	REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
ELEV.	DEPTH	TEGE	1. USACE Jacksonville is the custodia these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC CLASS	an for ssification TORY CATION	REC.	BOX	OR UD	NR = Not Recorded.	NOTE:	N-VAI

			DIVISIO	N		INS	STALL	ATIO	N	<u> </u>		SHE	ET 1	
DRI	ILLING	LUG	Soutl	h Atlantic		<u>L</u> ,	Jacks	sonvi	lle Dis	strict		OF	2 SHEET	s
1. PRO	JECT					9.	SIZE	AND	TYPE	OF BIT See	Remarks			
S	St. Johns C	ounty S	and Search			10.	COC	ORDI	NATE	SYSTEM/DATUM	HORIZONTA	AL VERT	TCAL	
	/ibracore B									e, FLN (U.S. Ft.)	NAD83	N/	AVD88	
	ING DESIG		· [1	LOCATION CO		11.	MAI	NUFA	CTUF	RER'S DESIGNATION	N OF DRILL	🔲 АИТО Н		
	/B-SJSP12				11 Y = 1,996,980	┡							L HAMMER	_
_	LLING AGE		CECAL	'	6738-12-5195	12.	тот	TAL S	AMPL		ISTURBED 5	UNDISTU	IRBED (UD	"
	Corps of En		- CESAJ	i_	0736-12-3193	1.0						; 0		-
-11 14241	0. 5					13.	. то	TAL N	IUMB	ER CORE BOXES	0			_
5. DIRI	ECTION OF	BORING		DEG. FROM	BEARING	14.	ELE	VAT	ON G	ROUND WATER				
	VERTICAL			VERTICAL		15.	DAT	ΓE BC	RING	ì	STARTED	i	PLETED	
	INCLINED			!	!	┝					07-03-12	2 07	7-03-12	-
6. THI	CKNESS OF	OVERB	URDEN	N/A		16.	. ELE	VAT	ION T	OP OF BORING	-57.6 Ft.			4
7. DEP	TH DRILLEI	D INTO	ROCK	N/A						ERY FOR BORING	96.50 %			_
	AL DEPTH	05 000	10	C F4		18.				ND TITLE OF INSPE	CTOR			
8. 101	AL DEPIN	UF BUK	19.	.6 Ft.		ㅗ	_		anne (Gruber, Geologist				4
ELEV.	DEPTH	LEGEND	CL	ASSIFICATIO	N OF MATERIALS	ŀ	REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	;	BLOWS/ 1 FT. N-VALUE	
														\neg
-57.6	0.0	┼	SAND nor	orly-graded, n	nostly fine to	\dashv	}							┝
	ļ	[:::]	medium-gr	rained sand-s	sized quartz, few fine to									ţ
	E	.··.			sized shell, no reaction					-58.6				ŀ
	F	·		moist, 5Y 8/1 6 Ft., few me	wnite (SP) dium-grained sand-size	_{ed} [1		-58.6				Ŧ
	_		shell, trace		didiri graniod dana dize	~	1	-Pos	t					Ė
	┝	$[\cdots]$												┝
	-	-:::												ļ
	-	:::								-60.6				ŀ
	F	<u> </u> :∷						2						F
	Ŀ						F							Ŀ
	-	-::-												⊢
	-	:::												ļ
	L	$[\cdot \cdot \cdot]$								-62.6				上
	F	ŀ∷ŀ	∽At El62.7	7 Ft., 5Y 5/1	gray			3						F
00.0							ŀ							Ė
-63.6	6.0	1	SAND nor	orly-graded w	ith silt, mostly	\dashv								\vdash
	F	.·	fine-graine	ed sand-sized	quartz, few silt, few fin	е								F
	L	-:			d-sized shell, no reactio	n L				-64.6				上
-65.1	7.5	1::	with HCI, I	110151, 01 5/1	gray (SP-SM)			4						+
	F				e-grained sand-sized	\neg	t							Ė
-65.8	8.2				avel-sized shell, little the HCI, moist,	ٳ								F
	F		\5Y 5/2 oliv	e gray (SC)										F
	ļ.		CLAY, fat,	some fine-gr	ained sand-sized	_								Ļ
	Ł				avel-sized shell, weak t, 10Y 6/1 greenish gra	,								Ŀ
	}		(CH)	1101, 1110131	, ioi oi giccilisti gia	'								F
60.4	F 10.5		•											F
-68.1	10.5		SAND cla	vev. some fin	e-grained sand-sized	\dashv								ŀ
	F		quartz, sor	me sand to gr	avel-sized shell, little									F
	է				HCI, moist, 5Y 6/2 ligh	nt								E
	}		olive gray	(30)										F
	F													F
	ŀ													ŀ
-70.6	13.0		0415		10 I 0 6 ·									L
	 				ith clay, mostly fine to sized quartz, little sand t									ŀ
-71.6	14.0				clay, weak reaction with									F
-/ 1.0	L 14.0	 	HCI, moist	t, 5Y 6/6 olive	yellow (SP-SC)	\bot								F
	-	.:			ith silt, mostly	<u> </u>								F
-72.6	15.0	1.:	nne-graine	au sanu-sized	quartz, few silt, few fin	۱ ۳								F

St. Johns County:		Jackso			-				F 2 SI	
-		COOKDINA	ATE SY	STEN	I/DAT	ум Н	IORIZONTAL	VERTI	CAL	
	Sand Search	State F	lane,	FLN (U.S. I	=t.)	NAD83	NA	VD88	
		ELEVATIO		OF B	ORING	3				
	= 1,996,980	-57.6 F	t.							
ELEV. DEPTH	CLASSIFICATION OF	MATERIALS	REC.	BOX OR SAMPLE	RQD OR UD		REMARK	s	BLOWS/ 1 FT.	N-VALUE
-77.2 19.6	to coarse-grained sand-sized reaction with HCl, moist, 5Y (SP-SM) SAND, silty, mostly fine-grai quartz, little silt, few sand to weak reaction with HCl, moist (SM) At El73.6 Ft., some fine-grai quartz, some sand to gravel-reaction with HCl	7/1 light gray ned sand-sized gravel-sized shell, st, 5Y 7/1 light gray rained sand-sized				-77.2				
		ssified in Soils Classification Its LABORATORY CLASSIFICATION SP* SP* SP* SP* SP* SP- SP- SP- SP- SP- SP-SM*				Abbreviatio	ns: it Recorded.			

n.	LLING	100	DIVISIO	N		IN	STA	LLATI	ON	<u> </u>		SHEET 1		7
		LUG	Sout	th Atlantic		\bot		ksonv				OF 2 SH	IEETS	1
1. PRO							_				Remarks	· · · · · · ·		1
		•	Sand Search	1		10	. C			SYSTEM/DATUM	HORIZONTAL	- 1	•	
	/ibracore Booking		. :	LOCATION (COORDINATES	11	. м			e, FLN (U.S. Ft.) RER'S DESIGNATIO	NAD83	NAVD8		-
	/B-SJSP12		į		789 Y = 1,997,875	1						MANUAL HAN		
3. DRII	LING AGEN	NCY		·	CONTRACTOR FILE NO			OTAL :	S A M D		DISTURBED	UNDISTURBED	(UD)	
	Corps of En		- CESAJ		6738-12-5195	<u> ''</u>		OIAL .	JAMPI		5	0		
4. NAN	IE OF DRILL	.ER				13	. т	OTAL	NUMB	ER CORE BOXES	0			
5. DIRI	ECTION OF	BORING	<u> </u>	DEG. FRO	M BEARING	14	. EI	LEVAT	ION G	ROUND WATER				
	VERTICAL INCLINED			VERTICAL		15	. D	ATE B	ORING)	STARTED 07-03-12	07-03-		
	CKNESS OF	OVERB	URDEN	_: N/A	<u> </u>	16	. EI	LEVAT	ION T	OP OF BORING	-55.2 Ft.	, 07 00		1
7 DED	TH DRILLEI	INTO	BUCK	N/A		17	. т	OTAL I	RECO	ERY FOR BORING				1
			•			18	. SI	GNAT	URE A	ND TITLE OF INSP	ECTOR			1
8. TOT	AL DEPTH	OF BOR	ING 18	3.0 Ft.		Щ,		_	_	Gruber, Geologist	:			4
ELEV.	DEPTH	LEGEND	CL	.ASSIFICATI	ON OF MATERIALS		% REC	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/	N-VALUE	
55.0	0.0													1
-55.2		 	SAND, po	orly-graded,	mostly fine to									
	E	-::-	medium-g	rained sand	-sized quartz, no reaction 1 white (SP)	n								ŀ
	F	:::	WILLIT ICI,	1110151, 51 0/	i wille (SF)									F
	F	$ \cdots $												F
	_		\	0 = 1:		.			1	-57.2				Ł
	E	$ \cdot\cdot\cdot $		2 Ft., little n d shell, trace	nedium to coarse-graine e silt	ed		1	Į.	-57.2				Ł
	F	$ \cdots $	00.70	a 0.10, t. a01				1-Pos	at.					F
	-	 :∵:												F
	_									50.0				ţ
	F	:∵¦	∽At El59.	2 Ft., few m	edium-grained sand-siz	ed		2	1	-59.2				t
	F	$ \cdots $	shell		-				ł					F
	F	·												F
	-	$ \cdots $												ŧ
	<u> </u>	$ \cdots $								-61.2				上
	<u> </u>	:·::						3						Ŀ
-62.0	L 6.8	1::1	SAND no	orly-graded	with silt, mostly	\dashv								ŀ
	F	$\ \cdot\ $	fine-graine	ed sand-size	d quartz, few silt, few									F
	F	-:		avel-sized s 5/1 gray (S	hell, no reaction with H0 P-SM)	CI,				-63.2				F
	F	:-		s. i giuy (O		Ì		4	1					ŧ
	ţ	-:							1					ţ
	F	:.												H
	F													F
	ļ.	$\ \cdot\ \ $												F
	<u> </u>													ţ
-66.1	- 10.9 	1.11	SAND cit	ty moetly fir	ne to medium-grained									Ŀ
-66.8	_ - 11.6		sand-sized	d quartz, sor	ne sand to gravel-sized									Ŀ
-67.2	12.0				eaction with HCI, moist,	/								F
- · · · <u>-</u>	-	一	SAND, cla	rk gray (SM ayey, mostly) fine to medium-grained	- /∥								F
	‡		sand-sized	d quartz, fev	sand to gravel-sized									ţ
	<u> </u>	·		eaction with light greenis	HCI, moist, sh gray (SC)									F
-68.7	13.5	1:17	SAND, po	orly-graded	with clay, mostly	٦ /								ŀ
	F	$\ \cdot\ \ $	tine-graine sand to or	ed sand-size avel-sized s	ed quartz, few clay, few hell, no reaction with H0	_{a.} /								F
	ļ.	·:	moist, 5Y	7/1 light gra	y (SP-SC)									ţ
	L	16.1111	SAND po	orly-graded	with silt, mostly			1	I	I			1	L

DR	ILLING	LOC	G (Cont. Sheet)	INSTALLA Jackso		Distri	nt .		SHEET 2 OF 2 SI	
PROJEC	т			COORDINA				JM HORIZONTAL VE	RTICAL	
St. J	ohns Count	y San	d Search	State P				!	NAVD88	
LOCATI	ON COORDI	NATES	3	ELEVATIO	N TOP	OF B	ORING	3		
X = (314,789		997,875	-55.2 F	t.					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATER	IALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-70.6 -73.2	15.4	31	ID DEPTH CLASSIF 1 2.0/2.5 S 1-Post 2.0/2.5 S 2 4.0/4.5 S 3 6.0/6.5 S	on with HCI, Id-sized shell, I		DB SP SP SP SP SP SP SP SP SP SP SP SP SP		-73.2 Abbreviations: NR = Not Recorded.		N-Y

DRI	LLING	LOG	DIVISIO			IN		LATIC		-4-4-4			EET 1	
1. PRO			Sout	h Atlantic		۹.			Ile Dis		Remarks	OF	2 SH	EEIS
		ounty S	and Search	1						SYSTEM/DATUM	HORIZONTA	L VER	TICAL	
	ibracore B	-	and ocaron	•						e, FLN (U.S. Ft.)	NAD83		NAVD88	3
	ING DESIG		į į	LOCATION C	OORDINATES	11				RER'S DESIGNATIO			HAMME	
	/B-SJSP12			X = 614,3	369 Y = 1,998,754						Ī	MANU!	AL HAM	MER
	LING AGEN				CONTRACTOR FILE N		. то	TAL S	SAMPI		DISTURBED	UNDIST	URBED	(UD)
	Corps of En		- CESAJ		6738-12-5195	_				1	5	0		
4. NAIV	IE OF DRILL	LEK				13	. то	TAL I	NUMB	ER CORE BOXES	0			
5. DIRE	CTION OF	BORING		DEG. FROM	M BEARING	14	. EL	EVAT	ION G	ROUND WATER				
	VERTICAL INCLINED			VERTICAL		15	. DA	TE BO	ORING	•	STARTED 07-03-12	i	IPLETE 17-03-1	
6. THI	CKNESS OF	OVERB	URDEN	N/A	•	16	. EL	EVAT	ION T	OP OF BORING	-58.6 Ft.			
7. DEP	TH DRILLEI	D INTO	ROCK	N/A		17	. то	TAL I	RECO	VERY FOR BORING	113.53 %			
8. TOT	AL DEPTH (OF BOR	ING 19.	.7 Ft.		18	. SIG			AND TITLE OF INSP Gruber, Geologist				
ELEV.	DEPTH	EGEND	CL	.ASSIFICATIO	ON OF MATERIALS		" REC.	BOX OR SAMPLE	_	l ,	REMARKS		BLOWS/ 1 FT.	N-VALUE
		╅╾┼												
-58.6	0.0	++	SAND no	orly-aradad	mostly fine to									
	<u> </u>	[:::]	medium-gi	rained sand-	sized quartz, trace fine									
	Ł	···	medium-gi	rained sand-	sized shell, no reaction									
	-	$ \cdot \cdot \cdot \cdot $	with HCI, I	1110151, 51 8/	1 white (SP)									
	ļ	$[\cdots]$								60.6				
	F	···						1	1	-60.6 -60.6				
	}	-:::						l-Pos	t					
	_	[:::]												
	E	 .∵. 												
	-	$ \cdot,\cdot\cdot $								-62.6				
	F	$[\cdots]$						2	1					
	ţ	$ \cdot \cdot \cdot $						H						
	F	· · ·	∽At El -63 €	6 Ft., few m	edium-grained sand-si	ized								
	F	<u> </u> :::		e silt, 5Y 5/1										
	L	$ \cdot \cdot $								-64.6				
	-	$ \cdot \cdot \cdot $						3						
-65.6	- 7.0	$ \cdots $							1					
-03.0		 :::: 	SAND, poo	orly-graded v	with silt, mostly									
	}	1:111	fine-graine	ed sand-size	d quartz, few silt, few t									
	<u> </u>	:.	with HCl. r	grained sand moist, 5Y 5/	d-sized shell, no reaction 1 gray (SP-SM)	UH				-66.6				
	ţ	:-	, .	,	3 - 7 ()			4						
	}	1:111												
	F													
	ţ	::												
	F	1:111												
	F	1:111	-Λ+ΕΙ 60 ·	1 Et	cand to around sized									
	L	::	shell, weal	1 Ft., some k reaction w	sand to gravel-sized ith HCl									
	}	1:111	,											
	F	:.												
-70.9	12.3	<u> :· </u>												
	-				fine-grained sand-size									
	<u>L</u>		quartz, little	ie ciay, trace dishelli no re	fine to medium-graine action with HCl, moist	ea								
	E		, 10Y 5/1 gr	reenish gray	(SC)	••,								
	-		LAt El71.8	8 Ft., some	sand to gravel-sized									
	<u> </u>		shell, stror gray	ng reaction v	vith HCl, 5Y 5/2 olive									
	<u> </u>		9.∽3											
-73.6	L 150	(////						l	1	I				I

		LU	3 (Cont. S	meet)		Jackso	nville (Distric	ct				OF 2	SHEETS	3
ROJEC	т					COORDINA				JM	HORIZONTAL	VE	RTICAL		1
St. J	ohns Count	y San	d Search			State P	lane, l	FLN (U.S. I	=t.)	NAD83		NAVD88		
CATI	ON COORDI	NATE	3			ELEVATIO	N ТОР	OF B	ORIN	3					1
X = 6	614,369	, <u> </u>	998,754			-58.6 F	t.								4
ELEV.	DEPTH	LEGEND	CLAS	SSIFICATION	OF MATERIAL	.s	ĸEC.	BOX OR SAMPLE	RQD OR UD		REMAR	(S	BLOWS/ 1 FT.	N-VALUE	
-75.6	17.0		SAND, silty, quartz, little s sand-sized si 5Y 5/2 olive of At El74.6 F shell, strong	silt, little fine i hell, weak re gray (SM) =t., some san	to coarse-gra action with H	ined Cl, moist,									
76.4			SAND, poorly	sand-sized q	uartz, little sa										F
70.1	17.0		gravel-sized s HCl, moist, 5 SAND, silty,	SY 6/2 light ol some fine-gr	live gray (SP rained sand-s	-SM) / ized									-
-77.6	19.0	-	quartz, some limestone, litt gravel-sized	tle silt, trace	fine to coarse)									Ė
-78.3	19.7	<u> </u>	moist, 5Y 6/1	1 gray (SM) mostly fine-o	rained sand-	sized	\vdash			-78.3					╪
			quartz, little s reaction with NOTES: 1. USACE J these origina 2. Soils are accordance of System. 3. Laborator SAMPLE ID 1 1-Post 2 3 4 *Lab visual c curve. No Afficial control of SAMP Courve.	lacksonville is al files. field visually with the Unifiery Testing Re SAMPLE DEPTH 2.0/2.5 2.0/2.5 4.0/4.5 6.0/6.5 8.0/8.5	classified in led Soils Class sults LABORA* CLASSIFIC SP* SP* SP* SP-SP*	an for sification TORY CATION				Abbrevia NR =	Not Recorded.				

			DIVISION		INS	TALLAT	ON			SHEET 1	
DRI	LLING	LOG	South Atlantic		J	ackson	/ille Di	strict		OF 2 SI	HEETS
1. PRO	JECT				9. 9	SIZE AN	D TYPI	E OF BIT See	Remarks		
S	St. Johns C	ounty S	and Search		10.	COORD	INATE	SYSTEM/DATUM	HORIZONTA	L VERTICAL	
	/ibracore B							e, FLN (U.S. Ft.)	NAD83	NAVD8	38
_	ING DESIG		1		11.	MANUF	ACTU	RER'S DESIGNATION	OF DRILL	AUTO HAMMI	
	/B-SJSP12 LING AGEI			99 Y = 1,998,355 CONTRACTOR FILE NO.				' n	L ISTURBED	MANUAL HAN	
_	Corps of En		1	6738-12-5195	12.	TOTAL	SAMP		5	0 ONDISTORBEI	, (00)
	IE OF DRILI		020/10	0700 12 0100	13	TOTAL	NIIMR	ER CORE BOXES	0	i °	
	CTION OF	BORING	DEG. FROM	BEARING	14.	ELEVA	rion G	ROUND WATER			
	VERTICAL INCLINED		VERTIOAL	į	15.	DATE E	ORING	•	STARTED 07-03-12	07-03-	
		. 0./		<u>'</u>	46	E1 E1/A	TION T	OD OF BODING		. ; 07-03-	12
6. THI	CKNESS OF	OVERB	URDEN N/A		_			OP OF BORING	-55.4 Ft.		
7. DEP	TH DRILLE	D INTO F	ROCK N/A					VERY FOR BORING	90.00 %		
8. ТОТ	AL DEPTH	OF BORI	NG 18.3 Ft.		18.			AND TITLE OF INSPE	CIOR		
		т т	10.01.		┰		_	Gruber, Geologist			ш
ELEV.	DEPTH	LEGEND	CLASSIFICATIO	N OF MATERIALS	R	SAMPLE SAMPLE	RQD OR UD		REMARKS	BLOWS/	N-VALUE
-55.4	0.0	++	SAND, poorly-graded, r	mostly fine to	\dashv	-	1	1			
	F	$[\cdots]$	medium-grained sand-s	sized quartz, few fine to							
	L	$ \cdots $	medium-grained sand-swith HCl, moist, 5Y 8/1				_	-56.4			
	-	· \	At El56.4 Ft., little fin			1		-56.4			
	-	I.∵:l\	sand-sized shell, little fi	ine to coarse-grained		(<u>-Po</u>	s)t				
	_	$ \cdot $	sand-sized shell, weak								
	-	:-	LAt El56.9 Ft., trace fil sand-sized shell, no rea								
	E		54.14 5.254 5.15H, 115 156					-58.4			
	-					2					
	-										
	_	···· `	From El59.2 to -59.4	Ft., 2" thick silt seam							
	-										[
	_	.::.			L			-60.4			
	-					3					
	F	::::\	At El61.0 Ft., few fine								
	-	:::	sand-sized shell, 5Y 5/	1 gray							
	_										
	F	$ \cdot \cdot $			\vdash	_	-	-62.4			+
	ţ	$ \cdot\cdot $				4	_				
	-	$ \cdots $									
	F	:::									
	ţ	$ \cdot\cdot $									
	F	$ \cdots $									
	F	$ \cdot $									
	Ŀ	$[\cdots]$									
	-	:::·									[
-66.1	10.7	(/////	SAND, clayey, mostly fi	ine_grained cand cized	\dashv						
	<u> </u>		quartz, little clay, few fir								
	-		sand-sized shell, no rea	action with HČI, moist,							[
-67.5	- 12.1		5G 5/1 greenish gray ((SC)							
	-		CLAY, fat, some fine-gr		\neg						
	[quartz, few sand to grave	vel-sized shell, no t, 5G 5/1 greenish gray							
	F		(CH)	it, JO Ji i greenish gray							
-69.0	13.6		` ,		\Box						
	L		SAND, clayey, mostly fi	ine-grained sand-sized and to gravel-sized shell,							
	}		no reaction with HCl, m		'						
-70.4	15.0		gray (SC)	ŭ							

DRI	RILLING LOG (Cont. Sheet)				TION nville l			<u> </u>	10.001		SHEET OF 2		rs
PROJEC	·T			COORDINA				IIM	HORIZONTAL	VE	RTICAL	0	Ť
	ohns Count	v San	d Search	State P					NAD83		NAVD88		
	ON COORDI			ELEVATIO						:			\dashv
	615,699 `			-55.4 F			,	-					1
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL		ĸ.	BOX OR SAMPLE	RQD OR UD		REMARKS		BLOWS/		-
-73.7	18.3		SAND, silty, mostly fine-grained sand- quartz, little silt, little fine-grained sand shell, weak reaction with HCI, moist, 5Y 6/2 light olive gray (SM)	sized I-sized				-73.7					1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
-13.1	18.3		NOTES: 1. USACE Jacksonville is the custodia these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC CONTROL SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC CONTROL SAMPLE SAMP	TORY CATION				Abbrevia	tions: Not Recorded.				-2
SALE	ORM 183	86-4											<u> </u>

DBI	LLING	I OG	DIVISION	IN	ISTAL	LATIC	ON		SHEET 1	
			South Atlantic	\bot			ille Dis		OF 2 SHE	ETS
1. PRO								E OF BIT See Remarks		
		•	and Search	10). CC			SYSTEM/DATUM HORIZONTAL	VERTICAL	
	ibracore Bo		LOCATION COORDINATES	11	1. M <i>I</i>			ne, FLN (U.S. Ft.) NAD83 RER'S DESIGNATION OF DRILL	NAVD88	
_	/B-SJSP12-		X = 616,160 Y = 1,997,468	- '					MANUAL HAMM	
-	LING AGEN		CONTRACTOR FILE NO		. то	TAL 9	SAMPI	DISTURBED	UNDISTURBED (UD)
	corps of Eng		- CESAJ 6738-12-5195		2. 10	TAL .	SAIVIPI	5	0	
4. NAM	E OF DRILL	ER		13	з. то	TAL I	NUMB	SER CORE BOXES ()		
5. DIRE	CTION OF I	BORING	DEG. FROM BEARING	14	1. EL	EVAT	ION G	ROUND WATER		
	VERTICAL INCLINED		VERTICAL	15	5. DA	TE B	DRING	STARTED 07-03-12	07-03-12	
6. THIC	CKNESS OF	OVERB	SURDEN N/A	16	6. EL	EVAT	ION T	OP OF BORING -57.1 Ft.		
7. DEP	TH DRILLED	INTO	ROCK N/A					VERY FOR BORING 93.00 %		
8. TOT	AL DEPTH C)F ROP	ING 18.8 Ft.	18	3. SI			AND TITLE OF INSPECTOR		
J. 101	AL DEFIN	т т	10.01 t.			_		Gruber, Geologist		
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS		REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
E7 1	0.0									
-57.1	0.0	 	SAND, poorly-graded, mostly fine-grained		1			1		-(
	L	$ \cdot \cdot $	sand-sized quartz, trace fine to medium-grain sand-sized shell, no reaction with HCl, moist							-
	_	:::	5Y 8/1 white (SP)	.,						F
	_	:·::	(2)							L
	_	-:::						-59.1		-
	_	:::	At El59.1 Ft., little medium-grained			1	1	-59.1		—
	_	:·::	sand-sized shell, trace silt, weak reaction with HCl	n		-Pos	t			Ė
	_	$ \cdots $	1.0.							-
	-	:::								F
	_	:·::]	-61.1		
	-	ŀ∷ŀ	At El61.3 Ft., few fine to medium-grained			2				ŀ
	_		sand-sized shell, no reaction with HČI				1			F
	-	::::								- 5
	_	-:::								-
	<u> </u>	:::\	∽At El63.1 Ft., 5Y 5/1 gray				ł	-63.1		 F
		:::	At Li00.11 t., 01 0/1 gray			3				F
-64.1	7.0									Ŀ
	-	$[\cdot, \cdot]$	SAND, poorly-graded with silt, mostly	fina						F
	Ī	[:]]]	fine-grained sand-sized quartz, few silt, few f to medium-grained sand-sized shell, weak	ııı ı C				-65.1		ţ
	_	$\ \cdot\ $	reaction with HCl, moist, 5Y 5/1 gray (SP-SI	M)		4	1	00.1		<u> </u>
-65.8	- 8.7	<u> </u>]	⊢	1			ŀ
			SAND, clayey, mostly fine-grained sand-sized sh							F
	_		quartz, little clay, few sand to gravel-sized sh no reaction with HCl, moist, (little clay seams							Ŀ
	_		10G 5/1 greenish gray (SC)	,,						ŀ
	_		At El66.9 Ft., little fine gravel-sized shell, weak reaction with HCl							- '
	<u></u>		WEAR I CACHOTI WILLI I ICI							Ł
	<u> </u>									F
	_		At El68.4 Ft., some fine gravel-sized shell,							ţ
	_		strong reaction with HCl, 2.5Y 7/2 light gray							E
	<u> </u>									F
-69.9	12.8									ţ
		$ \cdot $	SAND, poorly-graded with silt, mostly fine to							F
	_		medium-grained sand-sized quartz, little sand gravel-sized shell, few silt, strong reaction wi							F
	<u> </u>	$\ \cdot\ $	HCl, moist, 2.5Y 7/1 light gray (SP-SM)							L
	-	:: <u> </u>								}
	_	:.								Į.

St. Johns County Sand Search State Plane, FLN (U.S. Ft.) OCATION COORDINATES X = 616,160 Y = 1,997,468 ELEVATION TOP OF BORING -57.1 Ft. ELEV. DEPTH OUNTY CLASSIFICATION OF MATERIALS CLASSIFICATION OF MATERIALS SAND, silty, some fine-grained sand-sized quartz some sand to gravel-sized shell little		Jackso		Distric	et				SHEET :				
CLASSIFICATION OF MATERIALS SAND, silty, some fine-grained sand-sized quartz, some sand to gravel-sized shell, little silt, strong reaction with HCl, moist, 2.5' 6'1 gray (SM) -75.9 18.8 1	PROJECT								JM	HORIZONTAL	VER		
CLASSIFICATION OF MATERIALS SAND, silty, some fine-grained sand-sized quartz, some sand to gravel-sized shell, little silt storng reaction with HCI, moist, 2.5Y 6/1 gray (SM) NOTES: 1 USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classification system. 3. Laboratory Testing Results SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1.2.0/2.5 SP* 2.2.4.0/4.5 SP* 3.3.6.0/6.5 SP* 3.3.6.0/6.5 SP* 3.3.6.0/6.5 SP* 4.4.8.0/8.5 SP-SM* 4.8.0/8.5 SP-SM*	St. Johns Coun	ity San	d Search		State F	Plane, I	FLN (U.S. I	=t.)	NAD83		NAVD88	
CLASSIFICATION OF MATERIALS TO BETH TO SEE CONTROL TO SEE C	OCATION COORD	INATE	<u> </u>		ELEVATIO	N TOP	OF B	ORING	3				
-75.1 18.0 SAND, silty, some fine-grained sand-sized quartz, some sand to gravel-sized shell, little silt, strong reaction with HCl, moist, 2.5Y 6/1 gray (SM) NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Solis are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1 2.0/2.5 SP* 1-Post 2.0/2.5 SP* 2 4.0/4.5 SP* 3 6.0/6.5 SP* 4 8.0/8.5 SP-SM* *Lab visual classification based on gradation	X = 616,160	_	997,468		-57.1 F	t.							
-75.9 18.8 SAND, sitty, some fine-grained sand-sized quartz, some sand to gravel-sized shell, little sitt, strong reaction with HCl, moist, 2.5Y 6/1 gray (SM) NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1 2.0/2.5 SP* 1-Post 2.0/2.5 SP* 2 4.0/4.5 SP* 3 6.0/6.5 SP* 4 8.0/8.5 SP-SM* *Lab visual classification based on gradation	ELEV. DEPTH	LEGEND	CLASSIFIC	ATION OF MATE	RIALS	% REC.	BOX OR SAMPLE	RQD OR UD		REMARK	(S	BLOWS/ 1 FT.	N-VALUE
	-75.1 18.0	LEGEN	SAND, silty, some quartz, some sand silt, strong reaction 2.5Y 6/1 gray (SN NOTES: 1. USACE Jacksofthese original files 2. Soils are field vaccordance with the system. 3. Laboratory Tes SAMPLE SAI ID DE TES SAMPLE SAI ID DE TES SAI SAI SAI SAI SAI SAI SAI SAI SAI SA	or fine-grained sard to gravel-sized on with HCl, moist of the custom of	nd-sized shell, little ;, odian for in Classification SP* SP* SP* SP* SP* SP* SP* SP* SP* SP*	REC.	BOX O SAMPL	ROPE	Abbrevia	itions:		BLOW	N-VALCE N-VALC

DRILI	ING	LOG	DIVISION	11	NSTAL	LATIC	ON			SHEET 1	
			South Atlantic	\longrightarrow			lle Di			OF 2 SH	IEETS
. PROJEC			and Casuah					SYSTEM/DATUM	Remarks	VERTICAL	
		•	and Search	"	U. CC				1	ļ	.0
. BORING	acore Bo		LOCATION COORDINATES	1	1. MA			e, FLN (U.S. Ft.) RER'S DESIGNATIO	NAD83	NAVD8	
	SJSP12-		X = 616,610 Y = 1,996							MANUAL HAM	
. DRILLI			CONTRACTOR F	141	2. TO	TAL	SAMDI		ISTURBED U	INDISTURBED	(UD)
			- CESAJ 6738-12-519	95	2. 10	'IAL \	AWIF		5	0	
. NAME (OF DRILL	ER		1:	3. ТО	TAL I	NUMB	ER CORE BOXES	0		
. DIRECT	ION OF I	BORING	DEG. FROM BEARING	G 1	4. EL	EVAT	ION G	ROUND WATER			
	RTICAL		VERTICAL	1	5. DA	TE B	DRING	1	STARTED	COMPLETE	
	CLINED			$-\!+\!$					07-03-12	07-03-1	2
. THICK	NESS OF	OVERBU	URDEN N/A	1	6. EL	EVAT	ION T	OP OF BORING	-54.6 Ft.		
DEPTH	DRILLED	INTO R	ROCK N/A					ERY FOR BORING	99.49 %		
TOTAL	DEPTH O	F BORII	NG 19.6 Ft.	11	8. SI			ND TITLE OF INSP	ECTOR		
1			10.011.		T	_		Gruber, Geologist			
ELEV. I	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL	.s	REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/	N-VALUE
-54.6	0.0										
57.0 C	J.U		SAND, poorly-graded, mostly fine to		1						
}			medium-grained sand-sized quartz, few medium-grained sand-sized shell, no re								
F			with HCl, moist, 5Y 8/1 white (SP)	Caction							
ļ.			, ,								
Ŀ		ŀ∷·[-56.6			
F			-At El56.6 Ft., little medium-grained	ion with		1					
ļ.			sand-sized shell, trace silt, weak reacti HCI	OH WILH			1				
F		$ \cdots $									
F		· · · ·									
Ė								-58.6			Ь—
Ŀ		-:::			l .	2	Ĺ	-58.6			
-					1 '	R-Pos	ľ				
F		-::-									
ļ.		·.::						-60.6			
<u> </u>						3		-00.0			+
-						١	1				
F			-At El61.4 Ft., few medium-grained s								
þ			shell, few fine to medium-grained sand shell, 5Y 5/1 gray	J-SIZEO							
上		· · · [-62.6			Щ
E			-At El62.6 Ft., little fine-grained sand- shell	-sized		4					
F		-:									
-		$[\cdots]$									
Ŀ		-::-									
65 A	10.4	:··:									
-65.0 <u>-</u> 1	10.4	//	CLAY, fat, some fine-grained sand-size	ed	-						
-65.8 - 1	11.2		quartz, few fine to medium-grained sar	nd-sized							
			shell, no reaction with HCl, moist, (10GY 6/1 greenish gray (CH)	/	1						
F			SAND, clayey, mostly fine-grained san								
	40.5		quartz, little clay, few fine to medium-g sand-sized shell, no reaction with HCl,	grained							
-67.2 - 1	12.6		sand-sized shell, no reaction with HCI, 10GY 6/1 greenish gray (SC)	moist,	4						
F			SAND, poorly-graded with silt, mostly								
-68.1 1	13.5		fine-grained sand-sized quartz, some s gravel-sized shell, few silt, weak reaction		Д						
Ł			\HCl, moist, 5Y 7/1 light gray (SP-SM)		1						
F			SAND, clayey, some fine-grained sand	d-sized							
-69.6	15.0		quartz, some fine to coarse gravel-size								

DR	LLING	G (Cont. Sheet)	Jackson				.g 200.g			SHEE OF 2		EETS]	
PROJEC	·T			COORDINA				1184	HORIZONTAL	! VE	RTICAL			1
	ohns Count	ly San	d Search	State P					NAD83		NAVD8	A		
	ON COORDI			ELEVATIO					INADOS	<u>:</u>	IVAVDO			1
	616,610 `			-54.6 F		OF B	OKIN	G						
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	•	REC.	BOX OR SAMPLE	RQD OR UD		REMARKS) 3	- L	N-VALUE	1
-74.2	19.6		\(\sum_{5Y 6/1 gray}\) (SC) \(\sum_{5AND}\), poorly-graded with silt, mostly fine-grained sand-sized quartz, few si sand to gravel-sized shell, weak react HCI, moist, 5Y 6/1 gray (SP-SM)	It, few				-74.2						- 1 - - - - - - - - - - -
17.2	10.0		NOTES: 1. USACE Jacksonville is the custod these original files. 2. Soils are field visually classified in accordance with the Unified Soils Clasystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFITED SAMPLE SAMPL	ATORY CATION				Abbrevia	ntions: Not Recorded.					

			DIVISION	N		INS	TALLA	ION	<u> </u>		SHEET 1	
DRI	LLING	LOG	South	n Atlantic		J	acksor	ville D	strict		OF 2 SI	HEETS
1. PRO	JECT					9. 9	SIZE A	ID TYP	E OF BIT See	Remarks		
S	St. Johns Co	ounty S	and Search			10.	COOR	DINATE	SYSTEM/DATUM	HORIZONTAL	VERTICAL	
V	ibracore Bo	rings							ne, FLN (U.S. Ft.)	NAD83	NAVD8	38
	ING DESIGN		L	OCATION COOR		11.	MANU	FACTU	RER'S DESIGNATIO	N OF DRILL	аито намм	
	/B-SJSP12- LING AGEN		<u> </u>		Y = 1,995,696				1-		MANUAL HAI	
	Corps of Eng		- CESA I		1 TRACTOR FILE NO. 1738-12-5195	12.	тота	. SAMP		DISTURBED 5	UNDISTURBE	(טט)
	IE OF DRILL		- OLOAU	1	7700 12 0100	13	TOTA	NIIME	BER CORE BOXES	0		
	CTION OF I	BORING)	DEG. FROM	BEARING	14.	ELEV	TION	GROUND WATER		1	
	VERTICAL INCLINED			VERTICAL		15.	DATE	BORIN	G	STARTED 07-03-12	07-03-	
					<u>:</u>	40		TION	TOR OF PORING	-	07-03-	12
6. THIC	CKNESS OF	OVERB	URDEN	N/A		_			OP OF BORING	-56.0 Ft.		
7. DEP	TH DRILLED	INTO F	ROCK N	I/A					VERY FOR BORING	89.50 %		
8. ТОТ	AL DEPTH C	F BORI	NG 18	4 Ft.		18.			AND TITLE OF INSP Gruber, Geologist			
						Т		_	T Gruber, Geologist			ш
ELEV.	DEPTH	LEGEND	CL	ASSIFICATION O	F MATERIALS	R	%C. SON	RQD OR UD		REMARKS	BLOWS/ 1 FT.	N-VALUE
EC 0	0.0											
-56.0	0.0	 	SAND, poo	orly-graded, mos	tly fine to	\dashv	\vdash	+	1			
	-	.;::	medium-gr	ained sand-size	d quartz, trace fine to							1
	Ė.	·:::		ained sand-size noist, 5Y 8/1 wh	d shell, no reaction ite (SP)							
	_	: :::	With 1101, 11	110101, 01 0/1 1111	ito (01)							
	_	.``.							-58.0			
	_	ŀ∷ŀ			medium-grained	F	1		00.0			
	_	: :::	sand-sized HCl	shell, trace silt,	weak reaction with			\dashv				
	_	.``.	TICI									
	-	·:::										
	_	: :::							-60.0			
	-	.``.					2		-60.0			
	-						<u>₹-P</u>	ost				
	_	::::										
	-											
	F	:::\	SAFEL 62.0) Et few modiu	m-grained sand-sized	,	\perp	4	-62.0			-
	<u> </u>	::::	shell, no re	eaction with HCl	n-graineu sallu-sizet	1	3	4				
	Ł	:::										
	_	[∷:∫	`At El63.0) Ft., 5Y 5/1 gra	У							1
	<u> </u>	::::							-64.0			1
	<u> </u>	- : :				\vdash		1	-04.0			
	}	:::					\vdash	\dashv				
	F.	ŀ∷ŀ	-∆t El .e.s.∩) Et little fine a	avel-sized shell,							1
	<u> </u>	:::	weak react	ion with HCl	avor-sizeu si ieli,							1
-66.0	10.0					[
	-	[]]			medium-grained	\neg						
	ļ.]]]]]]		quartz, little silt, d shell, no react	few sand to ion with HCI, moist,							
	<u> </u>]			5Y 5/1 gray (SM)							
	<u> </u>	 										1
	Ļ											1
	<u> </u>											1
	-	<u> </u>										1
	-	[[]										1
	-											1
-70.0	14.0		SAND pag	orly graded with	eilt moetly	\dashv						1
	ţ	-	fine-graine	orly-graded with a d sand-sized qua	siit, mostiy artz, few silt, few							
74.0	L	11.11#	sand to are	avel-sized shell	no reaction with HCl.	- [1

DR	ILLING	G (Cont. Sheet)	INSTALLA Jackso		Dietri	~t		SHEET 2 OF 2 SI		
PROJEC	т			COORDINA				JM HORIZONTAL	VERTICAL	
St. J	ohns Coun	ty San	d Search	State P	lane,	FLN (U.S. I	Ft.) NAD83	NAVD88	
OCATI	ON COORD	NATE	s	ELEVATIO	N ТОР	OF B	ORING	•		
X = 6	517,090	Y = 1,	995,696	-56.0 F	t.					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATER	IALS	ĸ.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-74.4	18.4		moist, 5Y 5/1 gray (SP-SM) SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, gravel-sized shell, no reaction with I 5Y 8/1 white (SP)	few sand to				-74.4		
			ID DEPTH CLASSII 1 2.0/2.5 S 2 4.0/4.5 S 2-Post 4.0/4.5 S 3 6.0/6.5 S	RATORY FICATION				Abbreviations: NR = Not Recorded.		

DRI	LLING	I OG	DIVISION	IN	ISTAL	LATIC	N		SHEET 1		
1. PRO			South Atlantic	_			lle Dis		OF 2 SH	EETS	
			10					E OF BIT See Remarks SYSTEM/DATUM HORIZONTAL	VERTICAL		-
	t. Jonns Co ibracore Bo	•	and Search	"						,	
	NG DESIGN		LOCATION COORDINATES	11				e, FLN (U.S. Ft.) NAD83 RER'S DESIGNATION OF DRILL	NAVD88		1
	B-SJSP12-		X = 617,551 Y = 1,994,807						MANUAL HAMI		
	LING AGEN		CONTRACTOR FILE NO		2. TO	TAL S	SAMPL	DISTURBED	UNDISTURBED	(UD)	
	orps of Eng		- CESAJ 6738-12-5195	+					0		4
4. NAIVII	E OF DRILL	EK		13	3. то	TAL I	NUMB	ER CORE BOXES ()			4
5. DIRE	CTION OF E	BORING	DEG. FROM BEARING VERTICAL	14	1. EL	EVAT	ION G	ROUND WATER			
	/ERTICAL NCLINED		VERTICAL	15	5. DA	TE B	ORING	STARTED 07-03-12	07-03-1		
	KNESS OF	OVERBU	URDEN N/A	١,	2 EI	EVAT	ION T	OP OF BORING -53.8 Ft.	07-03-17		1
6. THIC	KNESS OF	UVERBU		┿				VERY FOR BORING 85.00 %			1
7. DEPT	H DRILLED	INTO R	ROCK N/A					AND TITLE OF INSPECTOR			
8. TOT	AL DEPTH O	F BORIN	ng 17.6 Ft.	``				Gruber, Geologist			
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS		ĸ.	K H			BLOWS/ 1 FT.	N-VALUE	
											1
-53.8	0.0	 	SAND, poorly-graded, mostly fine to								-0
F	-	l.:::l	medium-grained sand-sized quartz, few sand								F
	-		gravel-sized shell, no reaction with HCl, mois 5Y 8/1 white (SP)	ST,							Ė.
	- -	::::									-
	- -	·:::									L
	-	 ∷∴ 									-
	-							-56.8			F
	-		-At El56.8 Ft., little medium-grained			1		-56.8			ţ
	- -		sand-sized shell, trace silt, weak reaction with HCl	h		-Pos	t				Ŀ
	_	::::	1101								-
F	-	···									F
	- -	-::-						-58.8			<u>–</u> 5
	- -	[∵:]				2					ļ
	-	.:::									Ŀ
-	-										Ŀ
-	-							-60.8			-
	-	$ \cdots $	-At El60.8 Ft., few medium-grained sand-siz	zed		3					F
	- -	[∷::] [*]	shell, no reaction with HCl				1				F
	- -	:::									F
	- -		-At El62.3 Ft., few fine to medium-grained					62.0			ţ
-	-		sand-sized shell, 5Y 5/1 gray			4		-62.8			Ł
	=	[∷:]				 					F
	- 	-∷-									-10
	- -	[∷: <u> </u>	At El. C4 2 Et. come condite manual sized								-
<u>, </u>	-		-At El64.3 Ft., some sand to gravel-sized shell, strong reaction with HCl								L
-65.1	11.3 -		SAND, clayey, mostly fine-grained sand-sized	d							E
F			quartz, little clay, few fine to medium-grained	l							E
	-		sand-sized shell, no reaction with HCl, moist, (little clay seams throughout), 5GY 6/1 green								F
	- -		gray (SC)								ļ.
	- -										F
	-										E
	- -										F
	- -										F
F	-	V////			l	l	1				F

DRI	LLING	G (Cont. Sheet)	INSTALLA Jackso		Distric	ct				SHEET 2 OF 2 SH	IEETS	
ROJEC	т			COORDINA				UМ	HORIZONTAL	VE	RTICAL	
St. Jo	hns Count	y San	d Search	State P	lane,	FLN (U.S.	Ft.)	NAD83		NAVD88	
OCATIO	ON COORDI	NATES	3	ELEVATIO	N ТОР	OF B	ORIN	G				
X = 6	17,551		994,807	-53.8 F	t.							
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	ALS	% REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	3	BLOWS/ 1 FT.	N-VALUE
-71.4	17.6	LEGEND	NOTES: 1. USACE Jacksonville is the custod these original files. 2. Soils are field visually classified in accordance with the Unified Soils Clasystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABOR ID DEPTH CLASSIF 1 3.0/3.5 SF 1-Post 3.0/3.5 SF 2 5.0/5.5 SF 3 7.0/7.5 SF 4 9.0/9.5 SF *Lab visual classification based on grounce. No Atterberg limits.	dian for assification	%REC.	BOX OR SAMPLE	RQD	-71.4 Abbrevia NR =		5	BLOWS/	N-VALUE

DDI	LLING	LOG	DIVISION	li II	NSTAL	LATI	ON		SHEET 1	
		LUG	South Atlantic				ille Di		OF 2 SHE	ETS
1. PRO								See Remarks		
		-	and Search	1'	0. CC			SYSTEM/DATUM HORIZONT	!	
	bracore Bo		LOCATION COORDINATES	1	1 M/			e, FLN (U.S. Ft.) NAD83 RER'S DESIGNATION OF DRILL	NAVD88	
	B-SJSP12		X = 618,021 Y = 1,99		1. IVIA	111017	AC 1 O 1	RER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMM	
	LING AGEN		CONTRACTOR	FILE NO.				DISTURBED	UNDISTURBED (UD)
	orps of En		- CESAJ 6738-12-51	195 1 3	2. TO	TAL :	SAMPI	LES 5	0	
4. NAM	E OF DRILL	.ER		1:	з. то	TAL I	NUMB	ER CORE BOXES 0		
E DIDE	CTION OF	BODING	DEG. FROM BEARIN	10	4. EL	EVAT	ION G	ROUND WATER		
	ETION OF	BUKING	DEG. FROM BEARIN					STARTED	COMPLETED	,
i	NCLINED			1:	5. DA	TE B	ORING	07-04-1	2 07-04-12	2
6. THIC	KNESS OF	OVERB	URDEN N/A	1	6. EL	EVAT	ION T	OP OF BORING -52.6 Ft.		
7. DEPT	H DRILLED	INTO	ROCK N/A	1	7. TO	TAL	RECO	VERY FOR BORING 84.26 %		
				1	8. SI	GNAT	URE A	AND TITLE OF INSPECTOR		
8. TOT <i>i</i>	AL DEPTH (OF BORI	ING 16.8 Ft.			Eve	Huggi	ns, Geologist		
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	ıLS	ĸEC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-52.6	0.0	 	SAND, poorly-graded, mostly fine to		1		1			F
-	•		medium-grained sand-sized quartz, fe							F
	- -		gravel-sized shell, no reaction with H0 5Y 8/1 white (SP)	CI, moist,						Ŀ
-	-		31 6/1 Write (Si)							ŀ
	-									F
<u> </u>	-	$ \cdot\cdot\cdot $								
-	-									ŀ
-	- -		At El55.6 Ft., little medium to coars	o grainad			4	-55.6 -55.6		
<u> </u>	<u>.</u>		sand-sized shell, trace silt, weak reac			1 1-Pos	ļ	-55.0		t
-	-		HCI			<u>-F08</u>	*			ŀ
F	-									F
<u> </u>	-	$ \cdots $								ļ
ŀ	-	::::								Ŀ
	-									ŀ
	-	$ \cdots $								F
<u> </u>										ţ
-	<u>-</u>	$ \cdots $						-59.6		<u> </u>
-	-	∵:·[`	At El59.6 Ft., little medium-grained sand-sized shell			2				F
ļ	• •	[:::]	3a114-31254 311511		1		1			ţ
	- -									F
}	-									┢
ļ	-	-::-			1					F
<u> </u>	• •	:::			1					ţ
}	-	$ \cdots $								Ŀ
F	-	:::								-
<u> </u>	- -				1			-63.6		ļ
<u> </u>	-	. : : 	At El63.6 Ft., few medium-grained	sand-sized		3	1	-00.0		一
-		$ \cdots $	shell, no reaction with HCl			اب	1			F
ļ	- -									Ļ
	• • . <u>.</u> .	$ \cdot $								Ŀ
-65.4	12.8	1	SAND, poorly-graded with silt, mostly	fine to	1					ŀ
-66.0	- - 13.4		medium-grained sand-sized quartz, fe	ew silt, few]			-66.1		F
-	-		fine to coarse-grained sand-sized she	ell, no /	1	4	1	50.1		士
-66.6	14.0		\reaction with HCl, moist, 5Y 5/1 gray SAND, clayey, mostly fine-grained sal	(SP-SIM) /	Ч	⊢	1			F
ļ	-		quartz, little clay, little medium to	1	Ί					ļ
	-	1.111	coarse-grained sand-sized shell, weal	k reaction	1	I	I			ŀ

DRILLING LO	G (Cont. Sheet)	INSTALLAT Jackson		Distric	t		SHEET 2 OF 2 SI	
PROJECT		COORDINA				JM HORIZONTAL	VERTICAL	
St. Johns County Sar	nd Search	State Pla	ane, I	FLN (U.S. F	Ft.) NAD83	NAVD88	
LOCATION COORDINATE		ELEVATION		OF B	ORING			
	,993,897	-52.6 Ft						
ELEV. DEPTH	CLASSIFICATION OF MATERIAL	.s	ĸEC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-68.6 16.0 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	with HCl, moist, 5Y 5/1 gray (SC) SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt, sand to gravel-sized shell, no reaction woist, 5Y 5/1 gray (SP-SM) SAND, silty, mostly fine-grained sand-quartz, little silt, few sand to gravel-size no reaction with HCl, moist, 5Y 4/1 dar (SM) NOTES: 1. USACE Jacksonville is the custodiathese original files. 2. Soils are field visually classified in accordance with the Unified Soils Class System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORAT ID DEPTH CLASSIFIC SAMPLE SAMPL	with HCI, sized ed shell, rk gray				-69.4 Abbreviations: NR = Not Recorded.		

DDI	LLING	106	DIVISION	DN			INS	TALLA	TION	1	<u> </u>			SHEET	1	7
		LUG	Sou	th Atlantic				Jackso	nville	Dis	strict			OF 2	SHEETS	Š
1. PRO												ee Remarks				
	St. Johns Co	•	and Searc	h			10.				SYSTEM/DATUM	-	AL	VERTIC		
	ibracore Bo		1	LOCATION C	CORDINATE	9	11				e, FLN (U.S. Ft.) RER'S DESIGNATI			NAV		4
	/B-SJSP12				441 Y = 1		'''	WAIN	rac		REK 3 DESIGNATI	ON OF DRILL	=	UTO HAM		
	LING AGEN					OR FILE NO.	40					DISTURBED	UN	IDISTURE	ED (UD)	
	Corps of En		- CESAJ		6738-12	2-5195	12.	TOTA	L SA	MPL	LES	5	-	0		_
4. NAN	IE OF DRILL	.ER					13.	TOTA	L NU	ЈМВ	ER CORE BOXES	0				
E DID	CTION OF	BORING		DEC EDO	M DEA	RING	14.	ELEV	ATIO	N G	ROUND WATER					
\boxtimes	VERTICAL INCLINED	BORING	•	DEG. FROI VERTICAL	M BEA	KING	15.	DATE	BOR	RING	•	STARTED 07-04-12	2	COMPLE 07-0		1
	CKNESS OF	OVERB	URDEN	N/A	<u> </u>		16.	ELEV	ATIO	N T	OP OF BORING	-53.6 Ft.	=	, 0, 0	T 12	
7. DEP	TH DRILLE	D INTO	ROCK	N/A			17.	TOTA	L RE	cov	ERY FOR BORING	G 83.84 %				
							18.	SIGN	ATUF	RE A	AND TITLE OF INS	PECTOR				1
8. TOT	AL DEPTH (OF BOR	ING 1	7.2 Ft.			<u>L</u>	E۱	e Hu	ıggi	ns, Geologist					_
ELEV.	DEPTH	LEGEND	С	LASSIFICATION	ON OF MATE	RIALS	R	«EC.	SAMPLE	QD OR UD		REMARKS	;	BLOWS/	N-VALUE	
-53.6	0.0						\top									7
-55.0		 	SAND, po	oorly-graded,	mostly fine	to	\dashv	\vdash	+							F
	}	.::	medium-g	grained sand	-sized quartz	z, few sand to	>									F
	_	$ \cdots $	gravei-siz	ed shell, no i	reaction with	HCI, MOIST,										Ē
	_	:·::		()												Ė
	-	$ \cdots $									-55.6					ŀ
	-	:::: î		.6 Ft., little m							-55.6					1
	_	::::	sand-size HCl	ed shell, trace	e siit, weak r	eaction with		<u> 1-F</u>	ost							ţ
	_	$ \cdots $	1101													H
	-	$ \cdots $														F
	_	::::														Ŀ
	-	$ \cdots $														ŀ
	-	:::									-58.6					F
		::::					H	1	2		-50.0					士
	-							H	-							ŀ
	Ē															Ē
	_	:·::														ţ
	-	$ \cdot \cdot $														ŀ
	F	:::														F
	ļ.	[::::									-61.6					ţ
	_	$ \cdots $					\vdash	+.	3		-01.0				+	士
	 -	[:::						F.	\dashv							F
-62.6	9.0	::::	CAND	orly gradad	with oilt	nth.	\dashv									F
	ţ	1.		oorly-graded led sand-size												Ŀ
	 -	[:·]]	sand to g	ravel-sized sl	helİ, no reac		,									F
	Γ	1:11	moist, 5Y	' 5/1 gray (S	P-SM)											F
	E	1.11														Ŀ
	-	:· 	~Δt El _6/	.6 Ft., few m	edium-arsin	ed sand-size	٦ŀ	-+	\dashv		-64.6				_	F
-65.3	- 11.7	1:	shell	i, i CVV III	ioaiai ii-gi ali i	54 54 14-51 <u>2</u> 6	<u> </u>	<u> </u>	-							F
50.0	<u> </u>	 		oorly-graded,			\dashv									Ł
-66.0	- 12.4	<u> : : . </u>		grained sand			ا ٥									F
	ļ	$H\Pi\Pi$		grained sand moist, 5Y 7/			/]									ţ
	F	<u> </u>	SAND, si	Ity, some fine	e-grained sa	nd-sized	-									\vdash
	F	[[[ome fine to co												F
	L	[: : :	5Y 5/1 gr	weak reactior av (SM)	ı willi HCI, N	ioist,										Ł
-68.1	14.5	 	LAt El66	.6 Ft., 10Y 7												ŀ
	_		SAND, po	oorly-graded	with silt, mo	stly										F

DRI	LLING	LOC	G (Cont. Sheet)	Jackson		Distri	ct		SHEET 2 OF 2 S	
ROJEC	т			COORDINA				UM HORIZONTAL	VERTICAL	
St. Jo	ohns Count	ty San	d Search	State P				l l	NAVD88	
OCATIO	ON COORDI	NATES	3	ELEVATIO	н тор	OF B	ORIN			
X = 6	18,441	Y = 1,	992,985	-53.6 F	t.					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL	LS	REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
70.0	47.0		fine-grained sand-sized quartz, few sil sand to gravel-sized shell, no reaction moist, 5Y 5/1 gray (SP-SM)	t, few with HCl,				70.0		
-70.8	17.2	1. 111	NOTES:					-70.8 Abbreviations:		
			USACE Jacksonville is the custodia these original files.	an for				NR = Not Recorded.		
			Soils are field visually classified in accordance with the Unified Soils Clas System.	ssification						
			3. Laboratory Testing Results							
			SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC	TORY CATION						
			1 2.0/2.5 SP* 1-Post 2.0/2.5 SP* 2 5.0/5.5 SP* 3 8.0/8.5 SP* 4 11.0/11.5 SP-SI*	* * * M*						
			curve. No Atterberg limits.							
	ORM 183					L	L			

DB:	LLING	100	DIVISIO	N		INS	TALLA	TION	ı	<u> </u>		s	HEET 1		1
		LUG	Sout	h Atlantic		-	Jackso	_				0	F 2 SI	HEETS	4
1. PRO											Remarks				1
		-	and Search	l		10.				SYSTEM/DATUM	HORIZONT	AL VI	ERTICAL		
	ibracore B			LOCATION COC	PDINATES	11				e, FLN (U.S. Ft.) RER'S DESIGNATION	NAD83		NAVD8		4
	/B-SJSP12		· .		Y = 1,993,503	'''	WAIN			LK O DEGICITATION	OI DIVILL		O HAMMI UAL HAI		
3. DRIL	LING AGEN	NCY	· · · · · · · · · · · · · · · · · · ·		ONTRACTOR FILE NO.	42	TOT	LEA	MDI		STURBED		STURBE		1
	Corps of En		- CESAJ	<u> </u>	6738-12-5195	12.	TOTA	L JAI	WIPL	.E3	5	0			
4. NAM	IE OF DRILL	.ER				13.	TOTA	L NU	MBE	ER CORE BOXES	0				
5. DIRE	CTION OF	BORING	,	DEG. FROM	BEARING	14.	ELEV	ATIO	N G	ROUND WATER					
\boxtimes	VERTICAL INCLINED			DEG. FROM VERTICAL		15.	DATE	BOR	ING	i	STARTED 07-04-1	i	0MPLET 07-04-		
6. THIC	CKNESS OF	OVERE	URDEN	N/A		16.	ELEV	ATIO	N T	OP OF BORING	-52.5 Ft.				
7. DEP	TH DRILLEI	отито	ROCK N	 V/A		17.	TOTA	L RE	cov	ERY FOR BORING	82.32 %				1
						18.	SIGN	ATUR	RE A	ND TITLE OF INSPE	CTOR				1
8. ТОТ	AL DEPTH (OF BOR	ING 16	.7 Ft.		<u> Ļ</u>			ıggir	ns, Geologist					-
ELEV.	DEPTH	LEGEND	CL	ASSIFICATION	OF MATERIALS	F	REC.	SAMPLE	QD OR UD		REMARKS	6	BLOWS/ 1 FT.	N-VALUE	
-52.5	0.0							\top							
-52.5		 	SAND, po	orly-graded, mo	ostly fine to	-	\vdash	+	\dashv						-0
	-	$ \cdots $	medium-g	rained sand-siz	zed quartz, trace fine t zed shell, no reaction	0									ŀ
	Ē	:::		moist, 5Y 8/1 w											F
	_	::::	,		(- ,										ţ
	-	$ \cdots $													ŀ
	-	:::													F
	_	::::								FF F					ţ
	_	ŀ∷·ŀ	`At El55.	5 Ft., little med	ium-grained	⊦	-+	\dashv	ŀ	-55.5 -55.5				+	╁
	-	:::	sand-sized	d shell, trace si	It, weak reaction with			ost		00.0					F
	_	:•::	HCI					Ĭ							L
	-	$ \cdots $													ŀ
	-														F
	-	:•::													-5
	-	$ \cdot $													ŀ
	F														F
	_	:•::													ţ
	Ł	$ \cdots $								-59.5				<u> </u>	Ŀ
	 	:::						2	ſ						F
	<u> </u>	$ \cdots $					一	\dashv						1	ţ
	<u> </u>	$ \cdot \cdot \cdot \cdot $												1	F
	 -	$ \cdot \cdot \cdot $												1	F
	<u> </u>	$ \cdots $												1	F
	ţ	: : :												1	ţ
	L	$[\cdots]$													Ł
	F	::::	`At El62.	5 Ft., 5Y 6/1 g	ray									1	- 10 -
	<u> </u>	:::								62.5				1	ţ
	F	<u> </u> ∷⊹}	∽At El63.	5 Ft., few fine	to medium-grained	ŀ	+	+	ŀ	-63.5				+	t
	F	:::		d shell, few silt	 		\vdash	3						1	F
	<u> </u>	:::												1	L
	E	$[\cdots]$													ŀ
	F	:::								-65.5					F
	<u> </u>	$ \cdots $				 	+	\dashv	ŀ	-00.0				+	t
	-	$ \cdot $	\A+ E 00	4 F4 BM = 6 =	to occurs and and		\vdash	\dashv						1	ŀ
	<u> </u>	$ \cdots $	sand-sized	ı rt., iittle tine d shell, weak re	to coarse-grained eaction with HCl									1	F
	ţ	$ \cdot \cdot $	OILO	,											t
	L	:::												1	F .

			G (Cont. S	Jileet)		Jackso	nville l	Distric	ct				OF 2	SHEETS
ROJEC	T					COORDINA				JM	HORIZONTAL	VER	TICAL	
St. Jo	ohns Count	y San	d Search			State P	lane,	FLN (U.S. I	=t.)	NAD83	1	NAVD88	
	ON COORDI					ELEVATIO		OF B	ORING	3				
X = 6	319,330	1	993,503			-52.5 F	t.	1						
ELEV.	DEPTH	LEGEND	CLA	SSIFICATION (OF MATERIAL	.s	REC.	BOX OR SAMPLE	RQD OR UD		REMARK	S	BLOWS/	N-VALUE
-69.2	16.7									-69.2				
-69.2	16.7		these origin 2. Soils are accordance System. 3. Laborate SAMPLE ID 1-Post 2 3 4 *Lab visual	Jacksonville is al files. e field visually of with the Unification of SAMPLE DEPTH 3.0/3.5 7.0/7.5 11.0/11.5 13.0/13.5 classification to Atterberg limits	classified in ed Soils Classults LABORA* CLASSIFIC* SP* SP* SP* SP* SP* SP*	sification TORY CATION				Abbrevi	ations: • Not Recorded.			

			DIVISION	N		INS	TAL	LATIC	N	<u> </u>			SHEET 1		1
DKI	LLING	LUG	South	n Atlantic		١,	Jack	sonvi	le Dis	strict			OF 2 S	HEETS	
1. PRO	JECT					9.	SIZE	AND	TYPE	OF BIT See	Remarks				
S	t. Johns Co	unty S	and Search			10.	СО	ORDI	NATE	SYSTEM/DATUM	HORIZONTA	L V	ERTICAL		
V	ibracore Bo	rings						State	Plan	e, FLN (U.S. Ft.)	NAD83		NAVD	38	
	ING DESIGN		L	OCATION COOR		11.	MA	NUFA	CTUF	RER'S DESIGNATIO	OF DRILL	AUT	о намм	ER	
	B-SJSP12-				Y = 1,994,435	┞							IUAL HAI		4
	LING AGEN		OFCA I	1	TRACTOR FILE NO.	12.	то	TAL S	AMPL		ISTURBED	i	STURBE	D (UD)	
	Corps of Eng IE OF DRILLI		- CESAJ	; ;	3738-12-5195	 -					5	; 0			-
7. IVAIII	IL OI DIVILL					13.	то	TAL N	IUMB	ER CORE BOXES	0				4
5. DIRE	CTION OF E	ORING	i	DEG. FROM VERTICAL	BEARING	14.	ELI	EVAT	ON G	ROUND WATER					
	VERTICAL			VERTICAL	-	15.	DΔ	TE BO	RING	i	STARTED	i	OMPLET		
ш	INCLINED			!	- [ļ					07-04-12		07-04-	12	4
6. THIC	CKNESS OF	OVERB	URDEN	N/A		16.	ELI	EVAT	ON T	OP OF BORING	-54.9 Ft.				1
7. DEP	TH DRILLED	INTO F	ROCK N	I/A		17.	TO	TAL F	ECO/	ERY FOR BORING	80.80 %				
			10	0.51		18.	SIG	NAT	JRE A	ND TITLE OF INSPI	ECTOR				
8. ТОТ	AL DEPTH O	F BORI	NG 16.	8 Ft.		<u>L</u>		Eve I	luggi	ns, Geologist					1
ELEV.	DEPTH	LEGEND	CL	ASSIFICATION O	F MATERIALS	F	% REC.	BOX OR SAMPLE	RQD OR UD		REMARKS		BLOWS/ 1 FT.	N-VALUE	
															1
-54.9	0.0	 	SAND non	orly-graded, mos	tly fine to	\dashv									-0
	-	$ \cdots $	medium-gr	ained sand-sized	d quartz, few fine to										ţ
	_	.·			d shell, no reaction					-55.9					ŀ
	_	·∴:·[\		noist, 5Y 8/1 wh Ft., little mediu		Γ		1							F
	_				weak reaction with										Ė
	_		HCI												F
	_	.:													Ė
	_	·.::													L
	_	$ \cdots $													F
	<u>-</u>									50.0					ţ
	-					ŀ				-58.9 -58.9					╁
	= =	$ \cdots $					ŀ	2 }-Pos		00.0					F
	-	.:													L ₅
	-														ŀĭ
	<u>-</u>														F
	_														F
	_														ŀ
	<u> </u>	l∷k	-A+ F1 64 C) Et little fine to	madium arainad	F				-61.9					Į.
	_		sand-sized		medium-grained			3							Ė
	-	:::													ŀ
		[::::[₹	At El62.9	Ft., clay seams	starting at 8 feet.										F
	- -	. : . ') Ft., few fine to shell, 5Y 5/1 gr	medium-grained					62.0					ţ
	-	$ \cdot \cdot \cdot \cdot $	Jan 14 01204	5.1011, 5.1 0/ 1 gir	~,	├	\dashv			-63.9				+	+
	-							4							F
	<u> </u>	$ \cdot\cdot $													- -1
	_	$ \cdots $													
	<u>-</u>	$ \cdots $													ļ.
	_	[. · · ·]													F
	<u>-</u>	$ \cdot \cdot $													F
	-	:::													L
	-	$ \cdots $													F
-67.9	13.0	$ \cdot \cdot $													F
			SAND, wel	I-graded with silf	t, mostly quartz,	\dashv									F
-68.4	13.5	°.	strong read	ction with HCI, 5	Y 6/1 gray (SW-SM	1)_									F
			SAND, poo	orly-graded with	silt, mostly artz, few silt, few fin	_									Ĺ
	_	.• #		grained sand-size		۱ ۳									ŀ
	_	.:			Y 6/1 gray (SP-SM)										E

DRI	LLING	LO	G (Cont. Shee	et)	INSTALL	ATION Onville I	Distri	rt -		SHEET OF 2	
PROJEC					COORDIN				UM HORIZONTAL	VERTICAL	
	ohns Coun	ty San	d Search		l l	Plane,			I .	NAVD88	
	ON COORD				ELEVATION		OF B	ORIN	G		
X = 6	18,891	_	994,435		-54.9	Ft.					
ELEV.	DEPTH	LEGEND	CLASSIFICA	ATION OF MATE	ERIALS	REC.	BOX OR SAMPLE	RQD OR UD	REMAR	BLOWS/	N-VALUE
-71.7	16.8								-71.7		
			NOTES:						Abbreviations: NR = Not Recorded.		
			USACE Jackso these original files.								
			Soils are field vi accordance with th System.	d in Classification							
			3. Laboratory Test	_							
			ID DE	PTH CLAS	ORATORY SIFICATION						
			2 4.0 2-Post 4.0 3 7.0)/1.5)/4.5)/4.5)/7.5)/9.5	SP* SP* SP* SP* SP*						
			*Lab visual classificurve. No Atterber	cation based or							

DBI	LLING	LOG	DIVISIO	N		INS	TALLAT	ION			SHEET 1		
		LUG	Sout	h Atlantic		J	lackson	ville Di			OF 2 S	HEETS	
1. PRO										Remarks			
		•	and Search	l		10.			SYSTEM/DATUM	HORIZONTA	<u> </u>		
	ibracore Bo			LOCATION COO	PRINATES	11			ie, FLN (U.S. Ft.) RER'S DESIGNATION	NAD83	NAVD		
	B-SJSP12		' !'		Y = 1,995,252	• • • •	WANU	FACIO	RER 5 DESIGNATION	TOF DRILL	AUTO HAMM MANUAL HA		
	LING AGEN		<u> </u>		NTRACTOR FILE NO.					ISTURBED	UNDISTURBE		
	orps of En		- CESAJ	<u> </u>	6738-12-5195	12.	TOTAL	SAMP	LES	5	0		
4. NAM	E OF DRILL	.ER				13.	TOTAL	NUMB	ER CORE BOXES	0			
5. DIRE	CTION OF	BORING		DEG. FROM	BEARING	14.	ELEVA	TION 6	ROUND WATER				
\boxtimes	VERTICAL INCLINED			VERTICAL		15.	DATE	BORING	3	STARTED 07-03-12	COMPLET 2 07-03-		
6. THIC	KNESS OF	OVERB	URDEN	N/A		16.	ELEVA	TION T	OP OF BORING	-54.4 Ft.			
7. DEP	TH DRILLED	INTO	ROCK N	V/A		17.	TOTAL	RECO	VERY FOR BORING	89.00 %			
			•			18.	SIGNA	TURE A	AND TITLE OF INSPE	ECTOR			
8. ТОТ	AL DEPTH (OF BOR	ING 18.	.2 Ft.		<u> </u>	Ма	rianne	Gruber, Geologist				
ELEV.	DEPTH	LEGEND	CL	ASSIFICATION (OF MATERIALS	R	%EC.	RQD OR UD		REMARKS	BLOWS/	N-VALUE	
E 4 4	0.0												
-54.4	0.0	 	SAND, poo	orly-graded, mo	stly fine to	\dashv		+	1			t	-0
	-	-::-			ed quartz, little sand to								H
	_		moist, 5Y	8/1 white (SP)	eaction with HCI,								Ē
	-	:·::	, .										Γ
	_	-::-							-56.4				F
	_	····		4 Ft., some med			1	1	-56.4				F
	-	::::		ained sand-sized ction with HCl	d shell, trace silt,		<u>-Po</u>	<u>s</u> t				t	[
	_	$ \cdots $	ou ong roa	onon mannon								H	<u> </u>
	_ _	·∵\	\^+ E	9 Ft., 2" thick si	lt acom								Ē
	-	::::	AL LI57.3	9 Ft., Z triick Si	it Scarri							t	
	_	$ \cdots $										H	r
	_	:::							-59.4				F
	 -	:::: <u> </u>		4 Ft., little medi		F	2	1					-5 -
	_	$ \cdots $	sand-sized	d shell, weak rea	action with HCI		<u> </u>	\dashv					Ė
	_	:::											<u> </u>
	_	::::										[Ę
	_	-:::											L
	_												H
	_	:::											Ē
	 -	:::											_
	_	$[\cdots]$										 	
	_	 ∷:	-At FL -63 4	4 Ft some fine	to medium-grained	\vdash	-	\dashv	-63.4			+-	-
	_ _	:::			eaction with HCl		3	4					Ē
	_	[::]										 	- 10
	-	:::											
-65.4	- 11.0	<u>[∷:</u>]											Ē
-00.4	-	1:111		orly-graded with		\dashv						 	Γ
	_	-: <u> </u>	fine-graine	ed sand-sized qu	uartz, few silt, trace								t
	_	1:411	reaction w	ith HCl, moist. 5	5Y 5/1 gray (SP-SM)		-	-	-66.4			+	H
	_	 ::	LAt El66.4		rained sand-sized		4	_				 	Į.
-67.4	13.0	<u> [</u>	shell										L
		· .			ilt, mostly fine to	7							F
60 4	- - 14 0				ed quartz, some sand silt, strong reaction								Ē
-68.4	14.0	f_{1}	with HCl, r	moist, 5Y 6/1 gr	ay (SW-SM)	\mathcal{A}						 	
	_	[[rained sand-sized								ŀ
	-	14141	quartz, iitti	e siit, trace fine	to medium-grained				1			1 -	Γ.

PROJECT St. Johns County Sand Search St. Johns County Sand Sand Sand Sand Sand Sand Sand Sand		HEET 2		TIGUELT VE COCI	<u> </u>			INSTALLAT Jackson	G (Cont. Sheet)	LO	LLING	DRI
St. Johns County Sand Search State Plane, FLN (U.S. Ft.) RELEVATION TOP OF BORING -54.4 Ft. CLASSIFICATION OF MATERIALS RELEV. DEPTH Substitute 1	\dashv			HORIZONTAL	UM						т	PRO.JEC
CLASSIFICATION TOP OF BORING			ı	1					d Search	v San		
X = 618,399 Y = 1,995,252 -54.4 Ft.												
CLASSIFICATION OF MATERIALS CLASSIFICATION O					_		٠	l				
-72.6 18.2 NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1. 2.0/2.5 SP* 2 5.0/5.5 SP* 2 1Post 2.0/2.5 SP* 2 1.0/9.5 SP* 3 9.0/9.5 SP* 4 12.0/12.5 SP-SM* *Lab visual classification based on gradation **Table Value of the sit seams throughout, and the sit seams	N-VALUE	BLOWS/ 1 FT.		REMARKS		RQD OR UD	BOX OR SAMPLE	•				
NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1 2.0/2.5 SP* 2 5.0/5.5 SP* 2 5.0/5.5 SP* 3 9.0/9.5 SP* 4 12.0/12.5 SP-SM* *Lab visual classification based on gradation	-				-72.6				10Y 6/1 greenish gray (SM) At El69.4 Ft., little silt seams through		18.2	-72.6
					Abbrevia			TORY CATION	USACE Jacksonville is the custodia these original files. Soils are field visually classified in accordance with the Unified Soils Classystem. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC CLASSIF	<u> </u>	18.2	-72.6

nei	LLING	1.06	DIVISI	ON		IN	STAL	LATIC	ON	5 5		SH	IEET 1		7
			Sou	uth Atlantic		+			lle Di			OF	2 S	HEETS	4
1. PRO											e Remarks		DT1041		4
	St. Johns Co	•	Sand Seard	cn		10). CC			SYSTEM/DATUM	HORIZONTA		RTICAL		
	/ibracore Bo		J	LOCATION	COORDINATES	11	. MA			ie, FLN (U.S. Ft.) RER'S DESIGNATI			NAVD		-
	/B-SJSP12		•	1	961 Y = 1,996,149	1				NEW O DEGIGNATI]	=	IAL HA		
3. DRII	LING AGEN	ICY		,	CONTRACTOR FILE NO						DISTURBED	UNDIS	TURBE	D (UD)	1
	Corps of En	<u> </u>	s - CESAJ		6738-12-5195	12	2. 10	TAL :	SAMPI	LES	5	0			
4. NAN	IE OF DRILL	.ER				13	в. тс	TAL I	NUMB	ER CORE BOXES	0				
- DID		DO DIN		DEC EDO	M BEARING	14	l. EL	EVAT	ION G	ROUND WATER					1
\boxtimes	VERTICAL	BURIN		DEG. FRO		15	. DA	TE BO	ORING	3	STARTED	1 -	MPLET		1
	INCLINED	OVERE	BURDEN	! N/A	<u> </u>	16	5. EL	.EVAT	ION T	OP OF BORING	07-03-12 -54.9 Ft.	<u> </u>	07-03-	12	┨
	TH DRILLE			N/A		17	. т с	TAL I	RECO	VERY FOR BORING					1
						18	s. SI	GNAT	URE A	AND TITLE OF INS	PECTOR				1
8. TOT	AL DEPTH (OF BOR	ring 1	6.5 Ft.				Maria	anne	Gruber, Geologis	st				1
ELEV.	DEPTH	LEGEND	c	CLASSIFICATI	ON OF MATERIALS		% REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	i	BLOWS/ 1 FT.	N-VALUE	
-54.9	0.0														1
-54.9		 	SAND, p	oorly-graded.	mostly fine to					1					F
	}	.::.	medium-	grained sand	 sized quartz, little sand 	to									F
	<u> </u>	$ \cdot \cdot $	gravei-si: moist (S		ak reaction with HCI,										Ļ
	t	::::		,											Ł
	-	.::.								-56.9					ŀ
	 	·::		6.9 Ft., some				1	1	-56.9					ŧ
	E	:·::		rained sand-s action with H	sized shell, trace silt,			-Pos	t						Ł
	_			7.9 Ft., 1" thic											H
	 	$ \cdots $	At L151	7.911., 1 1110	SK SIIL SCAITI										ţ
	L	:·::								-58.9					Ł
	F	.::.						2							F
	 	$ \cdot : \cdot \cdot $													Ė
	<u> </u>	::::	`-At El59	9.9 Ft., few sa	and to gravel-sized shell	١,									F
	-		no reacti	on with HCI	-										ŀ
	<u> </u>	::::								-60.9				-	Ļ
	_	:·::						3							Ė
	-														ŀ
-62.2	7.3														F
-62.8	- 7 9	000		vell-graded, m grained sand	nostly fine to -sized quartz, some sar	nd				60.0					t
JZ.U	- ' . ' - '		to gravel	-sized shell, r	no reaction with HCl,	. <u> </u>		_	ł	-62.9					+
	F	$ \cdots $	\moist, 5	Y 8/1 white (\$	SW)	_/		4	-						F
	L	$ \cdots $	medium-	oony-graded, grained sand	mostly fine to -sized quartz, trace silt,										L
	F	∷::	trace fine	e to medium-	grained sand-sized shell	Ι,									F
	F	$ \cdot \cdot \cdot $			moist, 5Y 5/1 gray (SP) ne to medium-grained)									F
	<u> </u>	:::	sand-size		ne to medium-grained										F
	ŀ	∷∷													F
	ļ.	$ \cdot \cdot \cdot $													F
-66.5	- - 11.6	:::													ţ
	-	1:111	SAND, p	oorly-graded	with silt, mostly fine to										F
-67.3	- 12.4	 ::	medium-	grained sand	-sized quartz, few silt, n ist, 5Y 8/1 white(SP-S	O M)									F
	<u> </u>	11111	SAND, s	ilty, mostly fir	ne to medium-grained	·v')									Ė
	H		sand-size	ed quartz, littl	e silt, few sand to										F
-68.4	13.5			zed shell, no greenish gray	reaction with HCl, moist	t,									ţ
	L		CLAY fa	greenish gray at, little fine-a	rained sand-sized quart	_/ z,									ŀ
	F		no reacti		moist, N 3/ very dark gra										F
	<u> </u>		(CH)												ţ
		1////////													

Description Description	RILLING LOG (Cont. Sheet)	INSTALLATION				IEET 2 = 2 SHE	ETC
St. Johns County Sand Search State Plane, FLN (U.S. Ft.) NAD83 NAVD88 CATION COORDINATES X = 617,961 Y = 1,996,149 CLASSIFICATION OF MATERIALS SILT, organic-H, trace fine-grained sand-sized quartz, N 2.5/ black (OH) NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1 2.0/2.5 SP* 1Post 2.0/2.5 SP* 2 4.0/4.5 SP* 3 6.0/6.5 SP* 4 8.0/8.5 SP* *Lab visual classification based on gradation		_					E15
CLASSIFICATION OF MATERIALS Rec.					l l		
CLASSIFICATION OF MATERIALS The state of th							
-70.9 16.0 SILT, organic-H, trace fine-grained sand-sized quartz, N 2.5/ black (OH) NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION 1 2.0/2.5 SP* 1-Post 2.0/2.5 SP* 2 4.0/4.5 SP* 2 4.0/4.5 SP* 3 6.0/6.5 SP* 4 8.0/8.5 SP* *Lab visual classification based on gradation	(= 617,961 Y = 1,996,149	-54.9 Ft.					
-71.4 16.5 SILT, organic-H, trace fine-grained sand-sized quartz, N 2.5/ black (OH) NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE SAMPLE LABORATORY ID DEPTH CLASSIFICATION	EV. DEPTH O CLASSIFICATION OF MATER	IALS REC	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
	CLASSIFICATION OF MATER 1.4 16.5 SILT, organic-H, trace fine-grained quartz, N 2.5/ black (OH) NOTES: 1. USACE Jacksonville is the custo these original files. 2. Soils are field visually classified accordance with the Unified Soils C System. 3. Laboratory Testing Results SAMPLE SAMPLE LABOR ID DEPTH CLASSI 1-Post 2.0/2.5 5 5 1-Post 2.0/2.5 5 5 2 4.0/4.5 5 3 6.0/6.5 5 5 4 8.0/8.5 5 5 5 1-Dost 2.0/8.5 5 5 1-Dost 2.0/8.5 5 5 5 1-Dost 2.0/8.5 5 5 1-Dost 2.0/8.5 5 5 1-Dost 2.0/8.5 5 5 1-Dost 2.0/8.5 5 5 1-Dost 2.0/8.5 5 5 1-Dost 2.0/8.5 5 5 1-Dost 2.0/8.5 5 1-Dost 2.0/8.5 5 1-Dost 2.0/8.5 5 1-Dost 2.0/8.5 5 1-Dost 2.0/8.5 5 1-Dost 2.0/8.5 5 1-Dost 2.0/8.5 5 1-Dost 2.0/8.5 5 1-Dost 2.0/8.5 5 1-Dost 2.0/8.5 5 1-Dost 2.0/8.5 5 1-Dost 2.0/8.5 5 1-Dost 2.0/8.5 5 1-Dost 2.0/8.5 5 1-Dost 2.0/8.5 1-Dost 2.0/8.5 5 1-Dost 2.0	sand-sized dian for n lassification RATORY FICATION	BOX OR SAMPLE	ROD	-71.4 Abbreviations:	BLOWS/ 1 FT.	N-VALUE

DBI	LLING	LOG	DIVISION	II.	NSTAL	LATI	ON		SHEET 1	
			South Atlantic	+			ille Di		OF 2 SH	IEETS
1. PRO								E OF BIT See Remarks		
		•	and Search	1	0. CC			SYSTEM/DATUM HORIZONT	1	
	ibracore Bo		LOCATION COORDINATES	1	1. MA			e, FLN (U.S. Ft.) NAD83 RER'S DESIGNATION OF DRILL	NAVD8	
	/B-SJSP12		X = 617,006 Y = 1,997,905	Ι.	1412			REK O DEGICINATION OF DRIEE	MANUAL HAN	
3. DRIL	LING AGEN	ICY	CONTRACTOR FILE NO					DISTURBED	UNDISTURBED) (UD)
	Corps of Eng		- CESAJ 6738-12-5195	1	2. TC	TAL :	SAMPI	5	0	
4. NAM	IE OF DRILL	.ER		1:	3. ТС	TAL	NUMB	ER CORE BOXES 0		
E DIRE	CTION OF	POBING	DEG. FROM BEARING	— 1-	4. EL	EVAT	ION G	ROUND WATER		
	VERTICAL	BUKING	VERTICAL	Ι.				STARTED	COMPLETE	ED
	INCLINED		<u> </u>	1	5. DA	TE B	ORING	07-03-	12 07-03-	12
6. THI	CKNESS OF	OVERB	urden N/A	1	6. EL	EVAT	ION T	OP OF BORING -58.6 Ft.		
7. DFP	TH DRILLED	INTO	ROCK N/A	1	7. TC	TAL	RECO	VERY FOR BORING 96.00 %)	
				— 1	8. SI	GNAT	URE A	AND TITLE OF INSPECTOR		$\neg \neg$
8. ТОТ	AL DEPTH C	OF BORI	ING 19.5 Ft.			Maria	anne	Gruber, Geologist		
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS		% REC.	BOX OR SAMPLE	RQD OR UD	REMARK	BLOWS/	N-VALUE
		1 1								\Box
-58.6	0.0	 	SAND, poorly-graded, mostly fine to		1	_	\vdash	-		
	F	[:::]	medium-grained sand-sized quartz, little sand	l to						
	Ė	· ∴ · ′	gravel-sized shell, weak reaction with HCl, moist, 5Y 8/1 white (SP)]	-59.6		
	-	···· \	-At El59.5 Ft., few sand to gravel-sized shell	l,		1		-59.6		-
	-	[:::]\	no reaction with HCl	•		-Pos	≱ t			
	_	···	LAt El59.6 Ft., some fine to coarse-grained sand-sized shell, strong reaction with HCl							
	-	· · ·	Sand-Sized Shell, Strong reaction with From							
	_	[:::] <u>,</u>	ALEL CACEL State Single to receditions against				1	-61.6		\perp
	_	$ \cdot\cdot\cdot $	At El61.6 Ft., little fine to medium-grained sand-sized shell, weak reaction with HCl			2]			
	-		oand oled onon, mount odolon min rec							
	-	$[\cdots]$								
	_									
	_	l: ::	≻At El63.6 Ft., few fine-grained sand-sized		_		┨	-63.6		+
	F		shell, no reaction with HCl			3	1			
-64.6	6.0	<u> </u>	CAND poorly graded with all worth for		4					
	E	:.	SAND, poorly-graded with silt, mostly fine to medium-grained sand-sized quartz, few silt, fe	ew						
	F	[:-]∏	fine to coarse-grained sand-sized shell, no					-65.6		
-66.1	- - 7.5	-: <u> </u>	reaction with HCl, moist, 5Y 5/1 gray (SP-SN-At El65.6 Ft., little fine to medium-grained	/ 1)		4	1			
-00.1	_ 7.5	╂╫╫┞	\sand-sized shell, weak reaction with HCl	/	1	Ė	1			
	-		SAND, silty, mostly fine-grained sand-sized	_						
	F		quartz, little silt, few fine to coarse-grained sand-sized shell, no reaction with HCl, moist,							
	L	$\Pi\Pi\Pi$	5Y 5/1 gray (SM)							!
00.0	<u>ا</u>	HHH	At El67.4 Ft., some sand to gravel-sized shell, weak reaction with HCl, 5Y 4/1 dark gra	av/						
-68.3	9.7		CLAY, fat, some fine-grained sand-sized	лу	1					
	<u> </u>		quartz, some sand to gravel-sized shell, weak							
-69.4	_ _ 10.8		reaction with HCl, moist, 5G 6/1 greenish grate (CH)	y						
	_		SAND, clayey, some fine-grained sand-sized]					
-70.0	- 11.4 -		quartz, some fine to coarse gravel-sized shell,	, ,	4					
	L., .]	\little clay, strong reaction with HCl, moist, \5Y 5/2 olive gray (SC)	_/						
-70.9	12.3	┨┼┼┼┞	SAND, silty, some fine-grained sand-sized							
	F]]	quartz, some sand to gravel-sized shell, little	alc						
	<u> </u>	$\parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel $	silt, strong reaction with HCl, moist, 5Y 8/2 pa yellow (SM)	ale						
	<u> </u>	HHH	LSAND, silty, mostly fine-grained sand-sized							
	Ė.		quartz, few sand to gravel-sized shell, no reaction with HCl, 5Y 8/1 white (SM)							
	<u> </u>]]]]	reaction with Fig. 51 of Fwhite (Sivi)							
	ļ	$\parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel $			1					1 [

DKI	LLING	LO	G (Cont. Sheet)	Jackson		Dietric	~ t			SHEET 2 Of 2 SH	IFFTS
PROJEC	т			COORDINA				UM HORIZONTAL	VERT		
	ohns Count	y San	d Search	State P				!	1	AVD88	
LOCATION	ON COORDI	NATES	6	ELEVATIO							
X = 6	317,006	Y = 1,	997,905	-58.6 F	t.						
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	ALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	;	BLOWS/ 1 FT.	N-VALUE
70.4	40.5		NATE 77.9 Et geme fine greined en	nd sized				70.4			
-78.1	19.5		At El77.8 Ft., some fine-grained sa quartz, some sand to gravel-sized limstrong reaction with HCl, 5Y 7/1 light NOTES: 1. USACE Jacksonville is the custod these original files. 2. Soils are field visually classified in accordance with the Unified Soils Clasystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABOR. ID DEPTH CLASSIF 1 1.0/1.5 SF 1-Post 1.0/1.5 SF 2 3.0/3.5 SF 3 5.0/5.5 SF 4 7.0/7.5 SP-3 *Lab visual classification based on grourve. No Atterberg limits.	estone, gray lian for assification ATORY CATION				Abbreviations: NR = Not Recorded.			

			DIVISIO	N		INS	TAL	LATIC	N	 		SHEET 1		1
DRI	LLING	LUG	South	h Atlantic		L,	Jack	sonvi	lle Dis	strict		OF 2 S	HEETS	
1. PRO	JECT					9.	SIZE	AND	TYPE	OF BIT See	Remarks			
S	St. Johns Co	ounty S	and Search			10.	CO	ORDI	NATE	SYSTEM/DATUM	HORIZONTA	L VERTICAL		
	ibracore Bo									e, FLN (U.S. Ft.)	NAD83	NAVD	38	1
	ING DESIGI		L	LOCATION COO		11.	MA	NUFA	CTUF	RER'S DESIGNATIO	ON OF DRILL	AUTO HAMM		
	/B-SJSP12 LING AGEN		!		Y = 1,998,797 ONTRACTOR FILE NO.	┝				1,	L DISTURBED	MANUAL HAI		4
_	Corps of En		- CESAJ		6738-12-5195	12.	то	TAL S	SAMPL		4 4	ONDISTORBE	D (UD)	
	IE OF DRILL		OLO/ 10	<u> </u>	0,00 12 0100	13.	то	TAI N	IUMR	ER CORE BOXES	0	<u> </u>		1
						\vdash								1
	ECTION OF	BORING		DEG. FROM	BEARING	14.	EL	EVAI	ION G	ROUND WATER	STARTED			4
_	VERTICAL INCLINED					15.	DA	TE BO	RING	ì	07-03-12	07-03-		
	CKNESS OF	OVERR	UDDEN	N/A	· ·	16	=1	EVAT	ION T	OP OF BORING	-59.6 Ft.	, 0, 00		1
6. IHI	ZKNE35 UF	OVERB	UKDEN	IN/A		⊢								1
7. DEP	TH DRILLED	O INTO F	ROCK	I/A						/ERY FOR BORING				1
8. ТОТ	AL DEPTH (OF BORI	NG 19.	9 Ft.] '''				Gruber, Geologist				
						┱				orabor, ocologica	•		—ш	1
ELEV.	DEPTH	LEGEND	CL	ASSIFICATION	OF MATERIALS		% REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/	N-VALUE	
F0.0	0.0													1
-59.6	0.0	 	SAND poo	orly-graded, mo	stly fine to	-								-
	F	$ \cdots $	medium-gr	ained sand-siz	ed quartz, some sand									F
-60.6	1.0].∵.	to gravel-si	ized shell, few	fine to coarse-grained action with HCl, moist	! L				-60.6			\perp	L
-60.7	1.1	1: · :: N	5Y 8/1 whi	te (SP)		',		1		-60.6				ŀ
	-	$ \cdots $	^L SAND, pod	orly-graded, mo				-Pos	t					F
	_	$ \cdot\cdot\cdot $		d shell, some f	ine-grained silt, strong reaction									E
	_	$ \cdot\cdot $	with HCl		siit, strong reaction									-
		.·:· \		orly-graded, mo		L				-62.6			 	Ļ
	-	.··.			ed quartz, few sand to e to coarse-grained			2						F
	F	-::: \			tion with HCI (SP)									F
	_	$ \cdots $	At El62.2	2 Ft., 5Y 5/1 gr	ay									F
	-	$ \cdots $			to medium-grained action with HCl									F
	_	-:	odila oizoa	orion, woak ro		-				-64.6			+	Į,
	<u> </u>							3						Ė
	-	$ \cdots $												F
-66.1	- - 6.5	.::.												F
-00.1	0.5	1////	SAND, clay	yey, mostly fine	e-grained sand-sized	\dashv								Ł
	_				and to gravel-sized									H
	<u> </u>			reaction with greenish gray										þ
-67.7	L _{8 1}		.0010/1	g. 501 11011 gruy	()									L
57.7	-			orly-graded with		\dashv								F
-68.4	8.8	<u> </u>			uartz, few silt, few , no reaction with HCl									ţ
	<u> </u>	<i>[[]]</i>			, no reaction with HCi nish gray (SP-SM)	' /								F
	F		SAND, clay	yey, some fine	-grained sand-sized	-								F
	L				vel-sized shell, little								1	L
	}			g reaction with it gray (SC)	noi, moist,									F
	[– "g"	(50)										F
	F													F
	-													F
	L.,,													L
-71.9	_ 12.3		SAND poor	orly_aradod with	o clay moetly	_							1	F
-72.5	- - 12.9	:		orly-graded with d sand-sized g	uartz, little sand to									F
	<u> </u>		gravel-size	d shell, few cla	y, weak reaction with								1	F
l	F				reenish gray (SP-SC	<u>)/</u>							1	F
-73.6	14.0				-grained sand-sized vel-sized shell, little									L
	-		clay, strong	g reaction with	HCI, moist,									F
	ļ.	<u> </u>	\10Y 7/1 lig	ht greenish gra	ay (SC)] [1	ţ
	Ī	111111	SAND silts	v some fine-ar	ained sand-sized	ı							1	

DRI	LLING	LO	G (Cont. Sheet)	INSTALLA Jackso		Distri	ct		SHEET 2 OF 2 S	
PROJEC	т			COORDINA				JM HORIZONTAL	VERTICAL	
St. Jo	ohns Count	y San	d Search	State P	lane,	FLN (U.S. F	Ft.) NAD83	NAVD88	
	ON COORDI			ELEVATIO		OF B	ORING	3		
X = 6	16,576	_	998,797	-59.6 F	t.		, ,			
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIAL	LS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
			quartz, some sand to gravel-sized she silt, strong reaction with HCl, moist, 2.5Y 5/6 light olive brown (SM) At El74.2 Ft., some fine to coarse gravel-sized shell, 2.5Y 6/1 gray At El78.2 Ft., some fine to coarse gravel-sized limestone, 2.5Y 7/1 light of							
-79.5	19.9							-79.5		
			NOTES: 1. USACE Jacksonville is the custodia these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC TOTAL	TORY CATION				Abbreviations: NR = Not Recorded.		
					1					

		. ^^	DIVISIO	N		INS	TALL	ATIC	N	<u>-</u>			SHEET 1		1
	LLING	LUG	South	n Atlantic		ļ ,	Jacks	sonvi	lle Dis	strict			OF 2 S	HEETS	
1. PRO	JECT										Remarks				
	t. Johns Co	•	and Search			10.				SYSTEM/DATUM	HORIZONTA	\L	VERTICAL		
	ibracore Bo									e, FLN (U.S. Ft.)	NAD83	į	NAVD		4
	ING DESIGN		1	OCATION COO		11.	MAI	NUFA	CTUF	RER'S DESIGNATIO	N OF DRILL	_	JTO HAMM		
	B-SJSP12-		i_		Y = 1,998,406 NTRACTOR FILE NO.	┢				! п	ISTURBED		NUAL HAI		-
_	corps of Eng		- CESAJ		6738-12-5195	12.	TOT	TAL S	AMPL		4	i	0	J (UJ)	
	E OF DRILL			'		13.	TOI	TAL N	IUMB	ER CORE BOXES	0		-		1
						_				ROUND WATER					1
	CTION OF E	BORING		DEG. FROM VERTICAL	BEARING	<u> </u>		·VAI		ROORD WATER	STARTED	,	COMPLET	ED	4
	VERTICAL INCLINED					15.	DAT	TE BO	RING	ì	07-03-12	, ;	07-03-		
6 THI	CKNESS OF	OVERRI	IPDEN	N/A		16.	FLE	VAT	ION T	OP OF BORING	-60.3 Ft.		0. 00		1
						┾				/ERY FOR BORING	95.00 %				1
7. DEP	TH DRILLED	INTO R	OCK V	I/A						ND TITLE OF INSP					1
8. ТОТ	AL DEPTH O	F BORI	NG 19.	4 Ft.		1				Gruber, Geologist					
ELEV.	DEPTH	LEGEND	CL	ASSIFICATION (OF MATERIALS	R	_	BOX OR SAMPLE	RQD OR UD		REMARKS	i	BLOWS/ 1 FT.	N-VALUE	
						\dashv	一								1
-60.3	0.0	├	SAND nor	orly-graded, mo	stly fine to	_	-								-0
	-				ed quartz, little sand t	0									Ė
	_				eaction with HCI,					-61.3					ŀ
	-	·∷· \		3/1 white (SP)	d to gravel-sized			1		-61.3					F
	-	I · · I/	shell, stron	g reaction with	HCI		1	-Pos	t						Ė
	_	$[\cdots]$	-At El61.8 no reaction		to gravel-sized shell,										H
	_	·	no reaction												F
	-					L				-63.3					Ŀ
	_	$[\cdots]$		3 Ft., little fine t ∣shell, trace silt	o medium-grained			2							ŀ
	-	-: :-	Sai iu-sizeu	Sileli, trace sile	, or on gray		Ī								F
	_														F
	_	$ \cdots $													ŀ
	_	·				F	\dashv			-65.3					$+_{5}$
	- -	$ \cdot\cdot\cdot $					ļ	3							Ė
-66.4	_ 6.1	.·													ŀ
00.4	-				rained sand-sized										F
	- -		quartz, little	e silt, trace san	d to gravel-sized shel	I,									Ė
	_				st, (little silt seams eenish gray (SM)										H
	_			,,, g	g. e., (e)										F
	-														L
	-	ĬţĬţĬ													ŀ
	_	$\square\square$			-grained sand-sized										F
	_		quartz, son	ne fine to coars	e gravel-sized shell,										F
	=	 	strong read	ction with HCl, leenish gray	moist,										ŀ
	_		101 3/1 gi	ccilisii gray											-1
	_														-
	_	 													F
	-														-
	<u>-</u>	[] []													ŀ
	_	│ ┼┼┼┼													F
	_	∐∰∐ ∐													Ė
	-	[[F
	_ -	 ∤∤∤∤													F
	L	 													ŀ
-74.3	14.0	ЩЩ	SAND pag	orly graded ma	etly fine to	_									F
	- -	$ \cdot\cdot\cdot $		orly-graded, mo rained sand-size	stly fine to ed quartz, few sand to	,									Ė
		' · · ·			tion with HCl. moist.	_	- 1							1	Ĺ

DRI	LLING	LOC	G (Cont. Sheet)	Jackson		Distric	rt .		SHEET 2 OF 2 SI	
PROJEC	т			COORDINA				JM HORIZONTAL	VERTICAL	
St. Jo	ohns Count	y San	d Search	State P	lane, l	FLN (U.S. I	t.) NAD83	NAVD88	
	ON COORDI			ELEVATIO		OF B	ORING	<u> </u>		
X = 6	317,930	_	998,406	-60.3 F	t.					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	LS	ĸĚC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-75.8 -79.7	19.4	LEGE	SAND, silty, mostly fine-grained sand-quartz, little sand to gravel-sized shell, weak reaction with HCl, moist, 10Y 6/1 greenish gray (SM) NOTES: 1. USACE Jacksonville is the custodicthese original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFICATION CLASSIFICATION SPICE SP	sized little silt,	% REC.	BOX C SAMP	<u>පිහිපු</u>	-79.7 Abbreviations: NR = Not Recorded.	BLOW	N-VAL

			DIVISIO	N		INSTA	LLATI	ON			SHI	EET 1	
DRI	LLING	LOG		n Atlantic			ksonv		strict			2 SH	EETS
1. PRO	JECT									Remarks			
s	st. Johns Co	ounty S	Sand Search		İ	10. C	OORDI	NATE	SYSTEM/DATUM	HORIZONTA	L VER	TICAL	
	ibracore Bo						State	Plan	e, FLN (U.S. Ft.)	NAD83		NAVD88	3
2. BOR	ING DESIGN	OITA	1 1	LOCATION COOR	-	11. N	IANUF	ACTUF	ER'S DESIGNATION	OF DRILL	AUTO	HAMME	R
	B-SJSP12-		i		Y = 1,997,540							AL HAMI	
	LING AGEN		CECAL	1	1 TRACTOR FILE NO. 3738-12-5195	12. T	OTAL S	SAMPL		STURBED 5	UNDIST	URBED	(UD)
	Corps of Eng		S - CESAJ	i	730-12-3193	40 -					; 0		
	0					13. T	OTAL	NOMB	ER CORE BOXES	0			
5. DIRE	CTION OF I	BORIN	G	DEG. FROM VERTICAL	BEARING	14. E	LEVAT	ION G	ROUND WATER				
_	VERTICAL			VERTICAL		15. D	ATE B	DRING	i	STARTED	i	APLETE!	
	INCLINED			!						07-03-12	: ; ()7-03-1	
6. THIC	CKNESS OF	OVER	BURDEN	N/A		16. E	LEVAT	ION T	OP OF BORING	-57.6 Ft.			
7. DEP	TH DRILLED	INTO	ROCK N	I/A					ERY FOR BORING	91.00 %			
8. TOT	AL DEPTH C)F ROP	ING 10	1 Ft.		18. S			ND TITLE OF INSPE	CTOR			
J	JEF IN C	т т	10.				_		Gruber, Geologist				
ELEV.	DEPTH	LEGEND	CL	ASSIFICATION O	F MATERIALS	REC	BOX OR SAMPLE	RQD OR UD		REMARKS		BLOWS/ 1 FT.	N-VALUE
57.6	0.0								57.6				
-57.6		 		orly-graded, mos		+	1		-57.6				
	<u> </u>	$ \cdot \cdot $	gravel-size	d shell, some fin	ne-grained		⊢'						
-58.6	1.0	∤∷∤		i quartz, strong r 8/1 white (SP)	eaction with HCI,								
	_	<u> :::: </u>	LSAND, poo	orly-graded, mos									
	-	$ \cdots $			to coarse-grained on with HCI (SP)				-59.6				
	_	::::		6 Ft., little mediu			2	1	-59.6				
	_	:·::		I shell, trace silt,	weak reaction with		2-Pos	t					
	_	$ \cdots $	HCI										
	_												
	_	:·::							-61.6				
	L	:::·					3						
-62.6	5.0	$ \cdot $											
	-			orly-graded with									
	- -	:.			artz, few silt, few fine zed shell, no reactior				62.6				
	_	<u> [:] </u>		noist, 5Y 5/1 gra		\vdash	1		-63.6				
	-	:: <u> </u>					4						
	Ľ	<u> </u> :-											
	_												
-65.6	8.0	·.											
	-	Ш			medium-grained								
	_				nd to gravel-sized silt, ed shell, no reaction	'							
	_	$\parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel $	with HCI, n	noist, (little silt se	eams throughout),								
	_	<u> </u>	10Y 5/1 gr	eenish gray (SN	/I)								
	_												
	_	$\parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel $											
	L	[+]											
	-	<u> </u>											
-69.4	11.8	<u> [</u>											
-69.9	12.3			ganic-L, some fin		7							
55.5	- 12.0	╂┼┼┼╂	∖sand-sized ∖(ML)	ı quaπz, no react	tion with HCI, moist	/							
	<u>L</u>	[+]	SAND, silty		medium-grained	'							
	_]	sand-sized	quartz, little silt,	no reaction with								
	-	$\parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel $	HCl, moist At El71.0	(SIVI) D Ft., some fine t	to coarse								
	_	$\parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel $		d shell, strong re									
	L	$\parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel \parallel $											
-72.6	15.0	11111				- 1							

DRILL	ING I	LOC	G (Cont. Sheet)	INSTALLA Jackso		Dietri	¬+		EET 2 2 SH	FFTS
ROJECT			·	COORDINA						EEIJ
St. Johns	s County	y San	nd Search	State P				l l		
OCATION C				ELEVATIO		OF B	ORING	<u></u>		
X = 618,3	,389 Y		997,540	-57.6 F	t.					
ELEV. DE	ЕРТН	LEGEND	CLASSIFICATION OF MATERIA	LS	ĸÉC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
	8.1	TEGEND TEGEND	SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few si sand to gravel-sized shell, weak react HCl, moist, 5Y 7/1 light gray (SP-SM-At El74.3 Ft., some sand to gravel-shell, strong reaction with HCl NOTES: 1. USACE Jacksonville is the custodithese original files. 2. Soils are field visually classified in accordance with the Unified Soils Clasystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFI DEPTH CLASSIFI 2.0/2.5 SP 2 2.0/2.5 SP 4 6.0/6.5 SP-S 4 4 6.0/6.5 SP-S 4 4 6.0/6.5 SP-S 4 4 6.0/6.5 SP-S 5 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	It, few ion with) sized an for ssification ATORY CATION * * * * * * * * * * * * * * * *	%EC.	BOX OR	RORD	-75.7 Abbreviations: NR = Not Recorded.	BLOWS/	N-VALUE

DRI	LLING	LOG	DIVISIO			- 1	STAL			<u> </u>		T	EET 1		1
1. PRO			South	h Atlantic		_			lle Di			OF	2 SH	EETS	4
		t C.	and Canada							SYSTEM/DATUM	ee Remarks	I IVER	TICAL		4
	St. Johns Co	•	and Search			10.					!	ł		•	
	ibracore Bo		:1	OCATION C	OORDINATES	11				e, FLN (U.S. Ft.) RER'S DESIGNATI			NAVD8		┨
	/B-SJSP12				351 Y = 1,996,640	' ' '	. 1412-	NOF		KER 3 DESIGNATI	ON OF DRILL [HAMME AL HAM		
	LING AGEN		<u> </u>		CONTRACTOR FILE NO						DISTURBED	UNDIST			1
C	Corps of En	gineers	- CESAJ	-	6738-12-5195	12	. то	TAL S	AMPI	LES	5	0			
4. NAM	E OF DRILL	ER.		<u> </u>		13	. то	TAL I	IUMB	ER CORE BOXES	0				1
							E1	EVAT	ION G	ROUND WATER	-				1
	ECTION OF	BORING		DEG. FROM	BEARING			LVAI	ion e	ROUND WATER	STARTED	' CO	/PLETE	· D	4
	VERTICAL INCLINED					15	. DA	TE BO	RING	•	07-03-12	1)7-03-1		
	CKNESS OF	OVEDDI	IDDEN	N/A	· · · · · · · · · · · · · · · · · · ·	46		E\/AT	ION T	OP OF BORING	-57.3 Ft.	- ; (77 00 1		1
6. Inic	JANESS OF	OVERB	JKDEN	IV/A		\dashv									┨
7. DEP	TH DRILLE	INTO R	OCK V	N/A		_				VERY FOR BORIN					4
8. TOT	AL DEPTH (OF BORI	NG 18	.0 Ft.		718				AND TITLE OF INS					
		т т				┵			anne	Gruber, Geologi: I	51		_	111	1
ELEV.	DEPTH	LEGEND	CL	ASSIFICATIO	ON OF MATERIALS	I	ĸEC.	BOX OR SAMPLE	RQD OR UD		REMARKS		BLOWS/ 1 FT.	N-VALUE	
F7 ^	0.0			_											1
-57.3	0.0	++	SAND nor	orly-graded	mostly fine to	-				1					H
	<u> </u>	$[\cdot \cdot \cdot]$	medium-gr	rained sand-	sized quartz, some sar	nd									ţ
-58.3	1.0				eak reaction with HCI,					-58.3					ŀ
	-][\		6/1 gray (SF orly-graded	mostly sand to			1		-58.3					F
	<u> </u>		gravel-size	ed shell, som	e fine-grained			-Pos	t						t
	_	$ \cdots $			e silt, strong reaction										F
	<u> </u>	l.∷.k	with HCI (,											ţ
	-	·.·: `			ine to coarse-grained action with HCl,										ŀ
	F	$ \cdots $	5Y 7/1 ligh		aodon mar riol,										F
	_									04.0					t
	_	\cdots	-At FL -61.3	3 Ft little fir	ne to medium-grained	-		_		-61.3					╀
	ļ	::::			reaction with HCI			2							F
	_														L
	-	·:·:													ŀ
	<u> </u>									62.2					ţ
	_	$[\cdots]$				-				-63.3					╁
	F	-:::						3							F
-64.3	7.0	<u> ::: </u>													L
	-	:.			with silt, mostly d quartz, few silt, trace										F
	F	 [.:]‡∦	fine-graine	ed sand-sized	d shell, no reaction with					-65.3					F
-65.5	8.2	 : 	HCI, moist	, 5Y 5/1 gray	y (SP-SM)			4		55.5					t
	}				e-grained sand-sized and to gravel-sized she	,, I		-7							ŀ
	F.		weak react	tion with HC	I, moist, 5Y 5/1 gray	,									L
	ţ		(SM)												t
-67.1	9.8		SAND do	vov mostlice	fine grained send sizes										F
	_				fine-grained sand-sized ine to coarse-grained	1									F
	-		sand-sized	l shell, no re	action with HČI, moist,										ŀ
	F			seams throu											F
	ţ		10010/1	greenish gra	iy (30 <i>)</i>										ţ
-69.3	12.0														ŀ
55.5			CLAY, fat,	few fine-gra	ained sand-sized quartz	<u>z,</u>									þ
	}		few sand to	o gravel-size	ed shell, no reaction wit	th									ŀ
	Ĺ.		HCI, Moist	., 5G 5/1 gre	enish gray (CH)										L
	}														ŀ
	ļ.														ţ
	-														\vdash
	ļ.														ţ
	-														F

	LOG	(Cont. Sheet)	INSTALLA		المامات	- 4		SHEET 2	
ROJECT		• -,	Jackso				UM HORIZONTAL	OF 2 S	HEETS
St. Johns County	y Sand S	Search	State F				l .	NAVD88	
DCATION COORDIN			ELEVATIO				- <i>'</i>	•	
X = 618,851	Y = 1,996	06,640	-57.3 F	t.					
LEV. DEPTH	LEGEND	CLASSIFICATION OF MATERIA	ALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARI	BLOWS, 1 FT.	N-VALUE
		At El72.3 Ft., trace limestone							1
-75.3 18.0		NOTES: 1. USACE Jacksonville is the custod these original files. 2. Soils are field visually classified in accordance with the Unified Soils Clasystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABOR/ID DEPTH CLASSIFITY 1 1.0/1.5 SF 1-Post 1.0/1.5 SF 2 4.0/4.5 SF 3 6.0/6.5 SF 4 8.0/8.5 SP-\$ *Lab visual classification based on grourve. No Atterberg limits.	ATORY CATION 				-75.3 Abbreviations: NR = Not Recorded.		

DBI	LLING	100	DIVISION	N		INS	TAL	LATIC	N	<u> </u>			SHEET	i	7
		LUG	South	n Atlantic			Jack	sonvi	lle Dis	strict			OF 2 S	HEETS	<u>.</u>
1. PRO											Remarks				
	t. Johns Co	•	and Search			10.				SYSTEM/DATUM	HORIZONTA	VL :	VERTICA		
	ibracore Bo		- :-	OCATION COOL	PRINATES	11				e, FLN (U.S. Ft.) RER'S DESIGNATION	NAD83	 ;	NAVD		-
	B-SJSP12-				Y = 1,995,745	l	IVIA	MOF	CIO	LER 3 DESIGNATIO	N OF DRILL		ITO HAMN ANUAL H <i>A</i>		
	LING AGEN		I		NTRACTOR FILE NO.	42	ΤΩ.	TAL 6	AMBI		ISTURBED	UNI	DISTURBE	D (UD)	1
	orps of Eng		- CESAJ	i	6738-12-5195	12.	-10	IAL	AMPL	.E3	5	(0		
4. NAM	E OF DRILLI	ER				13.	то	TAL N	IUMB	ER CORE BOXES	0				
5. DIRE	CTION OF E	ORING		DEG. FROM	BEARING	14.	ELI	EVAT	ON G	ROUND WATER					
	VERTICAL INCLINED			VERTICAL		15.	DA	TE BO	RING	i	STARTED 07-03-12	2	07-03		
6. THIC	KNESS OF	OVERBU	JRDEN	N/A		16.	ELI	EVAT	ION T	OP OF BORING	-57.5 Ft.				
7. DFP	TH DRILLED	INTO R	OCK V	I/A		17.	то	TAL F	RECOV	ERY FOR BORING	94.00 %				
						18.	SIG	NAT	URE A	ND TITLE OF INSPI	ECTOR				
8. ТОТ	AL DEPTH O	F BORII	NG 19.	2 Ft.		Ļ			nne (Gruber, Geologist					
ELEV.	DEPTH	LEGEND	CL	ASSIFICATION (OF MATERIALS	F	% REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	;	BLOWS/ 1 FT.	N-VALUE	
	0.0					\neg									1
-57.5	0.0	 	SAND, poo	orly-graded, mos	stly fine to	\dashv									-0
	-	. : :	medium-gr	ained sand-size	ed quartz, some sand										F
-58.5	1.0	ŀ∷∖		zed snell, weak 6/2 light olive gr	reaction with HCl, av (SP)	F				-58.5 -58.5				_	丰
	-		-SAND, poo	orly-graded, mos	stly sand to		ļ	1 \-Pos		-50.5					ļ
-59.5	2.0	$ \cdots $		d shell, some fi quartz, strong	ne-grained reaction with HCl			(-1 09							Ł
	-	[∷∴]\	(SP)	,											ŀ
	-	::: `		orly-graded, most	stly fine to ed quartz, few fine to										F
	_	·.·:	coarse-gra	ined sand-sized	I shell, no reaction										F
	-		with HCI, 5	Y 8/1 white (S	P)										Ł
	_	-:													\vdash
	-														F
	- -	ŀ∷·k	-A+EL 62 F	Et some fine	to coarse-grained	-				-62.5				+	<u>‡</u> 5
	-				, strong reaction with			2							ţ
	-		HCI												Ł
	-	: ::													ŀ
	-	.∵.													F
	- -				to gravel-sized shell,										F
	-	: : :	no reaction	with HCI, mois	st, by 5/1 gray										þ
	_	$ \cdot \cdot $													F
	-									00.5					Ł
	_	:::				\vdash	-	2		-66.5				+-	+
	_	[∷:]						3							F
	_	.::.													<u></u>
	- -	[:::]													ţ .
	<u>-</u>	$ \cdots $													Ł
-68.8 -69.0	_ 11.3 - 11.5		SAND wel	I-graded, some	fine to	4									F
-∪8.∪	- 11.0 -		medium-gr	ained sand-size	ed quartz, some sand	_/[-69.5					F
	- -			zed shell, stron 6/1 gray (SW)	g reaction with HCl,	/		4		00.0				+	ŧ
70.5	-				silt, mostly fine to	-		•							Ł
-70.5	13.0		medium-gr	ained sand-size	ed quartz, little fine to										\vdash
	F				ed shell, few silt, weal SY 5/1 gray (SP-SM)										F
	_		CLAY, fat,	few fine-graine	d sand-sized quartz,	7									Ļ
	_				zed shell, no reaction eenish gray (CH)										ţ
	L		, 1101, 11	, 00 0/ 1 gi										1	L

DR	ILLING	LOC	G (Cont. Sheet)	INSTALLA Jackso				ig Designation VB-333P i	SHEET 2 OF 2 S	
ROJEC	T			COORDINA				JM HORIZONTAL	VERTICAL	
St. J	ohns Coun	ty San	d Search	State F	Plane,	FLN ((U.S. I	Ft.) NAD83	NAVD88	
OCATI	ON COORD	NATES	3	ELEVATIO	N ТОР	OF B	ORING	3		
X = 6	619,284	Y = 1,	995,745	-57.5 F	t.	_				
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIA	LS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE
-74.9 -76.7	17.4	LEGENI	SAND, silty, some fine to coarse grave shell, little fine-grained sand-sized que silt, strong reaction with HCl, moist, N (SM) NOTES: 1. USACE Jacksonville is the custodicthese original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC 1.0/1.5 SP 1Post 1.0/1.5 SP 2 5.0/5.5 SP 3 9.0/9.5 SP 4 12.0/12.5 SP 4 12.0/12.5 SP 4 12.0/12.5 SP 5 1	el-sized artz, little 6/ gray an for TORY CATION	%CC.	BOX OR	ROND ROND	-76.7 Abbreviations: NR = Not Recorded.	BLOWS.	N-VALUI
	ORM 18									

np	ILLING	106	DIVISION	N		INS	TALL	ATIO	N	<u> </u>			SHEET	1	7
			South	h Atlantic		_	lackso						OF 2	SHEETS	빜
1. PRO			C '			_				SYSTEM/DATUM	e Remarks	۸1	VERTIC	A1	-
	St. Johns Co	•	nd Search			10.					-	AL	1		
	Vibracore Bo		:1	LOCATION COOR	DINATES	11				e, FLN (U.S. Ft.) RER'S DESIGNATION	NAD83		NAV UTO HAN		-
	VB-SJSP12-		į-		Y = 1,994,829	l	1112-114	• •		LENO DEGIGNATIV	5.1	_	IANUAL H		
	LLING AGEN				NTRACTOR FILE NO.	1					DISTURBED	<u></u>	IDISTURE	BED (UD)	
	Corps of Eng		CESAJ		6738-12-5195	12.	тот	AL S	AMPL	LES	5		0		
4. NA	ME OF DRILL	ER				13.	тот	AL N	IUMB	ER CORE BOXES	0				
- DIE	FOTION OF F			' DEC EDOM	PEARING	14.	ELE\	/ATI	ON G	ROUND WATER					1
\boxtimes	ECTION OF E VERTICAL INCLINED	SUKING		DEG. FROM VERTICAL	BEARING	15.	DAT	Е ВС	RING)	STARTED 07-04-1	2	COMPLI 07-0	ETED 4-12	1
6. TH	CKNESS OF	OVERBU	RDEN	N/A	·	16.	ELE	/ATI	ON T	OP OF BORING	-56.2 Ft.				1
7. DEI	TH DRILLED	INTO R	OCK N	I/A		17.	тот	AL R	ECO\	ERY FOR BORING	97.36 %				
8. TO	TAL DEPTH O	F BORIN	I G 19.	4 Ft.		18.				IND TITLE OF INSI ns, Geologist	PECTOR				
ELEV.	DEPTH	EGEND		ASSIFICATION O	F MATERIALS	R		SAMPLE	RQD OR UD	ns, Geologist	REMARKS	5	BLOWS/	N-VALUE	
		+				+	+	-07						<u>z</u>	┨
-56.2	0.0		OANIC	and the same of the	H. Caraman	_	L								Lo
	t	:::	SAND, pod sand-sized	orly-graded, mos I guartz, some sa	tly fine-grained and to gravel-sized										Ŀ
	F	$ \cdot \cdot $	shell, stron	g reaction with I	HCI, moist,					-57.2					F
	-	.::. [;]	5Y 6/2 ligh	t olive gray (SP)	F		1		-57.2					†
	-	l:::\	At El57.7	7 Ft., few fine to	coarse-grained		1-1	Pos	t						ŀ
	F	: : ;	sand-sized	shell, no reaction											F
	t	[:::]	5Y 8/1 whi	te											Ł
	F	-:::·								-59.2					F
	<u> </u>				medium-grained	F		2		00.2					t
	-			I shell, trace silt,	weak reaction with		H	_							ŀ
	ļ.		HCI At Fl -59 7	7 Ft., 5Y 5/1 gra	V										L
	Ŀ	ŀ∷· ′	W E1. 00.7	7 1 t., 0 1 0/1 gra	y										Ŀ
	F	·.·:								-61.2					F
		∷:: <u>\</u>	At El61.2	2 Ft., little fine-g	rained sand-sized			3		01.2					+ 5
	-	-::: :	shell				\vdash	$\check{-}$							ŀ
	F	·:··													F
	t	: · : ·													Ŀ
	-	.∵.													F
	-	·:::													F
	ŀ	:·::													Ł
	F	l∴k	Δ+ EL _64 3	2 Et few fine to	medium-grained	⊢	+	_		-64.2					+
	ļ.	· : · <i>(</i>	sand-sized	shell, no reaction	on with HCl		L	4							ţ
	Ł	[: ::													Ł
	}	.::.													F
	ļ.	·::													ţ
	L	<u> ∷∷ </u>													-1
-66.7	10.5	• •	SAND wel	II-graded, mostly	fine to	\dashv									F
-67.2	11.0	<u> </u>	medium-gr	ained sand-size	d quartz, some sand	ا, ا									L
	t				g reaction with HCl,										Ŀ
	F			6/2 light olive gra	ay (SW) ained sand-sized	<i>-</i>									F
	F	I∤∐∤∐ (quartz, son	ne sand to grave	el-sized shell, little										F
	}	[<u>+</u>]+] ;	silt, strong		CI, moist, 5Y 6/1 gra	у									ŀ
	ļ.	[[]]	(SM)												L
	t														ŀ
	F	[+]+]													F
	<u> </u>	[+]+]]													F
	Ł.	[[]													Ŀ
_71つ	Γ 15 0	114141				- 1	- 1	- 1		l				1	Г

DRI	LLING	LOC	G (Cont. Sheet)	Jackso		Distric	nt .			12-	SHEET 2 OF 2 S	HEETS
PROJEC	 :Т			COORDINA				JM ¦ но	ORIZONTAL	VEI	RTICAL	
St. J	ohns Count	y San	d Search	State P	lane, l	FLN (U.S. I	=t.)	NAD83		NAVD88	
LOCATI	ON COORDI	NATES	5	ELEVATIO	N ТОР	OF B	ORIN	3				
X = 6	319,765	_	994,829	-56.2 F	t.							
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERI	ALS	REC.	BOX OR SAMPLE	RQD OR UD		REMARK	s	BLOWS/ 1 FT.	N-VALUE
-72.2	16.0		SAND, poorly-graded with silt, mostl medium-grained sand-sized quartz, sand to gravel-sized shell, no reactio moist, 5Y 5/1 gray (SP-SM) SAND, silty, mostly fine-grained san quartz, little sand to gravel-sized she no reaction with HCl, moist, 5Y 5/1 g	ew silt, few in with HCl, d-sized II, little silt,								
-75.6	19.4		ID DEPTH CLASSIF 1 1.0/1.5 S 1-Post 1.0/1.5 S 2 3.0/3.5 S 3 5.0/5.5 S	ATORY EICATION 				Abbreviation NR = Not	s: Recorded.			

	LLING		DIVISION	N		INS	TALI	LATIC	N				SHEET	1	7
		LUG	South	n Atlantic		<u> </u>	Jacks	sonvi	lle Dis	strict			OF 2	SHEETS	
1. PRO							_				Remarks				1
	st. Johns Co	-	and Search			10.				SYSTEM/DATUM	HORIZONTA	L :	VERTICA		
2. BOR	ibracore Bo	rings	;a	OCATION COO	RDINATES	11.				e, FLN (U.S. Ft.) RER'S DESIGNATION	NAD83	ار ، ا	NAVE TO HAMI		-
	B-SJSP12-				Y = 1,996,195	l				LIKO DEGIGIRATIO	10. 5	=	NUAL HA		
3. DRIL	LING AGEN	CY			NTRACTOR FILE NO.	42	то:	TAL 6	SAMPL		ISTURBED	UNI	DISTURB	ED (UD)	1
	Corps of Eng		- CESAJ	<u> i </u>	6738-12-5195	12.	-10	IAL	AWPL	ES	5	()		4
4. NAM	IE OF DRILLI	ER				13.	TO	TAL N	IUMB	ER CORE BOXES	0				
5. DIRE	CTION OF E	ORING		DEG. FROM	BEARING	14.	ELE	EVAT	ION G	ROUND WATER					
	VERTICAL INCLINED			VERTICAL		15.	DA	TE BO	RING	1	STARTED 07-04-12	- :	COMPLE 07-04		
6. THIC	CKNESS OF	OVERB	URDEN	N/A		16.	ELE	EVAT	ION T	OP OF BORING	-54.9 Ft.				
7. DEP	TH DRILLED	INTO F	ROCK N	I/A		17.	то	TAL F	RECOV	ERY FOR BORING	101.48 %	1			
						18.	SIG	NAT	URE A	ND TITLE OF INSPI	CTOR				
8. ТОТ	AL DEPTH O	F BORI	NG 20.	1 Ft.		Щ			luggi	ns, Geologist					4
ELEV.	DEPTH	LEGEND	CL	ASSIFICATION (OF MATERIALS	F	% REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	:	BLOWS/ 1 FT.	N-VALUE	
-54.9	0.0					\Box									
-54.9	0.0		SAND, poo	orly-graded, mo	stly fine to	\dashv	ŀ								-0
	-	$ \cdots $			ed quartz, few fine to d shell, no reaction										ŀ
	_			noist, 5Y 8/1 w											F
	_				, ,										ţ
	_	ŀ∷∖				L				-56.9					上
	-	[∷:]`	At El56.9- At El56.9	Ft., little fine t shell_trace silt	o medium-grained , weak reaction with			1		-56.9					ŀ
	_	$ \cdot \cdot $	HCI	orien, trace one	, weak reaction with		1	-Pos	t						F
	-														F
	<u>-</u> -														ŀ
	_														H
	_	$ \cdots $													F
	- -	-::-													-5
	-														ţ
	-	. · · ·								-60.9					Ł
	_			Ft., few medion Ft., few medio	um-grained sand-size	d		2							F
	_		Silcii, ilo ic	action with the	'		Ī								F
	_	$ \cdot \cdot $													F
	-	:·::													ŀ
	L	-:::													F
		:::													F
	<u> </u>	:::: <u> </u>	-At El63.6	Ft., some san	d to gravel-sized										Ė
	-	$ \cdot \cdot $	SHEII, STON	g reaction with	пО										Ė
	L	[:::]													- 1
	_	ŀ∷·ŀ	-At El65.0	Ft., few fine to	o coarse-grained										- 10 -
	- -	$ \cdots $	sand-sized	shell, few silt,	no reaction with HCI					65.0					ţ
	<u> </u>	$ \cdot\cdot\cdot $				 	\dashv	3		-65.9				+	+
	_	:::					ŀ	3							F
	<u>L</u>	:::													Ļ
	-	:::													ţ
	_	:::								-67.9					ŀ
	- -	[:::: `		Ft., few fine-g	rained sand-sized	ſ		4							F
	_	.::	shell				ŀ								Ė
	_														F
	- -	[:::													F
	F	ı . '. T				ı								1	l-

DRI	LLING	LOC	G (Cont. Sheet)	Jackson				.g 200.g	11011011 12 0001		SHEET OF 2		TS.
PROJEC ¹				COORDINA				IIM	HORIZONTAL	¦ VE	RTICAL	0	
	• hns Count	hy Sand	d Search	State P					NAD83	1	NAVD8	2	
	ON COORDI			ELEVATIO					I NADOS	!	WAV DO		
	20,152 `			-54.9 F		OF B	OKIN	G					
X = 0	20, 132		990, 193	-54.81	T.	~!!!							ш
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATER	IALS	ĸč.	BOX OR SAMPLE	RQD OR UD		REMARKS	•	BLOWS/	Ę.	N-VALUE
													- - - - - - - - - - - - - - - - - - -
75.0	20.1	:						75.0					F
-75.0	20.1		ID DEPTH CLASSI 1 2.0/2.5 \$ 1-Post 2.0/2.5 \$ 2 6.0/6.5 \$ 3 11.0/11.5 \$	RATORY FICATION 				Abbrevia NR =	ations: Not Recorded.				

			DIVISIO	N		INST	ALLATI	ON	<u> </u>		SHEE	T 1	
DKI	LLING	LOG	South	n Atlantic		Ja	ckson	/ille Di	strict		OF 2	SHEETS	s
1. PRO	JECT					9. S	IZE AN	D TYPI	OF BIT See	Remarks			
S	t. Johns Co	ounty S	Sand Search			10.	COORD	INATE	SYSTEM/DATUM	HORIZONTA	L VERTI	CAL	
V	ibracore Bo	rings					Stat	e Plan	e, FLN (U.S. Ft.)	NAD83	NA	VD88	
2. BOR	ING DESIGN	IOITAI	1 1	LOCATION COOR		11.	MANUF	ACTU	RER'S DESIGNATION	OF DRILL	AUTO HA	MMER	
	B-SJSP12-	_	<u> </u>		Y = 1,997,037							HAMMER	_
	LING AGEN			1	TRACTOR FILE NO.	12.	TOTAL	SAMP		STURBED	UNDISTU	RBED (UD))
	Corps of Eng		s - CESAJ	6	738-12-5195					5	0		_
4. NAIV	IE OF DRILL	EK				13.	TOTAL	NUMB	ER CORE BOXES	0			
5 DIRE	CTION OF E	OBINA	<u> </u>	DEC EDOM	BEARING	14.	ELEVA	TION G	ROUND WATER				
	VERTICAL	OKIN	G	DEG. FROM VERTICAL	BEARING					STARTED	COMP	LETED	
_	INCLINED				i	15.	DATE B	ORING	•	07-04-12	07	-04-12	
6. THI	CKNESS OF	OVERE	BURDEN	N/A		16.	ELEVA [.]	TION T	OP OF BORING	-56.5 Ft.			
									VERY FOR BORING	88.61 %			1
7. DEP	TH DRILLED	INTO	ROCK	I/A					AND TITLE OF INSPE				-
8. ТОТ	AL DEPTH O	F BOR	ing 18.	3 Ft.					ns, Geologist	JOI OK			
		П							lis, Geologist			lii .	-
ELEV.	DEPTH	LEGEND	CL	ASSIFICATION O	F MATERIALS	RE	BOX OR	RQD OR UD		REMARKS	ġ.	1 FT.	
	0.0												1
-56.5	0.0	 	SAND nor	orly-graded, most	tly fine to	\dashv	\vdash	+-					-0
	-	[:::]	medium-ar	ained sand-sized	d quartz, few sand to	.							ţ
	_	[:::]	gravel-size	d shell, no reacti	on with HCI, moist,			1	-57.5				ŀ
	_	. : .	\ 5Y 8/1 whi	te (SP)			1	1	07.0				士
	_	ŀ∷⊹l	At El57.5	5 Ft., little fine to	coarse-grained weak reaction with		- -'-	-					ŀ
	_	l·.:.	HCI	i Sileli, trace Silt,	weak reaction with								L
	_	l`.`.'											ŀ
	_	[:∵:]											Ł
	_	.∵.											F
	_	.∵											Ł
	_	$ \cdot \cdot $							-60.5				F
	_	$ \cdots $					2	1	-60.5				士
	_	[∷:]					2-Po	sit					ŀ
	_	. .						1					<u>-</u> 5
	_	-`:-`-											ŀĭ
	_	·.·.											ţ
	_	`.`.											⊢
	_	[::::]											ţ
	-	.∵.							-63.5				ŀ
	_	· ::	At El63.5	5 Ft., few fine-gra	ained sand-sized		3	1					Ŧ
	_	<u> : ::: </u>	_	eaction with HCI			Ť	1					ŀ
	_	<u> . : : .</u> [o coarse-grained								F
	-	.∵.	sariu-sized	I shell, 5Y 5/1 gra	ау			1					Ł
	L	-::-							-65.5				F
	<u>-</u>		`-At El65.5	5 Ft., few fine-gra	ained sand-sized		4	1					士
	L	[∷:]	shell	3				-					ŀ
	L	<u> . ; : </u>											<u>_</u> 1
	-	ŀ∷·∣						1					- '
	_	·`.`.											Ł
	-	'.::						1					\vdash
	<u>-</u>	[∷∷]											ţ
	<u> </u>	 .∵.						1					ŀ
	<u> </u>	· ∵						1					F
	L	-:::											F
	<u>L</u>	···	`-At El69.2	2 Ft., some sand	to gravel-sized			1					Ł
1	L	[::::[\ shell, stron	ng reaction with H	HCI								ŀ
	_	<u> . · · .</u>	no reaction	o Ft., trace sand	to gravel-sized shell,			1					Ł
	L	∴∴	no reaction	i With FIOI									F
	_	· . · .						1					Ł
	L	: ::											F

St. Johns County St. Jo	ATES	to medium-grai	Jacksor COORDINA State PI ELEVATION -56.5 Ft	TE SY ane, I	STEM FLN (OF B	I/ DATU U.S. F	Ft.) NAD83	OF 2 SHOWN	N-VALUE
St. Johns County St. Jo	CLASSIFICATION CLASSIFICATION SAND, silty, mostly fine sand-sized quartz, some shell, little silt, strong real	to medium-grai	State Pl ELEVATION -56.5 Ft	ane, I N TOP	FLN (U.S. F	et.) NAD83	NAVD88	ALUE
X = 619,716 Y = LEV. DEPTH	CLASSIFICATION CLASSIFICATION SAND, silty, mostly fine sand-sized quartz, some shell, little silt, strong real	to medium-grai	-56.5 F1	t.				OWS/	ALUE
-72.8 16.3	CLASSIFICATION CLASSIFICATION SAND, silty, mostly fine sand-sized quartz, some shell, little silt, strong real shell, strong real shell, strong	to medium-grai			BOX OR SAMPLE	RQD OR UD	REMARKS	.OWS/ FT.	ALUE
-72.8 16.3 ·	SAND, silty, mostly fine sand-sized quartz, some shell, little silt, strong rea	to medium-grai	s	ĸEC.	BOX OR SAMPLE	RQD OR UD	REMARKS	OWS/	ALUE
	sand-sized quartz, some	sand to gravel						<u> </u>	> 2
	sand-sized quartz, some	sand to gravel							
10.5	At El73.1 Ft., some sil	It, few sand to	l-sized , moist				74.8		
	NOTES: 1. USACE Jacksonville these original files. 2. Soils are field visually accordance with the Uni System. 3. Laboratory Testing R SAMPLE ID DEPTH 1 1.0/1.5 2 4.0/4.5 2-Post 4.0/4.5 3 7.0/7.5 4 9.0/9.5 *Lab visual classification curve. No Atterberg limi	is the custodial y classified in ffied Soils Class esults LABORAT CLASSIFIC SP* SP* SP* SP* SP*	in for sification				Abbreviations: NR = Not Recorded.		

 	RILLII		00	•	DIVISION	N		IN	STAL	LATIC	ON			SHEET 1		7
		10		3	South	n Atlantic			Jack	sonvi	lle Di			OF 2 SI	HEETS	<u> </u>
1. F	ROJECT												Remarks			_
			•	Sand	l Search			10				SYSTEM/DATUM	HORIZONTAL	VERTICAL		
	Vibraco					00471011.0	OORDINATES					e, FLN (U.S. Ft.) RER'S DESIGNATIO	NAD83	NAVD8		4
2. 6	VB-SJS			N	<u> </u>		276 Y = 1,997,967	"	. IVIA	ANUF	ACTO	RER'S DESIGNATIO	N OF DRILL	AUTO HAMMI MANUAL HAM		
3. I	RILLING				<u> </u>	7 - 010,2	CONTRACTOR FILE N						DISTURBED	UNDISTURBE		1
	Corps o	of Eng	ineers	s - C	ESAJ		6738-12-5195	12	. то	TAL S	SAMPI	LES	5	0		
4. N	IAME OF D	RILLE	R					13	. то	TAL I	NUMB	ER CORE BOXES	0			
						I		14	. EL	EVAT	ION G	ROUND WATER				
_	DIRECTION VERTIC		ORIN	G		DEG. FROM VERTICAL	// BEARING	-					STARTED	COMPLET	ED	1
	INCLIN	IED				i !	!	15	. DA	TE BO	ORING	•	07-04-12	07-04-	12	
6. 1	HICKNES	S OF (OVER	BURE	DEN	N/A		16	. EL	EVAT	ION T	OP OF BORING	-55.3 Ft.			
7. 1	EPTH DRI	LLED	INTO	ROC	K N	I/A		17	. то	TAL I	RECOV	/ERY FOR BORING	80.65 %			
								18	. SI	GNAT	URE A	ND TITLE OF INSP	ECTOR			
8. 1	OTAL DEF	тн о	F BOR	RING	15.	9 Ft.				_		ns, Geologist				4
ELE	V. DEP	тн	LEGEND		CLA	ASSIFICATIO	ON OF MATERIALS		% REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/ 1 FT.	N-VALUE	
-55	5.3 0.0			SA	AND. poo	orly-graded.	mostly fine to									-0
	F		\cdots	me	edium-gr	ained sand-	sized quartz, little sar	nd to								F
	L		\cdots			d shell, wea 3/1 white (S	k reaction with HCl,									L
	Ŀ		\cdots	""	5131, 51 0	" I WINC (C	, ,									ŀ
	F		.∵.									-57.3				F
	F		\cdots				edium to coarse-grain	ned		1		-57.3				t
	Ł		:::	L		shell, trace				-Pos	t					Ł
	F		.∵.				e to coarse-grained action with HCl									F
	ļ.		∵:) Sa	i iu-sizeu	Sileli, ilo ie	action with rich									ţ
	Ł		::::									-59.3				Ŀ
	ŀ		\cdots				edium-grained reaction with HCl			2						ŀ
-60	0.3 5.0		::::) sa	i iu-sizeu	Sileli, Weak	Teaction with Fici									F
	- 0.0		:111				with silt, mostly									-5
	ŀ		·:	fin	e-graine	d sand-size	d quartz, few sand to silt, no reaction with I	⊔CI								ŀ
	F		11	h mo	oist, 5Y 5	5/1 gray (SF	P-SM)					-61.3				₽
	-						ne to medium-grained	l		3						ļ
	Ŀ		•:	Sa	na-sizea	Sriell, weak	reaction with HCI									Ł
	ŀ		::													ŀ
	F		$\cdot \cdot $									-63.3				F
	F		::							4	1				1	ŧ
	Ŀ									Ė	1					t
	\vdash		$\cdot \ \ $													\vdash
	F		:: <u> </u>												1	F
-65	5.3 10.0)	.		AND "											<u>-</u> 1
	Ŀ		† [†] 				e-grained sand-sized action with HCl, moist,									ŀ'
	F		1+1+ 1				hout), N 5/ gray (SM									F
	F		\ <u> </u>													F
	Ė		<u> </u>												1	E
	F]												1	F
	ļ.		 - -												1	ţ
	Ł		 												1	L
	ŀ.														1	F
	ļ.		 - -												1	ļ.
	F		<u> </u>													F
	ŀ		$\parallel \parallel \parallel$													ŀ

DRILLING LO	RILLING LOG (Cont. Sheet)				INSTALLATION SHEET 2 Jacksonville District OF 2 SHE							
PROJECT		COORDINAT				JM HORIZONTAL	VERTICAL					
St. Johns County Sar	nd Search	State Pla	ane, F	ELN (U.S. F	Ft.) NAD83	NAVD88					
OCATION COORDINATE		ELEVATION	ТОР	OF B	ORING							
X = 619,276 Y = 1	1,997,967	-55.3 Ft.										
ELEV. DEPTH	CLASSIFICATION OF MATERIAL	LS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/	N-VALUE				
-71.2 15.9						-71.2						
-71.2 15.9	NOTES: 1. USACE Jacksonville is the custodia these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABORA ID DEPTH CLASSIFIC TOTAL CLA	TORY CATION				Abbreviations: NR = Not Recorded.						

DDI	LLING	I OG	DIVISION	IN	ISTAL	LATI	ON		SHEET 1	
		_56	South Atlantic				ille Dis		OF 2 SHEETS	s
1. PRO			and Canada					SYSTEM/DATUM HORIZONT	TAL VERTICAL	4
	t. Jonns Co ibracore Bo	•	and Search	1				e, FLN (U.S. Ft.) NAD83	;	
	NG DESIGN		LOCATION COORDINATES	1.				RER'S DESIGNATION OF DRILL	AUTO HAMMER	
V	B-SJSP12-	115	X = 618,786 Y = 1,998,90	00					MANUAL HAMMER	2
	LING AGEN		CONTRACTOR FILE		2. TO	TAL S	SAMPI	DISTURBED	UNDISTURBED (UD)))
	orps of Eng	_	- CESAJ 6738-12-5195						0	
4. NAIVI	E OF DRILL	EK		1:	3. то	TAL	NUMB	ER CORE BOXES 0		
5. DIRE	CTION OF I	BORING	DEG. FROM BEARING	1	4. EL	EVAT	ION G	ROUND WATER		
	/ERTICAL NCLINED		VERTICAL	19	5. DA	TE B	ORING	STARTED 07-04-	12 COMPLETED 07-04-12	
		0\/EDD		-	e =1	E\/AT	ION T		12 07-04-12	-
6. THIC	KNESS OF	OVERB	URDEN N/A					OP OF BORING -57.6 Ft.	,	-
7. DEP1	H DRILLED	INTO F	ROCK N/A					VERY FOR BORING 95.31 % AND TITLE OF INSPECTOR)	_
8. TOT	AL DEPTH C	F BORI	ING 18.7 Ft.		o. 31			ns, Geologist		
ELEV.	DEPTH	EGEND	CLASSIFICATION OF MATERIALS		REC.	89			BLOWS/ 1 FT.	
		+-+			1	_0,				\dashv
-57.6	0.0	 	OAND assault in the state of th		1					-0
ŀ	-	:::	SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little fi	ine to						Ŀ
ŀ	-	$ \cdots $	coarse-grained sand-sized shell, weak rea	action						ŀ
Ī	-		with HCI, moist, 5Y 8/1 white (SP)							F
	- -							-59.6		Ė
	-	$ \cdots $	At El59.6 Ft., some sand to gravel-sized	d		1	1	-59.6		+
ŀ	-	<u> </u> :.::[\	shell, strong reaction with HCl At El59.9 Ft., few fine to medium-graine	od		-Pos	at .			ŀ
	-		sand-sized shell, no reaction with HCl	eu						F
	-	$ \cdots $								Ė
1	-							-61.6		
}	-	∷: `	At El61.6 Ft., little medium-grained sand-sized shell, trace silt, weak reaction	with		2				ŀ
-	-	: : :	HCI	vvicii						F
	-									-5 -
	<u>-</u> -	l∷∖	►At El63.3 Ft., few fine to coarse-grained	d				-63.6		Ė
	-	: ::\	sand-sized shell, no reaction with HCl,	u		3	1	-03.0		+
}	-	·∷· \	5Y 5/1 gray	d			1			ŀ
ļ	- -	$ \cdots $	LAt El63.6 Ft., little fine to coarse-grained sand-sized shell, weak reaction with HCl	u						F
ļ	-	-:::								F
	- 	[∷:]						-65.6		
-66.2	- - 8.6	::: -				4				Ė
	_	000	SAND, well-graded, some fine to		1					E
F	-	000	medium-grained sand-sized quartz, some to gravel-sized shell, strong reaction with							F
	-	[؞؞؞ ا	moist, 5Y 6/1 gray (SW)	•						F
-68.0	- - 10.4	。 。 。								- 1
	-		SAND, silty, mostly fine-grained sand-size	ed	1					Ė
ŀ	_	$\parallel \parallel \parallel \parallel \parallel \parallel$	quartz, little silt, few sand to gravel-sized s no reaction with HCl, moist, 5Y 5/1 gray (F
F	-		LAt El68.6 Ft., some fine to medium-grai	ined						F
-69.6	12.0	ЩЩ	sand-sized quartz, some sand to gravel-si. shell, strong reaction with HCl	ı∠eu ∕	4					F
	- -	[::[][SAND, poorly-graded with silt, mostly fine							ţ
ŀ	- 	 -: ∦	medium-grained sand-sized quartz, little s gravel-sized shell, few silt, weak reaction							Ł
-	-		HCl, moist, 5Y 7/1 light gray (SP-SM)							F
	-									F
70 4	- - 11 5	 :: }∦								F
-72.1	14.5	 	SAND, silty, some fine-grained sand-sized	d	1					ţ

DR	LLING	LOC	G (Cont. Sheet)	INSTALLA Jackso		Dietri	nt .		SHEET OF 2	2 SHEETS
PROJEC			-	COORDINA				JM HORIZONTAL	VERTICAL	J.I.EE I J
St. J	ohns Coun	ty San	d Search	State F	Plane,	FLN ((U.S. I	Ft.) NAD83	NAVD88	
OCATI	ON COORD	INATES	•	ELEVATIO	N ТОР	OF B	ORIN	3		
X = 6	18,786	Y = 1,9	998,900	-57.6 F	t.					
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATER	IALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMAR	BLOWS/	N-VALUE
-72.7 -76.3	15.1		quartz, some sand to gravel-sized sl silt, strong reaction with HCl, moist, 10GY 5/1 greenish gray (SM) CLAY, fat, few fine-grained sand-size few fine to coarse-grained sand-size reaction with HCl, moist, N 5/ gray At El74.6 Ft., 10Y 6/1 greenish gr	zed quartz, ed shell, no (CH)				-76.3		
			ID DEPTH CLASSIF 1 2.0/2.5 S 1-Post 2.0/2.5 S 2 4.0/4.5 S 3 6.0/6.5 S	n lassification RATORY FICATION 				Abbreviations: NR = Not Recorded.		

			DIVISION	N		INS	STAL	LATIC	N	<u> </u>		SHEET 1		7
וט	RILLING	LUG	South	n Atlantic		<u> </u>	Jack	sonvi	lle Dis	strict		OF 2 S	HEETS	š
1. P	ROJECT					9.	SIZE	AND	TYPE	OF BIT See	Remarks			
	St. Johns Co	ounty S	and Search			10.	СО	ORDI	NATE	SYSTEM/DATUM	HORIZONTAL	VERTICAL	L	1
	Vibracore Bo	orings								e, FLN (U.S. Ft.)	NAD83	NAVD	88	
2. B	ORING DESIGN	NOITAN	ı i	OCATION COOR		11.	MA	NUF	CTUF	ER'S DESIGNATIO	N OF DRILL	AUTO HAMM	IER	
	VB-SJSP12-		!		Y = 1,998,392							MANUAL HA		_
3. D	RILLING AGEN		05041		NTRACTOR FILE NO.	12.	то	TAL S	SAMPL		ISTURBED	UNDISTURBE	D (UD)	'
4 N	Corps of Eng		s - CESAJ	; 6	6738-12-5195	_				<u> </u>	6	0		-
4. N	AME OF DRILL	EK				13.	то	TAL I	IUMB	ER CORE BOXES	0			
5. D	RECTION OF	BORING	3	DEG. FROM	BEARING	14.	EL	EVAT	ION G	ROUND WATER				
_	VERTICAL			DEG. FROM VERTICAL		45	DA	TE D	RING		STARTED	COMPLET	ED	
	INCLINED					13.	DA	IE B	KING		07-04-12	07-04	-12	
6. T	IICKNESS OF	OVERB	URDEN	N/A		16.	ELI	EVAT	ION T	OP OF BORING	-57.4 Ft.			
7 D	PTH DRILLED	INTO	BUCK V	I/A		17.	то	TAL F	RECOV	ERY FOR BORING	85.19 %			
	IF III DIGILLLE					18.	SIC	MAT	URE A	ND TITLE OF INSPI	ECTOR			
8. T	TAL DEPTH C	F BOR	ING 17.	3 Ft.				Eve I	Huggii	ns, Geologist				
ELE\	. DEPTH	LEGEND	CL	ASSIFICATION O	F MATERIALS	ı	« REC.	BOX OR SAMPLE	RQD OR UD		REMARKS	BLOWS/	N-VALUE	
						寸								1
-57.	4 0.0		SAMD poor	orly-graded, mos	tly fine to	\dashv								-0
	ţ	$ \cdot\cdot\cdot $			d quartz, few fine to									Ė
	-	$[\cdots]$	coarse-gra	ined sand-sized	shell, trace silt, no									ŀ
	-	:::	reaction wi	th HCl, moist, 5	Y 8/1 white (SP)									F
	+	:::												ŀ
	F	l∷¦	\A+ EL =0.4	I Et little fine to	modium arainad	ŀ				-59.4			4	₽
	t	$[\cdot \cdot \cdot]$	sand-sized	shell_trace_silt	medium-grained weak reaction with			1	.	-59.4				Ł
	-	ŀ∷·I	HCI	o	Trout rodotton man]	(-Pos	t					F
	-	:::												F
	-	:::												ŀ
	<u> </u>	$ \cdots $												L
	-	-::-												ŀ
	F	: :								-62.4				F
	<u> </u>	:·::				ŀ		2		-02.4				+ 5
	-	.::												ŀ
	ļ.	ŀ∷I												L
	-	<u> </u> :∵:												ŀ
	F	.:: <u> </u>												F
	Ė	$ \cdot\cdot\cdot $												F
	+	·· ··												ŀ
	F	<u> </u> .∵.[`At El65.1	Ft., little sand t	o gravel-sized shell	F				-65.4				Ŧ
	ţ	$ \cdot \cdot \cdot $						3						t
	+	:::												ŀ
	F	$[\cdot \cdot \cdot]$												F
	+	$ \cdot\cdot\cdot $												ŀ
	F	 ∷∴			gravel-sized shell,									-1
	ţ	$ \cdot\cdot $	no reaction	with HCl, 5Y 5/	'1 gray									t
	+	[. ∵ .]								-68.4				-
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	-	-::	trace silt n	เ	to gravel-sized shell HCl, 5Y 7/1 light gra	,								H
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	ORILLING LOG (Cont. Sheet)				TION nville l	Distri	ct		OF 2 S	HEETS
PROJE	СТ			COORDINA				UM HORIZONTAL	VERTICAL	
St.	Johns Count	ty San	d Search	State F	lane,	FLN ((U.S. I	Ft.) NAD83	NAVD88	
	ION COORDI			ELEVATIO		OF B	ORIN	G		
X =	620,187		998,392	-57.4 F	t.	1		<u> </u>		
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERI	ALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARK	BLOWS/	N-VALUE
-74.7		LEGENI	SAND, poorly-graded with silt, mostl fine-grained sand-sized quartz, few sand to gravel-sized shell, no reaction moist, 5Y 5/1 gray (SP-SM) At El73.4 Ft., little fine to medium-sand-sized shell, weak reaction with NOTES: 1. USACE Jacksonville is the custo these original files. 2. Soils are field visually classified in accordance with the Unified Soils Claystem. 3. Laboratory Testing Results SAMPLE SAMPLE LABOR ID DEPTH CLASSIF	y silt, few on with HCI, grained HCI dian for assification ATORY FICATION	% REC.	SAMPLE SAMPLE	ROND ROND	-73.4 -74.7 Abbreviations: NR = Not Recorded.	BLOWS:	N-VALUI