



St. Johns River

Water Management District

Ann B. Shortelle, Ph.D., Executive Director

4049 Reid Street • P.O. Box 1429 • Palatka, FL 32178-1429 • 386-329-4500
On the internet at www.sjrwmd.com.

DATE: September 25, 2020
TO: Prospective Respondents
FROM: Gerald Cahalane, Assoc. Procurement Specialist
SUBJECT: Addendum #1 to Invitation for Bids #36037 – FCX SAV Excavation

This addendum is to share information about how to obtain the audio recording of the pre-bid teleconference meeting and provide a copy of the finalized Construction Drawings.

Responses to this sealed bid are due by no later than 2:00PM on, Thursday, October 1, 2020.

Additionally, please ensure that all quotes are sent in PDF format as an email attachment.

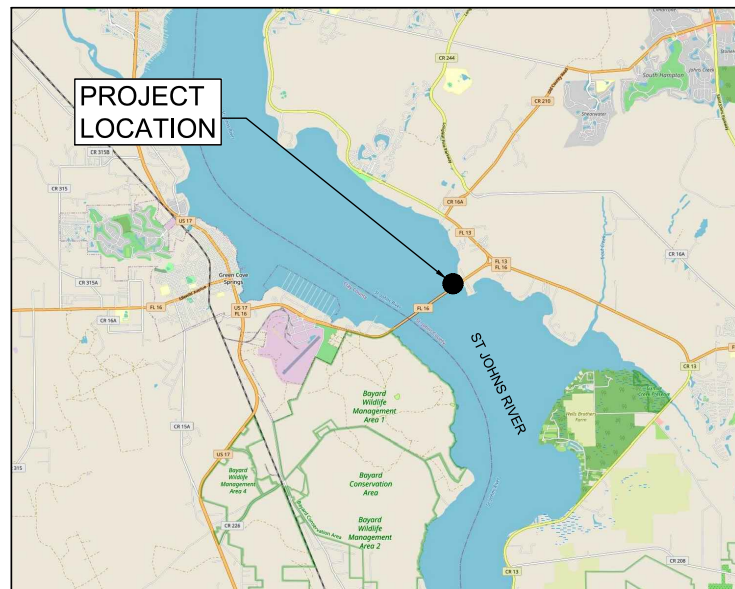
If you would like to receive the audio recording of the teleconference meeting, that was held on Tuesday, September 15, 2020, at 11:00AM, please send me a written request via email, at: gcahalan@sjrwmd.com, and I, or another member of the District, will email a copy of the audio recording to you.

Please see the next pages for the finalized version of the Construction Drawings:

CONSTRUCTION DRAWINGS FOR: FIRST COAST EXPRESSWAY SAV RESTORATION

ST JOHNS COUNTY, FLORIDA

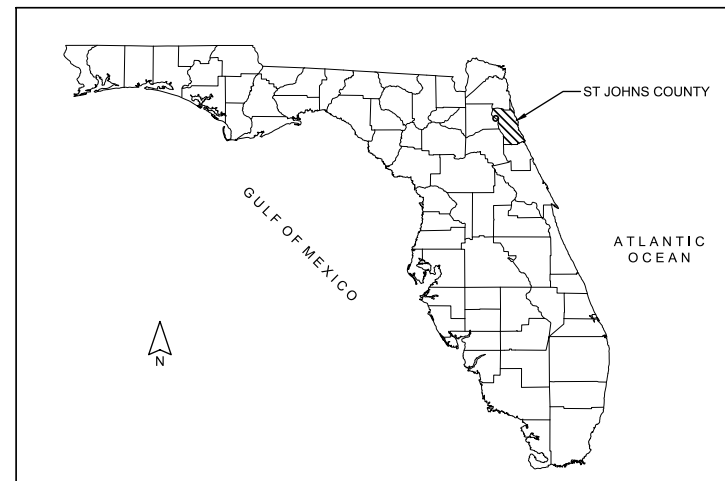
PREPARED FOR:
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT



PROJECT LOCATION:



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LOCATION MAP:

PREPARED BY:



PROJECT #: 20-1015



DATE: SEPTEMBER 2020

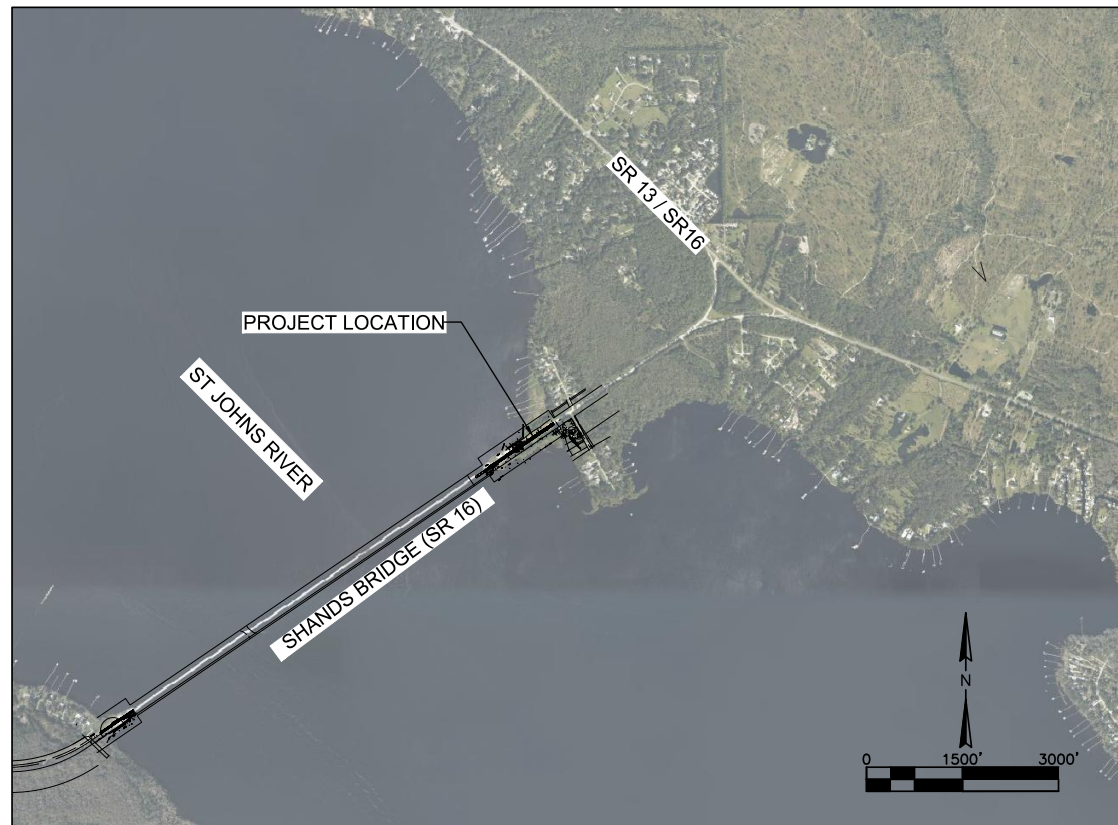
ISSUE: BID

REV NO	DATE	DRWN BY	CHKD BY	DESCRIPTION
1	9/22/20	SLD	MRK	BID ADDENDUM PLANS
2				
3				
4				
5				
6				

North of SR 16 Quantities Table:			
No.	Item	Quantity	Unit
1	Tree Protection (wrap and/or barrier may be required)	337	LF
2	Turbidity Barrier	750	LF
3	Clearing & Grubbing	0.82	AC
4	Excavation (amount of material removed from site)	3,604	CY
5*	Rip-Rap (FDOT Section 530 - 2.1.3 Bank and Shore Protection)	2,866	TN
6*	Bedding Stone (FDOT Section 530 - 2.1.4)	568	TN
7**	Geotextile Fabric (Tencate MIRAFI FW404 or Approved Equal)	12,736	SF
8	Restoration and additional sediment and erosion control as necessary	1	LS

South of SR 16 Quantities Table:			
No.	Item	Quantity	Unit
1	Tree Protection (wrap and/or barrier may be required)	582	LF
2	Turbidity Barrier	1,110	LF
3	Clearing & Grubbing	2.19	AC
4	Excavation (amount of material removed from site)	13,706	CY
5*	Rip-Rap (FDOT Section 530 - 2.1.3 Bank and Shore Protection)	6,721	TN
6*	Rip-Rap Type (FDOT Section 530 - 2.1.3.2 Ditch Lining)	390	TN
7*	Bedding Stone (FDOT Section 530 - 2.1.4)	1,333	TN
8**	Geotextile Fabric (Tencate MIRAFI FW404 or Approved Equal)	29,870	SF
9	Restoration and additional sediment and erosion control as necessary	1	LS

*Rip-rap unit weight of 150 PCF and bedding stone unit weight of 89.25 PCF.
 **Quantity does not include required fabric overlap adjacent or at top and toe.
 Bidder (Contractor) to determine additional required.



PROJECT VICINITY

GENERAL NOTES:

1. ALL LABOR, MATERIALS, AND METHODS OF CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH THE MINIMUM ENGINEERING AND CONSTRUCTION STANDARDS ADOPTED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION AND THE PLANS AND CONSTRUCTION SPECIFICATIONS. WHERE CONFLICTS OR OMISSIONS EXIST, THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS SHALL DICTATE. SUBSTITUTIONS AND DEVIATIONS FROM PLANS AND SPECIFICATIONS SHALL BE PERMITTED ONLY WHEN WRITTEN APPROVAL HAS BEEN ISSUED BY THE DISTRICT'S PROJECT MANAGER.

RELEVANT FOOT STANDARD AND SPECIFICATIONS INCLUDE (BUT NOT LIMITED TO) ARE THE FOLLOWING:

- 100 - CONSTRUCTION EQUIPMENT - GENERAL REQUIREMENTS
- 101 - MOBILIZATION
- 102 - MAINTENANCE OF TRAFFIC
- 104 - PREVENTION, CONTROL, AND ABATEMENT OF EROSION AND WATER POLLUTION
- 110 - CLEARING AND GRUBBING
- 120 - EXCAVATION AND EMBANKMENT
- 514 - FILTER FABRIC
- 530 - REVETMENT SYSTEMS
- 981 - TURF MATERIALS
- 982 - FERTILIZER
- 983 - WATER FOR GRASSING
- 985 - GEOSYNTHETIC MATERIALS

2. THE CONTRACTOR SHALL BE RESPONSIBLE TO FAMILIARIZE WITH THE NATURE AND EXTENT OF THE CONTRACT DOCUMENTS, SCOPE OF WORK, LOCAL CONDITIONS, ALL FEDERAL, STATE, AND LOCAL LAWS, RULES AND REGULATIONS THAT MAY AFFECT THE WORK.
3. DURING ALL PHASES OF CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM THE WORK INCLUDED IN THIS PROJECT. ALL MATERIALS, EQUIPMENT, SERVICES, ETC. USED OR PROVIDED SHALL CONFORM TO ALL O.S.H.A. REQUIREMENTS.
4. THE EXISTING CONDITIONS REPRESENTED IN THESE DRAWINGS AND THE PROJECT TOPOGRAPHIC SURVEY INFORMATION ARE BELIEVED TO BE ACCURATE ACCORDING TO THE INFORMATION AVAILABLE TO THE DISTRICT. HOWEVER, IT IS THE SOLE RESPONSIBILITY OF THE BIDDER (CONTRACTOR) TO VERIFY ALL EXISTING CONDITIONS AND REPORT ANY DISCREPANCIES TO THE DISTRICT PRIOR TO SUBMITTAL OF THE BID.
5. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL REQUIRED PERMITS ARE OBTAINED AND IN HAND BEFORE BEGINNING ANY CONSTRUCTION. NO CONSTRUCTION OR FABRICATION OF ANY ITEM SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED ALL APPROVED FOR CONSTRUCTION PLANS AND ANY OTHER DOCUMENTATION FROM ALL OF THE PERMITTING AND ANY OTHER REGULATORY AUTHORITIES.
6. PERMITS: THE CONTRACTOR SHALL COMPLY WITH THE CONDITIONS CONTAINED IN ALL PERMITS WHICH HAVE BEEN OBTAINED FOR THE PROJECT.
 - A. DISTRICT OBTAINED PERMITS INCLUDE:
 - (1) US ARMY CORPS OF ENGINEERS 404 CLEAN WATER ACT PERMIT
 - (2) FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION GENERAL PERMIT
 - (3) FLORIDA DEPARTMENT OF TRANSPORTATION
 - (4) ST. JOHNS COUNTY ENVIRONMENTAL PERMIT
 - B. THE CONTRACTOR SHALL OBTAIN ANY AND ALL REMAINING PERMITS AS REQUIRED FOR THE CONSTRUCTION OF THE PROJECT PRIOR TO BEGINNING CONSTRUCTION INCLUDING, BUT NOT LIMITED TO:
 - (1) SUBMITTAL OF THE NOTICE OF INTENT (NOI) TO USE THE US EPA NPDES CONSTRUCTION GENERAL PERMIT AND COMPLETION OF ANY SUPPORTING DOCUMENTS REQUIRED FOR THE PERMIT.
 - (2) ST. JOHNS COUNTY BUILDING DEPARTMENT PERMIT
 - (3) FDEP DEWATERING PERMIT
7. THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, LEVEES, ROADS, UTILITIES, AND OTHER IMPROVEMENTS FROM DAMAGE WHETHER OR NOT SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR PROTECTION METHODS, COORDINATION WITH OWNERS AND REPAIRS TO UTILITIES AND OTHER SITE IMPROVEMENTS DAMAGED DURING CONSTRUCTION.
8. THE CONTRACTOR SHALL NOTIFY THE DISTRICT'S PROJECT MANAGER AT LEAST FIVE DAYS PRIOR TO BEGINNING CONSTRUCTION.
9. CONSTRUCTION INSPECTION WILL BE PERFORMED BY THE DISTRICT. THE CONTRACTOR SHALL NOTIFY THE DISTRICT AT LEAST 48 HOURS PRIOR TO THE REQUIRED TIME OF INSPECTION FOR EACH AND EVERY PHASE OF WORK.
10. SHOP DRAWINGS OF ALL MATERIALS BEING USED SHALL BE SUBMITTED ELECTRONICALLY TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
11. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROJECT CONTRACT CONSTRUCTION DOCUMENTS.
12. ALL DISCREPANCIES ON THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY AND PRIOR TO COMMENCING WORK.
13. SECURITY OF THE SITE AND CONTRACTOR'S EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO ADDITIONAL COST TO THE DISTRICT.
14. ALL ELEVATIONS SHOWN ARE IN NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).
15. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE, AT ALL TIMES, ONE COPY OF THE CONTRACT DOCUMENTS INCLUDING STAMPED CONFORMED PLANS, SPECIFICATIONS, AND ALL SPECIAL PROVISIONS, AND COPIES OF ALL REQUIRED CONSTRUCTION PERMITS.
16. ALL DEWATERING COSTS ASSOCIATED WITH THE INSTALLATION AND CONSTRUCTION OF THIS PROJECT SHALL BE INCLUDED IN THE CONSTRUCTION COSTS, INCLUDING ALL WATER USE PERMITS THAT MAY BE REQUIRED FOR DEWATERING ACTIVITIES DURING CONSTRUCTION.
17. EXCAVATION ACCURACY SHALL BE TO +/- 0.1 FEET. IF DIFFICULTY IN MEETING EXCAVATION ACCURACY THE BIDDER (CONTRACTOR) SHALL NOTIFY THE DISTRICT PRIOR TO SUBMITTING BID. THE DISTRICT MINIMUM EXCAVATION TO ACHIEVE IS 2.30 ACRES (0.65 ACRES NORTH OF SR16 AND 1.65 ACRES SOUTH OF SR16) TO THE WATERSIDE PROJECT BOUNDARY WITH A TARGET OF (-)1.2 FEET NAVD88.

MOBILIZATION/DEMOBILIZATION

1. TASKS RELATED TO MOBILIZATION SHALL ADHERE TO THE CURRENT REQUIREMENTS OF SECTION 101 (MOBILIZATION) OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION).
2. AREA IS AVAILABLE ADJACENT TO THE PROJECT AREA IF OUTSIDE OF THE FDOT CLEAR ZONE FOR EQUIPMENT STAGING AND MATERIALS STORAGE. THE CONTRACTOR SHALL COORDINATE EXACT LOCATION WITH DISTRICT'S PROJECT MANAGER AND FDOT PRIOR TO BEGINNING MOBILIZATION.
3. WORK WILL BE CONSIDERED COMPLETE ONLY AFTER ALL RUBBISH AND UNUSED MATERIAL DUE TO OR CONNECTED WITH THE WORK HAS BEEN REMOVED AND THE PREMISES LEFT IN A CONDITION SATISFACTORY TO THE DISTRICT.
4. ALL PROPERTY DISTURBED OR DAMAGED DURING PROSECUTION OF THE WORK SHALL BE RESTORED TO ITS FORMER CONDITION OR BETTER AT NO ADDITIONAL EXPENSE TO THE DISTRICT. FINAL PAYMENT WILL BE WITHHELD UNTIL SUCH CLEANUP IS COMPLETED AND APPROVED BY THE DISTRICT.

MAINTENANCE OF TRAFFIC

1. CONTRACTOR SHALL PROVIDE ALL SAFETY AND TRAFFIC CONTROL NECESSARY FOR ACCESS TO THE SITE AND WORK WITHIN THE PROJECT LIMITS.
2. THE CONTRACTOR SHALL FOLLOW ALL FDOT MAINTENANCE OF TRAFFIC REQUIREMENTS. ANY DEVIATION FROM FDOT STANDARDS REQUIRES WRITTEN PERMISSION FROM FDOT.

AS-BUILT DRAWINGS

1. THROUGHOUT THE CONSTRUCTION PHASE, CONTRACTOR SHALL MAINTAIN ONE (1) COMPLETE SET OF THE SIGNED AND SEALED CONTRACT PLANS ON FULL-SIZED PLAN SHEETS AS THE AS-BUILTS DRAWINGS FOR THE PROJECT. THE AS-BUILT DRAWINGS SHALL INCLUDE ALL CHANGES, BOTH DESIGN AND CONSTRUCTION, WITH ALL SHOP DRAWINGS, INCLUDING ADEQUATE SKETCHES, DIMENSIONS, AND NOTES. ALL REVISIONS, INCLUDING THOSE OCCURRING DURING CONSTRUCTION, WILL BE INCLUDED IN THE AS-BUILT DRAWING SET.
2. UPON CONSTRUCTION COMPLETION, CONTRACTOR WILL INCORPORATE ALL CHANGES AND REVISIONS MADE TO THE PROJECT AND RECORDED ON THE ON-SITE AS-BUILT PLANS INTO A FINAL AS-BUILT PLAN SURVEYED BY A LICENSED SURVEYOR IN THE STATE OF FLORIDA. THE FINAL AS-BUILTS SHALL INCLUDE LIMITS OF THE RIP-RAP, TREE ISLANDS, AND FINAL GRADE TOPOGRAPHY. THE COMPLETED SURVEYED AS-BUILT CAD FILE SHALL BE PROVIDED TO THE DISTRICT TO VERIFY THE FINAL COMPLETION OF THE PROJECT FOR APPROVAL OF FINAL PAYMENT. THE DISTRICT MINIMUM EXCAVATION WILL BE VERIFIED THAT 2.30 ACRES (0.65 ACRES NORTH OF SR16 AND 1.65 ACRES SOUTH OF SR16) TO THE WATERSIDE PROJECT BOUNDARY WITH A TARGET OF (-)1.2 FEET NAVD88 IS ACHIEVED.

	Signature Michael R. Altmir, P.E. FL Professional Eng. #71640	Date			
REV	DATE	DESCRIPTION	BY	CHKD	
1	9/22/20	BID ADDENDUM PLANS	SLD	MRK	
2					
3					
4					
5					
6					

FIRST COAST EXPRESSWAY SAV RESTORATION
STATE ROAD 16

GENERAL NOTES

ST. JOHNS COUNTY FLORIDA
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

DESIGN	DRAWN	DATE	ISSUE
MRK	SLD	20-015	SEPTEMBER 2020
NUMBER	JOB	DATE	ISSUE

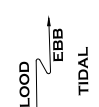
FOUR WATERS ENGINEERING

324 6th AVE N. JACKSONVILLE BEACH, FLORIDA 32250
904-414-2400 C.O.A.# 31101 WWW.4WENG.COM

DRAWING NUMBER
G-1

STEVE DUCHARNE LOCATION: E:\20-1015_SJRWMD_EC4_RESTORATION\A\CD\51_EC4-GENERAL.DWG

- NOTES:
1. THIS IS NOT A BOUNDARY SURVEY.
 2. COORDINATES, BEARING AND DISTANCES ARE BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE (907), NORTH AMERICAN DATUM OF 1983, 1990 ADJUSTMENT (NAD 83/90), AND WERE DERIVED FROM GPS OBSERVATIONS UTILIZING THE FDOT FLORIDA PERMANENT REFERENCE NETWORK (FPRN), UNLESS NOTED OTHERWISE. COORDINATES SHOWN ARE EXPRESSED IN U.S. SURVEY FEET.
 3. ELEVATIONS SHOWN HEREON REFER TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND ARE BASED ON: CLAY COUNTY SIDE: STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION, BENCHMARK DESIGNATION No. SNC21, PUBLISHED ELEVATION 2.96 (NAVD 88) FEET, PER FDOT PROJECT NETWORK CONTROL SHEET "CTL-1" FOR SR 23, PROJECT No. 422938-5-52-01. ST. JOHNS COUNTY SIDE: FDOT BENCHMARK "ATBM1" BEING A BOX CUT ON BULKHEAD ELEV. = 2.94 FEET.
 4. THIS IS A SURFACE SURVEY ONLY. UNDERGROUND IMPROVEMENTS SUCH AS FOOTERS AND UTILITIES, IF ANY, WERE NOT LOCATED, EXCEPT AS SHOWN.
 5. RIGHT OF WAY AND CENTERLINE INFORMATION SHOWN HEREON IS PER FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP FOR STATE ROAD 23, SECTION 78293, F.P. No. 4229382, F.A.P. No. 8887 939 A, DATED: 09/02/2009.
 6. UNDERGROUND UTILITIES WERE MARKED BY DRMP, AND LOCATED BY THIS FIRM.
 7. AT THE TIME OF THIS SURVEY THE NEW BRIDGE OVER THE ST. JOHNS RIVER FOR S.R. 23 HAS NOT BEEN CONSTRUCTED. CLEARING ACTIVITY HAS BEGUN IN CLAY COUNTY, BUT HAS NOT BEGUN IN ST. JOHNS COUNTY.



SR 16 R/W

ST JOHNS RIVER

CL SURVEY S.R. 16
PER S.R.D. R/W MAP 78060-2505
(VARIABLE WITH R/W)

STATE ROAD No. 16
(VARIABLE WIDTH RIGHT OF WAY)

CL CROWN

N 55°43'14" E

CL CROWN

L.A. R/W LINE
ORIGINAL R/W SR 16

REFERENCE BENCH MARK
FOUND BOX CUT IN
CONCRETE BULKHEAD
ELEV. = 2.94 NAVD'88

ORIGINAL R/W SR 16

S 55°46'15" W

L.A. R/W LINE

POINT #	BDH/TREE TYPE
39	6'ELM
40	6'ELM
41	6'ELM
42	6'ELM
43	6'ELM
44	6'ELM
45	6'ELM
46	6'HACKBERRY
48	6'HACKBERRY
52	6'OAK
53	6'OAK
62	6'SWEETGUM
65	6'SWEETGUM
66	6'SWEETGUM
67	6'SWEETGUM
68	6'SWEETGUM
69	6'SWEETGUM
70	6'SWEETGUM
71	6'SWEETGUM
72	6'SWEETGUM
73	6'SWEETGUM
74	6'TOPLAR
85	7/11' ELM
89	7'ELM
90	7'ELM
91	7'ELM
92	7'ELM
93	7'HACKBERRY
94	7'HACKBERRY
98	7'OAK
99	7'OAK
107	7'SWEETGUM
108	7'SWEETGUM
109	7'SWEETGUM
112	7'SWEETGUM
113	7'SWEETGUM
114	7'SWEETGUM
115	7'SWEETGUM
116	7'SWEETGUM
135	8'CYPRRESS
136	8'CYPRRESS
137	8'ELM
138	8'ELM
139	8'ELM
140	8'ELM
141	8'ELM
145	8'OAK
146	8'OAK
150	8'SWEETGUM
151	8'SWEETGUM

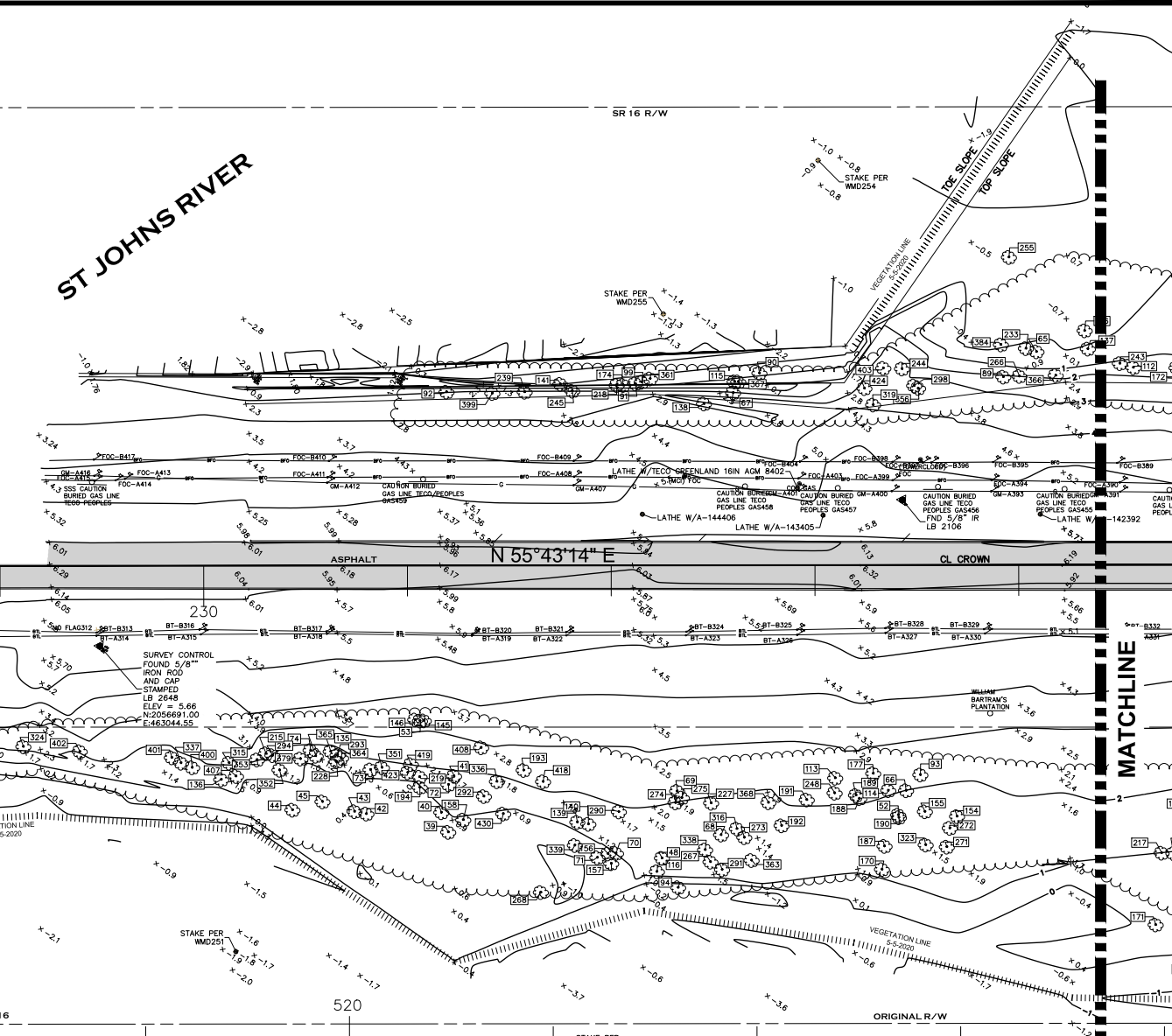
POINT #	BDH/TREE TYPE
154	8'SWEETGUM
155	8'SWEETGUM
156	8'SWEETGUM
157	8'SWEETGUM
158	8'SWEETGUM
169	9/7' SWEETGUM
170	9/7/7' SWEETGUM
171	9/9' SWEETGUM
172	9/11' SWEETGUM
174	9'ELM
176	9'OAK
177	9'OAK
183	9'SWEETGUM
184	9'SWEETGUM
186	9'SWEETGUM
187	9'SWEETGUM
188	9'SWEETGUM
189	9'SWEETGUM
190	9'SWEETGUM
191	9'SWEETGUM
192	9'SWEETGUM
193	9'SWEETGUM
194	9'SWEETGUM
195	9'UNKNOWN
215	10'CYPRRESS
216	10'CYPRRESS
217	10'ELM
218	10'ELM
219	10'ELM
227	10'SWEETGUM
228	10'SWEETGUM
233	11/6' SWEETGUM
239	11'CHINA BERRY
241	11'CYPRRESS
243	11'ELM
244	11'ELM
245	11'ELM
246	11'ELM
248	11'OAK
255	11'SWEETGUM
266	12'ELM
267	12'ELM
268	12'ELM
271	12'SWEETGUM
272	12'SWEETGUM
273	12'SWEETGUM
274	12'SWEETGUM
275	12'SWEETGUM
276	12'SWEETGUM
290	13'CYPRRESS

POINT #	BDH/TREE TYPE
291	13'ELM
292	13'ELM
293	13'ELM
294	13'ELM
295	13'ELM
296	13'OAK
299	13'PALM
315	14'CYPRRESS
316	14'ELM
319	14'PALM
323	14'SWEETGUM
324	14'SWEETGUM
336	15'CYPRRESS
337	15'CYPRRESS
338	15'ELM
339	15'ELM
351	16'CYPRRESS
352	16'CYPRRESS
353	16'CYPRRESS
356	16'OAK
361	17/15' SWEETGUM
363	17'CYPRRESS
364	17'CYPRRESS
365	17'CYPRRESS
366	17'ELM
367	17'ELM
368	17'OAK
378	18'CYPRRESS
379	18'CYPRRESS
384	18'PALM
387	18'SWEETGUM
394	20'CYPRRESS
399	21/6' ELM
400	21'CYPRRESS
401	21'CYPRRESS
402	21'CYPRRESS
403	21'HACKBERRY
407	22'CYPRRESS
408	22'ELM
410	23'CYPRRESS
418	24'SWEETGUM
419	24'SWEETGUM
423	26'CYPRRESS
424	26'ELM
427	27'CYPRRESS
430	36'SWEETGUM

- Symbol Legend**
- Symbol Denotes**
- IRON PIPE AS NOTED
 - ◉ BENCHMARK
 - IRON ROD AS NOTED
 - CONTROL POINT AS NOTED
 - SERVICE BOX
 - SIGN, AS NOTED
 - SIGN IN WATERWAY
 - DRMP UTILITIES LOCATION WITH NUMBER
 - DOUBLE REFLECTOR POLE
 - PINK PAIN MARKING LOCATION PER DRMP
 - TREE WITH TAG NUMBER
 - SERVICE CABINET
 - UNDERGROUND UTILITY MARKER
 - BFO- BURIED FIBRE OPTIC CABLE
 - BT- BURIED TELEPHONE LINE
 - G- BURIED GAS MAIN
 - x0.00 SPOT SHOT ELEVATION
 - DBH DIAMETER BREST HEIGHT
 - BT- BURIED TELEPHONE NUMBERED LOCATION PER DRMP

- GM- BURIED GAS MAIN NUMBERED LOCATION PER DRMP
- FOC- BURIED FIBRE OPTIC CABLE NUMBERED LOCATION PER DRMP
- DB DEED BOOK
- PB PLAT BOOK
- (P) PLAT
- PG PAGE(S)
- No. NUMBER
- LB LICENSED BUSINESS
- EL ELEVATION
- IDENT IDENTIFICATION
- MES MITERED END SECTION
- UEW U-SHAPED ENDWALL
- TYP TYPICAL
- N: NORTHING STATE PLANE
- E: EASTING COORDINATE PAIR
- NAVD 88 NORTH AMERICAN VERTICAL DATUM 1988
- CONTOUR

A MAP SHOWING A TOPOGRAPHIC SURVEY
OF A PORTION OF S.R. No. 16 & S.R. 23,
TOWNSHIP 6 SOUTH, RANGE 27 EAST,
CLAY COUNTY & ST. JOHNS COUNTY, FLORIDA



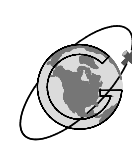
STATE ROAD No. 23
324' LIMITED ACCESS RIGHT OF WAY
SECTION 78293, F.P. No. 4229382

SHEET 2 OF 3

THIS SURVEY IS NOT VALID WITHOUT
SHEETS 1 THROUGH 3

GEOMATICS CORP.
SURVEYING-MAPPING-GPS
2804 N. FIFTH STREET, UNIT 101
ST. AUGUSTINE, FL 32084
PHONE (904) 824-3066 FAX (904) 824-8763

LICENSED BUSINESS
FLORIDA #2770 GEORGIA #090
SOUTH CAROLINA #3867 ALABAMA #794
NORTH CAROLINA #9782



PROJECT No: D 20-3127 TOPO
SURVEY DATE: 05/05/2020
CAD FILE: FCX-EXIST COND
CHECKED BY: P.FERRARI
DRAWN BY: C.MUNDIS
FIELD WORK: A.BROWNING
FB: 20-01 PG: 15-17

DESIGN	DRAWN	DATE	DESCRIPTION
MRK	SLD	BY	BY
20-015	20-015	1/9/2020	BID ADDENDUM PLANS
NUMBER	NUMBER	SID	SID
ISSUE	ISSUE	3	3
DATE	DATE	4	4
2020	2020	5	5
SEPTEMBER	SEPTEMBER	6	6
DATE	DATE		
ISSUE	ISSUE		
DATE	DATE		
ISSUE	ISSUE		

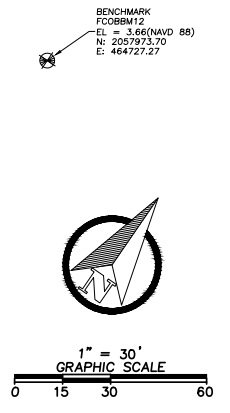
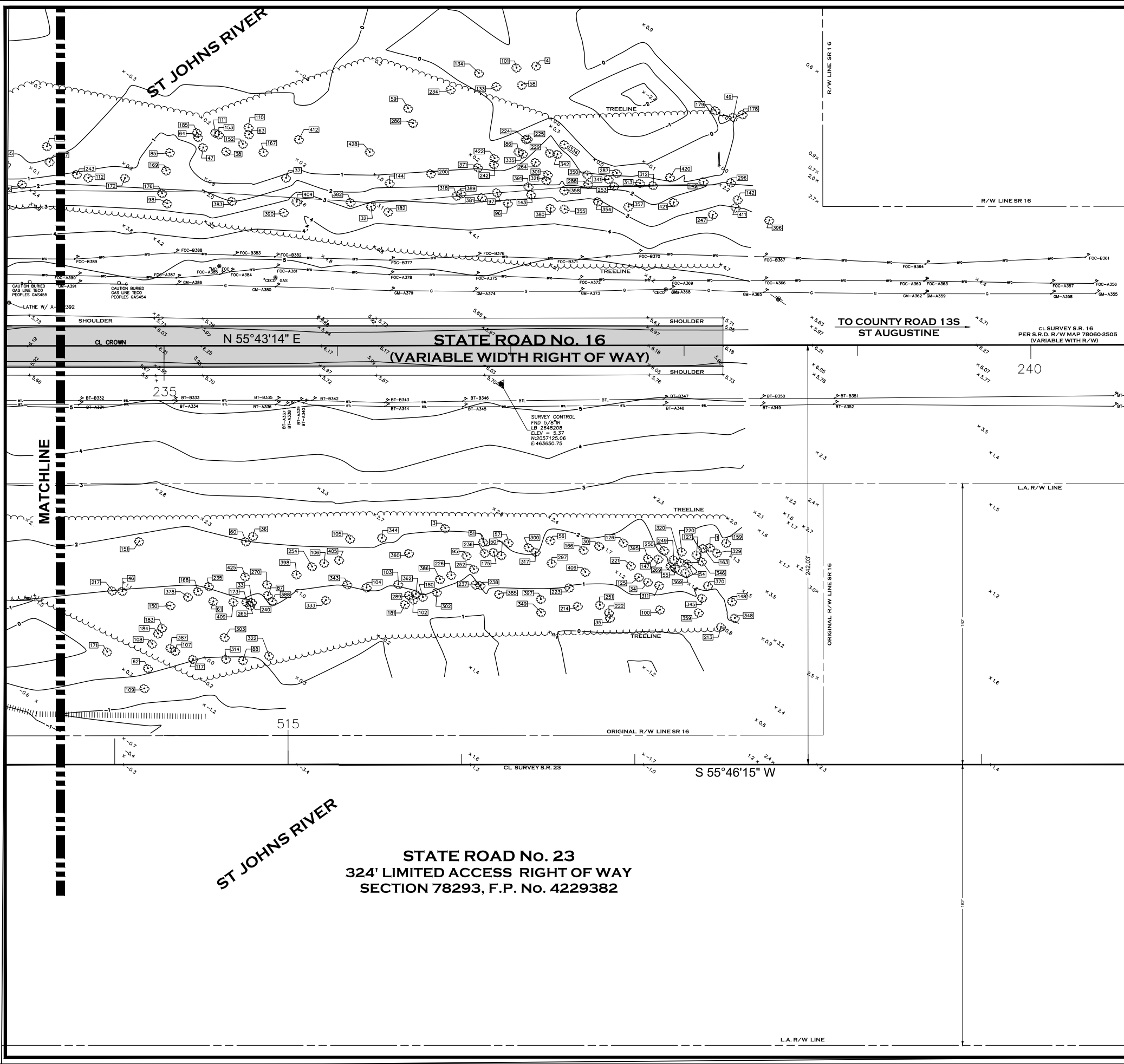
EXISTING CONDITIONS

FIRST COAST EXPRESSWAY SAV RESTORATION
STATE ROAD 16

ST. JOHNS COUNTY FLORIDA
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

DRAWING NUMBER
G-2

Signature: Michael R. Minn, P.E.
FL Professional Eng. #71640
Date: SEE SHEET 3



A MAP SHOWING A TOPOGRAPHIC SURVEY OF A PORTION OF S.R. No. 16 & S.R. 23, TOWNSHIP 6 SOUTH, RANGE 27 EAST, CLAY COUNTY & ST. JOHNS COUNTY, FLORIDA

GEOMATICS CORP.
 SURVEYING—MAPPING—GPS
 2804 N. FIFTH STREET, UNIT 101
 ST. AUGUSTINE, FL 32084
 PHONE (904) 824-3866 FAX (904) 824-6783

LICENSED BUSINESS
 FLORIDA #9797 GEORGIA #980
 SOUTH CAROLINA #3367 ALABAMA #794
 NORTH CAROLINA COA #9762

POINT #	BDH/TREE TYPE
1	5'SWEETGUM
3	5 CEDAR
4	5 SWEETGUM
30	6'SWEETGUM
32	6/7 OAK
33	6'CYPRESS
34	6'ELM
35	6'ELM
36	6'ELM
37	6'ELM
38	6'ELM
46	6'HACKBERRY
47	6'HACKBERRY
49	6'OAK
50	6'OAK
51	6'OAK
54	6'SWEETGUM
55	6'SWEETGUM
56	6'SWEETGUM
57	6'SWEETGUM
58	6'SWEETGUM
59	6'SWEETGUM
60	6'SWEETGUM
61	6'SWEETGUM
62	6'SWEETGUM
63	6'SWEETGUM
64	6'SWEETGUM
85	7/11 ELM
86	7'ELM
87	7'ELM
88	7'ELM
95	7'OAK
96	7'OAK
97	7'OAK
98	7'OAK
100	7'SWEETGUM
101	7'SWEETGUM
102	7'SWEETGUM
103	7'SWEETGUM
104	7'SWEETGUM
105	7'SWEETGUM
106	7'SWEETGUM
107	7'SWEETGUM
108	7'SWEETGUM
109	7'SWEETGUM
110	7'SWEETGUM
111	7'SWEETGUM
112	7'SWEETGUM
117	7'UNKNOWN
125	8'ELM

POINT #	BDH/TREE TYPE
126	8'ELM
127	8'GUM
133	8'SWEETGUM
134	8/9/10/9/6'SWEETGUM
137	8'ELM
142	8'OAK
143	8'OAK
144	8'OAK
147	8'PINE
148	8'SWEETGUM
149	8'SWEETGUM
150	8'SWEETGUM
151	8'SWEETGUM
152	8'SWEETGUM
153	8'SWEETGUM
159	9' PINE
163	9'GUM
166	9'SWEETGUM
167	9/6 SWEETGUM
168	9/7 ELM
169	9/7 SWEETGUM
171	9/9 SWEETGUM
172	9/11 SWEETGUM
173	9'CYPRESS
175	9'OAK
176	9'OAK
178	9'SWEETGUM
179	9'SWEETGUM
180	9'SWEETGUM
181	9'SWEETGUM
182	9'SWEETGUM
183	9'SWEETGUM
184	9'SWEETGUM
185	9'SWEETGUM
186	9'SWEETGUM
200	10'ELM
213	10'SWEETGUM
214	10/5/11' ELM
217	10'ELM
220	10'SWEETGUM
221	10'SWEETGUM
222	10'SWEETGUM
223	10'SWEETGUM
224	10'SWEETGUM
225	10'SWEETGUM
226	10'SWEETGUM
229	10'UNKNOWN
234	11/6/6'SWEETGUM
235	11/8 ELM
236	11'ELM

POINT #	BDH/TREE TYPE
237	11'SWEETGUM
238	11'SWEETGUM
240	11'CYPRESS
242	11'ELM
243	11'ELM
247	11'OAK
249	11'PINE
250	11'SWEETGUM
251	11'SWEETGUM
252	11'SWEETGUM
253	11'SWEETGUM
254	11'SWEETGUM
264	12'CYPRESS
265	12'ELM
269	12'SWEETGUM
270	12'SWEETGUM
286	13/9/6'ELM
287	13'CYPRESS
288	13'CYPRESS
289	13'CYPRESS
296	13'OAK
297	13'OAK
300	13'PINE
301	13'SWEETGUM
302	13'SWEETGUM
303	13'SWEETGUM
311	14'CYPRESS
312	14'CYPRESS
313	14'CYPRESS
314	14'CYPRESS
317	14'OAK
318	14'OAK
320	14'PINE
321	14'SWEETGUM
322	14'SWEETGUM
329	15'PINE
333	15/11/23 SWEETGUM
334	15'CYPRESS
335	15'CYPRESS
341	15'SWEETGUM
342	15'SWEETGUM
343	15'SWEETGUM
344	15'UNKNOWN
345	16'CYPRESS
346	16'PINE
348	16'CYPRESS
349	16'CYPRESS
350	16'CYPRESS
354	16'OAK
355	16'OAK

POINT #	BDH/TREE TYPE
357	16'SWEETGUM
358	16'UNKNOWN
359	17'CYPRESS
360	17/13 SWEETGUM
362	17'CYPRESS
369	17'PINE
370	18'CYPRESS
371	18'CYPRESS
378	18'CYPRESS
380	18'OAK
381	18'OAK
382	18'OAK
383	18'OAK
385	18'SWEETGUM
386	18'SWEETGUM
387	18'SWEETGUM
388	19'CYPRESS
389	19'OAK
390	19'OAK
391	19'SWEETGUM
395	20'PINE
396	20'PINE
397	20'SWEETGUM
398	20'SWEETGUM
404	21'OAK
405	21'PINE
406	21'SWEETGUM
409	23'CYPRESS
411	23'PINE
412	23'SWEETGUM
420	25'CYPRESS
421	25'OAK
422	26'CYPRESS
425	26'SWEETGUM
428	27'SWEETGUM

Signature: Michael R. Altm, P.E., FL Professional Eng. #71640
 Date: _____

REV	DATE	BY	DESCRIPTION
1	9/22/20	SLD	BID ADDENDUM PLANS
2			
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DRWN: CHKO
 CHKD: _____
 DATE: _____

FIRST COAST EXPRESSWAY SAV RESTORATION
 STATE ROAD 16

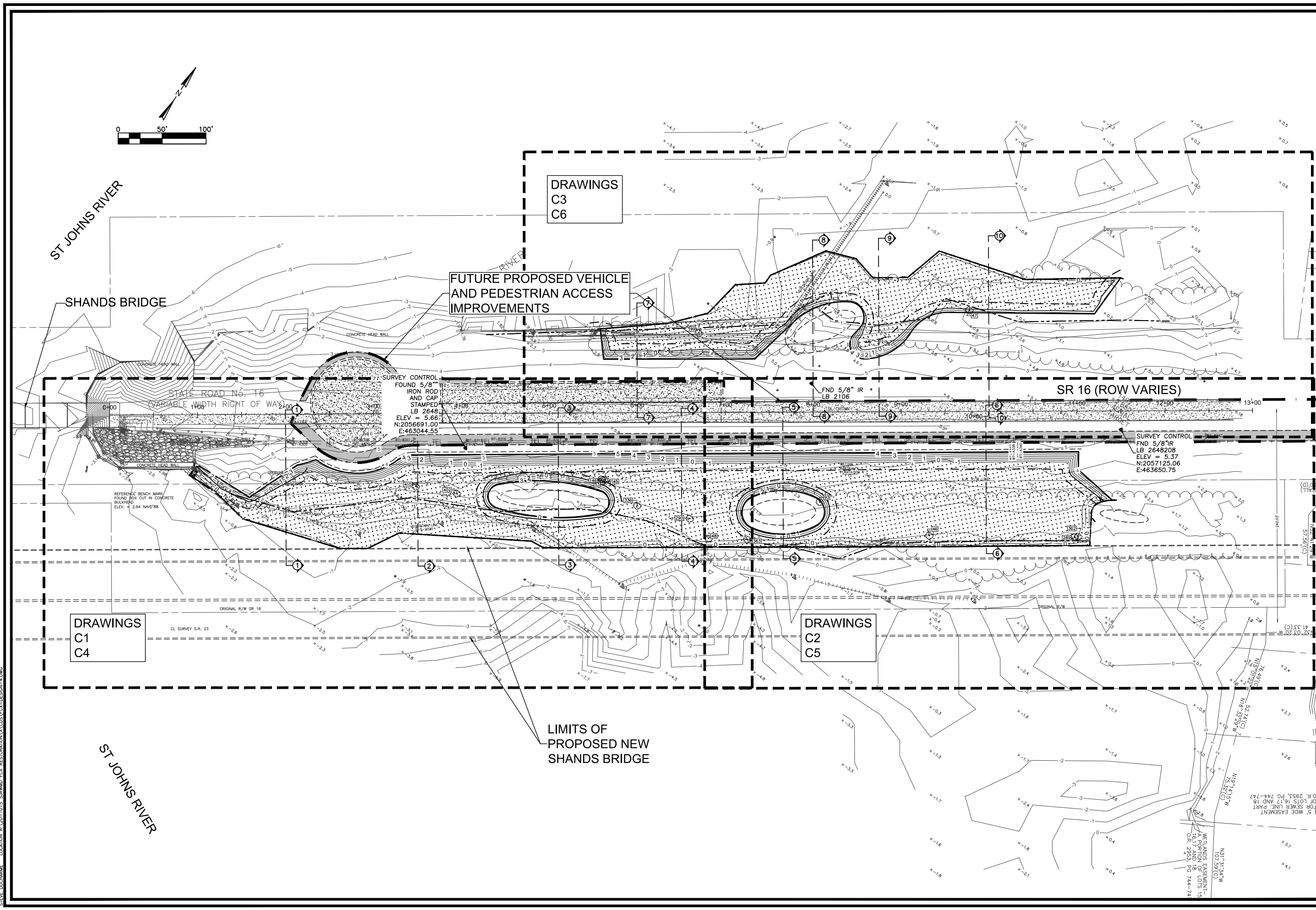
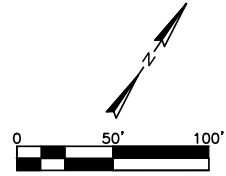
EXISTING CONDITIONS

ST JOHNS COUNTY FLORIDA
 ST JOHNS RIVER WATER MANAGEMENT DISTRICT

DESIGN: DRAWN: SLD
 MRK: JOB: 20-015
 NUMBER: NUMBER: 2020
 ISSUE: ISSUE: SEPTEMBER 2020
 DATE: DATE: _____
 ISSUE: ISSUE: _____

FOUR WATERS ENGINEERING
 324 6th AVE N. JACKSONVILLE BEACH, FLORIDA 32250
 904-414-2400 C.O.A.# 31101 WWW.4WENG.COM

DRAWING NUMBER: **G-3**



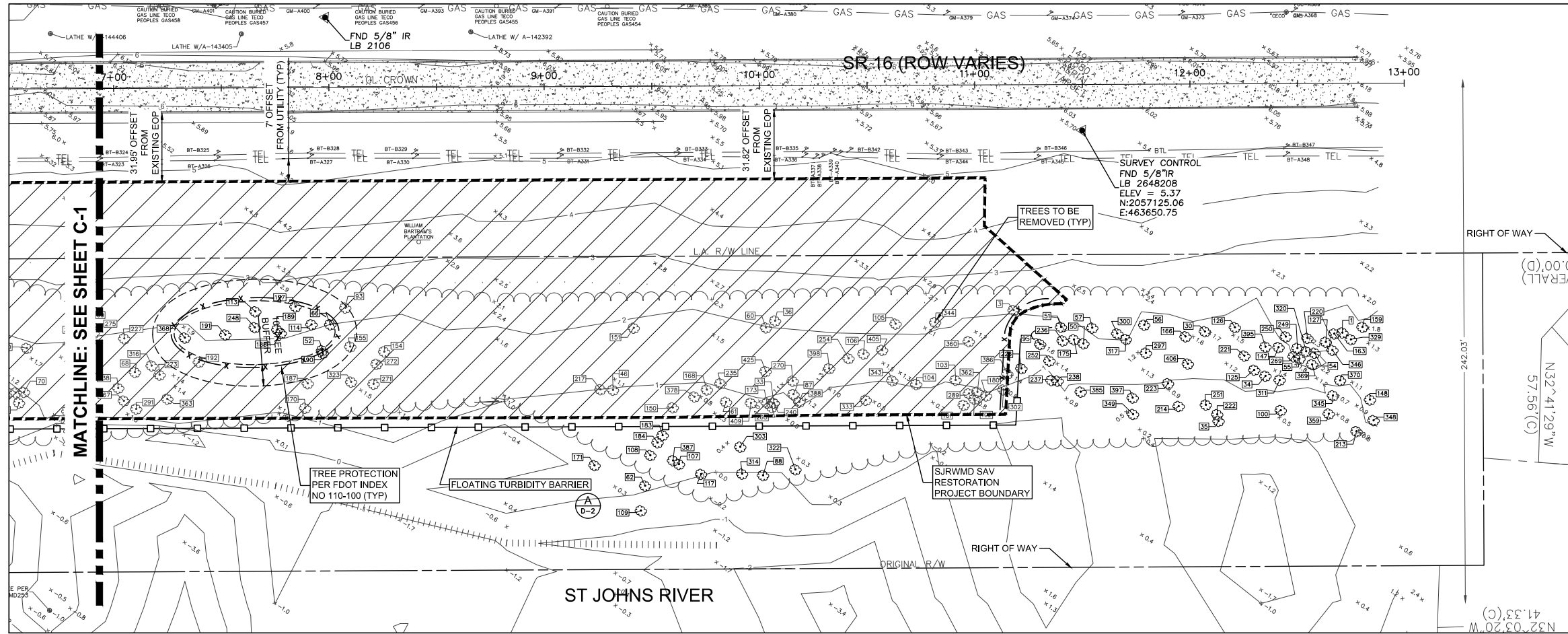
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OVERALL PROJECT AND DRAWING KEY MAP		DESIGN MKR SLD NUMBER 20-015	DRAWN SLD NUMBER 20-015
		ISSUE DATE SEPTEMBER 2020	BID
FIRST COAST EXPRESSWAY SAV RESTORATION STATE ROAD 16			
ST JOHNS COUNTY FLORIDA ST JOHNS RIVER WATER MANAGEMENT DISTRICT			

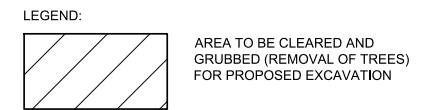
REV	DATE	DRWN	CHKD	DESCRIPTION
1	9/22/20	SLD	MRK	BID ADDENDUM PLANS
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FOUR WATERS ENGINEERING 324 6th AVE N. JACKSONVILLE BEACH, FLORIDA 32250 904-414-2400 C.O.A.# 31101 WWW.4WENG.COM	DRAWING NUMBER G-4
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Signature
Michael R. Klimm, P.E.
FL Professional Eng. #71640
Date



NOTE:
SEE SHEET C4, C5 AND C6
FOR STAKING PLAN.



TREE TABLE	TREE TABLE	TREE TABLE	TREE TABLE	TREE TABLE	TREE TABLE	TREE TABLE	TREE TABLE	TREE TABLE	TREE TABLE	TREE TABLE									
POINT #	BDH/TREE TYPE	POINT #	BDH/TREE TYPE	POINT #	BDH/TREE TYPE	POINT #	BDH/TREE TYPE	POINT #	BDH/TREE TYPE	POINT #	BDH/TREE TYPE	POINT #	BDH/TREE TYPE	POINT #	BDH/TREE TYPE	POINT #	BDH/TREE TYPE	POINT #	BDH/TREE TYPE
1	5'SWEETGUM	59	6'SWEETGUM	100	7'SWEETGUM	143	8'OAK	179	9'SWEETGUM	226	10'SWEETGUM	268	12'ELM	315	14'CYPRRESS	355	16'OAK	394	20'CYPRRESS
3	5'CEDAR	60	6'SWEETGUM	101	7'SWEETGUM	144	8'OAK	180	9'SWEETGUM	227	10'SWEETGUM	269	12'SWEETGUM	316	14'ELM	356	16'OAK	395	20'PINE
4	5'SWEETGUM	61	6'SWEETGUM	102	7'SWEETGUM	145	8'OAK	181	9'SWEETGUM	228	10'SWEETGUM	270	12'SWEETGUM	317	14'OAK	357	16'SWEETGUM	396	20'PINE
30	6'SWEETGUM	62	6'SWEETGUM	103	7'SWEETGUM	146	8'OAK	182	9'SWEETGUM	229	10'UNKNOWN	271	12'SWEETGUM	318	14'OAK	358	16'UNKNOWN	397	20'SWEETGUM
32	6/7 OAK	63	6'SWEETGUM	104	7'SWEETGUM	147	8'PINE	183	9'SWEETGUM	233	11/6 SWEETGUM	272	12'SWEETGUM	319	14'PALM	359	17'CYPRRESS	398	20'SWEETGUM
33	6'CYPRRESS	64	6'SWEETGUM	105	7'SWEETGUM	148	8'SWEETGUM	184	9'SWEETGUM	234	11/6/6'SWEETGUM	273	12'SWEETGUM	320	14'PINE	360	17/13 SWEETGUM	399	21/6'ELM
34	6'ELM	65	6'SWEETGUM	106	7'SWEETGUM	149	8'SWEETGUM	185	9'SWEETGUM	235	11/8 ELM	274	12'SWEETGUM	321	14'SWEETGUM	361	17/15'SWEETGUM	400	21'CYPRRESS
35	6'ELM	66	6'SWEETGUM	107	7'SWEETGUM	150	8'SWEETGUM	186	9'SWEETGUM	236	11'ELM	275	12'SWEETGUM	322	14'SWEETGUM	362	17'CYPRRESS	401	21'CYPRRESS
36	6'ELM	67	6'SWEETGUM	108	7'SWEETGUM	151	8'SWEETGUM	187	9'SWEETGUM	237	11'SWEETGUM	276	12'SWEETGUM	323	14'SWEETGUM	363	17'CYPRRESS	402	21'CYPRRESS
37	6'ELM	68	6'SWEETGUM	109	7'SWEETGUM	152	8'SWEETGUM	188	9'SWEETGUM	238	11'SWEETGUM	277	12'SWEETGUM	324	14'SWEETGUM	364	17'CYPRRESS	403	21'HACKBERRY
38	6'ELM	69	6'SWEETGUM	110	7'SWEETGUM	153	8'SWEETGUM	189	9'SWEETGUM	239	11'CHINA BERRY	278	13'CYPRRESS	329	15'PINE	365	17'CYPRRESS	404	21'OAK
39	6'ELM	70	6'SWEETGUM	111	7'SWEETGUM	154	8'SWEETGUM	190	9'SWEETGUM	240	11'CYPRRESS	288	13'CYPRRESS	333	15/11/23 SWEETGUM	366	17'ELM	405	21'PINE
40	6'ELM	71	6'SWEETGUM	112	7'SWEETGUM	155	8'SWEETGUM	191	9'SWEETGUM	241	11'CYPRRESS	289	13'CYPRRESS	334	15'CYPRRESS	367	17'ELM	406	21'SWEETGUM
41	6'ELM	72	6'SWEETGUM	113	7'SWEETGUM	156	8'SWEETGUM	192	9'SWEETGUM	242	11'CYPRRESS	290	13'CYPRRESS	335	15'CYPRRESS	368	17'OAK	407	22'CYPRRESS
42	6'ELM	73	6'SWEETGUM	114	7'SWEETGUM	157	8'SWEETGUM	193	9'SWEETGUM	243	11'ELM	291	13'ELM	336	15'CYPRRESS	369	17'PINE	408	22'ELM
43	6'ELM	74	6'TOPLAR	115	7'SWEETGUM	158	8'SWEETGUM	194	9'SWEETGUM	244	11'ELM	292	13'ELM	337	15'CYPRRESS	370	18'CYPRRESS	409	23'CYPRRESS
44	6'ELM	75	7/11 ELM	116	7'SWEETGUM	159	9' PINE	195	9'UNKNOWN	245	11'ELM	293	13'ELM	338	15'ELM	371	18'CYPRRESS	410	23'CYPRRESS
45	6'ELM	76	7'ELM	117	7'UNKNOWN	163	9'GUM	200	10'ELM	246	11'ELM	294	13'ELM	339	15'ELM	372	18'CYPRRESS	411	23'PINE
46	6'HACKBERRY	77	7'ELM	125	8'ELM	166	9'SWEETGUM	213	10'SWEETGUM	247	11'ELM	295	13'ELM	341	15'SWEETGUM	373	18'CYPRRESS	412	23'SWEETGUM
47	6'HACKBERRY	78	7'ELM	126	8'ELM	167	9/6 SWEETGUM	214	10/5/11' ELM	248	11'OAK	296	13'OAK	342	15'SWEETGUM	374	18'CYPRRESS	418	24'SWEETGUM
48	6'HACKBERRY	79	7'ELM	127	8'GUM	168	9/7 ELM	215	10'CYPRRESS	249	11'PINE	297	13'OAK	343	15'SWEETGUM	375	18'OAK	419	24'SWEETGUM
49	6'OAK	80	7'ELM	133	8'SWEETGUM	169	9/7 SWEETGUM	216	10'CYPRRESS	250	11'SWEETGUM	298	13'OAK	344	15'UNKNOWN	376	18'OAK	420	25'CYPRRESS
50	6'OAK	81	7'ELM	134	8/9/10/9/6'SWEETGUM	170	9/7/7 SWEETGUM	217	10'ELM	251	11'SWEETGUM	299	13'PALM	345	16'CYPRRESS	377	18'CYPRRESS	421	25'OAK
51	6'OAK	82	7'ELM	135	8'CYPRRESS	171	9/9 SWEETGUM	218	10'ELM	252	11'SWEETGUM	300	13'PINE	346	16'PINE	378	18'CYPRRESS	422	26'CYPRRESS
52	6'OAK	83	7'HACKBERRY	136	8'CYPRRESS	172	9/11 SWEETGUM	219	10'ELM	253	11'SWEETGUM	301	13'SWEETGUM	348	16'CYPRRESS	379	18'CYPRRESS	423	26'CYPRRESS
53	6'OAK	84	7'HACKBERRY	137	8'ELM	173	9'CYPRRESS	220	10'SWEETGUM	254	11'SWEETGUM	302	13'SWEETGUM	349	16'CYPRRESS	380	18'SWEETGUM	424	26'ELM
54	6'SWEETGUM	85	7'OAK	138	8'ELM	174	9'ELM	221	10'SWEETGUM	255	11'SWEETGUM	303	13'SWEETGUM	350	16'CYPRRESS	381	18'SWEETGUM	425	26'SWEETGUM
55	6'SWEETGUM	86	7'OAK	139	8'ELM	175	9'OAK	222	10'SWEETGUM	256	12'CYPRRESS	304	13'SWEETGUM	351	16'CYPRRESS	382	18'SWEETGUM	426	26'SWEETGUM
56	6'SWEETGUM	87	7'OAK	140	8'ELM	176	9'OAK	223	10'SWEETGUM	257	12'ELM	305	13'SWEETGUM	352	16'CYPRRESS	383	18'SWEETGUM	427	27'CYPRRESS
57	6'SWEETGUM	88	7'OAK	141	8'ELM	177	9'OAK	224	10'SWEETGUM	258	12'ELM	306	13'SWEETGUM	353	16'CYPRRESS	384	18'SWEETGUM	428	27'SWEETGUM
58	6'SWEETGUM	89	7'OAK	142	8'OAK	178	9'SWEETGUM	225	10'SWEETGUM	259	12'ELM	307	13'SWEETGUM	354	16'OAK	385	18'SWEETGUM	429	27'SWEETGUM

Signature: Michael R. Altmir, P.E.
FL Professional Eng. #71640

DATE: _____

REV	DATE	BY	DESCRIPTION
1	9/22/20	SLD	BID ADDENDUM PLANS
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DRW: CHKO
BY: SLD
CHK: SLD
APP: SLD

DESIGN: DRAWN: SLD
MJK
JOB: 20-015
NUMBER
ISSUE: SEPTEMBER 2020
DATE
ISSUE: BID

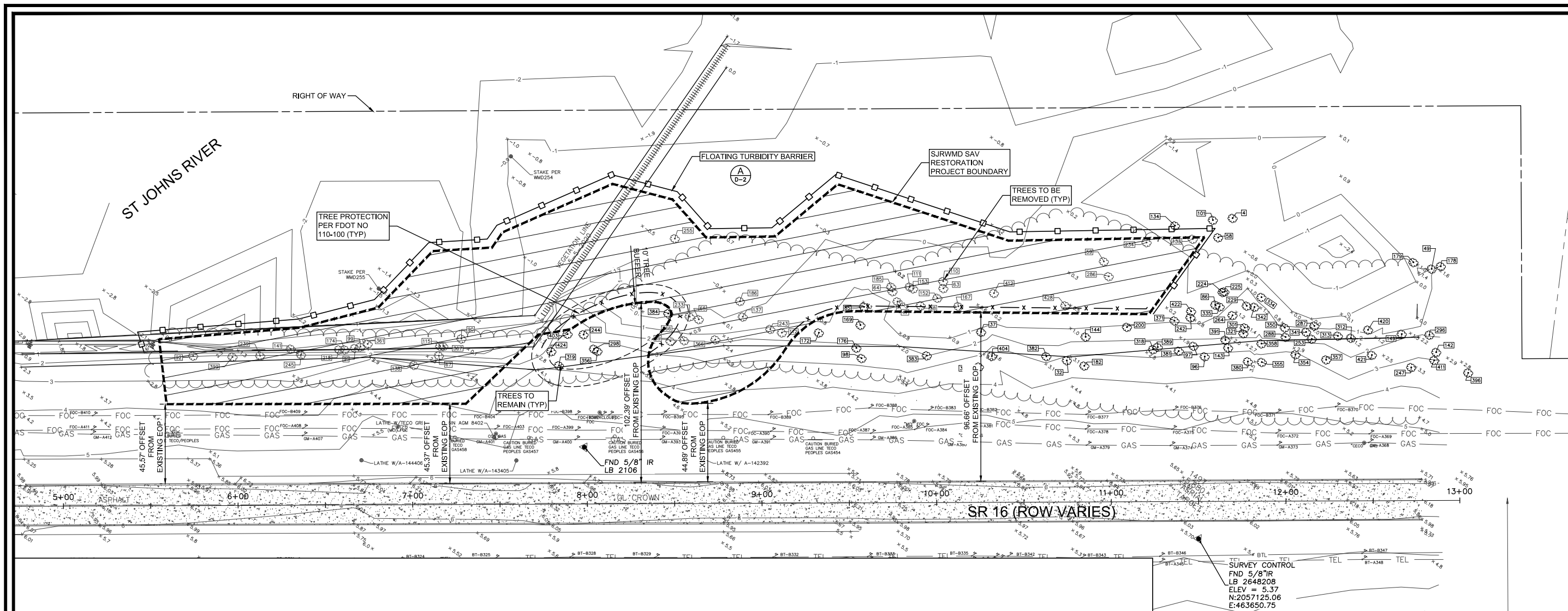
FOUR WATERS ENGINEERING
324 6th AVE N. JACKSONVILLE BEACH, FLORIDA 32250
904-414-2400 C.O.# 31101 WWW.FOURWATERS.COM

DRAWING NUMBER: **C-2**

SOUTH OF SR16 PROJECT BOUNDARY, TREE REMOVAL AND EROSION CONTROL

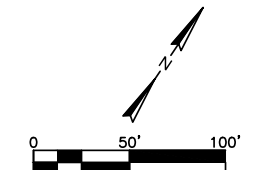
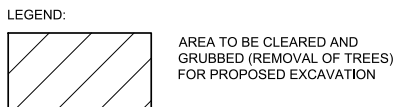
FIRST COAST EXPRESSWAY SAV RESTORATION STATE ROAD 16

ST JOHNS COUNTY FLORIDA
ST JOHNS RIVER WATER MANAGEMENT DISTRICT



TREE TABLE		TREE TABLE		TREE TABLE		TREE TABLE		TREE TABLE		TREE TABLE		TREE TABLE		TREE TABLE	
POINT #	BDH/TREE TYPE	POINT #	BDH/TREE TYPE	POINT #	BDH/TREE TYPE	POINT #	BDH/TREE TYPE	POINT #	BDH/TREE TYPE	POINT #	BDH/TREE TYPE	POINT #	BDH/TREE TYPE	POINT #	BDH/TREE TYPE
1	5'SWEETGUM	59	6'SWEETGUM	100	9'SWEETGUM	143	8'OAK	179	9'SWEETGUM	226	10'SWEETGUM	268	12'ELM	315	14'CYPRESS
3	5'CEDAR	60	6'SWEETGUM	101	7'SWEETGUM	144	8'OAK	180	9'SWEETGUM	227	10'SWEETGUM	269	12'SWEETGUM	316	14'ELM
4	5'SWEETGUM	61	6'SWEETGUM	102	7'SWEETGUM	145	8'OAK	181	9'SWEETGUM	228	10'SWEETGUM	270	12'SWEETGUM	317	14'OAK
30	6'SWEETGUM	62	6'SWEETGUM	103	7'SWEETGUM	146	8'OAK	182	9'SWEETGUM	229	10'UNKNOWN	271	12'SWEETGUM	318	14'OAK
32	6/7 OAK	63	6'SWEETGUM	104	7'SWEETGUM	147	8'PINE	183	9'SWEETGUM	233	11/6 SWEETGUM	272	12'SWEETGUM	319	14'PALM
33	6'CYPRESS	64	6'SWEETGUM	105	7'SWEETGUM	148	8'SWEETGUM	184	9'SWEETGUM	234	11/6/6'SWEETGUM	273	12'SWEETGUM	320	14'PINE
34	6'ELM	65	6'SWEETGUM	106	7'SWEETGUM	149	8'SWEETGUM	185	9'SWEETGUM	236	11'ELM	274	12'SWEETGUM	321	14'SWEETGUM
35	6'ELM	66	6'SWEETGUM	107	7'SWEETGUM	150	8'SWEETGUM	186	9'SWEETGUM	237	11'ELM	275	12'SWEETGUM	322	14'SWEETGUM
36	6'ELM	67	6'SWEETGUM	108	7'SWEETGUM	151	8'SWEETGUM	187	9'SWEETGUM	238	11'SWEETGUM	276	12'SWEETGUM	323	14'SWEETGUM
37	6'ELM	68	6'SWEETGUM	109	7'SWEETGUM	152	8'SWEETGUM	188	9'SWEETGUM	239	11'CHINA BERRY	277	13'CYPRESS	324	14'SWEETGUM
38	6'ELM	69	6'SWEETGUM	110	7'SWEETGUM	153	8'SWEETGUM	189	9'SWEETGUM	240	11'CYPRESS	278	13'CYPRESS	325	15'PINE
39	6'ELM	70	6'SWEETGUM	111	7'SWEETGUM	154	8'SWEETGUM	190	9'SWEETGUM	241	11'CYPRESS	279	13'CYPRESS	326	15'PINE
40	6'ELM	71	6'SWEETGUM	112	7'SWEETGUM	155	8'SWEETGUM	191	9'SWEETGUM	242	11'ELM	280	13'CYPRESS	327	15'PINE
41	6'ELM	72	6'SWEETGUM	113	7'SWEETGUM	156	8'SWEETGUM	192	9'SWEETGUM	243	11'ELM	281	13'CYPRESS	328	15'PINE
42	6'ELM	73	6'SWEETGUM	114	7'SWEETGUM	157	8'SWEETGUM	193	9'SWEETGUM	244	11'ELM	282	13'CYPRESS	329	15'PINE
43	6'ELM	74	6'TOPLAR	115	7'SWEETGUM	158	8'SWEETGUM	194	9'SWEETGUM	245	11'ELM	283	13'CYPRESS	330	15'PINE
44	6'ELM	75	7/11 ELM	116	7'SWEETGUM	159	9' PINE	195	9'UNKNOWN	246	11'ELM	284	13'ELM	331	15'ELM
45	6'ELM	76	7'ELM	117	7'UNKNOWN	160	9'GUM	196	10'ELM	247	11'ELM	285	13'ELM	332	15'ELM
46	6'HACKBERRY	77	7'ELM	125	8'ELM	166	9'SWEETGUM	213	10'SWEETGUM	248	11'ELM	286	13'ELM	333	15'ELM
47	6'HACKBERRY	78	7'ELM	126	8'ELM	167	9/6 SWEETGUM	214	10/5/11' ELM	249	11'ELM	287	13'ELM	334	15'ELM
48	6'HACKBERRY	79	7'ELM	127	8'GUM	168	9/7 ELM	215	10'CYPRESS	250	11'ELM	288	13'ELM	335	15'ELM
49	6'OAK	80	7'ELM	133	8'SWEETGUM	169	9/7 SWEETGUM	216	10'CYPRESS	251	11'SWEETGUM	289	13'ELM	336	15'ELM
50	6'OAK	81	7'ELM	134	8/9/10/9/6'SWEETGUM	170	9/7/7 SWEETGUM	217	10'ELM	252	11'SWEETGUM	290	13'ELM	337	15'ELM
51	6'OAK	82	7'ELM	135	8'CYPRESS	171	9/9 SWEETGUM	218	10'ELM	253	11'SWEETGUM	291	13'ELM	338	15'ELM
52	6'OAK	83	7'HACKBERRY	136	8'CYPRESS	172	9/11 SWEETGUM	219	10'ELM	254	11'SWEETGUM	292	13'ELM	339	15'ELM
53	6'OAK	84	7'HACKBERRY	137	8'ELM	173	9/11 SWEETGUM	220	10'ELM	255	11'SWEETGUM	293	13'ELM	340	15'ELM
54	6'SWEETGUM	85	7'OAK	138	8'ELM	174	9'CYPRESS	221	10'SWEETGUM	256	11'SWEETGUM	294	13'ELM	341	15'ELM
55	6'SWEETGUM	86	7'OAK	139	8'ELM	175	9'ELM	222	10'SWEETGUM	257	11'SWEETGUM	295	13'ELM	342	15'ELM
56	6'SWEETGUM	87	7'OAK	140	8'ELM	176	9'OAK	223	10'SWEETGUM	258	11'SWEETGUM	296	13'ELM	343	15'ELM
57	6'SWEETGUM	88	7'OAK	141	8'ELM	177	9'OAK	224	10'SWEETGUM	259	11'SWEETGUM	297	13'ELM	344	15'ELM
58	6'SWEETGUM	89	7'OAK	142	8'OAK	178	9'SWEETGUM	225	10'SWEETGUM	260	11'SWEETGUM	298	13'ELM	345	15'ELM

NOTE:
SEE SHEET C4, C5 AND C6
FOR STAKING PLAN.



REV	DATE	DRWN	CHKD	DESCRIPTION
1	9/22/20	SLD	MRK	BID ADDENDUM PLANS
2				
3				
4				
5				
6				

Signature: Michael R. Klim, P.E.
FL Professional Eng. #71640

DATE

NORTH OF SR16 PROJECT BOUNDARY, TREE REMOVAL AND EROSION CONTROL

FIRST COAST EXPRESSWAY SAV RESTORATION
STATE ROAD 16

ST JOHNS COUNTY FLORIDA
ST JOHNS RIVER WATER MANAGEMENT DISTRICT

DESIGN	MRK	SLD	DATE	ISSUE
20-015	20-015	2020	SEPTEMBER	BID


FOUR WATERS ENGINEERING
324 6th AVE N. JACKSONVILLE BEACH, FLORIDA 32250
904-414-2400 C.O.# 31101 WWW.4WENG.COM

DRAWING NUMBER
C-3

LEGEND:

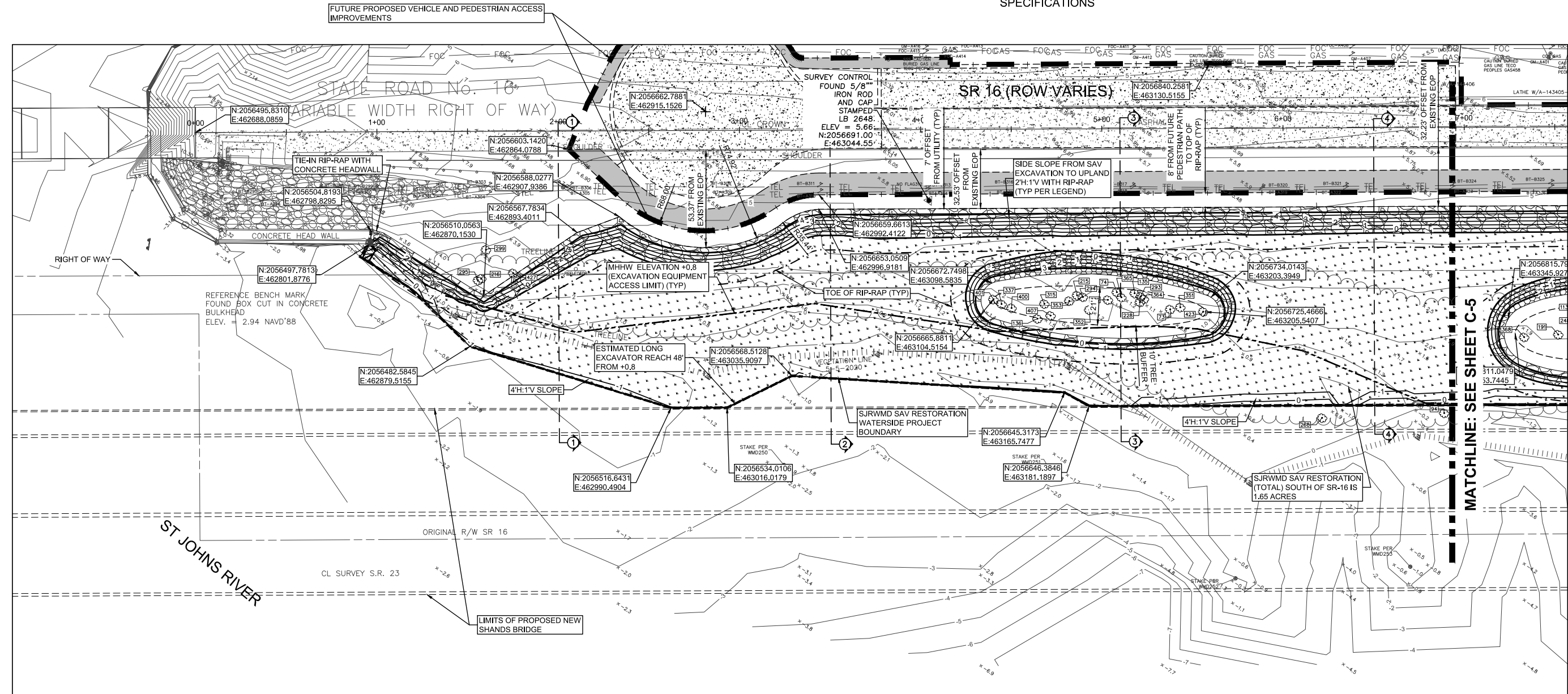
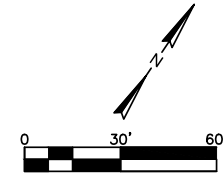
 SAV EXCAVATION TO (-) 1.2'

 RIP-RAP (BANK AND SHORE PROTECTION) $\text{\textcircled{A}}$
D-1

 RIP-RAP (DITCH LINING) $\text{\textcircled{B}}$
D-1

NOTE:

1. SLOPES WITH RIP-RAP ARE TO BE 2'H:1'V
2. SLOPES WITHOUT RIP-RAP ARE TO BE 4'H:1'V
3. CONTRACTOR TO VERIFY ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION
4. ALL UPLAND LAND DISTURBANCE TO HAVE PERMANENT SEEDING PER FDOT SPECIFICATIONS



REV	DATE	BY	CHKD	DESCRIPTION
1	9/22/20	SLD	MIRK	BID ADDENDUM PLANS
2				
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6				

FIRST COAST EXPRESSWAY SAV RESTORATION
STATE ROAD 16
SOUTH OF SR16
GRADING, RIP-RAP AND STAKING PLAN
ST. JOHNS COUNTY FLORIDA
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

DESIGN	DRAWN
MIRK	SLD
NUMBER	20-015
ISSUE	SEPTEMBER
DATE	2020
ISSUE	BID

FOUR WATERS ENGINEERING
324 6th AVE N. JACKSONVILLE BEACH, FLORIDA 32250
904-414-2400 C.O.A.# 31101 WWW.4WENG.COM


DRAWING NUMBER
C4

STEVE DUCHARNE LOCATION E:\20-1015_SJRWMD_ECX_RESTORATION\A_CDS\FCS-DESIGN-4.DWG

LEGEND:

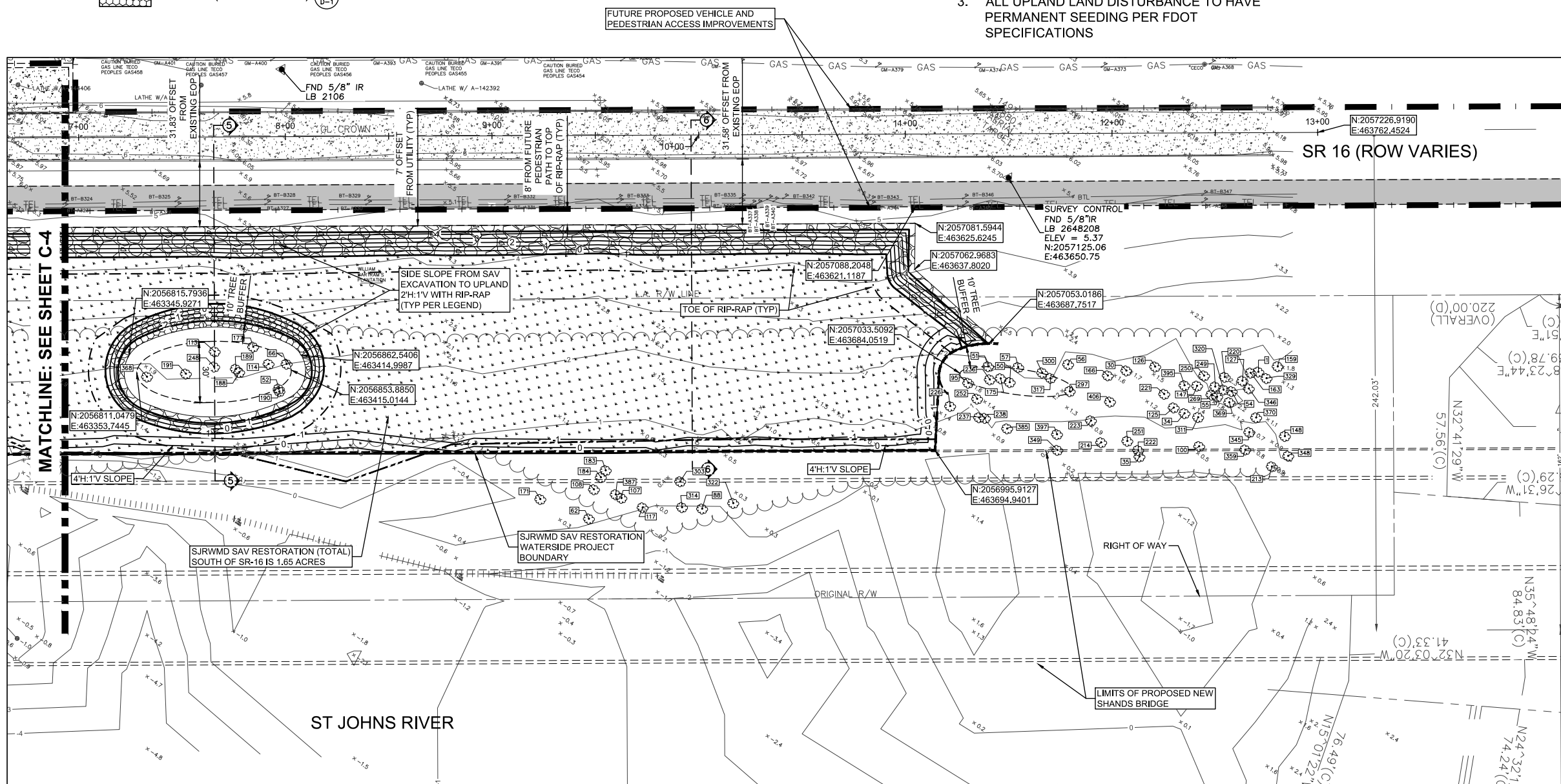
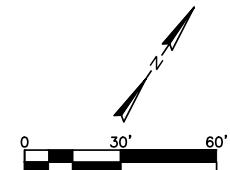
 SAV EXCAVATION TO (-) 1.2'

 RIP-RAP (BANK AND SHORE PROTECTION) $\text{\textcircled{A}}$
 $\text{\textcircled{D-1}}$

 RIP-RAP (DITCH LINING) $\text{\textcircled{B}}$
 $\text{\textcircled{D-1}}$

NOTE:

1. SLOPES WITH RIP-RAP ARE TO BE 2'H:1'V
SLOPES WITHOUT RIP-RAP ARE TO BE 4'H:1'V
2. CONTRACTOR TO VERIFY ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION
3. ALL UPLAND LAND DISTURBANCE TO HAVE PERMANENT SEEDING PER FDOT SPECIFICATIONS



Signature
Michael R. Altmir, P.E.
FL Professional Eng. #71640
Date

REV	DATE	BY	CHKD	DESCRIPTION
1	9/22/20	SLD	MRK	BID ADDENDUM PLANS
2				
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FIRST COAST EXPRESSWAY SAV RESTORATION
STATE ROAD 16
SOUTH OF SR16
GRADING, RIP-RAP AND STAKING PLAN
ST. JOHNS COUNTY FLORIDA
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

DESIGN	DRAWN	DATE	ISSUE
MRK	SLD	20-09-15	SEPTEMBER 2020
NUMBER	ISSUE	DATE	ISSUE

FOUR WATERS ENGINEERING
324 6th AVE N. JACKSONVILLE BEACH, FLORIDA 32250
904-414-2400 C.O.A.# 31101 WWW.4WENG.COM

DRAWING NUMBER
C-5

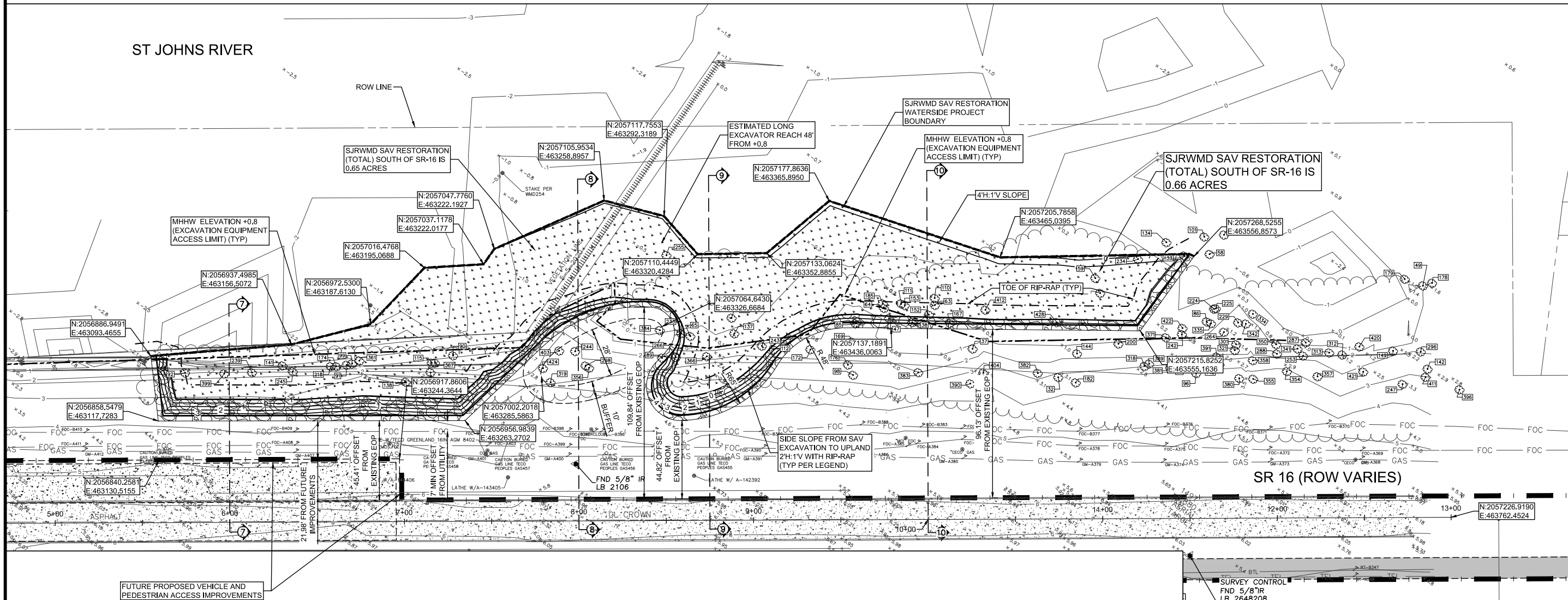
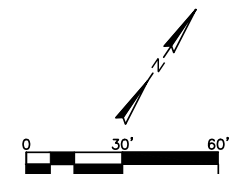
STEVE DUCHARME LOCATION: E:\20-1015_SJRWMD_ECX_RESTORATION\X\CDS_ECX-DESIGN-4.DWG

LEGEND:

- SAV EXCAVATION TO (-) 1.2'
- RIP-RAP (BANK AND SHORE PROTECTION) A
B-1
- RIP-RAP (DITCH LINING) B
B-1

NOTE:

1. SLOPES WITH RIP-RAP ARE TO BE 2'H:1'V
2. SLOPES WITHOUT RIP-RAP ARE TO BE 4'H:1'V
3. CONTRACTOR TO VERIFY ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION
4. ALL UPLAND LAND DISTURBANCE TO HAVE PERMANENT SEEDING PER FDOT SPECIFICATIONS



REV	DATE	DRWN	CHKD	DESCRIPTION
1	9/22/20	SLD	MRK	BID ADDENDUM PLANS
2				
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6				

**FIRST COAST EXPRESSWAY SAV RESTORATION
STATE ROAD 16
NORTH OF SR16
GRADING, RIP-RAP AND STAKING PLAN**

ST. JOHNS COUNTY FLORIDA
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

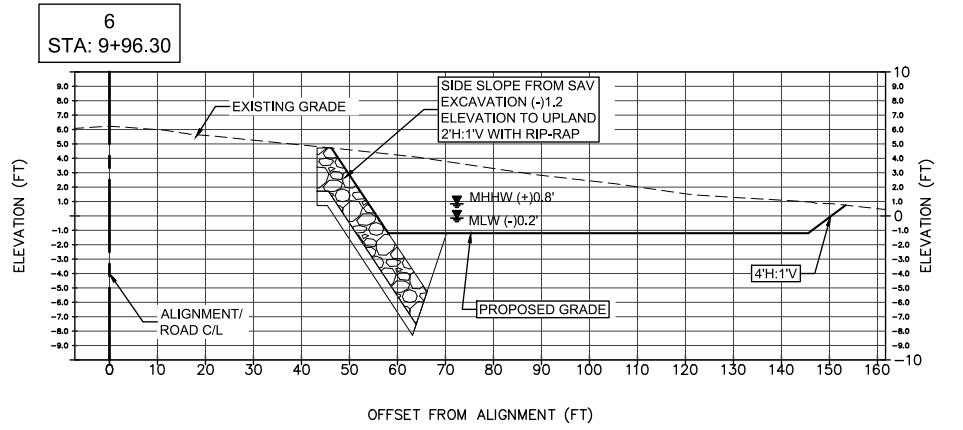
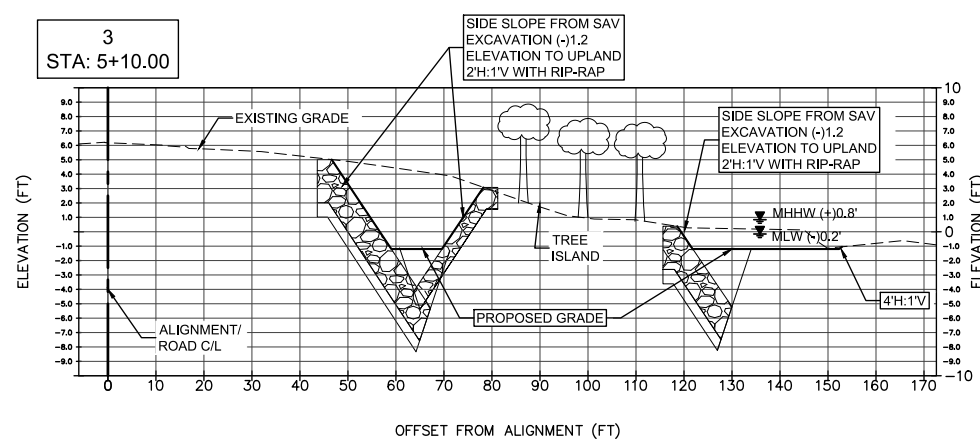
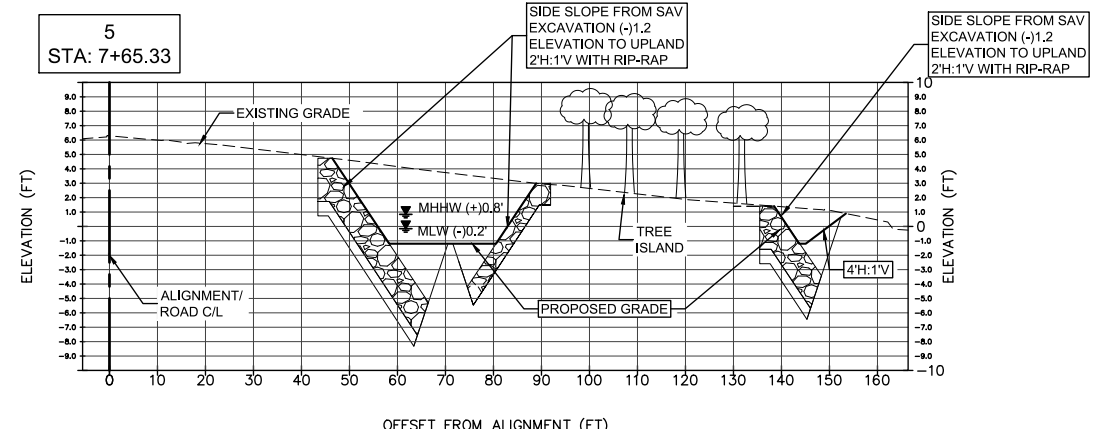
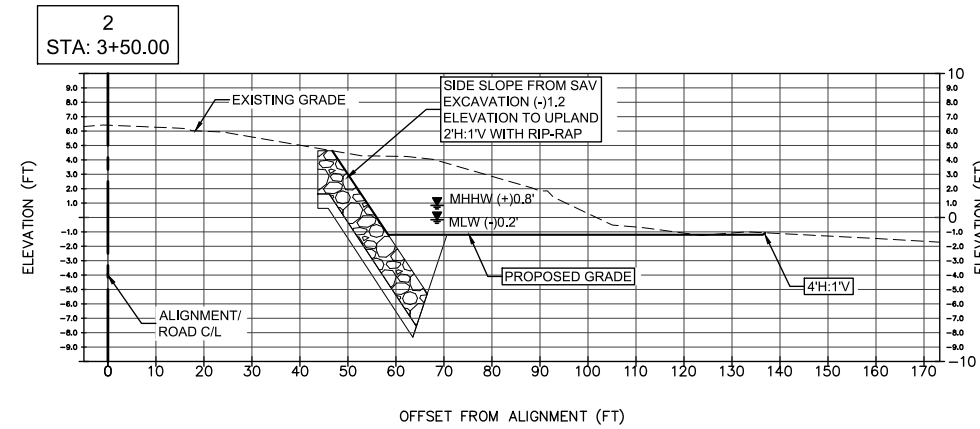
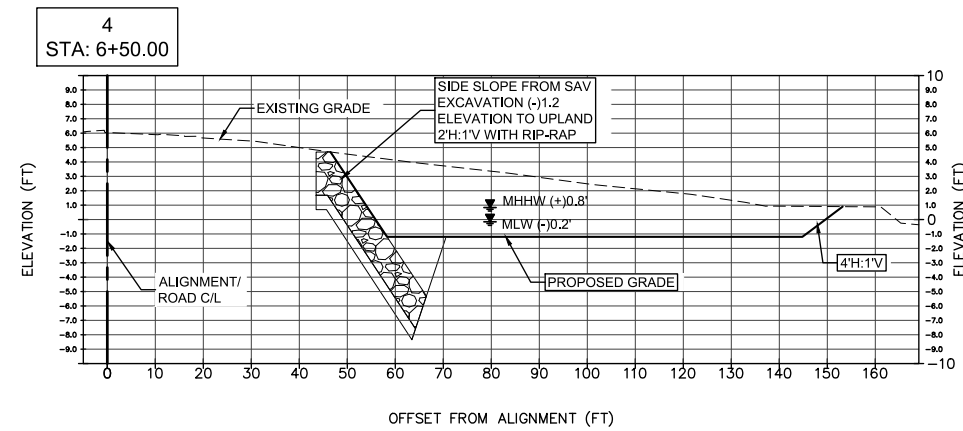
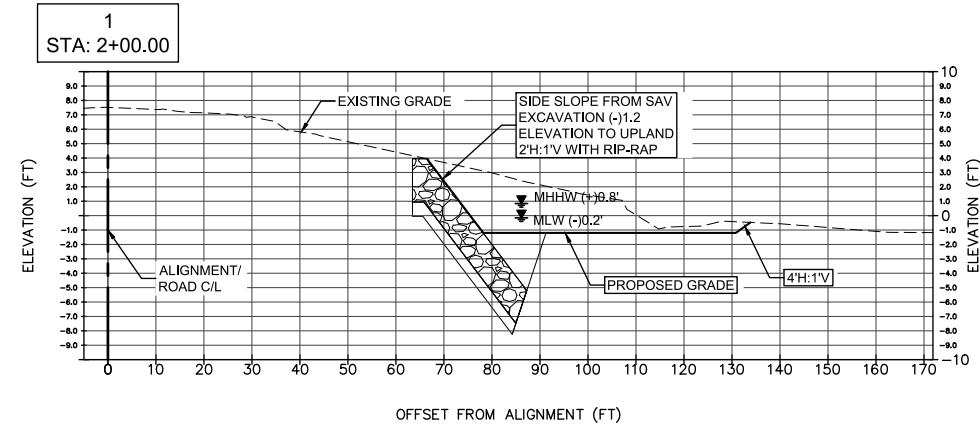
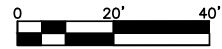
DESIGN	MRK	SLD	DATE	ISSUE
		20-015	SEPTEMBER 2020	

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 904-414-2400 C.O.A.# 31101 WWW.FOURWATERS.COM

DRAWING NUMBER
C-6

STEVE DUCHARME LOCATION: E:20+1015 SJRWMD_FCA_RESTORATION\A_CDS\FCA-DESIGN-4.DWG

STEVE DUCHARNE LOCATION: B:\20-1015_SJRWMD_ECX_RESTORATION\X\CD\5_ECX-DESIGN-4.DWG



Signature
Michael R. Klim, P.E.
FL Professional Eng. #71640
Date

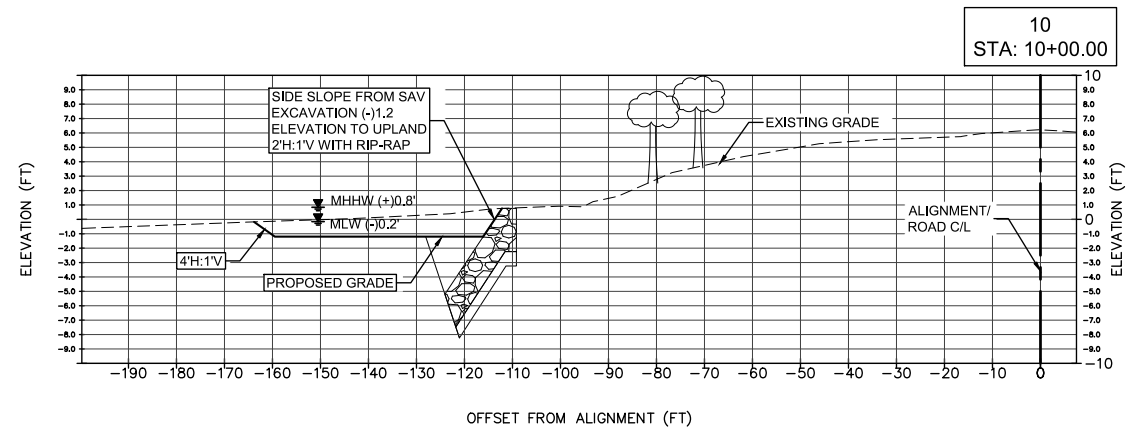
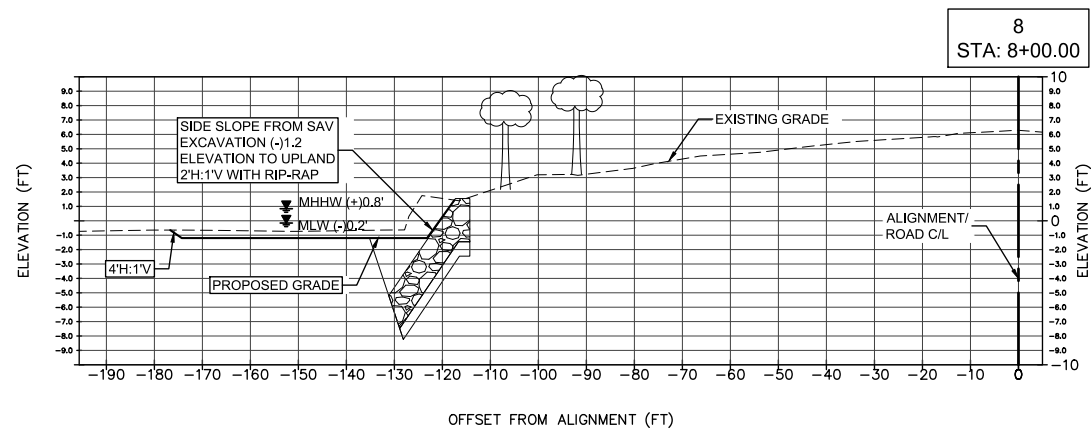
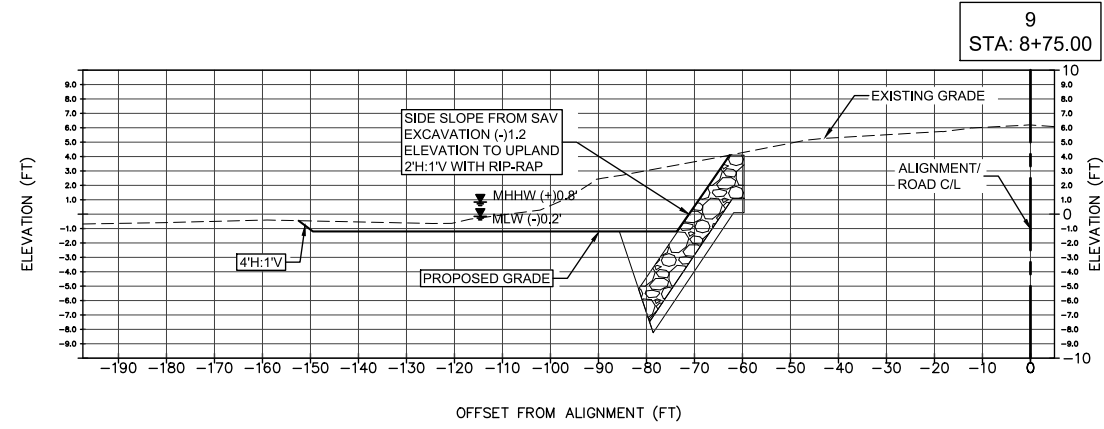
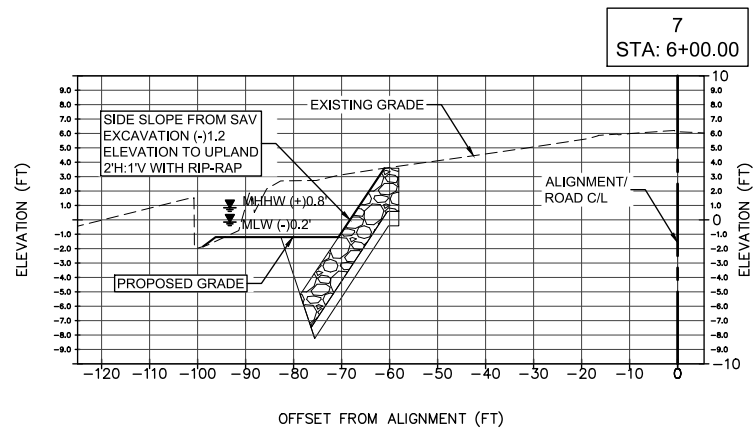
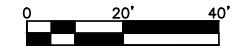
REV	DATE	DRWN	CHKD	DESCRIPTION
1	9/22/20	SLD	MRK	BID ADDENDUM PLANS
2				
3				
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FIRST COAST EXPRESSWAY SAV RESTORATION
STATE ROAD 16
CONSTRUCTION SECTIONS - SOUTH OF SR16
ST. JOHNS COUNTY FLORIDA
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

DESIGN	MRK	SLD	DATE	ISSUE
20-1015			2020	SEPTEMBER

FOUR WATERS ENGINEERING
324 6th AVE N. JACKSONVILLE BEACH, FLORIDA 32250
904-414-2400 C.O.A.# 31101 WWW.4WENG.COM

STEVE DUCHARME LOCATION E:\20-1015_SRWMD_ECX_RESTORATION\X\GIS\FCX-DESIGN-4.DWG



Signature
Michael R. Klimm, P.E.
FL Professional Eng. #71640
Date

REV	DATE	DRWN	CHKD	DESCRIPTION
1	9/22/20	SLD	MRK	BID ADDENDUM PLANS
2				
3				
4				
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FIRST COAST EXPRESSWAY SAV RESTORATION
STATE ROAD 16
CONSTRUCTION SECTIONS - NORTH OF SR16
ST. JOHNS COUNTY FLORIDA
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

DESIGN	MARK	JOB	NUMBER	ISSUE	DATE	ISSUE
DRAWN	SLD	20-1015	20-1015	SEPTEMBER	2020	BID

FOUR WATERS ENGINEERING
324 6th AVE N. JACKSONVILLE BEACH, FLORIDA 32250
904-414-2400 C.O.A.# 31101 WWW.4WENG.COM

DRAWING NUMBER
C-8

CONSTRUCTION SPECIFICATIONS AND NOTES FOR RIPRAP SYSTEM:

- GENERAL: THIS SECTION SHALL COVER THE WORK OF FURNISHING AND CONSTRUCTING THE RIPRAP WHICH SHALL CONSIST OF A PROTECTIVE COURSE OF STONE OR OTHER APPROVED MATERIALS ON EMBANKMENT SLOPES, IN CHANNELS, OR OTHER WORK AS SHOWN ON THE PLANS OR DIRECTED, WITH A FILTER BLANKET, ALL IN ACCORDANCE WITH THESE SPECIFICATIONS AND IN CONFORMITY WITH THE LINES AND GRADES NOTED IN THE PLAN DETAILS.
- RELATED DOCUMENTS:
 - DRAWINGS AND GENERAL PROVISIONS OF CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND OTHER SPECIFICATION SECTIONS, APPLY TO WORK OF THIS SECTION.
 - FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION) SECTION 530, AND FDOT STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION). WORK SHALL COMPLY WITH THE REQUIREMENTS OF FDOT SPECIFICATIONS AND STANDARD INDEX AS MODIFIED HEREIN.
- UNLESS OTHERWISE NOTED, RUBBLE RIPRAP FOR CHANNEL PROTECTION ON DISTRICT LAND FOR THIS PROJECT SHALL CONSIST ENTIRELY OF BROKEN STONE OR CONCRETE AND SHALL COMPLY WITH THE REQUIREMENTS SECTION 530-2.2.2 (DITCH LINING) OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION).
- CONCRETE RECYCLED RIPRAP MAY BE SUBSTITUTED PER THE APPROVAL OF THE DISTRICT. CONCRETE RECYCLED RIPRAP SHALL BE CLEAN, FREE OF EXPOSED METAL AND MEET SIZING PER RUBBLE RIPRAP (BANK AND SHORE PROTECTION) OF SECTION 530-2.1.3 OR SECTION 530-2.2.2 (DITCH LINING) FDOT SPECIFICATIONS AS SPECIFIED IN THE CONSTRUCTION PLANS.
- BEDDING STONE SHALL COMPLY WITH THE REQUIREMENTS SECTION 530-2.3 (BEDDING STONE) OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION).
- GEOTEXTILE FABRIC SHALL BE NEEDLE-PUNCHED NON-WOVEN FABRIC (OR APPROVED EQUAL) AND SHALL COMPLY WITH THE REQUIREMENTS SECTION 514 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION). ADDITIONALLY, THE GEOTEXTILE FABRIC MATERIAL SHALL CONFORM TO THE REQUIREMENTS FOR TYPE D-2 OF THE FDOT SPECIFICATIONS SECTION 985.
- CONSTRUCTION REQUIREMENTS: ALL SLOPES TO BE TREATED WITH RIPRAP SHALL BE TRIMMED TO THE LINES AND GRADES INDICATED BY THE PLANS OR DIRECTED, LOOSE MATERIAL SHALL BE COMPACTED BY METHODS APPROVED BY THE DISTRICT OR REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. SLOPES SHALL REQUIRE BEDDING STONE WITH FILTER BLANKET (GEOTEXTILE MATERIAL) UNDER THE RIPRAP SHALL, IN ADDITION TO THE ABOVE, BE PREPARED AS NOTED BELOW. PLACEMENT OF ANY RIPRAP ON A FILTER BLANKET SHALL BE BY SUCH MEANS THAT WILL NOT DAMAGE OR DESTROY THE BLANKET. ANY DAMAGE TO THE BLANKET SHALL BE REPAIRED OR REPLACED; TO THE DISTRICT'S APPROVAL, WITHOUT ADDITIONAL COMPENSATION. IF DIRECTED BY THE DISTRICT OR SHOWN BY PLAN DETAILS, ALL OUTER EDGES AND THE TOP OF RIPRAP WHERE THE RIPRAP TERMINATES SHALL BE FORMED SO THAT THE SURFACE OF THE RIPRAP WILL BE EMBEDDED AND EVEN WITH THE SURFACE OF THE GROUND AND/OR SLOPE. ALL RIPRAP CONSTRUCTION SHALL BEGIN AT THE BOTTOM OF THE SLOPE AND PROGRESS UPWARD.

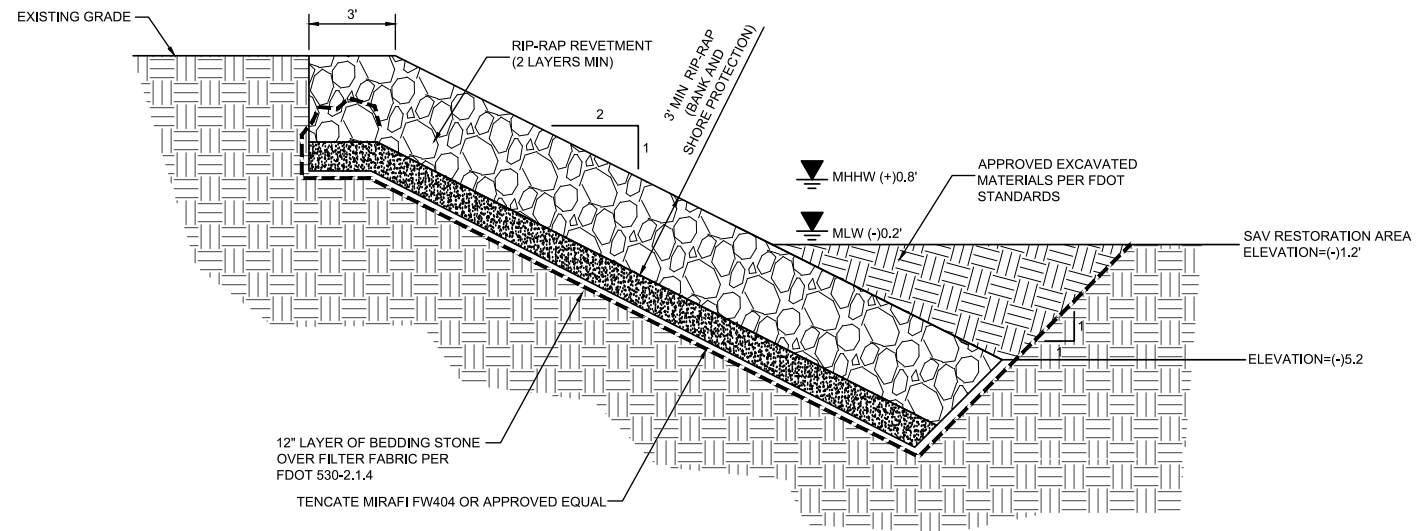
FOUNDATION PREPARATION: AREAS ON WHICH FILTER FABRICS ARE TO BE PLACED SHALL BE UNIFORMLY TRIMMED AND DRESSED TO CONFORM TO CROSS-SECTIONS SHOWN BY THE PLANS AND SHALL ALSO CONFORM TO THE REQUIREMENTS UNDER "EARTHWORK" AND ANY OTHER APPLICABLE SPECIFICATIONS ON REFERENCE DRAWINGS.

FILTER FABRIC (GEOTEXTILE MATERIAL): FILTER FABRIC SHALL BE PLACED IN THE MANNER AND AT THE LOCATIONS SHOWN IN THE PLANS OR AS DIRECTED BY THE DISTRICT. AT THE TIME OF INSTALLATION, FABRIC SHALL BE REJECTED IF IT HAS DEFECTS, RIPS, HOLES, FLAWS, DETERIORATION OR DAMAGE INCURRED DURING MANUFACTURE, TRANSPORTATION OR STORAGE. THE FABRIC SHALL BE PLACED WITH THE LONG DIMENSION PARALLEL TO THE CENTERLINE OF THE CHANNEL OR SHORELINE UNLESS OTHERWISE DIRECTED BY THE DISTRICT, AND SHALL BE LAID SMOOTH AND FREE OF TENSION, STRESS, FOLDS, WRINKLES OR CREASES. THE STRIPS SHALL BE PLACED TO PROVIDE A MINIMUM WIDTH OF 24 INCHES OF OVERLAP FOR EACH JOINT WITH THE UPSTREAM STRIP OF FABRIC OVERLAPPING THE DOWNSTREAM STRIP. OVERLAP JOINTS AND SEAMS SHALL BE MEASURED AS A SINGLE LAYER OF CLOTH. SECURING PINS WITH WASHERS SHALL BE INSERTED THROUGH BOTH STRIPS OF OVERLAPPED CLOTH AT NOT GREATER THAN THE FOLLOWING INTERVALS ALONG A LINE THROUGH THE MIDPOINT OF THE OVERLAP.

PIN SPACING	SLOPE
3 FT.	3:1 TO 4:1
5 FT.	FLATTER THAN 4:1

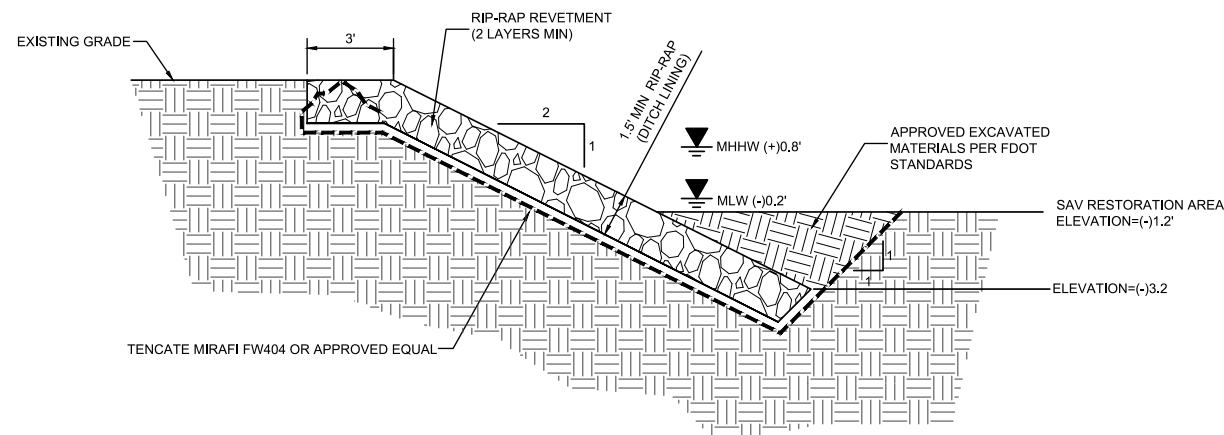
THE FABRIC SHALL BE TURNED DOWN AND BURIED TWO FEET AT ALL EXTERIOR LIMITS EXCEPT WHERE A STONE-FILLED KEY IS PROVIDED BELOW NATURAL GROUND OR OTHERWISE SHOWN. ADDITIONAL PINS REGARDLESS OF LOCATION SHALL BE INSTALLED AS NECESSARY TO PREVENT ANY SLIPPAGE OF THE FILTER FABRIC. OVERLAPS IN THE FABRIC SHALL BE PLACED SO THAT ANY UPSTREAM STRIP OF FABRIC WILL OVERLAP THE DOWNSTREAM STRIP. SHOULD THE DISTRICT DIRECT THAT THE FABRIC BE PLACED WITH THE LONG DIMENSION PERPENDICULAR TO THE CENTERLINE OF THE CHANNEL OR SHORELINE, THE LOWER STRIP OF FABRIC SHALL UNDERLAP THE NEXT HIGHER STRIP. EACH SECURING PIN SHALL BE PUSHED THROUGH THE FABRIC UNTIL THE WASHER BEARS AGAINST THE FABRIC AND SECURES IT FIRMLY TO THE FOUNDATION. THE FABRIC SHALL BE PROTECTED AT ALL TIMES DURING CONSTRUCTION FROM CONTAMINATION BY SURFACE RUNOFF AND ANY FABRIC SO CONTAMINATED SHALL BE REMOVED AND REPLACED WITH UNCONTAMINATED FABRIC. ANY DAMAGE TO THE FABRIC DURING ITS INSTALLATION OR DURING PLACEMENT OF RIPRAP SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST. THE WORK SHALL BE SCHEDULED SO THAT 5 DAYS DOES NOT EXPIRE BETWEEN PLACEMENT OF THE FABRIC AND THE COVERING OF THE FABRIC WITH RIPRAP.

STONE AND CONCRETE RUBBLE RIPRAP: PLACEMENT OF STONE OR CONCRETE MAY, UNLESS OTHERWISE NOTED HEREINAFTER, BE PLACED BY METHODS AND EQUIPMENT APPROVED BY THE DISTRICT SUITABLE FOR THE PURPOSE OF PLACING THE RIPRAP IN ACCORDANCE WITH THE REQUIREMENTS FOR THE CLASS RIPRAP INVOLVED WITHOUT DAMAGING ANY EXISTING FACILITY OR CONSTRUCTION FEATURE. THE STONE OR CONCRETE SHALL BE PLACED IN SUCH A MANNER AS TO PRODUCE A REASONABLY WELL GRADED MASS OF ROCK WITH THE MINIMUM PRACTICAL PERCENTAGE OF VOIDS. STONE OR CONCRETE SHALL BE LAID WITH CLOSE BROKEN JOINTS AND RESTING ON THE EMBANKMENT SLOPE. THE RIPRAP SHALL BE CONSTRUCTED TO THE LINES, GRADES AND THICKNESS SHOWN BY THE PLANS OR AS DIRECTED. RIPRAP SHALL BE PLACED TO ITS FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACING OR DAMAGING THE FILTER BLANKET MATERIAL. THE LARGER STONE OR CONCRETES SHALL BE WELL DISTRIBUTED AND THE ENTIRE MASS OF STONE OR CONCRETES IN THEIR FINAL POSITION SHALL CONFORM TO A REASONABLE UNIFORM GRADATION. THE FINISHED RIPRAP SHALL BE FREE FROM OBJECTIONABLE POCKETS OF SMALL STONE OR CONCRETES AND CLUSTERS OF LARGER STONE OR CONCRETES. OPEN JOINTS SHALL BE FILLED WITH SPALLS, OR SMALL STONE OR CONCRETES IN SUCH MANNER THAT ALL STONE OR CONCRETES ARE TIGHTLY WEDGED OR KEYED. PLACING RIPRAP BY DUMPING INTO CHUTES OR BY OTHER METHODS LIKELY TO CAUSE SEGREGATION OF SIZES SHALL NOT BE PERMITTED. THE DESIRED DISTRIBUTION OF THE VARIOUS SIZES OF STONE OR CONCRETES THROUGHOUT THE MASS SHALL BE OBTAINED BY SELECTIVE LOADING OF THE MATERIAL AT THE SOURCE, BY CONTROLLED DUMPING OF SUCCESSIVE LOADS DURING FINAL PLACING, OR BY OTHER METHODS OF PLACEMENT WHICH WILL PRODUCE THE SPECIFIED RESULTS. THE INDIVIDUAL PIECES OF STONE OR CONCRETE IN EACH HORIZONTAL COURSE SHALL BE LAID SO THAT THEY WILL BREAK AWAY FROM EMBANKMENT. REARRANGING OF INDIVIDUAL STONE OR CONCRETES BY MECHANICAL EQUIPMENT, OR BY HAND, WILL BE REQUIRED TO THE EXTENT NECESSARY TO OBTAIN A REASONABLY WELL GRADED DISTRIBUTION OF STONE OR CONCRETE AS SPECIFIED HEREIN.



- NOTES
- REVETMENT STONE OR CONCRETE SHALL BE A MINIMUM OF TWO UNITS THICK AND BE PLACED TO MAXIMIZE CONTACT BETWEEN ADJACENT STONES OR CONCRETE PIECES
 - SMALLER STONES OR CONCRETE PIECES SHALL BE UTILIZED FOR CHINKING TO ACHIEVE UNIFORM INSTALLATION CONFORMITY TO LINES AND GRADES
 - ROCK AND CONCRETE SIZE SHOWN IS BASED ON A MINIMUM DRY UNIT WEIGHT OF 150 PCF.
 - EXISTING GRADE SHOWN AT TIME OF SURVEY. CONTRACTOR TO VERIFY PRIOR TO CONSTRUCTION
 - GEOTEXTILE FABRIC SHALL HAVE A MINIMUM OVERLAP OF TWO FEET AND PLACED BETWEEN STONE LAYERS AT TOP OF BANK AND AS SHOWN AT TOE.

RIP-RAP (BANK AND SHORE PROTECTION) DETAIL A



- NOTES
- REVETMENT STONE OR CONCRETE SHALL BE A MINIMUM OF TWO UNITS THICK AND BE PLACED TO MAXIMIZE CONTACT BETWEEN ADJACENT STONES OR CONCRETE PIECES
 - SMALLER STONES OR CONCRETE PIECES SHALL BE UTILIZED FOR CHINKING TO ACHIEVE UNIFORM INSTALLATION CONFORMITY TO LINES AND GRADES
 - ROCK AND CONCRETE SIZE SHOWN IS BASED ON A MINIMUM DRY UNIT WEIGHT OF 150 PCF.
 - EXISTING GRADE SHOWN AT TIME OF SURVEY. CONTRACTOR TO VERIFY PRIOR TO CONSTRUCTION
 - GEOTEXTILE FABRIC SHALL HAVE A MINIMUM OVERLAP OF TWO FEET AND PLACED BETWEEN STONE LAYERS AT TOP OF BANK AND AS SHOWN AT TOE.

RIP-RAP (DITCH LINING) DETAIL B

Signature
Michael R. Alim, P.E.
FL Professional Eng. #71640
Date

REV	DATE	DRWN	CHKD	DESCRIPTION
1	9/22/20	SLD	MRK	BID ADDENDUM PLANS
2				
3				
4				
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FIRST COAST EXPRESSWAY SAV RESTORATION
STATE ROAD 16
CONSTRUCTION DETAILS
ST. JOHNS COUNTY FLORIDA
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

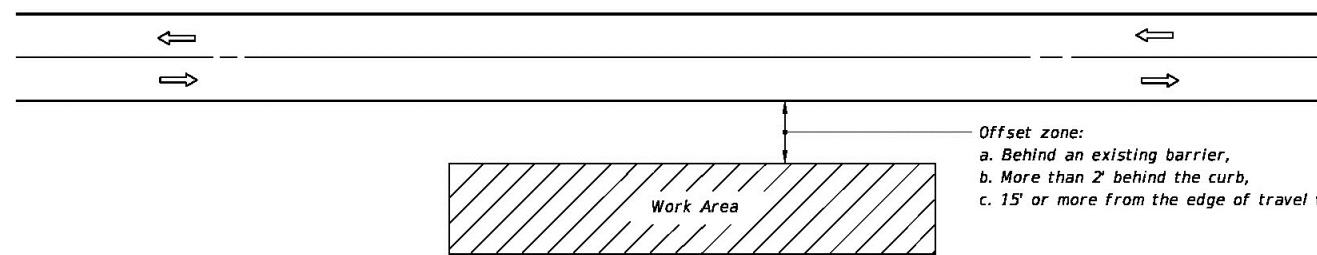
DESIGN	DRAWN	ISSUE	DATE	ISSUE	BID
MRK	SLD	204-015	SEPTEMBER 2020		

FOUR WATERS ENGINEERING
324 6th AVE N. JACKSONVILLE BEACH, FLORIDA 32250
904-414-2400 C.O.A.# 31101 WWW.4WENG.COM

DRAWING NUMBER
D-1

STEVE DUCHARNE LOCATION: R-20--1015_SJRWMD_FCY_RESTORATION\A\GIS\FCS-GENERAL.DWG

2/26/2020 12:29:40 PM



Offset zone:
 a. Behind an existing barrier,
 b. More than 2' behind the curb,
 c. 15' or more from the edge of travel way.

SYMBOLS

- Work Area
- Lane Identification + Direction of Traffic

GENERAL NOTES

1. If the work operation (excluding establishing and terminating the work area) requires that two or more work vehicles cross the offset zone in any one hour, traffic control will be in conformance with Index 102-602.
2. No special signing is required.
3. When a side road intersects the highway within the work area, additional TTC devices shall be placed in accordance with other applicable TCZ Indexes.
4. When construction activities encroach on a sidewalk refer to Index 102-660.
5. For general TCZ requirements and additional information, refer to Index 102-600.

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS AND THEIR ACTIVITIES ARE BEHIND AN EXISTING BARRIER, MORE THAN 2' BEHIND THE CURB, OR 15' OR MORE FROM THE EDGE OF TRAVEL WAY.

LAST REVISION 11/01/17	REVISION DESCRIPTION:	 FY 2020-21 STANDARD PLANS	TWO-LANE, TWO-WAY, WORK OUTSIDE SHOULDER	INDEX 102-601	SHEET 1 of 1
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Signature
 Michael R. Minn, P.E.
 FL Professional Eng. #71640
 Date

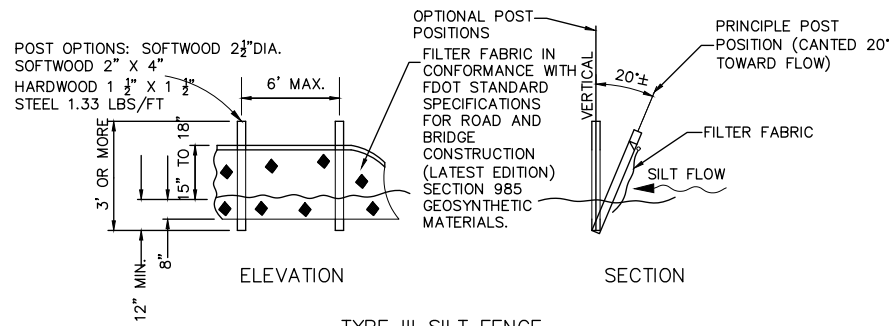
REV NO	DATE	DRWN	CHKD	BY	DESCRIPTION
1	9/22/20	SLD	MRK		BID ADDENDUM PLANS
2					
3					
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5					
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FIRST COAST EXPRESSWAY SAV RESTORATION
 STATE ROAD 16
CONSTRUCTION DETAILS
 ST JOHNS COUNTY FLORIDA
 ST JOHNS RIVER WATER MANAGEMENT DISTRICT

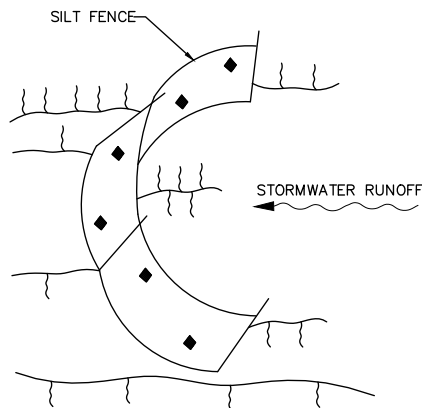
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		20-1015		SEPTEMBER	2020		

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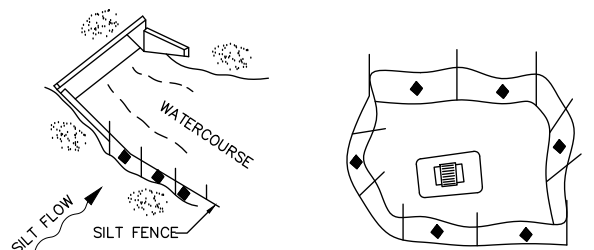
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TYPE III SILT FENCE



SILT FENCE PROTECTION IN DITCHES WITH INTERMITTENT FLOW

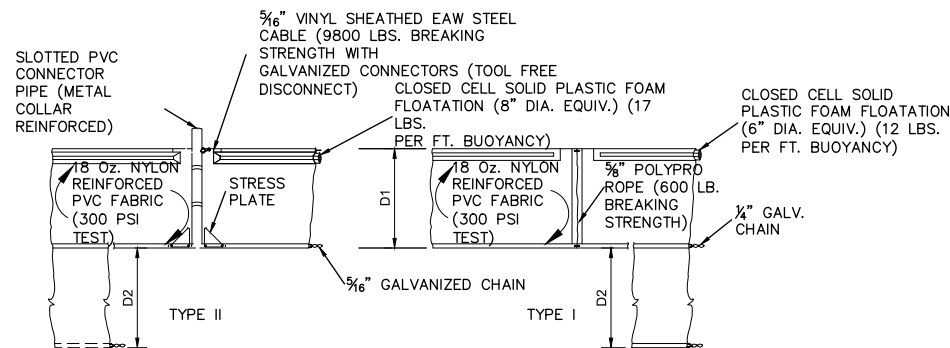


SILT FENCE APPLICATIONS

NOTES FOR SILT FENCES

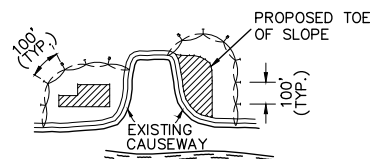
- TYPE III SILT FENCE TO BE USED AT MOST LOCATIONS. WHERE USED IN DITCHES, THE SPACING FOR TYPE III SILT FENCE SHALL BE IN ACCORDANCE WITH SECTION V OF THE STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL (JULY 2013).
- TYPE IV SILT FENCE TO BE USED WHERE LARGE SEDIMENT LOADS ARE ANTICIPATED. SUGGESTED USE IS WHERE FILL SLOPE IS 1:2 OR STEEPER AND LENGTH OF SLOPE EXCEEDS 25 FEET. AVOID USE WHERE THE DETAINED WATER MAY BACK INTO TRAVEL LANES OR OFF THE RIGHT OF WAY.
- DO NOT CONSTRUCT SILT FENCES ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE AT UPLAND LOCATIONS AND TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER.
- WHERE USED AS SLOPE PROTECTION, SILT FENCE IS TO BE CONSTRUCTED ON 0% LONGITUDINAL GRADE TO AVOID CHANNELIZING RUNOFF ALONG THE LENGTH OF THE FENCE.
- SILT FENCE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED SILT FENCE, (LF).

TEMPORARY SILT FENCE DETAIL
NOT TO SCALE



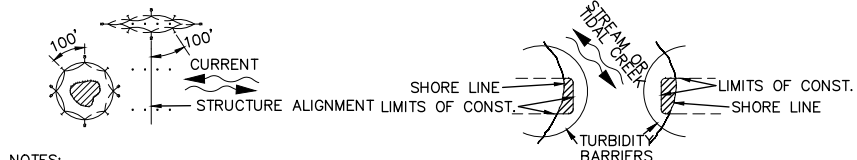
D1= 5' STD. (SINGLE PANEL FOR DEPTHS 5' OR LESS).
D2= 5' STD. (ADDITIONAL PANEL FOR DEPTHS > 5')
CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FEET TWO (2) PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FEET UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY CALLED FOR IN THE PLANS OR AS DETERMINED BY THE ENGINEER.
NOTICE: COMPONENTS OF TYPE I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGN. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.

FLOATING TURBIDITY BARRIERS (A)
NOT TO SCALE



GENERAL NOTES:

- FLOATING TURBIDITY BARRIERS ARE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR FLOATING TURBIDITY BARRIER, LF.
- STAKED TURBIDITY BARRIERS ARE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED TURBIDITY BARRIER, LF.



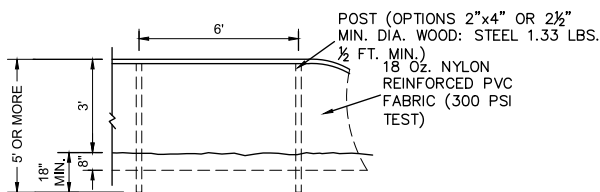
NOTES:

- TURBIDITY BARRIERS ARE TO BE USED IN ALL PERMANENT BODIES OF WATER REGARDLESS OF WATER DEPTH.
- NUMBER AND SPACING OF ANCHORS DEPENDENT ON CURRENT VELOCITIES.
- DEPLOYMENT OF BARRIER AROUND PILE LOCATIONS MAY VARY TO ACCOMMODATE CONSTRUCTION OPERATIONS.
- NAVIGATION MAY REQUIRE SEGMENTING BARRIER DURING CONSTRUCTION OPERATIONS.
- TURBIDITY BARRIERS SHALL CONFORM TO SECTION 104 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION).

LEGEND

- PILE LOCATIONS
- ▨ DREDGE OR FILL AREA
- MOORING BUOY W/ANCHOR
- ANCHOR
- BARRIER MOVEMENT DUE TO CURRENT ACTION

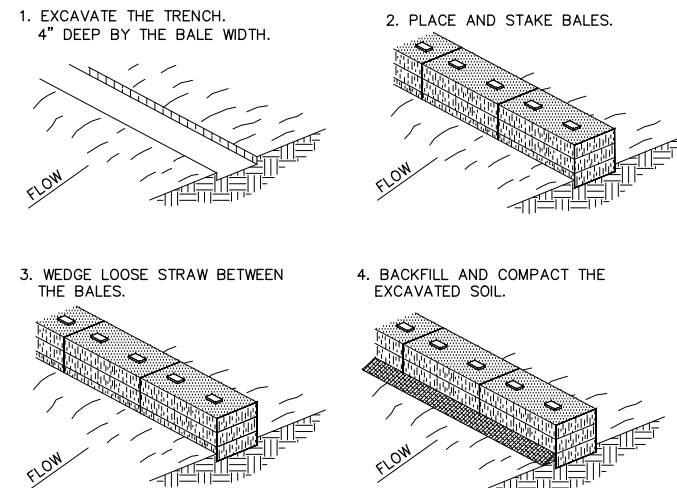
TURBIDITY BARRIER APPLICATIONS
NOT TO SCALE



NOTES:

TURBIDITY BARRIERS FOR FLOWING STREAMS AND TIDAL CREEKS MAY BE EITHER FLOATING, OR STAKED TYPES OR ANY COMBINATIONS OF TYPES THAT WILL SUIT SITE CONDITIONS AND MEET EROSION CONTROL AND WATER QUALITY REQUIREMENTS. THE BARRIER TYPE(S) WILL BE AT THE CONTRACTORS OPTIONS UNLESS OTHERWISE SPECIFIED IN THE PLANS, HOWEVER PAYMENT WILL BE UNDER THE PAY ITEM(S) ESTABLISHED IN THE PLANS FOR FLOATING TURBIDITY BARRIERS TO BE INSTALLED IN VERTICAL POSITION UNLESS OTHERWISE DIRECTED BY THE DISTRICT.

STAKED TURBIDITY BARRIER
NOT TO SCALE



NOTES:

- INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
- BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

HAY BALE BARRIER
NOT TO SCALE

EROSION AND SEDIMENT CONTROL NOTES:

- THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SILT FROM SITE IF NOT REUSABLE ON-SITE AND ASSURING PLAN ALIGNMENT AND GRADE IN ALL WORK AT COMPLETION OF CONSTRUCTION.
- ON-SITE PROTECTION IN ADDITION TO THE ABOVE MUST BE PROVIDED THAT WILL NOT PERMIT SILT TO LEAVE THE PROJECT CONFINES DUE TO UNSEEN CONDITIONS OR ACCIDENTS.
- THE FILTER BARRIER SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 8 INCHES. THE EXCAVATED SOIL SHALL BE BACKFILLED AND COMPACTED AGAINST THE FILTER BARRIER.
- SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
- SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED IMMEDIATELY.
- ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND GRASSED.
- THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE BEST EROSION AND SEDIMENT CONTROL PRACTICES AS OUTLINED IN THE PLANS, SPECIFICATIONS, PERMITS, AND ST. JOHNS RIVER WATER MANAGEMENT DISTRICT CRITERIA.
- FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL REFER TO STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL (LATEST EDITION).
- ALL DISTURBED AREAS SHALL BE GRASSED, FERTILIZED, WATERED AND MAINTAINED UNTIL A PERMANENT VEGETATIVE COVER IS ESTABLISHED. GRASSING SHALL CONFORM TO THE REQUIREMENTS OF SECTIONS 570 AND 981 THRU 983 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITIONS). NOTE THAT OTHER GRASSING ALTERNATIVES MAY BE USED WITH PRIOR DISTRICT APPROVAL.

Signature
Michael R. Alvin, P.E.
FL Professional Eng. #71640
Date

REV	DATE	BY	CHKD	DESCRIPTION
1	9/22/20	SLD	MRK	BID ADDENDUM PLANS
2				
3				
4				
5				
6				

FIRST COAST EXPRESSWAY SAV RESTORATION
STATE ROAD 16
CONSTRUCTION DETAILS
ST. JOHNS COUNTY FLORIDA
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

DESIGN	MARK	NO	DATE	ISSUE
20-015 <td></td> <td></td> <td>20-015 <td>SEPTEMBER 2020 </td></td>			20-015 <td>SEPTEMBER 2020 </td>	SEPTEMBER 2020

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STEVE DUCHARME