

## ADDENDUM NO. 1

### FLORIDA INLAND NAVIGATION DISTRICT DREDGED MATERIAL MANAGEMENT AREA DU-9 EXPANSION ST. JOHNS COUNTY, FLORIDA

#### **SUMMARY OF QUESTIONS AND RESPONSES**

1. **QUESTION:** Can you provide Cad files?

**RESPONSE:** The requested CAD files (2017 01 10 c2014-075 DU-9 Construction.zip) are provided on the FIND website (<http://www.aicw.org/>) as part of this Addendum.

2. **QUESTION:** Can you provide a typical section of the slurry wall used when it was constructed?

**RESPONSE:** Please see **Attachments 1 and 2** for a copy of the As-Built Drawings for the existing Dredged Material Management Area and specifications for the installed slurry wall. **Attachment 1, Sheets 12 and 15** include a typical section of the slurry wall.

3. **QUESTION:** Can you provide a typical section of the timber walkway used when it was constructed?

**RESPONSE:** Please see **Attachment 1** for a copy of the As-Built Drawings for the existing Dredged Material Management Area. **Attachment 1, Sheets 9 – 12** provide additional detail for the timber walkway.

4. **QUESTION:** Can you provide elevations of the outfall pipe at the rip rap outfall?

**RESPONSE:** Please see **Attachment 3** for a copy of the As-Built Drawings for the existing permanent buried discharge pipe. **Attachment 3, Pages 5 and 10** provides the invert of the pipe at the rip-rap outfall.

5. **QUESTION:** What is the design elevation of the riprap outfall at the end of the outfall?

**RESPONSE:** Please see **Attachment 3** for a copy of the As-Built Drawings for the existing permanent buried discharge pipe. **Attachment 3, Page 10** provides the As-Built elevation of the rip-rap outfall.

#### **SPECIFICATIONS**

##### **SECTION 00 01 00 TABLE OF CONTENTS**

**UPDATE:** Corrected Division Numbers for SECTION 00 65 16 to 00 65 19 Certificate of Substantial Completion and SECTION 01 45 00 to 01 40 00 Contractor Quality Control. See **Attachment 4** for the updated Specification.



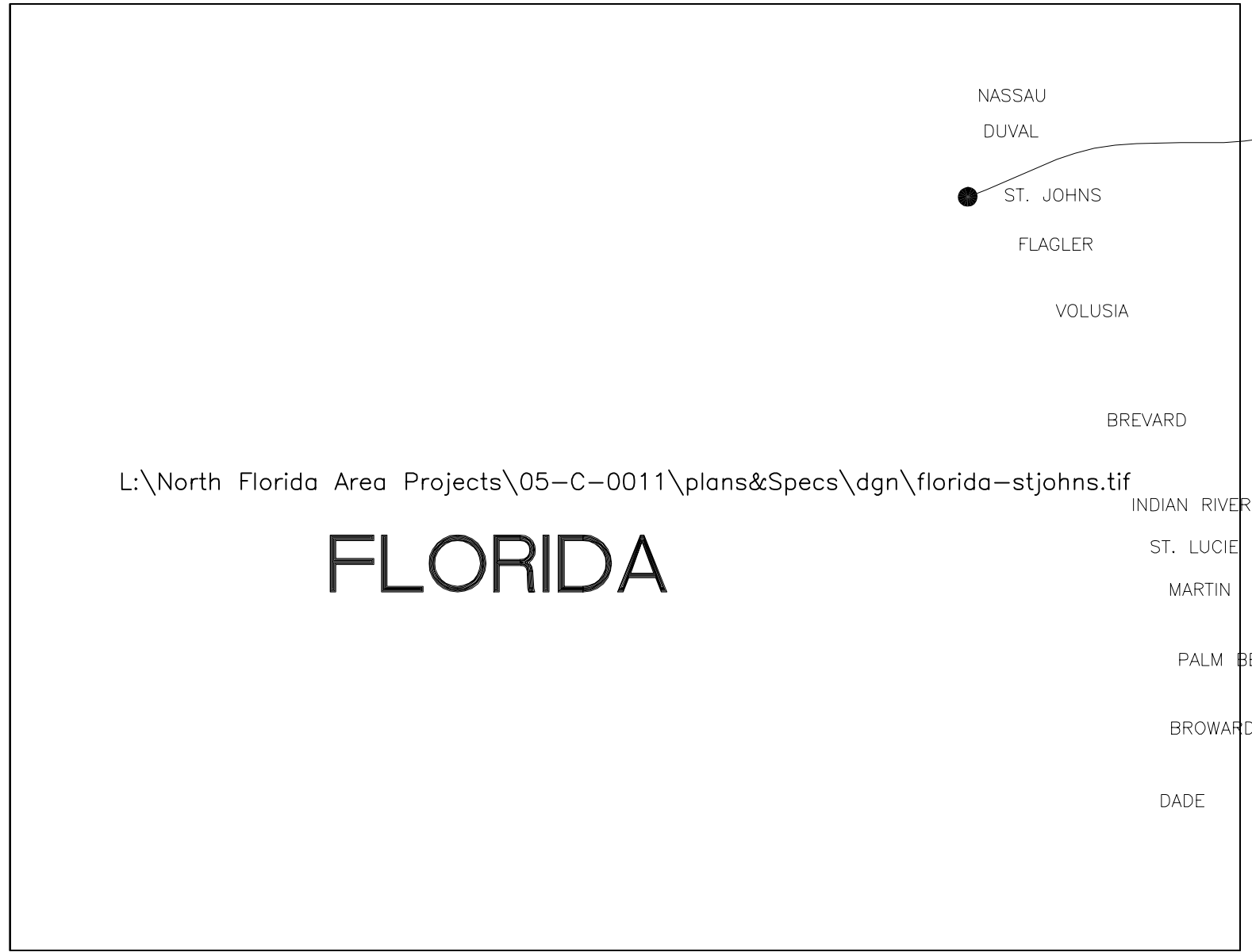
**FLORIDA INLAND NAVIGATION DISTRICT  
DREDGED MATERIAL MANAGEMENT  
AREA DU-9 EXPANSION  
ST. JOHNS COUNTY, FLORIDA**

**ADDENDUM NO. 1  
ATTACHMENT 1**  
As-Built Drawings  
Dredged Material Management Area DU-9

DU-9 DREDGED MATERIAL MANAGEMENT AREA  
FLORIDA INLAND NAVIGATION DISTRICT  
ST. JOHNS COUNTY, FLORIDA

SAFETY ON THIS  
JOB DEPENDS  
ON YOU

PROJECT LOCATION



LOCATION MAP  
N.T.S.

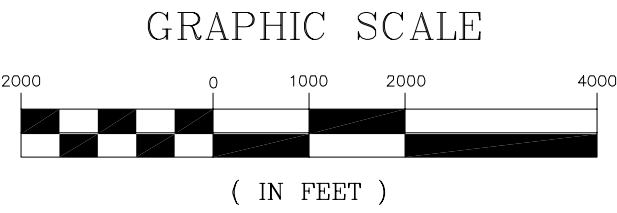
DRAWING INDEX

1. TITLE SHEET
2. SITE PLAN WITH AERIAL
3. SITE PLAN W/O AERIAL
4. DIKE PLAN VIEW
5. DIKE AND UNDERDRAIN DETAILS
6. DIKE DETAILS
7. DIKE SECTIONS - STA. 0+00 TO 22+00
8. DIKE SECTIONS - STA. 22+00 TO 44+00
9. WEIR PLAN AND SECTION
10. WEIR AND WALKWAY DETAILS
11. WALKWAY DETAILS
12. WALKWAY DETAILS
13. ENVIRONMENTAL IMPACTS AND PROPOSED ENVIRONMENTAL PLAN AND SECTIONS
14. ENVIRONMENTAL MITIGATION GRADING AND SECTIONS
15. ENVIRONMENTAL AND EROSION CONTROL DETAILS

AS-BUILT

\* NO BACKGROUND \*  
IMMAGES FURNISHED  
TO THIS FIRM.

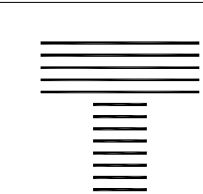
VICINITY MAP

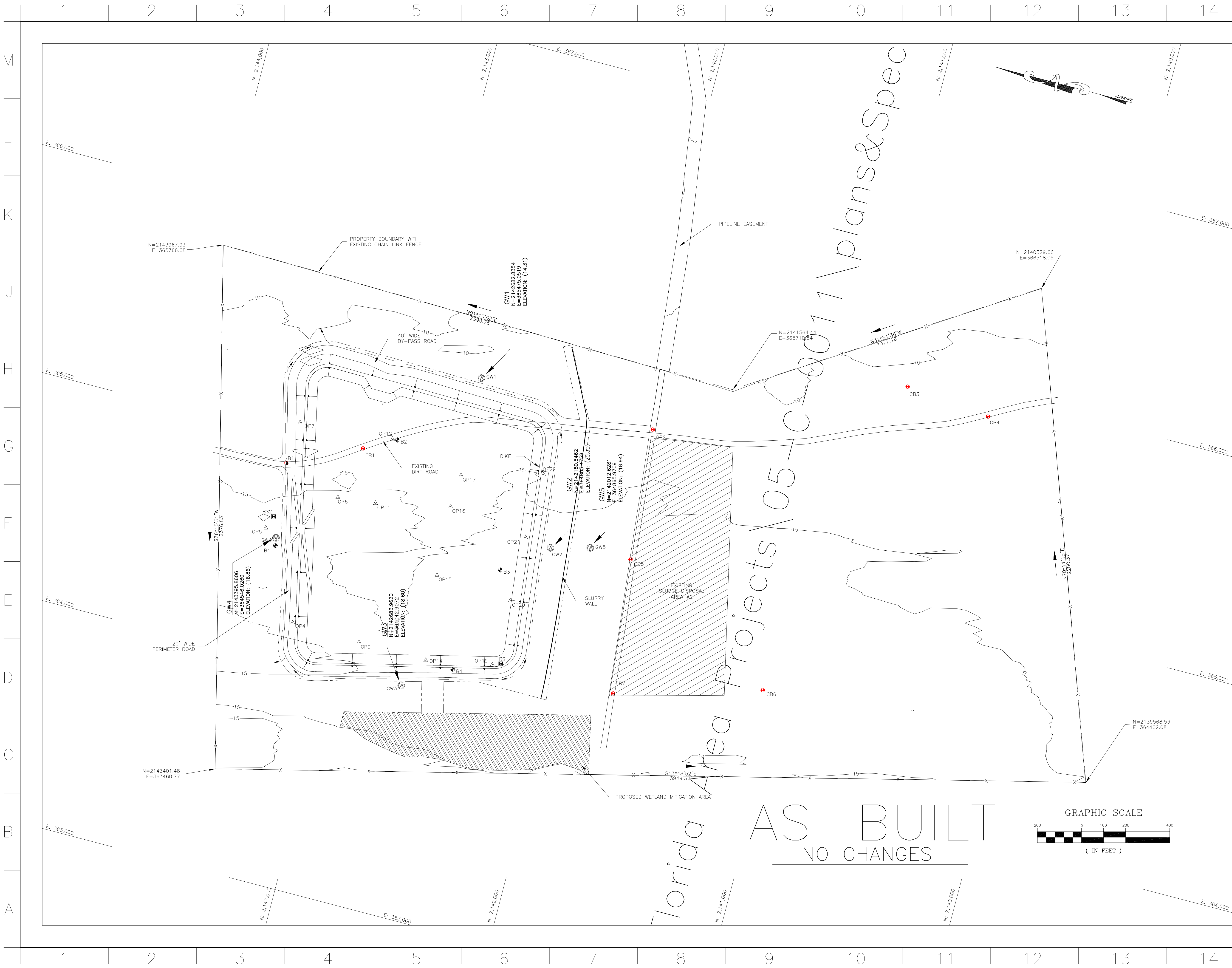


REFERENCE:  
USGS 7.5' QUADRANGLE MAP,  
PALM VALLEY, FLORIDA 1964  
PHOTOREVISED 1982

I CERTIFY THAT THESE CORRECTED DRAWINGS  
INDICATE CONSTRUCTION AS ACTUALLY  
PERFORMED AND ARE AN ACCURATE  
REPRESENTATION OF THE SPECIFIED WORK.  
THESE CORRECTED DRAWINGS ARE APPROVED  
FOR PREPARATION OF AS-BUILT  
CONSTRUCTION DRAWINGS

  
JASON BACKLUND  
QUALITY CONTROL MANAGER

 <b>TAYLOR ENGINEERING INC.</b> 9000 CYPRESS GREEN DRIVE, SUITE 200 JACKSONVILLE, FLORIDA 32256 <small>CERTIFICATE OF AUTHORIZATION # 4815</small>		
SEAL	<b>DU-9 DREDGED MATERIAL MANAGEMENT PLAN</b>	
	PROJECT NO C2001-010-02	SHEET NO
	DATE OCTOBER 2003	<b>1</b> OF <b>15</b>
<small>DARRELL M. SETSER P.E.# 45379 D.O. FILE NO. BA-38,435</small>		



- GENERAL NOTES
1. HORIZONTAL COORDINATES BASED ON NAD 27, FL. EAST ZONE.
  2. ELEVATIONS REFERENCED TO NGVD 29.
  3. BOUNDARY SURVEY BY ST. JOHNS SURVEY COMPANY (SJSC) SEPT. 1992, REVISED JULY 1994 (PROJECT 250-021).
  4. TOPOGRAPHIC SURVEY AND WETLAND DELINEATION BY ACOE JAN. 1998 (D.O. FILE NO. 8E37,788).
  5. AERIAL PHOTO FDOT 4551-8-39 TAKEN 1998.
  6. CONTRACTOR SHALL CLEAR, GRUB, AND REMOVE DEBRIS FROM AREA WITHIN CONSTRUCTION LIMITS.
  7. CONTRACTOR SHALL NOT DISTURB AREAS OUTSIDE OF CONSTRUCTION LIMITS.
  8. SOIL BORINGS AND SOIL SAMPLE LOCATIONS ARE APPROXIMATE.
  9. LOCATIONS OF OBJECTS IN AERIAL PHOTOGRAPH ARE APPROXIMATE.
  10. THE CONTRACTOR IS ADVISED THAT SITE CONDITIONS HAVE CHANGED AND SHALL FIELD VERIFY INFORMATION SHOWN IN THE DRAWINGS BEFORE SUBMITTING BID. THESE CHANGES INCLUDE LIMITS OF CLEARING AND GRUBBING, WATER TABLE ELEVATION AND GENERAL TOPOGRAPHY.

- LEGEND
- B1 SOIL BORING PERFORMED BY ELLIS AND ASSOC. INC.
  - CB1 SOIL BORINGS PERFORMED BY ACOE
  - B1 SOIL BORING PERFORMED BY MACTEC INC.
  - △ CP1 OBSERVATION PIT PERFORMED BY MACTEC INC.
  - BS1 BULK SOIL SAMPLE PERFORMED BY MACTEC INC.
  - CONSTRUCTION LIMITS
  - - - EXISTING FENCE
  - DRAINAGE DITCH
  - ⊙ GW1 GROUNDWATER MONITORING WELLS (PROPOSED)

REVISIONS

REV. NO.	SYM	ZONE	DESCRIPTION	DATE
1	△	L-14	REVISED TO ACCOMPANY AMENDMENT NO. 0002	SEP. 2004

**TAYLOR ENGINEERING INC.**  
9000 CYPRESS GREEN DRIVE, SUITE 200  
JACKSONVILLE, FLORIDA 32256  
CERTIFICATE OF AUTHORIZATION # 4815

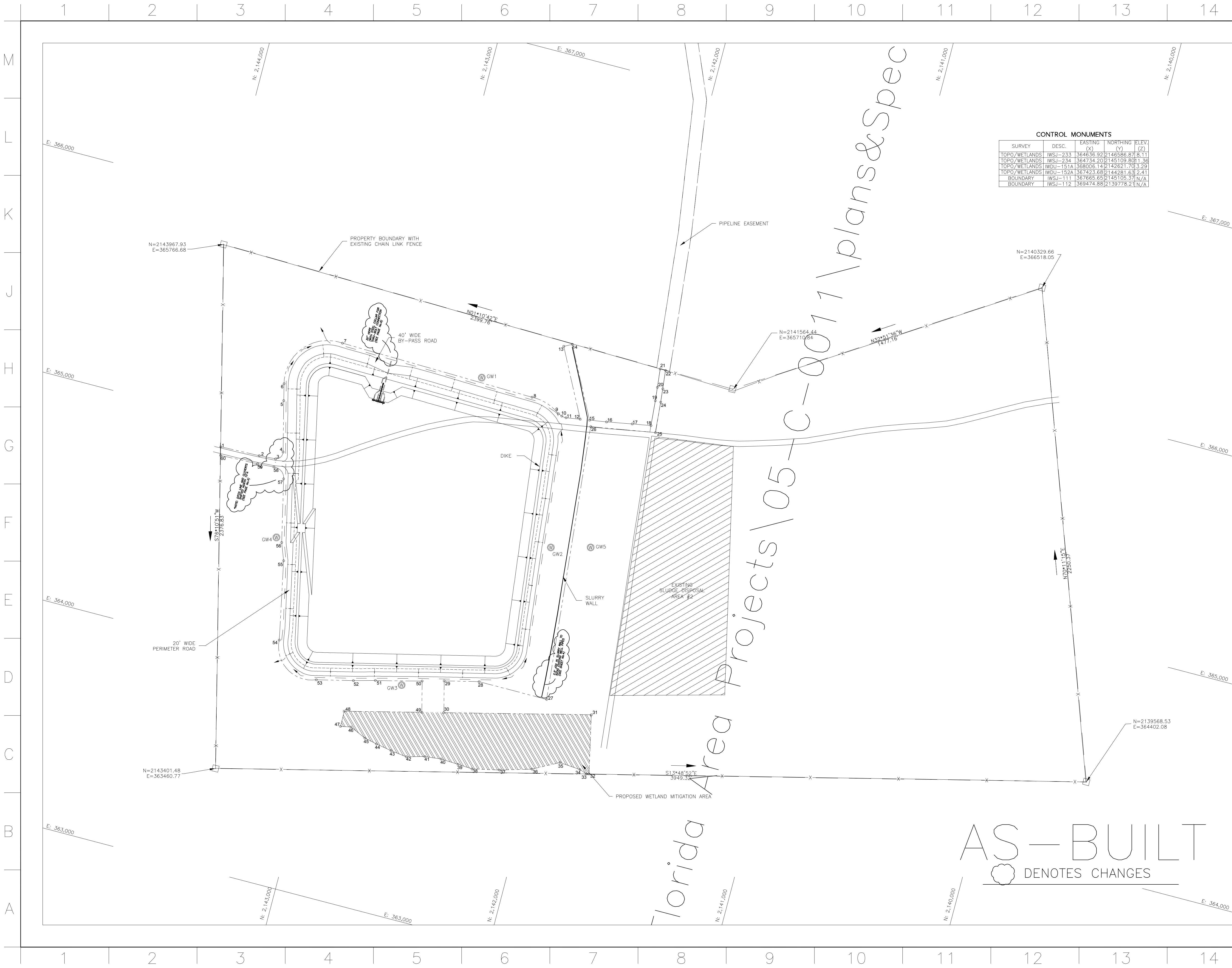
**DU-9 DREDGED MATERIAL MANAGEMENT PLAN**  
**FLORIDA INLAND NAVIGATION DISTRICT**

**SITE PLAN WITH AERIAL**

SEAL	DESIGNED	PROJECT NO.
	K.A.K.	C2001-010-02
	DRAWN	SCALE
	E.R.	AS SHOWN
	CHECKED	DRAWING NO.
	D.M.S.	215
	REVIEWED	
	J.T.A.	
	DATE	
	OCTOBER 2003	

D.O. FILE NO. BA-38,435





GENERAL NOTES

1. HORIZONTAL CONTROL BASED ON FLORIDA'S STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD27.
2. ALL ELEVATIONS REFERENCED TO NGVD 1929.
3. TOPOGRAPHIC SURVEY PERFORMED BY ACCE JAN. 1998. (D.O. FILE NO. 8E-37,788)
4. BOUNDARY SURVEY BY ST. JOHNS SURVEY COMPANY (SJC) SEPT. 1992, REVISED JULY 1994. (PROJECT NO. 250-021)
5. CONTRACTOR SHALL FIELD VERIFY ALL SURVEY DATA BEFORE BEGINNING CONSTRUCTION.
6. FINAL BASIN ELEVATION IS DEPENDENT ON THE AMOUNT OF MATERIAL REQUIRED FOR DIKE CONSTRUCTION. FINAL AVERAGE BASIN BOTTOM ELEVATION IS ESTIMATED @ +12.5 FT.
7. CONTRACTOR SHALL MAINTAIN EXISTING DIRT ROAD ACCESS THROUGH PROPOSED CONSTRUCTION LIMITS UNTIL COMPLETION OF BY-PASS ROAD.

SAFTEY ON THIS  
JOB DEPENDS  
ON YOU

CONTROL MONUMENTS			
SURVEY	DESC.	EASTING (X)	NORTHING (Y)
TOPO/WETLANDS	IWSJ-233	364636.92	2146586.87
TOPO/WETLANDS	IWSJ-234	364734.20	2145109.80
TOPO/WETLANDS	IWSJ-151A	368006.14	2142621.70
TOPO/WETLANDS	IWSJ-152A	367423.68	2144281.63
BOUNDARY	IWSJ-111	367665.65	2145105.37
BOUNDARY	IWSJ-112	369474.88	2139778.21

CONSTRUCTION LIMITS			
POINT #	NORTHING	EASTING	RADIUS
1	2143746.8864	364876.9722	
2	2143569.5828	364882.4917	
3	2143494.5241	364887.1924	-32.6'
4	2143460.3580	364906.0909	
5	2143525.7672	365151.8953	
6	2143543.7368	365226.3879	-197.4'
7	2143334.1368	365471.5887	
8	2142440.5538	365452.4934	-213.0'
9	2142305.9251	365410.7288	
10	2142285.756	365403.8697	
11	2142267.7838	365401.6689	-40.0'
12	2142203.8839	365411.3802	
13	2142360.0384	365723.1816	
14	2142324.5371	365730.6114	
15	2142162.2568	365418.0098	
16	2142085.0724	365450.7994	
17	2141970.3785	365450.7939	
18	2141886.1222	365465.2197	
19	2141895.7070	365579.4100	
20	2141902.1335	365640.5466	
21	2141910.9421	365724.3443	
22	2141885.7258	365723.5914	
23	2141876.9172	365639.7938	
24	2141870.4907	365578.6572	
25	2141858.3790	365459.4540	
26	2142149.3602	365391.1343	
27	2142028.8843	364143.8547	
28	2142345.4063	364143.9889	
29	2142499.2964	364107.1552	
30	2142464.6201	363967.5574	
31	2141814.9987	364127.7512	
32	2141756.8749	363865.6286	
33	2141767.6040	363863.2020	
34	2141801.8097	363874.1153	
35	2141897.5816	363882.4709	
36	2142013.0570	363821.2820	
37	2142153.8339	363779.7264	
38	2142276.3670	363753.1890	
39	2142342.5688	363757.4275	
40	2142423.3435	363761.1139	
41	2142497.3093	363752.9682	
42	2142578.6550	363730.9370	
43	2142652.8710	363740.1770	
44	2142724.6514	363752.9010	
45	2142781.3870	363764.6270	
46	2142854.9073	363787.8697	
47	2142902.2290	363788.2480	
48	2142902.8591	363859.3249	
49	2142567.7149	363943.6179	
50	2142595.8488	364081.0522	
51	2142801.7951	364029.6356	
52	2142897.8310	364003.9256	
53	2143061.7223	363964.8965	
54	2143269.8489	364096.5146	
55	2143341.8892	364449.5926	
56	2143371.2412	364526.9957	
57	2143436.0775	364808.5043	
58	2143492.1489	364849.2666	-48.8'
59	2143567.8102	364844.5283	
60	2143739.7534	364839.2354	

LEGEND			
---			
CONSTRUCTION LIMITS			
GW1			
GROUNDWATER MONITORING WELLS (PROPOSED)			

REVISIONS			
REV. NO.	SYM.	ZONE	DESCRIPTION
1			DESIGN REVIEW COMMENTS

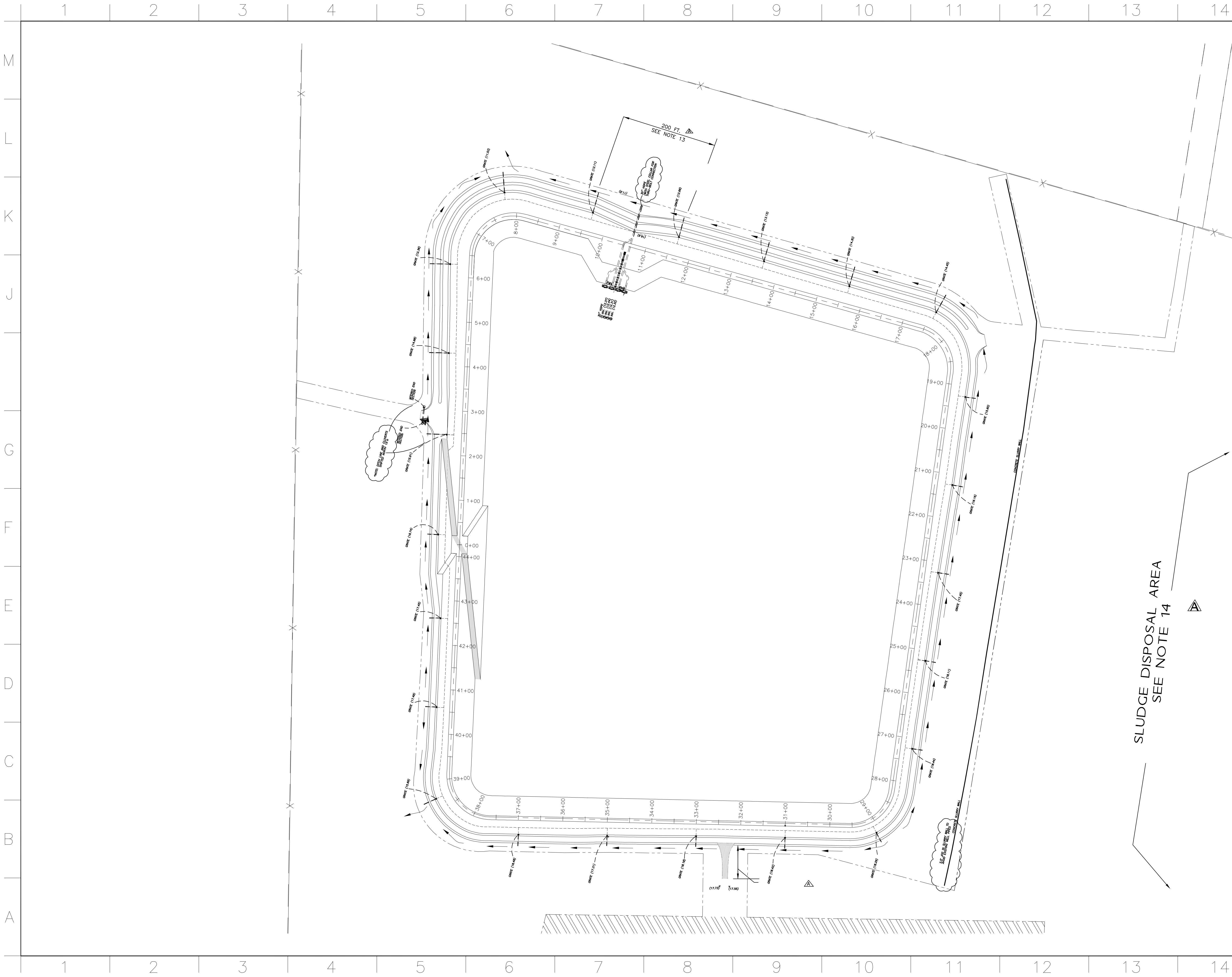
**TAYLOR ENGINEERING INC.**  
9000 CYPRESS GREEN DRIVE, SUITE 200  
JACKSONVILLE, FLORIDA 32256  
CERTIFICATE OF AUTHORIZATION # 4815

DU-9 DREDGED MATERIAL MANAGEMENT PLAN  
FLORIDA INLAND NAVIGATION DISTRICT

SITE PLAN W/O AERIAL

SEAL	DESIGNED K.A.K.	PROJECT NO. C2001-010-02
	DRAWN E.R.	SCALE AS SHOWN
	CHECKED D.M.S.	DRAWING NO. 3 15
	REVIEWED J.T.A.	DATE OCTOBER 2003

D.O. FILE NO. 8A-38,435



- GENERAL NOTES
1. HORIZONTAL CONTROL BASED ON FLORIDA'S STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD27.
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  4. BOUNDARY SURVEY BY ST. JOHNS SURVEY SEPT. 1992, REVISED JULY 1994. (PROJECT NO. 250-021)
  5. CONTRACTOR SHALL FIELD VERIFY ALL SURVEY DATA BEFORE BEGINNING CONSTRUCTION.
  6. FINAL BASIN ELEVATION IS DEPENDENT ON THE AMOUNT OF MATERIAL REQUIRED FOR DIKE CONSTRUCTION. FINAL AVERAGE BASIN ELEVATION IS ESTIMATED @ +12.5 FT.
  7. CONTRACTOR SHALL NOT EXCAVATE BELOW +11.0 WITHIN THE BORROW AREA UNLESS AUTHORIZED BY THE COR.
  8. CONTRACTOR SHALL CLEAR, GRUBB AND REMOVE DEBRIS WITHIN THE CONSTRUCTION LIMITS.
  9. CONTRACTOR SHALL NOT DISTURB AREAS OUTSIDE OF CONSTRUCTION LIMITS.
  10. CONTRACTOR SHALL INSTALL SILT FENCE AND EROSION CONTROL MEASURES AS REQUIRED BY PERMITS.
  11. CONTRACTOR SHALL PROVIDE WATER SOURCE FOR CONSTRUCTION NEEDS.
  12. EXCESS EXCAVATED MATERIAL LEFT ON SITE FOR FUTURE DIKE CONSTRUCTION.
  13. TRANSITION ROADWAY TO EL. +17.5 FT. OVER 100 FT. EACH WAY.
  14. CONTRACTOR TO MAINTAIN ACCESS TO SLUDGE DISPOSAL AREA FOR DEE-DOT RANCH PERSONNEL.

SAFETY ON THIS  
JOB DEPENDS  
ON YOU

DIKE CENTERLINE CONTROL POINT	
NORTHING	EASTING
1	2143463.85 365362.93
2	2142342.15 365345.67
3	2142212.82 364246.74
4	2143173.00 364017.00

LEGEND

----- CONSTRUCTION LIMITS

AS-BUILT

CLOUD DENOTES CHANGES

REVISIONS

REV. NO.	SYM.	ZONE	DESCRIPTION	DATE
4	△	—	REVISED TO ACCOMPANY AMENDMENT NO. 0002	SEP 2004

**TAYLOR ENGINEERING INC.**  
9000 CYPRESS GREEN DRIVE, SUITE 200  
JACKSONVILLE, FLORIDA 32256  
CERTIFICATE OF AUTHORIZATION # 4815

**DU-9 DREDGED MATERIAL MANAGEMENT PLAN**  
**FLORIDA INLAND NAVIGATION DISTRICT**

DRAWING TITLE

**DIKE PLAN VIEW**

SEAL	DESIGNED	PROJECT NO.
	K.A.K.	C2001-010-02
	DRAWN	SCALE
	E.R.	AS SHOWN
	CHECKED	DRAWING NO.
	D.M.S.	4 15
	REVIEWED	
	J.T.A.	
	DATE	OF
	OCTOBER 2003	

D.O. FILE NO. BA-38,435

1 2 3 4 5 6 7 8 9 10 11 12 13 14

M

L

K

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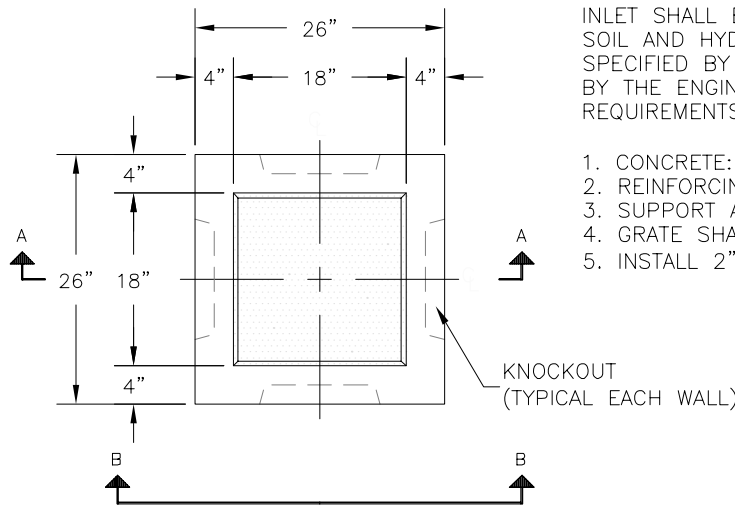
B

A

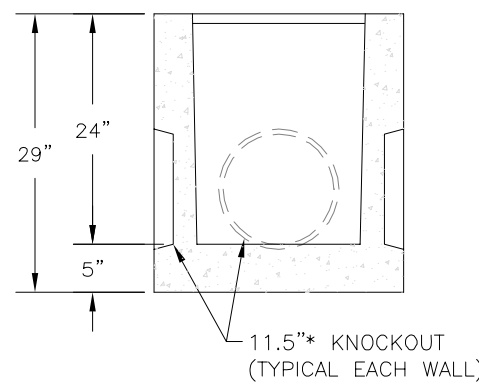
NOTES:

INLET SHALL BE PREMANUFACTURED AND DESIGNED TO WITHSTAND SOIL AND HYDROSTATIC LOADS. REINFORCEMENT SHALL BE SPECIFIED BY THE MANUFACTURER AND SUBJECT TO APPROVAL BY THE ENGINEER. INLET SHALL MEET THE FOLLOWING REQUIREMENTS:

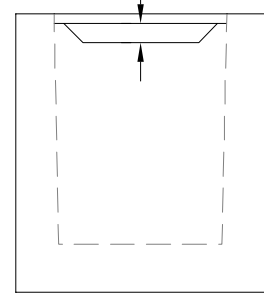
1. CONCRETE: 28 DAY COMPRESSIVE STRENGTH F'C = 4,500 PSI.
2. REINFORCING: ASTM A-615, GRADE 60.
3. SUPPORT AN H2O LOADING AS INDICATED BY AASHTO.
4. GRATE SHALL BE CAST-IRON WITH TRAFFIC BEARING CAPACITY.
5. INSTALL 2" DRAINAGE-SLOT ON OPPOSITE SIDES.



PLAN VIEW



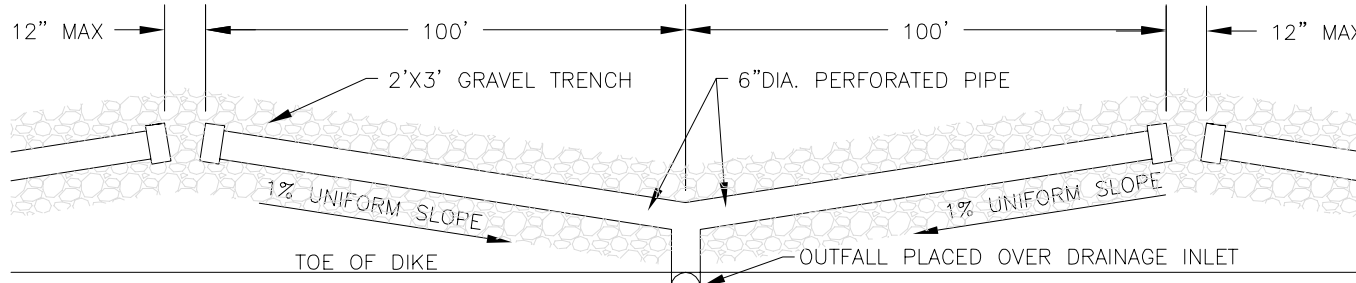
SECTION VIEW A-A



SECTION VIEW B-B

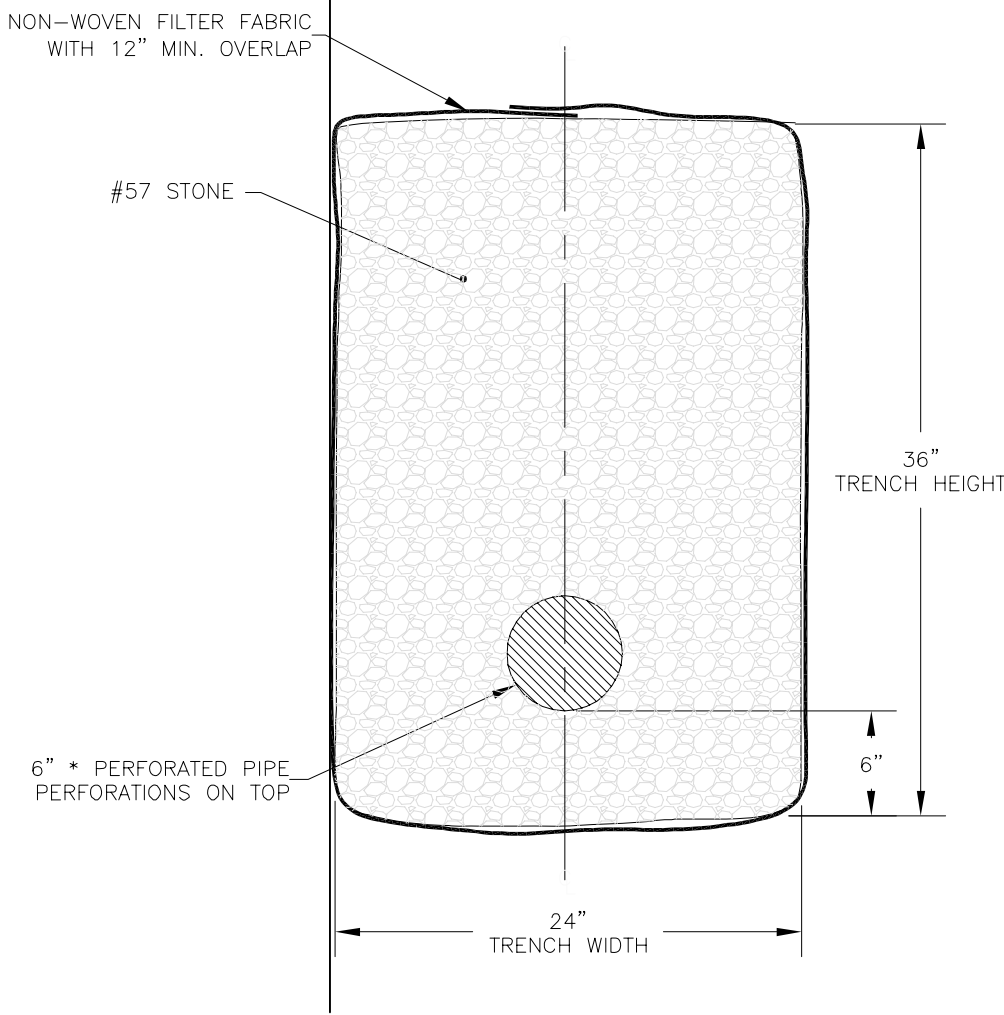
INLET DETAILS

SCALE: N.T.S.



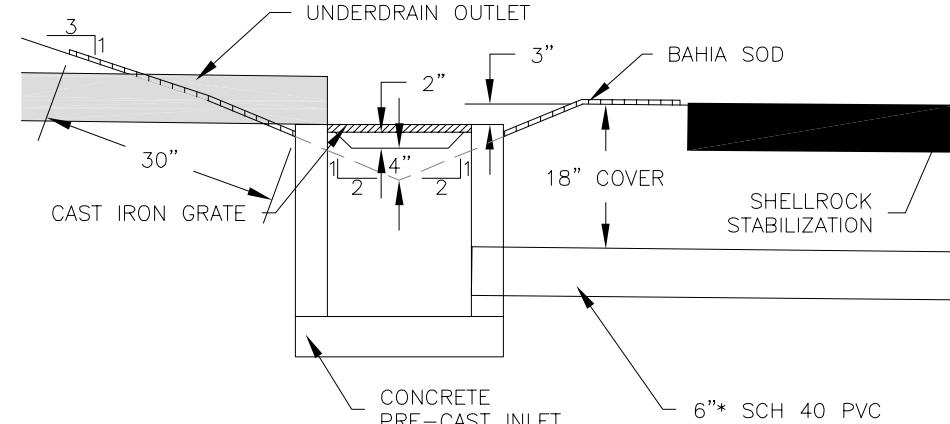
ELEVATION OF DIKE UNDERDRAIN

SCALE: N.T.S.



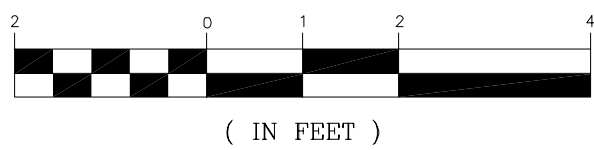
DIKE UNDERDRAIN TYPICAL SECTION

SCALE: N.T.S.



DRAIN DETAIL

GRAPHIC SCALE



( IN FEET )

GENERAL NOTES

SAFETY ON THIS  
JOB DEPENDS  
ON YOU

LEGEND

REVISIONS

REV. NO.	SYM.	ZONE	DESCRIPTION	DATE
1			DESIGN REVIEW COMMENTS	MAY 2004

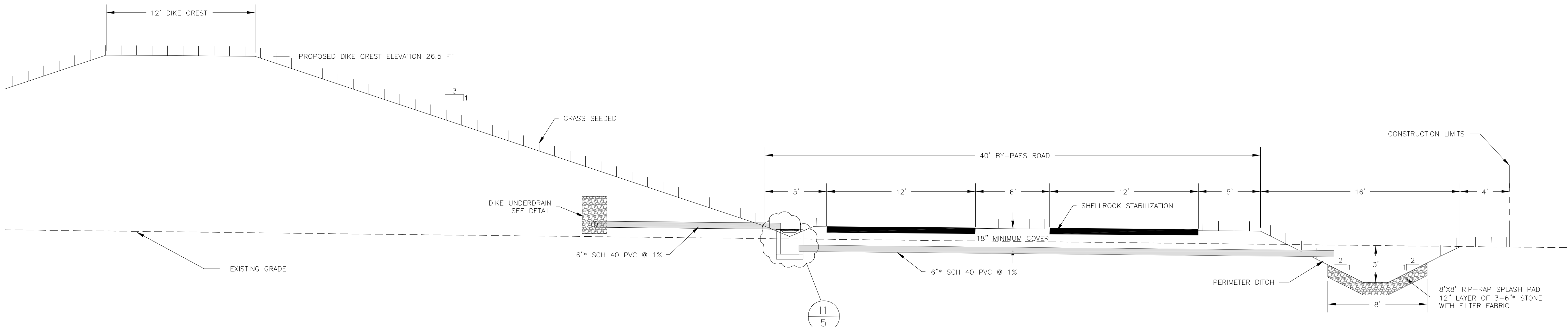
**TAYLOR ENGINEERING INC.**  
9000 CYPRESS GREEN DRIVE, SUITE 200  
JACKSONVILLE, FLORIDA 32256  
CERTIFICATE OF AUTHORIZATION # 4615

**DU-9 DREDGED MATERIAL MANAGEMENT PLAN  
FLORIDA INLAND NAVIGATION DISTRICT**

**DIKE AND UNDERDRAIN DETAILS**

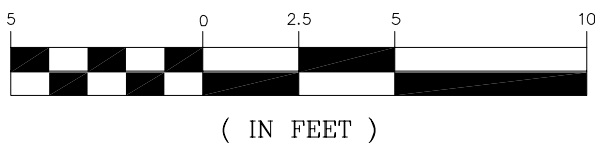
DESIGNED K.A.K.	PROJECT NO. C2001-010-02
DRAWN E.R.	SCALE AS SHOWN
CHECKED D.M.S.	DRAWING NO. 5 15
REVIEWED J.T.A.	
DATE OCTOBER 2003	

D.O. FILE NO. 8A-38,435



DIKE AND ROAD SECTION

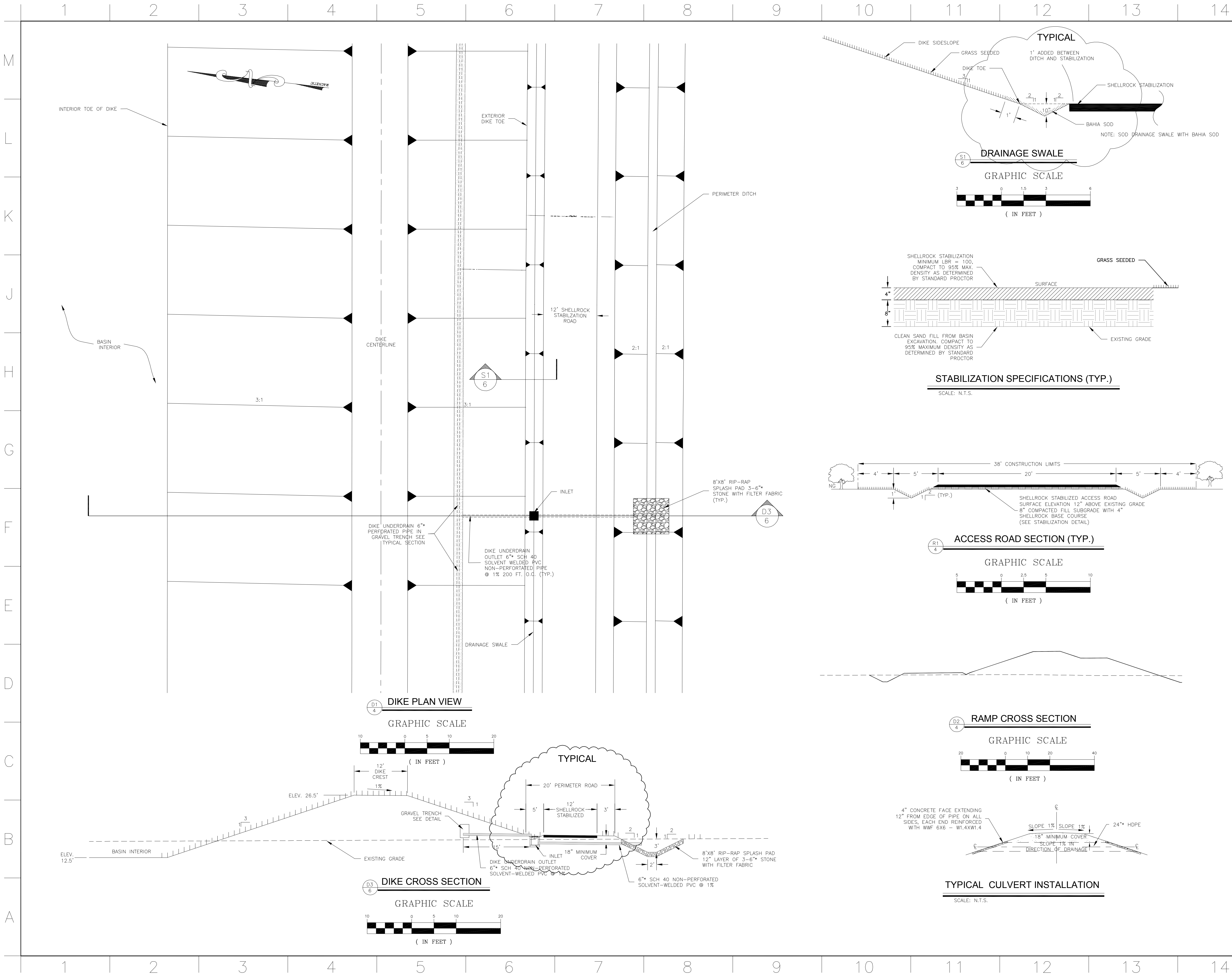
GRAPHIC SCALE



( IN FEET )

AS-BUILT  
NO CHANGES

1 2 3 4 5 6 7 8 9 10 11 12 13 14



GENERAL NOTES

SAFETY ON THIS JOB DEPENDS ON YOU

LEGEND

--- CONSTRUCTION LIMITS

AS-BUILT  
DENOTES CHANGES

REVISIONS

REV. NO.	SYM	ZONE	DESCRIPTION	DATE
1			DESIGN REVIEW COMMENTS	MAY 2004

TAYLOR ENGINEERING INC.  
9000 CYPRESS GREEN DRIVE, SUITE 200  
JACKSONVILLE, FLORIDA 32256  
CERTIFICATE OF AUTHORIZATION # 4815

DU-9 DREDGED MATERIAL MANAGEMENT PLAN  
FLORIDA INLAND NAVIGATION DISTRICT

DRAWING TITLE

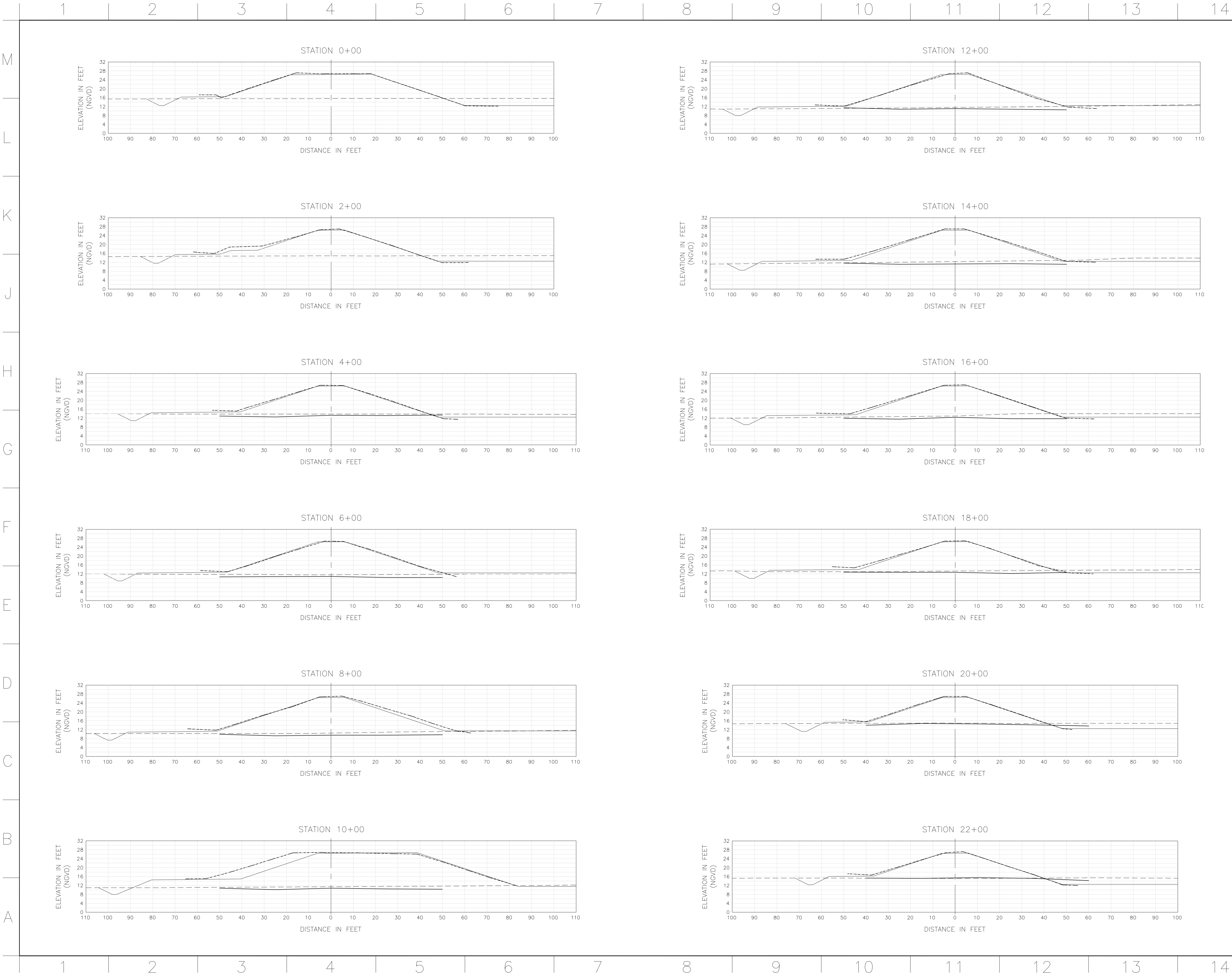
DIKE DETAILS

DESIGNED	PROJECT NO.
K.A.K.	C2001-010-02
DRAWN	SCALE
E.R.	AS SHOWN
CHECKED	DRAWING NO.
D.M.S.	6 15
REVIEWED	
J.T.A.	
DATE	
OCTOBER 2003	

DARRELL M. SETSER P.E.# 45379

D.O. FILE NO. 8A-38,435





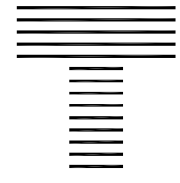
GENERAL NOTES  
1. HORIZONTAL CONTROL BASED ON FLORIDA'S STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD27.  
2. ALL ELEVATIONS REFERENCED TO NGVD 1929.  
3. DRAINAGE SWALES NOT SHOWN ON SECTIONS.

SAFETY ON THIS  
JOB DEPENDS  
ON YOU

LEGEND  
—— PROPOSED DIKE  
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AS-BUILT  
AS SHOWN

REVISIONS				
REV. NO.	SYM	ZONE	DESCRIPTION	DATE
1			DESIGN REVIEW COMMENTS	MAY 2004

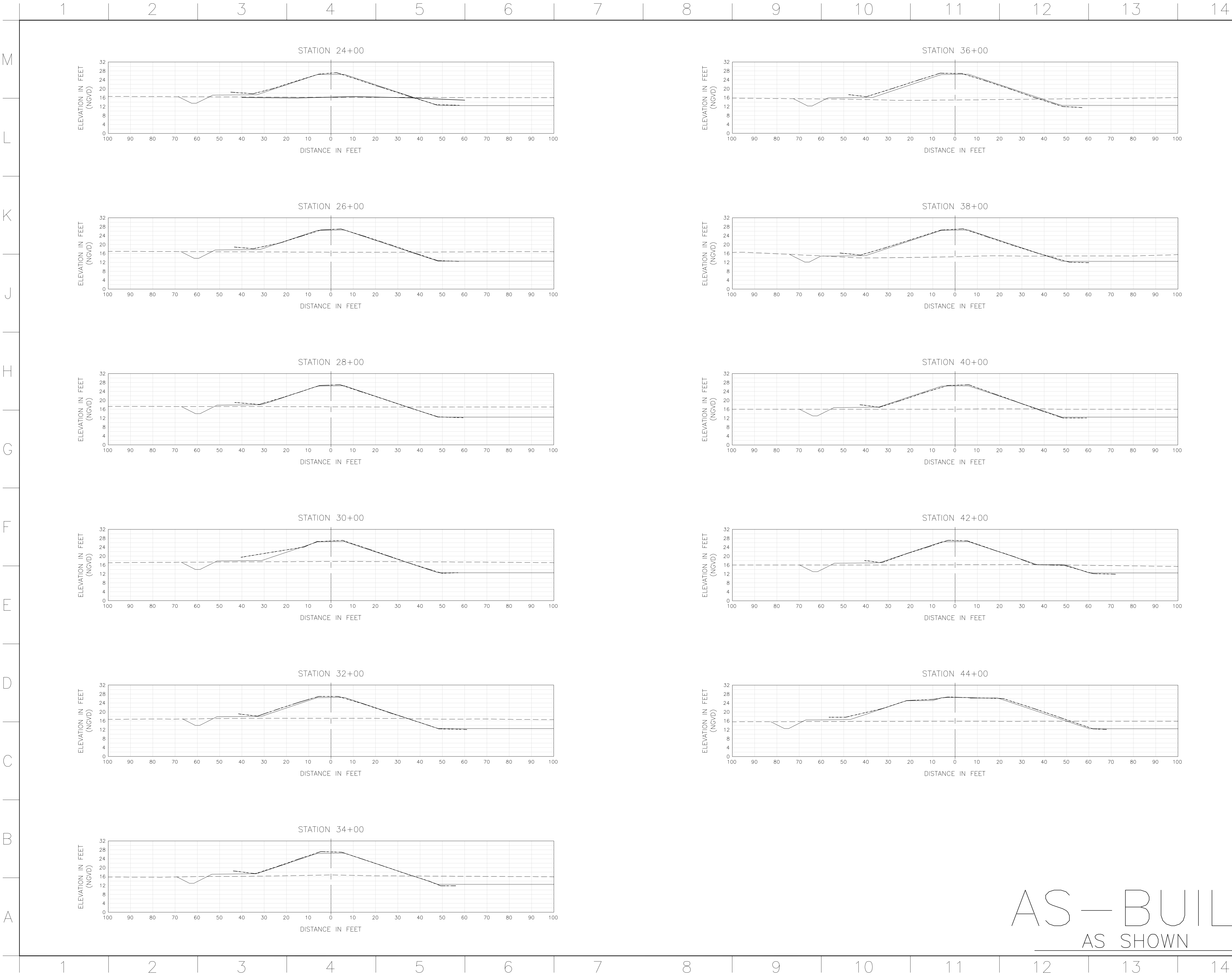
 **TAYLOR ENGINEERING INC.**  
9000 CYPRESS GREEN DRIVE, SUITE 200  
JACKSONVILLE, FLORIDA 32256  
CERTIFICATE OF AUTHORIZATION # 4815

**DU-9 DREDGED MATERIAL MANAGEMENT PLAN  
FLORIDA INLAND NAVIGATION DISTRICT**

DRAWING TITLE  
**DIKE SECTIONS -  
STA. 0+00 TO 22+00**

SEAL	DESIGNED	PROJECT NO
	K.A.K.	C2001-010-02
	DRAWN	SCALE
	E.R.	AS SHOWN
	CHECKED	DRAWING NO
	D.M.S.	<b>7 15</b> OF
	REVIEWED	
	J.T.A.	
	DATE	
	OCTOBER 2003	

D.O. FILE NO. 8A-38,435



GENERAL NOTES

1. HORIZONTAL CONTROL BASED ON FLORIDA'S STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD27.

2. ALL ELEVATIONS REFERENCED TO NGVD 1929.

3. DRAINAGE SWALES NOT SHOWN ON SECTIONS.

SAFETY ON THIS  
JOB DEPENDS  
ON YOU

LEGEND

PROPOSED DIKE

REVISIONS

REV. NO.	SYM	ZONE	DESCRIPTION	DATE
1			DESIGN REVIEW COMMENTS	MAY 2004

TAYLOR ENGINEERING INC.

9000 CYPRESS GREEN DRIVE, SUITE 200  
JACKSONVILLE, FLORIDA 32256

CERTIFICATE OF AUTHORIZATION # 4815

DU-9 DREDGED MATERIAL MANAGEMENT PLAN  
FLORIDA INLAND NAVIGATION DISTRICT

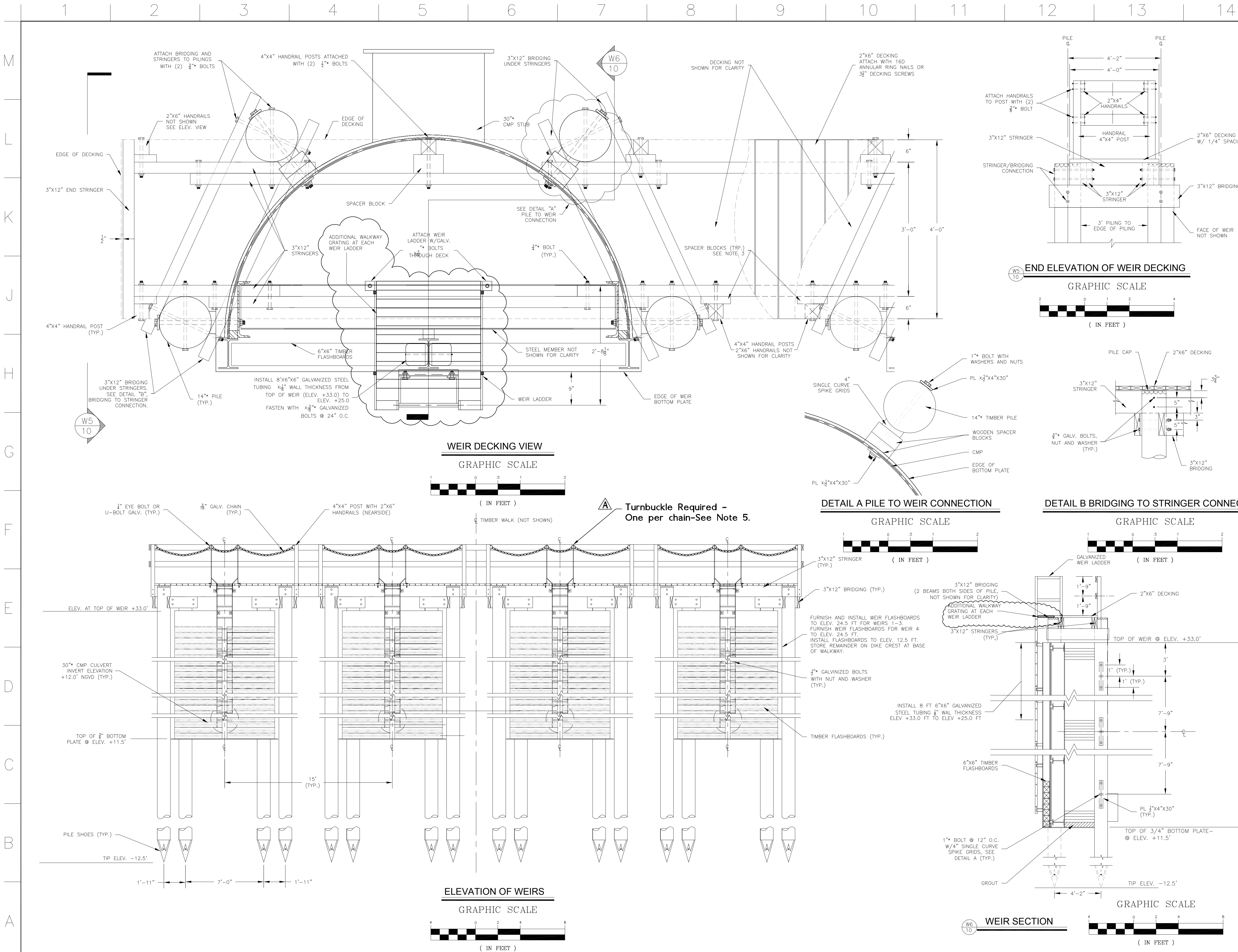
DIKE SECTIONS -  
STA. 22+00 TO 44+00

DESIGNED	PROJECT NO.
K.A.K.	C2001-010-02
DRAWN	SCALE
E.R.	AS SHOWN
CHECKED	DRAWING NO.
D.M.S.	8 15
REVIEWED	
J.T.A.	
DATE	
OCTOBER 2003	

DARRELL M. SETSER P.E.# 45379

D.O. FILE NO. 8A-38,435







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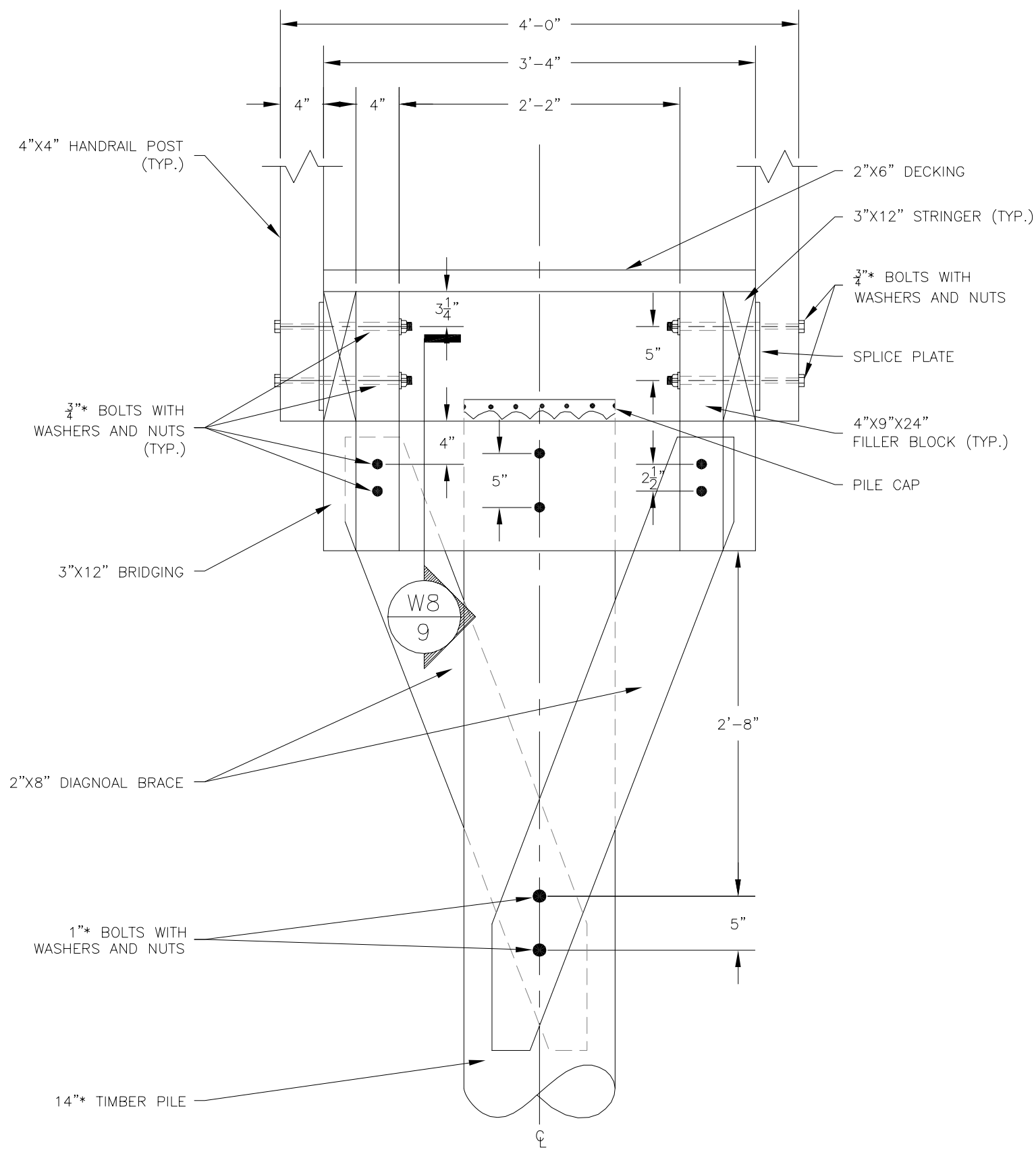
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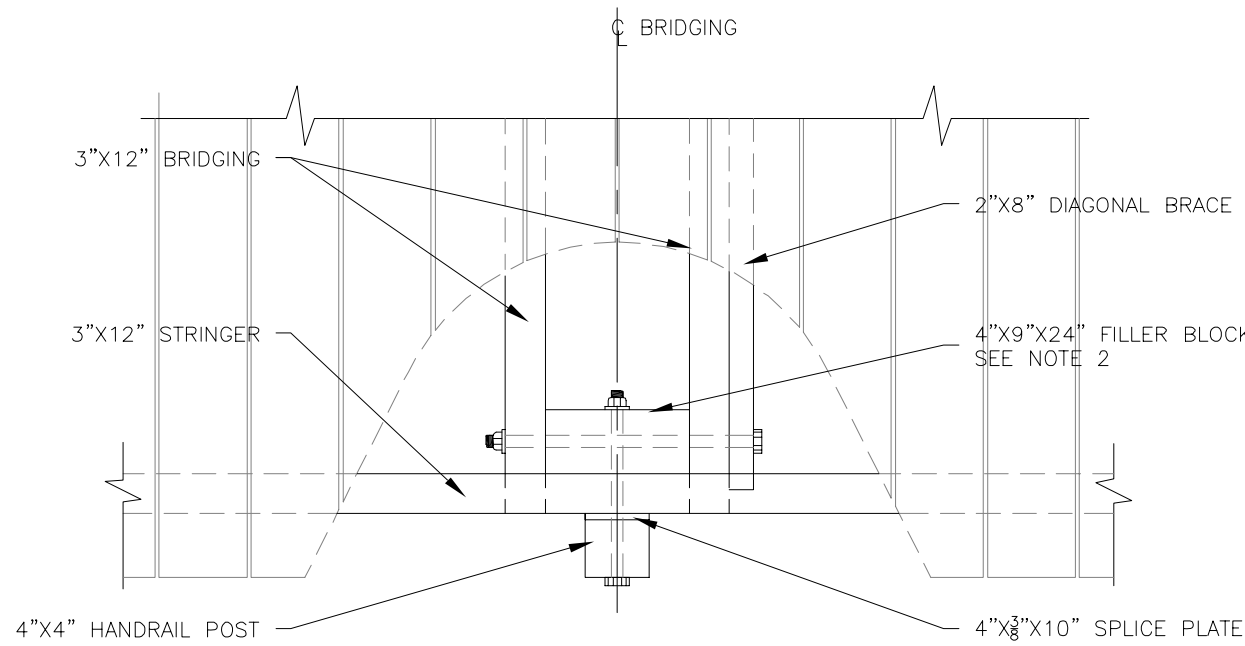
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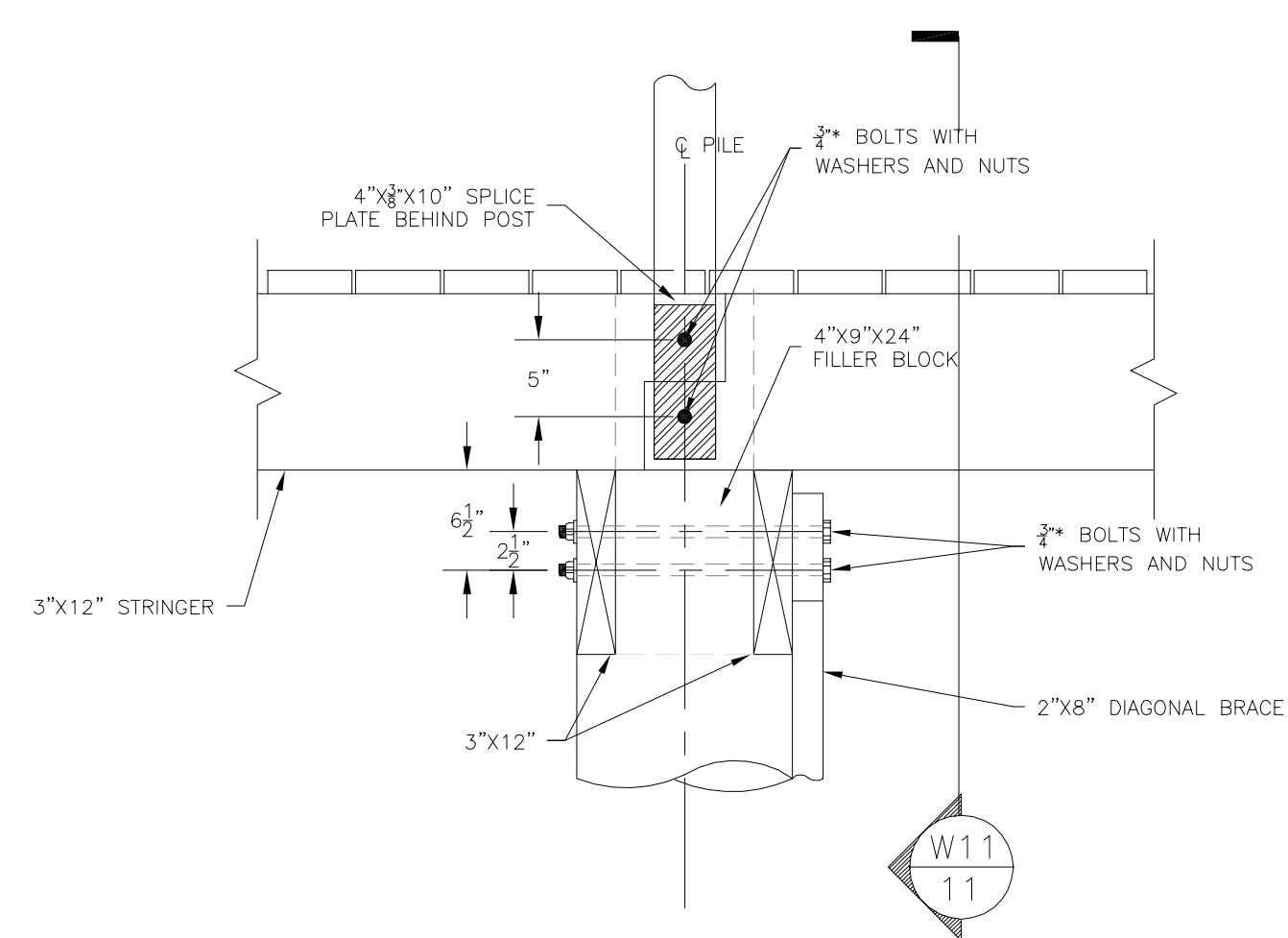
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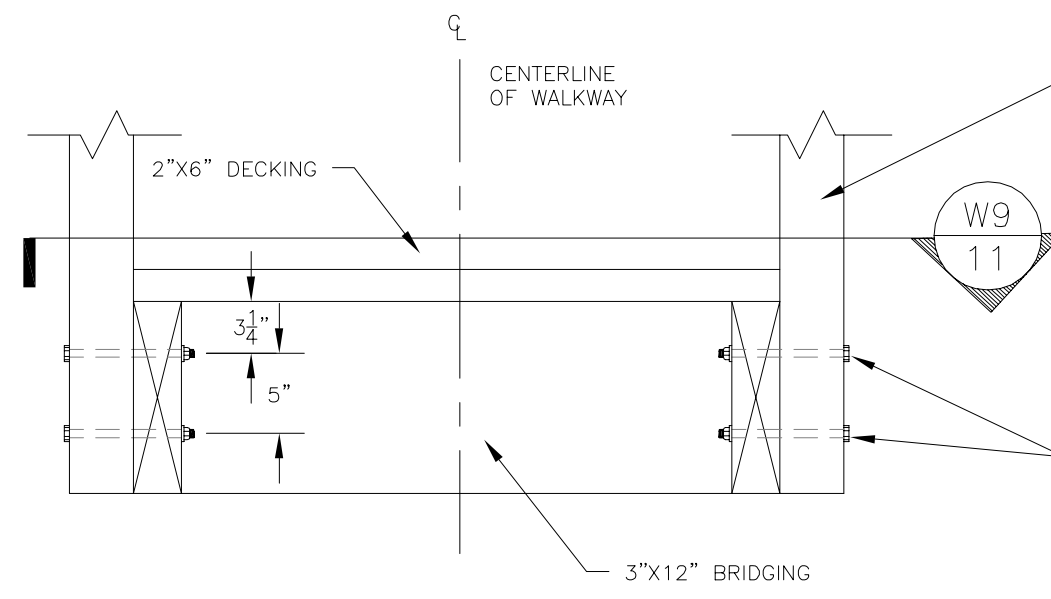
WALKWAY AND PILE  
GRAPHIC SCALE  
( IN FEET )



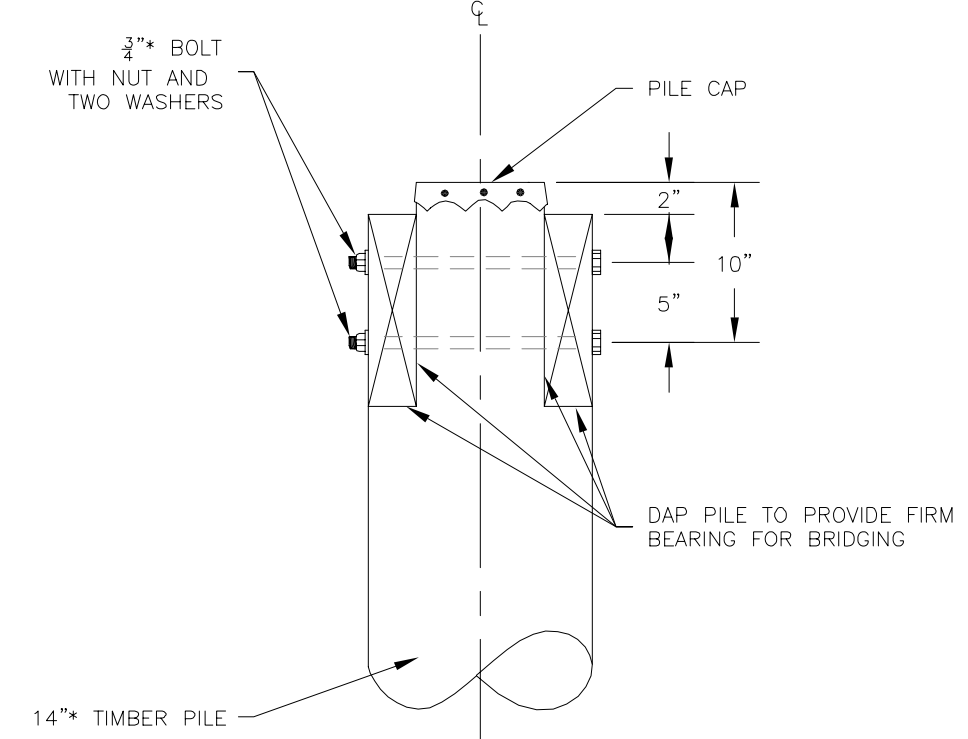
PLAN OF STRINGER SPICE DETAIL  
GRAPHIC SCALE  
( IN FEET )



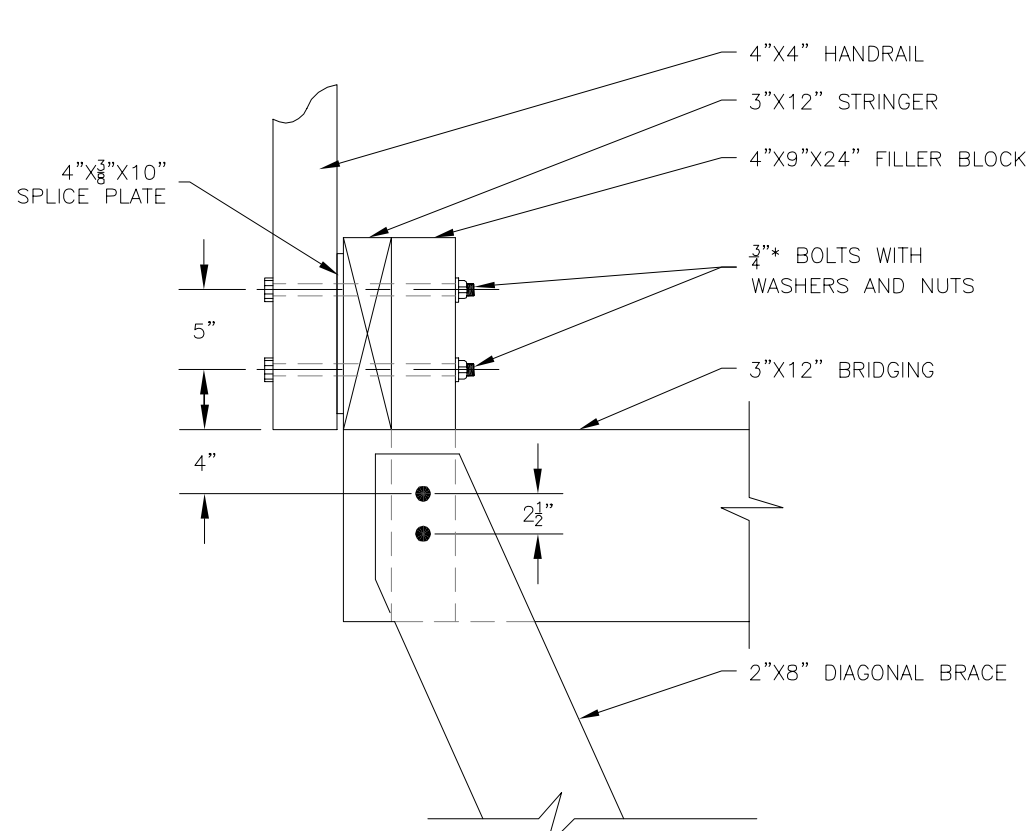
ELEVATION OF STRINGER SPICE DETAIL (TYP.)  
GRAPHIC SCALE  
( IN FEET )



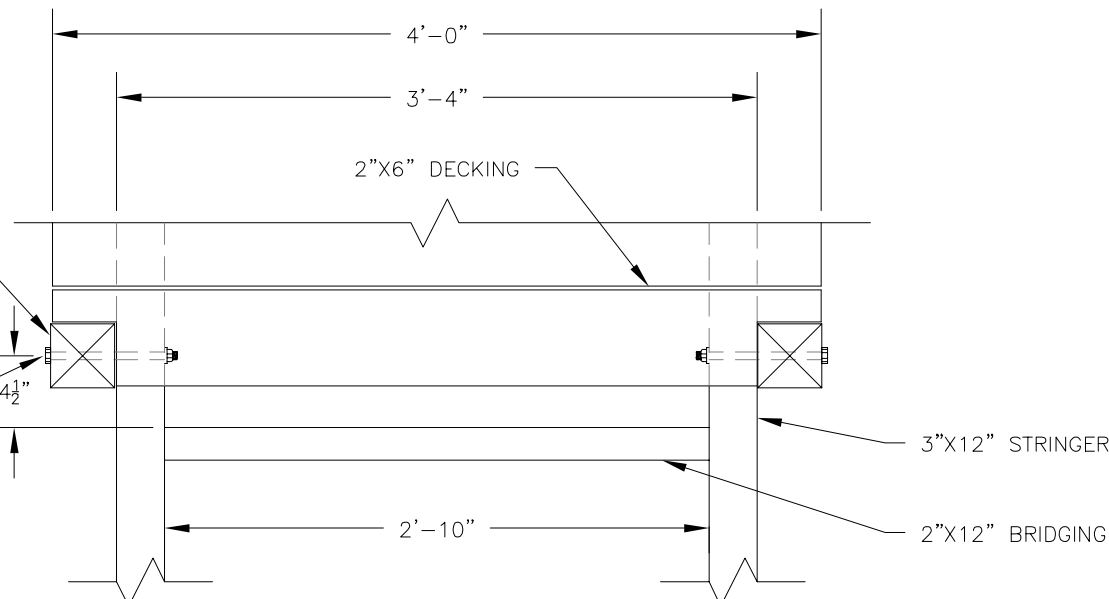
CROSS SECTION OF WALKWAY  
GRAPHIC SCALE  
( IN FEET )



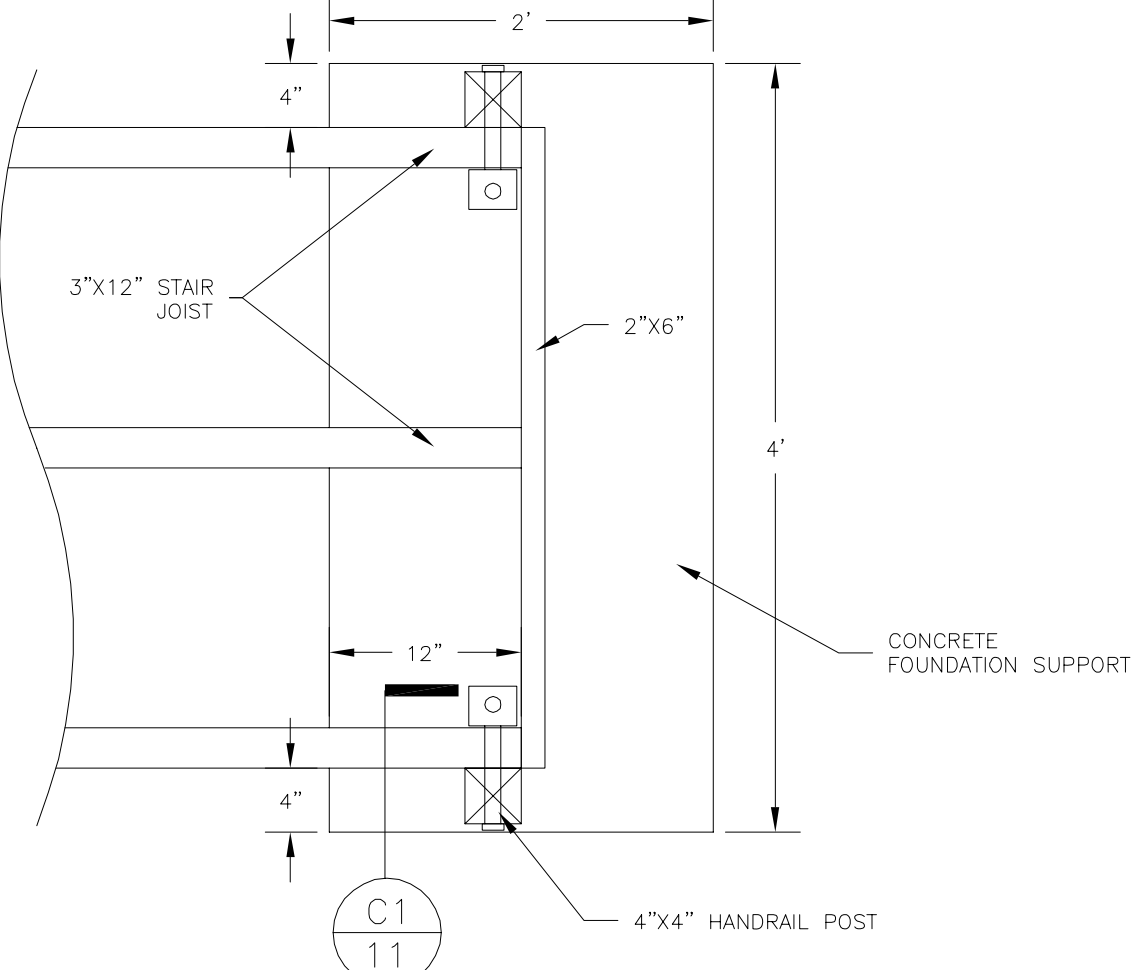
BRIDGING CONNECTION TO VERTICAL TIMBER PILES  
(TYP. FOR ALL CONNECTIONS)  
GRAPHIC SCALE  
( IN FEET )



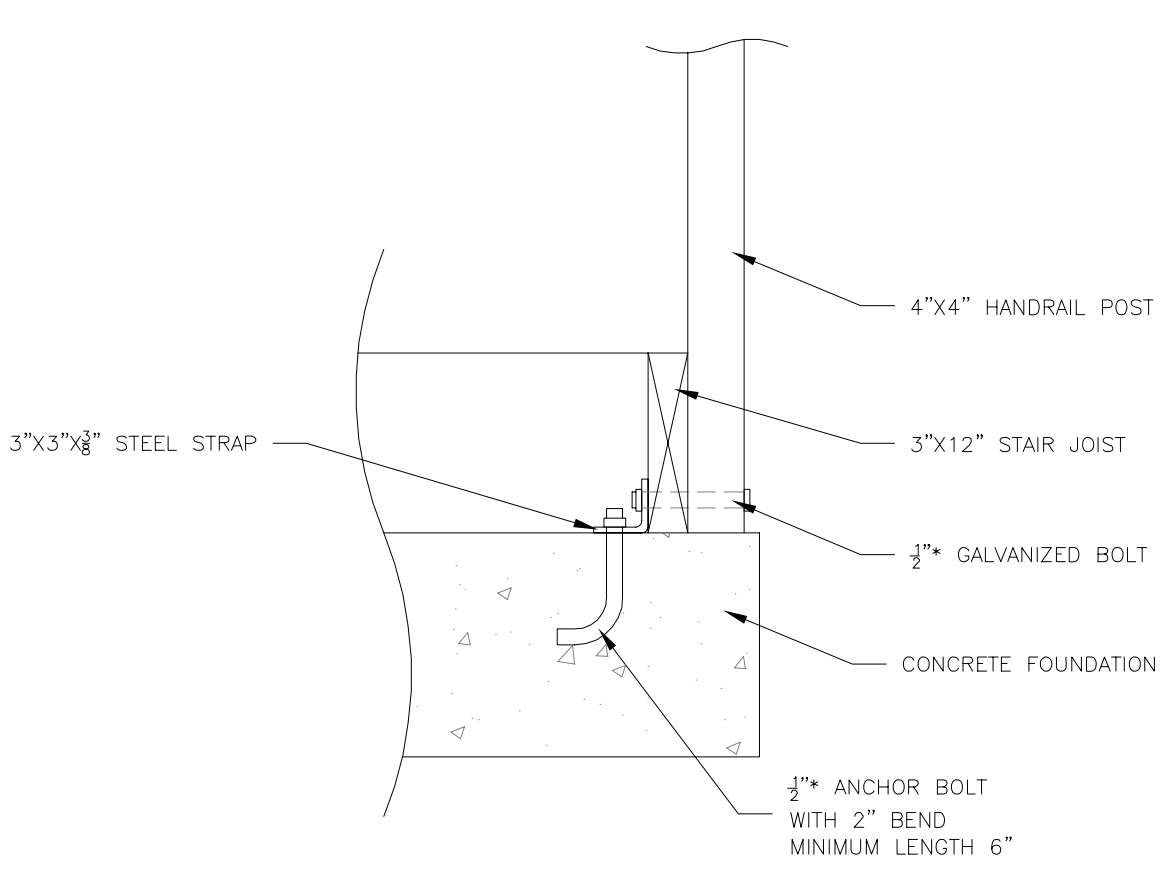
CROSS SECTION OF WALKWAY BRIDGING CONNECTION  
GRAPHIC SCALE  
( IN FEET )



CROSS SECTION OF WALKWAY (PLAN)  
GRAPHIC SCALE  
( IN FEET )



STAIR TO CONCRETE FOUNDATION PLAN  
GRAPHIC SCALE  
( IN FEET )



FOUNDATION CONNECTION  
GRAPHIC SCALE  
( IN FEET )

GENERAL NOTES

AS-BUILT  
NO CHANGES

SAFETY ON THIS  
JOB DEPENDS  
ON YOU

LEGEND

--- CONSTRUCTION LIMITS

REVISIONS

REV. NO.	SYM.	ZONE	DESCRIPTION	DATE
1			DESIGN REVIEW COMMENTS	MAY 2004

**TAYLOR ENGINEERING INC.**  
9000 CYPRESS GREEN DRIVE, SUITE 200  
JACKSONVILLE, FLORIDA 32256  
CERTIFICATE OF AUTHORIZATION # 4815

DU-9 DREDGED MATERIAL MANAGEMENT PLAN  
FLORIDA INLAND NAVIGATION DISTRICT

DRAWING TITLE

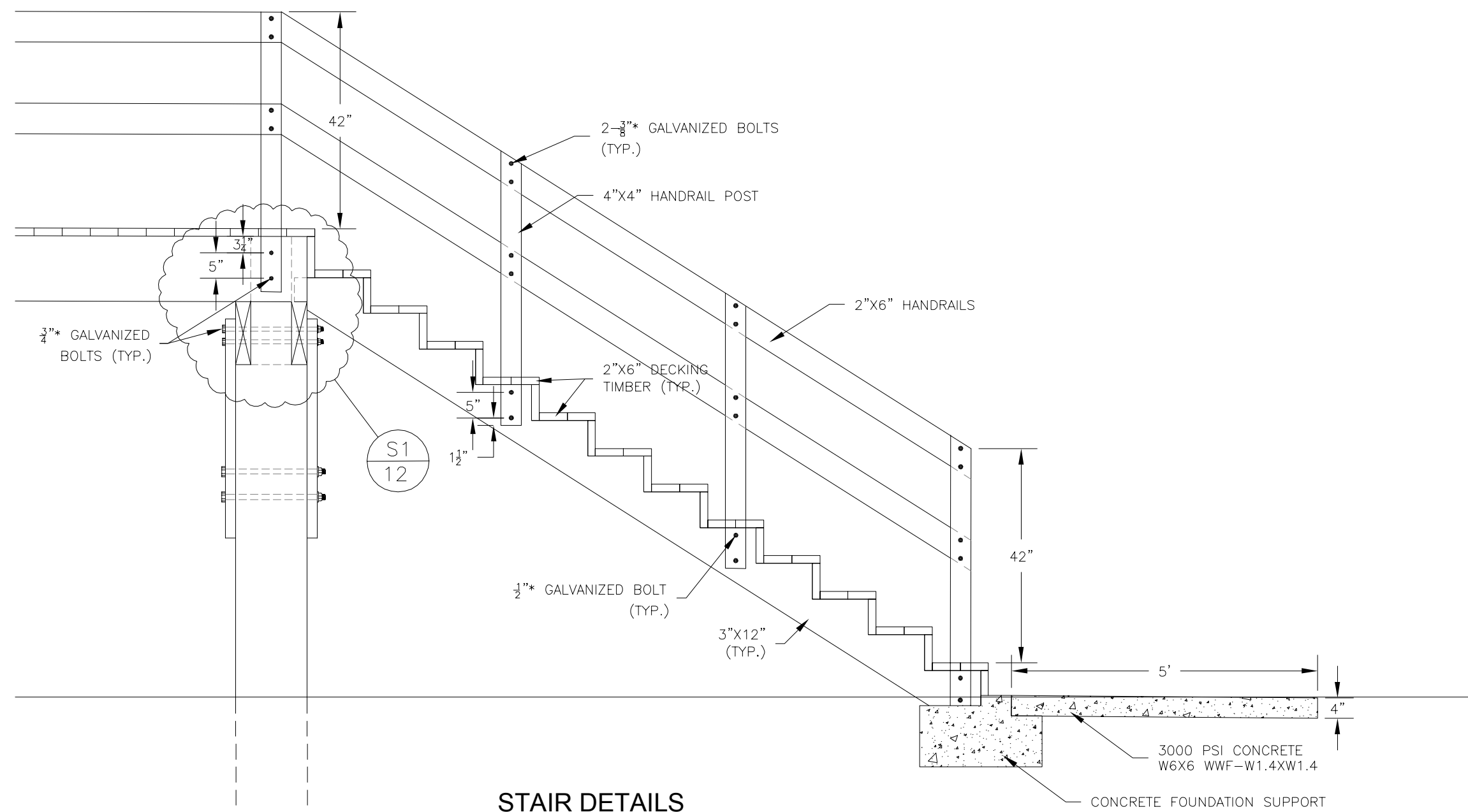
WALKWAY DETAILS

DESIGNED K.A.K.	PROJECT NO C2001-010-02
DRAWN E.R.	SCALE AS SHOWN
CHECKED D.M.S.	DRAWING NO 11 15
REVIEWED J.T.A.	DATE OCTOBER 2003
DATE OCTOBER 2003	

D.O. FILE NO. 8A-38,435

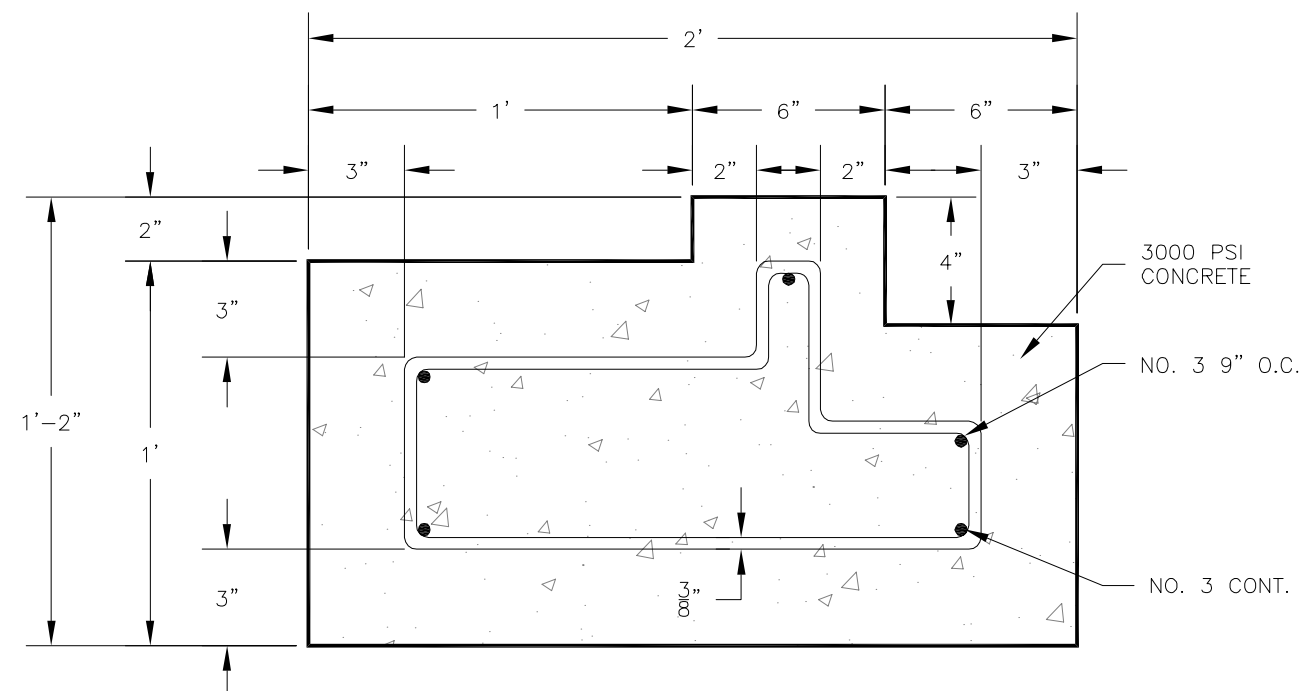
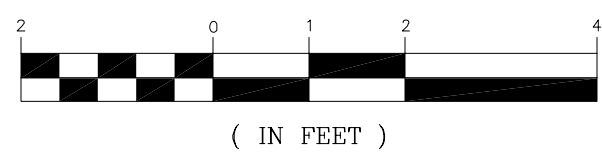
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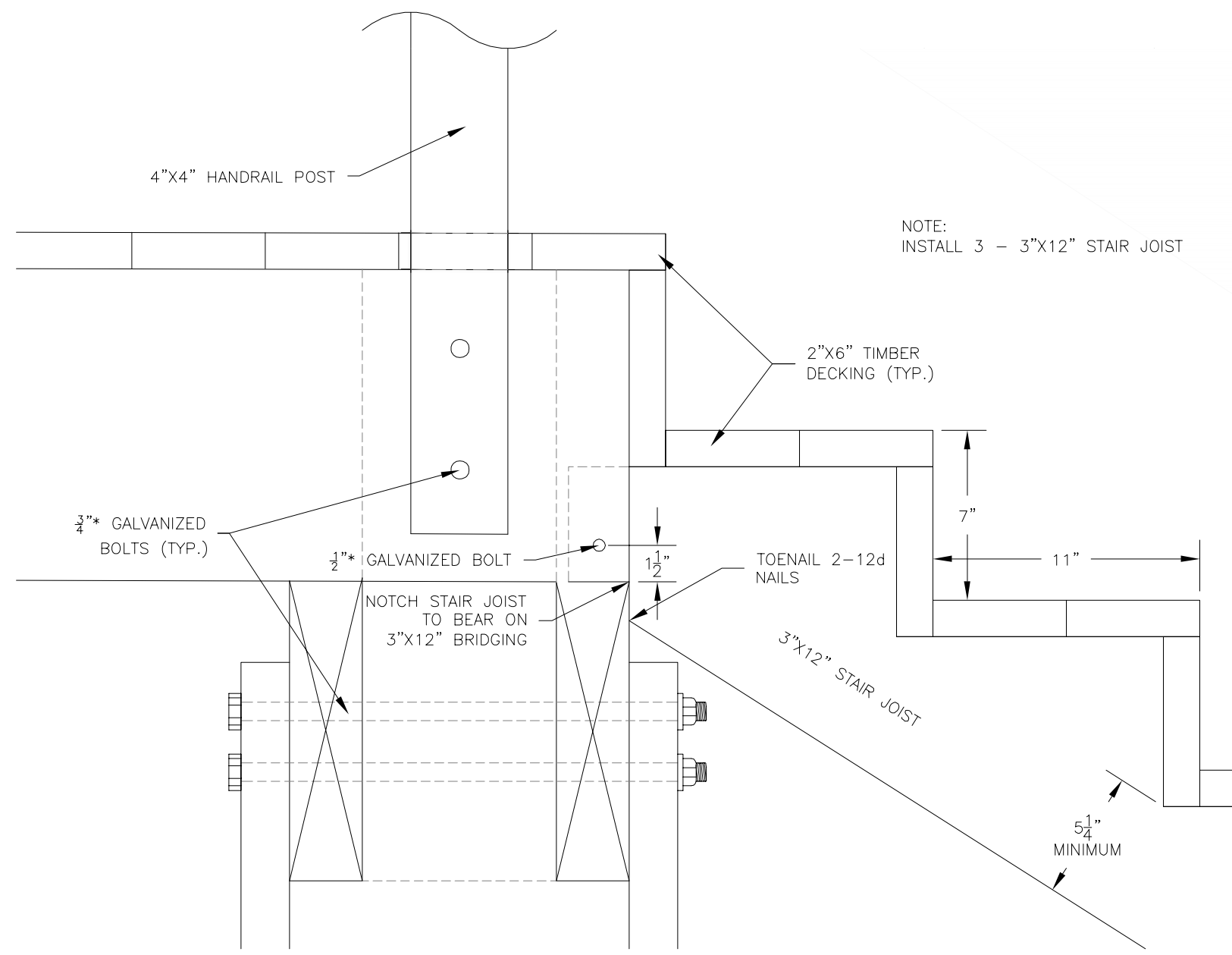
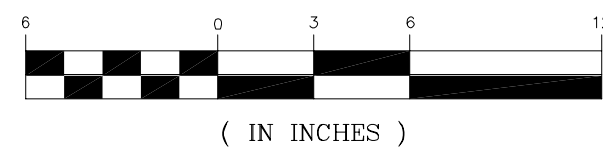
STAIR DETAILS

GRAPHIC SCALE



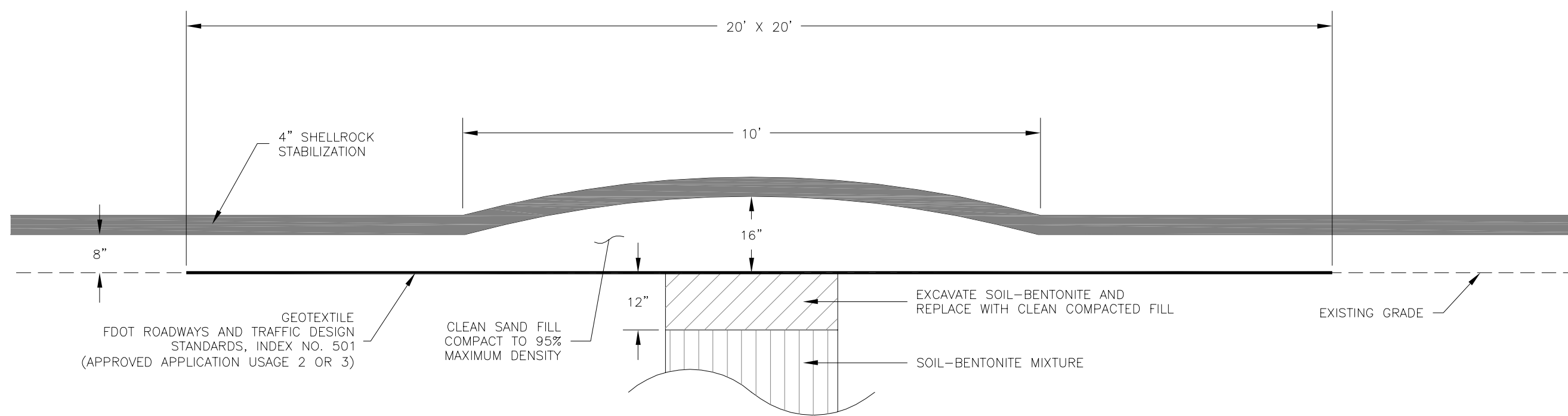
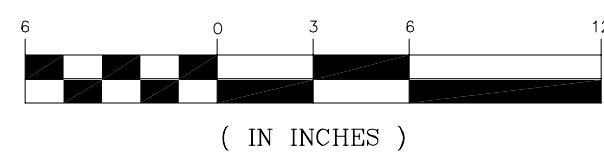
STAIR CONCRETE FOUNDATION  
SUPPORT REINFORCEMENT

GRAPHIC SCALE



STAIR CONNECTION

GRAPHIC SCALE



SLURRY WALL ROAD CROSSING

SCALE: N.T.S.

AS-BUILT  
NO CHANGES

GENERAL NOTES

SAFETY ON THIS  
JOB DEPENDS  
ON YOU

LEGEND

REVISIONS

REV. NO.	SYM.	ZONE	DESCRIPTION	DATE
1			DESIGN REVIEW COMMENTS	MAY 2004

**TAYLOR ENGINEERING INC.**  
9000 CYPRESS GREEN DRIVE, SUITE 200  
JACKSONVILLE, FLORIDA 32256  
CERTIFICATE OF AUTHORIZATION # 4815

DU-9 DREDGED MATERIAL MANAGEMENT PLAN  
FLORIDA INLAND NAVIGATION DISTRICT

DRAWING TITLE

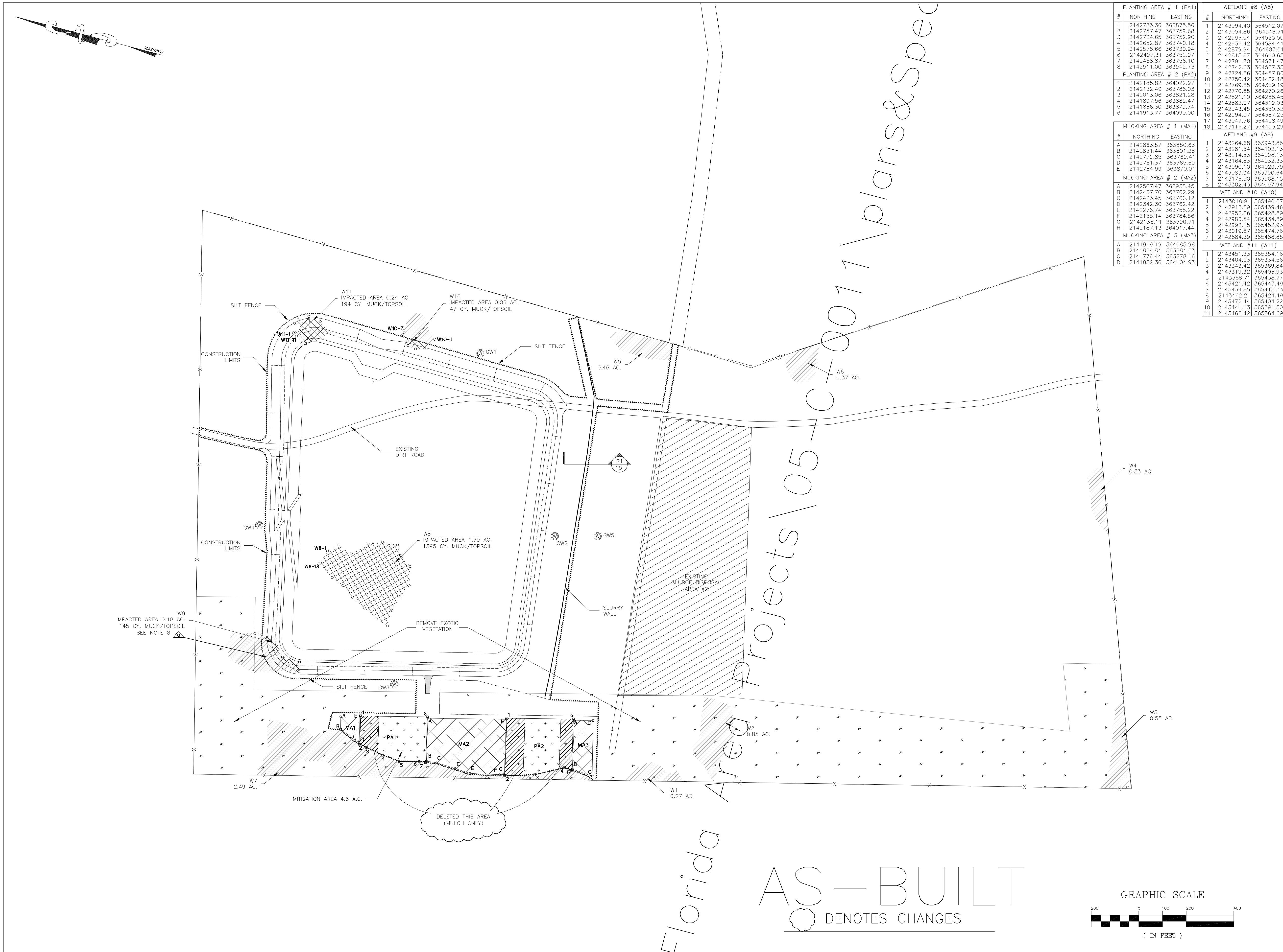
WALKWAY DETAILS

DESIGNED K.A.K.	PROJECT NO. C2001-010-02
DRAWN E.R.	SCALE AS SHOWN
CHECKED D.M.S.	DRAWING NO.
REVIEWED J.T.A.	12 15
DATE OCTOBER 2003	OF

D.O. FILE NO. 8A-38,435

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PLANTING AREA # 1 (PA1)			WETLAND #8 (W8)		
#	NORTHING	EASTING	#	NORTHING	EASTING
1	2142783.36	363875.56	1	2143094.40	364512.07
2	2142757.47	363759.68	2	2143054.86	364548.71
3	2142724.65	363752.90	3	2142996.04	364525.50
4	2142652.87	363740.18	4	2142936.42	364584.44
5	2142578.66	363730.94	5	2142879.94	364607.01
6	2142497.31	363752.97	6	2142815.87	364610.65
7	2142468.87	363756.10	7	2142791.70	364571.47
8	2142511.00	363942.73	8	2142742.63	364537.33
PLANTING AREA # 2 (PA2)			WETLAND #9 (W9)		
#	NORTHING	EASTING	#	NORTHING	EASTING
1	2142185.82	364022.97	1	2143264.68	363943.86
2	2142132.49	363786.03	2	2143281.54	364102.13
3	2142013.06	363821.28	3	2143214.53	364098.13
4	2141897.56	363882.47	4	2143164.83	364032.33
5	2141866.30	363879.74	5	2143090.10	364029.79
6	2141913.77	364090.00	6	2143083.34	363990.64
MUCKING AREA # 1 (MA1)			WETLAND #10 (W10)		
#	NORTHING	EASTING	#	NORTHING	EASTING
A	2142963.57	363850.63	1	2143018.91	365490.67
B	2142851.44	363801.28	2	2142913.89	365439.46
C	2142779.85	363769.41	3	2142952.06	365428.89
D	2142761.57	363765.60	4	2142986.54	365434.89
E	2142784.99	363870.01	5	2142992.15	365452.93
MUCKING AREA # 2 (MA2)			WETLAND #11 (W11)		
#	NORTHING	EASTING	#	NORTHING	EASTING
A	2142507.47	363938.45	1	2143451.33	365354.16
B	2142467.70	363762.29	2	2143404.03	365334.56
C	2142423.45	363766.12	3	2143343.42	365369.84
D	2142442.30	363762.42	4	2143319.32	365406.93
E	2142276.74	363758.22	5	2143368.71	365438.77
F	2142155.14	363784.56	6	2143421.42	365447.49
G	2142136.11	363790.71	7	2143434.85	365415.33
H	2142187.13	364017.44	8	2143482.21	365424.49
MUCKING AREA # 3 (MA3)			WETLAND #12 (W12)		
#	NORTHING	EASTING	#	NORTHING	EASTING
A	2141909.19	364085.98	1	2142884.39	365488.85
B	2141864.84	363894.63			
C	2141776.44	363878.16			
D	2141832.36	364104.93			

- GENERAL NOTES
1. HORIZONTAL CONTROL BASED ON FLORIDA'S STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD27.
  2. ALL ELEVATIONS REFERENCED TO NGVD 1929.
  3. TOPOGRAPHIC SURVEY PERFORMED BY ACOE JAN. 1998. (D.O. FILE NO. 8E-37,788)
  4. BOUNDARY SURVEY BY ST. JOHNS SURVEY SEPT. 1992, REVISED JULY 1994. (PROJECT NO. 250-021)
  5. CONTRACTOR SHALL FIELD VERIFY ALL SURVEY DATA BEFORE BEGINNING CONSTRUCTION.
  6. THE CONTRACTOR SHALL REMOVE 6 INCHES OF MUCK/TOPSOIL FROM THE IMPACTED WETLANDS AND DISTRIBUTE EVENLY IN THE PROPOSED MUCKING AREAS.
  7. CONTRACTOR SHALL NOT DISTURB AREAS OUTSIDE OF CONSTRUCTION LIMITS, EXCEPT FOR AREAS OF EXOTIC VEGETATION REMOVAL.
  8. CONTRACTOR SHALL PRESERVE UNIMPACTED WETLANDS BETWEEN CONSTRUCTION LIMITS AND EDGE OF PERIMETER DITCH.

SAFETY ON THIS  
JOB DEPENDS  
ON YOU

LEGEND			
	GW1	GROUNDWATER MONITORING WELLS (PROPOSED)	
	CONSTRUCTION LIMITS		
	EXISTING FENCE		
	SILT FENCE		
	PLANTING AREA		ROAD
	UNIMPACTED WETLANDS		MUCKING AREA
	REMOVE EXOTIC VEGETATION (CHINESE TALLOW)		IMPACTED WETLANDS

REVISIONS			
REV. NO.	SYM	ZONE	DESCRIPTION
3			REVISED TO ACCOMPANY AMENDMENT NO. 0002

**TAYLOR ENGINEERING INC.**  
9000 CYPRESS GREEN DRIVE, SUITE 200  
JACKSONVILLE, FLORIDA 32256  
CERTIFICATE OF AUTHORIZATION # 4815

DU-9 DREDGED MATERIAL MANAGEMENT PLAN  
FLORIDA INLAND NAVIGATION DISTRICT

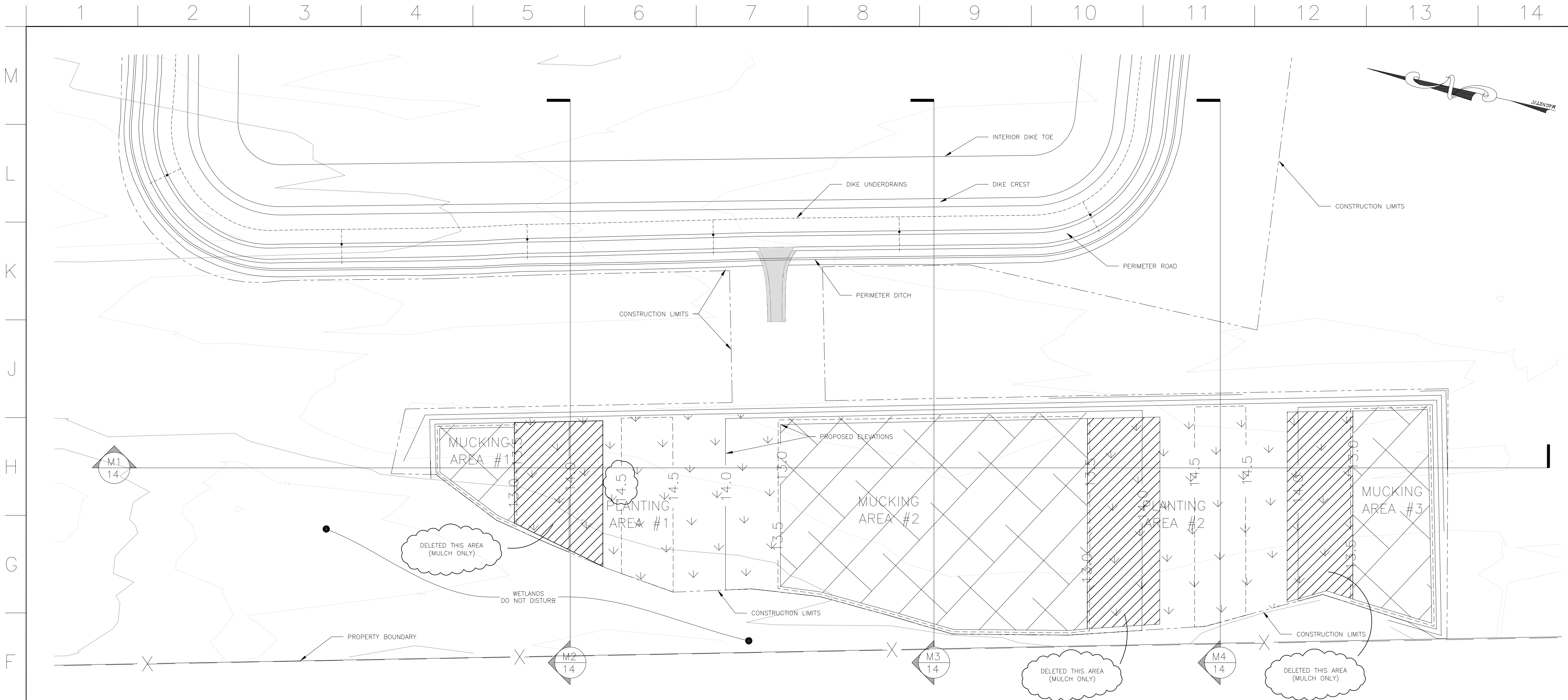
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**ENVIRONMENTAL IMPACTS  
AND PROPOSED ENVIRONMENTAL PLAN**

SEAL	DESIGNED	PROJECT NO.
	K.A.K.	C2001-010-02
	DRAWN	SCALE
	E.R.	AS SHOWN
	CHECKED	DRAWING NO.
	D.M.S.	
	REVIEWED	
	J.T.A.	
	DATE	
	OCTOBER 2003	

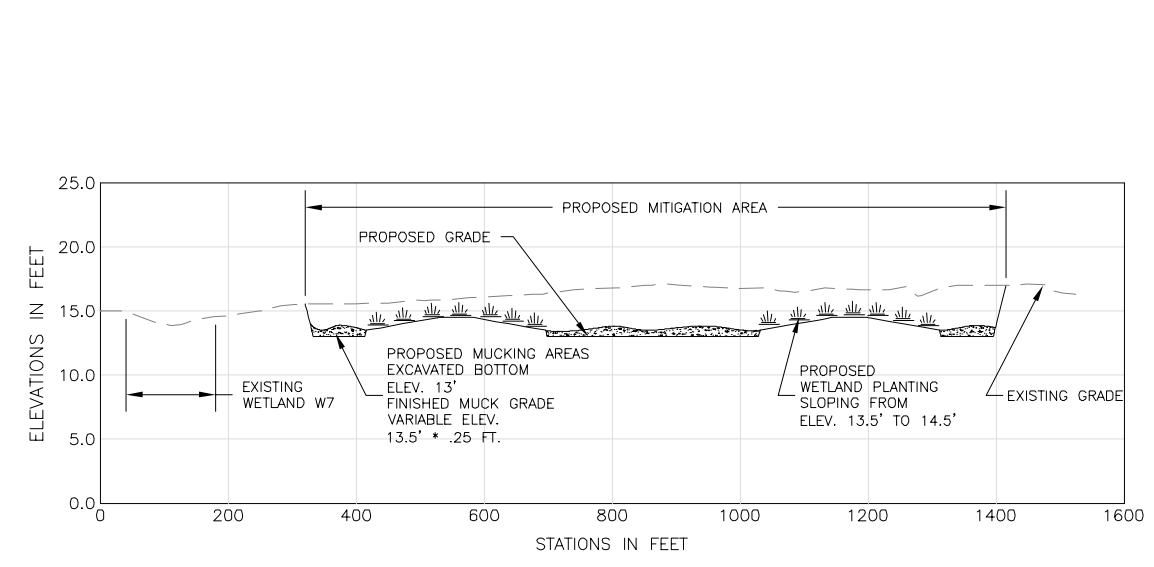
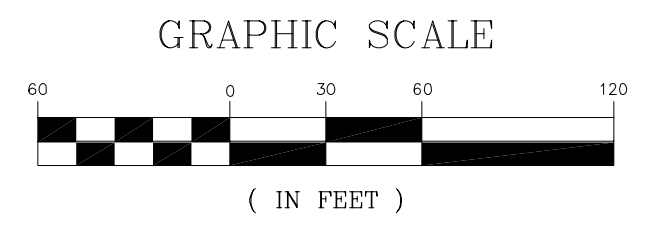
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OF

D.O. FILE NO. 8A-38,435

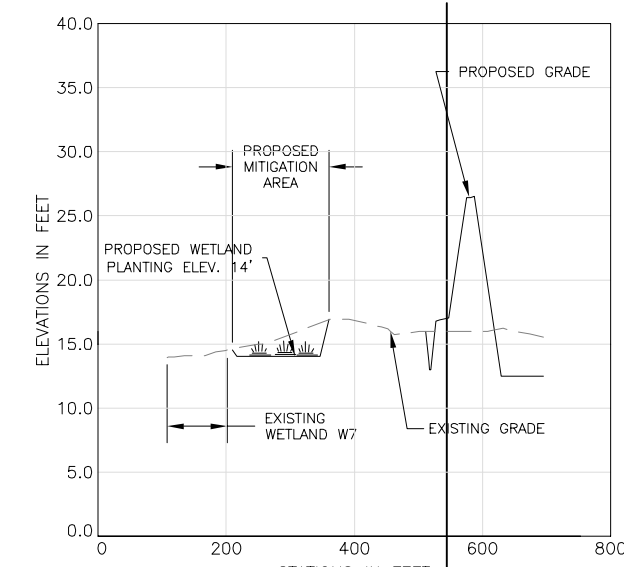
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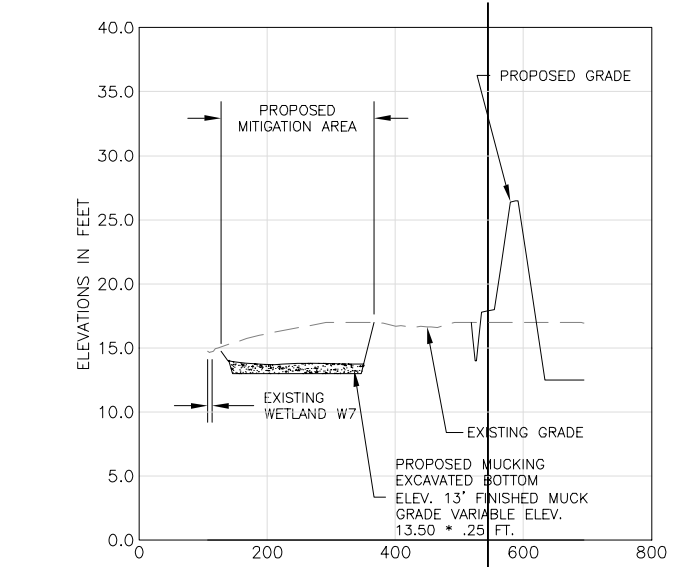
MITIGATION GRADING PLAN



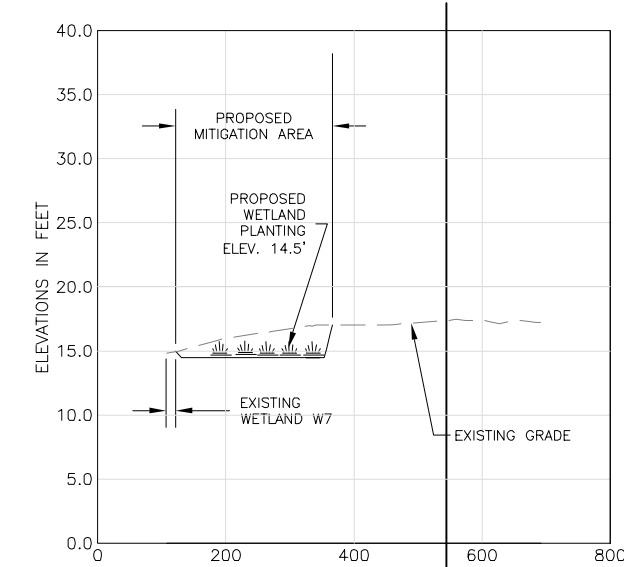
MITIGATION SECTION 1



MITIGATION SECTION 2



MITIGATION SECTION 3



MITIGATION SECTION 4

AS-BUILT  
DENOTES CHANGES

- GENERAL NOTES
1. HORIZONTAL CONTROL BASED ON FLORIDA'S STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD27.
  2. ALL ELEVATIONS REFERENCED TO NGVD 1929.
  3. TOPOGRAPHIC SURVEY PERFORMED BY ACCE JAN. 1998. (D.O. FILE NO. 8E-37,788)
  4. BOUNDARY SURVEY BY ST. JOHNS SURVEY SEPT. 1992, REVISED JULY 1994. (PROJECT NO. 250-021)
  5. CONTRACTOR SHALL FIELD VERIFY ALL SURVEY DATA BEFORE BEGINNING CONSTRUCTION.
  6. TRANSITION SLOPES FROM EXISTING GROUND TO THE MITIGATION AREA SHOULD BE NO STEEPER THAN 5H:1V
  7. PLANTING COVERS 50% OF MITIGATION AREA.
  8. ALL TREE SAPLINGS 4'-6' IN SIZE.
  9. ALL SAPLINGS PLANTED ON 10' CENTERS.
  10. CONTRACTOR SHALL NOT DISTURB AREAS OUTSIDE OF CONSTRUCTION LIMITS.

MITIGATION PLANTING SCHEDULE

COMMON NAME	SCIENTIFIC NAME
BALD CYPRESS	<i>TAXODIUM DISTICHUM</i>
POND CYPRESS	<i>TAXODIUM ASCENDENS</i>
RED MAPLE	<i>ACER RUBRUM</i>
SWAMP TUPELO	<i>NYSSA SYLVATICA</i> VAR. <i>BIPLORA</i>
POP ASH	<i>FRAXINUS CAROLINIANA</i>

SAFETY ON THIS  
JOB DEPENDS  
ON YOU

LEGEND

---	CONSTRUCTION LIMITS
- - -	EXISTING FENCE
- - -	DIKE UNDERDRAIN
+	PLANTING AREA
///	UNIMPACTED WETLANDS
•	REMOVE EXOTIC VEGETATION (CHINESE TALLOW)

REVISIONS

REV. NO.	SYM	ZONE	DESCRIPTION
1			DESIGN REVIEW COMMENTS

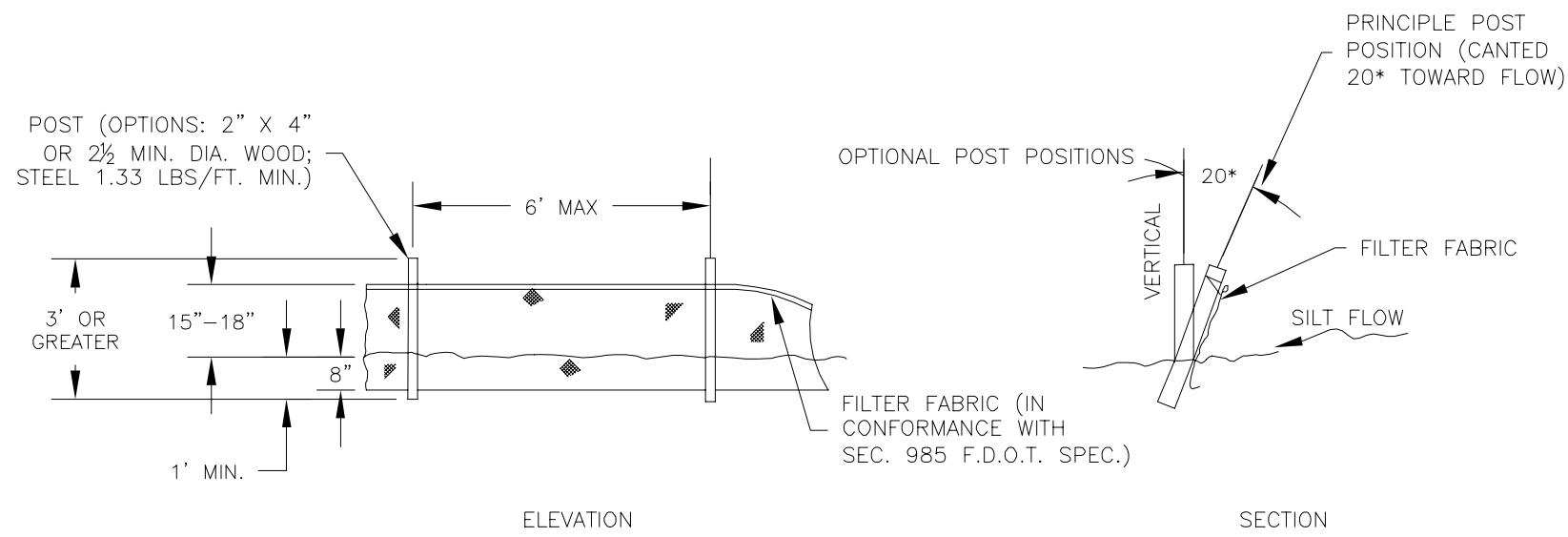
**TAYLOR ENGINEERING INC.**  
9000 CYPRESS GREEN DRIVE, SUITE 200  
JACKSONVILLE, FLORIDA 32256  
CERTIFICATE OF AUTHORIZATION # 4815

DU-9 DREDGED MATERIAL MANAGEMENT PLAN  
FLORIDA INLAND NAVIGATION DISTRICT

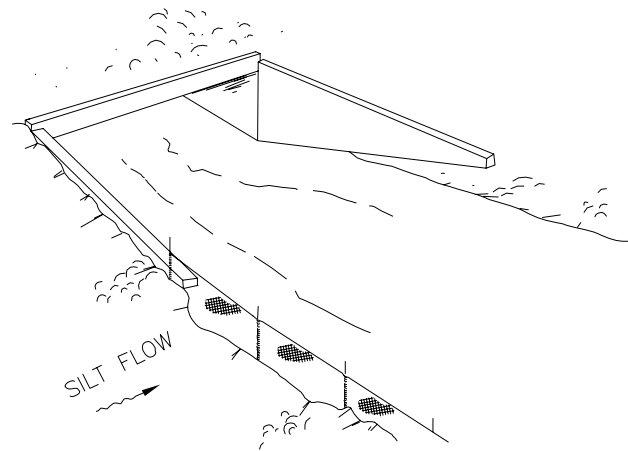
DRAWING TITLE		
ENVIRONMENTAL MITIGATION GRADING AND SECTIONS		
SEAL	DESIGNED K.A.K.	SCALE
	DRAWN E.R.	
	CHECKED D.M.S.	
	REVIEWED J.T.A.	
	DATE OCTOBER 2003	

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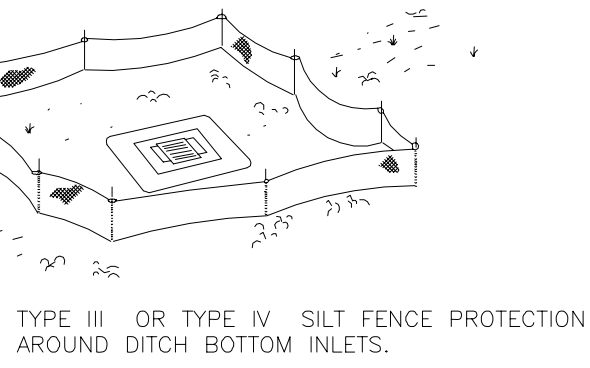


TYPE III SILT FENCE

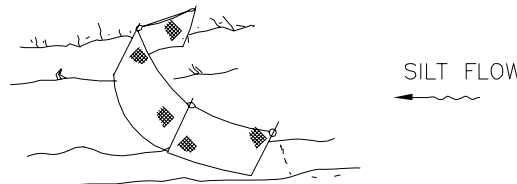


TYPE III OR TYPE IV SILT FENCE

DO NOT DEPLOY IN A MANNER THAT SILT FENCES WILL ACT AS A DAM ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE USED AT UPLAND LOCATIONS AND TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER.



TYPE III OR TYPE IV SILT FENCE PROTECTION AROUND DITCH BOTTOM INLETS.

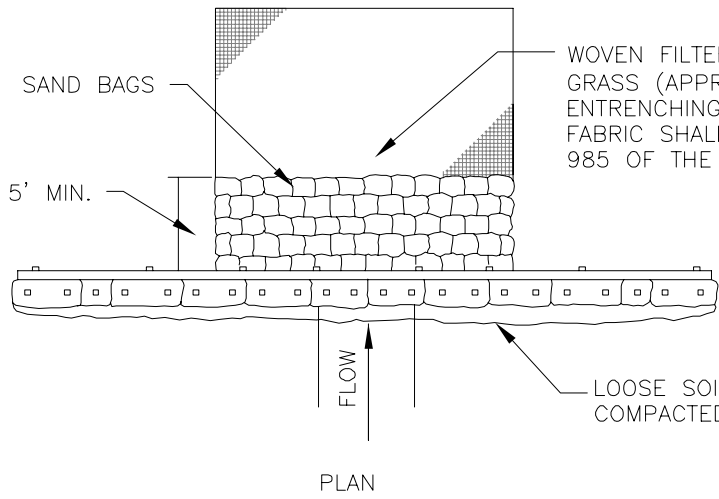


TYPE III SILT FENCE

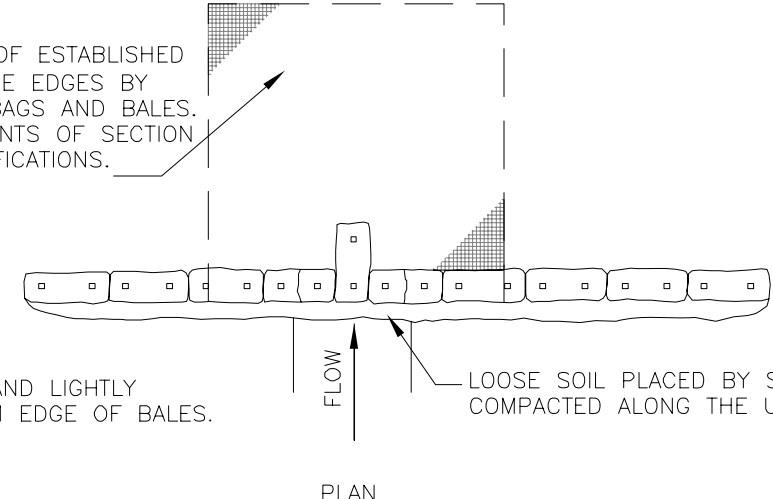
NOTE: SPACING FOR TYPE III & TYPE IV FENCE TO BE IN ACCORDANCE WITH CHART 1, SHEET 1 OF 3, F.D.O.T. INDEX NO. 102 AND DITCH INSTALLATIONS AT DRAINAGE STRUCTURES SHEET 2 OF 3, F.D.O.T. INDEX NO. 102.

SILT FENCE TYPE III & IV

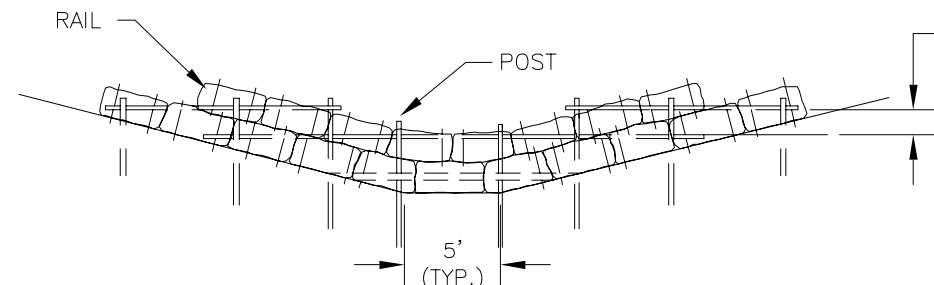
SCALE: N.T.S.



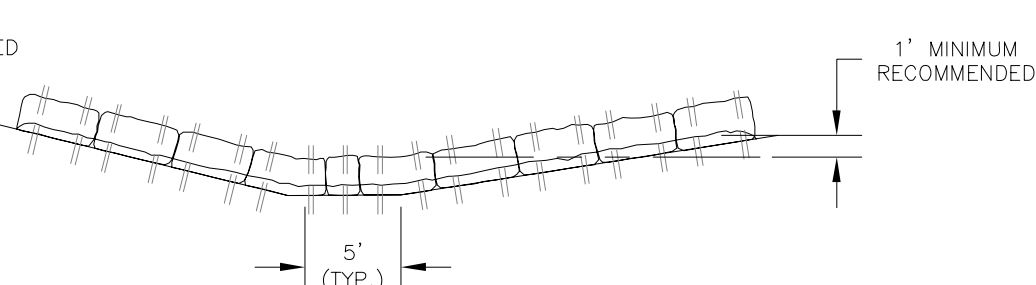
PLAN



PLAN



ELEVATION



ELEVATION

ANCHOR LOWER BALES WITH 2 - 2" X 2" X 4" STAKES PER BALE. ANCHOR TOP BALES TO LOWER BALES WITH 2 - 2" X 2" X 4" STAKES PER BALE.

ANCHOR BALES WITH 2 - 2" X 2" X 4" STAKES PER BALE

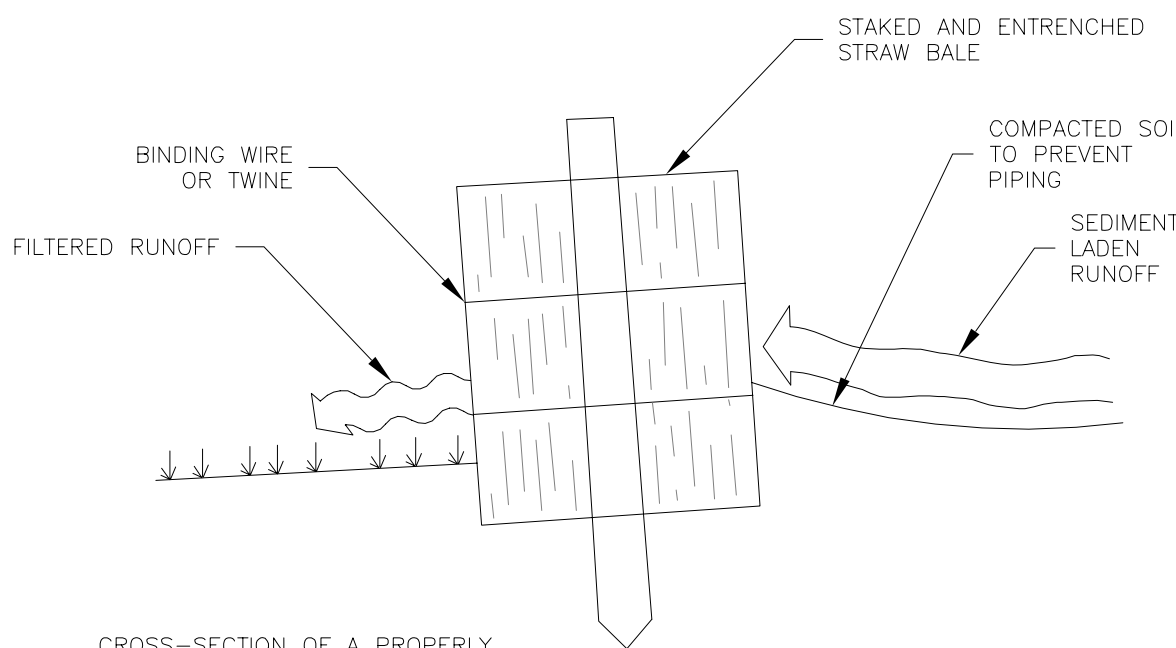
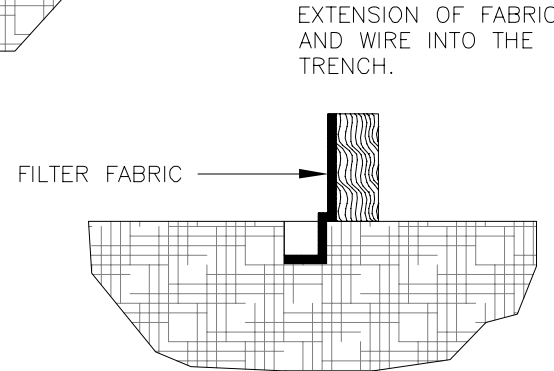
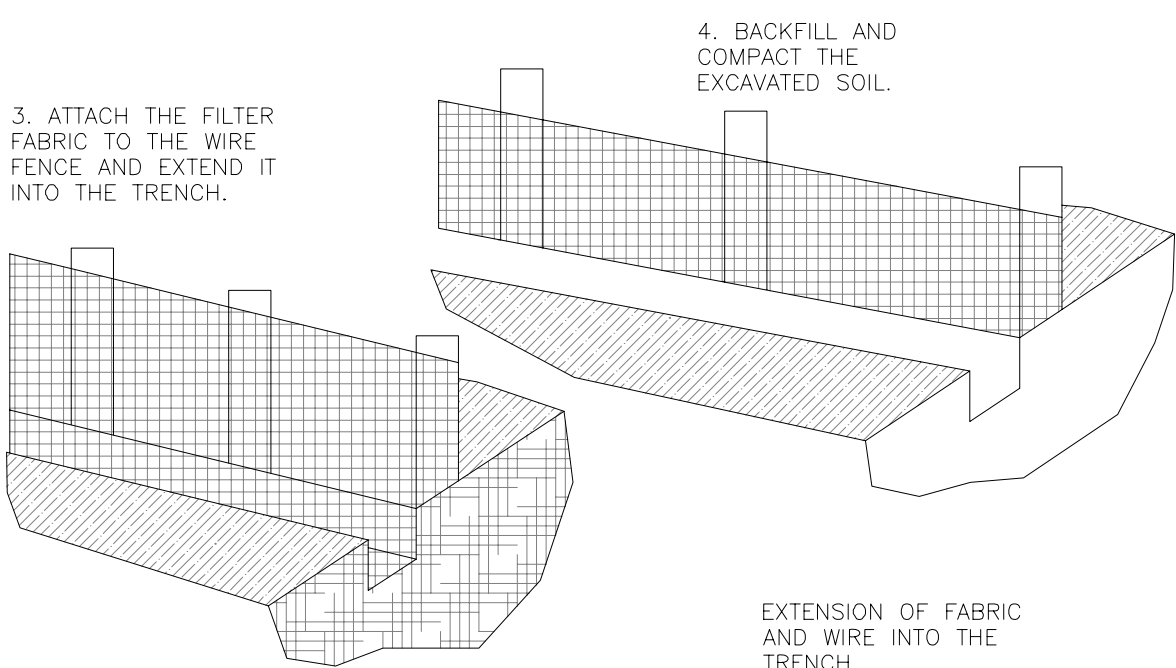
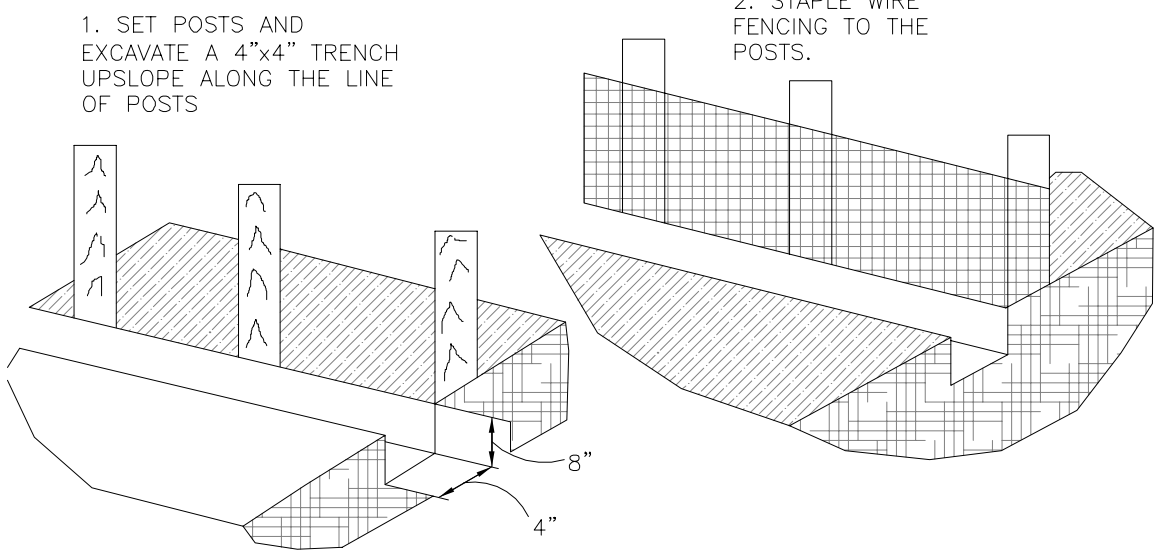
APPLICATION AND SPACING: THE USE OF TYPES I & II BALE BARRIERS SHOULD BE LIMITED TO THE CONDITIONS OUTLINED IN CHART 1, SHEET 1 OF 3, INDEX NO. 102

HAY BARRIERS TYPE 1 & 2

SCALE: N.T.S.

TYPE II

TYPE I



CROSS-SECTION OF A PROPERLY INSTALLED STRAW BALE

CONSTRUCTION DETAILS FOR SILT FENCES

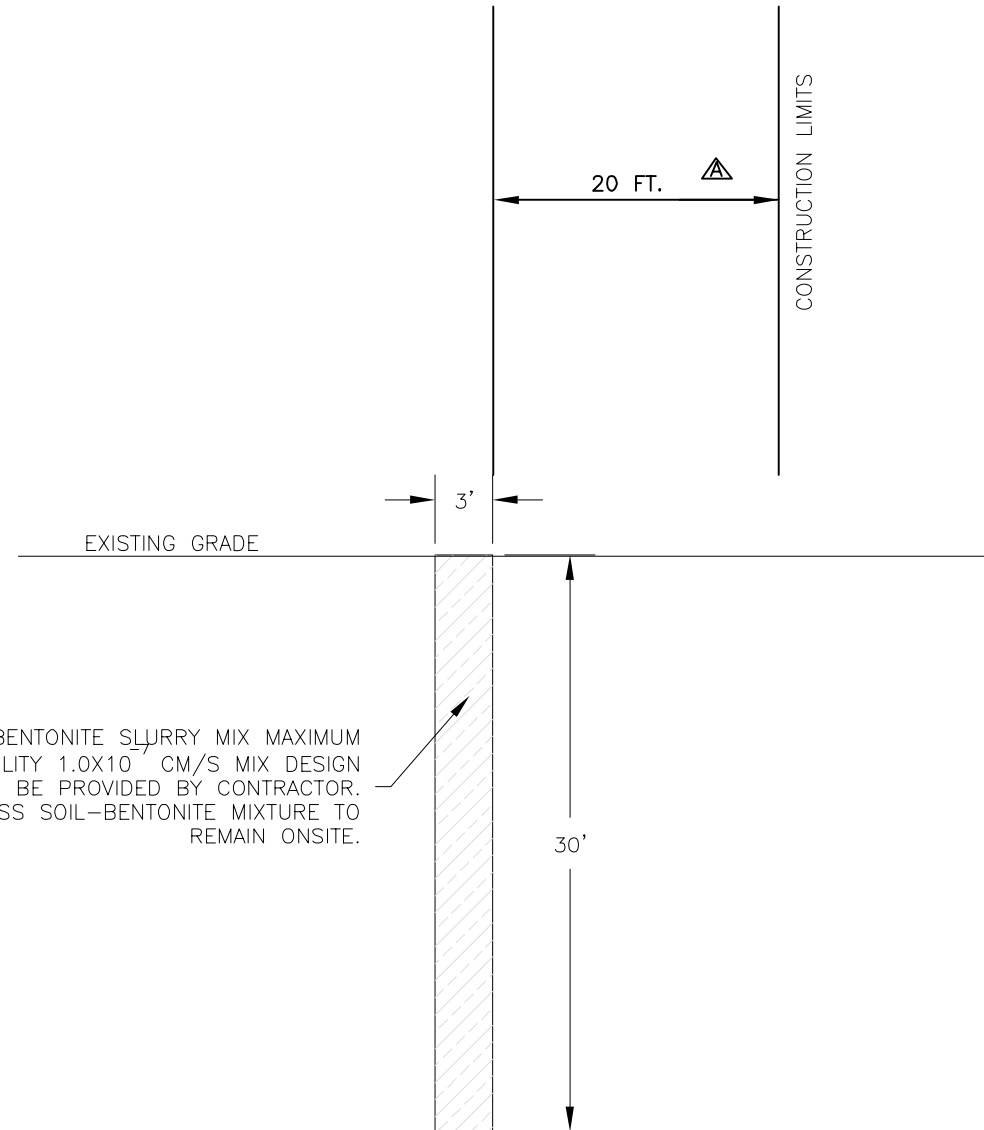
SCALE: N.T.S.

STAKED HAY BALE

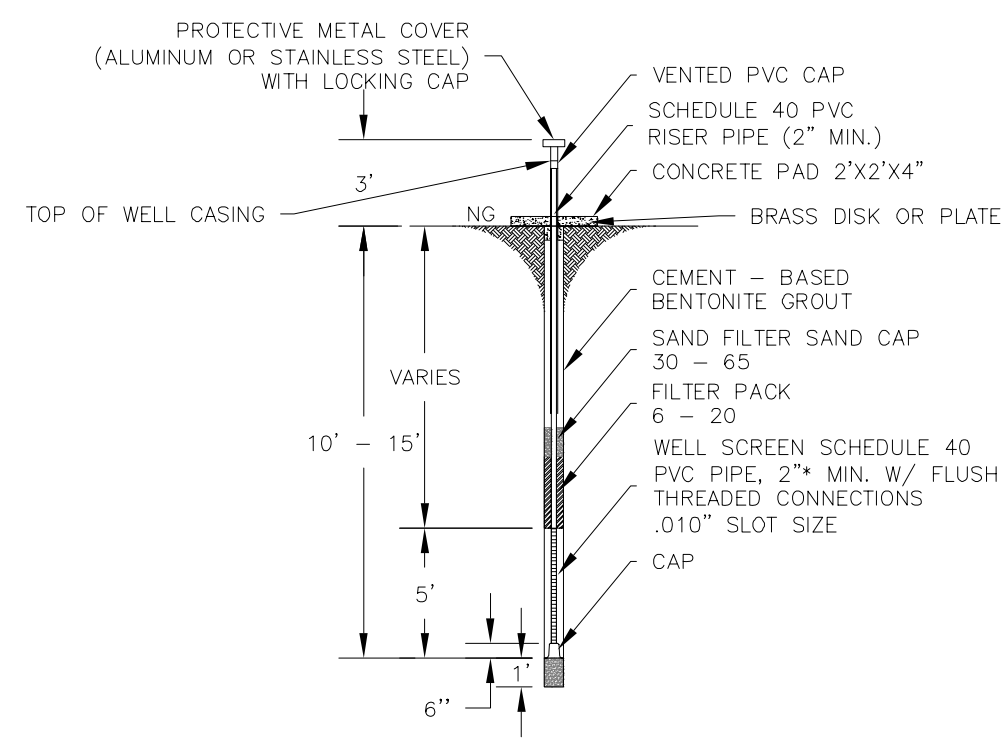
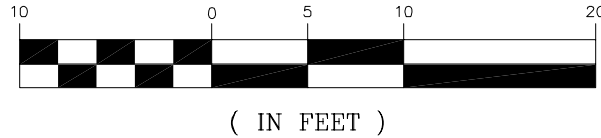
SCALE: N.T.S.

EROSION CONTROL AND GRASSING/SODDING NOTES:

1. THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN EROSION CONTROL MEASURES AS NECESSARY TO COMPLY WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS AND COMPLY WITH STATE WATER QUALITY CRITERIA FOR STORMWATER DISCHARGE. EROSION CONTROL MEASURES INCLUDE BUT ARE NOT LIMITED TO TURBIDITY SCREENS, MULCHING, HAY BALES, AND SILT FENCE. IF A WATER QUALITY VIOLATION OCCURS, THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ALL DAMAGE AND ALL COSTS WHICH MAY RESULT INCLUDING LEGAL FEES, CONSTRUCTION COSTS, AND FINES.
2. DISTURBED AREAS SHALL BE SEEDED/GRASSED, FERTILIZED, MULCHED, AND MAINTAINED IN ACCORDANCE WITH CITY, COUNTY, STATE, AND FEDERAL REQUIREMENTS UNTIL A PERMANENT VEGETATIVE COVER IS ESTABLISHED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE NPDES FINAL STABILIZATION REQUIREMENTS.
3. EROSION CONTROL MEASURES SHALL BE MAINTAINED FOR THE ENTIRE DURATION OF THE PROJECT OR UNTIL SODDING AND/OR GRASS IS ESTABLISHED.
4. EROSION CONTROL MEASURES SHALL BE PLACED TO CONTAIN ALL POINTS OF DISCHARGE TO SURFACE WATERS OR WETLANDS INCLUDING CURB INLETS, DITCH BOTTOM INLETS, DITCHES, AND DOWNSTREAM PORTIONS OF STREAMS AND TIDAL WATERS ADJACENT TO CONSTRUCTION.
5. 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR WILL SUBMIT A "NOTICE OF INTENT" TO THE EPA IN ACCORDANCE WITH NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM RULES AND REGULATIONS.
6. THE CONTRACTOR SHALL WRAP STORM GRATES IN FILTER FABRIC TO PREVENT SEDIMENTATION OF THE STORM SEWER SYSTEM. CONTRACTOR SHALL MAINTAIN THE FILTER FABRIC UNTIL THE ASPHALT/CONCRETE PAVEMENT IS PLACED.
7. THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED.
8. 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.
9. EROSION CONTROL MEASURES SHOWN REFERENCE FDOT 2000 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. INDEX NUMBERS REFERENCE FDOT 2000 ROADWAY AND TRAFFIC DESIGN STANDARDS.



SLURRY WALL GRAPHIC SCALE



MONITORING WELL

SCALE: N.T.S.

GENERAL NOTES

1. HORIZONTAL CONTROL BASED ON FLORIDA'S STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD27.
2. ALL ELEVATIONS REFERENCED TO NGVD 1929.
3. TOPOGRAPHIC SURVEY PERFORMED BY ADCE JAN. 1998. (D.O. FILE NO. 8E-37,788)
4. BOUNDARY SURVEY BY ST. JOHNS SURVEY SEPT. 1992, REVISED JULY 1994. (PROJECT NO. 250-021)
5. CONTRACTOR SHALL FIELD VERIFY ALL SURVEY DATA BEFORE BEGINNING CONSTRUCTION.
6. TRANSITION SLOPES FROM EXISTING GROUND TO THE MITIGATION AREA SHOULD BE NO STEEPER THAN 5H:1V
7. PLANTING COVERS 50% OF MITIGATION AREA.
8. ALL TREE SAPLINGS 4'-6' IN SIZE
9. ALL SAPLINGS PLANTED ON 10' CENTERS.

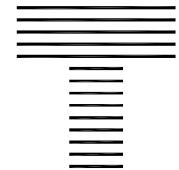
SAFETY ON THIS JOB DEPENDS ON YOU

LEGEND

AS-BUILT  
NO CHANGES

REVISIONS

REV. NO.	SYM	ZONE	DESCRIPTION	DATE
1	Δ	13-J	REVISED TO ACCOMPANY AMENDMENT NO. 0002	SEP 2004



**TAYLOR ENGINEERING INC.**  
9000 CYPRESS GREEN DRIVE, SUITE 200  
JACKSONVILLE, FLORIDA 32256  
CERTIFICATE OF AUTHORIZATION # 1815

DU-9 DREDGED MATERIAL MANAGEMENT PLAN  
FLORIDA INLAND NAVIGATION DISTRICT

DRAWING TITLE

ENVIRONMENTAL AND  
EROSION CONTROL DETAILS

SEAL	DESIGNED	PROJECT NO.
	K.A.K.	C2001-010-02
	DRAWN	SCALE
	E.R.	AS SHOWN
	CHECKED	DRAWING NO.
	D.M.S.	
	REVIEWED	
	J.T.A.	
	DATE	
	OCTOBER 2003	

15 15  
OF

D.O. FILE NO. 8A-38,435



**FLORIDA INLAND NAVIGATION DISTRICT  
DREDGED MATERIAL MANAGEMENT  
AREA DU-9 EXPANSION  
ST. JOHNS COUNTY, FLORIDA**

**ADDENDUM NO. 1  
ATTACHMENT 2**

Section 02262 Dredged Material Management Area  
DU-9 Slurry Wall Specifications

1 SECTION 02262

2 SLURRY WALL

3  
4  
5 **PART 1 - GENERAL**

6  
7 SUMMARY

8 This work includes, but is not limited to, preparation, placement and cleaning of slurry; excavation of slurry  
9 trench; stockpiling; sand and sediment removal from the slurry trench bottom; supplying, hauling, blending and  
10 placing all backfill mixture materials; temporary and permanent treatment of the top of the slurrywall; disposal  
11 of excess slurry; and quality control testing.

12  
13 REFERENCES

14  
15 American Petroleum Institute (API) Standard 13A

16  
17 DEFINITIONS

18  
19 Engineer

20 The word Engineer, in this Section, will be defined as the Contracting Officer (CO) and/or the Contracting  
21 Officer's Representative (COR).

22  
23 District

24 The word District, in this Section, will be defined as the Government.

25  
26 Bentonite

27 An ultra fine natural clay whose principal mineral constituent is premium grade sodium cation  
28 montmorillonite.

29  
30 Groundwater Level

31 The surface elevation of naturally occurring groundwater when subjected to atmospheric pressure. Water  
32 may be perched in discrete areas at elevations higher than the general groundwater level.

33  
34 Fines

35 Fine grained soil particles smaller than No. 200 U.S. Standard Sieve size.

36  
37 Remote Mixing Area

38 A temporary working surface constructed at a remote location from the slurry wall alignment in which the soil  
39 bentonite backfill will be proportioned and mixed. Whenever the area adjacent to the trench is not sufficient for  
40 mixing and blending of the backfill material, the soil trench excavation or imported soil will be transported to  
41 an approved remote area for mixing, and the resulting backfill will be transported back to the trench for  
42 placement.

43  
44 Slurry

45 A stable colloidal suspension of hydrated bentonite in water.

46  
47 Slurry Ponds

Ponds constructed for the purpose of storing mixed slurry. Earthwork for slurry ponds must consist of fill only. Excavation into the existing surface will not be permitted, unless approved on a case-by-case basis by the Engineer.

#### Slurry Trench

A vertical trench excavation, at least 3 feet wide, full of bentonite slurry to support the trench side walls.

#### Slurry Wall

A semi-impervious barrier of blended soil and bentonite, at least 2 or 3 feet wide, with a hydraulic conductivity of  $1 \times 10^{-7}$  centimeters per second (cm/sec) or less, constructed using a slurry trench during excavation and backfilling.

#### Working Surface

The prepared temporary working surface (pad) from which the slurry trench excavation, backfill mixing, and backfilling operations are performed.

### SUBMITTALS

#### Preconstruction

The Contractor shall submit the following items for approval to the Engineer at least 10 working days prior to commencing the Work:

#### Bentonite Certification

A Certification of Compliance including test results from the bentonite supplier that each shipment of the bentonite meets the requirements of the Specifications and is in compliance with American Petroleum Institute (API) Standard 13A. The sources for all bentonite shall be included in the Statement of Certification.

#### Water Source

Submit description of water source. Provide chemical analysis if source is from a source other than potable water supply.

#### Detailed Work Plan

Submit detailed work plan including:

- a. List of major equipment to be used.
- b. Specifications of the batch plant and slurry mixing including tanks, pumps, valves, hoses and supply lines.
- c. Layouts showing locations of equipment, ponds, mixing areas, access and haul roads.
- d. Material and equipment storage methods and location.
- e. Procedures for water-bentonite slurry mixing, transportation and recirculation.
- f. Procedures for control of drainage, spills, wastes, etc.
- g. Sequence and schedule for temporary working surfaces, haul roads, remote mixing and backfill



1 transportation, as necessary, working surface removal, and restoration.

2  
3 h. Procedures for trench excavation, slurry placement, backfill mixing and backfill placement.

4  
5 i. Material properties (gradation and moisture content) and sources for materials to be used to augment the  
6 fines content of the backfill mixture.

7  
8 j. Disposal procedures, disposal facilities and haulers for excess slurry.

9  
10 Quality Control Program

11 Details of the Contractor's quality control program, including personnel, organization, responsibilities,  
12 sampling and testing equipment and frequencies, inspections and the quality control report forms.

13  
14 Pre-Construction Mix Test

15 The Contractor shall submit the results of any pre-construction mix tests to the Engineer.

16  
17 The Work shall not commence prior to approval of the preconstruction SUBMITTALS by the Engineer.

18  
19 During Construction

20 The Contractor shall submit for approval during construction:

21  
22 Quality Control Tests

23 The Contractor shall prepare and submit Quality Control Test Results within 24 hours of completion unless  
24 otherwise directed by the Engineer. The Contractor shall maintain quality control and construction  
25 SUBMITTALS up to date. If the Contractor for whatever reason, does not submit acceptable quality control  
26 data in a timely manner, the Engineer may stop the associated work without a contract extension. Quality  
27 control tests, frequency of tests, and test requirements are determined in the Quality Control section of this  
28 specification.

29  
30 PAYMENT

31  
32 Payment for the Slurrywall will include all materials, labor, and equipment necessary to construct the work  
33 specified in this section and all appropriate costs in connection therewith or incidental thereto. Measurement  
34 for payment will be on the linear footage of slurrywall constructed. Approximately 20% of the total bid price  
35 for slurrywall construction will be withheld until the Contractor's equipment is demobilized and the site has  
36 been cleaned up and restored to the satisfaction of the Engineer.

37  
38 **PART 2 - PRODUCTS**

39  
40 Bentonite

41 The bentonite for use in the slurry trench shall be unadulterated powdered premium grade Wyoming sodium  
42 montmorillonite, or equal, as approved by the Engineer. The use of chemically treated bentonite will not be  
43 permitted. The bentonite shall be tested by the manufacturer and shall meet the following requirements as  
44 determined from a mixture of bentonite and distilled water prepared in accordance with API Standard  
45 Specifications, 13A, latest revision, and tested in accordance with API Code RP 13B, latest revision:

46  
47 a. Apparent viscosity: 15 centipoise minimum @ 68°F

1 b. Filtrate loss: 20 cc max in 30 minutes @ 100 psi

2  
3 c. Yield: 90 Barrels minimum

4  
5 Water

6 Water shall be free of excessive amounts of deleterious substances, as determined by the Engineer, that  
7 could adversely affect the properties of the slurry or backfill. The water shall comply with the following:

8  
9 a. pH 6 to 8

10  
11 b. Hardness <50 ppm

12  
13 c. shall have low dissolved salts, oil and total organic residue to allow proper hydration of bentonite.

14  
15 Initial Slurry Mixture

16 At the time of introducing slurry into the excavations, the slurry mixture shall have the following  
17 specifications:

18  
19 a. a minimum of 5.5 % bentonite per unit weight of water (range 5.5 to 7%) with a minimum unit weight  
20 of 64 pounds per cubic foot.

21  
22 b. an apparent viscosity not be less than 15 centipoise (40 Marsh seconds) at 68 degrees Fahrenheit as  
23 measured by the direct indicating viscometer.

24  
25 c. a filtrate loss not be greater than 20 cubic centimeters in 30 minutes at 100 psi as measured by the filter  
26 press.

27  
28 The Contractor shall add additional bentonite to make the slurry denser or more viscous than the limits  
29 specified above, if deemed necessary by the Engineer.

30  
31 Slurry Mixture in Trench

32 The slurry mixture in the trench shall meet all of the following requirements:

33  
34 a. a unit weight greater than 64 pounds per cubic foot;

35  
36 b. a unit weight at least 15 pounds per cubic foot less than the backfill unit weight;

37  
38 c. a unit weight less than 85 pounds per cubic foot, or as approved by the Engineer;

39  
40 d. a filtrate loss not greater than 20 cubic centimeters in 30 minutes at 100 psi as measured by the filter  
41 press;

42  
43 e. an apparent viscosity not less than 15 centipoise (40 Marsh seconds) at 68 degrees Fahrenheit as  
44 measured by the direct-indicating viscometer; and

45  
46 f. a sand content less than 18 percent as measured by API RP-13B, Sand Content Kit.



### Backfill

Materials for the backfill mix shall consist of slurry, dry bentonite if necessary, excavated trench materials, on-site soils, and approved off-site soil. Backfill shall be free of roots, organic soil, lumps, trash and debris. The backfill mixture shall have the following gradation limits:

100% passing 3" sieve

70-100% passing #4 sieve

>30% passing the #200 sieve

However, occasional lumps of up to 5 inches in their largest dimensions may be permitted provided that the lumps are not close together and, in the Engineer's opinion, will not affect the performance of the slurrywall. If material from off-site is needed to increase the fines content of the backfill mixture, the fines content of the backfill mixture shall not exceed 45 percent, unless approved by the Engineer on a case-by-case basis. The backfill mixture shall have a consistency that has the appearance of a wet concrete and a slump of 3 to 5 inches, just prior to placing. The density of the backfill shall be a minimum of 15 pounds per cubic foot more than the slurry at any depth in the trench.

The five tests running average hydraulic conductivity of the backfill shall be  $1 \times 10^{-7}$  cm/sec, or less. The maximum permissible value shall be  $1 \times 10^{-6}$  cm/sec as measured by the modified filter press test. The Contractor shall vary the bentonite content and mixing operations periodically, based on varying in-situ soil properties, to achieve the specified hydraulic conductivity value.

## **PART 3 - EXECUTION**

### EQUIPMENT

Equipment for excavating the slurry trenches shall be capable of excavating the minimum required trench width of 3 feet in a single pass of the excavating tool. The equipment shall be capable of excavating at least 5 feet deeper than the maximum depth shown on the drawings. If used, dragline buckets shall be free of protrusions. The Contractor's slurry plant shall include a suitable mixer capable of producing a colloidal suspension of bentonite in water, plus necessary pumps, sumps, valves, lines, hoses and storage tanks or ponds to provide a continuous supply of slurry.

The method of cleaning used for removal of suspended solids and bottom sediments from the slurry in the trench shall be capable of maintaining the slurry density within the specified limits. Equipment for mixing and placing the backfill shall be any type of earthmoving or grading equipment, such as bulldozers, disk harrows, and blade graders, or blenders and pug mills, that are capable of thoroughly mixing the backfill material (soil and bentonite/bentonite slurry) into a homogeneous mixture as specified. Placement of initial backfill in the trench may require a clamshell bucket.

### QUALITY CONTROL

#### General

The Contractor shall establish and maintain records of quality control for all slurry wall construction operations to assure compliance with contract requirements. The materials to be tested, test methods, sample and/or test

locations, frequencies, test specifications and failure response actions for the quality control program are summarized below.

#### Quality Control Tests

##### Bentonite Powder

Bentonite powder shall be tested once for each truck or rail car shipment. Bentonite powder shall conform to the following:

YP/PV Ratio:	1.5 max per API 13A
Plastic Viscosity:	10 or greater per API 13A
Filtrate Loss	less than 12.5 cubic cm per API 13A
Moisture Content	less than 10% per ASTM D2216

##### Initial Slurry Mixture

The initial slurry mixture shall be tested once for each batch. Initial slurry mixture shall conform to the following:

Viscosity	greater than 40 sec per API RP 13B-1
Density	greater than 64 lb/cf per API RP 13B-1
Filtrate loss	less than 20 cubic cm per API RP 13B-1
PH	6.5 to 10 per API RP 13B-1

##### In-Trench Slurry Mixture

In-trench slurry mixture shall be tested a minimum of once per day and shall conform to the following:

Density	64 - 85 lb/cf per API RP 13B-1
Viscosity	greater than 40 sec per API RP 13B-1
PH	6.5 to 10 per API RP 13B-1
Sand content	10% max

##### Backfill

Backfill shall be tested for every 100 linear feet of slurry wall and shall conform to the following requirements:

Gradation and Fine Material Content	finer content less than 45% per ASTM D422
Permeability Tests	Hydraulic conductivity shall average $1 \times 10^{-7}$ cm/sec or less for the last five tests as measured per ASTM D5084-00e1 Standard Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter. No one test shall measure greater than $1 \times 10^{-6}$ cm/sec.

##### Sample and Test Location References

All quality control samples and testing shall be referenced to the trench station (or baseline station) and depth below grade at which the sample was obtained or the test was conducted.

##### Surveillance of Excavation



1 The shall visually check and classify soil excavated from the proposed maximum depth of trench excavation.  
2 Cuttings from the bottom of the trench shall be examined on a continuous basis to ensure continuity. The  
3 Contractor shall document the soil classification of samples obtained from the bottom of trench and submit the  
4 test results to the Engineer for approval.

#### 5 6 Trench Depth

7 The Contractor shall provide a method of measuring the trench with incremental markings at 0.5 foot. The  
8 Contractor shall record the trench depth every 50 feet along the trench centerline. The Contractor shall measure  
9 and record the depth to the bottom of the trench excavation immediately after excavating and immediately  
10 before backfilling to document the depth and siltation conditions at the bottom of the trench.

#### 11 12 Assistance from Contractor

13 The Engineer reserves the right to make reasonable measurements as deemed necessary to inspect and evaluate  
14 the as-built condition of the cutoff wall. The Contractor shall cooperate with the Engineer during performance  
15 of these measurements, without claims for extras or delays. The Contractor shall provide at no additional cost  
16 the following:

- 17  
18 1. Labor and materials to measure the lines and grades of the temporary working surfaces and the bottom of the  
19 trench excavation under the observation of the Engineer.
- 20  
21 2. Labor and materials required to collect samples and test samples for quality assurance tests.
- 22  
23 3. Equipment Calibration. The test equipment shall be calibrated in accordance with applicable API and  
24 ASTM standards.

### 25 26 TRENCH CONSTRUCTION

#### 27 28 Temporary Working Surface

29 The Contractor shall prepare the temporary working surface by stripping topsoil and organic materials from the  
30 area of the temporary working surface, clearing trees, excavating soil, salvaging and stockpiling of selected  
31 materials, disposing of surplus and/or unsuitable material, furnishing and placing embankment or fill materials,  
32 and trimming the earth grade as required.

33  
34 The longitudinal grade of the working surface shall not exceed 1 percent, unless approved by the Engineer.  
35 The level of the temporary working surface shall be at least 3 feet above the measured groundwater level. The  
36 temporary working surface shall be graded to ensure excavation equipment produces a vertical trench. The  
37 Contractor shall provide and maintain gravity drainage control along the temporary working surface. The  
38 Contractor shall maintain the working surface free of excessive amounts of debris and slurry.

#### 39 40 Remote Mixing Area

41 The Contractor shall prepare and maintain, as needed, a temporary working surface at a remote location from  
42 the slurry wall alignment in which the soil bentonite backfill will be proportioned and mixed. The Contractor  
43 may use the area between the slurrywall and the dike perimeter ditch for a remote mixing area. The Contractor  
44 may request to the Engineer additional areas. The request for additional areas may or may not be approved by  
45 the Engineer.

#### 46 47 Slurry Preparation and Placement



1 The Contractor shall prepare slurry using a flash or paddle mixer to provide stable colloidal suspension of  
2 bentonite in water. Freshly mixed slurry shall be allowed to hydrate initially in storage ponds or tanks. The  
3 slurry shall be occasionally agitated or recirculated in the storage ponds until bentonite is fully hydrated,  
4 based on stabilized Marsh Funnel viscosity readings, and until the slurry appears homogeneous. No slurry  
5 is to be made in the trench. The slurry shall meet the requirements set forth in the Quality Control section  
6 for Initial Slurry Mixture, before the slurry is introduced into the trench.

8 Slurry Placement. Slurry shall be introduced into the trench at the time excavation begins. The level of the  
9 slurry in the open trench shall be maintained at all times at least 3 feet above the groundwater level and no  
10 more than 2 foot below the temporary 'working surface, unless approved by the Engineer. Dilution of the  
11 slurry by surface water shall be minimized. The slurry shall be maintained at all times in a condition which  
12 meets the requirements set forth in the Quality Control Section for In-Trench Slurry. The Contractor shall  
13 maintain the level of the slurry in the trench at all times, including weekends, nights and holidays.

#### 14 Slurry Cleaning

15 The Contractor shall remove, from the trench, any slurry which contains excessive suspended solids as  
16 indicated by a slurry unit weight exceeding 85 pounds per cubic foot or a slurry unit weight within 15  
17 pounds per cubic foot of the unit weight of the backfill mixture. The excessive suspended solids may be  
18 separated and removed from the slurry, and the "desanded" slurry may be re-introduced into the trench; or  
19 the slurry with the excessive suspended solids may be used for the preparation of the backfill mixture.

21 If the density of the slurry becomes greater than 85 pounds per cubic foot, the slurry shall be removed by  
22 methods approved by the Engineer and the excess solids shall be removed by screening or by a centrifugal-  
23 type de-sander.

#### 25 Excavation Procedure

26 The Contractor shall take all precautions in conduct of work as may be necessary to avoid disturbance or  
27 damage to existing utilities and other structures. The trench excavation shall be at least 3 feet wide. The  
28 trench excavation shall be continuous to the depths indicated on the Drawings or as directed by the  
29 Engineer. Actual depth of the wall will be determined based on visual observation of the trench cuttings.

31 The entire depth of excavation shall be carried along the trench line. Prior to backfilling any portion, and  
32 before the excavator starts his next cut, the Contractor shall pass the excavating tool along the completed  
33 section of the trench excavation to confirm continuity. The toe of the slope of the trench excavation shall  
34 not advance beyond the backfill slope by more than 200 feet.

36 The excavation shall be continuous from one end to the other, unless approved by the Engineer. If for  
37 some reason it becomes necessary for the slurry wall to be constructed in phased segments, some re-  
38 excavation of the previously constructed phase of the slurry wall will be necessary. This re-excavation shall  
39 consist of backfill removal and reconstruction of a minimum horizontal length of 10 feet of slurry wall over  
40 the entire depth of the wall.

42 The Contractor shall maintain trench stability to its full depth at all times. Sloughs, slides or any instability  
43 shall be re-excavated and/or repaired as approved by the Engineer. Material excavated from slurry trenches  
44 that is suitable for the backfill mixture may be stockpiled adjacent to the trench for subsequent processing.

#### 46 Slurry Trench Backfill

47 Mixing and blending shall be performed in such a manner as to produce the required backfill as specified



1 in the Quality Control Section for Backfill. The Contractor shall be responsible for developing and  
2 enacting a mixing technique to satisfy the hydraulic conductivity criterion.. The Contractor shall employ  
3 one or more of the following techniques to satisfy the hydraulic conductivity criterion:

4  
5 a. Use a higher percentage of clay and silt materials in the backfill by separating and spoiling the excavated  
6 sandy layers.

7  
8 b. Add dry bentonite, up to 3.5 percent by dry weight, to the backfill. Bentonite shall be spread over 6 to 8  
9 inch thick layers of soil backfill material and mixed thoroughly.

10  
11 c. Add more bentonite to the slurry mixture.

12  
13 d. Use material from an approved off-site area with a high percentage of clay and/or silt in the backfill by  
14 importing material with a minimum fines content of 65 percent and a maximum moisture content of 20  
15 percent.

16  
17 Stockpiled material from excavation and on-site materials for slurry wall backfill shall be thoroughly  
18 mixed and blended into a homogeneous mass, free from large lumps or pockets of fines, sand, or gravel, by  
19 windrowing, disk harrowing, bulldozing, blading, or by other methods such as a pug mill, or as approved  
20 by the Engineer. Slurry may be sluiced into the backfill mixture during blending operations to obtain the  
21 required consistency and slump. Sluicing with water will not be permitted.

22  
23 Excess slurry which may drain away from the mixing operations shall be allowed to drain back into the  
24 trench or shall be collected if mixing is done at a remote location. In no case should excess slurry flow  
25 outside of the construction limits. The Contractor may be required to add dry bentonite to the backfill  
26 material by broadcasting, pug mill or other methods to achieve the desired hydraulic conductivity value.

27  
28 If the backfill material is mixed adjacent to the trench, the Contractor shall construct a small dike (0.5-1  
29 foot high) parallel to the slurry trench in order to keep the backfill from flowing uncontrolled into the  
30 trenches as a result of wave action created by the dozer mixing the backfill. Intermittent openings in the  
31 dike will be allowed so that excess slurry may flow back into the trenches. The Contractor shall mix  
32 backfill at a remote mixing area if conditions are not acceptable to the Engineer along side of the trench.

33  
34 The backfill mixture shall be in compliance with the backfill requirements as set forth in the Quality  
35 Control Section for backfill, immediately prior to introduction into the trench.

36  
37 The backfill shall be placed so that no pockets of slurry are present in the completed slurrywall. The  
38 backfill shall not be deposited in any manner that will cause segregation. Dropping of backfill material into  
39 the slurry will not be permitted. The Contractor shall backfill continuously in the direction of the  
40 excavation from the beginning of the trench to the end of the trench, unless approved by the Engineer.

41  
42 If a lead-in trench is not excavated, the initial backfill shall be placed by lowering the material to the  
43 bottom of the trench by means of a clamshell bucket or other approved equipment until the backfill  
44 emerges from below the slurry surface and achieves its natural angle of repose from the bottom of the  
45 trench to the surface. Placing operations shall proceed in such fashion that the top of the backfill below the  
46 surface of the slurry shall follow a reasonably uniform grade and shall not have hollows which may trap  
47 pockets of slurry during subsequent backfilling. The bulldozer operator shall pile sufficient backfill on the  
48 edge of the existing backfill to cause the backfill to enter the trench by sliding down the forward face of the



1 previously placed backfill.

2  
3 The toe of the backfill slope shall not be less than 30 feet following the toe of the excavation to permit  
4 proper cleaning of the bottom, if required, and to allow inspection and depth measurement. Additional  
5 backfill material shall be placed in the trench to accommodate settlement. No placing of backfill material  
6 shall be performed when the air temperature is continuously below 30 degrees Fahrenheit unless otherwise  
7 approved by the Engineer. Frozen material shall not be placed in the trench.  
8  
9

10  
11 Treatment of the Top of the Slurry Trench Cutoff Wall

12 A 2 foot temporary protective layer of excess slurry shall be placed over the top of the backfill mixture,  
13 after the backfill reaches the top of the slurry trench and before drying out of the backfill can occur. The  
14 Contractor shall not cap the slurry wall until approved by the Engineer. Excavation for the final slurry  
15 trench shall not be accomplished until that portion of the completed trench has been in place a minimum of  
16 7 days, except for the areas where traffic access must cross the wall.  
17

18 EXCESS SLURRY DISPOSAL

19  
20 Excess slurry shall be disposed of on-site in an area approved by the Engineer. Disposal of the slurry shall  
21 comply with all Federal, State, and Local laws and regulations. Under no circumstances shall slurry be  
22 placed or escape outside the construction limits.  
23  
24

25 -- End of Section --



**FLORIDA INLAND NAVIGATION DISTRICT  
DREDGED MATERIAL MANAGEMENT  
AREA DU-9 EXPANSION  
ST. JOHNS COUNTY, FLORIDA**

**ADDENDUM NO. 1**

**ATTACHMENT 3**

As-Built Drawings

Dredged Material Management Area DU-9

Permanent Discharge Line



# AS-BUILT OF DU-9 PERMANENT DISCHARGE PIPE

## RECORD DRAWING AS-BUILT TB. LANDMARK, INC.

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	COVER PAGE
2 - 5	DISCHARGE PIPE AS-BUILT
6	HELICAL ANCHOR TABLES
7 - 10	PROFILES
11	CLEARING LIMITS AS-BUILT
12	GRASS LIMITS PLANTED AS-BUILT



VICINITY MAP  
N.T.S.

### SURVEYOR'S NOTES


- THIS IS NOT A BOUNDARY SURVEY.
- THE PURPOSE OF THIS SURVEY IS TO SHOW ONLY THE SPECIFIC INFORMATION AND IMPROVEMENTS (AS-BUILT) AS DIRECTED BY THE CLIENT.
- THE RELATIVE LINEAR DISTANCE ACCURACY FOR THIS SURVEY EXCEEDS 1:10,000.
- ALL MEASUREMENTS ARE IN U.S. STANDARD FEET AND WERE MADE WITH A THEODOLITE AND ELECTRONIC DISTANCE MEASURING DEVICE AND/OR STEEL TAPE.
- THE UNDERSIGNED SURVEYOR HAS NOT BEEN PROVIDED A CURRENT TITLE OPINION OF MATTERS AFFECTING THE TITLE TO OR BOUNDARY OF THE SUBJECT PROPERTY. IT IS POSSIBLE THAT THERE ARE DEEDS OF RECORD, UNRECORDED DEEDS, EASEMENTS OR OTHER INSTRUMENTS WHICH COULD AFFECT THE BOUNDARIES.
- THIS IS A COPYRIGHTED DOCUMENT; NO PORTION OF IT MAY BE REPRODUCED, WHOLLY OR IN PART, WITHOUT THE EXPRESSED WRITTEN PERMISSION OF CODY'S PROFESSIONAL SURVEYING AND MAPPING, INC.
- THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF THE FLORIDA LICENSED SURVEYOR AND MAPPER SHOWN HEREON.
- THE REFERENCE BENCHMARK AS SHOWN HEREON IS ELEV. (3.61), AT NORTHING 2142823.60 EASTING 524105.64 AND IS BASED ON N.G.V.D. VERTICAL DATUM OF 1929, WAS SET FROM AN NGS VERTICAL MONUMENT POINT ID:DL5778
- ALL ELEVATIONS SHOWN HEREON ARE BASED ON THE REFERENCE BENCH MARK.
- HORIZONTAL COORDINATES ARE BASED ON NORTH AMERICAN DATUM 1983 (NAD83).
- BOUNDARY AND RIGHT OF WAY LINES ARE APPROXIMATE ONLY. ALL LINES SHOWN ARE PRIMARILY FOR GRAPHICAL AND REFERENCE INFORMATION AND COULD CHANGE UPON THE COMPLETION OF A BOUNDARY SURVEY.
- TOTAL LENGTH OF PIPE INSTALLED: 3,715 LF; TOTAL NUMBER OF MANHOLES INSTALLED: 15
- CONTOURS ARE BASED OFF ELEVATION CROSS SECTIONS TAKEN ON 100 FOOT INTERVALS ALONG DISCHARGE FACILITIES.
- PIPE SHOWN ON THE DRAWING DEPICTS THE PROPOSED LOCATION FROM THE CONSTRUCTION DRAWINGS AND NOT THE AS-BUILT LOCATION.

### LEGEND

- ± - DENOTES PLUS OR MINUS  
AB - DENOTES AS-BUILT  
ALUM - DENOTES ALUMINUM  
BM - DENOTES BENCHMARK  
BOC - DENOTES BACK OF CURB  
CL - DENOTES CENTERLINE  
C# - DENOTES CURVE NUMBER  
C/L - DENOTES CENTERLINE  
CMP - DENOTES CORRUGATED METAL PIPE  
CLR LMT - DENOTES CLEARING LIMITS  
CO - DENOTES CLEAN OUT  
CONC - DENOTES CONCRETE  
D/W - DENOTES DRIVEWAY  
Ø - DENOTES DIAMETER  
E - DENOTES EASTING COORDINATE  
ELEV. - DENOTES ELEVATION  
EOP - DENOTES END OF PIPE  
EP - DENOTES EDGE OF PAVEMENT  
ERCP - DENOTES ELLIPTICAL REINFORCED CONCRETE PIPE  
F/L - DENOTES FLOW LINE  
FFE - DENOTES FINISH FLOOR ELEVATION  
FM - DENOTES FORCE MAIN  
FNC - DENOTES FENCE  
FND - DENOTES FOUND  
GRND - DENOTES GROUND  
H - DENOTES HORIZONTAL  
HDPE - DENOTES HIGH DENSITY POLY ETHYLENE  
ID - DENOTES IDENTIFICATION MARK  
INV. - DENOTES INVERT  
IP - DENOTES IRON PIPE  
L - DENOTES LEFT  
LF - DENOTES LINEAR FEET

- (M) - DENOTES FIELD MEASURED  
MES - DENOTES MITERED END SECTION  
MON - DENOTES MONUMENT  
N - DENOTES NORTHING COORDINATE  
N.G.V.D. - DENOTES NATIONAL GEODETIC VERTICAL DATUM  
N.T.S. - DENOTES NOT TO SCALE  
O/S - DENOTES OFFSET  
OHL - DENOTES OVERHEAD LINE  
OR - DENOTES OFFICIAL RECORDS BOOK  
PC - DENOTES POINT OF CURVATURE  
POB - DENOTES POINT OF BEGINNING  
POC - DENOTES POINT OF COMMENCEMENT  
PT - DENOTES POINT OF TANGENCY  
PVC - DENOTES POLYVINYL CHLORIDE  
(R) - DENOTES RECORD DEED  
R - DENOTES RIGHT  
R/W - DENOTES RIGHT OF WAY  
RCP - DENOTES REINFORCED CONCRETE PIPE  
S - DENOTES SLOPE  
SR - DENOTES STATE ROAD  
SAN - DENOTES SANITARY  
STA - DENOTES STATION  
STD - DENOTES STANDARD  
STM - DENOTES STORM PIPE  
TBM - DENOTES TEMPORARY BENCHMARK  
TOB - DENOTES TOP OF BANK  
TOC - DENOTES TOP OF CURB  
TOS - DENOTES TOE OF SLOPE  
TYP - DENOTES TYPICAL  
UD - DENOTES UNDER DRAIN  
V - DENOTES VERTICAL  
W/ - DENOTES WITH  
W/O - DENOTES WITHOUT  
WL - WATER LINE  
WPP - DENOTES WOOD POWER POLE
- - DENOTES ACTUAL MANHOLE  
● - DENOTES PROPOSED MANHOLE  
⊗(\*,\*\*) - DENOTES SPOT ELEVATION

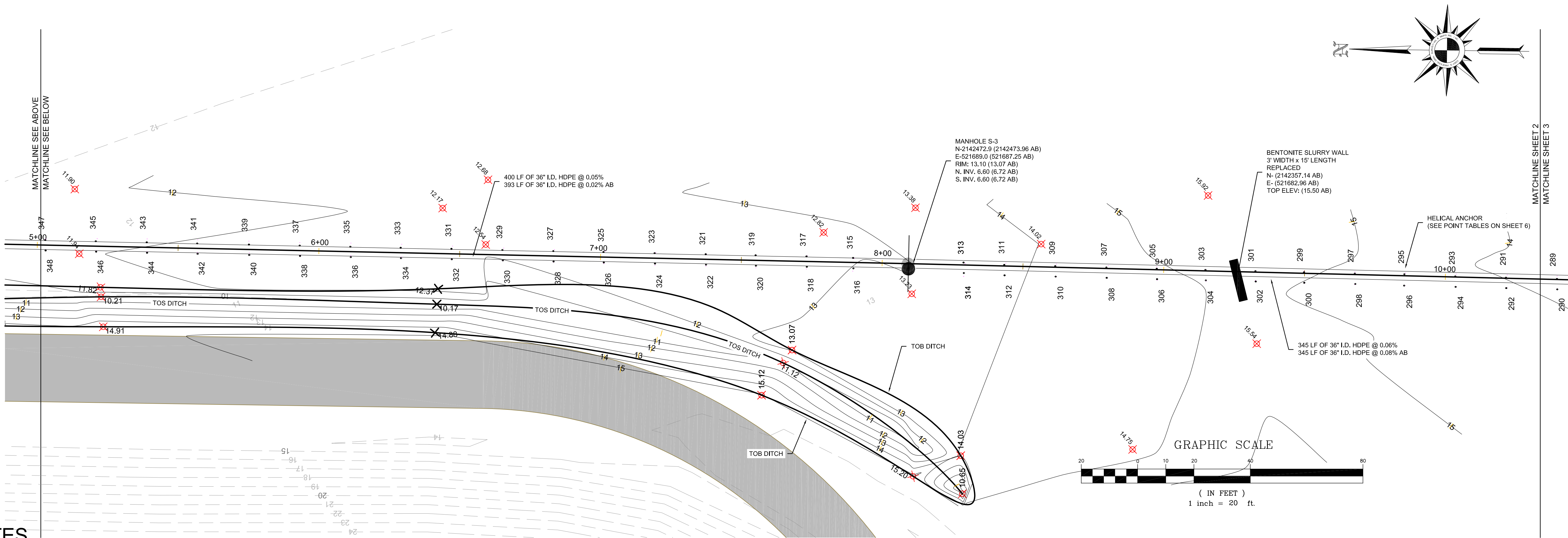
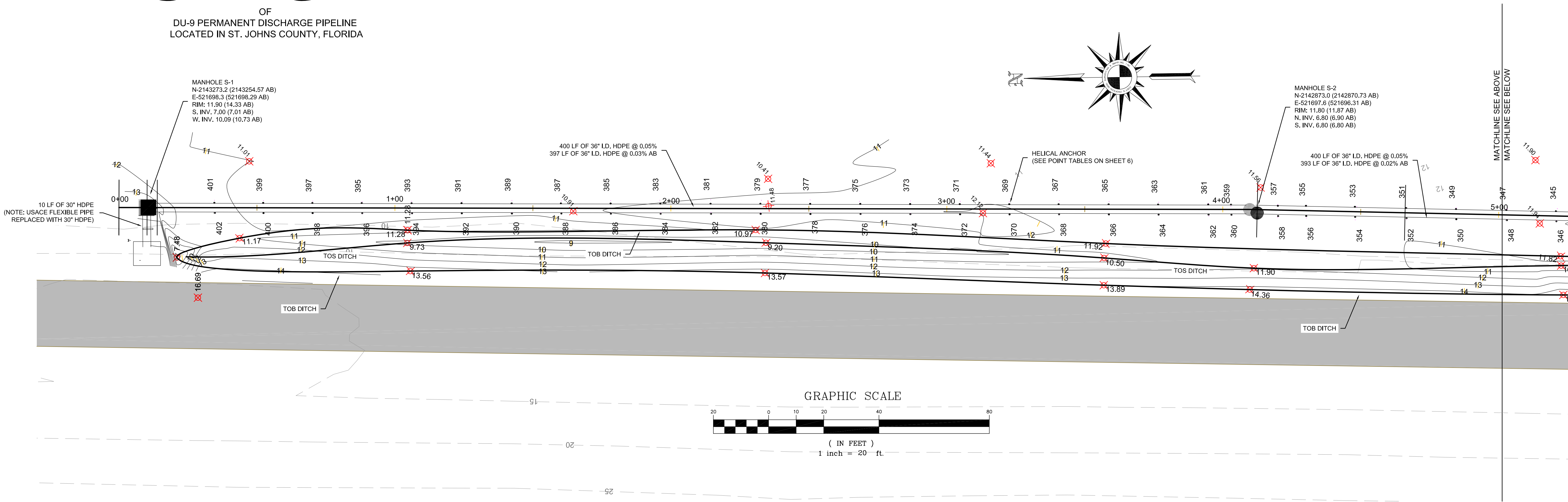
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<div><div><div>Cody's</div><div>Professional</div><div>Surveying &amp; Mapping, Inc.</div></div><div><div>(904) 696-8840 Phone (904) 696-8841 Fax 550 Balmoral Circle North, Suite 205 Jacksonville, Florida, 32218</div></div></div>		DU-9 PIPELINE
		PARTY CHIEF: RTF
		FIELD BOOK & PAGE: N/A
		CAD TECH: RTF
	ROY T. FLOWERS, JR. FL REGISTRATION NO. 6271	DATE OF SURVEY: DECEMBER 15, 2010
	DATE OF SIGNATURE: MARCH 7, 2011	PROJECT NUMBER: 11710
	FLORIDA L.B. # 7347	SHEET 1 OF 12
		DRAWING NO.: 11710 - D - ST - A



# AS-BUILT

OF  
DU-9 PERMANENT DISCHARGE PIPELINE  
LOCATED IN ST. JOHNS COUNTY, FLORIDA



## PAGE NOTES

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CAD TECH	RTF
PARTY CHIEF	RTF
FIELD BOOK & PAGE	
DATE OF SURVEY	12-15-2010

MANHOLE S-1 N-2143273.2 (2143254.57 AB) E-521698.3 (521698.29 AB) RIM: 11.90 (14.33 AB) S. INV. 7.00 (7.01 AB) W. INV. 10.09 (10.73 AB)	MANHOLE S-2 N-2142873.0 (2142870.73 AB) E-521697.6 (521696.31 AB) RIM: 11.80 (11.87 AB) N. INV. 6.80 (6.90 AB) S. INV. 6.80 (6.80 AB)
--	--

ROY T. FLOWERS, JR. FL REGISTRATION NO. 6271 MARCH 7, 2011 FLORIDA L.B. # 7347
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Jacksonville, Florida, 32218

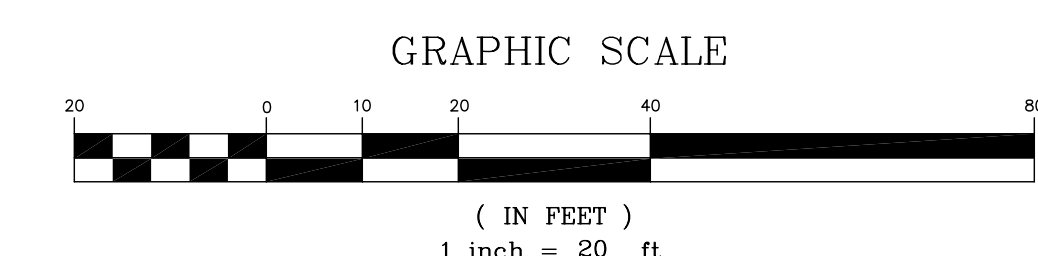
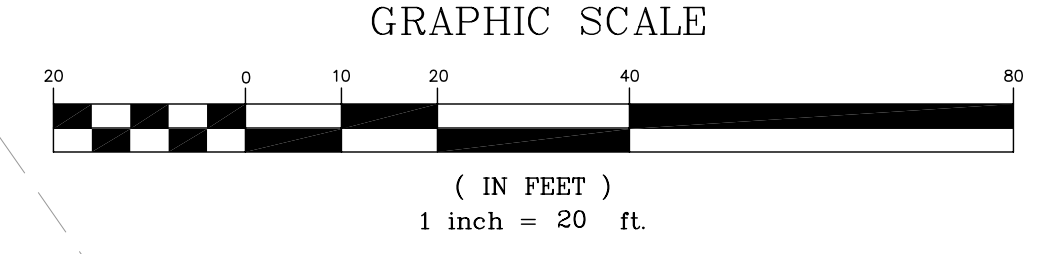
AS-BUILT (CONTRACTOR)	DATE: MARCH 7, 2011	COMPANY: T.B. LANDMARK	ADDRESS: 11720 NEW BELIN RD JACKSONVILLE, FL 32218	PHONE #: 904-751-1318	CONTRACTOR'S NAME: ROBIN R. THORPEN	CONTRACTOR'S STATE LICENSE NO.: CUC059228
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DU-9 PIPELINE	AS-BUILT
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DU-9 PIPELINE		AS-BUILT	
PROJECT NUMBER		11710 DU-9 PIPELINE	
SHEET NO.	2	OF	12



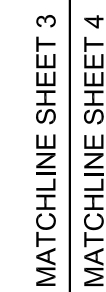
OF  
DU-9 PERMANENT DISCHARGE PIPELINE  
LOCATED IN ST. JOHNS COUNTY, FLORIDA



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2. THIS PAGE NOT VALID WITHOUT COVER SHEET

<p><b>AS-BUILT (CONTRACTOR)</b></p> <p>DATE: MARCH 2, 2011</p> <p>COMPANY: TB LANDMARK</p> <p>ADDRESS: 11220 NEW BERLIN RD JACKSONVILLE, FL 32256</p> <p>PHONE # 904-753-11818</p> <p>CONTRACTOR'S NAME: ROBIN R. THIERSEN</p> <p>CONTRACTOR'S STATE LICENSE NO: CUD057226</p>		<p><b>DU-9 PIPELINE</b></p>		<p><b>AS-BUILT</b></p>	
<p>PROJECT NUMBER</p> <p>11710 DU-9 PIPELINE</p>		<p>SHEET NO.</p> <p>3</p>		<p>OF</p> <p>12</p>	

OF  
DU-9 PERMANENT DISCHARGE PIPELINE  
LOCATED IN ST. JOHNS COUNTY, FLORIDA



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HEREBY CERTIFY THAT THE:

	PAYMENT	WATER MAIN
X	CHUBB & GUTTER	SANITARY SEWER
	SEWAGE & DRAINAGE	SEWAGE FORCE MAIN
	UNDERGROUND CONNECTIONS	SEWAGE LIFT STATION

USE AT THE DISCRETION OF THE ARCHITECT. AS SHOWN ON THE "PROPOSED" DRAWINGS. THE FOLLOWING TECHNICAL STANDARDS SET FORTH BY THE FLORIDA BOARD OF LAND SURVEYORS PURSUANT TO SECTION 472.027 FLORIDA STATUTES, SHALL APPLY TO ALL EASEMENTS ENCROACHMENTS OUTSIDE THE EASEMENTS OR RIGHT-OF-WAY.

ROY T. FLOWERS, JR., FLORIDA PLS. NO. 9271

**S** Professional  
**S**urveying &  
**M**apping, Inc.

(904) 696-8840 Phone  
(904) 696-8841 Fax  
550 Balmoral Circle North, Suite 205  
Jacksonville, Florida, 32218



AS-BUILT (CONTRACTOR)	_____
INFORMATION PROVIDED BY:	_____
DATE: MARCH 7, 2011	_____
COMPANY: TB LANDMARK	_____
ADDRESS: 11220 NEW BERLIN RD	_____
JACKSONVILLE, FL 32226	_____
PHONE #: 904-751-1016	_____
CONTRACTOR'S SIGNATURE: _____	_____
CONTRACTOR'S NAME: ROBIN R. THIGPEN	_____
CONTRACTOR'S STATE LICENSE NO.: CU0037226	_____

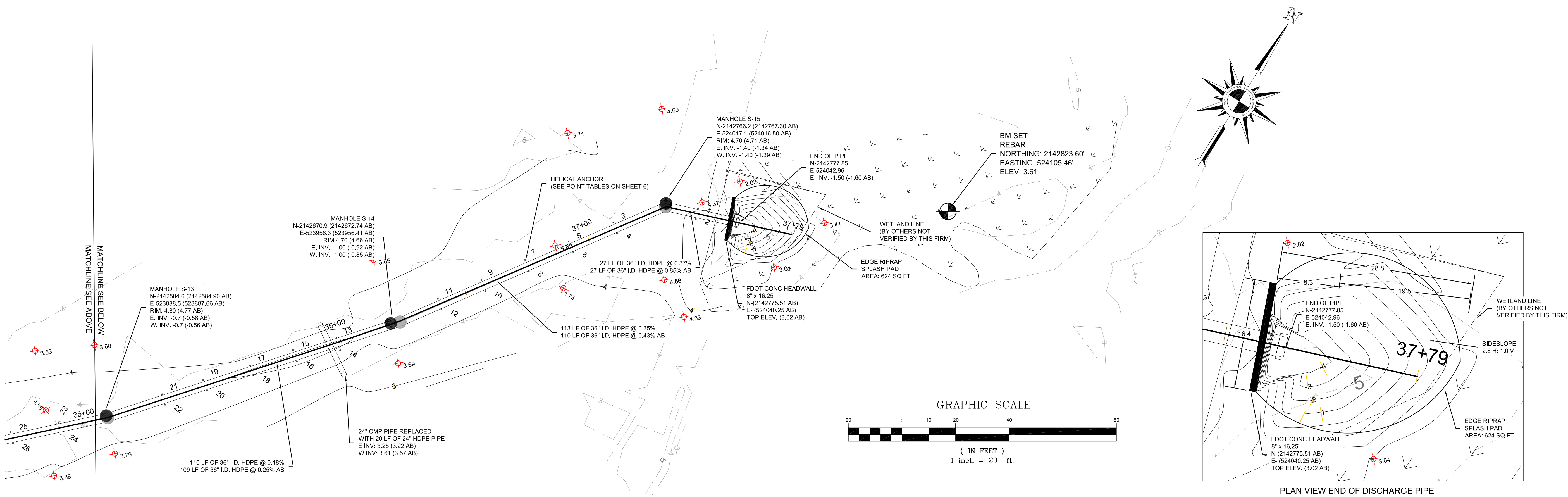
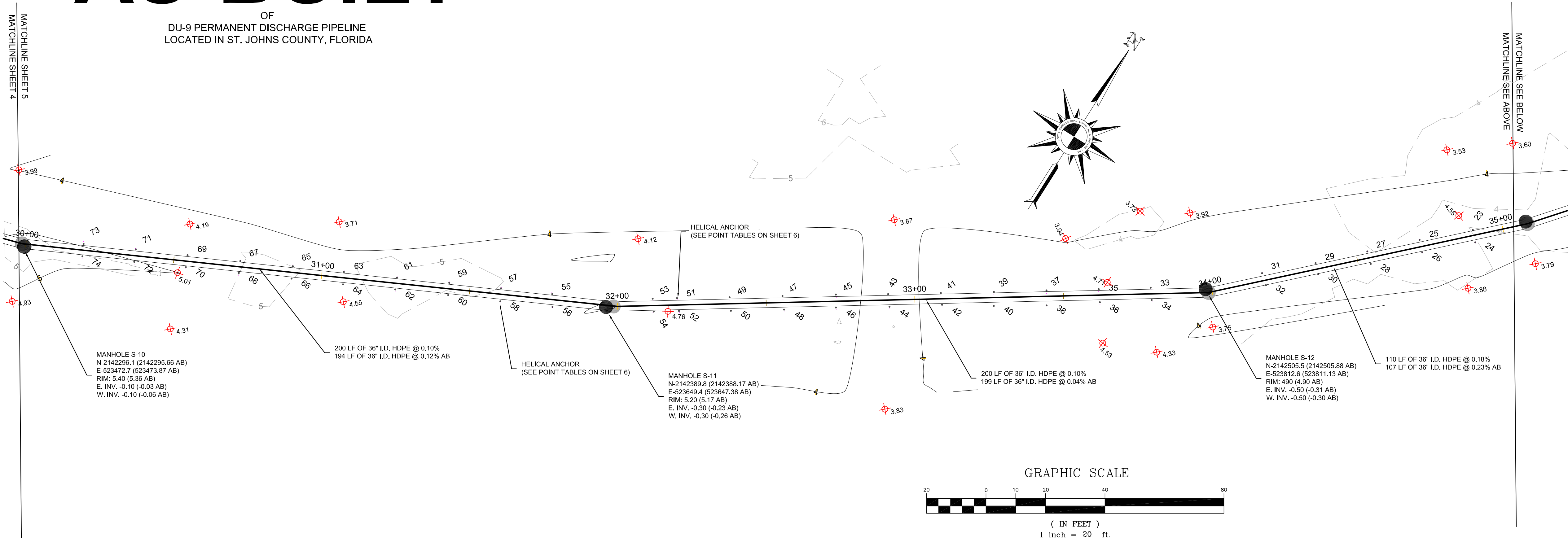
PROJECT NUMBER  
11710 DU-9 PIPELINE

SHEET NO.	OF
4	12



# AS-BUILT

OF  
DU-9 PERMANENT DISCHARGE PIPELINE  
LOCATED IN ST. JOHNS COUNTY, FLORIDA



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CAD TECH	RTF
PARTY CHIEF	RTF
FIELD BOOK & PAGE	
DATE OF SURVEY	12-15-2010

I HEREBY CERTIFY THAT I AM A LICENSED SURVEYOR IN THE STATE OF FLORIDA, AND I HAVE REVIEWED THE PLANS AND SPECIFICATIONS FOR THIS PROJECT, AND I AM NOT PROVIDING ANY GUARANTEE OR WARRANTY FOR THE ACCURACY OF THE INFORMATION PROVIDED HEREIN.

ROY T. FLOWERS, JR.  
FL REGISTRATION NO. 6271  
MARCH 7, 2011  
FLORIDA L.B. # 7347

Cody's Professional Surveying & Mapping, Inc.  
(904) 696-8840 Phone  
(904) 696-8841 Fax  
550 Balmoral Circle North, Suite 205  
Jacksonville, Florida, 32218

I HEREBY CERTIFY THAT THE MATERIALS AND QUANTITIES LISTED IN THE CONSTRUCTION OF THIS PROJECT ARE IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, AND I AM NOT PROVIDING ANY GUARANTEE OR WARRANTY FOR THE ACCURACY OF THE INFORMATION PROVIDED HEREIN.

AS-BUILT (CONTRACTOR)  
DATE: MARCH 7, 2011  
COMPANY: TB LANDMARK  
ADDRESS: 11220 NEW BERLIN RD  
JACKSONVILLE, FL 32218  
PHONE # 386-291-1311  
CONTRACTOR'S NAME: ROBIN R. THOMPEN  
CONTRACTOR'S STATE LICENSE NO.: CUC0507228

DU-9 PIPELINE  
AS-BUILT

PROJECT NUMBER	11710 DU-9 PIPELINE
SHEET NO.	5
OF	12



POINT TABLE		
POINT	EASTING	NORTHING
1	524027.48	2142772.50
2	524029.02	2142768.70
3	524004.27	2142750.40
4	524007.60	2142748.00
5	523994.34	2142735.26
6	523998.02	2142732.96
7	523984.74	2142720.45
8	523988.23	2142717.72
9	523975.50	2142705.14
10	523978.90	2142702.53
11	523965.87	2142690.22
12	523969.07	2142687.82
13	523942.70	2142657.00
14	523946.39	2142653.97
15	523931.79	2142644.21
16	523935.35	2142641.44
17	523921.63	2142630.48
18	523924.81	2142627.98
19	523910.23	2142616.15
20	523913.63	2142613.73

POINT TABLE		
POINT	EASTING	NORTHING
161	522691.47	2142153.30
162	522692.41	2142148.70
163	522673.71	2142151.07
164	522674.28	2142146.38
165	522655.89	2142148.63
166	522656.80	2142144.26
167	522638.24	2142146.48
168	522639.02	2142141.93
169	522620.55	2142143.94
170	522621.23	2142139.35
171	522602.54	2142141.41
172	522603.49	2142136.82
173	522584.71	2142139.06
174	522585.54	2142134.50
175	522566.82	2142137.00
176	522567.54	2142132.48
177	522549.02	2142134.44
178	522549.73	2142129.81
179	522531.58	2142131.52
180	522531.88	2142127.01

POINT TABLE		
POINT	EASTING	NORTHING
321	521692.37	2142545.58
322	521688.15	2142545.83
323	521692.96	2142563.59
324	521688.48	2142563.93
325	521693.50	2142581.59
326	521689.04	2142582.07
327	521694.04	2142599.64
328	521689.52	2142599.97
329	521694.58	2142617.64
330	521690.05	2142617.93
331	521695.28	2142635.78
332	521690.75	2142636.06
333	521695.94	2142653.81
334	521691.41	2142653.96
335	521696.35	2142671.87
336	521691.89	2142671.91
337	521696.54	2142689.99
338	521692.12	2142689.92
339	521697.04	2142708.09
340	521692.85	2142707.97

POINT TABLE		
POINT	EASTING	NORTHING
21	523900.51	2142603.20
22	523903.62	2142600.59
23	523874.48	2142572.66
24	523877.51	2142569.65
25	523861.53	2142559.88
26	523864.65	2142556.78
27	523849.14	2142546.85
28	523852.44	2142544.00
29	523836.92	2142533.86
30	523839.73	2142531.27
31	523823.89	2142521.09
32	523827.23	2142518.36
33	523796.01	2142495.53
34	523798.60	2142492.29
35	523781.79	2142485.10
36	523784.56	2142481.79
37	523767.57	2142474.75
38	523769.87	2142471.53
39	523753.08	2142464.63
40	523755.34	2142461.37

POINT TABLE		
POINT	EASTING	NORTHING
181	522513.85	2142128.96
182	522513.98	2142124.16
183	522504.14	2142127.67
184	522504.31	2142122.98
185	522472.00	2142123.86
186	522472.97	2142119.88
187	522454.50	2142121.91
188	522454.68	2142117.28
189	522436.51	2142120.16
190	522436.73	2142115.69
191	522418.62	2142118.65
192	522418.88	2142113.95
193	522400.78	2142116.75
194	522401.15	2142112.20
195	522383.16	2142115.07
196	522383.09	2142110.41
197	522365.30	2142113.16
198	522365.36	2142108.79
199	522347.54	2142111.51
200	522347.40	2142106.96

POINT TABLE		
POINT	EASTING	NORTHING
341	521697.52	2142726.23
342	521693.03	2142726.37
343	521697.84	2142744.21
344	521693.28	2142744.29
345	521697.94	2142761.95
346	521693.59	2142762.29
347	521697.80	2142780.23
348	521693.95	2142780.26
349	521698.21	2142798.61
350	521693.86	2142798.57
351	521698.28	2142816.75
352	521693.90	2142816.61
353	521698.64	2142834.62
354	521693.86	2142835.20
355	521699.17	2142852.89
356	521694.50	2142852.90
357	521699.41	2142863.25
358	521694.74	2142863.27
359	521698.79	2142880.26
360	521695.52	2142880.04

POINT TABLE		
POINT	EASTING	NORTHING
41	523738.69	2142454.13
42	523741.09	2142451.37
43	523724.15	2142443.99
44	523726.79	2142441.10
45	523709.81	2142434.05
46	523711.98	2142430.84
47	523695.32	2142423.49
48	523697.96	2142420.63
49	523680.72	2142413.26
50	523682.98	2142410.59
51	523665.93	2142403.58
52	523668.92	2142400.50
53	523659.26	2142398.83
54	523661.51	2142395.40
55	523629.55	2142382.05
56	523632.56	2142378.05
57	523614.49	2142373.95
58	523616.99	2142369.68
59	523599.08	2142365.83
60	523601.43	2142361.32

POINT TABLE		
POINT	EASTING	NORTHING
201	522329.15	2142109.92
202	522329.32	2142105.28
203	522311.12	2142108.09
204	522311.42	2142103.50
205	522293.21	2142106.27
206	522293.58	2142101.69
207	522275.15	2142104.43
208	522275.72	2142099.94
209	522257.08	2142102.69
210	522257.91	2142098.08
211	522239.60	2142101.14
212	522240.04	2142096.39
213	522221.66	2142099.17
214	522222.22	2142094.59
215	522203.71	2142097.38
216	522204.27	2142092.94
217	522185.80	2142095.87
218	522186.46	2142091.02
219	522167.78	2142094.00
220	522168.49	2142089.39

POINT TABLE		
POINT	EASTING	NORTHING
361	521699.85	2142888.45
362	521695.25	2142888.23
363	521700.24	2142906.43
364	521695.71	2142906.54
365	521700.52	2142924.39
366	521695.87	2142924.44
367	521700.84	2142942.45
368	521695.94	2142942.47
369	521700.51	2142960.56
370	521695.98	2142960.38
371	521700.59	2142978.31
372	521696.02	2142978.35
373	521700.71	2142996.36
374	521696.18	2142996.39
375	521700.59	2143014.87
376	521696.04	2143014.42
377	521701.08	2143032.73
378	521696.87	2143032.52
379	521700.95	2143050.37
380	521696.48	2143050.74

POINT TABLE		
POINT	EASTING	NORTHING
61	523583.40	2142357.56
62	523585.66	2142352.97
63	523567.64	2142349.03
64	523570.14	2142344.54
65	523552.18	2142341.07
66	523554.57	2142336.52
67	523536.64	2142332.50
68	523539.03	2142327.95
69	523520.84	2142324.27
70	523523.06	2142319.78
71	523505.25	2142315.98
72	523507.81	2142311.38
73	523489.47	2142308.22
74	523492.20	2142303.22
75	523456.44	2142293.27
76	523458.03	2142288.74
77	523439.46	2142287.08
78	523441.12	2142282.72
79	523422.71	2142281.50
80	523424.56	2142277.28

POINT TABLE		
POINT	EASTING	NORTHING
221	522149.91	2142092.36
222	522150.83	2142087.68
223	522133.96	2142091.39
224	522134.88	2142086.71
225	522117.79	2142090.21
226	522118.71	2142085.54
227	522102.07	2142088.64
228	522102.99	2142083.96
229	522078.72	2142086.70
230	522079.58	2142082.16
231	522061.60	2142084.55
232	522062.05	2142080.22
233	522043.62	2142083.07
234	522044.07	2142078.45
235	522025.71	2142081.37
236	522026.16	2142076.95
237	522007.48	2142079.56
238	522008.14	2142075.32
239	521989.83	2142077.88
240	521990.25	2142073.45

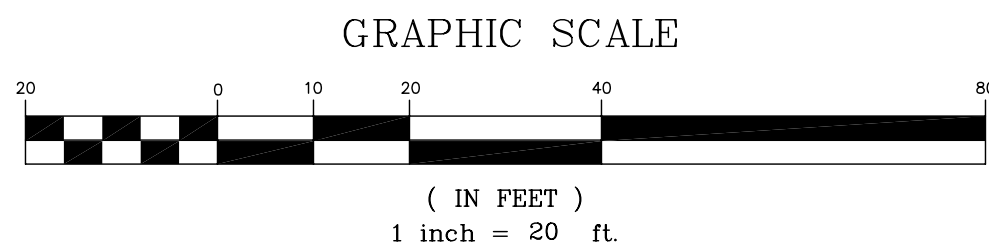
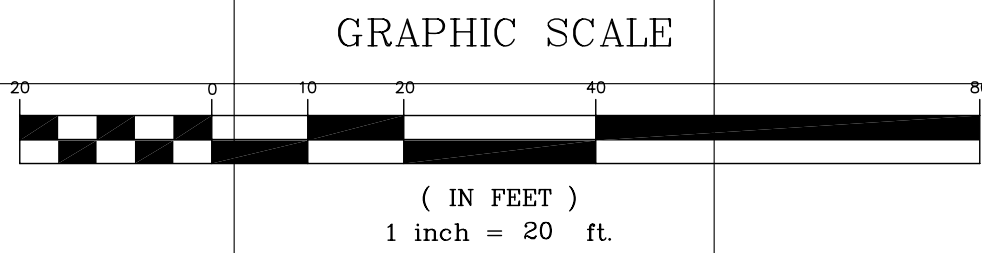
POINT TABLE		
POINT	EASTING	NORTHING
381	521701.13	2143068.75
382	521696.58	2143068.65
383	521700.95	2143087.19
384	521696.42	2143086.83
385	521700.84	2143105.02
386	521696.42	2143104.87
387	521700.74	2143122.85
388	521696.36	2143122.90
389	521700.90	2143140.79
390	521696.44	2143140.74
391	521700.63	2143158.84
392	521696.16	2143159.03
393	521700.62	2143177.16
394	521696.22	2143177.08
395	521700.45	2143195.08
396	521696.01	2143195.01
397	521700.66	2143212.94
398	521696.08	2143212.95
399	521700.88	2143230.82
400	521696.22	2143230.70

POINT TABLE		
POINT	EASTING	NORTHING
81	523406.17	2142275.46
82	523407.63	2142271.36
83	523390.50	2142270.52
84	523391.96	2142266.41
85	523372.86	2142264.26
86	523374.17	2142259.95
87	523355.71	2142258.44
88	523357.22	2142254.26
89	523338.59	2142252.33
90	523340.40	2142248.57
91	523322.11	2142247.01
92	523323.46	2142242.52
93	523304.55	2142242.39
94	523306.38	2142236.85
95	523294.68	2142239.04
96	523296.61	2142233.96
97	523265.81	2142231.63
98	523266.37	2142227.33
99	523248.52	2142229.27
100	523248.92	2142224.86

POINT TABLE		
POINT	EASTING	NORTHING
241	521971.71	2142076.04
242	521972.07	2142071.7
243	521953.40	2142074.45
244	521953.64	2142070.20
245	521935.40	2142072.44
246	521936.09	2142068.31
247	521917.22	2142070.61
248	521918.09	2142066.41
249	521899.26	2142068.77
250	521899.81	2142064.65
251	521881.58	2142067.10
252	521882.44	2142062.62
253	521863.85	2142065.07
254	521864.32	2142061.09
255	521846.01	2142063.39
256	521846.67	2142059.04
257	521828.23	2142061.69
258	521829.02	2142057.30
259	521810.44	2142059.36
260	521811.20	2142054.93



OF  
DU-9 PERMANENT DISCHARGE PIPELINE  
LOCATED IN ST. JOHNS COUNTY, FLORIDA



REVISION NOTE  
1. ADDED THE LOCATION OF THE EXISTING  
SLURRY WALL AND THE REPLACED SLURRY WALL  
ON 3-2-2011

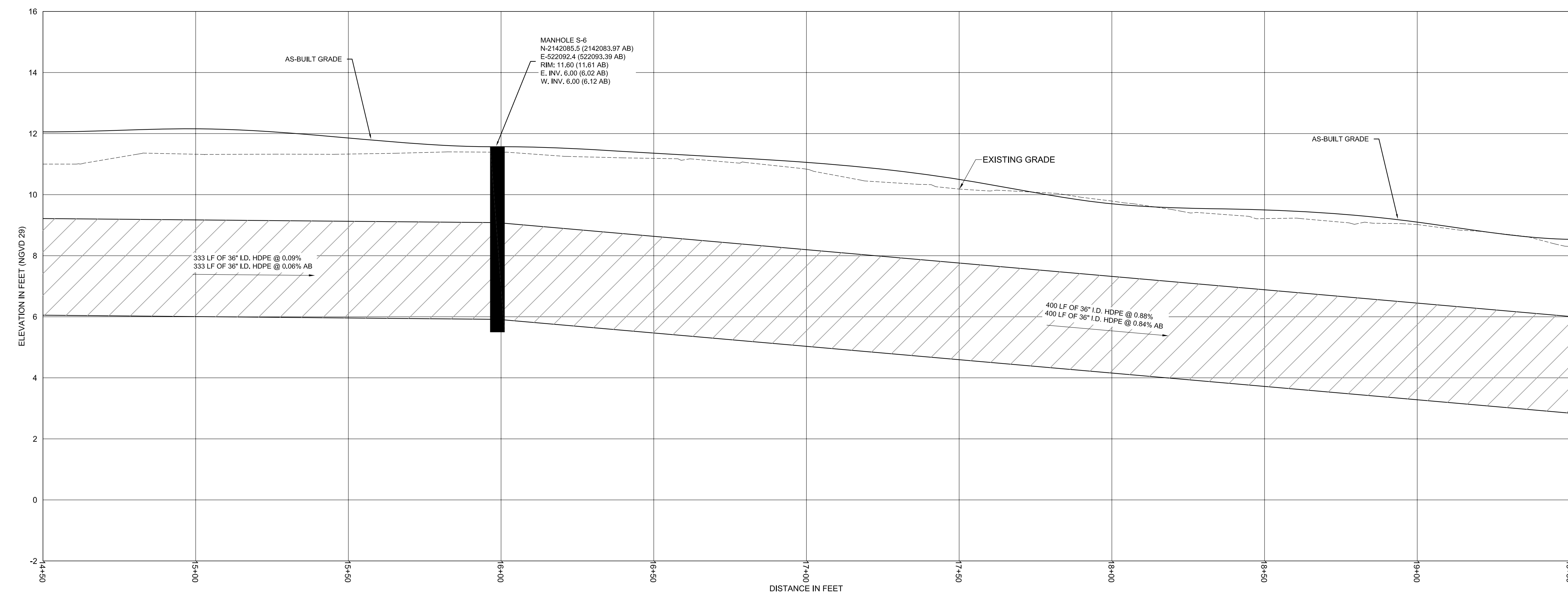
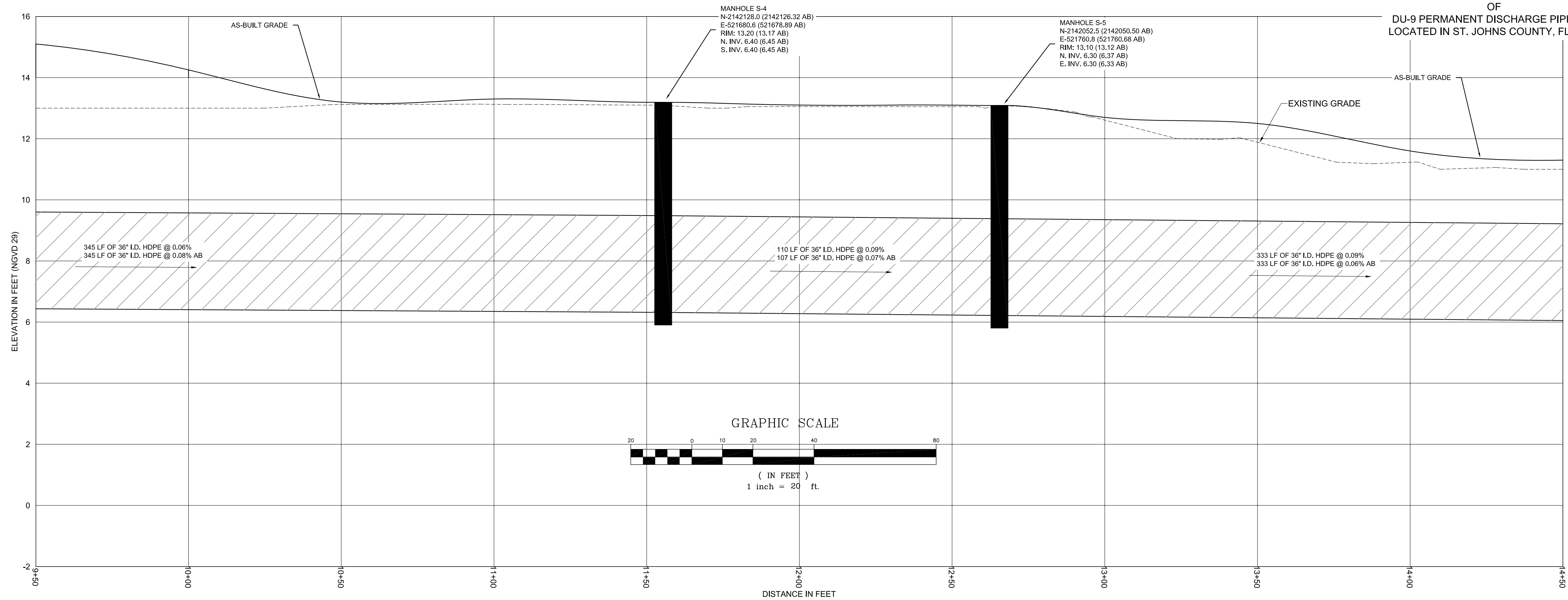
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PROJECT NUMBER	
11710 DU-9 PIPELINE	
SHEET NO.	OF
7	12

# AS-BUILT

OF  
DU-9 PERMANENT DISCHARGE PIPELINE  
LOCATED IN ST. JOHNS COUNTY, FLORIDA



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PARTY CHIEF	R1F	CAD TECH	R1F
FIELD BOOK & PAGE			
DATE OF SURVEY			
12-15-2010			

HEREBY CERTIFY THAT THE:

	PAYMENT	WATER MAIN
X	CHUBB & GUTTER	SANITARY SEWER
	SEWAGE & DRAINAGE	SEWAGE FORCE MAIN
	UNDERGROUND CONNECTIONS	SEWAGE LIFT STATION

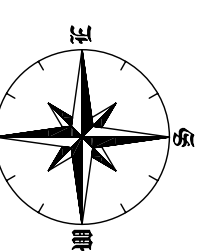
USE AT THE DISCRETION OF THE ARCHITECT. AS SHOWN ON THE "PROPOSED" DRAWINGS. THE FOLLOWING TECHNICAL STANDARDS SET FORTH BY THE FLORIDA BOARD OF LAND SURVEYORS PURSUANT TO SECTION 472.027, FLORIDA STATUTES, SHALL APPLY TO ALL EASEMENTS ENCROACHMENTS OUTSIDE THE EASEMENTS OR RIGHT-OF-WAY.

ROY T. FLOWERS, JR., FLORIDA PLS. NO. 9271

ROY T. FLOWERS, JR. FL REGISTRATION NO. 6271
MARCH 7, 2011
FLORIDA L.B. # 7347

**S** Professional  
**S**urveying &  
**M**apping, Inc.

(904) 696-8840 Phone  
(904) 696-8841 Fax  
550 Balmoral Circle North, Suite 205  
Jacksonville, Florida, 32218



\_\_\_\_\_ PAVEMENT \_\_\_\_\_ WATER MAIN  
 \_\_\_\_\_ CURB & GUTTER \_\_\_\_\_ SANITARY SEWER  
 \_\_\_\_\_ X STORM & DRAINAGE \_\_\_\_\_ SEWAGE FORCE MAIN  
 \_\_\_\_\_ UNDERDRAIN CONNECTIONS \_\_\_\_\_ SEWAGE LIFT STATION

E IN ACCORDANCE WITH THE APPROVED PLANS AND JEA  
 EIFICATIONS, UNLESS OTHERWISE APPROVED BY THE  
 ECT ENGINEER.

AS-BUILT (CONTRACTOR)	03
INFORMATION PROVIDED BY:	
DATE: MARCH 7, 2011	
COMPANY: TTB LANDMARK	
ADDRESS: 11220 NEW BEKIN RD	
JACKSONVILLE, FL 32226	
PHONE #: 904-751-1016	
CONTRACTOR'S SIGNATURE: _____	
CONTRACTOR'S NAME: ROBIN R. THOPEN	
CONTRACTOR'S STATE LICENSE NO.: CUC007226	
PR	AR SP 03

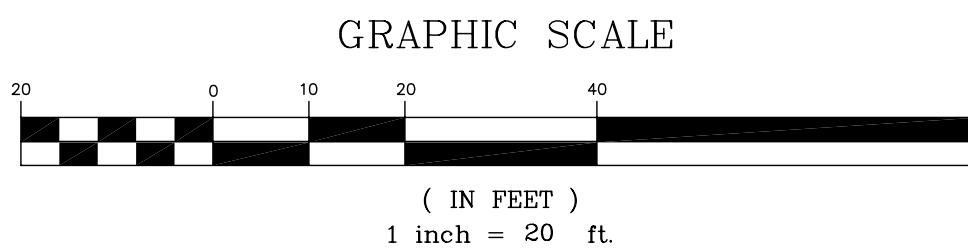
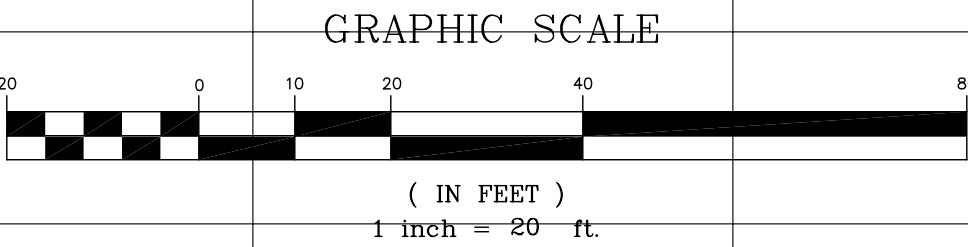
DU-9 PIPELINE	AS-BUILT
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PROJECT NUMBER  
11710 DU-9 PIPELINE

SHEET NO.	OF
8	12

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OF  
DU-9 PERMANENT DISCHARGE PIPELINE  
LOCATED IN ST. JOHNS COUNTY, FLORIDA



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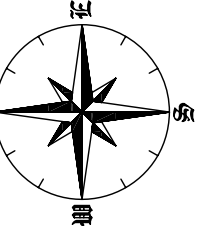
IN ACCORDANCE WITH CHAPTER 471, FLORIDA STATUTES, I HEREBY CERTIFY THAT THE:

PAVEMENT	_____	WATER MAIN
CURB & GUTTER	_____	SANITARY SEWER
X. STORM & DRAINAGE	_____	SEWAGE FORCE MAIN
UNDERDRAIN CONNECTIONS	_____	SEWAGE LIFT STATION

ARE AT THE HORIZONTAL AND VERTICAL LOCATIONS AS SHOWN ON THESE "AS-BUILT" DRAWINGS, AND MEET THE MINIMAL REQUIREMENTS OF THE FLORIDA DEPARTMENT OF TRANSPORTATION AND SURVEYORS PURSUANT TO SECTION 72.027, FLORIDA STATUTES AND THAT THERE ARE NOT ANY ENCROACHMENTS OUTSIDE THE EASEMENTS OR RIGHT-OF-WAY.

ROY T. FLOWERS, JR., FLORIDA PLS. NO. 6271

**Professional  
Surveying &  
Mapping, Inc.**  
(904) 696-8840 Phone  
(904) 696-8841 Fax  
550 Balmoral Circle North, Suite 205  
Jacksonville, Florida, 32218



I HEREBY CERTIFY THAT THE MATERIALS AND QUANTITIES USED IN THE CONSTRUCTION OF:

_____ PAVEMENT	_____ WATER MAIN
_____ CURB & GUTTER	_____ SANITARY SEWER
<input checked="" type="checkbox"/> STORM & DRAINAGE	_____ SEWAGE FORCE MAIN
_____ UNDERPIN CONNECTIONS	_____ SEWAGE LIFT STATION

ARE IN ACCORDANCE WITH THE APPROVED PLANS AND JET-SPECIFICATIONS, UNLESS OTHERWISE APPROVED BY THE PROJECT ENGINEER.

AS-BUILT (CONTRACTOR)  
INFORMATION PROVIDED BY:

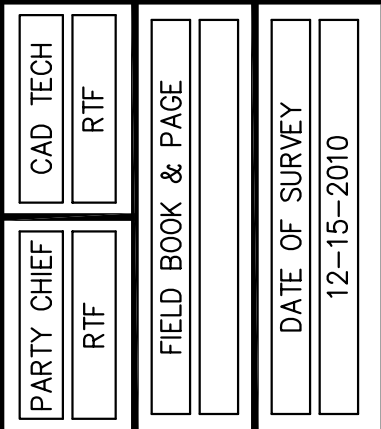
DATE:	MARCH 7, 2011
COMPANY:	TB LANDMARK
ADDRESS:	11220 NEW BERLIN RD
	JACKSONVILLE, FL 32226
PHONE #:	904-751-1016
CONTRACTOR'S SIGNATURE:	
CONTRACTOR'S NAME: ROBIN R. THIGPEN	
CONTRACTOR'S STATE LICENSE NO.: CUC057226	

AS-BUILT	DU-9 PIPELINE
----------	---------------

PROJECT NUMBER	
11710 DU-9 PIPELINE	
SHEET NO.	OF
9	12

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OF  
DU-9 PERMANENT DISCHARGE PIPELINE  
LOCATED IN ST. JOHNS COUNTY, FLORIDA



IN ACCORDANCE WITH CHAPTER 471, FLORIDA STATUTES, I HEREBY CERTIFY THAT THE:

PAVEMENT	_____ WATER MAIN
_____ CURB & GUTTER	_____ SANITARY SEWER
X STORM & DRAINAGE	_____ SEWAGE FORCE MAIN

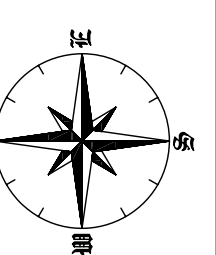
UNDERGROUND CONNECTIONS \_\_\_\_\_ SEWAGE LIFT STATION

ARE AT THE HORIZONTAL AND VERTICAL LOCATIONS AS SHOWN ON THESE "AS-BUILT" DRAWINGS, AND MEET THE MINIMAL TECHNICAL STANDARDS SET FORTH BY THE MINERAL AND SERVICES PURSUANT TO SECTION 471.027, FLORIDA STATUTES, AND THE MINERAL AND SERVICES STANDARDS SET FORTH OUTSIDE THE EASEMENTS OR RIGHT-OF-WAY.

ROY T. FLOWERS, JR. FLORIDA PLS. NO. 8271

ROY T. FLOWERS, JR. FL REGISTRATION NO. 6271
MARCH 7, 2011
FLORIDA L.B. # 7347

**Professional  
Surveying &  
Mapping, Inc.**  
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(904) 696-8841 Fax  
550 Balmoral Circle North, Suite 205  
Jacksonville, Florida, 32218



I HEREBY CERTIFY THAT THE MATERIALS AND QUANTITIES USED IN THE CONSTRUCTION OF:

_____ PAVEMENT	_____ WATER MAIN
_____ CURB & GUTTER	_____ SANITARY SEWER
_____ X. STORM & DRAINAGE	_____ SEWAGE FORCE MAIN
_____ UNDERDRAIN CONNECTIONS	_____ SEWAGE LIFT STATION

ARE IN ACCORDANCE WITH THE APPROVED PLANS AND JEA SPECIFICATIONS, UNLESS OTHERWISE APPROVED BY THE PROJECT ENGINEER.

**AS-BUILT (CONTRACTOR)**

INFORMATION PROVIDED BY:

DATE: MARCH 7, 2011

COMPANY: TB LANDMARK

ADDRESS: 11220 NEW BERLIN RD  
JACKSONVILLE, FL 32226

PHONE #: 904-751-1016

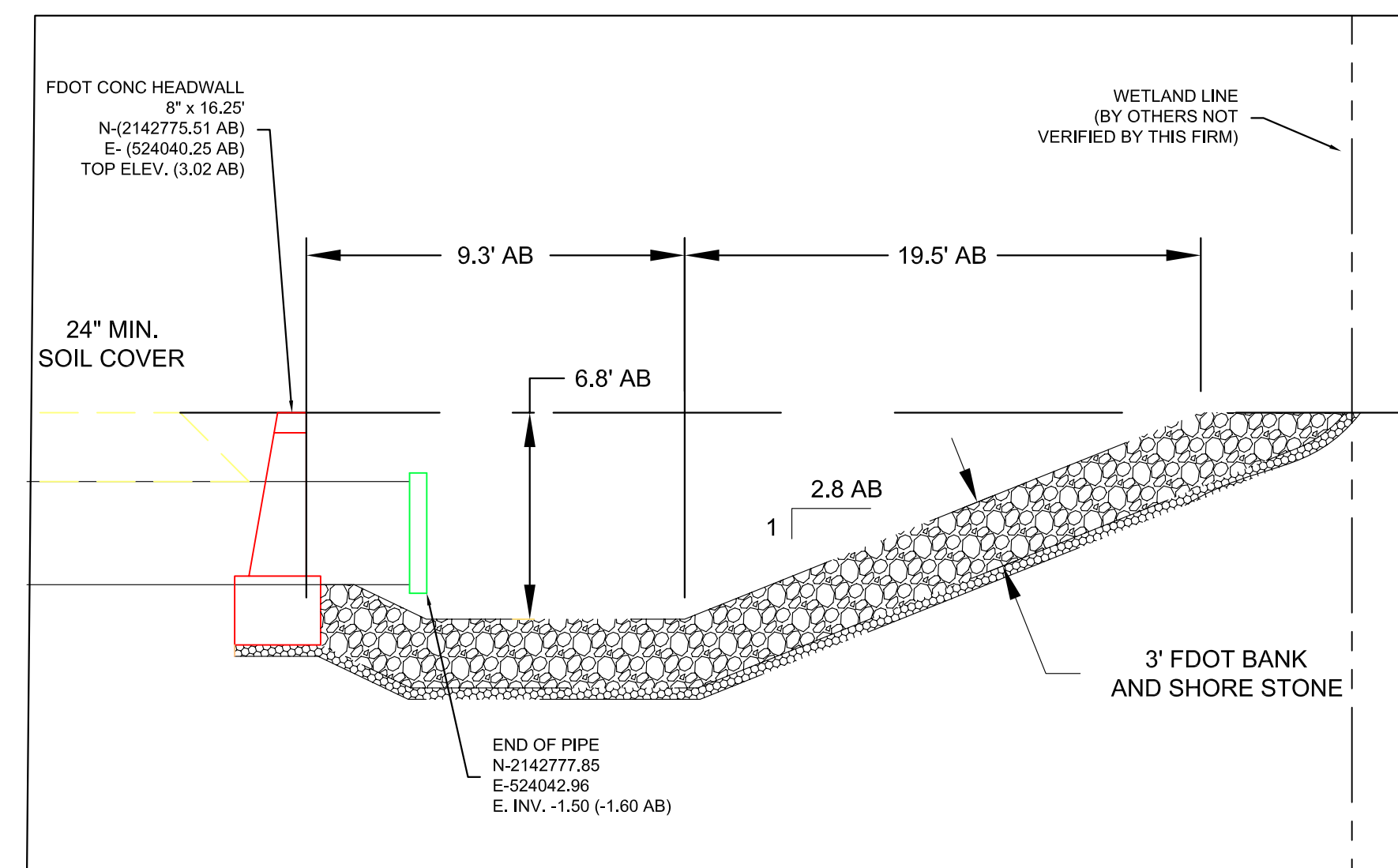
CONTRACTOR'S SIGNATURE: \_\_\_\_\_

CONTRACTOR'S NAME: ROBIN R. THIGPEN

CONTRACTOR'S STATE LICENSE NO.: CUC057226

DU-9 PIPELINE	AS-BUILT
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PROJECT NUMBER	
11710 DU-9 PIPELINE	
SHEET NO.	OF
10	12



SECTION VIEW END OF DISCHARGE PIPE  
NTS

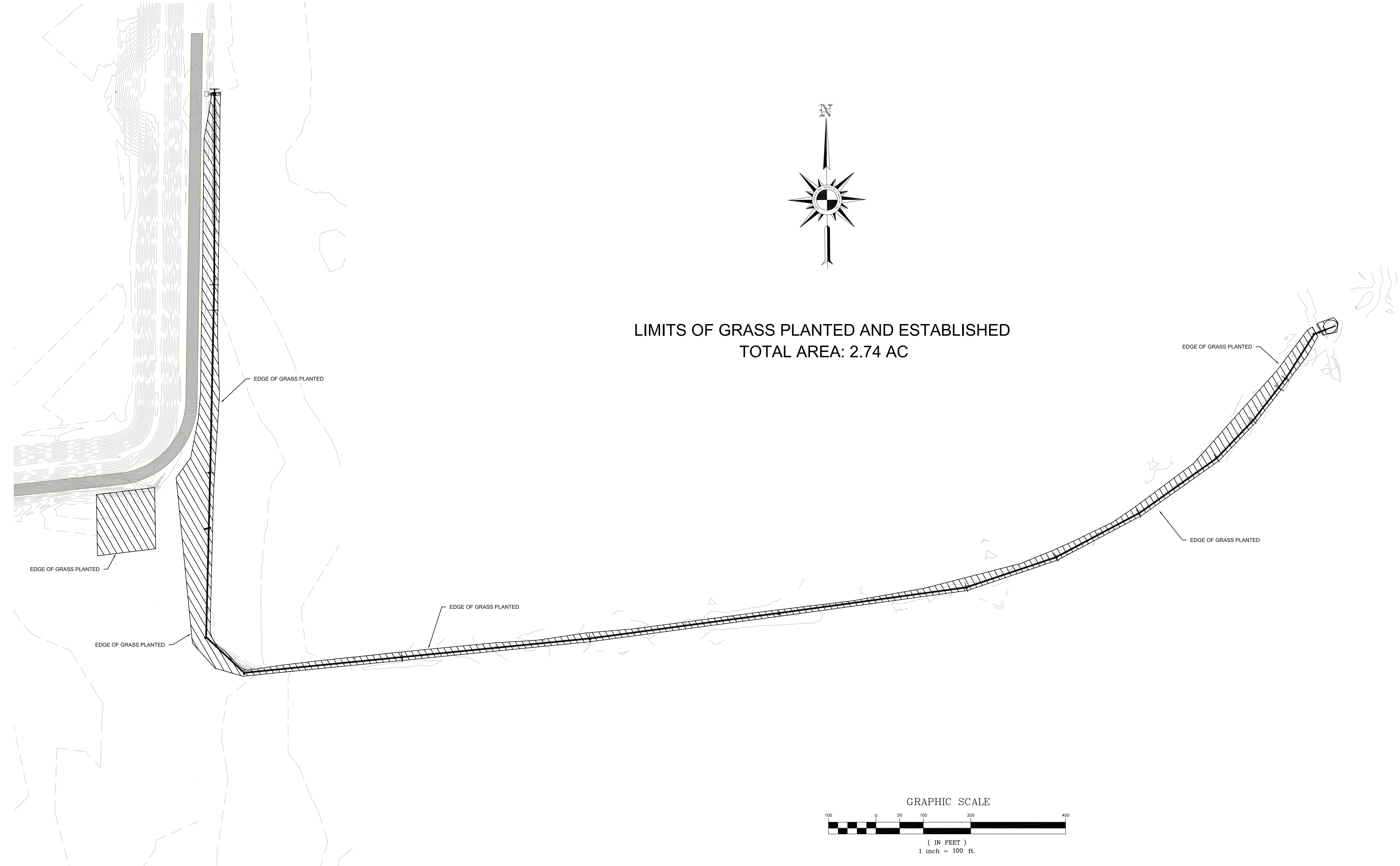
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AS-BUILT

OF  
DU-9 PERMANENT DISCHARGE PIPELINE  
LOCATED IN ST. JOHNS COUNTY, FLORIDA



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2. THIS PAGE NOT VALID WITHOUT COVER SHEET

PARTY CHIEF	CAD TECH
RTF	RTF
FIELD BOOK & PAGE	
DATE OF SURVEY	12-15-2010

I, ROY T. FLOWERS, JR., CERTIFY THAT I AM A LICENSED SURVEYOR IN THE STATE OF FLORIDA, LICENSE NO. 6271, AND I HAVE PREPARED THIS AS-BUILT DRAWING IN ACCORDANCE WITH CHAPTER 471, FLORIDA STATUTES, AND I HEREBY CERTIFY THAT THE DRAWING IS A TRUE AND CORRECT REPRESENTATION OF THE FIELD SURVEY AND THE INFORMATION PROVIDED TO ME BY THE CLIENT.

ROY T. FLOWERS, JR.  
FL REGISTRATION NO. 6271  
MARCH 7, 2011  
FLORIDA L.B. # 7347

**Cody's Professional Surveying & Mapping, Inc.**  
(904) 696-8840 Phone  
(904) 696-8841 Fax  
550 Balmoral Circle North, Suite 205  
Jacksonville, Florida, 32218

I, ROY T. FLOWERS, JR., CERTIFY THAT THE MATERIALS AND QUANTITIES SHOWN ON THIS AS-BUILT DRAWING WERE USED IN THE CONSTRUCTION OF THE PROJECT.

AS-BUILT (CONTRACTOR)  
INFORMATION PROVIDED BY:  
DATE: MARCH 7, 2011  
COMPANY: TB LANDMARK  
ADDRESS: 11720 NEW BERLIN RD  
JACKSONVILLE, FL 32218  
PHONE # 386-2751-1010  
CONTRACTOR'S NAME: ROBIN R. THURPEL  
CONTRACTOR'S STATE LICENSE NO.: CUC0507228

DU-9 PIPELINE  
AS-BUILT

PROJECT NUMBER	11710 DU-9 PIPELINE
SHEET NO.	12
OF	12



**FLORIDA INLAND NAVIGATION DISTRICT  
DREDGED MATERIAL MANAGEMENT  
AREA DU-9 EXPANSION  
ST. JOHNS COUNTY, FLORIDA**

**ADDENDUM NO. 1  
ATTACHMENT 4**  
Section 00 01 10 Table of Contents



## SECTION 00 01 10

### TABLE OF CONTENTS

<b><u>SECTION</u></b>	<b><u>TITLE</u></b>
<b><u>DIVISION 00: PROCUREMENT AND CONTRACTING REQUIREMENTS</u></b>	
00 01 10	Table of Contents
00 01 15	List of Project Drawings
00 10 00	Bid Solicitation
00 21 13	Instructions to Bidders
00 41 63	Bid Form
00 41 63A	Bid Schedule
00 43 13	Bid Bond
00 45 01	Public Entity Crime Statement
00 45 02	Affidavit for Surety Company
00 51 00	Notice of Award
00 52 00	Contract
00 55 00	Notice to Proceed
00 61 13.13	Performance Bond
00 61 13.16	Payment Bond
00 65 19	Certificate of Substantial Completion
00 72 00	General Conditions
00 73 00	Supplementary Conditions
00 73 19	Safety and Occupational Health Requirements
00 73 19A	Drug-Free Workplace Form
00 94 63	Change Order
<b><u>DIVISION 01: GENERAL REQUIREMENTS</u></b>	
01 11 00	Summary of Work
01 29 00	Measurement and Payment
01 31 00	Project Management and Coordination
01 33 00	Submittal Procedures
01 35 43	Environmental Protection
01 40 00	Contractor Quality Control
01 50 00	Temporary Facilities and Controls
01 77 00	Project Closeout
<b><u>DIVISION 02 THROUGH 05 ARE NOT REQUIRED</u></b>	

**DIVISION 06 TIMBER**

06 11 00 Timber Walkway

**DIVISION 07 THROUGH 30 ARE NOT REQUIRED****DIVISION 31: EARTHWORK**

31 10 00 Site Clearing and Grubbing  
31 23 00 Dike and Earthwork Construction  
31 23 33 Trenching and Shoring for Pipe Installation

**DIVISION 32: EXTERIOR IMPROVEMENTS**

32 92 19 Grassing Establishment

**DIVISION 33 NOT REQUIRED****DIVISION 34: TRANSPORTATION**

34 71 00 Roadway Stabilization

**DIVISION 35: WATERWAY AND MARINE CONSTRUCTION**

35 42 37 Rip-Rap Splash Pads and Erosion Protection Stone

**DIVISION 36 THROUGH 48 ARE NOT REQUIRED****APPENDICES**

Appendix A	Project Drawings
Appendix B	Environmental Permits Florida Department of Environmental Protection 55-129250-006-EI Department of Army SAJ-2008-04116 Florida Fish and Wildlife Conservation Commission Gopher Tortoise Incidental Take Permit #STJ-24, St. Johns County
Appendix C	Topographic Survey 2005 DeGrove Surveyors, Inc.; Construction Survey for Dredge Material Management Area DU-9; Inv. No. W912EP-05-D-001 2008 Arc Surveying & Mapping, Inc.; Topographic Survey DU-9 - 60' Pipeline Easement; Project No. 08-05-06 2010 Arc Surveying & Mapping, Inc. Topographic Survey DU-9 - 60' Pipeline Easement; Project No. 09-09-04
Appendix D	Geotechnical Information 1999 Report of Geotechnical Exploration; DMMA DU-9; Dee Dot Ranch Property; St. Johns County, Florida; E&A Project No. 99-1018 2003 Preliminary Report of Geotechnical Exploration; DU-9 Dredged Material Management Area; MACTEC Project No. 6734-03-8695 2015 Revised Report of Geotechnical Engineering Services; FIND DU-9 Dredged Material Management Area; AMEC Foster Wheeler Project No. 6734-15-9829
Appendix E	Draft Submittal Register
Appendix F	General Forms
Appendix G	Florida Department of Environment Protection Former Dee Dot Sludge Disposal Area No. 2 Conditional Closure Letter

-- End of Section --