

MANATEE COUNTY, FLORIDA

STORMWATER DISCHARGE MAINTENANCE PROGRAM

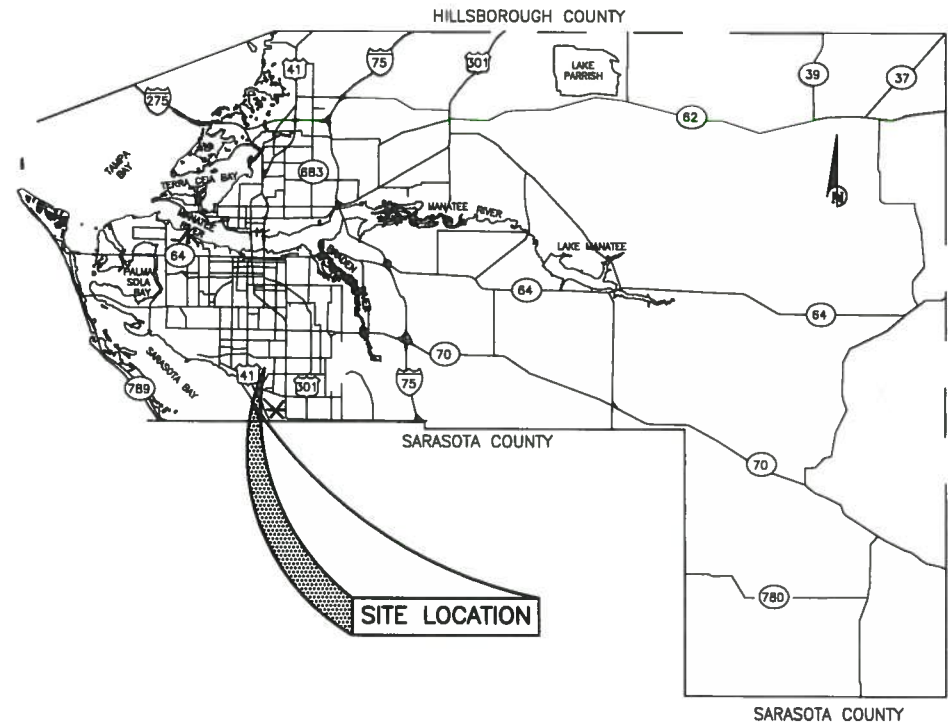
BOWLEES CREEK 2

OCTOBER 2014



PROJECT SITE

VICINITY MAP
N.T.S.



SITE LOCATION

100% PLANS

NO.	INDEX OF SHEETS
1.	COVER SHEET
2.	GENERAL NOTES & LEGEND
3.	PLAN & PROFILE
4-6.	AERIAL MAP (LOC. 1, 3, & 5)
7.	PLAN & PROFILE
8-10.	AERIAL MAP (LOC. 2, 4, & 6)

PROJECT DESCRIPTION

DREDGING SEDIMENT AT SIX LOCATIONS CONTAINING
A TOTAL OF 6 OUTFALLS OFF MAGELLAN WAY
(SEE ABOVE MAP).
TOTAL EXCAVATION = 350 CY.

STORMWATER DISCHARGE
MAINTENANCE PROGRAM
BOWLEES CREEK 2
COVER SHEET

NO.	REVISION DESCRIPTION	DATE

PROJECT #	----
SURVEY #	NA
SEC./TWN./RGE	28/35/17
SCALE	AS SHOWN
BY	DATE
SURVEYED	NA -
DESIGNED	JP 10-03-14
DRAWN	JP 10-03-14
CHECKED	KK 10-20-14



Know what's below
Call before you dig

KENNETH KOHN, P.E.
FLORIDA P.E. # 51995
Signature
10/23/14
Signature & Date

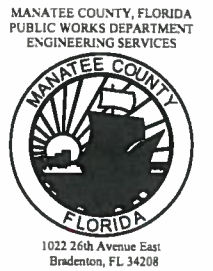
S:\PMD_Engineering\Shore Stormwater Engineering\SetimentOutfalls Design\Bowlees Creek 2\DWG\11 x 17 Cover_10/23/2014 1:18 PM John.Poir. 1.L. tabbed (11 x 17)

GENERAL NOTES

1. A PRE-CONSTRUCTION MEETING SHALL BE REQUIRED BEFORE ANY DREDGING COMMENCES.
2. THIS PROJECT DOES NOT REQUIRE A PERMIT FROM FDEP / SWFWMD. THE CONSTRUCTION ACTIVITIES PERFORMED IN ACCORDANCE WITH THE CONSTRUCTION PLANS AND SPECIFICATIONS ARE ANTICIPATED TO HAVE A MINIMAL IMPACT AND ARE DEEMED EXEMPT OR AS DEMINIMUS ACTIVITY. CONSTRUCTION ACTIVITIES MUST CEASE AND APPLICABLE REGULATORY STATE AND FEDERAL PERMITS/AUTHORIZATION MUST BE OBTAINED SHOULD CONSTRUCTION ACTIVITIES BE DEEMED NECESSARY TO DEVIATE FROM WHAT IS NOTED ON THE APPROVED PLANS AND SPECIFICATIONS.
3. ALL WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODE ORDINANCES AND REGULATIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT ALL REQUIRED PERMITS/AUTHORIZATIONS/EXEMPTIONS ARE OBTAINED IN HAND BEFORE BEGINNING ANY DREDGING.
4. CONTRACTOR SHALL PROTECT, STABILIZE AND MAINTAIN STRUCTURAL INTEGRITY OF SEA WALLS, DOCKS, OR OTHER STRUCTURES IN PROXIMITY OF PROPOSED DREDGING LIMITS THAT COULD BE COMPROMISED FROM THE DREDGING AND ASSOCIATED WORK. ANY IMPACTS TO EXISTING SEA WALLS, FENCES, REAR YARD, DOCKS, OR ANY PRIVATE/PUBLIC PROPERTY SHALL BE REPLACED AND RECONSTRUCTED TO THE SAME OR BETTER CONDITION BY CONTRACTOR AT NO CHARGE TO THE COUNTY.
5. ALL DISTURBED AREAS NOT INCLUDING THE AREAS SHOWN ON THE PLANS WHERE DREDGING WILL OCCUR, WILL BE RESTORED TO THEIR PRE-DREDGED CONDITION.
6. THE CONTRACTOR SHALL CONTACT THE PROPERTY OWNERS WHOSE PROPERTY ABUTS THE CANAL WHERE DREDGING WILL OCCUR NO LATER THAN 14 DAYS IN ADVANCE OF THE PROPOSED WORK. SUCH CONTACT SHALL INCLUDE WRITTEN NOTIFICATION OF THE PROPOSED WORK, DATES AND TIMES OF THE PROPOSED WORK AND ANY IMPACTS TO NAVIGATION, ROADS, AND/OR UTILITIES THAT MAY OCCUR. IN ADDITION CONTACT INFORMATION SHALL BE PROVIDED ON THE WRITTEN NOTIFICATION INCLUDING CONTRACTOR AND COUNTY CONTACTS, PHONE NUMBERS AND BUSINESS HOURS.
7. ALL DREDGED MATERIAL SHALL BE DISPOSED OF AT THE MANATEE COUNTY CLASS I LANDFILL (LENA ROAD). ALL DISPOSAL MATERIAL PLACED IN THE LANDFILL SHALL BE IN COMPLIANCE WITH "TEST METHODS FOR EVALUATING SOLID WASTE, PHYSICAL CHEMICAL METHOD" METHOD 9095 (PAINT FILTER LIQUIDS TEST) (EPA PUBLICATION NO. SW-846). CONTRACTOR TO MAINTAIN PRECISE RECORDS OF THE VOLUME OF MATERIAL DISPOSED OF THAT MEETS THE PAINT TEST. METHODOLOGY FOR QUANTIFYING DREDGED MATERIAL DISPOSED SHALL BE APPROVED BY THE COUNTY ENGINEER.
8. HAULING SHALL BE IN SEALED TRUCKS OVER A CONTRACTOR DESIGNATED, COUNTY APPROVED HAUL ROUTE TO MANATEE COUNTY LANDFILL. ANY ROADWAY DAMAGE ALONG THE HAUL ROUTE FROM SPOIL TRANSPORTATION SHALL BE REPAIRED PER FDOT OR COUNTY STANDARDS AT NO COST TO THE OWNER OR ENGINEER.
9. DREDGING WILL OCCUR ONLY AT THE LOCATIONS, DEPTHS, AREAS AS SHOWN ON THE PLANS. A PRE AND POST DREDGING SURVEY WILL BE PROVIDED TO DEMONSTRATE DREDGING WAS CONSISTENT WITH THE DEPTH, AREAS AND LOCATIONS INDICATED ON THE PLANS.
10. THE CONTRACTOR SHALL NOT EXCAVATE, DREDGE, REMOVE OR OTHERWISE DISTURB ANY MATERIAL STRUCTURE OR PART OF A STRUCTURE WHICH IS LOCATED OUTSIDE THE DREDGING AREA INDICATED ON THE PLANS, EXCEPT WHERE SUCH EXCAVATIONS, DREDGING OR REMOVAL IS PROVIDED FOR IN THE CONTRACT, PLANS OR SPECIFICATIONS.
11. APPARENT ERRORS, DISCREPANCIES OR OMISSIONS ON THE DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION BEFORE BIDDING.
12. THE CONTRACTOR SHALL PERFORM SITE OPERATION AND CARE FOR THE REMOVAL OF ALL TRASH, DEBRIS, EXCESS MATERIALS AND EQUIPMENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PRESENT THE PROJECT CLEAN AND IN GOOD ORDER AT ALL TIMES UNTIL FINAL ACCEPTANCE.
13. THE CONTRACTOR SHALL COMPLY WITH THE LEGAL LOAD RESTRICTIONS IN HAULING MATERIALS IN PUBLIC ROADS BEYOND THE LIMITS OF WORK. A SPECIAL PERMIT WILL NOT RELIEVE THE CONTRACTOR OF LIABILITY FOR DAMAGE WHICH MAY RESULT FROM THE MOVING OF MATERIAL AND EQUIPMENT.
14. ALL EXISTING DRAINAGE STRUCTURES TO REMAIN UNLESS OTHERWISE NOTED.
15. THE CONTRACTOR SHALL VERIFY LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. EXISTING UTILITIES ARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED. CONTRACTOR MUST EXERCISE EXTREME CAUTION WHILE WORKING OR EXCAVATING NEAR NATURAL GAS LINES, UNDERGROUND ELECTRIC, AND GRAVITY SEWER. THIS MAY NECESSITATE HAND DIGGING TO AVOID DAMAGE OR SERIOUS INJURY.
16. THE CONTRACTOR TO NOTIFY SUNSHINE STATE ONE-CALL OF FLORIDA AT 1-800-432-4770, TWO FULL BUSINESS DAYS PRIOR TO CONSTRUCTION.
17. THE CONTRACTOR TO NOTIFY THE U.S. COAST GUARD AND ANY OTHER NAVIGATIONAL AUTHORITY REGARDING INGRESS AND EGRESS TO THE PROPOSED PROJECT INCLUDING ANY NAVIGATIONAL HAZARDS OR REQUIREMENTS FOR SUCH WORK THAT MAY EXIST.
18. ALL MANATEE PROTECTION DEVICES AND CONTROLS SHALL BE MAINTAINED AS REQUIRED BY STATE LAW.
19. ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 88.
20. ALL CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH THE PUBLIC WORKS DEPARTMENT, PROJECT MANAGEMENT DIVISION AND ENGINEERING SERVICES DIVISION.

EROSION AND TURBIDITY/SEDIMENT CONTROL:

1. CONTRACTOR SHALL INSTALL PRIOR TO AND MAINTAIN DURING THE DREDGING OPERATION ALL SEDIMENT CONTROL MEASURES TO MEET APPLICABLE STATE, FEDERAL AND LOCAL WATER QUALITY STANDARDS.
2. THE PROPOSED DUAL FLOATING TURBIDITY SCREENS WILL BE PLACED AS SHOWN ON THE PLANS AND WILL REMAIN IN PLACE THROUGHOUT THE DURATION OF THE DREDGING OPERATION. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED AS REQUIRED TO MAINTAIN WATER QUALITY STANDARDS THROUGHOUT THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE TO ADJUST, RELOCATE, AND MAINTAIN EROSION CONTROLS TO MEET APPLICABLE WATER QUALITY STANDARDS.
3. THE MAINTENANCE SCHEDULE FOR THE EROSION AND TURBIDITY/SEDIMENT CONTROL WILL BE DAILY.
4. EROSION AND TURBIDITY/SEDIMENT CONTROL BMP'S IN ADDITION TO THOSE PRESENTED ON THE PLANS SHALL BE IMPLEMENTED AS NECESSARY TO PREVENT TURBIDITY OR OTHER WATER QUALITY VIOLATIONS. BMP'S SHALL BE MAINTAINED TO ENSURE THAT APPLICABLE SURFACE WATER QUALITY STANDARDS ARE MET.
5. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH ALL APPLICABLE SURFACE WATER QUALITY STANDARDS (STATE, FEDERAL AND LOCAL) TO ENSURE THE DREDGING OPERATION DOES NOT RESULT IN APPLICABLE SURFACE WATER QUALITY VIOLATIONS. TURBIDITY WHICH EXCEEDS 29 NTU'S ABOVE BACKGROUND SHALL BE CORRECTED IMMEDIATELY AND SUCH INCIDENTS SHALL BE REPORTED TO THE COUNTY ENGINEER AND STATE WARNING POINT NO LATER THAN 24 HOURS AFTER THE OCCURRENCE. THE REPORT SHALL INCLUDE THE CAUSE OF THE EXCEEDANCE AND CORRECTIVE ACTION TAKEN.
6. WATER QUALITY SAMPLES FOR TURBIDITY WILL BE AT THE EXPENSE OF THE CONTRACTOR IF NECESSARY IN THE EVENT A WATER QUALITY VIOLATION OR TURBIDITY PLUME OCCURS OR EROSION AND SEDIMENT CONTROLS ARE COMPROMISED OR OTHERWISE NOT PROVIDING FOR THE REQUIRED PROTECTION NECESSARY TO MEET APPLICABLE SURFACE WATER QUALITY STANDARDS. IF REQUIRED, AN ADEQUATE MIXING ZONE MAY BE ESTABLISHED IN ACCORDANCE WITH FAC CHAPTERS 62-4 AND 62-302 AND WILL BE APPROVED BY THE APPLICABLE REGULATORY AGENCY. WHERE REQUIRED, MONITORING WILL OCCUR WITHIN THE AFFECTED AREA AND AT A DOWNSTREAM UNIMPACTED BACKGROUND LOCATION. SAMPLES WILL BE COLLECTED AT THE SURFACE AND AT MIDEPTH. MONITORING WILL CONTINUE ON NO LESS THAN A DAILY BASIS UNTIL WATER QUALITY STANDARDS ARE MET. ALL CONSTRUCTION/DREDGING ACITIVITY WILL CEASE IN EVENT WATER QUALITY VIOLATIONS OCCUR AS A RESULT OF THE PROJECT.
7. CONTRACTOR TO BE SOLELY RESPONSIBLE FOR CONTROL OF EROSION WITHIN THE WORK SITE AND PREVENTION OF SEDIMENTATION AND TURBIDITY OF ANY ADJACENT OR DOWNSTREAM WATERWAYS. THE EROSION AND SEDIMENT/TURBIDITY CONTROL MEASURES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS. THE CONTRACTOR'S METHOD OF OPERATION MAY DICTATE ADDITIONAL EROSION AND SEDIMENTATION/TURBIDITY CONTROL MEASURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING AND INSTALLING ADDITIONAL MEASURES.
8. TEMPORARY DEWATERING SHALL NOT OCCUR WITHOUT PRIOR APPROVAL FROM FDEP AND MANATEE COUNTY.
9. ALL TEMPORARY EROSION CONTROL DEVICES SHALL BE REMOVED AT THE COMPLETION OF THE PROJECT.
10. REFER TO THE EROSION AND SEDIMENT CONTROL PLAN(S) FOR ADDITIONAL INFORMATION.



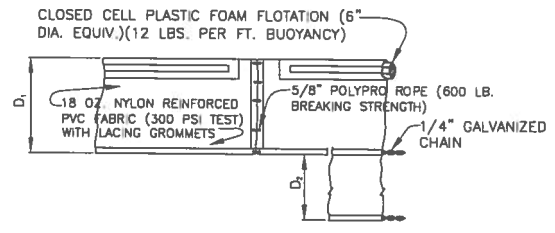
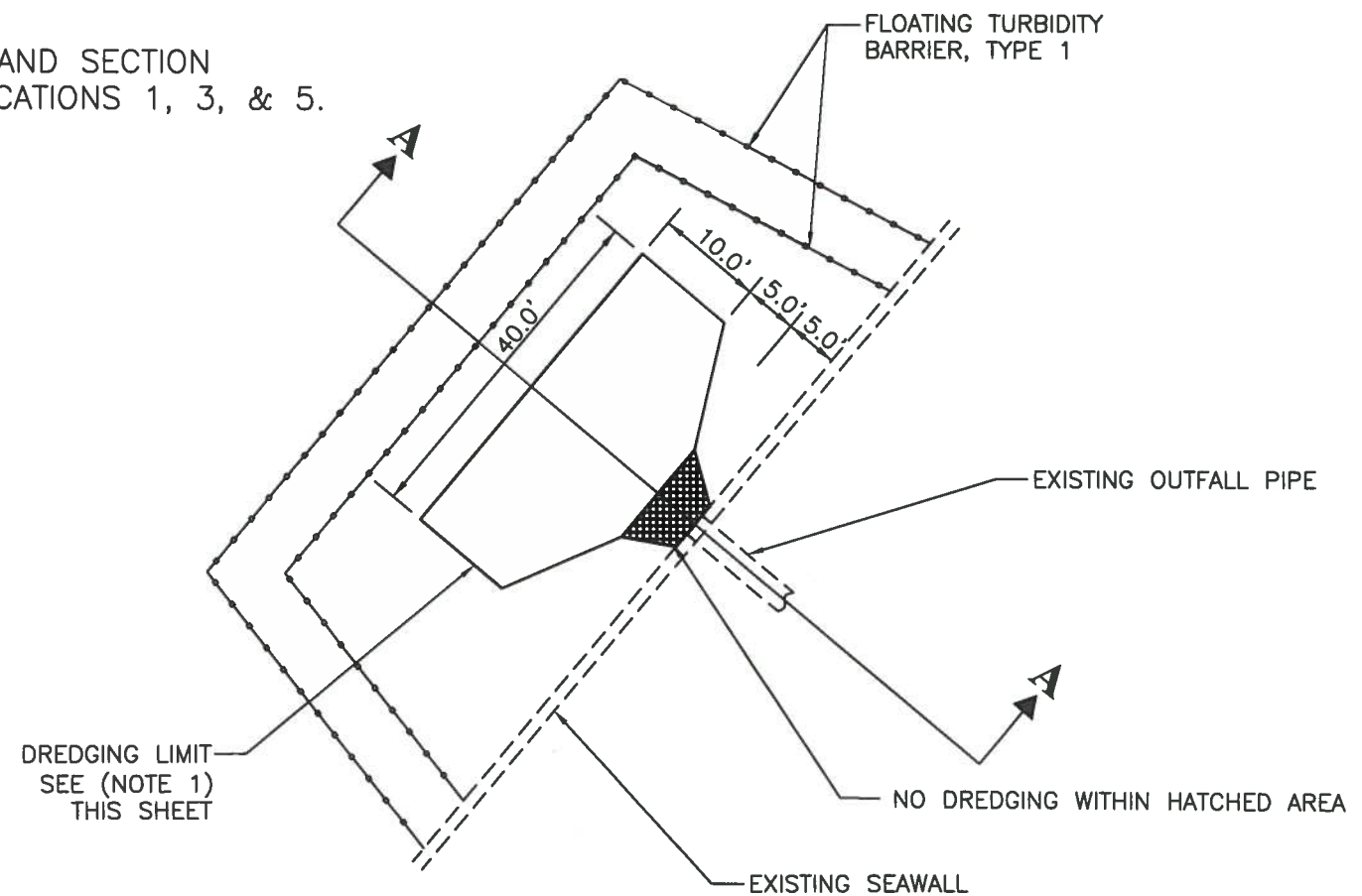
**STORMWATER DISCHARGE
MAINTENANCE PROGRAM
BOWLEES CREEK 2
GENERAL NOTES & LEGEND**

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	----
SURVEY #	000
SEC./TWN./RGE	28/35/17
SCALE	AS SHOWN
BY	DATE
SURVEYED	NA
DESIGNED	JP 10-03-14
DRAWN	JP 10-03-14
CHECKED	KK 10-07-14
KENNETH KOHN, P.E.	
FLORIDA P.E. # 37993	
<i>Kenneth Kohn</i>	
10/29/14	
Signature & Date	

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TYPICAL PLAN AND SECTION
FOR CANAL LOCATIONS 1, 3, & 5.

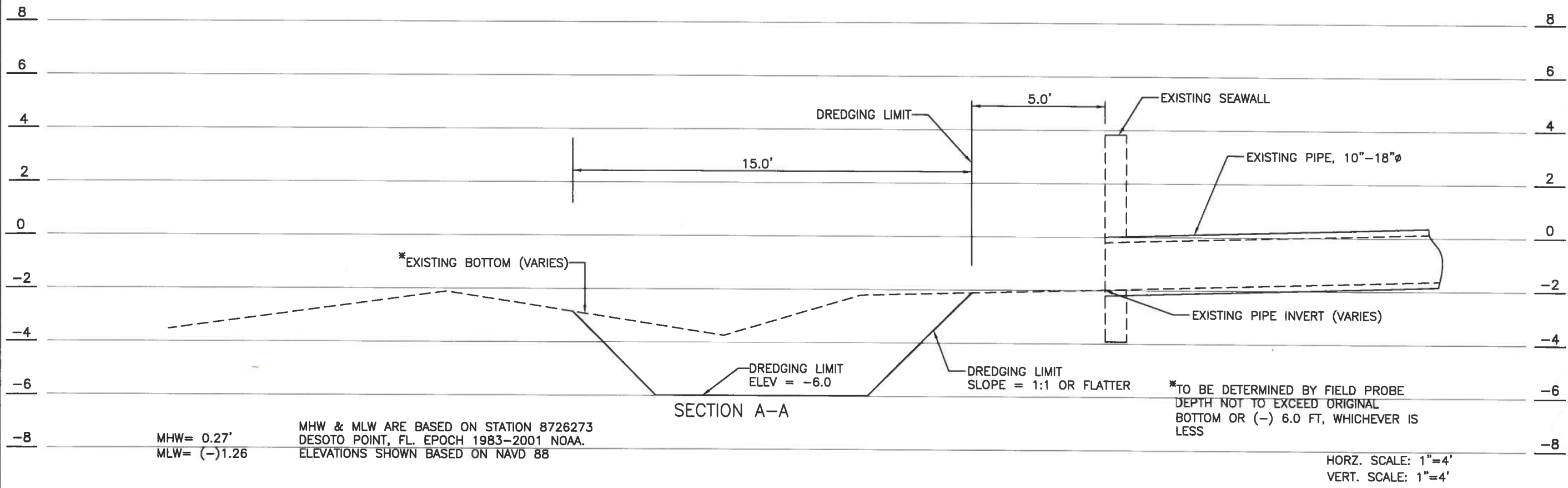


FLOATING TURBIDITY BARRIERS

D₁ = 5' STD. (SINGLE PANEL FOR DEPTHS 5' OR LESS). D₂ = 5' STD. (ADDITIONAL PANEL FOR DEPTHS > 5'). CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FEET. TWO(2) PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FEET UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY CALLED FOR IN THE PLANS OR AS DETERMINED BY THE ENGINEER.

NOTICE: COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.

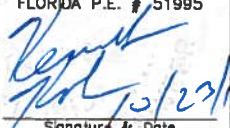
NOTE 1: DREDGING LIMITS NOT TO EXCEED AREA AS SHOWN, VARIES FOR EACH LOCATION. MAINTAIN 5 FT MINIMUM SEPARATION FROM DOCKS AND OTHER MANMADE STRUCTURES



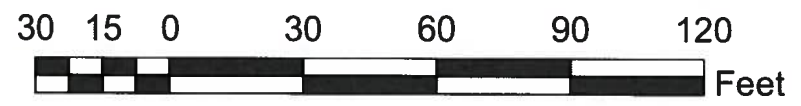
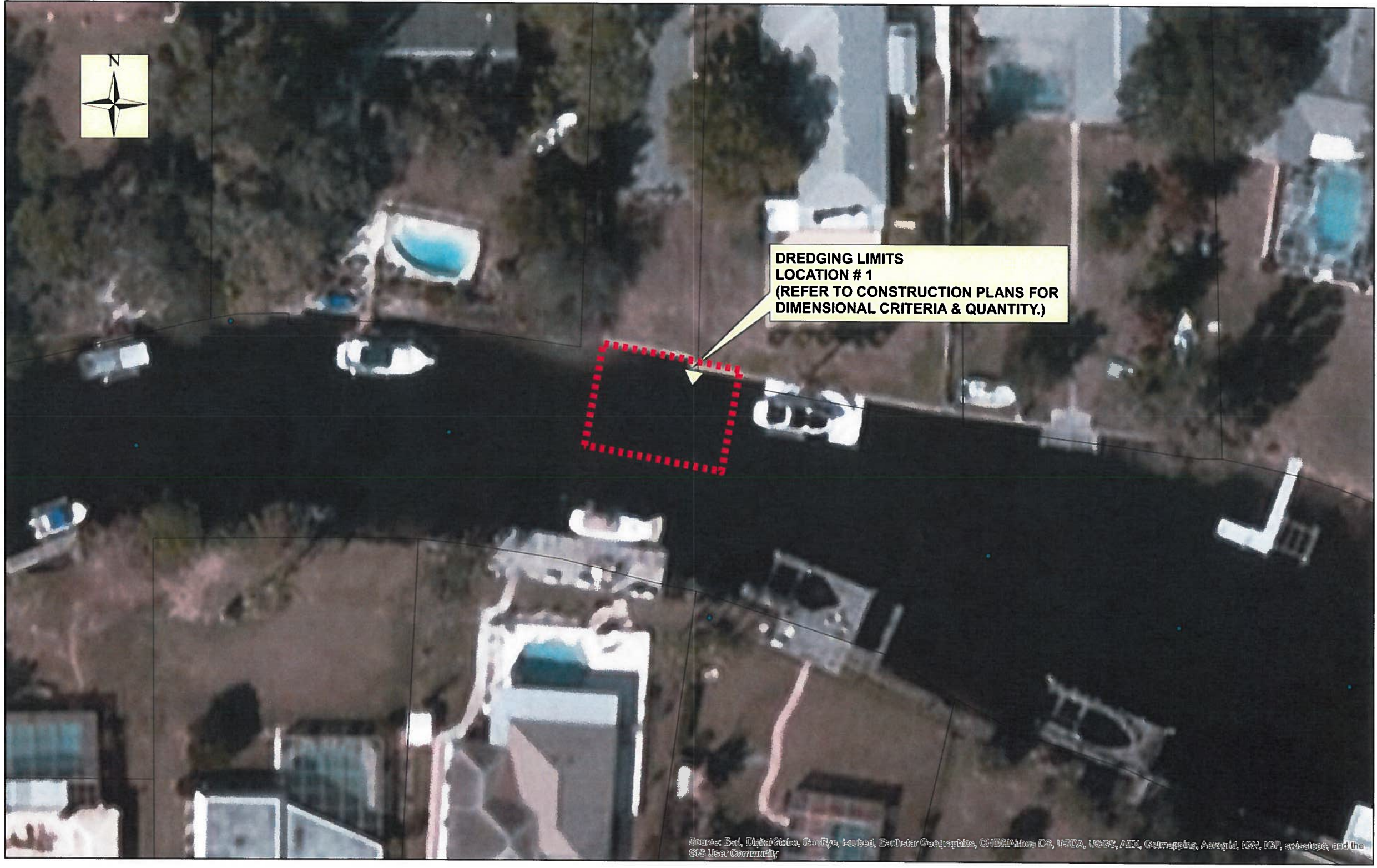
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**STORMWATER DISCHARGE
MAINTENANCE PROGRAM
BOWLESS CREEK 2
PLAN & PROFILE**

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	----	
SURVEY #	000	
SEC./TWN./RGE	26/35/17	
SCALE	AS SHOWN	
	BY	DATE
SURVEYED	NA	09/20/12
DESIGNED	JP	10/03/14
DRAWN	JP	10/03/14
CHECKED	KK	10/20/14
KENNETH KOHN, P.E.		
FLORIDA P.E. # 51995		
 Signature & Date		

**STORMWATER DISCHARGE
MAINTENANCE PROGRAM
BOWLEES CREEK 2
AERIAL MAP - LOCATION 1**



Source: Esri, DeLorme, GeoEye, Iridium, Earthstar Geographics, CNR/Airphoto, IGN, USA, USGS/Airphoto, AeroGRID, IGN, Esri, Swisstopo, and the GIS User Community

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	----
SURVEY #	000
SEC./TWN./RGE	26/35/17
SCALE	AS SHOWN

	BY	DATE
SURVEYED	NA	
DESIGNED	JP	10-03-14
DRAWN	JP	10-18-14
CHECKED	KK	10-20-14

KENNETH KOHN, P.E.
FLORIDA P.E. # 51995

Kenneth Kohn
10/23/14

Signature & Date

I:\P\B\Engineering\Stormwater\Engineering\Segment\Outlets\Drawings\Bowlees_Creek_2\DWG\Aerial_Location_Map1_10/23/2014_203-PK-10m-Plan-1-10.mxd (11"x17")

**STORMWATER DISCHARGE
MAINTENANCE PROGRAM
BOWLEES CREEK 2
AERIAL MAP - LOCATION 3**



Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroX, GeoMapping, AeroGRID, IGN, ICF, swisstopo, and the
GIS User Community

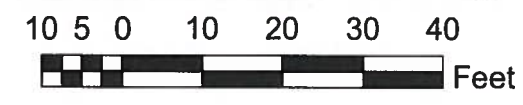
NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	----
SURVEY #	000
SEC./TWN./RGE	26/35/17
SCALE	AS SHOWN
	BY DATE
SURVEYED	NA
DESIGNED	JP 10-03-14
DRAWN	JP 10-16-14
CHECKED	KK 10-20-14

KENNETH KOHN, P.E.
FLORIDA P.E. # 51995
Kenneth Kohn
10/23/14
Signature & Date

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**STORMWATER DISCHARGE
MAINTENANCE PROGRAM
BOWLEES CREEK 2
AERIAL MAP - LOCATION 5**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, ISP, Planet, and the GIS User Community

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	----
SURVEY #	000
SEC./TWN./RGE	26/35/17
SCALE	AS SHOWN

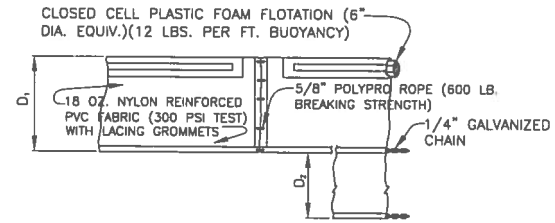
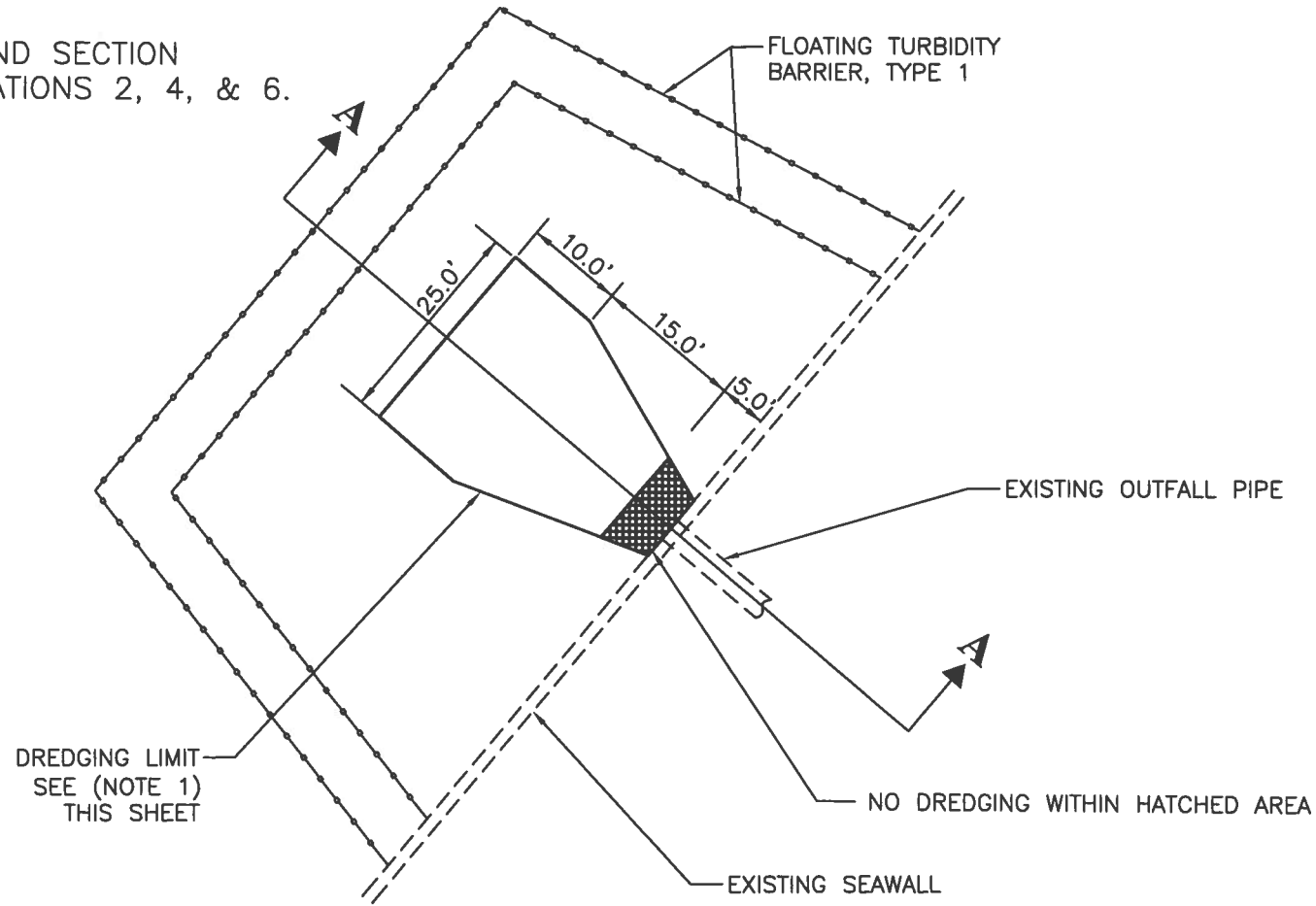
	BY	DATE
SURVEYED	NA	
DESIGNED	JP	10-03-14
DRAWN	JP	10-16-14
CHECKED	KK	10-20-14

KENNETH KOHN, P.E.
FLORIDA P.E. # 11995
Kenneth Kohn
10/23/14
Signature & Date

SHEET 6

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TYPICAL PLAN AND SECTION FOR CANAL LOCATIONS 2, 4, & 6.

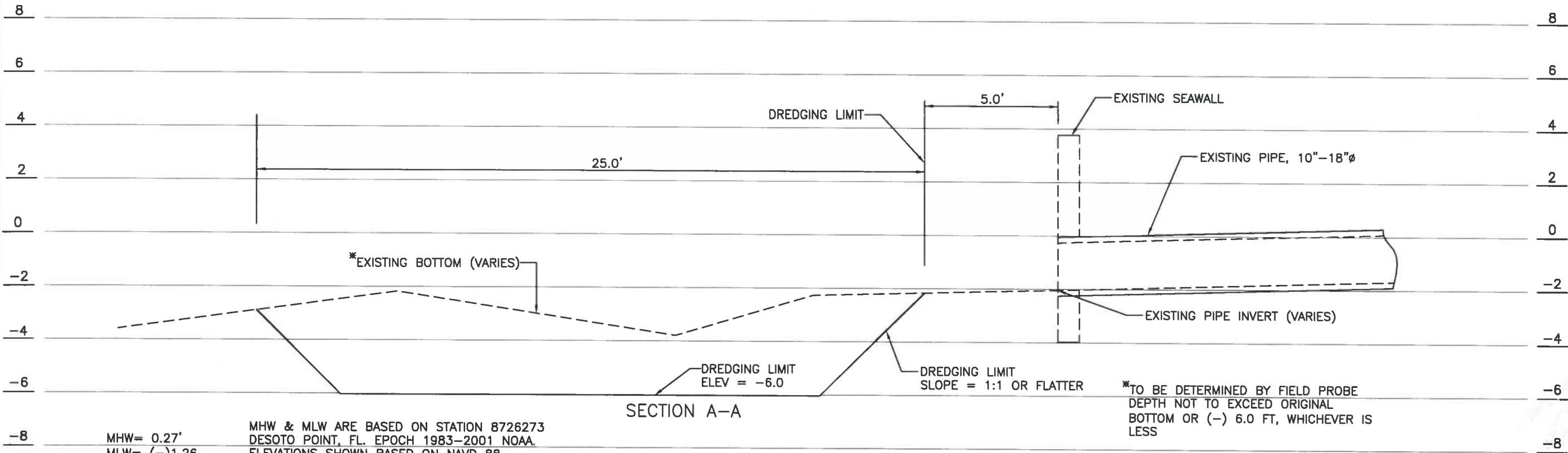


FLOATING TURBIDITY BARRIERS

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NOTE 1: DREDGING LIMITS NOT TO EXCEED AREA AS SHOWN, VARIES FOR EACH LOCATION. MAINTAIN 5 FT MINIMUM SEPARATION FROM DOCKS AND OTHER MANMADE STRUCTURES



SECTION A-A

MHW = 0.27'
MLW = (-)1.26

MHW & MLW ARE BASED ON STATION 8726273
DESOTO POINT, FL. EPOCH 1983-2001 NOAA.
ELEVATIONS SHOWN BASED ON NAVD 88

*TO BE DETERMINED BY FIELD PROBE
DEPTH NOT TO EXCEED ORIGINAL
BOTTOM OR (-) 6.0 FT, WHICHEVER IS
LESS

HORIZ. SCALE: 1"=4'
VERT. SCALE: 1"=4'



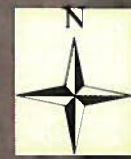
STORMWATER DISCHARGE
MAINTENANCE PROGRAM
BOWLEES CREEK 2
PLAN & PROFILE

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT # ----
SURVEY # 000
SEC./TWN./RGE 26/35/17
SCALE AS SHOWN
BY DATE
SURVEYED NA 09/20/12
DESIGNED JP 10/03/14
DRAWN JP 10/16/14
CHECKED KK 10/20/14
KENNETH KOHN, P.E.
FLORIDA P.E. # 51985
Kenneth Kohn
10/23/14
Signature & Date
SHEET 7

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**STORMWATER DISCHARGE
MAINTENANCE PROGRAM
BOWLEES CREEK 2
AERIAL MAP - LOCATION 2**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNR/Airbus DS, USDA, USGS, AeroGRID, IGN, IGP, swisstopo, and the GIS User Community

NO.	REVISION DESCRIPTION	BY	DATE

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SURVEYED	NA
DESIGNED	JP 10-03-14
DRAWN	JP 10-16-14
CHECKED	KK 10-20-14

KENNETH KOHN, P.E.
FLORIDA P.E. # 51995
Kenneth Kohn
12/29/19
Signature & Date
SHEET 8

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**STORMWATER DISCHARGE
MAINTENANCE PROGRAM
BOWLEES CREEK 2
AERIAL MAP - LOCATION 4**



**DREDGING LIMITS
LOCATION # 4
(REFER TO CONSTRUCTION PLANS FOR
DIMENSIONAL CRITERIA & QUANTITY.)**



Source: Esri, DigitalGlobe, GeoEye, Federal Earthsat, GeoEye, IGN, AerGRID, AIR, Carto, IGN, IGN, ICF, swisstopo, and the
GIS User Community

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DRAWN	JP 10-16-14
CHECKED	KK 10-20-14

KENNETH KOHN, P.E.
FLORIDA P.E. # 11995
Kenneth Kohn
12/23/14
Signature & Date

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**STORMWATER DISCHARGE
MAINTENANCE PROGRAM
BOWLEES CREEK 2
AERIAL MAP - LOCATION 6**

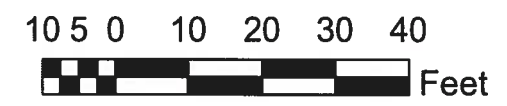


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CHECKED	KK 10-20-14

**DREDGING LIMITS
LOCATION # 6
(REFER TO CONSTRUCTION PLANS FOR
DIMENSIONAL CRITERIA & QUANTITY.)**

Source: ESRI, DigitalGlobe, GeoEye, i-cubed, Earthstar, GeoGraphics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, IGP, swisstopo, and the GIS User Community



KENNETH KOHN, P.E.
FLORIDA P.E. # 51998
Kenneth Kohn
10/23/19
Signature & Date

I:\PWP_Engineering_Support\GIS\Projects\Stormwater\Design\Bowles_Creek_2\DWG\Aerial_Map_6_10/23/2014 2:05 PM John Poirier (11-17)