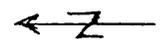


SCALE 1" = 400'

PHOTO DATE MARCH 1951

SECTION 22
TOWNSHIP = 12S
RANGE = 10E

DIXIE COUNTY
FLORIDA

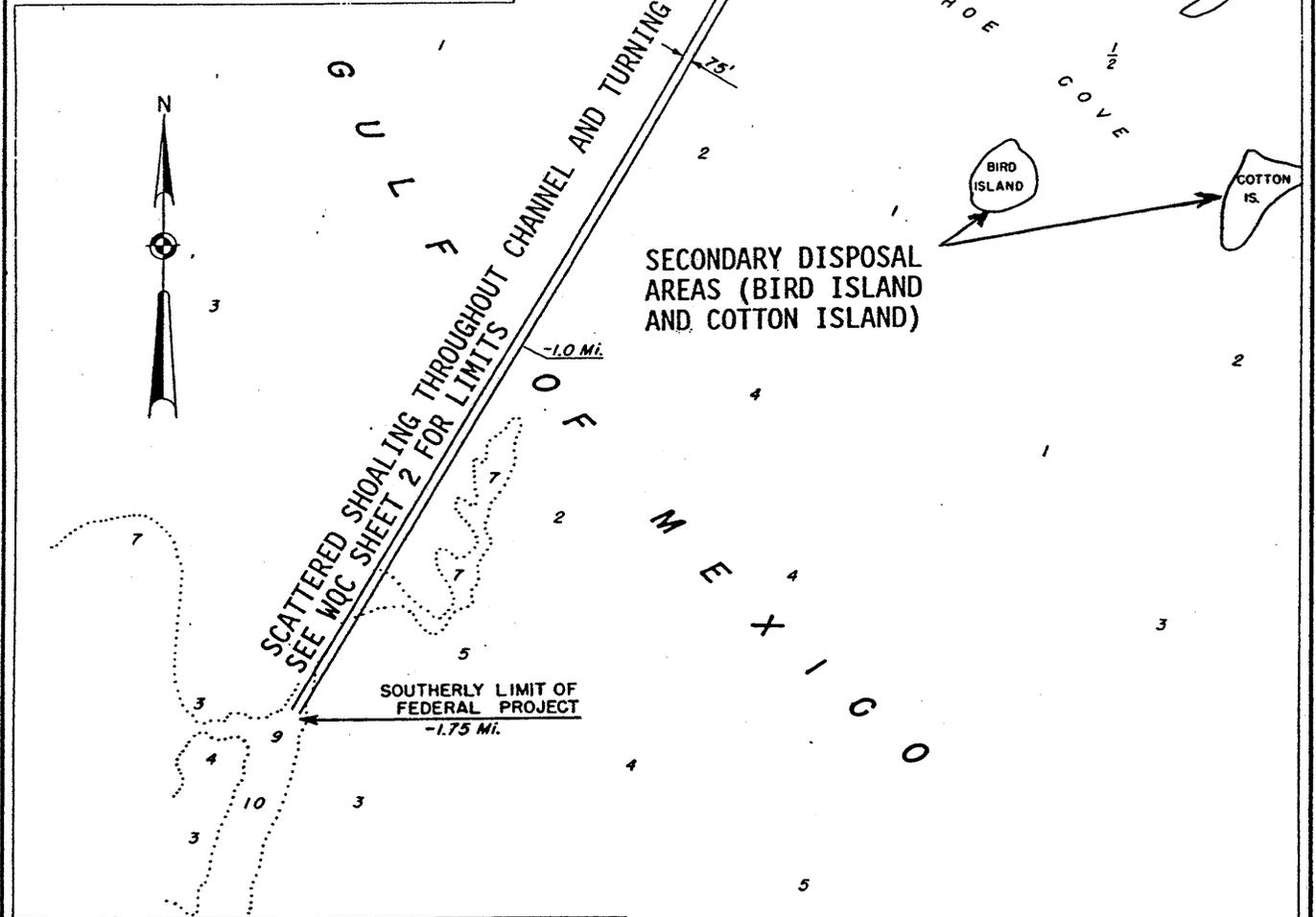
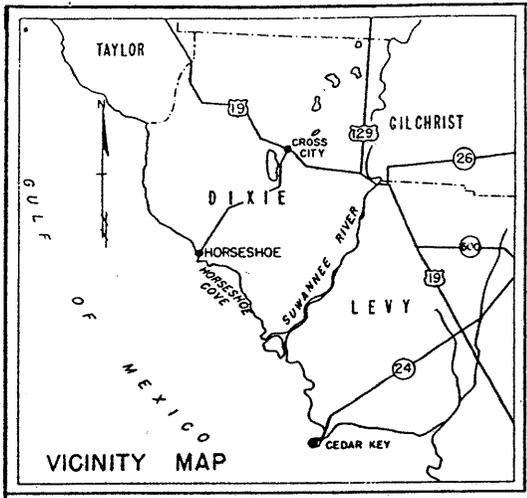


SHEET 2

SECONDARY DISPOSAL AREA

43

APPROXIMATE LOCATION OF
PRIMARY DISPOSAL AREA
(SEE WQC SHEET 6 FOR LIMITS)



PROJECT: A channel 6 feet deep and 75 feet wide from that depth in the Gulf of Mexico to and including an irregular-shaped basin of like depth at the village of Horseshoe. The length of the improvement is about 1.75 miles.

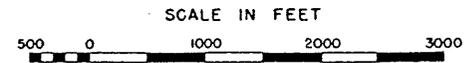
MEAN TIDAL RANGE: 2.4 feet.

AUTHORIZATION FOR EXISTING PROJECT		
AGT	WORK AUTHORIZED	DOCUMENT
17 May 1950	Channel 6 x 75 feet, and turning basin 6 feet deep and of irregular shape.	H.Doc.106/81/1

ENCL 3

WQC SHEET 1

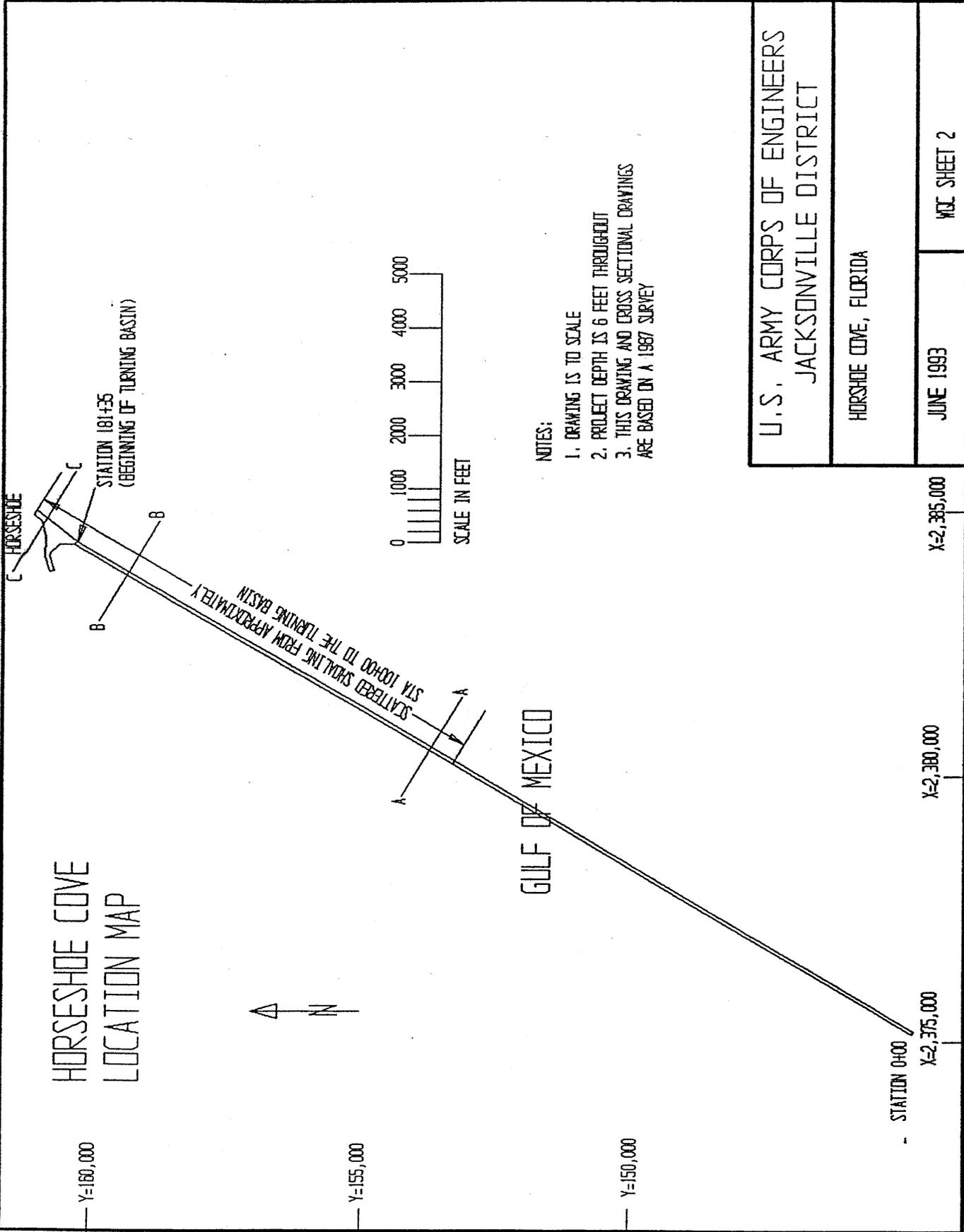
HORSESHOE COVE, FLA.



JACKSONVILLE FLORIDA DISTRICT

6-30-59

HORSESHOE COVE LOCATION MAP



- NOTES:**
1. DRAWING IS TO SCALE
 2. PROJECT DEPTH IS 6 FEET THROUGHOUT
 3. THIS DRAWING AND CROSS SECTIONAL DRAWINGS ARE BASED ON A 1987 SURVEY

U.S. ARMY CORPS OF ENGINEERS JACKSONVILLE DISTRICT	
HORSHOE COVE, FLORIDA	
JUNE 1993	KJC SHEET 2

STATION 0+00
X=2,375,000

X=2,380,000

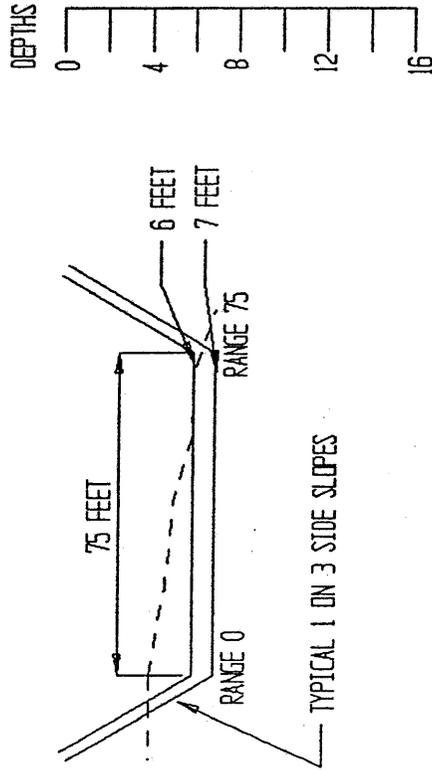
X=2,385,000

Y=160,000

Y=155,000

Y=150,000

TYPICAL DREDGING SECTION
 (CROSS SECTION A-A, STATION 105+00)



NOTES:

1. CROSS SECTIONAL DRAWINGS WERE DEVELOPED FROM A 1987 SURVEY
2. DASHED LINE INDICATES EXISTING BOTTOM
3. PROJECT DEPTH IS 6 FEET THROUGHOUT PROJECT INCLUDING TURNING BASIN
4. ONE FOOT OF ALLOWABLE OVERDEPTH IS SHOWN IN THE DRAWINGS
5. CHANNEL WIDTH IS 75 FEET FROM STATION 0+00 TO STATION 181+35 (BEGINNING OF TURNING BASIN). TURNING BASIN WIDTH VARIES FROM 75 TO 725 FEET
6. DEPTHS ARE GIVEN RELATIVE TO MEAN LOW WATER (MLW)
7. MLW IS 1.2 FEET BELOW MEAN SEA LEVEL (NGVD 1929)
8. MEAN HIGH WATER ELEVATION IS 2.65 FEET ABOVE MLW



VERTICAL SCALE IN FEET



HORIZONTAL SCALE IN FEET

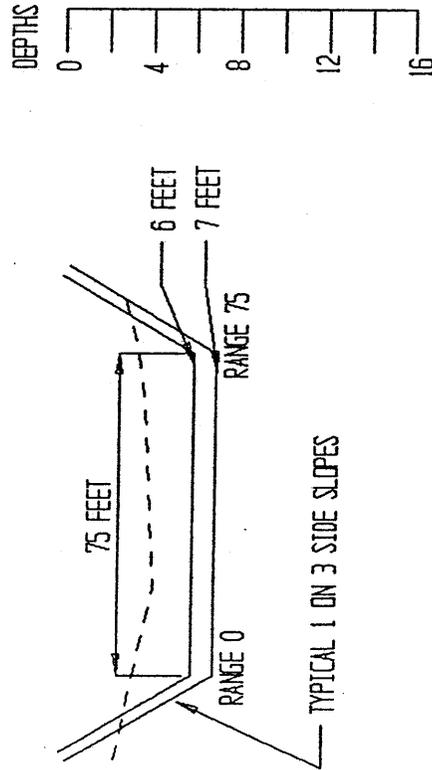
U.S. ARMY CORPS OF ENGINEERS
 JACKSONVILLE DISTRICT

HORSESHOE COVE, FLORIDA

JUNE 1993

WDC SHEET 3

TYPICAL DREDGING SECTION (CROSS SECTION B-B, STATION 170+00)



NOTES:

1. CROSS SECTIONAL DRAWINGS WERE DEVELOPED FROM A 1987 SURVEY
2. DASHED LINE INDICATES EXISTING BOTTOM
3. PROJECT DEPTH IS 6 FEET THROUGHOUT PROJECT INCLUDING TURNING BASIN
4. ONE FOOT OF ALLOWABLE OVERDEPTH IS SHOWN IN THE DRAWINGS
5. CHANNEL WIDTH IS 75 FEET FROM STATION 0+00 TO STATION 181+35 (BEGINNING OF TURNING BASIN). TURNING BASIN WIDTH VARIES FROM 75 TO 725 FEET
6. DEPTHS ARE GIVEN RELATIVE TO MEAN LOW WATER (MLW)
7. MLW IS 1.2 FEET BELOW MEAN SEA LEVEL (NGVD 1929)
8. MEAN HIGH WATER ELEVATION IS 2.65 FEET ABOVE MLW



VERTICAL SCALE IN FEET



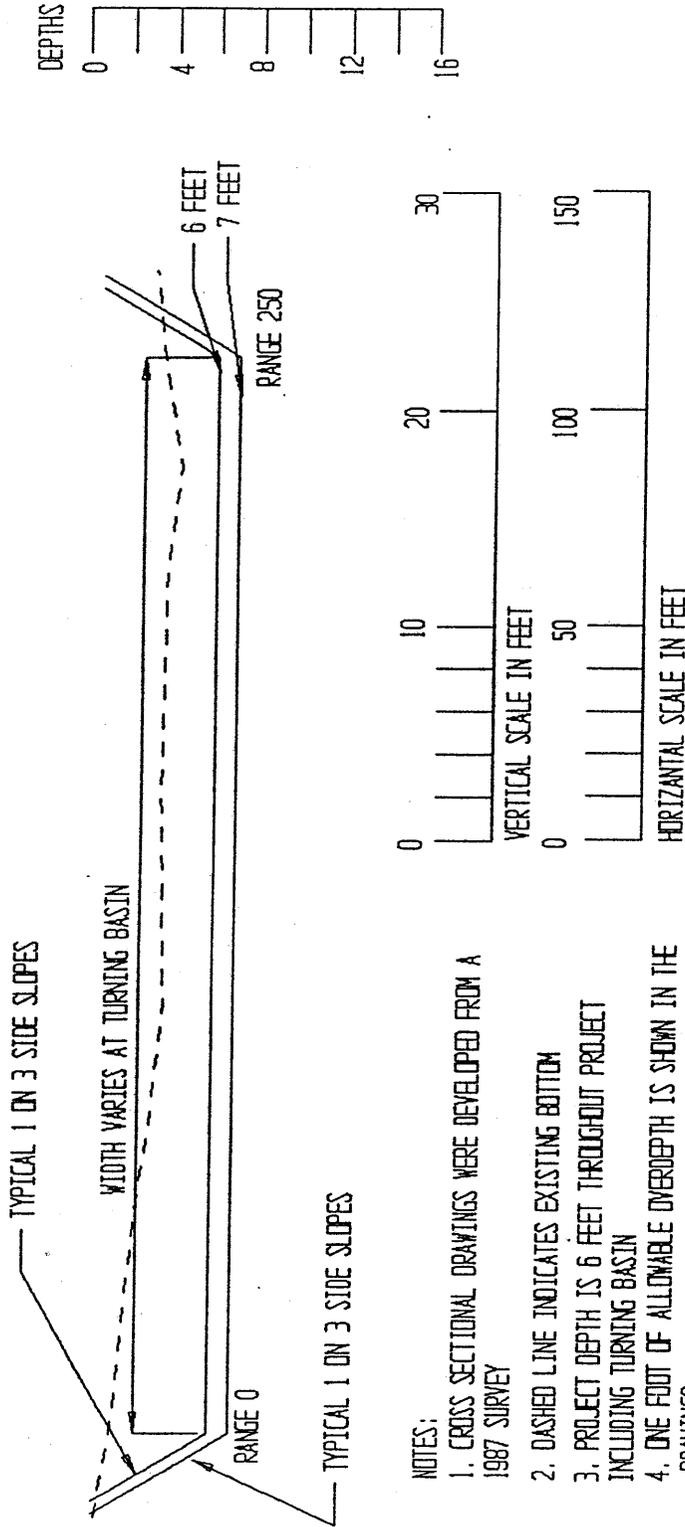
HORIZONTAL SCALE IN FEET

U.S. ARMY CORPS OF ENGINEERS
JACKSONVILLE DISTRICT
HORSESHOE COVE, FLORIDA

JUNE 1993

WDC SHEET 4

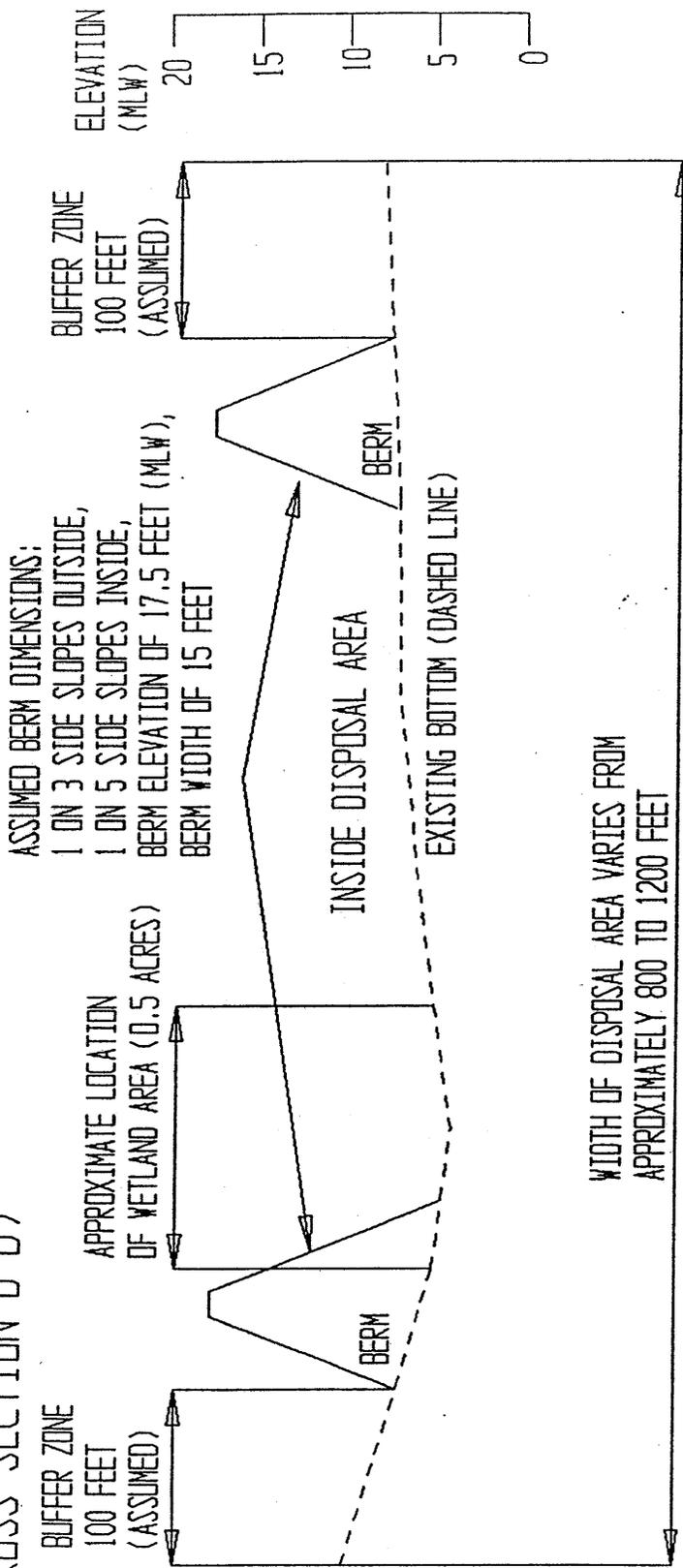
TYPICAL DREDGING SECTION
 (CROSS SECTION C-C, TURNING BASIN,
 STATION 187+00)



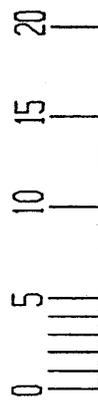
- NOTES:
1. CROSS SECTIONAL DRAWINGS WERE DEVELOPED FROM A 1987 SURVEY
 2. DASHED LINE INDICATES EXISTING BOTTOM
 3. PROJECT DEPTH IS 6 FEET THROUGHOUT PROJECT INCLUDING TURNING BASIN
 4. ONE FOOT OF ALLOWABLE OVERDEPTH IS SHOWN IN THE DRAWINGS
 5. CHANNEL WIDTH IS 75 FEET FROM STATION 0+00 TO STATION 181+35 (BEGINNING OF TURNING BASIN), TURNING BASIN WIDTH VARIES FROM 75 TO 725 FEET
 6. DEPTHS ARE GIVEN RELATIVE TO MEAN LOW WATER (MLW)
 7. MLW IS 1.2 FEET BELOW MEAN SEA LEVEL (NGVD 1929)
 8. MEAN HIGH WATER ELEVATION IS 2.65 FEET ABOVE MLW

U.S. ARMY CORPS OF ENGINEERS
 JACKSONVILLE DISTRICT
 HORSESHOE COVE, FLORIDA
 JUNE 1993
 WJOC SHEET 5

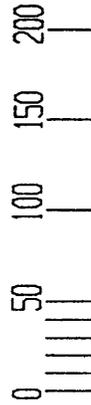
TYPICAL CROSS SECTION OF DISPOSAL AREA (CROSS SECTION D-D)



WIDTH OF DISPOSAL AREA VARIES FROM
APPROXIMATELY 800 TO 1200 FEET



VERTICAL SCALE
(IN FEET)



HORIZONTAL SCALE
(IN FEET)

NOTES:

1. DRAWING IS TO SCALE
2. DRAWING OBTAINED FROM SITE INVESTIGATION, HORSESHOE BEACH QUADRANGLE MAP (1954), AND DIXIE COUNTY AERIAL PHOTOGRAPHS AND ELEVATIONS BASED ON MEAN LOW WATER (MLW) AND ASSUMED FROM QUADRANGLE MAP
3. ELEVATIONS BASED ON MEAN LOW WATER (MLW) AND ASSUMED FROM QUADRANGLE MAP
4. MLW IS 1.2 FEET BELOW MEAN SEA LEVEL (NGVD 1929)

U.S. ARMY CORPS OF ENGINEERS
JACKSONVILLE DISTRICT

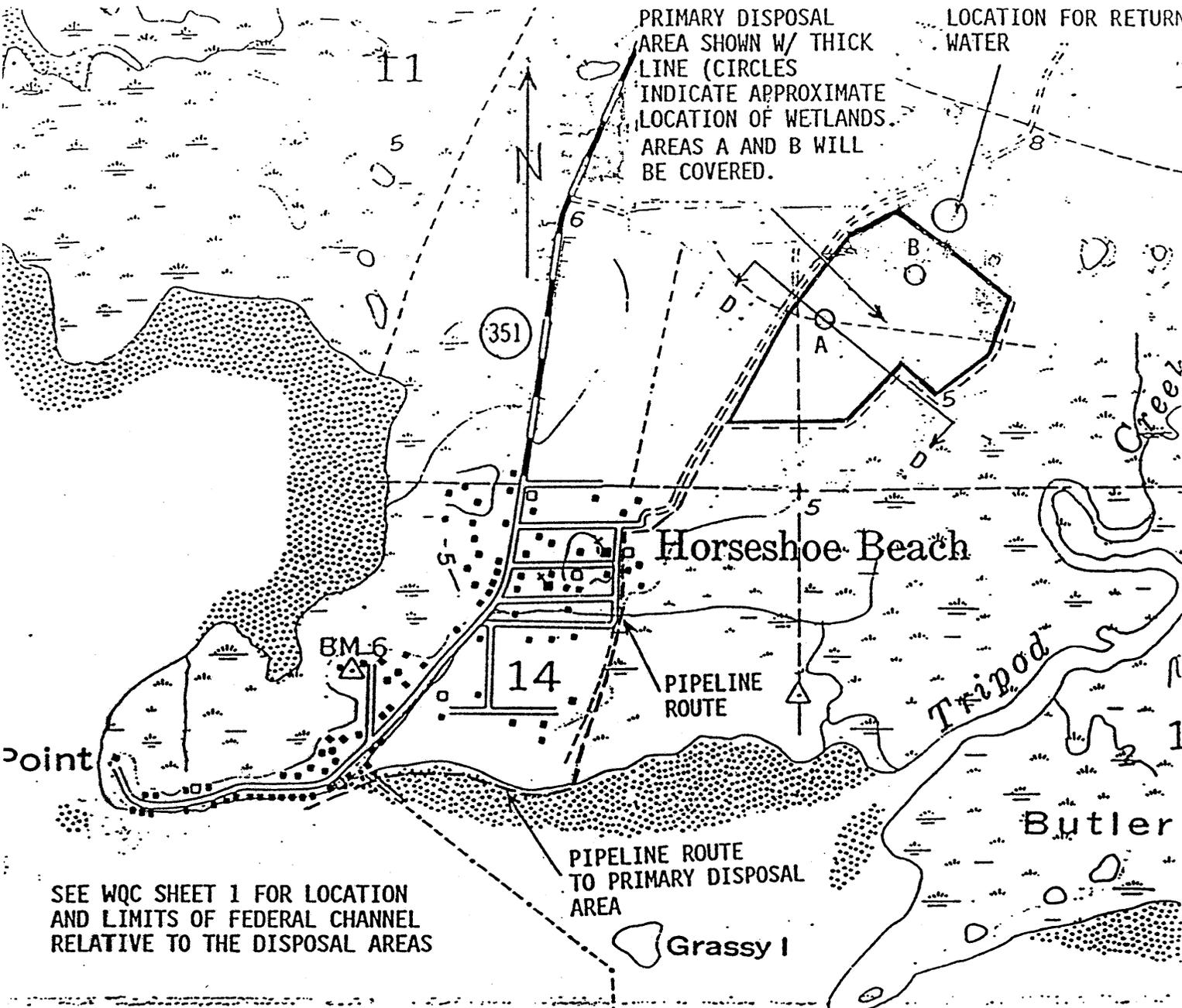
HORSESHOE COVE, FLORIDA

JUNE 1993

WDC SHEET 7

PRIMARY DISPOSAL
AREA SHOWN W/ THICK
LINE (CIRCLES
INDICATE APPROXIMATE
LOCATION OF WETLANDS.
AREAS A AND B WILL
BE COVERED.

LOCATION FOR RETURN
WATER



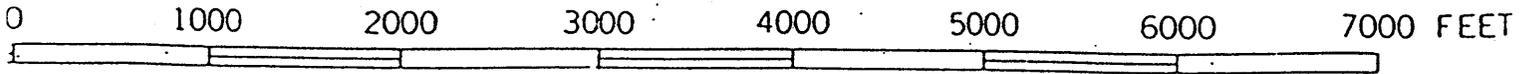
SEE WQC SHEET 1 FOR LOCATION
AND LIMITS OF FEDERAL CHANNEL
RELATIVE TO THE DISPOSAL AREAS

PIPELINE ROUTE
TO PRIMARY DISPOSAL
AREA

Bird Island

Cotton Island

SCALE IN FEET





06

PRELIMINARY
404(b) EVALUATION REPORT
HORSESHOE COVE
DIXIE COUNTY, FLORIDA
CONFINED UPLAND DISPOSAL SITE

1. Introduction. The evaluation is prepared in accordance with the Guidelines found in 40 CFR 230 (Subpart C-H).

a. Subpart C - Potential Impacts on Physical and Chemical Characteristics of the Aquatic Ecosystem.

230.20 Substrate. The substrate at the confined upland disposal site consists predominantly of sand with an overburden of humic material. The dredged material is expected to be silty sand which will be confirmed by core borings. Additional core borings will be performed in the proposed disposal site to eliminate the possibility of salt water leachate from the dredged material affecting fresh water wells in the vicinity of the project.

230.21 Suspended particulates/turbidity. Turbidity will be short term and localized during discharge. Adverse impacts resulting from turbidity are expected to be minimal during discharge.

230.22 Water. Dredging operations will result in some changes in water quality. Temporarily elevated levels in turbidity are expected at the dredging and discharge sites. Reduced dissolved oxygen levels may also occur in localized areas, but will return to normal shortly after completion of the project.

230.23 Current patterns and water circulation. There will be negligible effects on water circulation from discharge operations.

230.24 Normal water fluctuations. The discharge will not affect the normal water fluctuations.

230.25 Salinity gradients. There will be negligible effects on salinity gradients in the vicinity of the project.

b. Subpart D - Potential Impacts on Biological Characteristics of the Aquatic Ecosystem.

230.30 Threatened and endangered species. Manatees are not expected to be adversely impacted by the discharge operations. Actions to protect and/or minimize adverse effects on manatees will be addressed in the Environmental Assessment.

230.31 Fish, crustaceans, mollusks, and other aquatic organisms in the food web. These species will not be significantly affected by the work. Individual members of these species may be impacted from short term, localized increased levels of turbidity.

230.32 Other wildlife. Wildlife that inhabit the disposal area will be temporarily displaced by project operations. Some wildlife species will be forced to relocate to nearby areas. Other species will return shortly after the completion of the project to use the site for foraging and resting. The project will not result in the loss of preferred food resources or significantly disrupt the food web of the area.

c. Subpart E - Potential Impacts on Special Aquatic Sites.

230.40 Sanctuaries and refuges. No Federal, State, or local sanctuaries or refuges will be impacted.

230.41 Wetlands. The proposed disposal site is a partially-cleared upland prime area. A minimal amount of salt water wetlands will be affected by the placement of the dredge pipeline. No long-term adverse impacts to wetlands will occur.

230.42 Mud flats. No significant adverse impacts to nearby mud flats will occur.

230.43 Vegetated shallows. If submerged vegetation becomes evident within the project's periphery, measures will be taken to preserve their biological integrity. Certain precautions, if necessary, will be included in the contract specifications environmental protection section.

230.44 Coral reefs. No coral reefs will be impacted.

230.45 Riffle and pool complexes. No riffle or pool complexes will be impacted.

d. Subpart F - Potential Effects on Human-Use Characteristics.

230.50 Municipal and private water supplies. Core borings will be performed to determine the composition of the disposal area substrate. Analysis of the core borings will indicate whether the use of the proposed disposal site is likely to impact fresh water wells in the area.

230.51 Recreational and commercial fisheries. No impacts on these resources are expected. If it is found, through public comment or interagency coordination, that a specific time of discharge may have an unreasonable adverse impact on fishery resources, the project will be scheduled to avoid this impact. Such scheduling is subject to substantive

scientific evidence that the discharge will impact on certain species and the public's use of the area's existing fisheries. Such scheduling is subject to periodic review.

230.52 Water-related recreation. There will be no adverse effect on water-related recreation.

230.53 Esthetics. No loss of esthetic values are expected from the project operations.

230.54 Parks, national and historic monuments, national seashores, wilderness areas, research sites, and similar preserves. Such resources will not be adversely impacted.

e. Subpart G - Evaluation and Testing.

230.60 - 230.61 General evaluation of dredged or fill material. The dredged material is expected to be silty sand. Although silty sand is more likely to contain contaminant components than clean sand, it is unlikely that the dredge material from Horseshoe Cove will contain significant levels of toxic material. Testing of the dredge sediments will be performed as necessary to determine the levels of chemical constituents. The parameters to be tested, if any, will be identified during the water quality certification.

f. Subpart H - Actions to Minimize Adverse Effects.

230.70 - 230.77 Actions concerning the disposal location, control of material, and other actions. The proposed site was selected because it is an upland site in reasonable proximity to the dredging area. The material will be confined by dikes of sufficient height to contain the return discharge to meet State Water Quality Standards.



DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
P. O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019

REPLY TO
ATTENTION OF

July 2, 1993

Navigation Section
Construction-Operations Division

Mr. Brian H. Winchester, President
Winchester Environmental Associates, Inc.
Post Office Box 1977
30 South Main
Alachua, Florida 32615

Dear Mr. Winchester:

References are made to:

- a. Your letter of May 29, 1993, regarding restoration of Bird and Cotton Islands using shoal material from the Federal channel at Horseshoe Cove.
- b. The telephone conversation between you and Mr. Matt Miller of my staff on June 16, 1993.
- c. Drawing of a portion of the project area, enclosed.

We are moving forward with the Federal maintenance dredging project at Horseshoe Cove, Florida. We have been working closely with the local sponsor's agent, Suwannee River Water Management District (SRWMD), on this project. The local sponsor for this project is Dixie County.

In regard to disposal areas for Horseshoe Cove, the local sponsor has the responsibility for providing, constructing, and maintaining any disposal areas. When considering disposal area options, we apply the Federal standard, which mandates us to use the least cost, environmentally acceptable disposal alternative meeting sound engineering and design criteria. Additional costs associated with using sites existing outside of the mandated site are borne by non-Federal interests. As such, we have been presented with a large disposal site which appears to meet our mandate. This site is shown as the primary site on the enclosed drawing.



CO/PD



FLORIDA GAME AND FRESH WATER FISH COMMISSION

S. GILBERT W. HUMPHREY JOE MARLIN HILLIARD J. BEN ROWE JULIE K. MORRIS QUINTON L. HEDGEPEETH, DDS
 Miccosukee Clewiston Gainesville Sarasota Miami

M. BRANTLY, Executive Director
 L. EGBERT, Ph.D., Assistant Executive Director

FARRIS BRYANT BUILDING
 620 South Meridian Street
 Tallahassee, FL 32399-1600
 (904) 488-1960
 TDD (904) 488-9542

August 2, 1993

Colonel Terrence C. Salt
 District Engineer
 U.S. Army Corps of Engineers
 P.O. Box 4970
 Jacksonville, Florida 32232-0019

Re: U.S. Army Corps of Engineers
 Public Notice No. PN-HC-178,
 Dixie County, Channel
 Maintenance Dredging,
 Horseshoe Cove

Dear Colonel Salt:

The Office of Environmental Services of the Florida Game and Fresh Water Fish Commission (FGFWFC) has reviewed this public notice received from the United States Army Corps of Engineers, dated July 14, 1993. Our comments are submitted in compliance with the Fish and Wildlife Coordination Act.

The proposed work includes maintenance dredging of approximately 1.75 miles of the 75-foot-wide federal channel and turning basin to obtain a depth of 7 feet below mean low water. Approximately 120,000 cubic yards of silt and silty sand will be excavated and pumped to a 30-acre upland disposal area located northeast of the project area.

A field survey of the project site was made on July 28, 1993, with biologists and project personnel of the U.S. Army Corps of Engineers. In addition, a preliminary Environmental Assessment is being prepared by the Corps for the project. The following recommendations are offered to either reduce project impacts on fish and wildlife resources, or to identify information gaps so that impacts can be better assessed and avoided:

1. A field survey of the channel and turning basin should be made to determine if seagrass beds are present within the project boundaries. If seagrasses are found within the large turning basin, the applicant should consider modifying the proposed shape of the basin and amount of dredging to avoid impacts to this important marine community.