



Permit Application Ten-Year Beach Maintenance Project Harrison County, Mississippi

Prepared for :
**Harrison County Sand Beach Authority
842 Commerce Street
Gulfport, Mississippi**

Project Number: 05139-01

Prepared by:
**BMI Environmental Services LLC
401 Cowan Road, Suite A
Gulfport, Mississippi 39507**

January 2022

JOINT APPLICATION AND NOTIFICATION

U.S. ARMY CORPS OF ENGINEERS

MISSISSIPPI DEPARTMENT OF MARINE RESOURCES

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY/OFFICE OF POLLUTION CONTROL

This form is to be used for proposed activities in waters of the United States in Mississippi and for the erection of structures on suitable sites for water dependent industry. Note that some items, as indicated, apply only to projects located in the coastal area of Hancock, Harrison and Jackson Counties.

1. Date

_____ month day year

2. Applicant name, mailing address, phone number and email address:

Agent name, mailing address, phone number and email address:

3. Official use only

COE _____
DMR _____
DEQ _____
A95 _____
DATE RECEIVED _____

4. Project location

Street Address _____ City/Community _____
Name of Waterway _____ Latitude _____ Longitude (if known) _____
Geographic location: Section _____ Township _____ Range _____ County _____

5. Project description

New work ___ Maintenance work ___

Dredging

___ Channel	length _____	width _____	existing depth _____	proposed depth _____
___ Canal	length _____	width _____	existing depth _____	proposed depth _____
___ Boat Slip	length _____	width _____	existing depth _____	proposed depth _____
___ Marina	length _____	width _____	existing depth _____	proposed depth _____
___ Other-Mooring Basin	length _____	width _____	existing depth _____	proposed depth _____

Cubic yards of material to be removed _____ Type of material _____
Location of spoil disposal area _____
Dimensions of spoil area _____ Method of excavation _____
How will excavated material be contained? _____

Construction of structures

___ Bulkhead	Total length _____	Height above water _____	
___ Pier	length _____	width _____	height _____
___ Boat Ramp	length _____	width _____	slope _____
___ Boat House	length _____	width _____	height _____

___ Structures on designed sites for water dependent industry (Coastal area only). Explain in item 11 or include as attachment.

___ Other (explain) _____

Filling

Dimensions of fill area _____
Cubic yards of fill _____ Type of fill _____

Other regulated activities (i.e. Seismic exploration, burning or clearing of marsh) Explain.

6. Additional information relating to the proposed activity

Does project area contain any marsh vegetation? Yes _____ No _____

(If yes, explain) _____

Is any portion of the activity for which authorization is sought now complete? Yes _____ No _____

(If yes, explain) _____

Month and year activity took place _____

If project is for maintenance work on existing structures or existing channels, describe legal authorization for the existing work. Provide permit number, dates or other form(s) of authorization. _____

Has any agency denied approval for the activity described herein or for any activity that is directly related to the activity described herein?

Yes _____ No _____ (If yes, explain) _____

7. Project schedule

Proposed start date _____ Proposed completion date _____

Expected completion date (or development timetable) for any projects dependent on the activity described herein. _____

8. Estimated cost of the project _____

9. Describe the purpose of this project. Describe the relationship between this project and any secondary or future development the project is designed to support. _____

Intended use: Private _____ Commercial _____ Public _____ Other (Explain) _____

10. Describe the public benefits of the proposed activity and of the projects dependent on the proposed activity. Also describe the extent of public use of the proposed project.

11. Narrative Project Description:

12. Provide the names and addresses of the adjacent property owners. Also identify the property owners on the plan view of the drawing described in Attachment "A". (Attach additional sheets if necessary.)

1.

2.

13. List all approvals or certifications received or applied for from Federal, State and Local agencies for any structures, construction, discharges, deposits or other activities described in this application. Note that the signature in Item 14 certifies that application has been made to or that permits are not required from the following agencies. If permits are not required, place N/A in the space for Type Approval.

<u>Agency</u>	<u>Type Approval</u>	<u>Application Date</u>	<u>Approval Date</u>
Dept. of Environmental Quality			
Dept. of Marine Resources			
Army Corps of Engineers			
City/County _____			
Other _____			

14. Certification and signatures

Application is hereby made for authorization to conduct the activities described herein. I agree to provide any additional information/data that may be necessary to provide reasonable assurance or evidence to show that the proposed project will comply with the applicable state water quality standards or other environmental protection standards both during construction and after the project is completed. I also agree to provide entry to the project site for inspectors from the environmental protection agencies for the purpose of making preliminary analyses of the site and monitoring permitted works. I certify that I am familiar with and responsible for the information contained in this application, and that to the best of my knowledge and belief, such information is true, complete and accurate. I further certify that I am the owner of the property where the proposed project is located or that I have a legal interest in the property and that I have full legal authority to seek this permit.

U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willingly falsifies, conceals, or covers up by any trick, scheme or device a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both.

Mississippi Coastal Program (Coastal area only)

I certify that the proposed project for which authorization is sought complies with the approved Mississippi Coastal Program and will be conducted in a manner consistent with the program.



Signature of Applicant or Agent

January 27, 2022
Date

15. Fees

Payable to MS Dept. of Marine Resources
\$50.00 Single-family residential application fee
\$500.00 Commercial application fee
Public notice fee may be required

Please include appropriate fees for all projects proposed in coastal areas of Hancock, Harrison and Jackson Counties.

16. If project is in Hancock, Harrison or Jackson Counties, send one completed copy of this application form and appropriate fees listed in Item 15 to:

Department of Marine Resources
Bureau of Wetlands Permitting
1141 Bayview Avenue
Biloxi, MS 39530
(228) 374-5000

If project IS NOT in Hancock, Harrison or Jackson Counties, send one completed copy of this application form to each agency listed below:

District Engineer
Mobile District
Attn: CESAM-RD
P.O. Box 2288
Mobile, AL 36628-0001

District Engineer
Vicksburg District
Regulatory Branch
Attn: CEMVK-OD-F
4155 Clay Street
Vicksburg, MS 39183-3435

Director
Mississippi Dept. of Environmental Quality
Office of Pollution Control
P.O. Box 10385
Jackson, MS 39289

17. In addition to the completed application form, the following attachments are required:***Attachment "A" Drawings***

Provide a vicinity map showing the location of the proposed site along with a written description of how to reach the site from major highways or landmarks. Provide accurate drawings of the project site with proposed activities shown in detail. All drawings must be to scale or with dimensions noted on drawings and must show a plan view and cross section or elevation. Use 8 1/2 x 11" white paper or drawing sheet attached.

Attachment "B" Authorized Agent

If applicant desires to have an agent or consultant act in his behalf for permit coordination, a signed authorization designating said agent must be provided with the application forms. The authorized agent named may sign the application forms and the consistency statement.

Attachment "C" Environmental Assessment (Coastal Area Only)

Provide an appropriate report or statement assessing environmental impacts of the proposed activity and the final project dependent on it. The project's effects on the wetlands and the effects on the life dependent on them should be addressed. Also provide a complete description of any measures to be taken to reduce detrimental offsite effects to the coastal wetlands during and after the proposed activity. Alternative analysis, minimization and mitigation information may be required to complete project evaluation.

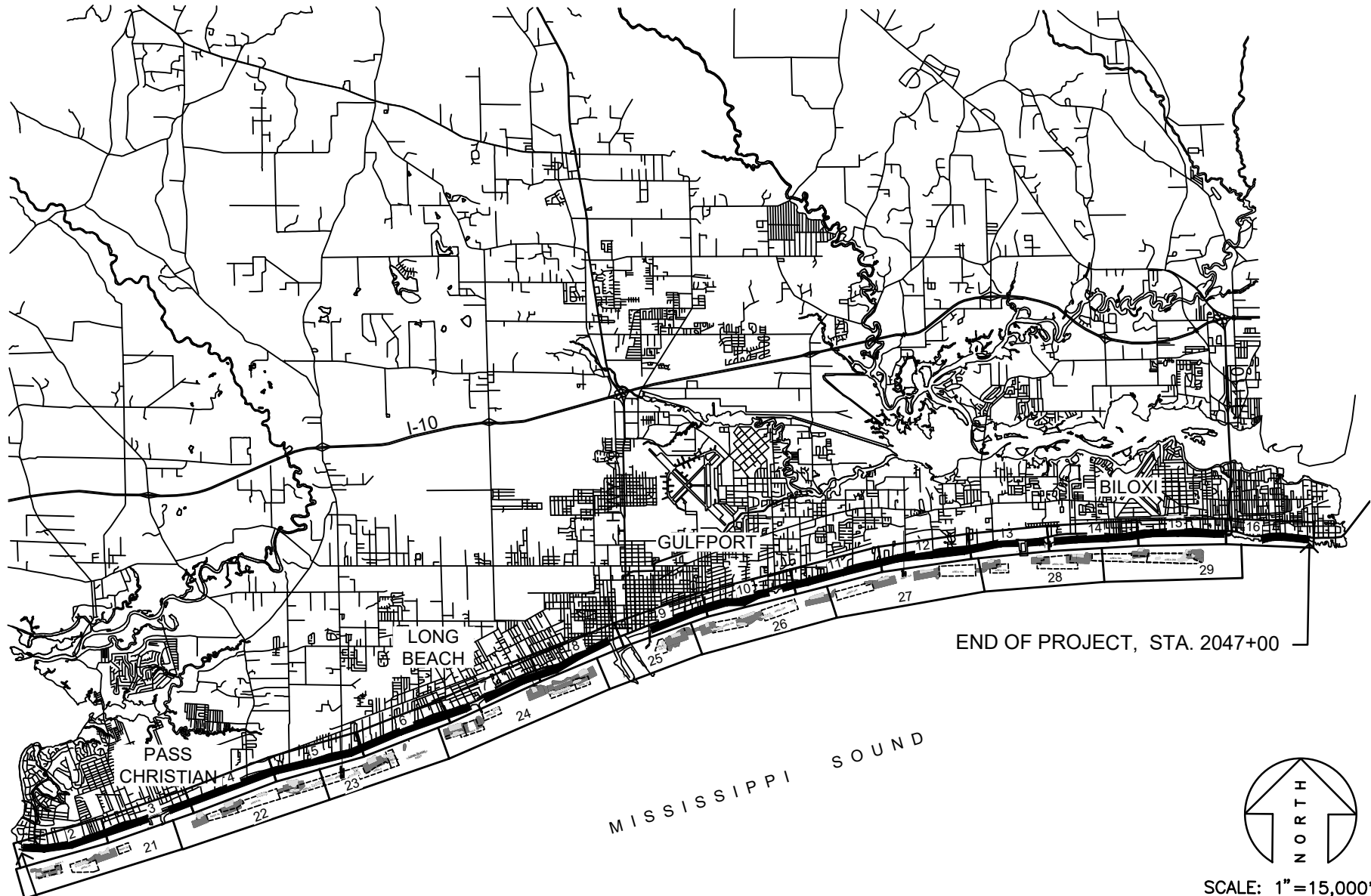
Attachment "D" Variance or Revisions to Mississippi Coastal Program (Coastal area only)

If the applicant is requesting a variance to the guidelines in Section 2, Part III or a revision to the Coastal Wetlands Use Plan in Section 2, Part IV of the Rules, Regulations, Guidelines and Procedures of the Mississippi Coastal Program, a request and justification must be provided.

Attachment "E-1 and E2" Adjoining Property Owners and Geographic Locations

**Attachment A
Drawings**

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BEGINNING OF PROJECT, STA. 0+00

END OF PROJECT, STA. 2047+00

MISSISSIPPI SOUND



SCALE: 1" = 15,000'±

VICINITY MAP
SAND BEACH RENOURISHMENT
 HARRISON COUNTY SAND BEACH DEPARTMENT

HARRISON COUNTY, MISSISSIPPI

SHEET 1 OF 31



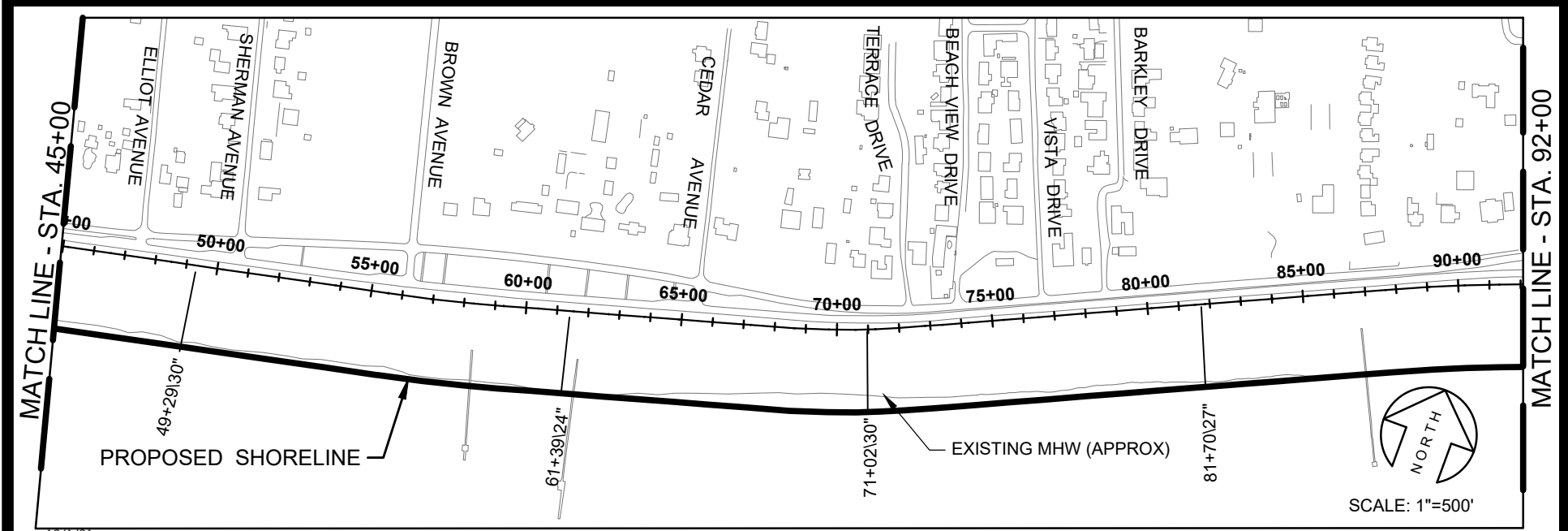
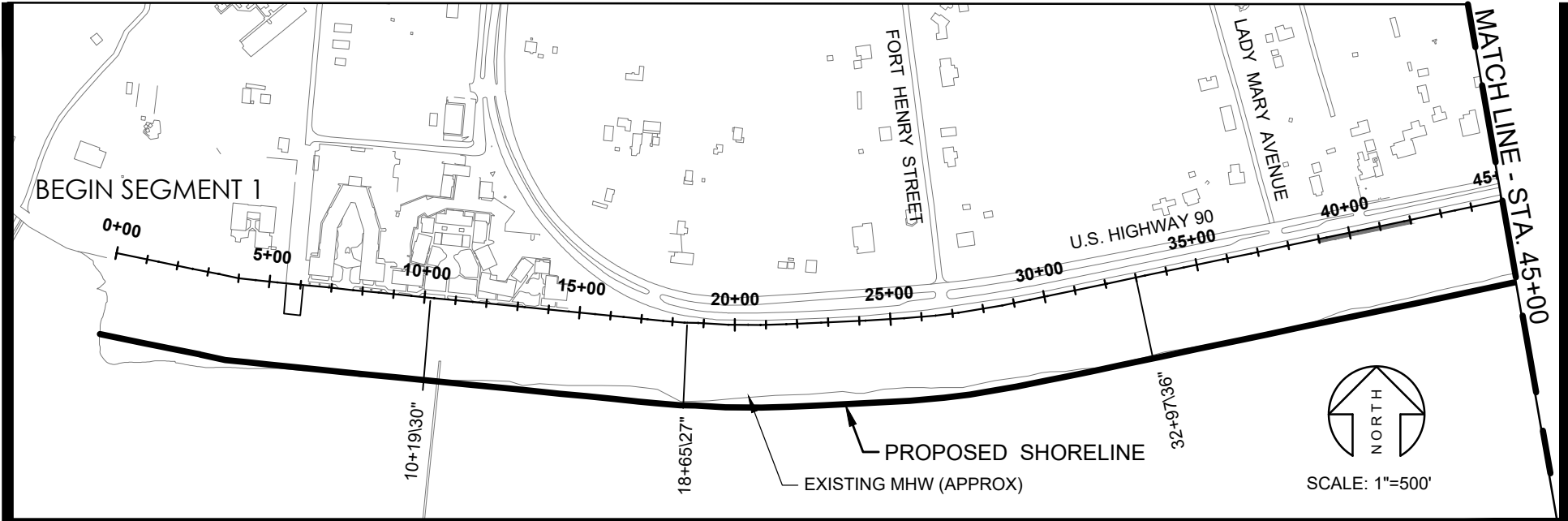
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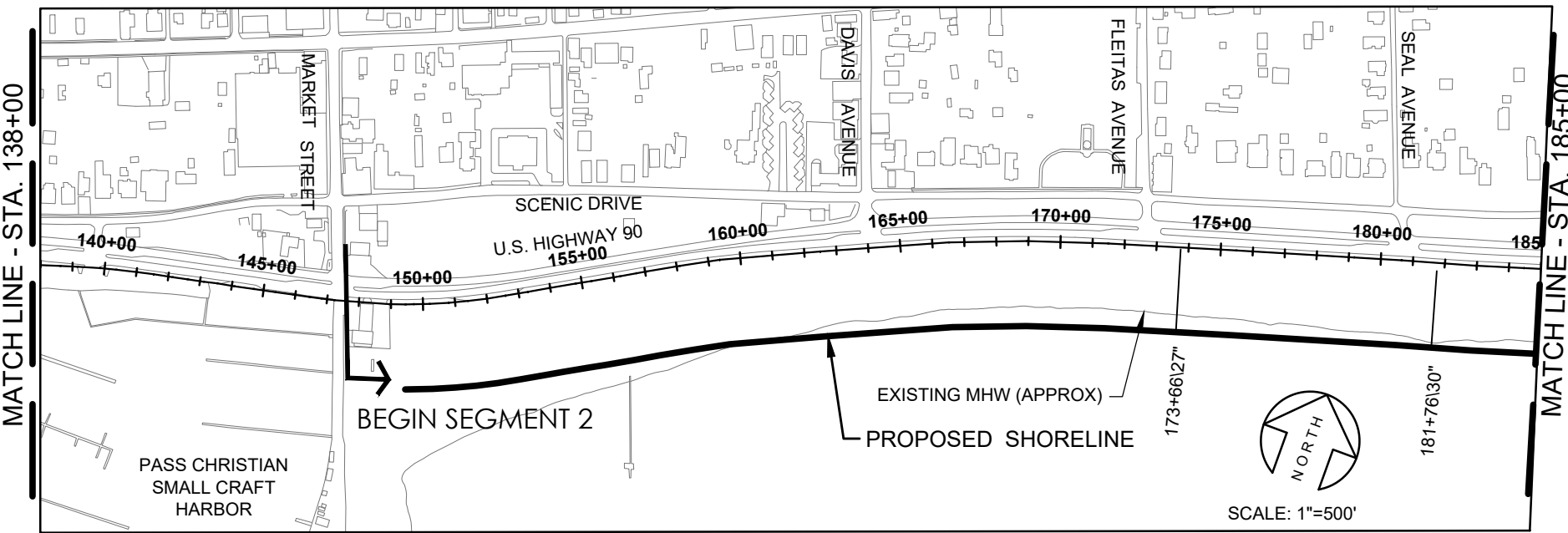
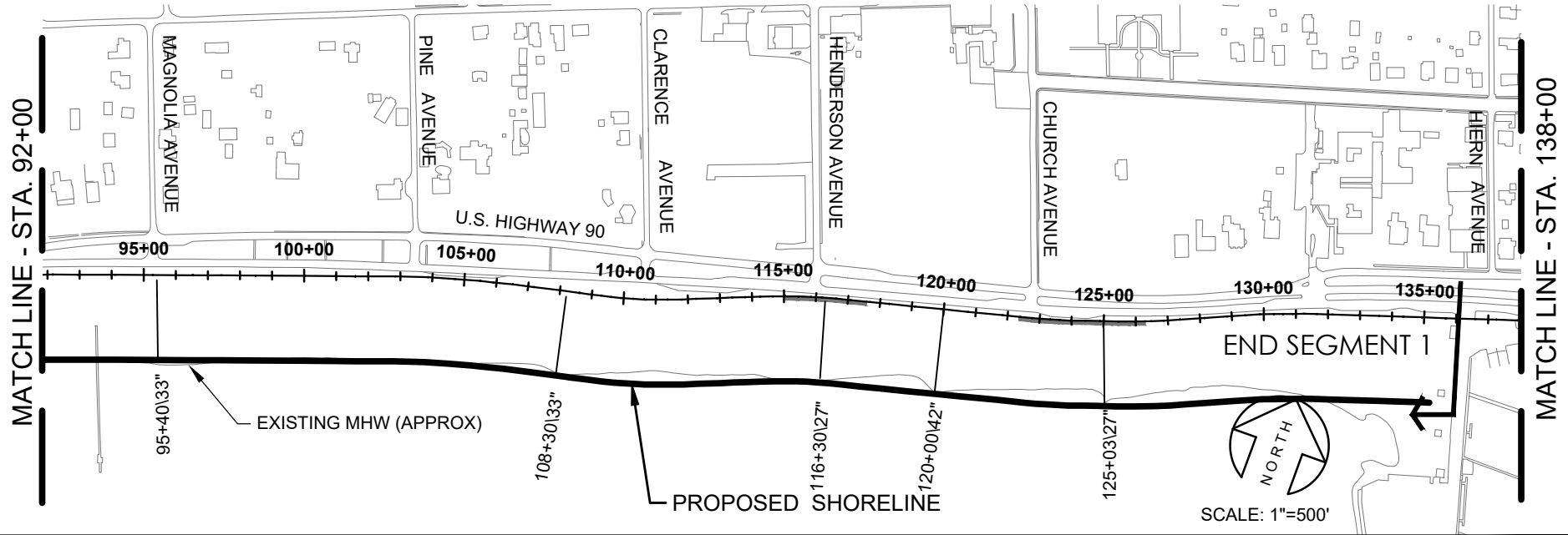
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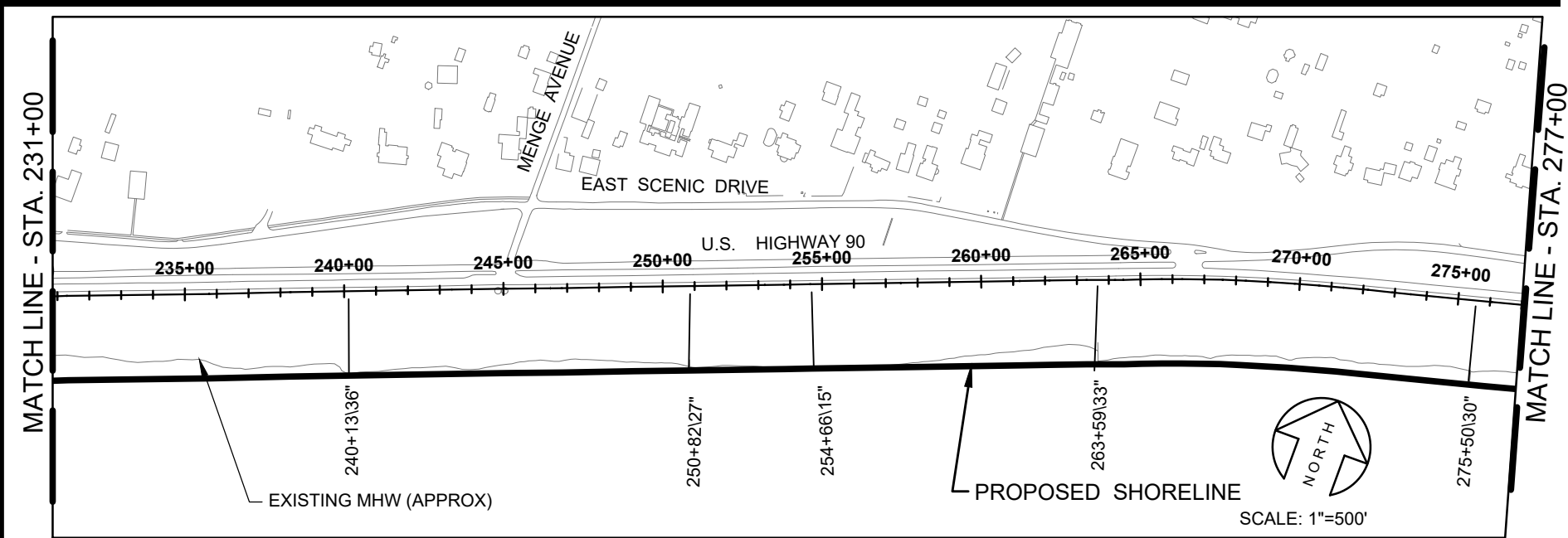
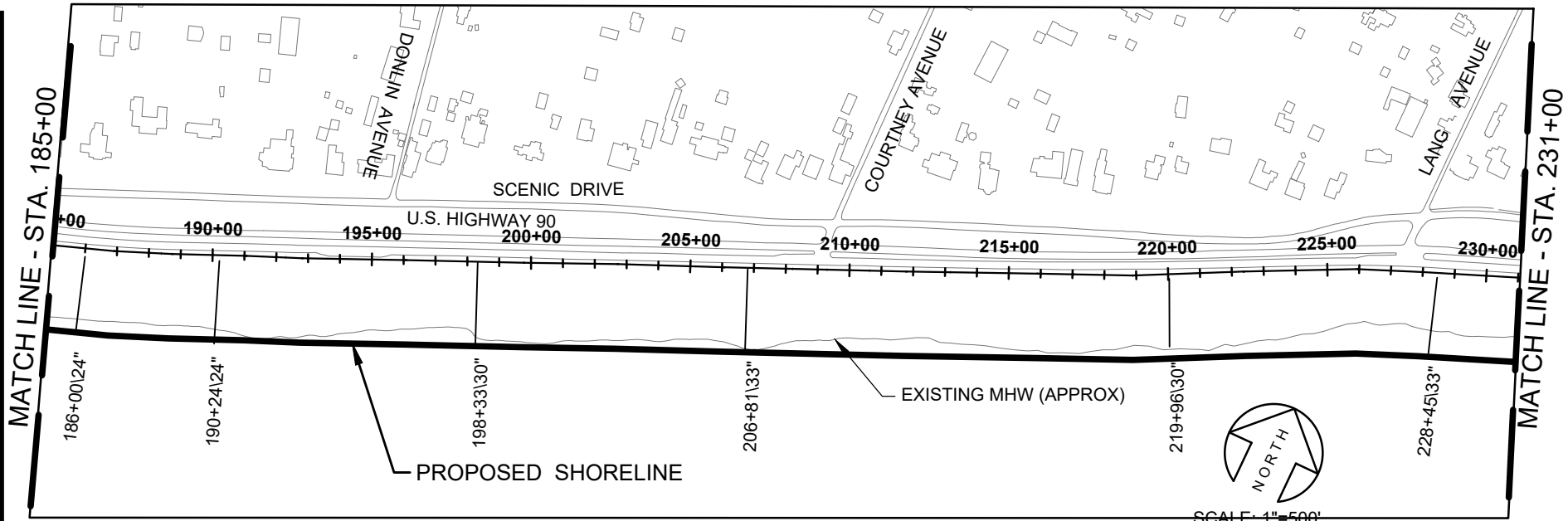


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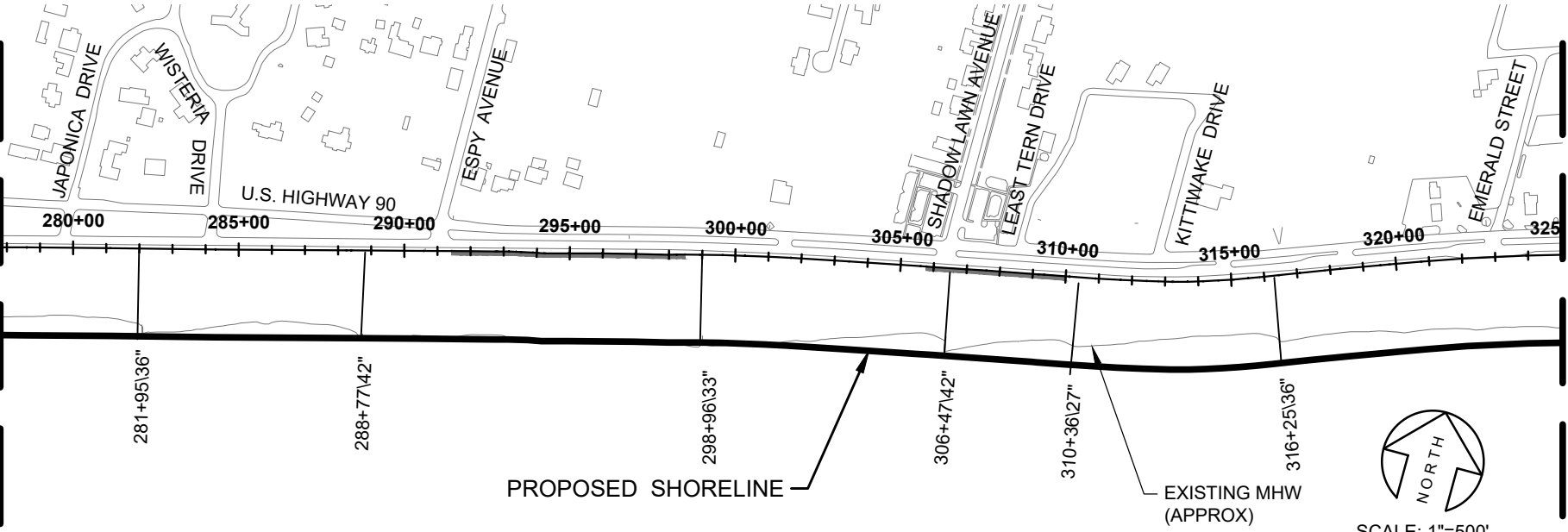
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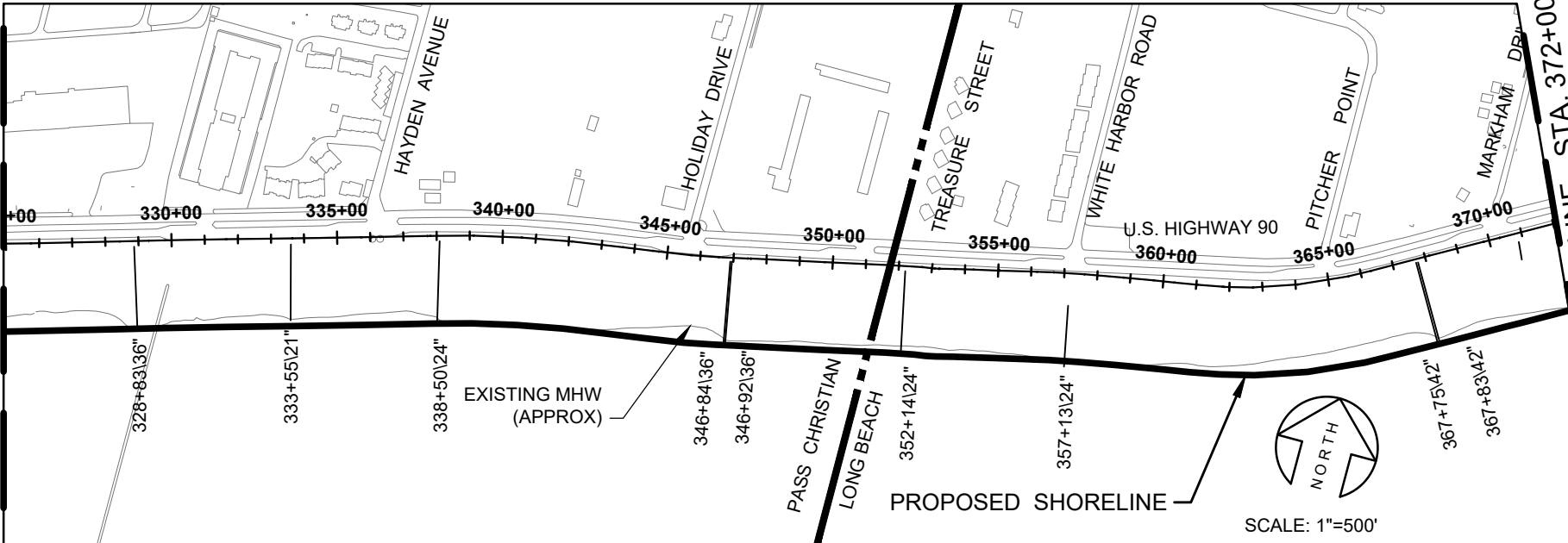
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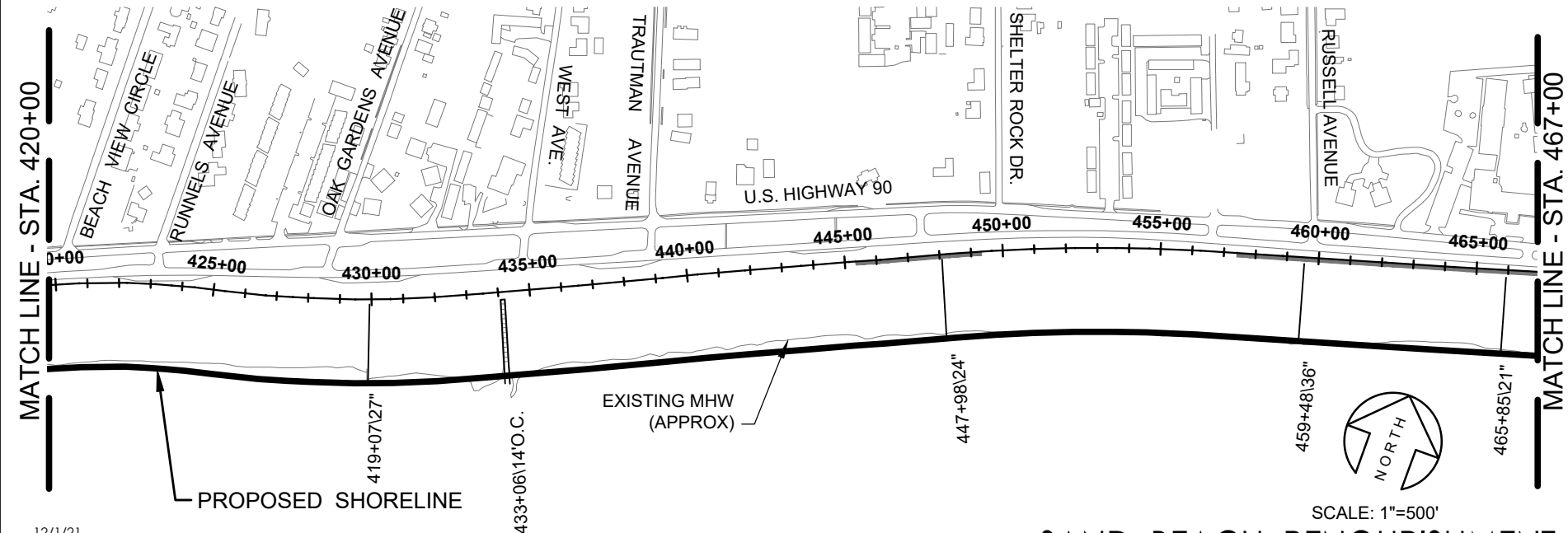
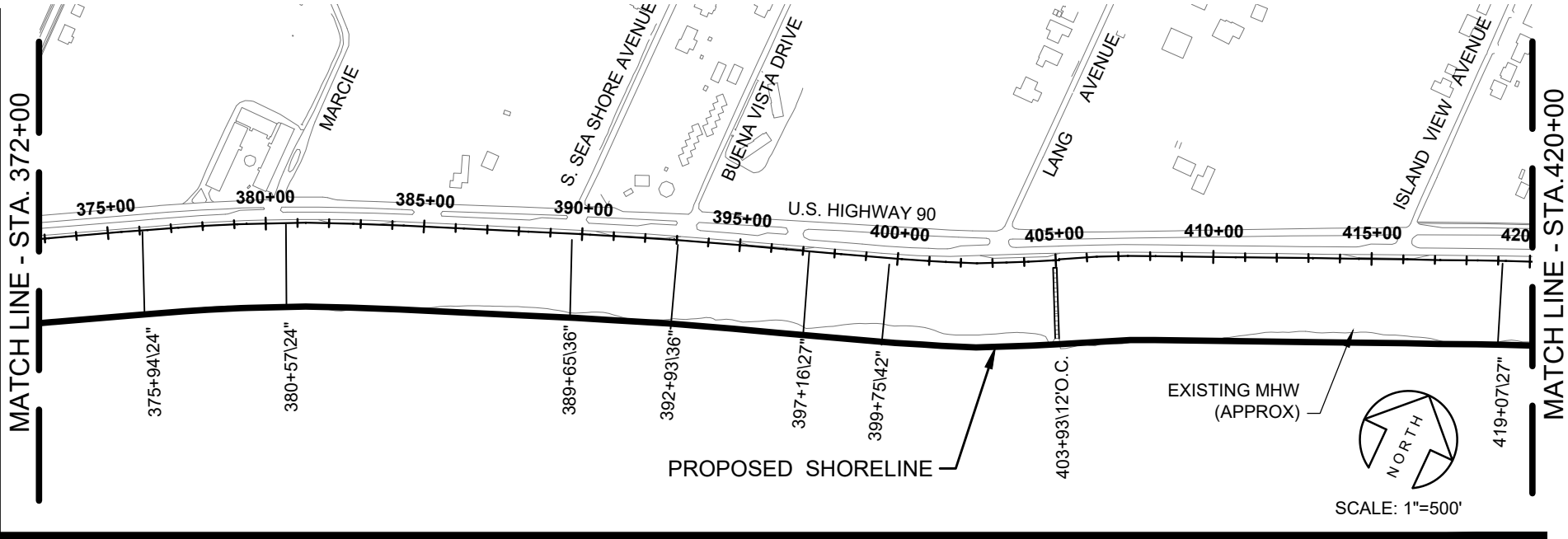
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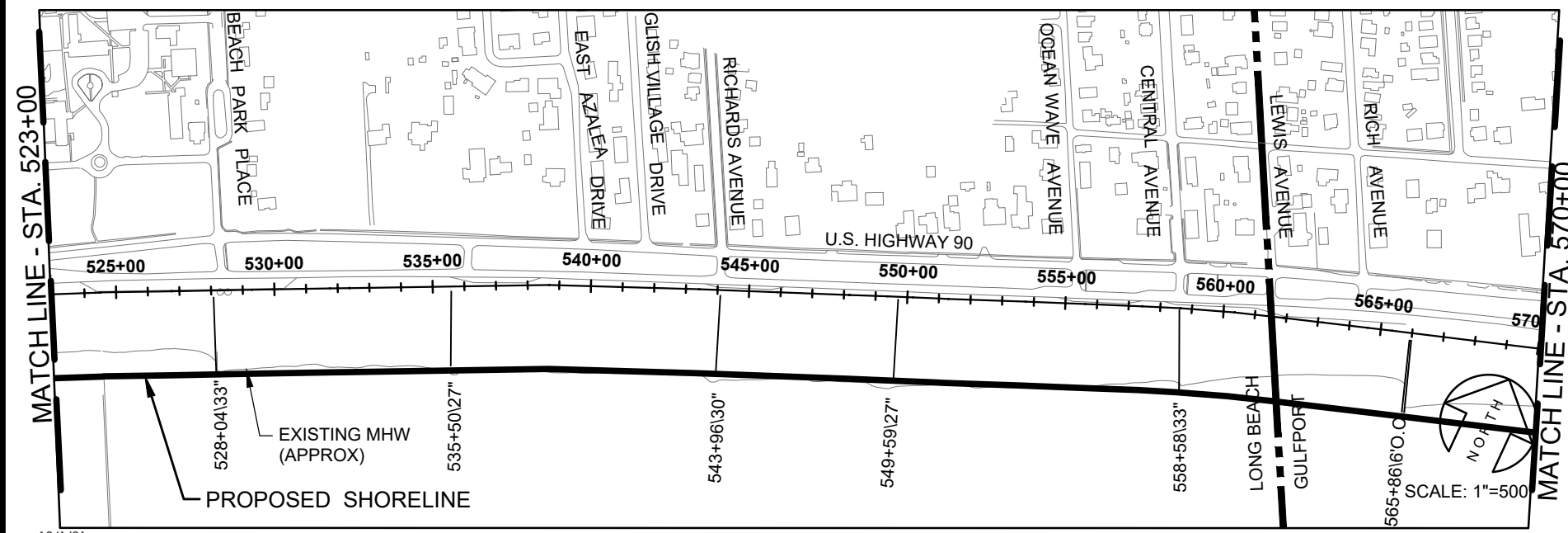
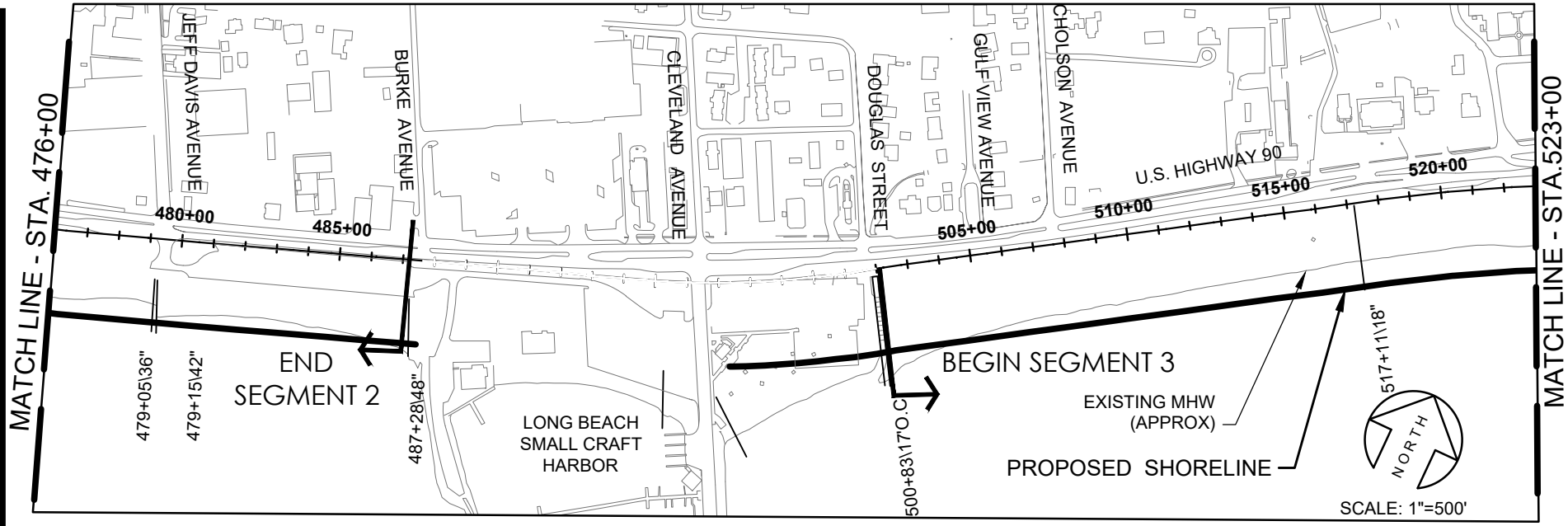
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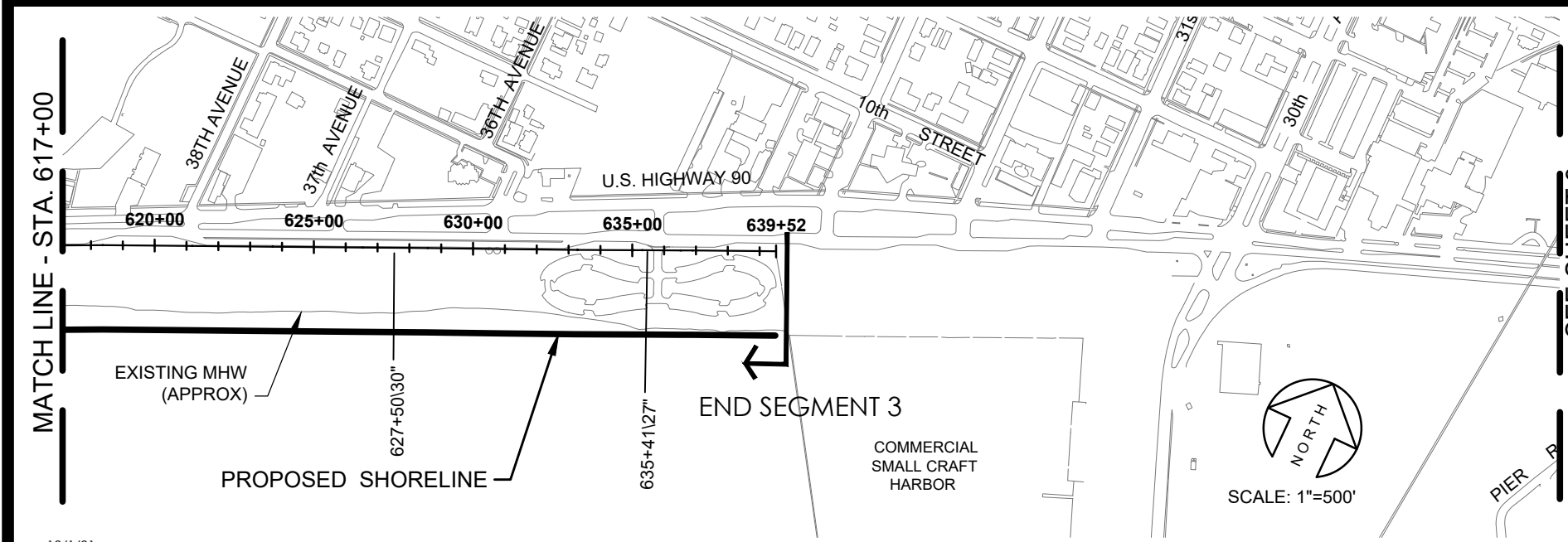
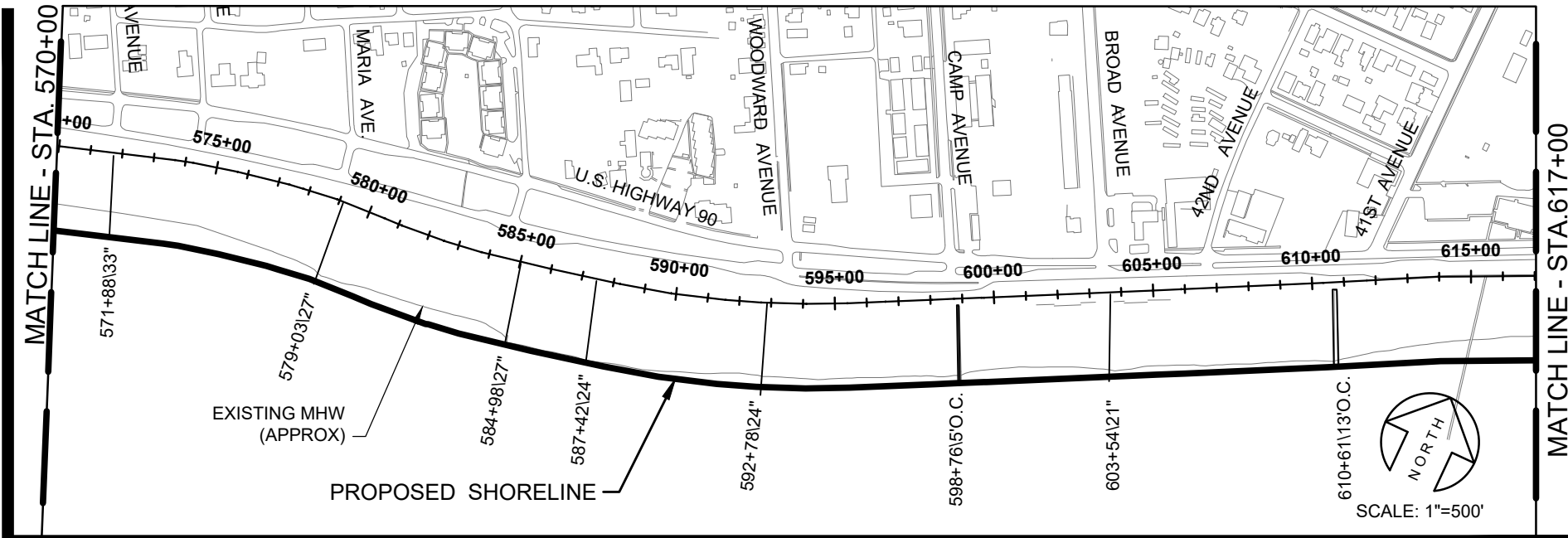
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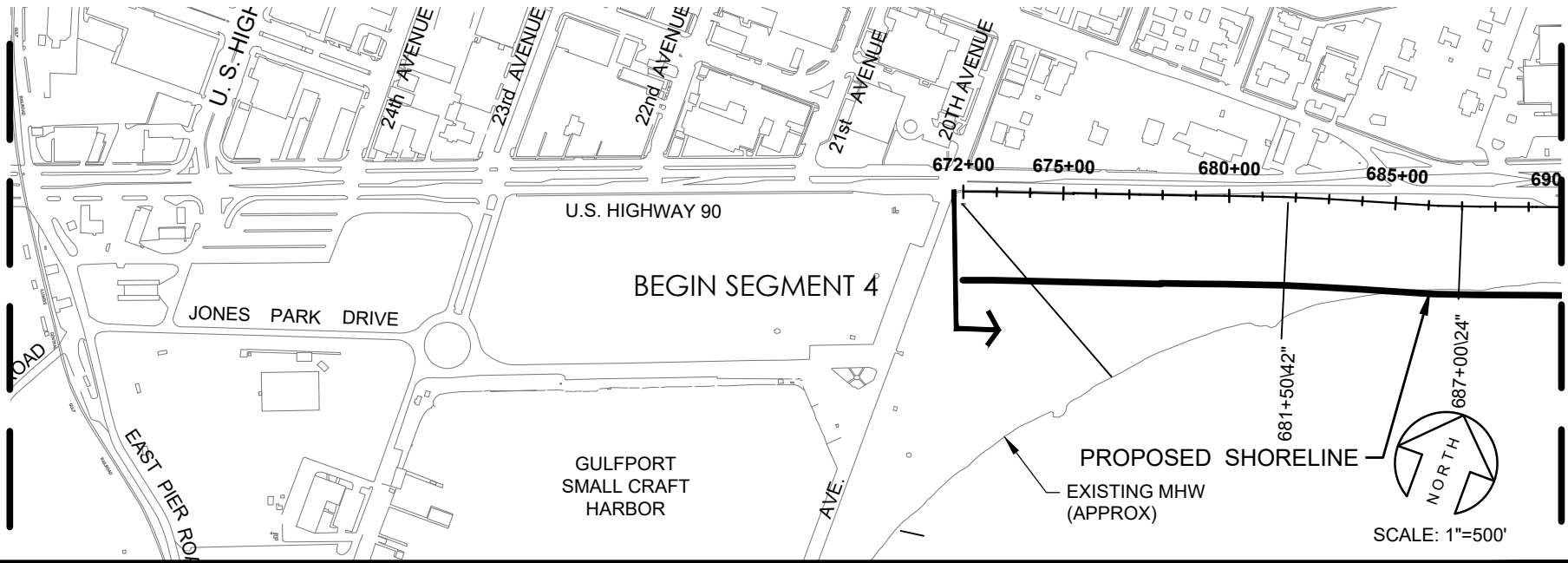
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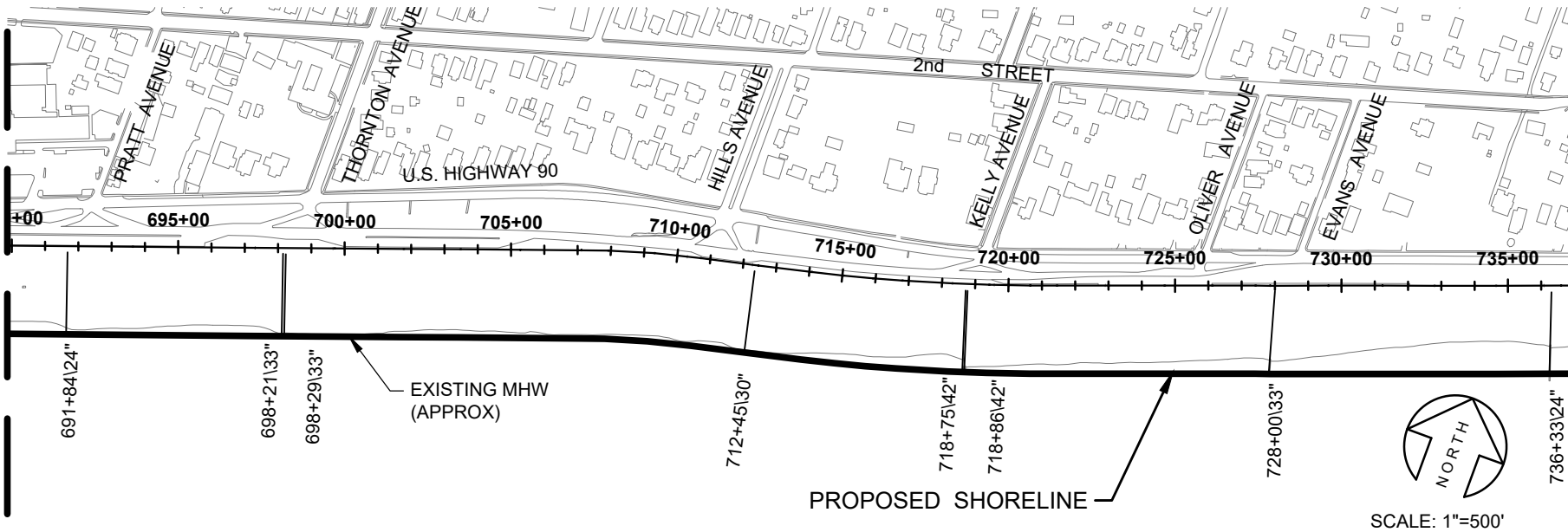
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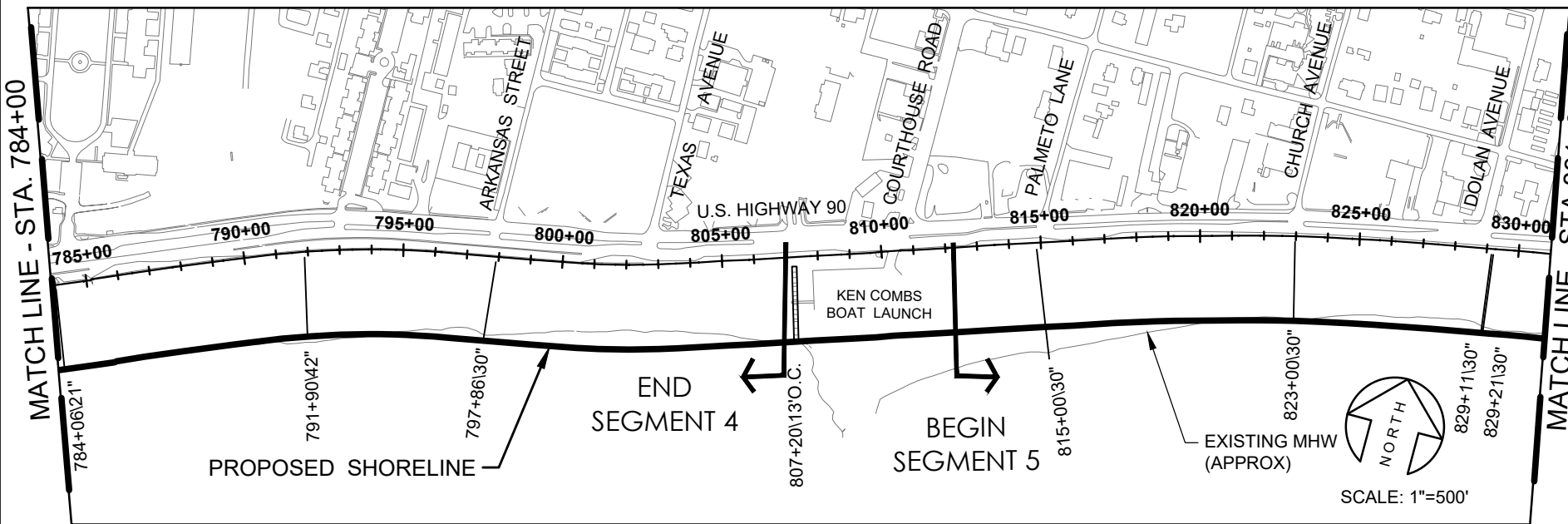
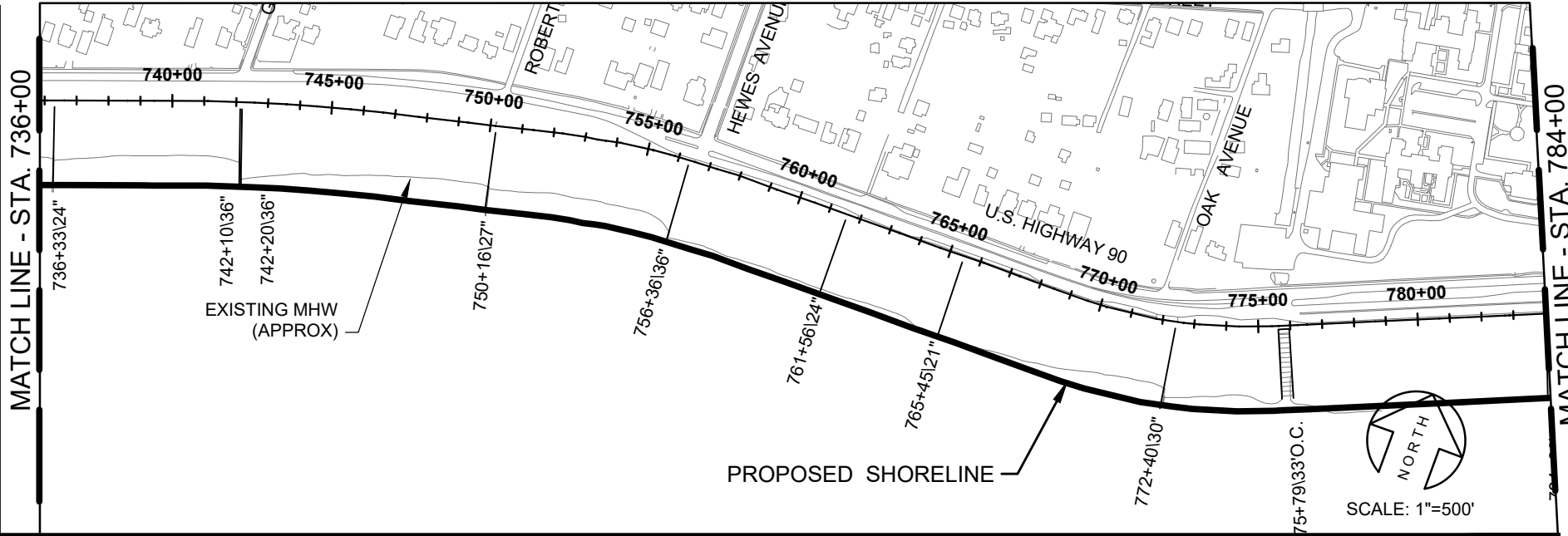
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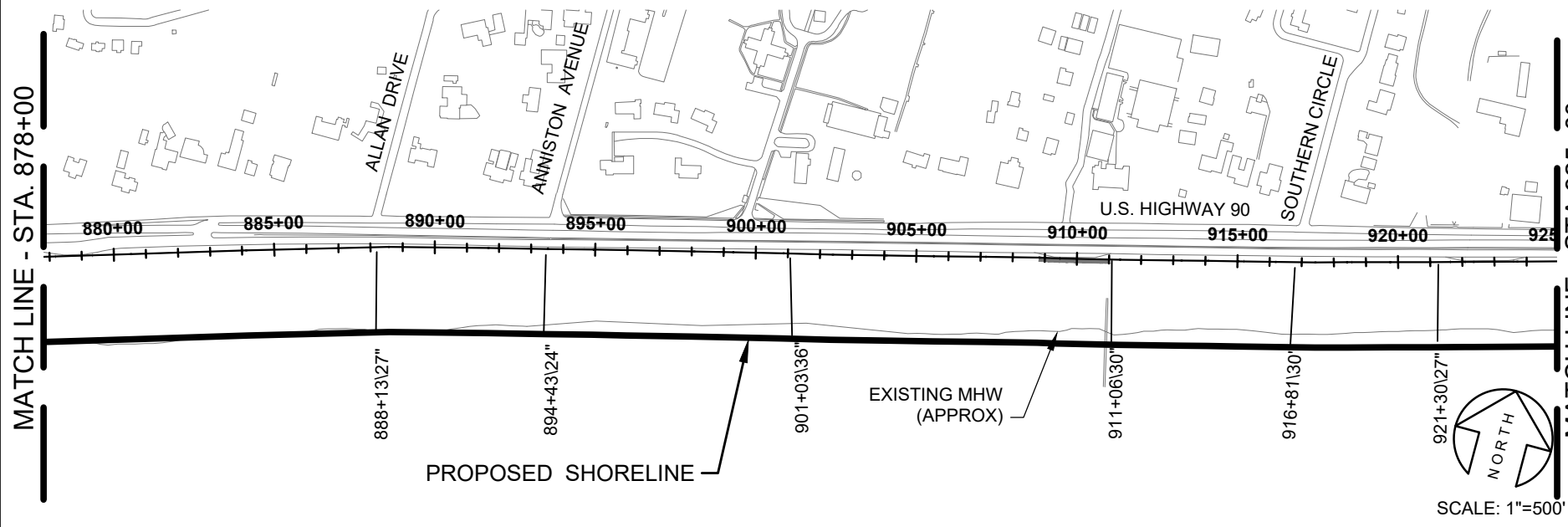
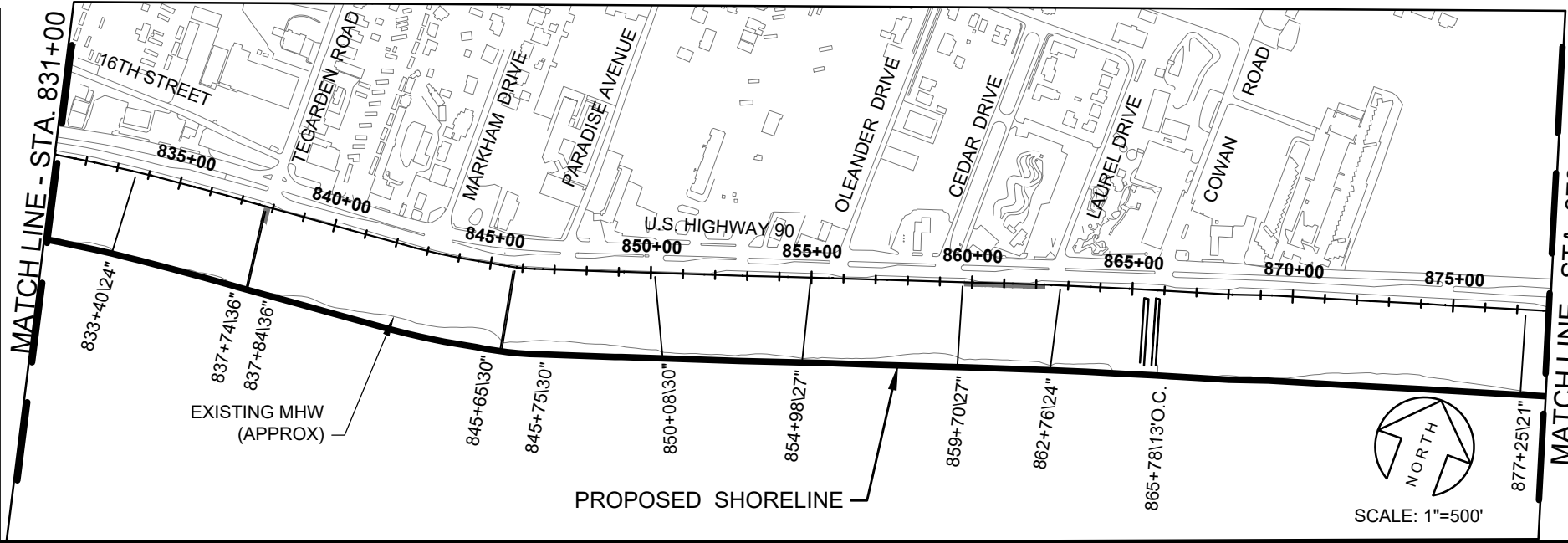


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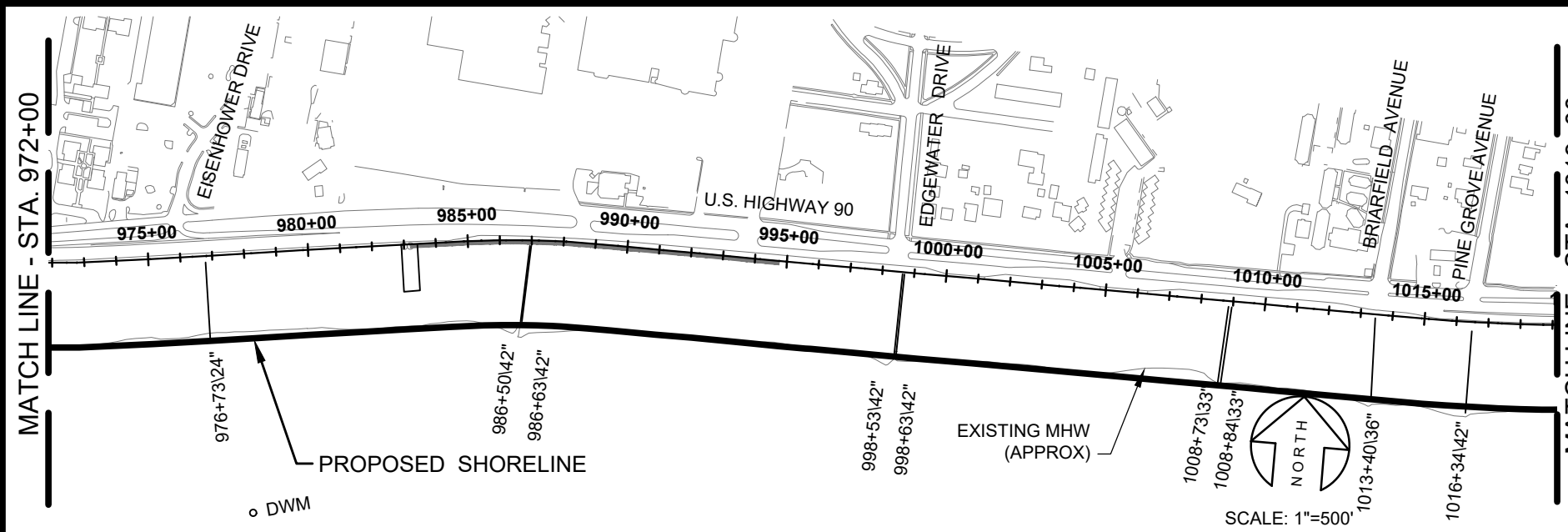
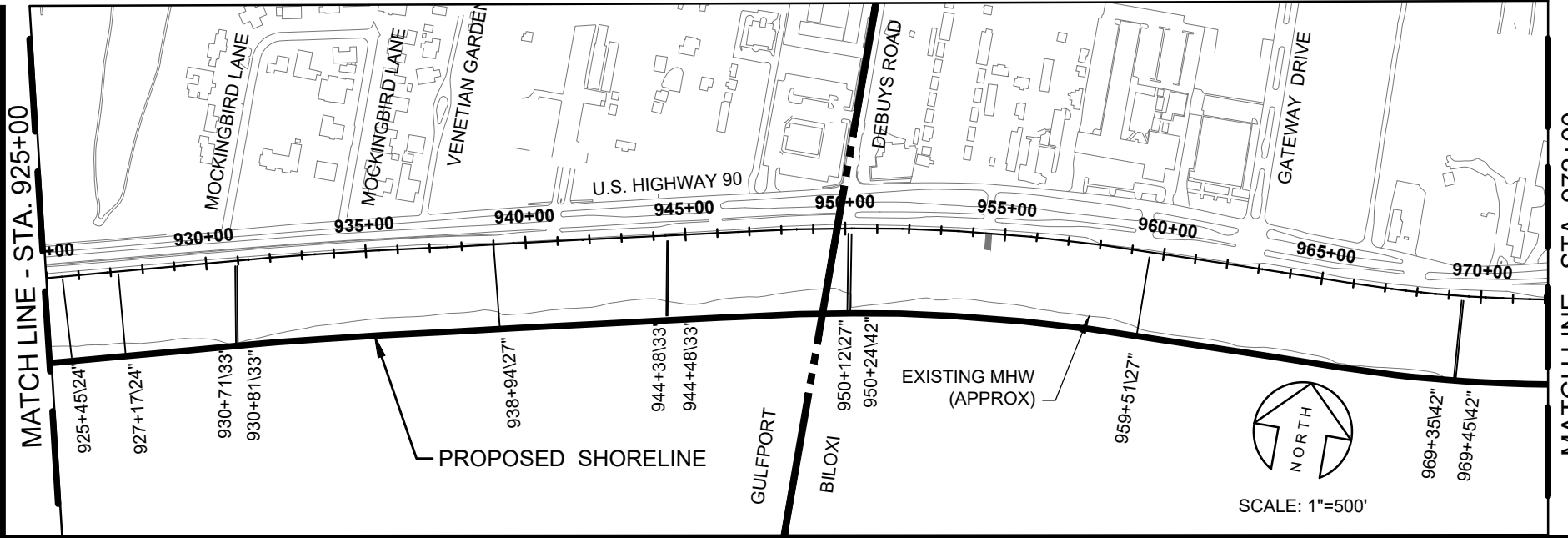


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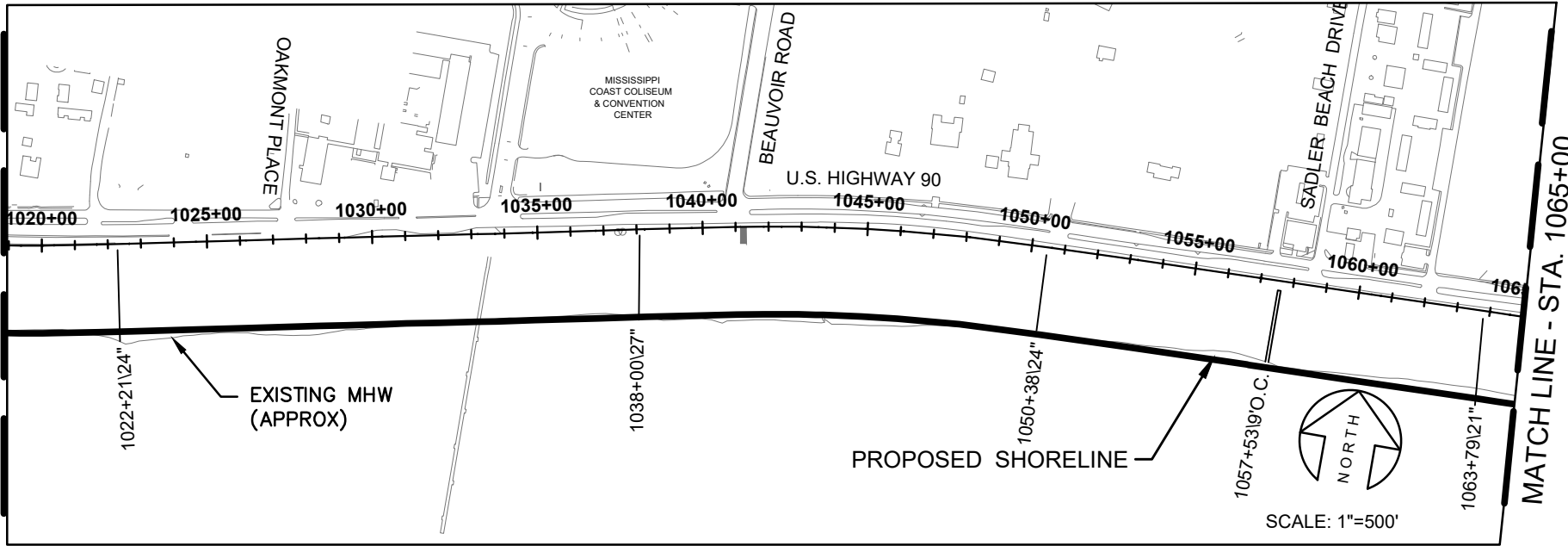
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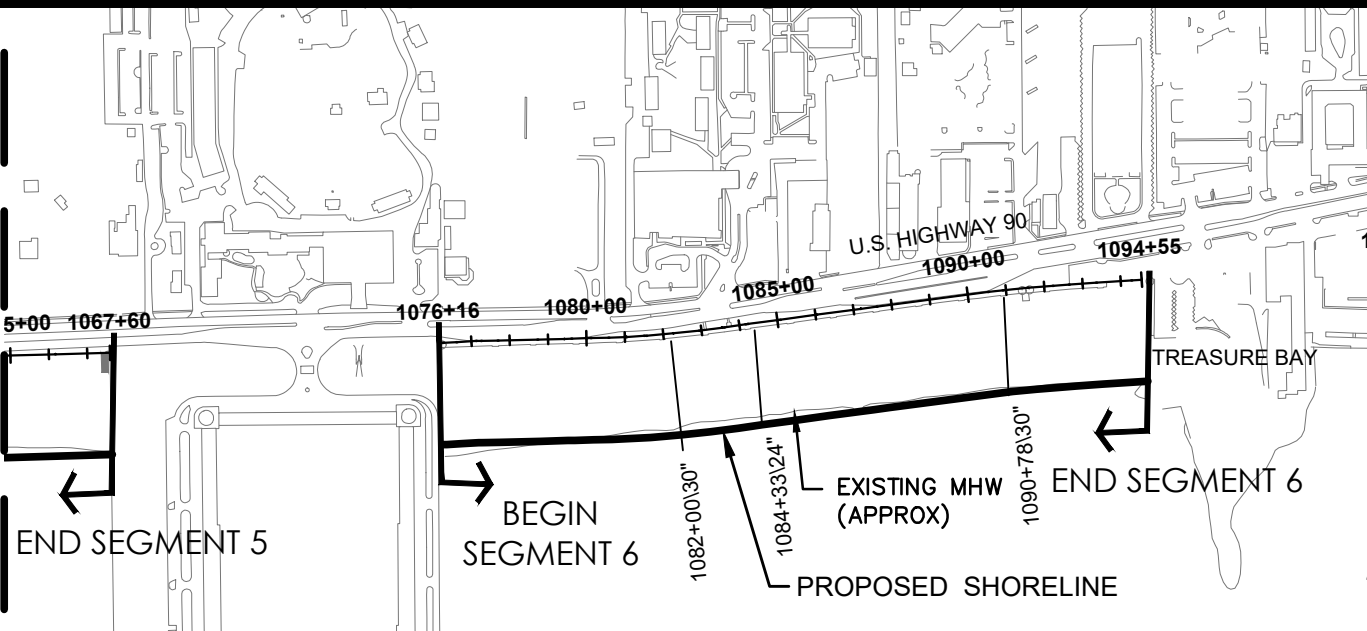
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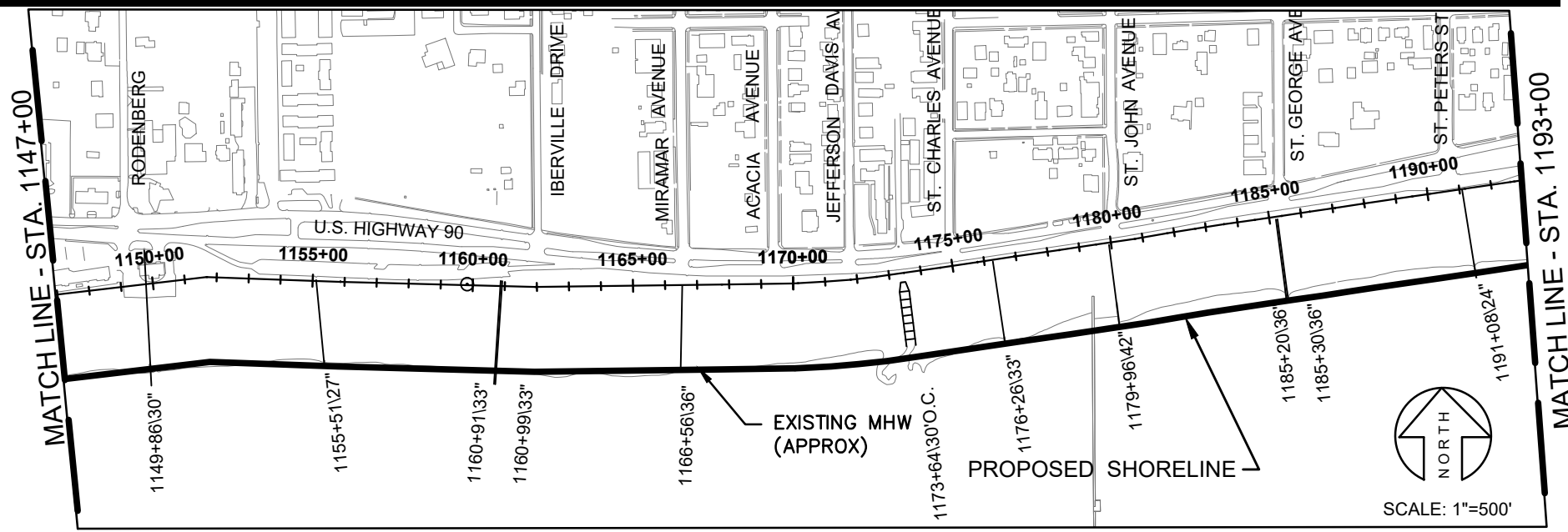
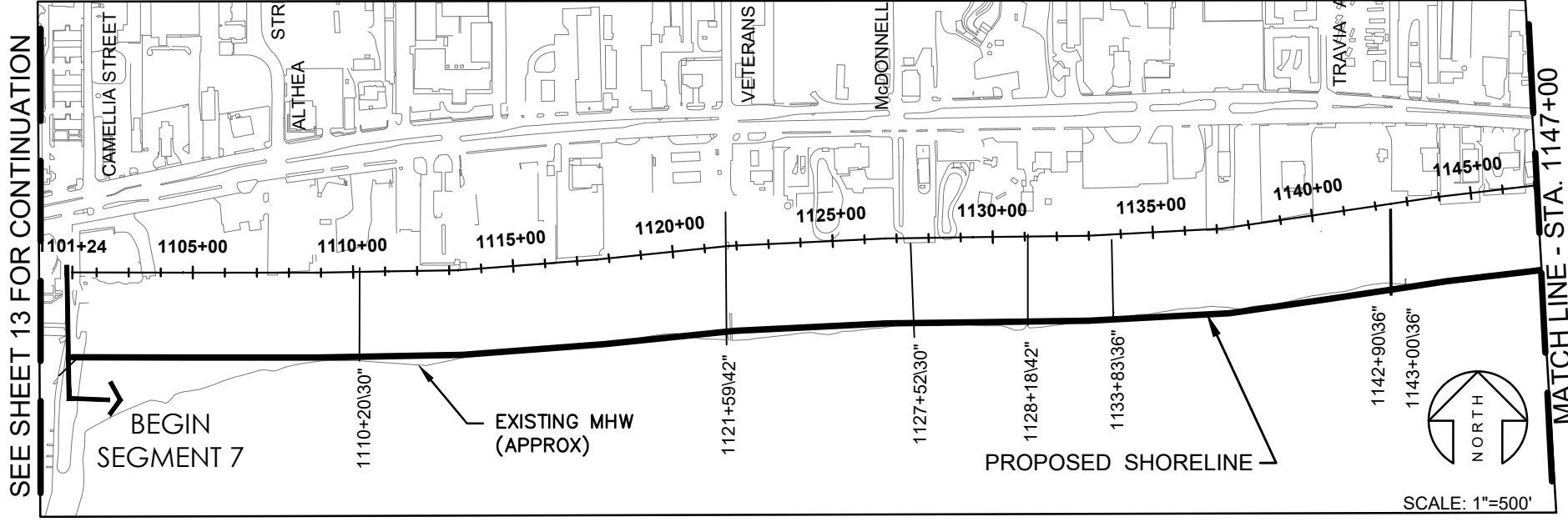
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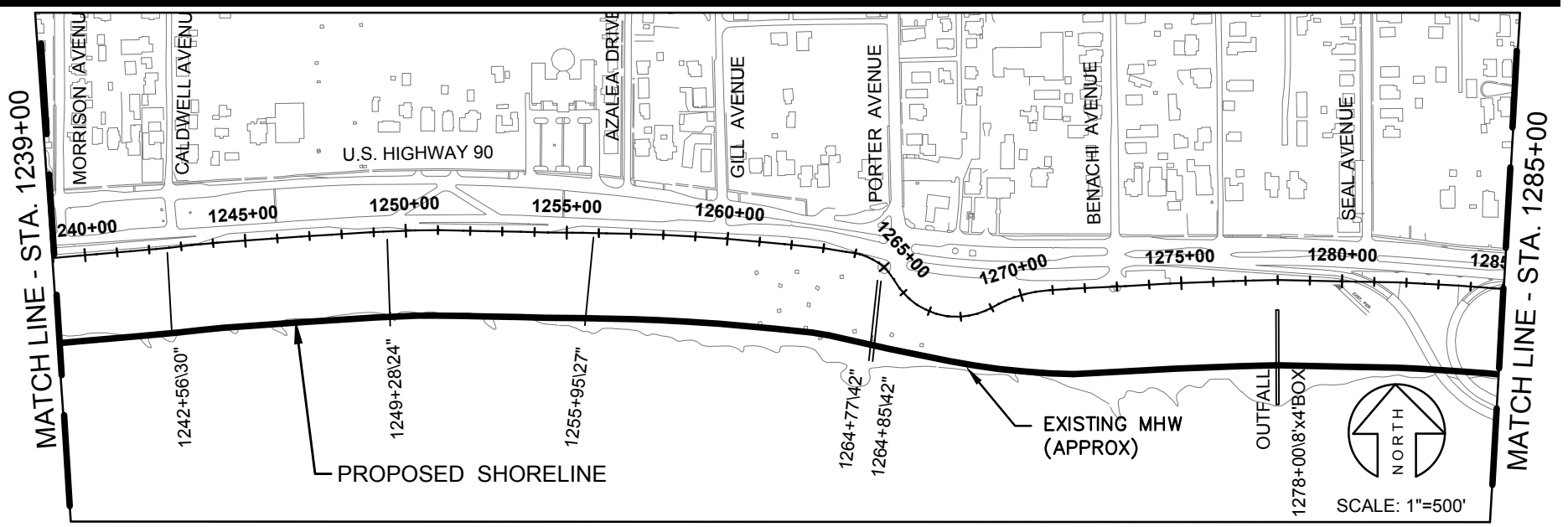
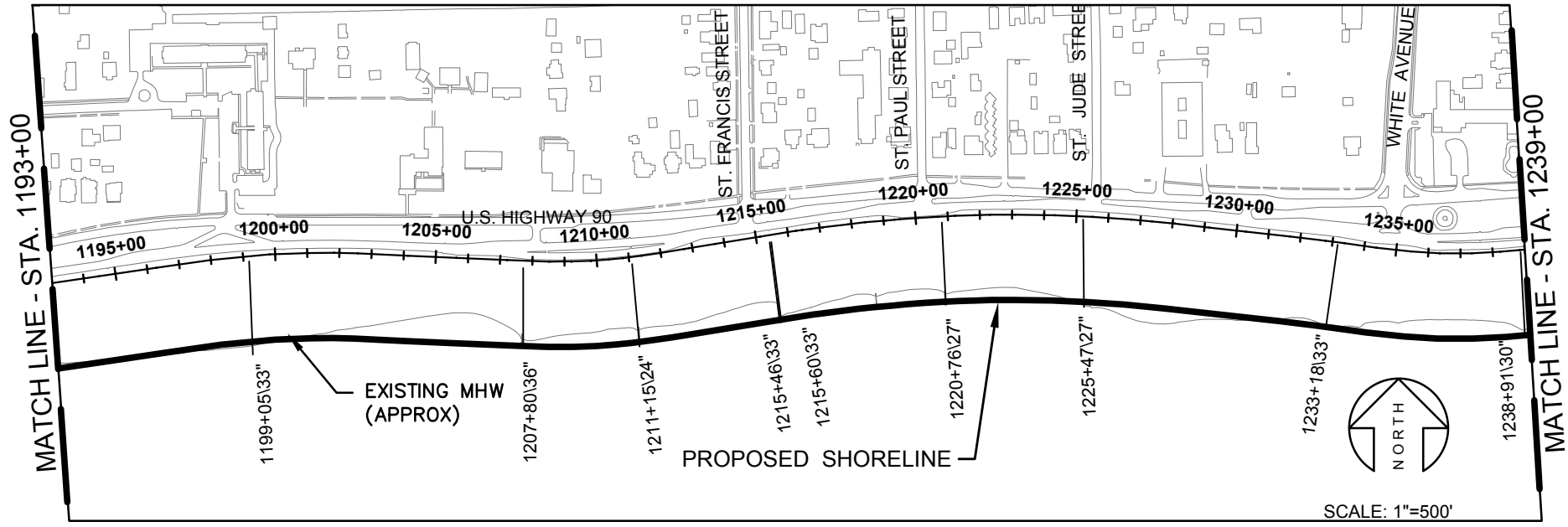
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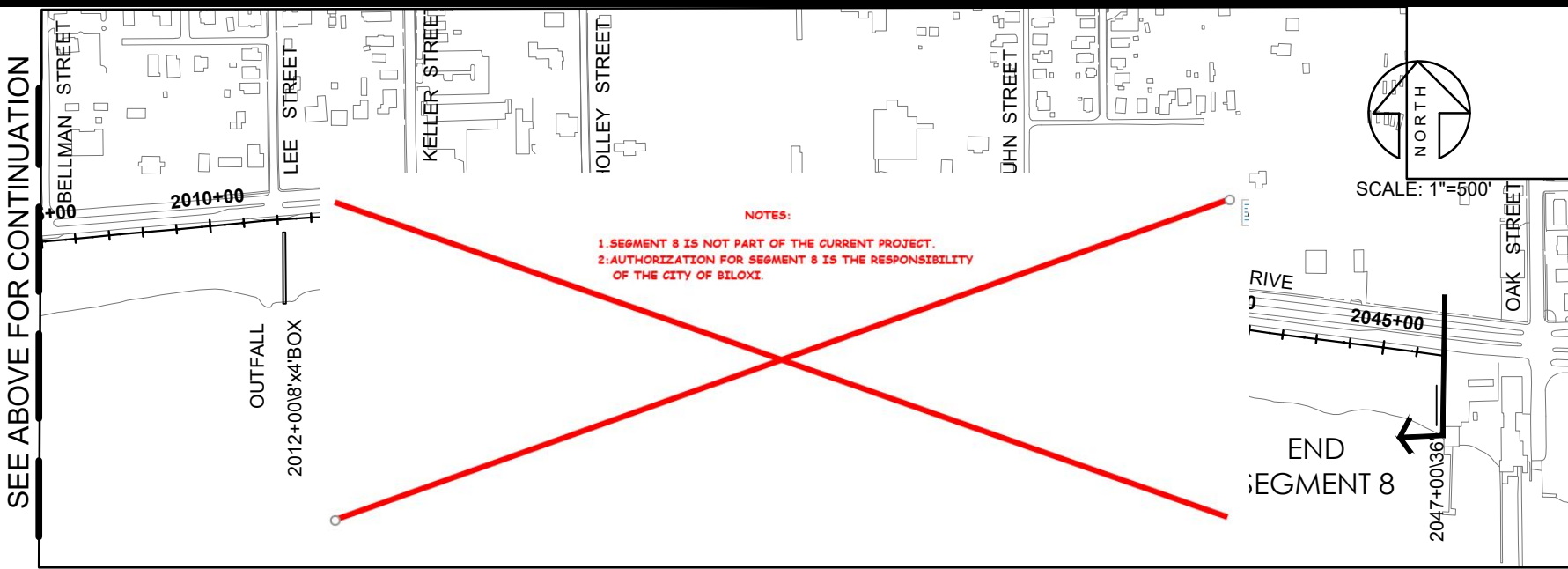
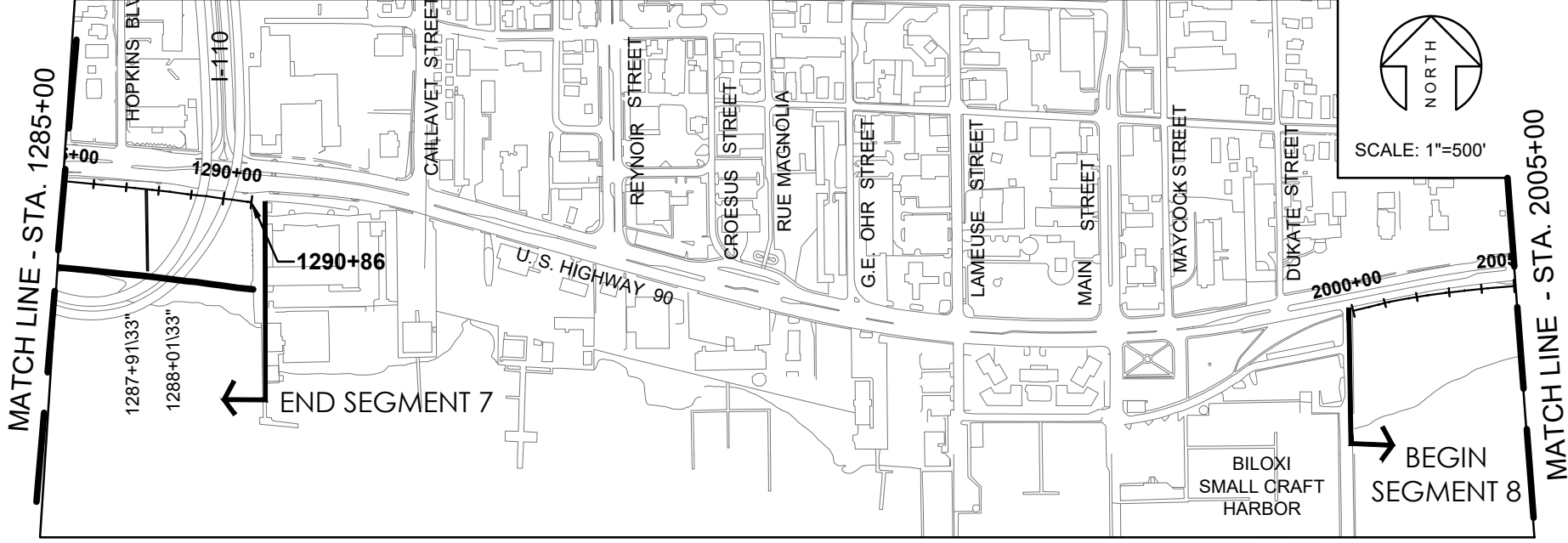
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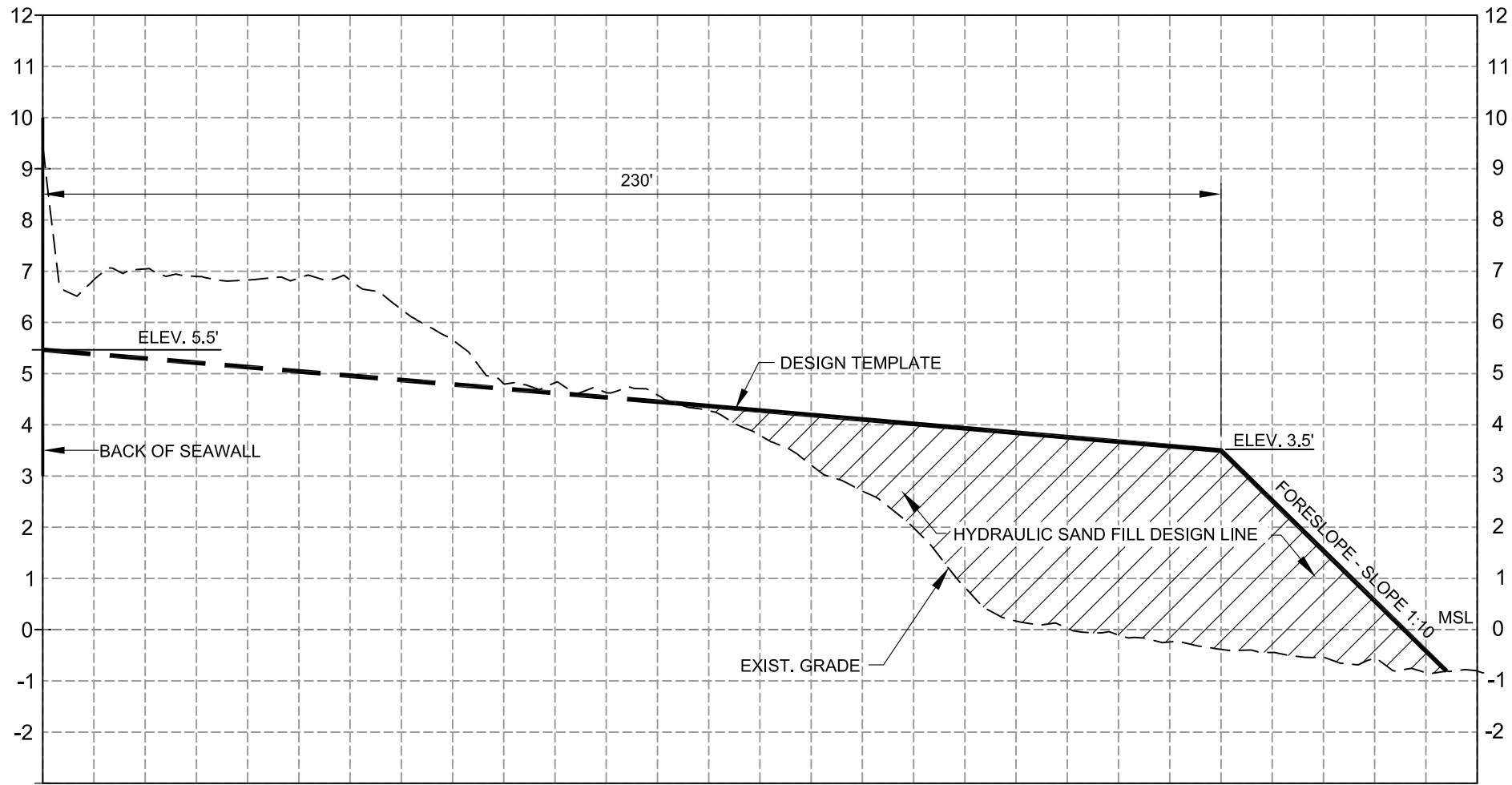
NOTES:
 1. SEGMENT 8 IS NOT PART OF THE CURRENT PROJECT.
 2. AUTHORIZATION FOR SEGMENT 8 IS THE RESPONSIBILITY OF THE CITY OF BILOXI.

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TYPICAL BEACH SECTION

1"=30' HORIZONTAL
1'=3' VERTICAL

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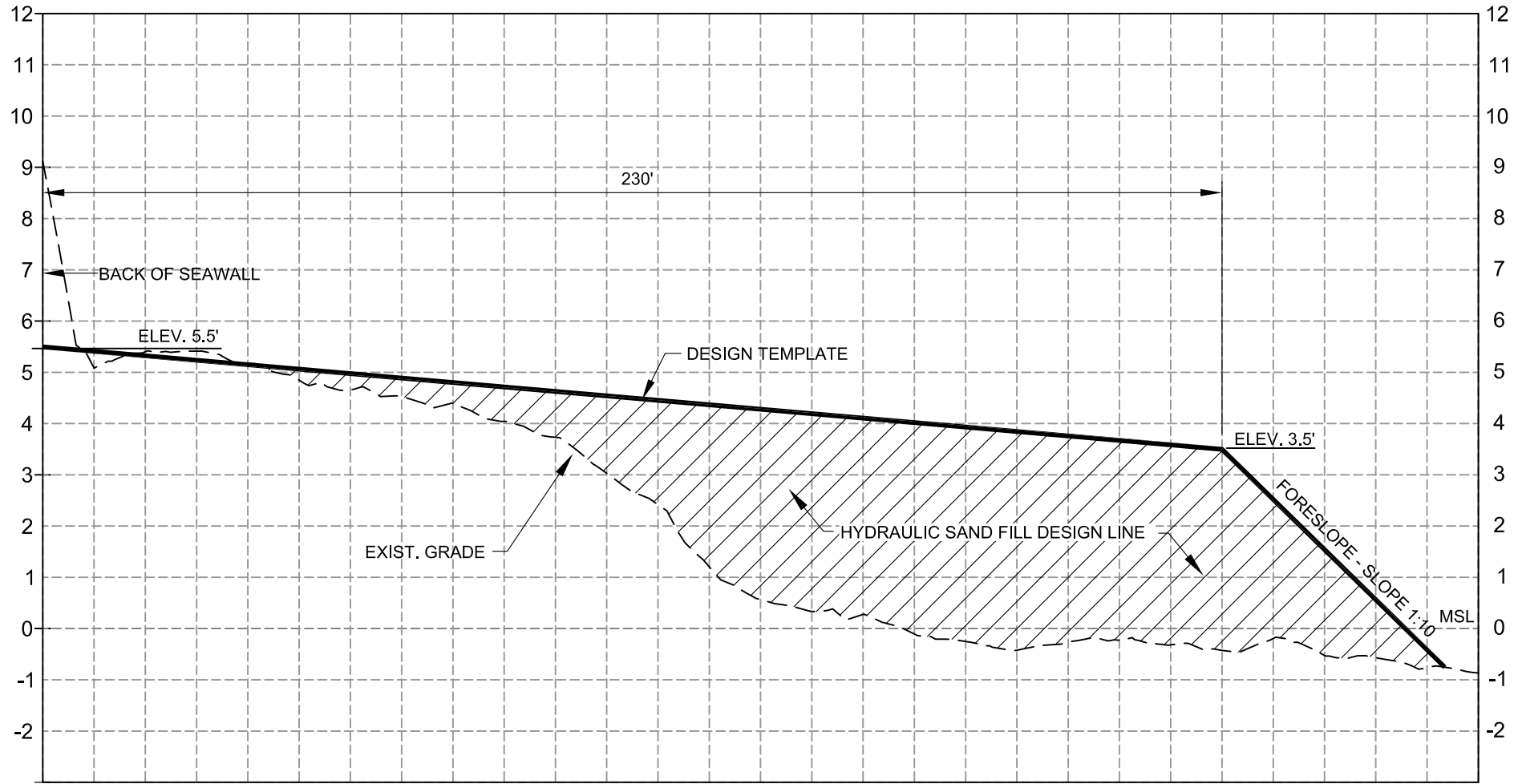
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TYPICAL SECTIONS

HARRISON COUNTY, MISSISSIPPI

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TYPICAL BEACH SECTION

1"=30' HORIZONTAL
1"=3' VERTICAL

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HARRISON COUNTY SAND BEACH DEPARTMENT

TYPICAL BEACH SECTIONS

HARRISON COUNTY, MISSISSIPPI
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SAND BEACH RENOURISHMENT

HARRISON COUNTY SAND BEACH DEPARTMENT

EARTHWORK SUMMARY TABLE

SEGMENT	LANDMARKS	FILL VOL (CY)	AREA ACRES
1	STA. 0+00 - STA. 136+00 (HENDERSON POINT TO PASS CHRISTIAN HARBOR)	245,913	25.47
2	STA. 147+50 - STA. 487+50 (PASS CHRISTIAN HARBOR TO LONG BEACH HARBOR)	384,398	30.74
3	STA. 502+00 - STA. 539+52 (LONG BEACH HARBOR TO GPT. COMM. SMALL CRAFT HARBOR)	137,178	11.92
4	STA. 672+00 - STA. 812+50 (GPT. SMALL CRAFT HARBOR TO KEN COMBS PIER)	135,907	11.79
5	STA. 812+00 - STA. 1067+60 (KEN COMBS PIER TO BROADWATER MARINA)	296,190	33.40
6	STA. 1076+16 - STA. 1094+55 (BROADWATER MARINA TO TREASURE BAY)	15,705	1.05
7	STA. 1101+24 - STA. 1290+86 (TREASURE BAY TO I-110 LOOP)	272,404	23.84
TOTALS		1,487,695	138.21

SAND BEACH RENOURISHMENT

HARRISON COUNTY SAND BEACH DEPARTMENT

EARTHWORK QUANTITIES

HARRISON COUNTY, MISSISSIPPI

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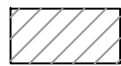
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LEGEND



1972 DREDGE AREA



1986 DREDGE AREA



2001 DREDGE AREA



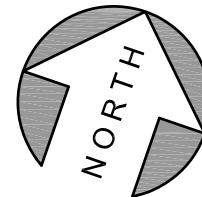
PROPOSED BORROW AREA

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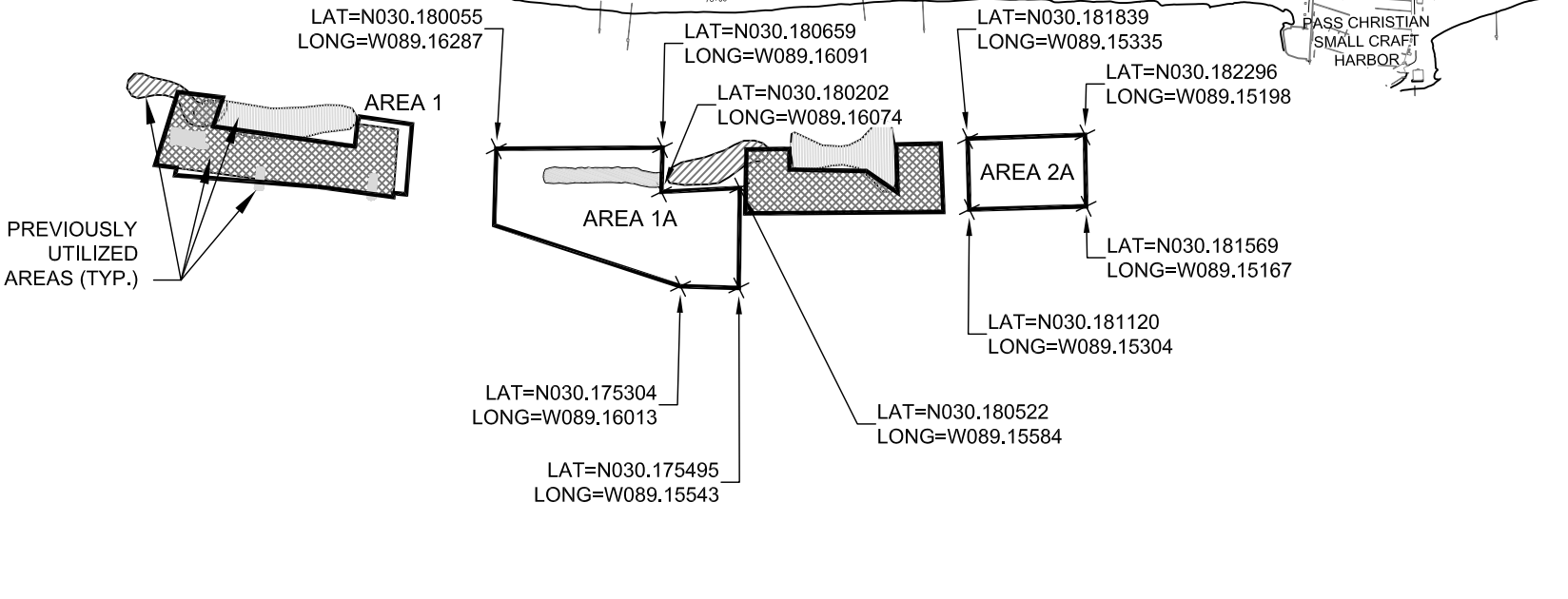
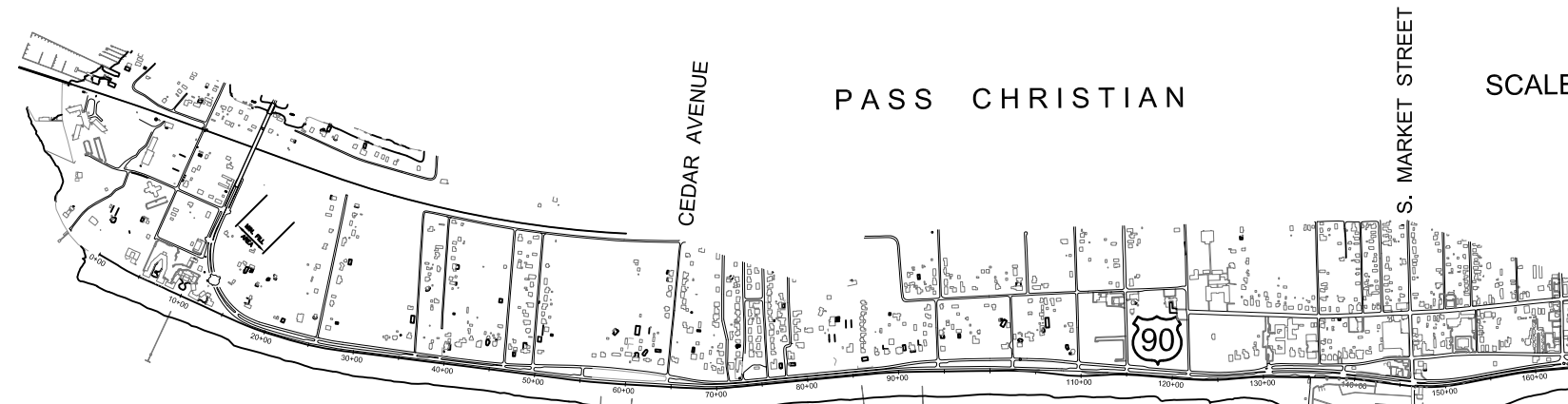
SAND BEACH RENOURISHMENT
HARRISON COUNTY SAND BEACH DEPARTMENT
BORROW AREA LEGEND

HARRISON COUNTY, MISSISSIPPI
SHEET 20 OF 31



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PASS CHRISTIAN



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LAT=N030.180659
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LONG=W089.15335

LAT=N030.182296
LONG=W089.15198

AREA 1

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AREA 2A

PREVIOUSLY
UTILIZED
AREAS (TYP.)

AREA 1A

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MATCHLINE - STA. 165+00

SAND BEACH RENOURISHMENT HARRISON COUNTY SAND BEACH DEPARTMENT

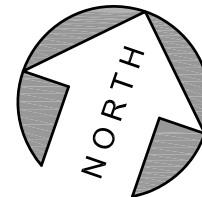
BORROW AREAS

HARRISON COUNTY, MISSISSIPPI

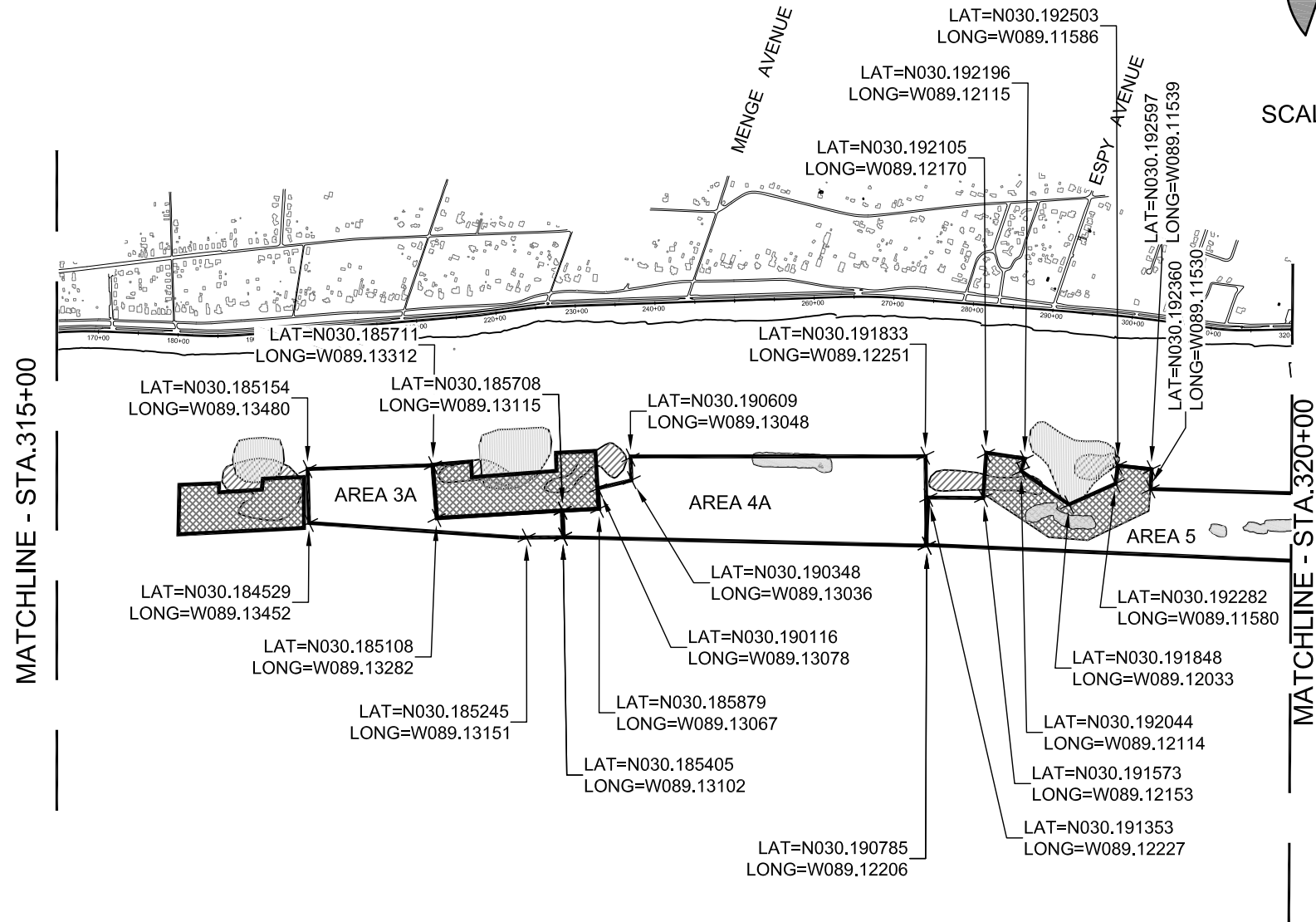
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SAND BEACH RENOURISHMENT

HARRISON COUNTY SAND BEACH DEPARTMENT

BORROW AREAS

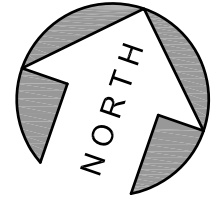
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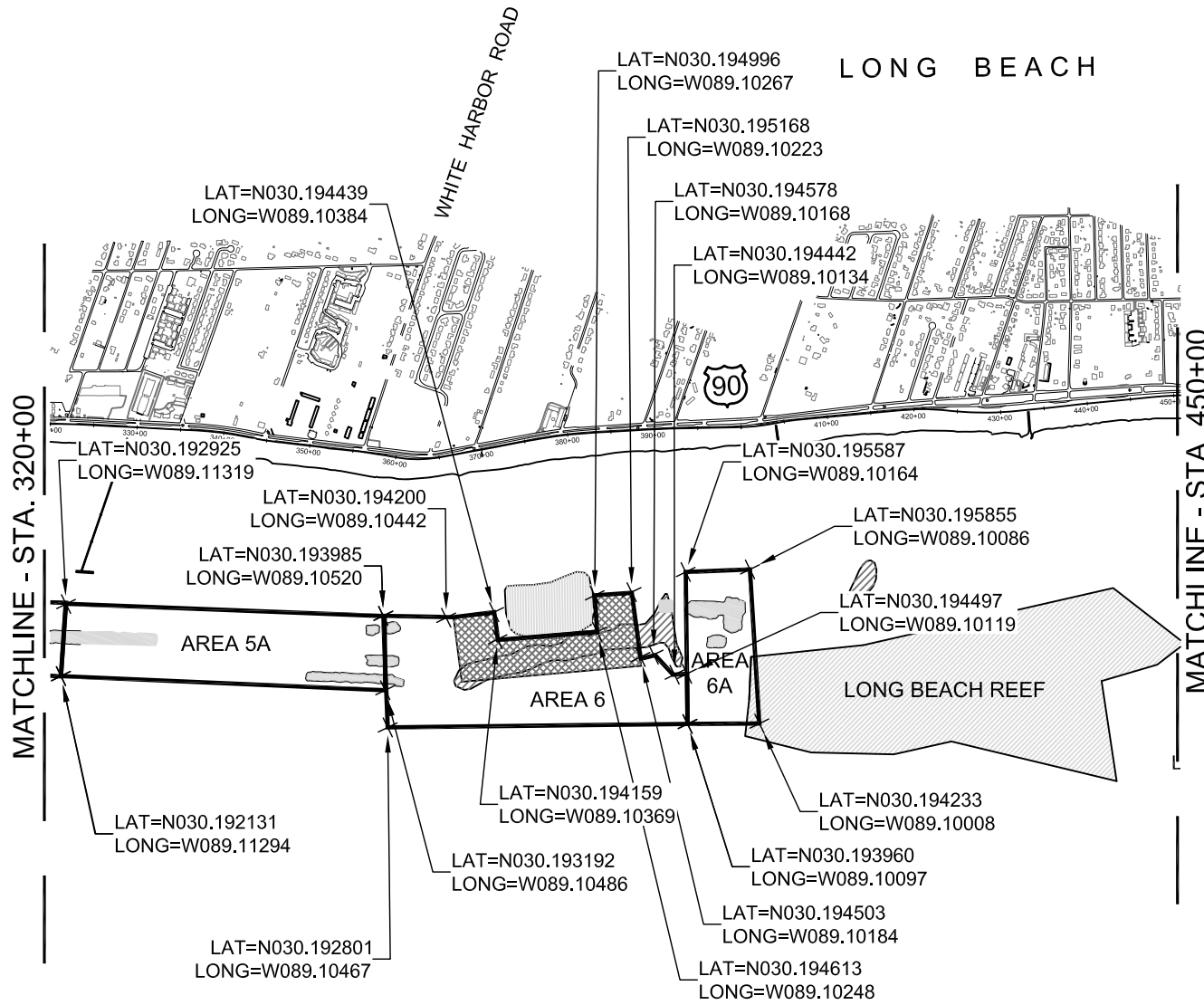
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SAND BEACH RENOURISHMENT

HARRISON COUNTY SAND BEACH DEPARTMENT

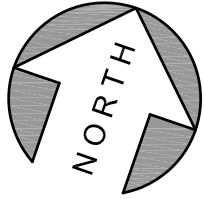
BORROW AREAS

HARRISON COUNTY, MISSISSIPPI

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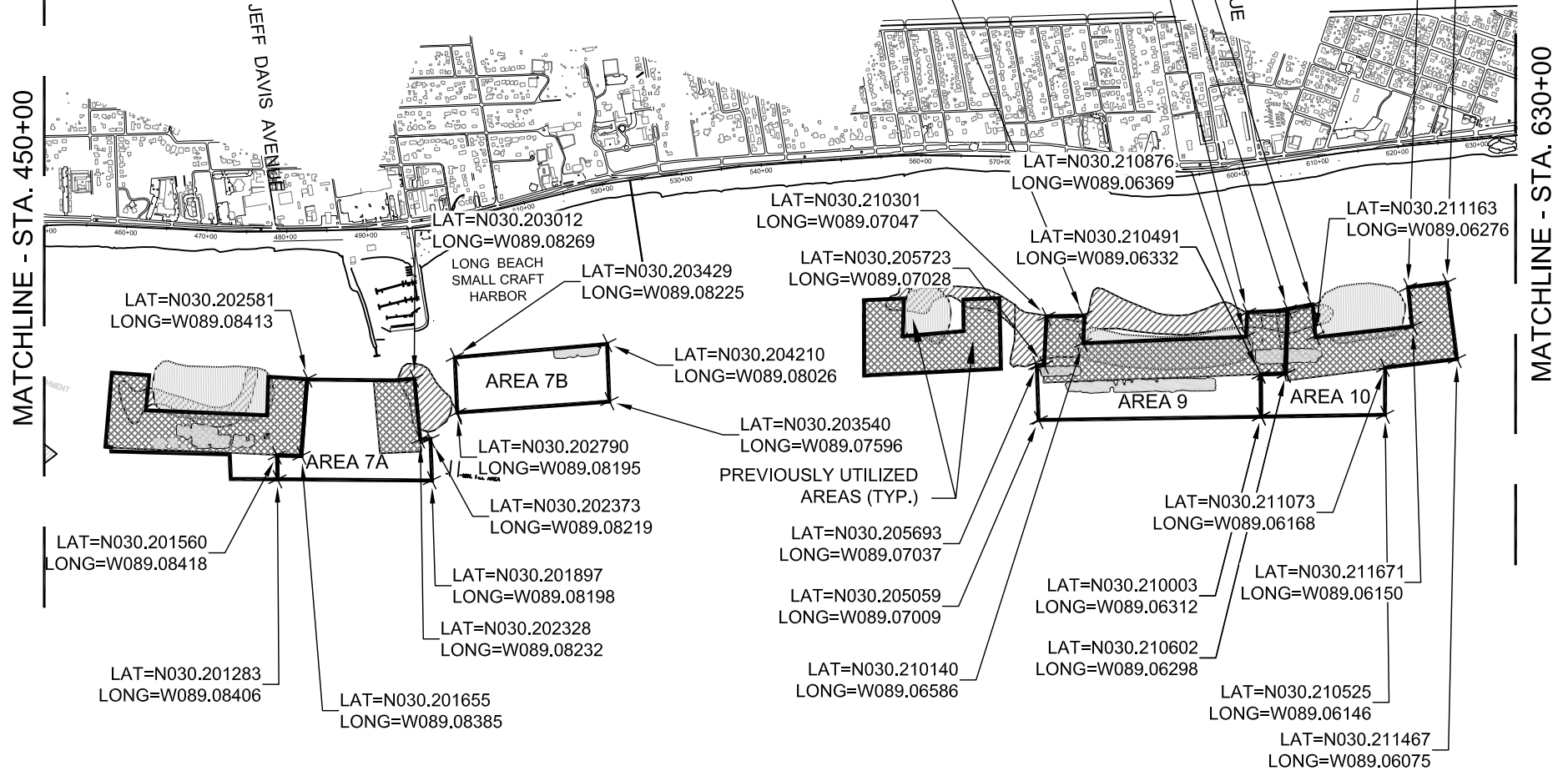
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LONG BEACH

GULFPORT



SAND BEACH RENOURISHMENT

HARRISON COUNTY SAND BEACH DEPARTMENT

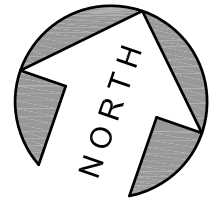
BORROW AREAS

HARRISON COUNTY, MISSISSIPPI

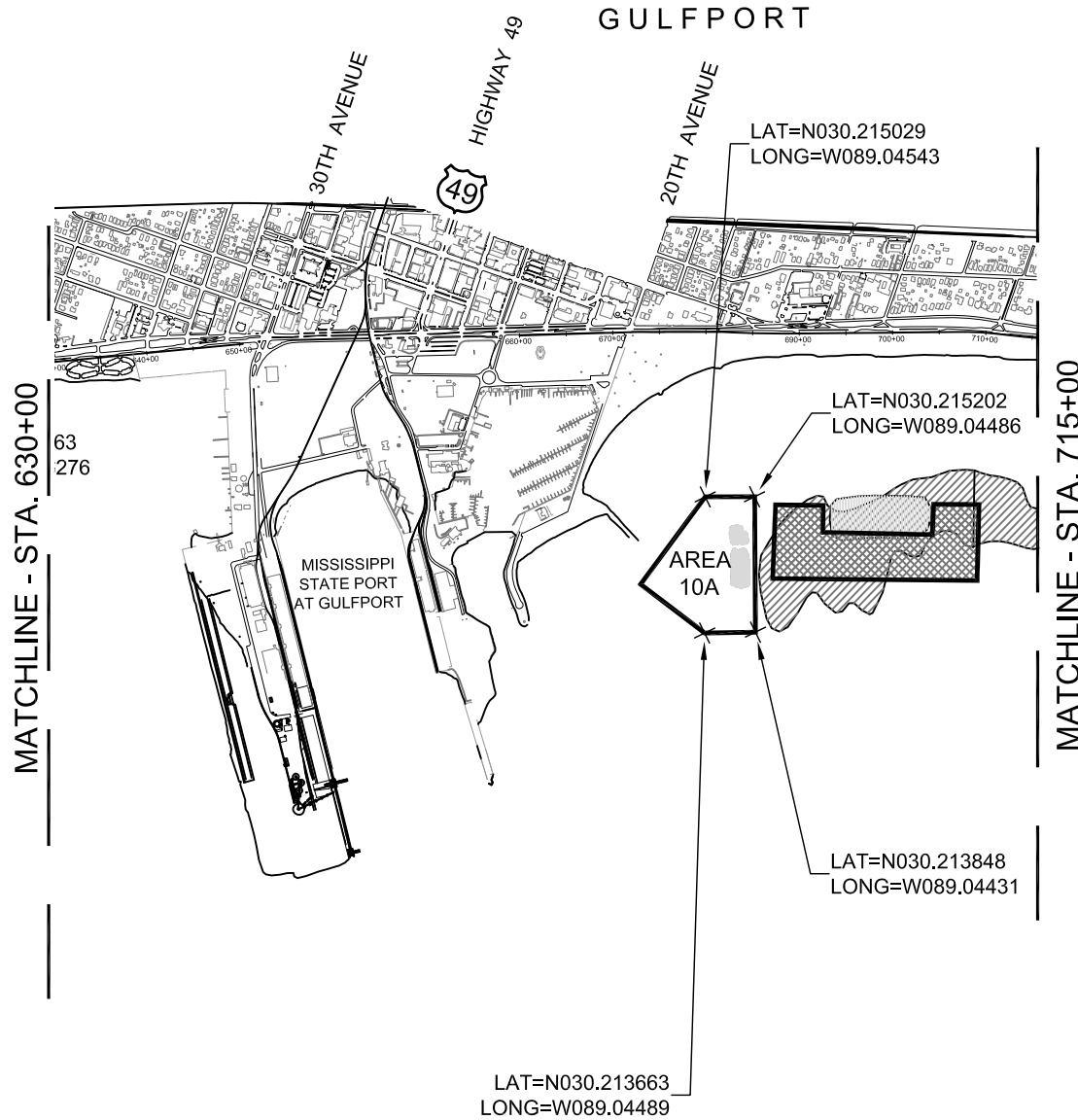
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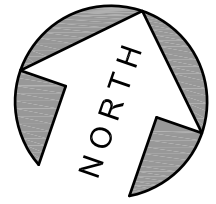


SAND BEACH RENOURISHMENT
 HARRISON COUNTY SAND BEACH DEPARTMENT
 BORROW AREAS

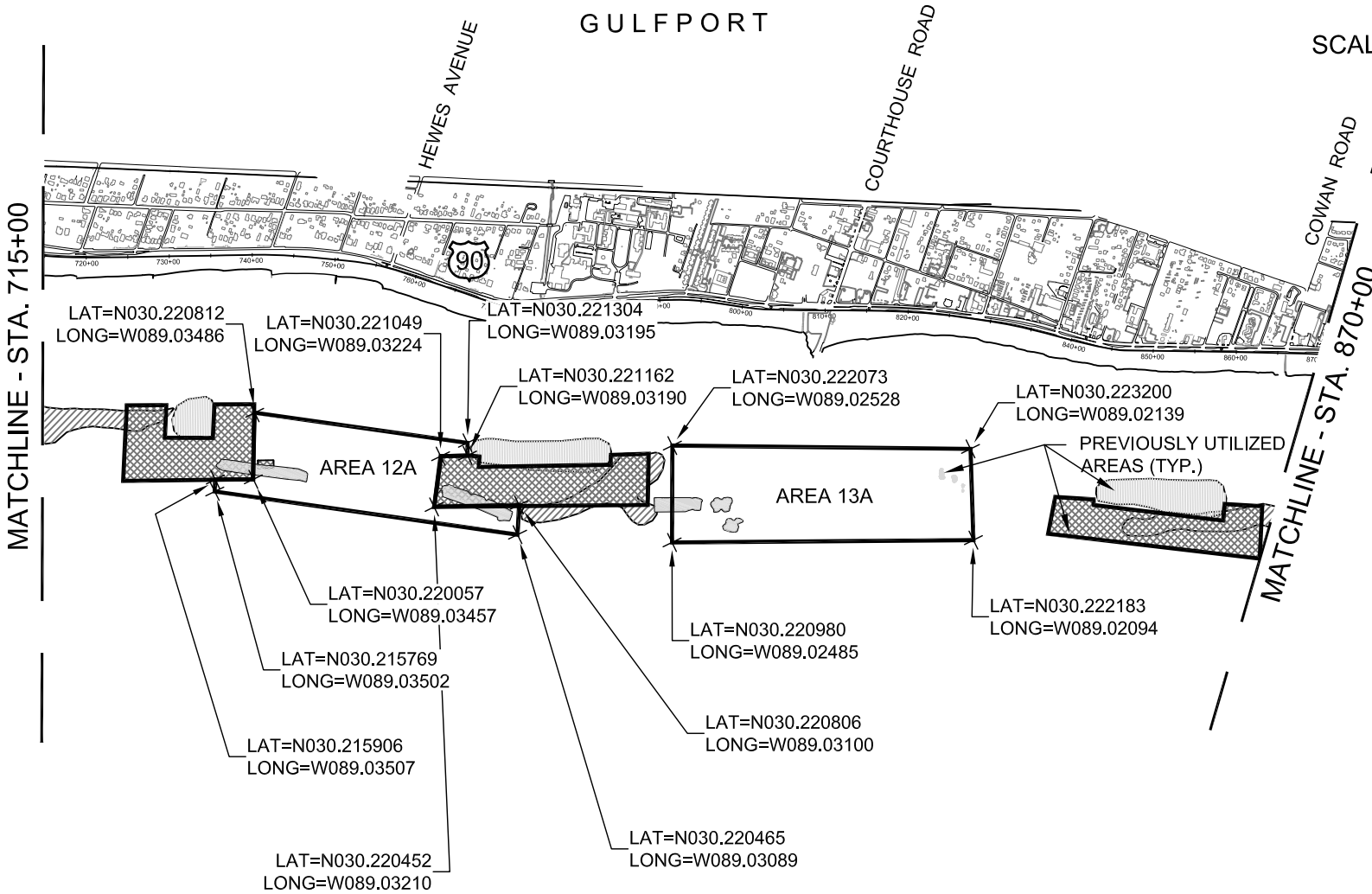
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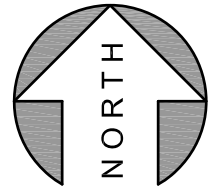
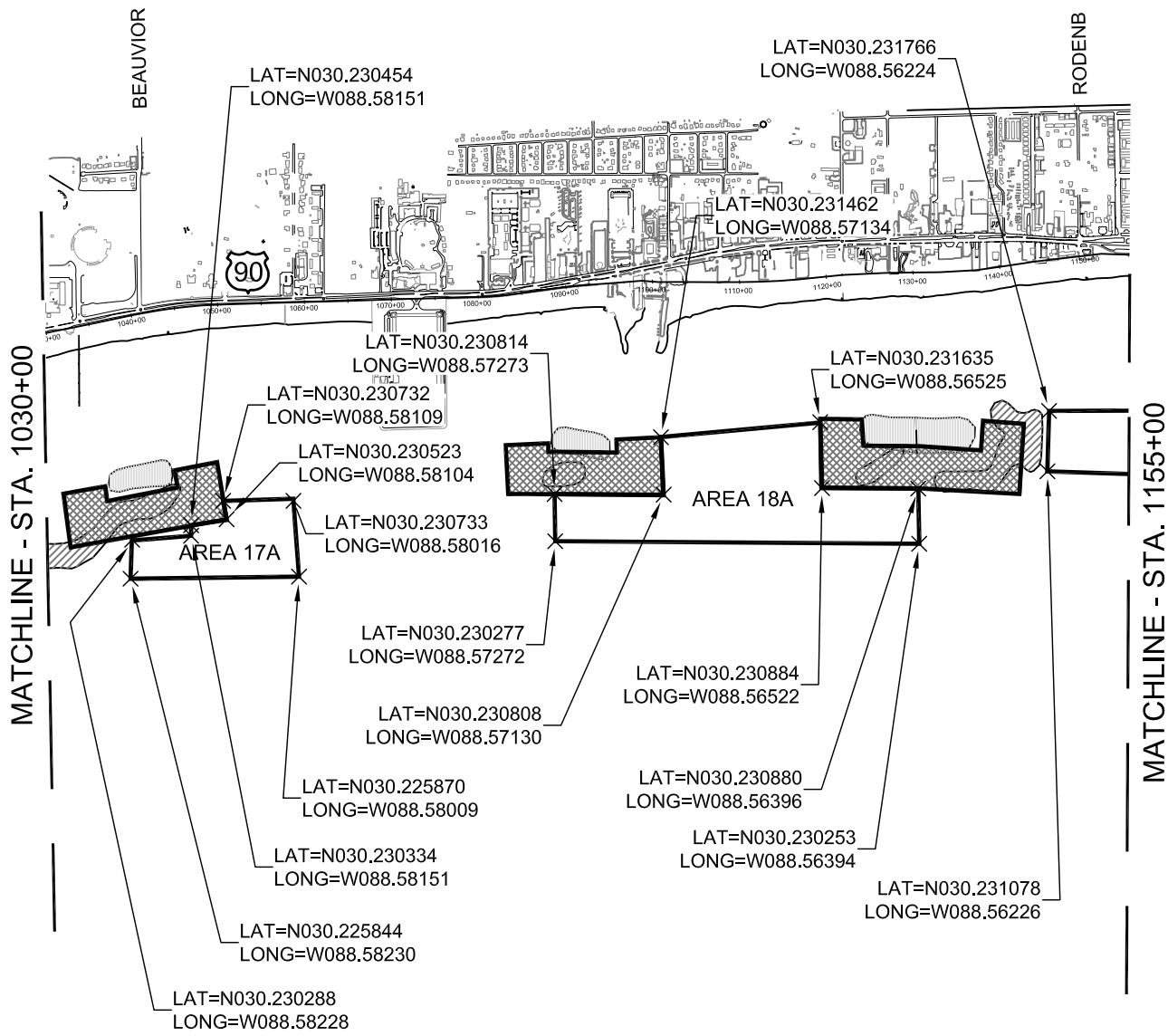
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SAND BEACH RENOURISHMENT
HARRISON COUNTY SAND BEACH DEPARTMENT
BORROW AREAS

HARRISON COUNTY, MISSISSIPPI
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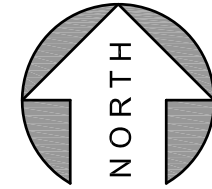
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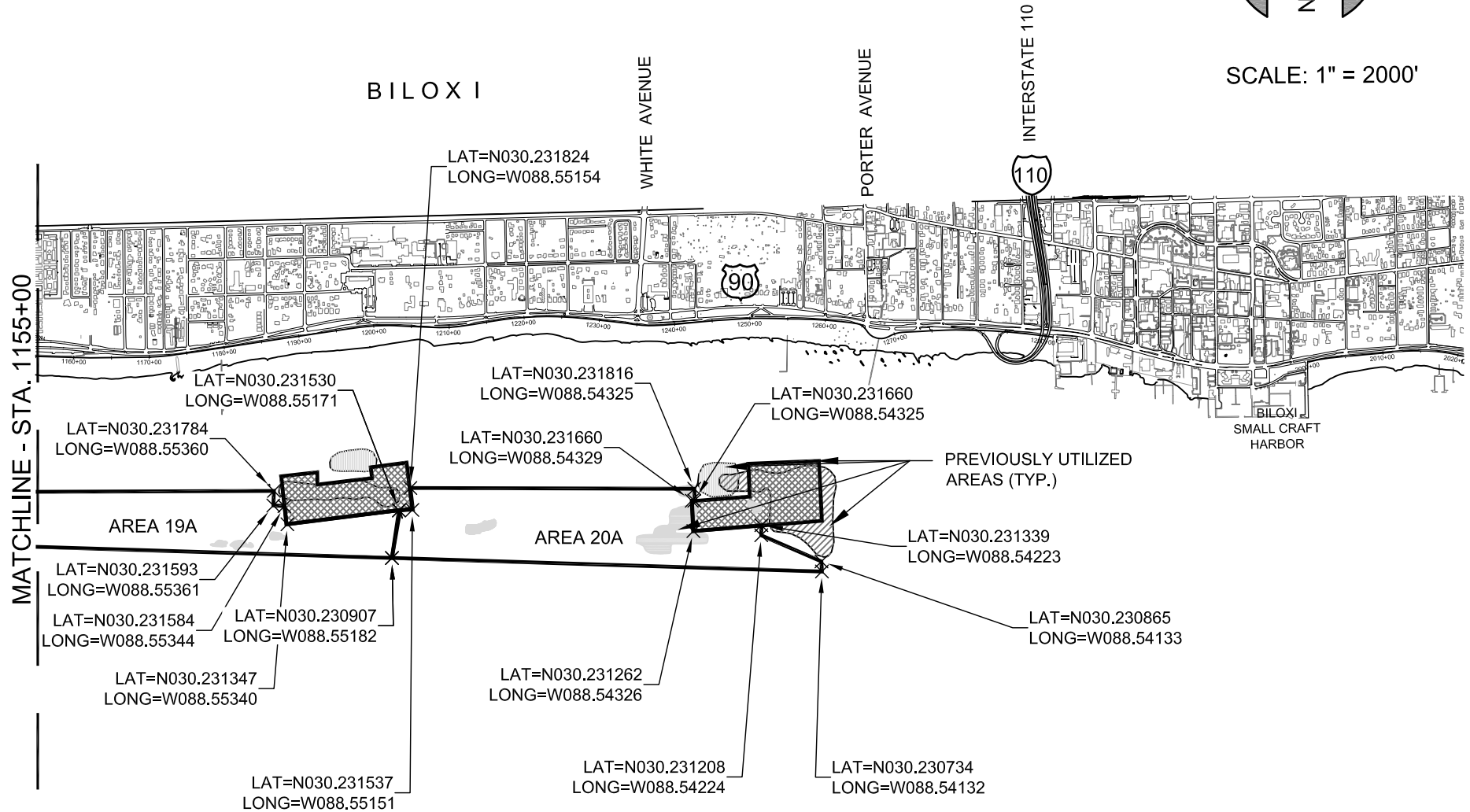
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 & ALEXANDER, INC.
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SAND BEACH RENOURISHMENT
 HARRISON COUNTY SAND BEACH DEPARTMENT
 BORROW AREAS

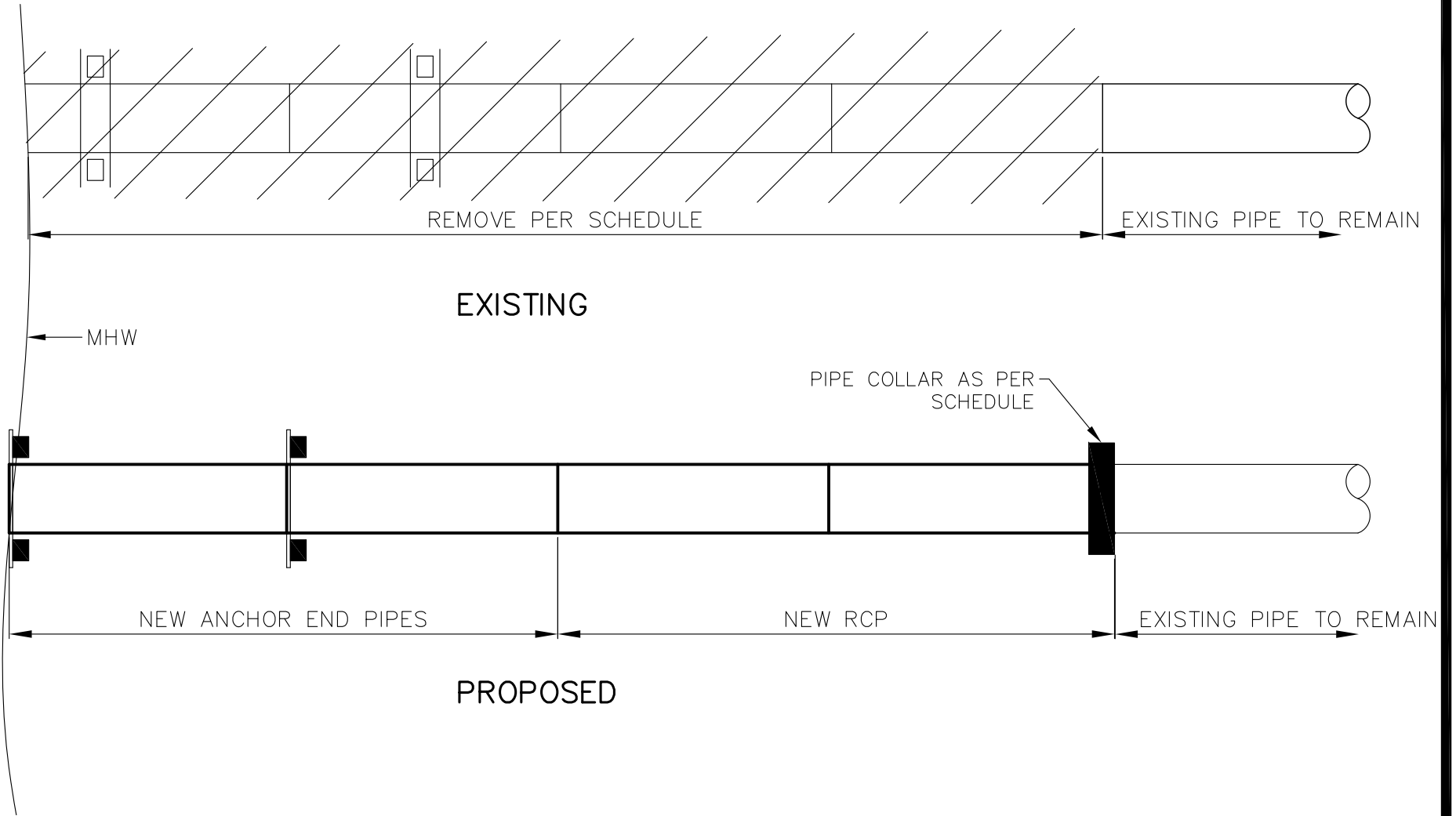
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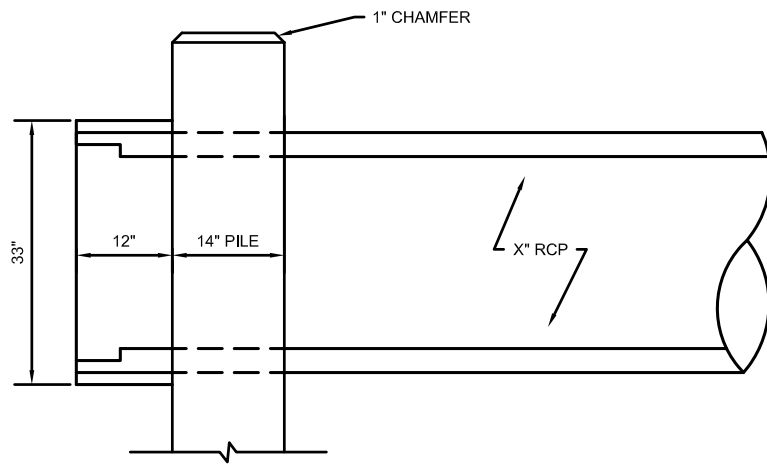
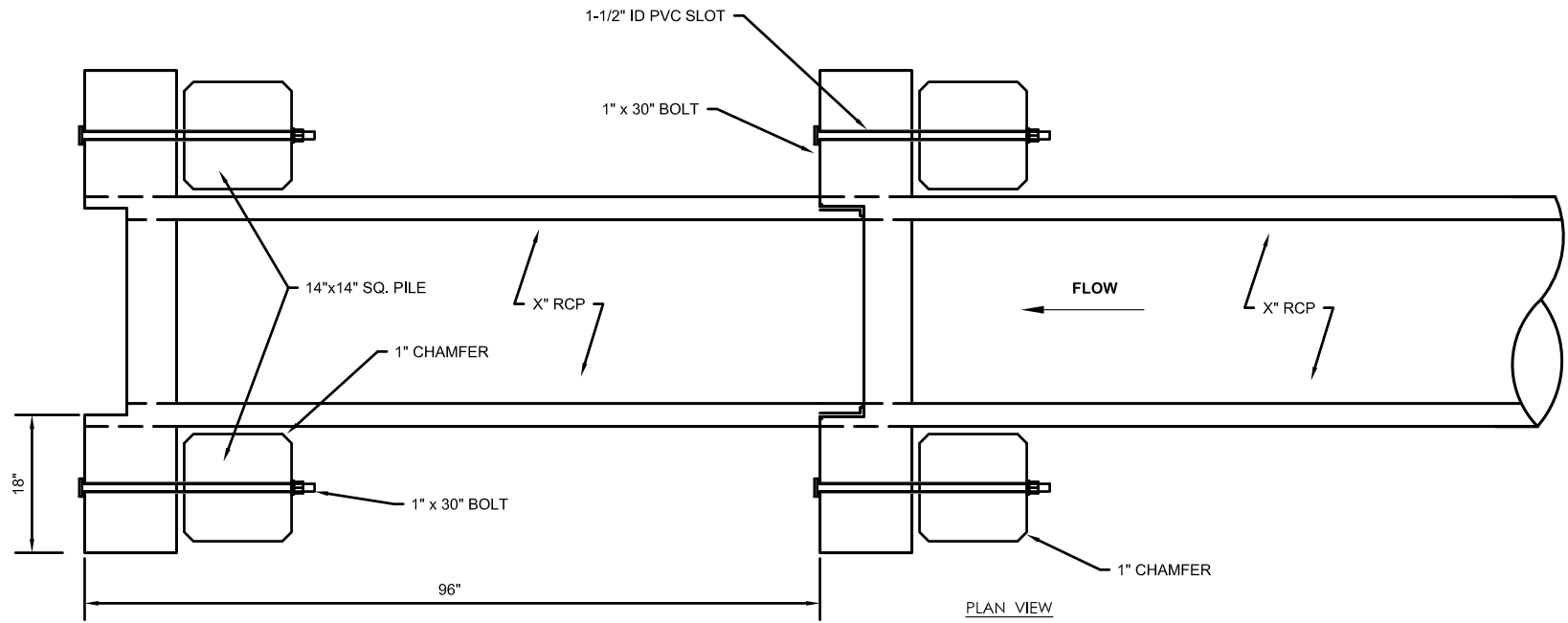
SAND BEACH RENOURISHMENT

HARRISON COUNTY SAND BEACH DEPARTMENT

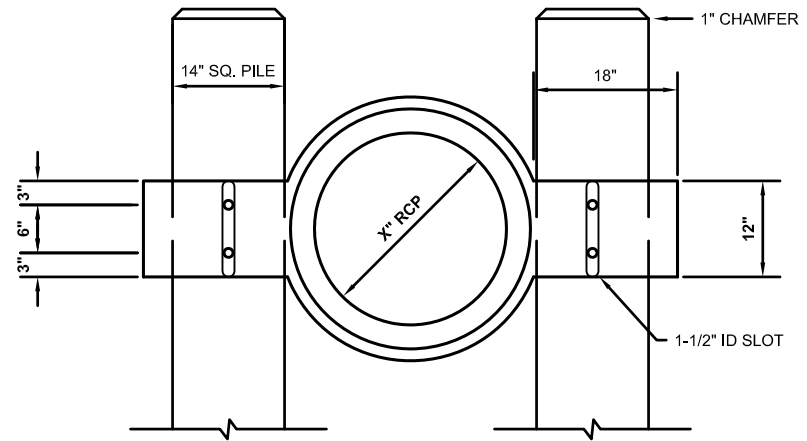
CONSTRUCTION DETAILS

HARRISON COUNTY, MISSISSIPPI
SHEET 30 OF 31

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SECTION VIEW



ELEVATION AT END OF PIPE

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bma BROWN, MITCHELL
& ALEXANDER, INC.
CONSULTING ENGINEERS

CONCRETE PIPE ANCHOR

SAND BEACH RENOURISHMENT

HARRISON COUNTY SAND BEACH DEPARTMENT

CONSTRUCTION DETAILS

HARRISON COUNTY, MISSISSIPPI

SHEET 31 OF 31

Attachment B
Agent Letter

HARRISON COUNTY

SAND BEACH DEPARTMENT

842 COMMERCE STREET • GULFPORT, MISSISSIPPI 39507
(228) 896-0055 • FAX (228) 896-0059



September 17, 2021

Corps of Engineers
Mobile District
P.O. Box 2288
Mobile, Alabama 36628

Mississippi Department of Marine Resources
1141 Bayview Avenue, Suite 101
Biloxi, MS 39530

Mississippi Department of Environmental Quality
P.O. Box 20305
Jackson, MS 39289-1305

**REF: Permit Application-Beach Renourishment and Restoration Project
Harrison County Sand Beach Authority
Harrison County, Mississippi**

Ladies and Gentlemen:

Please be advised that BMI Environmental Services, LLC. of Gulfport, Mississippi is hereby authorized to act as our agent for permit coordination on the above referenced permit request.

Any questions regarding this project may be directed to Mr. Larry Lewis of BMI Environmental Services, LLC at 228-864-7612.

Sincerely,

A handwritten signature in blue ink, appearing to read "Chuck Loftis", is written over a faint, larger signature.

Chuck Loftis
Harrison Sand Beach Authority

cc: Mr. Larry Lewis
Mr. Dax Alexander, PE

Attachment C
Environmental Assessment



Environmental Assessment Ten-Year Beach Maintenance Project Harrison County, Mississippi

Prepared for:
Harrison County Sand Beach Authority
Gulfport, Mississippi

Project Number: 05139-01

Prepared by:
BMI Environmental Services LLC
401 Cowan Road, Suite A
Gulfport, Mississippi 39507

January 2022

1.0 INTRODUCTION, PURPOSE AND NEED

The Harrison County Sand Beach Authority (HCSBA) is responsible for maintaining over 26 miles of man-made sand beach in Harrison County, Mississippi. The beach, which was authorized by Congress (Public Law 727 enacted in 1946) and the Mississippi Legislature (Chapter 334 of the Laws of Mississippi of 1948), was constructed in 1952 to provide protection for the seawall and U.S. Highway 90. The beach has a maximum design width of 300 feet and encompasses an area of shoreline from Biloxi, Mississippi on the east to Henderson Point in Pass Christian, Mississippi on the west.

The shoreline of the Mississippi Sound is a very dynamic environment, and the man-made sand beach is subjected to wind and wave erosion on a daily basis. The wind and wave action erodes the man-made beach and transports sand material away from and along the shoreline of the beach (See Figure 1). The erosive forces of wind generally move sand in a northerly direction towards the seawall and U.S. Highway 90. Littoral currents transport sand in a westerly direction, and off-shore tidal currents move sand south into the nearshore waters of the Mississippi Sound. While most of the wind-eroded sand accumulates near the seawall, eroded sand which is transported along the beach by littoral currents accumulates around the outfall structures.

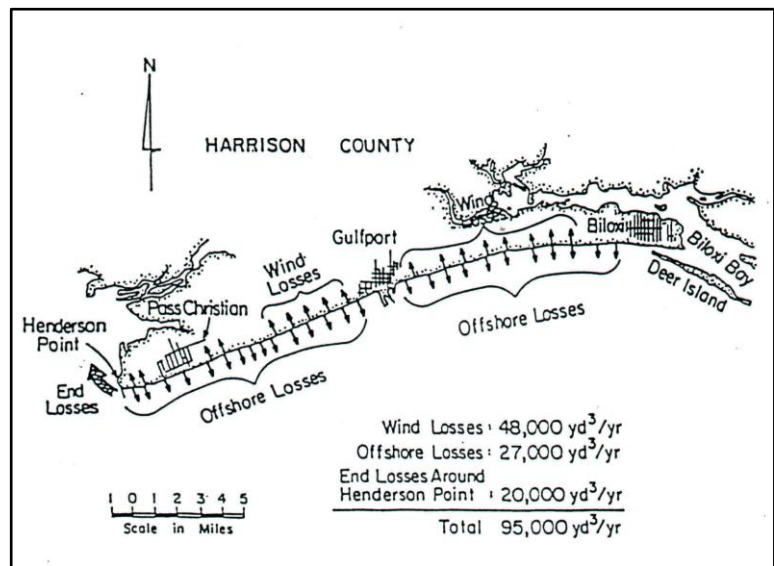


Figure 1: Schematic Illustration of Sediment Losses (Source: Sand Beach Master Plan, Harrison County, Mississippi, 1986)

As the non-federal local sponsor, Harrison County, acting through the HCSBA, is required to conduct certain activities related to the operation, maintenance, repair, replacement, and rehabilitation of the beach as specified in the *Operation, Maintenance, Replacement, Repair, and Rehabilitation Manual*. Those operation and maintenance activities include activities such as repair of drainage outfall structures, removal of trash and debris, and redistribution of eroded/accumulated sand to maintain the project template design and proper flow through the outfalls. Maintenance activities also include major beach renourishment activities which involve dredging in off-shore borrow areas and placement of sand on the beach to restore the beach profile.

Most beach maintenance activities take place on a routine basis and depend on need. General grading and trash and debris removal are scheduled as needed depending on season, level of use, and minor storm events (i.e. high winds and storm tides). Large scale beach renourishment activities historically occur on 7-10 year intervals depending on the rate of erosion and wind and wave damage from hurricanes. In the aftermath of Hurricane Katrina federal funds were provided under the Flood Control and Coastal Emergencies Program (PL 84-99) and the Harrison County beach was renourished in 2007 and approximately 125 acres of native vegetation plantings were restored.

Beach surveys in 2017 revealed that over 41 acres of beach and several hundred linear feet of dunes were lost to erosion. Approximately 295,520 cubic yards of sand was placed on eroded areas of the beach and dune plants were installed by the US Army Corps of Engineers (USACE). More recent storms and Hurricane Zeta in 2020 caused significant losses of beach and dune structures. Loss of the beach and dune structures reduces their functionality for seawall protection.

There are 183 outfall pipes and 11 outfall channels along the 26 miles of man-made beach in Harrison County. Routine maintenance is required at various intervals and replacement of the outfall structures is often needed to strengthen them.

There is a need to perform beach renourishment at varying intervals of 5 to 10 years depending on the rate erosion and the severity of storm events. Giving full consideration to the recent frequency of renourishment needs, the HCSBA proposes a 10-year maintenance dredging permit which will allow the HCSBA the flexibility to coordinate with the regulatory agencies and initiate renourishment activities on a need versus time basis. There is also a need to repair and replace existing sections of the outfall structures to allow for proper drainage of US 90 and the drainage basins north of US 90.

2.0 PROPOSED ACTION AND ALTERNATIVES

The HCSBA proposes to conduct beach renourishment activities to renourish the sand beach to its prescribed design template. The beach renourishment will utilize a hydraulic dredge to obtain sand material from designated off-shore borrow areas which will be pumped in place at selected areas of the beach where larger quantities of sand material are needed for replenishment. The HCSBA also proposes to repair and replace existing sections of the outfall structures to allow for proper drainage of US 90 and the drainage basins north of US 90.

2.1 Background

The HCSBA has considered a number of alternatives for renourishing large areas of the beach. Historically, the HCSBA renourishes large areas of the sand beach using sand which is hydraulically dredged from designated borrow areas offshore of the beach and placed in the eroded areas to restore the original beach profile. Beach renourishment by hydraulic dredging is generally performed approximately every 10 years and approximately 1,000,000 cubic yards of sand is placed on the sand beach from Biloxi to Henderson Point.

2.2 Alternatives

Alternative methods for beach renourishment include mining sand from offshore borrow area, mining sand from upland sources, retrieving sand which blows over the seawall, and near-shore retrieval of sand from the off-shore platform. The alternatives analysis findings for each alternative are as follows:

- **Material from the Nearshore Platform Alternative**-Suitable sand for beach renourishment is available in the nearshore platform and this material can be removed at a cost of approximately 2.50 per cubic yard. The technique involves mechanical removal of thin layers of sand (6 inches thick) from the offshore platform using earth moving equipment such as a pan scraper.

- **Material from Upland Sources Alternative**-Suitable sand for beach renourishment is available from surface mining pits in south Mississippi; however, there are a number of factors that make the use of upland surface mining pits as a source for large scale beach renourishment projects.
- **Material from US Highway 90**-Suitable sand for beach renourishment is available for beach renourishment after storm events blow sand from the beach onto US Highway 90. Reports indicate that storm events may cause approximately 48,000 cubic yards of sand to be blown across the seawall per year. Collecting sand which accumulates on US Highway 90 is a practical alternative for small scale renourishment; however a number of logistical factors make the use of material collected from US Highway 90 as a source for large scale is not feasible.

In summary, the upland source alternative, the retrieval from the nearshore platform, and the retrieval of sand from US Highway 90, when considered individually or in combination for small renourishment project are viable alternatives and will be used on an as needed basis. For larger renourishment projects. Retrieving sand from offshore borrow areas is the most efficient alternative.

2.4 Proposed Action Alternative

HCSBA proposes to renourish eight sections of beach from Henderson Point to Biloxi. Sand will be obtained from designated borrow areas by hydraulic dredge and placed on the beach segments to restore the beach profile. The sand will be deposited in eroded areas and then graded to restore the beach to its originally permitted design width. The total volume and total area to be renourished at each segment are presented in Table 1. An estimated 1,487,695 cubic yards of sand would be dredged from pre-designated borrow areas and deposited within the beach template as to re-establish approximately 138.21 acres of beach Table 1.

Table 1 – Renourishment Volume and Area by Location.

SEGMENT #	STATION LOCATION	LANDMARKS	CUBIC YARDS	AREA ACRES
Segment #1	STA.0+00-STA. 136+00	HENDERSON POINT TO PASS CHRISTIAN HARBOR	245,913	25.47
Segment #2	STA. 147+50 -STA.487+50	PASS CHRISTIAN HBR TO LONG BEACH HBR	384,398	30.74
Segment #3	STA. 502+00 - STA.S39+52	LONG BEACH HARBOR TO GPT. COMMERCIAL HARBOR	137,178	11.92
Segment #4	STA. GN+00 - STA.812+50	GPT.SMALL CRAFT HARBOR TO KEN COMBS PIER	135,907	11.79
Segment #5	STA. 812+00 -STA.1067+60	KEN COMBS PIER TO BROADWATER MARINA	296,190	33.40
Segment #6	STA.1076+16-STA.1094+55	BROADWATER MARINA TO TREASURE BAY	15,705	1.05
Segment #7	STA. 1101+24- STA.1290+86	TREASURE BAY TO I-110 LOOP	272,404	23.84
TOTAL			1,487,695	138.21

Future renourishment projects required during the 10-year life of the permit will be evaluated, assessed and presented to the regulatory agencies in accordance with the terms and conditions of the Ten-Year Beach Renourishment Project.

3.0 AFFECTED ENVIRONMENT

This section describes the existing environment and discusses the potential impacts associated with the Proposed Action and No-Action Alternative.

3.1 Geology and Soils

The project area is located within the East Gulf Flatwoods Major Land Resource Area (MLRA 152A) of the Atlantic and Gulf Coast Lowland Forest and Crop Region. The region is mostly level to gently sloping land that includes the coastal plains and the Mississippi River Delta along the Gulf of Mexico. This East Gulf Flatwoods MLRA is a near level, low coastal plain crossed by many large streams and river systems.

No Action Alternative – Under the No Action Alternative, no impacts to geology or soils would occur.

Proposed Action Alternative – Under the Proposed Action Alternative, no significant adverse impacts to geology would occur. Minor, temporary impacts to the sand beach will occur during deposition of the dredged material. Removing sand from the offshore borrow areas should not negatively impact coastal geology or soils.

3.2 Water Resources

3.2.1 Surface Water

The proposed project site is located on the northern shore of the Mississippi Sound. The Mississippi Sound is a shallow coastal lagoon approximately 80 miles long by approximately 9 miles wide which is separated from the Gulf of Mexico by a chain of sandy barrier islands. The Mississippi Sound has an average mean low water depth (MLW) depth of 10 feet, and more than 99 percent of the Mississippi Sound is shallower than 20 feet at MLW. The salinity in the Mississippi Sound averages 22 parts per thousand however that can vary from lower salinities during high freshwater input (flood conditions) to higher salinities during periods when there is very little freshwater input (drought conditions).

No Action Alternative – Under the No Action Alternative, no adverse impacts to surface water would occur.

Proposed Action Alternative – Under the Proposed Action Alternative temporary impacts to surface water in the Mississippi Sound could occur during dredging and placement of sand on the beach. Turbidity associated with the hydraulic dredging and placement of material on the beach may be higher during the construction period; but the turbidity will return to background conditions once the dredging and placement work is completed. The selected contractor will be required to conduct dredging and beach renourishment in a way that will not cause the turbidity in the vicinity of the project to be greater than 50 Nephelometric Turbidity Units outside a 750 feet mixing zone.

3.2.2 Waters of the U.S. Including Wetlands

The USACE regulates the discharge of dredged or filled material into waters of the U.S. (WOUS), including wetlands, pursuant to Section 404 of the Clean Water Act (CWA). Additionally, Executive Order 11990 requires federal agencies to avoid, to the extent possible, adverse impact of wetlands.

According to the National Wetlands Inventory (NWI) Map, the nearshore waters of the Mississippi Sound are classified as estuarine and marine unconsolidated sub-tidal bottoms. No vegetated wetlands are submerged aquatic vegetation (SAV) are located within the shoreline area or the nearshore platform of the man-made beach.

No Action Alternative – Under the No Action Alternative, no impacts on WOUS, including wetlands, would occur.

Proposed Action Alternative – Under the Proposed Action Alternative, temporary impacts to WOUS in the Mississippi Sound could occur during dredging and placement of sand on the beach. To reduce impacts to WOUS, BMPs for turbidity will be implemented. The increase in turbidity is considered a short term impact and once the material has been placed on the beach and graded, the turbidity should return to background levels within 10 days.

3.3 Air Quality

The Clean Air Act (CAA) requires that states adopt ambient air quality standards. The standards have been established in order to protect the public from potentially harmful amounts of pollutants. Under the CAA, the U.S. Environmental Protection Agency (EPA) establishes primary and secondary air quality standards. Primary air quality standards protect the public health, including the health of “sensitive populations, such as people with asthma, children, and older adults.” Secondary air quality standards protect public welfare by promoting ecosystems health and preventing decreased visibility and damage to crops and buildings. EPA has set national ambient air quality standards (NAAQS) for the following six criteria pollutants: ozone (O₃), particulate matter (PM_{2.5}, PM₁₀), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), and lead (Pb). According to MDEQ, the entire state of Mississippi is classified as in attainment, meaning that criteria air pollutants do not exceed the NAAQS (MDEQ, 2008).

No Action Alternative – Under the No Action Alternative, there would be no short- or long-term impacts on air quality because no construction would occur.

Proposed Action Alternative – Under the Proposed Action Alternative, temporary impacts on air quality would occur during the dredging and construction periods. To reduce the emission of criteria pollutants, fuel-burning equipment running times would be kept to a minimum and engines would be properly maintained. The long-term and short-term localized increases in emissions would be negligible compared to existing conditions and therefore is not anticipated to adversely affect air quality.

3.4 Noise

Noise is generally defined as unwanted sound. Sound is most commonly measured in decibels (dB) on the A-weighted scale, which is the scale most similar to the range of sounds that the human ear can hear. EPA guidelines, and those of many other federal agencies, indicate that noise levels of 55 dB outdoors and 45 dB indoors are identified as preventing activity interference and annoyance (EPA, 1974). The levels are not a single event, or "peak" levels. Instead, they represent averages of acoustic energy over periods of time such as 8 hours or 24 hours, and over long periods of time such as years. Noise levels for various areas are identified according to the use of the area. Levels of 45 dB are associated with indoor residential areas, hospitals, and schools, whereas 55 dB is identified for certain outdoor areas where human activity takes place.

The level of 70 dB is identified for all areas in order to prevent hearing loss. Several sensitive receptors are located along US Highway 90. The sensitive receptors include churches, libraries, municipal buildings, and parks

No Action Alternative – Under the No Action Alternative, no impacts on noise levels would occur because there would be no construction.

Proposed Action Alternative – Under the Proposed Action Alternative, temporary increases in noise levels are anticipated during the maintenance and renourishment construction periods. Construction would occur during daylight hours only to provide quiet hours during the night-time for local residents and people attending activities at the sensitive receptors. All of the construction noises would be of short duration, localized, and would not have a long term effect on the adjacent commercial properties or public facilities.

3.5 Biological Resources

The proposed project site is located along the northern shore of the Mississippi Sound and adjacent to cities, towns, and residential developments. Wildlife resources in the vicinity of the project site are limited and include shorebirds and wading birds, and various species of migratory birds. Common birds found in the area of the site include herons, egrets, terns, gulls, and black skimmers. The vegetation along the beach consists of dune and beach grasses and non-native ornamentals such as palm trees which are part of the landscape.

Shallow estuarine water bottoms dominate the areas in the immediate vicinity of the project site. These areas range in depth from less than 1 foot at mean low water (MLW) to 8 feet at MLW and contain a variety of aquatic species. The intertidal and sub-tidal bottoms are populated with benthic organisms commonly found on muddy-sand bottoms.

The major fisheries of the project area include menhaden, mullet, croakers, shrimp, crab, and oysters. These species and others common to the area are generally described as estuarine dependent species because they spend all or part of their lives in estuaries such as the Mississippi Sound.

The Mississippi Sound is listed as one of fourteen areas or units designated as critical habitat for the Gulf sturgeon (68 FR 13370, March 19, 2003); however, the critical habitat does not include the current footprint of the Long Beach Harbor. The sand beaches in the vicinity of the proposed project site are within a designated critical habitat for the piping plover and the beach shoreline provides some foraging, roosting, and sheltering habitat for plovers.

The piping plover (*Charadrius melodus*) was federally listed as endangered in the Great Lakes watershed, and as threatened throughout the remainder of its range on January 10, 1986. The final rule designating critical habitat for the wintering population of the piping plover was published in the Federal Register on Tuesday, July 10, 2001 (Federal Register/Vol. 66, No. 132).

Critical habitat is a term used in the Endangered Species Act (Act) that refers to specific geographic areas that contain habitat features essential for the conservation of a threatened or endangered species. These areas may require special management considerations or protection for the species. Fifteen critical habitat units were identified for the Mississippi Gulf Coast. The federally listed threatened and endangered species that may occur in Harrison County, Mississippi are shown in Table 2.

Table 2: List of Federally Threatened and Endangered Species, Harrison County, Mississippi.

Common Name	Scientific Name	Status
Alabama red-bellied turtle	<i>Psuedemys alabamensis</i>	Endangered
Black pine snake	<i>Pituophis melanoleucus ssp. lodingi</i>	Threatened
Gopher Tortoise	<i>Gopherus polyphemus</i>	Threatened
Green sea turtle	<i>Chelonia mydas</i>	Threatened
Gulf sturgeon	<i>Acipenser oxyrhynchus desotoi</i>	Threatened with Critical Habitat
Kemp's ridley sea turtle	<i>Lepidochelys kempii</i>	Endangered
Leatherback sea turtle	<i>Dermochelys comacea</i>	Endangered
Loggerhead sea turtle	<i>Caretta caretta</i>	Threatened
Louisiana black bear	<i>Ursus americanus luteolus</i>	Recovery
Louisiana quillwort	<i>Isoetes louisianensis</i>	Endangered
Dusky gopher frog	<i>Rana sevosa</i>	Endangered with Critical Habitat
Piping Plover	<i>Charadrius melodus</i>	Endangered with Critical Habitat
Red-cockaded woodpecker	<i>Picoides borealis</i>	Endangered
West Indian manatee	<i>Trichechus manatus</i>	Endangered

The Magnuson-Stevens Fishery Conservation and Management Act of 1976 (Magnuson-Stevens Act, 16 U.S.C. 1801 et seq.), as amended, gives the United States exclusive management authority over fisheries, except for highly migratory species of tuna, within a fishery conservation zone of 5 to 322 kilometers (3 to 200 miles) offshore. The Magnuson-Stevens Act also mandates the identification of Essential Fish Habitat (EFH) for managed species. EFH is defined as the waters or substrate necessary for fish to spawn, breed, feed, or grow to maturity. The Gulf of Mexico Fishery Management Council identifies and describes EFH based on areas where various life stages of selected managed species commonly occur. Because these species collectively occur in all estuarine and marine habitats of the Gulf of Mexico, the entire Gulf is considered to be EFH. According to the National Oceanic and Atmospheric Administration's (NOAA) EFH Mapper, the Mississippi Sound is designated as EFH for coastal pelagics (i.e. Spanish mackerel and blue fish), red drum, and various species of shrimp. According to the NOAA EFH Mapper, the proposed project area does not include Habitat Areas of Particular Concern.

No Action Alternative – Under the No Action Alternative, there would be no impacts to biological resources or listed species because no construction would occur.

Proposed Action Alternative – Under the Proposed Action Alternative, disruption of the benthic environment during dredging and the placement of sand material would result in temporary impacts on species that are unable to avoid the project area. The project could also cause temporary adverse impacts on habitat quality due to turbidity during the construction period. To reduce impacts to the marine environment, the applicant would implement appropriate BMPs, including turbidity, erosion and sediment controls as needed during dredging and construction activities.

The Proposed Action Alternative is not expected to adversely impact any EFH or NMFS-managed species because the fish and other mobile marine organisms such as crabs and shrimp would be able to avoid the project area during dredging and should return once construction is completed. Sea turtles, Gulf sturgeon, and West Indian Manatee may be temporarily unable to use the project site for forage or refuge habitat during the dredging activities. These species are highly mobile and would be able to avoid the dredging area.

The West Indian Manatee year-round distribution is restricted to peninsular Florida because they need warm water to survive the winter. During the non-winter months (March to November) some manatees disperse to the waters of other Gulf coastal states and manatees are occasionally sighted in Alabama, Mississippi, Louisiana, and Texas. As in the case of the Gulf sturgeon, manatees would be able to avoid the dredge and beach renourishment areas during construction.

Beach renourishment activities can impact sea turtle nesting activities and feeding and foraging activities of piping plovers and red knots. Beach renourishment activities can also impact nesting activities for the least terns. Beach renourishment impacts will be minimized by monitoring the project area prior to renourishment activities, limiting renourishment activities during least tern nesting season, and limiting renourishment activities in areas closest to the shoreline. Beach renourishment activities are not likely to adversely impact designated Piping Plover Critical Habitat Units along the Harrison County Sand Beach. The Primary Constituent Elements (PCE's) in Piping Plover Critical Habitat likely to be directly affected by this action include the intertidal flats for foraging and the adjacent areas for roosting and sheltering. There will be short term impacts to the intertidal flats south of the sand beach. The impacts to tidal flats will occur in the immediate vicinity of the beach renourishment areas and once the area is renourished the intertidal flats will return to normal conditions. The beach renourishment activities will also impact the upper reaches of the beach where sand is placed and graded as needed to maintain the design template. These areas will be avoided when possible, during winter months to reduce impacts.

3.6 Cultural Resources

Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, and implemented by 36 CFR Part 800, outline the procedures for Federal agencies to follow to take into account the effect of their actions on historic properties. The NHPA also created the Advisory Council on Historic Preservation (ACHP), the Federal agency responsible for overseeing the Section 106 process and providing commentary on Federal activities, programs, and policies that affect historic properties. Historic properties are defined as archaeological sites, buildings, or other historic resource types listed in or eligible for listing in the National Register of Historic Places (NRHP).

No Action Alternative -Under the No Action Alternative, no impacts on archaeological or cultural resources would occur because there would be no construction.

Proposed Action Alternative - Under the Proposed Action Alternative, no impacts to archaeological or above-ground historic properties are anticipated.

4.0 SUMMARY

The HCSBA proposes to conduct hydraulic dredging from designated borrow areas to renourish eight segments of the sand beach which are eroded. Hydraulic dredging to renourish the beach is required to restore eroded beach segments and maximize the protection functions the beach provides to the adjacent seawall and US Highway 90 during storm events. The impacts associated with the project have been evaluated and determined to be short term and minor. No significant adverse impacts to aquatic resources are anticipated, and the project should not have any adverse impacts on man and the environment.

The scope of work under the Ten-Year Maintenance Permit focuses initially on the immediate need to renourish eight segments of the beach from Henderson Point to the I-110 Loop. Future renourishment projects required during the 10-year life of the permit will be evaluated, assessed, and presented to the regulatory agencies in accordance with the terms and conditions of the Ten-Year Beach Renourishment authorization.

Attachment D
Variance Request Use Plan Change

The HCSBA requested a variance to the guidelines outlined in Chapter 8, Section 2, Part III.G.4 of the MCP for a similar beach renourishment project in April of 2017. The request which was approved is attached and the MDMR staff has advised no additional variance request is required.

BMI Environmental Services, LLC

Environmental Consultants

April 18, 2017

Mr. Chris Pickering
Coastal Ecology Branch
Mississippi Department of Marine Resources
1141 Bayview Avenue, Suite 101
Biloxi, MS 39532

**RE: Harrison County Sand Beach Authority
Beach Renourishment Project (DMR-150178)
Harrison County, Mississippi**

Dear Chris:

In accordance with the provisions of the Mississippi Coastal Program (MCP), we respectfully request a variance to the guidelines outlined in Chapter 8, Section 2, Part III.G.4 of the MCP for the above referenced project.

The Harrison County Sand Beach Authority (HCSBA) proposes to conduct beach renourishment activities to replace eroded areas of the beach and restore the beach to the authorized beach template dimension. The renourishment work will require dredging borrow material from borrow areas located offshore of the beach. Once material is removed from the borrow areas, the resulting depths in the borrow areas will be greater than surrounding water depths.

It is our understanding that the dredging for borrow material may conflict with one of the Guidelines for Regulated Activities presented in Chapter 8, Section 2, Part III. G. Channels and Canals of the MCP because the depth of the borrow area will be greater than the parent body of water. Based on this understanding, we are submitting this request for a variance to MCP Guideline Chapter 8, Section 2, Part III.G.4 and support the request with the attached justification.

If you have any questions regarding the justification, or if we can provide any additional information, please let me know.

Sincerely,



Larry Lewis
Senior Environmental Scientist

Attachment

u:\05139\02 beach outfall maintenance 2014\hcsb variance request 04-18-17.docx

**JUSTIFICATION FOR VARIANCE TO GUIDELINES:
HARRISON COUNTY SAND BEACH-BEACH RENOURISHMENT PROJECT
HARRISON COUNTY, MISSISSIPPI**

BACKGROUND

The Harrison County Sand Beach Authority (HCSBA) is responsible for maintaining over 26 miles of man-made sand beach in Harrison County, Mississippi. The beach, which was authorized by Congress (Public Law 727 enacted in 1946) and the Mississippi Legislature (Chapter 334 of the Laws of Mississippi of 1948), was constructed in 1952 to provide protection for the seawall and U.S. Highway 90. The beach has a maximum design width of 300 feet and encompasses an area of shoreline from Biloxi, Mississippi on the east to Henderson Point in Pass Christian, Mississippi on the west. In the aftermath of Hurricane Katrina federal funds were provided under the Flood Control and Coastal Emergencies Program (PL 84-99) and the Harrison County beach was renourished in 2007 and approximately 125 acres of native vegetation plantings were restored. Additional funds for sand beach restoration for storm damage reduction, flood damage reduction, and ecosystem restoration were authorized by PL 110-28 (May 25, 2007).

INTRODUCTION TO THE PROBLEM

The shoreline of the Mississippi Sound is a very dynamic environment and the man-made sand beach is subjected to wind and wave erosion daily. The HCSBA is required to maintain the beach and since its original construction in 1952, the beach has been renourished approximately 6 times, or about every 10 years. Material is obtained from offshore borrow areas within 5,000 feet of the shoreline and pumped by hydraulic dredge for placement along the eroded beach. The borrow areas vary by size and depth and the actual dimensions reflect the quality and quantity of sand within the borrow area, and the renourishment needs for the specific segment of beach that is being renourished. While the depth may vary from 10-15 feet, the resulting depth of the borrow area after dredging is greater than the surrounding water depths.

The proposed project is consistent the guidelines for Other Mineral Extraction found at Chapter 8, Section 2, Part III.L; however, it may conflict certain guidelines which for activities listed for Channels and Canals. Chapter 8, Section 2, Part III.G.4 of the Mississippi Coastal Program (MCP) states that Access canals shall be... "no deeper than the parent body of water". Therefore, HCSBA must request a variance to the Guidelines for Regulated Activities for this project.

REQUEST FOR VARIANCE

The HCSBA requests a variance from the Guidelines for Regulated Activities to allow dredging within the borrow areas to depths that are greater than the surrounding water depths. This request is based on a determination which indicates that the impacts on coastal wetlands would be no worse than if the guidelines were followed.

JUSTIFICATION

In support of this request for a variance, HCSBA offers the following justification:

1. The Harrison County Sand Beach was established by the county as a shoreline stabilization feature that functioned in concert with the seawall which was built to protect U.S. Highway 90. Funding for construction of the beach was authorized by Congress (Public Law 727 enacted in 1946) and the Mississippi Legislature (Chapter 334 of the Laws of Mississippi of 1948). In the aftermath of Hurricane Katrina federal funds were provided under the Flood Control and Coastal Emergencies Program (PL 84-99) and the Harrison County beach was renourished 2007 and additional funds for sand beach restoration of storm damage reduction, flood damage reduction, and ecosystem restoration were authorized by PL 110-28 (May 25, 2007).
2. The project area is currently classified as a General Use District and mineral extraction is an allowable use within a General Use District.
3. The proposed dredging for beach replenishment conforms to the Guidelines for Other Mineral Extraction (Chapter 8, Section 2, Part III). With respect to Guideline G.4, allowing a bottom depth in the borrow area that is greater than the adjacent water borrows allows for the maximum extraction of suitable sand with minimum disturbance to the offshore areas where the sand material is available.
4. Dredging within previously identified offshore borrow areas to a depth that is greater than the surround depths would not set a negative precedent or result in potential cumulative impacts of similar or other development in the project area. This method of beach renourishment has been utilized during all previous renourishment projects. It is the most cost effective method for obtaining sand for large scale renourishment projects and it is also the most efficient method given the proximity of the sand sources to the beach.
5. The proposed dredging for beach renourishment is not likely to directly and indirectly affect the biological integrity and productivity of the coastal wetlands ecosystems. The project has been evaluated and discussed in the Environmental Assessment which was prepared by the US Army Corps of Engineers for the renourishment project conducted in 2007. Similar environmental assessments have been prepared and submitted to the MDMR for beach renourishment projects in 1988 and 2001. There will be some short-term impacts to water quality during the construction phase of the project. There may be short periods of time where the dissolved oxygen levels may be low, however, this is a short-term condition and it would affect a very minor portion of the water bottoms in the project area. No long-term impacts to water quality or coastal wetlands are anticipated to result from this project.
6. The full extent of the project, including impacts induced by the project, both intended and unintended, have been evaluated and addressed in the Environmental Assessment. No cumulative or secondary impacts are anticipated.

7. The HCSBA has made every effort to avoid any adverse impacts to coastal wetlands through project modifications, safeguards, or conditions.
8. Several alternatives were evaluated for this project. One alternative considered the use of suitable sand from upland sources. This alternative may be acceptable for replacing sand from small eroded areas, however, it not practical or cost effective for a large scale renourishment project. Another alternative considered the retrieval of sand which accumulates in the off-shore platform. This alternative is also not practical for large scale beach renourishment projects.

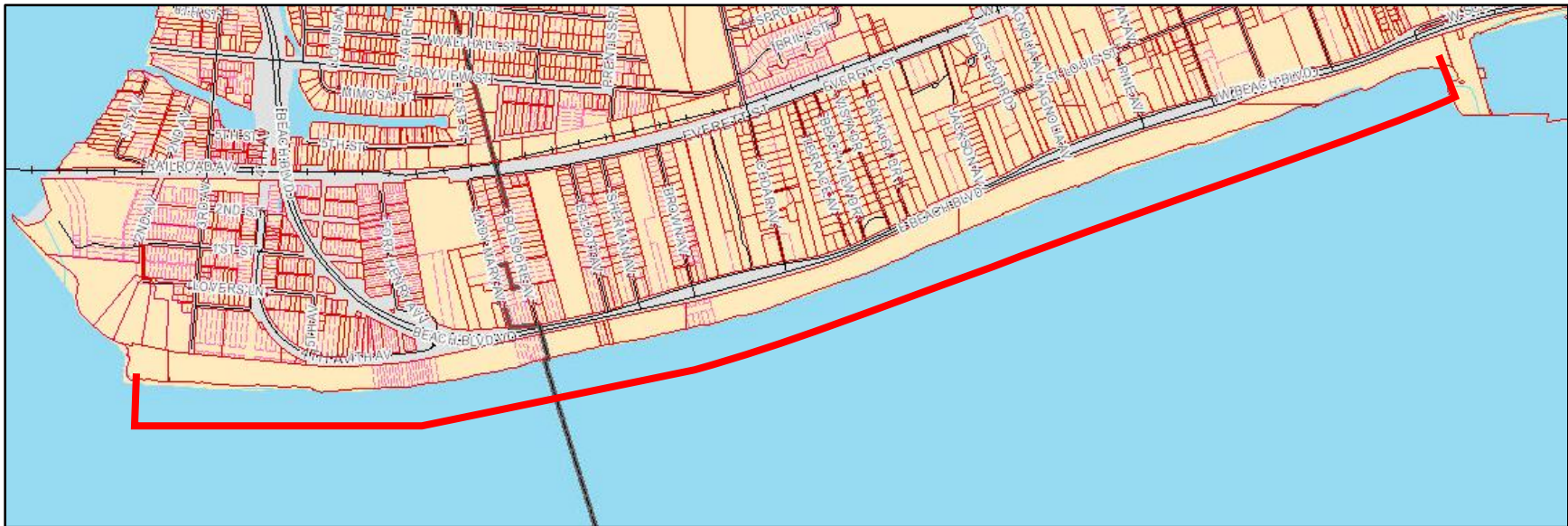
SUMMARY

Dredging sand for beach renourishment projects often involves dredging to depths that are greater than the water depths in areas surrounding the borrow area. Dredging areas deeper than the parent body of water is considered to be in conflict with one of the guidelines for Channels and Access Canals. For this reason, the HCSBA requests a variance from the Guidelines to allow dredging for sand material for beach replenishment.

When a project conflicts with MCP Guidelines for Regulated Activities, a request and justification for a variance must be provided to the Mississippi Department of Marine Resources for evaluation. By letter dated April 18, 2017, the HCSBA requested a variance from Chapter 8, Section 2, Part III.G.4 and the justification for the variance is based on the fact that impacts on coastal wetlands would be no worse than if the guidelines were followed and there are no feasible alternatives.

Attachment E-1
Adjoining Property Owners List

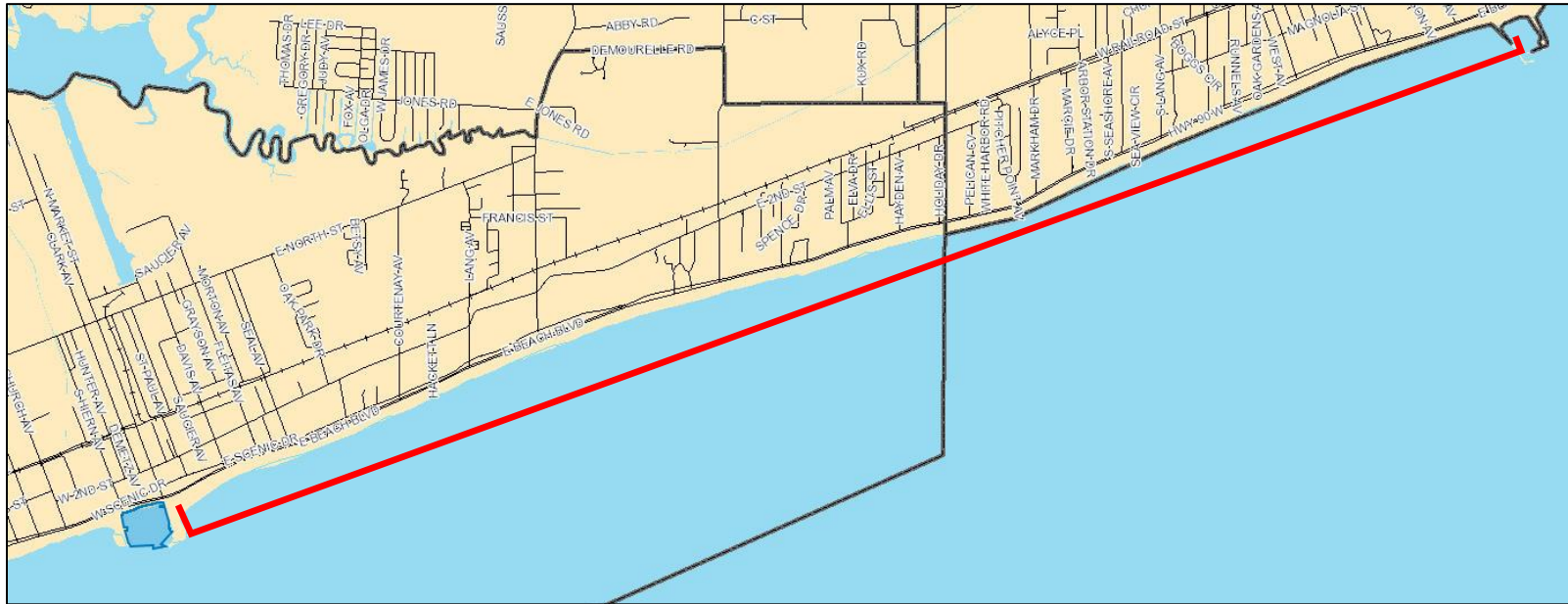
Segment #1: HENDERSON POINT TO PASS CHRISTIAN HARBOR



NOTE: Adjoining property owners are listed in order from western station beginning point and proceeding east to the eastern station ending point of the segment.

SECTY OF STATE -TIDELANDS P.O. BOX 97 GULFPORT MS 39502	MISS DEPT OF TRANSPORTATION P O BOX 1850 JACKSON 39215	PASS CHRISTIAN CITY OF PO BOX 368 PASS CHRISTIAN MS 39571
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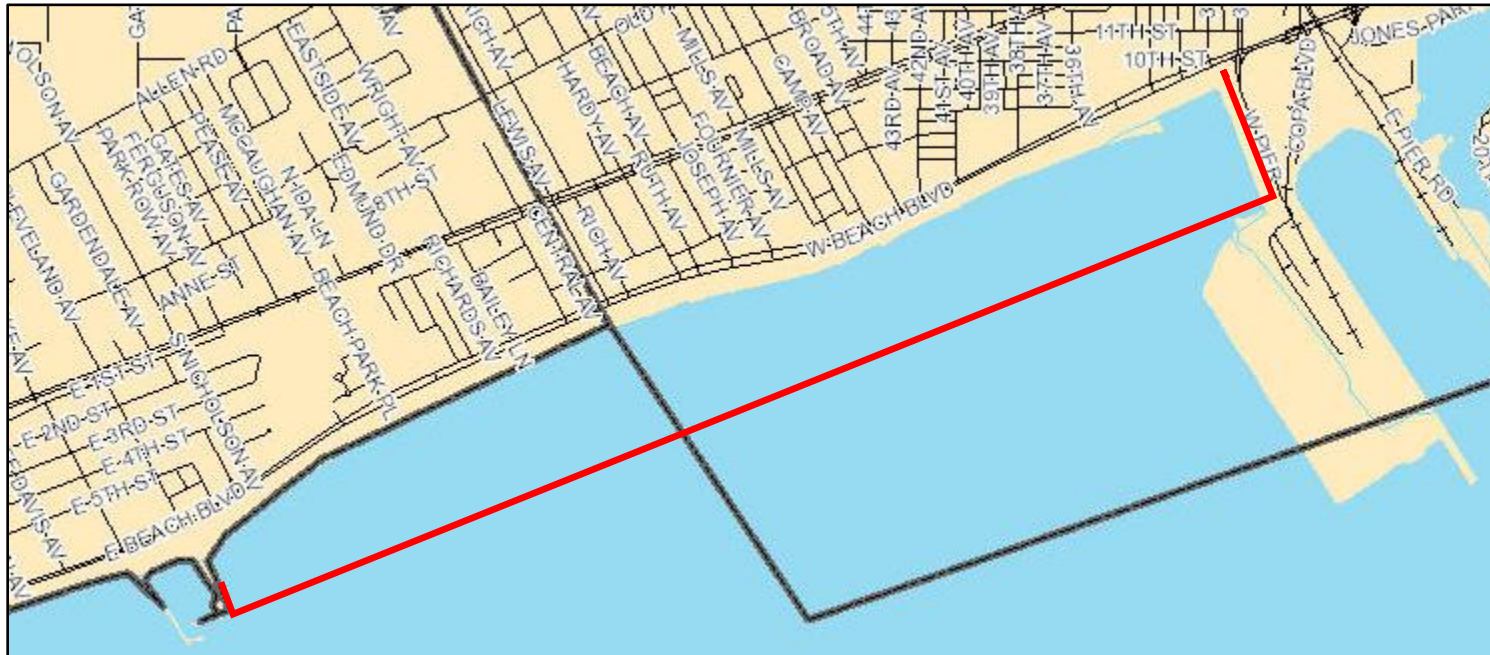
Segment #2: PASS CHRISTIAN HARBOR TO LONG BEACH HARBOR



NOTE: Adjoining property owners are listed in order from western station beginning point and proceeding east to the eastern station ending point of the segment.

SECTY OF STATE -TIDELANDS P.O. BOX 97 GULFPORT MS 39502	PASS CHRISTIAN CITY OF PO BOX 368 PASS CHRISTIAN MS 39571	HARRISON COUNTY 1801 23 RD AVENUE GULFPORT MS 39501	LONG BEACH CITY OF 201 JEFF DAVIS LONG BEACH MS 39560
CLAUDE E GRIFFIN -EST- P O BOX 5466 MOSS POINT 39563	DMR PROPERTIES LESSEE CO/LONG BEACH CITY OF 201 JEFF DAVIS LONG BEACH MS 39560	LONG BEACH YACHT CLUB LESSEE CO/LONG BEACH CITY OF 201 JEFF DAVIS LONG BEACH MS 39560	LB HARBOR RESORTS LESSEE CO/LONG BEACH CITY OF 201 JEFF DAVIS LONG BEACH MS 39560
LB HARBOR RESORTS LESSEE CO/LONG BEACH CITY OF 201 JEFF DAVIS LONG BEACH MS 39560			

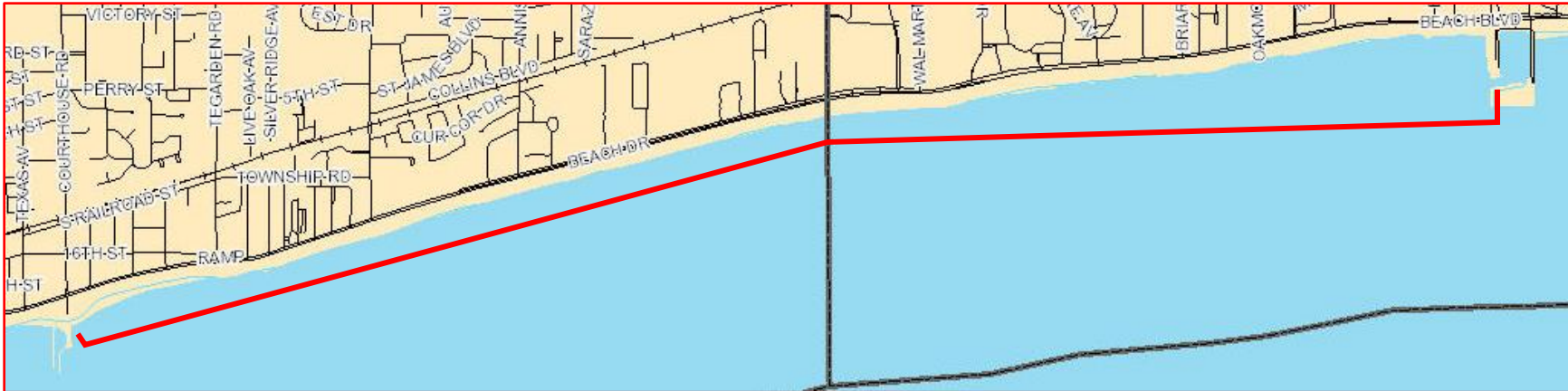
Segment #3 LONG BEACH HARBOR TO GULFPORT COMMERCIAL HARBOR



NOTE: Adjoining property owners are listed in order from western station beginning point and proceeding east to the eastern station ending point of the segment.

SECTY OF STATE -TIDELANDS P.O. BOX 97 GULFPORT MS 39502	LONG BEACH CITY OF 201 JEFF DAVIS LONG BEACH MS 39560	ZAMBROWSKI ROBERT A 303 W FIRST ST LONG BEACH MS 39560	CITY OF GULFPORT 4802 JEFFERSON AVE GULFPORT MS 39501
GULFSIDE CASINO PARTNERSHIP LESSEE C/O MS STATE PORT AUTHORITY PO BOX 40 GULFPORT MS 39501	MS STATE PORT AUTHORITY PO BOX 40 GULFPORT MS 39501	MISS DEPT OF TRANSPORTATION P O BOX 1850 JACKSON 39215	

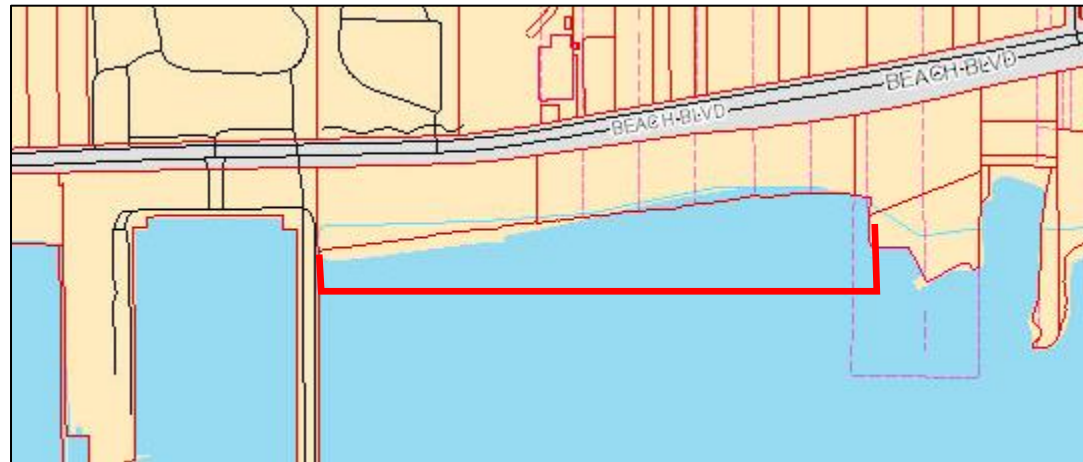
Segment #5: KEN COMBS PIER TO BROADWATER MARINA



NOTE: Adjoining property owners are listed in order from western station beginning point and proceeding east to the eastern station ending point of the segment.

SECTY OF STATE -TIDELANDS P.O. BOX 97 GULFPORT MS 39502	MISS DEPT OF TRANSPORTATION P O BOX 1850 JACKSON 39215	CITY OF GULFPORT 4802 JEFFERSON AVE GULFPORT MS 39501	CITY OF BILOXI PO BOX 429 BILOXI MS 39533
COAST TRANSIT AUTHORITY-LESSEE C/O SECTY OF STATE -TIDELANDS P.O. BOX 97 GULFPORT MS 39502	BROADWATER DEVELOPMENT LLC LESSEE C/O SECTY OF STATE -TIDELANDS P.O. BOX 97 GULFPORT MS 39502		

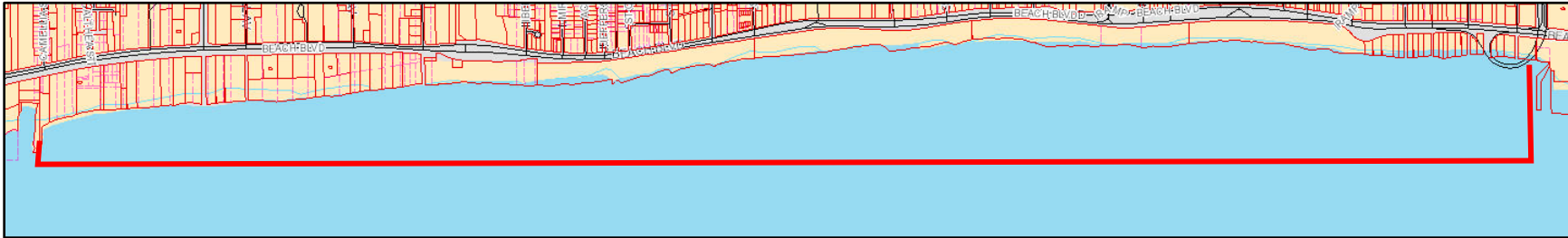
Segment #6: BROADWATER MARINA TO TREASURE BAY



NOTE: Adjoining property owners are listed in order from western station beginning point and proceeding east to the eastern station ending point of the segment.

<p>SECTY OF STATE -TIDELANDS P.O. BOX 97 GULFPORT MS 39502</p>	<p>MISS DEPT OF TRANSPORTATION P O BOX 1850 JACKSON 39215</p>	<p>BROADWATER DEVELOPMENT LLC LESSEE C/O SECTY OF STATE -TIDELANDS P.O. BOX 97 GULFPORT MS 39502</p>	<p>CITY OF BILOXI PO BOX 429 BILOXI MS 39533</p>
<p>TREASURE BAY LLC PO BOX 4637 BILOXI MS 39535</p>	<p>TREASURE BAY LLC- LESSEE C/O SECTY OF STATE -TIDELANDS P.O. BOX 97 GULFPORT MS 39502</p>		

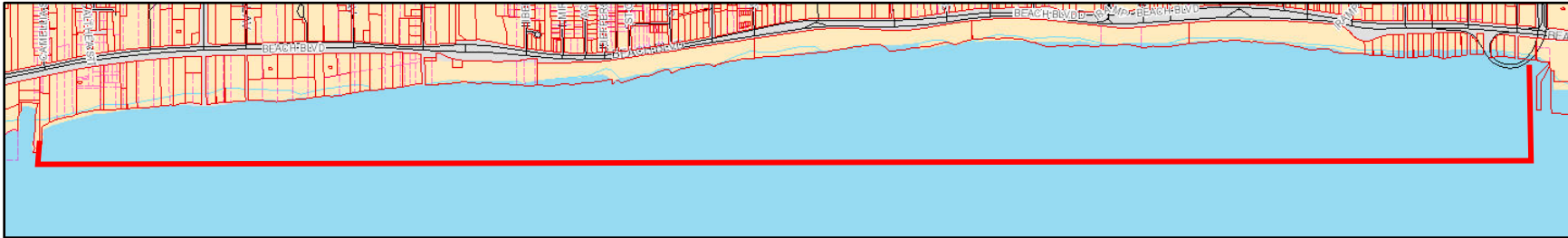
Segment #7: TREASURE BAY TO I-110 LOOP



NOTE: Adjoining property owners are listed in order from western station beginning point and proceeding east to the eastern station ending point of the segment.

SECTY OF STATE -TIDELANDS P.O. BOX 97 GULFPORT MS 39502	MISS DEPT OF TRANSPORTATION P O BOX 1850 JACKSON 39215	CITY OF BILOXI PO BOX 429 BILOXI MS 39533	KOPLIN RANDY 9030 SEAWALL BLVD GALVESTON 77554
SEA BREEZE CONDOS & RESORT 1899 BEACH BOULEVARD MOBILE 36602	SEA BREEZE CONDOS & RESRT OWN ASSOC PO BOX 73164 METARIE LA 70033	CD BEACH FRONT PROP 3925 N-110 SERVICE RD SUTE 105 METARIE LA 70002	DEAU SOLEIL DEVEL, LLC 55 COUNTY ROAD 142 CRANE HILL AL 35053
COURTLAND BILOXI LLC 3424 PEACHTREE RD NE SUITE 30 ATLANTA GA 30326	WEIL JOLENE ETAL 416 DEJAEN COVE BILOXI MS 39531	MENZA PROPERTY MGMNT LLC 3525 METAIRIE HTS AVE METARIE LA 70002	CLARK PROPERTIES LLC 720 STATION ST WAYNESBORO MS 393672
RW DEVELOPMENT LLC 1836 BEACH BLVD BILOXI MS 39531	BYRD BARNEY J & NORA E 334 E VIEW DRIVE BILOXI MS 39531	WAFFLE HOUSE INC ATTN: TAX DEPARTMENT NORCROSS GA 30091	SOUTH BEACH I LLC C/O RW DEVELOPMENT LLC 1836 BEACH BLVD BILOXI MS 39531
SOUTH BEACH II LLC C/O RW DEVELOPMENT LLC 1836 BEACH BLVD BILOXI MS 39531	SOUTH BEACH III LLC C/O RW DEVELOPMENT LLC 1836 BEACH BLVD BILOXI MS 39531	PIEROTICH PROPERTIES LP 2646 BAY POINT DR BILOXI MS 39531	PIEROTICH PROPERTIES LLP 2646 BAY POINT DR BILOXI MS 39531

Segment #7: TREASURE BAY TO I-110 LOOP (CONTINUED)



NOTE: Adjoining property owners are listed in order from western station beginning point and proceeding east to the eastern station ending point of the segment.

SECTY OF STATE -TIDELANDS P.O. BOX 97 GULFPORT MS 39502	MISS DEPT OF TRANSPORTATION P O BOX 1850 JACKSON 39215	CITY OF BILOXI PO BOX 429 BILOXI MS 39533	COAST TRANSIT AUTH LESSEE C/O SECTY OF STATE -TIDELANDS P.O. BOX 97 GULFPORT MS 39502
CATHOLIC DIOCESE OF BILOXI 1790 POPPS FERRY ROAD BILOXI MS 39532	KENNEDY THOMAS M JR & CYNTHIA W 1034 BEACH BLVD BILOXI MS 39530	MASON PATRICK T & DEWEY B 1022 BEACH BLVD BILOXI MS 39530	FINCH DANIEL P & SALLY C 1016 BEACH BLVD BILOXI MS 39530
CULBERTSON JOSEPH 211 W SHOREVIEW DR SAN RAMON CA 94582	WILSON JOHN J & JENNIFER I 164 BALMORAL AVE BILOXI MS 39531	LAI TIMOTHY TUAN 3014 DELTA RD SAN JOSE CAL 95315	STRANGI JANET 128 NORTH VARDAMAN ST WIGGINS MS 39577
MATTERI ELY S & CAROLE L 849 BREEZY WAY POST FALLS ID 83854	YACHT VIEW APTS INC PO BOX 626 BILOXI MS 39533	ONEAL FERRIS B & RACHEL R PO BOX 729 WIGGINS MS 39577	GILLOCJ AMDRES & WF 1070 JUDGE SEKUL AVE BILOXI MS 39530
JOACHIM CYNTHIA S PO BOX 4449 BILOXI MS 39535	BICKHAM HAMILTON D PO BOX 5565 VANCLEAVE MS 39565	BARQ HOMEPLACE LLC 2527 RUE PALAFOX DR BILOXI MS 39531	PHG BILOXI LLC 5607 GLENRIDGE DRIVE NE ATLANTA GA 30342
BR RESORT PROPCO LLC C/O LEGAL DEPT LAS VEGAS NV 89119			

Attachment E-2
Section Township and Range Data

Section Township and Range Data

Section, Township, and Range data for the Harrison County Sand Beach, Beach Renourishment and Cut a Maintenance Project, beginning at Henderson Point, Pass Christian and proceeding east to I-110 Loop in Biloxi, Mississippi.

Sections 35 and 36-T8S, R13W

Sections 13, 14, 20, 21, 22, and 30- T8S, R11W

Section 6-T8S, R10W

Sections 32, 34, 35, and 36-T7S, R10W

Sections 31, 32, and 33-T7S, R9W