FEASIBILITY STUDY

Jacksonville

Extend Henderson Drive (SR 1336)
from Western Boulevard (SR 1470)
to Ramsey Road (SR 1324)
Onslow County

Division 3

U-3811

Prepared by the
Program Development Branch
Division of Highways
N. C. Department of Transportation

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2/26/98
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Jacksonville, Onslow County

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I. General Description

This feasibility study describes an extension of Henderson Drive (SR 1336) from Western Boulevard (SR 1470) to Ramsey Road (SR 1324) on the north side of Jacksonville. The project location is shown on Figure 1.

The studied cross section is a 2-lane, rural shoulder section, with 12-foot (3.6-m) wide travel lanes and 8-foot (2.4-m) wide shoulders, 4 feet (1.2 m) paved. The 2-lane section should be asymmetrical on a 100-foot (30.5 m) wide right-of-way to facilitate future widening. The project length is 1.3 miles (2.1 km).

It is anticipated that there would not be any residences or businesses relocated as a result of this project.

The total cost of the project, including construction and right-of-way, is estimated to be $2,660,000 as follows:

Right-of-way	$ 260,000
Construction	2,400,000
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Total	$2,660,000

This study is the initial step in the planning and design process for this project and is not the product of exhaustive environmental or design investigations. The purpose of this study is to describe the proposed project including costs, and to identify potential problems that may require consideration in the planning and design phases.

II. Evaluation of Alternates

Two alternative alignments were evaluated for this project. A detailed description of these alternates is as follows:

Alternate 1
The Alternate 1 alignment, the most direct alignment, proceeds in a northeast direction from Henderson Drive, at Western Boulevard, for approximately 0.9 miles (1.4 km) and then curves to the north to Ramsey Road to create a 90 degree intersection. It is estimated that for a 100-foot (30.5-m) wide right-of-way, this alternate will impact approximately 15.2 acres of wetlands.

Alternate 2
The Alternate 2 alignment almost immediately curves north from existing Henderson Drive, at Western Boulevard, and then intersects and follows an existing, previously cleared road bed to Ramsey Road. It is estimated that a 100-foot (30.5-m) wide right-of-way, on this alignment, will impact approximately 12.1 acres of wetlands area, of which approximately 6 acres has been previously disturbed.

Alternate 2 was selected as the preferred alignment since it will create the least amount of disturbance to previously undisturbed wetlands.

II. Need for Project

The purpose of this project is to provide for direct access from Western Boulevard to Ramsey Road and provide access to a quickly developing area of Jacksonville. An alignment similar to that included in this study, is included on the Jacksonville Thoroughfare Plan as a future major thoroughfare. This segment of roadway is not at this time included in the Statewide Functional Classification System.

This project was requested by the City of Jacksonville as priority number seven of out of ten unprogrammed highway and bicycle needs at the 1996 TIP hearing. The project has been endorsed in concept by Onslow County but the County has indicated that this project is not one of the most pressing needs affecting the economic development of the county.

Henderson Drive has recently been extended from Gum Branch Road to Western Boulevard. This segment of roadway is a 2-lane, rural section with 12-foot (3.6-m) wide travel lanes and wide soil shoulders. Henderson Drive is currently developing rapidly south of Western Boulevard. Development consists of a mix of single family residential, multi-family residential, and commercial facilities.

At Henderson Drive, Western Boulevard is a 2-lane rural section with 12-foot (3.6-m) wide travel lanes and wide soil shoulders. It has been widened to 3 lanes at the intersection to facilitate turning movements. With the exception of the southeast corner of the intersection, this segment of Western Boulevard is presently undeveloped. From Ocean Highway (US 17), Western Boulevard is rapidly developing commercially out towards Henderson Drive with existing development now approaching to within one-half mile. As development moves westward towards Henderson Drive, it appears that the existing roadway is being widened to multi-lanes to accommodate the increased traffic volumes.

Existing Ramsey Road is a 2-lane rural section with a 20-foot (6.1-m) wide pavement and soil shoulders. The roadway is currently undeveloped in the area of this project.

It is estimated that if the new route were constructed now, it would have traffic volumes of approximately 3,300 vehicles per day (vpd). It is further estimated that the design year (2020) traffic volumes would be approximately 8,000 vpd.

Based on the above traffic volumes, it is estimated that this studied roadway would initially operate at a Level of Service B and might reach Level D close to the design year.

III. Detailed Description of Project

This feasibility study describes an extension of Henderson Drive (SR 1336) from Western Boulevard (SR 1470) to Ramsey Road (SR 1324) on the north side of Jacksonville. The project location is shown on Figure 1 and is described in detail as follows:

1. Extend Henderson Drive, from Western Boulevard, to an existing, previously cleared road bed located approximately 0.3 miles (0.5 km) northwest of Henderson Drive, then along the existing roadbed to Ramsey Road. This alignment is shown as Alternate 2 on Figure 1 and Figure 2. Photographs of the existing roadbed are shown on Figure 3.
2. Construct an eastbound left-turn lane and a westbound right-turn lane from Western Boulevard to the new roadway.
3. Construct an eastbound right-turn lane and a westbound left-turn lane from Western Boulevard to the new roadway.
4. Install a new traffic signal at Western Boulevard

The studied cross section is a 2-lane, rural shoulder section, with 12-foot (3.6-m) wide travel lanes and 8-foot (2.4-m) wide shoulders, 4 feet (1.2 m) paved. The 2-lane section should be asymmetrical on a 100-foot (30.5 m) wide right-of-way to facilitate future widening. The project length is 1.3 miles (2.1 km).

It is anticipated that there would not be any residences or businesses relocated as a result of this project.

The total cost of the project, including construction and right-of-way, is estimated to be $2,660,000 as follows:

Right-of-way	$ 260,000
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Total	$2,660,000

IV. Other Comments

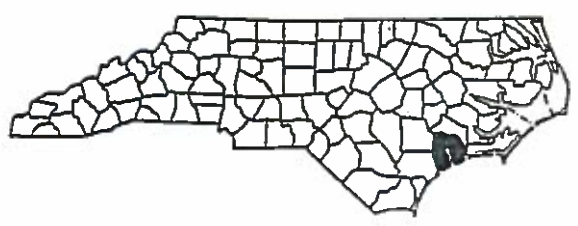
The cost of a 5-lane, 64-foot (19.5-m) wide (face-to-face), curb-and-gutter section with 10-foot (3.0-m) wide berms, on the Alternate 2 alignment, was also evaluated in this study. The estimated construction cost of this cross section is $4,000,000. Estimated traffic volumes and Level of Service calculations indicate that this cross section would not be needed until near the design year, if needed then.

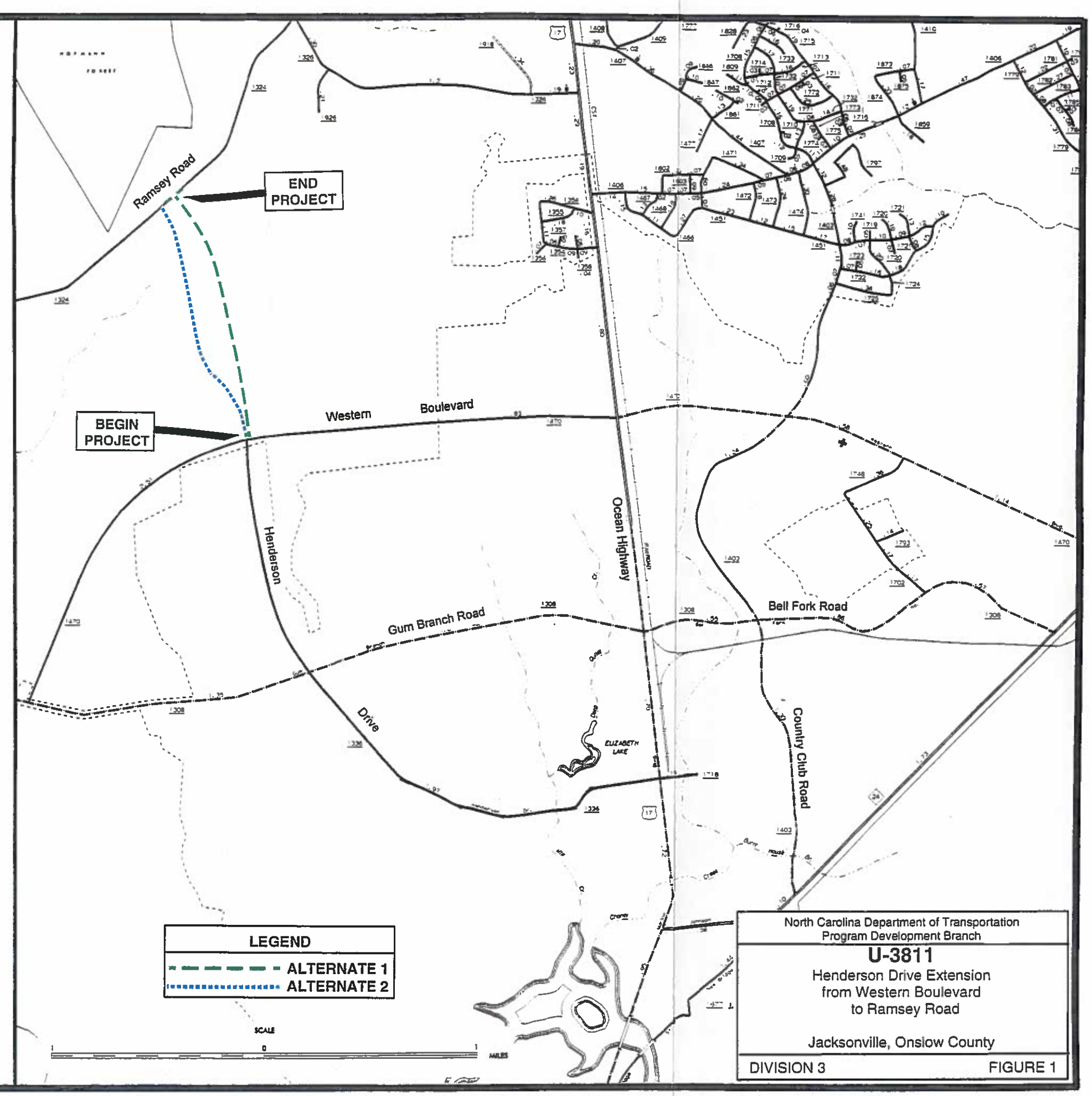
An environmental screening was not conducted for this study. However, it is anticipated that up to 12 acres of wetlands could be affected by this project.

Permits for construction of this project will be required from the Corps of Engineers.

Based on maps at the Department of Environment, Health & Natural Resources - Natural Heritage Section, no threatened or endangered species were identified in the project corridor.

The NCDOT Bicycle Program has not identified this segment of roadway as having a need for special accommodations for bicycles.





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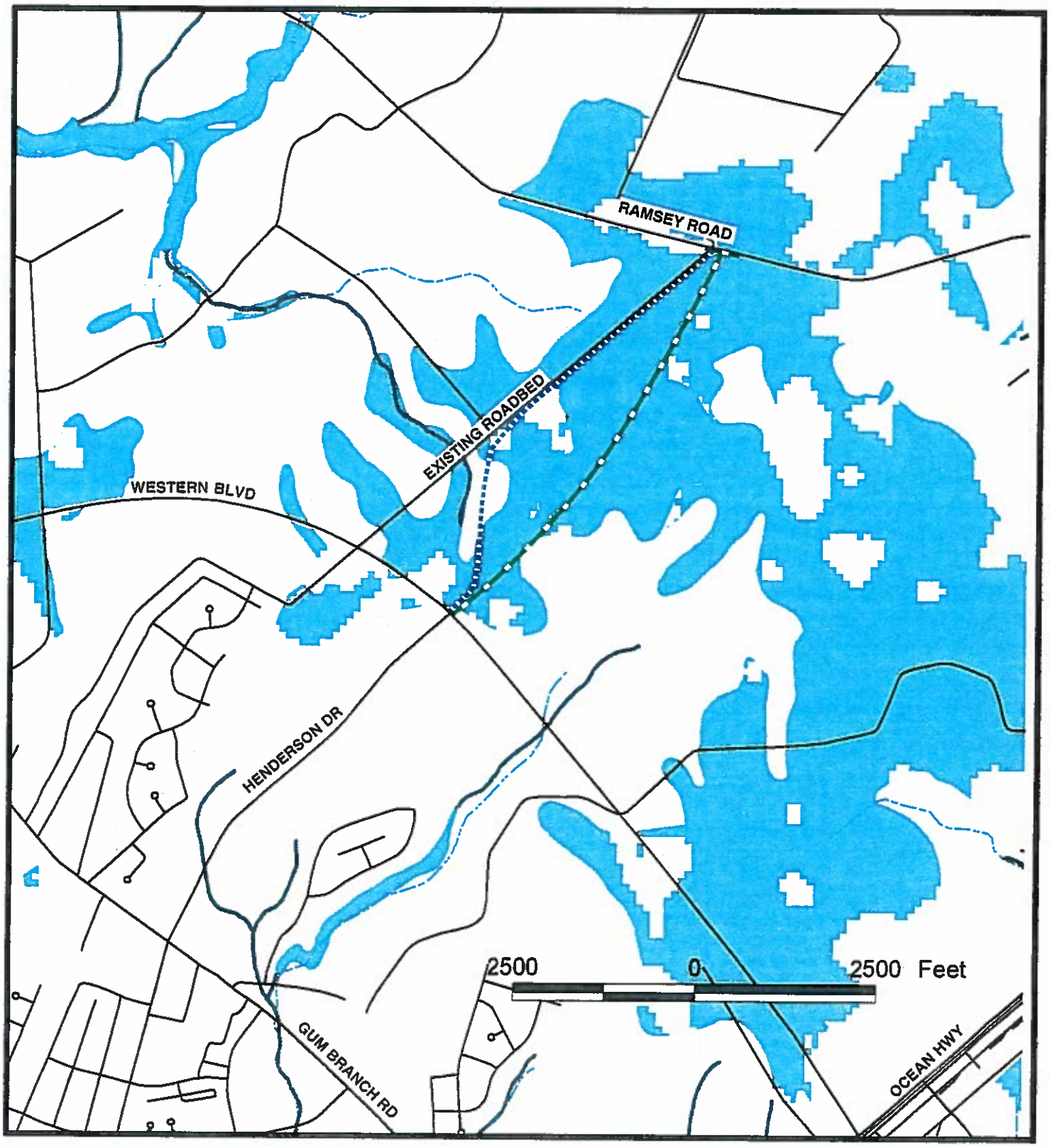
Henderson Drive Extension
from Western Boulevard
to Ramsey Road

Jacksonville, Onslow County

DIVISION 3 FIGURE 1



LEGEND

- ALTERNATE 1
- ALTERNATE 2
- Roads & Streets
- Hydrography (lines)
- National Wetlands Inventory
- Wetlands (coastal only)

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Henderson Drive Extension
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DIVISION 3 FIGURE 2

ON RAMSEY ROAD LOOKING ACROSS TO WESTERN BOULEVARD ALONG OLD ROADBED

ON RAMSEY ROAD LOOKING ACROSS TO WESTERN BOULEVARD ALONG OLD ROADBED

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Henderson Drive Extension
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DIVISION 3 FIGURE 3