

# **FINAL**

## **Location Hydraulics Memorandum**

**Florida Department of Transportation**

**District Four**

**SR 5/US 1 Bridge Over Loxahatchee River/Atlantic Intracoastal Waterway**

**(Bridge #930005)**

**From CR-A1A to Beach Road**

**Milepost 10.567 – 11.127**

**Palm Beach County, Florida**

**Financial Management Number: 428400-2-22-02**

**Federal Aid Number: N/A**

**ETDM Number: 14199**

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by FDOT pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated December 14, 2016, and executed by FHWA and FDOT.

**FINAL**

# Location Hydraulics Memorandum

for

**SR 5/US 1 Bridge Over Loxahatchee River/Atlantic Intracoastal Waterway  
(Bridge #930005)  
Project Development and Environment (PD&E) Study  
From CR-A1A to Beach Road  
Milepost 10.567 – 11.127  
Palm Beach County, Florida**

**Financial Management Number: 428400-2-22-02  
Federal Aid Number: N/A  
ETDM Number: 14199**

Prepared for:



**Florida Department of Transportation  
DISTRICT FOUR  
3400 West Commercial Boulevard  
Fort Lauderdale, FL 33309**

**Prepared by:  
Kimley-Horn and Associates, Inc.  
1920 Wekiva Way, Suite 200  
West Palm Beach, FL 33411**

**MARCH 2018**

## **DRAFT LOCATION HYDRAULICS MEMORANDUM**

### **I. PURPOSE**

The purpose of this memorandum is to address the base floodplain encroachments resulting from the roadway improvements evaluated in the Project Development and Environment (PD&E) study. In accordance with Executive Order 11988 “Floodplain Management”, USDOT Order 5650.2, “Floodplain Management Protection”, and Federal-Aid Policy Guide 23 CFR 650A, floodplains must be protected. The intent of these regulations is to avoid or minimize highway encroachments within the 100-year (base) floodplain, and to avoid supporting land use development, which is incompatible with floodplain values.

### **II. BASE FLOODPLAIN**

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for US-1/SR 5 (Federal Highway) Bridge over Loxahatchee River, community panel number 1251190003E, dated 06/02/1992, indicates that the project area is located in the 100-year floodplain (see Figure 1). The Loxahatchee River and portions of US 1 (SR 5) within the project limits are located within Flood Zone A7 that has a flood elevation of 6.0. The existing bridge banks at the abutments are at about elevation 5 and minor encroachment and loss of storage is anticipated. All floodplain storage losses will be compensated for by excavating swales within FDOT right-of-way within the floodplain. Additionally, there are no regulated floodway(s) within the project limits.

South Florida Water Management District (SFWMD) and FDOT design criteria for conveyance systems (e.g. culverts) that does not allow significant increases in flood stages will be met.

### **III. WATER QUALITY**

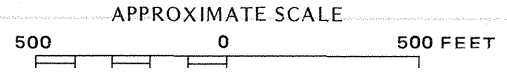
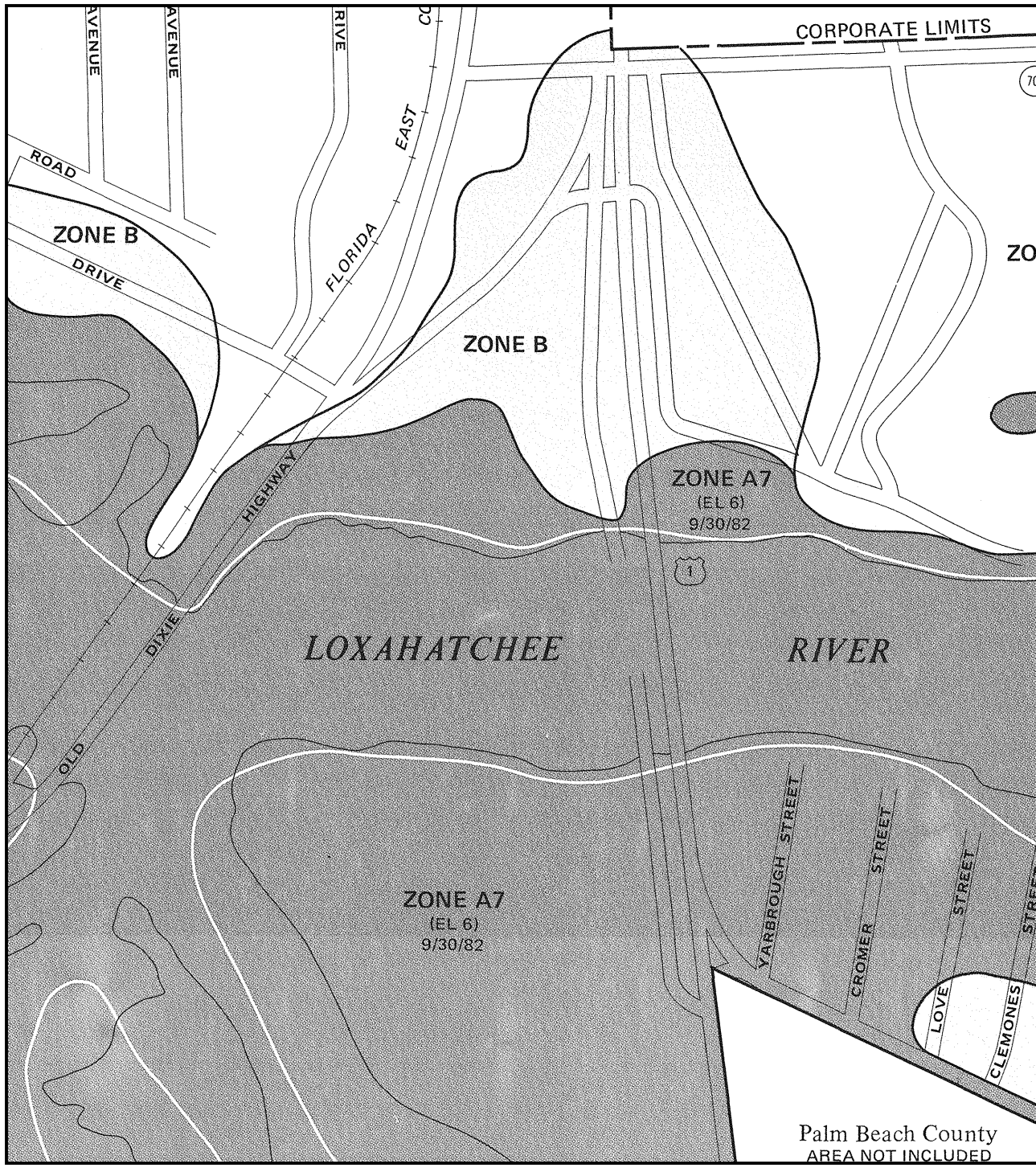
This project will have no adverse impact to the area’s water quality. Stormwater treatment of the additional impervious areas will be treated as required by the SFWMD Environmental Resource Permit (ERP) drainage criteria.

#### IV. RISK ASSESSMENT

There is no change in flood “Risk” or floodplain impacts associated with this project.

The following floodplain statement is Number 4 in the FDOT PD&E Manual, tailored for this project:

“The proposed structure will perform hydraulically in a manner equal to or greater than the existing structure, and backwater surface elevations are not expected to increase. As a result, there will be no significant adverse impacts on natural and beneficial floodplain values. There will be no significant change in flood risk, and there will not be a significant change in the potential for interruption or termination of emergency service or emergency evacuation routes. Therefore, it has been determined that this encroachment is not significant.”



NATIONAL FLOOD INSURANCE PROGRAM

**FIRM**  
FLOOD INSURANCE RATE MAP

TOWN OF  
**JUPITER, FLORIDA**  
PALM BEACH COUNTY

PANEL 3 OF 6

—NOTE—

THIS MAP INCORPORATES APPROXIMATE BOUNDARIES OF COASTAL BARRIER RESOURCES SYSTEM UNIT AND/OR OTHERWISE PROTECTED AREAS ESTABLISHED UNDER THE COASTAL BARRIER IMPROVEMENT ACT OF 1990 (PL 101-591).

**COMMUNITY-PANEL NUMBER**  
125119 0003 E

**MAP REVISED:**  
JUNE 2, 1992



Federal Emergency Management Agency

Palm Beach County  
AREA NOT INCLUDED

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)