

FINAL LOCATION HYDRAULIC REPORT

Technical Memorandum
May 2002

Introduction

Protection of floodplains and floodways is required by Executive Order 11988, "Floodplain Management", USDOT Order 5650.2, "Floodplain Management and Protection", and Federal-Aid Policy Guide 23 CFR 650A, Subchapter G, Part 650, Subpart A, Section 650.111, December 9, 1991. This Location Hydraulic Report memorandum is prepared in accordance with the requirements set forth in the Florida Department of Transportation (FDOT) PD&E Manual, Part 2, Chapter 24, revised April 22, 1998. This document supports the Gandy Boulevard (SR 694) PD&E Study. It is intended to determine the effects of the encroachment within the 100-year base floodplain of the recommended alternative and, where practicable, avoid supporting land use development that is incompatible with floodplain values as the result of the proposed improvements.

Proposed Improvements

The FDOT is proposing improvements to Gandy Boulevard (SR 694) from west of US 19 to east of 4th Street in Pinellas County, a distance of approximately 3.9 miles. The proposed improvements consist of widening the existing arterial highway to a divided limited access arterial highway with frontage road and collector road systems.

The proposed project is divided into four segments with varying typical sections. The proposed typical sections would contain varying median widths, including a median barrier wall with 12-foot shoulders, four to six 12-foot lanes (two to three in each direction), two 12-foot frontage roads in each direction, which include a 5-foot sidewalk and a 4-foot bike lane to the outside in each direction. This would require a minimum typical section width of 222 feet. Fly-over interchanges are proposed at the intersections at 9th Street and 4th Street.

Basin Description

Gandy Boulevard (SR 694) is located within the Sawgrass Lake and Tinney Creek drainage basins which outfall into Old Tampa Bay.

Flooding History

FDOT drainage maps, United States Geological Survey (USGS) Quadrangle maps, Southwest Florida Water Management District (SWFWMD) topographic maps, and Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) were used to identify flood-prone areas within the Gandy Boulevard (SR 694) corridor. Field inspections were conducted to identify obvious drainage problems. Additionally, people knowledgeable about local drainage conditions (residents, FDOT maintenance personnel, and Pinellas County operations personnel) were interviewed. At that time, no flooding problems were associated with the existing drainage conditions for the length of the project.

FEMA FIRMs

FEMA has prepared a Flood Insurance Study (FIS) for the City of St. Petersburg, dated March 30, 1983 and a FIS for Pinellas Park, dated February 17, 1989. The FIRM Community-Panel Numbers that cover the project area are as follows: 125148 0003, 125148 0004, 125148 0005 and 125148 0009 (dated September 30 1983); 120251 0006 and 120251 0009 (dated February 117, 1989) and 125139 0206, 125139 0207 and 125139 0208 (dated June 1, 1983). Coordination with local FEMA representatives in August 2001 revealed that no revisions have been made to the effective FIRMs within the Gandy Boulevard (SR 694) project limits.

The FEMA floodplain is based on the still water 100-year storm surge. Portions of the project that are directly connected to Old Tampa Bay will not require storm surge floodplain compensation. In the design phase, more detailed survey; design and geotechnical information will be available. At that time, the requirement for storm surge floodplain compensation can more accurately be defined.

There are no FEMA regulatory floodways within the Gandy Boulevard (SR 694) project corridor.

Risk Assessment

The floodplain involvement has been categorized by level of significance and project activity. A preliminary hydraulic evaluation was used as a means of selecting the project activity category for each floodplain encroachment location. The level of significance is determined to be MINIMAL and the project activity is Category 4.

Floodplain Evaluation Category 4 - Projects on existing alignment involving replacement of existing drainage structures with no record of drainage problems.

Conclusion

It has been determined through consultation with local, state, and federal water resource and floodplain management agencies that there is no regulatory floodway involvement on the proposed project. In addition, the project will not support base floodplain development that is incompatible with existing floodplain management programs.

The proposed drainage structures will perform hydraulically in a manner equal to or greater than the existing structures, and backwater surface elevations will be maintained or reduced. As a result, there will be no adverse impacts on natural and beneficial floodplain values. There will be no significant change in flood risk, or 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.