



Community Aesthetic Features (CAF) Project

By: Bing Wang, P.E.



The **Barefoot Mailman** Statue is one of the first Community Aesthetic Features (CAF) constructed by a FDOT Contractor as part of a bascule bridge rehabilitation project. The project is located within the City of Pompano Beach at the Hillsboro Inlet Bridge. The CAF included the Barefoot Mailman monument, plaques of the barefoot mailman legend, and the City name signs on the bridge pier. The local agency hired an architectural firm (CAF design firm) to design the CAFs and an artist to create the barefoot mailman sculpture. The design of the CAF must meet minimum FDOT standards. In order to include these CAF items into this FDOT project, a Local Funded Agreement (LFA) and a Memorandum of Agreement (MOA) were required. The project was recently completed in March 2016.

The **barefoot mailman** refers to the first US Mail carriers (1885-1892) on route between Palm Beach and the settlements around Lake Worth on the north, and Miami, Coconut Grove, and Lemon City to the south. The mailmen had to walk and travel by boat because there was no road connecting the 68-mile route from Palm Beach to Miami. Approximately 28 miles of the one way trip was by rowing different boats, and the rest by walking along the firmer sand along the beach. The route was a Star route, with the carriers contracting with the Post Office. The route was originally called the "barefoot route" and the carriers were called "beach walkists" or "beach walkers". It was not until around 1940 that the term "barefoot mailman" came into use. The mailman depicted on the statue is from the **Legend of James Edward Hamilton** –The barefoot mailman that was mysteriously missing one day from his normal route. Legend has it that he was eaten by alligators.

In This Issue

- Community Aesthetic Features (CAF) Project
- Piper the Manatee Inspires a Multidisciplinary DOT Response
- FDOT Steps Towards the Use of Fiber Reinforced Polymers
- New/Relocated Employee Introductions

Design Units

- ◆ Administration
- ◆ Consultant Project Mgmt
- ◆ Drainage
- ◆ Engineering Support
- ◆ Landscape
- ◆ Roadway
- ◆ Structures
- ◆ Survey and Mapping
- ◆ Traffic Design
- ◆ Utilities

Continued on page 2

Community Aesthetic Features (CAF) Project continued

Adding the statue required extensive coordination with the local agency and the community; but was a big success due to the local partnership approach. We have several lessons learned that I will share:

- It is important to define the final CAF design submittal date and critical milestone schedule objectives of the project and submit to the local agency early in the process (preferably at the kickoff meeting) in order to meet the FDOT project production schedule.
- The project manager must coordinate with the CAF design firm to follow the two-phase CAF approval process in the Plans Preparation Manual (Chapter 9 in PPM) and incorporate the process within the FDOT production schedule.
- Identify any variations and exceptions needed for installing the CAF and obtain the approvals early.
- Start the permit coordination as soon as possible (such as Department of Environment Protection permit for Lighting)
- Any portion of the CAF which did not meet the permit requirements should not be included in the project production package.
- MOA included the maintenance requirement for all CAF. There are three options for removal and restoration deposit (recovery funds) requirements in the MOA. These three options are letter of credit, performance bond and check deposit. The easiest option is to deposit a check for the recovery funds.

We hope that the above lessons learned provide useful information for future CAF projects.

Piper the Manatee Inspires a Multidisciplinary DOT Response

By: James Poole, P.E.

On Tuesday, May 12th, 2015, Fort Lauderdale firefighters and the Florida Fish and Wildlife Conservation Commission (FWC) rescued a trapped manatee from a municipal stormwater pump station on the north side of the New River in downtown Fort Lauderdale. The troubled manatee, appropriately named Piper, was taken to the Miami Seaquarium for a rehabilitation period featuring a rich diet and antibiotics. In five months, Piper went from weighing 300 pounds to 500 pounds.

On Wednesday, October 14th, 2015, Piper was released into the Middle River from George English Park in front of a large crowd of delighted spectators. Even though the story had a happy ending, the situation highlighted a risk the FWC wanted the City and the Department to address. The City of Fort Lauderdale speculated that a DOT outfall into the Himmarshee Canal east of US-1 could have been the location where Piper first entered the interconnected stormsewer network downtown. Representatives from the City suggested that the manatee may have traversed a ¾-mile long path through FDOT and City stormwater pipes below US-1, Broward Boulevard, and SE 1st Avenue to their pump station on the New River.

Built before a time when manatee grates were required to be installed on new outfalls, the DOT's outfall into the Himmarshee Canal is usually submerged and difficult to see. The Department's coordination effort to retrofit our outfall with a new manatee grate involved representatives from drainage design, environmental management, bridge inspection, and the Palm Beach Operations Center.

Part of our coordination involved the investigation of an unusual complex of neighboring stormwater junction boxes close to the southwest corner of US-1 and Broward Boulevard. An asset maintenance diver assisted with a field review to determine if it was reasonable to assume that a manatee could twist and turn through this maze of weirs and debris cluttered storage vaults. Danielle Mullen from our D4 Environmental Management office provided input on the habits and maneuverability of manatees.

Jim Richardson from Bridge Inspection wisely suggested we coordinate the fabrication of a new manatee grate with a talented welder, Brock Ackerman, in the Palm Beach Operations Center. Brock took the rough sketches prepared in our Drainage Design office and information he gathered in the field and quickly assembled a practical solution that could be installed with our in-house operations staff.

Continued on page 3

Piper the Manatee Inspires a Multidisciplinary DOT Response continued

On October 21st, 2015, representatives from the Palm Beach Operations Center led by Brock Ackerman and John Mattison delivered and installed our manatee grate with no major challenges (but it is rumored that somebody fell into the canal and got drenched). Their design allows for convenient maintenance of the outfall and it ensures that no manatees or large creatures can swim into our stormwater pipes.



FDOT Steps Towards the Use of Fiber Reinforced Polymers

By: District Structures Design Office

When the Department added a section on Fiber Reinforced Polymer Reinforcing to its *Invitation to Innovation* website it took a significant step towards the use of composite materials. The proposed changes to the *FDOT Design Standards* (Design Standards) and the *FDOT Standards Specifications for Road and Bridge Construction* (Specifications) will provide the first practical implementation of these relatively new materials. These materials hold the promise of equal or greater strength with a greatly reduced likelihood of corrosion and therefore reduced maintenance costs. Let's take a brief look at these exciting changes.

In order to better understand the relationship between the materials and their implementation, it is best to start with the Specifications, Division III - Materials. The relevant changes to Specifications Sections 932 and 933 will provide new content addressing Fiber Reinforced Polymer (FRP) reinforcing bars and prestressing strands, respectively. Section 933 will provide analogous criteria for prestressed carbon fiber reinforced polymer (CFRP) strands as well as stainless steel (SS) strands. Both sections will provide the information that FRP producers need in order to be placed on the Department's Production Facility Listing. In the Specifications, Division II – Construction Details, Sections 400, 407, 410, 415 and 450 will provide the steps needed to properly implement FRP and SS from Sections 932 or 933 in Concrete Structures, Three-Sided Precast Concrete Culverts, Precast Concrete Box Culverts, and Precast Prestressed Concrete Construction.

New Design Standards have been developed to expedite the introduction of these new materials. The 22600 series of the Design Standards provide plans, notes, and details for 12", 14", 18", 24", and 30" square prestressed concrete piles, as well as 54" and 60" prestressed concrete cylinder piles. Complete details are provided for both CFRP strands and SS strands for all square and cylinder pile sizes.

The implementation of the Design Standards and Specifications changes along with the new design criteria in the Structures Manual – Volume 4, "Fiber Reinforced Polymer Guidelines" provides a clear signal of the Department's commitment to the future of composite materials.

New/Relocated Employee Introductions



July Jimenez - CM Section 4

I am pleased to announce that July (Randt) Jimenez has joined Consultant Management from In-house design. July is originally from Venezuela and moved to Florida at the age of nineteen. After being in Florida for a couple years, she started college and completed her B.S. in Civil Engineering at Florida Atlantic University. She started working at the Florida Department of Transportation as a P.E. Trainee in 2008. After two years in the department and going through the different rotations of the P.E. Trainee program, July joined Roadway Design and spent two years in Section 1 and two years in Section 3. In the last couple of years July became a mother and got married—now she is Mrs. Jimenez. Some of her hobbies include traveling, dancing and spending time with her family. Please join me in welcoming July to her new position.



Cindy Ramos-Leal - Design Admin

Cindy Ramos-Leal joined Design on January 29, 2016. Her background includes: Real Estate as a licensed salesperson and Administration with the Dept. of Education/Division of Vocational Rehabilitation. She is married with 3 children, a native of Florida with family ties to Cuba, and enjoys cooking and spending time with family. Please stop by and welcome her to the Department.



Cristopher Serrano - Survey and Mapping

I started my career with FDOT in April 2014, as a Survey Crew Member I on the survey crew at District 6. I just recently started on Jay Seeley's survey crew at District 4, also as a Survey Crew Member I. I have lived in Davie my whole life and graduated high school from Western High. My hobbies include working on and riding motorcycles and also working on cars. I also am a percussionist in the Miami Heat band. On weekends, I enjoy going fishing.

Upcoming Events

- ◆ Design Semi-Annual Town Hall Meeting - April 5th
- ◆ Service Pin Ceremony - April 7th
- ◆ CM Business Plan Retreat - May 10th

Acknowledgement

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