

MILE POINT TRAINING WALL CONFIGURATION

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ABSTRACT

Keywords: geotextile tubes, scour aprons, erosion control, marshland, habitat restoration

Infrastructure Alternatives, Inc. (IAI) completed a unique geotextile tube installation in the Mile Point area of the Jacksonville Intracoastal Waterway, near Jacksonville, Florida, in 2016, as a subcontractor to Manson Construction Company (Manson). The in-water geotextile tube structure was specified by the United States Army Corps of Engineers (USACE) and designed and installed by IAI as part of an effort to restore and protect Great Marsh Island, an important wetland habitat, from tidal erosion. For this project, IAI installed 1,146-m. (3,763-ft.) of geotextile tubes, both on land and in water, overcoming challenging conditions, such as high velocity cross-currents, tidal influences, and areas of unstable base material in the alignment path.

INTRODUCTION

Mile Point is located at the intersection of the St. Johns River and the Intracoastal Waterway, an area that experiences strong cross-currents at ebb tide. The USACE designed the Mile Point Training Wall project to restore and protect Great Marsh Island, and selected Manson as the General Contractor. Manson placed stone, marine mattresses and precast concrete units to create the training wall. IAI was then brought to the project as a subcontractor to Manson, to install geotextile tubes and scour aprons, along a 1,146-m. (3,763-ft.) section of the wall. Dredge spoils were later pumped behind the wall to create approximately 0.21-km² (52 acres) of new marshland. The containment wall retains the dredge spoils in place and prevents them from being washed away. This paper will detail the methods utilized to install the geotextile tube portion of the training wall, the challenges that were encountered along the way, and describe how those challenges were overcome.



Figure 1. USACE design of the Flow Improvement Channel

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