

Dinner Key Managed Mooring Field, Florida

waterfront & marinas



One of the largest mooring fields in Florida, the Dinner Key Managed Mooring Facility consists of 225 moorings located in Biscayne Bay just offshore of Dinner Key Marina in Coconut Grove, Florida. Coastal Systems was retained by the City of Miami to provide consulting engineering and environmental permitting services for the project.

Coastal Systems completed field investigations that included hydrographic and marine resource surveys. The marine resource surveys were required for environmental permit compliance as a baseline survey for biological monitoring. Jet probes were conducted along the bay bottom to confirm geotechnical conditions for the design of the mooring anchoring system. Coastal Systems also prepared maps of derelict vessels and other underwater debris based on the survey data and compiled information provided by the City. Environmental and waterway marker permits were processed through the following agencies:

- Florida Department of Environmental Protection (DEP)
- U.S. Army Corps of Engineers
- Miami-Dade County Department of Environmental Resource Management (DERM)
- Florida Fish and Wildlife Conservation Commission (FWC)
- U.S. Coast Guard

The engineering design of the mooring field was completed utilizing helical anchor systems with Stormsoft down lines and associated hardware specified for a long service life with minimal maintenance in the marine environment. The helical mooring anchors minimize impacts to the sensitive seagrass beds in Biscayne Bay. A perimeter buoy system was also designed adjacent to the navigation channels, and a shallow water zone was established in the nearby Area 5 to protect seagrass beds.

Coastal Systems prepared construction plans and specifications and assisted the City in the preparation of bid documents and selection of a qualified marine contractor through a competitive bid process. Construction administration services were provided to ensure the project was constructed in accordance with the plans, specifications and environmental permits. Underwater investigations were performed by Engineer-Divers to observe the mooring anchor installation, and anchor pull tests were observed to confirm design limits.



Aerial View of Field



Client:	City of Miami
Location:	Coconut Grove, Florida
Date of Completion:	2009
Construction Cost:	\$600,000

