

DRAFT VESSEL SURVEY MEMORANDUM

Florida Department of Transportation

District One

S.R. 789 (Longboat Key) PD&E Study

Limits of Project: From North Shore Road to Coquina Park Entrance

Manatee County, Florida

Financial Management Number: 436676-1-22-01

ETDM Number: 14382

Date: April 2022

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by the Florida Department of Transportation (FDOT) pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated May 26, 2022 and executed by the Federal Highway Administration and FDOT.

Vessel Survey

Technical Memorandum

Longboat Key Bridge PD&E Study

S.R. 789 (Longboat Key) from North Shore Rd to Coquina Park Entrance
Manatee County
FPID: 436676-1-22-01

Prepared for



Florida Department of Transportation

District 1

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VESSEL SURVEY TECHNICAL MEMORANDUM

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INTRODUCTION

The Florida Department of Transportation (FDOT) District 1 (D1) is currently conducting a Project Development and Environment (PD&E) Study for the potential reconstruction and/or rehabilitation of the S.R. 789 (Longboat Key) Bridge [Structure Number 130057] over Longboat Key Pass in Manatee County, Florida. The project limits extend along S.R. 789 from North Shore Rd to Coquina Park Entrance in Manatee County, see Figure 1. The alternatives under consideration for this PD&E study include a no-build alternative, a rehabilitation alternative, a fixed bridge alternative and a movable bridge alternative.

The United States Coast Guard (USCG) requested a Navigation Impact Report be completed in accordance with the FDOT PD&E Manual Volume 1, Chapter 16 to define the new bridge clearance height if the preferred alternative is the reconstruction of the bridge to either a fixed or movable bridge. The USCG Navigation Impact Study requires information on the vessels using the Longboat Key Pass waterway, particularly vessels air draft (height of the highest fixed point of the vessel above the waterline). The project team performed field vessel surveys to obtain vessel information needed for the Navigation Impact Report in November 2021 and March 2022. This technical memorandum documents the survey methodology and survey results the project team implemented to obtain the required vessel information for the Navigation Impact Report.

SURVEY METHODOLOGY

The survey methodology for collecting vessel data developed for this project was coordinated between FDOT District 1 and the USCG. The methodology proposed was adapted from the USCG Office of Bridge Programs, Bridge Permit Application Guide (BPAG) with concurrence on the approach occurring on August 23, 2020, see the Navigation Study USCG Coordination Meeting Minutes included in Appendix A. The vessel survey gathered information on vessels traversing the Longboat Key Pass waterway under the Longboat Key bridge, moored in the water in Sarasota Bay and docked at local marinas near the project site.

Marina Survey

The project team visited 18 marinas in Manatee and Sarasota counties, shown in Figure 2, on November 8th and 9th, 2021, with a follow-up visit on March 17th and 18th, 2022. Seven of the marinas are located north of Longboat Key Bridge, and 11 are located south of the bridge. At each marina the project team asked dockmasters and boat owners (when available) questions regarding the boats docked at the marina and their concerns regarding any potential impacts due to the possible replacement of the existing bridge. Photographs of vessels of notable height were taken and are presented in this report.

On-Water Survey

The survey team performed an on-water survey on November 8, 2021. The team used a 20-foot pontoon boat and launched from Centennial Park located northeast of the John Ringling Bridge and headed north along the eastern shore of Sarasota Bay and continued around the bay back to Centennial Park. The pontoon boat was able to access channels, canals and non-marina slips while looking for vessels with notable heights. Boaters with vessels of notable heights either moored or traveling in Sarasota Bay were questioned regarding their vessel air draft and their concerns regarding any potential impacts due to the possible replacement of the existing bridge. Figure 3 presents the on-water survey area. Photographs of vessels of notable height were taken and are presented in this report.

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On-site Bridge Survey

On March 15th through March 17th, 2022 the survey team visited the Longboat Key bridge to collect information about vessels passing through the channel. Specific information collected included counting number of vessels, measuring air drafts, and classifying them by type and usage. Air draft (vessel height above the waterline) was collected by measuring vessels with a Nikon Hypsometer from the NW shore of the Longboat Key channel (Coquina Park). Communication was made with captains when possible by using a handheld radio transceiver. Captains were asked questions about their boat heights to confirm accuracy of measurements. Photographs of vessels of notable height were taken and are presented in this report.

SURVEY RESULTS

Marina Survey

Surveyed marinas in the project area varied in size and type of vessels each accommodated. Many of the marinas were wet dock marinas with no dry dock boat storage. Most marinas had sailboats of varying heights docked at their facilities and eight (8) of them can accommodate sailboats with air drafts larger than 65 feet, with the most notable marina accommodating tall vessels being Longboat Key Moorings. Before each field visit the project team-initiated correspondence with each marina either through email or telephone. Figure 2 shows the location of the marinas surveyed.

The consensus among interviewed marina dockmasters, managers and vessel owners is that the Longboat Key Bridge will become the only method of entry for vessels over 65 feet into Sarasota Bay after the Cortez Bridge is replaced with a high-level fixed bridge. This sentiment was particularly strong among facilities that are capable of accommodating vessels with air drafts greater than 65 feet. Facilities that primarily docked power/center console boats indicated that a 65-foot-high level fixed bridge will not adversely impact their business operations. A brief description of the marina survey results is presented below. A complete listing of the marinas surveyed, contact information and marina survey data is included in Appendix B. The marina survey data sorted by air draft is presented below.

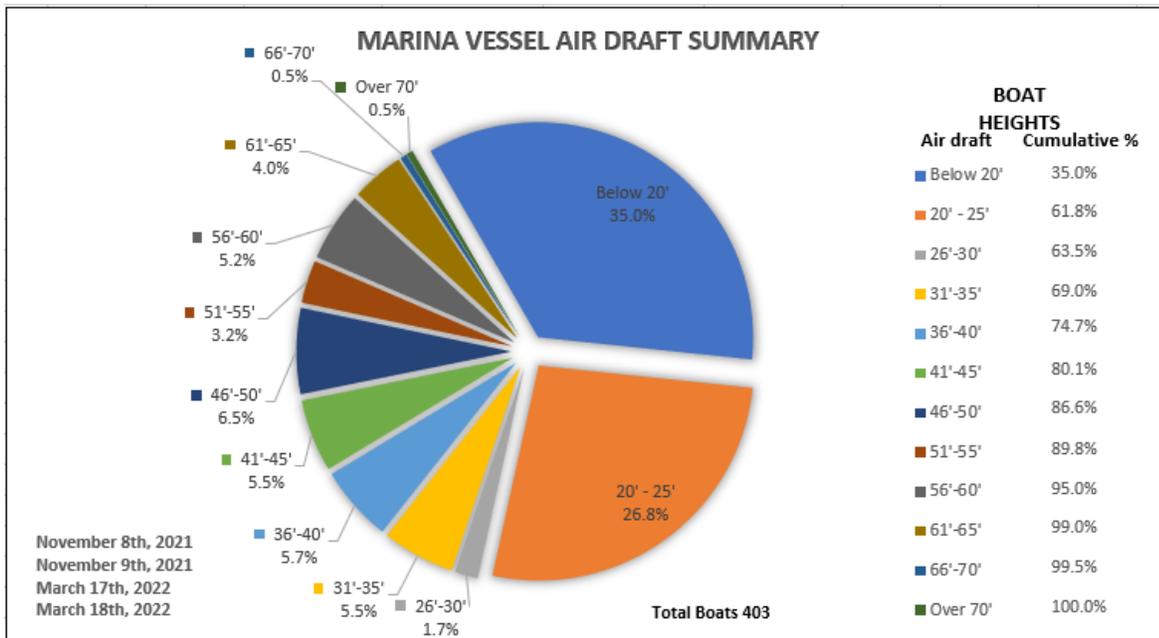


Exhibit 1 – Marina Survey Vessel Air Draft Summary

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Sarasota Sailing Squadron

Address: 1717 Ken Thompson Parkway, Sarasota, FL 34236

Contact: Alyssa Thomas, Dockmaster

Survey Summary: Primarily a wet dock marina with some boats stored on land. Marina is located near Ringling Bridge and most vessels that dock there pass under Ringling Bridge. Maximum air drafts of vessels at this marina are between 50 and 55 feet and are typically sailboats. Dockmaster, Alyssa Thomas, stated that replacement of the bridge will not negatively impact their business.

Marine Max Sarasota

Address: 1601 Ken Thompson Pkwy Sarasota, FL 34236

Contact: Heather Moss, Sales Manager

Survey Summary: This marina does not dock sailboats, they primarily dock and sell power/center console boats. Boats at this facility typically have air drafts less than 30 feet. Per Heather Moss replacement of the bridge will not impact their business.

Boathouse on Longboat

Address: 410 B Gulf of Mexico Dr, Longboat Key, FL 34228

Contact: John Kross, Dockmaster

Survey Summary: Marina does dock sailboats, primarily docks power/center console boats with heights less than 25 feet. The one sailboat docked at this facility, at the time of survey, had an air draft less than 45 feet. Per the dockmaster replacement of the bridge will not impact their business.

Longboat Key Club Moorings

Address: 2630 Harbourside Dr, Longboat Key, FL 34228

Contact: Dennis Matthews, Director of Marina Operations

Survey Summary: This marina is a large resort marina that can accommodate over 200 boats. Director of Marina Operations, Dennis Matthews, indicated there were at least six boats with air drafts greater than 60 feet. Mr. Matthews indicated that replacing the Longboat Key Bridge with a 65-foot clearance fixed bridge will negatively impact their ability to dock and service some of their routine high mast customers. This marina had over 150 boats docked at their facility during each field visit (November 2021 and March 2022). After the November 2021 field visit the project team coordinated with Longboat Key Club Moorings to contact their boat owners via email requesting their air drafts over 90 boaters responded. Of the 90 that responded 13 have an air draft greater than 60 feet. Vessels that dock at this Marina with air drafts over 64 feet are listed below. See Figure 4 and Figure 5 for photographs of the *Encore II* and *Pitch Perfect* Sailboats.

Boat Name	Vessel Type	Owner	Air Draft (ft)
Encore II	Sailboat	Paul Horst	75
Pitch Perfect (Nordhavn 56MS)	Sailboat	Ernie Martinez	73
	Sailboat	John Henderson	65
Vela Navis	Sailboat	Mitch Schlitt	65
	Sailboat	John Wurdeman	64.5
Heart of Gold	Sailboat	Carl Arentzen	64.5
Serendipity	Sailboat	Mike Murphy	64.3

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Cannons Marina

Address: 6040 Gulf of Mexico Dr. Longboat Key, FL 34228

Contact: David, Sales Manager

Survey Summary: This marina is located on Longboat Key, south of Longboat Key Bridge. Specializes in selling and servicing power/center console boats. Sailboats do not dock there, all vessels have air drafts under 25 feet. Staff indicated the construction of a fixed bridge will not impact their business. Anticipated construction activities will have more of an impact on their facility due to its proximity to the bridge.

Harbor Villa Boat Club

Address: 615 Dream Island Rd. Longboat Key, FL 34228

Contact: NA

Survey Summary: This marina is a residential docking facility for the Harbour Villa condominium owners. There was no dockmaster present at the time of the survey. Four sailboats were present at the time of the survey. The sailboat with the largest air draft was the Holodeck 3, with an air draft just under 60 feet, see Figure 6.

Ultra Yacht Charters

Address: 522 Cedar St, Longboat Key, FL 34228

Contact: Ed Kolodzieski, Owner

Survey Summary: This company charters vessels out of an outdoor store front along Gulf Drive, south of the Longboat Key Bridge. The majority of their fleet are power/center console boats with air drafts less than 20 feet. Their largest vessel is a 44 foot long Enchanted, a Leopard Sailing Catamaran with an air draft of 73 feet (see Figure 7), which is docked and operated from the residence at 6550 Bayou Hammock Rd, Longboat Key, FL, less than a mile away from the Longboat Key Bridge. The owner of this vessel, Ed Kolodzieski, of this vessel has indicated that with the potential replacement of Cortez Bridge, the Longboat Key Bridge will be the only method of accessing the Gulf of Mexico from Sarasota Bay.

Bradenton Beach Marina

Address: 402 Church St N Bradenton Beach, FL 34217

Contact: John Deleon, Dockmaster

Survey Summary: This is a commercial marina, southwest of the Cortez Bridge, that docks and services power and sailboats. At the time of the survey there were approximately 30 boats present, with about half of them being sailboats. The tallest sailboat according to John Deleon, Dockmaster, was 54 feet. He indicated that that while they routinely see sailboats, it is very rare to see one with an air draft over 60 feet.

Tide Tables Restaurant & Marina

Address: 12507 Cortez Rd W Bradenton, FL 34210

Contact: Bob Woodson, Owner

Survey Summary: This facility, located southeast of Cortez Bridge, is primarily a restaurant that accommodates boaters looking to dock and eat at a restaurant. The vast majority of boats seen and described by the owner consist of power boats with air drafts less than 20 feet. Owner, Bob Woodson, indicated the replacement of the Longboat Key Bridge with either a fixed or movable span will not impact his business.

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Cortez Cove Boatyard & Marina

Address: 4522 121st W Cortez, FL 34215

Contact: Jamie Manns, Dockmaster

Survey Summary: This facility, located southeast of Cortez Bridge, is a marina that repairs and services mid to large boats, including large yachts and sailboats. The dockmaster did indicate that replacing the bridge could impact their business as they sometimes service boats over 65 feet. There were no boats with air drafts over 60 feet present at the time of the field visit.

AP Bell Fish

Address: 4600 124th St Ct W Cortez, FL 34215

Contact: Karen Bell, Owner, Dockmaster

Survey Summary: This is the only commercial fishing facility in the survey area and is located east of the Cortez Bridge. During the first and second visit the Eagle Eye and Linnea C were identified as the biggest ships with air drafts of 46 and 40 feet respectively. AP Bell Fish Company supported the proposed 65 foot high level fixed bridge for Cortez and indicated they have no objections to the replacement of Longboat Key Bridge with a fixed bridge.

Bayshore Gardens Marina

Address: 6919 26th St W, Bradenton, FL 34207

Contact: NA

Survey Summary: This private marina is located on the eastern shore of Sarasota Bay. The marina docks a mix of sailboats and powerboats. There was a total of 35 sailboats with air drafts between 35 feet and 57 feet and 23 power boats, with air drafts less than 20 feet. There was no dockmaster at the time of the field survey and attempts to contact a dockmaster have been unsuccessful.

Sara Bay Marina

Address: 7040 N Tamiami Trail, Sarasota, FL 34243

Contact: Jason Silverman, Dockmaster

Survey Summary: This marina is located on the eastern shore of Sarasota Bay. The facility has dry and wet docks and stores and services a mixture of powerboats and sailboats. There were eight sailboats with air drafts varying between 30 and 55 feet. The dockmaster indicated the replacement of the Longboat Key Bridge will have little impact on their business as most of the boats they serve have air draft less than 60 feet.

Bahia Mar Marina

Address: 6918 14th Street W Bradenton Fl 34207

Contact: Aubrey, Manager

Survey Summary: This marina is located on the eastern shore of Sarasota Bay and can accommodate up to 53 boats. There were 49 boats at the time of survey. Vessel types included sailboats and powerboats. The tallest boat was the Dreamweaver, owned by Kenneth Boehnin, which has an air draft of 63 feet.

Innovation Marina

Address: 2303 Pennsylvania Ave, Bradenton, FL 34207

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Contact: Joaquin, Manager

Survey Summary: Small marina located along the eastern shore of Sarasota Bay. The primarily sell and service low air draft power boats. The manager Joaquin indicated the bridge replacement will have no impact on their business.

Marinas located North of Cortez Bridge

Note: The marinas listed below are located north of Cortez Bridge. The marinas were included in the survey based on consultation with FDOT District 1. Vessels with air drafts over 65 feet will not be able to travel south under Cortez Bridge if the planned replacement of the movable bridge at Cortez is replaced with future high level (65 ft. clearance) fixed bridge.

Seafood Shack Marina

Address: 4110 127th St W, Cortez, FL 34215

Contact: Harley Wise, Dockmaster

Survey Summary: Seafood Shack Restaurant and Marina, located northeast of Cortez Bridge, docks and services large power boats and sailboats. The tallest boats identified at the time surveys are Synchronicity (see Figure 8), Mischief and Talakiro with 67, 66, and 63 feet air drafts, respectively. Another vessel that frequently docks here is Endeavor Sailboat (air draft of 61.5 ft) which was not there at the time of survey.

Cove Sound Moorings

Address: 4208 129th St W, Cortez, FL 34215

Contact: NA

Survey Summary: This marina is located approximately 0.3 mile north of the Seafood Shack Marina. At the time of the survey there were approximately 16 powerboats, with air drafts less than 25 feet and 22 sailboats with air drafts ranging between 35 feet to 65 feet. The tallest vessel at the time of survey was the Comfortably Numb with an air draft of 65 feet.

Parrot Cove Marina

Address: 11510 36th Ave W

Contact: Captain Larry Davis

Survey Summary: This small marina is located approximately 0.8 mile east of Harbour Landings along the south shore of Palmo Sola Bay. The shallow channel leading through Palma Sola Bay is no longer marked and access to the marina is heavily reliant on local knowledge of the extensive sandbars and seagrass beds in the Bay. These characteristics preclude larger (and taller) vessels from gaining access to this marina. The tallest vessel docked at the time of the survey had an air draft of 60 ft. The manager at the time of the survey indicated that this vessel was the tallest one they serve.

On-Water Survey

The on-water survey was conducted on November 8, 2021. This survey documented vessels traveling or moored in Sarasota Bay, and vessels docked at private residences/docking facilities along channels adjacent to Sarasota Bay as shown in Figure 3. Observations from the on-water survey are described below.

There were sailboats moored in the water near Centennial Park with most of them being unoccupied at the time of the survey. Their air drafts varied in height with the tallest being slightly under 60 feet. North of Centennial

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Park was the Whitaker Bayou channel, along this channel were boat slips for single family residences, but no notable vessels/sailboats were observed. North of the Whitaker Bayou channel along Sarasota Bay's eastern shore there are private residence boat slips with a few power boats with air drafts less than 20 feet docked.

Four miles north of Whitaker Bayou there are several canals which serve as the entrances to four marinas, Sara Bay, Bahia Mar, Innovation and Bayshore Gardens. The canals are lined with single family residences with residential boat docks that contained a mixture of power boats and sailboats. There were two sailboats with air drafts between 50 and 60 feet docked at residential docks at the end of Westmoreland Drive, west of the Sara Bay Marina, see Figure 9. There were four sailboats docked at private residences with air drafts between 50 and 60 feet located at the end of the southernmost canal adjacent to Holly Circle cul-de-sac. Attempts to contact the owners of these boats were unsuccessful as no owners were present at the time of the survey. While traveling north the project team surveyed a sailboat traveling south, the Tianna, which had an air draft of 62 feet per the owner.

Five miles northwest of is the Coral Shores residential development with a canal system lined with private docks. There were no sailboats or vessels with air drafts greater than 45 feet located in this area.

There were 14 vessels moored southeast of the Cortez Bridge, near the commercial fishing marina, AP Bell Fish Company and the Cortez Cove Marina, see Figure 10. Of the 14 vessels, nine were sailboats with air drafts less than 50 feet and eight were power boats.

To the northeast of the Cortez Bridge there were three residential developments with residential boat docks surveyed: Mariners Cove, Harbour Landings, and San Remo Shores/Palma Sola Harbor. Mariners Cove consists of a single canal with docking facilities on each side, there was only one sailboat with an air draft of 50 feet, the Strider. There were two sailboats in the Harbour Landings canal system each with an air draft of less than 50 feet. San Remo Shores/Palma Sola Harbor contained 8 sailboats and multiple powerboats docked along the canal system, the tallest of which was the Loonsong with an air draft of 60 feet, see Figure 12.

The western shore of Sarasota Bay contains Longboat Key and is a narrow length of land that carries Gulf Drive. There are not a lot of channels and canals in this area, though there are marinas (see Marina Survey Results), and vessels moored in the water and docked at private residences docking facilities. In this area there were only two vessels of notable height:

- The first vessel was identified was a catamaran named The Next Thing with an air draft of 75 feet, see Figure 12. This vessel was moored in the water northeast of the Longboat Key Bridge. The boat's owner indicated that he came in this area through the Longboat Key Bridge as an emergency to avoid a storm. He does not frequent the Sarasota Bay area, his vessel is based off the east coast of Texas.
- The other vessel discovered during this survey was the Enchanted catamaran. which was initially discovered during the on water survey but included in the Marina Field Notes section as it is owned by the Company Ultra-Yachts that operates yacht/boat charters in the area.

Near the southern end of the western shore there are single family residences with private boat docks bordering the canal system. While sailboats were present there were no sailboats or vessels with notable heights to be included in the survey.

On-site Bridge Survey

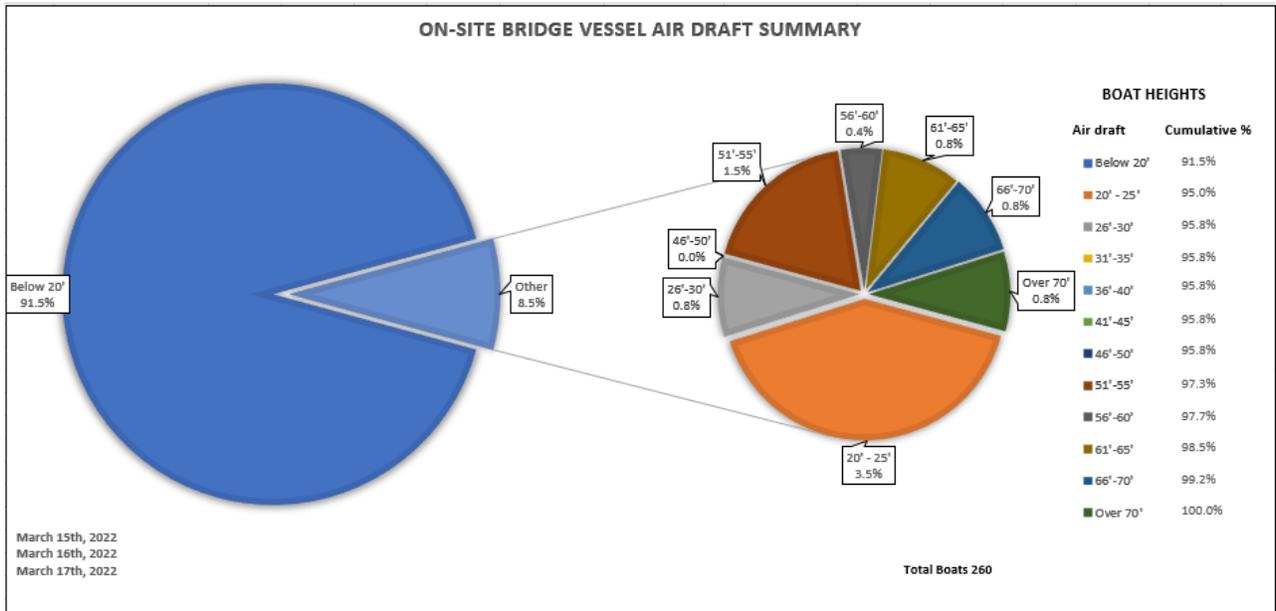
During March 15th through March 17th the project team counted and logged over 260 vessels traversing the

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Longboat Pass Bridge. The data collected included number of vessels, vessel type, and air draft. Most of marine transit at the Longboat Key bridge consists of powerboats and pontoons of less than 20 feet. Close attention was paid to the tallest vessels that required bridge openings to pass through the bridge. Most of the sailboats that requested openings ranged in air draft heights between 50 and 66 feet. The tallest boats recorded were the *Bold We Go* (Figure 13) and *Darcarys* (Figure 14) with air drafts of 71 and 78 feet respectively. There were no cargo ships, tugboats or barges observed using the channel during data collection period. The on-site bridge survey data sorted by air draft is presented below. The complete data for the vessels is included in Appendix C

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Exhibit 2 On-site Bridge Vessel Air Draft Summary



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FIGURES



Figure 1 – Project Location Map

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Figure 2 – Marina Location Map

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Figure 3 – On Water Survey Map

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Figure 4 – Encore II Docked at Longboat Key Moorings

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Figure 5 – Pitch Perfect Sailboat Docked at Longboat Key Moorings

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Figure 6 – Holodeck 3 Docked at Harbor Villa Boat Club

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Figure 7 – Enchanted Catamaran – Ultra Yacht Charters

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Figure 8 – Synchronicity – Docked at Seafood Shack Marina

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Figure 9 – Residential sailboats docked west of Sara Bay Marina

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Figure 10 – Moored vessels west of AP Bell & Cortez Cove Marina

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Figure 11 – Loonsong docked in San Remo Shores

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Figure 12 – The Next Thing moored NE of Longboat Key Bridge

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Figure 13 – Bold We Go, after passing Longboat Key Bridge

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Figure 14 - Darcarys, after passing Longboat Key Bridge