

October 8, 2024

MIR-24-32

## Contact of Barge *San Juan-JAX Bridge* with Pier

On June 8, 2023, about 2130 local time, the freight barge *San Juan-JAX Bridge* contacted the Army Terminal Pier in Cataño, Puerto Rico, while being moored by the ocean tug *Signet Thunder* and three assist tugs (see figure 1 and figure 2).<sup>1</sup> There were no injuries, and no pollution was reported. Damage to the barge was repaired at a cost of \$277,571.



**Figure 1.** Barge *San Juan-JAX Bridge* moored in Jacksonville, Florida, on unknown date before the casualty. (Source: Trailer Bridge)

<sup>1</sup> (a) In this report, all times are Atlantic standard time. (b) Visit [ntsb.gov](https://www.ntsb.gov) to find additional information in the [public docket](#) for this NTSB investigation (case no. DCA23FM035). Use the [CAROL Query](#) to search investigations.

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**Casualty Summary**

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<b>Casualty type</b>	Contact
<b>Location</b>	Army Terminal Pier, Cataño, Puerto Rico 18°25.78' N, 066°06.49' W
<b>Date</b>	June 8, 2023
<b>Time</b>	2130 Atlantic standard time (coordinated universal time -4 hrs)
<b>Persons on board</b>	1 ( <i>San Juan-JAX Bridge</i> ), 7 ( <i>Signet Thunder</i> )
<b>Injuries</b>	None
<b>Property damage</b>	\$277,571
<b>Environmental damage</b>	None
<b>Weather</b>	Visibility 7 nm, overcast, winds east 12 kts, seas calm, air temperature 88°F, water temperature 86°F, civil twilight 1924, sunset 1900
<b>Waterway information</b>	Bay, width at dock 340 ft, depth at dock 40 ft

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**Figure 2.** Area where the *San Juan-JAX Bridge* contact occurred, as indicated by a circled X. (Background source: Google Maps)

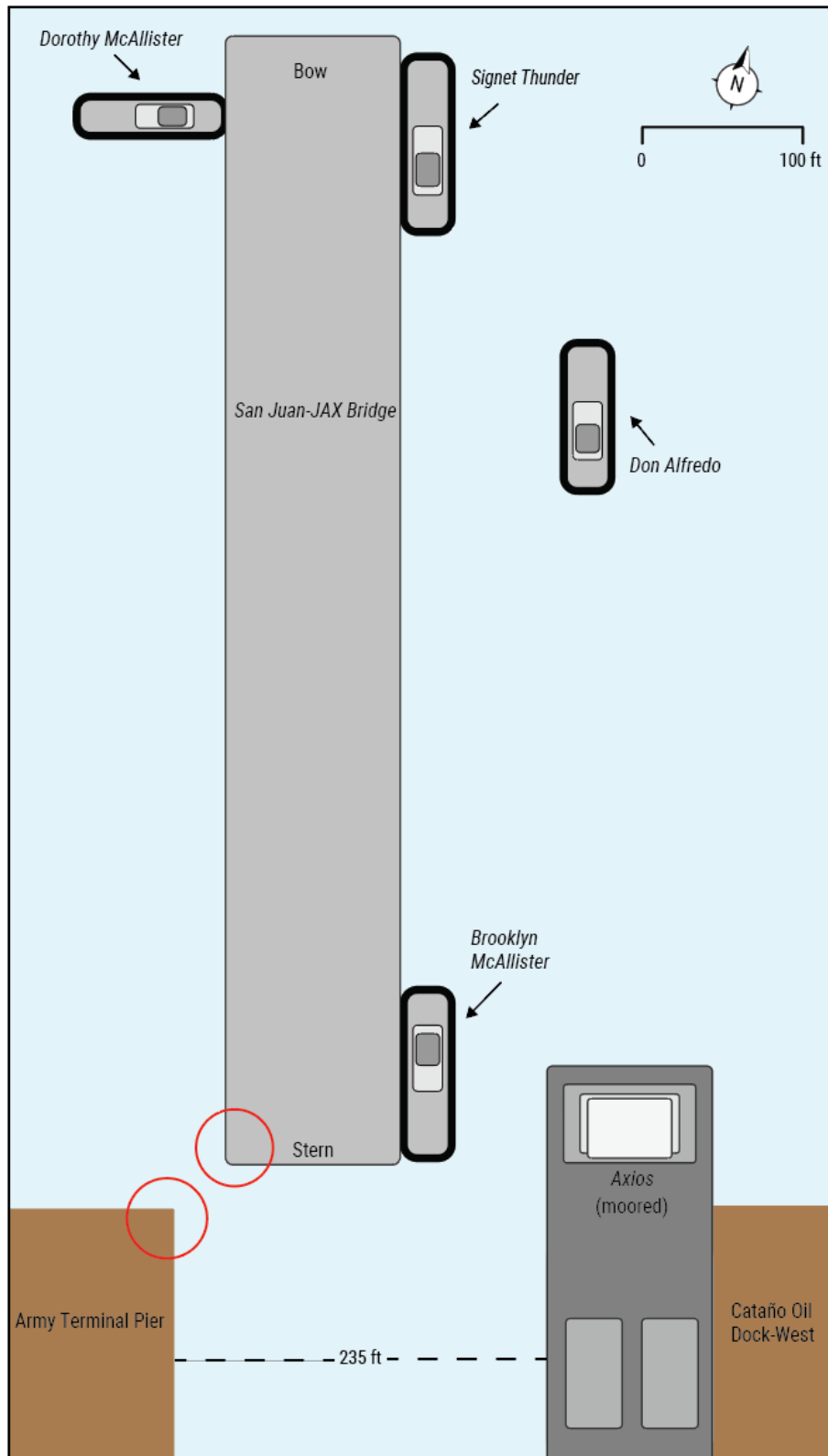
## 1 Factual Information

The *Signet Thunder* was a 120-foot-long ocean tug built in 2001 and operated by Signet Maritime Corporation. The *San Juan-JAX Bridge* was a 699-foot-long freight barge built in 1984 and operated by Trailer Bridge, Inc. The vessels routinely transported roll-on/roll-off cargo between Jacksonville, Florida, and San Juan, Puerto Rico.

On June 3, 2023, the *Signet Thunder* left Jacksonville towing the *San Juan-JAX Bridge*, en route to the Army Terminal Pier at Cataño in San Juan Harbor, San Juan, Puerto Rico. On June 8, while underway, the *Signet Thunder* suffered a port main engine casualty. The tug's crew repaired the engine and placed it back in service; however, the US Coast Guard, after being notified about the engine casualty, required an additional assist tug on arrival until the repairs could be inspected. (In addition to *Signet Thunder*, it would normally take two other harbor tugs to maneuver the barge with its large sail area into the narrow slip.)

After the *Signet Thunder* and *San Juan-JAX Bridge* arrived in San Juan Harbor on the evening of June 8, a docking pilot boarded the barge from one of the assist tugs and prepared to dock the barge, bow out, port side to the Army Terminal Pier. He positioned the tugboat *Brooklyn McAllister* on the barge's starboard quarter and the tugboat *Dorothy McAllister* on the port bow. The extra assist tug required by the Coast Guard, the *Don Alfredo*, stood by near the barge. The *Signet Thunder* made up, bow to stern, on the barge's starboard bow. The tugs spun the barge around, stern to the terminal, and attempted to line up parallel to the Army Terminal Pier. They then started to back the barge into the slip and push it alongside.

Across from where the *San Juan-JAX Bridge* barge would moor at the Army Terminal Pier, the chemical tank vessel *Axios*, with a beam of 105 feet, was docked at the Cataño Oil Dock-West. The distance between the *Axios* and the Army Terminal Pier was 235 feet. Once the barge, with a beam of 104 feet, was moored, there would be 131 feet separating the two vessels in the slip. During the docking, when tugs (beams of about 34 feet) were assisting, there was even less room to maneuver (see figure 3).



**Figure 3.** Approximate arrangement of the *San Juan-JAX Bridge*, the assist tugs, and the *Axios* as the barge and tugs approached the dock before the contact (scale approximate). The areas of the barge and pier involved in the contact are circled.

The *Brooklyn McAllister* was positioned at the barge's starboard quarter. Due to the height of the barge, the *Brooklyn McAllister* captain was not able to see the Army Terminal Pier from where his tug was positioned. According to the docking pilot, he first instructed the *Brooklyn McAllister's* captain to keep the barge's stern clear of the *Axios*. However, he then gave instructions intended to move the barge's stern away from the Army Terminal Pier so that the barge would clear the corner of the dock while entering the slip, given a light breeze on the starboard beam. The *Brooklyn McAllister* captain later stated that he had heard the docking pilot's instructions as "ahead and to starboard." The docking pilot stated that he requested and received confirmation that the captain was carrying out his instructions. However, the barge moved to port, and the barge's port quarter was pushed into the corner of the pier with enough force to damage the barge.

After the impact, the docking pilot instructed the tugs to maneuver the barge out and away from the slip and gave orders for another approach attempt; the second approach resulted in the tugs successfully docking the barge at the pier.

The *San Juan-JAX Bridge* suffered fractured frames and a 3-meter-by-4-meter buckled area of the transom and main deck (see figure 4). The transom and bottom plating were also holed. Repairs were made to the barge at Grand Bahama Shipyard, and the vessel returned to service that month, in June 2023.



**Figure 4.** *San Juan-JAX Bridge's* damaged port quarter. (Source: McAllister Towing)

## 2 Analysis

After the ocean tug *Signet Thunder* arrived in San Juan Harbor towing the *San Juan-JAX Bridge* barge, a docking pilot boarded the barge to dock it at the pier, in darkness, with little clearance between the pier and a nearby moored tanker. The *Signet Thunder* and three tugs assisted with the docking. The assist tug *Brooklyn McAllister* was made up on the barge's starboard quarter, and its captain was unable to see the Army Terminal Pier from where the tug was positioned due to the height of the barge. The docking pilot gave instructions intending the captain to move the barge's stern away from the northeast corner of the pier. However, the captain of the *Brooklyn McAllister* maneuvered his vessel in a way that pushed the port quarter of the barge toward the pier, contrary to the docking pilot's intention. The miscommunication resulted in the barge contacting the pier.

## 3 Conclusions

### 3.1 Probable Cause

The National Transportation Safety Board determines that the probable cause of the contact of the barge *San Juan-JAX Bridge* with the Army Terminal Pier was miscommunication between the docking pilot and an assist tug captain while docking the barge.

## Vessel Particulars

Vessel	<i>San Juan-JAX Bridge</i>	<i>Signet Thunder</i>
Type	Towing/Barge (Freight barge)	Towing/Barge (Ocean tug)
Owner/Operator	Kadampattu Corp./ Trailer Bridge, Inc. (Commercial)	Signet Maritime Corp. (Commercial)
Flag	United States	United States
Port of registry	New York, New York	Port Fourchon, Louisiana
Year built	1984	2001
Official number (US)	667317	1120750
IMO number	8642529	9253571
Classification society	American Bureau of Shipping	American Bureau of Shipping
Length (overall)	699.2 ft (213.1 m)	120.0 ft (36.6 m)
Breadth (max.)	104.0 ft (31.7 m)	36.0 ft (11.0 m)
Draft (casualty)	9.7 ft (3.0 m)	16.4 ft (5.0 m)
Tonnage	35,086 GT ITC	493 GT ITC
Engine power; manufacturer	N/A	2 x 3,500 hp (2610 kW); EMD 16-645F7BZ diesel engines

NTSB investigators worked closely with our counterparts from **Coast Guard Sector San Juan** throughout this investigation.

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable cause of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for any accident or event investigated by the agency. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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For more detailed background information on this report, visit the [NTSB Case Analysis and Reporting Online \(CAROL\) website](#) and search for NTSB accident ID DCA23FM035. Recent publications are available in their entirety on the [NTSB website](#). Other information about available publications also may be obtained from the website or by contacting—

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