SAFETY AND NAVIGATION GUIDELINES
SAN JUAN BAY PILOTS ASSOCIATION

Purpose and Scope

These Safety and Navigation Guidelines are intended to protect life, property, the marine environment, and the uninterrupted flow of commerce in San Juan Bay. They are designed to be informative, objective, and professional, while remaining practical, easy to reference, and easy to quote. These Guidelines consolidate legal requirements, regulatory obligations, established best practices, and the professional judgment of the San Juan Bay Pilots Association.

This document is intended for use by San Juan Bay Pilots support staff; vessel owners, operators, and agents; terminal operators; regulators and oversight authorities; and the general public.

This is a living document. It shall be updated as conditions, regulations, infrastructure, vessel types, and operational practices evolve.

Section 1 – Definitions

Pilot
A Pilot is a duly commissioned San Juan Bay Pilot under Puerto Rico law, federally and state licensed, and an active member of the San Juan Bay Pilots Association.

Pilotage
Pilotage is the act of providing navigational control and advice to a vessel within compulsory pilotage waters.

ASD / Tractor Tug
An ASD or tractor tug is a tug equipped with azimuthing stern drives or tractor configuration designed for high maneuverability.

Escort Tug
An escort tug is a tug holding a formal “Escort” notation issued by its Classification Society, designed and certified to provide steering and braking forces to an assisted vessel. Escort tugs are capable of operating either tethered to the vessel or in an untethered (free-running) escort mode, as determined by prevailing conditions and pilot judgment.

Dead Ship
A dead ship is a vessel without operational propulsion or steering.

Special Circumstance
A special circumstance is any condition involving vessel limitations, environmental factors, infrastructure constraints, or equipment deficiencies that increase navigational risk.

Portable Pilot Unit (PPU)
A Portable Pilot Unit is an electronic navigation aid used by pilots to enhance situational awareness.

Section 2 – Compulsory Pilotage

Statutory Basis

All vessels subject to compulsory pilotage under Puerto Rico law, and any vessel not otherwise subject to compulsory pilotage that requests pilotage, shall have a Puerto Rico-licensed Pilot on board to direct the movement of the vessel when entering or leaving the ports of Puerto Rico, or when transiting the navigable waters of the bays, rivers, or any other navigable waters of Puerto Rico, except as provided below.

Exempt Vessels

The following vessels are exempt from compulsory pilotage:

- Vessels exempt from pilotage under the laws of the United States
- Single-hulled vessels with an actual draft of less than seven (7) feet of water
- Any vessel moved within the confines of a drydock, or between a drydock and a pier adjacent to the drydock
- Any vessel moved to an adjacent or contiguous pier by means of its lines, without getting underway, provided that the movement is less than the vessel's length

Applicable Legal References

U.S. Coast Pilot No. 5, Chapter 13
46 CFR 15.1001
46 CFR 15.812(a)(1) and (3)
Puerto Rico Law 226 of 1999, Articles 19 and 20
Puerto Rico Pilotage Regulation 6384, Rules 51 and 52

Section 3 – Scheduling, Delays, and Cancellations

Delays, Changes, and Traffic Coordination

Any anticipated delay exceeding thirty (30) minutes shall be reported to SJBP Dispatch as soon as practicable and, when possible, at least two (2) hours in advance. Vessels delayed without prior notice may be reassigned to a later traffic window, subject to prevailing traffic conditions and operational constraints. Changes to berth assignments, movement times, or vessel readiness without proper notice may affect vessel priority and scheduling in order to maintain safe and orderly harbor traffic.

Cancellations and Waiting Time

Cancellations made less than two (2) hours prior to the scheduled service time are subject to a cancellation charge. Waiting time charges shall apply when a delay exceeds thirty (30) minutes beyond the scheduled time, with an additional waiting time charge applied if the delay exceeds one (1) hour beyond the initial thirty-minute period.

Applicable Legal References

Puerto Rico Port Regulation 7214, Rules 16 and 17
Puerto Rico Regulation 9524, Articule 10

Section 4 – Pilot Boarding and Disembarkation

Pilot Boarding and Disembarkation Positions

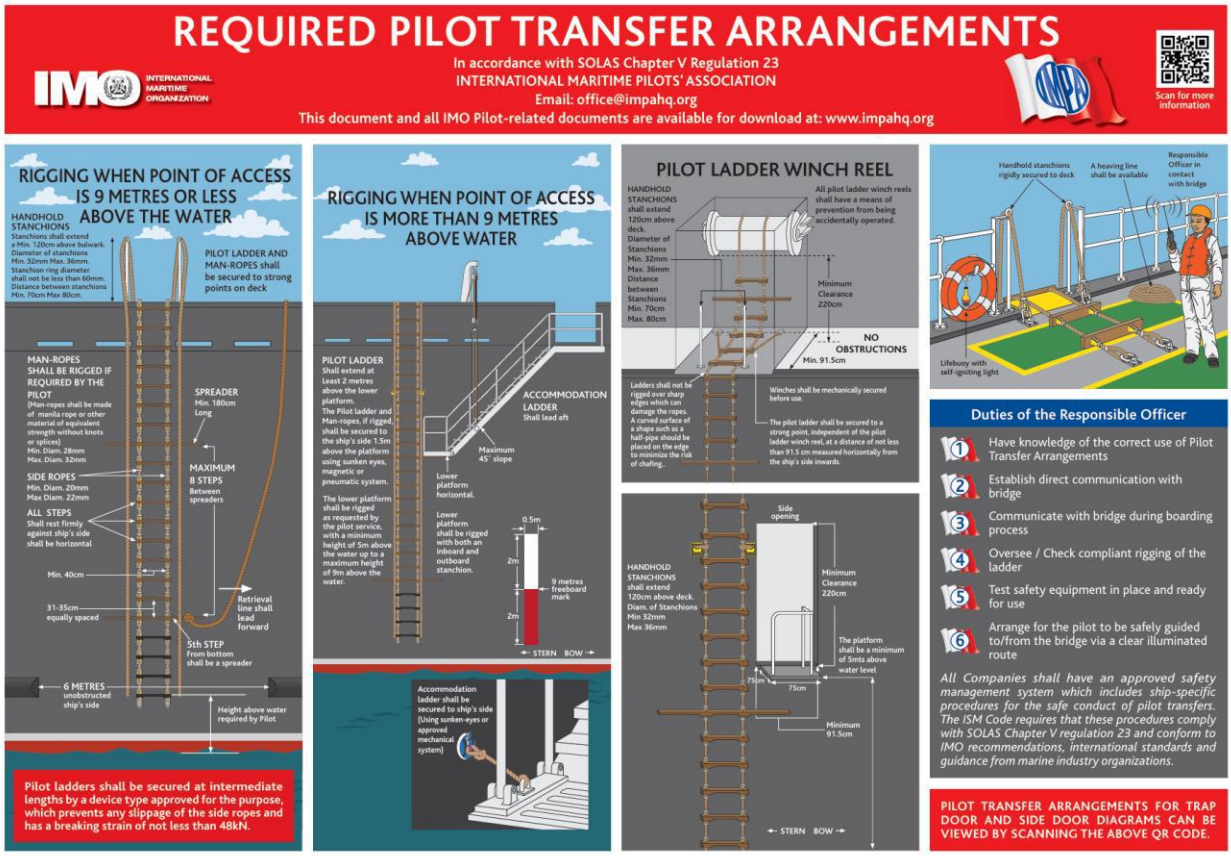
Pilot boarding is three (3) nautical miles **north** of the San Juan Harbor entrance, at position 18°31.4 ʾN / 066°07.8 ʾW. Pilot disembarkation normally occurs once the vessel has cleared the harbor and crossed Buoys No. 2 and No. 3, which mark the limits of the Bar Channel.

Boarding and Disembarkation Arrangements

Prior to boarding or disembarkation, the vessel shall establish contact with the Pilot Station on VHF Channel 14 to confirm the pilot ladder position and height. Pilot ladder height shall normally be one (1) to two (2) meters above the water, depending on the pilot boat being used. Vessel speed shall normally be maintained between eight (8) and ten (10) knots unless otherwise directed by the Pilot. The vessel shall be maneuvered to provide a safe lee on the side designated for boarding or disembarkation. Arrangements may be adjusted by mutual agreement between the Pilot and the Master when required by prevailing conditions or safety considerations.

Ladder and Safety Requirements

Pilot ladders shall be rigged in strict accordance with SOLAS V/23 requirements, including the use of spreaders. Ladders shall be clean, in good repair, properly secured, and free of defects. No slack shall be permitted on deck, and no boat ropes, man ropes, or unmoused hooks shall be attached. During nighttime operations, the ladder shall be adequately illuminated without impairing the pilot boat operator's vision. An officer equipped with a portable radio shall attend the ladder and provide a safe escort between the ladder and the bridge. A ring buoy, and at night a self-activating light, shall be immediately available for use in the event of a man overboard.



Section 5 – Under Keel Clearance and Depth Verification

Depth Verification

The Puerto Rico Ports Authority, through its docking permit and berth assignment process, is expected to verify and rely upon the most recent certified depth information for the assigned berth and its approaches prior to authorizing a vessel to berth. Depth certification shall be provided every two (2) years according to state requirements.

Pilot Reliance on Certified Information

Pilots rely on officially published, certified, or otherwise verified depth information when assessing under keel clearance. Any uncertainty regarding berth or channel depths may result in additional restrictions, modified maneuvers, or refusal of service until adequate information is available.

Owner and ISM / SMS Considerations

The vessel owner's expectations, as communicated to the Master through the vessel's Safety Management System in accordance with the International Safety Management Code, shall be observed and shall be a determining factor in the establishment of under keel clearance. The Master retains ultimate responsibility for the safe operation of the vessel and shall ensure that under keel clearance complies with the vessel's SMS, company policies, and any applicable flag-state or classification society requirements.

Operational Authority

If, in the professional judgment of the Pilot or the Master, adequate under keel clearance cannot be assured, the movement shall be delayed, modified, or declined until safe conditions can be established.

Applicable Legal References

U.S. Coast Guard Marine Safety Information Bulletin 01-25
International Safety Management Code

Section 6 – Channels

General

The following is the controlling depth certified by the Corps of engineers. Final authorization for any transit remains subject to Pilot–Master assessment and prevailing conditions.

Controlling depth

Bar Channel: 14.6 meters (48 feet)
Anegado Channel: 13.4 meters (44 feet)
San Antonio Approach Channel: 10.9 meters (36 feet)
San Antonio Channel: 10.9 meters (36 feet)
Graving Dock Channel: 10.9 meters (36 feet)
Army Terminal Channel: 13.4 meters (44 feet)
Puerto Nuevo Channel: 11.8 meters (39 feet)

Tidal Reference and Survey Basis

All draft values are referenced to Mean Lower Low Water for San Juan Harbor. Actual available depth may vary due to tidal state, meteorological conditions, squat, vessel speed, shoaling, and other environmental or operational factors.

Hydrographic Survey Date

The most recent hydrographic survey date reflected on the applicable nautical charts is April 29, 2025. Pilots and Masters shall consider the survey date, charted information, Notices to Mariners, and any other available depth data as part of voyage planning and the Master–Pilot Exchange.

Section 7 – Channel-Specific and Vessel-Type Transit Restrictions

Army Terminal Channel

The Army Terminal Channel has a charted width of approximately 450 feet. For vessels transiting this channel, vessel beam is the controlling dimensional factor, consistent with PIANC channel design principles for one-way traffic in confined waterways.

For planning and operational purposes, vessels with a maximum beam of 34.4 meters (113 feet) are considered within normal operating parameters for the Army Terminal Channel, subject to Pilot–Master assessment and prevailing conditions. Vessels exceeding 34.4 meters (113 feet) in beam shall be treated as special circumstances, and additional safety measures may be imposed as required to maintain adequate safety margins.

Regardless of vessel beam, the Pilot and Master retain full authority to modify, delay, or suspend transits based on prevailing weather, traffic density, vessel maneuverability, tug availability, bank effects, or any other operational constraint affecting safe navigation.

Graving Dock Channel

The Graving Dock Channel has an effective navigable width of approximately 350 feet. Due to the confined nature of the channel and proximity to fixed structures, vessel beam is the controlling dimensional factor for safe one-way transit, consistent with PIANC channel design principles.

For planning and operational purposes, vessels with a maximum beam consistent with a Panamax-class vessel, approximately 32.3 meters (106 feet), are considered within normal operating parameters for the Graving Dock Channel, subject to Pilot–Master assessment and prevailing conditions. Vessels exceeding this beam shall be treated as special circumstances, and additional safety measures may be imposed.

Regardless of vessel beam, the Pilot and Master retain full authority to modify, delay, or suspend transits based on prevailing weather, traffic density, vessel maneuverability, tug availability, proximity to fixed structures, or any other operational constraint affecting safe navigation.

Puerto Nuevo Channel

The Puerto Nuevo Channel has an effective navigable width of approximately 350 feet. Within this channel, the current berthing pocket provides approximately 100 feet of lateral clearance from the channel edge. The United States Coast Guard and appropriate local authorities are evaluating potential expansions and improvements to the berthing pocket and associated infrastructure.

Pending completion of any such evaluations or modifications, vessel beam remains the controlling dimensional factor for safe one-way transit, consistent with PIANC channel design principles for confined waterways. For planning and operational purposes, vessels with a maximum beam consistent with a Panamax-class vessel, approximately 32.3 meters (106 feet), are considered within normal operating parameters.

Regardless of vessel beam, the Pilot and Master retain full authority to modify, delay, or suspend transits based on prevailing weather, traffic density, vessel maneuverability, tug availability, terminal conditions, or any other operational constraint affecting safe navigation.

Tank Vessel Transit Restrictions

To reduce navigational risk associated with circadian rhythm lows and human performance factors, tank vessel transits in San Juan Bay are restricted during the following time periods: 0300 to 0430 hours and 1500 to 1630 hours.

These restrictions apply to all tank vessels, whether inbound, outbound, or shifting, and regardless of cargo condition, including loaded or ballast voyages. Any deviation from these restrictions shall be evaluated on a case-by-case basis by the Pilot, in coordination with the Master, and subject to prevailing safety considerations.

Section 8 – Passenger and Cargo Vessel Traffic Management

Purpose and General Principles

San Juan Harbor supports both passenger and cargo vessel traffic that are critical to Puerto Rico's economy and public interest. Vessel traffic sequencing and coordination shall be conducted to ensure safety, efficiency, and reliability, while recognizing the differing operational characteristics, constraints, and time sensitivity of passenger and cargo vessels.

Consistent with customary international port practice and local regulations, passenger vessel movements—particularly those involving home-ported passenger turnaround operations—are afforded traffic management priority for scheduling and sequencing purposes. This priority reflects operational necessity and public interest considerations and is applied in a manner consistent with applicable prevailing safety conditions. Nothing in this section creates an absolute or unconditional right of priority for any vessel.

Arriving Passenger Vessels – Home-Ported Operations

Home-ported passenger vessels are those engaged in scheduled embarkation and disembarkation operations involving large volumes of passengers, baggage, provisioning, and terminal coordination. The primary arrival window for home-ported passenger vessels is 0400 to 0600 hours.

During this window, the harbor entrance shall be maintained free of opposing or conflicting traffic until all scheduled arriving home-ported passenger vessels have safely entered the

including terminal readiness, shoreside transportation coordination, and passenger safety, while remaining subject to Pilot judgment and prevailing safety considerations.

Cargo Vessel Coordination During Home-Ported Passenger Arrivals

To maintain safe and orderly traffic flow during peak passenger arrival periods, cargo vessel movements shall be coordinated accordingly. Cargo vessels scheduled to depart prior to home-ported passenger arrivals shall be underway by 0230 hours. Cargo vessels scheduled to arrive shall enter the harbor no later than 0300 hours.

Cargo vessels unable to meet these timelines may be required to wait until completion of scheduled home-ported passenger vessel arrivals, subject to traffic conditions and Pilot direction. These measures are intended to provide predictability for cargo operators while reducing congestion and navigational risk during peak passenger operations.

In-Transit Passenger Vessels (Non-Home-Ported)

Passenger vessels transiting the harbor entrance that are not engaged in home-ported turnaround operations, including in-transit or port-of-call vessels, shall be managed to maintain a minimum buffer of forty-five (45) minutes between passenger vessel movements and other vessel traffic at the harbor entrance. This buffer is intended to ensure a clear and predictable channel.

Service for any vessel unable to clear the entrance channel within the required buffer period will not be accepted and will be rescheduled.

Departing Passenger Vessels

Home-ported passenger vessels departing in accordance with their scheduled departure times are afforded traffic management priority, particularly where delays would materially impact passenger operations and terminal sequencing. Requests for early departures, or departures outside scheduled times, shall be evaluated based on Pilot availability, traffic conditions, and overall harbor safety. Passenger vessels not ready to depart at their scheduled time may be rescheduled to maintain safe and efficient traffic flow.

Docking and Departure Priority Order for Passenger Vessels

When multiple passenger vessels are scheduled to dock or depart at the same time, the following priority order shall apply for traffic coordination purposes:

Arrival - Frontier Pier-Pan American Dock (East)-Pan American Dock (West)-Pier 4 (East)-Pier 4 (West)-Pier 3 (East)-Pier 3 (West)-Pier 1 (East)-Pier 1 (West)

Departure - Pier 1 (West) - Pier 1 (East) – Pier 3 (West) – Pier 3 (East) - Pier 4 (West) - Pier 4 (East) - Pan American Dock (West) - Pan American Dock (East) - Frontier Pier

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Section 9 – Berth Operations and Facility Requirements

General Requirements

Berth operations shall be conducted so as not to obstruct or reduce the effective width of any navigable channel. Berth equipment, vessel equipment, and terminal operations shall not compromise safe vessel maneuvering, pilot visibility, or pilot–tug communications. Additional requirements applicable to berth operations are set forth in the Puerto Rico Ports Authority Reglamento de Seguridad Portuaria, which remains fully applicable.

Gantry Cranes (Terminal-Operated)

Gantry cranes shall be kept clear of navigable channels when not actively engaged in cargo operations. Crane booms shall not be moved during vessel approach, mooring, unmooring, or departure. Crane machinery shall be shut down or not running while vessels are maneuvering to or from a berth, as machinery noise on open bridge wings interferes with pilot–tug communications and creates a safety risk.

Where practicable, gantry cranes shall be positioned near the midship section of the vessel's planned berth position to reduce the risk of allision caused by vessel bow or stern flare extending beyond the fender line. Boom lights shall be secured and turned off when crane booms are in the vertical position, as such lighting can significantly impair night visibility, particularly during rain or reduced visibility.

No personnel should be allowed aloft on a gantry crane during berthing/unberthing operations.

Ship's Cranes

Ship's cranes shall not be swung out, extended, or positioned so as to encroach into any navigable channel without the express approval of the Pilot and Port Control. Encroachment of ship's cranes into a navigable channel reduces available channel width and increases the risk of allision for passing vessels. When not in use, ship's cranes shall be secured inboard so as not to interfere with vessel traffic.

VHF Radio Watch

All vessels moored in San Juan Harbor shall maintain a continuous listening watch on VHF Channel 14. This channel shall be used to coordinate vessel movements and, when necessary, request the securing or repositioning of cranes or other equipment affecting navigable channels.

Mediterranean Mooring

Vessels moored Mediterranean-style shall not deploy anchors within any federal navigable channel or otherwise obstruct navigation without the express permission of the United States Coast Guard.

Change of Berth

Changes to berth assignments require prior approval from the Puerto Rico Ports Authority. In cases of emergency or where immediate safety concerns exist, Pilots may berth a vessel at an alternate location, provided that Port Control is notified as soon as practicable.

Line Handling Operations

Line handling is a critical and essential component of any berthing or unberthing evolution. The safety of the vessel, its crew, assisting craft, and the berth is directly dependent on competent, adequately staffed, and well-coordinated line-handling operations.

Line handlers receive direct operational instructions from the vessel's deck officers regarding the handling, placement, and tending of mooring lines. Shore-side line-handling personnel shall be properly supervised by a responsible party, adequately trained for the task, and such training should be documented. Appropriate personal protective equipment shall be worn at all times.

As a matter of standard and widely accepted maritime practice, a minimum of two (2) line handlers per end of the vessel is required. This safety-in-numbers requirement allows personnel to work as a team, maintain situational awareness, share workload, and respond effectively during what is an inherently hazardous operation. These principles are consistent with the expectations of the Puerto Rico Ports Authority Reglamento de Seguridad Portuaria.

For clarity, San Juan Bay Pilots do not select, hire, assign, or staff line handlers, nor do they control whether such services are provided directly by a terminal, vessel, or contracted company.

Section 10 – Berth Condition Standards

Berth owners and operators are responsible for ensuring that berths are fit for purpose and capable of safely accommodating the size and type of vessels calling at their facilities.

At a minimum, berth owners and operators shall ensure that fendering systems appropriate to the size, displacement, and hull form of vessels are installed, maintained, and in serviceable condition. Lighting systems shall be adequate to safely illuminate the berth, fender line, mooring points, and working areas during hours of darkness or reduced visibility.

Mooring points, including bollards, bitts, hooks, and dolphins, shall be properly designed, certified where applicable, maintained, and suitable for the loads imposed by vessels calling at the berth. Temporary fenders, including pneumatic fenders, shall be installed, secured, and used strictly in accordance with the manufacturer's specifications and load ratings.

Any deficiency or degradation in berth condition may result in the imposition of additional operational restrictions, including additional tugs, daylight-only operations, environmental limits, or denial of use until the condition is corrected. These requirements reflect long-standing principles of safe port operations and remain consistent with the Puerto Rico Ports Authority Reglamento de Seguridad Portuaria.

Section 11 – Tug Assistance and Standards

General Principles

Tug assistance requirements are established in the interest of navigational safety and are intended to provide a baseline framework rather than to limit professional judgment. The Pilot on board, in coordination with the Master, shall evaluate vessel characteristics, propulsion and steering capability, draft, displacement, wind, current, visibility, traffic density, berth configuration, and prevailing operational conditions when determining tug requirements.

Tug requirements may be increased, reduced, or otherwise modified by the Pilot as conditions warrant in order to maintain adequate safety margins. Nothing in this section obligates a Pilot to proceed with a maneuver when, in the Pilot's judgment, available tug assistance is insufficient for the conditions encountered.

Minimum Tug Requirements (Baseline Guidance)

The following tug requirements represent minimum baseline guidance under normal conditions. Additional tugs or operational restrictions may be required based on vessel characteristics or prevailing conditions.

Single screw vessels exceeding 450 feet in length generally require a minimum of one tug for arrival and departure.

Vessels exceeding 700 feet in length generally require a minimum of two tugs, at least one of which shall be an ASD or tractor tug.

Vessels with a static draft exceeding 10.0 meters (32.8 feet) generally require a minimum of two tugs, at least one of which shall be an ASD or tractor tug.

This baseline guidance applies irrespective of the presence, availability, or use of a vessel's bow thruster.

Unless otherwise specified by vessel-type or terminal-specific requirements, the minimum bollard pull per tug shall be 40 metric tons.

Application and Expansion of Requirements

These baseline requirements may be expanded to include additional tugs, escort-capable tugs, daylight-only operations, environmental limits, or other safety measures as determined by the Pilot. Specific tug configurations, horsepower or bollard pull requirements, and terminal- or vessel-type criteria are addressed in vessel-specific tables and terminal-specific provisions, which may be updated independently as part of this living document.

Tug Operator Duty to Furnish Information about Tugs

In order to ensure safe and efficient navigation and to prevent operational interruptions resulting from incomplete or unknown tug capabilities, all assist tug operators shall provide licensed pilots, upon request and prior to assignment, with accurate and current technical and operational information concerning each tug deployed.

Such information shall include, but not be limited to:

- Certified bollard pull documentation (static and escort, where applicable)
- Classification certificates and notations
- General arrangement drawings
- Escort capability ratings and steering/braking force data, where applicable
- Propulsion configuration and limitations
- Any operational restrictions or performance limitations

Failure to provide such information shall be construed as an operational deficiency affecting safe navigation.

Section 12 – Escort Tug Assignment

General Requirements

Escort tug assignment is a risk-mitigation measure intended to provide steering and braking capability during confined, restricted, or high-consequence transits. Escort tugs assigned to a vessel shall hold a formal "Escort" notation issued by their Classification Society and shall be maintained in accordance with that certification.

Escort tug assignment does not replace other tug assistance requirements unless expressly determined by the Pilot based on vessel characteristics, operating environment, and risk profile.

Escort Tug Configuration and Use

Escort tugs may be employed in a tethered or untethered (free-running) configuration, as determined by the Pilot based on vessel characteristics, escort geometry, prevailing environmental conditions, and operational requirements. When tethered, the escort tug shall normally be positioned astern of the assisted vessel unless an alternative configuration is required for safety.

Escort Tug Capability Requirements for LNG and Special Circumstances

For LNG carriers and other vessels designated as special circumstances, escort tugs shall be capable of operating outside the harbor limits, including in exposed or open-water conditions, as part of the approach to and departure from the Bar Channel.

Escort tugs assigned in these cases shall be capable of maintaining effective escort control at transit speeds of approximately eight (8) to ten (10) knots, including the ability to generate steering and braking forces consistent with their escort certification. Escort capability shall not be evaluated solely on static bollard pull, but shall also account for hydrodynamic performance, escort force generation, winch capacity, towing gear, and tug stability at escort speeds.

Further specific tug requirements for LNG vessels are set forth in Annex B under LNG Vessels.

Bollard Pull and Assignment Criteria

Escort tug bollard pull requirements are determined based on a combination of factors, including vessel length, beam, and displacement; static and dynamic draft; deadweight tonnage; maneuvering and stopping characteristics; environmental conditions and available stopping distance; and required escort speed and operating area.

Where minimum escort tug bollard pull values are specified, they represent baseline guidance and may be increased as conditions warrant.

Pilot Authority and Case-by-Case Assessment

Escort tug requirements shall be evaluated on a case-by-case basis by the Pilot in coordination with the Master. Additional escort tugs, higher bollard pull or performance requirements, daylight-only operations, reduced environmental limits, or other risk controls may be imposed whenever necessary to maintain adequate safety margins.

Nothing in this section obligates a Pilot to proceed with a transit if escort capability is deemed inadequate for the vessel, prevailing conditions, or operational profile.

Section 13 – Vessel Equipment, Visibility, and Propulsion Requirements

General Requirements

All critical navigation, propulsion, and steering equipment shall be fully operational prior to and throughout any transit, berthing, or unberthing evolution. Any equipment malfunction, degradation, or limitation affecting the safe operation of the vessel shall be reported to the Pilot prior to commencing the movement.

Navigation and Bridge Equipment

An AIS pilot plug providing accurate heading information shall be available and operational at the conning position. Radar, gyrocompass, rate-of-turn indicator if fitted, echo sounder, engine and rudder indicators, and internal communications shall be operational and suitable for the intended transit.

Bridge Visibility

Bridge visibility shall comply with the requirements of 33 CFR 164.15, including unobstructed fields of view ahead and to each side of the vessel. Any visibility restriction resulting from cargo, deck equipment, crane booms, structural features, or vessel condition shall be identified and addressed during the Master–Pilot Exchange.

Propulsion and Steering Performance

Propellers shall remain fully immersed throughout the transit to ensure effective propulsion and steering control. Engine maneuvering RPM ranges, including ahead and astern ranges, shall be posted, available on the bridge, and achievable on demand. Steering gear, thrusters if fitted, and propulsion control systems shall be capable of responding promptly to maneuvering commands.

Limitations and Operational Adjustments

Any limitation in equipment, visibility, propulsion, or steering capability may result in the imposition of additional safety measures, including daylight-only operations, assignment of additional Pilot or Pilots, enhanced tug or escort requirements, reduced environmental limits, modified transit plans, or refusal of service.

Final determination of acceptable operating conditions shall be made by the Pilot in coordination with the Master, based on prevailing circumstances and safety considerations.

Section 14 – Groundings and Shoaling

Immediate Assessment and Notification

Any grounding, contact with the bottom, suspected shoaling, or abnormal vessel response, including unexpected vibration, loss of speed, loss of propulsion effectiveness, or steering anomalies, shall be treated as a potential safety event. The vessel shall immediately notify the Pilot, the Master, and Port Control, and the movement shall be evaluated before continuing operations.

Soundings and Surveys

Soundings shall be obtained within twenty-four (24) hours following any grounding, suspected shoaling, or abnormal vessel response that may affect under keel clearance, maneuverability, or channel integrity. Any grounding or abnormal vessel response occurring within a federal navigable channel requires soundings within twenty-four (24) hours.

Where warranted by the nature of the event, location, or prevailing conditions, independent hydrographic surveys may be required to verify available depths and assess channel or berth suitability. If the U.S. Army Corps of Engineers is unable to perform the required soundings in a timely manner, an independent third-party surveyor shall be engaged.

These requirements apply equally to channels, berth approaches, and berthing areas, whether at Puerto Rico Ports Authority facilities or private terminals.

Operational Restrictions and Resumption of Service

Based on Pilot assessment and available depth or survey information, temporary draft restrictions, operational limits, modified transit requirements, or suspension of movements may be imposed. Draft restrictions may be imposed solely on the basis of Pilot assessment pending confirmation of safe conditions.

Restrictions shall remain in effect until adequate survey data or other reliable information confirms that normal operations may safely resume.

Section 15 – Dead Ship Movements

Definition

A dead ship movement is any vessel movement conducted without main propulsion and/or without effective steering, including vessels incapable of responding to helm or engine commands in a timely and reliable manner.

Advance Notice and Planning

A minimum of forty-eight (48) hours ’advance notice is required for any proposed dead ship movement. A pre-transit planning meeting may be required to review tug configuration, tow arrangement, communication procedures, contingency planning, and environmental limits.

Operating Restrictions

Dead ship movements shall be conducted during daylight hours only. A minimum visibility of three (3) nautical miles shall be maintained throughout the movement. Additional restrictions may be imposed based on traffic conditions, weather, or operational complexity.

Pilot Assignment

Dead ship movements involving vessels four hundred (400) feet or greater in length require the assignment of multiple Pilots.

Authority

Dead ship movements are treated as special circumstances and are evaluated on a case-by-case basis by the Pilot or Pilots assigned. Any change in conditions or safety concern may result in additional restrictions, delay, or cancellation of the movement.

Nothing in this section obligates a Pilot to proceed with a dead ship movement when, in the Pilot’s professional judgment, conditions are unsafe or available resources are inadequate.

Section 16 – Navigation Aids

General Requirements

Only official, established, and approved aids to navigation shall be relied upon for vessel navigation within San Juan Harbor. Official aids to navigation are those placed, charted, and maintained by the United States Coast Guard, including privately owned aids that are in the process of transitioning to Coast Guard ownership and approval.

Temporary, private, or unapproved navigation aids shall not be used as a substitute for official aids unless expressly accepted under the provisions below.

Range Lights and Night Navigation

All established range lights required for a given transit shall be fully operational for unrestricted nighttime navigation. Inoperative or unreliable range lights may result in traffic restrictions, daylight-only operations, or other operational limitations as deemed necessary for safety.

Inoperative or Degraded Aids to Navigation

The failure, degradation, displacement, or inoperability of any aid to navigation may result in the imposition of traffic restrictions, draft limitations, daylight-only operations, or suspension of vessel movements. Such measures shall remain in effect until the aid is restored, alternative risk controls are implemented, or safe operating conditions are otherwise confirmed.

Temporary Aids

Temporary lighted buoys or other temporary navigation aids may be accepted on a case-by-case basis, subject to Pilot assessment of reliability, visibility, and overall risk. Acceptance of temporary aids does not eliminate the need for additional operational restrictions where warranted by prevailing conditions.

Section 17 – General Authority, Discretion, and Safety Primacy

General Authority and Professional Judgment

These Safety and Navigation Guidelines are adopted in the interest of safety and navigational risk mitigation. Nothing contained herein obligates a Pilot to move a vessel when, in the Pilot's professional judgment, it would be unsafe to do so. These Guidelines do not limit or supersede the on-scene authority of the Pilot or the Master.

The Pilot and the Master are best positioned to assess prevailing conditions, vessel condition, available resources, and operational constraints in real time. Variances from these Guidelines

may be made when required to avoid immediate danger or to respond to unforeseen circumstances.

All foreign vessels and United States vessels engaged in foreign trade, including dead ships, must employ a duly commissioned San Juan Bay Pilot while underway in compulsory pilotage waters.

Independence from Commercial Pressure

Pilotage is a public safety function and not a commercial service. No Pilot shall be required, directed, influenced, or pressured, directly or indirectly, by vessel owners, charterers, operators, agents, terminal operators, tug companies, or any other commercial interest to conduct a vessel movement in a manner that compromises safety.

Scheduling constraints, financial considerations, contractual arrangements, or commercial preferences shall not override the Pilot's professional judgment. Any attempt to exert commercial pressure on a Pilot to alter, expedite, delay, or otherwise influence a navigational decision may result in additional safety restrictions, refusal of service, or reporting to appropriate authorities.

This principle is consistent with long-standing United States pilotage practice and the safety principles articulated by the American Pilots 'Association, the International Maritime Pilots ' Association, and the International Maritime Organization.

Section 18 – Comprehensive Legal and Regulatory References

The following statutes, regulations, guidance documents, and professional standards are incorporated by reference and provide the legal and regulatory framework supporting these Guidelines:

Puerto Rico Law 226 of 1999 (Pilotage Act)
Puerto Rico Pilotage Regulations 6384
Puerto Rico Port Regulations 7214, including Rules 16, 17, 28, 29, 31, 32, 54, and 55
Puerto Rico Regulation 9524
33 CFR Parts 110 and 164
46 CFR Part 15
United States Coast Guard Marine Safety Information Bulletins 03-02 and 07-16
United States Coast Pilot No. 5
Puerto Rico Pilot Commission letters dated January 28, 2003; June 29, 2005; and October 28, 2005

San Juan Bay Pilots correspondence dated June 24, 2005
PIANC Guidelines for Approach Channels
Puma Energy San Juan Bulk Terminal Navigational Restrictions, Section 4.2
IMO Resolution A.960, Pilot Training and Operational Procedures
American Pilots ’Association Best Practices and Policy Statements

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Section 19 – Governance, Updates, and Change Control

Governance and Maintenance

This document is maintained by the San Juan Bay Pilots Association Safety Committee. Amendments may be proposed by any duly commissioned San Juan Bay Pilot.

Changes affecting safety, tug requirements, escort requirements, or navigation restrictions may be implemented immediately when required in the interest of safety. Administrative, editorial, or clarifying updates shall be recorded in the Change Log.

All revisions shall retain prior versions to ensure traceability, transparency, and historical reference. This document remains a living document and shall evolve as conditions, regulations, infrastructure, vessel types, and operational practices change.

Section 20 – Change Log

Date: 14 February 2026
Sections Affected: All
Summary of Change: Initial consolidated revision
Approved By: San Juan Bay Pilots Association

Section 21 – Alignment with National and International Pilotage Best Practices

These Safety and Navigation Guidelines align with nationally and internationally recognized pilotage principles, including compulsory pilotage as a safety function, independence of pilot judgment from commercial pressure, the use of multiple pilots for high-risk or restricted operations, the requirement for escort-capable tugs where risk warrants, and the emphasis on Bridge Resource Management.

Primary reference sources include the American Pilots ’Association policy statements and best practices, as well as IMO Resolution A.960.

Applicable References

ASD tugs: Thrust and azimuths

Tug use in Port – A practical guide

Behavior and handling of ships

Annex A – Terminal-Specific Operational Requirements

This Annex consolidates all terminal-specific restrictions and operational requirements applicable within San Juan Bay, including but not limited to requirements for the following facilities:

New Fortress Energy LNG Terminal

- See Annex B, LNG Vessels.

Puma Energy San Juan Bulk Terminal

- Maximum draft 11.58m, maximum length 236m

Pan American Dock

- Two tugs for docking, undocking and shiftings
- Yokohama fenders on all resting points(piles/dolphins) except loading platform
- Two pilots for all maneuvers
- Daylight restricted

Molinos, Nutrimix

- 25’ max draft with 10’ diameter Yokohama fenders properly secured as per manufacturer’s specifications.
- Daylight only
- Two tugs for docking, undocking and shiftings
- Yokohama fenders on all resting points(piles/dolphins) except loading platform
- Two pilots for all maneuvers

Cataño Oil dock East

- Max LOA 534’ at 38’ draft
- Max LOA of 607’ draft fwd less than 9.5m
- Vessel at NFE Berth Max Beam of vessel docking at COD (32.2m) 106’
- Vessel more than 22m beam:
  2 pilots
  Daylight Only
  PPU (Portable Pilot Unit)
  docking and undocking 2 ASD/tractor tugs one of the tugs must be escort rated
- Vessel less than 22m beam
  2 ASD/tractor tugs docking/undocking one of the tugs must be escort rated
  1 pilot

Cataño oil dock West

- No docking/undocking if barge in docked at Army Terminal East

Tender Pier

- Only vessels using the berthing area that does not include the “finger pier” (including mooring). Finger pier is currently in disuse
- The berthing area is 485’
- Mooring lines need to stay inside the 485’ pier

Crowley Berth

- All ships exceeding 700 feet in length require at least 2 tugs, 1 must be an ASD/tractor tug (minimum 40-ton Bollard Pull per tug) for arrival
- All ships exceeding 700 feet in length with a fully operational bow thruster require at least 1 ASD/tractor tug (minimum 40-ton Bollard Pull) for departure

Pier 1

- APPR condemned 11/29/2022

Pier 11, 12, 13, 14

- Condemned COTP6398783

Pier 14 extension

- The vessel and its mooring lines must be secured within the maximum dimensions of berth 14x (415 feet)
- See attached COTP6398783

Navy Frontier

- As per Port Authority not usable

All terminal-specific requirements contained in the main body of this document remain in force and may be relocated to this Annex for clarity and future reference.

Annex B – Vessel-Type Specific Requirements

This Annex consolidates vessel-type specific requirements and guidance applicable to operations in San Juan Bay, including but not limited to:

Tank Vessels

350’ - 750’	2 ASD/tractor tugs one must be escort rated
751’ +	2 ASD/tractor escort rated

Car Carriers and Ro-Ro Vessels

Vessel Type	Length	Thruster	Docking	Undocking	Total tugs HP
Car Carriers (**MSIB 12-01**)	Less than 450’	none	2	2	3,600 hp
	Less than 450’	Bow or stern	1	1	1,800 hp
	450’-650’	none	2	2	6,000 hp
	450’-650’	Bow or stern	2	2**	6,000 hp
	650’ +	none	3*	2	7,800 hp
	650’ +	Bow or stern	2	2	6,000 hp
*If car carrier design prohibits the use of 3 tugs, 2 tugs of combine HP of 7,800 are required					
**If the Master and Pilot agree during docking that, due to thruster capabilities and any other condition, it is safe to undock with 1 tug. Minimum HP is 3,000 hp					

LNG Vessels

These LNG-specific guidelines have been developed by the San Juan Bay Pilots Association based on almost two years of simulations at the Seamen's Church Institute, actual runs of LNG vessels in the San Juan Bay, the Letter of Recommendation ("LOR") of January 12, 2026 issued by the United States Coast Guard ("USCG"), the collective professional knowledge, operational experience, and judgment of its pilots, in furtherance of their duty to safeguard life, property, and the marine environment within the estuary of San Juan Bay. They reflect the unique and elevated risks associated with LNG vessel operations in a densely populated harbor characterized by narrow and constrained channels, significant hydrodynamic forces, prevailing wind effects, known and potential hazards, and seasonally adverse environmental conditions, including winter northerly swells and hurricane-season weather systems. Notwithstanding the continued exercise of pilot professional judgment and discretion on a case-by-case basis, the measures set forth in this section constitute the minimum operational standards agreed upon by the San Juan Bay Pilots Association in the interest of public safety, protection of life and property, and safeguarding the marine environment.

The objective of these guidelines is to ensure a prudent margin of safety for LNG transits and related operations by incorporating adequate reserve power, redundancy, and operational safeguards to address both foreseeable and unforeseen scenarios, while preserving the safety of all harbor users and the surrounding communities. These guidelines are based on validated maneuvering studies and operational concepts developed and agreed upon during full-mission simulation exercises conducted at Seamen's Church Institute in Houston, which involved the participation of all San Juan Bay Pilots, independent technical consultants, terminal operator personnel, tugboat companies, and vessel representatives, and which in turn were considered by the United States Coast Guard in issuing its *Letter of Recommendation* dated January 12, 2026 which documents prior operations and modifies existing directives. These guidelines are intended to address and supplement the resulting operational gaps in order to maintain the level of safety entrusted to the pilots within San Juan Bay.

<u>Vessels Docking at the New Fortress Terminal</u>

Pending receipt and review of current terminal certifications, including but not limited to maximum vessel dimensions, fendering systems fit for purpose, securing points fit for purpose, applicable environmental operating limits, and verified depths to the fender line, LNG vessel operations shall be conducted conservatively and in accordance with the requirements set forth in this section.

Terminal Areas

No pier-side obstructions shall impede the safe and efficient running of mooring lines during berthing or unberthing operations, including spring lines. The timely and proper securing of the vessel is essential to the safety of the operation.

Pilots

A minimum of two pilots shall be assigned under normal operating conditions. An additional pilot may be required when, in the judgment of the pilots, operational or environmental conditions present elevated risk, including but not limited to dead-ship tows, restricted maneuverability, propulsion or steering deficiencies, or other circumstances that materially affect the safe conduct of the maneuver.

Environmental Conditions

LNG vessel movements shall be conducted only in daytime, when sustained winds do not exceed 10 knots, with gusts not exceeding 15 knots, and when visibility is not less than 3 nautical miles. Wind measurements shall be obtained from the vessel and anemometers station around the harbor, as localized wind data for the southwest sector of the harbor remains under evaluation. Maximum allowable wave height and swell conditions shall be limited to those within the certified operational capabilities of the assigned tugboats and any applicable operating restrictions imposed by the tug operator or vessel, as determined in coordination with the pilots.

Transit and Maneuvering – Required Tugboats

For berthing, unberthing, and harbor transit operations, a minimum of four azimuthing-drive reverse tractor or true tractor tugboats shall be employed, each capable of delivering not less than 80 metric tons of bollard pull. All tugboats shall be escort-rated for operations at speeds up to 10 knots and capable of operating in tethered escort configuration outside the harbor limits. It is recommended that the tugboats be sister vessels; however, where non-sister vessels are utilized, all tugboats shall possess substantially similar performance characteristics, maneuvering capabilities, propulsion configurations, and control responsiveness, and shall be capable of safely assuming any assigned position in the escort, berthing, or unberthing arrangement in order to ensure the required level of redundancy and operational resilience.

Navigational Aids

All navigational aids, including range lights, shall be operational and unobstructed. Installation of an outbound range light for the Army Terminal Channel remains pending and shall be completed within a reasonable timeframe. Pilot Portable Units shall be employed for all LNG vessel operations and shall be provided by the San Juan Bay Pilots. The most current NOAA-issued nautical charts shall be used.

Training and Tug Commands

Each pilot and tug operator shall be trained in the maneuvering plans and procedures developed specifically for LNG vessel transits, berthing, and unberthing evolutions. A standardized and simplified system of tug commands has been established, rehearsed, and shall be consistently employed for all such operations to ensure clear communication, uniform execution, and safe coordination among all participating units.

Stand-by tugs

While an LNG VESSEL IS AT THE NFE BERTH, 2 ASD escort-rated tugs shall remain on standby: one to safely guard the LNG Vessel and the other two follow the transiting vessel. No vessel may transit through the Army terminal turning basin while an LNG vessel is at the NFE berth if the required stand-by tugs are not in place.

Annex C – Tug and Escort Tables

This Annex contains detailed tug and escort reference material, including minimum tug horsepower and bollard pull tables, escort tug assignment matrices, and definitions applicable to ASD and tractor tugs.

Escort tug - Bollard Pull Rating is measured in metric tons (MT) and is the minimum for that vessel parameter. Every assigned tug must have a formal “Escort” notation issued from its Classification Society and be tethered on the stern. Additional escort requirements may be imposed on any ship on a case-by-case basis.

Annex D – Infrastructure and Navigational Constraints

This Annex documents known infrastructure and navigational constraints within San Juan Bay, including channel dimensions and draft limits, beam restrictions, condemned or restricted berths, and navigational aid dependencies.

Anchorage

Anchorage E	34 (10.4)	Vessels shall remain within anchorage limits. If a vessel cannot maintain position inside the anchorage, a standby tug must be used. Max allowed time 24 hours

Anchorage F	25 (7.6)	250’ (76m) max size (Special Anchorage See 33 CFR 110.1,110.74c,and 110.240)

Commission letter June 29,2005; San Juan Bay Pilots letter June 24, 2005; MSIB 03-02; 33 CFR 110.74c, 110.240

Annex E – Duties of Additional Pilots

This applies only when a Vessel transiting San Juan Harbor requires the services of two or more Pilots. The additional Pilot(s) will assist in gaining, maintaining and assessing situational awareness, problem solving, and decision making throughout the transit. This will enable the conning Pilot to not become overloaded such that situational awareness can be always maintained allowing the conning Pilot to concentrate on the conduct of the Vessel in the waterway.

Only one Pilot will be conning a Vessel at any given time. It will be communicated to the Bridge Team during the Master Pilot Exchange which Pilot will be conning, and which Pilot(s) will be assisting. It will be subsequently communicated to the Bridge Team when the conning Pilot and the additional Pilot(s) exchange duties. The additional Pilot(s) will be engaged throughout the transit and may assist any time needed as outlined below:

Boarding / Communications with crew:

- Assist during Master-Pilot Exchange.
- Evaluation of Vessel’s navigation equipment.
- Review of Under Keel Clearance (UKC) issues.
- Arrange traffic situations.

Transit of waterway:

- The additional Pilot(s) may be stationed at different locations on the Vessel to aid with any visibility/deck obstruction issues.
- Assess any hazards to the safe navigation of the Vessel.
- Monitor position of Vessel in the channel.

Docking / Undocking:

- Assist during docking, undocking, close quarter situations, and turning.
- Positioning of Vessel at berth / liaising with dock personnel.
- Coordinate with line handlers.

Accident Avoidance and Response:

- Replace conning Pilot in case of incapacitation.
- Handle communications with authorities.
- Coordinate damage control and spill mitigation.
- Coordinate tug assist.

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