

REPORT

REPORT: Update on the Turning Basins Expansion Study (Maritime)

MEETING DATE: 11/21/2019

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APPROVED BY: Danny Wan, Interim Executive Director

ACTION TYPE: None

EXECUTIVE SUMMARY

Cargo vessels that call the Port of Oakland (Port) maritime facilities (Seaport) continue to grow in size and length. In order to more efficiently and safely handle Seaport vessel traffic, Staff is proceeding with the initiation of a Feasibility Study which will examine a potential expansion of the turning basins in both the Oakland Outer and Inner Harbor Channels – the waterways that serve the Seaport. The Oakland Harbor is a Federal-sponsored navigation channel and is maintained annually by the United States Army Corps of Engineers (USACE). An expansion of the turning basins would require concurrence and collaboration from the USACE, and approval from the U.S. Congress in future authorization and funding legislation. Staff intends to follow a USACE “Section 203” Process to expedite the Feasibility Study elements.

BACKGROUND

In order to remain competitive, the Port of Oakland and its tenants have made significant investments over time including the deepening of navigation channels/waterways, berths, marine terminals, cargo handling equipment, rail, and other facilities in the Seaport that support trade and commerce. Recently, the size (length and width) and container capacity of cargo vessels deployed in global trade and calling the Port has dramatically increased.

Specifically, ocean carrier deployment of new, large and ultra-large container vessels has been straining the Port’s landside and waterside infrastructure. These container vessel deployments have resulted in recent investments such as crane raisings and bollard/fender upgrades to accommodate the unique needs of these ships. It has also brought attention to certain limitations of the Oakland Harbor and some additional potential improvements to address those limitations.

The Seaport is served by the Oakland Harbor, which generally consists of the Entrance Channel, the Outer Harbor and its Outer Harbor Turning Basin (OHTB), and the Inner Harbor and its Inner Harbor Turning Basin (IHTB). The Oakland Harbor is a federal-sponsored

channel in that the navigation features (depth and width of channels/turning basins) are maintained (payment and performance) by the USACE, via direct appropriations from the federal government.

The Oakland Harbor was last improved to provide a water depth of -50 feet and expanded turning basins – a construction effort which concluded in 2009 (-50 Foot Project). The OHTB was expanded to 1,650 feet in diameter and the IHTB was expanded to 1,500 feet in diameter. Any costs of improvements to navigation features beyond general maintenance are typically shared between USACE and the Port, and require additional federal authorization beyond the project's current contours. The Oakland Harbor federal navigation features are depicted in Exhibit A.

The -50 Foot Project was designed and constructed based on a maximum vessel size of 6,500 TEUs, 1,139 feet in length, and a maximum draft of -48 feet. Currently, the Port routinely receives cargo vessels that have a 14,000 TEU capacity and a length of 1,210 feet, but are still capable of operating within the -50 feet draft limitation¹. The 14,000 TEU vessel is the maximum size vessel that can turn in the Port's IHTB (the real restriction is 1,210 feet in length, which usually pairs to a 14,000 TEU vessel).

The Port has received Ultra Large Container Vessels (ULCVs) with capacities greater than 14,000 TEU. Specifically, the CMA CGM Benjamin Franklin, which has an 18,000 TEU capacity and a length of 1,310 feet, called marine terminals in both the Inner and Outer Harbor. Vessel movements for the Benjamin Franklin were heavily restricted, and required extensive consultation with the San Francisco Bar Pilots, including computer simulations and modeling. The vessel had to move at slack tide during daylight only, could only access Berth 55 in the Inner Harbor, and had to move backwards upon departure from Berth 55 so it could turnaround near the Entrance Channel. On the inbound and outbound transits, all other cargo vessel traffic inbound or outbound to/from the Seaport had to stop for up to three hours while the Benjamin Franklin was maneuvering. Based on this vessel example and the future forecast of ship size and length, expanding the IHTB and OHTB could result in increased efficiencies and abilities by the Port and its tenants to handle ULCVs.

Process and Schedule for Evaluating Current Operating Constraints

There are several steps involved in evaluating how to address the physical limitations and constraints in the Oakland Harbor. Because large portions of the Oakland Harbor include federally navigable waters, this process necessarily involves USACE. These steps are:

1. *Initial Appraisal Report.* The first step, is to clearly define the problem and/or the need. In 2015-16, around the time the Port had its first ULCV vessel call, the Port and USACE began discussions about the operational constraints of the IHTB and OHTB. As a result, USACE initiated the first step in the process by developing an Initial Appraisal Report (IAP) in 2018. In summary, the IAP concluded that the accelerated expansion of trade volume and increased design vessel size at the

¹ Port Staff is currently performing a technical study to determine whether there will be any depth constraints with the handlings of Ultra Large Container Vessels ULCVs)

Port has materially affected the economic conditions and engineering design resulting in economic inefficiencies associated with ULCV's operations and navigational safety hazards. Further, the IAP recommended conducting feasibility level studies to expand the IHTB and OHTB.

2. *Feasibility Study.* Per the recommendations outlined in the IAP, the Port requires USACE's collaboration to conduct further feasibility level studies, which is initiated with a formal Feasibility Study (FS). The objective of the FS is to evaluate the potential turning basin expansion, including economic justification, environmental review, permitting and clearance, and technical feasibility.

The Port will include community and stakeholder outreach, involvement, and participation throughout the process, including early engagement to discuss key features and potential community and environmental impacts.

An expedited Water Resource Development Act Section 203 process ("Section 203") allows the local sponsor (in this case, the Port), to take the lead on most elements of the of the FS. The risk associated with the Section 203 process is that if the funding and efforts of the FS do not lead to a federally authorized project, then the local sponsor would not later receive any reimbursement from USACE for the FS.

Upon completion of the FS under a Section 203 process, the Project could be eligible for federal cost-sharing of construction costs, subject to approval by Congress in future authorization and funding bills. Port staff is proceeding with this Section 203 Process, under which the Port plans to solicit consultants to lead the FS elements in the next 2-3 months. Staff plans to return to the Board with recommended consultants in the first or second quarter of 2020. If the Board approves the recommended consultants, the FS process could start in calendar year 2020 and could reasonably conclude the FS by 2023.

3. *Budget for Design/Construction.* Upon completion of the FS and receipt of all necessary environmental and other approvals, the Port could make a determination on whether to proceed with a proposed project and seek funding authorization from Congress, most likely in a future water resources development legislation. These bills are typically, but not strictly, considered every two years. Upon congressional authorization, the USACE could begin formal federal request for funding for project implementation/construction, which could occur between 2023 and 2026.

In the event that the Port, as a local sponsor, desires to proceed to Design and Construction without federal funding or prior to a federal appropriation, the Port does have the option to directly fund the Design and Construction itself. In this case, the Port would only be eligible for reimbursement of a certain portion of the Design and Construction costs in the event federal funding is appropriated in the future. Given the estimated magnitude of this proposed project, this option is not currently recommended.

4. *Design/Construction.* The final steps in the project delivery process is USACE-led Design and Construction. If the funding is appropriated, Design/Construction could reasonably take place from 2026 to 2029.

Estimated Costs for the Feasibility Study

Under the Section 203 Port led FS, all costs related to developing a final FS will be initially paid for by the Port. Staff expects the consultant costs related to the FS technical studies to be approximately \$3 million and be shared 50/50 between Port and USACE if the final proposed project receives federal authorization for future construction. The Port is not committing itself to the construction of a project by initiating a feasibility study.

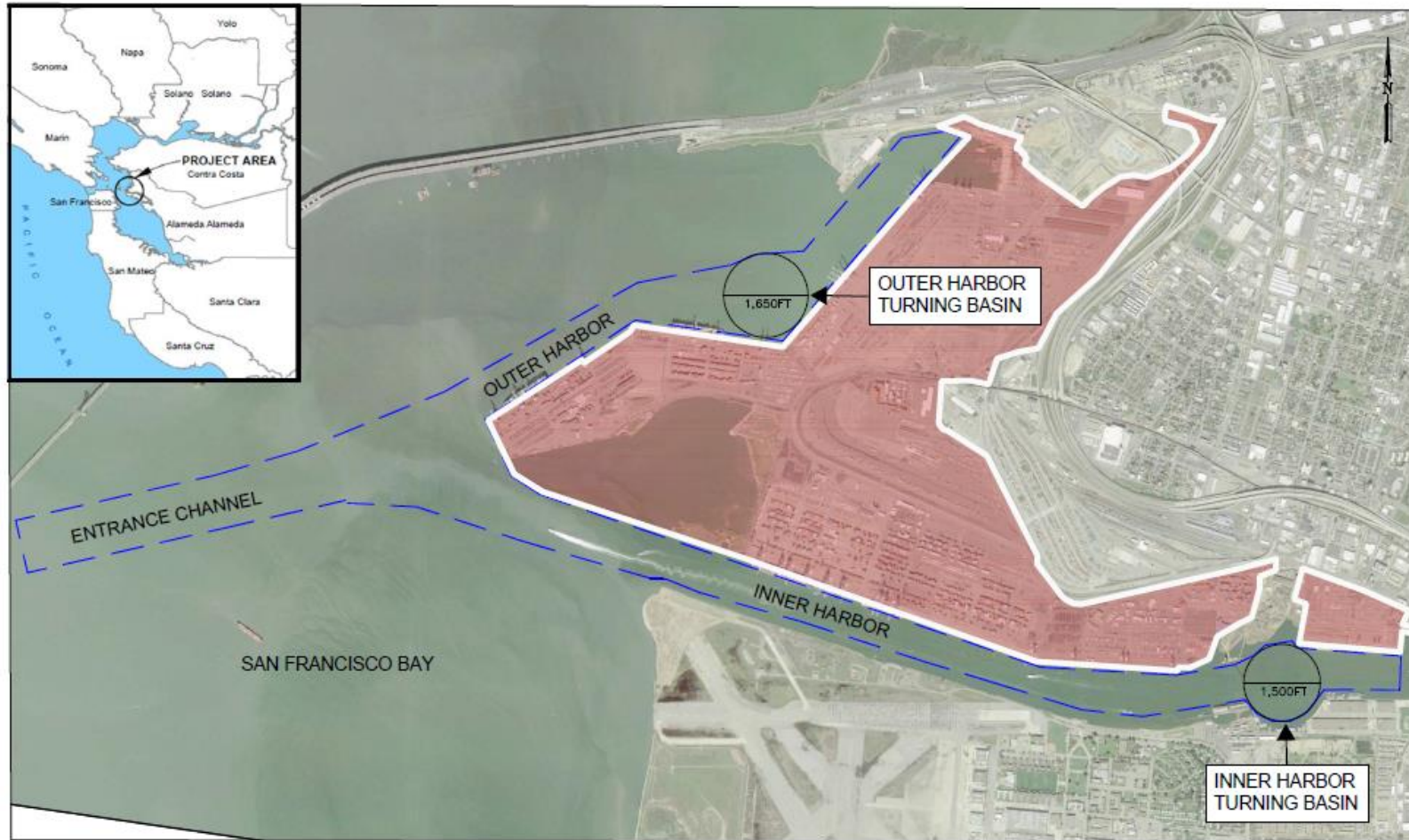
NEXT STEPS

Staff plans to take the following near-term action items for commencing an FS, consistent with the Section 203 process:

1. Port to enter into contract with consultant to conduct preliminary economic analysis – staff anticipates that this agreement will not exceed \$150,000 and can be executed by the Executive Director pursuant to the Purchasing Ordinance;
2. Port and USACE to draft and negotiate a Memorandum of Agreement (MOA) pursuant to the Intergovernmental Cooperation Act – this allows USACE to provide technical support to the Port-led FS;
3. Port to issue Requests for Proposals for various types of consultant support on the FS; and
4. Staff to seek Board approval for budget and contract authority for USACE MOA and FS consultant contract(s). Staff anticipates these contracts will be brought to the Board for consideration in Q1 or Q2 2020.

Staff plans to continue to provide the Board with regular updates on the Turning Basins Expansion Study.

Exhibit A
50-Foot Project Deep Draft Navigation Features



OAKLAND HARBOR DEEP DRAFT CHANNEL LIMITS

- Approximate Federal Channel Limits
- General Port of Oakland Seaport Area

Project Location/Vicinity Map
(No Scale)