

An aerial photograph of a ferry terminal and a ferry boat. The terminal is a large, modern building with a blue roof and a central tower, situated on a grassy area. A long pier extends from the terminal into the water. A large ferry boat, with a white hull and blue accents, is docked at the pier. The boat has multiple decks and is carrying several cars. Other smaller boats are visible in the water. The text "Marine Master Plan" is overlaid in white on the image.

Marine Master Plan

The Future Ferry Fleet

Public Meeting 02/23/23



Welcome and General Meeting Procedures

- Chat feature to be utilized for any comments or questions.
- Questions or comments will be placed in a queue. At appropriate times during the meeting, questions may be read aloud, and answers will then be provided.
- This meeting is being recorded, to capture all questions and feedback.
- The presentation will be available on the project website following the meeting.
- To leave comments:
 - Marine master plan email: marinemasterplan@drba.net
 - Call and leave voice message: voicemail at x27280, 609-889-7280

Overview/ Agenda for this Presentation

- Welcome and Introductions
- Project Overview
- Engagement
- Fleet Assessment Findings
- Vessel Design Process
- Future Fleet Planning

Plan Process and Approach

Internal & External Engagement

PHASE 1- GATHER DATA

Gather Data and Develop Assumptions

PHASE 2- SYSTEM ANALYSIS

Preliminary and Detailed Analysis

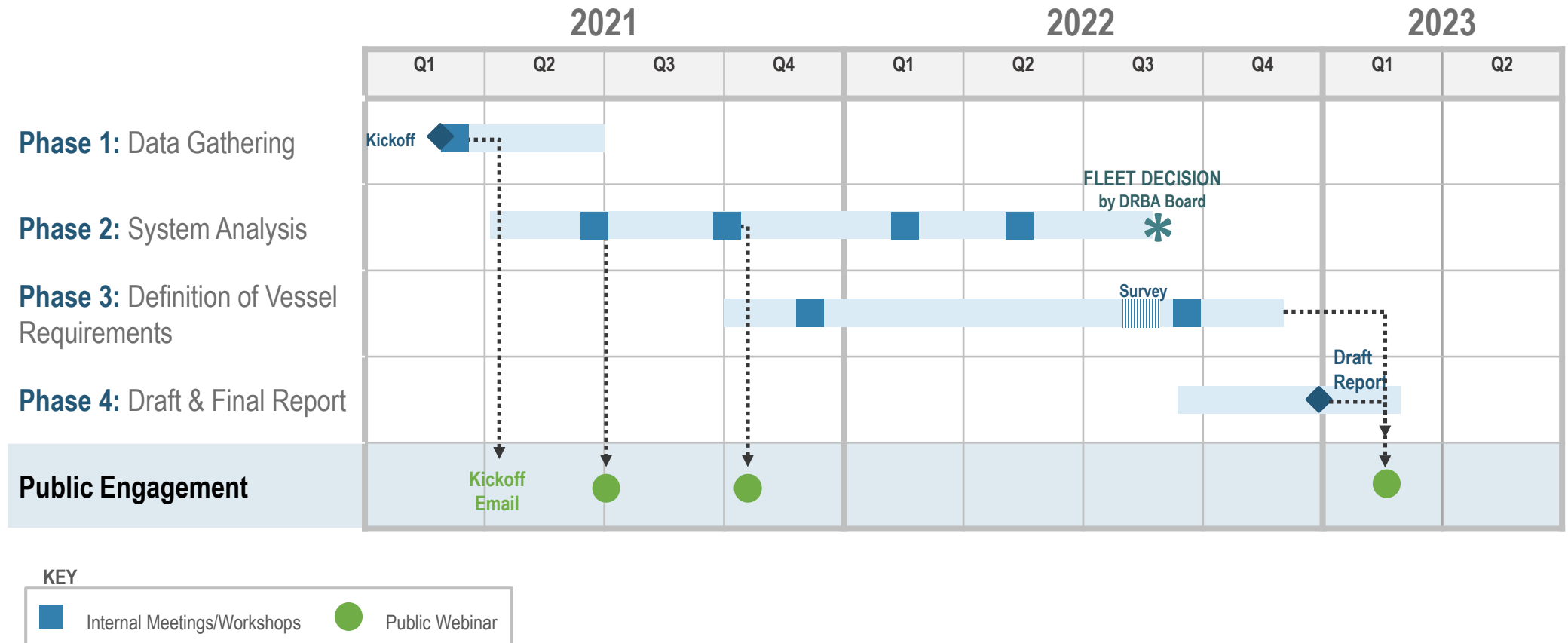
PHASE 3- DEFINITION OF VESSEL REQUIREMENTS

Develop Preliminary and Detailed Requirements

PHASE 4- FINAL REPORT

Draft and Final Report

Summary of Engagement



Characteristics of the Future Fleet

Capacity: Meet current demand and accommodate a small level of growth over the next 40 yrs.

Minimize terminal modifications:

Work within the current terminal configuration as much as possible

Improved amenities: Improve customer and crew amenities

Trip time: Meet or beat the current total trip time

Mode served: Vessels serve both passengers and vehicles.

Environmental : The new fleet will be more environmentally friendly.

Lower costs: Maintain or lower current operating costs

Current Fleet

Three 100-car ferries

100
(800 pax)

100
(800 pax)

100
(800 pax)

New Fleet Configuration Options

1 Optimized Current Fleet

Three 100-car ferries

100
(440 pax)

100
(440 pax)

100
(440 pax)

2a Mid-size Fleet

Three 75-car ferries

75
(330 pax)

75
(330 pax)

75
(330 pax)

2b Mid-size Fleet

Four 75-car ferries

75
(330 pax)

75
(330 pax)

75
(330 pax)

75
(330 pax)

Selected

3 Smaller Vessel Fleet

Five 55-car ferries

55
(240 pax)

55
(240 pax)

55
(240 pax)

55
(240 pax)

55
(240 pax)

Capital Cost Analysis

Four (4), 75-vehicle ferries are projected to be less than three (3) current 100 vehicle capacity replacement vessels due to the quantity of materials needed (steel, etc).

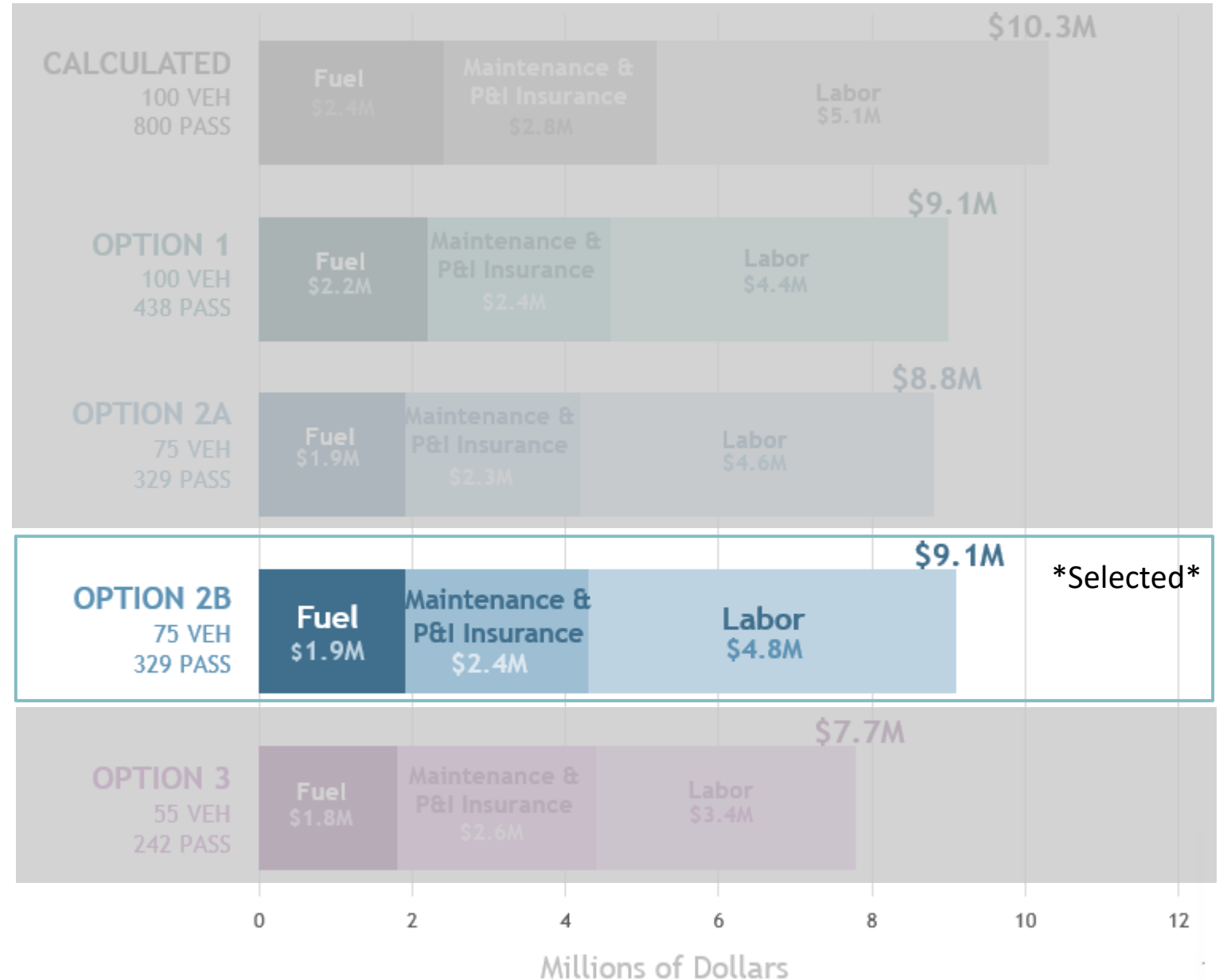
	OPTION 1 100 VEH	OPTION 2A 75 VEH	*Selected* OPTION 2B 75 VEH	OPTION 3 55 VEH
Capital Cost Per Vessel	\$115M	\$76M	\$76M	\$45M
Total Estimated Vessel Costs	\$345M	\$228M	\$304M	\$225M
Electrification Terminal Costs	\$15M	\$15M	\$15M	\$15M
Dolphin Costs	\$0	\$1.1M	\$1.1M	\$4.3M
Passenger Tube Costs	\$0	\$0	\$0	\$3M
Total Estimated Terminal Costs	\$15M	\$16.1M	\$16.1M	\$22.3M
TOTAL CAPITAL COSTS	\$360M	\$244M	\$320M	\$242M

- **\$27.6M** (Single-Ended Hybrid-Ready)

- Diesel hybrid propulsion is considered for comparison.
- Clean diesel could be approximately 20% cheaper.

Operating Cost Analysis

Four (4), 75-vehicle ferries is projected to have an operating savings over current operations due to decreased fuel and maintenance over the current fleet.



Other considerations

Port Fit

Vessel to be designed to match existing passenger loading tubes and vehicle ramps. Minor in-water modifications would be required for moorage of the vessel by adding dolphins for stability.

Emissions Reduction and Fuel Savings

Decreased fuel use. That decrease paired with new engine technology will lead to greener ferries. Vessel to be design “hybrid-ready” with space for batteries to be installed in the future.

Capacity

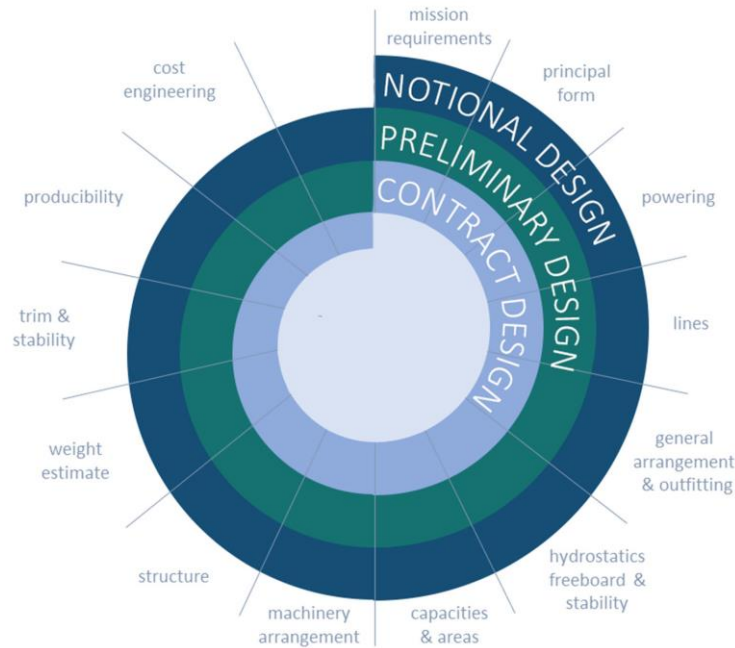
With an increased operational tempo provides an increase of up to 350 vehicles during summer peak period capacity and adding up to 9 additional peak period sailing time options. Capacity better matches reduced winter demand.

Seakeeping and Navigation

The 75-vehicle ferry will be designed to meet navigational considerations or to have satisfactory seakeeping capabilities for the route.

Internal Engagement

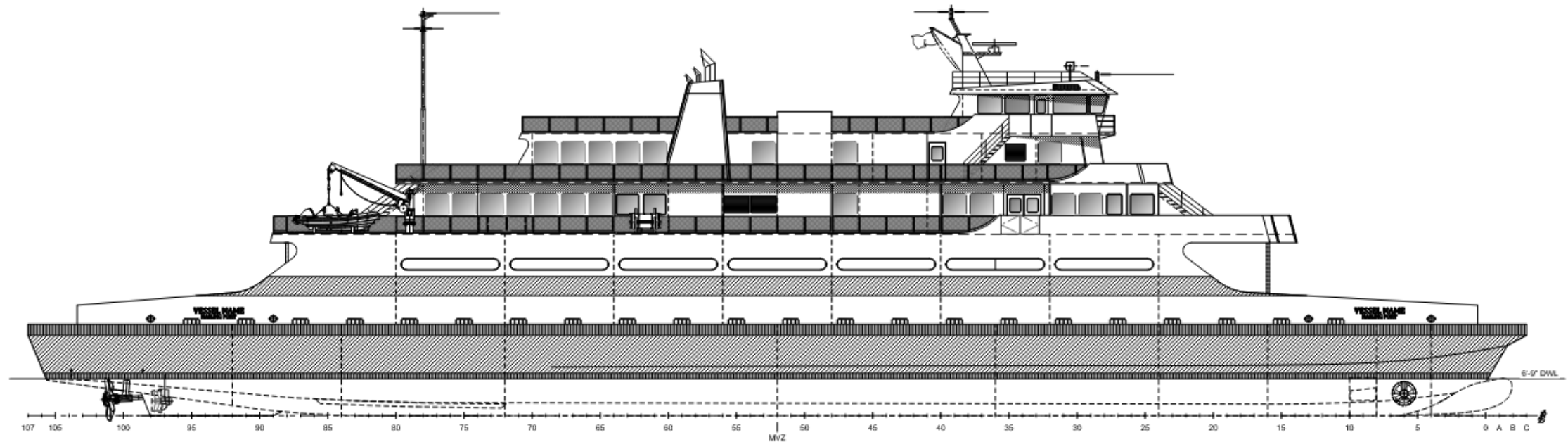
- Top Priorities from Owner's Requirements Engagement



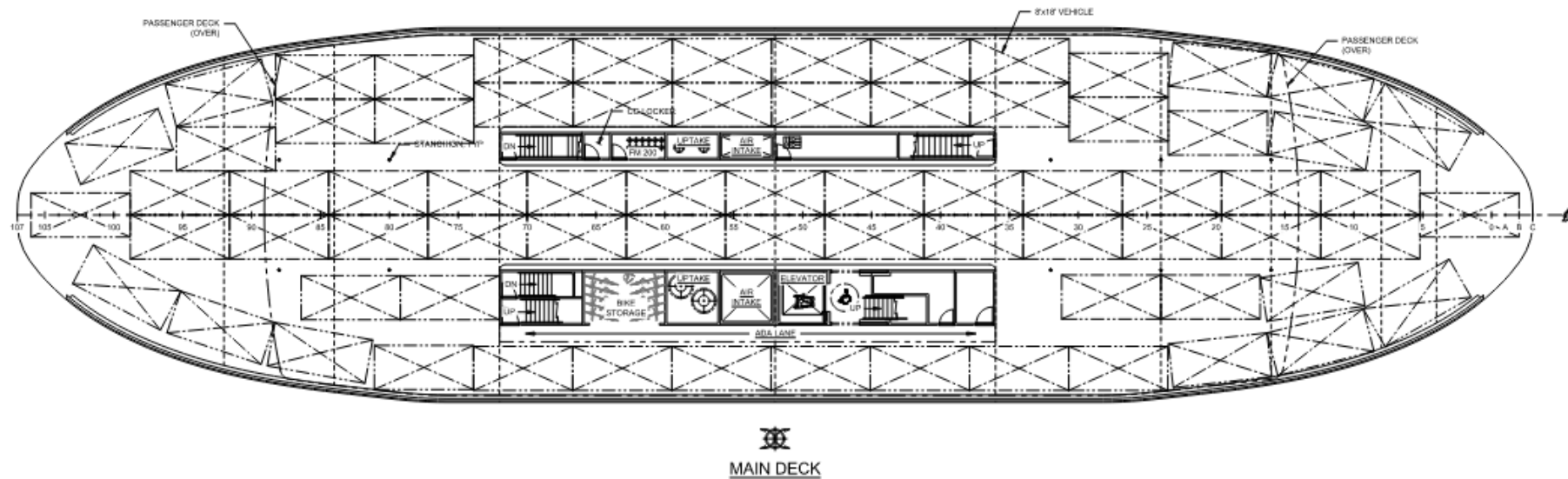
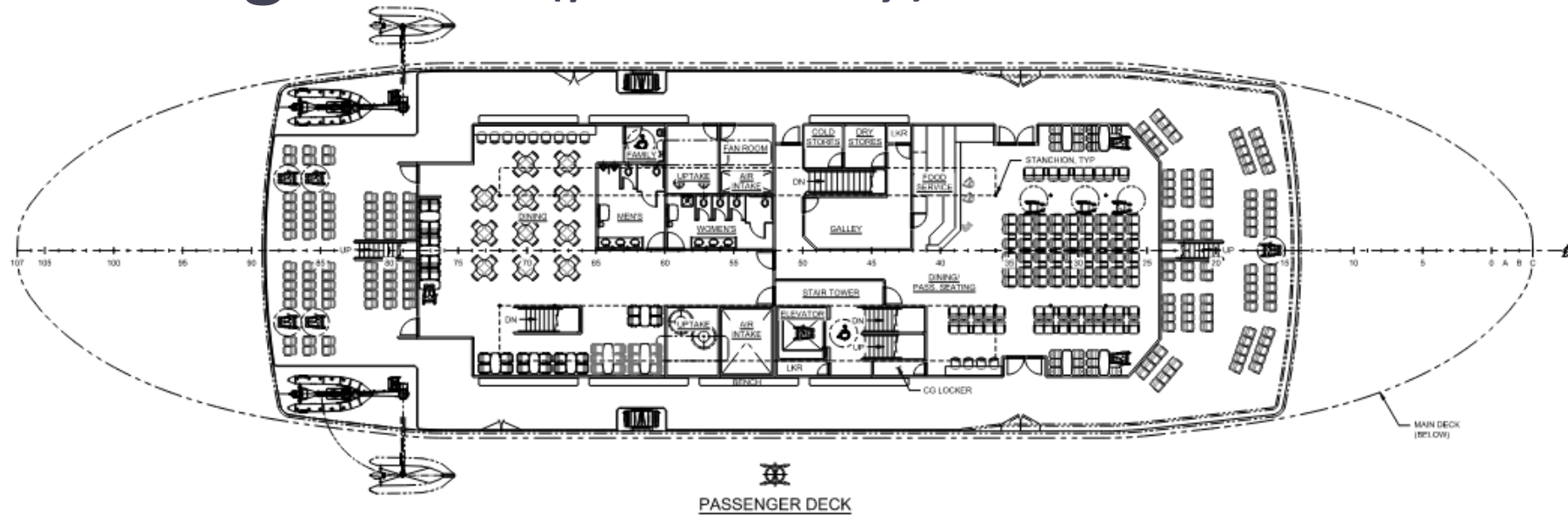
Maneuvering
Speed
Crew Space
Crossing Time
Propulsion
Vehicle Capacity

Hull type
Design Life
Passenger Capacity
Painting
Terminal
Integration

Notional Vessel Design Profile (*preliminary*)

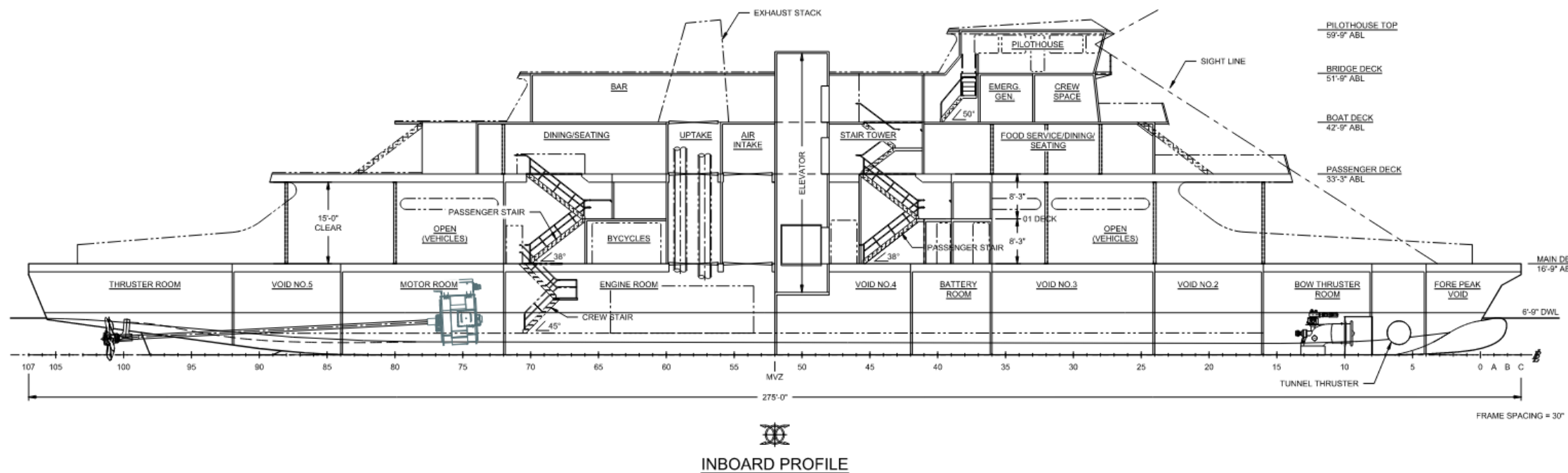


Deck Arrangement (preliminary)



PRELIMINARY

In-board Profile (*preliminary*)



Vessel Design Schedule

	2023				2024				2025				2026					
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Preliminary Design																		
Trade-Off Studies																		
Design Validation																		
Contract Design																		
Design Completed																		
Vessel Procurement																		
Vessel Construction																		

Vessel Design Schedule

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Additional Ways to Provide Comments and ask Questions

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