SFBP Station Boat No. 1

Preliminary Authorization Request

CA Board of Pilot Commissioners | March 26, 2026

110’ Hybrid Pilot Station Vessel • EPA Tier 4 + DPF • 20-Year Service Life

Agenda

Station Boat No. 1 — Preliminary Authorization

1. Vessel Design and Particulars
2. Shipyard and Contracting
3. Project Management
4. Legal Considerations
5. Financing Structure
6. Cost and Contract Structure
7. Cost Summary
8. Preliminary Authorization Request

Vessel Characteristics

Principal Dimensions, Specifications & Key Features

LOA	110'
Beam	28.1'
Draft	9'
Full Load Displacement	257 LT
Lightship Weight	205 LT
Structural Steel Weight	97 LT
Speed	12 kts cruise, 15 kts max
Accommodations	4 crew, 8 pilots
Regulatory	Uninspected, unclassed, ABS load line

Key Design Features

Extended Hull
104 to 110 ft to accommodate CARB mandated emissions equipment

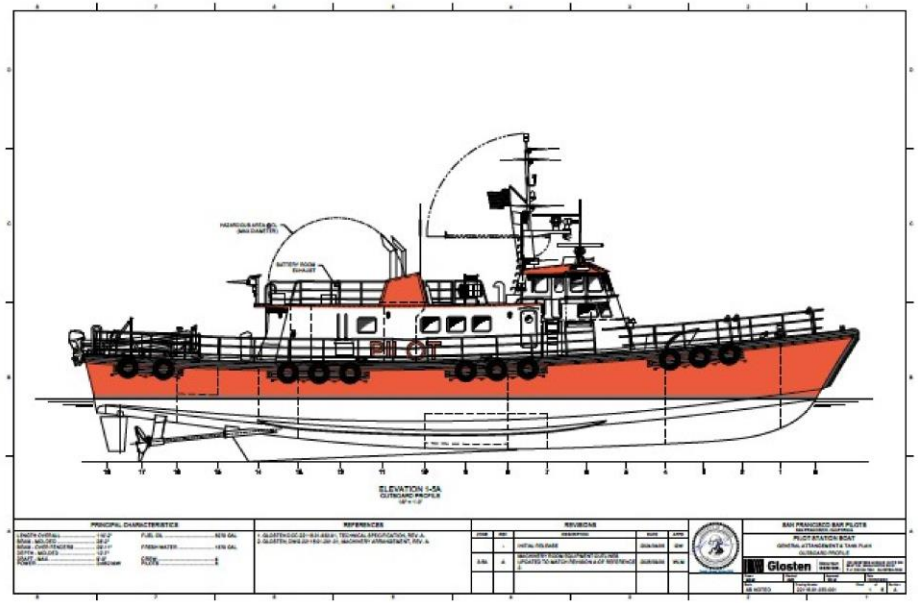
Hybrid Propulsion
Parallel hybrid with PTO/PTI motors for cleaner operation

Energy Storage
240 kWh lithium-ion ESS for pier-side and loiter power

Emission Controls
SCR + DPF on engines and generators

General Arrangement

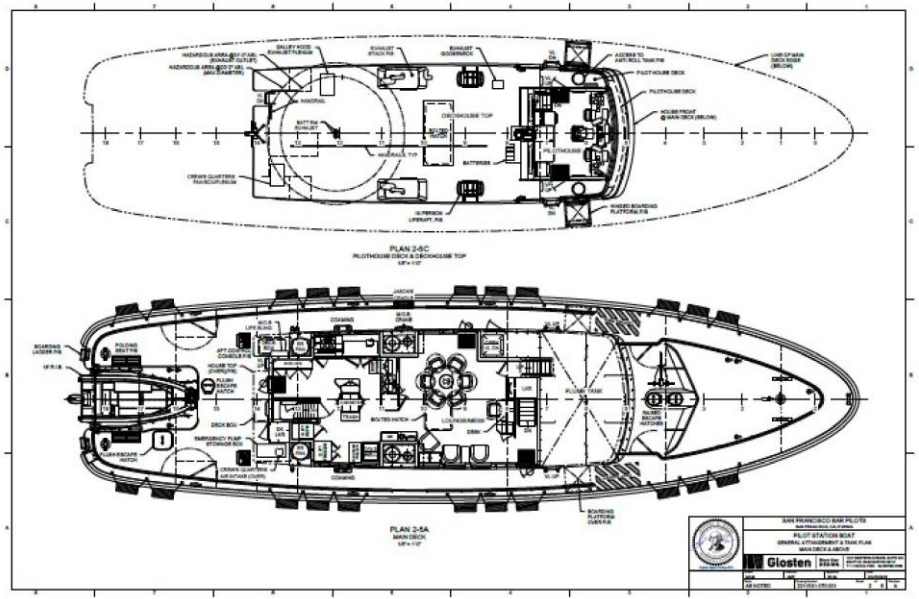
Outboard Profile



Outboard Profile — 110' LOA with extended hull with hybrid propulsion

General Arrangement

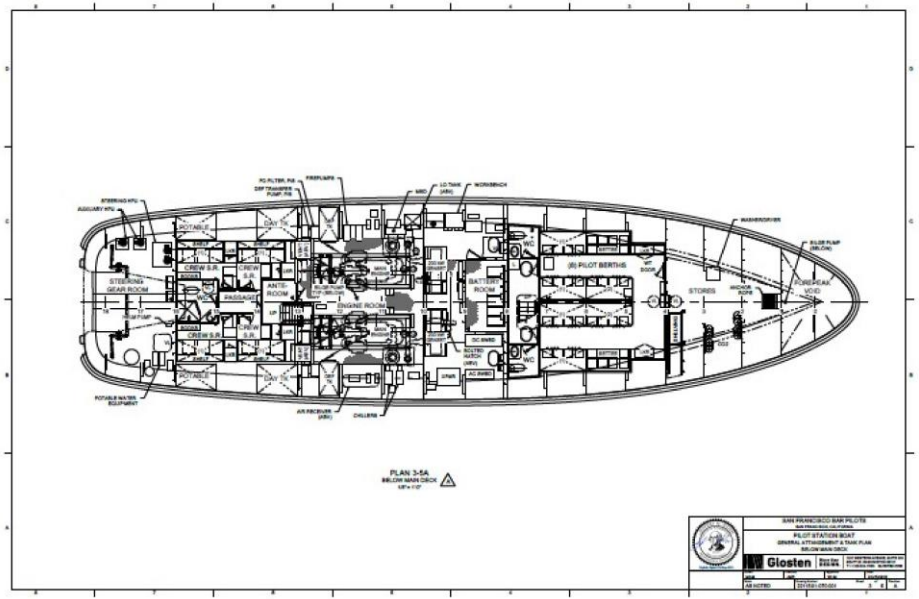
Main Deck Plan



Main Deck Plan — Pilothouse, galley, lounge/mess, and back-deck work area with daughter boat stowage

General Arrangement

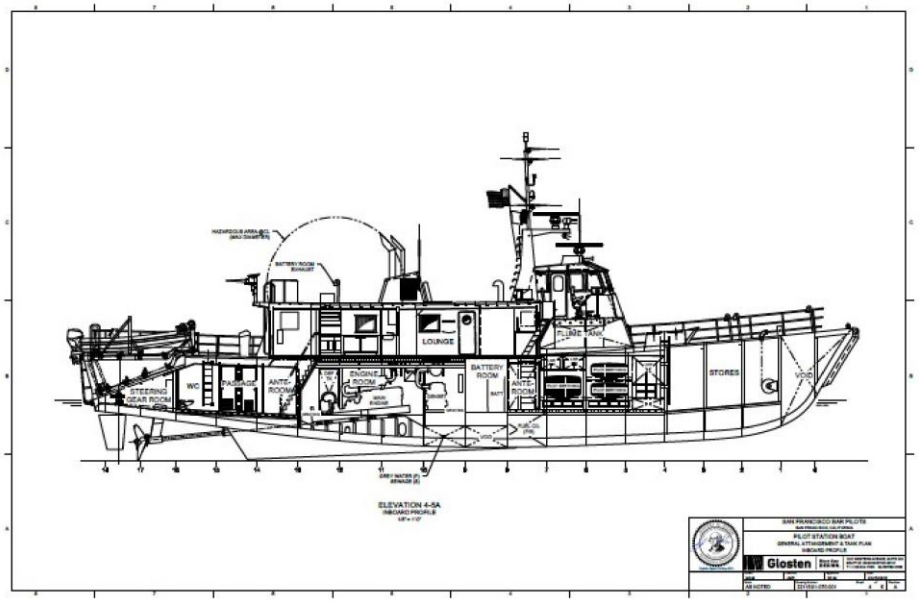
Below-Deck Plan



Below-Deck Plan — Engine room, battery room with HVAC/fire suppression, forward berthing, and tank layout

General Arrangement

Inboard Profile



Inboard Profile — Structural arrangement, watertight bulkheads, and machinery/equipment placement

Daughter Boat

Auxiliary Operations Vessel

Built by Safeboats International

Key Functions

Man Overboard

Primary MOB rescue and recovery operations

Odd Vessels

Transfer pilots to/from vessels too small or positioned for the 110-ft station boat

Close-Quarters

Maneuvering in tight anchorages and alongside difficult hull configurations

Propulsion & Steering

Arrangement Overview

Main Engines & Drivetrain

Two main engines with close-coupled gearboxes mated to straight shafts driving 5-bladed propellers for optimal thrust and efficiency.

Steering System

Twin rudders provide precise steerage and maneuverability in the demanding conditions of San Francisco Bay.

Control Stations

Propulsion and steering controlled from four stations: one on each side of the pilothouse and one on either side of the back deck.

Main Engines

EPA Tier 4 MAN 30-Liter Diesel Engines

Engine Configuration

Two EPA Tier 4 MAN 30-liter diesel engines with integrated SCR + DPF emission controls

Gearbox & Coupling

Close-coupled to 4:1 clutched reduction/trolling gearboxes with rubber coupling for noise reduction

Drive System

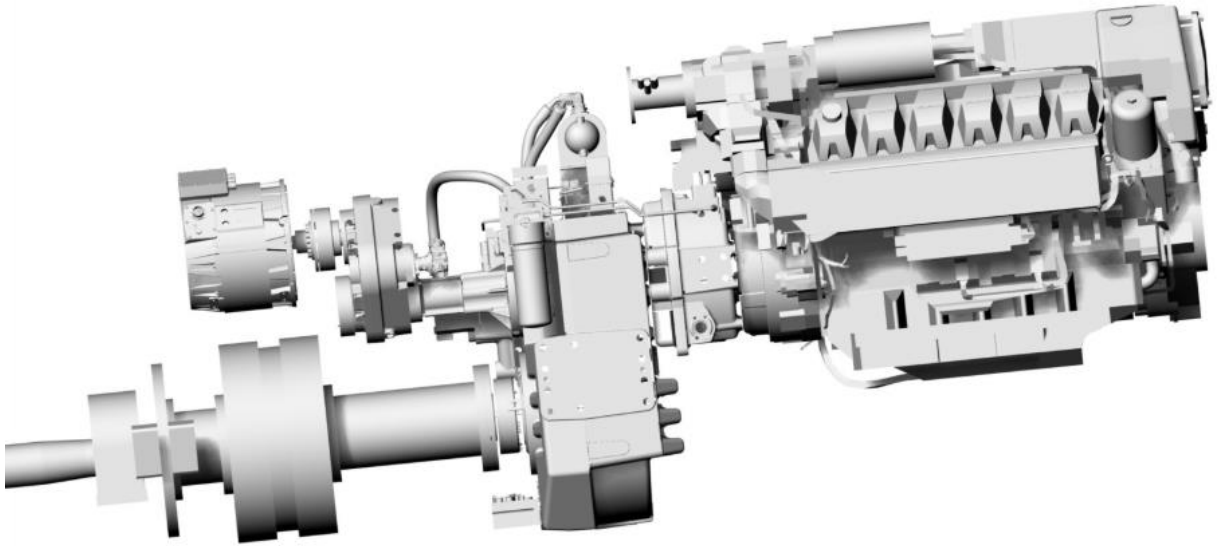
Straight shafts drive 5-bladed propellers for optimal thrust and efficiency

Emission Controls

Compact passive Diesel Particulate Filters (DPF) installed in the engine room

Main Engines

Engine and Drivetrain Configuration



Main engine with close-coupled gearbox, PTO/PTI motor, and Lo-Rez shaft vibration isolation system

Electrical System

Power Distribution Architecture

DC Bus

Ship service gensets supply power directly to a ~750 VDC bus

Main Switchboard

208 VAC 3-phase switchboard powers hotel loads through bidirectional inverter

AC Distribution

Subsidiary AC power panels in the pilothouse, fan room, and galley

Bridge Batteries

12 VDC and 24 VDC battery banks support vital electrical systems on the bridge

Engine Batteries

Two 24 VDC battery systems power vital engine controls, starters, and steering

Charging

Each battery bank is continually charged from the AC bus for redundancy

Gensets

Electrical Power Generation

1

Generator Sets

Two Northern Lights variable-speed 200 kW gensets using Danfoss permanent magnet alternators for reliable power generation

2

DC Bus Integration

Generators supply power through rectifiers directly to the main DC bus for efficient distribution

3

Emission Filtration

Generator exhaust filtered by Diesel Particulate Filters (DPF) to meet environmental requirements

Energy Storage System

Marine Lithium-Ion Battery Packs

240

kWh Capacity

- Marine lithium-ion battery packs installed as part of the electrical integrator’s scope
- Supports hotel loads on the pier, meets power demands when a second genset comes online, and powers propulsion during loiter operations
- Housed in a dedicated battery room with HVAC, firefighting, and gas detection systems

Wheelhouse Design

Enhanced Situational Awareness & Navigational Safety

Ergonomic bridge layout based on the configuration our captains already operate, with targeted improvements to increase safety and efficiency.

Solid-State Radar

Enhanced target detection and reliability for fog-prone San Francisco Bay operations

Integrated Monitoring System

Centralized display of propulsion, auxiliary systems, tanks, CCTV, and weather data

FLIR Infrared Camera

Improved detection in low-light and reduced-visibility conditions; supports search and MOB recovery

Man Overboard Detection

Rapid automated alerting and GPS tracking for improved MOB response capability

Onboard Improvements

Crew Safety, Comfort & Environmental Stewardship

Noise & Vibration Reduction

Pilothouse, lounge/mess, and forward berthing designed to ≤ 65 dB(A). Floating floors and isolation mounts. Acoustic treatment throughout.

Hybrid Propulsion

Cleaner, quieter propulsion reducing emissions. Main engines secured during loitering with electric power. Extended maintenance intervals.

HVAC & Air Quality

Modern climate control with high fresh-air exchange rates and advanced filtration throughout all crew and operational spaces.

Shipyard & Contracting

Nichols Brothers Boat Builders

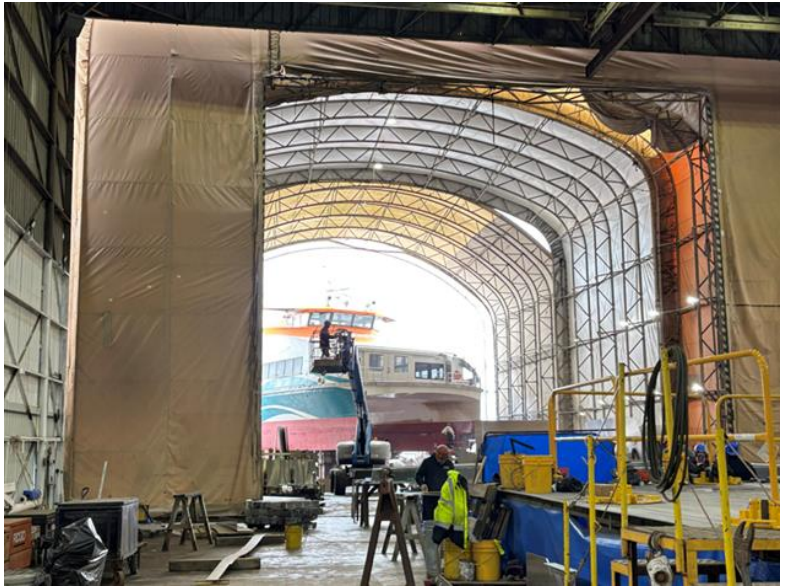
Located in Freeland, WA — Whidbey Island

- 60+ years of U.S. shipbuilding experience
- Tugs, workboats, and ferries
- 200+ vessels delivered
- Experience with California emissions requirements

Representative vessel rendering — Station Boat No. 1

NBBB – Primary Construction Space

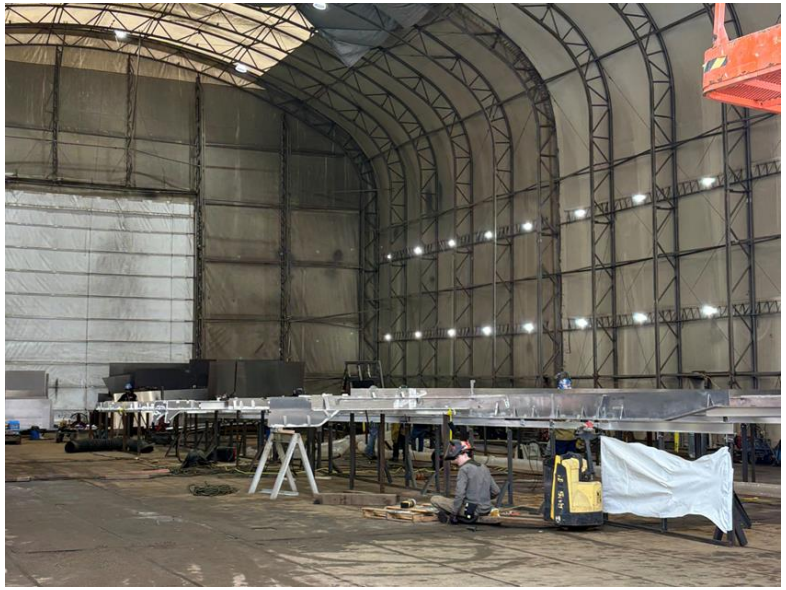
Shipyard Facility Overview



NBBB primary construction facility — covered fabrication building

NBBB Fabrication Space

Steel Fabrication and Assembly



NBBB fabrication and assembly workspace

NBBB – WETA Ferry

Recent Construction Projects

WETA all-electric aluminum ferry under construction

Construction Schedule

Anticipated 18–22 Month Build Period

Contract Signing: June 2026 **Construction Start:** Sept 2026 **Delivery:** Q1 2028

Total Build Period: 18–22 Months

Project Management

Maritime Consulting Partners

Project Management Partner

MARITIME CONSULTING PARTNERS

maritimeconsultingpartners.com

Pacific Northwest

- Extensive experience in marine engineering, program development, and project management
- Engaged on PV Golden Gate project and WETA ferry projects
- Well versed in CARB regulations
- Based in the Pacific Northwest

Project Management Details

Scope of Services

1. Administration of the VCA, ensuring shipyard compliance
2. Schedule review, oversight, and day-to-day monitoring of progress and quality
3. Review of all payment requests and technical/pricing evaluation of change orders
4. Drawing and deliverable review for specification compliance
5. Attendance at project kick-off, weekly, quarterly, and design review meetings
6. Witness all shipyard testing and quality checkpoints; in-process inspections
7. Attendance at all Dock, Sea, and Acceptance Trials with deficiency documentation
8. Shipyard close-out: review of final deliverables (manuals, as-builts, reports)

Legal

Anticipated Legal Costs

1 Construction Agreement

Negotiation and execution of Vessel Construction Agreement between SFBP B&P and NBBB

2 Line of Credit

Negotiation and execution of Vessel Construction Line of Credit between SFBP B&P and Five Star Bank

3 Lender Fees

SFBP B&P responsible for legal fees incurred by Five Star Bank in loan initiation (standard lender practice)

4 Construction Monitoring

Monitoring of construction and delivery: confidentiality, risk of loss transfer, and warranty issues

Financing Structure

Construction Line of Credit

LOC

Construction
Line of Credit

- Tax implications of receiving revenue without depreciation offset — requires debt-first, accrual-match strategy
- Milestone-based disbursements tied to verified progress
- Funds released only when construction milestones are met
- Aligns financing with responsible stewardship of funds

Cost & Contract Structure

Milestone-Based Disbursements

1

Define

Clearly defined milestones and approval processes

2

Verify

Milestone-based disbursements tied to verified progress

3

Release

Funds released only when construction milestones are met

4

Steward

Aligns financing with responsible stewardship of funds

Cost & Contract Structure

NBBB Contract Overview

Fixed-Price Contract

Fixed-price construction contract (~$24M) with clearly defined scope and specifications

Performance Bond

Performance bond included to protect SFBP B&P investment throughout construction

Change-Order Process

Formal change-order process ensures transparency and cost control on all modifications

Quality Control

Formal quality control processes with documented inspections at every milestone

Milestone Payment Schedule - CONFIDENTIAL

Construction Progress-Based Disbursements (1 of 2)

#	Milestone Description	Est. Date	%	Amount
1	Contract Sign	6/1/2026	10%	$2,329,453
2	Receipt of Cut Part Information	7/16/2026	5%	$1,164,727
3	Steel Delivery	9/15/2026	5%	$1,164,727
4	Steel Delivery 2	10/16/2026	5%	$1,164,727
5	Bow Module Structure 95%	12/8/2026	5%	$1,164,727
6	Engine Room Module 95%	12/22/2026	5%	$1,164,727
7	Engineering 95% Complete	12/29/2026	5%	$1,164,727
8	Superstructure Module Complete	1/23/2027	5%	$1,164,727
9	Hull Modules Joined	2/13/2027	5%	$1,164,727
10	Pipe Spools 50% Complete	3/16/2027	5%	$1,164,727

Subtotal Milestones 1–10: $13,962,178

Milestone Payment Schedule - CONFIDENTIAL

Construction Progress-Based Disbursements (2 of 2)

#	Milestone Description	Est. Date	%	Amount
11	Hull Painted	4/24/2027	5%	$1,164,727
12	Main Engines and Gears Received	6/11/2027	5%	$1,164,727
13	Cooling, Fuel, Bilge & Air Installed	7/12/2027	5%	$1,164,727
14	Engines, Shaft, Prop & Rudder	7/31/2027	5%	$1,164,727
15	Danfoss Equipment Received	8/13/2027	5%	$1,164,727
16	Pilothouse Outfitting 95%	9/27/2027	5%	$1,164,727
17	Stage 2 Testing Complete	11/27/2027	5%	$1,164,727
18	Delivery to San Francisco	1/10/2028	5%	$1,164,727
19	Acceptance Trials Complete	2/19/2028	5%	$1,164,727
	Total (All 19 Milestones)		**100%**	**$23,294,531**

Five Star Bank

Line of Credit Partner

Bank Overview

Founded
California-based business bank, est. 1999 (NASDAQ: FSBC)

Bauer Financial
Superior Rating — 5 Stars

Findley Report
Super Premier Performer

IDC Rating
Superior

SBA Status
Preferred SBA lender

Proposed Terms

Rate
Prime + 0% (currently 6.75%)

Interest
Only on funded balances

Loan Fee
0.75%

Good Faith Deposit
~$33K (applied to closing costs)

3rd Party Costs
TBD — parties work to minimize

Milestone Payment Schedule + Financing

Construction Progress-Based Disbursements (1 of 2)

CONFIDENTIAL

#	Milestone Description	Est. Date	%	Amount	Period Interest	Acc. Interest
1	Contract Sign	6/1/2026	10%	$2,329,453	$0	$0
2	Receipt of Cut Part Information	7/16/2026	5%	$1,164,727	$19,655	$19,655
3	Steel Delivery	9/15/2026	5%	$1,164,727	$38,654	$58,309
4	Steel Delivery 2	10/16/2026	5%	$1,164,727	$27,080	$85,389
5	Bow Module Structure 95%	12/8/2026	5%	$1,164,727	$56,780	$142,169
6	Engine Room Module 95%	12/22/2026	5%	$1,164,727	$18,344	$160,514
7	Engineering 95% Complete	12/29/2026	5%	$1,164,727	$10,701	$171,215
8	Superstructure Module Complete	1/23/2027	5%	$1,164,727	$41,930	$213,145
9	Hull Modules Joined	2/13/2027	5%	$1,164,727	$39,310	$252,454
10	Pipe Spools 50% Complete	3/16/2027	5%	$1,164,727	$72,067	$324,522

Subtotal Milestones 1–10: $13,962,178

Milestone Payment Schedule + Financing

Construction Progress-Based Disbursements (2 of 2)

CONFIDENTIAL

#	Milestone Description	Est. Date	%	Amount	Period Interest	Acc. Interest
11	Hull Painted	4/24/2027	5%	$1,164,727	$91,285	$415,807
12	Main Engines and Gears Received	6/11/2027	5%	$1,164,727	$123,170	$538,977
13	Cooling, Fuel, Bilge & Air Installed	7/12/2027	5%	$1,164,727	$88,010	$626,987
14	Engines, Shaft, Prop & Rudder	7/31/2027	5%	$1,164,727	$58,091	$685,078
15	Danfoss Equipment Received	8/13/2027	5%	$1,164,727	$42,585	$727,663
16	Pilothouse Outfitting 95%	9/27/2027	5%	$1,164,727	$153,744	$881,407
17	Stage 2 Testing Complete	11/27/2027	5%	$1,164,727	$222,754	$1,104,161
18	Delivery to San Francisco	1/10/2028	5%	$1,164,727	$169,031	$1,273,192
19	Acceptance Trials Complete	2/19/2028	5%	$1,164,727	$161,824	$1,435,016
	Total (All 19 Milestones)		**100%**	**$23,294,531**		**$24,729,547**

Total All 19 Milestones: $24,729,547

Construction Cost Breakdown

Price Breakdown by WBS Category

CONFIDENTIAL

Category	Price
General Design and Construction Requirements	$4,302,922
Delivery to San Francisco and Acceptance Trials	$235,833
Structure	$1,913,941
Propulsion Plant	$3,096,046
Electrical	$3,969,282
Communications, Navigation, and Ship Control	$1,229,388
Machinery	$4,577,106
Outfitting	$3,280,013
Total	**$23,294,531**

Supplementary Costs

Additional Project Expenses

Project Management

MCP & ad hoc engineering and onsite technical consultant services

Pre-Contract Engineering

Additional design phase engineering for 30L MAN engines

SFBP Oversight

Travel and lodging for pilot staff during construction oversight

Legal & Finance

Attorney fees for contract negotiation, loan initiation, and monitoring

Owner-Supplied Equipment

Miscellaneous equipment provided directly by SFBP for vessel outfitting

Fuel

Fuel costs for sea trials, delivery transit, and commissioning operations

Total Estimated Construction Costs

Station Boat No. 1 — Cost Summary

Item	Estimated Cost
Shipyard base contract	$23,294,531
Engine change (est. adjustment)	$250,000
Change order allowance (2%)	$466,000
Daughter boat contract (Safeboats)	$256,000
Miscellaneous owner-supplied items	$50,000
Contingency for Fuel	$45,000
Construction management (MCP)	$750,000
Ad hoc engineering support	$250,000
Pilot and staff travel/expenses	$150,000
Legal	$50,000
Interest and bank fees – Not Capitalized	$1,500,000
Total Construction Cost	**$27,061,531**

Preliminary Authorization Request

BOPC Joint PV Finance Committee | Construction Phase

1

Project Approval

Approval of the proposed Station Boat No. 1 project as presented

2

Contracting Authorization

Authorization to proceed with shipyard contracting and financing

3

Cost Authorization

Approval of total estimated construction costs of $27.1M

Note: Design and engineering subject to change. Costs and scheduling are best estimates.

Station Boat No. 1 — Ready to Proceed

$27.1M	110’	20 Yr	Q1 2028
Total Estimated Cost	LOA Hybrid Vessel	Planned Service Life	Estimated Delivery