OBJECTIVE

The Maine Department of Transportation (Maine DOT) is requesting proposals from marine propulsion integrator firms for the design and engineering of a complete hybrid propulsion and electrical power system on a new ferry vessel. Integrator information provided should include description of experience and qualifications, outline drawings of equipment, specifications, scheduling, and rough order of magnitude equipment pricing. The objective is to select two competing propulsion system integrator firms for development of engineering from the design phase through the shipyard bidding process. Selection of the vendors will be based on the criteria as outlined in the RFP. Responses are requested by 3:00 pm ET on February 27, 2026.

All contact with Gilbert Associates regarding this RFP must be made through the RFP Coordinator listed below via email. This includes, but is not limited to, questions, requests for clarification and/or additional information and Technical Proposal submissions.

A preliminary virtual meeting will be held for interested parties on January 29, 2026.

RFP Coordinator: Jerry Gilligan - Email: jgilligan@jwgainc.com

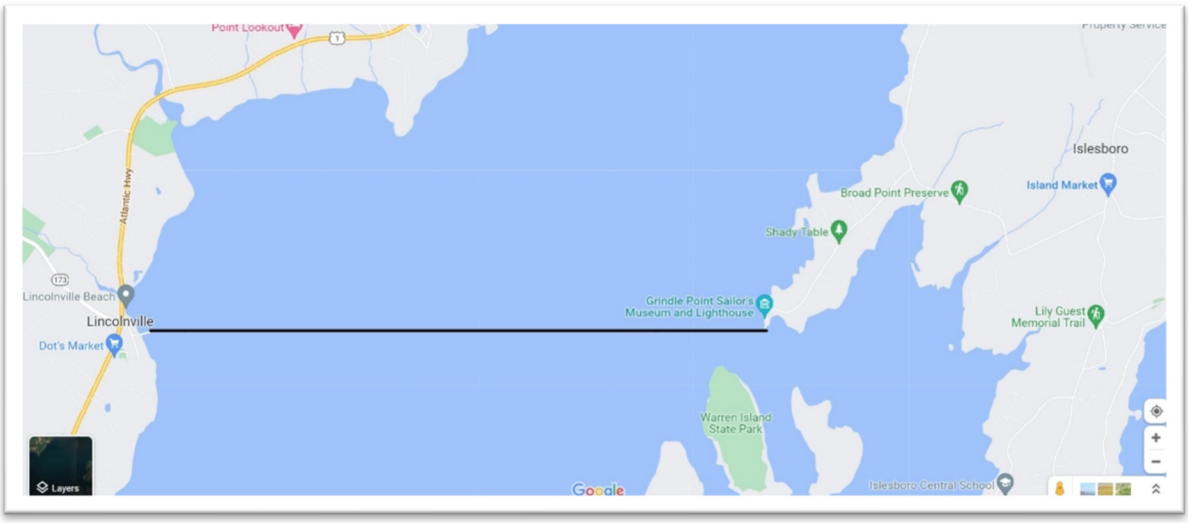
The deadline to submit questions and/or requests is 5:00 pm ET on February 13, 2026. Responses to questions and clarification requests will be circulated no later than the close of business on February 18, 2026.

INTRODUCTION

Gilbert Associates, Inc. is designing a new Subchapter K passenger/vehicle ferry for the Maine Department of Transportation (Maine DOT) for service between terminals in Lincolnville and Islesboro, Maine. The new vessel is a replacement for the 166'-6" LOA passenger/vehicle ferry, "Margaret Chase Smith". Maine DOT has placed importance on the modernization of ferry propulsion to reduce fuel consumption, limit carbon emissions, and support technology development in the marine industry. The preliminary design phase began with general arrangements and hull form development in conjunction with the stability analysis, speed-power calculations, tonnage calculations and preliminary propulsion equipment layout. The ferry is dimensioned to carry approximately 250 passengers and approximately 29 cars or a mix of cars and trucks.

The new ferry will be a 172'-0" long, twin screw, single-ended vessel, with two main diesel engines having hybrid PTO/PTI reduction gears with electric motor on each gear. The design will have two variable speed, automatically paralleled ship service generators, and one emergency generator. Two battery banks will be provided in dedicated spaces below the main deck.

ROUTE



Ferry Route: Lincolnville, ME to Islesboro, ME

The length of a single crossing is 2.8 nautical miles straight across West Penobscot Bay. The vessel operates from 7:30 am to 5:15 pm year-round, making 9 round-trips daily, with fewer trips on Sundays. The one-way trip takes approx. 11 minutes at 12 knots, another 3 minutes to maneuver into the pen, and the vessel is in port for 16 minutes to unload and reload. Unloading and reloading does not happen simultaneously. The vessel is used by commuters to and from the island and sees increased volume in the summertime with tourist travel. The route is considered Partially Protected Waters. Ferry schedules for the last year are included in Appendix A for reference.

HULL GENERAL ARRANGEMENTS

The engine room will be located just aft of midships on the vessel. The space forward of engine room will contain crew head, crew mess, two battery rooms, firefighting equipment, and engineer's stores. An Engineer's Monitoring Station will be in the engine room either accessible through a watertight door to the crew space or from the engine room. Propulsion will be accomplished with two fixed pitch propellers at aft end of the vessel, with conventional rudders.

Fuel tank and lube oil tanks are located aft of engine room. Water and sewage tanks are located forward of the crew space. A 200 kw electric transverse tunnel bow thruster will be provided forward, just aft of the collision bulkhead.

The vessel will be designed to meet the requirements of 46 CFR Subchapter K (Sections 114-122). Intact and damage stability criteria have been analyzed by Gilbert Associates in

conjunction with the location of the watertight bulkheads, location of downflood points, expected lightship weights and centers, and loading for the vessel.

SPEED, POWER AND PROPULSION

A preliminary hull form has been developed for the vessel. It will be a double-chined design with a sponson above the design waterline, with round bow and stern to meet the pens at each end of the run. A copy of the preliminary lines plan has been included in Appendix B. The design cruising speed is 13.5 knots. Based on our calculations, we estimate the augmented resistance including thrust deduction at the propeller to be approximately 21,000 lbs at 13.5 knots. The required SHP at 13.5 knots is approximately 1450 hp total. A summarized resistance prediction is included in Appendix C. Preliminary propeller calculations assume a 68", four blade, fixed-pitch propeller with 0.64 DAR.

It is expected that the vessel will dock at the Islesboro ferry pen overnight and will be connected to shore power for 12 hours. The current power characteristics available at both docks is 3 phase 240 Volt at 200 Amps. Service may be upgraded to 480 volts before the new vessel construction is complete.

Current plans for the new ferry show two Caterpillar C32 main engines, rated 750 bhp each at 1800 rpm. Engines are installed on resilient sound mounts. Hybrid reduction gears, approximately 4.5:1 ratio, with flexible couplings to main engines, will be provided with PTO/PTI auxiliary clutched driveshaft. Electric motors, approximately 200 KW each, will be mounted to the auxiliary driveshafts. Two automatically paralleled, variable speed generators, each approximately 350 KW will be provided for electric propulsion, bow thruster, battery charging, and vessel's auxiliary electrical loads. Two lithium-ion battery banks, each approximately 320 KWh in capacity are installed in independent battery rooms forward in the hull. Emergency generator, 138 KW, will be provided on the 02 deck aft of pilothouse.

Normal ship service electrical load underway will be approximately 30 KW. With required safety systems running, this would rise to approximately 120 KW. Vessel is heated with oil-fired furnace. Only the pilothouse is air conditioned.

Vendor will assist in determination of power distribution between diesel engines and electric motors. Final sizing of generators and batteries is to be determined during the design phase. Any required DC propulsion switchboards, AC ship service switchboard, battery banks, propulsion motors, variable speed drives, shore power connections and onboard transformers shall be included in the overall propulsion system proposal. General Arrangements depicting a preliminary machinery configuration are included in Appendix D.

The following information is requested from the proposers:

- Vendor's qualifications and previous experience with design of marine parallel hybrid systems aboard commercial vessels, and references to previous projects.
- List of key personnel planned for the project and description of their experience with similar projects.
- Overall description of equipment to be provided by the vendor for the hybrid propulsion and electrical system on the vessel.
- Proposed single line diagram of electrical system with major components shown.
- Dimensional drawings of all major components. If drawings cannot be provided at this time, a clear description with overall dimensions and weights shall be provided.
- Suggested battery capacity, battery capacity per unit, total number of batteries shall be noted as well as the expected battery lifetime and expected depletion of capacity over time shall be noted. Minimum and maximum battery charge limitations shall be described. Only lithium-ion type batteries will be considered for this application. The vessel will be subject to ASTM F3353-19 *Standard Guide for Shipboard Use of Lithium-Ion Batteries* and USCG Plan Review Guidance E2-29 for review of Lithium-Ion Battery Systems. MaineDOT would have preference for liquid cooled batteries, but this will be determined during the design phase.
- Auxiliary system requirements for heating and cooling, and necessary environmental controls.
- Technical description of equipment and its operation including but not limited to electrical and mechanical efficiency; electrical equipment description and rating; integration method and control components; motor power and torque curves.
- Rough Order of Magnitude itemized cost estimate for equipment with commissioning services.
- Anticipated cost of design up to and through the shipyard bidding process.
- Description of vendor support during design and construction phases and warranty and maintenance/service information for the post-delivery phase.
- Recommendations for alternate equipment configurations will be considered if well justified by the vendor.

FUNDING

MaineDOT have received a Federal Transit Authority (FTA) grant. The grant will require the ferry to meet Buy America requirements for Rolling Stock. The cost of the ferry components and subcomponents produced in the U.S. must be more than 70 percent of total builder's contract. Final assembly for rolling stock must occur in the U.S. Additionally, rolling stock procurements are subject to the pre-award and post-delivery Buy America audit provisions set forth in 49 U.S.C. § 5323(m) and 49 CFR part 663.

ESTIMATED PROJECT TIMELINE

Final Design Complete for Bids	September 10, 2026
Shipyard Bidding Period	September 15, 2026 – December 1, 2026
Vessel Construction Period	January 15, 2026 – January 15, 2028

SCORING CRITERIA AND WEIGHTS

Technical Proposals will be scored on the criteria below using a 100-point scale. The point values/weights of each criterion are also provided below. It is the intent of MaineDOT to make two awards to the two Highest Qualified Proposers as a result of this RFP process. MaineDOT will contract directly with the two chosen integration firms to provide the engineering necessary to receive bids from shipyards. The "Two Highest Qualified Proposers" are defined as the two proposers whose Technical Proposals receive the two highest scores based on the evaluation criteria stated below. The intention of this RFP is to select two vendors for the shipyard bidding phase, with one being sole-sourced in the shipyard construction contract as the supplier of the propulsion and integration equipment. The vendors will work closely with Gilbert Associates and MaineDOT during design development to ensure technical cohesion with the vessel's structure and auxiliary electrical and mechanical systems. Anticipated fees associated with the design development efforts for the selected suppliers should be delineated in the RFP response. MaineDOT reserves the right to continue with one integrator based on performance, including inability to meet the project schedule and/or the technical requirements of the project. Qualified proposers will be invited to present their proposals to the evaluation team via virtual meetings. The selected integrators will be expected to conduct a virtual meeting with all of the interested shipyards during the construction bidding process.

a. **Experience and Qualifications (20 points):**

   i. Describe the Proposer's experience providing equipment and services similar to those requested for this project. Identify at least 5 projects on which your company has performed work comparable to that required in this RFP in the last 5 years. Include company name, contact name, address, and phone number, as well as a description of the project, dates of design/construction and results. These will be used as reference checks and in scoring this criteria.

   ii. Identify the **key** staff who will be assigned to fulfill the contract requirements (project managers, engineers, technicians). Provide resumes describing their educational and work experiences.

b. **Technical Applicability (25 Points)**

i. Describe the components that will comprise the machinery package and the ability to meet the powering criteria within the hull space available.

ii. Provide an overall performance estimate for the proposed machinery. Include efficiency, fuel economy, longevity, etc.

iii. Provide dimensions of the proposed equipment such that the fit can be assessed by the designers.

iv. Describe the biggest known disadvantage of the proposed propulsion system so that it may be assessed as part of the decision-making process (i.e. crash stop time, battery size, motor size, effects on health and safety of crew, etc.).

v. Describe the redundancy of the system and ability to function in diesel-only mode in case of battery or electric motor failure. Describe the process that would allow the ferry to stay in service if a hybrid assist component or battery fails. The Ferry Service has concerns with the ferry being out of service and waiting for parts that have long lead time.

vi. Provide a suggested list of spare parts that should be purchased to reduce downtime due to repairs.

c. **Cost (20 points)**

i. Provide a cost breakdown of required materials, equipment, engineering design support, construction support, warrantee cost, and markup based on pricing in today's dollars.

ii. Describe how you plan on controlling costs during the design process through construction, limiting price escalation.

iii. Can your company provide a fixed price for materials supplied to the shipyard in Fall of 2026?

iv. Describe how the firm will control and monitor its costs to MaineDOT.

d. **Domestic Content (5 points):**

i. This project will be funded with FTA funds and the total project shall meet Buy America Rolling Stock regulations. Identify where all major components and subcomponents will be sourced. Companies that can provide positive credit towards USA domestic content calculation will be given 5 points. Partial credit will be given based on the percentage of total material that can be domestically procured and manufactured.

e. **Customer Service (20 points):**

i. What is your current workload and ability to make this project a priority for both design and construction?

ii. Provide a schedule of deliverables including key milestones.

iii. Can your company commit to providing experienced personnel through the design and construction process, and be able to absorb any loss of key staff?

iv. Describe how your company will control quality and ensure the constructability of the design plans.

v. Describe how your firm intends to maintain communication with the State and Consultant Designer and respond to conflicts in construction or unforeseen challenges.

f. **Maintenance (10 points):**

i. This ferry will serve the mainland port of Lincolnville, Maine. Describe your company's ability to replace parts and provide diagnostics for maintenance. What is the lead time on major and minor parts? What is the typical time to get a service representative from their current location to Lincolnville, Maine. Where would the nearest service technician travel from (where do they reside)?

ii. What is the maintenance plan for the equipment you are specifying? Do you provide maintenance? Do you have to be the one to repair equipment and machinery? Can you get an outside vendor or third party to perform the work?

iii. The contract with the shipyard/builder requires a one year in service warrantee once the ferry has a USCG Certificate of Inspection from the home port OCMI. Can you provide a 365 day in service warrantee for all equipment and parts supplied by your company? Can you provide any additional warrantee? Following the COI, each day the ferry is out of service for maintenance, the warrantee will be extended up to a maximum of 730 day duration. During the warrantee period the MSFS reserves the right to drydock and/or take the ferry out of service for maintenance and require the in service warrantee to be extended.

g. **Contact Information:** Provide the name, address, phone number and email address of Proposer.

Appendix A Lincolnville-Islesboro Ferry Schedule

Islesboro Ferry Schedule

Summer Schedules

Effective April 8th, 2025

Monday through Saturday

Depart Islesboro	Depart Lincolnville
7:30 am	8:00 am
8:30 am	9:00 am
9:30 am	10:00 am
10:30 am	11:00 am
12:30 pm	1:00 pm
1:30 pm	2:00 pm*
2:30 pm*	3:00 pm
3:30 pm	4:00 pm
4:30 pm	5:00 pm

Sunday

Depart Islesboro	Depart Lincolnville
8:30 am	9:00 am
9:30 am	10:00 am
10:30 am	11:00 am
12:30 pm	1:00 pm

Depart Islesboro	Depart Lincolnville
1:30 pm	2:00 pm
2:30 pm	3:00 pm
3:30 pm	4:00 pm
4:30 pm	5:00 pm

Winter Schedules

Effective 11/02/25 through 04/13/26

Monday through Saturday

Depart Islesboro	Depart Lincolnville
7:30 am	8:00 am
8:30 am	9:00 am
9:30 am	10:00 am**
12:30 pm	1:00 pm
1:30 pm	2:00 pm
3:30 pm	4:00 pm
4:30 pm	5:00 pm

Sunday

Depart Islesboro	Depart Lincolnville
8:30 am	9:00 am
9:30 am	10:00 am
12:30 pm	1:00 pm
3:30 pm	4:00 pm

Depart Islesboro	Depart Lincolnville
4:30 pm	5:00 pm

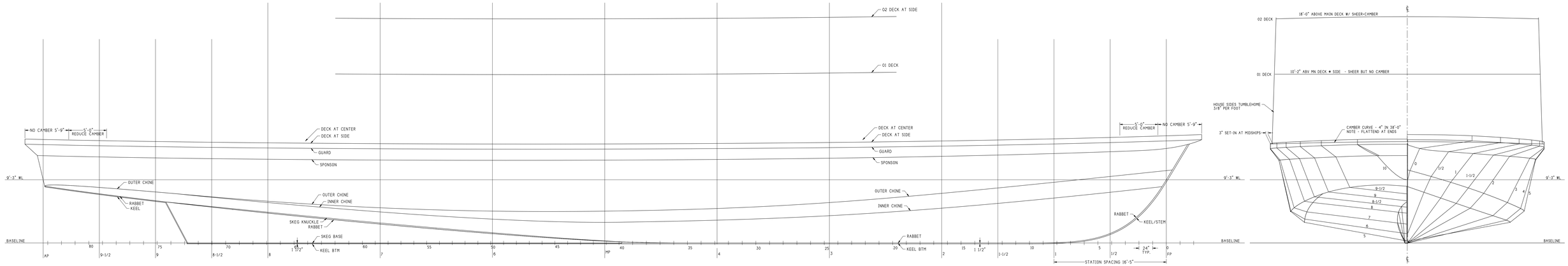
In order to accommodate fueling the vessel:

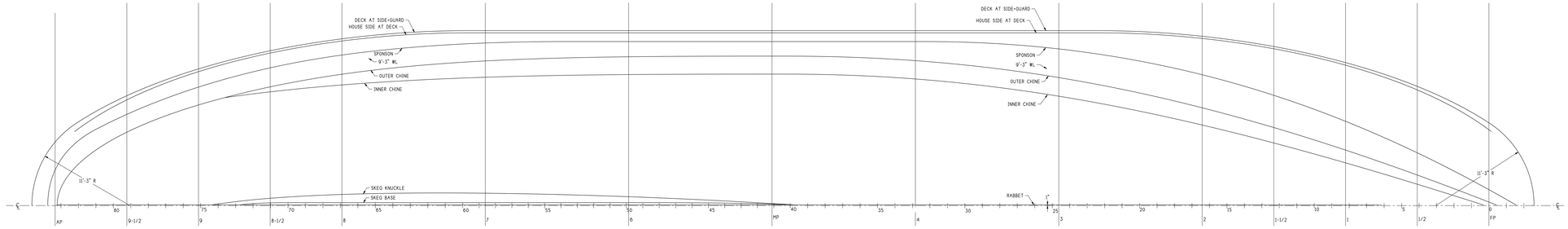
**Summer Schedule - there is no 2:00 PM departing Lincolnville or 2:30 PM departing Islesboro on Wednesdays.*

***Winter Schedule - the 10:00 AM boat will be delayed on Wednesdays.*

On **Thanksgiving, Christmas, and New Year's Day** boats depart Islesboro at 8:30 AM and 3:30 PM and depart Lincolnville at 9:00 AM and 4:00 PM.

NOTE: If you have a non-reserved vehicle or truck leaving Islesboro, please contact the Islesboro terminal for vehicle line up instruction, 24 hours prior to departing from Islesboro.





PRINCIPAL CHARACTERISTICS

LENGTH BET. PERP.	164'-2"
LENGTH ON DECK	172'-0"
MOLDED BEAM	40'-0"
MOLDED DEPTH	14'-6"
MOLDED DRAFT @DWL	9'-3"

ALT	DESCRIPTION	DATE	NAME

GILBERT ASSOCIATES, INC.

NAVAL ARCHITECTS
100 GROSSMAN DR.

MARINE ENGINEERS
BRAINTREE, MA 02184

172 FT LOA FERRY VESSEL

HULL LINES PLAN

DRAWN BY GEG	**DATE** 10/2025
CHECKED BY	**DATE**
APPROVED BY	**DATE**
SCALE 1/4"=1'-0"	
DWG. NO. D-372A-T1	**ALT.** A

SHEET 1 OF 1

* RESISTANCE AND PROPULSION CHARACTERISTICS - SALT WATER * JWGA DATE= 1- 9-2026 TIME= 9:33:57 BY: GEG

D-358B 164'-2" LWL STATE OF MAINE FERRY 12/2025

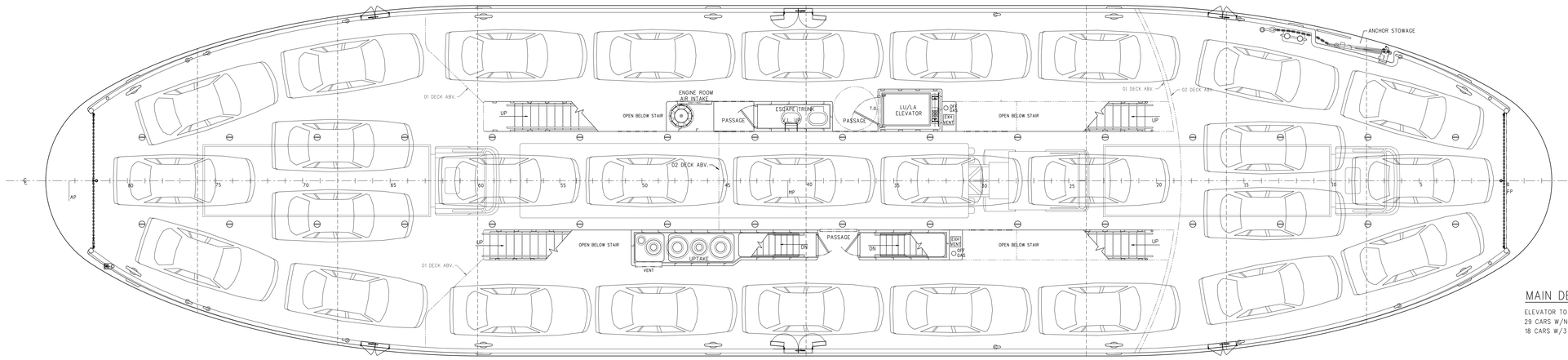
* HULL INPUT DATA *

WATERLINE LENGTH	=	164.170	FT.
WATERLINE BEAM	=	36.220	FT.
MOLDED DRAFT	=	9.250	FT.
DISPLACEMENT	=	721.00	LONG TONS
WETTED SURFACE	=	5652.00	SQ.FT.
LCG AFT MIDSHIPS	=	-0.739	FT.
1/2 ENTRANCE ANG	=	22.50	DEG.
WET TRANSOM AREA	=	10.000	SQ.FT.
MIDSHIP COEFF.	=	0.786	
WATERPLANE COEFF	=	0.766	
PRISMATIC COEFF.	=	0.598	
BLOCK COEFF.	=	0.470	

* APPENDAGE INPUT DATA *

FLAT PLT RUDDER AREA	=	0.000	SQ.FT.
STREAMLND RUDDER AREA	=	88.336	SQ.FT.
STRUT WETTED SURF AREA	=	51.948	SQ.FT.
SKEG WETTED SURF AREA	=	268.392	SQ.FT.
SHAFTING WETTED SURF	=	45.519	SQ.FT.
STBLIZER WETTED SURF	=	0.000	SQ.FT.
BILGE KEEL WETTED SURF	=	0.000	SQ.FT.
BULB TRANSVERSE AREA	=	0.000	SQ. FT.
BULB CTR. HEIGHT	=	0.000	FT.
THRUSTER TUNNEL DIA.	=	3.000	FT.
NO. OF PROPELLERS	=	2	
PROP DIAMETER	=	5.500	FT.

* VALUE *	* VESSEL SPEEDS *									
VESSEL SPEED -KNOTS	4.000	6.000	8.000	10.000	12.000	12.500	13.000	13.500	14.000	14.500
VESSEL SPEED -FT/SEC	6.756	10.134	13.512	16.890	20.268	21.112	21.957	22.802	23.646	24.490
FROUDE NUMBER	0.09296	0.13944	0.18592	0.23240	0.27888	0.29050	0.30212	0.31374	0.32536	0.33698
REYNOLDS NUMBER	0.867E+08	0.130E+09	0.173E+09	0.217E+09	0.260E+09	0.271E+09	0.282E+09	0.293E+09	0.303E+09	0.314E+09
FRICTIONAL COEFF.	0.002127	0.002006	0.001927	0.001868	0.001822	0.001812	0.001803	0.001794	0.001785	0.001777
FRICTIONAL DRAG -LBS	546.11	1159.00	1978.74	2997.93	4211.11	4544.20	4889.08	5245.70	5614.01	5993.95
HULL FORM FACTOR	1.2214	1.2214	1.2214	1.2214	1.2214	1.2214	1.2214	1.2214	1.2214	1.2214
VISC. FORM DRAG -LBS	120.92	256.63	438.15	663.82	932.45	1006.21	1082.57	1161.54	1243.09	1327.22
WAVE MAKING COEFF.	0.000000	0.000006	0.000095	0.000473	0.001437	0.001751	0.002001	0.002190	0.002361	0.002574
WAVE MAKING DRAG LBS	0.01	3.45	97.59	758.82	3321.27	4389.62	5427.57	6404.04	7426.70	8682.74
CORRELATION COEFF	0.000641	0.000641	0.000641	0.000641	0.000641	0.000641	0.000641	0.000641	0.000641	0.000641
CORRELATION DRAG LBS	164.65	370.46	658.60	1029.06	1481.84	1607.90	1739.10	1875.45	2016.95	2163.59
TRANSOM DRAG -LBS	52.15	73.79	53.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
THRUSTER DRAG -LBS	20.55	46.24	82.20	128.44	184.95	200.69	217.06	234.08	251.74	270.04
APPENDAGE DRAG -LBS	96.24	204.24	348.70	528.30	742.09	800.79	861.57	924.41	989.31	1056.27
TOTAL RESISTANCE LBS	1000.63	2113.81	3657.76	6106.37	10873.73	12549.40	14216.96	15845.23	17541.81	19493.82
EFFECTIVE HORSEPOWER	12.29	38.95	89.86	187.52	400.71	481.73	567.57	656.90	754.17	868.02
OUTBD THRUST DEDUCT	0.9039	0.9039	0.9039	0.9039	0.9039	0.9039	0.9039	0.9039	0.9039	0.9039
CENTER WAKE FRACTION	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
OUTBD WAKE FRACTION	0.9084	0.9091	0.9096	0.9099	0.9102	0.9102	0.9103	0.9103	0.9104	0.9104
P/S HULL EFFICIENCY	0.9950	0.9943	0.9938	0.9934	0.9931	0.9930	0.9930	0.9929	0.9929	0.9928
CTR ROTATIVE EFFIC.	0.9992	0.9992	0.9992	0.9992	0.9992	0.9992	0.9992	0.9992	0.9992	0.9992
P/S ROTATIVE EFFIC.	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
AUGMENTED RESIST LBS	1132.93	2395.13	4146.63	6925.07	12335.16	14236.95	16129.72	17978.10	19904.14	22120.19
PER SIDE W/MARGIN	652.	1377.	2384.	3982.	7093.	8186.	9275.	10337.	11445.	12719.

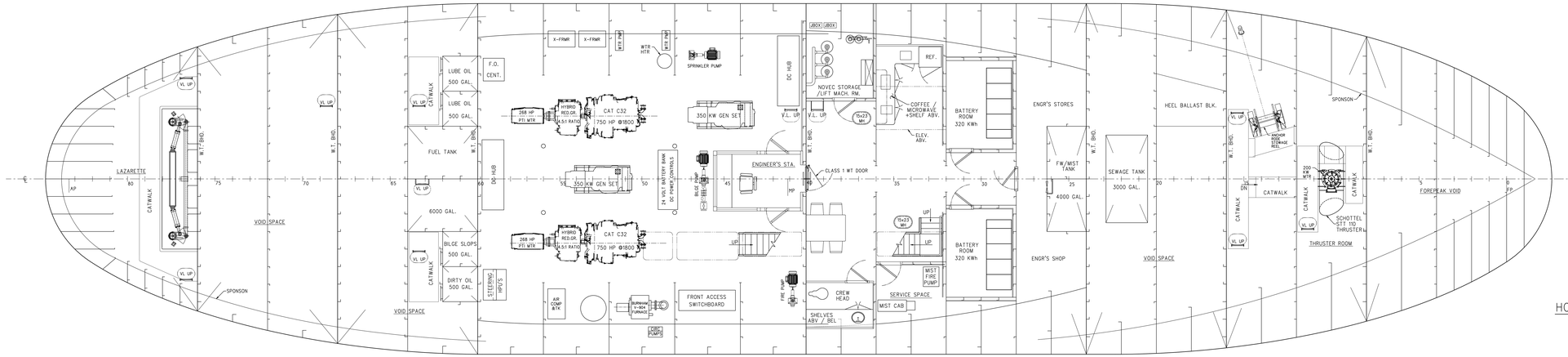


MAIN DECK

ELEVATOR TO UPPER DECKS
29 CARS W/NO TRUCKS
18 CARS W/3 TRUCKS CTR LANE

PRINCIPAL CHARACTERISTICS

LENGTH BET. PERP.	164'-2"
LENGTH ON DECK	172'-0"
MOLDED BEAM	40'-0"
MOLDED DEPTH	14'-6"
MOLDED DRAFT @DWL	9'-3"
GROSS TONNAGE	LT 100



HOLD

ALT	DESCRIPTION	DATE	NAME

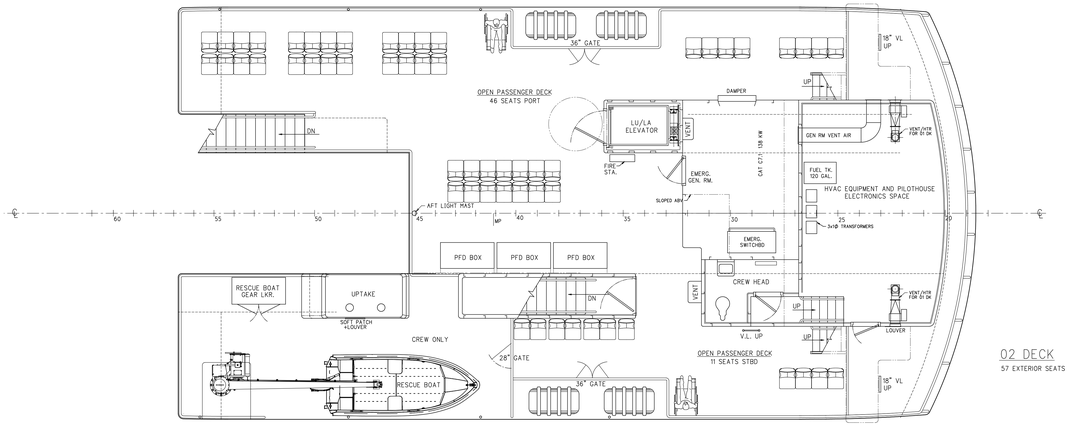
GILBERT ASSOCIATES, INC.
NAVAL ARCHITECTS — MARINE ENGINEERS
100 GROSSMAN DR. — BRAINTREE, MA 02184

172 FT LOA FERRY VESSEL
SINGLE ENDER, TWO TUNNELS

GENERAL ARRANGEMENTS
HOLD AND MAIN DECK

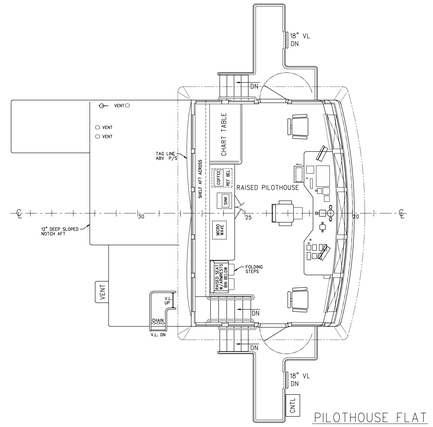
DRAWN BY GEG	DATE 10/2025
CHECKED BY	DATE
APPROVED BY	DATE
SCALE 1/4"-1'-0"	
DWG. NO. D-372A-AI-1	ALT. A

SHEET 1 OF 2

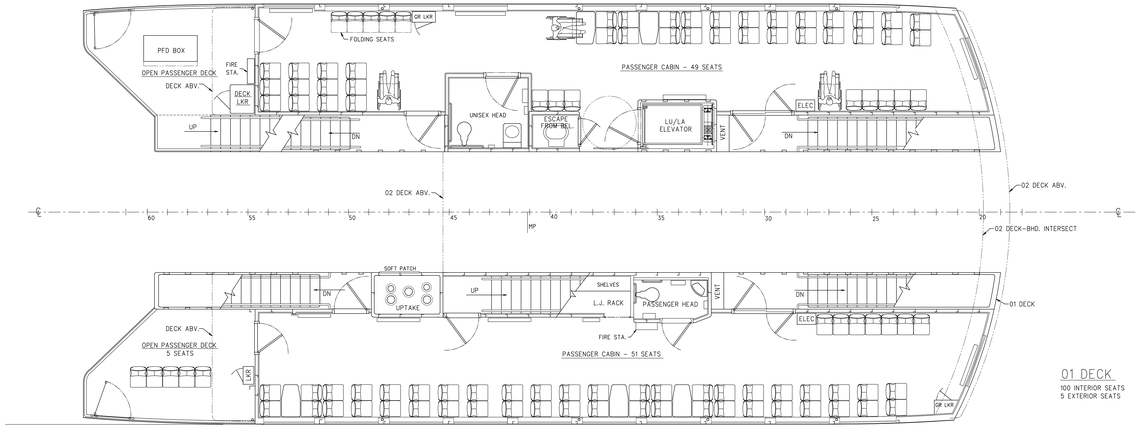


02 DECK

57 EXTERIOR SEATS



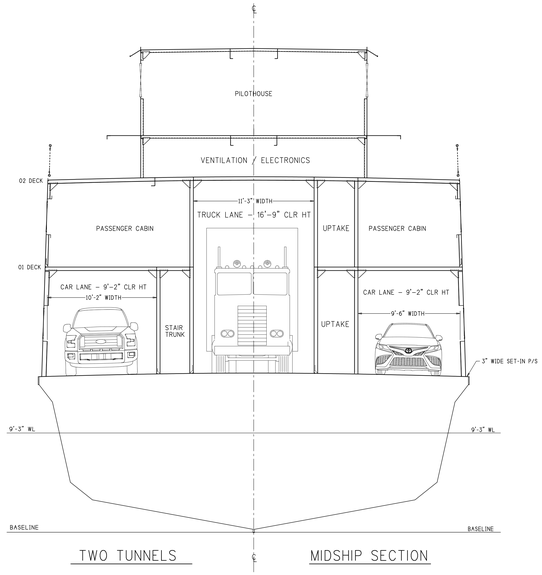
PILOTHOUSE FLAT



01 DECK

100 INTERIOR SEATS

5 EXTERIOR SEATS



TWO TUNNELS

MIDSHIP SECTION

ALT	DESCRIPTION	DATE	NAME

GILBERT ASSOCIATES, INC.

NAVAL ARCHITECTS
100 GROSSMAN DR.

MARINE ENGINEERS
BRAINTREE, MA 02184

172 FT LOA FERRY VESSEL
SINGLE ENDER, TWO TUNNELS

GENERAL ARRANGEMENTS
01 AND 02 DECKS

DRAWN BY GEG	DATE 10/2025
CHECKED BY	DATE
APPROVED BY	DATE
SCALE 1/4"-1'-0"	
DWG. NO. D-372A-A1-2	ALT. A

SHEET 2 OF 2