



SYNERGIST
Mobility Accelerator

Ghostworks Marine - Synergist Mobility Accelerator

Workforce Development White Paper



Prepared for:

Beaver Island Transportation Authority

Prepared By:

Ghostworks Marine, Inc. & Synergist Mobility Accelerator

Date:

July 8, 2025





Table of Contents

Executive Summary	1
1. Problem Statement	1
2. Ghostworks Marine Apprenticeship Framework	2
3. Establishing the Great Lakes and Inland Marine Training Center (at Beaver Island)...	3
4. Operation Benefits to Beaver Island.....	3
5. Funding Sources and Financial Support.....	4
5.1 Michigan Economic Development Corporation (MEDC)	4
5.2 Going Pro Talent Fund.....	4
5.3 Federal Shipbuilding and Maritime Training Programs	4
5.4 U.S. Coast Guard Training Grants	4
5.5 National Guard Training Funds	5
Conclusion	5

Exhibit Listing

Exhibit 1. Emerald Isle Ferry.....	1
Exhibit 2. Training Facility.....	2



Executive Summary

Beaver Island faces a critical challenge in sustaining reliable ferry operations due to staffing limitations, especially for skilled maritime roles. As ferry vessels age and seasonal variability increases, the need for a self-reliant and certified workforce becomes more urgent.

This white paper proposes a scalable, regionally integrated Workforce Development (WFD) pipeline. At its core is a partnership between **Ghostworks Marine, Inc. (Ghostworks)**, **Synergist Mobility Accelerator (Synergist)**, regional training institutions, and the **Beaver Island Transportation Authority (BITA)**, aimed at staffing Beaver Island ferries with locally trained and certified mariners and technicians.

By integrating **hands-on apprenticeship programs**, **academic training**, and **on-the-job sea time accumulation**, BITA can develop a qualified maritime workforce capable of building, operating, and maintaining its essential transportation infrastructure.

1. Problem Statement

Beaver Island's ferry operations are increasingly strained by:

- **Aging vessels (*Exhibit 1*)**, requiring higher technical maintenance.
- **Seasonal operation windows**, which complicate staffing and retention.
- **A lack of licensed mariners** and service technicians based on the island.
- Limited local access to **United States Coast Guard (USCG)-compliant** training programs.

These limitations impact both operational continuity and the long-term resilience of ferry logistics for Beaver Island.



Exhibit 1. Emerald Isle Ferry



2. Ghostworks Marine Apprenticeship Framework

Ghostworks has developed a scalable, paid, **18-month apprenticeship program** in Holland, Michigan for **Carbon Manufacturing Technicians**, culminating in a Plastics-Polymer Engineering Technology certificate from Grand Rapids Community College (*Exhibit 2*). Synergist, working with Ghostworks, is expanding the program to address the broader maritime industry ecosystem beyond the specifics of material science and engineering associated with Plastics-Polymer Engineering Technologies.

Expansion tracks include:

- **Marine Electricians.**
- **Diesel/Bio-Diesel Engine Mechanics.**
- **Advanced Carbon Fiber Manufacturing.**
- **Future areas of focus** will include other **emerging carbon neutral propulsion technologies (electrification and hydrogen); electronics; and critical enabling technologies such as cybersecurity, data analytics, and enabling infrastructure** supporting emerging marine propulsion technologies.

Key Benefits:

- Industry-aligned curriculum.
- Transferable skills for marine, construction, and aviation sectors.
- Classroom costs covered by the **Michigan Going Pro Talent Fund**.
- Program capacity scalable from eight (8) to more than thirty (30) students per class.

Proposed Island Integration:

- Reserved slots for **Beaver Island residents**.
- Co-sponsorship by **BITA**.
- Priority pathways for ferry system employment.



Exhibit 2. Training Facility



3. Establishing the Great Lakes and Inland Marine Training Center (at Beaver Island)

To staff ferries with Coast Guard-licensed captains and crew, this WFD White Paper proposes including a **localized credentialing hub** to support:

USCG Certification Pathways:

- **Master up to 100 Tons – Inland and Great Lakes.**
- **Near Coastal Endorsements.**
- **Able Seaman and Engine Room Ratings.**

Program Requirements:

- **360-720 days of sea time**, depending on endorsement level.
- Structured log keeping and documented watch standing.
- Practical experience aboard the **Beaver Island ferry vessels.**

Facility Components:

- Online curriculum (e.g., Premier Maritime Training, US Captains Training, Maritime Institute).
- Classroom building on-island for rotating instructors.
- “Study abroad” partnerships for **near-coastal sea service accumulation.**

4. Operation Benefits to Beaver Island

Our WFD proposal supports multiple levels of benefits, including Immediate, Mid-Term, and Long-Term, as described below:

Immediate:

- Staffing pipeline for **Beaver Islander** and **Emerald Isle.**
- Local jobs created for **deckhands, engineers, electricians, and mechanics.**
- Reduced reliance on seasonal or transient labor.

Mid-Term:

- Certification of **Beaver Island-based captains.**
- Improved vessel uptime due to local maintenance capabilities.
- Reduced transport interruptions of perishables and medical goods.

Long-Term:

- Exportable workforce supporting warm-water routes in winter.
- Year-round employment prospects for island youth.
- Strengthened island resilience to future infrastructure and workforce shocks.



5. Funding Sources and Financial Support

Implementing a robust maritime training pipeline for Beaver Island will require multi-tiered financial support. Fortunately, several federal and state programs can be leveraged to fund infrastructure, training, staffing, and vessel modernization.

5.1 Michigan Economic Development Corporation (MEDC)

The **MEDC** provides economic incentives, capital access, and job training grants to Michigan-based projects that stimulate employment and infrastructure development. Beaver Island's ferry staffing initiative qualifies for:

- **Michigan Business Development Program:** Grants for job creation and investment tied to maritime workforce expansion.
- **Capital Access Program:** Credit enhancement for ferry-related infrastructure or vessel improvement projects.

Ghostworks is already an MEDC partner and can help facilitate co-sponsored applications on behalf of BITA.

5.2 Going Pro Talent Fund

The **Going Pro Talent Fund** is a Michigan-based WFD grant program offering up to:

- **\$2,000 per trainee** for classroom instruction.
- **\$2,000 per new hire** for on-the-job training.
- **\$3,500 per apprentice** in U.S. Department of Labor-certified apprenticeship programs.

This fund can directly subsidize Beaver Island apprentices in electrical, diesel, or marine operational tracks as well as those enrolled in captain licensure programs. It is ideal for supporting employment opportunities for island youth or transitioning seasonal workers.

5.3 Federal Shipbuilding and Maritime Training Programs

The **Federal Shipbuilding Program**, administered via the **Maritime Administration**, supports regional vessel construction and workforce readiness through:

- **Small Shipyard Grant Program:** Assists with the purchase of equipment and training at small shipyards.
- **Assistance to Small Shipyards Program:** Can fund workforce training, apprenticeship expansion, and facility improvements.

Beaver Island's integration into Ghostworks' carbon manufacturing and marine outfitting projects may qualify the island for inclusion in these funds.

5.4 U.S. Coast Guard Training Grants

The USCG offers limited grants and partnerships for maritime education, particularly:

- Funding for **USCG-approved schools and academies**.



- Support for regional institutions providing **merchant mariner credentialing** and **safety training**.
- Eligible use of **Homeland Security or Federal Emergency Management Agency funds** for disaster-resilient transportation system training (e.g., mass evacuation drills).

A formal partnership with a USCG-recognized program could also allow for creditable **sea service and licensure testing** directly on Beaver Island.

5.5 National Guard Training Funds

Through the **National Guard Bureau** and the **State Adjutant General**, the island may be eligible for:

- **Defense Support to Civil Authorities** mission funding for **search and rescue training**.
- Support for dual-use vessels that could serve both **disaster response and military logistics**.
- Use of maritime training slots for **National Guard members stationed in Michigan**, contributing to regional resiliency.

Such dual-use capabilities are especially relevant for modular ferry platforms capable of emergency response and medical evacuation.

This diverse funding ecosystem can dramatically reduce out-of-pocket costs for Beaver Island's maritime WFD, enabling a scalable and sustainable approach to ferry staffing and regional resilience.

Conclusion

The long-term sustainability of Beaver Island's maritime lifeline depends not only on modernizing its vessels, but also on investing in a **homegrown, certified, and adaptable workforce**. Aligning Ghostworks' shipbuilding technical expertise and training infrastructure with **Synergist's understanding of advanced mobility** creates a comprehensive maritime industry WFD program and model specific to emerging commercial maritime industry needs. Working with BITA to address the operational needs of the Beaver Island ferry system provides the ability to address the needs of a Rural/Island Maritime Transportation ecosystem which has emerged as a critical cog in the economic wellbeing of the State of Michigan.

This white paper presents a clear, scalable pathway to meeting both short-term staffing goals and long-term resilience objectives. The partnership model proposed – built on existing apprenticeship tracks, Coast Guard certification pathways, and on-the-job training – offers a blueprint for island communities nationwide seeking to secure their own maritime futures.