



USDOT Tier 1 University Transportation Center

Bipartisan Infrastructure Law

Semi-Annual Progress Report #1

Federal Agency: Office of the Assistant Secretary for Research and Technology

Federal Grant #: 69A3552348331

Project Title: Maritime Transportation Research and Education Center (MarTREC)

Center Director: Heather Nachtmann, Ph.D., Professor, Department of Industrial Engineering, University of Arkansas, hln@uark.edu, 479.575.3484

Center Manager: Amy Shell, M.S., University of Arkansas shell@uark.edu 479.575.6021

Submission Date: October 30, 2023

DUNS: 1914297450000

EIN: 71-6003252

Recipient Organization: University of Arkansas
800 W. Dickson St.
Fayetteville, AR 72701

Project/Grant Period: Start Date: June 1, 2023
End Date: May 31, 2029

Reporting Period Start Date: June 1, 2023
Reporting Period End Date: September 30, 2023

Report Term or Frequency: semi-annual

Signature: 

MarTREC is a U.S. Department of Transportation Tier 1 University Transportation Center funded through the Office of the Assistant Secretary for Research and Technology. MarTREC was competitively awarded through MAP-21, and the FAST Act. Now through funding of the Bipartisan Infrastructure Law (BIL), MarTREC's theme of Preserving the Nation's Transportation System through Sustainable and Resilient Maritime and Multimodal Supply Chains and Infrastructure, will contribute primarily to four United States (U.S.) Department of Transportation (DOT) strategic goals: 1) Economic Strength and Global Competitiveness, 2) Climate and Sustainability, 3) Safety, and 4) Equity.

MarTREC's vision is to be recognized as the nation's premier source for expertise on maritime and multimodal transportation research and education. Made up of renowned maritime transportation researchers dedicated to transferrable research and inclusive education and workforce development, the MarTREC consortium are University of Arkansas (UARK), Fayetteville, AR; Jackson State University (JSU), Jackson, MS; Louisiana State University (LSU), Baton Rouge, LA; University of New Orleans (UNO), New Orleans, LA; Texas A&M University/Texas Transportation Institute (TAMU/TTI), College Station, TX; and Vanderbilt University (VU), Nashville, TN.

1. Accomplishments

1.1 Consortium-Level Accomplishments

- University of Arkansas has set up the prime award and is working on the consortium partner subawards.
- MarTREC Website and the Directory of Key Personnel were updated.
- MarTREC Data Management Plan was submitted to USDOT on September 18, 2023 and under review.
- Center director (in-person), center manager (in-person), and consortium partners (virtual) attending UTC Kickoff Meeting on July 16, 2023.
- Internal center practices and processes have been created to meet USDOT goals and priorities.
- Planning for hosting the 2025 CUTC Summer Meeting has commenced.

1.1.1 Research

Research Effectiveness Metrics	Progress
# of peer-reviewed journal articles (published, accepted, submitted)	0
# of conference presentations given	0
# of students participating in transportation research projects funded by UTC	0

1.1.2 Leadership

Leadership Effectiveness Metrics	Progress
# of national and regional leadership positions held	44
# of invited talks given	0
# of leadership and research awards received	4

1.1.3 Education and Workforce Development

Education and Workforce Development Effectiveness Metrics	Progress
# of transportation-related degrees conferred	0
# of technician certification programs offered	18
# K-12 outreach programs offered	0

1.1.4 Technology Transfer

Technology Transfer Effectiveness Metrics	Progress
# of existing collaborative partnerships	0
# or new collaborative partnerships formed	0
# of project deliverables submitted	0
# of collaborative research/tech transfer agreements	0

1.1.5 Opportunities for Training and Professional Development

- 44 leadership positions held by MarTREC faculty researchers.

1.1.6 Dissemination of Results – Nothing to report

1.1.7 Plans to Accomplish Goals and Objectives during Next Reporting Period

- Consortium partner subawards will be in place.
- MarTREC Data Management Plan will be finalized and approved.
- Projects will be established and operational.
- The annual MarTREC Advisory Board meeting is scheduled for November 2 and 3, 2023.
- Additional advisory board members will be recruited.

1.2 Project-Level Accomplishments and Plans for Next Reporting Period

1.2.1 Maritime and Multimodal Supply Chain Management – No projects at this time

1.2.2 Maritime Sustainable and Resilient Infrastructure - No projects at this time

1.2.3 Disaster Response and Transportation Planning for Coastal and River Valley Communities – No projects at this time

2. Participants & Collaborating Organizations – Nothing to report

3. Outputs

3.1 Publications – Nothing to report

3.2 Website: martrec.uark.edu

3.3 New Methodologies, technologies, or techniques - Nothing to report

3.4 Inventions, patents, and/or licenses - Nothing to report

3.5 Other products – Nothing to report

4. Outcomes

4.1 Increased understanding and awareness of transportation issues

- Brian Wolshon, Innovator and Influencer, Resilient Roads Roundtable Transportation Industry.
- Demetric Baines, JSU, Mississippi Academy of Science, Best Oral Presentation.
- Heather Nachtmann, Arkansas Research Alliance Fellow, program recognizes scientists and engineers in Arkansas for their contributions to the state’s core research areas.
- Hiba Baroud, Excellence in Teaching Award, Vanderbilt.

4.2 Passage of new policies, regulation, rulemaking, or legislation - Nothing to report

4.3 Increases in body of knowledge - Nothing to report

4.4 Improved processes, technologies, techniques, and skills - Nothing to report

4.5 Enlargement of the pool of trained transportation professionals

- 693 individuals completed transportation certified courses.

4.6 Adoption of new technologies, techniques or practices -Nothing to report

5. Impacts

5.1 Effectiveness of the Transportation System – Nothing to report

5.2 Technology Transfer

- MarTREC is committed to accelerating the pace of the research-to-market cycle for new technologies. Long-term MarTREC technological innovation goals will be met through the establishment of memorandums of understanding and cooperative research and development agreements. These technology transfer mechanisms will facilitate collaboration, cooperation, and coordination among MarTREC consortium institutions and government, industry, academic, and nonprofit partners.

5.3 Increase in the Body of Scientific Knowledge

- 17 Editorial positions

5.4 Transportation Workforce Development

- 693 individuals completed transportation certified courses

5.5 Transfer of Results – Nothing to report

5.6 Commercialization of Technology – Nothing to report

5.7 Adoption of new practices – Nothing to report

5.8 **Opportunities in research and training**

- MarTREC is hosting the 2025 CUTC Summer Meeting. This will be an opportunity for information sharing among UTC teams.

5.9 **Underrepresented Groups** – Nothing to report

5.10 **Development and Dissemination of New Educational Materials** – Nothing to report

6. **Changes/Problems** – Nothing to report

7. **Special Reporting Requirements** – Nothing to report