



U.S. Department  
of Transportation  
**Federal Transit  
Administration**

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Michigan, Minnesota,  
Ohio, Wisconsin

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May 10, 2022

Jean Ruestman, Administrator  
Office of Passenger Transportation  
Michigan Department of Transportation  
P.O. Box 30050  
Lansing, MI 48909

**Via E-Mail**

**RE: FY 2022 Section 5304 Work Program Michigan Department of Transportation**

Dear Ms. Ruestman:

The Michigan Department of Transportation's letter dated May 10, 2022 requested approval to approve the FY 2022 Michigan Department of Transportation (MDOT) Section 5304 Work Program to include six new projects.

These projects will increase the safety and security of the transportation system for motorized and nonmotorized users; increase the accessibility, connectivity, and mobility of people; protect and enhance the environment; promote efficient system management and operation, including training; emphasize the preservation of the existing transportation systems; improve the resiliency and reliability of the transportation system; and provide evidence of local support.

The FY 2022 Section 5304 Work Program for MDOT is approved. If you have any questions concerning this action, please contact Susan Weber at [susan.weber@dot.gov](mailto:susan.weber@dot.gov) or (312) 353-3888.

Sincerely,

Jay Ciavarella  
Director, Planning and Program Development

ecc: Michelle Weber-Currie, Michigan Department of Transportation

# **FY 2022 Section 5304 Work Program**

Submitted by:  
Michigan Department of Transportation  
Office of Passenger Transportation

May 10, 2022

## Budgets

### Section 5304

<b>RECIPIENT</b>	<b>MDOT PROJECT MANAGER</b>	<b>DESCRIPTION OF PROJECT</b>	<b>FEDERAL</b>	<b>TOTAL</b>
Arenac Public Transportation Authority (APTA)	Tina Makarewicz	Transportation Needs Study and Service Plan & Facility Construction Feasibility Study	\$112,000	\$140,000
Beaver Island Transportation Authority (BITA)	Tina Makarewicz	Propulsion Systems Feasibility Study	\$72,000	\$90,000
Benzie Transportation Authority (BTA)	Heather Bowden	Dynamic Air Purification Treatment	\$143,088	\$178,860
Mecosta Osceola Transit Authority (MOTA)	Janet Arcuicci	Transportation Service Feasibility Study & Facility Feasibility Study	\$112,000	\$140,000
Michigan Department of Transportation (MDOT) - Office of Passenger Transportation (OPT)	Marcele Edington	Drug & Alcohol Consortium and Training	\$48,000	\$60,000
Michigan Public Transit Association (MPTA)	Marcele Edington	2023 Statewide Training	\$175,210	\$219,014
			\$662,298	\$827,874

<b>Title</b>	Transportation Needs Study and Service Plan & Facility Construction Feasibility Study
<b>OPT Project Manager</b>	Tina Makarewicz
<b>Project Submitted by</b>	Arenac Public Transportation Authority (APTA)
<b>Problem Statement/Objective</b>	<p>A Transportation Needs Study and Service Plan would provide concrete data to evaluate the current public transportation services provided by APTA throughout Arenac County. This funding will bring the financial resources to conduct a thorough study evaluating the effectiveness of current services, identify additional transportation methods, delivery service processes, and opportunities to most effectively partner with community organizations, agencies, and business consortium to meet consumer transportation needs.</p> <p>The Facility Construction Feasibility Study will provide APTA the financial resources to investigate construction options and next steps to constructing fleet housing, equipment storage, and offices in one location. APTA currently rents monthly with a one year contract, a portion of their current location is shared with another business, the Lessor. Current office space does not allow for administration growth and there is minimal storage space for APTA equipment that is not secure. All transit vehicles are parked outside, exposed to elements and are a potential for vandalism. In addition, APTA's current location, as a Lessee, prevents State and Federal grant monies to make facility changes needed to accommodate low no emissions vehicles.</p>
<b>Description</b>	<p>As a first ever assessment, APTA anticipates the results of the Transportation Needs Study and Service Plan may indicate changes to hours of operation, expanding existing service, identifying new state or local contracts, and/or creating additional programs to meet specific populations. Although Arenac County residents are supportive of public transportation, &lt;.5% of residents utilize the services. Arenac county has 29% of households with one or more children under 18 years of age living at home with only two (2) school districts across 12 townships. 12% of population is someone living alone over the age of 65, and approximately 14% of the population is below poverty; APTA would want the study to share methods to increase the effectiveness of public transportation to connect residents with essential services. This project will be spearheaded by APTA Executive Director. APTA intends to work closely with consultant to assist where needed to gather necessary information required by the consultants. The agency anticipates utilizing inclusive surveys via multiple formats, town hall meetings, and additional forms of outreach suggested/identified by consultants to gather data. APTA plans to use information, maps, charts, and written materials gained from the study to inform Arenac County residents</p>

	<p>of results to further educate on public transportation services. APTA also expects to utilize visual marketing and audio messaging techniques throughout public education and outreach efforts.</p> <p>APTA expects a thorough Facility Construction Feasibility Study will identify the amount of space needed to accommodate current fleet, allow for expansion, transition to low no emission vehicles, and compare cost savings of in-house maintenance vs outsourcing as current practice. The study would also include a projection of financial sustainability. Researching building designs, investigating best real estate options suitable for building or modification, and engaging guidance from MDOT will be part of the process spearheaded by APTA Executive Director. Conducting transportation survey, town hall style meetings, presentations with community organizations, and businesses will provide feedback to gauge public financial support and educate on public transportation services and value.</p>
<b>Deliverables</b>	<p>The Transportation Needs Study and Service Plan would provide the agency with tools/resources to assist with educating the community yet also educate existing staff on service possibilities not previously considered. Analyzing study information will allow APTA to create new approaches to introduce transportation to the public; reducing barriers, minimize unmet needs, identify, and reduce stigma regarding misconceptions of public transportation. APTA would evaluate operations including technology, fleet size, fleet growth potential, support equipment, adequate staffing, and organizational structure. As public knowledge increases, businesses and community organizations will identify ways public transportation will support their industry.</p> <p>The Facility Construction Feasibility study will:</p> <ul style="list-style-type: none"> <li>• Identify the appropriate facility; size, location, amenities to meet transportation needs for Arenac County</li> <li>• Identify adequate staffing size to maintain</li> <li>• Projection of financial sustainability</li> <li>• Identify funding sources; Local, State, Federal, and other grant opportunities</li> <li>• Next steps and create a timeline to advance the process</li> <li>• Provide data to adequately answer questions from State, Federal, and community stakeholders</li> </ul>
<b>Time Frame</b>	<p>October 1, 2022 – September 10, 2023 (Transportation Needs Study and Service Plan); September 15, 2023 – May 15, 2024 (Facility Construction Feasibility Study)</p>

## Budget

Federal	State	Local	Total
\$112,000	\$28,000		\$140,000

## Project Supports:

- Increase the safety of the transportation system for motorized and nonmotorized users
- Increase the security of the transportation system for motorized and nonmotorized users
- Increase the accessibility and mobility of people and for freight
- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight
- Promote efficient system management and operation, including training
- Emphasize the preservation of the existing transportation system
- Improve the resiliency and reliability of the transportation system
- Provide evidence of local support, which may include local funding

<b>Title</b>	Propulsion Systems Feasibility Study
<b>OPT Project Manager</b>	Tina Makarewicz
<b>Project Submitted by</b>	Beaver Island Transportation Authority (BITA)
<b>Problem Statement/Objective</b>	The project objective is to determine if and what type of alternative propulsion system could be implemented on the M/V Emerald Isle and the ferry vessel that was designed in 2012, but not yet constructed, to better meet or exceed the EPA's Clean Air Act.
<b>Description</b>	<p>The M/V Emerald Isle is powered by Twin Caterpillar 3512Bs diesel engines and two (2) 3304 diesel generators, and a 3116 diesel powered bow thruster. These engines are original (vessel launched 1997) and have been rebuilt several times. A study will examine the following issues:</p> <ul style="list-style-type: none"> <li>• Should an alternative propulsion system be considered? If so, what options are feasible?</li> <li>• What would have to be replaced/modified on the vessel to make it functional with the proposed alternate technology propulsion systems?</li> <li>• Would it be financially beneficial over the long term to remain with just upgraded diesel engines that meet the EPA's Clean Air Act?</li> <li>• What would projected costs be for proposed options?</li> </ul> <p>A proposed new vessel was designed in 2012 and has not yet been funded. This vessel was designed utilizing diesel engines. The study would also examine the following:</p> <ul style="list-style-type: none"> <li>• Could the vessel plans be altered to accommodate a different type of propulsion system? If so, what type(s) of propulsion systems would be recommended?</li> <li>• What is the estimated cost for a vessel redesign and construction costs with alternate propulsion systems?</li> </ul> <p>Docks:</p> <ul style="list-style-type: none"> <li>• If electric or another energy source is considered a viable alternative to diesel, what are the infrastructure needs and projected costs required on the docks?</li> <li>• Does the Island have these capabilities?</li> <li>• Are they available at the mainland dock?</li> <li>• What are estimated infrastructure costs and costs of charging/storing fuel?</li> </ul> <p>The target group is the BITA and those using ferry transportation from the mainland to Beaver Island. It would also be useful for other ferry providers in Michigan who are considering moving away from diesel propulsion to alternative propulsion technologies.</p>

<b>Deliverables</b>	<p>The anticipated work product of the Propulsion Systems Feasibility Study would be to provide a final report from a naval architectural firm with their recommendations, and a tentative schedule to accomplish the tasks required to meet a possible repower and infrastructure support at dock locations. The report would include the following:</p> <p>M/V Emerald Isle:</p> <ul style="list-style-type: none"> <li>• What type of alternative propulsion system is recommended if possible?</li> <li>• What would have to be replaced/modified on the vessel?</li> <li>• What would be the average and maximum traveling speed?</li> <li>• An estimated cost/specifications for a naval engineer to draft plans for another type of propulsion system</li> <li>• Effects on space and weight</li> </ul> <p>2012 Vessel Plans for New Ferry:</p> <ul style="list-style-type: none"> <li>• What type of alternative propulsion systems are available and recommended if possible?</li> <li>• What would have to be replaced/modified on the vessel?</li> <li>• What would be the average and maximum traveling speed?</li> <li>• An estimated cost/specifications for a naval architect to draft plans for another type of propulsion system</li> <li>• Cost analysis of diesel vs alternative fueled engines/maintenance/energy usage</li> <li>• Effects on space and weight</li> </ul> <p>Beaver Island/Charlevoix docks:</p> <ul style="list-style-type: none"> <li>• If electric or another source is available, what are the infrastructure needs required on the docks?</li> <li>• Does the Island and the City of Charlevoix have the suggested capabilities?</li> <li>• Estimated cost and specifications for engineering to be completed</li> </ul>
<b>Time Frame</b>	November 1, 2022 – September 30, 2024

**Budget:**

<b>Federal</b>	<b>State</b>	<b>Local</b>		<b>Total</b>
\$72,000	\$18,000			\$90,000



## **Project Supports:**

- Increase the safety of the transportation system for motorized and nonmotorized users
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- Increase the accessibility and mobility of people and for freight
- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight
- Promote efficient system management and operation, including training
- Emphasize the preservation of the existing transportation system
- Improve the resiliency and reliability of the transportation system
- Provide evidence of local support, which may include local funding

<b>Title</b>	Dynamic Air Purification Treatment
<b>OPT Project Manager</b>	Heather Bowden
<b>Project Submitted by</b>	Benzie Transportation Authority (BTA)
<b>Problem Statement/Objective</b>	Public transportation often provides compact rider areas where a concentrated number of passengers are in close proximity to each other creating a difficult situation to eliminate the spread of diseases. Plastic shields on buses provide some direct protection from sneezing and coughing for BTA's drivers, but what about the recirculating air that in Michigan, is utilized probably 7-8 months a year in a northern climate? Is there a way to follow commercial airline air purification technology which make flying safer? BTA believes that cleaner air on buses will offer improved economic vitality, productivity, and efficiency for all stakeholders. This project would be an investment when looking at the catastrophic health issues caused by the airborne spreading of COVID-19.
<b>Description</b>	<p>BTA proposes being a pilot test bus/lab for Renew or an equivalent system, an air-purification system which kills 98% of SARS-COV-2 particles similar to the commercial airline industry; but is more cost effective. If successful, it will improve safety of the transportation system by reducing the transmitting of illness and the results will be transferred to transit systems statewide through Tech Talks and MDOT conferences. This innovative approach to conventional OEM air handling systems and is essential to combat airborne impurities. This project is deemed critical and will be administered by the BTA Executive Director and BTA staff will assist in collecting air quality data, writing reports, and assisting in presentations. One vendor called Luminator, has a system called Renew™ Air Treatment System that dispenses Grignard Pure, an antimicrobial air treatment through a connected, technologically advanced system that measures and automatically adjusts the amount that is dispensed in the air. As conditions change, such as fluctuations of fresh air intake throughout the route, the system maintains an effective level to continuously kill virus particles in the air. Grignard Pure kills 98% of SARS-COV-2 particles in the air, where transmission is most likely. The adaptive system utilizes on-board sensors to automatically adjust the system based upon the fresh air intake and other conditions in the vehicle, maintaining proper concentration for efficacy, even with doors opening and closing as passengers embark and disembark the vehicle. This system is:</p> <ul style="list-style-type: none"> <li>• Easy to use — no dilution, mixing or protective gear is required</li> <li>• Safe for all on-board surfaces including upholstery and electronics</li> </ul> <p>Other ultraviolet systems are available and BTA will conduct its due diligence prior to publishing specs for its RFP.</p>

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<b>Deliverables</b>	<p>It is unknown how to best sample air quality and circulation claims. Various systems have sought outside labs and published white papers to verify its claims. BTA would ideally document air quality in buses before and after showing improved results that can be shared throughout the industry. Generally, sharing information is best by the state association, Michigan Public Transit Association (MPTA) at monthly meetings and MDOT conferences have topical sessions on best practices or monthly Zoom Tech Talks that appear to be well attended and popular.</p> <p>The BTA Board has pressed the Management Team to be the cleanest and safest transportation agency and BTA is one of the first to utilize electrostatic sanitizing systems just weeks after the COVID-19 outbreak in March of 2020. BTA will pledge on-going operational costs for purchasing Renew products. BTA has also been successful in MMRMA Rap Grants for security cameras and keyless entry pads and will immediately seek funding to reduce airborne contaminants which could harm passengers. A proposal will be submitted for some of the program costs. Finally, Commercial Driver Licensees are a precious commodity. What is it worth to improve the health of even a small percentage of BTA's 36 drivers? BTA feels that an investment in Renew will make them more resilient and improve the reliability of their services with healthier drivers.</p>
<b>Time Frame</b>	October 1, 2022 – March 1, 2023

**Budget:**

<b>Federal</b>	<b>State</b>	<b>Local</b>	<b>Total</b>
\$143,088	\$35,772		\$178,860

**Project Supports:**

- Increase the safety of the transportation system for motorized and nonmotorized users
- Improve the resiliency and reliability of the transportation system

<b>Title</b>	Transportation Service Feasibility Study and Facility Construction Feasibility Study
<b>OPT Project Manager</b>	Jane Arcuicci
<b>Project Submitted by</b>	Mecosta Osceola Transit Authority (MOTA)
<b>Problem Statement/Objective</b>	A Transportation Needs Study and a Service Plan would provide concrete data to the current public transportation services provided by the MOTA throughout both Mecosta and Osceola Counties.
<b>Description</b>	<p>A thorough study evaluating the effectiveness of the current services, identify additional transportation methods, delivery services process, and business consortium to meet consumer transportation needs.</p> <p>As a first ever assessment, MOTA anticipates the results will indicate changes to hours of service, expanding service, identifying new state and/or local contracts, and/pr cresting new programs to meet the needs of the people. Although MOTA area residents are supportive of public transportation, only approximately 15,000 rides per year come from the combined population base over 63,000 residents in both counties. While the majority of the rides occur in Mecosta (most populated), Osceola County remains under-served due in large part to the large state forest in the center of the county which has no public roads in it. MOTA desires to increase the usage of its services in Osceola County and in outlying under-served areas of Mecosta County as well. While Mecosta County has a poverty rate of 13.6%, Osceola County's rate is 14.2% according to the latest U.S. Census. This project will be overseen by the Executive Director who will coordinate with the consultants and work closely with the townships, villages, and cities in MOTA's service area.</p> <p>The Facility Construction Feasibility Study will identify the need for an appropriate location of an appropriate facility considering MOTA's present fleet size and project needs.</p>
<b>Deliverables</b>	<p>MOTA expects to receive clear direction and guidance to either upgrading the present facility or moving to an appropriate more centrally located facility in their service area, and adjusting the service provided for increased effectiveness and greater utilization.</p> <p>MOTA expects a thorough study will identify the amount of space needed to accommodate current fleet, allow for expansion, transition to low/no emission vehicles. The study would also include a projection of financial sustainability. Researching building designs, investigating best real estate options suitable for building or modification, and engaging guidance from MDOT will be part of the process spearheaded by the MOTA Executive Director. Conducting a transportation survey, town hall style</p>

	meetings, presentations with community organizations, and businesses will provide feedback to determine both public financial support and educate on public transportation services and value.
<b>Time Frame</b>	October 1, 2022 – January 15, 2023

**Budget**

<b>Federal</b>	<b>State</b>	<b>Local</b>	<b>Total</b>
\$112,000	\$28,000		\$140,000

**Project Supports:**

- Increase the security of the transportation system for motorized and nonmotorized users
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight
- Promote efficient system management and operation, including training
- Improve the resiliency and reliability of the transportation system
- Provide evidence of local support, which may include local funding

<b>Title</b>	Drug & Alcohol Consortium and Training
<b>OPT Project Manager</b>	Marcele Edington
<b>Project Submitted by</b>	Michigan DOT – Office of Passenger Transportation
<b>Problem Statement/Objective</b>	The Michigan public transit industry must comply with several pieces of legislation published by the United States Department of Transportation (USDOT). This legislation was enacted to prevent drug and alcohol misuse by the providers of public transportation nationwide and is critical to the safety of transportation in Michigan. These public transportation organizations require technical assistance and training in order to administer these compliance programs effectively and efficiently.
<b>Description</b>	This contract provides third-party administration of all necessary requirements (except policy formulation including drug and alcohol policy templates provided to new transit agencies as well as policy review and approval of new policies as well as existing transit policies) to ensure compliance with the USDOT (FTA and FMSCA) to comply with the federal regulations for drug and alcohol testing. This contract is available to any governmental agency or approved contractor within the State of Michigan. User agencies that are regulated by FTA and may include transit agencies such as independent and county operated transit systems, covered contractors, maintenance contractors whose employees perform safety-sensitive functions as defined by 49 CFR Part 655 and user agencies that are regulated by FMCSA may include transit agencies such as private nonprofit, covered contractors, maintenance contractors, whose employees perform safety-sensitive functions as defined by 49 CFR Part 382.
<b>Deliverables</b>	Services provided under this contract include complete drug and alcohol testing services including the collection of the specimen at a local facility, analysis of the specimen, initial and confirmation testing, Medical Review Officer services, random selection, technical assistance, and Substance Abuse Professional referral services. It is also understood that the contract per-test price per urine drug test (DOT and NON-DOT) and per breath alcohol test (DOT and NON-DOT) includes all services provided at approved collection facilities only. The Consortium program will be billed directly to the transit agencies (testing, collection site identification, MRO identification, etc.). The consultant will ensure policies for all rural agencies are following current regulations and provide training to all rural agencies on the drug and alcohol program, including reasonable suspicion. These actions will result in the following: minimized compliance costs, simplified compliance procedures, identified and coordinated compliance resources, education/training, clarification, advice, and reduced state administration and involvement with program.
<b>Time Frame</b>	July 2022 – July 2027

## Budget

<b>Federal</b>	<b>State</b>	<b>Local</b>	<b>Total</b>
\$48,000	\$12,000		\$60,000

## Project Supports:

- Increase the safety of the transportation system for motorized and nonmotorized users
- Increase the security of the transportation system for motorized and nonmotorized users
- Promote efficient system management and operation, including training

<b>Title</b>	2023 Statewide Training
<b>OPT Project Manager</b>	Marcele Edington
<b>Project Submitted by</b>	Michigan Public Transit Association (MPTA)
<b>Problem Statement/Objective</b>	<p>Michigan has approximately 150 public transit and specialized transportation service agencies who receive funding and/or assistance through MDOT's public programs. These agencies employ a wide range of personnel - managers, supervisors, operators/drivers, dispatchers, trainers, mechanics, maintenance workers, and others. The transit agency staff requires training on various topics internally and periodic training efforts vary greatly among the transit service providers, there is a need for a federal/state sponsored training program.</p> <p>The objective of the training program is to supplement local training efforts; improve the quality of service of the transit and specialized services transportation systems; and increase the knowledge, skill and ability of transit employees and management; improve the efficiency and cost effectiveness of MDOT's current training efforts; and improve transit safety.</p>
<b>Description</b>	To provide training opportunities statewide to increase the knowledge, skills, and ability of local transit agencies and enhance efficiency in the workplace.
<b>Deliverables</b>	<p>The 2023 Statewide Training will provide the following:</p> <ul style="list-style-type: none"> <li>• Statewide transit conference is geared toward advancing public transit in the State of Michigan.</li> <li>• Frontline training provides training for drivers, dispatchers, and supervisors.</li> <li>• Equipment seminar provides training for maintenance staff.</li> <li>• Bus Rodeo showcases small bus drivers' driving skills and knowledge.</li> <li>• Accounting training ensures that all transit agencies know and understand the laws governing the local bus reimbursement program related to financial management and implementing rules and accounting/audit guidelines.</li> <li>• Rural Transit Managers Workshop provides training specific to rural transit providers and specialized transit providers.</li> </ul>
<b>Time Frame</b>	October 1, 2022 – September 30, 2023

## Budget

Federal	State	Local	Total
\$175,210	\$500	\$43,304	\$219,014



## **Project Supports:**

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