



Detroit Department of Transportation

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To: Council Member Angela Whitfield-Calloway
From: Detroit Department of Transportation
Date: March 21, 2024
Re: Responses to Budget Questions to Detroit Department of Transportation

Please find below responses to your questions sent on 3/15/2024, regarding the proposed Fiscal Year 2025 Proposed Budget for the Detroit Department of Transportation (DDOT).

- 1. Please explain why DDOT failed to use federal funds to purchase electric buses during the current fiscal year. In 2021, Congress passed a bi-partisan spending bill that included \$7.5 Billion for local governments to purchase electric buses. In 2022, Congress added another \$1 Billion to the amount available. DDOT failed to purchase any electric buses during this period. This is clearly a lost opportunity.**

The Detroit Department of Transportation (DDOT) did not seek grant funding for electric buses purchased in 2021 or 2023. DDOT is in the process of applying for the Low-No Emissions and Grants for Buses and Bus Facilities Competitive Programs FY2024. The grant application is due on April 25, 2024. With this grant award, DDOT will be able to purchase additional electric and hybrid buses that can be supported through our current energy capacity. The grant will place DDOT in a position to enhance the infrastructure required to support electric vehicles (EV).

Having on route chargers and terminal chargers will allow the department to operate electric vehicles for a longer time without interrupting the service. DDOT is concentrating on this approach based on the lessons learned from DDOT's Electric Vehicle (EV) pilot program and other transit agencies' various approaches. DDOT's vision is to have ample infrastructure resources readily available prior to investing in electric buses.

DDOT participated in the 2022 federal grant application and received a federal award of \$6,912,404.00. The award received for the department was to buy (4) battery electric buses and install (2) charging equipment in cooperation with the state's plan to eliminate greenhouse gas emissions by 2050. Currently, we are working with the Federal government to receive the funds to establish a contract to complete the plan.

DDOT has discovered two (2) major challenges associated with EV buses:

1. Battery capacity; and
2. Workforce development.



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DDOT is actively working with other transit agencies with more extensive experience with EV buses regarding “lessons learned” with this technology, particularly in the two areas referenced above.

It is the intent of DDOT to build out the infrastructure (i.e., charging capacity) with a focus on utilizing energy more efficiently, thereby lowering operating costs.

In FY2025, DDOT is planning to initiate a pilot project with hydrogen buses as part of the Zero Emission Bus (ZEB) Plan.

2. Please provide a brief plan of action for converting the present DDOT fleet to an electric bus fleet.

DDOT is currently looking to incorporate fuel cell and battery electric technologies into our zero-emission transition plan that help reduce greenhouse gas emissions. DDOT’s plan is to procure zero-emission buses (ZEB) as part of our fleet replacement plan over the next ten years. The major transition will be in 2034, where over 100 buses will be emission-free with a 3.68 MV energy capacity to support electric vehicles. By concentrating on the expansion of the zero-emission bus replacement, the strategic approach to operating the ZEBs will have minimal cost, and the conversion of energy usage to support futuristic technology will allow the department to adapt to new norms seamlessly.

3. Please provide a brief plan of action for replacing existing bus shelters with modern solar powered bus shelters with customer friendly features such as lighting, emergency call boxes, security cameras, and charging stations.

DDOT has plans underway to install 60 bus shelters by next year. The first 25 will start being installed beginning in July 2024, with the next 35 coming in Q4 of 2024 and Q1 of 2025. Amenities included in each shelter are a bench, and solar power for lighting and USB charging. DDOT has included solar-powered lighting in all shelters installed since 2017, and solar-powered USB charging in all shelters installed since 2020. DDOT will work with the appropriate City departments to explore options of emergency call boxes and security cameras in shelters.



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- 4. Please provide a plan of action for bus driver safety training. DDOT has far too many bus accidents and the cost of settlements is excessive. Bus drivers are too aggressive and need defensive driving training to reduce the number of accidents. TEAM CALLOWAY anticipates a 50% decrease in settlement pay outs at the conclusion of the re-training program.**

The Safety and Training division has instituted the Sentinels of Safety program with a multi-pronged approach to increase driver awareness, promote over the road safety and ultimately reduce the overall number of accidents.

- **Drivers at Risk Performance Monitoring List:** DDOT has established a performance monitoring program targeting operators identified as higher risk due to factors such as probationary status, length of service and/or a history of preventable accidents. This program includes undercover supervisory rides and enhanced oversight to ensure adherence to safety protocols.
- **Undercover Observation Rides:** Our Safety and Training Department conducts undercover observation rides to monitor Transit Equipment Operators (TEOs) for compliance with established safety and training standards. These rides specifically target those in our Drivers at Risk program, and others identified through management requests. If a safety infraction is committed during an undercover observation ride - immediate corrective action is taken. This can include a re-instruction on the DDOT General Rules and Regulations or the immediate removal of a TEO from revenue service depending on the severity of the infraction.
- **Road Supervisor Trail Checks:** The frequency of road supervisor trail checks has been increased. These checks involve a Senior Transportation Service Inspector (road supervisor) following a selected bus to observe a TEOs' operation from an external perspective, to ensure safe driving practices are being followed. Those operators identified as higher risk based on a standardized rating system are placed on the Drivers at Risk (DAR) performance monitoring list.
- **Safety Promotion Campaign:** We have initiated a comprehensive campaign to promote a culture of safety among our work force. This includes the prominent display of safety-oriented posters within our terminals and distribution of a daily email campaign aimed at reinforcing key safety messages and tips.

The department is in the process of procuring a state-of-the-art bus camera security system. This new system will feature advanced artificial intelligence capabilities to detect distracted driving behaviors in real-time and will offer remote access to live streaming and on-demand past event retrieval. The



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anticipated result is a significant enhancement in our ability to monitor and ensure safety rule compliance in our daily operations.

Defensive Driving Training Response:

The information below, outlines our theoretical and practical approach for our defensive driving training program for Transit Equipment Operators (TEOs).

Theoretical Instruction:

Our student TEOs engage in a comprehensive defensive driving curriculum, facilitated through various TAPTCO modules. This program is meticulously designed to cover a wide range of critical safety topics essential for operating a bus in various driving conditions.

The cumulative duration of this theoretical instruction amounts to approximately 16 hours and 15 minutes. This includes interactive classroom sessions where students are introduced to the principles of defensive driving, hazard recognition, the importance of maintaining safe following distances, and strategies for managing adverse conditions and emergencies.

Behind-the-Wheel (BTW) Training:

In addition to classroom learning, our TEOs receive extensive hands-on training, amounting to 14 hours of behind-the-wheel experience.

This practical training encompasses:

- **Basic Maneuvering Exercises:** Students are introduced to and practice essential maneuvers, including left and right turns, managing right side spacing, and mastering mirror observation techniques.
- **Specialized Driving Conditions:** Training includes exposure to railroad crossings and freeway driving, which are critical components of their operational duties.
- **Urban Driving Experience:** Given the unique challenges of urban environments, particularly in areas with heavy vehicular and pedestrian traffic, our TEOs are introduced to the complexities of navigating Downtown Detroit.
- **Simulated Route Training:** An integral part of our BTW training involves driving a selected DDOT route with an empty bus. This simulation provides a realistic experience of daily operations, enhancing their readiness for actual service conditions.