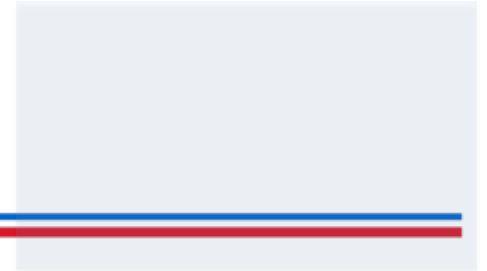




# Trunk Line Signal System

Operational Planning & Infrastructure  
Committee

July 9, 2024

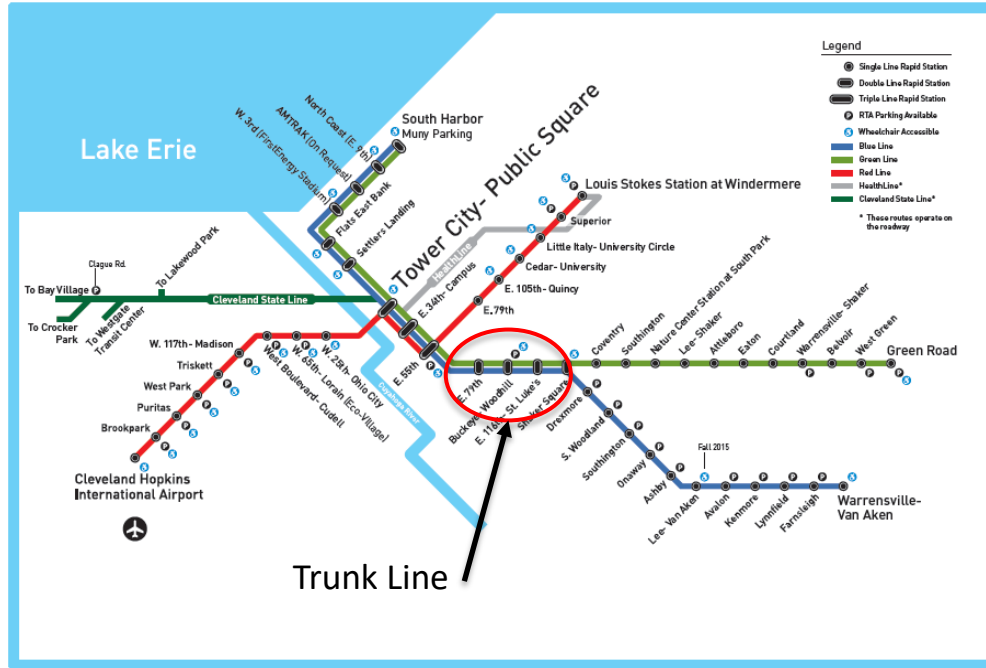


# Trunk Line Signal System

Contract 2022-122 awarded to Bison Rail Systems on March 31, 2023, by Resolution No. 2023-2, for construction of a new modern signaling system on the light rail Trunk Line from East 79<sup>th</sup> St. Station to Shaker Square in an amount not to exceed \$4,464,789.20.



# Trunk Line Signal System



# Trunk Line Signal System

- Project spans from East 79<sup>th</sup> to Shaker Square
- Replace existing signal system built in 1920
- Work will take place during an 8-week shutdown
  - Original Schedule Project Completion: July 2024
  - Proposed New Project Completion: Fall 2025



# Trunk Line Signal System

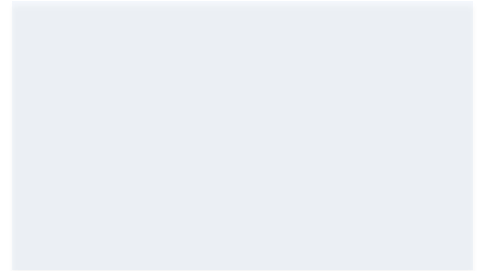
## Timeline:

- March 31, 2023- Notice to Proceed was issued.
- May 20, 2023 - Bison Rail Systems proposed an alternate technical solution that would upgrade the signal communication system to current, modern technology using fiber optics.



# Trunk Line Signal System

- Since June 2023, staff has been reviewing the proposed solution to determine the cost and available funding.
  - Funding for the purchase and installation of fiber became available which enabled RTA to pursue the new communications technology.
  - Internal technical review was conducted and several third-party consultants were engaged.



# Trunk Line Signal System

## Proposed New Technical Solution:

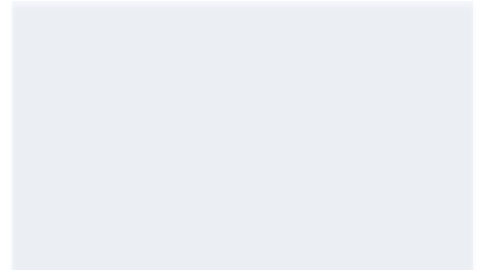
- Original design called for PSO 4000 Audio Frequency Track Circuits. (1960's technology.)
- New technical solution will provide 60Hz vane power frequency track circuits that will enable communications via fiber. (2000's technology.)
- Fiber will be installed under a separate project.



# Trunk Line Signal System

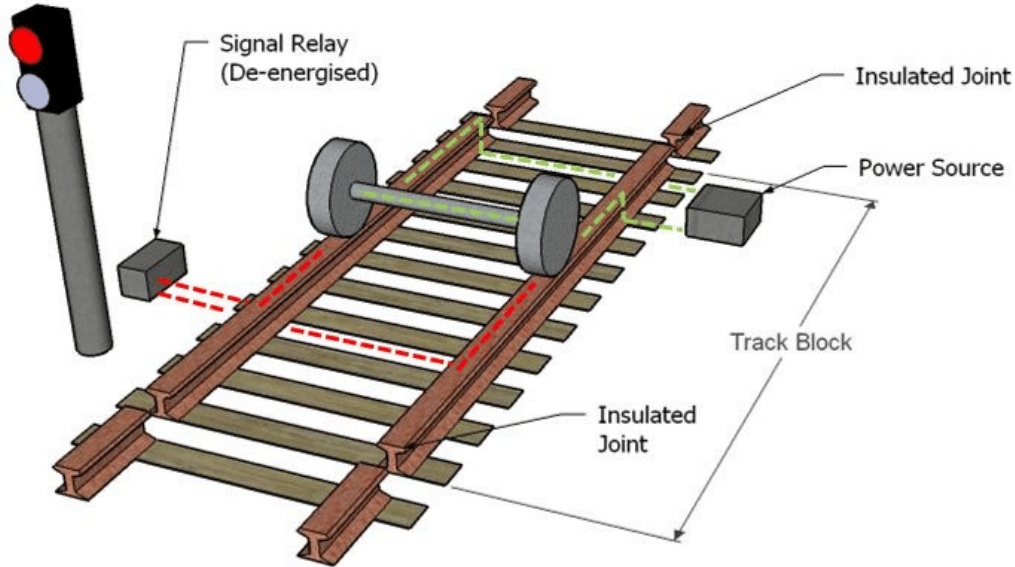
## Proposed New Technical Solution:

- Will provide superior shunting sensitivity and broken rail detection.
- Will provide better protection against broken down insulated joints.
- This system is preferred by GCRTA's Power and Way Dept. because it will provide a modern communication signal system.





# Trunk Line Signal System



## Rail Shunting

Greater Cleveland Regional Transit Authority



# Trunk Line Signal System

- Base contract authorized by Resolution No. 2023-2 in an amount not to exceed \$4,464,789.20
- Notice to Proceed effective March 31, 2023
- Final Completion was scheduled for July 30, 2024
- One (1) no-cost, time extension change order has been issued



# Trunk Line Signal System

## Proposed Change Order

- The Proposed Change Order of \$1,129,068.56 will include all costs for the new proposed solution as well as the new construction schedule, adding 442 days to the schedule.
- The proposed technical solution represents approximately \$400,000.00 of the change order cost, with the remaining amount due to the delay.
- Based on the ODOT method for pricing delay costs, the overhead costs are fair and reasonable to compensate for the new Fall 2025 construction schedule.
- The Change Order Committee reviewed and approved this proposed change order.



# Trunk Line Signal System

## **DBE Goal:**

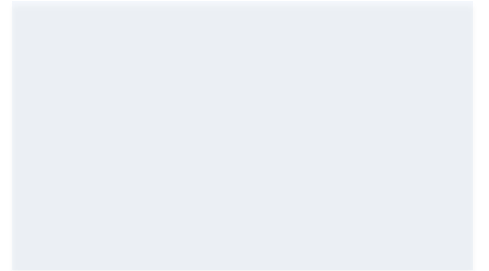
Bison Rail Systems, a self-performing DBE contractor, remains committed to achieving the 17% DBE participation goal that was assigned to this project.



# Trunk Line Signal System

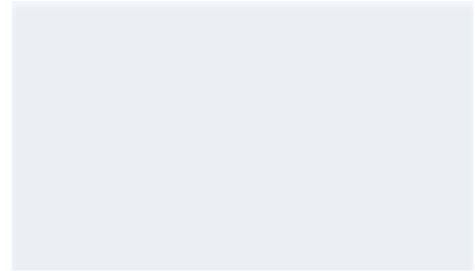
## Going Forward:

- Utilize GCRTA's On-Call Signal Engineering consulting firm, Mott MacDonald LLC, to provide signal engineering services for the duration of this project.
- Utilize GCRTA's On-Call Scheduling and Cost Control consulting firm, Construction Support Solutions, Inc. to provide support for the project schedule.



# Trunk Line Signal System

Staff requests that the Operational, Planning & Infrastructure Committee recommend approval of the proposed change order to Bison Rail Systems in a negotiated amount not to exceed \$1,129,068.56 resulting in a new total contract amount not to exceed \$5,593,857.76. This change order will also reinstate the General Manager's change authority to \$250,000.00.



# Questions?

Greater Cleveland Regional Transit Authority

