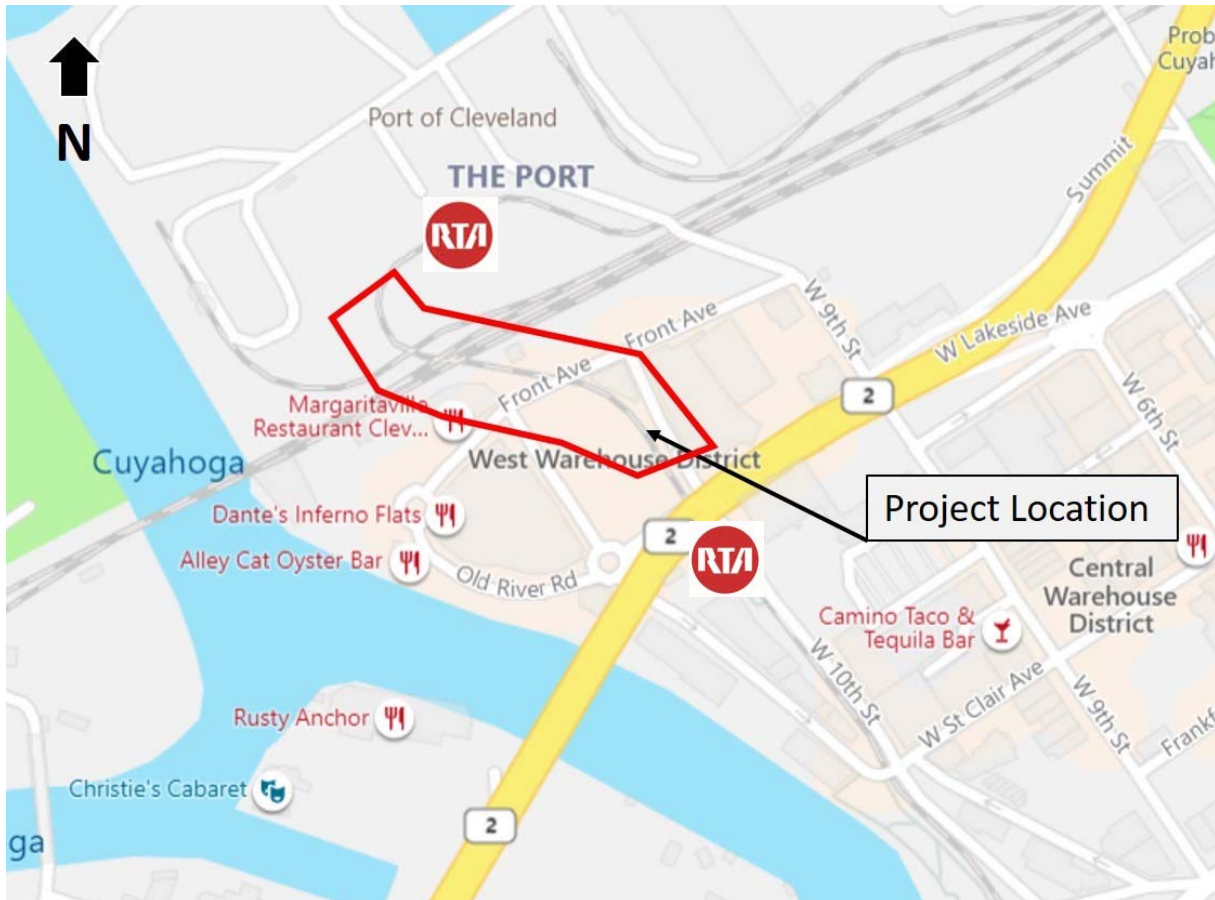




Summary of Proposed Award Engineering Services for the Waterfront Line Bridge Rehabilitation

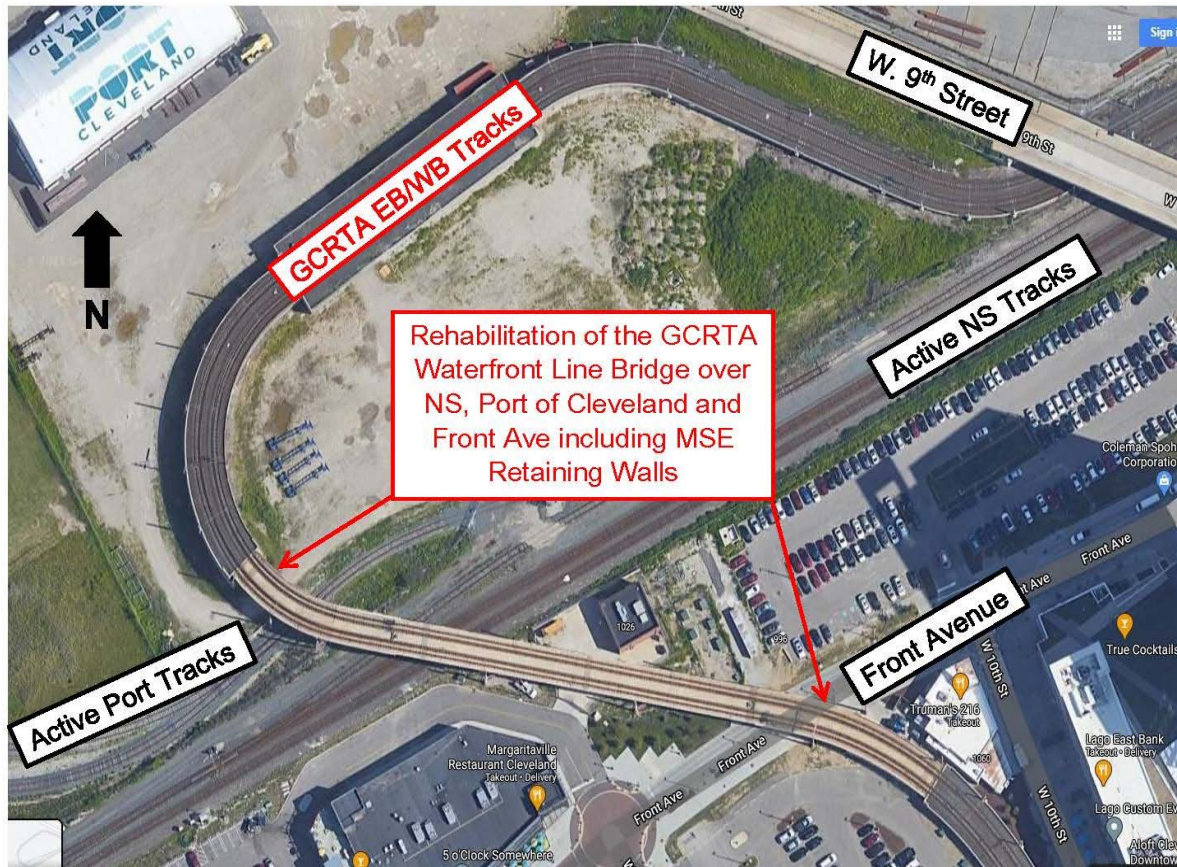
Presented to: Operational Planning &
Infrastructure Committee

May 11, 2021

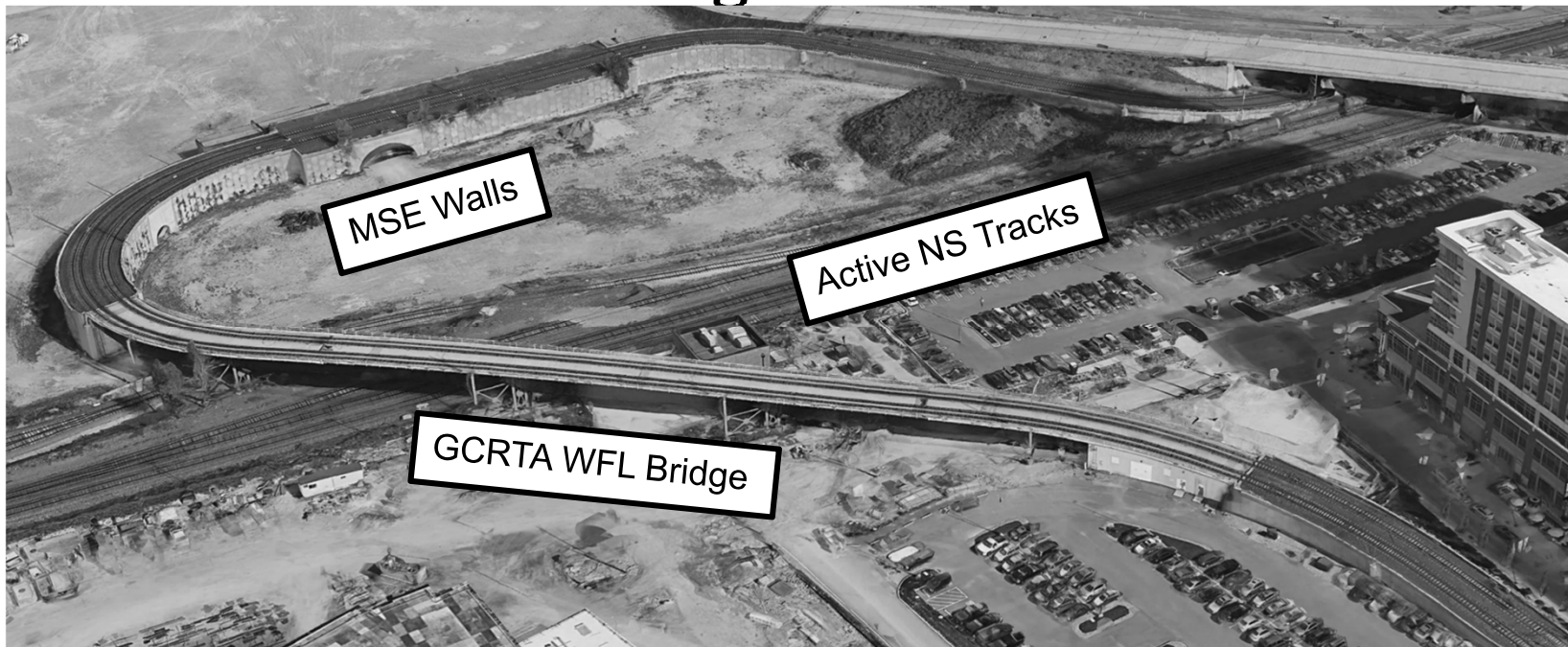


Greater Cleveland Regional Transit Authority





Engineering Services for the Waterfront Line Bridge Rehabilitation



Greater Cleveland Regional Transit Authority



Engineering Services for the Waterfront Line Bridge Rehabilitation



View looking west

Greater Cleveland Regional Transit Authority



Engineering Services for the Waterfront Line Bridge Rehabilitation

History of Work/Study

- The Waterfront Line construction complete in 1995
- MSE Wall Repairs implemented 2019
- No significant bridge rehabilitation work to date
- In-depth inspection highlighted need to rehabilitate
- On-going bridge crack monitoring continues to measure changes in condition over time, loads and temperature

Engineering Services for the Waterfront Line Bridge Rehabilitation

Complex Findings

- Bridge type: Curved Post Tensioned Segmental Box Girder
- Bridge type is unique to GCRTA. ODOT has few in-service.
- Expert studies have found similar problems among early pre-2000 bridge designs nationally.
- Various cracks in primary concrete members.
- Tightly curved bridge & rail geometry add to complexity of repair.
- Over an active NS mainline track

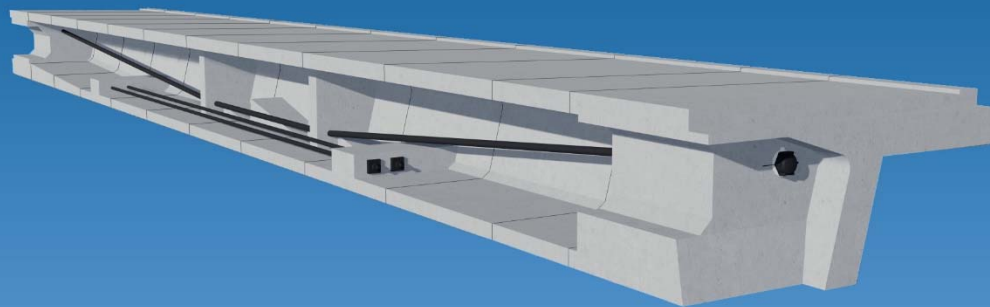
Engineering Services for the Waterfront Line Bridge Rehabilitation

Project Objectives

- Extend service life of bridge and adjoining Mechanically Stabilized Earth walls (MSE) by 25 years minimum. The design will:
 - Perform load rating of structure
 - Restore primary structural members to carry full loads
 - Provide proper expansion/contraction of bridge & rail
 - Deliver solutions which least impact NS operations

Engineering Services for the Waterfront Line Bridge Rehabilitation

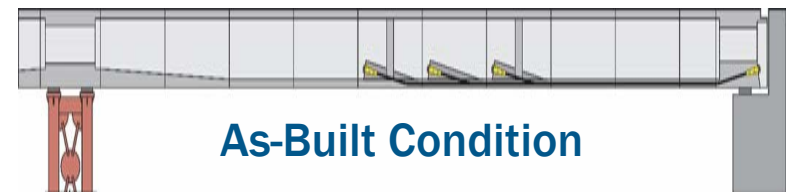
STRENGTHEN SPANS 1 AND 5



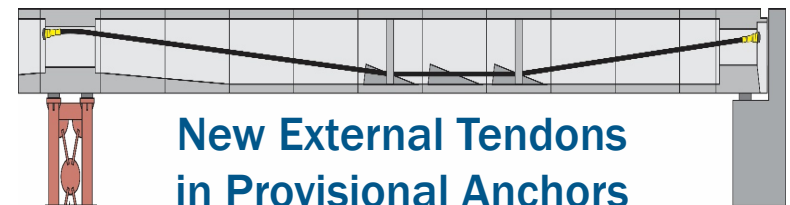
with New External Tendons with PT Bars

PT = POST TENSIONED

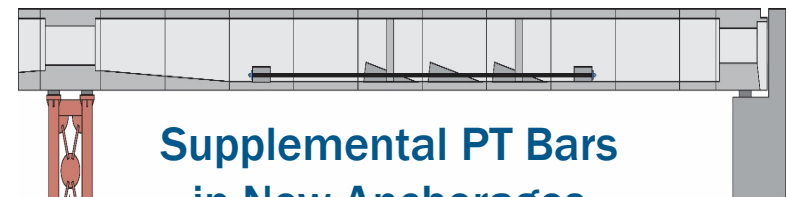
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As-Built Condition



**New External Tendons
in Provisional Anchors**



**Supplemental PT Bars
in New Anchorages**



Engineering Services for the Waterfront Line Bridge Rehabilitation

Procurement Summary

- RFP issued December 28, 2020
- Accessed on the GCRTA web site by Forty-Four (44) interested parties
- Three (3) firms proposed
- Three (3) firms were interviewed

Engineering Services for the Rehabilitation of Waterfront Line Bridge

Evaluation Panel Members:

- Engineering and Project Development
- Office of Management and Budget
- Asset Management
- Safety
- Office of Business Development
- Procurement

Engineering Services for the Waterfront Line Bridge Rehabilitation

Procurement Summary

- Recommended Vendor:
 - Hardesty & Hanover, LLC, Roseville, Minnesota
 - 5% DBE Goal will be met by utilizing:
 - 2LMN, Inc.
 - G & T Associates, Inc.
 - NEAS, Inc.

Engineering Services for the Waterfront Line Bridge Rehabilitation

Procurement Summary

- Firm Experience:
 - Hardesty & Hanover, LLC, Roseville, Minnesota has been in business for over 130 years with currently 400 employees across 27 offices
 - Projects for Amtrak, ODOT, Florida DOT, Michigan DOT, City of Minneapolis Public Works, and Norfolk County Council in England

Engineering Services for the Waterfront Line Bridge Rehabilitation

Staff requests that the Operational Planning & Infrastructure Committee recommend award to Hardesty & Hanover for Engineering Services for the Waterfront Line Bridge Rehabilitation. The base contract is not to exceed \$1,468,163.84.

Engineering Services for the Waterfront Line Bridge Rehabilitation

Questions?