

Lickton Pike Bridge over Shane's Creek Bridge Replacement

Existing Conditions

DESCRIPTION:

Lickton Pike Bridge over Shane's Fork Creek is located between Old Springfield Pike and Old Walters Creek Road in Davidson County. The bridge was built in the 1950's. NDOT's Bridge Program addressed embankment failure on the northeast bridge corner in 2018 to ensure roadway stability, and Load Posted the bridge to 10 Tons for the safety of the traveling public. Additionally, TDOT dropped the sufficiency rating of the bridge from 30.9 in 2019 to 7.0 in 2021.

Bridge Length: Approximately 59'

Number of Spans: 2

Width: 24'

Skew: 40°

REASONS FOR REPLACEMENT:

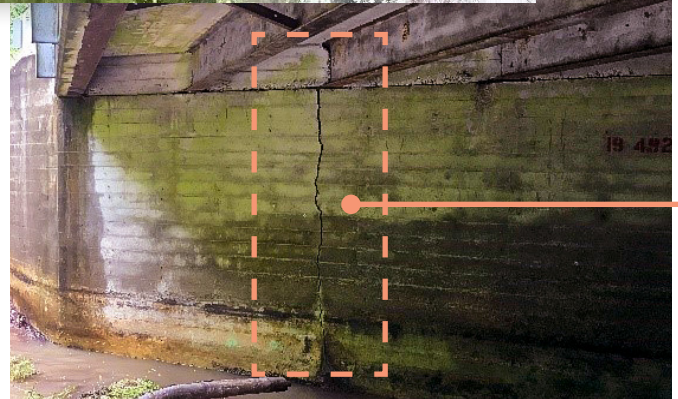
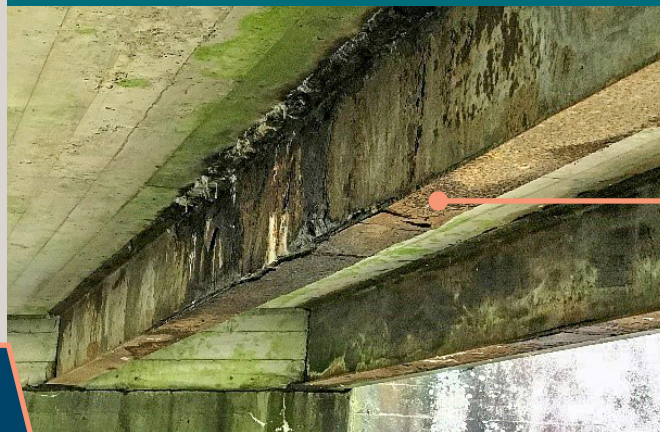
- A General Condition Assessment of "Poor" with a Sufficiency Rating of 7.0.
- Concrete Cracks with Efflorescence, and Spalled Concrete with Exposed Steel on Bridge Deck.
- Heavy Corrosion and Section Loss on Steel Bearing Pads.
- Steel Girders display Heavy Corrosion, Flaking, and Areas of Section Loss.
- Abutments and Peir Wall display Open Shear Cracks.
- Wingwall(s) have missing stones.
- The Bridge is Load Posted to 10 Tons.



NE Embankment Failure



Steel Girder w/ Heavy Corrosion & Flaking



Concrete Cracks; West Abutment

Lickton Pike Bridge over Shane's Creek Bridge Replacement

Proposed Conditions

DESCRIPTION:

The bridge replacement project is located adjacent to 6460 Lickton Pike and is part of The Nashville Department of Transportation & Multimodal Infrastructure's (NDOT) 5-year capital improvement campaign. The bridge replacement is scheduled for completion February 2024. The bridge will undergo a phased demolition and replacement plan in order to maintain a lane of traffic, with temporary signal system, over the bridge throughout the project duration. The Bridge Replacement has been coordinated with all Applicable Utility Companies, Adjacent Property Owners, NDOT Planning Department, NDOT Traffic Department, NDOT Permits, and TDEC. All necessary approvals have been received and the project is Ready-for-Construction.

Bridge Length: Approximately 102'

Number of Spans: 1

Width: 49'

Skew: 40°

Project Cost: \$2.6M

Anticipated Construction Duration: 12 months

Anticipated Schedule for Construction: March 1st, 2023 to February 28th, 2024

CONSTRUCTION CHALLENGES:

- Utility Coordination
- Phased construction while maintaining traffic
- Material Procurement
- Steel Girder Fabrication & Shipping
- Maintenance of the Stream under Phased Construction



MULTIMODAL INFRASTRUCTURE IMPROVEMENTS

The Proposed Bridge Design will facilitate sidewalks and bike lanes when multimodal infrastructure plans reach the bridge.

