

December 18, 2023

PRE-INSPECTION REPORT

BRIDGE NO HAM-50-2910 (SFN3103811)

PID No. 105476



ROUTE 50 (COLUMBIA PARKWAY) OVER NORFOLK SOUTHERN RAILROAD,
INDIANA AND OHIO RAILROAD, DUCK CREEK, AND RED BANK ROAD

INSPECTION DETAILS:

Bridge No.: HAM-50-2910
Features intersected: Norfolk Southern Railroad, Indiana and Ohio Railroad, Duck Creek, and Red Bank Road

Locations to Inspect: Fracture critical / Nonredundant Steel Tension Members

No. of Inspection Days: Anticipated 1 day
No. of Spans to Inspect: 3
Anticipated Inspection Dates: Week of March 18, 2024
Inspection Hours: Daytime
Access Equipment: Ladders, Rope Access Equipment, Manlift*

- - possible, manlift may be required over Red Bank Rd (will be field determined)

FRACTURE CRITICAL INSPECTION REQUIREMENTS:

The inspection will consist of an In-Depth “Arms-Reach” inspection, performed in accordance with the guidelines of the current FHWA National Bridge Inspection Standards for Fracture Critical Members.

To perform an effective Fracture Critical Inspection, the following tasks must be performed:

1. Determine Resource Requirements.
(Identify qualified inspection staff, use appropriate inspection access and inspection equipment).
2. Identify the Fracture Critical Members.
3. Develop the Inspection Procedure.
(Contained in this document)
4. Prepare Follow-up Procedure.
(Recommendations will be made as part of this current project)
5. Provide Quality Control/Quality Assurance for the inspection and report.
(Procedures outlined in this document)
6. Develop a Periodic Inspection Plan
(Already in place with the Ohio Department of Transportation, District 8)

BRIDGE DESCRIPTION:

The HAM-50-2910 Bridge is a dual 3-span riveted steel plate girder structure with a reinforced concrete deck that carries the Columbia Parkway over two railroads (Norfolk Southern Railroad and the Indiana and Ohio Railroad), Duck Creek, and Red Bank Road. The bridge numbering system follows the convention set in the design plans (west to east, left to right looking east). Access to the structure will be with climbing methods and possibly a manlift.

FRACTURE CRITICAL MEMBER LOCATIONS:

The fracture critical members for this structure are the flanges and the webs of the continuous haunched and riveted plate girders which vary in depth from 78” to 126”, the W30 floor beams,

and the overhang brackets labeled as BR1, BR2, BR3, or BR4 in the plans. While not typically considered fracture critical, the exterior stringers labelled as S1, S4, S5, and S8 should also be inspected as fracture critical as the slab due to the large tributary area (9ft+ overhang x 30ft spaced floor beam) that it solely supports. The deck is likely not capable of independently supporting the overhang and loss of this member could lead to a partial collapse of the deck.

The fracture critical members are to be inspected in accordance with “ODOT District 8 Fracture Critical Inspection Procedures.” A schematic detailing the location of the FCMs are included in the directory. Because this is an entirely riveted bridge, the AASHTO fatigue category for all connections is Category D.

INSPECTION METHOD & PLAN: The Collins Team will access the bridge with climbing techniques. The girders can be accessed with horizontal lead climbing techniques, and beam clamps can be utilized for anchor points on cantilevered portions. A manlift can be staged on the dirt shoulder to the west of Red Bank Rd under the bridge. The field work is expected to take 1 day and will likely be a 3-person team (for safety/rescue). Field operations will adhere to the Collins safety procedures.

FIELD COORDINATION - The following entities will be involved in coordinating and performing all field work associated with the inspection of these structures.

Traffic Control Plan: Traffic control is not expected in ODOT right of way. Any needed lane closures will be coordinated with the Village of Fairfax.

Railroad Coordination Plan: Collins is responsible for railroad coordination, if needed. Field work is not anticipated to affect rail traffic and so a right of entry permit will not be required. If needed, the permitting process for each railroad is as follows:

Genesse & Wyoming (Western Tracks- Indiana and Ohio RR track)

Encroachment on G&W right of way requires an occupancy permit in the first link below to be approved through the formal process detailed in the second link below:

<https://www.gwrr.com/wp-content/uploads/2021/07/RailroadProtectiveApplication.pdf>

<https://www.gwrr.com/real-estate/accessing-property/>

Upon approval, the process for scheduling flaggers is detailed in the right of entry agreement. Exact contacts are not currently known but can be updated upon entry permit approval.

This is for the tracks in Span 1 (western rail tracks). Previous contacts supplied are local contacts that are not the initial step in proper permitting.



Norfolk Southern (Eastern Tracks)

Encroachment on NS right of way requires a right of entry permit that is accessed by the link below. Note the file contains instructions on filling it out. Once approved, a right of entry agreement is signed and the process for scheduling flaggers is detailed in the right of entry agreement. Exact contacts are not currently known but can be updated upon entry permit approval.

<https://www.norfolksouthern.com/en/rail-development-property/ns-property/projects-on-ns-property/access-ns-property>

COLLINS – Field Team Contacts:

Michael Seal, P.E., CBI: Team Leader, Project Manager (614) 849-2277 (C)
mseal@collinsengr.com

Matthew Rogers, P.E., CBI: Team Leader, (859) 630-2238 (C)
mrogers@collinsengr.com

Kevin Mitchell, CBI, Asst. Team Leader, (606) 344-3000 (C)
kmitchell@collinsengr.com

ODOT (Project and Permitting Contacts) – A right of entry permit for District 8 is not anticipated for this work. The following ODOT personnel will be contacts.

Brandon Collett: Project Manager (513) 933-6643
Brandon.Collett@dot.state.oh.us

Jeff Meyer: Assistant Structures Engineer (513) 933-6630

6519 Scott Kraus: District Work Zone Traffic Manager (513) 933-
Scott.Kraus@dot.state.oh.us

Chris Bass: Right-of-Way Use Permits (513) 933-6575
Christopher.Bass@dot.state.oh.us

Village of Fairfax (Permitting) – A right of entry permit will be needed through the Village of Fairfax to encroach on Red Bank Rd. This permit will stipulate lane closure limitations and approve any proposed traffic control. Contacts are:

Fairfax (513) 527-6508

Joe Huskey Maintenance Supervisor jhuskey@fairfaxoh.org

A&A Safety – A&A Safety will be the traffic control subcontractor for this inspection should closures be needed on Red Bank Rd. Contacts are:

Don Beagle/Keith Gilbert: A&A Safety (513) 276-
2153
donb@aasafetyinc.com

Approved right of entry permits the City of Cincinnati will be kept on the job site throughout the inspection period.

TRAFFIC CONTROL – If needed, A&A Safety will be responsible for installation of traffic control devices to close lanes of Red Bank Road as stated above. However, lane closures are not expected to be necessary during this inspection.

Red Bank Road – Alternating lane closures of Red Bank Road underneath the Columbia Parkway Bridge.

INSPECTION PLAN:

Refer to the Access Plan for access methods.

FOLLOW-UP PROCEDURES FOR INSPECTION FINDINGS:

Inspection findings shall be documented on a fracture critical inspection report, which will be uploaded into the inspection record in AssetWise. This inspection and report will focus solely on FC/NSTM members.

Quality Control/Quality Assurance

The standard Collins Quality Control Plan will be utilized. Such steps include: completion of field task checklist prior to leaving site, team leader review of all field notes and photographs before leaving the site, the report originator will be the team assistant, the report checker will be the NBI Team Leader, the report corrector cannot be the checker, the back-checker cannot be the corrector, and the field team leader will be involved for at least one phase of the reporting process.

APPENDIX A – RIGHT OF ENTRY PERMIT APPLICATIONS

APPENDIX B – TRAFFIC CONTROL DETAILS

APPENDIX C – FATIGUE PRONE DETAILS FOR HAM-50-2910

