RAIL POLLUTION PROTECTION PITTSBURGH

METROPOLITAN PITTSBURGH

2024 SAFETY & CURSORY INSPECTION REPORT OF

NORFOLK SOUTHERN AND FEEDER RAILROAD BRIDGES

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INTRODUCTION

The David R. Schmidt Company, Inc. was retained by Rail Pollution Protection Pittsburgh (RP3) to provide a safety and cursory inspection of select Norfolk Southern Railroad bridges, and the adjacent feeder rail bridges, in the metropolitan Pittsburgh area. The goal was to inspect twenty bridges, with public safety being the focus.

The bridges were inspected to identify structural issues, and safety concerns such as falling ballast, falling concrete, and lighting under the bridge spans. We also noted vertical clearance under each bridge, and whether vertical clearance was posted.

The twenty bridges were mostly bridges thought to be in relatively poor condition. However, we did include several that were not in poor condition. For instance, there is a stretch of bridges on the South Side of Pittsburgh that begins at 18th St and extends to 27th St. Those from 18th to 25th were thought by RP3 to be in poor condition. But to be fair, we included the bridges at 26th and 27th St, which completed this run of bridges, even though these two were not thought to be in poor condition.

The inspections were not hands-on; we merely made observations by walking underneath each bridge. We did not walk on top of any of the bridges so as to not trespass. As such, member sizes, span lengths, details, etc. that we mention in this report, were simply estimated. The idea was to give a ballpark description of the structure, for the record, and to help make our findings clear.

From a structural perspective, we did our best from ground level to document defects that we could see. We had no prior inspection reports, as-built plans, structural analyses, etc., so our cursory inspection was not influenced by the opinions of the railroads engineers or their consultants.

We also point out that it was not possible for us to consider the many long span bridges in the area, as we could not see much from the ground below. Some were over rivers and others were up too high and therefore shaded so much that we could not see anything clearly, even with high powered lighting.

Our inspection team leader for each of the bridges inspected was the president of our firm, David Schmidt. Mr. Schmidt is a registered professional engineer in the Commonwealth of Pennsylvania with 38 years of bridge engineering experience. During this time, Mr. Schmidt has inspected nearly 8,000 bridges including numerous railroad structures, all in conformance with the Code of Federal Regulations for the Federal Highway Administration (Section 650.309) and the Federal Railroad Administration (Section 237.51) requirements, to act as both a team leader and as a project manager. Mr. Schmidt first did this work as an

employee of the two largest engineering firms in Maryland. Since founding his own firm in 2000, Mr. Schmidt has managed the inspection of about 3,000 bridges.

A summary of our findings can be found on the next page. The summary shows that of the 20 bridges inspected, nine are in poor condition and two are in serious condition. The two bridges in serious condition have structural issues that are affecting primary structural elements. The Rating Criteria, Descriptions, Codes and Actions described on the next two pages conform to a standard rating system utilized by bridge engineers. Complete reports for each bridge are included.

SUMMARY OF RESULTS

The following table summarizes the results of our inspection efforts. The overall condition rating is a function of the lowest rating of the two major structural items considered (the superstructure and substructure). For a definition of the codes and descriptions used, please refer to the next page.

BRIDGE NO.	RAIL LINE	CROSSING	OVERALL CONDITION	
			CODE	DESRIPTION
N/A	Conemaugh Feeder	River Front Rd in Millvale, PA	3	Serious
510969U	Conemaugh	13th St in Sharpsburg, PA	4	Poor
504632C	Conemaugh	6th St in Freeport, PA	5	Fair
510775N	Conemaugh	7th St in Freeport, PA	3	Serious
510547B	Monongahela (Mon)	18th St in Pittsburgh (South Side)	4	Poor
510548H	Monongahela (Mon)	21st St in Pittsburgh (South Side)	4	Poor
510549P	Monongahela (Mon)	22nd St in Pittsburgh (South Side)	4	Poor
510550J	Monongahela (Mon)	23rd St in Pittsburgh (South Side)	4	Poor
510551R	Monongahela (Mon)	24th St in Pittsburgh (South Side)	4	Poor
510552X	Monongahela (Mon)	26th St in Pittsburgh (South Side)	5	Fair
510553E	Monongahela (Mon)	27th St in Pittsburgh (South Side)	6	Satisfactory
947583G	Pittsburgh	E. Liberty Blvd in Pittsburgh	5	Fair
510507D	Pittsburgh	5th Ave in Pittsburgh	4	Poor
510508K	Pittsburgh	N. Dallas Ave in Pittsburgh	5	Fair
510512A	Pittsburgh	South Ave in Wilkinsburg, PA (East Bridge)	5	Fair
510512A	Pittsburgh	South Ave in Wilkinsburg, PA (West Bridge)	5	Fair
947563V	Pittsburgh	Rowland Connector in Wilkinsburg, PA	4	Poor
510513G	Pittsburgh	Rebecca Ave in Wilkinsburg, PA	4	Poor
507919M	Pittsburgh	Stewart St in Trafford, PA	5	Fair
507443R	Ft Wayne	Sandusky St in Pittsburgh	5	Fair

CONDITION RATINGS AND ASSOCIATED COMMON ACTIONS		
CODE	**DESCRIPTION**	**COMMON ACTIONS**
9	**EXCELLENT CONDITION**	PRESERVATION/ CYCLIC MAINTENANCE
8	**VERY GOOD CONDITION** – No problems noted.	
7	**GOOD CONDITION** – Some minor problems.	
6	**SATISFACTORY CONDITION** – Structural elements show some minor deterioration.	PRESERVATION/ CONDITION-BASED MAINTENANCE
5	**FAIR CONDITION** – All primary structural elements are sound but may have some minor section loss, cracking, spalling, or scour.	
4	**POOR CONDITION** – Advanced section loss, deterioration, spalling, or scour.	REHABILITATION OR REPLACEMENT
3	**SERIOUS CONDITION** – Loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present.	
2	**CRITICAL CONDITION** – Advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present, or scour may have removed substructure support. Unless closely monitored, the bridge may have to be closed until corrective action is taken.	
1	**IMMINENT FAILURE CONDITION** – Major deterioration or section loss present in critical structural components, or obvious vertical or horizontal movement affecting structural stability. Bridge is closed to traffic, but corrective action may put it back in light service.	
0	**FAILED CONDITION** – Out of service. Bridge is beyond corrective action.	

NOTES:

1. CONDITION RATING CODES 0 AND 1 ARE RESERVED FOR BRIDGES THAT ARE CURRENTLY CLOSED.

2. A CODE OF N IS USED FOR ITEMS THAT CAN'T BE SEEN OR DO NOT EXIST.