I-71 Noise Barrier Analysis

Ohio Department of Transportation

PROJECT DESCRIPTION

BPS served as a subconsultant for this noise analysis in ODOT District 12. For this project, BPS performed a Type I Noise Study for a proposed interstate widening to add an auxiliary lane.

Major tasks for this project including assemblage of mapping and identification of noise reading locations based on a Noise Wall Preliminary Placement Plan. Field visits were conducted in the project area to define the existing noise environment at sensitive receptor sites, as well as to define background ambient noise levels and determine the worst-case noise hour. An existing noise analysis was completed using a TNM noise model, and a future noise analysis was modeled to determine future peak noise hour levels within each noise sensitive area (NSA).

The need for consideration of noise mitigation was identified and a Preliminary Placement Plan for noise barriers in the locations identified for possible noise mitigation was created and submitted to ODOT for review. Following approval, these noise barriers were created and modeled to determine feasibility and reasonableness. A noise barrier design table was created with barrier heights, top elevations, base elevations, and distance offsets for 50' segments. The results of the barrier analysis and design table were then documented in an updated report.

LOCATION

ODOT District 12, Cuyahoga County

HIGHLIGHTS

- Environmental

MAJOR TASKS

- Noise Studies
- Preliminary Noise Analysis
- Barrier Preliminary Placement Plan
- Barrier Analysis
- Noise Barrier Design Tables
- Final Noise Analysis Report