



RAILROAD BRIDGE REHABILITATION

CHALLENGE

AN EXISTING RAILROAD BRIDGE NEEDING SIGNIFICANT REPAIRS ALSO BENEFITTED FROM FUNDING EXPERTISE.

SERVICES

- Bridge Inspection
- Grant & Funding Assistance
- Bridge Design
- Track Design
- Survey
- Floodplain Coordination
- Regulated Materials Review
- Geotechnical Engineering
- Railroad Coordination
- Project Administration
- Bidding Services
- Construction Services

RAILROAD BRIDGE REHABILITATION AT ELLWOOD ENGINEERED CASTINGS

Ellwood Engineered Castings (EEC), an ingot-mold manufacturing firm in Hubbard, Ohio, hired ms consultants, inc. to provide bridge inspection, funding assistance, engineering design services, and bidding and construction services, for the replacement of a 53-foot, single-track railroad bridge over Little Yankee Run. This structure carries the industry track, which

connects directly to Norfolk Southern's main line, over Little Yankee Run, and is a crucial link to the facility's production operations.

BRIDGE INSPECTION

To assess the condition of the existing bridge, ms consultants inspected the railroad bridge. Based on this work, the team determined that the bridge needed significant repairs to provide safe passage over the waterway.

The team concluded that replacing the bridge was the best solution based on the inspection. ms prepared an estimated construction cost of the structure's replacement so that EEC could program the work.

GRANT AND FUNDING ASSISTANCE

To further add value and help offset costs, ms assisted in identifying grant opportunities. The team then wrote and coordinated a request to the Ohio Rail Development Commission (ORDC) for an economic development grant. They also worked diligently to help structure the funding package and kept in contact with ORDC staff over several months.

ORDC awarded EEC a \$75,000 Economic Development Grant for the \$500,000 railroad bridge project, with the requirement that EEC would increase

their capacity, thereby adding production jobs to their facility. Due in part to the grant assistance, EEC was able to move forward in not only retaining their existing jobs and production levels but also in:

- Making an additional multi-million dollar capital investment on-site.
- Expanding job opportunities within the Mahoning Valley area.

ENGINEERING DESIGN SERVICES

The ms consultants' team designed the replacement railroad bridge and approaches per AREMA and Norfolk Southern requirements. Work also included borings, surveying, regulated-materials review and site investigation, and a floodplain development permit.

To avoid impacting the waterway, the new abutments were placed behind the existing stone abutments, which remained to support the earth contain the waterway. Approach track work was minimized to control costs.

ms also:

- Coordinated the railroad work with Norfolk Southern.

- Assisted with coordinating with First Energy for the de-energizing of their overhead transmission line, required for pile installation.

The new railroad bridge spans 75 feet and is a single-track, open-deck plate-girder structure. It also has 5-foot metal grate walkways on both sides for safe passage of pedestrians.

BIDDING AND CONSTRUCTION SERVICES

ms consultants performed all bidding services, including preparing the project manual, soliciting qualified contractors, evaluating the bids, and assisting with awarding the project. The team provided construction administration and inspection services for the duration of construction.

ms takes pride in providing excellent and effective engineering and architectural design services and in creating additional value for our clients so they can invest and create job opportunities in their communities and neighborhoods.