

Executive Summary

Rachel Carson (Ninth Street) Bridge Rehabilitation
Category C

The Rachel Carson (Ninth Street) Bridge is an eye-bar-chain, self-anchored suspension bridge carrying Ninth Street over the Allegheny River, Tenth Street Bypass, and Three Rivers Heritage Trail in downtown Pittsburgh. It is one of the "Three Sisters" bridges constructed from 1924 to 1928 that comprise the only trio of identical, side-by-side bridges in the world and the first self-anchored suspension spans constructed in the United States.

The 995-foot-long bridge consists of two multi-girder steel approach spans of approximately 75 feet and 60 feet in length, and an 860-foot three span, self-anchored, steel eye-bar suspension bridge. Rehabilitation was required due to accelerating age-related deterioration.

TranSystems Corporation d/b/a Transystems Corporation Consultants led and coordinated the efforts of the team to deliver the inspection, design, and construction services.

Construction work involved replacement of the bridge deck and sidewalks; total repainting of the superstructure; steel repairs of the stringer connections, floor beam connections, stiffening girder, and sidewalk brackets; replacement of numerous sidewalk brackets and all sidewalk fascia beams; updates to structure drainage and lighting; and upper substructure repairs.

The rehabilitated structure maintains the prior level of service for average daily traffic, and the wider lanes and new lane configuration have proven successful in alleviating traffic congestion.

However, the bridge's social value goes beyond traffic, as the refurbished structure enhances the bridge's appeal as a premier location for well-attended community pedestrian events.

Coming in on time, the rehabilitated structure meets client and stakeholder expectations.