



CHALLENGE

SUMMIT COUNTY METRO PARKS NEEDED TRAIL, CHANNEL, AND BRIDGE IMPROVEMENTS AT SEVERAL LOCATIONS ALONG THE UNNAMED SAND RUN TRIBUTARY AND SAND RUN PARKWAY TRAIL.

SERVICES

- Shared-Use Path
- Bicycle Facilities + Enhancement Design
- Non-Complex Roadway Design
- Level 1 Bridge Design
- Geotechnical Engineering Services
- Ecological Survey

SAND RUN PARKWAY IMPROVEMENTS

The improvements included design of a soldier pile retaining wall with the realignment of the hiking trail, replacement of two deteriorated steel-truss bridges with prefabricated timber bridges, replacement of a third bridge with a prefabricated three-sided concrete culvert with modular block wall and stream stabilization to replace fallen gabion baskets, trail relocation, and other trail improvements.

proposed conditions model included improving the channel, adding two bridges that were to be replaced to an existing model provided by Summit County Metro Parks, removing a third pedestrian bridge and replacing it with a 3-sided culvert with modular block walls and relocating the trail, and adding a soldier pile and lagging wall with a relocated trail at various locations along a tributary to Sand Run.

Hydrologic and hydraulic modeling were conducted for Sand Run and Sand Run Tributary for both the existing conditions and the proposed conditions. The

The ms team performed field survey and geotechnical borings. The topographic survey included channel sections within the study limits, along with structural data for the crossings. Scour protection was also designed to mitigate the erosion potential from the high velocities through the study area due to the slope of the channel bottom. The multidiscipline services for this project included surveying and mapping, geotechnical engineering, trail and drainage design, structural engineering, water resources, and construction services.

The project was constructed in phases due to funding constraints, with the glulam timber bridges being the first projects let and constructed by Metro Parks forces. ms consultants assisted in the preparation of the bid documents and reviewed the shop drawings provided by the fabricator. Culvert #41, the modular block wall, the third bridge removal, and associated stream stabilization were part of the second construction project. This project was constructed by HM Miller, and ms assisted in the preparation of the bid documents, performed shop drawing and submittal reviews, and construction inspection for the culvert foundations and precast segment installations.

The final project was the trail realignment at Site #1, including a new soldier pile wall, embankment, trail reconstruction, slope protection, and guardrail and railing installations. This phase of the project also included other stream stabilization improvements performed by another consultant, which were bid concurrently. This project is being constructed by Cavanaugh. Again, ms assisted in the preparation of bid documents, performed shop drawing and contractor submittal reviews, as well as construction inspection for the wall installation.