



RAILROAD EXPERIENCE

WINGATE RAIL PROJECT CocnocoPhillips Gallup, NM

Burlington Northern Santa Fe (BNSF) has historically provided storage of ConocoPhillips' (COP) rail car fleet and switching services at their Wingate Fractionator Plant east of Gallup, New Mexico. The switching services included moving empty and full NGL rail cars into and out of the Wingate loading rack and arranging loaded cars for pick up. BNSF is emphasizing long-distance unit trains and desired to discontinue providing switching services. COP was required to install capital facilities and engage a third party operator to accommodate this change.

Entellus services included:

- ✓ Options to situate the appropriate amount of rail.
- ✓ Detailed design of the preferred rail arrangement (including pickup, set out, and storage tracks).
- ✓ Switch yard operating plan.
- ✓ Specification of materials.
- ✓ Cost estimating and cash flow requirements.
- ✓ Purchasing assistance coordinated with COP procurement.
- ✓ Receiving and inspection of pre-purchased material.
- ✓ Construction documents.
- ✓ BNSF approval of the construction documents.
- ✓ Support COP on various BNSF commercial agreements.
- ✓ Solicit interest from and prequalify contractors for both earthwork operations and track construction.
- ✓ Assist in the construction bidding process and evaluation of the construction bids.
- ✓ Construction phasing support to identify the construction strategies that allowed the existing operations at Wingate to continue with the least amount of disruption.
- ✓ Construction staking
- ✓ Inspection of the mass grading, roadbed, and track construction.
- ✓ Project closeout, facilitate BNSF inspections, approvals, and as-builts.



DEVELOPMENT SERVICES OVERVIEW

RAILROAD CROSSING IMPROVEMENTS

City of Phoenix • Phoenix, AZ

Entellus was retained by the City of Phoenix to complete the conceptual design revisions/improvements to eight (8) railroad crossings at existing roadway sections. The roadway improvements were designed in conjunction with a new railroad gate mast arms and signals. The improvements, which bring the crossings in compliance with current standards, include pedestrian crossing modifications (Sidewalk Behind Gate), curb and gutter, track crossing material, coordination of railroad access requirements, signage and striping, grading and drainage, utility coordination and relocation, and identification of additional rights-of-way and easement requirements.

Entellus also obtained all permits to survey the project site, and survey control was established including identifying railroad right-of-way, as well as, base mapping, as-builts, and utility mapping. Entellus prepared detailed cost estimates to support the federal funding applications for the project. Additionally, Entellus provided the City with railroad schematic drawings and dimensions and coordinated with such agencies as Arizona Department of Transportation (ADOT), Union Pacific Railroad (UPRR), and the Arizona Corporation Commission (ACC).

The crossings are located at:

- ◀ UPRR crossing at 40th Street
- ◀ UPRR crossing at 32nd Street
- ◀ UPRR crossing at Grant west of 7th Street
- ◀ UPRR crossing at 3rd Avenue
- ◀ UPRR crossing at 2nd Avenue
- ◀ BNSF crossing at 15th Avenue
- ◀ UPRR crossing at 15th Avenue
- ◀ UPRR crossing at 27th Avenue

ENTELLUS CORE PURPOSE:

To provide solutions that have a positive impact on our community, the world and the way in which people live, work and play.



Contact:
Tim Crall, PE, LEED AP
Sr. Vice President
tcrall@entellus.com



OTHER TECHNICAL SERVICES:

Water/Wastewater

Water Resources

Transportation

Field Services

GIS