



Client: Rocky Mountain Rail Authority
Location: Colorado

Quandel Consultants provided planning and engineering services to the Rocky Mountain Rail Authority (RMRA) to determine the technical and financial feasibility of implementing high speed passenger rail service along Colorado's Front Range from Wyoming to New Mexico and along the I-70 Corridor from Denver to the Utah state border, including secondary corridors to major tourist destinations. The services included the development of initial alignment plans, profiles and capital cost estimates for technologies capable of traveling at speeds between 79 mph and 250 mph. Quandel prepared strategies for preliminary engineering, environmental studies, final engineering, and construction activities required to implement a high speed/intercity passenger rail service within Colorado and into neighboring states.

The study evaluated the state's two most heavily traveled intercity corridors to determine whether the corridors could provide reliable high-speed connections, enabling efficient and congestion-free trips within and between the two corridors. Quandel Consultants developed design criteria for each level of high speed rail technology – 79 mph, 110 mph, 150 mph, 220 mph, and 250 mph – to optimize the alignments within each corridor to ensure proper relationship between travel time and capital cost. Travel time, which is the driver for ridership, and capital costs are the key elements needed to determine the benefit to cost ratio for each alignment.

Within the I-70 Corridor, Quandel Consultants, using Esri's ArcGIS platform, determined the optimum alignments for each technology level connecting Colorado's most populated region and Denver International Airport to the mountains and the Western Slope, supporting some of Colorado's largest economic drivers – tourism, agriculture, and energy.

Within the I-25 Corridor, Quandel Consultants, using Esri's ArcGIS platform, determined the optimum alignment connecting Denver with the growing technology-driven and military communities in northern and southern Colorado, as well as with other burgeoning communities along the Front Range.