BENEFIT COST ANALYSIS

A benefit-cost analysis (BCA) was conducted for the US 85 / 120th Avenue Grade-Separation and Interchange project as part of this grant application. This analysis was conducted in accordance with the USDOT's BCA Guidance for Discretionary Grant Programs (December 2025). The BCA evaluated the costs and benefits of implementing the US 85 / 120th Avenue Grade-Separation and Interchange project against a Baseline Scenario under which the project does not occur (and the existing at-grade intersections and rail crossings are retained and maintained).

Appendix B summarizes the analyses and assumptions used in the development of the BCA. The analysis has been conducted by quantifying and calculating the various types of benefits and disbenefits associated with the project.

The US 85 / 120th Avenue Grade-Separation and Interchange project is projected to reduce driver delay and vehicle emissions caused by congestion and rail activity, reduce crashes occurring at both the 120th Avenue and 124th Avenue intersections, eliminate vehicular/rail conflicts at the 120th Avenue rail crossing, significantly reduced vehicle-rail interactions at the 124th Avenue crossing, and improve rail freight movement throughout the project area. The table on the next page summarizes the BCA. This analysis resulted in a benefit cost ratio (BCR) of 2.23.

Over the 30-year assessment period, the US 85 / 120th Avenue Grade-Separation and Interchange Project generates approximately $275.2 million in total benefits and a BCR of 2.23 at the 7.0 percent discount rate.



BENEFIT COST ANALYSIS		BUILD GRANT
US 85/120th Avenue Grade-Separation and Interchange Project		2024-2055 7.0% discount rate
TOTAL PROJECT COSTS		
Project Costs		
Present Value of Total Costs		$123,526,200
Total Costs		**$123,526,200**
TOTAL PROJECT BENEFITS		
Operating & Maintenance Expenditures		
Maintenance		($252,747)
Train Operating and Social Costs		
Freight Train Idling		$384,008
Non-CO2 Emission Costs		$1,184,641
Residual Value & Remaining Service Life		
Residual Value		$10,909,884
Safety		
Reduction in Property Damage Only Crashes		$2,724,482
Reduction in Injury Crashes		$28,299,472
Reduction in Fatal Crashes		$1,005,487
Value of Travel Time Savings		
Travel Time Savings - Private Vehicle Travel		$106,564,277
Travel Time Savings - Commercial Vehicle Travel		$5,752,444
Emissions Reductions Benefits		
Emissions Reductions		$61,569
Total Benefits		$275,161,896
Benefit Cost Ratio		2.23 : 1
Net Present Value of Entire Project		$151,635,696

Reference BCA Guidance: Appendix A of the USDOT Benefit-Cost Analysis Guidance for Discretionary Grant Programs, December 2025

All BCA costs and benefits are adjusted to reflect 2024$