BENEFIT-COST ANALYSIS

The Benefit-Cost Analysis estimates that there will be more than $98 million in total benefits over the 20-year analysis period (undiscounted), resulting from the $30,700,000 investment. When evaluated on a discounted NPV basis (3.1 percent for all costs and benefits except CO2, which is discounted at 2 percent), the Project yields a benefit-cost ratio of **2.82:1**. Benefits arise from various sources, including safety, ongoing maintenance cost savings, travel time savings, and the value associated with health and amenity improvements.

The proposed improvements will enhance safety for users of all transportation modes through Presque Isle, promote the use of non-vehicular travel, reduce road maintenance costs, and significantly improve the aesthetics and quality of life for both regional residents and visitors relying on the commercial district, including tourists. These enhancements will lead to an appreciable increase in residential and commercial property values in Presque Isle and the surrounding Aroostook County.

All savings are presented in 2023 dollars, and the Project is expected to start accruing full benefits in 2032, with the end of the 20-year analysis period set for 2051.

3.1% NPV Summary			
	Costs	Benefits	Discounted
Capital Cost	($24,798,700)		($20,041,110)
Operations and Maintenance		$5,423,096	$2,969,404
Safety		$14,053,143	$8,096,938
Travel Time Savings		$8,234,109	$4,744,211
Vehicle Operating Cost Savings		$0	$0
Emission Reductions		$0	$0
Amenity Benefits		$62,033,076	$35,741,329
Health Benefits		$8,500,681	$4,897,801
Total	**($24,798,700)**	**$98,244,104**	**$36,408,572**

Net Present Value	**$36,408,572**
Benefit-Cost Ratio	**2.82**

Net Operations and Maintenance Costs

A modest overall benefit to the Project is the reduction in maintenance required post-construction, achieved through reducing travel lanes, resurfacing roadways, and repairing sidewalks to address deficiencies. Most Project components are estimated to have a useful life of 45 years, and the BCA includes provisions for increased maintenance costs after each five-year period. The NPV of the net savings in the build vs. no-build scenario amounts to **$2,969,404.**

Safety

The calculated nominal annualized safety benefit is over $700,000 per year, resulting in an overall NPV of **$8,096,938**. These savings are derived from the estimated full elimination of crashes involving pedestrians and cyclists resulting from the new shared-use paths and updated sidewalks designed with Complete Streets principles and the addition of crosswalks, including three new Rectangular Rapid Flashing Beacons (RRFB).

Travel Time Savings
The construction of the pedestrian bridge will yield travel time savings as an existing commute on foot or bicycle will be reduced by 0.7 miles for many users. The NPV of this benefit is **$4,744,211.**

Assumptions
While it is impossible to quantify the exact portion of pedestrian and cyclist trips that benefit from this benefit, it is conservatively estimated that this benefit impacts 10 percent of all trips.

Amenity Benefits
The new pathways, connecting to both existing and new infrastructure, are expected to significantly enhance connectivity throughout the project area. Benefits were calculated for both existing and new users. The NPV of these benefits is **$35,741,329.**

Health Benefits
The new pathways are expected to increase pedestrian and cyclist activity throughout the project area. The NPV of the incremental induced pedestrian and bicyclist use in this benefit is **$4,897,801.**

Assumptions
Because of the city's rural nature, pedestrian and bicyclist volumes are not regularly tracked. As a part of the Feasibility Study that guided this Project design, traffic engineers collected pedestrian and bicyclist volumes at the critical intersection of Main Street and State Street. These volumes are used as the basis for the No Build scenario assumptions.

For purposes of the Benefit-Cost Analysis, Project engineers prepared a conservative estimate of one-time, 10 percent pedestrian and bicyclist volume growth due to the Project at time of Project completion. This includes induced non-motorized transportation from residents as well as expected growth at the nearby University of Maine at Presque Isle (UMPI) campus at the south end of the Project area. Of the currently enrolled students at the UMPI campus, 75 percent (524 students) commute via vehicle, walking, and cycling. Of the students who live on-campus, 40 percent (70 students) do not have a registered vehicle on campus. These figures are factored into the 10 percent growth assumption for pedestrian and bicyclist volumes but demonstrate how this assumption is very conservative.