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Michigan Statewide Tolling Study: US-127 Feasibility Analysis Addendum

IN ACCORDANCE WITH
PUBLIC ACT 140 OF 2020 AND
PUBLIC ACT 73 OF 2022



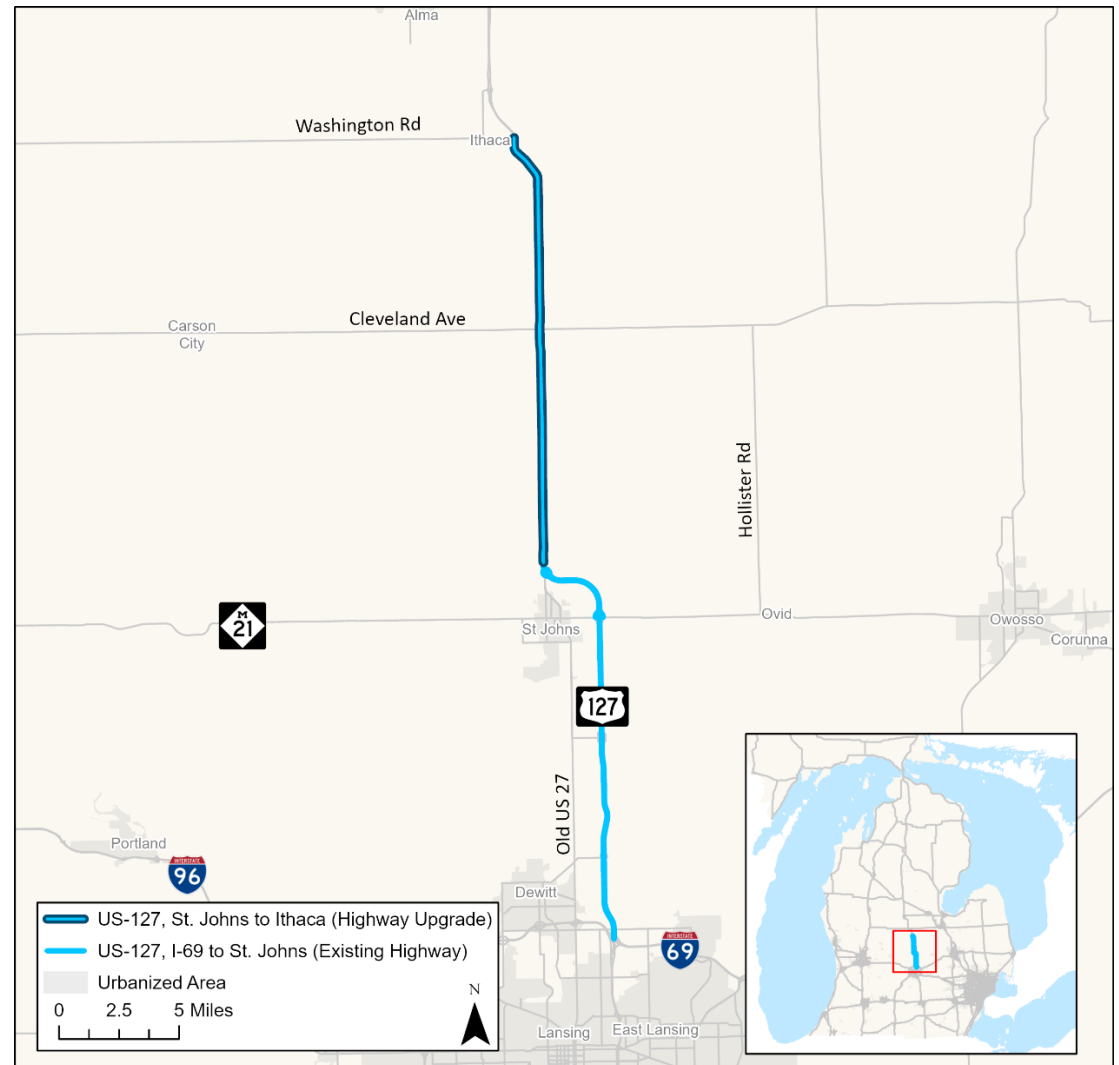
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This US-127 Michigan Statewide Tolling Study US-127 Feasibility Analysis Addendum includes analysis of funding improvements to two sections of US-127 using toll revenue. The two sections of US-127 included in the analysis are shown in **Figure 1**. The northern section runs from St. Johns to Ithaca and is not currently a limited access highway. This section was assumed to be upgraded to a limited access highway in this analysis. The southern section runs from I-69 to St. Johns and is already a limited access highway but has roadway and bridge infrastructure needs.

Capital costs were estimated for the US-127 corridor between I-69 and Ithaca using the study methodologies described in the main Feasibility Analysis report. For the southern section, a total roadway, bridge, toll gantry, and communications cost of \$238 million (in 2020 dollars) was estimated. For the northern section, the roadway and bridge cost estimate to upgrade the facility to a limited access highway was based on the Preliminary Engineering Study that supported the 2001 US-127 Environmental Study (see in **Figure 2**). The cost estimate included in the 2001 study was inflated to 2020 dollars using the Engineering News Record historical construction cost index trend and was estimated to be \$318 million in 2020 dollars. After also including toll gantry and communications costs the total northern section capital cost was estimated to be \$329 million.

Figure 1: US-127 Corridor Studied



Potential 2030 gross toll revenue for the corridor was estimated using the methodologies and models described in the main Feasibility Analysis report. This was estimated to be about \$11 million for the northern section and \$11 million for the southern section (both in 2020 dollars). Annual toll operations and maintenance costs, annual roadway operations and maintenance costs, and annual discount program costs were also estimated using the methodologies described in the main Feasibility Analysis report. After subtracting these other operations and maintenance and discount program costs, 2030 net toll revenue was estimated to be about \$6 million for the northern section and \$6 million for the southern section (both in 2020 dollars).

Using these estimates of capital cost and net revenue, the Feasibility Index was calculated for each section of US-127. The Feasibility Index, as described in the main Feasibility Analysis report, uses 2030 estimated net toll revenue multiplied by 20, divided by capital cost estimates multiplied by two. To be considered feasible as a self-supported toll road, the Feasibility Index should be near one. The Feasibility Indices of the northern and southern sections, respectively, were calculated to be 0.18 and 0.26. **This US-127 corridor is therefore not considered to be feasible as a self-supported toll road.** However, about \$12 million in total annual net revenue could be combined with other funding sources to support a capital program on this corridor, including improvement of the northern section to an access controlled highway.

Figure 2: US-127 Study; basis for northern section cost estimate

