

## Technical Advisory - Summary of Changes to Toll Cost/ Passenger Fee Calculation

An update was recently developed to correct an issue with the computations involving the passenger fee cost within TREDIS 4.0. This change is comprehensive, and influences only users of economic impact analyses (Benefit Cost users are not affected) who were using this field and not seeing any results. Explicitly the following reports are expected to be affected for any and all users making use of the passenger fee input:

- Travel Cost Savings – by Cost Type (2A)
- Travel Cost Savings – by Industry (2B)
- Direct Project Impact Summary (4A)
- Total Economic Impacts – by Year (4B)
- Total Economic Impacts – by Industry (4C)
- Total Economic Impacts – by Occupation (4D)

The reason this only effects economic impact analysis users is that in Benefit Cost analysis, fees and tolls are viewed as transfers between elements of society and therefore generate no distinguishable 'net' effects.

Caution is suggested in using fee and toll inputs when modelling a scenario: In general when modelling a toll or fee, it is important to capture the resulting change in passenger/road user behavior as a result of the toll – especially when explicitly modelling congestion mitigation scenarios. Since the toll will siphon money out of a regional economy that would otherwise be spent and cycle its way around the economy generating secondary effects, it is important to capture the enhancements to the facility and its remaining users as a result of the toll.

Starting with the Travel Cost Savings – by Cost Type (2A) report, the passenger Fee Cost shows up in the 'Toll Cost' section of the reports. This 'Toll Cost' field is now computed as the sum of any Toll Costs accrued, plus any per passenger fees levied. Mathematically this is expressed from a national standpoint in TREDIS as:

$$\text{Toll Cost} = \text{VehTrips} * (\text{TollsPerVehTrip} + [\text{PassengersPerVeh} * \text{FeePerPassenger}])$$