

# Toll Traffic & Revenue Study

The aging Interstate Bridge needs to be replaced with a modern, earthquake-resilient structure that will improve safety and keep travelers and our economy moving. The Interstate Bridge Replacement (IBR) program is estimated to cost between \$5 billion and \$7.5 billion. While funding from Oregon, Washington, and federal grants will make up a large share of the construction costs, the program's financial plan calls for at least 20% of the capital funding to come from leveraging tolls.

## Background

Tolls will generate revenue to help fund construction, as well as facility operations and maintenance. They will also help manage demand and improve mobility through the corridor.

The Level 2 Toll Traffic and Revenue Study completed by the program in fall 2023 provides estimates of future traffic, gross toll revenue potential and net toll revenue expected from tolling the Interstate Bridge to use in financial planning for the IBR program.

## What will Tolling Look Like on the Bridge?

The Interstate Bridge will use electronic toll collection, which is standard for tolled facilities throughout the country. There will not be toll booths and traffic will not need to stop to pay tolls. The program and local agency partners have agreed that the Interstate Bridge will use variable-rate tolling on a set schedule that charges higher prices during peak congestion times. The intended effect is some users shifting trips to off-peak travel times.

Tolling on the existing Interstate Bridge is anticipated to start in 2026, shortly after the construction of the replacement bridge is estimated to begin. This is referred to as pre-completion tolling, which helps to achieve the toll funding contribution more efficiently. Once construction is complete, tolling will switch to the new bridge.



New tolling technologies do not require users to stop to pay tolls.\*

## Traffic Forecasts for Different Purposes

There are two different types of traffic volume forecasts being prepared for use on the IBR Program: Financial Planning Forecasts and Environmental Analysis Forecasts.

These forecasts have different purposes. Forecasts for financial planning, such as a toll traffic and revenue (T&R) studies, focus on annual traffic and revenue projections in each year. Typically, these forecasts are conservative so as to not overstate possible revenue.

Forecasts for environmental analysis are prepared to support the National Environmental Policy Act (NEPA) process and focus on traffic impacts for a typical weekday. Generally, these forecasts are intended to avoid underestimating possible environmental impacts and are used for design needs.

## What is a Toll Traffic and Revenue Study?

A toll T&R study is used to estimate the potential traffic and revenue of a toll facility. The forecasting process is based on historical trends and anticipated future changes such as:

- ▶ Traffic counts and travel times on existing facilities
- ▶ Origin-destination patterns on existing facilities
- ▶ Projections of population growth
- ▶ Projections of employment growth
- ▶ Traveler values of time (i.e., a traveler's willingness to pay for time saved)
- ▶ Expected changes to travel patterns
- ▶ Changes to future transportation infrastructure options
- ▶ Toll policies and pricing strategies

There are three levels of T&R studies, typically performed sequentially and each building upon the previous one to inform the decision-making process. Level 1 is a basic analysis for evaluating high-level feasibility of tolling. This level of analysis was completed during previous bridge replacement planning efforts.

**Level 2 includes a more detailed analysis conducted to test different toll and policy scenarios to determine their relative traffic and revenue outcomes to inform ongoing financial planning.**

This is the level of analysis recently conducted by the program. A Level 2 toll T&R study is typically conducted concurrent with environmental analysis required by NEPA.



A Level 3 toll T&R study (also referred to as an “investment-grade” study) is the most-detailed level, focused on supporting decision-makers to refine toll rates and policies into the set that are projected to meet project objectives, including all financial obligations. The Level 3 forecasts are prepared with sufficient precision and rigor to secure a credit rating and obtain financing and are typically completed about 6 to 8 months before tolling begins.



## Level 2 T&R Study Overview:

A Level 2 T&R study was completed for the Interstate Bridge with input from the Oregon Transportation Commission (OTC) and Washington State Transportation Commission (WSTC). This study analyzed various toll rate scenarios to understand how each would affect travel demand and revenue.

The Level 2 T&R forecasts were developed based on existing, readily available traffic data and trip patterns along with the Regional Travel Demand Model (RTDM), which includes assumptions about future estimates of population and employment as well as all adopted projects and policies related to transportation in the region. The forecasting approach accounted for recent changes in regional travel patterns due to the COVID-19 pandemic. On I-5, Interstate Bridge traffic volumes have nearly returned to pre-pandemic levels. Given the uncertainty about continuing changes in travel patterns and their effects on future toll revenue, the Level 2 T&R study aims to provide a conservative revenue forecast.

## Toll-Rate Setting and Toll Policy Coordination

While the Level 2 T&R Study made assumptions to inform the analysis, actual toll rates and policies implemented on the Interstate Bridge will be jointly set by the OTC and the WSTC. The commissions will consider possible exemptions and discounts which may include those for carpools, emergency vehicles, low-income travelers, tribes and public transit. Both commissions have supported the study of a low-income toll program, including how such a program could be implemented in each state. They will work together to determine how to approach this on the Interstate Bridge.

**Public input is an important part of setting toll rates and policies, and both the IBR Program and the commissions will seek input from the communities that would be affected.** The IBR Program will work with the commissions to determine the process for incorporating input from the public, partner agencies and IBR advisory groups around toll rate setting and policies.

The Level 2 T&R results are designed to inform policy discussions in preparation for (and to narrow the range of scenarios to carry into) the Level 3 T&R study.

## Toll Scenarios Analyzed

**For this Level 2 T&R, two sets of variable toll rates — base tolls and lower tolls — were analyzed across seven scenarios.** An analysis of the existing traffic patterns along with potential funding needs were considered in developing both toll rate schedules. Higher toll rates during peak hours were assumed in both scenarios, with lower rates during off-peak hours to incentivize some trips to shift out of congested peak times and into lower cost off-peak times.

The base toll schedule was developed to provide a high probability of meeting the IBR program’s preliminary funding target, with rates ranging from \$2.15 to \$3.55 in year-of-opening (FY2026) dollars, depending on time of day. The lower toll schedule was developed to test how traffic and revenue estimates would differ, with rates ranging from \$1.50 to \$3.15 in year-of-opening (FY2026) dollars. Since lower toll rates would result in higher traffic using the tolled Interstate Bridge compared to base toll rates, the IBR environmental analysis used the lower toll schedule to better understand the environmental impacts of the program.

In all but one of the seven scenarios, toll rates were assumed to increase annually with general price inflation averaging 2.15% per year. Toll rates on weekend days are conservatively assumed to remain constant throughout the day at the minimum (non-zero) weekday toll.

During the pre-completion tolling period, this study assumed the existing Interstate Bridge would not be tolled overnight (11 p.m. to 5 a.m.) so that travelers are not paying a toll during times in which they may be impacted by construction activities. Overnight tolling at the minimum toll rate was assumed to begin once the replacement bridge opens.

This study included analysis that also captured the interaction with other tolling initiatives in the region. The I-205 Toll Project, which is part of the adopted Regional Transportation Plan, was included in the modeling assumptions for all scenarios analyzed as part of the Level 2 T&R study. In addition, ODOT’s Regional Mobility Pricing Project (RMPP), which proposes to add congestion pricing to I-5 and I-205 south of the Columbia River through the entire Portland metropolitan region, was included in two of the toll scenarios. This analysis was completed based on information available in late 2022. The RMPP toll policies and toll point locations remain under study and are subject to change.

Two low-income scenarios with placeholder discount and enrollment assumptions were used for analysis to help understand the potential impact to traffic and revenue.

Both scenarios assumed customers with annual income at or below 200% of the Federal Poverty Level would be eligible for the discount. One scenario assumed a 50% low-income toll rate discount, and the second scenario assumed a 25% discount.

Starting with the annual gross toll revenue forecasts, net toll revenue projections were prepared by accounting for the projected costs of toll collection and bridge facility operations and maintenance. These projected costs for toll collection are placeholders based on the best available information at the time of analysis. Many decisions around how accounts will function, how tolls will be collected and toll policies that impact the cost to collect tolls still have not been made.

Preliminary estimates of the potential capital funding contribution from the draft net toll revenue projections were jointly prepared in early 2023 by ODOT, in coordination with the Oregon State Treasury and by the Washington Office of the State Treasurer (OST) to inform the 2023 IBR Financial Plan. That work confirmed that the base toll rate net revenues were sufficient to meet the Financial Plan’s target of \$1.24 billion in funding based on a combination of bond proceeds and pay-as-you-go net toll revenues. While it is likely that several of the other scenarios would also be sufficient to meet the target, additional coordination would be required to confirm toll funding for each scenario.

### Next Steps

**A future Level 3 T&R study (investment grade analysis) will support and inform the formal bridge toll rate-setting process conducted by OTC and WSTC ahead of starting the planned pre-completion tolling.**

**This future study will collect updated data on trip origin-destination patterns, conduct a survey to estimate traveler values of time and refine projections of regional population and employment. The Level 3 analysis will also include updated assumptions about other regional network characteristics including pricing on other facilities. The Level 3 toll T&R study will inform formal rate setting and help secure financing.**

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