RECOMMENDED SHORT-TERM AND MID-TERM IMPROVEMENTS

Short-term improvements are low-capital cost, physical and operational improvements that are needed within the next five years to maintain or improve traffic operations on the existing bridge. Figure 6 shows the short-term improvements recommended during Tier II. Additionally, a set of mid-term improvements is recommended in case the bridge replacement is more than ten years away. These improvements would maintain or improve traffic operations in the 6-10 year timeframe.

Short-Term Improvements

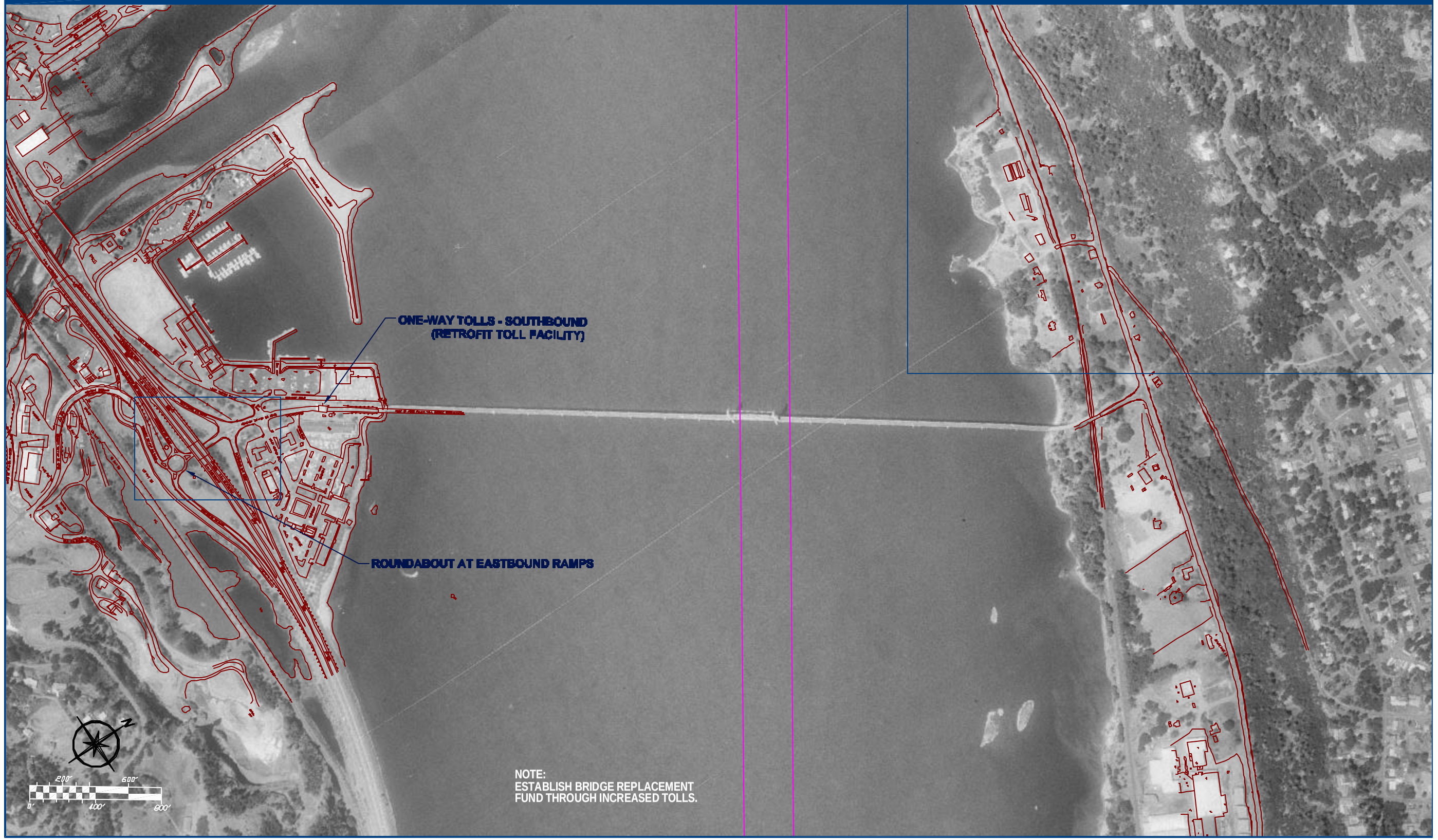
- Roundabout or traffic signal at I-84 eastbound ramps and Oregon 35/Hood River Bridge access road: this would reduce or eliminate peak traffic episode queuing and spillback onto the I-84 mainline. A roundabout is recommended due to the close proximity of Oregon 35, as well as the offset nature of the eastbound I-84 off- and on-ramps.
- Convert the toll booth to one-way tolls southbound: At peak traffic times, and are forecast to occur daily in the short-term, northbound traffic passing through the toll booth spills back through the adjacent four-way stop intersection. In the long-term, these queues could block the I-84 ramp intersections. Converting the toll booth to one-way tolls ($1.50 toll paid once, rather than $0.75 paid each way) southbound will eliminate the potential for spillback queues affecting intersection and I-84 traffic operations. In the southbound direction, if queues form, the entire bridge can be used for the queue storage length which does not impact any adjacent intersection. The one-way tolls should reduce the ongoing operating costs to the Port of Hood River by reducing the number of toll takers needed to operate the toll booth. The short-term conversion would consist of a retrofit of the existing toll booth, minor pavement widening to allow for northbound traffic to flow safely through the toll plaza, and signage changes and removals.
- Bridge replacement fund: A dedicated fund would be established through increased tolls to fund a replacement bridge. In the short term, these would be collected by the Port of Hood River under an interagency agreement with the Washington State and Oregon Departments of Transportation.

Cost for these improvements are shown below. These costs do not include the cost of right-of-way acquisition nor do they include costs for environmental impact mitigation.

- $270,000 for the roundabout
- $100,000 for the toll booth conversion to one-way tolls
- $573,500 total cost for short-term improvements (including additional costs for engineering, construction management, and contingencies).

SR 35 COLUMBIA RIVER CROSSING STUDY

SR-35 SHORT TERM IMPROVEMENTS



PARSONS BRINCKERHOFF

5-15-02

Mid-Term Improvements

If the replacement of the bridge is not programmed to occur for at least ten years, traffic and congestion growth will result in additional improvements needed to maintain or improve traffic operations on the bridge. These include:

- Signalize the I-84 westbound ramps at the Hood River Bridge access road: This would alleviate the future failing level-of-service at the interchange.
- Convert to a Roundabout or signalize the four-way stop at the Port/Retail Entrance: The four-way stop, which stops all vehicles, will eventually become a bottleneck and result in traffic spillbacks either into the toll booth area, or into the I-84 interchange area. Additionally, with short-term improvements at the I-84 ramps and at the toll booth to improve traffic flow, having a stop sign in the center of an otherwise flowing corridor may actually increase accidents over time.
- Restrict or close turns at the private driveway onto the Hood River Bridge access road: Vehicles turning left into, or out of, the driveway conflict with bridge traffic. With increased traffic, congestion, and queuing at the toll booth, and the increased potential for accidents, turning movements at the driveway should be restricted at a minimum to right-turns only, and potentially closed if the accident rate increases.
- Toll booth and automated toll collection system: This would alleviate southbound queuing near the toll booth by allowing regular bridge users to use automated toll collection. Project includes removal of current toll booth and the construction of new toll both, canopy, and communication system to support automated toll collection. The new toll booth would be designed and built so that it would not need to be replaced with the construction of a long-term improvement in this corridor.
- Signalize the SR-14/Hood River Bridge access road intersection: Eventually, this intersection will experience LOS E/F conditions, which could result in higher accident rates as left-turning vehicle drivers become impatient with longer wait times and begin to attempt turns into unsafe gaps in traffic.

Cost for these improvements are shown below. These costs do not include the cost of right-of-way acquisition nor do they include costs for environmental impact mitigation.

- $160,000 for the traffic signal at the westbound ramps
- $270,000 for the roundabout at the Port/Retail intersection
- $20,000 for the turn restriction or closure at the private driveway
- $750,000 for toll booth and automated toll collection system
- $160,000 for the signal at SR-14.
- $2.1 million total cost for mid-term improvements (including additional costs for engineering, construction management, and contingencies).