

FREQUENTLY ASKED QUESTIONS

About the Vancouver Rail Bridge Project
Prepared for Portland Freight Committee meeting 1/21/04

by

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1. How many lifts are called for at the I-5 bridge?

That depends entirely on the river levels. In low water years, when the river level does not rise above 6 feet at the Vancouver gauge, we may have very few lifts requested by towboat operators. But in some years, the river may be above 6 feet for six or seven months. The ten-year average is about 275 annual lifts at I-5. But in 1997, a high water year, there were over 100 lifts per month for seven months straight, most of them called by towboat captains. Similarly, 1996 had six straight months with over 100 lifts per month. Washington DOT predicts that the average annual number of lifts will increase to about 400 in 2021.

In the winter up to 90% of lifts may be called by towboat captains, while in the summer perhaps as few as 60%. Whether recreational vessels would be able to use the high span to the same extent as commercial tows may depend on mast heights. But certainly the I-5 lifts could not be immediately disabled upon construction of a rail bridge lift, for a small percentage of vessels would continue to require the use of the 175-foot high I-5 lifts.

2. Why is no one complaining about traffic delays on I-5 caused by lifts?

We have had four straight low-water years, and consequently very few lifts. But after the high water years of 1996 and 1997, there was a great deal of public outcry about the lifts. Identity Clark County (ICC) and others appealed for further restrictions on the times the towboat captains could call for lifts, and in fact, the Coast Guard was compelled to look at the issue very closely, holding several public hearings on the matter. The Columbia River Towboat Association was pressured by Washington's Senator Gorton to negotiate a settlement of the issue with ICC, the Coast Guard and ODOT, participating. In the end, we agreed to increase the lift restriction period by an additional 1 & 1/2 hours.

After the agreement was made, we entered the current period of low water years, where few lifts have been requested. Naturally, some people assume that because of the outcry, the towboat industry has reformed itself, no longer requesting unnecessary lifts. Even ICC officials have occasionally complimented the industry on its admirable restraint.

But this is certainly not the case. As soon as the river again reaches 6 feet, captains will be calling for lifts.

And of course, I-5 traffic has gotten worse in the last few years, and the outcry will again be noisy when the lifts begin stopping traffic. Both ODOT and WSDOT have indicated that they will again seek further lift restrictions from the Coast Guard when the pressure rises.

3. Why does increasing the I-5 lift restriction time make navigation more dangerous?

When the river level is over 6 feet, downbound captains are no longer able to safely use the wide or high spans of I-5 and must use the lifts. If they are unavailable, captains must schedule the arrival time to coincide with non-restricted hours (sometimes by holding the tow upriver). As the opening time becomes more restricted, more tows must schedule their arrivals at the daytime hours of opening, which thus become more crowded with towboat traffic, or at night, when the rail bridge transit is even more hazardous.

And of course, with added opening restrictions, there is increased pressure on captains to avoid the lifts by attempting the maneuver through the wide or high spans. The cautious captain might choose to wait; but the close calls, the difficult decisions will always arise. Much depends on the captain's judgment of the situation. Considering the complexity of factors involved, an error is perhaps inevitable if the conditions are not improved.

4. If the rail bridge is so hazardous, why haven't there been more accidents?

Although Columbia/Snake river towboat captains appear to agree that this is the most dangerous man-made hazard on the river, very few of them have actually had a significant accident at the bridge. It is of course relevant that all captains are very much aware of the dangers. Before navigating between the I-5 and rail bridges, the captains will have thought out the route before making the approach, and will have considered the variables, from weather conditions to river levels, speed and likely currents that will be encountered. Partly this is because he knows it can be treacherous, partly because he must arrange in advance both openings and will thus be alert to the current situation. He will not attempt the downbound approach through I-5 without making sure the rail bridge is open, even if he can avoid using the I-5 lifts.

To say that captains are highly skilled and careful operators may certainly be an accurate assessment. However, these same captains have all had harrowing close calls at the bridge and assert in written and oral testimony that a major accident is inevitable unless the rail bridge opening is changed. Partly this belief is based on the fact that I-5 lifts are now less available (and may even be less so in the future), so he must make harder decisions about how to make the transit. Should the high span be attempted when the river is at six feet, or should he play it safe and wait several hours for lifts to again be available?

Some have expressed the view that the “old guard” is retiring, and a new crop of untested captains must learn the ropes at a time when the region is going through an extended period of low water years, so there will be a steep learning curve when river levels return to historic conditions.

5. What would be the effect of an accident on rail traffic?

Since the local Coast Guard and river operators all agree that a major accident is just a matter of time unless changes are made, we should note the likely effects. If the rail bridge were put out of commission, resulting delays along the west coast would take weeks and months to unsnarl. Rail traffic would be diverted to Eastern Washington, to Eastern Oregon (the closest crossing is at Wishram) and back through the Columbia Gorge. The cost to Burlington Northern and Union Pacific would be about \$156,000 a day (taken from Congressman Blumenauer’s testimony at the Truman-Hobbs hearing). West Coast Amtrak service would simply stop. River traffic would stop. If the cargo involved in the accident happened to include petroleum products or hazardous materials, the ecological effects could be catastrophic.

6. How would changing the rail bridge improve the situation at I-5?

If a lift opening were placed at the span just to the south of the current opening, it could be about 300 feet wide and could be approached from either the I-5 wide or high spans with relative ease. There would be no need for towboat captains to use the lifts during high water. At 72 feet (at zero gauge) the high span is high enough to accommodate any towboat under nearly any possible river condition except very high flood levels, when there would be no river traffic anyway. Thus, I-5 lifts from towboat traffic could be eliminated with a modification of the rail bridge.

7. How much cargo moves by river, and can train and truck replace it?

The ten-year average for cargo moved in barges through the two bridges is about 10 million tons per year. The estimated point of origin value for the cargo (mainly grain, wood products, containerized agricultural products, petroleum and other bulk commodities) is about \$2 billion. Barge transportation is the most economic and reliable transportation mode. Each fully laden grain barge, for example, contains the equivalent of 35 rail cars or 116 truckloads of grain. A full tow of four barges carries more than an entire unit train or more than 464 semi-trucks. Wheat barged from Lewiston costs the shipper from 17-19 cents per bushel; 30-38 cents by rail, and 42-45 cents by truck. Fuel efficiency is a major factor in these costs. According to USDOT figures, for a gallon of fuel, a truck can move one ton 59 miles; a train 202 miles, and a barge 514 miles. Environmental costs are significantly different for the modes. A recent USDOT Ports and Waterways study of the environmental impacts of a modal shift in transportation corridors now served by barge concluded that moving from barges to trucks would cause an 826% increase in annual fuel use, a 709% increase in exhaust emissions, and a 5,967% increase in probable accidents each year. Looking at corridors where rail is a possible alternative, fuel use would increase by 331%, emissions by 470% and probable accidents by 290%.

U.S. farmers compete with producers in Canada, Australia, South America, France and China to sell our grain into a global marketplace. The total range in market price is often less than two cents per bushel. Without barging on the Columbia/Snake system many of these farmers would be priced out of the market. Similar economic factors control the intermodal container traffic that has in recent years been so important to the economic vitality of our region. Barging containers (mostly agricultural products) from the Columbia and Snake River basin has been a decisive factor in making the case for the channel deepening project on the lower Columbia. All these upriver containers are barged through the Vancouver rail bridge. Economics make it impossible to ship many of these products without barging; fuel emissions and highway congestion make it an unlikely policy direction.

The Maritime Administration (USDOT) has recently begun to study (the “Short-Sea Shipping” program) the feasibility of dramatically increasing the use of barging in areas of the country where highway congestion has become a problem. One of the study areas is the I-5 corridor. The idea is that it may be that container cargo, for example, currently trucked from Long Beach, California, to Portland and beyond could be barged.

8. Is there a bottleneck for marine traffic at the bridge?

Current barge traffic stack-ups result from two major causes: 1) When the river level is above six feet, downbound tows can collect at Ryan point to await their turn to use the I-5 lifts; and 2) When the rail bridge is occupied by train traffic, tows must also wait for the rail bridge to clear, although river traffic has theoretical priority.

Because of the constricted and dangerous nature of the downbound approach to the rail bridge, only one tow at a time can approach the two-bridge intersection at a time, and both the I-5 lift and the rail swing span must be in the open position before a captain can commence the downbound approach. All this can take some time to coordinate, and the effect on freight mobility can be significant for all three modes. Obviously, when a barge queue develops, the result on highway and train traffic is to create two more bottlenecks for these modes as the barge tows navigate one by one through the bridges. As river, highway and train traffic increases, these bottleneck effects will only worsen.

A modification in the rail bridge will have positive impacts on all three modes, for it will allow quicker barge transits, shorter rail bridge openings, and far fewer I-5 lifts. The cascading bottleneck that is now developing at the intersection would be nearly eliminated, certainly for marine and highway traffic, and it would be greatly lessened for train traffic as well.

9. Why did the Coast Guard rule against Truman-Hobbs funding?

The Coast Guard’s Eighth District, which is headquartered in St. Louis, was asked to do the study and conduct the hearing because of its extensive experience in handling Truman-Hobbs matters. After holding the hearing and considering the facts, it strongly recommended that action

be taken to fix the problem. It flatly declared in its report that in its opinion the Vancouver Rail Bridge is an unreasonable obstruction to navigation.

However, when the case got to Headquarters in Washington, D.C., there were other factors to be considered. Namely, the cost/benefit analysis showed that unless the benefits from reducing I-5 lifts and avoiding a hypothetical future accident were factored into the equation, the \$42 million cost of modifying the bridge was not justified economically by the other benefits to navigation. And it found that the regulations did not provide the flexibility to look at those benefits, particularly the benefits to highway traffic on a nearby bridge, a bridge that was not even under Truman-Hobbs consideration for modification.

We subsequently learned that the Truman-Hobbs program is currently starved for funds, and that nationally it handles about one bridge per year. Had the Vancouver rail bridge been approved for Truman-Hobbs funding, the project would have been put in a queue with a long list of other approved projects, waiting for appropriations.

10. Why is the Coast Guard now willing to undertake the project?

Even after ruling against Truman-Hobbs funding, the Coast Guard's Washington D.C. Headquarters has expressed an interest in managing the project. If funding can be assured without reducing the dollars available for approved projects, the Truman-Hobbs managers at Headquarters would be willing to undertake and complete the project. It is our opinion, based on many conversations with Coast Guard officials, that while the Coast Guard views this project as important to navigational safety, Coast Guard officials also see that its importance to regional multi-modal freight transportation, including I-5 freight mobility, is also a very significant factor and should be considered when deciding the funding issues.

The local Coast Guard Commander, after calling the rail bridge opening "an anachronism from another era without the nostalgia of that era" that represents the greatest man-made navigational challenge to river traffic, stated at the hearing that "to put it simply, the proposal represents and unusual win-win-win-win situation for three modes of transportation and for reduced risk of casualties and environmental harm...and will simplify the planning and construction of future regional transportation links by rail and highway across the Columbia River." (Truman-Hobbs testimony, March 5, 2002)

The Eighth District agreed with the local Commander and recommended that the project go forward, and also pointed out the benefits to the other modes of transportation. On this latter point rests the hope expressed by so many in the Coast Guard after the failure at Headquarters. The project is important to the region, to multi-modal and intermodal traffic, and even to the rail system. If the region pulls together and recognizes the far-reaching positive impacts of the project, funding will be found. If Truman-Hobbs cannot use the benefits to I-5 traffic in its cost-benefit analysis, the region and its Congressional delegations are certainly able to do so. Authorizing this multi-modal transportation project under TEA-21 makes a great deal of sense, and with proper legislation the Coast Guard will be able to use the mechanisms of Truman-Hobbs to fully manage and complete the project.

11. Why should the project not be considered a rail project?

It is perhaps unfortunate, and certainly misleading, that the I-5 Trade and Transportation Partnership categorized the project as a rail project. Obviously, in a sense it is a rail project, since it involves the rail bridge. But other than the rather large benefit of reducing the likelihood that the rail bridge itself will be hit by a barge tow, the economic benefits derive mainly from a modernized opening. Theoretically, a new lift can be operated with greater speed than the old swing span. But BNSF has put a great deal of money into making sure the old swing span can continue to operate for years into the future. It has expressed little interest in building a new lift. The capital costs would hardly justify such a project in the near future merely on the basis that a new opening could be faster.

It is clear that the justification for the project comes primarily from its effects on maritime safety and its benefits to I-5 traffic. This is not a rail project, and to so classify it induces a kind of torpor, an inclination to wait for the railroads to weigh in on the need for it.

There was some concern expressed at the Truman-Hobbs hearing that the rail bridge ought to be upgraded to accommodate increasing rail traffic, and that perhaps the upgrade could be done at the same time as the safety modification. We believe that this is an independent issue and ought to be decided on its own merits rather than be tied to the critical issue of navigation safety; certainly it should not be used to impede the decision to improve the opening. A new lift could be configured to accommodate a third rail if necessary.

12. Why not wait for planning on the new highway crossing to be done?

With the I-5 Trade and Transportation Partnership calling for a new Columbia River crossing, shouldn't the planning be done before we undertake a change at the rail bridge? The new crossing, by the most optimistic forecasts, is a good number of years away, and planning will take considerable time. But that's not the main point. If we go ahead now with the rail bridge project, we open up possibilities for the I-5 planners, and we get immediate benefits for I-5 traffic and freight mobility.

By moving the rail opening to the south, we can eliminate the need to have a high span at the north end of any new I-5 bridge. This is because river traffic will no longer have to line up on the north side of the river to get through the rail bridge. The new bridge can be designed with its high spans nearer the middle of the river, lining up with the new lift at the rail bridge, also nearer the middle of the river.

Thus the new highway bridge could be planned without lifts and without a high span at the north end. This will certainly facilitate access to the street system at Vancouver USA, and will allow more efficient use of the current freeway infrastructure north of the river. A modification of the

rail bridge accomplished early in the planning process for the I-5 crossing would thus facilitate that effort, reduce the projected costs of the new crossing, and at the same time ease the congestion currently forecast by WSDOT and ODOT on the existing bridge.

13. Wouldn't a new highway bridge solve the problem?

There is no doubt that a new I-5 crossing would be constructed without a lift, and to that extent would be better for highway as well as river traffic. However, unless the rail bridge opening is moved, the navigation hazard would remain. In theory, the north end of a new highway bridge could be built high enough to accommodate river traffic in high water conditions, thus eliminating the dangerous "S" turns for river traffic, but this approach makes little sense from an engineering perspective. The problems of the rail bridge opening, the narrow opening and the hazardous approach, need to be solved whatever decisions are taken with regard to the timing and configuration of a new highway bridge.

14. How much would the project cost?

The Coast Guard estimated for purposes of the Truman-Hobbs study that the cost would be about \$42 million. This figure includes the costs of the engineering and environmental impact studies and contemplates that the entire project would be managed by the Coast Guard itself. It is frankly an estimate, and it may be high. It was based partly on an unrelated study conducted by HDR Engineering for SW Washington RTC for adding a third track to the bridge, and was considered relevant because it also contemplated removing the swing span and adding a lift.