

Truck Tolling Analysis

The Hampton Roads Transportation Planning Organization (HRTPO) has been working diligently to address the region's transportation needs. Funding limitations from public sources have increased the activity of PPTA/P3 proposals for projects.

It appears likely that tolls will be prominent in the equation for improving the region's transportation infrastructure. However, the HRTPO needs to ensure that the tolls do not become prominent at the expense of local industry and commerce growth. It has been widely shown that tolls are passed on from the trucking companies to the companies shipping the goods, which cuts substantially into the narrow profit margins of many goods, and eliminates economic growth in the region. Many options are available, but the existing national standard for tolling trucks can be unreasonable and may be a poor choice for this region's economy.

Hampton Roads possesses an economy that is heavily reliant on the freight movement. In addition to the goods that make their way to and from businesses and consumers typical of most regions, Hampton Roads' economy is also supported by international trade through our ports and military supply and deployment. In order to intelligently consider cost-benefit outcomes from transportation improvements whose funding relies on tolls, an understanding of the impact resulting from increasing the cost of transporting this freight is needed.

Transportation costs as a percent of the total costs of goods varies. The largest variable to this percentage is the value of the goods themselves. Typical standards in the U.S. place that range between 5% and 15% to the total cost of goods. This increase over the last decade is due to increased fuel prices and worsening highway congestion. But while transportation costs have increased, the costs of many goods imported from overseas has decreased. Transportation costs continue to increase in importance relative to the goods shipped. Taking transportation costs into consideration becomes increasingly important when businesses decide where to locate or whether to relocate.

As transportation costs increase, profit margins are affected. Entire industry segments such as bulk commodities operate on thin profit margins between 1% and 5% or less. Truck movements are often inelastic when it comes to tolls, because they often cannot travel on minor arterial or other local routes, or bypass tolls for a variety of reasons. Consequently, trucks end up traveling on major corridors and are exploited by tolls with the understanding that personal vehicles have much more flexibility for toll avoidance and the cost of operating, maintaining and covering debt service for toll roads is required.

Studies have shown that trucks are routinely charged an average of six times more than passenger vehicles at tolls throughout the country. Travel Demand Models and other congestion calculations commonly estimate that one truck produces the equivalent congestion of two or three cars. Increased costs may cause freight-related businesses to move to other regions to avoid paying the tolls, or to set up new operations in other, toll-free areas. Once a company moves, getting them back, even by eliminating tolls, is difficult because the inelasticity that the toll roads rely on also works against attracting new business once it has chosen an alternative location.

Regional economies and toll facilities themselves count on growth to finance new infrastructure. But tolling commerce too severely can prove counterproductive. It is not that trucks cannot or should not pay tolls; but rather the entire economy should be carefully analyzed when determining toll rates for transportation infrastructure.

The addition of toll roads will increase highway capacity throughout Hampton Roads, which will cut costs by reducing time delays and fuel consumption. However, since bulk goods movement is not as time-sensitive as high-value goods movement, it will benefit less from the added capacity. Increased highway capacity will only reduce costs if the future system is so congested that a significant amount of time is added to the total trip when compared to not tolling the trucks. Fuel savings can help offset the additional cost of tolls, since idle or stop-and go traffic increases fuel consumption, but this is not likely to offset tolls if the rates are set similar to other U.S. facilities.

Another consideration for the HRTPO with multiple PPTA projects is the possibility of a truck paying multiple tolls for one shipment. For example, a truck may come down the proposed US 460 toll corridor, deliver its cargo in Virginia Beach after passing through a toll at the Downtown Tunnel, and leave the region by taking the HRBT to I-64.

Several options are available regarding toll pricing for trucks, including variable pricing. Variable pricing is become increasingly more common at toll facilities, where tolls are higher at peak times and lower at off-peak periods. Adjusting the variable pricing to include affordable off-peak/overnight pricing periods similar in price to those of vehicles is a solution that could both help the local economy and reduce peak congestion.