

## **DOWN: COSTS APPEAR TO EXCEED BENEFITS**

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*In 2050, Norfolk may be regarded as visionary for starting The Tide, but that's unlikely unless the system is expanded.*

By JAMES V. KOCH

Because I gratefully rode mass transit systems until age 25, when I purchased my first car, many might view me as biased in favor of light rail systems such as The Tide. The truth is I would love to see The Tide succeed. However, the circumstances under which it would be generally viewed as successful are more limited than many of its most fervent supporters believe.

Let's look at the benefits and costs.

On the benefit side, the hope is that The Tide will reduce traffic congestion. Other studies indicate this benefit will average about \$40 per citizen. This translates to \$9.37 million in annual congestion savings for Norfolk's 234,000 citizens.

Light rail systems also can reduce traffic accidents and avert deaths. Once again, if Norfolk's experience matches that of other cities, these benefits will approximate \$12.66 million annually. Given the configuration of The Tide as it winds through several of the city's major intersections, this is probably a significant overestimate and the actual value may be zero or negative.

Light rail systems also may increase property values. The evidence here is mixed; property values usually increase in higher-income areas near light rail but decrease in lower-income areas. The noise and passenger traffic near light rail stations can decrease property values directly adjacent to stations.

Light rail systems may act as a magnet and increase population density. There is evidence that this occurs, though it takes many years to do so, and some regard it as a negative.

Some argue that light rail systems increase sales. This benefit is largely illusory because increased sales in one area of a city usually means offsetting decreases in sales elsewhere in that city. Only if Norfolk attracts additional sales away from, say, Chesapeake, because of The Tide, will it be better off.

Most advocates argue that light rail systems are more energy efficient. Somewhat surprisingly, this often is not true today and will be even less so as automobiles climb toward the 35.5 to 39 mpg CAFE standard mandated by the U.S. government for 2016.

Against these possible benefits, there are the costs of construction and operation/ maintenance. The most reliable recent estimate of the construction costs of The Tide is \$338.3 million. If one expects to earn a 5 percent rate of return on such an investment, then a \$16.9 million annual flow of profit (benefits) is required. For the city of Norfolk, however, this burden is approximately cut in half because of U.S. government financial assistance to Tide construction.

The Tide projects \$14 million in annual operating costs, of which \$1.4 million (10 percent) would be paid by passengers. Taxpayers, advertisers and others would pay the remaining 90 percent (\$12.6 million).

There also will be some side effects. For example, one of HRT's most productive bus routes is Route 20, which starts at the Oceanfront in Virginia Beach and roughly parallels the path of The Tide for several miles. Route 20 currently serves an average of 29 passengers per revenue hour. Will this bus route be closed and these passengers pushed onto The Tide? Those between Tide stations would not be happy, and there would be no net gain for mass transit; however, if both routes remained, they would cannibalize each other and increase costs.

If The Tide expects to earn \$1.4 million in annual passenger revenues and the average fare is \$3, then this implies 466,667 passengers annually and 1,278 per day, 365 days per year. This seems doable but would not result in a huge reduction in automobile activity. We recognize that we need to divide the 1,278 daily number by two to recognize round trips, and in any case many of these passengers do not ride during rush hours.

Where does this analysis leave us? Costs appear to exceed benefits, and all agree that riders on The Tide will end up being subsidized by those who choose not to ride. However, this is true for virtually every mass transportation system in the United States. It's also true that automobile transportation in this country likewise is subsidized significantly and that the current \$2.70 per gallon price of gasoline does not begin to cover the real costs generated by automobile usage.

In 2050, Norfolk's current leadership may be regarded as visionaries for biting the bullet and starting The Tide, yet this is unlikely to occur unless the system is expanded to include major population centers such as Naval Base Norfolk, Old Dominion University, Portsmouth, Greenbrier and, of course, a route to the Virginia Beach Oceanfront. However, even today, the cost of constructing such routes easily might exceed \$3 billion and would require impressively large operating subsidies as well.

My heart makes me wish that The Tide will succeed. My training as an economist, however, informs me that this will be a very difficult row to hoe.

James V. Koch is Board of Visitors professor of economics and president emeritus at Old Dominion University.