

Detailed Truck Data for Virginia's Port

The Port of Virginia is one of the largest ports on the East Coast, moving over 1.6 million containers each year. Only a day's drive from two-thirds of the U.S. population, Hampton Roads is a hot spot for commercial trucking activity. Over 60% of cargo is transported out of the port by commercial trucks.

EXECUTIVE SUMMARY

Large commercial port wanted highway truck movements to help prioritize funding.

- Our truck analysis ranked port traffic by high-volume routes.
- Results validated \$1 billion highway mega-project.
- Data enables prioritizing future projects that improve port access.

Mission: Secure Affordable and Accurate Truck Data

The Hampton Roads Transportation Planning Organization (HRTPO) wanted to understand which routes were most commonly used by commercial trucks, in order to support project prioritization, ongoing studies, and federal funding applications.

Traditional truck data collection methods rely on driver surveys, which have poor results due to low response rates and human error in reporting answers. Instead, HRTPO invested in costly truck data from an industry research institute. Unfortunately, they had no way to process the raw data effectively, and the sample size was too small.

"This analysis confirmed our investment in a billion-dollar mega-project on I-64."

DR. ROBERT CASE
HRTPO



Analysis: Identify Port Truck Routes

StreetLight Data's metrics comprise commercial trucks tagged by weight class, with spatial precision of up to five meters. This GPS data covers about 12% of all commercial truck trips in the U.S. (sample size varies by region).

With this data set, HRTPO first analyzed the total volume of truck trips from the Port of Virginia, finding that 91% originated at the two international terminals. It was a result that, until then, they had been unable to quantify.

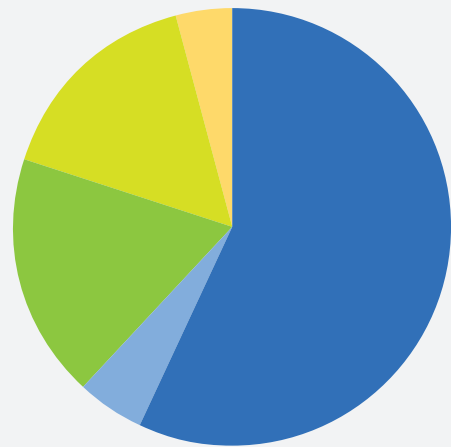
To determine which highways trucks used to depart, HRTPO ran an O-D analysis using the port's distribution centers as trip origin zones, marking nearby highway gateways as pass-through zones. This analysis revealed that I-64 was used 57% of the time, a much greater percentage than any other route.

For validation, HRTPO compared StreetLight InSight results to sensor truck counts from the Virginia Department of Transportation. VDOT counted total truck numbers at the highway gateways, but not which trucks were affiliated with the port. StreetLight collected slightly higher numbers, showing that interstates are more important routes for port trucks than average trucks.

Results: Validate Investments and Prioritize Planning

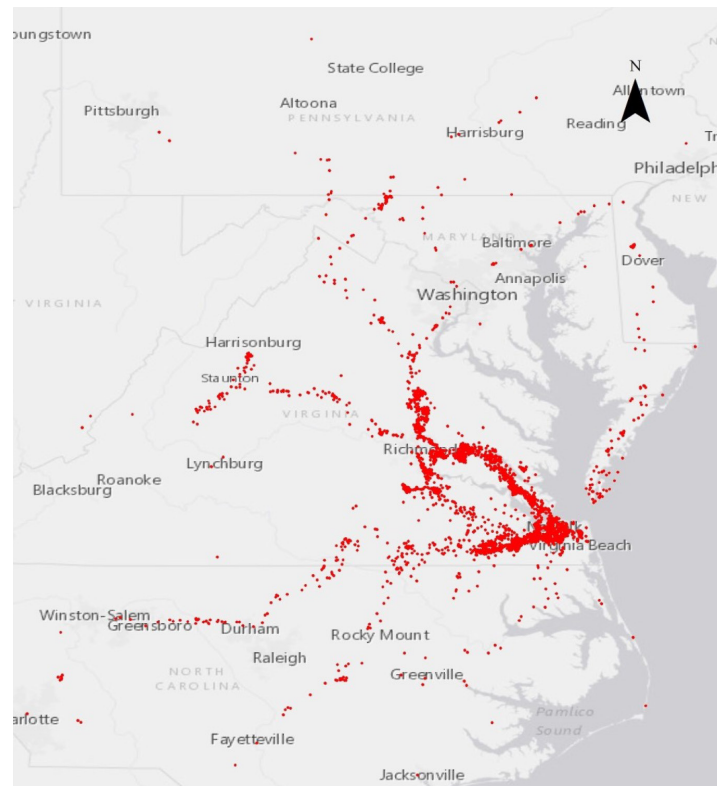
HRTPO now is able to score potential projects in the region via a prioritization tool, rewarding projects that increase access to port facilities. Until this analysis, HRTPO had not been able to quantify which projects would actually improve port access.

The results have also been used to validate HRTPO's selection of past projects for regional highway maintenance and infrastructure improvements. Finally, the gateway usage information will inform ongoing corridor studies, assisting HRTPO in developing accurate and reasonable future plans.



57% I-64 Pen 16% US58 Other
18% US460 5% US13 CBBT

Highway gateways share of usage on an average weekday from July 2016 through June 2017.



O-D analysis showing truck highway routes from port distribution centers.