I-64 HOV to HOT Conversion Feasibility Study

Norfolk/Virginia Beach/Chesapeake

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I-64 HOV to HOT Conversion Feasibility Study

Objective

- Study the conversion of existing HOV lanes to HOT lanes
- Identify the potential to provide low-cost solutions that can quickly provide benefits to the region

Regional Opportunity

- 32 miles of HOV lanes in Hampton Roads are underutilized
- Opportunity to provide travel choices to commuters
- Improve reliability and reduce congestion in all travel lanes

Study Scope

The study will evaluate I-64 HOV lanes on the Southside from I-564 to Battlefield Boulevard.

First Segment: I-564 to I-264

- 7 miles of two-lane reversible HOV lanes

Second Segment: I-264 to Battlefield Boulevard

- 6.5 miles of dual direction one-lane HOV (diamond) lanes

Location Map

Current HOV Utilization

Reversible HOV lanes

- Utilization during 2 Hour AM & PM HOV restricted periods *
  - AM: 796 vehicles (avg.)
  - PM: 1157 vehicles (avg.)
- Free flow capacity = 6000+ vehicles
  (1,500 vehicles / lane x 2 lanes x 2 hours)

Dual direction one-lane HOV lanes

- Utilization during 2 Hour AM & PM HOV restricted periods *
  - AM: 1183 vehicles (avg.)
  - PM: 1603 vehicles (avg.)
- Free flow capacity = 3000+ vehicles
  (1,500 vehicles / lane x 1 lane x 2 hours)

* Traffic Data Source: 2014 (avg.) VDOT data

Study Goal & Objectives

Goal

To determine the feasibility of converting the High Occupancy Vehicle (HOV) lanes on I-64 on the Southside to High-Occupancy / Toll (HOT) lanes

Objectives

- **Feasibility of converting existing HOV lanes to HOT lanes**
- **Potential benefits of the HOV to HOT conversion**
- **Planning level cost estimates**
- **Planning level construction schedule**

Team

Representatives from Office Intermodal Planning and Investment, HRTPO, HRTAC, ODU, VDOT, FHWA

Methodology

Data Collection

- Existing Survey and base mapping, geometrics, traffic data, subsurface utility information, ITS interface standards, T&R Forecasts and Models

Define the managed lane design concept

- Pricing methodology
- General location of toll zones, gantries, signage and traffic management devices

Develop high level planning cost estimates

- Construction and implementation
- Operations and maintenance

Assess feasibility

- Net Revenue Estimates

Preliminary Schedule

February 18, 2016

- Study 1 (Reversible HOV lanes)
  Identify feasibility & benefits of conversion

March 17, 2016

- Study 1 (Reversible HOV lanes)
  Planning level cost estimates & planning level construction schedule
- Study 2 (Dual direction one-lane HOV lanes)
  Planning level cost estimates & planning level construction schedule

May 17, 2016

- Study 1 (Reversible HOV lanes)
  Final report
- Study 2 (Dual direction one-lane HOV lanes)
  Final report