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-546 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