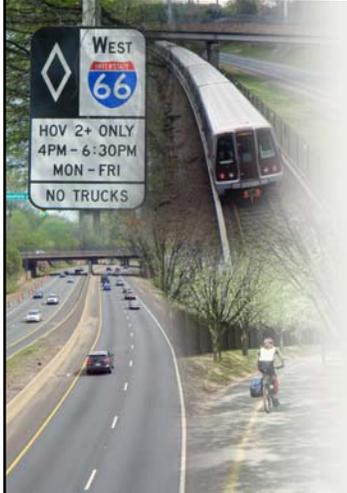


Study Overview and Preliminary Mobility Options



December 2011

CARRIBOT

Transportation leadership you can trust.

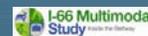
Goals of the Study



Study Goal

- » Identify a range of current and visionary multimodal and corridor management solutions that can be implemented to reduce highway and transit congestion and improve overall mobility within the corridor and along major arterial roadways and bus routes within the study area
- » Solutions can include operational, transit, bike, pedestrian, and highway improvements

2



Study Area



3

I-66 Multimodal Study

Relevant Studies in the Corridor



- Idea-66 Study
- I-66 Transit/TDM Study
- I-66 Tier I Environmental Impact Study (I-495 to U.S. 15)

TDM = Transportation Demand Management

4

I-66 Multimodal Study

Path to Recommendations



Mobility
Option
Elements

Mobility
Options

Mobility
Option
Packages

Recommendations

5



Process to Identify Issues and Needs



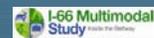
Existing
and New
Planning
Ideas

Analysis of
Influencing
Factors

Analysis of
Modal
Indicators

Issues
and
Needs

6



I-66 Inside the Beltway Issues and Needs



- Westbound roadway congestion
- Eastbound roadway congestion (include interchange capacity constraints at the Dulles Connector Road)
- Capacity issues at I-66/arterial interchanges
- Non-HOV users during HOV operation hours
- Orange Line Metrorail congestion
- Adverse impact of roadway congestion on bus service
- Challenges to intermodal transfers (rail, bus, bike, car)
- Bottlenecks on W&OD and Custis Trails
- Limitations/gaps in bicycle and pedestrian accessibility and connectivity

7



Baseline Assumptions for 2040



- 2011 Constrained Long Range Plan (CLRP)
 - » I-66 restricted to Bus/HOV 3+ in the peak direction
 - » I-66 westbound spot improvements #1, #2, #3
 - » Same I-66 HOV hours of operation as today
 - » Silver Line Phase I (to Wiehle Avenue) and Silver Line Phase II (to Dulles)
- Services and programs as recommended in the I-66 Transit/TDM study

8



A. HOV Restrictions



- **I-66 lanes in both directions are designated Bus/HOV during peak periods**
- **No new lanes added**
 - » **In the peak direction, all lanes are Bus/HOV 3+ only during peak periods (no change from CLRP)**
 - » **In the reverse peak direction, all lanes are Bus/HOV 2+ only during peak periods**
 - » **In off-peak periods all lanes are open to all traffic**

Issues and Needs

- Westbound roadway congestion
- Eastbound roadway congestion
- Interchange capacity
- Roadway congestion affects on bus service

9



B1. I-66 Bus/HOV/HOT Lane System – Option 1



- **Converts I-66 into an electronically tolled Bus/HOV/high occupancy toll (HOT) roadway**
 - » **Single occupancy vehicle (SOV) and HOV 2 vehicles would be tolled**
 - » **Bus/HOV 3+ vehicles would not be tolled**
 - » **Applies to all lanes in both directions 24/7**

Issues and Needs

- Westbound roadway congestion
- Eastbound roadway congestion
- Interchange capacity
- Non-HOV users during HOV operation hours
- Roadway congestion affects on bus service

10



B2. I-66 Bus/HOV/HOT Lane System – Option 2



Converts I-66 into an electronically tolled Bus/HOV/HOT roadway and adds a lane in each direction

- » SOV and HOV 2 vehicles would be tolled
- » Bus/HOV 3+ vehicles would not be tolled
- » Applies to all lanes in both directions 24/7

Issues and Needs

- Westbound roadway congestion
- Eastbound roadway congestion
- Interchange capacity
- Non-HOV users during HOV operation hours
- Roadway congestion affects on bus service

11



C1. I-66 Capacity Enhancement – Option 1



An additional lane is added in both directions

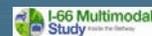
- » In the peak direction, all lanes are Bus/HOV 3+ only during peak hours
- » In the reverse peak direction, one lane is Bus/HOV 2+ during peak hours, and the rest are general purpose lanes
- » In off-peak periods all lanes are open to all traffic

This option is intended to be used to test the benefits of widening the roadway either through use of the shoulders or by adding a new lane.

Issues and Needs

- Westbound roadway congestion
- Eastbound roadway congestion
- Interchange capacity
- Roadway congestion affects on bus service

12



C2. I-66 Capacity Enhancement – Option 2



● An additional lane is added in both directions

- » In the peak direction, all lanes are Bus/HOV 3+ only during peak hours
- » In the reverse peak direction, all lanes are general purpose lanes during peak hours
- » In off-peak periods all lanes are open to all traffic

Issues and Needs

- Westbound roadway congestion
- Eastbound roadway congestion
- Interchange capacity
- Roadway congestion affects on bus service

13



D. Integrated Corridor Management



● ICM strategies deployed throughout the corridor

- » I-66 Active Traffic Management
- » Ramp Metering
- » Dynamic Merge
- » Multimodal Real Time Traveler Information
- » Transit Signal Priority

Some aspects of benefits of this option may be explored using off-model techniques

Issues and Needs

- Eastbound roadway congestion
- Interchange capacity
- Non-HOV users during HOV operation hours
- Roadway congestion affects on bus service
- Intermodal transfers

14



E. Arterial Capacity Enhancement



- **Enhance U.S. 50**
 - » Apply access management principles
 - » Implement bus-only lane in each direction and improve bus service in the corridor (e.g., Priority Bus with 10-minute headway)
 - » Bus lane may be introduced by adding a new lane or shoulders
 - » New lane could be open to general traffic during off-peak periods

Although coded as a Priority Bus, this option will also reveal if demand warrants a higher-capacity mode such as light rail

Issues and Needs

- Westbound roadway congestion
- Eastbound roadway congestion
- Roadway congestion affects on bus service

15



F. Metrorail Level of Service and Capacity



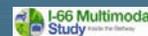
- **Provide operating flexibility for Metrorail and a direct connection between I-66/Dulles Corridor and Pentagon/South Arlington**
 - » Add an interline connection between Orange Line and Blue Line
 - » Add an interline connection between the Yellow Line and Blue Line



Issues and Needs

- Orange Line Metrorail congestion
- Intermodal transfers

16



G. Bus Transit Level of Service and Capacity



- **Several planned enhancements to local, commuter, and regional bus services, including route changes and additions**

- **New and enhanced Priority Bus services with 10-minute peak period frequency**

- » I-66, U.S. 29, and U.S. 50

10-minute service frequency represents an enhancement over I-66 Transit/TDM Study service levels

Issues and Needs

- Orange Line Metrorail congestion
- Roadway congestion affects on bus service

17



H. Transportation Demand Management



- **Enhanced TDM strategies drawn from the I-66 Transit/TDM Study**

- » **Enhanced Corridor Marketing**
- » **Vanpool Driver Incentive**
- » **I-66 Corridor Specific Startup Carpool Incentives**
- » **Rideshare Program Operational Support**
- » **Carsharing at Priority Bus Activity Nodes**
- » **Enhanced Virginia Vanpool Insurance Pool**
- » **Enhanced Telework! VA**

Benefits of this option may be explored using off-model techniques

Issues and Needs

- Westbound roadway congestion
- Eastbound roadway congestion
- Interchange capacity
- Roadway congestion affects on bus service
- Intermodal transfers

18



I. Bike/Pedestrian System Enhancements



- **New facilities (on- and off-road) to address gaps and improve connections**
- **Improve bicycle/pedestrian access to transit (bus and rail)**
- **Expand bicycle parking at stations**
- **Expand bikesharing program**

- Issues and Needs**
- Intermodal transfers
 - Trail bottlenecks
 - Bicycle and pedestrian system gaps

Benefits of this option may be explored using off-model techniques

Schedule/Key Milestones



TASK	Jul '11	Aug '11	Sep '11	Oct '11	Nov '11	Dec '11	Jan '12	Feb '12	Mar '12	Apr '12	May '12
Finalize Work Plan		■									
Identify Key Corridor Transportation Issues and Needs		■	■	■	■						
Develop Option Elements to Address Congestion, Reliability, and Mobility			■	■	■						
Commuter Survey to Solicit Feedback on Critical Mobility Needs				■	■	■					
Interviews with Elected Officials and Transportation Stakeholders				■	■	■	■	■			
Analyze and Evaluate Mobility Options to Develop Multimodal Mobility Packages					■	■	■	■			
Analyze and Evaluate Multimodal Mobility Packages							■	■	■		
Develop Recommendations for Enhanced Mobility on I-66									■	■	
Public Meetings						■	■	■		■	■
Interim and Final Reports							■	■			■

www.i66multimodalstudy.com

Your Comments Needed



I-66 Multimodal Study
Virginia Department of Transportation
Public Information

Public Meeting
Location: Courthouse 6, 2015, 1-19pm
Stop: Clear Creek Road Middle School
1200 Clear Creek Road
Falls Church, VA 22041

Comment Sheet

All comments submitted will become a part of the public hearing transcript and will be made available to the public.

Name (optional): _____
Address: _____

1. In your opinion, what are the major transportation issues in the corridor, and how can they be addressed?

2. Given your knowledge of the corridor, which improvements to the roadway, the public transportation system, and the bicycle and pedestrian network are most important?

3. Would you be interested in us asking you to a project meeting to present notification of availability of the public information report? (e.g., when the next public meeting is held)

Additional Comments: _____

- **Comment Sheet**
- **E-mail**
 - » **info@i66multimodalstudy.com**
- **Telephone**
 - » **855-788-3966**
 - » **855-STUDY66**
- **Court Reporter**

