

# National Capital Region Transportation Planning Board

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## MEMORANDUM

**TO:** Transportation Planning Board

**FROM:** Eric Randall  
Department of Transportation Planning

**SUBJECT:** Proposed Task Force and Work Plan for an Assessment of Bus On Shoulder (BOS) Feasibility in the Washington Metropolitan Region

**DATE:** September 12, 2012

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At the July 18, 2012 meeting of the Transportation Planning Board (TPB), it was requested that a task force be established to identify promising locations in the region to operate buses on the shoulders of highways. This memo proposes the membership for the task force and a work plan and schedule for coordinating an assessment of the experience and potential for Bus On Shoulder (BOS) operations on the region's freeways and major arterials. As requested by the TPB, this task force will bring together the stakeholder agencies, including transit operators, departments of transportation, and local jurisdictions, to review local and national experience with BOS and discuss the potential for near-term applicability in the region. The task force will oversee a scoping of potential locations for BOS, including a high-level benefit-cost analysis of implementing BOS along select corridors and bus routes.

### **Proposed Task Force Membership**

The regional assessment of BOS feasibility will be coordinated through a series of meetings, with necessary work assigned through discussion.

The meeting co-Chairs will be Ms. Carol Krimm, of the City of Frederick Board of Aldermen, and Mr. Chris Zimmerman, of the Arlington County Council. Other prospective members will be invited from the following:

<i>Departments of Transportation</i>	<i>Transit Operators</i>	<i>Jurisdictions</i>
<ul style="list-style-type: none"><li>• District of Columbia (DDOT)</li><li>• Maryland (MDOT)</li><li>• Virginia (VDOT)</li></ul>	<ul style="list-style-type: none"><li>• WMATA</li><li>• PRTC</li><li>• MTA Commuter Bus</li><li>• Loudoun Transit</li></ul>	<ul style="list-style-type: none"><li>• Fairfax County</li><li>• Frederick County</li><li>• Montgomery County</li><li>• Prince George's County</li><li>• Others...</li></ul>

The first meeting of the task force would be held at 10:00 AM on Wednesday, October 17, 2012, prior to that day's TPB meeting.

## **Background on the Bus On Shoulders (BOS) Concept and Experience**

BOS is an arrangement by which buses providing public transportation service operate on designated highway shoulders, when safe and practical to do so, in order to circumvent peak traffic congestion. As described in the just published Transit Cooperative Research Program (TCRP) Report 151: A Guide for Implementing Bus On Shoulder (BOS) Systems:

*“Typically, the BOS projects limit buses using the shoulder to times when traffic on the highway is congested and moving very slowly, and they cap the speed buses are allowed to operate on the shoulder.”* (Page 1-1). [http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp\\_rpt\\_151.pdf](http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_151.pdf)

Current local experience with BOS includes bus operation along a short section (1.3 mi) of VA-267 (the Dulles Toll Road), for bus access to the West Falls Church Metrorail Station, and along the shoulders of MD-29 near Burtonsville. Previously, bus service operated along the Maryland portion of the Capital Beltway in the vicinity of the American Legion Bridge was permitted to operate on shoulders; however, this service was discontinued in 2003. Looking ahead, VDOT is conducting an assessment of the potential of BOS along I-66. In addition, as described in the TCRP report, several other cities across the United States also have BOS service; of these, Minneapolis has the most-developed network with over 270 miles of BOS corridors.

A review of the BOS concept and experience will reinforce current work by the TPB. The TPB is in the second year of the Regional Transportation Priorities Plan (RTPP) study, with the purpose of identifying those transportation strategies that best promote the TPB’s goals for economic opportunity, transportation choices, system safety and efficiency, quality of life and environmental stewardship. Ultimately, it is envisioned that 10 to 15 strategies will be identified that the region can agree are the top priorities for addressing the most pressing challenges faced in meeting the TPB’s goals.

One of the RTPP strategies now being refined is that of increasing the application of bus priority measures across the region, specifically: *“Apply operational management strategies including roadway treatments that speed up buses, traffic signal coordination, and low-cost improvements that alleviate choke points.”* Bus On Shoulders is one concept that falls under this strategy, and also reinforces the TPB’s previous efforts in bus priority, including the WMATA Priority Corridor Network Plan Study, the publication of the *Priority Bus Treatments Guidelines*, and the Multimodal Coordination and Bus Hot Spots study, as well as the ongoing TIGER Grant for Priority Bus Transit. As this region considers current and future travel needs, including expanded public transportation, the BOS concept may offer opportunity for relatively cost-effective improvements in bus service.

## **Proposed Work Plan**

The task force will hold at least three meetings and review technical research, transportation data analysis, and benefit-cost analysis of selected locations. TPB staff will coordinate the collection of information and the development of supporting analyses with input and assistance from stakeholder agency staff.

### *Task 1 – Summary of Local and National Experience with Bus On Shoulders*

Experience with current and previous BOS experience in the region will be summarized, to include an overview of the safety, roadway engineering, and bus service operations aspects. In addition, a summary of national experience and its applicability and use in this region will be prepared and

reviewed, including federal regulations, requirements for requesting design exceptions, and supporting state legislation. This information will be used as a resource for discussion and development of the assessment.

*Task 2 – Assessment of the Feasibility of BOS at Specific Locations*

Stakeholder agencies will identify potential corridors for BOS operation on the region’s highway network, based on 1) existing highway congestion locations, 2) current bus service, and 3) highway shoulder conditions. This information will be used to screen out infeasible locations and to identify potential corridors and bus routes for further analysis.

*Task 3 – Analysis of Select Corridors/Routes in the Region*

Using the results of Tasks 1 and 2, the TPB staff, with assistance from the respective highway and transit agencies, will conduct an analysis of the feasibility of BOS on the potential corridors/routes in the region. The analysis will:

1. Identify issues and challenges with safe operation,
2. Develop capital cost and operating cost inputs, as provided by the stakeholder agencies.
3. Determine potential travel time savings for bus routes based on highway congestion,
4. Present a benefit-cost analysis of the prospective benefits to riders and traffic relative to the projected costs of implementation of BOS service, on the selected corridors/routes.

For each task, technical memoranda summarizing the results will be prepared, with supporting presentations for the task force. In addition, periodic updates will be provided to the TPB, the TPB Technical Committee, the TPB Management, Operations and Intelligent Transportation Systems (MOITS) Subcommittee, and the TPB Regional Bus Subcommittee. A final presentation to the TPB is proposed for its May 2013 meeting.

The proposed schedule of work is shown below:

Proposed Schedule										
Tasks	2012				2013					
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
<b>Task 1</b>										
Summary of Local and National Experience with Bus On Shoulders										
<b>Task 2</b>										
Assessment of the Feasibility of BOS at Specific Locations										
<b>Task 3</b>										
Analysis of Selected Locations in the Region										
Meetings		▲			▲			▲		
Technical Memoranda			■		■			■		

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