



Baltimore Metropolitan Council
2700 Lighthouse Point East, Suite 310
Baltimore, Maryland 21224-4774

www.baltometro.org
Phone: (410) 732-0500
Fax: (410) 732-8248

MEMORANDUM

TO: BRTB Members

FROM: Harvey S. Bloom

DATE: May 13, 2008

SUBJECT: Agenda Item #12 – Presentation on Redundancy Analysis

ACTION: Informational Item

Attached is a summary that provides an overview of this effort to date. The BRTB will be apprised of the progress that has been made to date.

Attachment

Baltimore Regional Transportation Network Redundancy Analysis

Introduction

The Baltimore Metropolitan Council (BMC), as staff to the Baltimore Regional Transportation Board (BRTB), has been tasked to support regional homeland security planning activities, focusing on the accepted emergency support functions of transportation and leveraging any synergies with current staff activity and expertise.

This homeland security support activity will include coordination with other regional stakeholders from local, state, and federal agencies. BMC staff has been actively engaged with representatives from the Maryland Department of Transportation (MDOT), the Maryland Emergency Management Agency (MEMA), and the Baltimore Urban Area Work Group (UAWG) to determine appropriate areas of involvement and work tasks that would benefit from regional coordination.

Drawing upon recommendations from MDOT and MEMA, BMC staff was able to identify several regional homeland security planning activities that could be effectively supported by BMC involvement. Among these activities was a study to assess **regional transportation system redundancy**.

The BMC has undertaken this task with consultant support from the University of Maryland where the Dynasmart-P modeling tool was developed.

Identify Critical Infrastructure: This task includes definition of critical infrastructure and development of a list of these facilities (tunnel, bridge, highway, transit, rail, freight, port, inter-modal transfer, and etcetera).

Scenario Design: This task includes the definition of seven scenarios where the use of critical infrastructure is suddenly lost due to a catastrophic event.

Impact Analysis: This task includes projecting the impacts on the regional transportation system following the catastrophic loss of critical infrastructure for each of the seven scenarios.

Document Findings and Develop Recommendations: This task will include a detailed documentation of the results from the earlier impact analysis.

Modeling Tool

DYNASMART-P: A dynamic network modeling capability, to represent the impacts of the disruptions on the performance of the system and resulting levels of service, as well as to predict trip makers' responses to these changes in both the short run and the long run.