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# 1 INTRODUCTION

## 1.1 Purpose

The Bus Network Improvement Project (BNIP) is one of MTA's premier initiatives to improve the Baltimore region's access to jobs and opportunity through public transit. BNIP will increase the quality, connectivity, efficiency, and effectiveness of the entire transit system by making strategic improvements in MTA's core bus network, MTA's largest and most heavily utilized service.

MTA has not undertaken a comprehensive review and assessment of its network of local bus routes in over a decade. BNIP is meant to correct that lapse, while also addressing routing and level of service issues that have arisen in recent history due to changes in residential and commercial development, and the new travel patterns that have resulted from these changes. The BNIP recommendations will meet the region's transit needs, exceed customers' expectations, and attract new riders.

BNIP is intended to provide service improvements for MTA's local bus, QuickBus, and Express Bus services while also improving connectivity to the other regional transit modes – MTA's Light Rail (LR) system, Metro Subway (Metro) system, and the MARC Commuter Rail (MARC) services, as well as other local and regional transit carriers. The recommendations also include some physical improvements that will benefit transit operations and access, such as transit signal priority (TSP), bus only lanes along identified roadways and corridors, improved layover locations, and new or improved multi-modal or bus transfer centers.

To help guide the BNIP planning effort a project Steering Committee was formed consisting of local and regional stakeholders with interests in transit and transportation. This committee helped to develop several goals and objectives that provided direction over the duration of the project. The following are the BNIP goals and objectives:

- To improve service quality by:
  - Reducing vehicle overcrowding
  - Improving on-time performance
  - Improving system-wide travel speeds
  - Decreasing passenger trip times
- To maximize transit access and connectivity by:
  - Increasing the percentage of Baltimore residential populations within walking distance of transit
  - Increasing the number of jobs accessible by transit
- To increase MTA network efficiency and effectiveness by:
  - Improving connections between buses and between modes
  - Increasing passengers per hour

- Reducing the cost per passenger
  - To align the bus network with existing and projected land use and trip patterns by improving services to major regional job centers
  - To involve riders, employees, communities, and officials in the BNIP process

The project's ability to meet each of these goals and objectives became a unifying mantra throughout BNIP. During the development of the recommended plans, each route recommendation was weighed as to how well it helped meet each of the goals and objectives. Routes that were determined to have met more of the goals and objectives received a boost in their priority ranking, which will ultimately determine when a route gets implemented.

After 18 months of data analysis, public engagement, and planning, MTA has developed a strategic and comprehensive series of route recommendations that, when taken on the whole, will exceed the project's goals and objectives and will significantly change the bus network within and surrounding the City of Baltimore.

## 1.2 Background

MTA operates a multi-modal transit network that has a limited number of rail services: MARC Commuter Rail (Brunswick, Camden and Penn Lines), Light Rail (Hunt Valley to BWI and Glen Burnie), and Metro Subway (Owings Mills to Johns Hopkins Hospital). These rail lines form the backbone of MTA's service, however by themselves they benefit only a small portion of the Baltimore region's population. Unless customers have access to personal vehicles, the MTA core bus network is the main way to deliver passengers to and from rail stations. Perhaps even more importantly, the bus network fills in the gaps to provide transportation where no rail line exists. The bus network performs a vital role in the region's strategic plans for decreasing the carbon footprint of transportation, increasing access to jobs and opportunity, attracting residents and businesses, and increasing economic activity and vitality.

MTA's core bus network carries over 68 million people annually, accounting for 64% of MTA's 107 million riders and only 40% of MTA's operating budget. The core bus network consists of 62 bus lines and over 6,000 bus stops throughout the Baltimore Metropolitan region. Over half of MTA's riders use the core bus network *every day*, making core bus the main source of riders' perceptions of MTA's transit services.<sup>1</sup>

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<sup>1</sup> Source: MTA customer survey. 56 percent of MTA's customers use core bus *daily*. For comparison, the same percentage (55 percent) *never* use MARC train.

The core bus network has not had a strategic improvement plan in over a decade, causing the network to fall behind in the quality, quantity, and utility of provided service. New developments have emerged and economic centers have shifted, but the bus network has not been adjusted to meet these needs on a comprehensive level. For example, Harbor East, Hampden, Canton, Towson, Arundel Mills, and Owings Mills have all seen substantial growth in recent years. In addition, more growth is planned: the Horseshoe Casino and the Amazon Distribution Center have recently opened, while mixed-used developments along White Marsh Boulevard are planned and Baltimore’s Downtown will continue to be re-developed. The core bus network needs to be reconfigured to better connect people with these jobs and opportunities. To make the connections attractive to current and potential riders, the core bus network needs to be of a higher quality and more easy to use – this requires an investment. Fortunately, the core bus network is the most robust and scalable component of MTA’s transit portfolio and can be brought up to par with the needs of the region. Improved connections, increased service levels, a stronger crosstown network of routes, increased QuickBus options and new routes that serve recently redeveloped and emerging locations will reduce the public’s reliance on a personal vehicle and help increase ridership.

BNIP is MTA’s initiative to “right the ship” and set in motion a strategic improvement plan for the bus network. Improving the bus network will enhance the functionality and attractiveness of the entire Maryland transit network. BNIP is a key turning point in MTA’s ongoing efforts to improve bus services and the perception of transit in Maryland as a whole.

### 1.3 Approach

BNIP was crafted as a network improvement project to place the focus on improving how the entire bus system functions. The process to develop the BNIP plan was divided into six basic phases, as shown in **Table 1.3.1**.

**Table 1.3.1 – BNIP Phases and Timeline**

Phase	Timeframe	Description
<b>1</b>	April – September 2013	Data Compilation and Analysis
<b>2</b>	September – November 2013	Public Engagement (round 1)
<b>3</b>	December 2013 – present	Develop BNIP Recommendations
<b>4</b>	TBD	Publish Recommendations
<b>5</b>	TBD	Public Engagement (round 2)
<b>6.1</b>	August 2014	Publish Year 1 Plan
<b>6.2</b>	TBD	Publish Full BNIP Report

During Phase 1 (Data Analysis), MTA compiled current operational statistics of its bus network, including frequencies, ridership, and other characteristics. Also, demographic, population, employment, and trip data were gathered from the U.S. Census, the American Community Survey, and from the Baltimore Metropolitan Council’s projected and current travel models. These data were used to determine the current levels of transit supply and transit demand which presented a picture of where and to what extent transit is needed in the Baltimore region, information that was utilized for all subsequent planning exercises.

During Phase 2 (Public Engagement) MTA conducted many different forms of outreach. A Stakeholder Committee<sup>2</sup> was created and briefed at major milestones in the project. The MTA's Citizen's Advisory Committee (CAC) and Citizen's Advisory Committee for Accessible Transportation (CACAT) also provided feedback. MTA employees – particularly bus operators – were solicited for their ideas for service changes. The general public was engaged through six workshops, three pop-up events, a BNIP telephone hotline, and an interactive website (<http://mtamaryland.mindmixer.com>). Through these methods, over 1,100 individuals were involved in providing feedback to MTA about what improvements were needed to bus services in the region.

This public engagement sought not only to obtain ideas for the BNIP service changes but also to gauge public sentiment and priorities for the bus network and inform members of the public about the trade-offs related to transit planning decisions. For example, most riders don't realize that, given a fixed budget, it is not possible to increase BOTH service frequency (i.e., how often a bus comes) and coverage (i.e., the length of a transit line). Through the BNIP outreach, MTA worked to both provide and gather information so that an informed dialogue could be had regarding proposed service changes.

During Phase 3 (Develop Recommendations), MTA will develop a network design based on what the region needs.

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<sup>2</sup> The Stakeholder Committee is comprised of 47 members including representatives such as the Central Maryland Transportation Alliance, Greater Baltimore Committee, Downtown Partnership, ATU Local 1300, BWI Business Partnership, etc.