



MOMENTUM

metro The Next Generation of Metro

STRATEGIC PLAN 2013-2025



STRATEGIC PLAN 2013-2025

Table of Contents

Executive Summary	1
Preparing For Tomorrow's Region, Today	9
Metro's Importance to the Region	15
Metro's Recent Accomplishments	25
Creating Metro's Strategic Plan	31
Public Engagement and Support	33
The Strategy	39
Metro 2025	51
Metro 2040	71
Implementing <i>Momentum</i>	73

List of Exhibits

Table 1: Summary of Metro 2025 Capital Initiatives	7
Table 2: MWCOG Population and Employment Projections, Round 8.0	18
Table 3: Metrorail System Peak Period Capacity by Line without Fleet Expansions	23
Table 4: Metrorail System Peak Period Capacity: Expansion to 100 Percent Eight-car Trains by 2020	23
Table 5: Metrorail System Peak Period Capacity	56
Table 6: Station Capacity Improvements	58
Table 7: Metrobus Priority Corridor Network: Current Status	60
Figure 1: Strategic Time Horizon	11
Figure 2: Metrorail Average Weekday Ridership	15
Figure 3: Illustration of land area that would need to be covered in five-story parking garages in a world without Metro	16
Figure 4: Metro Moves the Region	16
Figure 5: To Move All Those People by Roads	16
Figure 6: Metro Saves People Time	16
Figure 7: Relationship of Economic Competitiveness and Availability of Public Transit	17
Figure 8: Projected 2040 Employment and Population Growth, by County, MWCOG Round 8.0	18
Figure 9: Regional Benefits	19
Figure 10: Emissions Avoided Because of Metro	19
Figure 11: MetroAccess Average Annual Ridership	20
Figure 12: Projected Daily Ridership Growth	21
Figure 13: Metro's Core and Core Stations	22
Figure 14: Results of Customer Satisfaction Survey (2012)	25
Figure 15: Planning Process Timeline	31
Figure 16: Support for Improvements Among Business Community	38
Figure 17: The Strategic Plan	39
Figure 18: Average Weekday Ridership, NTD and WMATA	47
Figure 19: Map of Transit Projects in Region's CLRP	52
Figure 20: Metro 2025 Costs in Comparison to Other Regional Initiatives	53
Figure 21: Projected Timeline to Operate 100 Percent Eight-Car Trains in the Peak Period	55
Figure 22: 100 Percent Eight-Car Trains Timeline	55
Figure 23: Core Station Improvements Timeline	57
Figure 24: Recommended Priority Corridor Network	59
Figure 25: Metrobus PCN Timeline	59
Figure 26: Infrastructure for Blue Line Service Timeline	61
Figure 27: New Blue Line Connections	62
Figure 28: Next Generation Communications Infrastructure Timeline	63
Figure 29: Bus Fleet Growth Timeline	65
Figure 30: Supply of and Demand for Buses and Bus Facilities	66
Figure 31: Pocket Tracks, Turnbacks, Interlinings Timeline	67
Figure 32: Location of Existing Pocket Tracks, Junctions, and Yards	68
Figure 33: The Cost of Adding Capacity	69
Figure 34: Potential New Lines Through Core	71
Figure 35: Potential System Extensions	72
Figure 36: Potential High Quality Surface Transit Expansions	72
Figure 37: Connecting Transit Across The Potomac River	72
Figure 38: Metro's Annual Capital Needs through 2025	74

Executive Summary

Metro is at a critical juncture. Since the system opened, the region has grown tremendously; yet investments and upgrades to the system have not kept up. Today's customers are experiencing the effects of years of chronic underfunding and underinvestment: aging equipment, deteriorating infrastructure and less-reliable service. Recent efforts to renew the system are helping, but will only bring the system back to where it should have been all along.

Meanwhile, the region is projected to continue to grow over the coming decades, and this growth will place even more pressure on a system that is already nearing capacity. To ensure the system continues to meet the region's mobility needs as well as support

the competitiveness of the region, Metro must continue to rehabilitate the system and plan for future growth by articulating a strategic, long-term vision for the future.

To rise to this challenge, Metro's leadership has created *Momentum*, a strategic plan that will guide Metro's decisions over the next ten years and ensure that the system continues to support the region's competitiveness for decades to come. Building on the Board of Director's governance improvements, a renewed safety and performance management culture, achieving financially-measurable efficiencies and preparing for more, and the accomplishments of MetroForward, *Momentum*:

- Ensures that Metro will provide the transit system the Washington region needs to deliver hundreds of millions of trips to residents and visitors each year;
- Provides vision and guidance for decision-making to efficiently meet the needs of today while proactively preparing to support the future needs of a healthy, prosperous, and competitive region tomorrow;
- Establishes priorities for near- and long-term action and establishes a vision for its regional role that is consistent with language in the Metro Compact;
- Sets the stage for addressing Metro's chronic funding challenges, and among other items specifically calls for an aggressive effort to secure a reliable and sustainable source of funding for the system; and
- Calls on Metro to fill a critical role in regional transit leadership.

Concurrently, *Momentum* gives Metro clear direction in fully-committing itself to the customer experience





and ensuring the system and its customers are safe and secure.

The Strategic Planning Process

The strategic plan presented in *Momentum* reflects thorough technical analyses and extensive outreach and feedback from regional stakeholders. Board members and management initially reached out to stakeholders based on a draft framework for *Momentum*. As a result of the initial intensive discussions by the Board and the executive leadership team, Metro drafted a new vision, mission and goals that reflect the priorities of the region. With this new strategic framework in hand, the Board of Directors and management launched a comprehensive outreach program for *Momentum*.

Reflecting Metro's broad reach across the region, the outreach plan was extensive and sought input from

Metro's customers, the general public, jurisdictional and federal funders, key regional civic organizations, Metro's own employees, and stakeholders. Business and advocacy groups further extended the initiative's reach. Metro's partners simultaneously joined the effort to promote maximum exposure, regional reach, and breadth of input.

Among the most prominent shared areas of feedback were the following sentiments:

- **Metro is critical to the region's future:** The transit system is the region's circulatory system; tending to it is essential to competitiveness, prosperity, and enhanced qualities of life;
- **Continue rebuilding:** "Fix it" and make the system more reliable;
- **Reduce crowding:** Metro needs more capacity on both rail and bus;

- **Provide better customer information:**

Customers want all types of trip information, on-demand, everywhere; and

- **Ensure predictable funding:** Citizens, leaders, and businesspeople alike are unified in calling for sustainable, reliable funding so Metro can continue to produce a return on investment for the region.

The Strategy

Momentum is both responsive to current feedback as well as proactive in anticipating future needs. Built around the four Board-endorsed strategic goals, *Momentum* articulates the following strategies for Metro:

Goal 1

Build and Maintain a Premier Safety Culture and System



Keep safety Metro's first priority

Metro will continue its efforts to return to and keep the system, equipment, and infrastructure in good condition. Metro will use data-driven and science-based methods to allocate resources, use system safety practices and principles and environmental design to enhance safety, and seek to meet or exceed national safety and security standards for transit.

Create a shared climate of safety

Metro will work with employees, riders, jurisdictional partners, and the general public to make sure that everyone does their part in creating and sustaining a culture of safety and security in stations, vehicles, support facilities, and access points. Metro will enhance its communications feedback loops to bring critical safety information to empowered agents quickly and prevent accidents before they happen.

Expect the unexpected

Metro will continue to support the region's emergency transit management and security readiness protocols, and seek to make transit emergency protocols widely- and easily-understood. Metro will maintain regional evacuation capability and prepare for any event that requires wide-scale response. On a smaller scale, Metro will continue to improve incident response timing, planning, preparation and investigation.

Prepare for extreme weather

Extreme weather is becoming more commonplace. Metro will continue to design and build the system, as well as implement operational protocols which assume extreme weather may become the "new normal". Facility enhancements, new equipment, and strategic partnerships will also improve Metro's ability to adapt to changing weather patterns.

Goal 2

Meet or Exceed Expectations by Consistently Delivering Quality Service

Focus on the customer

Metro will focus on the needs of Metro's customers at all stages of a trip and optimize its customer-facing employee approach.



Make it easy and intuitive to plan, pay, and ride

Metro will provide customers with accurate and timely information to navigate the region and plan their trips, including real-time information on arrivals and departures, or delays and incidents. Adopting new technologies and policies will help our customers experience an easy, intuitive and seamless trip.

Fix it first and fast

Metro's results focused maintenance approach is critical to keeping assets in a state of good repair and services running reliably. Metro will collect and utilize data on the performance of the system in order to deploy resources.

Be on-time

Metro is dedicated to delivering service on time. Metro will continue to adjust service delivery to improve reliability, reduce crowding, and better serve travel markets.

Goal 3

Improve Regional Mobility and Connect Communities



Be the region's transit leader

Metro is not only the region's largest transit provider, but is chartered as the region's transit planner. Through leadership and partnerships, Metro will cultivate a culture of regional collaboration and push the boundaries of joint problem-solving, ensuring that tomorrow's regional transit services move people where they want to go, seamlessly.

Maximize what we have

Metro will meet growing demand and address overcrowding by optimizing the capacity of the existing infrastructure. In addition, Metro will work with local jurisdictions to implement transit priority improvements on the street to move buses faster.

Enhance access

Access to and linkages between stations/stops and services is the basis for a successful transit network. Metro and its partners have added sidewalks and bike

lanes and connected local bus services to stations, but there is still much work to be done. Metro will continue to improve the usability of multiple modes of transit and the overall accessibility of the entire system to all riders.

Expand for the future

Metro will work with local partners to enlarge the rail and bus network to provide high quality transit to communities across the region.

Support the region's economic competitiveness

Transit is the backbone of the region and a key to its vitality. Metro will continue to support the development of places where people want to invest, live and work.

Goal 4

Ensure Financial Stability and Invest in our People and Assets



Secure funds for strategic investments

Metro will work with regional and federal partners to secure predictable funding sources to enable strategic investments for transit. Metro is already working with regional partners to develop multi-year budgets to form the basis of stable funding agreements.

Invest for the long-term

Vehicles, tunnels, bridges, stations and systems are all valuable physical assets for the region that will require replacement. Metro will prioritize and replace assets with a view to providing long-term safety, reliability and cost savings.

Increase efficiency and lower costs

Metro will operate efficiently by focusing on key cost drivers, improving business processes, and using technology more effectively.

Be Green

Metro will employ technologies and practices to reduce consumption of natural resources and pollution. Lower energy usage, alternative fuels, and sustainable development criteria will be considered for new facilities and vehicles.

Recruit and keep the best

Continued growth and development throughout the region requires an organization that is capable of recruiting, developing, and motivating and retaining a diverse, high-performing workforce necessary to achieve Metro's goals and to foster the next generation of Metro employees and leaders. Metro's human capital strategies will leverage the priority actions identified in *Momentum* to address future workforce demands and challenges.



Metro 2025

Momentum includes a set of seven pivotal investments, called Metro 2025, that are essential to implement immediately so that the system can keep up with today's demands and continue to support the region's economic competitiveness and quality of life.

Table 1: Summary of Metro 2025 Capital Initiatives

Summary of Metro 2025 Initiatives	Description	Regional Benefits
Eight-Car Trains During Peak Periods p. 55-56	Operate all eight-car trains (longest possible) during rush hour by acquiring additional railcars, power capacity, and railcar storage	Trains will carry 35,000 more passengers per hour during rush hour – the equivalent of building 18 new lanes of highways into Washington, D.C.
Core Station Improvements p. 57-58	Expand or enhance high-volume rail transfer stations in the Metro system core to ease congestion for existing customers and to accommodate more riders in the future. Build new underground pedestrian connections between select stations such as the Farragut Stations or Metro Center/Gallery Place	Brighter, safer, and easier to navigate stations that will serve more people than today. Customers will be able to walk between stations rather than transfer on trains, which will be more convenient, save time and relieve crowding at the major transfer stations
Metrobus Priority Corridor Network (PCN) p. 59-60	Enhance and make bus service faster by completing the PCN, which outlines a variety of improvements that allow buses to bypass traffic congestion	Buses will move 50 percent faster, save each passenger on these routes an average of 3-4 minutes per trip, and remove an additional 100,000 trips from roadways each day
New Blue Line Connections p. 61-62	Seek to restore peak period Blue Line service between Pentagon and Rosslyn stations	Five more trains per hour during the peak period between Pentagon and Rosslyn stations, which would provide capacity for at least 4,000 more passengers per direction per hour. This would reduce crowding and wait times by an average of three minutes per trip for around 16,000 trips.
Next Generation Communications p. 63-64	Become a one-stop shop for all regional transit trip planning, and payment for the region's 15 transit systems. Upgrade communications systems for better, more accurate, and audible information for riders	Regardless of the regional provider, customers will be able to plan, pay for, and take a transit trip seamlessly and effortlessly all across the region. Information, everywhere, all the time, will allow travelers to know where buses and trains are and how to time their trips, as well as receive real-time travel and consumer information while in stations
Bus Fleet Expansion p. 65-66	Expand bus fleet and storage/maintenance facilities along growing corridors	Enables Metro to serve 40,000 additional bus trips per day. Allows Metrobus to maintain existing levels of service. Places Metrobus on a course to help relieve Metrorail congestion on some of its busiest segments.
Pocket Tracks p. 67-68	Build new rail infrastructure, such as pocket tracks and crossovers, to improve service for customers and provide more flexibility in the system	Customers will benefit from a rail system that is more flexible and better able to respond to service disruptions. The infrastructure has the potential to reduce operating costs to local jurisdictions.

Order of Magnitude Cost Estimate (\$2012)	FY2014-2019 Investments	Timeline for Implementation																										
\$2 Billion	\$100 Million	<table><tr><td>2013</td><td>2014</td><td>2015</td><td>2016</td><td>2017</td><td>2018</td><td>2019</td><td>2020</td><td>2021</td><td>2022</td><td>2023</td><td>2024</td><td>2025</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025													
2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025																
\$1 Billion	\$100 Million	<table><tr><td>2013</td><td>2014</td><td>2015</td><td>2016</td><td>2017</td><td>2018</td><td>2019</td><td>2020</td><td>2021</td><td>2022</td><td>2023</td><td>2024</td><td>2025</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025													
2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025																
\$600 Million	\$85 Million	<table><tr><td>2013</td><td>2014</td><td>2015</td><td>2016</td><td>2017</td><td>2018</td><td>2019</td><td>2020</td><td>2021</td><td>2022</td><td>2023</td><td>2024</td><td>2025</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025													
2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025																
\$1 Billion	\$1 Million	<table><tr><td>2013</td><td>2014</td><td>2015</td><td>2016</td><td>2017</td><td>2018</td><td>2019</td><td>2020</td><td>2021</td><td>2022</td><td>2023</td><td>2024</td><td>2025</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025													
2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025																
\$400 Million	\$60 Million	<table><tr><td>2013</td><td>2014</td><td>2015</td><td>2016</td><td>2017</td><td>2018</td><td>2019</td><td>2020</td><td>2021</td><td>2022</td><td>2023</td><td>2024</td><td>2025</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025													
2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025																
\$450 Million	\$85 Million	<table><tr><td>2013</td><td>2014</td><td>2015</td><td>2016</td><td>2017</td><td>2018</td><td>2019</td><td>2020</td><td>2021</td><td>2022</td><td>2023</td><td>2024</td><td>2025</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025													
2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025																
\$500 Million	None	<table><tr><td>2013</td><td>2014</td><td>2015</td><td>2016</td><td>2017</td><td>2018</td><td>2019</td><td>2020</td><td>2021</td><td>2022</td><td>2023</td><td>2024</td><td>2025</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025													
2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025																

Preparing for Tomorrow's Region, Today

Almost five decades ago, the Washington region faced a decision – continue to grow around roads and highways, or grow the region around rail, buses, and roads. Today, the choice that the region's leaders made to create Metro is paying great economic, social, and environmental dividends. The Metro system – which now delivers 1.2 million customer trips daily – anchors the region's growth and economic competitiveness.

Now, the system is at a critical juncture. As the region grew, investment and upgrades to the system did not keep up. Today's customers are experiencing the spiraling effects of years of underfunding and underinvestment: aging equipment, deteriorating infrastructure and less-reliable service. Recent efforts to renew the system are helping matters, but will only bring the system back to where it should have been all along.

Without an eye to the future of the Metro system – and how it might keep up with continued strong growth in the metropolitan area – the region's competitiveness may be at stake. Certainly, Metro must not only continue the system rehabilitation that is currently underway, but also anticipate future growth to ensure that the region remains livable and to advance its competitiveness.

There will be challenges to planning for the future while rebuilding the system. To meet these challenges, Metro's leadership has created *Momentum*, a strategic plan that will guide Metro's decisions and business plans over the next 10 years and ensure that the system continues to support the region's competitiveness for decades to come. *Momentum* builds on the Metro Board's governance improvements, a renewed safety and performance management culture, and the accomplishments

of MetroForward – an aggressive, \$5 billion, six-year investment program to rebuild the system. It provides vision and guidance for decision making so that Metro can not only meet the needs of today efficiently, but also proactively support the future needs of a healthy, prosperous, and livable region.

Why Metro Needs a Strategic Plan

Strategic planning is the process of determining what an organization does, where it wants to be and how it plans to get there. Organizations with well-defined strategic plans have the distinct advantage of clarity of common direction.

A strategic plan and the planning process itself offer discipline, focus, and results-orientation, enabling the entire enterprise to focus its talents and energies and to measure achievements against expectations and potential constraints. At Metro, it also provides leaders clear direction for prioritizing decisions around improvements, investments, expansion, operations, and maintenance.

Metro needs a strategic plan for all of the above reasons and more. The organization is implementing hundreds of improvements to rehabilitate the system via MetroForward and instilling management





discipline to the organization through the General Manager/CEO's business plan. These efforts will have positive effects in the near term, but will be insufficient to prepare the system and organization for the challenges to come.

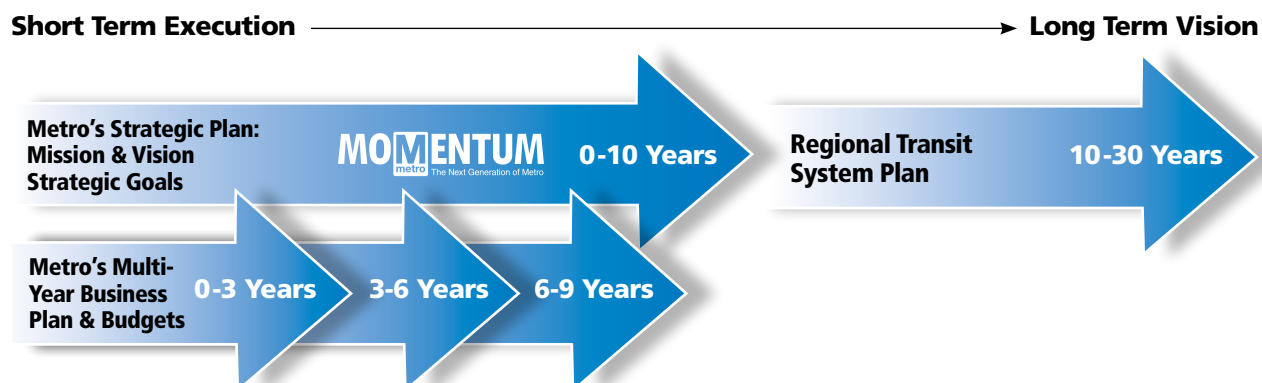
Decisions are already needed for actions beyond the business plans for the following reasons:

- Though MetroForward and the current six year Capital Improvement Program (CIP) may be completed by FY 2017, system maintenance needs will not disappear and in fact will increase as the system expands. Metro must prepare structurally and financially to ensure that the backlog does not increase once the current CIP is complete.
- Meanwhile, the region is expected to continue to grow, bringing additional transit demand for existing

and potential future locations and exacerbating crowding on buses, station platforms and trains, and system maintenance issues.

- The region is preparing for \$7 billion in regional transit investments, including projects such as the Purple Line (MD), the Silver Line (VA), and portions of DC's streetcar plan. Additional investments in Metro's capacity, including right-sizing Metro's core (defined on page 22), are critical to successfully accommodating the expected increases in ridership that will come from these long-planned regional transit expansions.
- Finally, resource scarcity regionally and nationally will continue to make planning, budgeting, and funding ongoing repair and rehabilitation needs difficult.

Figure 1: Strategic Time Horizon



Strategic Plan Horizon

In any enterprise, strategic plans and business plans should co-exist, reinforcing one another, but serving specifically different functions and fulfilling different organizational needs.

Strategic plans are designed to guide an organization through multiple business-plan cycles. They define what the organization will do, and to some extent the priority actions that should be executed in the near term. They often set funding and investment directions and expectations for the overall organization, as well as define the long-term outcome from these investments. Though an expected life of a strategic plan for a public entity is approximately 10 years, some of its impacts will last for decades.

Business plans lay out short-term activities for strategic plan implementation. They identify executable and measurable actions to achieve specific performance targets within a set timeframe, and in many cases define the targets and measures themselves. They function at the department (not enterprise) level and are constructed with one- to three-year horizons. They are revisited at least annually to assess whether they have been successful in moving the department closer to achieving the goals of the strategic plan.

Momentum integrates and synchronizes the General Manager/CEO's business plan, which is already being implemented, into a larger strategic framework over a longer-term horizon. It also bridges near-term activities to Metro's Regional Transit System Plan (RTSP), a transit expansion plan for the region in 2040, and Metropolitan Washington Council of Governments' (MWCOC) Region Forward, a broadly endorsed 2050 vision to help the region meet future challenges.

Getting to 2025

Portions of *Momentum* are already being executed, meaning that elements in this strategic plan under Metro's control are already in implementation mode. Engineering work is well-underway to support some of the immediate and near-term investments and innovations to carry the system to the year 2025. Some of the projects and their dates of completion or anticipated completion include the following:

- Farragut North and Farragut West Pedestrian Passageway (2004);
- Gallery Place/Chinatown - Metro Center Pedestrian Passageway (2005);
- Station Access and Capacity Study (2008);
- Priority Corridor Network (2008);

- Metrobus Fleet Management Plan (2010) and Update (2013);
- Union Station Access and Improvement Study (2011);
- 100% Eight-Car Trains and Power Traction Study (2013);
- Metrorail Fleet Management Plan (2013);
- Rail Yard Expansion Plan (2013);
- Gallery Place Station Capacity Study (2013);
- Northern Virginia Core Capacity Study (2013);
- Alternatives Analysis for Southern Avenue Bus Garage (2013);
- L'Enfant Plaza Station Capacity Study (2014);
- Customer Service Action Plan (ongoing); and
- Advanced Information Management System upgrade (2017)

Metro's staff and Board are already laying the financial underpinnings to execute the strategic plan. In 2013, the Board approved Metro's multi-year capital and operating budgets. While continuing laser-like focus on safety improvements and the rebuilding of the existing system, the FY 2014-2019 Capital Improvement Program (CIP) includes a number of significant investments that lay the groundwork for the implementation and execution of Metro 2025, which is described in the following section and later in this document.

Among these strategic investments are included:

- **Safety First**

- o Replacing and upgrading Metro's radio system infrastructure
- o Safety improvements and implementation of NTSB recommendations

Related and Supporting Studies in the Region

Momentum builds upon and advances a number of regionally significant planning studies that are either recently completed – or underway. They include:

- **Region Forward:** A vision for the DC region created by the MWCOG. It addresses the interrelated challenges of population growth, aging infrastructure, traffic congestion, energy costs, environmental impacts, affordable housing and sustainable development, as well as disparities in education, economics and health (2010)
- **Economy Forward:** A companion piece to Region Forward that reinforces the importance of transit to the region's overall competitiveness (2012)
- **Financially Constrained Long-Range Transportation Plan (CLRPT):** The region's official long-range transportation plan that outlines the priority projects to be implemented in the region between 2012 and 2040 as prioritized by the Transportation Planning Board (TPB) and local jurisdictions (2012)

- o Comprehensive rehabilitation and replacement of track and rail structures to achieve a state of good repair and a steady state of maintenance

- **Preparing for 100 Percent Eight-Car Trains**

- o Preliminary investment to initiate the acquisition of 220 railcars
- o Phased investment in power system infrastructure upgrades
- o Investment in planning and engineering for eight-car train maintenance and storage facilities

- **Moving More People with Less Crowding**

- o Station capacity and access improvements at Gallery Place and Union Station
- o Continued investment in planning and project development for core and station capacity

projects, new Blue Line connections, and pocket tracks and crossovers

- o Replacement and/or rehabilitation of over 150 escalators and 85 elevators

- **Enhancing the Regional Bus Network**

- o Additional buses to reduce overcrowding and improve on time performance
- o Acquisition of 100 expansion buses, representing the first meaningful addition to the fleet in more than a decade
- o Replacement of the Southern Avenue and Royal Street bus garages

- **Making it Easy to Plan, Pay and Ride**

- o Modernization of Metro's fare collection infrastructure and technology

These investments demonstrate Metro's commitment to putting the strategic plan into implementation right away by allocating financial and human resources to advancing and accomplishing the goals of *Momentum*.

Beyond *Momentum* and 2025 – The Regional Transit System Plan for 2040

Concurrently with this strategic plan, Metro is developing a Regional Transit System Plan (RTSP), which seeks to define the transit network for the region to serve 2040 travel needs and the region as envisioned by Region Forward. It includes all modes and operators, regardless of who currently operates or is presumed to operate a project in the future. Reflecting Metro's capacity to think regionally, the RTSP is multi-modal in its transit planning approach, and operator-neutral in its philosophy.

The RTSP's analysis to date directly informs the capital recommendations included in *Momentum*. In addition, the RTSP analysis gives guidance on which regional transit elements might likely fall within Metro's purview and which might likely be locally-sponsored initiatives. A technical advisory group comprised of staff members from jurisdictions and agencies around the region has contributed to the development of the plan's targets, objectives, strategies, and evaluation criteria. Further analysis and evaluation of alternative networks are underway and a recommended plan is expected in 2014.

Metro has been working collaboratively with local jurisdictions to develop the RTSP. The Technical Advisory Group includes transportation and land use professionals from the following jurisdictions and agencies:

- Prince Georges County
- Montgomery County
- Frederick County
- District of Columbia
- Arlington County
- Fairfax County
- City of Alexandria
- City of Fairfax
- City of Falls Church
- Prince William County
- Loudoun County
- Maryland Transit Authority / MARC
- Maryland Department of Transportation
- Virginia Department of Railway and Public Transit
- Virginia Department of Transportation
- Virginia Railway Express (VRE)
- Metropolitan Washington Council of Governments
- National Capital Planning Commission
- Federal Transit Administration



Metro's Importance to the Region

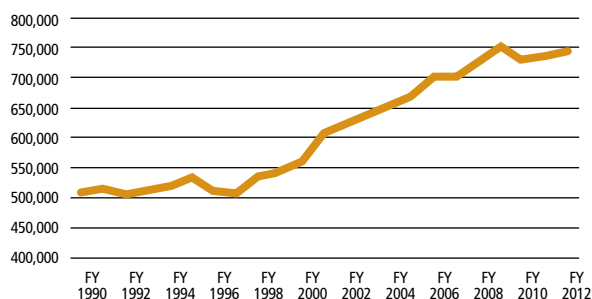
Metro from the Beginning

In 1967, the federal government passed a bill to create the Washington Metropolitan Area Transit Authority (Metro). The interstate compact was signed by the District of Columbia, the Commonwealth of Virginia, and the State of Maryland. Metro continues to be chartered by this interstate Compact. Among all transit providers in the Washington region – which number more than 15 – Metro is unique in that it serves both states and the District. It provides the only truly regional transit network.

In the late 1970s, Metro trains carried just over 100,000 passengers a day and served hundreds of thousands of passengers on the bus system. Since then, most rail stations in the core of the system have seen ridership more than double. As depicted below, rail average weekday ridership system-wide has gone from just over 500,000 in 1990 to almost 750,000 today, or 220 million trips annually, while weekday bus ridership has stayed at a stable level of roughly 450,000 daily trips, or 134 million trips annually.

Today, Metro is the largest and most-heavily utilized transit provider in the Washington region, delivering more than 1.2 million safe, clean and reliable trips each day to a population of 4.6 million within a

Figure 2: Metrorail Average Weekday Ridership



1,300-square-mile area. Metro operates the second busiest heavy rail transit system, sixth busiest bus network and fourth busiest paratransit service in the United States.

Additionally, the Washington region itself is growing and the reliance on transit is growing at a pace equal to or greater than general growth trends.

- MWCOC's 2007/2008 household travel study found that 17 percent of the region's commuting trips are on transit – more than three times the national average.
- In the region's core, 43 percent of workers use transit to get to work.
- Non-work trips on Metrorail are on the rise, and approximately 17 percent of weekday Metrorail trips are conducted for non-work reasons (entertainment, shopping, etc.)

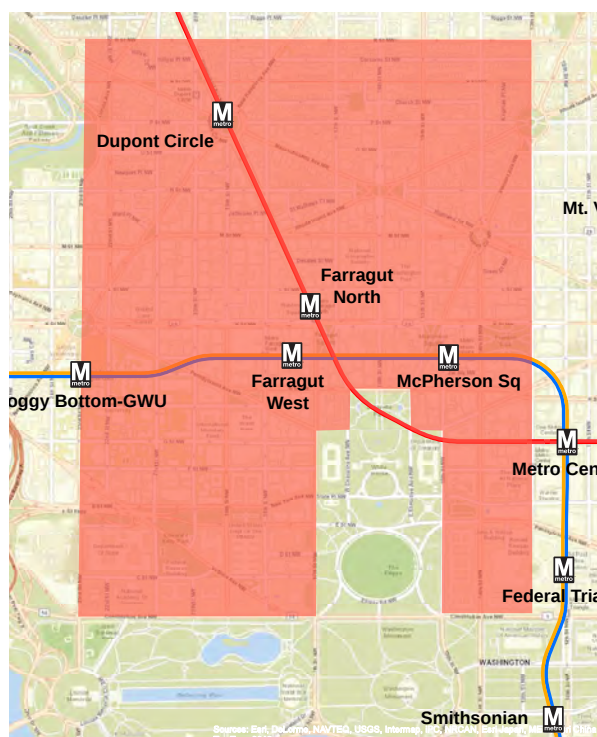


Figure 3: Illustration of land area that would need to be covered in five-story parking garages in a world without Metro

Metro's Benefits to the Region

Metro does far more for the region than simply providing transportation. It also provides economic, social, and environmental benefits which contribute to the region's health and vitality. *Making the Case for Transit* (2011) found that without Metro and the regional transit system that it feeds:

- There would be one million more auto trips per day;
- Congestion would increase by 25 percent;
- All Potomac River crossings would need four to six additional lanes; and
- Downtown Washington would require 200,000 more parking spaces, which is the equivalent of 166 blocks of five-story garages, at a cost of at least \$4 billion (2012), excluding land.

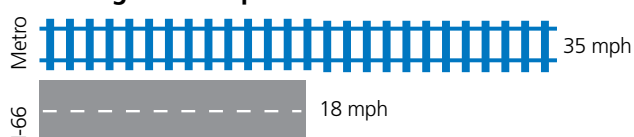
Figure 4: Metro Moves the Region

Metro's Orange Line moves up to 15,400 passengers per hour past I-66 bottlenecks.

Person Throughput



Average Travel Speed



Source: WMATA, MWCOC 2011 Aerial Traffic Congestion Survey.

Figure 5: To Move All Those People By Roads...

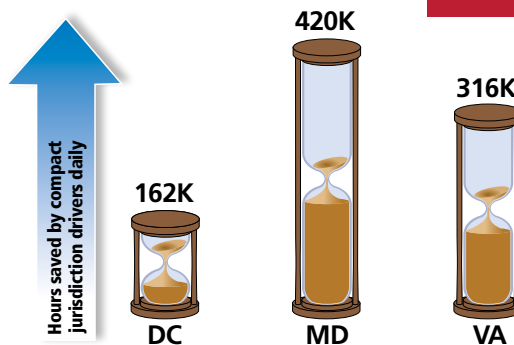
we'd need almost 1,000 lane miles of new roads.



Figure 6: Metro Saves People Time

How much time stuck in traffic does Metro give back to the region?

That's seven days per year per household.



Metro – A Place for Business

Metro is critical to the prosperity of the region and has a positive effect on business activity. Within one half-mile of rail stations and bus stops there are two million jobs, which account for 54 percent of all jobs in the region. The figure on page 18 shows how future employment will be focused in the Metrorail service areas of the central jurisdictions and the inner suburbs.

The Washington, D.C. Metropolitan Statistical Area (MSA) added 275,000 households and 295,000 jobs between 2004 and 2010. Of that growth, 6.4 percent of new households and 13.8 percent of new jobs located within one-quarter mile of urban Metro stations and one-half mile of suburban ones. The land area around these Metro stations comprises only 1.2 percent of the MSA land area, so Metro-adjacent locations are capturing far more than an average share of growth. When asked, 83 percent of business leaders surveyed by Metro in March, 2013 noted the importance of Metro to their future success. Employers have chosen Metro station areas as highly desirable places to locate jobs and attract employees. Seventy-seven percent of them said the proximity of a Metrorail station was important to where they decided to locate their businesses.

MWCOG's Economy Forward

In September 2012, MWCOG released Economy Forward, a call to action for a more competitive metropolitan Washington. This report called for strong centers with housing, jobs, and access to transit as a means to enhance the region's competitiveness. Through monthly meetings with public and private nonprofit and academic leaders, it concluded that the transportation network is one of the five critical challenges in recruiting new business to the Washington region. It also concluded that "without adequate funding, Metro and the region's highways will become even more congested, which will hurt the region's productivity and economic growth potential."

Transit: a Powerful Economic Development Engine

A study commissioned by Metropolitan Montreal's Board of Trade included regional economic competitiveness assessments for metropolitan areas in North America.

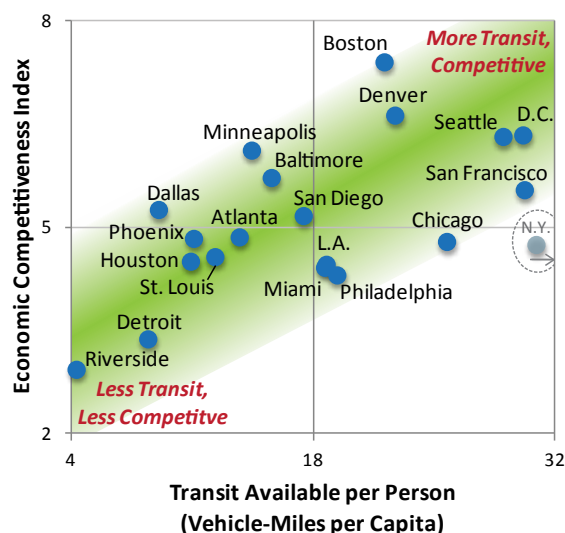
The study quantified regional competitiveness according to the following dimensions:

- Government and fiscal policy
- Technology
- Security
- Business Incubation
- Infrastructure
- Trade openness
- Human Resources
- Environmental Policy

Among the findings are:

- The 50 leading metropolitan areas in the United States show a positive relationship between "better transit service" and "greater competitiveness".
- The most competitive cities are those where the proportion of transit trips is highest.
- Transit generates very important economic benefits such as reducing the cost of trips for users, decreasing travel time for non-users, increasing the pool of workers and consumers for companies, and mitigating the harmful environmental effects of travel.

Figure 7: Relationship of Economic Competitiveness and Availability of Public Transit



Sources: Metro Area Competitiveness Report, Beacon Hill Institute 2007 and NTD Vehicle Revenue Miles (2007) per UZA Population

Figure 8: Projected 2040 Employment and Population Growth, by County, MWCOG Round 8.0

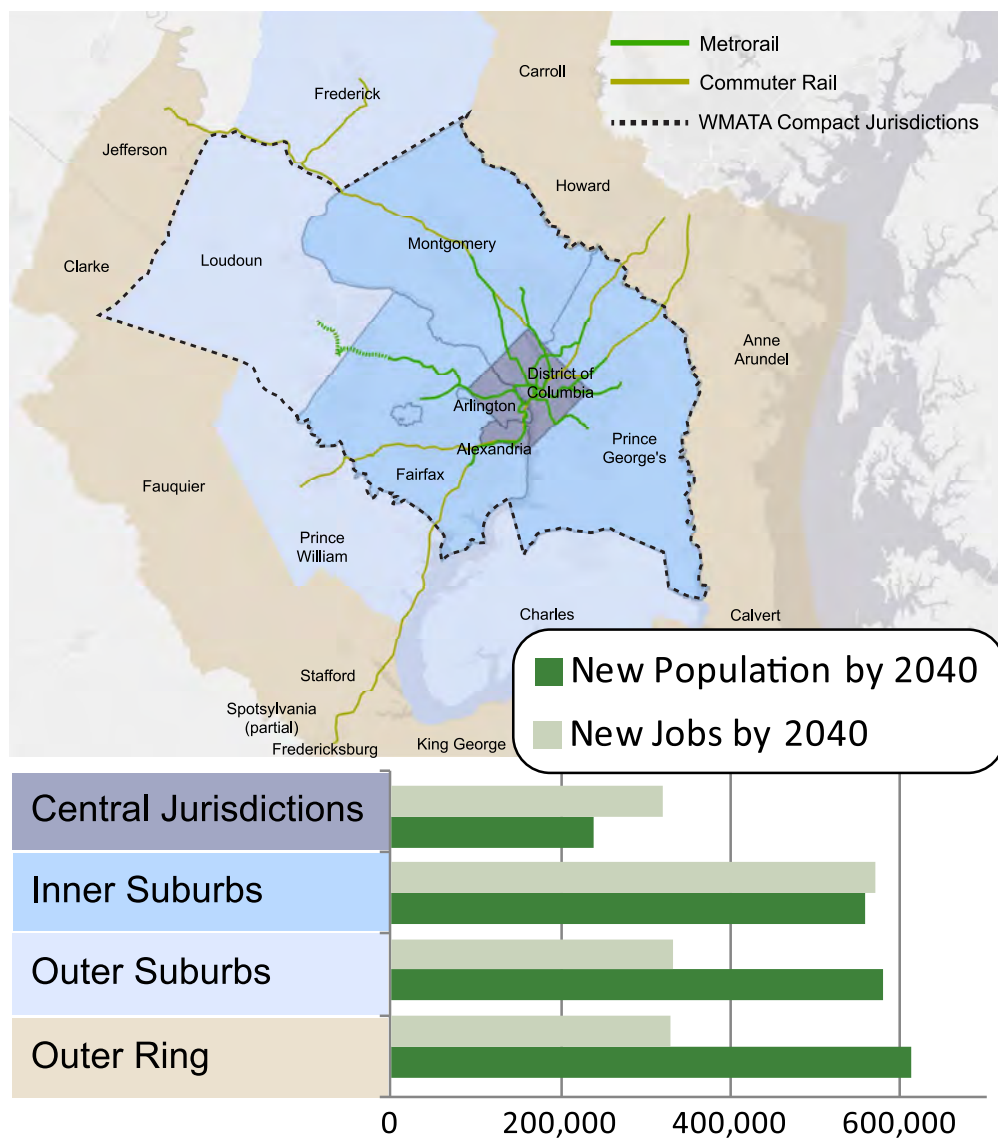


Table 2: MWCOG Population and Employment Projections, Round 8.0

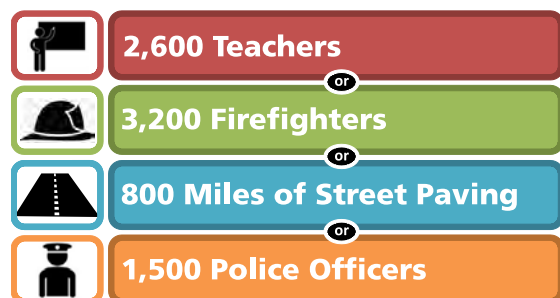
	2010		2040		Growth 2010 to 2040		% Increase 2010 to 2040	
	Population	Jobs	Population	Jobs	Population	Jobs	Population	Jobs
Central Jurisdictions	962,842	1,100,033	1,200,795	1,418,730	237,954	318,697	25%	29%
Inner Suburbs	2,917,733	1,544,426	3,475,233	2,115,119	557,500	570,693	19%	37%
Subtotal WMATA Service Area	3,880,575	2,644,459	4,676,028	3,533,849	795,454	889,390	20%	34%
Outer Suburbs	1,129,669	492,879	1,710,176	824,318	580,507	331,439	51%	67%
Outer Ring	1,616,679	874,778	2,227,767	1,202,099	611,088	327,321	38%	37%
Total	6,626,923	4,012,116	8,613,971	5,560,049	1,987,049	1,548,150	30%	39%

Transit-Oriented Development around Metrorail Generates Local Tax Revenues

Proximity to transit, especially high-quality, frequent, high-capacity rail, increases property values, attracts development and provides mobility choices. Property values are higher near Metro's high-quality, high-frequency, high-capacity services, and deliver an incremental increase in total tax revenue to the Compact jurisdictions.

- Property taxes on land around Metrorail stations generate \$3.1 billion annually in revenues to the jurisdictions.
- Of these revenues, \$224 million is extra value that would not exist without Metro. This amount is equivalent to providing the following public services.

Figure 9: Public Services Enabled by Metrorail's Value



Source, WMATA Office of Planning Analysis

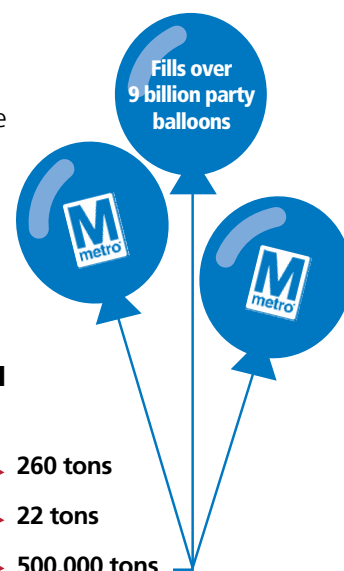
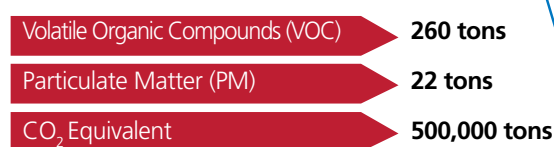
Improved Quality of Life

Metro also delivers quality of life benefits to individuals by reducing the costs of travel and minimizing environmental impacts. Without transit:

- Congestion at peak times would increase 25 percent, costing over \$1.0 billion annually in wasted time.
- Households would spend an additional \$500 million/year in auto expenditures, including an additional 41 million gallons of fuel annually.

- Air quality would worsen because of an additional 260 tons of volatile organic compounds, 22 tons of particulate matter and 500,000 tons of CO₂ equivalent in the air.

Figure 10: Emissions Avoided Because of Metro



MetroAccess – Serving the Region's Disabled Community

Metro is the nation's most accessible large transit system. All 86 Metrorail stations have elevators and the new 7000-series rail cars are designed to maximize accessibility. Metrobus operates 1,100 fully accessible buses, most of which are low-floor and ramp-equipped and all of which have automated stop announcements. Numerous other changes have been made by Metro to maximize usability so that many customers with disabilities are able to use Metrobus and Metrorail for some of their travel. However, inadequacies such as the lack of curb cuts, sidewalks and traffic signals impact disabled customers' ability to use Metrorail and Metrobus. MetroAccess serves these trips and others and presently provides about two million trips per year.

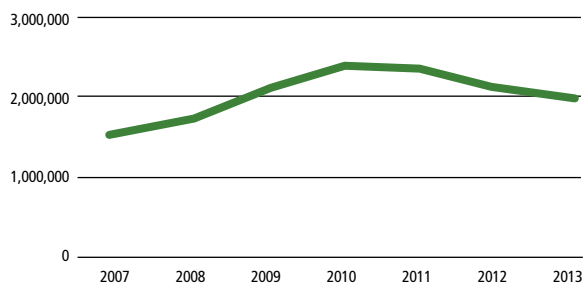
MetroAccess was originally created to provide supplementary specialized transportation services to the Metro system. Beginning some years ago, as social service agencies reduced their transportation offerings, MetroAccess gradually became the region's general paratransit provider.



For Metro and the region, the growth of the program is unsustainable. The costs to provide paratransit services that meet robust federal regulations are often twice the cost of transportation provided by human service agencies. Additionally, customers are unable to receive the specialized services on board that the human service agencies provide.

To best meet the needs of the region's customers with disabilities and financial realities, a strategic and region-wide plan must be developed to deliver accessible transit and paratransit throughout Metro's service area. MetroAccess is working with its jurisdictional partners to address regional roles and responsibilities for paratransit services and a Regional Accessibility Strategic Plan is under development to meet the following objectives:

Figure 11: MetroAccess Average Annual Ridership

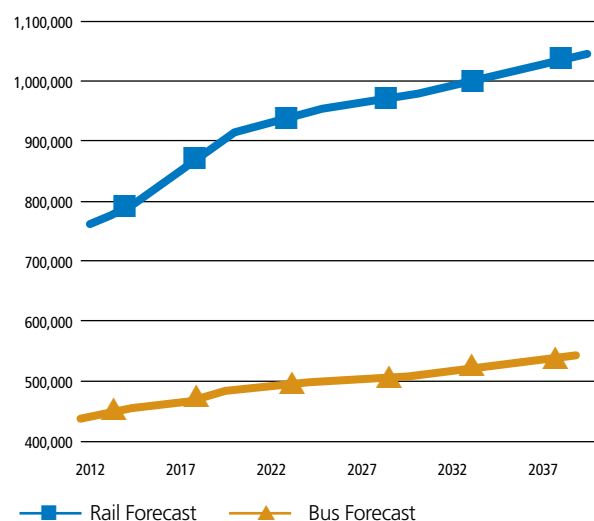


- Coordinate planning and delivery of all transportation services, throughout the region, for seniors and persons with disabilities;
- Eliminate infrastructure and environmental obstacles to use accessible fixed- route transit;
- Design and plan transit facilities, equipment and services to provide not only compliance with the Americans with Disabilities Act, but also usability by seniors and persons with disabilities;
- Communicate the broad range of transportation options to people with disabilities and to seniors, so that they can make informed choices about services that best meet their needs; and
- Establish roles and responsibilities in coordinating and delivering accessible transportation to people with disabilities and to seniors.

Preparing for Tomorrow

Over the next three decades, the Washington region is forecasted to experience increased growth, including a 30 percent increase in population and a 39 percent increase in employment. This would be equivalent to adding the population of the city of Philadelphia or Houston to the region. Notably, forecasts for the Washington region prepared in advance of recently-released Census 2010 data are already outdated, as they did not anticipate the extent to which D.C., Arlington, Alexandria, and close-in portions of Montgomery and Fairfax Counties would attract increasing shares of the region's growth.

The Washington region is one of a subset of Metropolitan Statistical Areas (MSAs) nationwide where growth is occurring in the core and inner suburbs in addition to the outer suburbs as shown on page 18. Some metropolitan areas are "hollowing out" – meaning that growth is taking place regionally but the central city and close-in jurisdictions are continuing to lose population and employment. This is not the case here, because not

Figure 12: Ridership Growth

Projected Daily Ridership Growth of Metrorail and Metrobus, 2010-2040

only is the region growing, but there is growth taking place and projected to take place in the region's central jurisdictions as well as in the suburbs. A recent Brookings Institute report on metropolitan employment location found that of the 100 largest metro areas, only D.C. experienced an increase in both the number and share of jobs located in the urban core during the 2000s. Our region's dynamic nature means that Metro must prepare for anticipated future ridership growth. Static or declining ridership is not likely to be in the region's future.

Based on the MWCOG's projections shown above, although jobs will increase everywhere, 53 percent of employment opportunities and 71 percent of the population will be within Metro's original Compact jurisdictions. As shown above, between 2010 and 2040, Metrorail ridership is projected to grow from 750,000 to 1.05 million, an increase of 40 percent. Bus ridership is expected to grow, though it is restrained by slow travel because of traffic congestion. The system that is already strained will continue to face pressure to move more people and more employees.

Meanwhile, the region is expanding beyond its historical urbanized areas into previously agricultural suburbs. Numerous villages, "town centers", urban revitalization areas, and revitalized inner suburbs are signs that the D.C. area now functions as a "regional city" – one that needs transit provision in places where the original system was never designed to go and may not be effective in serving this new demand. Notably, two-thirds of the MWCOG Regional Activity Centers are envisioned as being connected to – and in part catalyzed by – high capacity transit, and in many of these activity centers, this transit has yet to be planned, let alone built.

Expanding local transit services such light-rail transit (LRT), bus-rapid transit (BRT), streetcar, commuter rail, and local bus service will feed additional travelers onto the rail system, often leading to the system's core. The ongoing work of MWCOG's Region Forward initiative suggests that regional coordination and cooperation can be achieved with the right blend of leadership and bold vision. The region's transit network can achieve its true potential when the many transit operators in the region work collaboratively to co-author regional mobility solutions. Metro leadership believes that such cooperation, while not yet fully-realized, is absolutely essential and can be achieved.

Finally, pedestrian and bicycle connections are two of the fastest growing contributors to rail ridership. Transit-oriented development (TOD) is critical to harnessing this trend, and office TOD in the eastern part of the region can help rebalance the "region divided" and make more cost-effective use of the capital investment that has already been made in transit.

Supporting the Region's Growth

A major challenge for Metro is how to adapt and adjust to a region that is growing rapidly, adding development at or near Metro station areas, and using transit at an increasing rate on a system that was conceived more than four decades ago.

Figure 13: Metro's Core and Core Stations

Platforms at major stations and trains during rush hours are crowded, reducing the reliability and comfort for customers. Buses on many of the most popular lines often carry many standees and sometimes do not have enough capacity to pick up all customers along their route. Throughout much of the region, buses sit in the same traffic as do automobiles, hampering their speeds, reliability and competitiveness.

The Metro system's core – an area that incorporates 26 stations across all lines in D.C. and Arlington – is the destination or transfer point for 80 percent of all rail riders system-wide. As shown on the tables on the

following page, there are crowded conditions at peak periods today and, without rail fleet expansion, most rail lines will be even more congested by 2025. Pivotal improvements, such as operating 100 percent eight-car trains and maximizing train throughput during peak periods could increase peak-hour capacity by 35 percent system-wide. Increasing bus service and implementing bus-only lanes could increase bus speeds and reliability, attracting 100,000 more riders every day. Increasing the capacity of transfer stations, together with all eight-car trains at maximum frequencies would provide adequate capacity through 2040, except on the Orange and Silver lines, as shown in the table on the following page.

Table 3: Metrorail System Peak Period Capacity by Line without Fleet Expansion

	2012	2020	2025	2040
Red	✓	—	—	✗
Yellow	✓	✓	✓	—
Green	✓	—	—	✗
Blue	✓	—	—	✗
Orange/Silver	—	✗	✗	✗

✓ Acceptable (average passengers per car (PPC <100)

— Crowded (PPC between 100 and 120)

✗ Extremely crowded (PPC >120)

Table 4: Metrorail System Peak Period Capacity: Expansion to 100 Percent Eight-car Trains by 2020

	2012	2020	2025	2040
Red	✓	✓	✓	—
Yellow	✓	✓	✓	✓
Green	✓	✓	✓	—
Blue	✓	—	—	—
Orange/Silver	—	—	—	✗

The Cost of Doing Nothing

What happens if Metro completes MetroForward and ceases there? Simply put, the region cannot afford for Metro to get the system back to where it should have been, but stop short of preparing the system for the growth that has already created overcrowding conditions and service disruptions, let alone prepare for additional growth that has yet to come.

Note that the region is already the most congested area in the country, and Metro is a huge part of what keeps this region moving and working in spite of its transportation gridlock. Stopping short of implementing Metro 2025 and *Momentum* means that the region's attractiveness as a place to live and work may be threatened. The region could face the following consequences:

- Metro will degrade quickly with more delays and service disruptions – visible progress will be lost;
- Shoulder-to-shoulder, rush hour conditions experienced today on an increasing number of rail lines and stations will grow system-wide and become worse;
- Crowding similar to Presidential Inauguration Days will likely become the norm;
- Customers will be left with 1970s-era communication and trip planning services;
- Residents would have fewer jobs within an acceptable commuting distance and employers would have access to a much smaller pool of employees; and
- The regional transit system will advance towards antiquity, harming the region's competitive advantage for talent, jobs and investment dollars.



Without strong commitments not only to rehabilitate and repair, but also to bold visions for the future of the region, the region's future growth will be challenged. Some have even gone so far as to question whether or not the Washington region can achieve its bold growth projections without a renewed focus on transit – especially as transit investments are critical components of the assumptions feeding the forecasts. Metro can and should play an important role in developing this network, advocating for connections and projects to create a seamless experience for the customer, and identifying the most promising projects that provide the greatest regional benefit. However, it can only do so if it has the resources and resolve to address its own critical needs

and improve its current and future health.

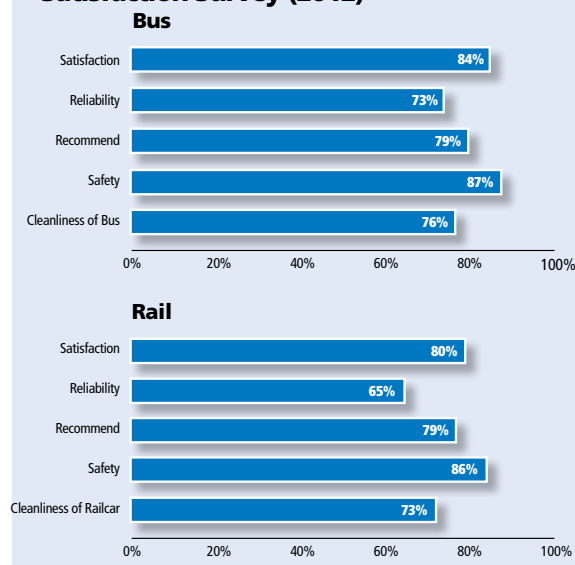
Metro may be the only entity capable of leading and cultivating a coordinated, efficient, and cost-effective transit solution suitable for the region's needs. In fact, Article VI of the WMATA Compact defines the Authority's responsibilities to develop and revise a Mass Transit Plan for the regional system.

Taking leadership in the region and assuming these responsibilities, however, cannot take place if the region's largest transit provider and only entity chartered by law to organize the regional transit system faces capacity limitations that might negatively impact operations.

Metro's Recent Accomplishments

Metro has been rebuilding inside and out and achieving significant improvements in safety and reliability of the system for the millions of people who rely on it. As a recent customer survey reveals, the results of this effort are showing.

Figure 14: Results of Customer Satisfaction Survey (2012)



In addition to customer satisfaction, Metro's achievements are reflected in its Vital Signs Report, which tracks key performance indicators that measure progress towards achieving its strategic goals. **From 2011 to 2012, Metro successfully:**

- Improved Metrorail on-time service from 90.1 percent to 91.0 percent and Metrobus on-time service from 75.3 percent to 76.3 percent;
- Improved escalator availability from 85.5 percent to 89.3 percent;
- Reduced employee injury rates by three percent; and
- Reduced customer injury rates by 10 percent.



Building a Robust Safety Culture

Metro's Board took the lead in building a safety-first culture by establishing the Safety and Security Committee. Metro has also adopted an analytical approach to prevent incidents by employing smart technology and identifying hazards early. All of Metro's efforts to improve safety since 2010, including increased communication and analysis, have been recognized by the Federal Transit Administration (FTA) and the National Transportation Safety Board (NTSB).

The actions over the last two years include:

- Deploying safety officers and Metro Transit Police geographically based on hazard reporting, analysis of crime statistics and identified "hot spots";
- Installing hundreds of security cameras and video technology on buses, to decrease the occurrence of incidents and improve alertness;
- Closing all ten recommendations of the Federal Transportation Administration (FTA) State Safety Oversight Audit;

- Completing six internal safety audits, making Metro current with the three-year cycle required by the System Safety Program Plan;
- Continuing to develop the confidential close-call reporting system;
- Developing a Fatigue Risk Management System, a Fatigue Executive Steering Committee, and hours of service maximums to effectively address fatigue throughout the Authority; and
- Closing seven NTSB recommendations, submitting fourteen for closure, and continuing progress on six.

Employee Survey (2012)

With feedback from a survey completed by nearly 100 percent of its employees, Metro began enacting reforms in 2010. The Authority's progress in establishing an ever-improving safety culture is demonstrated by the results of Metro's 2012 Employee Engagement Survey. The most important finding is that employees are reporting significant progress in implementing Metro's safety culture. **In fact, scores indicate that employees:**

- Know how to report safety issues or concerns;
- Feel they have the training to do the job safely and can provide ideas and suggestions for improving safety;
- Assert that their direct supervisor regularly provides safety communications;
- Report that their co-workers take safety policies and procedures seriously;
- Believe effective action would be taken if a safety violation was reported; and
- Assert they are comfortable in reporting safety violations and concerns.

Strides in Improving Reliability

Thanks to its funding partners, Metro is now engaged in the largest capital improvement program since its original construction. Two years ago, MetroForward was launched – an aggressive, \$5 billion, six-year

"WMATA has made considerable progress in strengthening its safety organization, safety analysis capabilities, and information sharing and communication processes regarding safety issues."

– FTA Audit, November 30, 2012

investment program to rebuild the system.

MetroForward is investing in what Metro's customers value most: safety, reliability, and good customer service. With continued investment, it is projected that Metro will continue to make progress on the intensive MetroForward "catch up" phase in the years ahead. **MetroForward has already delivered:**

- An aggressive escalator rehabilitation program;
- Continued improved elevator availability;
- Station repairs at Judiciary Square, Shady Grove, Rockville, White Flint, Twinbrook and Union station;
- 461 new MetroAccess vehicles in service;
- Over 200 new replacement or rehabilitated buses in service;
- Electrical upgrades to accommodate additional eight-car trains on some lines; and
- Replacement of over 14.7 miles of rail; 36 No. 8 guarded switches; 16,000 ties; 11,731 cross ties; 62,723 linear feet of running rail; 20,745 fasteners; 8,849 insulators; and 9,829 linear feet of grout pads.

In the next six years, Metro will be rehabilitating and replacing over 150 escalators and 85 elevators; retrofitting track and replacing track circuitry; rehabilitating third rail, running rail and track pads; installing track turnouts; upgrading radio system infrastructure; modernizing its fare collection system; replacing two bus garages and rehabilitating three more; rehabilitating three rail yards; and annually replacing 100 Metrobuses and rehabilitating 100



more. Metro is also replacing its 1000 and 4000 series railcars and preparing for Silver Line operations by expanding its fleet with the 7000 series railcars, the most advanced in the industry.

In addition to rehabilitating and replacing Metro's existing vehicles, systems and infrastructure, Metro is also upgrading its future operations. In September 2012, Metro opened the new Shepherd Parkway Metrobus Division, a state-of-the-art garage that will expand Metro's ability to maintain its new vehicles. The facility is Metro's first building to receive a U.S. Green Building Council LEED Silver certification. Notably, Metro is moving forward with the delivery of two additional bus garages to replace the aging facilities at Southern Avenue and Royal Street, which will enable the expansion of the bus fleet.

Metro is also preparing for future operations of the Silver Line to Dulles by expanding and training its workforce, and adding capacity for maintenance at its rail yards.

While Metro is improving service and reliability through MetroForward, and building for the future, there are further improvements required to meet the growth expected in the region. Metro certainly must achieve a state of good repair (SOGR), then sustain this achievement over the long term – an effort which will require significant resources that have yet to be identified or allocated. Meanwhile, the funding for MetroForward itself is periodically threatened by federal budget negotiations and without a reliable sustained source of funding, Metro will likely be unable to continue making strides to improve reliability.

Metro will face new challenges as well. As new rail lines open – the Silver Line opening will increase the size of the rail system by 25 percent - Metro will need to increase investment in capital maintenance to sustain a steady state of maintenance (SSOM) on these new assets. Metro is currently working to understand the scope of effort and scale of additional capital funding required for the long term needs of the Silver Line. To better organize these challenges utilizing lifecycle decision making, an Asset Management Plan is being developed that will be synchronized with this strategic plan to guide investment decisions.

Improving Accessibility and Efficiency

To confront the challenges of providing more service for more customers with disabilities while working to contain the high cost of door-to-door paratransit service, Metro launched a campaign to maximize fixed-route use by customers with disabilities. It has effectively enhanced the transit experience for customers, enabled customers with disabilities to travel more independently, and achieved millions of dollars of savings by reducing the reliance on contracted for service. **Achievements, which earned Metro the 2012 Innovation Award from the American Public Transit Association (APTA), include:**

- Offering an integrated free and reduced fare program that automatically enrolls paratransit applicants in the discounted fixed-route travel option;
- Aggressively promoting travel training, which shifted 1.08 million trips to fixed route services, resulting in cost avoidance for the Authority of over \$50 million;
- Working with jurisdictions to prioritize local improvements to bus stops with accessibility barriers;

Metro's Cost Efficiencies and Savings

Over the last five years, Metro has cut \$200 million through efficiency-related reductions and achieved similar savings in costs avoided through management efficiency initiatives, restructurings, one-time savings and other actions, including:

MetroAccess

In FY11, by encouraging select paratransit riders to use fixed route transit, Metro saved more than \$25 million in paratransit costs. Continuing to promote this travel training has lowered MetroAccess demand and has allowed Metro to avoid spending an additional \$10 million in FY13 alone.

Energy Efficiencies

Metro's bus fleet has improved its fuel economy by 27 percent over the last eight years, saving money on rising fuel costs. Meanwhile, Metro's facilities are saving money as well – the new Shepherd Parkway facility is LEED-Silver certified – and the new escalators and elevators are realizing significant energy savings.

Parking Facilities

Metro saves \$3.1 million each year as a result of automating its parking facilities.

Employee Health and Wellness

As a result of a health insurance benefits program audit, Metro has cut \$3 million per year, and plans to continue on the wellness track by incentivizing healthy behavior and habits to help its employees, increase productivity and further reduce health insurance costs.

Overtime

An organization-wide review of overtime procedures and pay is paying dividends. Since the end of 2012, overtime is \$3 million lower than the same period for each of the two preceding years.

Transaction Costs

Metro is encouraging more SmarTrip Card usage, and as a result has reduced the use of paper fare media from 20% of payments to 12%, saving \$1 million per year. Metro has its eyes set on more savings by targeting a 5 percent paper fare card usage rate.

Identifying More Efficiencies

An independent efficiency analysis is underway to assist in identifying further opportunities to save money in administrative areas.

- Introducing changes to Metro's Trip Planner starting in 2014 that will enable MetroAccess customers to locate accessible bus stops;
- Integrating travel training into the Office of Eligibility Certification and Outreach process;
- Employing trained recreation therapists to conduct paratransit eligibility assessments; and
- Implementing management level review of all ineligibility findings, which decreased appeals by 80 percent.

Improving Customer Service

Since 2011, Metro has made great strides to improve customer service through the Customer Service Action Plan. As a starting point, to determine customer priorities, Metro conducted customer and employee research to define good customer service and to identify customer priorities. With the

information gathered from its customers and frontline employees, Metro identified the areas needing improvement in the respective departments and then put together individual corrective work plans.

Through the Customer Service Action Plan, Metro has accomplished the following:

- Developed new customer service training programs and trained over 2,000 employees;
- Replaced and/or rehabilitated 28 escalators in 2012;
- Introduced new and improved bus maps;
- Assigned over 30 more police officers to improve bus security;
- Developed and launched a trip planning and information site designed for mobile devices;
- Installed digital flat screens in all stations to improve customer information;
- Deployed MetroAlerts so customers have access to





real-time detour and disruption information;

- Installed over 2,600 static stop signs to enhance service information at bus stops;
- Enhanced MetroAccess' on-time performance standards in response to customer survey feedback;
- Installed SmarTrip dispensers in all stations; and
- Implemented the Better Bus program to improve service.

Critical Board Accomplishments

Since 2010, the Board of Directors has been laying the foundation to rebuild Metro itself. From hiring a new General Manager to beginning the largest capital program since the inception of Metro, the Board has taken numerous actions to better equip the agency to succeed, including providing a stronger governance foundation.

Under the leadership of the Board, Metro has made substantial progress on improving system safety, reforming the agency's governance, and stabilizing its finances.

The Board has made strategic investments in infrastructure, equipment and workforce training, and developed policies that have markedly improved safety, as recognized by the NTSB and FTA and documented in the Authority's publicly-reported Vital Signs score card.

Governance reforms undertaken over the last two years have modernized Board leadership, strengthened the Authority's governing structure, improved the Board's partnership with the General Manager/Chief Executive Officer, enhanced internal management, and prioritized public dialogue. The Board also adopted governance reform measures that strengthened its Code of Ethics and provided its first-ever bylaws, which detail the Board's focus on policy, financial direction, oversight and Metro's relationship with its customers and jurisdictional partners.

Creating Metro's Strategic Plan

Creating a Strategic Framework

In 2012, Board Members and Metro's management initially reached out to stakeholders to develop a draft framework for *Momentum*, including:

- Representatives of federal, state and local governments;
- Metro's advisory groups; and
- Metro's employees.

Dozens of separate meetings were held to create a draft strategic framework. The outreach in this initial phase established the vision, mission and strategic goals that were then used for a second phase of more in-depth outreach that has continued into 2013 and will assist in shaping the Authority's strategic direction.

As a result of the initial intensive discussions by the Board and the executive leadership team, Metro drafted a new vision, mission and goals that reflect

the priorities of the region – priorities that take into account expected growth in ridership, future funding levels, system maintenance requirements, and the need for an expanded transit network to sustain the region.

Metro's Mission, Vision, and Goals

Vision

Metro moves the region forward by connecting communities and improving mobility for our customers.

Mission

Metro provides safe, equitable, reliable and cost-effective public transit.

Goals

- Build and maintain a premier safety culture and system
- Meet or exceed customer expectations by consistently delivering quality service
- Improve regional mobility and connect communities
- Ensure financial stability and invest in our people and assets

Figure 15: Planning Process Timeline





Public Engagement and Support

Public Support for *Momentum*

With a new strategic framework in hand, Metro's Board and management launched a comprehensive outreach program for *Momentum*. Reflective of Metro's broad reach across the region, the engagement plan was extensive, seeking input from Metro's customers, the general public, jurisdictional and federal funders, key regional civic organizations, Metro's own employees, and stakeholders. Business and advocacy groups further extended the initiative's reach. Metro's partners simultaneously joined the effort to promote maximum exposure, regional participation, and breadth of input.

Through the outreach program, Metro worked to achieve the following goals:

- Create ownership of and pride in Metro by providing a voice for many stakeholders in the region's transit future;
- Continue to build credibility and trust in Metro's regional transit planning role;
- Demonstrate the value of Metro to the region's economy and quality of life;
- Build a compelling case for the need to plan for Metro's future by educating the public about future opportunities and challenges; and
- Grow support for sustainable, long-term funding for Metro.

Momentum's outreach program was designed to be an interactive deliberative public dialogue. This approach enabled many people throughout the region to have input into the future of the region's transit system and to move towards a shared concept of "our Metro".

"Hearing from our customers is one of the best and most important tools we have as we make decisions about Metrobus, Metrorail and MetroAccess service. Assembling feedback from a variety of sources gives us a more comprehensive view of service and helps us focus on constantly improving our customers' experience."

- Tom Downs, Metro Board Member

The Stakeholder Outreach Process

Momentum employed a multi-pronged outreach and feedback gathering strategy, including both conventional and modern tools. Metro staff gathered input to inform a draft plan and subsequently, gathered feedback on the plan prior to finalizing it. Metro staff conducted community listening sessions, delivered presentations, deployed email blasts, issued press releases, held employee town halls, and distributed a host of collateral materials. MindMixer, an online tool assisted in creating an interactive dialogue and input. Meanwhile, deliberative forums were held with diverse sets of community members in each jurisdiction, a Washington Post forum called "Conquering the Commute" occurred, and webcasts were hosted on *Momentum* and the future of Metro.

Extensive measures were taken to ensure the most diverse and inclusive input possible. The *Momentum* team reached out to the region's diverse communities including churches, libraries, residential communities, and social service agencies. Online and paper surveys in English and Spanish were distributed. Posters



and cards on buses in English and Spanish directed riders to a variety of ways to make their voices heard. Advertisements were placed in multiple non-English language newspapers. MindMixer was available in 60 languages and the deliberative forums included ADA-qualified participants and a Spanish language forum.

Momentum Outreach Response

Metro staff heard from almost 12,000 stakeholders during the outreach process through the following tools. The input has informed Metro's understanding of the public's short- and long-term needs.

Momentum Forums

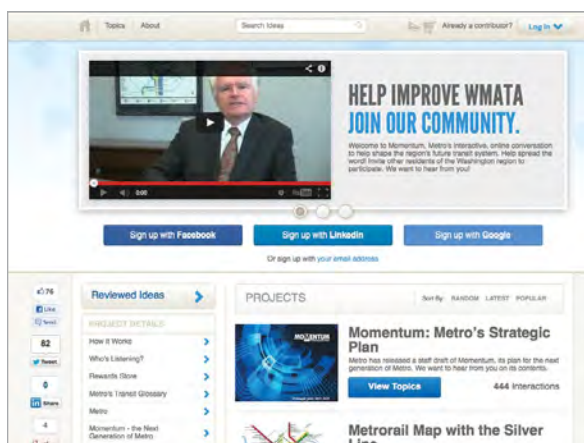
Four deliberative forums, one in each jurisdiction and one in Spanish, were conducted in the fall of 2012. The special format allowed participants to learn more about Metro issues, discuss them in groups, and vote on or prioritize issues. Approximately 120 people, recruited and screened to be a representative sample of Metro ridership, participated in these forums.

MindMixer (wmata.mindmixer.com)

Since September 2012, the site has been visited over 12,000 times, by 7,700 unique individuals. Four rounds of questions were posted, generating comments ranging from many short-term suggestions



such as platform markings, running more trains and more buses in the off-peak hours, and improving service information in the stops and stations, to long-term solutions such as separating the Blue/Orange/Silver lines, adding bus-only lanes, and second entrances and mezzanines at all major stations.



Momentum Rider Surveys

On December 3, 2012, an online survey was sent to a random selection of 5,000 bus and rail riders to gather information from those who did not have a chance to participate in other *Momentum* outreach efforts. In addition, on December 12th, Metro opened the survey to the public, which resulted in over 3,000 responses, most of which came from frequent riders. Metro also conducted a survey at various regional bus stops.

Washington Post Forum

On December 14, 2012, the Washington Post, in conjunction with Metro, hosted an on-the-record Forum. Approximately 150 civic and business leaders and public officials attended. The content, however, reached many more people with an online viewing audience of 1,200 (double that of a typical forum), Tweets of 3.6 million impressions, and web page views of 10,000. The *Post* Forum focused on the challenges of commuting in the region, as well as possible priorities, approaches and solutions.

www.wmata.com

The Board's strategic plan framework has been posted on line since September 27, 2012 for public review of the newly adopted vision, mission and goals. The website has offered a video of *Momentum* and a landing page with stakeholder information about the plan and outreach effort. Since Metro launched the *Momentum* outreach effort and staff draft of the plan, these webpages have nearly 6,000 unique page views. Frequent tweets and Facebook posts have been received by Metro's 37,000 Twitter followers and nearly 4,000 Facebook friends.

Stakeholder Presentations

Over 60 presentations were made throughout the region to:

Business Groups, including:

- The Washington, D.C. Chamber of Commerce
- Fairfax Economic Development Authority
- Montgomery County Chamber of Commerce
- Washington, D.C. Board of Trade
- District of Columbia BID Council
- D.C. Building Industry Association

Public Officials, including:

- Maryland Congressional Delegation

The feedback received was diverse, but some themes rang true among all participants. Among the most prominent shared areas of feedback were the following sentiments:

Metro is critical to the region's future

The transit system is the region's circulatory system; tending to it is essential to competitiveness, prosperity, and enhanced qualities of life

Continue rebuilding

"Fix it" and make the system more reliable

Reduce crowding

Metro needs more capacity on both rail and bus

Provide better customer information

Customers want all types of trip information, on-demand, everywhere

Provide Stable Funding

Citizens, leaders, and business people alike are unified in calling for sustainable, reliable funding for Metro

- Montgomery County, Arlington County, Prince George's County
 - Northern Virginia Transportation Commission
 - Virginia Department of Rail and Public Transportation
 - D.C. Council
- Planning organizations such as:
- Transportation Planning Board (TPB);
 - National Capital Planning Commission
 - D.C. and Prince George's Planning Departments
 - Region Forward Coalition
- Advocacy groups, such as:
- Urban Land Institute (ULI)
 - Coalition for Smarter Growth
 - D.C. Federation of Citizens Association

- American Planning Association – DC Chapter
- American Institute of Architects – DC Chapter

Metro's Accessibility Advisory Committee, Riders' Advisory Council, and Jurisdictional Coordinating Committee were also briefed and consulted.

Metro also hosted three public meetings about *Momentum* and the FY2014 budget. Three employee town hall meetings were also convened with updates distributed to employees through the GM's weekly messages. Internally, five employee *Momentum* roundtable discussions have been held with leadership of multiple departments.

Other Outreach Tools:

To encourage widespread input, Metro launched a "Big Idea" advertising campaign, which appeared in seventeen local media outlets, including the *Korean Times*, *Epoch Times*, *El Tiempo Latino*, *Washington Hispanic* as well as on Patch.com and Facebook to encourage residents who are not digitally inclined to submit their ideas for Metro's future. Metro also sent monthly *Momentum* email blasts to stakeholders and monthly letters to SmarTrip users.

Public Comments on *Momentum*

Below is a high-level summary of the most commonly-held viewpoints across region:

- Make no small plans for Metro;
- Recognize Metro is critical to the region's future;
- Continue rebuilding;
- Reduce crowding;
- Provide better customer information; and
- Ensure predictable funding.

Customers: *"Today's service quality is a paramount concern" and "Master the basics then move to grand plans"*

Customers indicated how important Metro is to their communities. Of those responding to the online survey, 77 percent said Metro was an important part of their decision to move to the area and 75 percent said it is the reason they stay. Much of the feedback from customers was service-oriented focused on short-term improvements. Customers want Metro to keep rebuilding and improve predictability, reliability, and frequency. Customers indicated that "it would go a long way with us" if Metro would take care of the "little things" now. Instead of focusing on more rail lines and bus priority corridors, frequently raised issues include:

- Better in-system information;
- Enhanced station/vehicle amenities;
- More off-peak service; and
- Reduced crowding on both bus and rail.

Customers were generally supportive of Metro 2025 initiatives, with all eight-car trains receiving the most positive votes, followed by increasing station capacity, upgrading the communications system, and increasing flexibility in the rail system via pocket tracks and crossovers. While bus enhancements overall were considered to be positive (including bus-only lanes and an extensive bus priority network), there was a general consensus that without rail enhancements, expanded bus service would not be sufficient to meet future demands. Lastly, many felt that system integration including fare payment across all regional modes was important.

Employees: *“Prepare people and assets for the future”*

Metro employees were supportive of *Momentum* and were excited that the Authority is strategically planning for the future, but voiced concerns about preparing the system to handle future demand, ensuring adequate staffing and succession planning, and ensuring that funds will be available for *Momentum*. Employees indicated that financial stability is crucial to ensuring the viability of the organization as well as preparing for climate change and increased incidences of extreme weather events. Additionally, for disabled customers, Metro should strive to be the region’s provider of specialized mobility services, but work with jurisdictions to shift human services and healthcare-related trips to locally-provided or agency-provided service options. Topics that were unique to Metro employees included the importance of incorporating a wrap-around health and wellness program to address symptoms such as fatigue.

Elected/Public Officials: *“Fix the funding problem, and be the region’s transit Authority”*

Elected and other public officials were supportive of *Momentum* and planning for the future, though concerns were voiced that current funding levels were not sufficient to support the regions’ future needs. Major areas of focus included system capacity, regional mobility, enhanced connectivity including suburb to suburb commutes, integrating with other regional transit projects, economic development and Metro serving as the region’s transit planning leader. Specific support emerged for bus rapid transit and expanded bus services to address both core capacity and suburb-to-suburb issues and 100 percent eight-car trains to address core capacity and platform crowding. Officials also seem to agree that Metro should “be responsible for coordinating regional connectivity” by fulfilling its role as the transit planner of the region, as outlined in the Metro Compact.

During a meeting with the Maryland Congressional delegation, all members present expressed their willingness to discuss the reauthorization of PRIIA or finding other means of federal investment when the current authorization expires in 2018; however, the delegation was clear in stating that local and state officials need to take lead on securing a substantial and local capital funding commitment before Congress would act.

Business Community: *“Metro is key to the region’s competitiveness”*

Within the business community, there was general agreement that the future of the region’s economy is tied to Metro’s success. Business leaders felt that Metro is critical to their business in terms of transporting employees and attracting future workers and clients. In fact, numerous business leaders felt that the region’s reliance on Metro will continue to grow. When surveyed, 97 percent of businesses said Metro will be either as important or more important to the future of the business economy than it is today. One factor working against the economy, according to the Bureau of Labor Statistics, is an estimated nationwide decline in the availability of talent from 2010-2020. The business community is well aware of this and is also aware of Metro’s role in capitalizing on the talent that exists. In March, 2013, 96 percent of business leaders stated that Metro will play an important role in attracting talent to the region. Finally, the business community suggested creating a marketing program to demonstrate the benefits of Metro and specifically defining “the ask.”

Advisory/Advocacy/Civic Groups: *“Provide better connectivity”*

Among the key advisory and advocacy groups in the region, there was wide support for the *Momentum* planning effort. Priorities included better connectivity, integration, access and wayfinding in the system. For rail, there was support for advancing the plan’s

core capacity improvements and adding pocket tracks for flexibility, more station capacity, and a new “circle line” rail line to better connect the edges of our region. There was wide support for the Priority Corridor Network and increases roadway priority for buses, potentially on the region’s HOV lanes. It was also noted that Metro could take a more active role in land use planning to encourage transit-oriented development and complete communities. Some felt that Metro should more actively promote its environmental benefits, while also creatively looking for new sustainable measures.

Support from the Business Community for Metro 2025 Initiatives

Business leaders were asked a series of questions about Momentum to gauge the extent that they believe the strategic plan is focused in the right direction. Five different growth options were presented and respondents were asked their level of support for each of them. The options included:

- Running all eight-car trains;
- Installing bus-only lanes as well as other bypass measures;
- Improving stations via widening platforms, more escalators/elevators, pedestrian tunnels;
- Improving communications infrastructure at

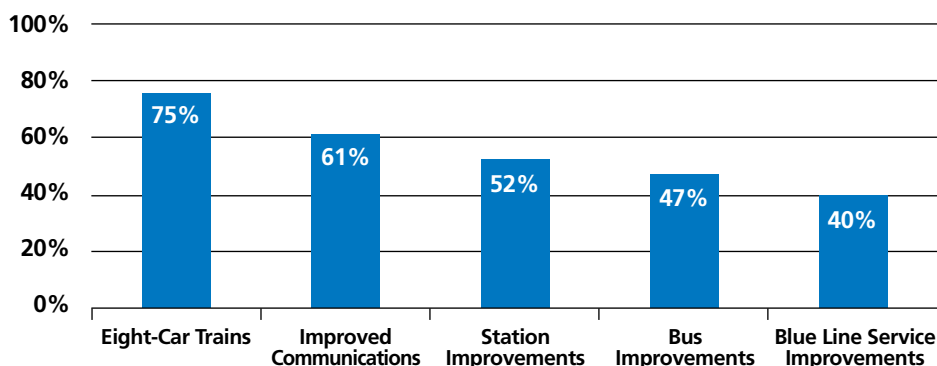


stations, bus stops, online & fare payment; and

- Relieving track and station congestion at Rosslyn with new infrastructure.

There was clear support for the eight-car trains, with three out of four business leaders choosing this as a priority. Improved communications was also supported by six out of ten surveyed. The rest of the improvements had support from approximately one half of the total respondents.

Figure 16: Support for Improvements Among Business Community



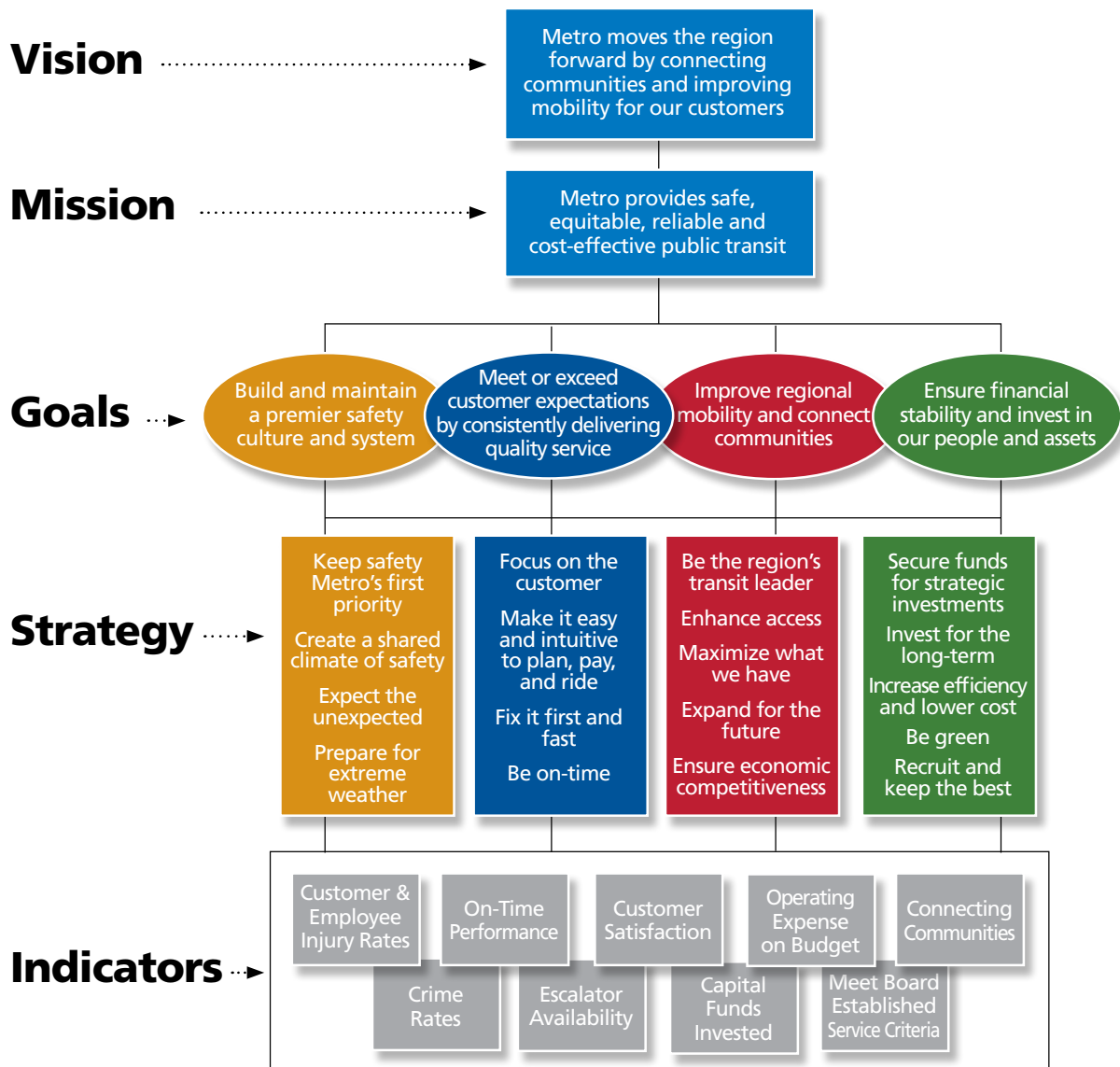
Source: WMATA Survey 2013, DC Board of Trade and DC Chamber of Commerce

The Strategy

The strategic plan for Metro supports the vision of tomorrow's transit ride and gives guidance to the types of investments and decisions that Metro can and must make in order to achieve this vision and support the region. The strategies flow directly from

Metro's Board-endorsed vision, mission, and goal statements, and provide the overarching framework for executing the General Manager's business plan (see the diagram below).

Figure 17: The Strategic Plan





Implementing *Momentum*

Many of the priority actions are already underway, while others will be implemented in the coming years. The significant capital and operating funding needed to implement *Momentum*, and especially the gap between needs and funding, becomes especially pronounced beginning in FY 2017, meaning that Metro has two to three years to create and execute an implementation plan for *Momentum*. This implementation plan, which is the necessary next step to this strategic planning effort, will address execution and management improvements such as performance management and metrics, procurement, program budgeting, capital funding, and having the right human capital on board to get the job done right the first time.

During the course of creating this strategic plan, Metro has identified four key areas that must comprise the foundations of this implementation plan.

Human Capital: Metro will need to ensure that employees with the right skill sets are in the right job at the right time. This means working proactively to identify human capital needs years down the road, and executing a personnel strategy to fund and fill those needs. Metro's Strategic Human Capital Plan, which is currently under development, lays the foundation to ensure that strategic hiring goals

are met and to build the groundwork for the long-term resource needs. Using the priority actions outlined in *Momentum*, Metro leadership will work collaboratively to align workforce staffing, recruiting, succession and performance management plans and technology to establish a pipeline of top-notch talent that will be needed to achieve *Momentum's* goals.

Budget Planning: The initiatives outlined in *Momentum* are broad in reach and ambitious in nature. In some cases, as is shown on pages 55 through 68, the initiatives are in part funded at the departmental level and already underway. In other cases, the initiatives will require either operational or capital funding above and beyond that which is currently estimated to be spent in order to be executed.

Metro will approach its internal budgeting in a way that fully-supports the initiatives outlined in *Momentum*. In simplest terms, this will mean that Metro leadership will work collaboratively to make clear the resources necessary to accomplish the goals of *Momentum* over a ten year period. Metro leadership will have to also communicate these needs clearly to its funding partners. Conversely, when sufficient resources to accomplish the goals of *Momentum* are not available, Metro leadership and its Board of Directors must be forthright regarding the consequences to the strategic plan and its goals.

Procurement: Metro is in the process of automating and streamlining its procurement system and process to better align it with internal business and department needs. A contract lifecycle management (CLM) system is being implemented that will create transparency and enable advance planning for procurement and performance milestones through the entirety of a contract. This implies that Metro will make procurement decisions with a long-term view in mind, as well as track procurements diligently through their lifecycle and minimize unwanted and potentially expensive re-procurements. For items that Metro orders repeatedly, long-term strategic source contracts are under development to leverage high volume purchases and ensure that Metro has the right items when

they are needed. Similar to the budget and human capital components, improvements in procurement will require collaboration between Metro's operations, maintenance, and procurement departments.

Efficiency Initiatives: Enterprise-wide and at the department level, Metro is pursuing multiple avenues that commit it to clear objectives, specific measurable goals, customer service standards, and targets for improved performance. These initiatives, which may include branded methodologies such as Quality Management and Six Sigma, fall collectively under the umbrella prerogative of Metro embracing a performance-based organization approach, and will improve performance while cutting administrative

Metro – The Region's Transit Leader

Momentum requires Metro to reclaim its leadership role and to ensure that the region's transit network meets the region's needs. Metro's Compact charges it with putting forth plans and mobility projects that enhance regional mobility and to be the champion for the regional rider. This means moving beyond the role of "convener" and mere "coordinator" and embracing the roles of "leader", "collaborator", and "co—author".

Living up to this charge means leveraging the relationships with sister agencies Metro has already built by collaborating with partners from concept to execution. Metro will bring its partners in early to co-author mobility innovations, engage in joint problem-solving, and collaborate on bringing these projects online and into operation. As the lead transit planner, Metro will literally draw the region's transit map and advocate for its implementation.

Current Role	Considerations / Constraints	Proposed Role
Advisor Leads Metro-related transit planning studies Advises on locally-sponsored transit initiatives Sets service standards for Metrobus and Metrorail Coordinates schedules and routes with local transit operators Operates: Rail, paratransit and regional/non-regional bus	Instances of and potential for additional suboptimal system planning and performance Passive position on local transit proposals, regardless of Metro system impacts Metro and jurisdictions in direct competition for limited funds to achieve potentially conflicting goals Service standards not always upheld Metro not control right of way, land use, or bus stops	Leader Identify and advocate for projects that enhance regional mobility Develop regionally-optimized transit system plan Maximize efficiency by managing to the service standards Champion the regional rider Execute regional fare payment, land use, roadway priority, and information provision standards

costs. Having these activities in operation will be a key element to *Momentum's* implementation plan.

Momentum – the Return on Investment

Implementing *Momentum* will pay for itself many times over and make possible a regional transit system that can become the regional ride of choice.

By implementing Metro 2025, the region will get:

- Less congestion, because Metro 2025 will result in 135,000 fewer cars on the roads each day;
- Trains with 35 percent more capacity to carry 35,000 more passengers per hour during rush hour; *That is like adding 16-18 new lanes of freeways into downtown Washington – or two to four lanes on each of six major highways into the region's core – at a fraction of the cost it would take to put those trips on the roads;*
- Faster buses that bypass traffic congestion, and attract 100,000 more trips per day while costing less to operate. *PCN will provide a 20% increase in ridership and a 50% increase in speed while lowering fuel costs by 12%;*
- One centralized hub for regional transit trip planning and payment using the latest technology, making it possible for customers to plan, pay for, and make a transit trip seamlessly and effortlessly;
- \$130 million in savings each year because of reduced congestion;
- An additional \$100 million in savings per year from reduced fuel consumption and other out-of-pocket travel costs;
- Savings of \$675 million by avoiding the need to build 30,000 additional parking spaces;
- Brighter, safer, and easier to navigate stations that will serve more people than today;

- Information, everywhere, all the time, allowing travelers to know where buses and trains are and how to time their trips, as well as receive real-time travel and consumer information while in stations; and
- Increased service on the Blue Line so that trains arrive every six minutes during rush hour instead of every 12 minutes, as the case is today.

The ideal transit ride of the future will be on an integrated, multi-modal network that supports the region's prosperity, livability and sustainability. New surface transit services will complement the extensive network of Metrorail and Metrobus lines, and some of the existing lines may be augmented or expanded. Customers will have a seamless and simple, payment, travel, and post-travel experience that allows for "one stop shopping" and a trip experience that makes transit the preferred mode of travel in the region.

Trips will be simple, predictable, and reliable, in stations, facilities, and vehicles that are safe, well-lit, and comfortable. Accurate, audible information will be provided to customers in multiple formats before and during their ride. Train and bus frequency will adequately meet demand system-wide. Customers will feel safe and secure before boarding the vehicles and after disembarking, and will have a variety of easy-to-use and timely information sources to help with trip planning and route selection throughout the region.

By implementing the entirety of Momentum, Metro will be poised to deliver a transit experience and service to the region that is second to none in North America, and the regional "ride of choice". Metro can assume the mantle of the region's transit leader and focus on regional mobility solutions in ways that no other entity can.

In short, the regional travel customer could take a transit ride conceived, organized, planned for, and coordinated by Metro.

Strategies for Goal 1

**Build and Maintain a Premier Safety
Culture and System**

**Metro will create a safer and
more secure transit experience for
customers and employees.**

Metro customers and employees deserve and expect a safe environment – on the job, in the buses, on the trains and in the stations and shelters.

Our commitment: A Metro ride is a safe ride.

In 2011, eighty employees were recognized as Champions of Safety for their efforts in safeguarding Metro employees, equipment and customers.

More than eighty-five percent of both Metrobus and Metrorail riders are highly satisfied with security.

Keep safety Metro's first priority

Metro will continue its efforts to return to and keep the system equipment and infrastructure in good condition. Metro will use data-driven and science-based methods to allocate resources, use system safety practices and principles and environmental design to enhance safety, and seek to meet or exceed national safety and security standards for transit.

Priority strategic actions underway include:

- Continue to complete all National Transportation Safety Board recommendations
- Sustain efforts to maintain a high-reliability organization for decades to come

New priority strategic actions include:

- Set standards for police force based on national best practices

**According to the FTA, Metro has
made "considerable progress" in
strengthening its safety organization.**

**MetroForward provides a solid
foundation for improving our
assets, but more needs to be done
to keep the system running reliably
and safely well into the future.**



Create a shared climate of safety

Metro will work with employees, riders, jurisdictional partners, and the general public to make sure that everyone does their part in creating and sustaining a culture of safety and security in stations, vehicles, support facilities, and access points. Metro will enhance its communications feedback loops to bring critical safety information to empowered agents quickly, to prevent accidents before they happen.

Priority strategic actions underway include:

- Continue to inform customers on safe boarding and riding practices
- Strengthen partnerships with schools to combat youth crime
- Continue to expand Safety Measurement System
- Fully implement all aspects of the close call program
- Embrace health and wellness, especially with respect to fatigue management, to ensure top-notch employee performance
- Continue to enhance employee safety training throughout the organization

New priority strategic actions include:

- Enhance the cooperative agreement with jurisdictional police to support Metro
- Mitigate crime through environmental design

Expect the unexpected

Metro will continue to support the region's emergency transit management and security readiness protocols and seek to make transit emergency protocols widely- and easily-understood. Metro will maintain regional evacuation capability and prepare for any event that requires wide-scale response. On a smaller scale, Metro will continue to improve incident response timing, planning, preparation and investigation.

Priority strategic actions underway include:

- Train staff to accelerate incident investigations
- Work to enhance the region's emergency transit management protocols
- Continue to harden the system to protect against a man-made emergency
- Pursue system-wide technologies that enhance system security and safety
- Continue to educate the customer about transit coverage and usage in regional emergencies

New priority strategic actions include:

- Enhance emergency transit availability language for mass communication providers
- Expand continuous feedback loops to prevent accidents before they happen
- Implement emergency evacuation procedures for people with disabilities

Prepare for extreme weather

Extreme weather is becoming more commonplace. Metro will continue to design and build the system, as well as implement operational protocols, which assume extreme weather may become the "new normal". Facility enhancements, new equipment, and strategic partnerships will also improve Metro's ability to adapt to changing weather patterns.

Priority strategic actions underway include:

- Continue to update weather plans annually

New priority strategic actions include:

- Adjust contingency plans system-wide for increased extreme weather
- Implement physical designs that assume more frequent extreme weather

Strategies for Goal 2

Meet or Exceed Customer Expectations by Consistently Delivering Quality Service

Metro will provide reliable, accessible, clean and customer-focused transit service.

Metro strives to be the region's preferred ride. That means that Metro will provide on-time service that gets customers where they want to go, when they want to get there. From the moment customers arrive in a station or board a bus or Access vehicle, Metro will strive to make travel safe, reliable, clean, comfortable and affordable. Trip information will be easy to hear and simple to obtain with support from the latest user-friendly technology and responsive staff.

Over the last two years, Metro has improved on-time performance and customer service so today:

- Metrorail continues to make improvements to exceed ninety percent on-time reliability, and MetroBus continues to improve service despite increasing traffic congestion; and
- Over eighty percent of both bus and rail customers surveyed are 'highly satisfied' with service.

Focus on the customer

Metro will focus on the needs of Metro's customer at all stages of a trip, and optimize its customer-facing employee approach.

Priority strategic actions underway include:

- Maintain clean, well-lit, comfortable, and accessible stations, stops, and vehicles
- Monitor Metro's progress and strive to continually improve using mystery shoppers and satisfaction surveys and other venues

"We are aiming for nothing short of excellence in serving our customers."

—Member, Board of Directors

Metro is committed to continually improving customer experience with a combination of new technology and improved service.



- Establish a continual learning culture for customer service

New priority strategic actions include:

- Re-invent customer-facing employee roles and recruiting/hiring protocols
- Focus on recruiting and hiring as a means to achieve better customer-facing employee roles
- Develop and implement new feedback systems for customers to provide input and track resolution of complaints and issues
- Develop new opportunities to reach our customers where they live, work and play

Make it easy and intuitive to plan, pay, and ride

Metro will provide customers with accurate and timely information to navigate the region's transit network and plan their trip, including real-time information on arrivals and departures, or delays and incidents. Adopting new technologies and policies will help our customers experience an easy, intuitive and seamless trip.

Priority strategic actions underway include:

- Provide customers with accurate, clear and timely service information
- Provide readily-understandable and useful real-time information in stations, stops, and on vehicles
- Invest in the technology infrastructure to complete the journey to an intuitive, easy to use system
- Invest in communications tools and technologies to provide the next generation of information services

New priority strategic actions include:

- Provide transit riders with a regional trip planning system that works for all systems and provides real-time information in vehicles, in stations, at bus stops, and on any device
- Commit to a customer education effort to smooth the transition to an easy and intuitive system

Fix it first and fast

Metro's results focused maintenance approach is critical to attaining a state of good repair and keeping services running reliably. Metro will collect and utilize data on the performance of the system in order to deploy resources, proactively.

Priority strategic actions underway include:

- Conduct regular maintenance to keep assets operating reliably
- Perform vehicle mid-life overhauls, garage/yard rehabilitations and station upgrades
- Monitor reliability of assets, isolate root causes of disruptions and engineer corrective actions
- Aggressively rehabilitate segments of the rail system and bus facilities

Be on-time

Metro is dedicated to delivering service on time. Metro will continue to adjust service delivery to improve reliability, reduce crowding, and better serve travel markets.

Priority strategic actions underway include:

- Develop supervisory techniques to make service changes in real time
- Establish and perform to regional service standards for bus and rail
- Target service improvements and bus priority measures along Metrobus corridors
- Analyze options to increase performance or reallocate resources
- Adhere to established MetroAccess performance standards, and continue to identify opportunities for schedule optimization
- Modify schedules and routes to reflect changing traffic, demand, and service standard thresholds
- Ensure a seamless fare system among all modes and services

Strategies for Goal 3

Improve Regional Mobility and Connect Communities

Metro will be the region's transit planner, providing leadership for the transit map of the future.

The region's public transit needs are great, and the current multi-party approach has flaws that threaten the overall viability of the network. Metro is the only entity that is capable of and chartered to provide regional transit leadership.

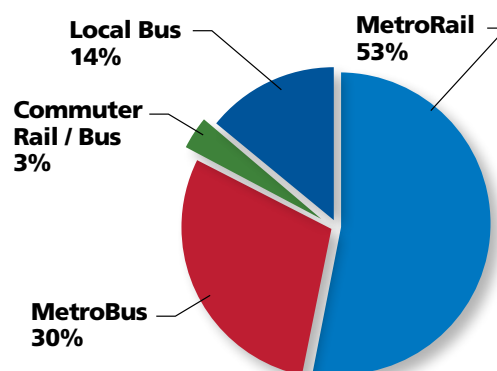
Metro has and will continue to make these and other investments, but it should be noted that jurisdictional partners will also have to do their part in order to ensure that these investments result in significant improvements. This means cooperating on mobility policies, coordinating on capital investments

such as traffic signal prioritization, and making land use decisions that support transit usage and ridership gains, especially in areas where Metro has underutilized existing capacity.

Be the region's transit leader

Metro is not only the region's largest transit provider, but is chartered as the region's transit planning entity. Through leadership and partnerships, Metro will guide regional integration, ensuring that today and

Figure 18: Average Weekday Ridership, 2011, *Source: National Transit Database and Metro*



Metro is the region's transit system providing over 80 percent of the region's average daily ridership. Metro's leadership in creating the transit map of the future is critical to the region.

tomorrow's regional transit services move people where they want to go, seamlessly.

Priority strategic actions underway include:

- Develop and adopt regional long-range transit system plan
- Pursue policies at all levels of government to support a stronger regional role for Metro
- Promote Metro's interests in regional planning activities

New priority strategic actions include:

- Support a regional approach to specialized transportation delivery
- Promote interoperability across modes and non-Metro services such as facilities, schedules, payment, fares, technologies, and right-of-way improvements

Maximize what we have

Metro will meet growing demand and address overcrowding by optimizing the capacity of Metro's existing infrastructure. In addition, Metro will work with local jurisdictions to implement transit priority improvements on the street to move buses faster.

Priority strategic actions underway include:

- Fund and implement Metro 2025

New priority strategic actions include:

- Aggressively address underutilized capacity by working with jurisdictions as they pursue land-related actions that will result in ridership growth at minimal additional operating cost where Metro excess capacity exists.

Enhance access

Access to and linkages between stations/stops and services is the basis for a successful transit network. Metro and its partners have added sidewalks and bike lanes and connected local bus services to stations, but there is still much work to be done. Metro will continue to improve the usability of multiple modes of transit and the overall accessibility of the entire system to all riders.

Priority strategic actions underway include:

- Work with partners to maximize safe, barrier free, direct access to stops/stations for all users and modes
- Work with partners to ensure seamless connections between Metro and other transit systems in the region
- Increase utilization of Metro's parking facilities and work with jurisdictions to expand capacity through shared parking
- Increase mode shares for pedestrian and bicycle access to transit

New priority strategic actions include:

- Design facilities on Metro property to ensure and enhance intermodal connections

Expand for the future

Metro will work with local partners to enlarge the rail and bus network to provide high quality transit to communities across the region.

Priority strategic actions underway include:

- Complete the Regional Transit System Plan

New priority strategic actions include:

- Connect communities with new high-quality transit that supports regional trip-making across local boundaries

Support the region's economic competitiveness

Transit is the backbone of the region and a key to its vitality. Metro will continue to support the development of places where people want to invest, live and work.

Priority strategic actions underway include:

- Work with local jurisdictions to develop policies and plans that support transit-oriented development and balance travel demand
- Design services to link riders to jobs

New priority strategic actions include:

- Advance development projects on Metro property

Strategies for Goal 4

Ensure Financial Stability and Invest in our People and Assets

Metro will seek sufficient and stable funding while leveraging all of its assets wisely.

Metro will put to best use all of its resources—from investing in employees and smarter management of equipment to securing a sound financial roadmap for the future.

But this alone will not give the region the transit network it needs for the future. Reliable and sustained funding will be absolutely necessary for Metro to make the critical investments that the region needs. Metro will work with partners at the local, state, and federal levels to ensure that proper funding mechanisms and practices are in place.

Metro is a wise steward of its resources. Each year, Metro recycling efforts divert tons of garbage from landfills.

Secure funds for strategic investment

Metro will work with regional and federal partners to secure predictable funding sources to enable strategic investments for transit. Metro is already working with regional partners to develop multi-year budgets to form the basis of stable funding agreements.

Priority strategic actions underway include:

- Ensure adequate annual operating and capital funds that are sufficient to execute *Momentum*
- Capture additional revenue from real estate and advertising
- Establish multi-year rolling schedules for funding agreements: six years for operations and ten years for capital

New priority strategic actions include:

- Pursue fare policies that are equitable and balance revenue needs with ridership growth



Metro's investment to automate its parking facilities has saved \$3.1 million in annual operating costs since the beginning of FY2013.

Invest for the long-term

Metro's vehicles, tunnels, bridges, stations and systems are all valuable physical assets for the region that will require replacement. Metro will prioritize and replace assets with a view to providing long-term safety, reliability and cost savings.

Priority strategic actions underway include:

- Replace aging vehicles and garages with safer, more modern designs
- Maintain an Access fleet with an average age of less than five years
- Develop an asset management system using lifecycle costs in line with industry best practice
- Keep infrastructure and technology on schedule for repair or replacement
- Maintain a bus fleet with no buses older than 15 years old

Increase efficiency and lower costs

Metro will operate efficiently by focusing on key cost drivers, improving business processes, and using technology more effectively.

Priority strategic actions underway include:

- Stabilize workforce by managing absenteeism and overtime
- Develop contract lifecycle management approaches
- Continue to advance ongoing work related to regional bus network optimization
- Continue to develop strategies to increase use of bus and rail by customers with disabilities.

New priority strategic actions include:

- Develop processes to become a performance based organization
- Create affordable collective bargaining agreements

- Incentivize employees to identify inefficiencies throughout the authority

Be Green

Metro will employ technologies and practices to reduce consumption of natural resources and pollution. Lower energy usage, alternative fuels, and sustainable development criteria will be considered for new facilities and vehicles.

Priority strategic actions underway include:

- Expand the share of alternative fuel vehicles
- Pursue energy efficient designs of equipment and facilities
- Ensure environmental excellence inside and out

New priority strategic actions include:

- Explore potential for installing electric charging stations for surface vehicles at rail stations

Recruit and keep the best

Continued growth and development throughout the region requires an organization that is capable of recruiting, developing, and motivating and retaining a diverse, high-performing workforce necessary to achieve Metro's goals and to foster the next generation of Metro employees and leaders. Metro's human capital strategies leverage the priority actions identified in *Momentum* to address future workforce demands and challenges.

Priority strategic actions underway include:

- Expand strategic sourcing partnerships with an emphasis on diversity recruitment capabilities
- Implement training programs to address broad-based developmental needs
- Develop a performance management program to serve as a foundation for succession and leadership development

Metro 2025

Metro is hard at work improving the entire riding experience - from the time customers enter the station or arrive at the bus stop to when they leave the system. Metro believes that the transit experience in the Washington region can and should be second to none in North America and be the regional “ride of choice”. Responding to the feedback gathered, Metro has its sights already set on dramatically improved elements that will define the transit ride of the future.

The ideal transit ride of the future will be on an integrated, multi-modal network that supports the region’s prosperity, livability and sustainability. New surface transit services will complement the extensive network of Metrorail and Metrobus lines, while some of the existing lines will be augmented or expanded. Customers will have a seamless and simple payment, travel, and post-travel experience that allows for “one-stop shopping” and a trip experience that makes transit the preferred mode of travel in the region.

Travel will be easy, predictable, and reliable, in stations, facilities, and vehicles that are safe, well-lit, and comfortable. Accurate, audible information will be provided to customers in multiple formats before and during their rides. Train and bus frequency will adequately meet demand system-wide. Customers will feel safe and secure before boarding and after disembarking the vehicles, and will have a variety of easy-to-use and timely information sources to help with trip planning and route selection throughout the region.

Today’s Planned Transportation Investments – the Constrained Long Range Plan

The National Capital Region Transportation Planning Board (TPB), the region’s Metropolitan Planning Organization (MPO), adopts the region’s constrained



Surface transit modes including Bus Rapid Transit (BRT), Streetcar, and Light Rail Transit (LRT) need to be thoughtfully planned for system interoperability

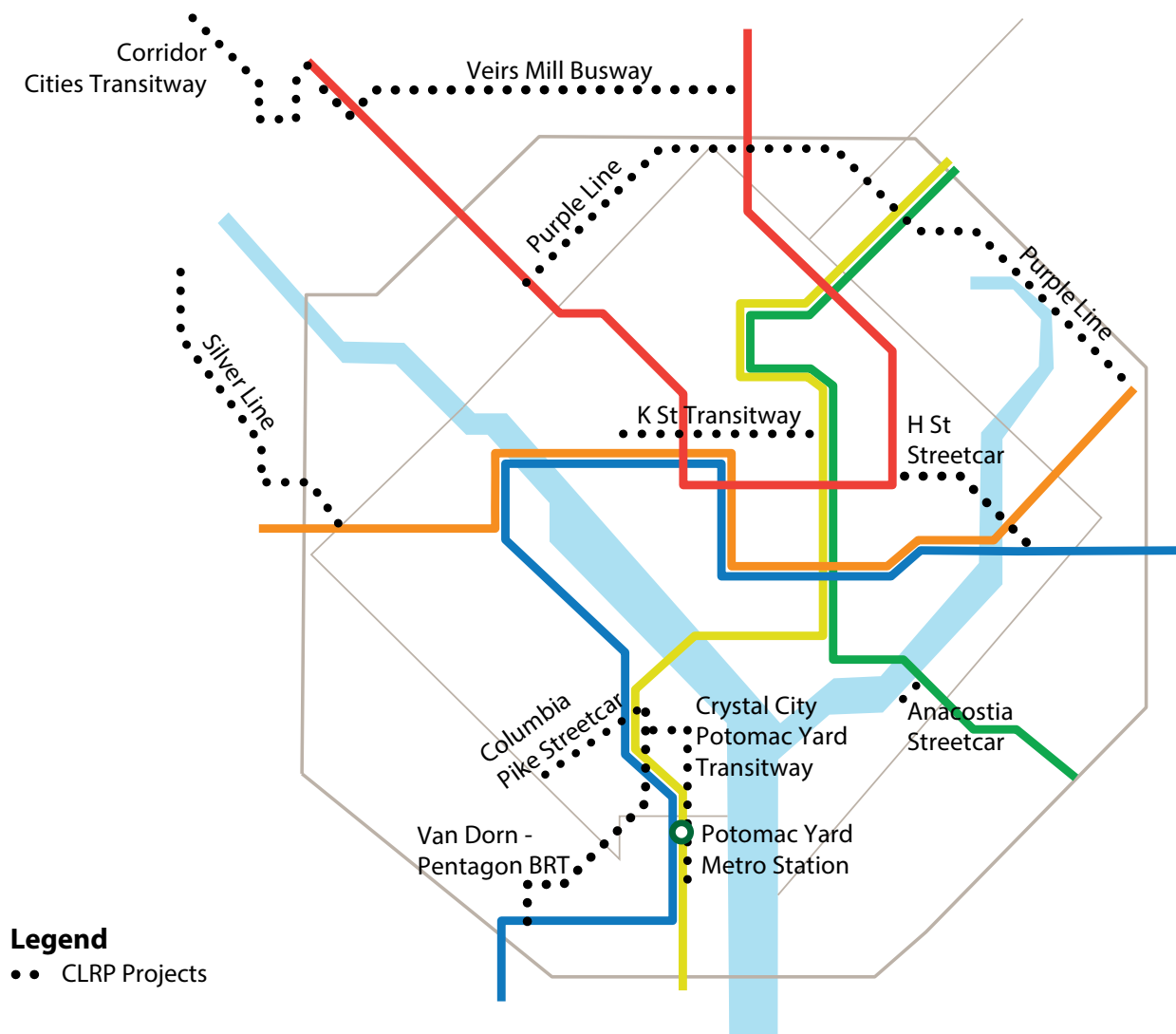
long-range plan (CLRP) annually. Only projects included in this regional transportation plan are eligible for federal funding, and since 1991, federal law requires the CLRP to be constrained financially. This regional transportation plan includes only projects that are reasonably expected to be fully funded.

As shown below, the CLRP includes numerous regionally-significant transit investments totaling roughly \$7 billion (\$2012) to be implemented in the region between 2012 and 2040. These projects

have progressed through planning studies to the point where locally-preferred alternatives have been identified and funding plans have been developed.

If implemented, the CLRP transit projects will increase transit use in the region, resulting in more transfers to and from Metrorail and Metrobus lines, which are already approaching capacity. Without improvements to the existing system, expectations of mobility improvements or enhanced transit access may lead to increased crowding, accelerated system degradation

Figure 19: Map of Transit Projects in Region's CLRP



due to higher usage, and the potential for less-reliable service and more-frequent system interruptions as the existing system becomes overburdened.

Significantly, the current CLRP Financial Plan has insufficient funding to fully support Metro's projected renewal needs beyond 2020, as well as no funding for Metro core capacity improvements. As a result of the financial shortfall, the CLRP travel forecasts include a transit capacity constraint that limits the growth in transit trips beyond 2020, negatively impacting future traffic congestion and air quality.

The lack of funding in the CLRP to address the backbone of the region's transit system means that the region's other transit investments may not perform as expected. Adequate throughput, passenger comfort, and reliability are necessary for Metro's core to absorb additional demand that will alleviate roadway congestion. Metro's core capacity needs to be a regional priority in order to manage the expected increases in ridership that will come from these transit expansions.

Metro 2025 - Making Good on the Region's Investments

Along with achieving a steady state of maintenance, Metro's priority will be to maximize the current transit network and squeeze every last bit of capacity from the system. Such plans may indeed better serve the region as it has evolved over the last 35 years, but they are only the foundation necessary to meet the needs of the region of the future.

Metro leaders have already formulated a series of initiatives to not only meet current demand but also prepare the system to keep up with regional investments and help the region maximize the return on these investments. These initiatives, which should be completed by 2025 if they are to have maximum impact, will increase system and core capacity and improve the effectiveness of the rail and bus networks.

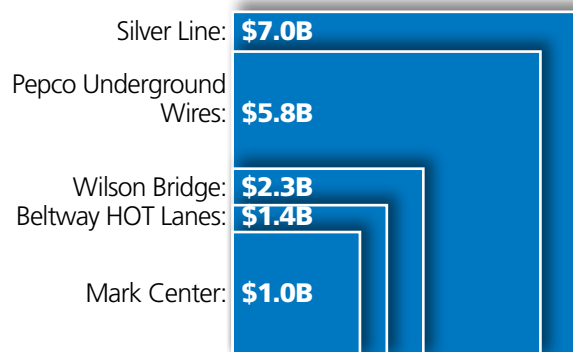
These investments will not only maximize the current system, but also make it more likely that the region's non-Metro transit investments included in the CLRP will have the results that the region needs and expects.

Solutions to maximize the current transit network include running longer trains at greater frequency, making physical improvements to rail stations and fully implementing the Metrobus priority corridor network (PCN) for buses. For the PCN, inter-jurisdictional cooperation will be of paramount importance, as Metro does not own the roadways and local jurisdictions will need to cooperate to allow buses to bypass vehicular traffic congestion.

The elements, which in total are projected to cost approximately \$6 billion, include the following:

- Investments needed to operate all eight-car trains during peak periods;
- Core station improvements;
- Full implementation of the Metrobus PCN plan;
- New Blue Line connections in the vicinity of Rosslyn station;
- Next-generation communications;
- Bus-fleet expansion to increase bus service; and
- Special track work such as pocket tracks and crossovers.

Figure 20: Metro 2025 Costs in Comparison to Other Regional Initiatives





Eight-Car Trains During Peak Periods

Summary

This program will maximize the capacity of the existing Metrorail system by enabling operations of 100 percent eight-car trains during peak periods.

Metro will upgrade, replace or expand:

- The rail car fleet
- Traction power substations
- Power cabling
- Third rail
- Train control systems
- Storage tracks and maintenance bays in the yards

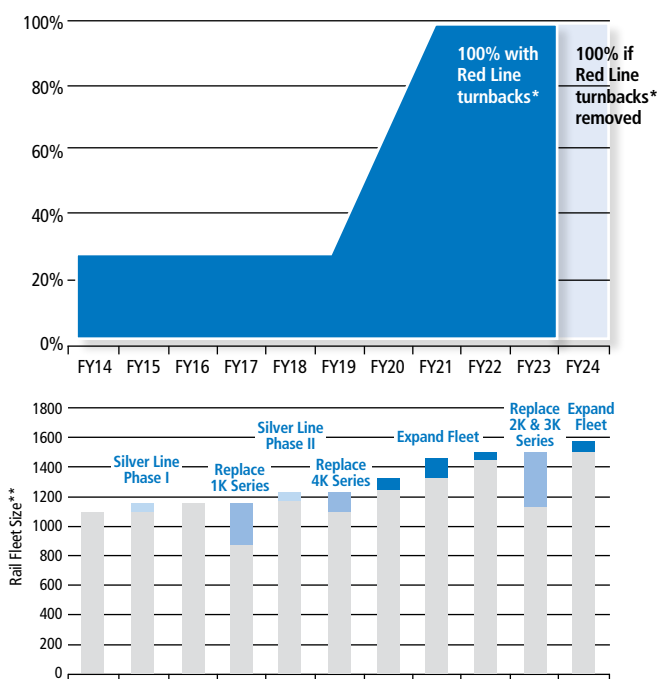
Purpose and Need

The Metro system's core is the destination or transfer point for 80 percent of all rail riders system-wide. Crowded conditions during peak periods exist currently and, without rail fleet expansion, most rail lines will be even more congested by 2025. Operating 100 percent eight-car trains during peak periods and increasing the capacity of transfer stations (under a related initiative) will provide adequate capacity through 2025.

Benefits

- Allows lines to carry 35,000 more customers per hour during the peak period
- Accelerates the modernization of the rail fleet
- Attains adequate system capacity through 2040
- Provides passengers with comfortable rides, including more seating
- Satisfies latent travel demand with the increased capacity
- Enhances reliability of traction power and related systems
- Allows comprehensive heavy repair and overhaul of

Figure 21: Projected Timeline to Operate 100 Percent Eight-Car Trains in the Peak Period



* Currently, during peak periods on the Red Line, Metro operates two routes: Shady Grove-Glenmont and Grosvenor-Silver Spring. Grosvenor-Silver Spring makes use of pocket tracks at these stations to “turn back” trains and create a shorter route, utilizing fewer railcars. Additional railcars, shown in FY24, would be needed to remove the turnback and operate the full Red Line route between Shady Grove-Glenmont with all eight-car trains.

** Does not include 50 railcar contingency.

Note: Prior to commencement of 100 percent eight car train operations during the peak period, power system and storage/maintenance facilities improvements are required. They are expected as shown in the timeline below.

aging rail cars in a new central facility

Considerations

- Upgrade of systems and expansion of facilities should be complete prior to delivery of the new rail cars.
- Improvements of core stations must be concurrent with this program (under a related initiative).

Figure 22: 100 Percent Eight-car Trains Timeline

[illegible]

- The long timeframe for developing the heavy repair and overhaul facility requires start in FY2014.
- Dulles Yard expansion should be part of MWAA contract for the initial yard.

Status of Ongoing Projects

- 7000-series cars are being fabricated with options for additional cars, though not enough to attain 100 percent eight-car trains. An 8000-series car must be developed to supply the remainder.
- A survey of traction power conditions (2013) is identifying upgrades of traction power, cabling, third rail and train control.
- 100 percent Eight-car Train Program (2013) is being finalized that will detail all elements of the program.
- Rail Yard Plan (2013) will further define storage and maintenance needs.

FY2014-2019 Investments

These investments are already included and funded in Metro's current six-year Capital Improvement Program (CIP):

- Engineering and design of maintenance/storage facilities
 - Power upgrades
- Total - \$100 million*

Order of Magnitude Cost Estimate \$2 billion (\$2012)

- \$610 million: 220 railcars (7000 series)
- \$420 million: 140 railcars (8000 series)
- \$370 million: traction power and related systems upgrade
- \$600 million: storage and maintenance facilities expansion

Table 5: Metrorail System Peak Period Capacity

Without Fleet Expansion

	Peak Hour Passengers per Car (Maximum)				
	Location of Peak Direction Maximum Ridership (2012)	2012	2020	2025	2040
Red	Dupont Circle → Farragut West Gallery Place → Metro Center	✓	—	—	✗
Yellow	Pentagon → L'Enfant Plaza	✓	✓	✓	—
Green	Waterfront → L'Enfant Plaza Mt. Vernon Sq. → Gallery Place	✓	—	—	✗
Blue	Pentagon → Foggy Bottom	✓	—	—	✗
Orange/Silver	Court House → Foggy Bottom	—	✗	✗	✗

With Fleet Expansion to 100% Eight-Car Trains by 2020

	Peak Hour Passengers per Car (Maximum)				
	Location of Peak Direction Maximum Ridership (2012)	2012	2020	2025	2040
Red	Dupont Circle → Farragut West Gallery Place → Metro Center	✓	✓	✓	—
Yellow	Pentagon → L'Enfant Plaza	✓	✓	✓	✓
Green	Waterfront → L'Enfant Plaza Mt. Vernon Sq. → Gallery Place	✓	✓	✓	—
Blue	Pentagon → Foggy Bottom	✓	—	—	—
Orange/Silver	Court House → Foggy Bottom	—	—	—	✗

✓ Acceptable (average passengers per car (PPC <100) — Crowded (PPC between 100 and 120) ✗ Extremely crowded (PPC >120)

Core Station Improvements

Summary

This program provides improvements and expansion at high ridership stations to ensure safe and efficient operations and facilitate passenger movements from street to platform and transfers between lines. The proposed stations, most of which are in the system's core, already experience crowding or would reach capacity by 2025. Proposed improvements vary from adding escalators and stairs to building pedestrian passageways connecting platforms within a station and between stations.

Purpose and Need

Station capacity is the maximum number of passengers that can safely travel through facilities within a station. Expanding capacity at high ridership stations ensures safe and efficient movements of passengers and trains throughout the Metro system. The strong ridership growth Metro enjoyed since opening has already placed strains on some stations, where travel demand exceeds the designed capacity, especially in the system's core. Metro 2025 identifies a group of stations that urgently need significant capacity expansions to alleviate current and anticipated congestion and support a strong economy and sustainable development in the region.

Benefits

- Eliminates congestion bottlenecks at stations
- Accommodates ridership growth
- Supports operations of 100 percent eight-car trains
- Enhances safety for both passengers and operations
- Enhances connections to other transportation modes
- Supports additional development around stations
- Reduces passenger travel time and facilitate smooth

movements within stations

- Improves rail on-time performance
- Diverts transferring passengers from trains to walking paths and relieve crowding on the most congested lines and in the most congested stations

Considerations

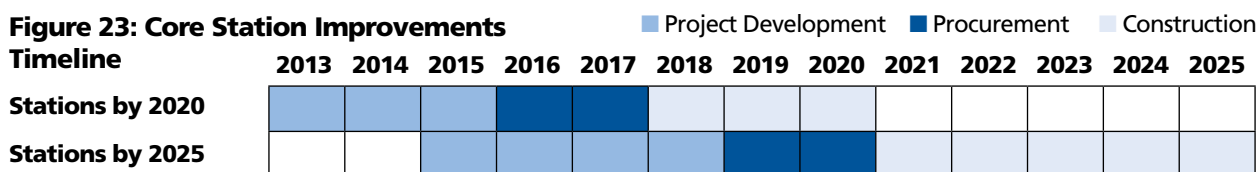
- Metro's regional capital funding agreement does not adequately incorporate station expansion. Current regional capital funds typically apply to infrastructure renewal and expansion for fleet, tracks and yards, as well as station rehabilitation.
- Current funding sources, based on Metro Board direction, focuses heavily on state of good repair and have minimal funding for capacity expansion. New funding sources will be needed to pay for these improvements.
- Metro would need to maintain existing operations and reduce construction impacts on operations, passengers and surrounding businesses.
- Metro would need to identify potential structural and right-of-way impacts on stations and adjacent properties.

Status of Ongoing/Previous Projects

The proposed station improvements are built upon major system plans and individual station capacity studies, including:

- Core Capacity Study (2002)
- Pedestrian Passageway Studies (2004 and 2005) (Farragut North - Farragut West, Gallery Place - Metro Center)
- Station and Access Capacity Study (2008), proposing capacity improvements for the entire system
- Union Station Access and Capacity Study (2011)
- Gallery Place-Chinatown Capacity Study (ongoing, 2013)
- L'Enfant Plaza Capacity Study (ongoing, 2013)

Figure 23: Core Station Improvements Timeline



FY2014-2019 Investments

These investments are already included and funded in Metro's current six-year CIP:

- Construction of Union Station and Gallery Place station access and capacity improvements
- Planning for additional stations

Total- \$100M

Order of Magnitude Cost Estimate

\$1 billion (\$2012)

Some of the proposed improvements were identified in previous studies while others require further detailed analysis. Costs for individual stations may vary by improvement type, station layout and project complexity.



Table 6: Station Capacity Improvements

■ Improvements to be completed by 2020
 ■ Improvements to be completed by 2025

Stations	Add Vertical Circulation and Faregates	Expand Mezzanines	Build Bridges Above Tracks	Widening Platforms	Add Internal Transfer Points	New Entrances	Build Pedestrian Passageway Between Stations
Priority Core Stations							
Farragut North							
Farragut West							
Gallery Place							
Metro Center							
Union Station							
L'Enfant Plaza							
Foggy Bottom							
McPherson							
Dupont Circle							
End of Line Stations							
Vienna							
Shady Grove							
New Carrollton							

Metrobus Priority Corridor Network

Summary

The Priority Corridor Network (PCN) Plan will improve bus service, travel speeds, and reliability on 24 regional corridors, which serve half of Metrobus ridership. Improvements include:

- Improved operational strategies such as transit signal priority and exclusive bus lanes
- Increased frequency and span of service
- Improved customer information
- Added MetroExtra, Metro's limited-stop bus service, routes and buses
- Expanded fare payment options
- Added safety, security and incident response measures
- Enhanced bus stops and facilities

Purpose and Need

The Metrobus system carries about 440,000 riders each day with more than half on the PCN. Buses are frequently caught in heavy street traffic, increasing travel times, degrading reliability, and increasing operating costs just to maintain service levels. Ridership on PCN corridors has increased by eight percent since 2010, straining already-crowded buses on congested streets. A 2009 Metro study found eight frequent service corridors with average afternoon rush hour bus speeds below five miles per hour, a brisk walking pace. Metro will need to add buses to reduce customer wait times and crowding, however Metro's fleet and bus garage capacity is constrained in locations with the highest demand.

Benefits

- Adds over 100,000 new daily boardings to the regional bus network

Figure 24: Recommended Priority Corridor Network

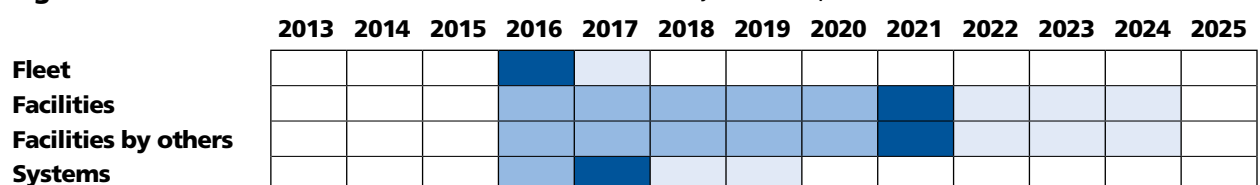


- Saves each passenger an average of 3-4 minutes per trip
- Reduces transit travel times in key corridors by up to 50 percent
- Triples the number of households and more than doubles the number of jobs within a half-mile of a MetroExtra bus stop
- Provides Metrorail line and core system capacity relief and redundancy during rail system disruptions

Considerations

- While Metro operates bus service, local and state jurisdictions own the roadways on which many of the improvements are planned.
- Reserving street space exclusively for buses is often met with firm community resistance. Without a

Figure 25: Metrobus PCN Timeline



strong local partner, the majority of the benefits of PCN will not be realized.

- The region's 2010 Priority Bus TIGER Grant award provided funding for some transit signal priority, queue jumps and bus lanes projects, but much more progress is needed to achieve the full benefits of the PCN.
- Cost effective operation of the PCN fleet will require expanded garage space to house and maintain new buses. Locations of available or readily-expandable garage space, PCN bus lines and fleet needs for larger or alternative-fuel buses often are not closely aligned, hindering implementation.
- Costs for garage space needed to house and maintain the estimated 172 new PCN buses needed to support the full PCN plan are included in another element of Metro 2025.

- The proposed service improvements alone do provide measurable and meaningful benefits, but their full benefit is not realized until the infrastructure improvements are made.

Status of Ongoing Projects

- Metrobus PCN Plan, approved by the Metro Board of Directors (2008)
- Washington Region Priority Bus TIGER Grant award (\$58.8M) (2010)
- PCN Evaluation Study (2010)
- Metrobus Fleet Plan (2010, 2013)
- 17 of the 24 PCN corridor studies have been completed, with 8 corridor service recommendations implemented and 9 partially implemented

Table 7: Metrobus Priority Corridor Network: Current Status

Corridor	Metrobus Routes	Study Status	Annual Ridership (M)			Service Implem. Year	Capital Improvement Status	
			FY10	FY11	FY12			
District of Columbia								
1	Georgia Ave / 7th St (DC)	70, 74, 79	Complete	5.4	5.5	5.9	2007	In Development
2	Wisconsin Ave. / Pennsylvania Ave.	31, 32, 34, 36, 37, 39	Complete	5.6	5.8	6.2	2009	In Development
3	Sixteenth St	S1, S2, S4, S9	Complete	5.0	5.4	5.8	2009	In Development
4	H St / Benning Rd	X1, X2, X3, X9	Complete	3.9	4.1	4.7	2011	In Development
5	Anacostia / Congress Heights	A2, 6, 7, 8, 42, 46, 48, A4, 5, 9	Complete	4.4	4.6	4.6	2013	Concept Plan
6	Fourteenth St	S2, S3, S4	Complete	4.0	4.3	4.6	2014	Concept Plan
7	U St / Garfield	90, 92, 93	Complete	4.2	3.9	3.8	2015	Concept Plan
8	North Capitol St	80	Under Study	2.1	2.1	2.2	2015	Concept Plan
9	Rhode Island Av (DC)	G8	Planned	1.0	1.0	1.1	2016	Concept Plan
Maryland								
10	University Blvd / East West Hwy	J1, J2, J3, J4	Complete	1.9	2.1	2.2	2003	In Development
11	Southern Ave Metro / Nat Harbor	NH-1	Complete	0.2	0.2	0.2	2008	Concept Plan
12	New Hampshire Ave	K6 / K9	Complete	1.8	1.9	1.9	2013	Concept Plan
13	Georgia Ave (MD)	Y5, Y7, Y8, Y9	Complete	2.2	2.3	2.4	2013	Concept Plan
14	Veirs Mill Rd	Q1, Q2, Q4, Q5, Q6	Complete	2.7	2.7	2.8	2014	In Development
15	East West Hwy (Prince George's)	F4, F6	Complete	2.1	2.2	2.3	2014	Concept Plan
16	Greenbelt / Twinbrook	C2, C4	Under Study	3.5	3.4	3.6	2015	Concept Plan
17	Rhode Island Ave Metro to Laurel	81, 82, 83, 86, 87, 88, 89, 89M	Planned	1.7	1.6	1.8	2016	In Development
18	Eastover / Addison Rd	P12	Planned	1.7	1.7	1.9	2016	In Development
19	Colesville Rd / Columbia Pike (MD US29)	22, 6, 8, 9, 29, 11, 13	Planned	2.4	2.4	2.6	2016	Concept Plan
Virginia								
20	Richmond Hwy Express (REX)	REX	Complete	1.1	1.0	1.1	2003	Concept Plan
21	Columbia Pike (Pike Ride)	16A, B, D, E, F, J; 16G, H, K, W; 16L, Y	Complete	3.6	3.6	3.7	2004	Concept Plan
22	Crystal City / Potomac Yard	9A, E, S, X	Complete	0.8	0.9	0.9	2014	In Development
23	Leesburg Pike	28A, 28X, 28F, G, T	Complete	1.9	2.0	2.1	2015	In Development
24	Little River Tpke / Duke St	29K, N; 29C, E, G, H, X	Planned	0.9	0.9	0.9	2016	Concept Plan
				64.1	65.6	69.4		

FY2014-2019 Investments

These investments are already included and funded in Metro's current six-year CIP:

- Purchasing 100 expansion buses
- Adding bus garage capacity
- Implementing improvements on additional corridors
- Evaluating additional corridors for improvements

Total - \$85 million

Note: these planned investments are also enumerated in the Bus Fleet Expansion description

Order of Magnitude Cost Estimate

\$600 million (\$2012)

- \$120 million: buses (\$720K per bus)
- \$120 million: systems including transit signal priority and passenger information
- \$150 million: facilities, including stations, and park and ride lots
- \$210 million: facilities by jurisdictions including exclusive bus lanes and other running way improvements

New Blue Line Connections

Summary

Adding new Blue Line connections seeks to restore train frequencies to every six minutes during the peak period between Pentagon and Rosslyn stations, resulting in less waiting time and crowding for Blue Line riders in Northern Virginia. Once the Silver Line opens, the Blue Line service will operate every 12-14 minutes as opposed to the previous six minutes. The feasibility analysis is currently underway and has identified two potential alternatives to create new connections:

- Alternative 1: Add rail track that would create a new connection between the Blue and Orange/Silver Lines, or
- Alternative 2: A second Rosslyn Station for a new Blue Line with an underground passageway to the existing Rosslyn station, which would connect to the Orange/Silver Lines with a pedestrian tunnel.

Purpose and Need

In 2012, to prepare for the Silver Line and better match ridership growth on the Orange Line west of Rosslyn, service changes were implemented that added more capacity to high-growth areas along the Orange Line. Due to the limit of 26 trains per hour per direction from Rosslyn into Washington, Blue Line service was reduced from every six minutes to every twelve to fourteen minutes. Even with expanded Yellow Line service between Virginia and Washington, Metro recognizes that this service change has been disruptive to thousands of riders, especially those who are among the 32,000 peak period daily trips recorded between the west side of Washington and south Arlington and Alexandria. When the Silver Line opens, Blue Line frequency will decline slightly.



This initiative will restore peak period Blue Line service between Pentagon and Rosslyn stations and provide more frequent trains to Metro's Blue Line customers in Northern Virginia by adding physical capacity for more trains to move to and from and potentially through Rosslyn station. By creating this capacity, Metro will also be provided with needed flexibility at one of the system's most congested sections.

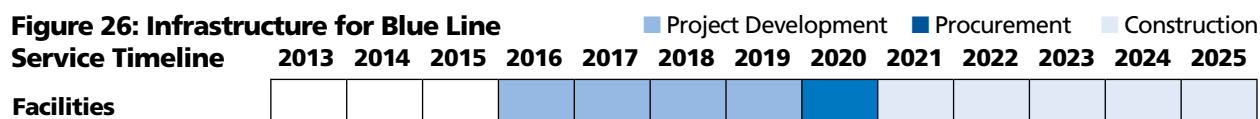
Benefits

- Both alternatives would add five more trains per hour during the peak period between Pentagon and Rosslyn stations, which would provide capacity for at least 4,000 more passengers per direction per hour. This would reduce crowding and wait times by an average of three minutes per trip for around 16,000 trips. These more frequent trains would also benefit new intra-Virginia trips that may occur after the Silver Line opens.

Alternative 1: Add rail track that would create a new connection between the Blue and Orange/Silver Lines

- Enables a one-seat ride between Dulles Airport, Tysons Corner, Ballston, the Pentagon, National Airport, and Alexandria without having to travel through the core;
- Adds five more trains in the both directions on the Silver/Orange Lines west of Rosslyn, adding

Figure 26: Infrastructure for Blue Line Service Timeline



capacity on one of the busiest sections of the system; and

- Adds operational redundancy and flexibility so that riders will have more options to avoid congested areas of the system.

Meanwhile, Alternative 2, a second Rosslyn Station with an underground passageway to the existing Rosslyn station, would set the stage for a second connection across the Potomac – the first step in creating a new east west line into and through downtown Washington.

Considerations

- Both alternatives have complex constructability and must safeguard existing high density development.
- Construction may impact federal property and monuments, such as Arlington Cemetery and the US Marine Corps Memorial, which will require a lengthy environmental review and a high level of mitigation.
- Stopping short of adding the cross-Potomac connection, neither alternative increases capacity across the Potomac River. The restriction remains 26 trains per hour.
- The total timeframe of ten years for planning, design, procurement and construction calls for an early start. Metro is currently conducting a feasibility study.

Status of Ongoing/Previous Studies

- Capacity Study (2002): developed plans and profiles of both alternatives.
- Northern Virginia Core Capacity Study (ongoing, 2013): examines feasibility of the alternatives in greater detail and exploring other short-term and interim-term solutions.

FY2014-2019 Investments

These investments are already included and funded in Metro's current six-year CIP:

- Planning and feasibility studies
- Pocket track/crossover feasibility testing

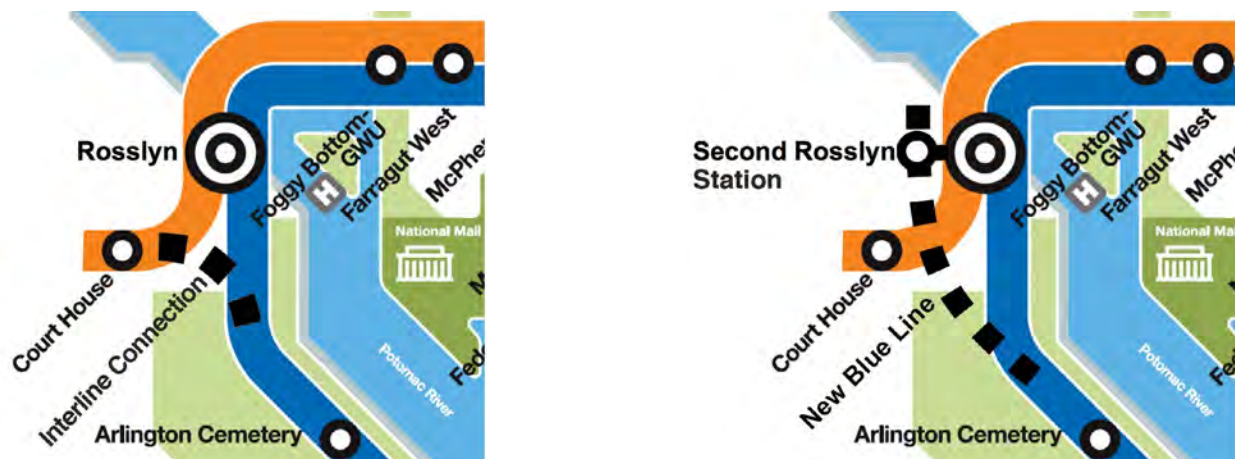
Total - \$1 million

Order of Magnitude Cost Estimate

\$1 billion (\$2012)

- Alternative 1: Add rail track to create a new connection will require mined tunnels and large trenches to expose existing tunnels plus new rail cars
- Alternative 2: A second Rosslyn Station will require tunneling of tracks, an underground station, large trenches to expose existing tunnels, plus new rail cars

Figure 27: New Blue Line Connections



Next Generation Communications

Summary

The program expands current communications infrastructure to provide an integrated one-stop communications hub for the region's transit customers. Proposed improvements will capitalize on efforts already underway to improve the functionality of the rail control software. They include the next generation of the Passenger Information Display System (PIDS), new public address systems, improved station signage, and equipping station managers with mobile devices. Bus and train information will also be integrated, with real-time information displays to well-used bus stops.

Purpose and Need

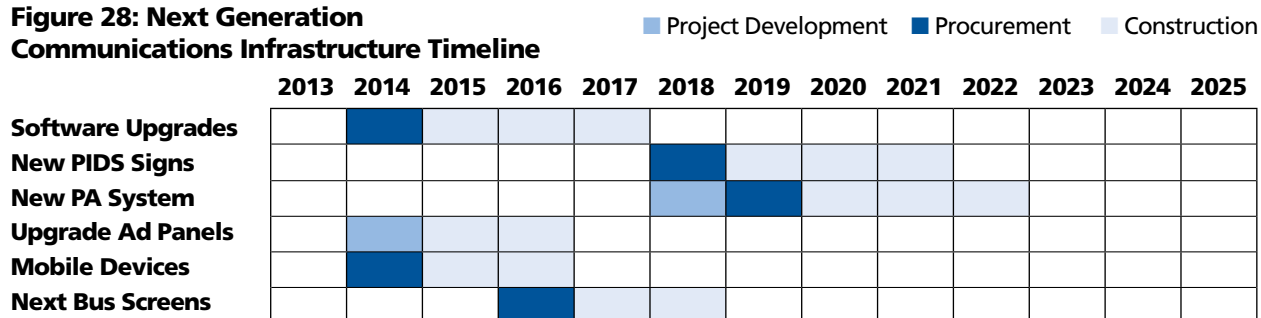
Much of Metro's communication infrastructure dates to the rail system's opening in the 1970s. Modifications to Metrorail and Metrobus communications equipment, already in progress, hold potential to provide better, more accurate information for Metro's customers. Improvements to the PID System and public address system are necessary to get this information to Metro's customers and to improve system accessibility for the visually impaired. For bus passengers, the installation of real-time information screens at the 800 busiest stops would improve the convenience and effectiveness of the bus network.



Benefits

- Increases information available to customers about actual bus and rail departures and improves communications content during special events and track work
- Provides better PIDS in all stations with more sign coverage, improved graphics and more flexibility in terms of information displayed
- Provides an audible public address system in stations and on vehicles for all riders
- Increases accessibility for customers with visual and auditory impairments
- Displays service information with customized sign content
- Provides bus information that allows passengers without smartphones to better utilize the bus network and aids passengers making connections between bus and rail

Figure 28: Next Generation Communications Infrastructure Timeline



Considerations

- Installing new PIDS signage would not occur until after rail control software upgrades. Upgrades to the public address system would use inputs from the new software package as well.
- Developing a new public address system would require acoustic testing at some underground stations, especially ones serving multiple train lines.
- Using LCD screens would maximize the flexibility of the advertising space, as the content could be changed by the time of day, day of week or for special events.
- Modification of advertising space to LCD screens requires additional study to determine power and size requirements of the new screens.
- Using mobile devices by station managers would allow them to better assist customers through increased access to information.
- Most bus stops are not on Metro property. Metro will have to work with the local jurisdictions to obtain permits to install real-time informational screens.
- Real-time bus information would need to include both Metrobus and local bus operators to benefit the greatest number of customers.

Status of Ongoing/Previous Projects

Projects underway related to this initiative include:

- Upgrades of train control software used by the Rail Operation Control Center will improve the quality of information available about train movements, especially during track work and special events. Procurement is expected to start in July of 2013 and the project should finish in 2017.
- 7000 series cars, currently in production, will have improved customer information displays (see graphic on opposite page).



- Radio system upgrades will enable interfacing with regional emergency management and first responders.
- Signs at bus stops will provide real time information at approximately 350 bus stops across the region. The project is funded by the TIGER program through 2016.

FY2014-2019 Investments

These investments are already included and funded in Metro's current six-year CIP:

- Upgrading the Advanced Information Management System
- Project planning and evaluation

Total - \$60 million

Order of Magnitude Cost Estimate

\$400 million (\$2012)

This initiative is still being refined though some cost elements could include:

- \$9 million new PIDS signage and \$64 million for a new public address system at all 86 stations
- \$TBD replacing in station advertising signs with Liquid Crystal Display (LCD) screens
- \$6 million Wi-Fi and other infrastructure to support mobile devices for station managers
- \$9 million real-time bus information at remaining 450 bus stops not yet funded
- \$250 million allowance for further advances as new technology emerges

Bus Fleet Expansion

Summary

Metrobus needs to accommodate growth in demand for bus service. Simultaneously, service effectiveness and reliability are suffering due to increasing traffic congestion. In order to meet this challenge, Metro requires 400 new buses by 2025 in addition to those needed for service on the Priority Corridor Network (PCN). Between PCN implementation and service expansion on “Emerging Corridors”, a bus fleet of 2,060 is required by 2025. To support this fleet, an additional 250-space bus garage will be needed along with heavy overhaul capacity expansion from 100 to 150 buses/year.

Purpose and Need

Metro faces dual challenges of growing demand for bus transit and increasing traffic congestion, resulting in slower trips, overcrowding, and less reliable service. In order to achieve and maintain a state of good operations in the face of these challenges Metrobus needs an expanded bus fleet and increased maintenance and storage capacity. An increase in fleet size from 1,505 in 2013 to 2,060 in 2025 would relieve crowding, increase operational efficiencies and allow Metro to meet the ever-growing demand for bus transit along the Priority Corridor Network and the next tier of “Emerging Corridors”. To enable such an increase, Metro would also need one additional bus storage and maintenance facility, as well as added heavy maintenance capacity.

Benefits

- Provides customers with an enhanced bus transit experience: faster, safer, more comfortable

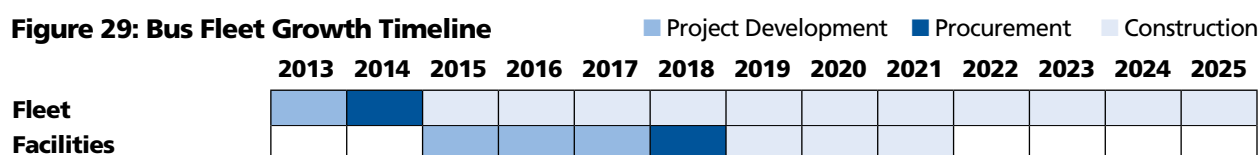


- Increases operational efficiencies and on-time performance
- Enhances surface transit to relieve Metrorail core capacity
- Allows Metrobus to maintain existing levels of service, which is constantly threatened by ever-increasing traffic congestion on local roads
- Continues investment in improved bus maintenance practices
- Provides service to meet growing demand: up to 40,000 additional bus trips per year

Considerations

- Primary challenge to meet emerging bus growth is the lack of funding for new buses.
- Secondary challenge is meeting the increased operating costs that will result from operating and maintaining the additional buses.
- Despite benefits of bus transit, bus facilities are notoriously hard to site due to traffic, noise and air quality concerns raised by neighbors.
- Expansion of the fleet can begin immediately: expansion of heavy overhaul capacity is required when expansion buses reach mid-life, starting around 2020.

Figure 29: Bus Fleet Growth Timeline

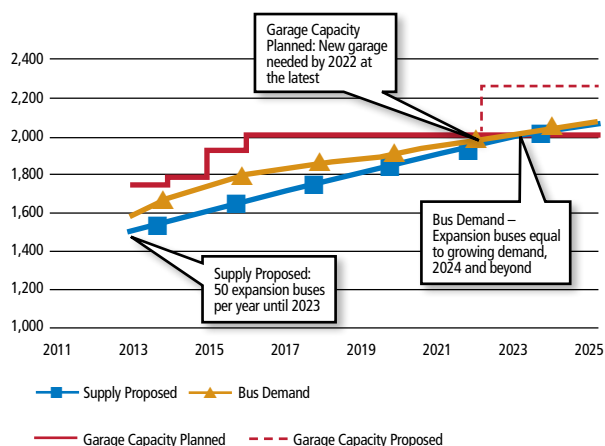


- Planned garage capacity increases can accommodate many of the buses needed by 2025 but not all of them.
- Principles of efficient operation dictate that buses be housed in garages located near the routes served, meaning:
- Excess capacity in one garage does not imply new facilities are not warranted elsewhere and
- Growing demand for bus service in the urban core cannot be efficiently served by new facilities located in suburban areas.
- Best practices in bus maintenance indicate 250 buses is the optimal storage capacity of a new bus facility.
- New garages will need to include maintenance facilities for an expanded articulated bus fleet.

Status of Ongoing Projects

- Royal Street garage will become unusable by 2016 due to height restrictions and taller dimensions of newer buses.
- Cinder Bed Road garage is designed and funded to replace Royal Street and is now moving into implementation.
- Implementation of Southern Avenue Bus Garage

Figure 30: Supply of and Demand for Buses and Bus Facilities



replacement is now commencing.

- Metro is actively pursuing options for replacement, rehab or consolidation of Northern and Western bus garages.

FY2014-2019 Investments

These investments are already included and funded in Metro's current six-year CIP:

- Purchasing 100 expansion buses
- Adding bus garage capacity
- Implementing improvements on additional corridors
- Evaluating additional corridors for improvements

Total - \$85 million

Note: these planned investments are also enumerated in the Metrobus Priority Corridor Network description

Order of Magnitude Cost Estimate

\$450 million (\$2012)

- \$300 million: bus fleet expansion (\$720k per bus)
- \$50 million: bus overhaul capacity expansion, to 150 buses per year
- \$100 million: new, 250-space bus garage

Pocket Tracks

Summary

The addition of special trackwork at key locations in the system will provide more flexibility to the overall system.

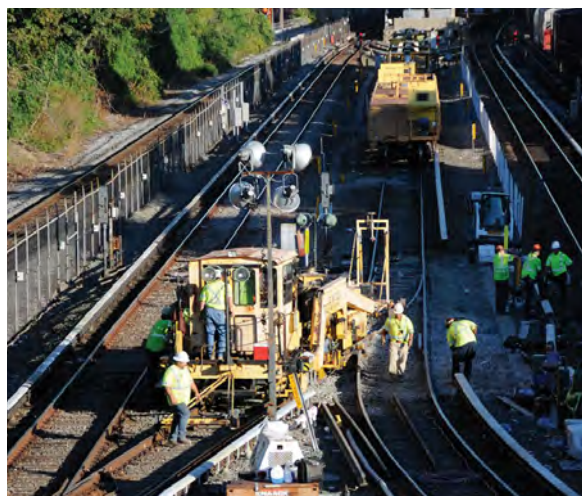
- Pocket tracks: allow trains to turn back in the direction from which they came (short-lining), gap trains to be stored until placed in revenue service, and the staging of track equipment until nighttime trackwork
- Crossovers: allow trains to single track during incidents or trackwork

Purpose and Need

The Metrorail system includes various single- and double-crossovers and additional ones will shorten the distance of single tracking. The system also has seven mid-route turnbacks, each of which is configured to operate as a third or “pocket” track capable of storing an eight-car train. To improve efficiency and reduce operating costs, certain lines could utilize a pocket track for a “short-lining” turnback to provide improved service to the highest-demand segments of the line. Other new pocket tracks would allow for storage of gap trains, disabled trains and track equipment.

Benefits

- Better matches rail system demand with operations
- Provides system flexibility to a two-track system in order to shift service around incidents and enable scheduled trackwork
- Potentially reduces operating costs
- Offers staging of trains in pocket tracks for events



and track equipment for night maintenance

- Might offer staging of gap trains and temporary storage of disabled trains

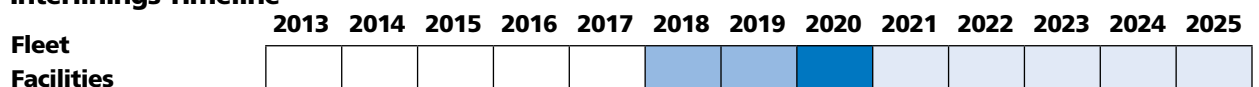
Considerations

- The addition of special trackwork will add labor and costs to the annual maintenance program.
- Unlike at-grade sections, any new trackwork within tunnel sections will be a more complex undertaking and may involve structural modifications.
- Access and timeframe for installation of special trackwork will be restricted to nighttime hours and weekends.

Status of Ongoing Projects

- Core Capacity Study (2002): considered a pocket track inbound of Potomac Avenue Station and a tail track outbound of Pentagon Station.
- Orange-Blue Line rehabilitation contract (ongoing): may upgrade the National Airport Station pocket track.

Figure 31: Pocket Tracks, Turnbacks, Interlinings Timeline



- Potomac Yard Station Environmental Impact Statement: may result in a pocket track, but for track equipment.
- In the coming fiscal year, Metro will study the location of new special trackwork as a prelude to this Metro 2025 program element.

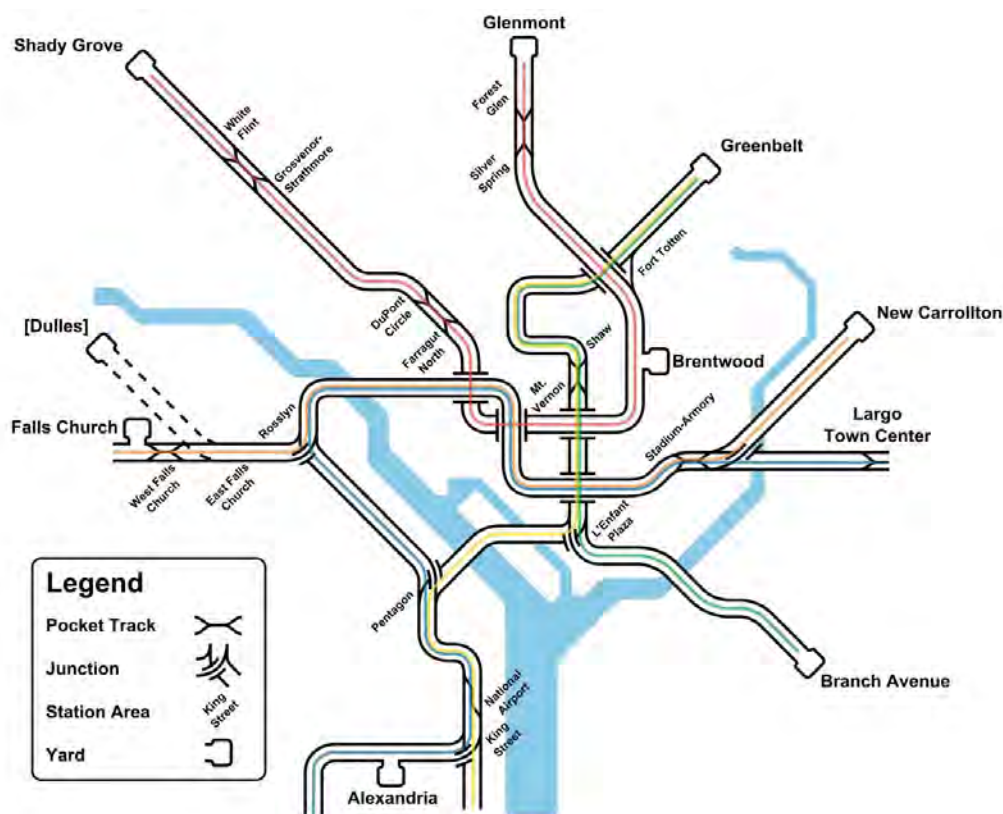
Order of Magnitude Cost Estimate

\$500 million (\$2012)

While Metro has standard designs for special trackwork, each project site will have its unique engineering and construction issues. Costs will include project management, design, track rights, construction, train control and communications connections, testing and start-up.



Figure 32: Location of Existing Pocket Tracks, Junctions, and Yards



Metro 2025 – The Return on the Investment

The seven projects in Metro 2025 will reduce road congestion, save money throughout the region, add riders to the Metro system, and make Metro rides more comfortable and efficient.

Capacity Increases to Support Additional Ridership.

Metro 2025 investments will take 135,000 cars off the region's roads, adding 300,000 boardings to transit, each day. This will help to reduce congestion while increasing transit ridership. With 100 percent eight-car trains, Metrorail will be able to carry the majority of those trips and have adequate capacity to carry the expected ridership of over one million daily trips by 2040. Implementing the full Priority Corridor bus network will enable increased bus use by over 100,000 daily trips by 2040. Next generation communications have helped draw new riders in Boston and Chicago. These investments save all travelers time and money, regardless of whether they ride.

We Lay the Groundwork for Expansion. Four of the Metro 2025 projects are prerequisites to outward expansion of Metrorail. Eighty percent of Metrorail riders travel to, or transfer at, one of a dozen core stations, but the core is reaching its capacity. Before expanding, the trains, tunnels, and stations downtown need to be able to handle the demand. Metro 2025 does this, and lays the groundwork for future rail transit expansion in the region.

Economic Growth Will Be Able to Occur Freely.

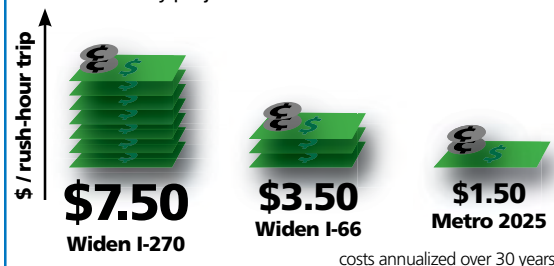
Transitioning to 100 percent eight-car trains at maximum frequencies increases Metrorail's capacity by 35 percent, and allows roughly 35,000 more people per hour to access downtown. This capacity increase is like adding 16-18 new lanes of freeways into downtown Washington – or two to four lanes on each of six major highways into the region's core. It also means that the downtown can grow without adding as many as 30,000 additional parking spaces.

Unsafe and Unpleasant Crowding Will be Relieved

- Metro 2025 eliminates severe crowding on trains and provides adequate capacity on the system until 2040.
- With 100 percent eight-car trains, passengers will be able to load and unload at core stations faster through more doors.
- A new connection at Rosslyn will allow Metro to increase the capacity on the Blue Line, increasing service to Virginia customers while relieving crowding.

Figure 33: The Cost of Adding Capacity

Metro 2025 will provide capacity for an additional 500,000 rush-hour bus and rail trips per day for a cost of about \$1.50 per trip priced over the life of the project. Compare that to freeway projects near Metrorail corridors.



Passengers Will Save Time and Money

- Drivers will save \$130 million each year because of reduced congestion.
- Regional riders will save an additional \$100 million per year by purchasing less fuel and other out-of-pocket travel costs.
- The region will avoid building 30,000 new parking spaces, saving \$675 million.
- Core station improvements including pedestrian walkways will enable riders to walk directly to their destination rather than waiting for a train to go only one or two more stops.
- The PCN for buses will move riders up to 50 percent faster, reducing travel times by three to four minutes per trip

Metro Will Become More Efficient

- The PCN projects will allow Metro to run better bus service, at lower cost – estimated 5 percent higher speeds and 12 percent fuel savings.
- Additional rail pocket tracks or crossover locations will allow Metro to save millions per year through scheduling efficiencies and matching service to demand.

Metro Will Become More Reliable

- With storage tracks and crossover locations, Metro will be able to respond more effectively to incidents, stage trains for special events, and single-track along shorter segments.
- New rail connections at Rosslyn will add redundancy and flexibility to operations.
- Core station improvements will allow Metrorail to better adhere to schedules.
- Property tax revenues will increase, as accessibility via transit grows, adding property tax revenues to local coffers and helping to pay for local services.



Metro 2040

Metro 2040 – Building the System that the Region will Need

The year 2040 may seem distant and removed, but in the context of transit planning, it is right around the corner. Metro's Office of Planning is in the process of developing the 2040 Regional Transit System Plan (RTSP), which will outline a comprehensive regional transit network to prepare the region's transit system for continued growth.

The RTSP, along with other elements that may be identified in the future, will need to be evaluated as necessary to meet the demands in the future. The plan includes a combination of core system improvements, which are included as part of Metro 2025 above, as well as system connectivity and expansion projects. Most importantly, it combines all modes in the region's transit system, whether or not Metro will build or operate them. The strategies in the plan are designed to both serve existing areas better and provide service to new areas, helping to realize Region Forward's vision of regional activity centers with transit options that improve regional mobility, enhance commerce and competitiveness, and have environmental and health benefits for generations to come.

If the Metro 2025 investments are implemented, they will help the region to solidify its first-class transit system and have mobility and economic development benefits for the next decade. However, Metro leadership is keenly aware that even if Metro 2025 is implemented, it will be inadequate to keep up with the total amount of projected growth that is forecasted to occur over the next 30 years. Metro leadership wants to make sure the region's transit network – which contributes to the assumptions feeding these growth projections – helps to ensure

the region's growth and prosperity through and beyond this forecast period.

The Metro 2040 elements that will build on Metro 2025's foundation are still in the conceptual planning phases and could include the following:

New Metrorail lines in the core. In the longer run, with volumes on lines converging at Rosslyn and L'Enfant Plaza reaching full capacity, new east-west and north-south Metrorail tunnels through parts of Arlington and District of Columbia could be built to accommodate trips to and through the system's core.

Figure 34: Potential New Lines Through The Core



Extending the reach of the system. To address the growth in the outer suburbs and take advantage of new Metrorail lines in the core, several extensions could be considered. These could be developed as Metrorail, bus-rapid transit (BRT), or light-rail transit (LRT), depending on further analysis. As they would bring additional riders into the system core, the Metro

2025 initiatives discussed would need to be in place and, in some cases, they would need to go hand-in-hand with new Metrorail lines in the core.

Figure 35: Potential System Extensions



Extend high quality surface transit. Some transit corridors are forecasted to have passenger volumes that are served more cost-effectively by LRT or BRT, rather than Metrorail. Examples of corridors include extensions of the planned Purple Line from New Carrollton south and west to Virginia, and a new BRT connection from North Bethesda to Tysons Corner and Dunn Loring.

Figure 36: Potential High Quality Surface Transit Expansion



Cross-Potomac connections. The planned streetcar networks include multiple routes currently under development in the District of Columbia and Virginia. By connecting these systems across the Potomac, additional capacity would complement that of the Metrorail system while serving travel corridors that align better with the region's travel patterns. Similarly, extending MARC commuter rail from Union Station to L'Enfant Plaza and across the Potomac, to Crystal City and beyond, would reduce pressures on Union Station and enable through-running of commuter rail between Virginia, Washington, and Maryland.

Figure 37: Connecting Transit Across the Potomac River



Commuter rail / commuter bus service. The capacity of the region's transit network would be expanded by improving the frequency of commuter rail and bus services, such as for MARC commuter rail services, additional off-peak service on the MARC Brunswick and Camden Lines with added bi-directional service on the Camden Line. Similarly, increased commuter bus frequency would provide more capacity and adding bi-directional service during the peak period would support the reverse commute.

Implementing *Momentum*

Delivering the Ideal Transit System

Delivering the transit system that the region needs will require an unequivocal commitment of additional resources from internal and external stakeholders. Simply put, the rehabilitation work being accomplished at the time of the writing of this document will not be nearly enough to keep up with the region's needs, and without additional resources it will be unlikely that the region can continue to enjoy a transit network that contributes to competitiveness and makes the Washington metropolitan area one of the most desirable places to live and work.

Metro – Doing Business Differently

Metro recognizes that rebuilding the region's transit system also means rebuilding the region's transit authority – and will continue to be hard at work on this task in preparation for the implementation of *Momentum*. In the near term this means revamping nuts and bolts elements of the authority, including but not limited to: identifying ways that Metro can do its job more efficiently while increasing performance; evaluating its contracting and procurement philosophy to emphasize lifecycle contract and asset management; engineering a budgeting process that allows Departments to strive to achieve the goals of *Momentum* within the context of tight fiscal and financial discipline; and a human capital strategy that must have the right talent in-place and in-queue. In the long term, this means completing the journey to a much more business-like operating and execution philosophy for the organization.

Metro 2025

This suite of system investments will maximize the utility of existing Metro assets and set the following

regional transit priorities for 2025:

- Operate all eight-car trains (longest possible) during rush hour by acquiring additional railcars, power capacity, and railcar storage;
- Enhance and make bus service faster by completing the Metrobus Priority Corridor Network (PCN), which outlines a variety of improvements that allow buses to bypass traffic congestion;
- Expand or enhance high volume rail (transfer) stations in the Metro system core to ease congestion for existing customers and to accommodate more riders in the future;
- Build new pedestrian connections between selected stations to provide more convenient transfer options and alleviate core congestion;
- Become the regional hub for trip planning, payment, and farebox reconciliation, providing real-time trip planning information for the region's transit customers across systems/modes;
- Upgrade communications infrastructure to provide better, more accurate, and audible information to riders in and beyond the system;
- Accommodate bus service growth on emerging corridors through fleet and facility expansion; and
- Build new infrastructure, such as tracks and stations, to provide system flexibility and reliability, which will improve service for customers.

Metro 2040

Implementing Metro 2025 means that the region will have the transit network that can serve the region in the next decade. However, it stops short of giving the region a transit system that is built with the future in

mind. Questions about whether the region will live up to its growth potential without a transit system built to accommodate the world in 2040 are fair to ask – as is asking about the quality, conditions, and reliability of the system in 2040 should the region still rely on one built for 2025.

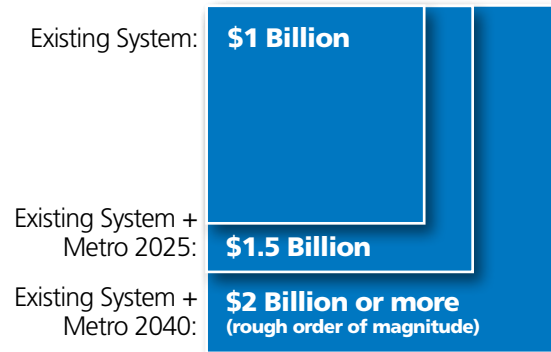
The intent of Metro 2040 is to ask current regional stewards to embrace the same boldness that their forefathers did and make decisions that are designed for the next several generations. Metro 2040 will emerge from the ongoing work of the Regional Transit System Plan, which is still in the planning phases as this long-range plan is still under development.

Addressing the Funding Challenge

Like many of the nation's transit agencies, Metro must rebuild its once-new capital assets as they wear down and deteriorate after decades of use. Metro could feasibly use every penny in its capital budget for years to come just reducing its backlog of maintenance issues. Moreover, Metro also needs to ensure that the system is able to overcome the capacity constraints that come with a regional population expected to swell in both the central core and the suburbs in the years ahead. And on top of this, Metro will need to address calls for entirely new service in many areas of the region. Once Metro is rehabilitated, the system will require a stable level of investment to maintain a state of good repair as it continues to age and deteriorate. Metro estimates that \$1 billion (in 2012 dollars) per year is necessary to support and maintain the existing system, even after rehabilitation. Metro 2025 will expand the core and system capacity, as well as ensure that the region's capital investments are successful. This requires an additional \$500 million, on average, in annual capital funding through 2025.

Certainly, increases in the overall size and scope of the system will also have an impact on operating

Figure 38: Metro's Annual Capital Needs through 2025



costs, which would grow to some degree when new rail cars, buses, and service are put in place. These operating costs may grow in line with the proportional size of system expansion or at a lower rate, especially if increases in reliability and the increased attractiveness of transit to today's non-riders has a disproportionate effect on ridership, mode choice, and revenues for modes that have high farebox recovery ratios today and/or where existing demand is already delivering more revenue than operating costs.

Metro recognizes that the region must plan now for regional mobility needs in a post-2025 world. That is why Metro's leaders are already hard at work on the long-term Regional Transit System Plan, which recommends the transit network the region will need by the year 2040.

This proposed network supports continued economic growth and prosperity as well as shapes economic development opportunities region-wide, ensuring the long-term competitiveness of the region's economy and investment climate. It also ensures that the region has the world-class transit network that will anchor an enhanced quality of life, increased regional mobility, connectivity, and productivity, and the fostering of a region that grows sustainably.



Metro's Capital Funding Agreement continues through FY2016 and provides a solid foundation for supporting a state of good repair for the existing system. To achieve the capacity improvements identified for Metro 2025 and beyond, Metro must sustain the current level of investment and seek commitments from regional partners to fund the needed capacity improvements.

Metro will work with the regional Congressional delegation to seek a re-authorization of the \$1.5 billion federal funding provided to Metro under the Passenger Rail Investment and Improvement Act of 2008 (PRIIA). Reauthorization of Moving Ahead for Progress in the 21st Century (MAP-21) the current federal surface transportation legislation and funding mechanism, will also be critical to maintaining the baseline funding of Metro's current capital program.

The majority of the additional \$500 million in annual funding needed to implement *Momentum* will require a renewed commitment to the regional partnership that allowed the National Capital Area to build, and rebuild the Metro system. As Metro's regional funding partners directly benefit from the return on investment that Metro conveys, they may also have the most compelling reasons to re-invest in the system. To the greatest extent possible, Metro will also leverage other federal funding programs, such as those provided in the Transportation Infrastructure Finance and Innovation Act (TIFIA), in an effort to lower borrowing costs and accelerate delivery of critical projects.

