NASA Goddard SPACE FLIGHT CENTER

GREENBELT CAMPUS

DRAFT TRANSPORTATION MANAGEMENT PLAN

DRAFT | FEBRUARY 2021

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

APPENDICES

ABBREVIATIONS & ACRONYMS

AVO	Average Vehicle Occupancy
CTRC	Campus Transportation Review Committee
CDMP	Commuter Decision-Making Process
ETC	Employee Transportation Coordinator
GRH	Guaranteed Ride Home
GSFC	Goddard Space Flight Center
MDOT	Maryland Department of Transportation
MNCPPC	Maryland National Capital Parks and Planning Commission
MTA	Maryland Transit Authority
MWCOG	Metropolitan Washington Council of Governments
NASA	National Aeronautics and Space Administration
NCPC	National Capital Planning Commission
NCR	National Capital Region
NVTA	Northern Virginia Transportation Alliance
SOV	Single Occupancy Vehicles
TMP	Transportation Management Plan
TDM	Travel Demand Model
VMT	Vehicle Miles Traveled
WMATA	Washington Metropolitan Area Transit Authority

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EXECUTIVE SUMMARY

This Transportation Management Plan (TMP) for the NASA Goddard Space Flight Center (GSFC) Greenbelt Campus is a supporting document to the GSFC Greenbelt Campus Master Plan which has a planning horizon of 2037. This TMP follows the principles in the Transportation Element of the National Capital Planning Commission (NCPC) Comprehensive Plan to reduce the use of single-occupancy vehicles (SOV). This TMP will provide support for employees to commute to and from the GSFC Greenbelt Campus by carpool, vanpool, public transit, active transportation (bicycle and pedestrian travel), and telecommuting.

TMP Goals. This TMP establishes specific goals for modes of travel other than commuting as a single occupant vehicle (SOV). These non-SOV modes include carpool, vanpool, public transit, active transportation, and telecommuting. The goals are measured as a percentage of average daily trips, in a typical work week. A single average daily trip is defined as the commute both to and from work for each employee. By 2037, the goal is that 53% of all average daily trips will be by non-SOV modes and 47% will remain SOV trips (see **Figure E-1**).

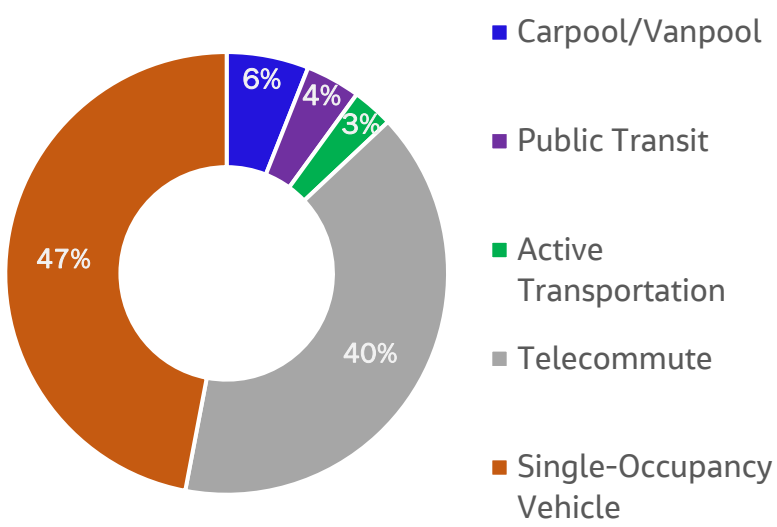

Figure E-1. 2037 Modes of Travel Goals

Master Plan Transportation Framework. The on-campus infrastructure changes in the GSFC Greenbelt Campus Master Plan are based on a centralized campus site plan that promotes a "sustainable, walkable, and vibrant campus comprised of modern adaptable facilities in a natural setting." A hierarchy of roads has been established that addresses vehicular movement, enhanced pedestrian facilities, and enhanced bicycle facilities – including a cross campus multi-purpose trail and dedicated bicycle lanes on primary roads. Parking has been reconfigured to create pedestrian greenways. The main gate has been relocated and enhanced with a dedicated drop-off/pick-up area for passenger loading and ride-hailing.

Regional Transportation. The campus is well connected to the regional road infrastructure, including a direct connection to a primary regional road, the Baltimore-Washington Parkway. However, regional roads are congested and, based on projections by MWCOG, congestion will continue to be a challenge. Off-campus infrastructure also includes the Metrorail System and MARC train; there are three stations in the vicinity of the GSFC Greenbelt Campus. Local bus system routes (Metrobus and The Bus) provide connections from the transit stations to the campus. Although currently there is a signed bicycle route (East Coast Greenway) nearby, there are no dedicated bicycle facilities with direct access to the campus. The bicycle infrastructure and network are anticipated to expand significantly by 2037 through the National Capital Trail Network that will constitute a 60-mile network via trail projects throughout the multijurisdictional region. Off-campus pedestrian facilities are somewhat limited, but there are walkways and crosswalks that facilitate safe access from the campus to adjacent commercial land uses, neighborhoods, and bus stops.

COVID-19 Impacts. Although both traffic volumes and transit ridership have declined during the COVID-19 Pandemic, regional studies completed in the summer of 2020 suggest that volumes and ridership will begin to return to pre-pandemic levels in late 2021 – and the goals of this TMP will be attainable by 2037.

TMP Strategies. The 2037 goal of 53% non-SOV average daily trips equates to 4,399 average daily trips by GSFC Greenbelt Campus employees. Currently, there are 938 non-SOV average daily trips reported. An additional 3,461 average daily trips need to be transitioned to non-SOV modes by 2037 (see **Table E-1**).

Table E-1. Average Daily Trips by Mode Summary

	2016		2037		2016 2037
Commuter Mode	Avg. Daily Mode	# Avg Daily Trips by Mode	Mode Goals in 2020 TMP	# Avg Daily Trips by Mode	# Avg Daily Trips Change
Carpool	5.5%	457	6.0%	498	42
Vanpool	0.0%	0	0.0%	0	0
Public Transit	1.8%	149	4.0%	332	183
Active Transportation	1.3%	108	3.0%	249	141
Subtotal	**9%**	**714**	**13%**	**1,079**	**365**
Telecommute	0.4%	33	40.0%	3,320	3,287
Other	2.3%	191	0.0%	0	-191
Total Non-SOV Mode	**11%**	**938**	**53.0%**	**4,399**	**3,461**
Single-Occupancy Vehicle	89%	7,362	47.0%	3,901	-3,461
	100.0%	8,300	100.0%	8,300	

This TMP explores strategies for each commuter mode based on the following considerations: 2016 mode splits, future mode split goals, 2016 GSFC Employee Commute Survey, 2020 Pulse Telework Survey, available resources (such as the MWCOG Commuter Connections program), and available incentives (such as the federal Transportation Subsidy and Commuter Tax Benefit Programs). As stated earlier, the TMP is a supporting document to the GSFC Greenbelt Campus Master Plan. The TMP strategies are supported by and aligned with the Master Plan implementation phases (near-term, mid-term and long-term) as well as planned local and regional projects. A summary of the TMP strategies and potential strategies are shown in **Table E-2.**

Designate an Employee Transportation Coordinator (ETC). If an Employee Transportation Coordinator (ETC) does not already exist, one should be designated. The strategies in this TMP provide context from which the ETC in coordination with others will develop actions for a continuously progressing effort to work toward the 2037 goals.

Implement/Monitor/Document. After the TMP has been developed (goals are set, a framework of strategies is created, and a monitoring process is developed) – transportation management enters a cyclical process of implementation, measuring/monitoring, and documenting/reporting (see **Figure** E-2).

Implementation starts with an annual action plan that is developed by the ETC in coordination with internal Campus Transportation Review Committee (CTRC) and external partners. The ETC establishes the CRTC and its members will consist of campus employees with non-SOV mode experiences and interests. The ETC and CTRC will focus on a public information and marketing campaign and the establishment of a resource center to work directly with employees to explore non-SOV mode choices based on where they reside. The external partners will include agencies that plan local and regional transportation infrastructure. Coordination with the regional agencies will focus on infrastructure improvements that can facilitate employee non-SOV mode choices.

To monitor and evaluate success, an Employee Commute Survey will be updated and conducted every two years. This survey also provides feedback to be considered in the subsequent annual action plan. An annual report will be created to document the results of the most recent survey and describe the actions taken in the previous year. In compliance with NCPC policy, every two (2) years, the ETC will submit progress updates to NCPC. Every five years this yearly cycle includes an update of the TMP to reflect changes in existing and planned infrastructure and to review and adjust goals and overall strategies as needed.

Table E-2. TMP Strategies and Timeline Summary

Strategies	Mode							Term		
	Carpool	*Vanpool*	*Public Transit*	*Bicycle*	*Pedestrian*	*Telecommute*		*Near Term*	*Mid Term*	*Long Term*
Establish a dedicated Drop-off/Pick-up area for passenger loading and ride-hailing as recommended in GSFC Greenbelt Campus Master Plan (Section 2.5.2)	●	●	●						●	●
Establish an Employee Transportation Coordinator (Section 3.1)	●	●	●	●	●	●		●	●	●
Provide an on-going resource center to work directly with individual employees to explore their non-SOV mode choices (Section 3.1)	●	●	●	●	●	●		●	●	●
Create Campus Transportation Review Committee to represent the viewpoints of the employees in commuting priorities and plans in transportation discussions (Sections 2.4, 3.1, and 3.2.3)	●	●	●	●	●	●		●	●	●
Promote Ridesharing (Carpool and Vanpool) (Section 3.2.1)	●	●						●	●	●
Promote and support the MWCOG Commuter Connections' carpool and vanpool rideshare matching resources (Section 3.2.1)	●	●						●	●	●
Conduct focus groups to identify benefits of non-SOV modes (Sections 3.2.1, 3.2.2, and 3.2.3)	●	●	●	●	●			●	●	●
Promote Active Transportation (Bicycle and Pedestrian Travel) (Section 3.2.3)				●	●				●	●
Expand commute surveys to capture active transportation characteristics (Section 3.2.3)				●	●			●	●	●
Identify and advocate for off-campus projects benefitting non-SOV modes for GSFC Greenbelt Campus (Sections 2.4 and 3.2.3)	●	●	●	●	●			●	●	●
Supporting Telecommuting (Section 3.2.4)						●		●	●	●
Encouraging Variable Work Schedules (Section 3.3)	●	●	●	●	●	●		●	●	●
Promote Transportation Subsidy and Commuter Tax Benefits Program (Section 3.4)		●	●					●	●	●
Promote Guaranteed Ride Home Program (Section 3.5)	●	●	●	●	●			●	●	●
Potential Strategies										
Consider off-campus shuttle serving transit centers (Sections 3.2.2 and 3.7)			●						●	●
Consider secure bike racks/storage, showers, and locker rooms (Section 3.2.3)				●					●	●
Expand transportation subsidy to include MARC train (Section 3.4)			●						●	●
Consider expanding transportation subsidy to cover transit center parking (Section 3.4)			●						●	●
Promote monthly Federal Transportation Subsidy for federal employees (Section 3.4)	●		●						●	●
Promote Commuter Tax Benefits among contractors (Section 3.4.2)	●		●					●	●	●
Develop Campus Guaranteed Ride Home Program to supplement regional program (Sections 3.2.3 and 3.6.1)	●	●	●	●	●				●	●
Provide bike racks on shuttle vehicles (Section 3.7)				●					●	●
Explore on-demand shuttle service to the transit stations in the evenings (Section 3.7)	●	●	●	●	●				●	●
Add fixed route/fixed schedule shuttle service during select hours (Section 3.7)	●	●	●	●	●				●	●

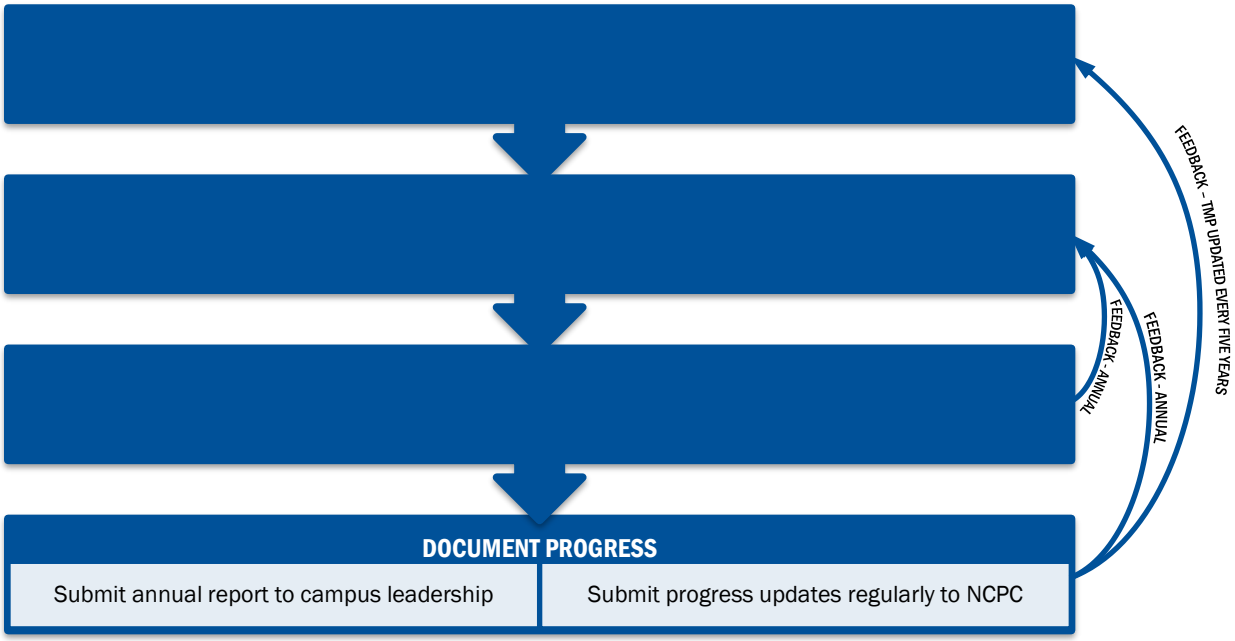

Figure E-2. Transportation Management Process

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CHAPTER 1. INTRODUCTION

This Transportation Management Plan (TMP) is an update to the December 2016 NASA Goddard Space Flight Center (GSFC) Greenbelt Campus TMP. A TMP is required by the National Capital Planning Commission (NCPC) for federal facilities in the National Capital Region (NCR) that have, or plan to have, more than 100 employees or propose physical improvements that can impact the transportation system. Currently the GSFC Greenbelt Campus meets this requirement as it is located in the northeastern region of the NCR and employs approximately 8,300 personnel.

This TMP is a supporting document to the GSFC Greenbelt Campus Master Plan. The Greenbelt Campus Master Plan, with a planning horizon of 2037, provides a development framework to meet the campus planning vision of creating "a sustainable, walkable, and vibrant campus comprised of modern adaptable facilities within a natural setting." The goals and phasing of this TMP are in alignment with the vision of the Master Plan.

1.1. Guidance and Purpose

This TMP has been prepared in accordance with the Transportation Element of the NCPC Comprehensive Plan. NCPC is the federal government's central planning agency for the NCR. The Transportation Element is based on the principles of:

- Reducing single-occupant vehicles (SOV)
- Resource-efficient planning for sustainable travel that promotes:
    - Carpool/Vanpool
    - Public Transit
    - Walking
    - Bicycling
    - Shuttles
    - Other strategies that reduce reliance on SOV and increase quality of life

To achieve these principles, metrics are provided in this TMP as goals expressed as specific percentages to be obtained for each non-SOV mode. Transportation Demand Management (TDM)

strategies are provided to help the GSFC Greenbelt Campus achieve these goals. The strategies include concepts, information, resources, and incentives. From these strategies, specific actions are to be identified by the GSFC Greenbelt Campus to promote change on an annual basis to incrementally achieve the 2037 goals.

Overall, the strategies and actions are designed to influence commuter behavior towards certain goals, such as reducing the number of vehicles traveling during the peak periods and reducing the total number of commuters to the campus. Other strategies and action steps encourage commuters to share vehicles and use the accessible public transportation system.

Most strategies and actions to reduce congestion on the roadway system are aimed at reducing the number of SOV on the roadway system. Success of these strategies and actions can have other positive outcomes as well. For example, incorporating biking, pedestrian travel, or other active modes into a daily commute provides an opportunity for exercise during the work week that can improve the health and well-being of the commuter. Time spent as a passenger in vehicles (carpool, vanpool, or public transit) allows for a passive commute, which can be less stressful for the commuter. Lastly, all the non-SOV strategies reduce emissions and improve air quality. According to the Metropolitan Washington Council of Governments (MWCOG), the Metropolitan Planning Area has been designated an air quality "marginal non-attainment area" for failure to meet ozone standards.

1.2. Study Area

Built in 1959, the GSFC Greenbelt Campus is located 9 miles northeast of Washington, DC in Prince George's County, Maryland. The campus has approximately 8,300 employees, which includes both civil service employees and contractors. A majority of employees work on the Main Campus Area of the GSFC Greenbelt Campus as shown in **Figure 1-1.** This TMP focuses on the Main Campus.

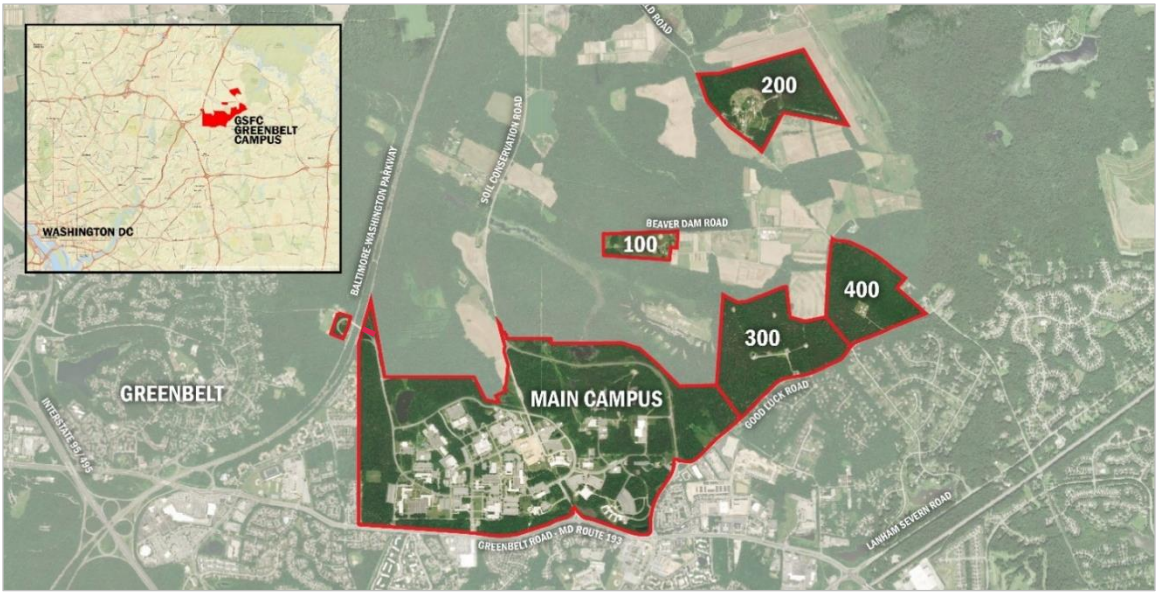


Figure 1-1. GSFC Greenbelt Campus

1.3. Goals and Metrics

Table 1-1. below shows the goal metrics expressed as percentages of average daily trips associated with the GSFC Greenbelt Campus by commute mode. It includes conditions in 2016, the goals previously established for 2032 (in the 2016 TMP), and updated goals for 2037 (established in this TMP). A single average daily trip is defined as the commute both to and from work at the GSFC Greenbelt Campus for each employee. For example, an employee who telecommutes for work at this campus constitutes one trip, as does an employee who drives a personal vehicle to the campus for work. Each day has one trip per employee since it is assumed that each employee will usually travel by the same mode both to and from the GSFC Greenbelt Campus. The percentages are based on the commute mode which employees (cumulatively) have, or are anticipated, to travel. In a work week, each employee has five trips – and can travel by a different mode each of the five trips. The average daily trips shown in **Table 1-1.** below represent the average of the entire work week.

These goals are intended to decrease the reliance on SOV and increase use of non-SOV modes. The 2016 conditions show a mode split of 11% for non-SOV modes and 89% for SOV. The 2032 goal in the 2016 TMP was a 41% mode split for non-SOV modes, and the 2037 goal in this TMP is 53% non-SOV modes. The change in the goal of the 2016 TMP and this TMP is based on an increase in telecommuting (as reflected in the current telecommuting experience during the COVID-19 Pandemic) and a decrease in other non-SOV modes. **Figure 1-2** provides a visual representation of the mode splits.

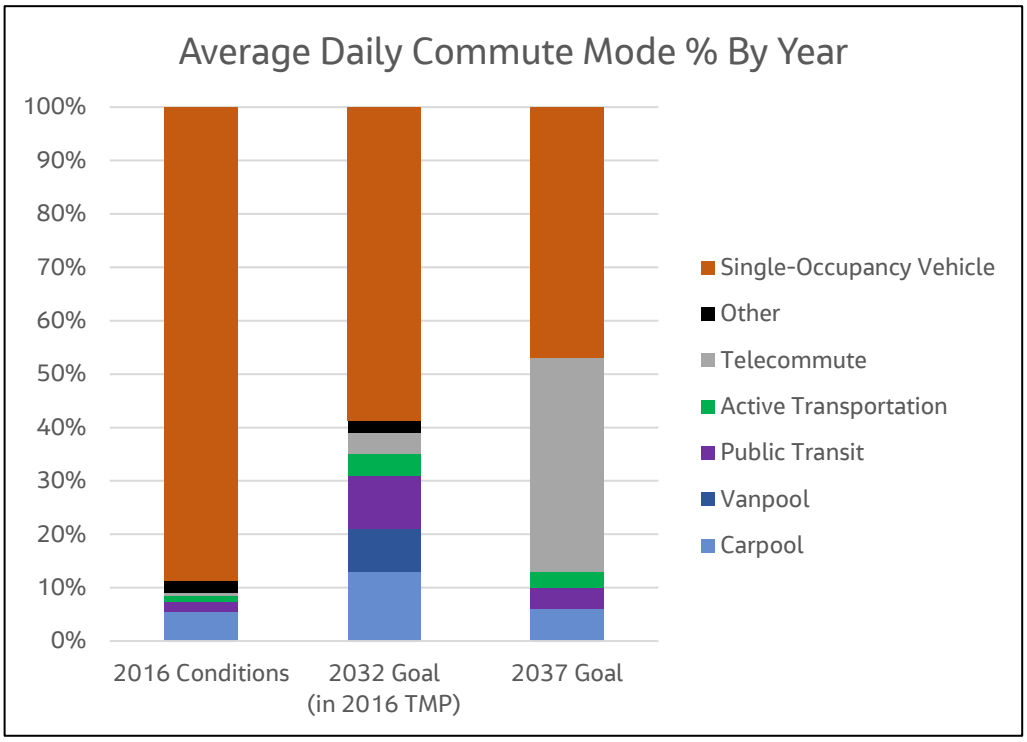
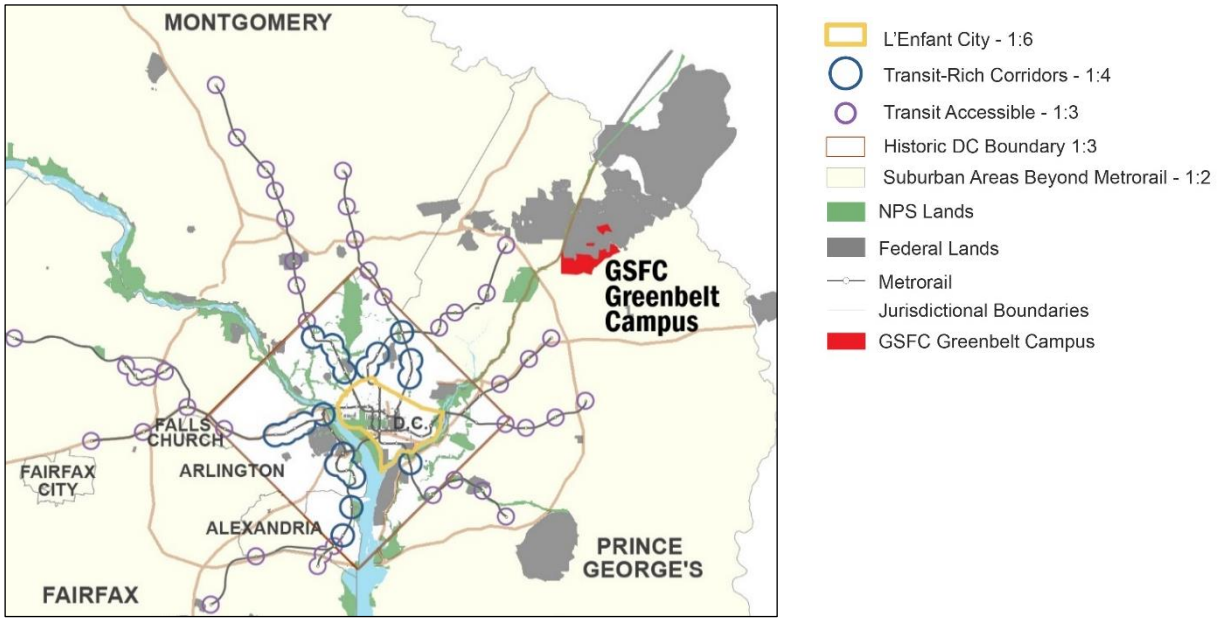


Figure 1-2. Mode Split Goal Percentages

Table 1-1. Mode Split Goals

Commute Mode	2016	2032	2037
	Avg. Daily Mode	Avg. Daily Mode Goals in 2016 TMP	Avg. Daily Mode Goals in this TMP
Carpool	5.5%	13.0%	6.0%
Vanpool	0.0%	8.0%	0.0%
Public Transit	1.8%	10.0%	4.0%
Active Transportation	1.3%	4.0%	3.0%
Subtotal	**9%**	**35%**	**13%**
Telecommute	0.4%	4.0%	40.0%
Other	2.3%	2.3%	0.0%
Total Non-SOV Mode	**11%**	**41%**	**53%**
Single-Occupancy Vehicle	89%	59%	47%
	100.0%	100.0%	100.0%

The updated 2037 mode split goals for carpool, vanpool, public transit, and active transportation are based on the Federal Parking Ratio map for the National Capital Region. The map divides the region into five (5) categories: L'Enfant City, Transit-Rich Corridors, Transit Accessible, Historic DC Boundary, and Suburban Areas Beyond Metrorail. As shown in **Figure 1-3** below, the GSFC Greenbelt Campus falls within the "Suburban Areas Beyond Metrorail."



Source: 2017 NCPC National Capital Regional Federal Parking Study

Figure 1-3. Federal Parking Ratios

The parking ratio is defined as the number of parking spaces per employee. The 2020 parking ratio was 1:1.19 (84%). As shown in **Table 1-2** below, the 2037 calculated parking ratio in this TMP is 1:1.3 (77%). Parking for visitors and operational equipment are excluded from this ratio calculation. Chapter 3 provides more information regarding the parking on the GSFC Greenbelt Campus.

Table 1-2. 2020 and 2037 GSFC Greenbelt Campus Parking Ratios

Year	Parking Spaces*	Total Employees	Parking Spaces per Employee (%)	Parking Spaces per Employee (Ratio)
2020	6,979	8,300	84%	1:1.19
2037 Goal in 2020 TMP	6,385**	8,300	77%	1:1.3

**Employee parking spaces include general parking, reserved spaces for leadership, carpool, vanpool, time-limited spaces, fuel-efficient and electric vehicles, and motorcycles. Does not include visitor parking, ADA accessible spaces, and spaces for the facilities management division.*

***The reduction in the quantity of parking spaces will be the result of the GSFC Greenbelt Campus Master Plan implementation.*

As part of the analysis, the Federal Parking Study also used the Metropolitan Washington Council of Governments (MWCOG) travel demand model (TDM) to project mode splits for 2040. **Figure 1-4** below shows the mode splits for 2016 and 2040 from the MWCOG TDM cited in the Federal Parking Study. Similar to the Accessibility Analysis, mode splits were assigned to the categories of Regional Core, Inner Suburbs, and Outer Suburbs. This TMP uses the "Outer Suburbs" 2040 mode splits for non-SOV modes as the basis for the 2037 goals for the GSFC Greenbelt Campus. This includes 15% for carpool and vanpool (which have been divided into 9% and 6% respectively), 8% for transit, and 2% for active transportation (bicycle and pedestrian travel).

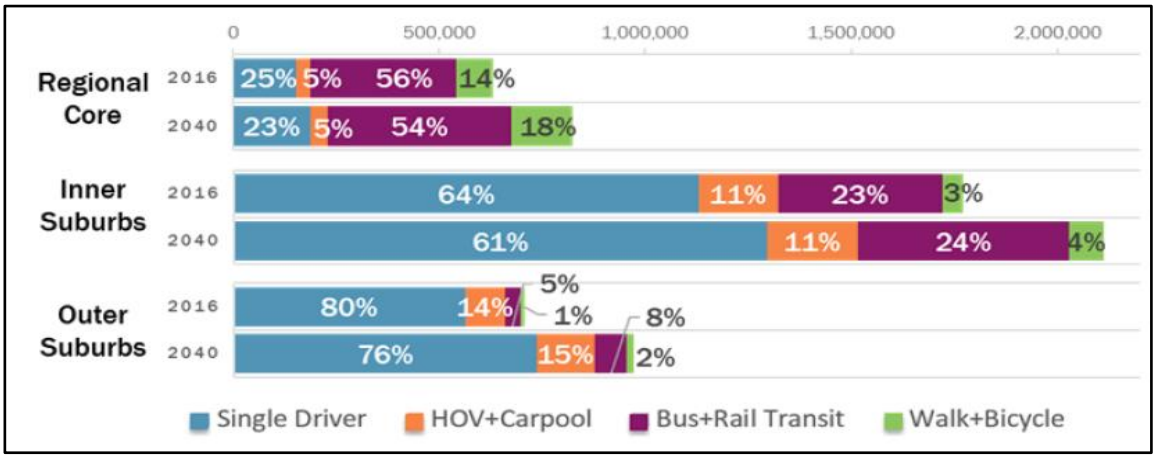


Figure 1-4. Mode Split Projections

Since the goals of this TMP focus on average daily trip percentages, it is helpful to understand how many average daily trips must change to reach the goals. **Table 1-3** below translates the mode split percentages into average daily trips. Since there are approximately 8,300 employees (civil service employees and contractors) at the GSFC Greenbelt Campus, that equates to 8,300 average daily trips. In the 2016 conditions, there were 938 non-SOV average daily trips. The goal in this TMP for

2037 is 4,399 non-SOV average daily trips. This means that, in addition to retaining the 938 average daily trips, an additional 3,461 average daily trips will need to shift to non-SOV modes. With the increase in telecommuting accounting for an additional 3,320 average daily trips, only 365 average daily trips will need to be shifted from SOV to other non-SOV modes.

Table 1-3. Average Daily Trips by Mode

Commuter Mode	2016		2037		2016 2037
	Avg. Daily Mode	# Avg Daily Trips by Mode	Mode Goals in 2020 TMP	# Avg Daily Trips by Mode	# Avg Daily Trips Change
Carpool	5.5%	457	6.0%	498	42
Vanpool	0.0%	0	0.0%	0	0
Public Transit	1.8%	149	4.0%	332	183
Active Transportation	1.3%	108	3.0%	249	141
Subtotal	**9%**	**714**	**13%**	**1,079**	**365**
Telecommute	0.4%	33	40.0%	3,320	3,287
Other	2.3%	191	0.0%	0	-191
Total Non-SOV Mode	**11%**	**938**	**53.0%**	**4,399**	**3,461**
Single-Occupancy Vehicle	89%	7,362	47.0%	3,901	-3,461
	100.0%	8,300	100.0%	8,300	

1.4. Document Organization

Chapter 1 defines the purpose and study area; establishes specific goals for travel by modes other than SOV; and describes the organization of the TMP report.

Chapter 2 documents and discusses the existing and planned transportation infrastructure available on and around the GSFC Greenbelt Campus for employees to utilize when making their average daily commute trip mode decisions. Chapter 2 also discusses the impact of the COVID-19 Pandemic on traffic volumes and transit ridership.

Chapter 3 addresses the TDM strategies and considerations that will be utilized to create actions to motivate employees to shift the mode by which they are making their daily commute.

Chapter 4 provides guidance to translate the strategies into implementable steps to be taken by the GSFC Greenbelt Campus. This chapter also addresses the internal and external partners that will be needed to promote, monitor, and achieve the 2037 mode split goals. Internal partners are important to provide knowledge, information, and perspective; develop the action steps; and help communicate the key messaging to GSFC Greenbelt Campus employees. External partners are important to monitor and coordinate transportation infrastructure improvements that can impact the commute mode choices of GSFC Greenbelt Campus employees. This chapter will also discuss implementation timelines and monitoring and evaluation activities needed to track success over time.

CHAPTER 2. EXISTING AND PLANNED TRANSPORTATION SYSTEM

This chapter provides the existing and planned transportation network in the NCR that employees utilize to commute to the GSFC Greenbelt Campus. This chapter begins with a density map of the GSFC Greenbelt Campus employee zip code data to show the areas from which employees are commuting on the transportation network. Next, this chapter presents an overview of the impact of COVID-19 Pandemic on the transportation system. It provides available resources and perspective that help predict when traffic volumes and transit ridership can be expected to return to pre-pandemic levels. Last, this chapter provides an overview, and detailed information, about the off-campus and on-campus transportation network that includes roadways, transit, and pedestrian and bicycle facilities.

2.1. Zip Code Analysis of Trip Origination for GSFC Greenbelt Campus Employees

An analysis of the GSFC Greenbelt Campus commuters' trip origins informs the discussion of the needs for transportation infrastructure improvements. **Figure 2-1.** Distance between the GSFC Greenbelt Campus and Employee Residences, 2020 shows the density of campus employee residence zip codes in 2020 relative to the location of the campus. The data includes both civil service employees and contractors. Employee residences are spread throughout the region, with dense pockets west, east, and north of campus. The map shows that dense areas are present within 0-5 miles of campus, 5-10 miles, 10-20 miles, and 20-30 miles from campus. **Table 2-1** shows the highest percentage of employees reported commute times of 31-45 minutes in the 2016 Employee Commute Survey.

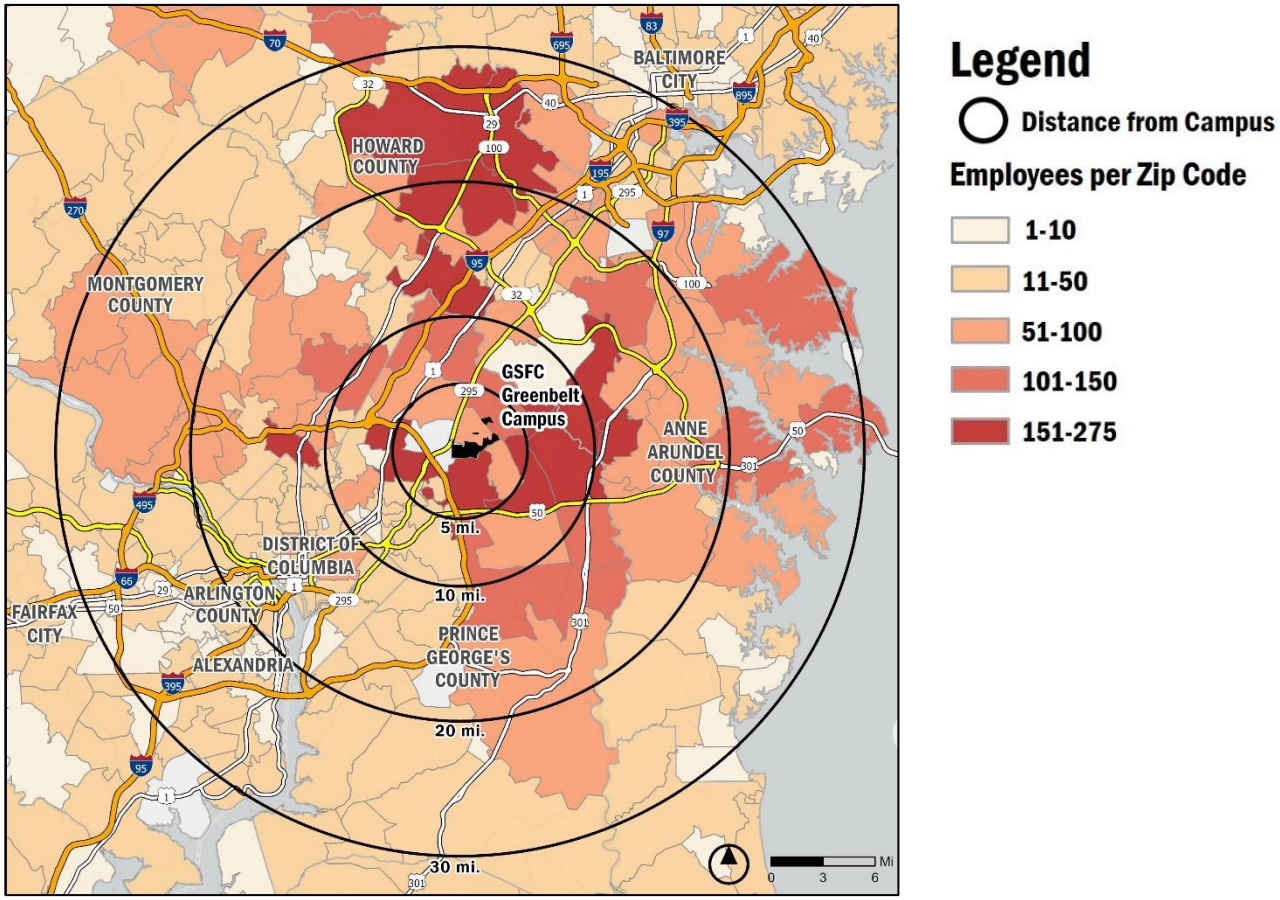


Figure 2-1. Distance between the GSFC Greenbelt Campus and Employee Residences, 2020

Table 2-1. 2016 Employee Commute Time

Commute Time	Percentage
Less than 15 minutes	9.6%
16 - 30 minutes	23.0%
31 - 45 minutes	28.2%
46 - 60 minutes	20.8%
61 - 90 minutes	12.0%
Greater than 90 minutes	6.4%
Total	100.0%

As shown in **Figure 2-2,** the dense areas where employees reside include the counties of Prince George's, Anne Arundel, Howard, and Montgomery. External agency outreach (as discussed in **Chapter 4**) will include these four (4) counties to identify improvements that can encourage them to use non-SOV modes.

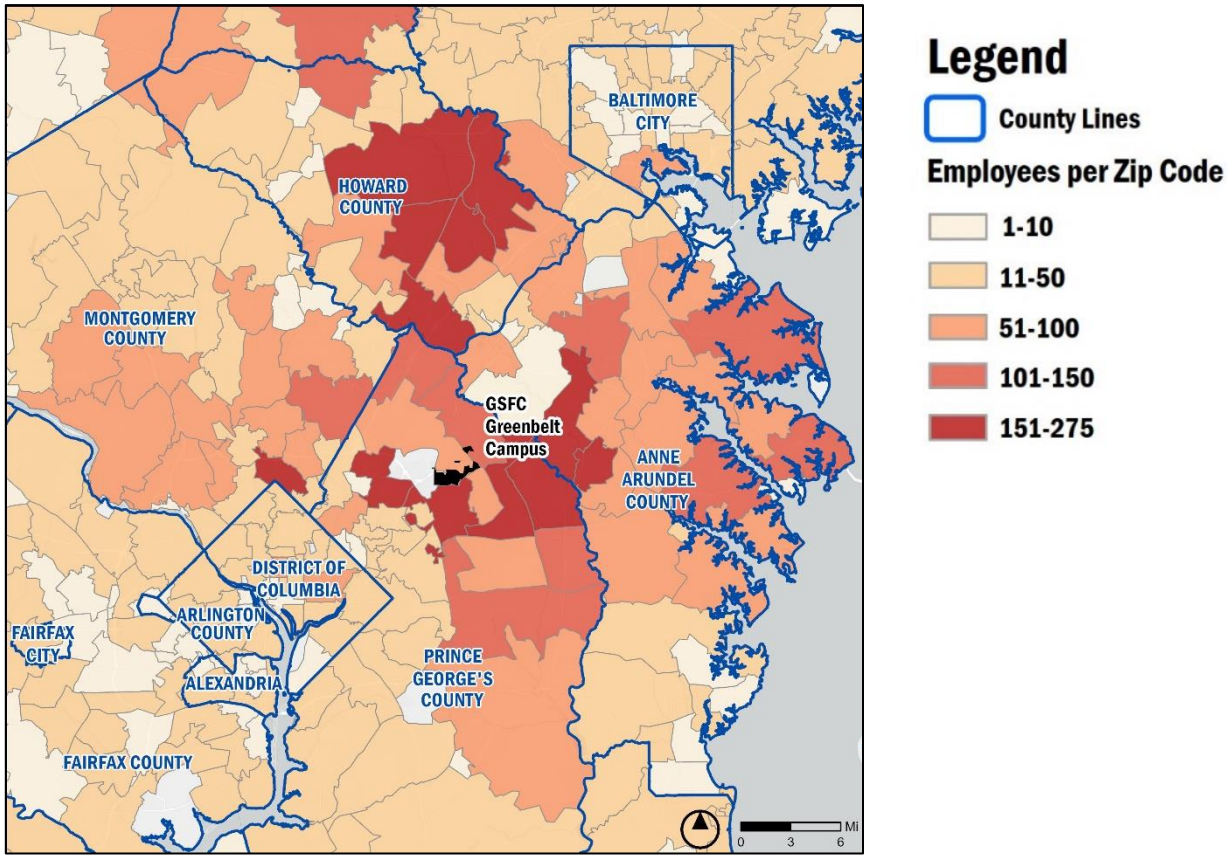


Figure 2-2. Employee Residence by Zip Code, 2020

2.2. Off-Campus Transportation Facilities Overview

This section reviews the existing and planned off-campus transportation facilities in the NCR and how they may impact the GSFC Greenbelt Campus employee commute mode choices. It includes roadway, transit, bicycle, and pedestrian facilities.

A primary agency for transportation in the region is the MWCOG which staffs the NCR Transportation Planning Board (TPB) and is the federally designated Metropolitan Planning Organization (MPO) for the region. It provides a forum for transportation planning and prepares plans and programs that the federal government must approve in order for federal-aid transportation funds to flow to the Washington, DC region. Members of the TPB include state departments of transportation, counties, cities, and transit agencies that build, operate, and maintain transportation facilities in the region.

According to the MWCOG, there were 5.7 million people living in the MWCOG planning area in 2018, and population is anticipated to grow to more than 6.9 million people by 2045. To accommodate this large and growing population, the NCR has a comprehensive and complex transportation network of roadways and transit facilities. This network requires continuous maintenance as well as improvements and expansions to continue to move people efficiently.

Visualize 2045 is the federally mandated, long-range transportation plan for the NCR prepared by the MWCOG. It was last adopted in 2018. The plan delineates seven initiatives to address transportation in the region:

1. Bring jobs and housing closer together
2. Expand bus rapid transit regionwide
3. Move more people on the Metrorail
4. Provide more telecommuting and other options for commuting
5. Expand express highway network (for vehicles and transit)
6. Improve pedestrian and bike access to transit
7. Complete the National Capital Trail

The goals of this TMP are in alignment with the Visualize 2045 initiatives; both plans encourage employees to increase the use of non-SOV modes and decrease SOV commute travel.

2.2.1. Existing Roadway Network

The GSFC Greenbelt Campus is located in Greenbelt, Maryland, approximately nine (9) miles northeast of Washington, DC. As shown in **Figure 2-3,** the GSFC Greenbelt Campus is located just outside I-495 (Capital Beltway) and can be accessed by MD 193 (Greenbelt Road) to the south and MD 295 (Baltimore-Washington Parkway) to the west. **Figure 2-4** shows the GSFC Greenbelt Campus relative to the regional transportation network.

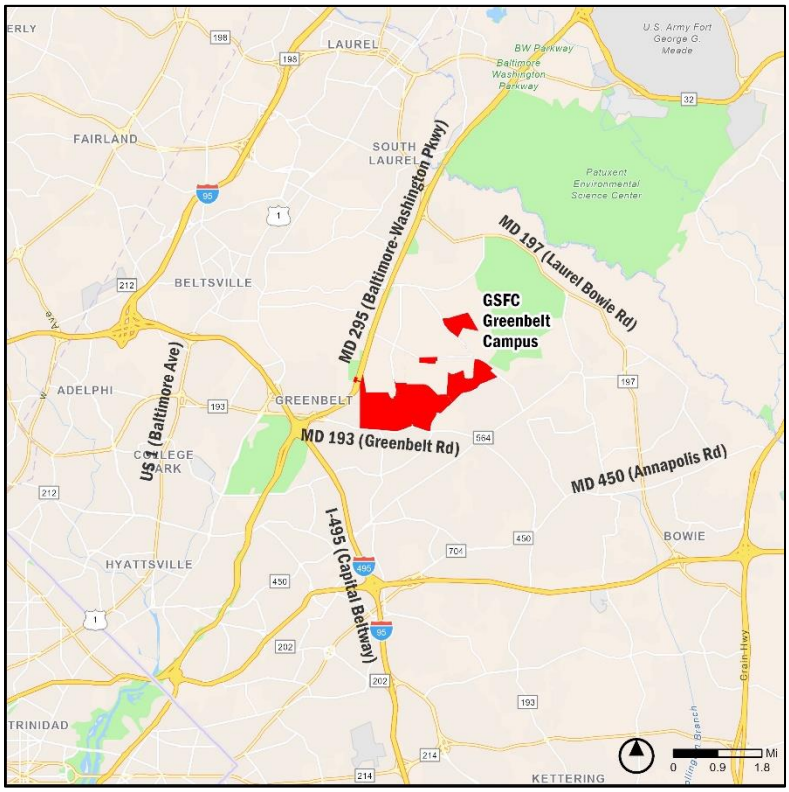


Figure 2-3. Roadway Network in Vicinity of Campus

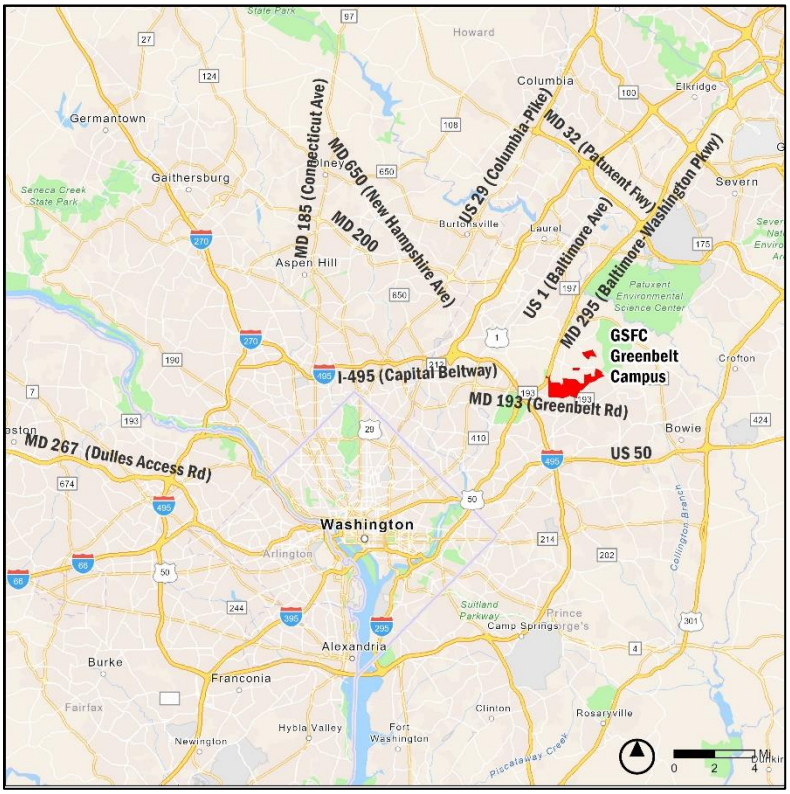


Figure 2-4. Regional Roadway Network in NCR

2.2.2. Historical and Projected Traffic Volumes

This section reviews the historical and projected traffic volumes for the major roadways in the vicinity of the GSFC Greenbelt Campus. Employees may be driving from many different parts of the NCR, but will likely need to travel by one of these roads to reach the campus.

Historical growth from 2010 to 2019 was calculated using data from the Maryland Annual Average Daily Traffic database. Future traffic growth was calculated using data from the MWCOG Travel Demand Model (TDM). As shown in **Table 2-2,** the average annual historical growth rate and annual future growth rate for these roadways was determined to be 1.14% and 0.35%, respectively. In all cases, projected growth rates are lower than historical growth rates, because traffic volumes on many major roadways are already at or close to capacity.

Table 2-2. Historical and Projected Traffic Growth Rates

Roadways	Annual Historical Growth Rate (2010 2019)	Annual Future Growth Rate (2019 2040)
I-495 (Capital Beltway)	0.28%	0.38%
I-95	1.50%	0.31%
US 50 (John Hanson Hwy)	1.95%	0.46%
US 29 (Columbia Pike)	0.15%	0.39%
US 1 (Baltimore Ave)	0.50%	-0.12%
MD 193 (Greenbelt Rd)	1.30%	0.21%
MD 295 (Baltimore-Washington Pkwy)	1.25%	0.18%
MD 450 (Annapolis Rd)	2.15%	1.02%
Average	**1.14%**	**0.35%**

Figure 2-5 and **Figure 2-6** below show the congestion levels for the PM peak period from the MWCOG travel demand model (TDM) for 2019 and 2040, respectively. Congestion is measured as the ratio of volume to capacity (V/C). Red indicates V/C greater than 1.0. Orange indicates V/C from 0.8 to 1.0. Green indicates V/C less than 0.8. Both 2019 and 2040 show significant congestion throughout the region and look very similar. The 2040 levels reflect all the improvements planned through 2040 by MWCOG, but also include anticipated population and employment growth. These congestion maps show that employees commuting on these roadways are likely to experience congestion on their daily commute that will not subside over time. Congestion is one reason that employees may be open to resources provided by the GSFC Greenbelt Campus to explore non-SOV commute choices.

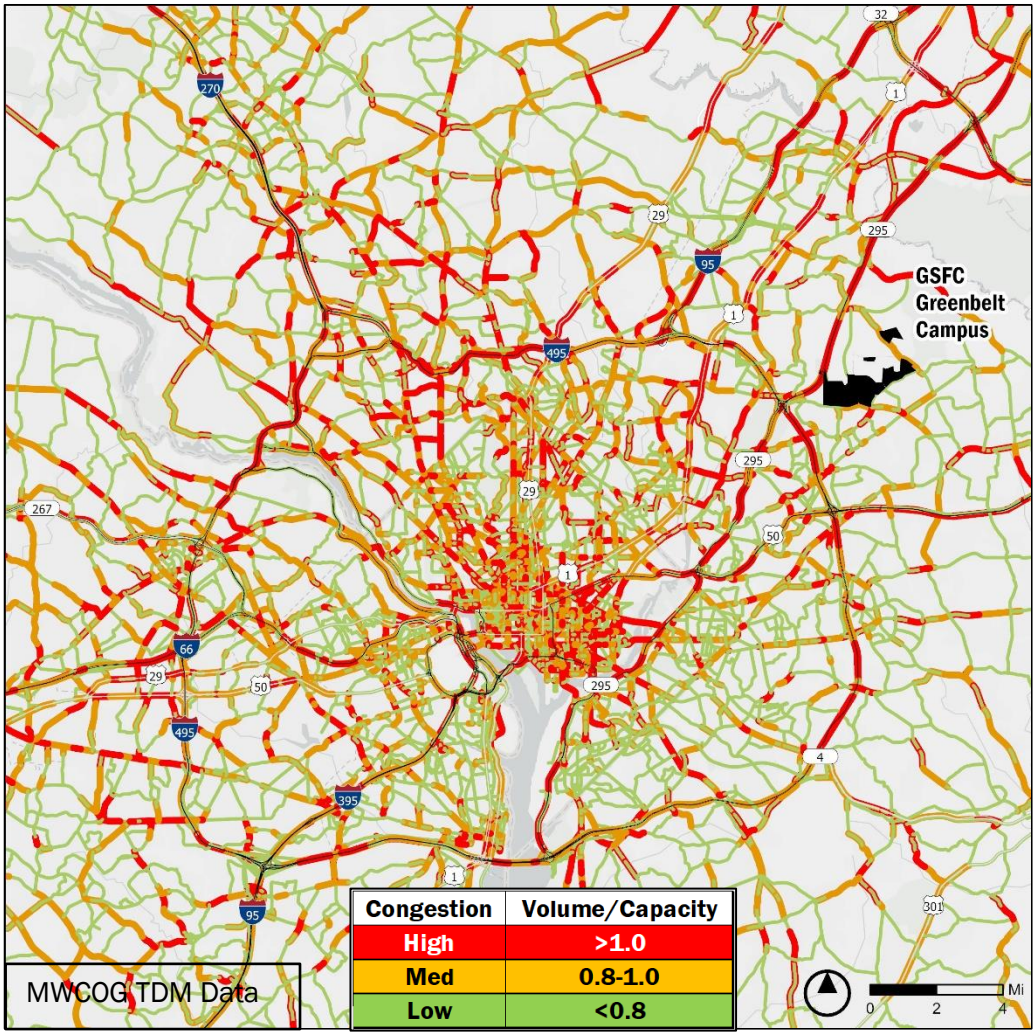


Figure 2-5. 2019 Congestion Level, PM Peak Period

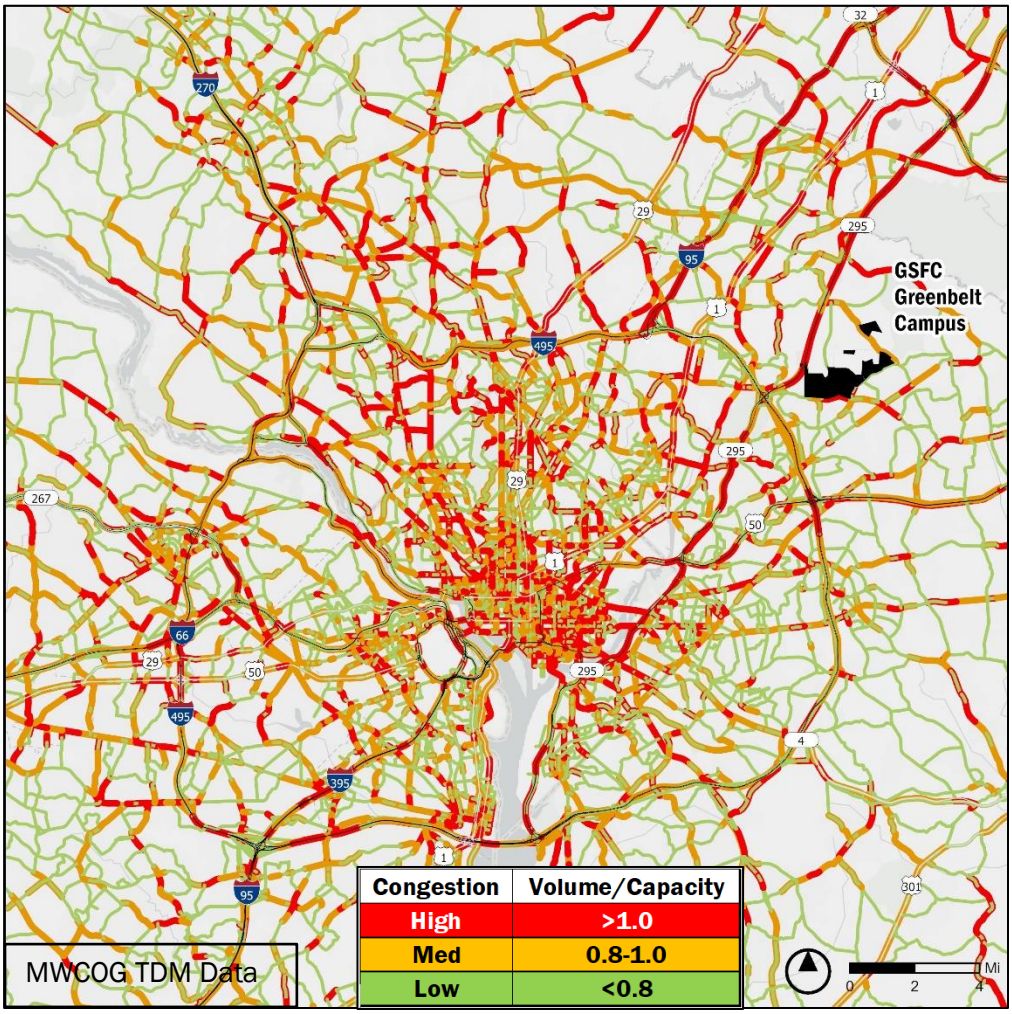


Figure 2-6. 2040 Congestion Level, PM Peak Period

2.2.3. Public Transit

Regional Transit Network

Several transit systems operate in the NCR. WMATA runs the Metrorail and Metrobus systems. MTA operates the Maryland Area Regional Commuter (MARC) train that has three lines in the NCR. Prince George's County has bus routes that complement the other transit systems. GSFC Greenbelt Campus employees live in areas where other counties, cities, and organizations also operate transit that complements the WMATA and MTA systems. These include but are not limited to, Prince George's County TheBus, Montgomery County RideOn, Regional Transportation Agency of Central Maryland (RTA), University of Maryland Transportation Services Shuttle-UM, Greenbelt Connection Bus Service, Potomac and Rappahannock Transportation Commission OmniRide, Alexandria DASH, Arlington Transit (ART), Fairfax Connector, and Loudon County Transit.

Metrorail Rapid Transit

One of the primary transit systems in the NCR is the Metrorail run by WMATA. Figure 2-7 shows the system and the many lines throughout the NCR. The closest lines to the GSFC Greenbelt Campus are the Green and Yellow Lines that stop at the Greenbelt Metro Station and the Orange Line that stops at the New Carrollton Metro Station. In 2019 total ridership was 182 million trips on Metrorail in the region. Peak hour headways for both the AM and PM trains for the Green, Yellow, and Orange Lines are eight (8) minutes. Both stations connect with local bus system routes to the campus.

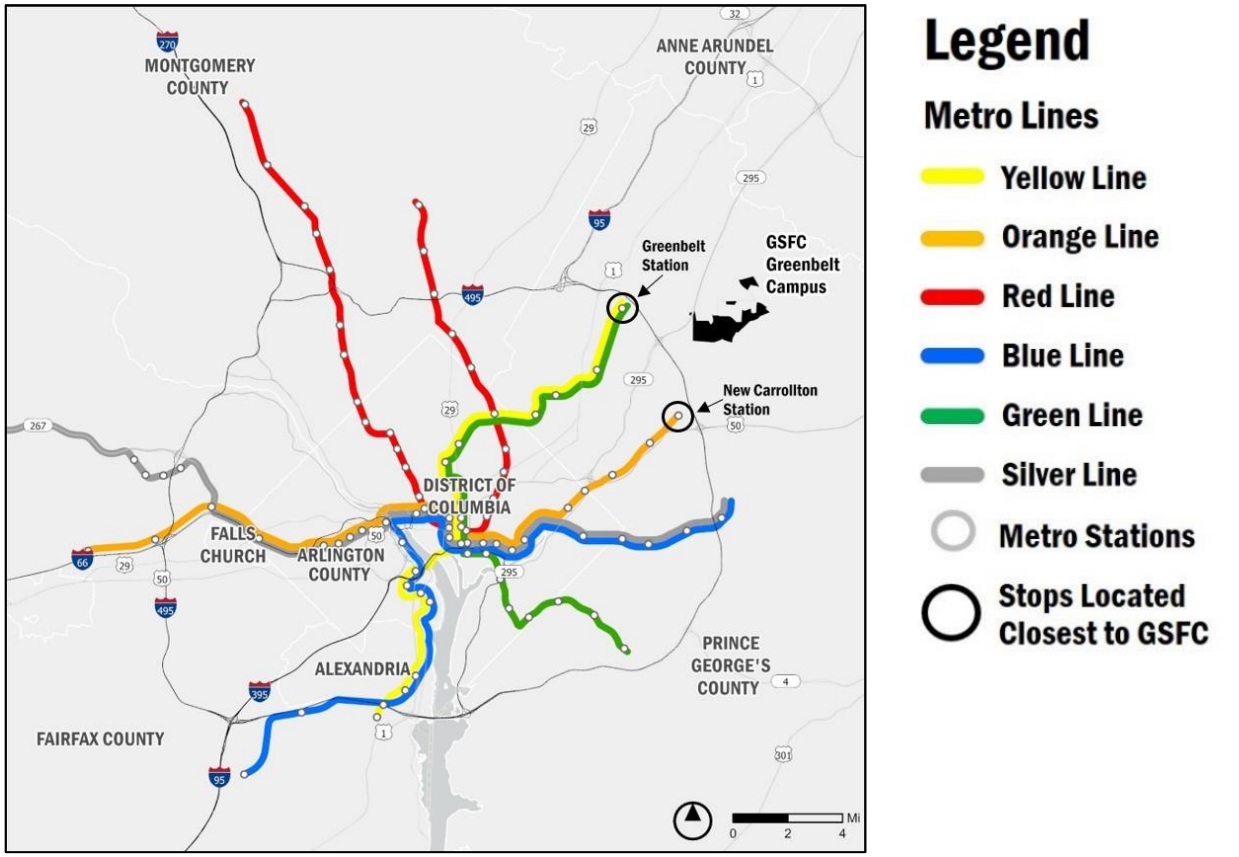


Figure 2-7. Metrorail System

MARC Commuter Train

The Maryland Area Regional Commuter (MARC) is a commuter train that maintains three (3) lines in the NCR as shown in **Figure 2-8**. All three lines terminate at Union Station in Washington, DC. The Brunswick Line services the northwestern portion of the NCR with a terminus in Martinsburg, West Virginia. The Camden and Penn Lines service the northeastern portion of the NCR. The Penn Line terminates at the Baltimore Penn Station. The Camden Line terminates at the Baltimore Camden Station. Peak period travel time from both of these Baltimore stations to the stations closest to the GSFC Greenbelt Campus is approximately 40 minutes.

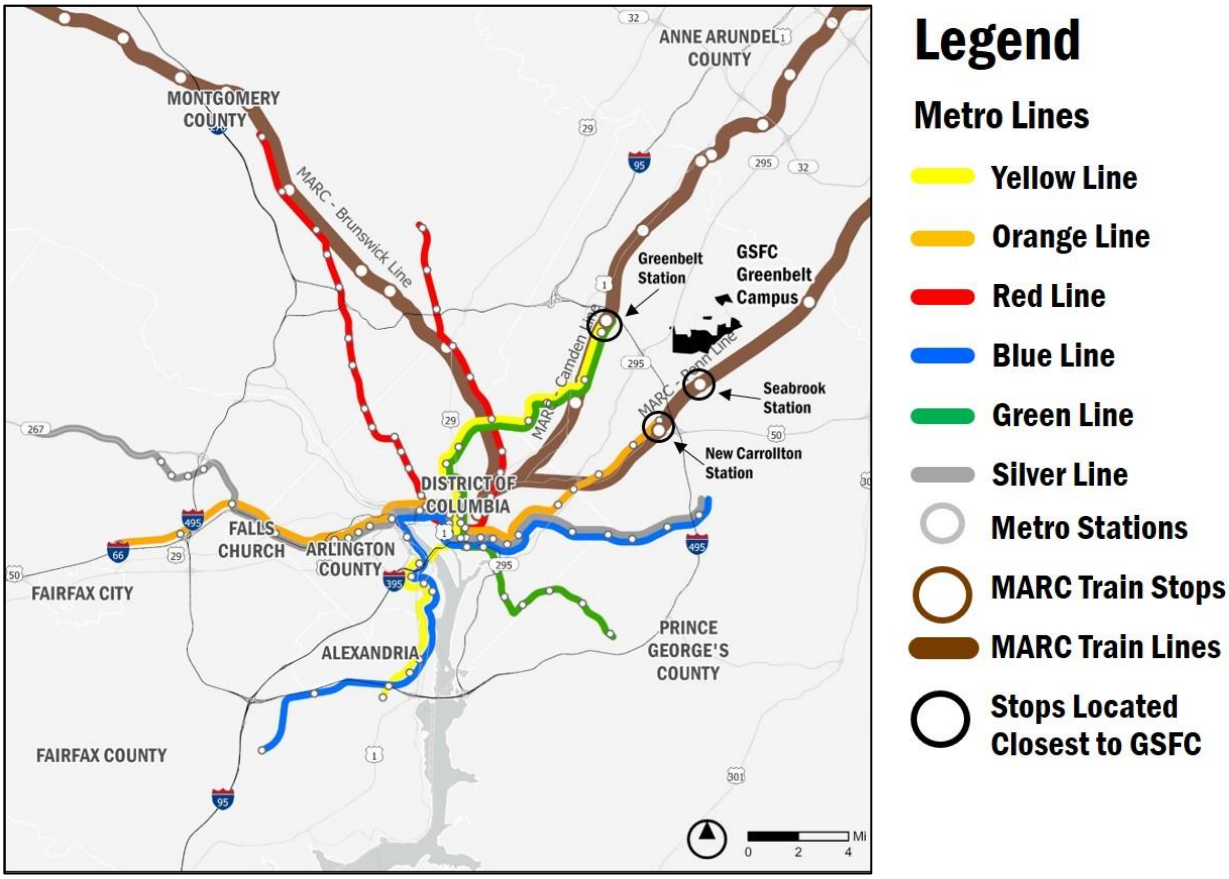


Figure 2-8. Metrorail and MARC System

Figure 2-9 shows the MARC and Metrorail lines and stations relative to where the majority of GSFC Greenbelt Campus employees reside. The MARC Camden Line parallels the eastern boarder of Howard County where the largest density of employees reside.

MARC's Camden and Penn Lines both have stops near the GSFC Greenbelt Campus. The MARC's Greenbelt Station (serving the Camden Line) is co-located with the Metrorail's Greenbelt Station (serving the Yellow and Green Lines), and connects to the campus via local bus. The MARC's New Carrollton Station (serving the Penn Line) is co-located with the Metrorail's New Carrollton Station (serving the Orange Line) and connects to the campus via local bus. The MARC's Seabrook Station (serving the Penn Line) also serves the GSFC Greenbelt campus.

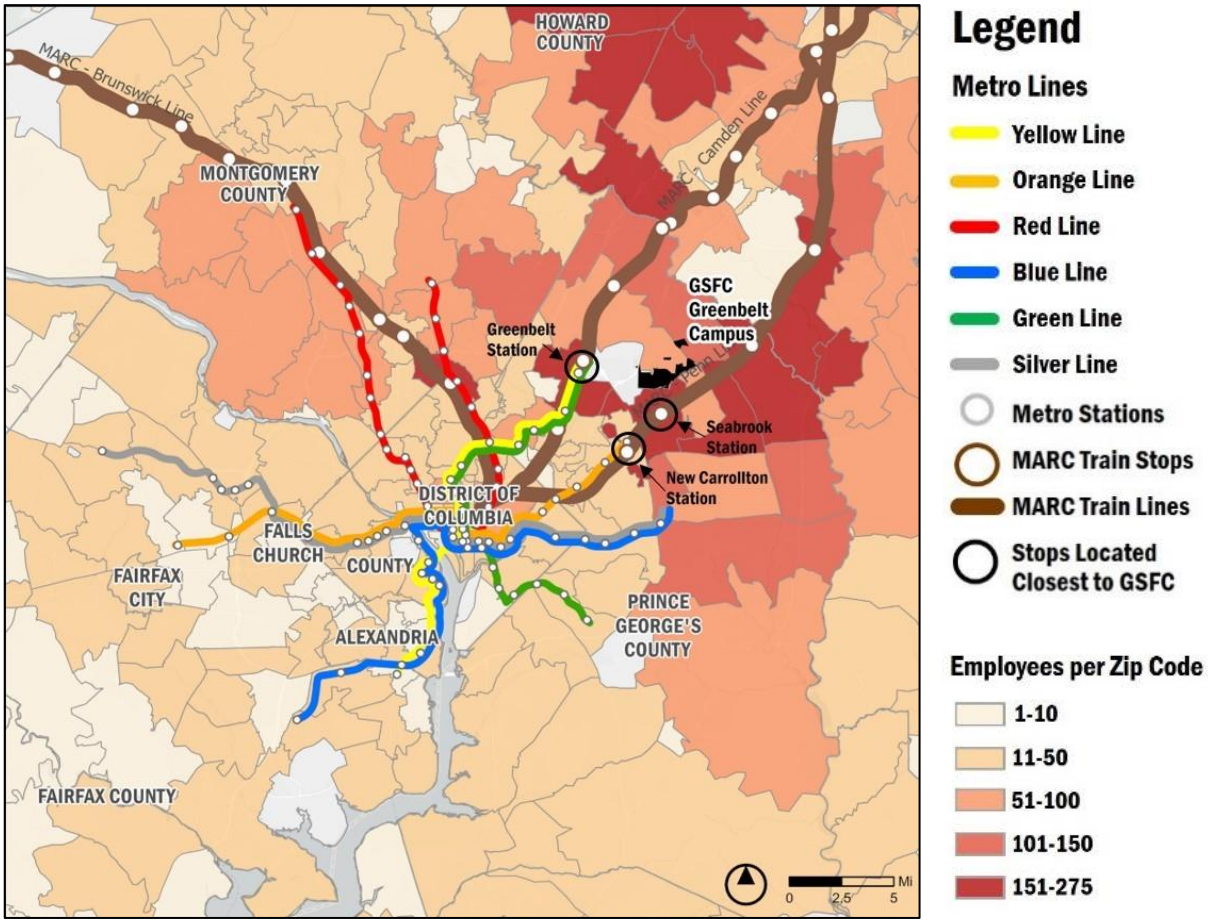


Figure 2-9. Employee Zip Code Density Relative to Rail Lines, 2020

Local Transit Network

There are currently two public transit bus routes that connect directly to the GSFC Greenbelt Campus from nearby rail facilities. Two routes connect to the Greenbelt Metrorail and MARC Stations and the New Carrollton Metrorail and MARC Stations. The first is the 15X bus route operated by the Prince George's County Transit System referred to as the *TheBus*. The second is the 14G bus route operated by the Washington Metropolitan Area Transit Authority (WMATA) through the MetroBus program. There are no public transit routes that directly connect the GSFC Greenbelt Campus to the MARC Seabrook Station despite the fact that it is the closest station to the campus.

Additionally, there are two transit agencies that operate near the GSFC Greenbelt Campus. The University of Maryland operates the Shuttle -UM for students and faculty. Shuttle-UM Route 143 Greenbelt travels near the GSFC Greenbelt Campus along Mandan Road with stops near Goddard Road. The City of Greenbelt operates a 12-passenger van with on-demand service within specific hours of operation called the Greenbelt Connection. All residents of the City of Greenbelt are able to use this service for trips within Greenbelt by calling and arranging for transportation at least 24 hours in advance.

TheBus operates twenty-eight (28) routes serving all of Prince George's County, Maryland. **Figure** 2-10 shows the 15X route that travels from the Greenbelt and New Carrollton Metro Stations with a stop at the campus. The 15X route bus stop is located at the Main Gate on Greenbelt Road.

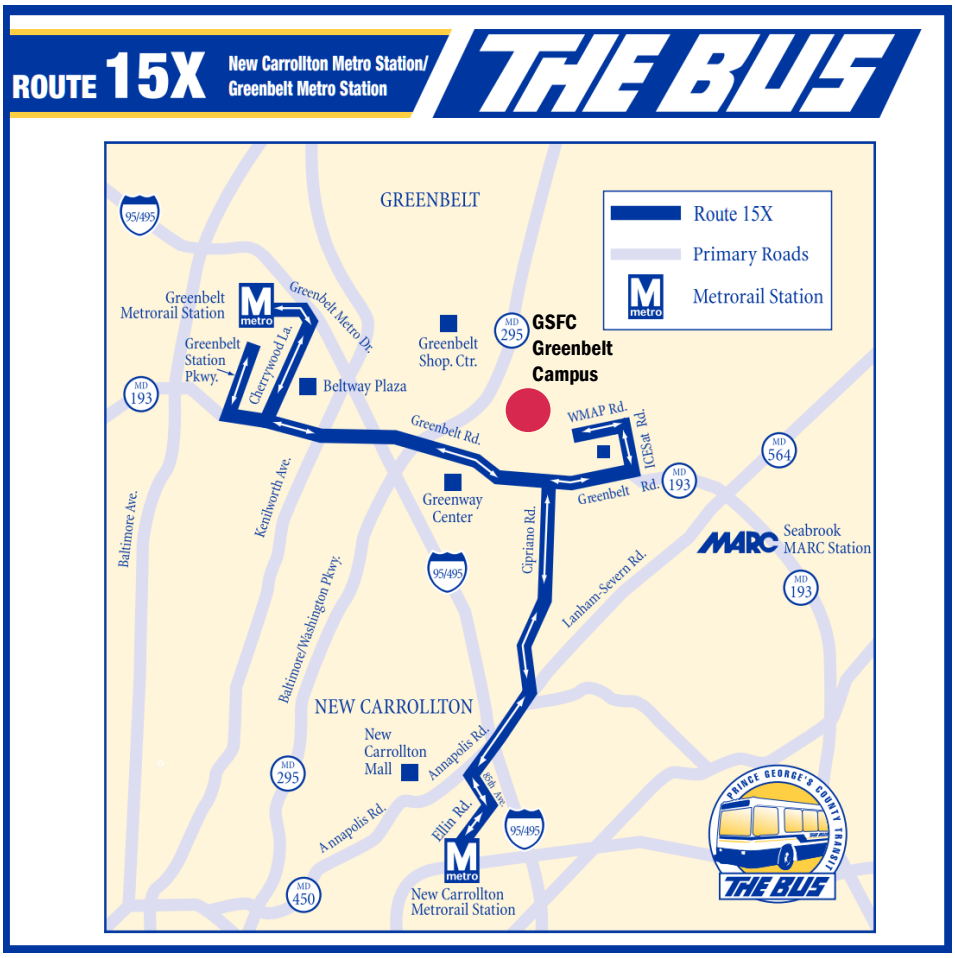


Figure 2-10. TheBus Route 15X Map

During the AM and PM service, the headways are every forty (40) minutes and the average travel time between both Metro Stations and the GSFC Greenbelt Campus is 10-15 minutes. A full schedule is available in **Appendix A**.

The second local bus route is provided by the WMATA MetroBus program that operates in Washington, DC, Virginia, and Maryland. MetroBus route G14, shown in **Figure 2-11**, travels between the Greenbelt and New Carrollton MARC and Metro Stations. Stops are currently located at both the Main Gate and the South Gate entrances to the campus. The weekday headways for AM and PM peak periods are 30 minutes and the average travel time between both the stations and the campus is 20-25 minutes. A full schedule is available in **Appendix A.**

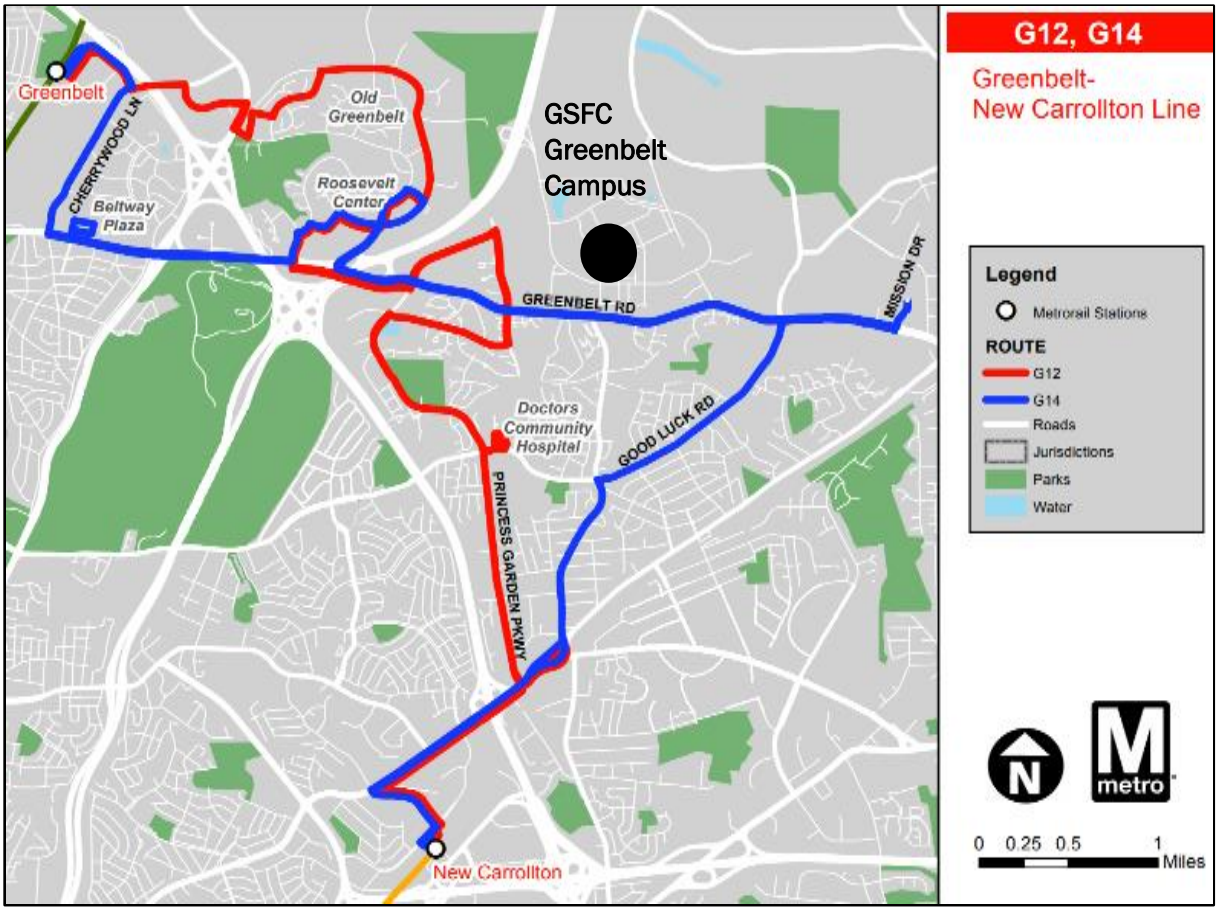


Figure 2-11. MetroBus G14 Route

2.2.4. Pedestrian Facilities

Pedestrian facilities (sidewalks and signalized crosswalks) are present at the Main Gate intersection of Greenbelt Road and Goddard Road. These pedestrian facilities serve transit commuters to the GSFC Greenbelt Campus as well as pedestrians that travel to the commercial land uses at this intersection.

Figure 2-12 and **Figure 2-13** show the sheltered bus stops eastbound and westbound on Greenbelt Road at the Main Gate. The G14 and 15X bus routes stop at this intersection. **Figure 2-14** shows an aerial view of the pedestrian facilities at the intersection of Greenbelt Road and Goddard Road. Few pedestrian facilities exist outside of this intersection between, and in the vicinity of, the Main Gate and South Gate. Intermittent sidewalks do exist on the south side of Greenbelt Road, but there are no facilities on the north side.

Figure 2-12. G14 and 15X Bus Route Shelter on Greenbelt Road at Main Gate (Eastbound)

Figure 2-13. G14 and 15X Bus Route Shelter on Greenbelt Road at Main Gate (Westbound)

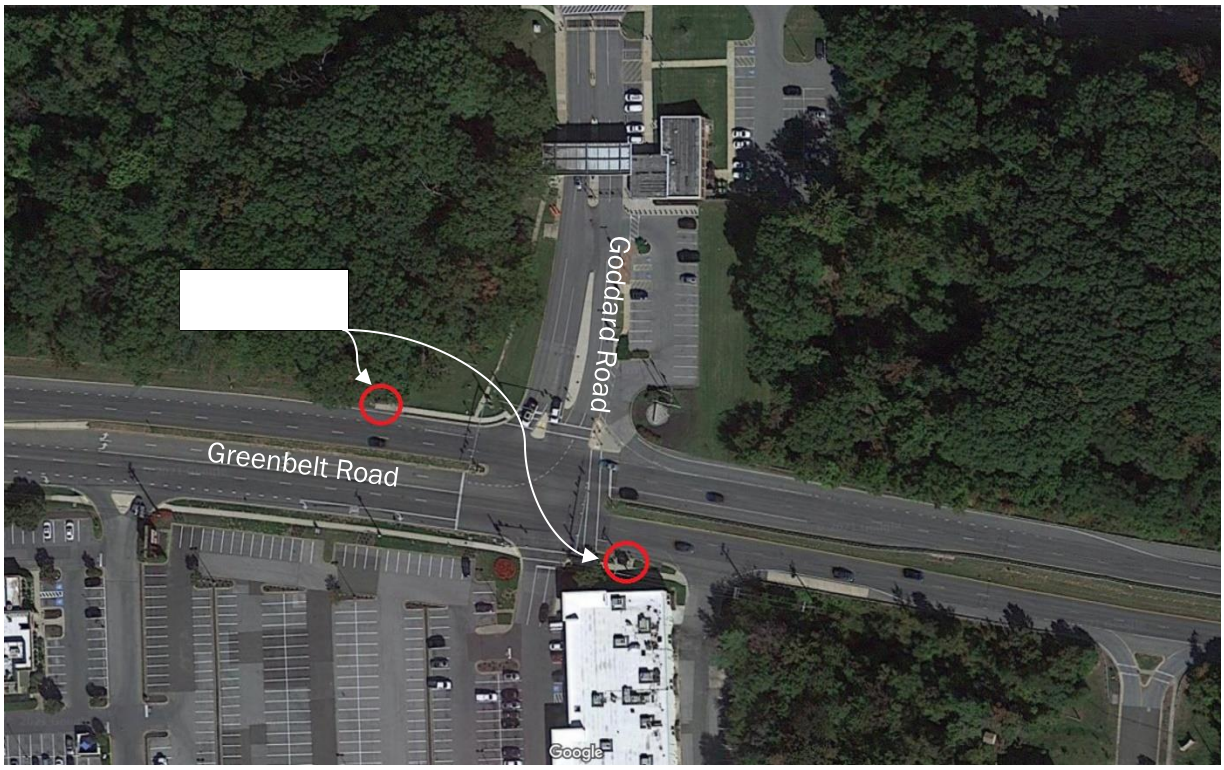


Figure 2-14. Aerial View of Intersection of Greenbelt and Goddard Roads (Existing Main Gate)

Figure 2-15 shows G14 and 15X bus stops on Greenbelt Road approximately 1,000 feet east of the South Gate on ICESat Road. A sidewalk does not exist on the north side of Greenbelt Road from this bus stop to the South Gate. **Figure 2-16** shows an aerial view of the intersection of Greenbelt Road and ICESat Road that indicates these bus stops as well as the bus stop located near the Visitor's Center that is only used by the 15X route. Pedestrian facilities do not currently exist at the intersection of Greenbelt Road and ICESat Road.

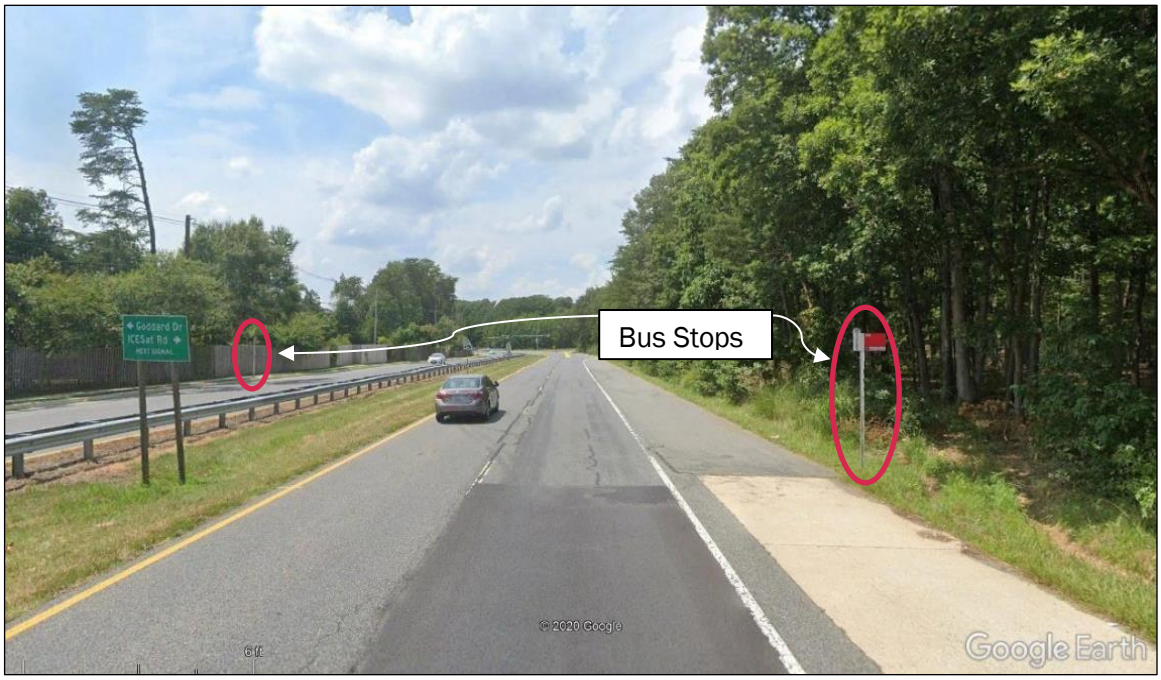


Figure 2-15. G14 and 15X Bus Stops on Greenbelt Road at South Gate

Figure 2-16. Aerial View of the Road to the Visitor's Center and the Intersection of Greenbelt and ICESat Roads (South Gate)

2.2.5. Park and Ride Lots for Transit, Carpools, and Vanpools

Figure 2-17 shows Park and Ride lots in the NCR. According to the Commuter Connections program operated through MWCOG, there are over 160,000 parking spaces at nearly 400 Park and Ride lots where commuters can drive, bike, or travel as a pedestrian to access transit or join up with carpools and vanpools. Parking is free at 89% of these lots and more than 25% have bicycle parking facilities. Park and Ride lots are particularly useful in locations near where employees reside.

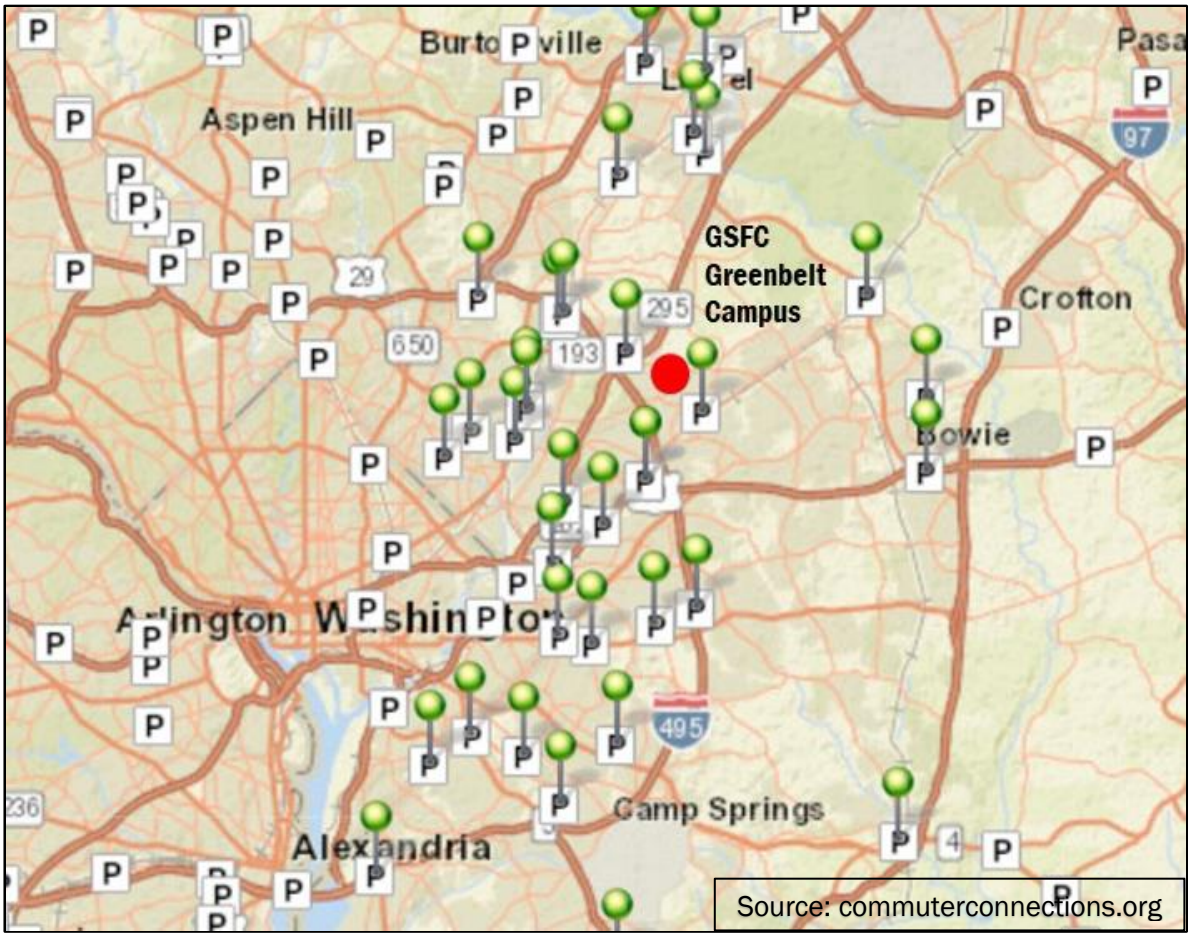


Figure 2-17. Park and Ride Lots in NCR

2.3. Impact of COVID-19 on Transportation

During the COVID-19 Pandemic, both vehicular traffic and transit ridership volumes decreased beginning in March 2020. This trend is anticipated to continue into 2021. However, it is anticipated that traffic and transit ridership volumes will begin to return to pre-pandemic levels by late 2021 as indicated in the data resources that follow.

2.3.1. Roadway Volumes and COVID-19

A presentation by the Northern Virginia Transportation Alliance (NVTA) in July 2020 shows declines for 2020 of Vehicle Miles Traveled (VMT) in the NCR. VMT that was projected to be approximately 95 million in 2021 pre-COVID-19 is now projected to be between 80 and 90 million in 2021 as shown in **Figure 2-18.** Four alternative future scenarios are depicted:

- Quick Recovery describes the economy recovering by Fall, 2020 and most people are back at work and school.
- Increased Active Transportation includes a gradual recovery where biking and pedestrian travel remains higher than in 2019.
- Second Wave of COVID-19 precipitates a second stay-at-home advisory in October 2020 with an increase in job loss and telecommuting and a decrease in transit ridership.
- Cautious Recovery is the most gradual recovery with low school attendance, reduced business-related travel, and increased E-commerce.

The NVTA analysis translates to approximately 84-95% of previous projections, or a decline of 5-16%. This TMP assumes that, over time, traffic volumes will return to 2019 levels in the near future and that traffic congestion will continue to be a major challenge in the region.

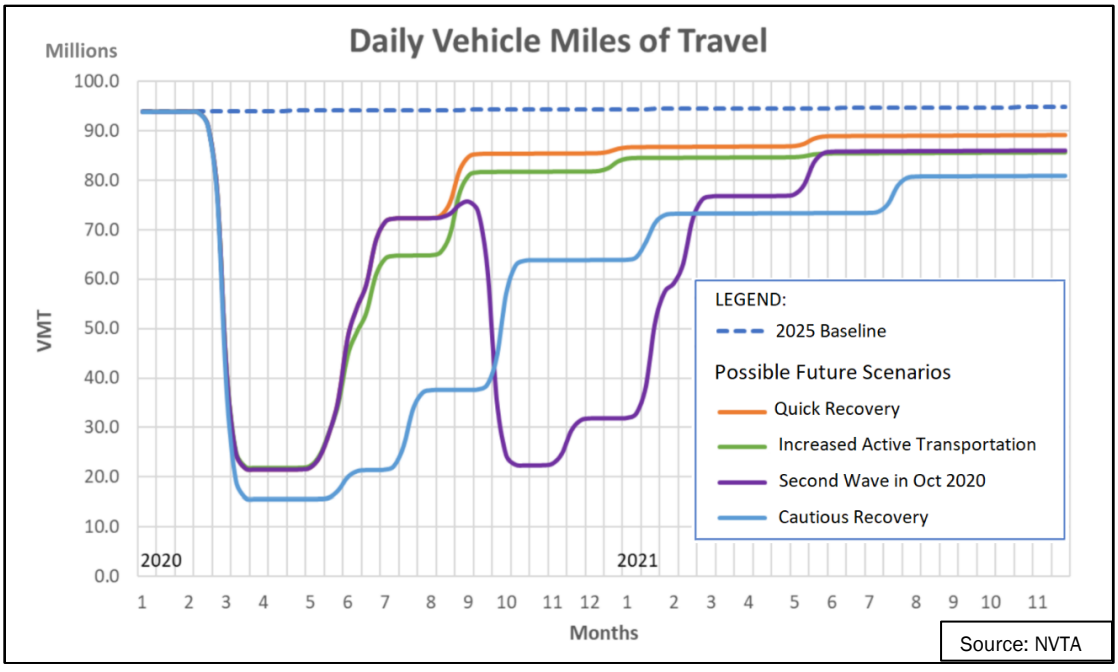


Figure 2-18. Projected Impacts of COVID-19 Recovery Scenarios to Vehicle Miles Traveled (VMT)

2.3.2. Transit Ridership and COVID-19

Transit ridership has declined during the COVID-19 Pandemic due to the difficulty of social distancing in a contained space with others, the lack of mask order compliance and the increase in telecommuting. The Washington Metropolitan Area Transit Authority (WMATA) reported that transit ridership was projected to be down 94% for Metrorail and 78% for Metrobus in the fourth quarter of 2020 compared to the first quarter of 2020 as shown in **Figure 2-19**. The Maryland Department of Transportation (MDOT) reports that the Maryland Transit Authority (MTA) ridership (green line on graphic) was down approximately 60% in November 2020 compared to November 2019 as shown in **Figure 2-20**.

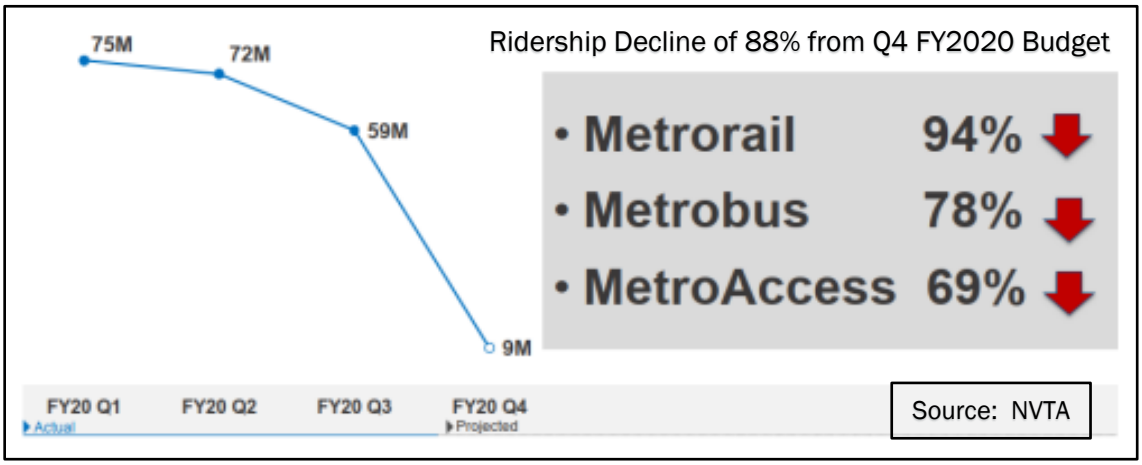


Figure 2-19. WMATA Transit Ridership Trends During COVID-19 Pandemic

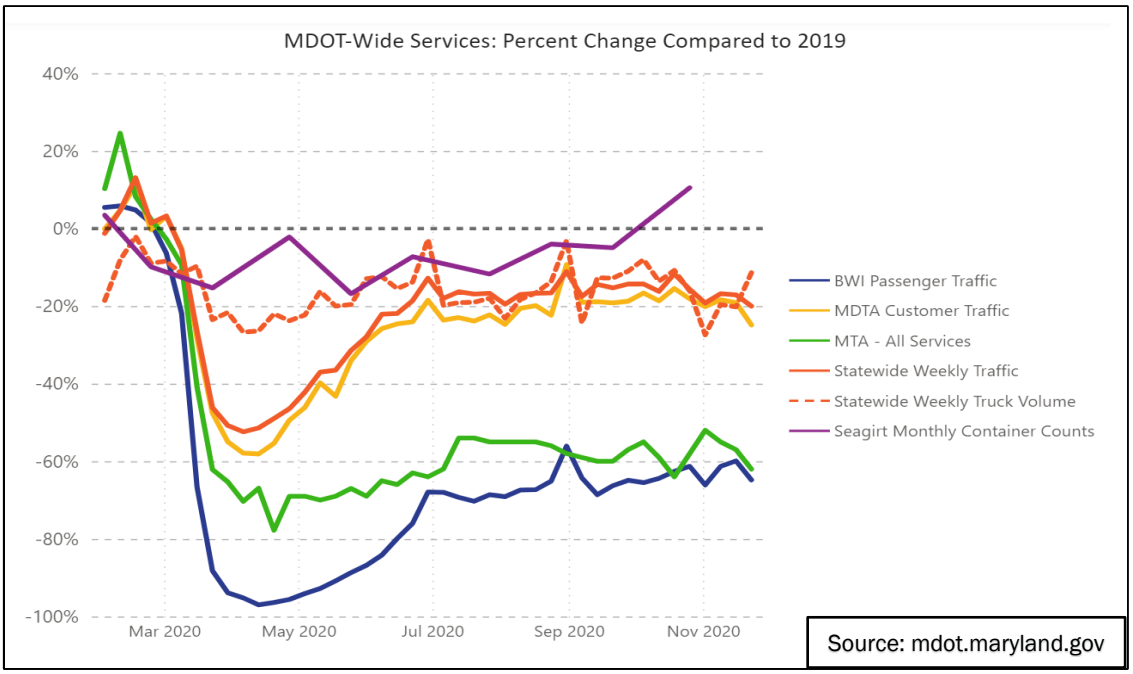


Figure 2-20. MTA Transit Ridership and MDOT-Wide Services During COVID-19 Pandemic

Over time, it is assumed that the COVID-19 Pandemic will become less of a health risk and transit ridership will return. **Figure 2-21** shows ridership is anticipated to return to 92% of pre-pandemic levels (1.1 million riders per day versus 1.2 million riders) by late 2021. This TMP assumes that once employees begin returning to the workplace and the concerns about commuting with others in contained spaces has subsided, transit ridership will rebound. Transit will remain a viable non-SOV choice, which will support the 2037 goals in this TMP.

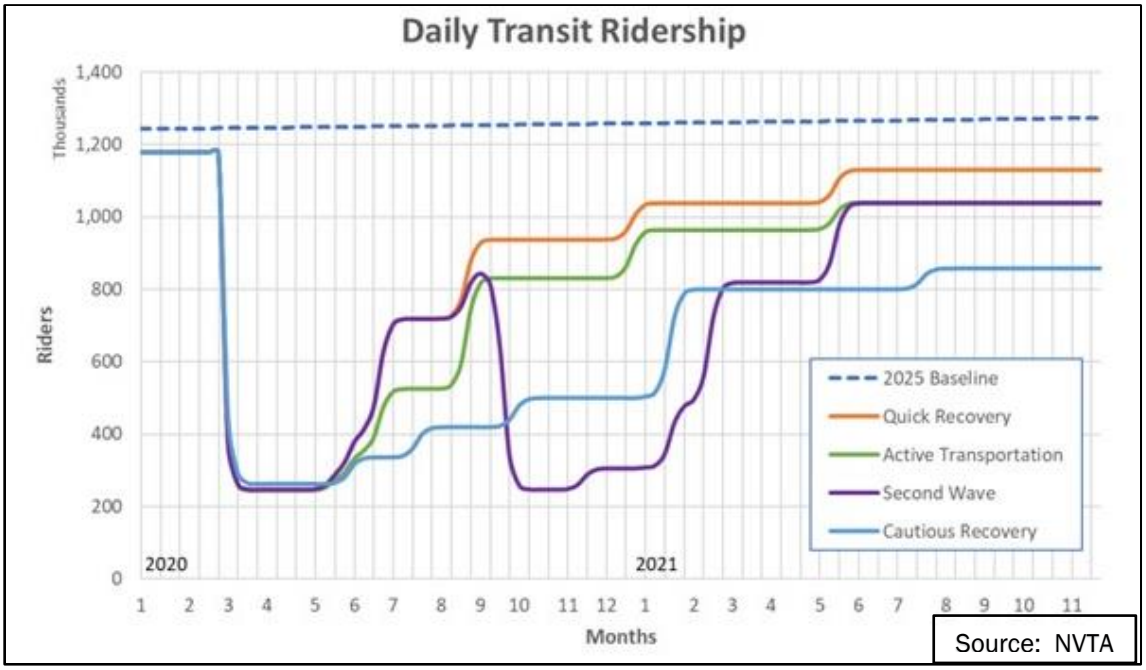


Figure 2-21. Projected Impact of COVID-19 Recovery Scenarios to Transit Ridership

2.3.3. National Traffic Volumes and COVID-19

A study conducted by MS2, a Transportation Analytics company, shows a decline in overall national traffic of 9.2% in November 2020. This data includes a combined summary of daily traffic volumes for twenty (20) states in November 2020 compared to the same week and month form the most recent year that data was available. Although Virginia was among the 20 states in this study, Maryland was not. The study shows an increase in national truck traffic of 1.25% in November. The results are shown in **Figure 2-22.** The Maryland statewide weekly traffic volumes reported by MDOT are included in **Figure 2-20**. Among various modes of travel, it shows that the volume of truck traffic dropped approximately 20% since early 2020.

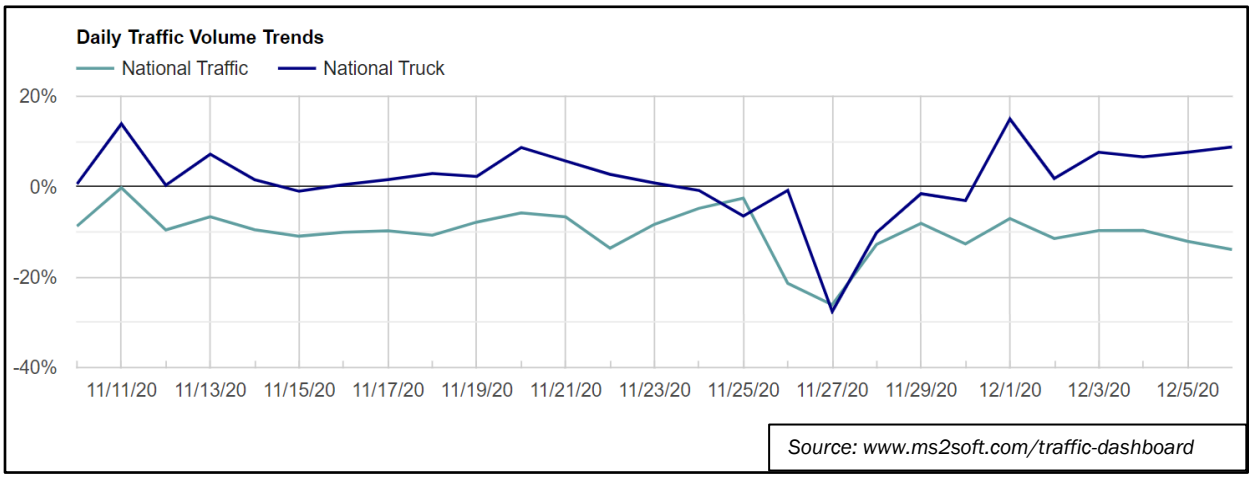


Figure 2-22. Percent Change in National Traffic Volumes, 2020 vs. 2019

2.4. Planned Improvements to Roadway and Transit Network

Figure 2-23, 2-24, and 2-25 show the planned projects from the MWCOG Visualize 2045 Metropolitan Transportation Plan in the vicinity of the GSFC Greenbelt Campus. This includes major highway projects, HOT, HOV and toll lane projects, and major transit projects. A full list and description of the projects from the Visualize 2045 plan is provided in **Appendix B.**

To monitor MWCOG, MDOT, and local county and city projects, the internal Campus Transportation Review Committee (CTRC) will work with the external community transportation groups to discuss planned and completed projects in the region and how they impact commutes to and from the GSFC Greenbelt Campus. Both the CTRC and external transportation groups are described in **Chapter 4**. In particular, local projects not included in the MWCOG or MDOT plans that address capacity, operations, pedestrian and bicycle facilities, and safety improvements will be discussed, This coordination is especially important with Prince George's County, where the GSFC Greenbelt Campus is located, and other counties where the majority of employees reside.

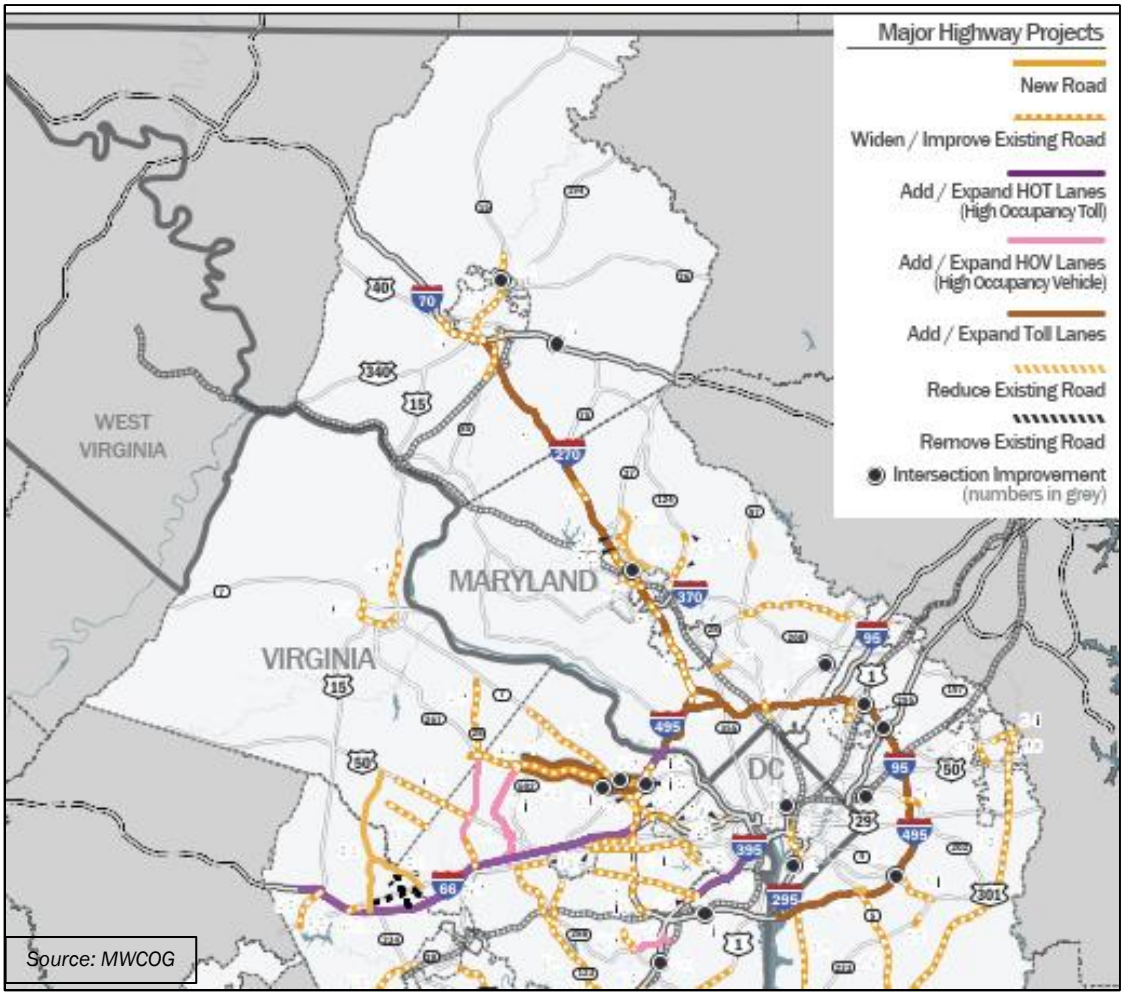


Figure 2-23. MWCOG Major Highway Projects

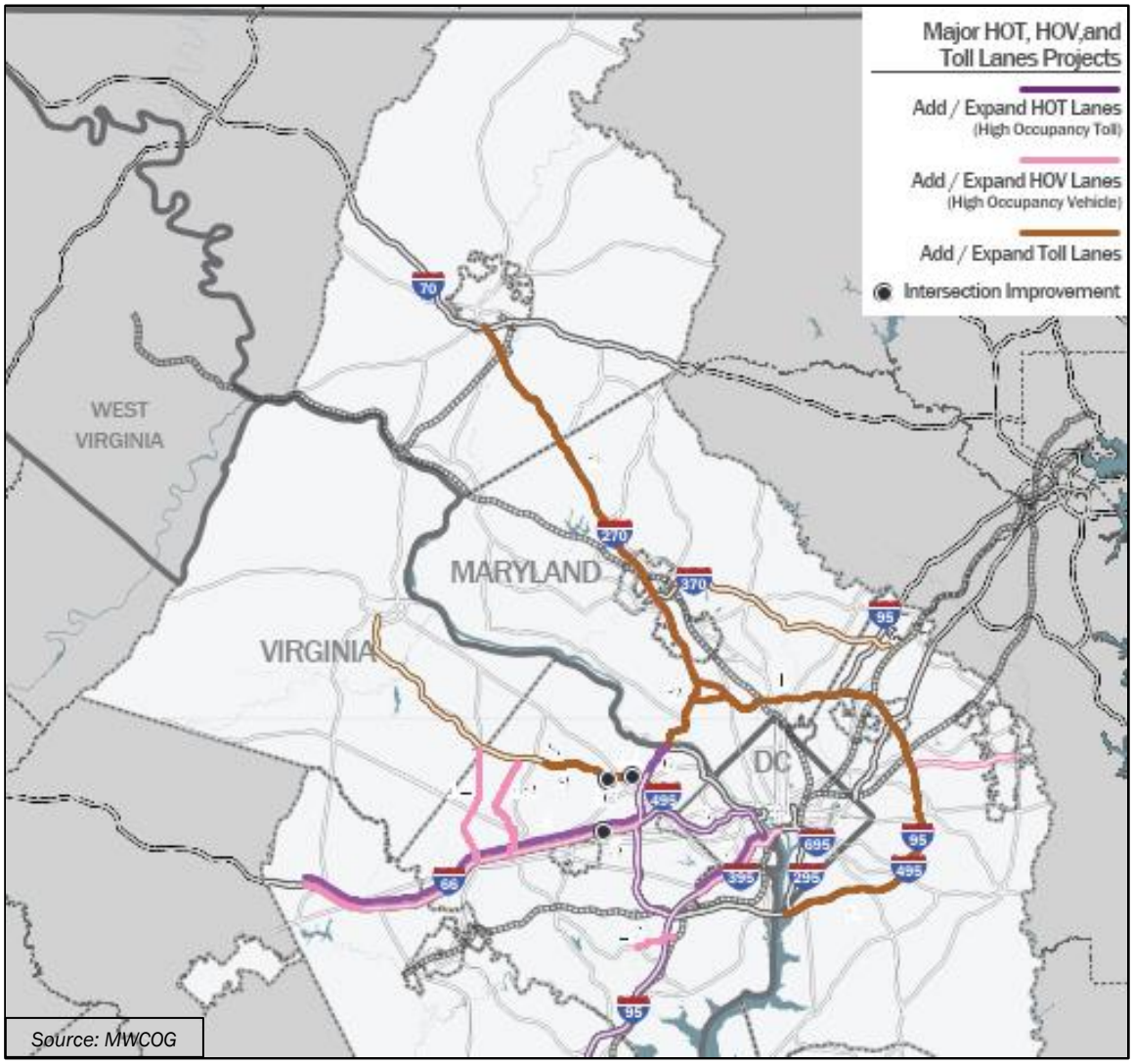


Figure 2-24. MWCOG HOT, HOV, and Toll Lanes Projects

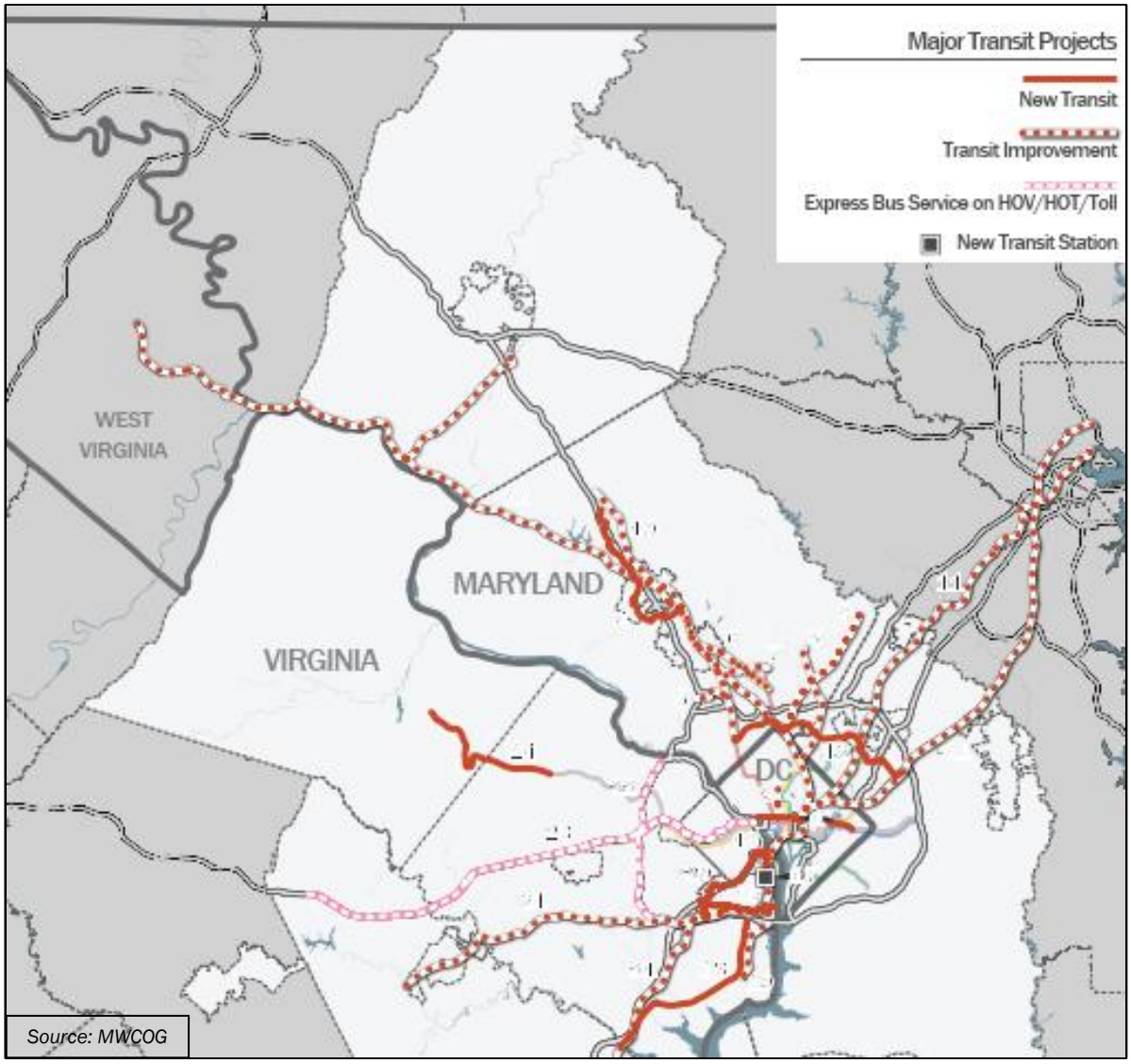


Figure 2-25. MWCOG Major Transit Projects

2.4.1. Metrorail Purple and Silver Lines

Two major transit projects include the Metrorail Silver Line Extension and Purple Lines as shown in **Figure 2-26.** The new Metrorail Purple Line is a 16-mile light rail line that provides additional east-west connections for the Metrorail System. The Purple Line is planned to operate mainly in dedicated or exclusive lanes, allowing for fast, reliable transit operations. The construction of this project is underway, and all stops were anticipated to be open by mid-2023. Current reports indicate that this progress may be slowed.

The Metrorail Silver Line operates between Wiehle-Reston East in Virginia to Largo Town Center in Maryland. The Silver Line is currently being extended with six new stations west of Wiehle-Reston East as far as Ashburn in Loudon County, Virginia. Completion is expected in 2021.

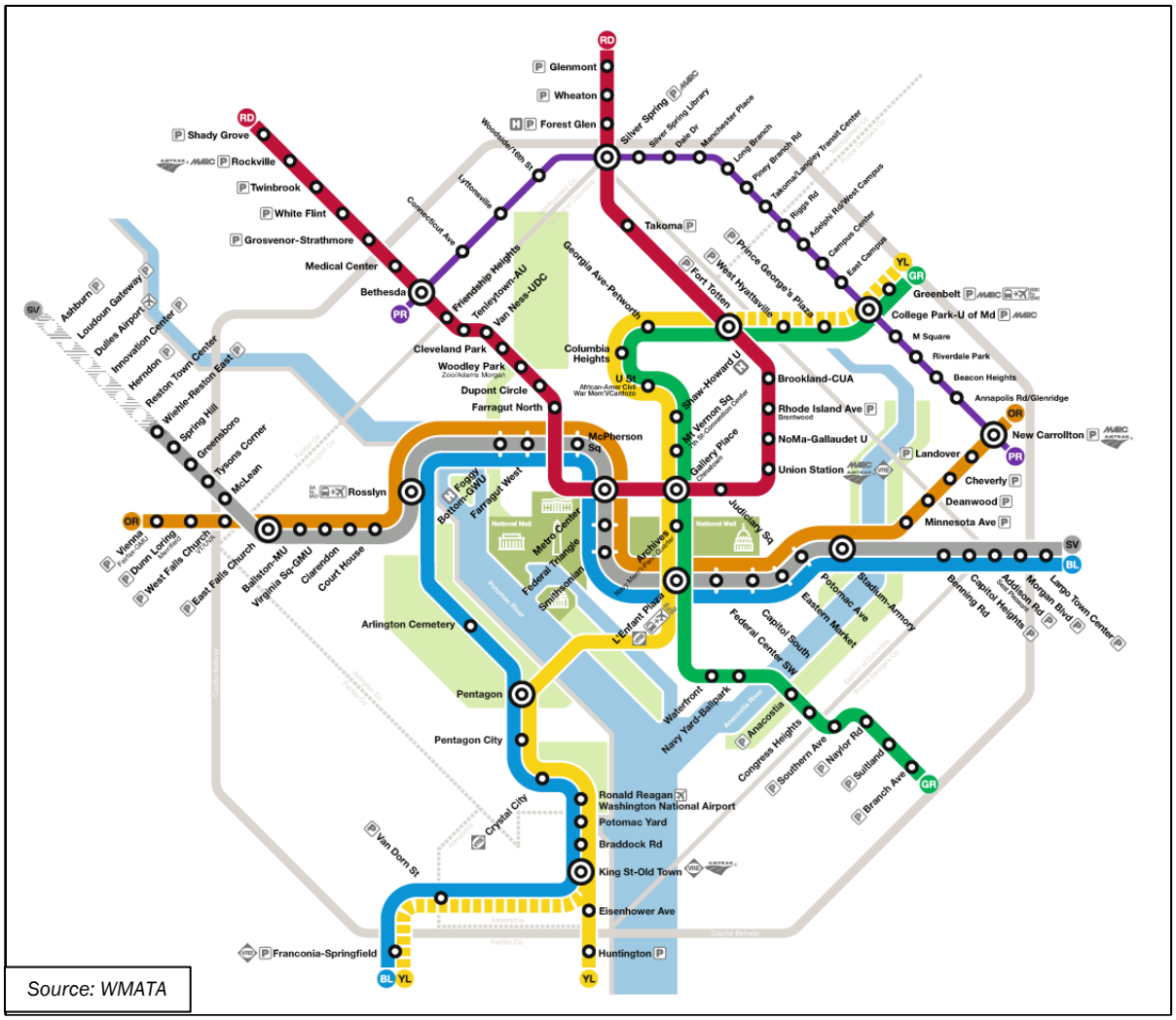


Figure 2-26. WMATA Metrorail System with Planned Silver Line Extension and New Purple Line

2.4.2. Existing and Proposed Off-Campus Trail and Bicycle Facilities

Figure 2-27 shows existing and planned facilities for the National Capital Trail Network available from MWCOG as part of the Visualize 2045 Long Range Transportation Plan. Currently there are no direct bike routes to the GSFC Greenbelt Campus. At full build out of the National Capital Trail Network, an interconnected bike trail system with direct access to the GSFC Greenbelt Campus is anticipated. The Trail Network will be built by multiple entities. The 2014 City of Greenbelt Pedestrian and Bicyclist Master Plan includes additional projects that focus on the connection to the GSFC Greenbelt Campus such as a connection across MD 295 near the Parkway Gate.

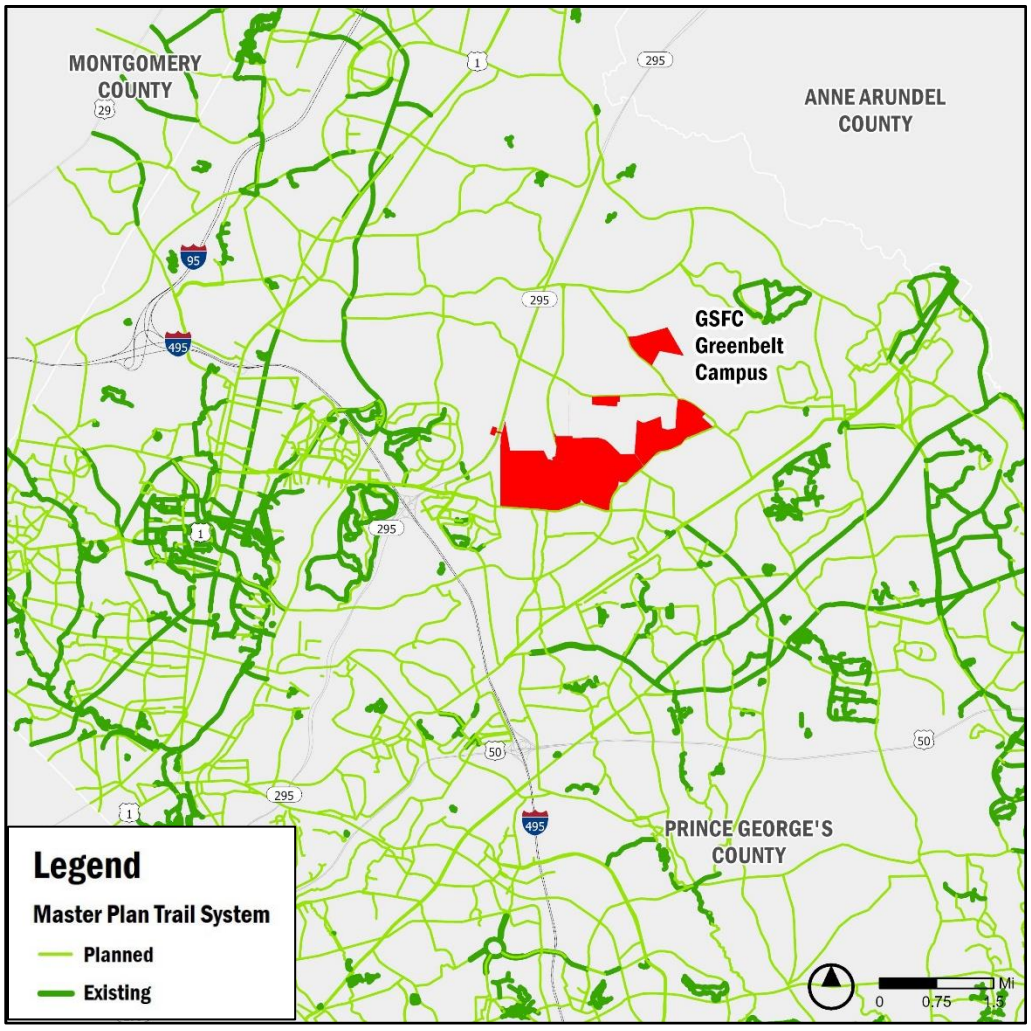


Figure 2-27. National Capital Trail Network

2.4.3. Bicycle Facilities Serving Transit

Information from GSFC Greenbelt Campus personnel suggests that currently twelve (12) employees commute to work on the MARC Penn Line and travel by bike from the MARC Seabrook Station to the campus. As shown in **Figure 2-28**, a direct route is Cipriano Road to Greenbelt Road and takes approximately 12 minutes. Cipriano Road ends at Greenbelt Road just west of the Main Gate. There are currently no dedicated bicycle facilities on Cipriano Road or Greenbelt Road. Similar bike routes from the New Carrollton and Greenbelt Stations to the campus are shown in **Figure 2-29** and **Figure 2-30,** respectively. The maps show it will take approximately 22 minutes from the New Carrollton Station and 30 minutes from the Greenbelt Station.

Figure 2-28. Bike Route from Seabrook

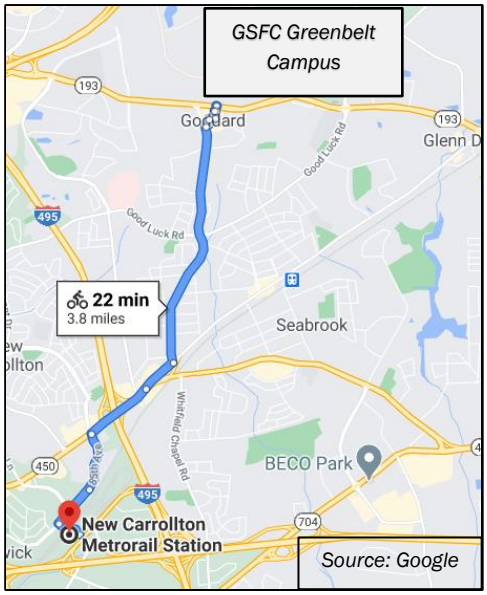


Figure 2-29. Bike Route from New Carrollton Station

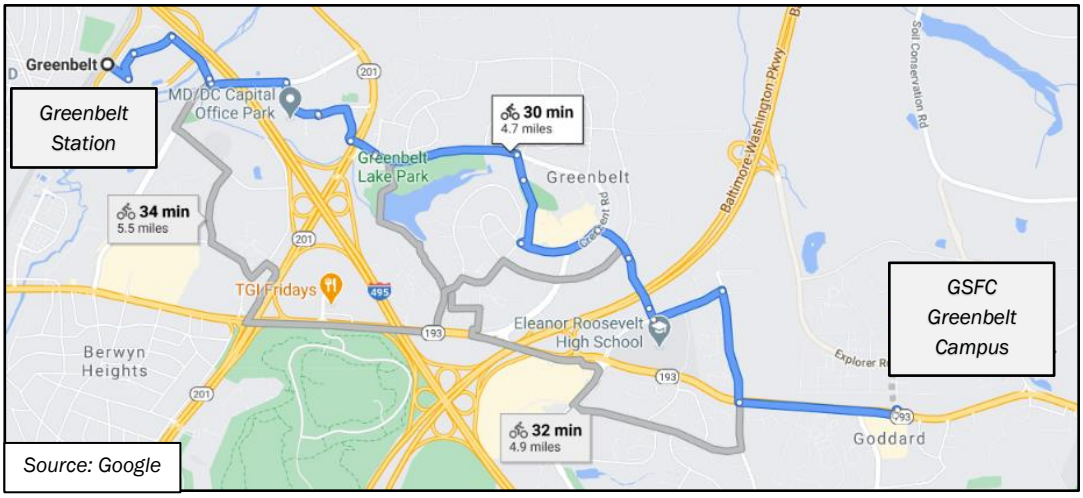


Figure 2-30. Bike Route from Greenbelt Station

2.5. On-Campus Roadway Facilities Overview

On-site transportation systems for internal mobility are an important component that can influence off-site commuting choices. For example, employees may be more likely to choose non-SOV alternatives for their commute if they know that they can comfortably and safely travel between the buildings and facilities as part of their workday once they arrive at the GSFC Greenbelt Campus without their vehicle.

The planning goals of the GSFC Greenbelt Campus Master Plan include creation of a "sustainable, walkable, and vibrant campus comprised of modern adaptable facilities within a natural setting." The mobility, circulation, and wayfinding goals aim to "provide a circulation framework emphasizing pedestrian connectivity in support of a more collaborative and integrated campus."

The current site layout includes buildings that are widely distributed throughout the main campus. To decrease the amount of time and physical energy spent traveling from one building to another across campus for a meeting, some employees drive their personal vehicles within the campus during the business day. Employees are also able to utilize an on-demand shuttle service on campus called the "Goddard Taxi" that utilizes one 12-passenger van. Three (3) additional vans are available for on-site visitor tours.

Dedicated bike lanes do not currently exist on campus; however, in the absence of bicycle lanes, Maryland state law and GSFC: Greenbelt Campus allows bicycles as well as motor vehicles to use travel lanes. On the GSFC Greenbelt Campus the speed limit is currently 25 mph. There is a free bike share program on campus that has 38 bikes in 2020 located at 15 bike parking stations.

The Master Plan will cluster the majority of buildings together thereby reducing the need for SOV travel for intra-campus meetings. With the planned consolidation and densification of the campus, employees will more likely travel by active transportation. In the Master Plan, a system of dedicated bike lanes, shared lanes, and multiuse lanes will promote the use of the bike share program, personal bikes, pedestrian travel, and other active travel on the campus for business or recreational purposes.

2.5.1. On-Campus Transportation Facilities: Existing and Proposed

Figure 2-31 shows the existing GSFC Greenbelt Main Campus site layout. Buildings are currently widely distributed throughout the main campus. Although there is a system of walkways, a parking study conducted for the 2016 TMP shows that parking duration is often less than two (2) hours indicating that employees with vehicles likely drive to other buildings for meetings during the weekday.

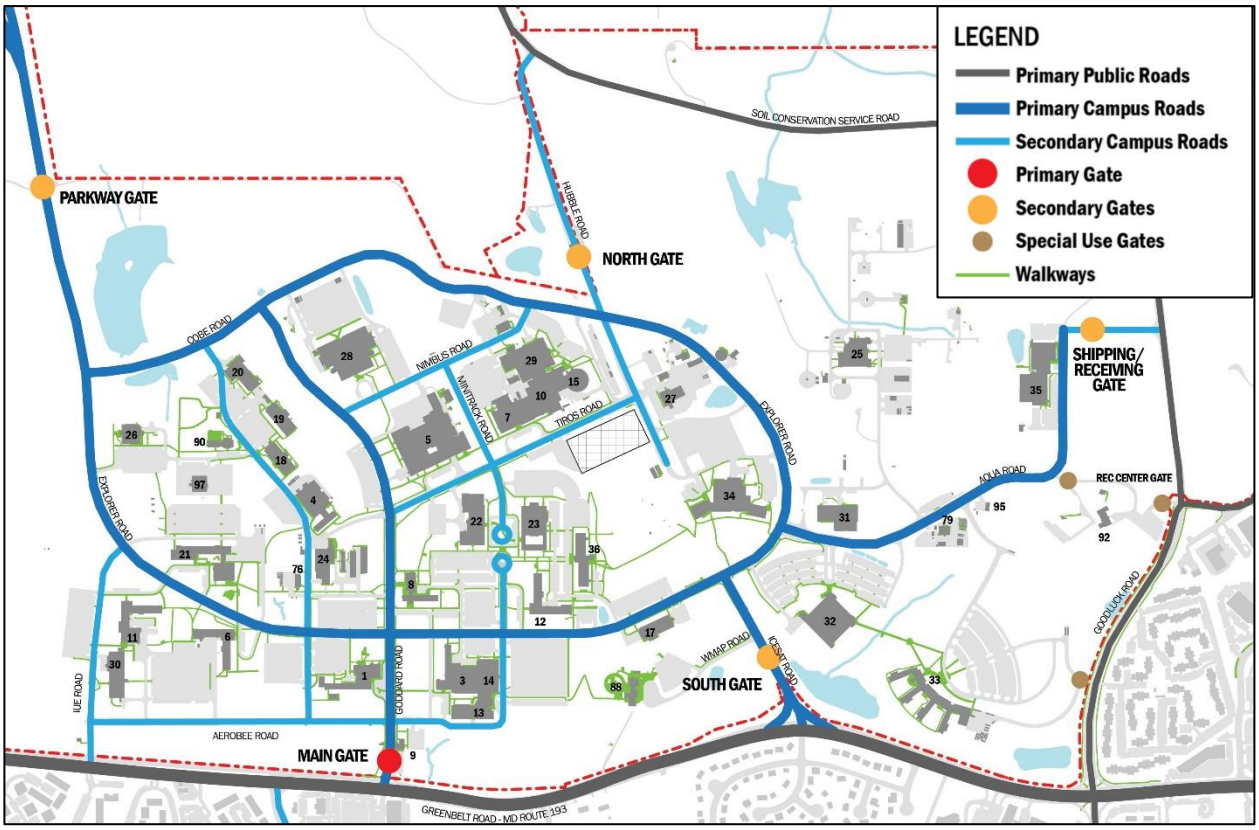


Figure 2-31. 2020 Main Campus Vehicular and Pedestrian Circulation Map

Figures 2-32 and 2-33 show the Master Plan site layout and circulation plan for the Main Campus. The site layout shows a cluster of primary buildings (in yellow) with parking behind the buildings. This will create a walkable center in the middle of the Main Campus and de-emphasizes the need for vehicular travel during the workday. The circulation plan shows a system of walkways, trails, dedicated bike lanes, and multi-use paths. Subsequent sections will specifically address campus gate access, bicycle and pedestrian facilities, parking, and the on-campus shuttle bus.

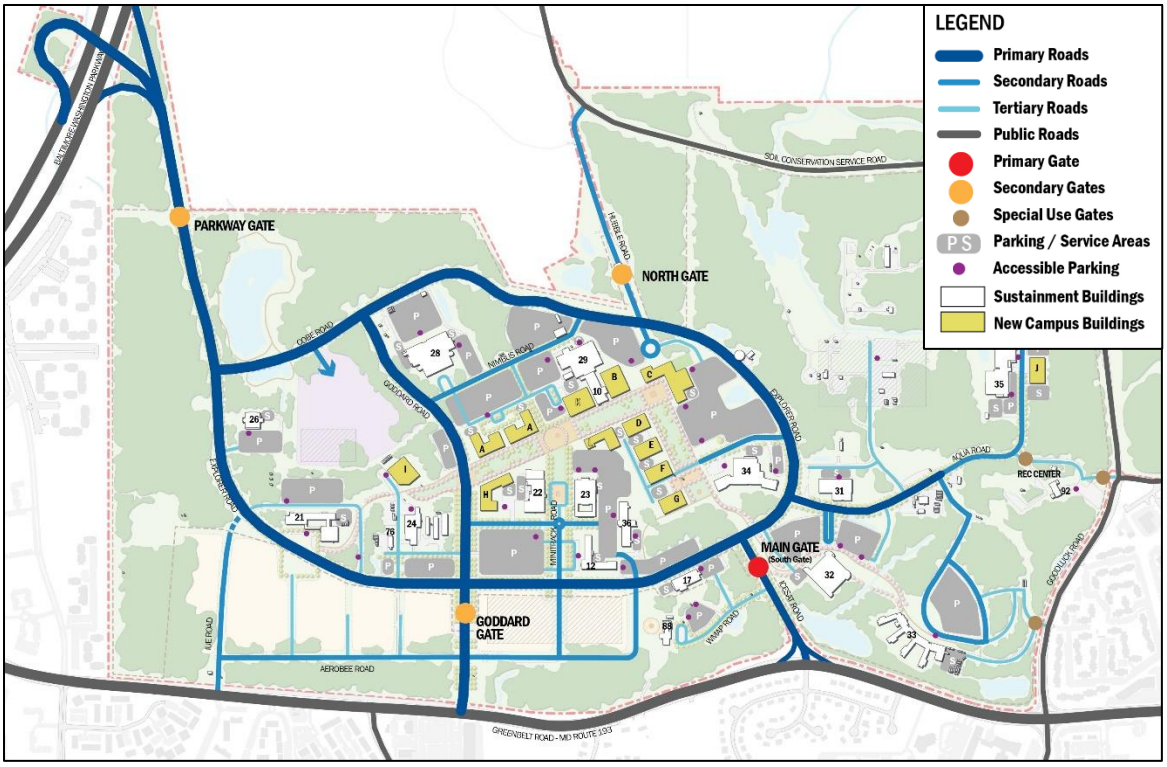


Figure 2-32. Main Campus Master Plan Framework for Roads and Parking

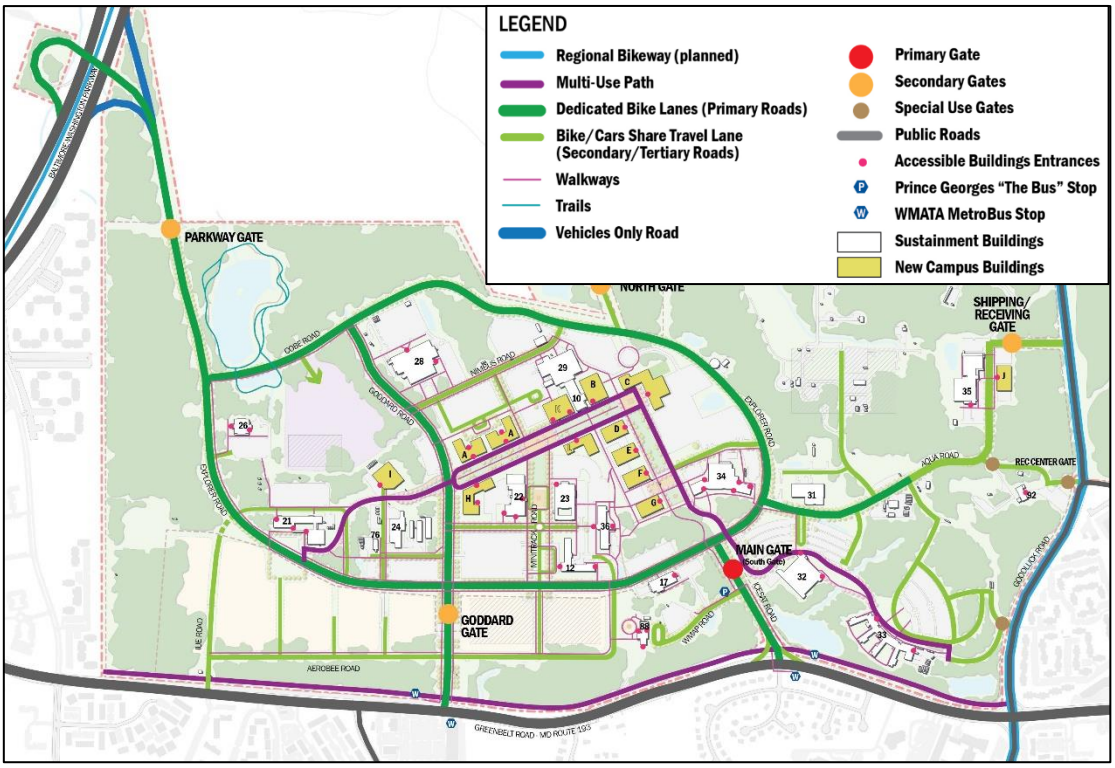


Figure 2-33. Main Campus Master Plan Framework for Walkways and Bikeways

2.5.2. Campus Access Modifications in the Master Plan

The Master Plan includes improvements to the campus access points. The Main Gate which is currently located at Goddard Road will be shifted to ICESat Road. The current Main Gate will be called Goddard Gate and the current South Gate will be called the Main Gate once these modifications are implemented. **Table 2-3** provides a summary of these changes.

The new Main Gate (ICESat Road) will serve as the primary entrance for visitors and will also open to employees. The distance (set back) of the new Main Gate from Greenbelt Road will increase vehicle queueing capacity.

Building 17 (located adjacent to the new Main Gate) will become the new badge and pass office as well as the on-campus/off-campus transit transfer hub. Site improvements to the area south of Building 17 will provide parking and drop-off areas for buses and other vehicles. This will be available for visitors, public transit, personal vehicles, and ride-hailing vehicles such as Lyft, Uber, Via, and taxis. Employees listed in **Table 2-3** include civil service employees and contract employees with permanent badges. The new Main Gate will be open 24/7.

Additionally, there are on-going discussions between GSFC and Metro Bus to relocate the two bus stops east of the campus along Greenbelt Road to be closer to the ICESat Road – Greenbelt Road intersection. Existing and proposed bus stop locations are shown in **Figure 2-16** and **Figure 2-33**, respectively.

Table 2-3. Gate Modifications in the Master Plan

2020		2037	
Entry Gates	Permissible Entry Type	Master Plan Entry Gates	Permissible Entry Type
Main Gate (Goddard Road)	Employees and Visitors	(New) Goddard Gate	Employees
South Gate (ICESat Road)	Employees	(New) Main Gate	Employees and Visitors
Parkway Gate (Explorer Road)	Employees	No Change	Employee
North Gate (Hubble Road)	Deliveries	No Change	Deliveries

2.5.3. 2016 Roadway Counts

Roadway counts were obtained in 2016 at the four primary entry gates. **Table 2-4** shows the AM and PM peak volumes as well as the average daily traffic (ADT). This data was collected continuously (24 hours) over three days. The dates of collection were Tuesday, 17 May 2016 through Thursday, 19 May 2016.

The average daily traffic through the gates was 16,900 vehicles. The peak periods ranged from 8:00 - 9:30 AM and 4:00 - 5:30 PM and vary by gate. The highest ADT was at the Main Gate (Goddard Road), followed by the Parkway Gate (Explorer Road). Staff from the GSFC Greenbelt Campus indicated that in 2020 the only gate that experienced queuing problems was the Parkway Gate on Explorer Road with access from MD 295 (Baltimore-Washington Parkway). With the Main Gate relocation, visitors will be entering through the new Main Gate on ICESat Road thereby relocating some of the peak hour trips to the new Main Gate.

Table 2-4. 2016 Roadway Counts

Gate	AM Peak Hour	AM Peak Volume	PM Peak Hour	PM Peak Volume	ADT
Main Gate (Goddard Rd)	8:00 – 9:00 AM	470	4:15 – 5:15 PM	540	6,400
South Gate (ICESat Rd)	8:00 – 9:00 AM	360	4:00 – 5:00 PM	360	3,700
Parkway Gate (Explorer Rd)	8:30 – 9:30 AM	750	4:30 – 5:30 PM	590	4,800
North Gate (Hubble Rd)	8:00 – 9:00 AM	410	4:15 – 5:15 PM	580	2,000
Total					16,900

2.5.4. Bicycle and Pedestrian Facilities in Master Plan

To improve bicycle circulation within the campus and accommodate future growth of biking activities, roads will be modified. Design considerations in the GSFC Greenbelt Campus will include the placement bicycle boxes at signalized intersections and enhanced markings and signage for bicycles at unsignalized intersections. The roadway hierarchy will include three types of roads: primary, secondary, and tertiary. **Figure 2-34** below shows the proposed cross-section for primary roads.

Primary roads will have an operating speed of 25-30 miles per hour, dedicated bike lanes, 4-8-foot sidewalks, and include major roads such as Explorer Road, Goddard Road, and ICESat Road that will connect to the off-campus roadway system.

Secondary roads will have an operating speed of 20-25 miles per hour, 4-8-foot sidewalks, shared use lanes for bicycles, and will serve as connections between primary roads and areas interior to the campus.

Tertiary roads will provide connectivity between primary or secondary roads and individual facilities, parking, and service areas. Tertiary roads will be designed for the lowest volumes of traffic and travel speeds and will have an operating speed of 15-20 miles per hour, 6-foot sidewalks, and include shared use lanes for bicycles.

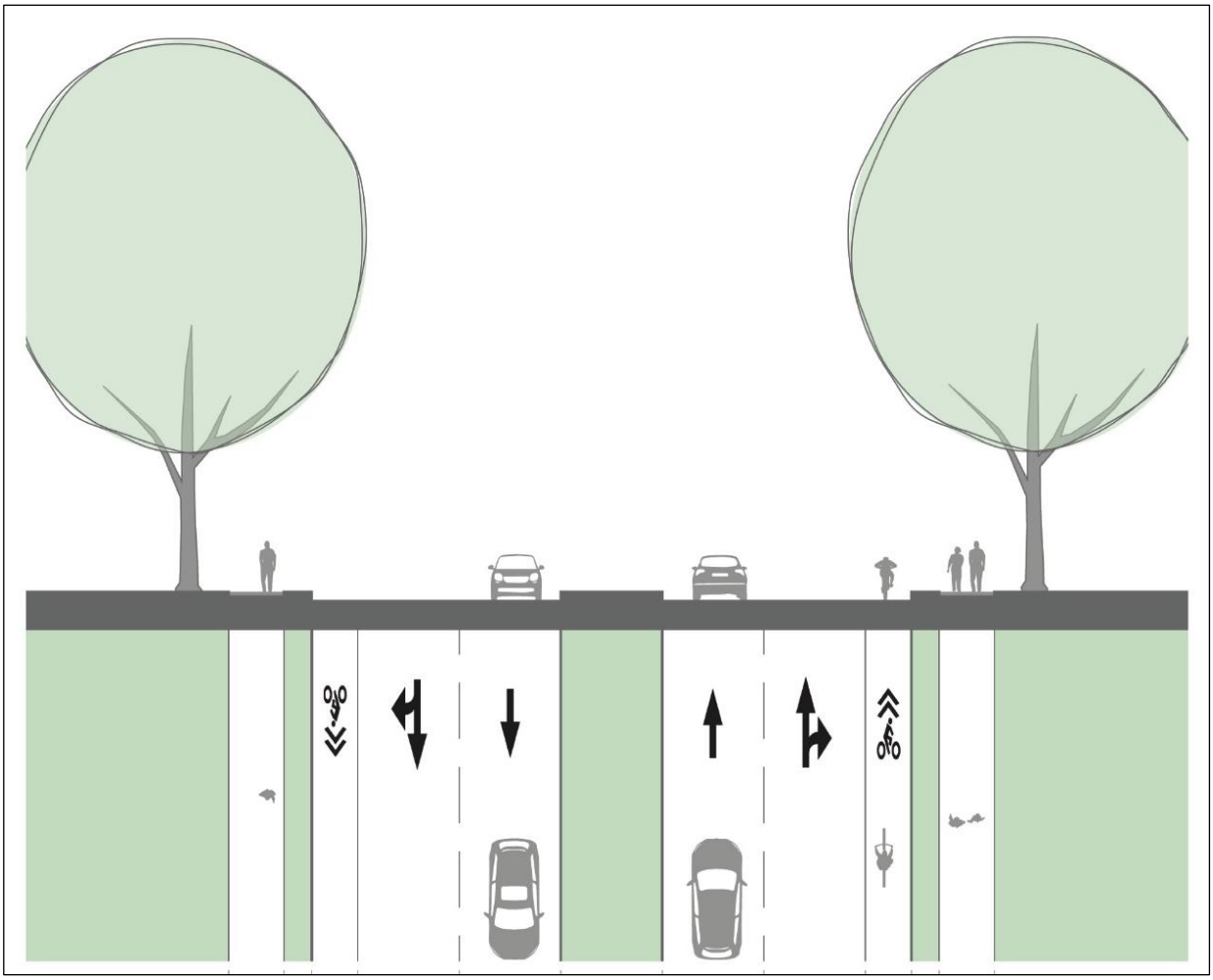


Figure 2-34. GSFC Greenbelt Campus Master Plan Primary Road Prototype

2.5.5. Parking Study

SOV and some of the other commute modes directly impact the parking demands on the campus. A Parking Study was conducted for the 2016 TMP, which is summarized below to provide context to the challenge in reducing SOV average daily trips. The study focused on the most heavily used parking areas on the GSFC Greenbelt Campus to determine parking lot utilization and duration when vehicles were parked. The five (5) lots studied are shown in **Figure 2-35**.

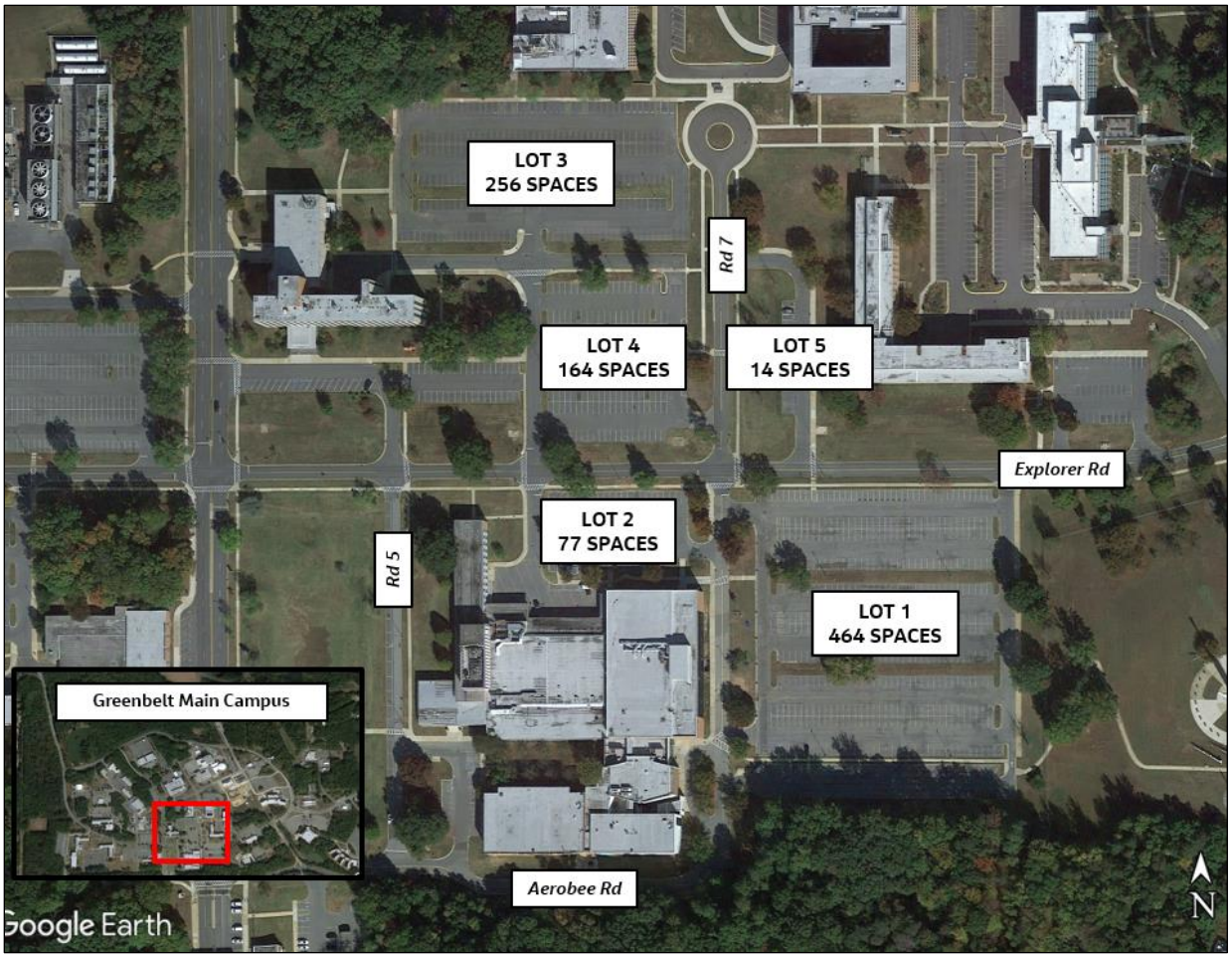


Figure 2-35. Parking Lots in Campus Parking Study

Parking Utilization

Parking lot utilization and duration counts were collected on Tuesday, May 17, 2016 from 7:00 AM to 6:00 PM. Personnel collecting the data drove through the parking lots every hour throughout the 11-hour time frame and recorded the number of occupied and vacant parking spaces. **Figure 2-36** shows that the parking lots studied had a 55-92% utilization rate during working hours between 10:00 AM and 2:30 PM. The variation in the utilization rate during the day shows that a number of vehicles enter the lots upon arrival to the Campus, but do not remain parked throughout the day; this is most evident during the study between 10 AM and noon in Lot 3. This data suggests that some vehicles, perhaps personal SOVs, are used to move across or off campus during the mid-day.

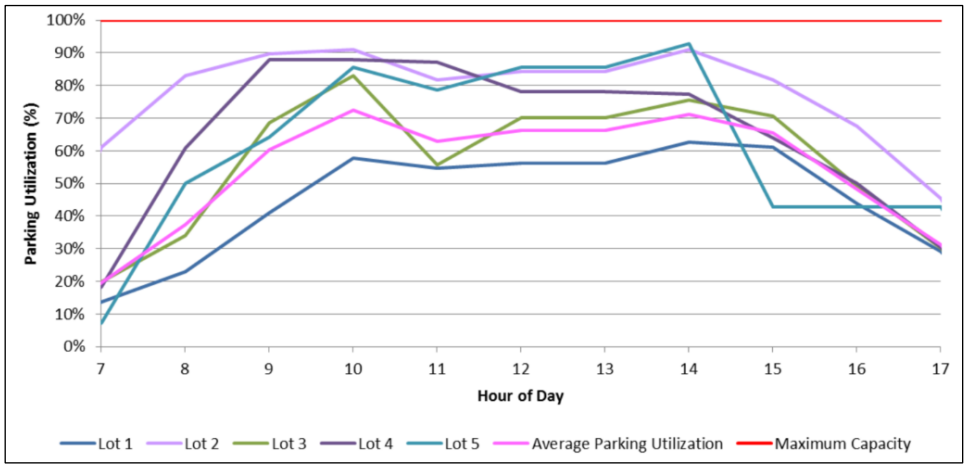


Figure 2-36. Campus Parking Utilization

Parking Duration

Parking duration is defined by the amount of time that an individual vehicle remained parked. The duration of each parked vehicle was determined by recording the first three letters and numbers of the license plate. Figure 2-37 shows that the highest percentage of parked vehicles had a duration of one (1) hour or less with many vehicles parked for two (2) hours or less. The next highest percentage of parked vehicles had a duration of six (6) to seven (7) hours. As with the parking utilization data, the parking duration data shows that some vehicles enter the campus but do not stay parked throughout the day. Specifically, about 20% of vehicles stay parked for only one hour or less. This data illustrates that a portion of the campus employees move either within or off the campus during the workday. Such movements may impact these employees' ability or willingness to forego their SOV commuting mode.

Over time, parking utilization and duration will change as the GSFC Greenbelt Master Plan is implemented and the commuting modes of employees shift.

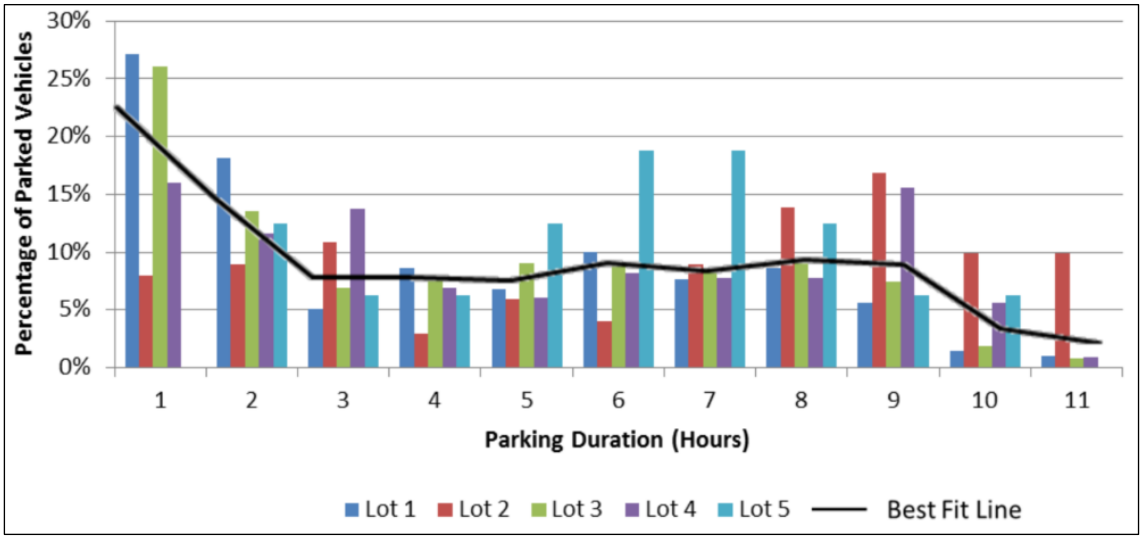


Figure 2-37. Campus Parking Duration

Parking Ratio

Table 2-5 shows the 2020 and the 2037 estimated parking ratios. In 2020 there were 6,979 spaces which corresponds to a parking ratio of 1:1.19. The 2037 ratio is estimated to be 1:1.3 which corresponds to not more than 6,379 employee parking spaces. As noted, the implementation of the GSFC Greenbelt Campus Master Plan will result in a modest decrease in Employee Parking Spaces. Visitor parking is excluded from the calculation of the parking ratio. In 2020 and in 2037 the visitor parking includes 500 parking spaces for badged visitors (those passing through the security gates) and approximately 100 spaces outside the security gate for non-badged visitors (those at the Visitor Center).

The implementation of the GSFC Greenbelt Campus Master Plan will reduce the demand for vehicle parking by creating a dense, walkable campus center that will reduce the need to drive personal vehicles from building to building during the workday. The GSFC Greenbelt Campus Master Plan will also provide pedestrian and bicycle facilities and support a campus shuttle to reduce the need for employees to have a personal vehicle on campus.

Table 2-5. 2020 and 2037 GSFC Greenbelt Campus Parking Ratios

Year	Non Badged Visitor Parking at Visitor Center	Badged Visitor Parking Inside Campus	Employee Parking Spaces Inside Campus*	Total Employees	Parking Spaces per Employee (%)	Employees per Parking Space (Ratio)
2020	100	500	6,979	8,300	84%	1:1.19
2037 Goal in this TMP	100	500	6,385**	8,300	77%	1:1.3

**Employee parking spaces include general parking, reserved spaces for leadership, carpool, vanpool, time-limited spaces, fuel-efficient and electric vehicles, and motorcycles. Does not include visitor parking, ADA accessible spaces, and spaces for the facilities management division.*

***The reduction in the quantity of parking spaces will be the result of the GSFC Greenbelt Campus Master Plan implementation.*

2.5.6. Campus Shuttle

The GSFC Greenbelt Campus provides a campus shuttle service referred to as the "Goddard Taxi." In 2020 this service had one 12-passenger van and was available through an on-demand request system. The Goddard Taxi is another on-campus resource that will be available for GSFC Greenbelt Campus employees to navigate the GSFC Greenbelt Campus without the use of a personal vehicle. GSFC Greenbelt Campus staff have indicated that in 2019 there were approximately 110 passengers per day, including ten (10) people with disabilities. Three (3) additional passenger vans were available for on-site visitor tours. It is anticipated that this shuttle service will continue to be a valuable resource to transport employees and visitors to on-campus facilities outside of the centralized area.

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CHAPTER 3. TRAVEL DEMAND MANAGEMENT STRATEGIES

As shown in **Table 3-1**, to achieve the goals of this TMP by 2037 a total of 4,399 average daily trips by non-SOV modes will be required. This means that in addition to retaining the 938 average daily trips by non-SOV modes, an additional 3,461 average daily trips must shift to non-SOV modes by 2037. To meet the new mode goals for average daily trips, employees (civil service employees and contractors) must change their commute mode choices. To encourage this behavioral change by employees, the strategies below, and associated considerations, are recommended.

Table 3-1. Average Daily Trips by Mode Summary

Commuter Mode	2016		2037		2016 2037
	Avg. Daily Mode	# Avg Daily Trips by Mode	Mode Goals in 2020 TMP	# Avg Daily Trips by Mode	# Avg Daily Trips Change
Carpool	5.5%	457	6.0%	498	42
Vanpool	0.0%	0	0.0%	0	0
Public Transit	1.8%	149	4.0%	332	183
Active Transportation	1.3%	108	3.0%	249	141
Subtotal	**9%**	**714**	**13%**	**1,079**	**365**
Telecommute	0.4%	33	40.0%	3,320	3,287
Other	2.3%	191	0.0%	0	-191
Total Non-SOV Mode	**11%**	**938**	**53.0%**	**4,399**	**3,461**
Single-Occupancy Vehicle	89%	7,362	47.0%	3,901	-3,461
	100.0%	8,300	100.0%	8,300	

3.1. Employee Transportation Coordinator

To achieve the goals in this TMP, the first strategy is to designate an Employee Transportation Coordinator (ETC) to determine and implement actions to encourage change. The ETC will build on the foundation that the GSFC Greenbelt Campus has already created, including the internal website for commute options; the Bikes Around Goddard bike share system and brochure (see **Appendix C**), and the 2020 telecommute survey (see **Appendix D**).

As outlined further in **Chapter 4**, to review strategies and monitor infrastructure updates, the ETC will work with an internal Campus Transportation Review Committee (CTRC) and coordinate with external transportation agencies.

Generally speaking, the actions to encourage mode shift will include a public information and marketing campaign to employees based on multiple inputs:

- Focus group discussions by mode
- Personal stories from those that have adopted non-SOV commute strategies
- Available resources to help plan non-SOV commutes
- Available incentives, such as the federal transit subsidy

In addition to a public information and marketing campaign, the ETC will provide a resource center to work directly with employees one-on-one to explore their non-SOV mode choices based on the location of their residence.

The ETC will conduct an Employee Commute Survey, which will focus on questions on mode split with a few questions to guide the ETC with annual outreach and work plans. The survey may cover topics such as the zip code of the commute trip origin, approximate departure and arrival times for ingress and egress commute trips, issues that will encourage mode shifting. A draft example of such a survey is provided in **Appendix E.**

According to the NCPC Transportation Management Program 2014 Handbook, there are five (5) steps in the Commuter Decision-Making Process:

1. Awareness
2. Interest
3. Inquiry
4. Trial Use
5. Regular Use of Mode

Actions to encourage commuter mode change will consider these five (5) steps in the Commuter Decision-Making Process (CDMP).

3.2. Considerations by Mode

The following sections explore considerations that can inform the development of specific action steps to achieve these TMP goals. The following are examples of such considerations:

- 2016 mode splits
- Future 2037 mode split goals
- Available resources
- Available incentives

3.2.1. Carpool and Vanpool (Ridesharing)

Carpools and vanpools reduce the number of SOV using the roadway system, which results in fewer vehicles and a decrease in traffic congestion on roadways, which in turn decreases emissions and promotes sustainability. As shown in **Table 3-2**, in the 2016 survey, 5.5% of employees indicated they utilize carpools. Because the survey did not provide an option to indicate that an employee was utilizing a vanpool, no data was available for vanpools. The goal outlined in this TMP is that 6% will utilize carpools and 0% will utilize vanpools for their commute to work by 2037, thereby achieving a ridesharing total of 6% of average daily trips. This equates to 498 ridesharing average daily trips.

Table 3-2. Average Daily Trips by Carpool and Vanpool

Commuter Mode	2016		2037		2016 2037
	Avg. Daily Mode	# Avg Daily Trips by Mode	Mode Goals in 2020 TMP	# Avg Daily Trips by Mode	# Avg Daily Trips Change
Carpool	5.5%	457	6.0%	498	42
Vanpool	0.0%	0	0.0%	0	0

According to the 2016 employee commute survey, 5% of employees carpooled to work at least one day per week. Forty-five percent (45%) of employees expressed interest in ridesharing, but stated they do not have the necessary information or resources to get started. The ETC will play a pivotal role in assisting these employees to find other campus employees with whom to carpool or vanpool and directing them to regional resources. For employees with concerns regarding transportation in the case of an unexpected event or personal emergency, the ETC can explain the (GRH) program, as described in **Section 3.5**.

Ridesharing Programs

The ETC will also encourage employees to utilize the Rideshare Program offered through the MWCOG Commuter Connections program. The Rideshare Program maintains a state-of-the-art interactive system that provides a comprehensive list of all potential ridesharing partners in the area. Commuter Choice Maryland offers a similar program through Rideshare Maryland. This program is offered by the MTA's Commuter Assistance Office.

3.2.2. Transit

In 2016, the GSFC Greenbelt Campus employees made 149 average daily trips (1.8%) by public transit. The 2037 goal is to increase this percentage to 4%, or 332 average daily trips. This will require an additional 183 average daily trips as shown in **Table 3-3**.

Table 3-3. Average Daily Trips by Transit

Commuter Mode	2016		2037		2016 2037
	Avg. Daily Mode	# Avg Daily Trips by Mode	Mode Goals in 2020 TMP	# Avg Daily Trips by Mode	# Avg Daily Trips Change
Public Transit	1.8%	149	4.0%	332	183

Motivation to Ride Transit

Commuting by transit offers some benefits including cost savings (relative to the cost of automobile ownership) and environmental benefits (improved air quality). Additionally, commuters do not have to contend with the stress of driving during peak traffic periods. The ETC and CTRC will conduct focus group interviews with current transit riders to collect personal experiences about the benefits of transit ridership. As with ridesharing, for employees who have concerns regarding transportation due to an emergency or unexpected situation, the ETC can provide information regarding the GRH program, as described in **Section 3.5.**

Transportation Subsidy and Benefits Programs

The 2037 goal of 4% of average daily trips by public transit equates to an additional 183 average daily trips. To incentivize employees to shift to public transit from SOV, a transportation subsidy program (see **Section 3.4**) is available for employees that make this trip at least three (3) times per week.

Off-Campus Shuttle Bus Service Consideration for Transit

To support the use of transit, the GSFC Greenbelt Campus will consider an off-campus shuttle to pick up and drop off employees during AM and PM peak periods at the Greenbelt Metrorail and MARC Stations, the New Carrollton Metrorail and MARC Stations, and the MARC Seabrook Station. The ETC will evaluate current commute times by the local bus services from the Greenbelt and New Carrollton Metro Stations as well as headways to determine the cost/benefit of providing this off-campus shuttle service. Currently, the two local bus routes have headways of 30-40 minutes and travel times of 10-25 minutes. An off-campus shuttle will provide a convenient and comfortable express service to the GSFC Greenbelt Campus and help remove an impediment for some employees

3.2.3. Active Transportation: Bicycling and Pedestrian Travel

In 2016, 108 average daily trips (1.3%) were made by active transportation, which includes bicycling and pedestrian travel. The 2037 goal, as shown in **Table 3-4**, is 249 average daily trips (3%) and will require an additional 141 average daily trips by active transportation.

GSFC Greenbelt Campus currently provides on-campus bike sharing; see Appendix C for the bicycle brochure describing this program. In addition, safety will be enhanced through updated intersection design guidelines in the Master Plan.

Reaching this goal will be supported by the GSFC Greenbelt Campus Master Plan which will provide dedicated bike lanes, shared lanes, and multi-use paths within the GSFC Greenbelt Campus. In addition, planned bicycle facilities near the campus in the National Capital Trail Network will promote commuter biking and pedestrian travel through a connected infrastructure network. Future data reporting such as employee commute surveys, will have separate metrics for biking and pedestrian travel to better gauge the number of employees utilizing these distinct modes.

Table 3-4. Average Daily Trips by Active Transportation

Commuter Mode	2016		2037		2016 2037
	Avg. Daily Mode	# Avg Daily Trips by Mode	Mode Goals in 2020 TMP	# Avg Daily Trips by Mode	# Avg Daily Trips Change
Active Transportation	1.3%	108	3.0%	249	141

Motivation for Active Transportation

The public information and marketing campaign to encourage non-SOV commute travel will focus on the benefits of biking and pedestrian travel:

- Economical, and fun alternative to a drive-alone commute
- Low-impact exercise
- Avoid parking hassles
- Reduce carbon emissions

Focus groups with employees that currently travel to work as pedestrians or cyclists will be conducted to reveal personal stories that motivate them to select this choice. It may also reveal insights on the safest routes that have been discovered to access the GSFC Greenbelt Campus or where improvements are needed.

The City of Greenbelt Pedestrian and Bicycle Master Plan (2014) and the Prince George's County Transportation Plan (2009) show existing and future bicycle and pedestrian travel facilities. Many of these projects connect the GSFC Greenbelt Campus to nearby residential and commercial communities. The ETC, in discussions with the CTRC, will identify high priority projects serving the campus, and advocate for them with the local jurisdictions.

As with other non-SOV modes, the ETC can explain the GRH program (Section 3.5) to those who are hesitant to commute via active transportation out of concern for quick access to home when there is an unexpected event.

Support for Active Transportation

To facilitate development of infrastructure and support for biking and pedestrian travel, the ETC, CTRC, and GSFC Greenbelt Campus Leadership will consider the following multiple suggestions and explore their usefulness:

- Secure racks and/or storage for personal bikes
- Building amenities to support active transportation such as showers and locker rooms
- A supplemental GRH program when biking home is not an option

3.2.4. Telecommuting

Telecommuting will be important because it can reduce the overall number of commuters on the road. The 2037 goal is to increase the percentage of telecommuters from 0.4% to 40.0% by 2037 as shown in **Table 3-5.** This large increase is due to the experience with telecommuting during the COVID-19 Pandemic.

Table 3-5. Average Daily Trips by Telecommute

Commuter Mode	2016		2037		2016 2037
	Avg. Daily Mode	# Avg Daily Trips by Mode	Mode Goals in 2020 TMP	# Avg Daily Trips by Mode	# Avg Daily Trips Change
Telecommute	0.4%	33	40.0%	3,320	3,287

Prior to the pandemic, telecommuting was not a popular choice for employees and employers. The 2016 employee commute survey indicated that 37% of respondents were able to telecommute at least one day per week, but only 0.4% of average daily trips were by telecommuting. The survey and responses are available in **Appendix F**. The pandemic, however, required that employees and employers use this option for health and safety reasons. Between March and November 2020, it is estimated that 80% of the GSFC Greenbelt Campus employees telecommuted from home.

An August, 2020, survey of GSFC employees showed a significant increase in support of telecommuting over that reported in the 2016 GSFC Employee Commute Survey. Over 90% of the 2020 survey respondents agreed with the following statements:

- Telecommuting is feasible even after the end of the COVID-19 Pandemic.
- I feel supported by my immediate supervisor.
- I am able to contact and communicate with people outside my team to get my work done.

The survey did reveal a need for some individuals to obtain access to labs, and some respondents expressed a desire for access to office equipment from their on-site workplaces.

NASA Headquarters has established a committee with representation from the GSFC Greenbelt Campus as well as other locations to address post-COVID-19 Pandemic telecommuting among its employees. The goal is to maximize the ability, efficiency, and flexibility of NASA and its workforce to be productive, engaged, and connected, taking advantage of its distributed worksite locations. NASA will develop guideposts and recommendations and each location and will tailor its approach as appropriate.

The GSFC will use the first six months of the post-pandemic era to pilot and experiment with a hybrid work posture of on-site and telecommuting employees. The pilot will accomplish multiple purposes:

- Prepare and work with supervisors and employees to develop a unit approach for hybrid and flexible work arrangements based on mission need and employee desire
- Develop pilot projects to include both general use areas and organizational workspaces
- Pilots will focus on IT setups, physical space layouts, usage patterns, policies (HR, supervision, workforce, telecommuting, etc.), and potential efficiencies.

In the short-term, the telecommuting pilot program will evaluate staff impact metrics, based on lessons learned to assess on-going large-scale telecommuting options. The pilot program will offer GSFC opportunities to optimize administrative support services, e.g., shared hoteling and distribution spaces, coordinated with IT infrastructure needs, etc.

The telecommuting pilot program will inform the long-term changes to the facilities required to support the future GSFC Greenbelt Campus telecommuting environment. The pilot program will indicate the proper scoping of shared space, hoteling space, and meeting rooms and the NASA-wide IT requirements.

Following the steps in the CDMP, the 2016 survey data indicated that prior to the pandemic employees were ***aware*** (step 1) of telecommuting, but were not ***interested*** (step 2.) The pandemic propelled employees and employers to ***trial use*** *(*step 4.) Since most employees and employers have found that they can successfully work from home, this mode option is likely to gain momentum in the future and can lead to ***regular use of mode*** *(*step 5.)

3.3. Variable Work Schedules

Variable work schedules are not technically a mode choice, but a strategy that can have a significant impact in reducing congestion on the roadways. For average daily trips that utilize vehicles (SOV, carpool, and vanpool), commuting during non-peak periods can make a positive contribution to congestion reduction on the NCR regional road network. This option can be considered for employees choosing any commuting modes including SOV, carpool, and vanpool.

The 2016 roadway counts (presented in **Table 2-4** above) for the entrance gates suggest that peak periods are between 8:00-9:30 AM and 4:00-5:30 PM. The ETC and CTRC will work with the regional transportation agencies to determine peak periods in the region. The 2016 employee commute survey shows that 40% of respondents say they arrive to work before 8:00 AM and 4% indicated they arrive after 10:00 AM. The remaining (56%) arrive during the peak period between 8:00 and 10:00 AM. Nineteen percent (19%) of respondents say that they depart the GSFC Greenbelt Campus between 2:00 and 4:00 PM and 16% after 6:00 PM. The remainder (65%) depart during the peak period of 4:00 to 6:00 PM.

3.4. Transportation Subsidy and Commuter Tax Benefits Programs

The federal government allows two (2) options for incentives to off-set the costs of non-SOV transportation. The first is offered to only federal employees that are assigned to the Greenbelt Campus and is called the Transportation Subsidy Program. The second (which can be offered by any employer) is a Commuter Tax Benefit that allows employees to use pre-tax dollars to cover some of

the costs incurred while commuting such as public transportation tickets and passes. Federal employees cannot participate in both programs simultaneously.

The GSFC Greenbelt Campus participates in the Transportation Subsidy Program and the Commuter Pre-Tax Benefit for federal employees. There are currently 112 civil servants that have applied for, and received, the Federal Transportation Subsidy. All participation is currently for transit. It is recommended that the ETC monitor changes in subsidy legislation to ensure that the current subsidy policies, e.g., eligibility criteria, registration requirements, etc., are disseminated among GSFC Greenbelt Campus employees. It is also recommended for the campus subsidy program to be revised to include the MARC train. Some other federal agencies in the area use the Transerv program (by the US Department of Transportation) to assist with the Federal Transportation Subsidy.

Neither the Transportation Subsidy nor the Commuter Tax Benefits Program cover any expenses related to parking. This applies to the parking at public transit Park and Rides, which is part of the connection many people use to access public transportation. It is recommended that the ETC determine if the cost of parking at a Park and Ride is currently a barrier for employees to use public transit. If determined so, GSFC Greenbelt Campus may research an alternative funding source.

3.4.1. Federal Subsidy Program

The Federal Subsidy incentive may be used for expenses on public transit (rail and bus) or a vanpool (with at least 7 people, including the driver). Carpools do not qualify. To qualify, public transit or vanpool must be used for a minimum of ten (10) days per month.

Public Transit

For campus civil service employees, the Transportation Subsidy is paid by the federal government. It is directly applied to a SmartTrip card for commuting. This is an electronic card that stores funds that can be used to pay transit costs for multiple regional transit agencies, including WMATA's Metrorail and many of the local bus systems in the NCR. Unfortunately, the SmartTrip card does not currently apply to the MARC train.

Vanpools

As with public transit, campus civil service employees can utilize the SmartTrip card for vanpools that are part of WMATA's vanpool program. Currently there is no reported vanpool use at the GSFC Greenbelt Campus. To qualify for the Transportation Subsidy, the vanpool will need to commute at least three (3) days per week.

3.4.2. Commuter Pre-Tax Benefit

For federal employees and contractors that work at the campus, the Commuter Tax Benefit program is managed by the employee and their employer as a pre-tax benefit that allow employees to use pre-tax dollars to cover the cost of commuting. In this program, the benefit is the tax dollars saved by the employee.

Information about the Commuter Tax Benefits offered by the employers of the contractors is not currently compiled. Since the majority of people on the GSFC Greenbelt Campus are contractors this information will be important to inform the strategies of the GSFC Greenbelt Campus. It is recommended that the ETC work to determine if the employers offer the pre-tax benefits and also if the contractors are aware of what pre-tax benefits are available to them.

3.5. Guaranteed Ride Home (GRH) Program

The 2016 employee commuter survey indicates that 25% of respondents will need a GRH in the event of an emergency if they utilized non-SOV modes. MWCOG offers a GRH program through the Commuter Connections program. Eligibility requires that the employee regularly (twice per week) commutes to work via carpool, vanpool, public transit, bicycle, or pedestrian travel. This program ensures employees a guaranteed free ride home should they need to travel outside of their non-SOV commute schedule, up to four (4) times per year. Employees must register for the program. However, for initial use, commuters who have not been officially registered may use the GRH service as a "one-time exception." More details are available from Commuter Connections.

Written communications distributed to employees throughout the year offer the ETC opportunities to promote non-SOV travel modes for commuters. Among promotional messages, the ETC can announce the GRH program, its eligibility criteria, and registration instructions.

3.6. Parking Management

Parking supply can be used as an incentive for employees to choose non-SOV average daily commute trips. Designated parking spaces for non-SOV vehicles (carpools and vanpools) will be placed in premium locations.

As the GSFC Greenbelt Campus Master Plan is implemented over time, the campus will be consolidated to a more walkable environment. Therefore, parking spaces outside of the campus core, while still in existence, will become functionally obsolete.

3.6.1. Parking Supply as an Incentive

Parking will be utilized as an incentive to reduce SOV use through priority placement of parking spaces reserved for carpool and vanpool vehicles. Currently the GSFC Greenbelt Campus has 26 parking spaces reserved for carpools and none for vanpools.

Parking spaces can also be reserved for GSFC-owned vehicles. These dedicated vehicles will be for use by employees that travel by non-SOV modes and need access to a vehicle in case of emergency. This strategy can be part of an employer-based GRH program that complements the regional GRH programs.

The placement of parking spaces for carpools, vanpools, and possibly dedicated employer-sponsored shared vehicles in easily accessible parking spaces will provide priority parking locations for employees using these modes. In smaller text, the signs will include carpool and vanpool eligibility criteria and information (such as contact information and eligibility) about the GRH program. This messaging will be a resource for those using carpools and vanpools but also an advertisement for those considering these modes.

3.6.2. Parking Supply

As shown in Table 3-6 below, the 2037 calculated parking ratio is 1:1.3. The current site layout has a total of 6,979 spaces for employee parking. With an estimated 8,300 employees, this equates to a calculated parking ratio of 1:1.19. As shown in Table 3-7, the calculated number of vehicles commuting to the GSFC Greenbelt Campus in 2037 (based on the mode split goals) will need approximately 4,150 parking spaces. By 2037, despite some parking spaces becoming functionally obsolete, 6,385 parking spaces are projected to remain because parking will not be targeted for removal as a stand-alone project.

There are 600 parking spaces identified for visitors to the GSFC Greenbelt Campus and Visitors Center. Although the 2016 employee commute survey indicates that 66% of respondents found parking easy or very easy, several open responses indicated that parking can be difficult on certain days – particularly when visitors join on-site employees for large meetings or conferences. In 2019, an average of 2,700 visitor passes (which can be multi-day passes) were issued each month.

Table 3-6. 2020 and 2037 GSFC Greenbelt Campus Parking Ratios

Year	Non Badged Visitor Parking at Visitor Center	Badged Visitor Parking Inside Campus	Employee Parking Spaces Inside Campus*	Total Employees	Parking Spaces per Employee (%)	Employees per Parking Space (Ratio)
2020	100	500	6,979	8,300	84%	1:1.19
2037 Goal in this TMP	100	500	6,385**	8,300	77%	1:1.3

**Employee parking spaces include general parking, reserved spaces for leadership, carpool, vanpool, time-limited spaces, fuel-efficient and electric vehicles, and motorcycles. Does not include visitor parking, ADA accessible spaces, and spaces for the facilities management division.*

***The reduction in the quantity of parking spaces will be the result of the GSFC Greenbelt Campus Master Plan implementation.*

3.6.3. Average Vehicle Occupancy (AVO)

In the 2016 TMP, Average Vehicle Occupancy (AVO) was reported as a ridesharing mode goal. Although AVO continues to be a metric in this TMP, it is not regarded as a goal because there are multiple non-SOV modes for which AVO does not adequately communicate the mode shift. For example, increased telecommuting or transit usage will reduce the SOV average daily trips and AVO, It will not convey which mode had resulted in the change to the AVO. Mode splits provide the detail that reveals where there are SOV average daily trips. The 2017 federal parking study noted that AVO should be measured for federal facilities.

The AVO is determined by the number employees using vehicles (single occupant, carpooling, and vanpooling) divided by the number of vehicles utilized. As shown in Table 3-7, the AVO ratio in 2016 was 1.04. When the 2037 estimated mode split goals are met, the anticipated AVO increases to 1.07. The calculation assumes that carpools average 2.25 people per vehicle and vanpools average seven (7) people per vehicle. The employee commute surveys will collect data on the average number of people per vehicle for SOV, carpools, and vanpools to accurately track this metric over time.

Table 3-7. Average Ridesharing Daily Trips and Vehicles with AVO

Commuter Mode	2016		2037 Goals	
	Percent by Mode	Number by Mode	Percent by Mode	Number by Mode
Average Daily Trips				
Carpool	5.50%	457	6.00%	498
Vanpool	0.00%	0	0.00%	0
Single-Occupancy Vehicle	89%	7,387	47%	3,901
Total		**7,844**		**4,399**
Average Daily Vehicles				
Carpool Vehicles		152		221
Vanpool Vehicles		0		0
Single-Occupancy Vehicles		7,387		3,901
Total		**7,539**		**4,122**
AVO		1.04		1.07

3.7. Campus Shuttle

As described in **Sec. 2.5.6**, the "Goddard Taxi" shuttle service currently serves the GSFC Greenbelt Campus using a single 12-passenger van. The service is provided on an on-demand basis. For campus personnel who do not bring their own vehicles to work, this service offers one option to travel across campus. It can be particularly useful during inclement weather. GSFC Greenbelt Campus staff reported that the shuttle averages 110 passengers per day, including approximately 10 persons with disabilities. With the transformation of the GSFC Greenbelt Campus in the Master Plan, the Goddard Taxi is expected to continue to be a useful transportation option for non-SOV travel within the GSFC Greenbelt Campus.

Modifications to the Goddard Taxi service will be developed by the ETC and informed by the outreach to the GSFC Greenbelt Campus employees. Possibilities to explore include the following:

- expanding service beyond the on-demand function by adding a fixed route/fixed schedule operation during those times of the day, or week, when demand commonly occurs. The provision of a fixed schedule component will allow riders to avoid the wait time that accompanies the strictly on-demand service.
- Ensure that shuttles have bicycle racks on the front to allow bicyclists to use them in inclement weather.
- Consider shuttle service between the campus and the nearby transit centers.
- Explore the shuttles as an on-demand service for accessing transit centers in the evenings.

3.8. Travel Demand Management Strategy Summary

The information in this chapter provides data, information, context, and considerations which the GSFC Greenbelt Campus will use to develop Annual Action Plans to incrementally work toward the 2037 goals. The goals for non-SOV modes will require an additional 42 carpool average daily trips,

183 transit average daily trips, and 141 active transportation average daily trips. This equates to a total 365 non-SOV average daily trips that must shift to other modes (these numbers do not include telecommuting). A continuously progressing effort with increasing support for each step will be required to gradually achieve and maintain these average daily trip mode shifts.

The goal of reducing SOV average daily commute trips will be accomplished using multiple trip modes. Encouraging employees to shift into non-SOV travel to and from the Greenbelt Campus will require various strategies as outlined herein. **Table 3-8** is a summary of such strategies.

Table 3-8. TMP Strategies Summary

Strategies	Mode					
	Carpool	*Vanpool*	*Public Transit*	*Bicycle*	*Pedestrian*	*Telecommute*
Establish a dedicated Drop-off/Pick-up area for passenger loading and ride-hailing as recommended in GSFC Greenbelt Campus Master Plan (Section 2.5.2)	●	●	●			
Establish an Employee Transportation Coordinator (Section 3.1)	●	●	●	●	●	●
Provide an on-going resource center to work directly with individual employees to explore their non-SOV mode choices (Section 3.1)	●	●	●	●	●	●
Create Campus Transportation Review Committee to represent the viewpoints of the employees in commuting priorities and plans in transportation discussions (Sections 2.4, 3.1, and 3.2.3)	●	●	●	●	●	●
Promote Ridesharing (Carpool and Vanpool) (Section 3.2.1)	●	●				
Promote and support the MWCOG Commuter Connections' carpool and vanpool rideshare matching resources (Section 3.2.1)	●	●				
Conduct focus groups to identify benefits of non-SOV modes (Sections 3.2.1, 3.2.2, and 3.2.3)	●	●	●	●	●	
Promote Active Transportation (Bicycle and Pedestrian Travel) (Section 3.2.3)				●	●	
Expand commute surveys to capture active transportation characteristics (Section 3.2.3)				●	●	
Identify and advocate for off-campus projects benefitting non-SOV modes for GSFC Greenbelt Campus (Sections 2.4 and 3.2.3)	●	●	●	●	●	
Supporting Telecommuting (Section 3.2.4)						●
Encouraging Variable Work Schedules (Section 3.3)	●	●	●	●	●	●
Promote Transportation Subsidy and Commuter Tax Benefits Program (Section 3.4)		●	●			
Promote Guaranteed Ride Home Program (Section 3.5)	●	●	●	●	●	
Potential Strategies						
Consider off-campus shuttle serving transit centers (Sections 3.2.2 and 3.7)			●			
Consider secure bike racks/storage, showers, and locker rooms (Section 3.2.3)				●		
Expand transportation subsidy to include MARC train (Section 3.4)			●			
Consider expanding transportation subsidy to cover transit center parking (Section 3.4)			●			
Promote monthly Federal Transportation Subsidy for federal employees (Section 3.4)	●		●			
Promote Commuter Tax Benefits among contractors (Section 3.4.2)	●		●			
Develop Campus Guaranteed Ride Home Program to supplement regional program (Sections 3.2.3 and 3.6.1)	●	●	●	●	●	
Provide bike racks on shuttle vehicles (Section 3.7)				●		
Explore on-demand shuttle service to the transit stations in the evenings (Section 3.7)	●	●	●	●	●	
Add fixed route/fixed schedule shuttle service during select hours (Section 3.7)	●	●	●	●	●	

CHAPTER 4. IMPLEMENTATION

To achieve the principles of the NCPC Comprehensive Plan to reduce SOV travel through resource-efficient planning for sustainable travel that promotes non-SOV travel, the GSFC Greenbelt Campus Leadership will adopt the performance metrics in this TMP expressed as percentage goals for non-SOV travel. To achieve these goals, the GSFC Greenbelt Campus Leadership will explore the strategies and considerations provided in this TMP and determine specific action steps to attain these goals by 2037.

4.1. Employee Transportation Coordinator

As mentioned in Chapter 3, the first step to implementation will be to designate an Employee Transportation Coordinator (ETC). Then, supported by the GSFC Greenbelt Campus Leadership, the ETC will lead the implementation of this TMP with collaboration from an internal Campus Transportation Review Committee (CTRC) and through coordination with external transportation agencies. From the perspective of the GSFC Greenbelt Campus employees the ETC will be the source of information about the commuting options and resources. From the perspective of the GSFC Greenbelt Campus Leadership, the ETC will be the source of information regarding the status of the TMP implementation and the associated metrics.

4.2. Transportation Committee and Agency Coordination

Determination of the Annual Action Plan to achieve the goals in this TMP will be led by the ETC in coordination with the internal CTRC and will be based on the strategies in Chapter 3. The CTRC will be comprised of internal GSFC Greenbelt Campus staff members. The ETC, CTRC, and GSFC Greenbelt Campus Leadership will work together to determine specific actions for implementation. Actions will be documented, and the performance metrics will be measured on an annual basis.

4.2.1. Campus Transportation Review Committee (CTRC)

The purpose of the Campus Transportation Review Committee (CTRC) will be to implement, and monitor the success of, this TMP over time. This committee will be comprised of internal campus employees. At a minimum, representatives will be appointed to represent non-SOV modes including carpool and vanpool, public transit, active transportation (bicycle and pedestrian) and telecommuting.

The committee, chaired by the ETC, will be comprised of multiple GSFC Greenbelt Campus employees. The size of the committee and selection of members will be determined by Greenbelt Campus Leadership. Each committee member will be responsible for working with the ETC to determine action steps for engagement with the campus employee community at large to meet the goals of this TMP over time.

Action steps will include the following:

- Quarterly meetings
- Focus groups by mode
- Annual action plan development
- Annual action plan for review by Greenbelt Campus Leadership
- Implement plan
- Annual evaluation of goal attainment
- Annual report
- Updates to the TMP every five years

The CTRC will meet at least quarterly. It will begin by reviewing this TMP, gathering additional information, and determining which actions to take first to work toward meeting goals of this TMP by 2037. For instance, to gain more information about employees already choosing non-SOV, focus groups can be held with these employees. Their experience will be insightful for motivating other employees to choose non-SOV modes in the future.

The action steps and additional information will lead to an annual action plan for approval by GSFC Greenbelt Campus Leadership prior to implementation. The action plan will consider the five (5) steps in the CDMP:

1. Awareness
2. Interest
3. Inquiry
4. Trial use
5. Regular use of mode

Awareness can be achieved through a general public information and marketing campaign about the campus goals and resources available. Group meetings, lunch-n-learns, or other events can be held to provide additional information and pique ***interest***. Once interest is established, the ETC will be available to meet with individual employees who want to ***inquire*** about their options based on where they reside. From there, employees will be encouraged to a ***trial use*** of non-SOV modes including carpool, vanpool, public transit, and active transportation (biking and pedestrian travel) that can lead to ***regular use of mode***.

4.2.2. External Agency Coordination

The ETC and CTRC will stay current on external agency transportation efforts such as safe and accessible infrastructure that will impact GSFC Greenbelt Campus employee mode choices. The ETC will monitor the activities of the existing transportation planning programs and committees of nearby entities, as well as requesting agency specific meetings. These can include, but are not limited to, the following agencies and committees:

- National Capital Planning Commission (NCPC)
- Metropolitan Washington Council of Governments (MWCOG)
    - Commuter Connections Telework Work Group
    - Transportation Planning Board (TPB)
    - Long-Range Plan Task Force
    - TPB Community Advisory Committee
    - TPB Technical Committee
        - Bicycle and Pedestrian Subcommittee
        - Regional Public Transportation Subcommittee
        - Transportation Safety Subcommittee
- Maryland National Capital Parks and Planning Commission (MNCPPC)
- Washington Metropolitan Areas Transit Authority (WMATA)
- Maryland Department of Transportation (MDOT)
    - Washington Suburban Transit Commission
    - Maryland Transit Administration (MTA)
- City of Greenbelt, MD
    - Advisory Planning Board
- Prince George's County, MD
- Anne Arundel County, MD
- Montgomery County, MD
- Howard County, MD

The ETC will also use the resources and training for federal ETCs provided by the GSA, MWCOG, and NCPC to interface with other ETCs and stay up to date on the regional commuting trends.

4.3. Implementation Timeframe

An Annual Action Plan to achieve the TMP goals by full build out of the GSFC Greenbelt Campus Master Plan in 2037 will be aligned with the phasing of the Master Plan implementation which is defined in three phases:

- Near-term
- Mid-term
- Long-term

The physical campus improvements will evolve over time, as shown in **Table 4-1**. Strategies to affect employee mode choice will begin immediately based on the current campus site layout and current transportation infrastructure in the vicinity of the campus and regionally. As physical campus improvements occur and transportation infrastructure improvements in the region are implemented, strategies and actions will be updated to reflect these efforts.

Table 4-1. TMP Strategies and Timeline Summary

Strategies	Mode							Term		
	Carpool	*Vanpool*	*Public Transit*	*Bicycle*	*Pedestrian*	*Telecommute*		*Near Term*	*Mid Term*	*Long Term*
Establish a dedicated Drop-off/Pick-up area for passenger loading and ride-hailing as recommended in GSFC Greenbelt Campus Master Plan (Section 2.5.2)	●	●	●						●	●
Establish an Employee Transportation Coordinator (Section 3.1)	●	●	●	●	●	●		●	●	●
Provide an on-going resource center to work directly with individual employees to explore their non-SOV mode choices (Section 3.1)	●	●	●	●	●	●		●	●	●
Create Campus Transportation Review Committee to represent the viewpoints of the employees in commuting priorities and plans in transportation discussions (Sections 2.4, 3.1, and 3.2.3)	●	●	●	●	●	●		●	●	●
Promote Ridesharing (Carpool and Vanpool) (Section 3.2.1)	●	●						●	●	●
Promote and support the MWCOG Commuter Connections' carpool and vanpool rideshare matching resources (Section 3.2.1)	●	●						●	●	●
Conduct focus groups to identify benefits of non-SOV modes (Sections 3.2.1, 3.2.2, and 3.2.3)	●	●	●	●	●			●	●	●
Promote Active Transportation (Bicycle and Pedestrian Travel) (Section 3.2.3)				●	●				●	●
Expand commute surveys to capture active transportation characteristics (Section 3.2.3)				●	●			●	●	●
Identify and advocate for off-campus projects benefitting non-SOV modes for GSFC Greenbelt Campus (Sections 2.4 and 3.2.3)	●	●	●	●	●			●	●	●
Supporting Telecommuting (Section 3.2.4)						●		●	●	●
Encouraging Variable Work Schedules (Section 3.3)	●	●	●	●	●	●		●	●	●
Promote Transportation Subsidy and Commuter Tax Benefits Program (Section 3.4)		●	●					●	●	●
Promote Guaranteed Ride Home Program (Section 3.5)	●	●	●	●	●			●	●	●
Potential Strategies										
Consider off-campus shuttle serving transit centers (Sections 3.2.2 and 3.7)			●						●	●
Consider secure bike racks/storage, showers, and locker rooms (Section 3.2.3)				●					●	●
Expand transportation subsidy to include MARC train (Section 3.4)			●						●	●
Consider expanding transportation subsidy to cover transit center parking (Section 3.4)			●						●	●
Promote monthly Federal Transportation Subsidy for federal employees (Section 3.4)	●		●						●	●
Promote Commuter Tax Benefits among contractors (Section 3.4.2)	●		●					●	●	●
Develop Campus Guaranteed Ride Home Program to supplement regional program (Sections 3.2.3 and 3.6.1)	●	●	●	●	●				●	●
Provide bike racks on shuttle vehicles (Section 3.7)				●					●	●
Explore on-demand shuttle service to the transit stations in the evenings (Section 3.7)	●	●	●	●	●				●	●
Add fixed route/fixed schedule shuttle service during select hours (Section 3.7)	●	●	●	●	●				●	●

4.4. Monitoring and Evaluation

An employee commute survey will be updated and conducted every two years to monitor mode choice and other commute factors among GSFC Greenbelt Campus employees. The survey will measure mode choice for average daily trips, based on an average week. The survey will also evaluate attitudes toward various mode choices. It will ask if the employee has tried any non-SOV modes in the past year that are different than the modes reported in the average daily trip questions. The employee commute survey will continue to collect, refine, and track variable work schedules as well as mode choices over time.

An annual report will be created to report the survey results and document actions taken. The survey results will provide data for the ETC, CTRC, and Campus Leadership to consider regarding campus changes and the regional transportation agencies to consider for off-campus changes. It will also inform communication strategies with employees to encourage trial and regular use of non-SOV modes. In compliance with NCPC policy, every two (2) years, the ETC will submit progress updates to NCPC.

4.5. Amending the TMP

Future amendments or updates to the TMP will be developed and approved by the ETC, CTRC, and Campus Leadership. Upon approval, the ETC will publish any items as an addendum to this document. The TMP will be updated every five (5) years, as shown in **Figure 4-1**, to document success during this period and review the principles, goals, and strategies that inform actions to be taken in future years by the GSFC Greenbelt Campus to achieve long-term success by 2037.

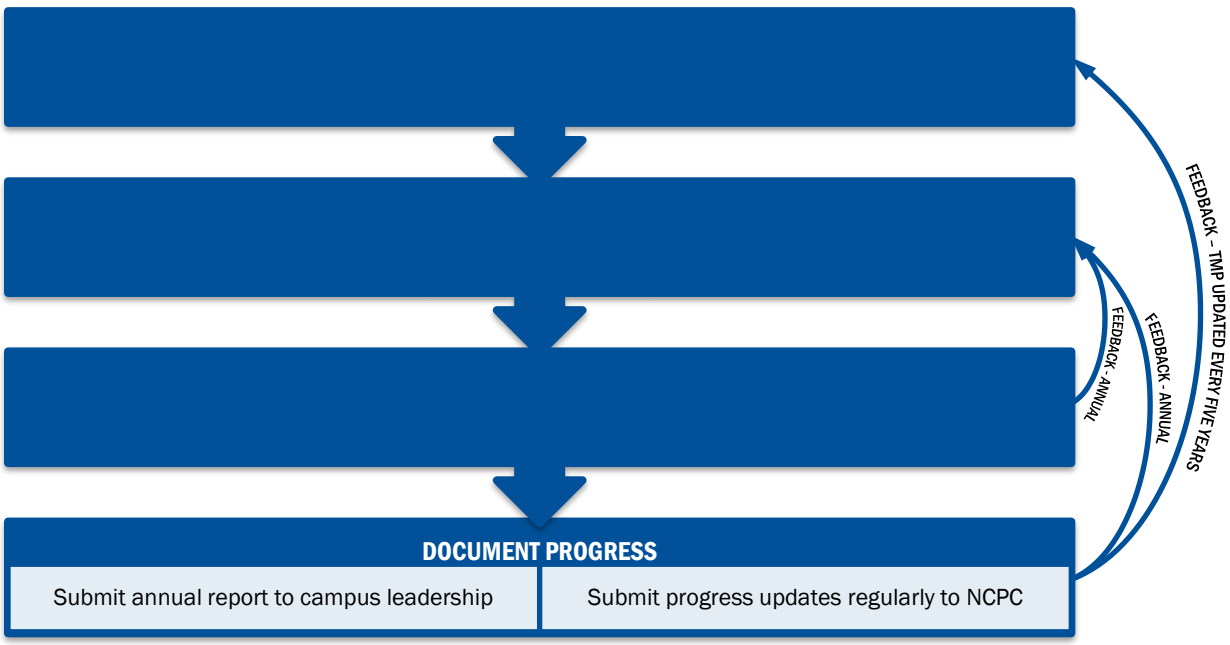

Figure 4-1. TMP Process

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Appendix A. Bus and MARC Train Schedules

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ROUTE 15X

New Carrollton Metro Station/
Greenbelt Metro Station

THE BUS

Greenbelt Metrorail Station/Goddard Space Flight Center/ New Carrollton Metrorail Station

AM LOOP

New Carrollton Metrorail Station	Goddard Spaceflight Center Visitors Center	Greenbelt Station Community	Greenbelt Metrorail Station	Goddard Spaceflight Center Visitors Center	New Carrollton Metrorail Station
—	—	—	6:00	6:15	6:25
6:00	6:15	6:30	6:40	6:55	7:05
6:40	6:55	7:10	7:20	7:35	7:45
7:20	7:35	7:50	8:00	8:15	8:25
8:00	8:15	8:30	8:40	8:55	9:05
8:40	8:55	9:10	9:20	9:35	9:45
9:20	9:35	9:50	10:00	10:15	10:25
10:00	10:15	10:30	10:40	—	—

PM LOOP

Greenbelt Metrorail Station	Greenbelt Station Community	Goddard Spaceflight Center Visitors Center	New Carrollton Metrorail Station	Goddard Spaceflight Center Visitors Center	Greenbelt Metrorail Station
—	—	—	3:00	3:15	3:25
3:00	3:10	3:25	3:40	3:55	4:05
3:40	3:50	4:05	4:20	4:35	4:45
4:20	4:30	4:45	5:00	5:15	5:25
5:00	5:10	5:25	5:40	5:55	6:05
5:40	5:50	6:05	6:20	6:35	6:45
6:20	6:30	6:45	7:00	7:15	7:25
7:00	7:10	7:25	7:40	—	—

Please note: Route 15X is a limited stop route. It only serves the following stops:

- Greenbelt Metro Station
- Greenbelt Station Community
- Greenway Center
- MD 193 at Cipriano Road
- NASA Goddard Space Flight Center
- Brae Brooke Drive
- New Carrollton Metro Station

Complementing the county's transit system – THE BUS, MetroAccess provides service for disabled persons who are unable to use the regular transit systems and have been certified eligible. For further information regarding the program, please call MetroAccess at 800-523-7009 / 301-588-7835 (TTY) or the Washington Metropolitan Area Transit Authority at 202-637-7000 / 202-638-3780 (TTY).

Patrons may obtain real-time schedule information for all THE BUS routes by logging onto www.nextbus.com, including on mobile devices.

During county-declared weather events, THE BUS will operate under a modified stop policy to accommodate patrons. During snow storms, call for route information.

Phone: 301-324-BUSS (2877)
Fax: 301-333-5030
Website: www.princegeorgescountymd.gov
TDD: Maryland Relay 711

Tips for a pleasant trip: Plan to be at your stop at least five minutes ahead of THE BUS' scheduled arrival. Please observe posted rules. Be courteous to other patrons. Offer your seat to disabled or senior patrons. Please pull cord prior to your stop. Public notices will explain holiday operations or other service changes.

DPW&T
Effective Date: April 2017

Prince George's County DPW&T

OFFICE OF TRANSPORTATION
9400 Peppercorn Place, Suite 320
Largo, MD 20774

Rushern L. Baker, III
County Executive

THE BUS

Route 15X Express
New Carrollton Metro Station/
Greenbelt Metro Station

Fares

- Adults – $1.25
- Seniors (60+) & Disabled – FREE*
- First child under 5 – FREE
- Students – RIDE FREE from 2–7 p.m., Monday–Friday, with valid school ID.

Other passes are available. Electronic transfers are available with paid fares only. Please have exact fare ready when you board. Drivers do not carry change.

Rules & Regulations

THE BUS accepts cash and SmarTrip cards payment of fares. Pennies are not accepted.
No smoking. No eating or drinking.
No pets or animals; service animals are permitted.
Electronic devices with earphones only.
Buses stop only at designated bus stops.

*Proper ID required (i.e. driver's license, State issued ID card, MetroAccess card, Metro senior or disabled card, Medicare card).

General Information

THE BUS Route 15X provides limited stop bus service in the Greenbelt and New Carrollton areas from 6:00 a.m. to 8:05 p.m. Buses operate Monday through Friday every 40 minutes during the a.m. and p.m. rush hours. No service on Saturdays, Sundays, or major holidays (New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day).
Phone: 301-324-BUSS Fax: 301-333-5030 TDD: Maryland Relay 711
Customer Information Hours of Operation: 6:30 a.m. - 7:00 p.m.

THE BUS

ROUTE 15X New Carrollton Metro Station/ Greenbelt Metro Station

G12,14

Greenbelt-New Carrollton Line

Effective Sunday, August 23, 2020
A partir del domingo, 23 de agosto de 2020

Eastbound to New Carrollton station

Monday thru Friday — Lunes a viernes

Route Number	Green-belt Metro	Beltway Plaza ■	Ivy La. & Ridge Rd.	Crescent Rd. & Garden-way (Roosevelt Center)	Greenbelt Rd. at Greenway Shopping Center	Greenbelt Rd. opposite NASA Main Gate	Goddard Corporate Park	Cipriano Rd. & Tucker-man St.	Ora Glen Dr. & Mandan Rd.	Doctors Com-munity Hospital	Annapolis Rd. & 85th Ave.	NEW CAR-ROLL-TON Metro
AM Service — Servicio matutino												
G14	-	-	-	5:15	5:20	5:24	5:30	5:38	-	-	5:44	5:48
G12	-	-	-	5:30	5:36	-	-	-	5:41	5:48	5:55	5:59
G14	-	-	-	5:45	5:50	5:54	6:00	6:08	-	-	6:14	6:18
G12	6:00	-	6:05	6:13	6:19	-	-	-	6:24	6:31	6:38	6:42
G14	6:15	●	-	6:27	6:31	6:35	6:41	6:49	-	-	6:55	6:59
G12	6:30	-	6:35	6:43	6:49	-	-	-	6:54	7:01	7:08	7:12
G14	6:45	●	-	6:57	7:01	7:05	7:11	7:19	-	-	7:25	7:29
G12	7:00	-	7:05	7:13	7:19	-	-	-	7:24	7:31	7:38	7:42
G14	7:15	●	-	7:27	7:31	7:35	7:41	7:49	-	-	7:55	7:59
G12	7:30	-	7:36	7:45	7:52	-	-	-	7:58	8:05	8:12	8:17
G14	7:45	7:54	-	8:04	8:09	8:14	8:20	8:28	-	-	8:34	8:39
G12	8:00	-	8:06	8:15	8:22	-	-	-	8:28	8:35	8:42	8:47
G14	8:15	8:24	-	8:34	8:39	8:44	8:50	8:58	-	-	9:04	9:09
G12	8:30	-	8:36	8:45	8:52	-	-	-	8:58	9:05	9:12	9:17
G14	8:45	8:54	-	9:04	9:09	9:14	9:20	9:28	-	-	9:34	9:39
G12	9:00	-	9:06	9:15	9:22	-	-	-	9:28	9:35	9:42	9:47
G14	9:15	9:24	-	9:34	9:39	9:44	9:50	9:58	-	-	10:04	10:09
G12	9:30	-	9:36	9:45	9:52	-	-	-	9:58	10:05	10:12	10:17
G14	9:45	9:54	-	10:02	10:07	10:10	10:17	10:25	-	-	10:31	10:37
G12	10:15	-	10:20	10:28	10:35	-	-	-	10:41	10:48	10:56	11:02
G14	10:45	10:54	-	11:02	11:07	11:10	11:17	11:25	-	-	11:31	11:37
G12	11:15	-	11:20	11:28	11:35	-	-	-	11:41	11:48	11:56	12:02
G14	11:45	11:54	-	12:02	12:07	12:10	12:17	12:25	-	-	12:31	12:37
PM Service — Servicio vespertino												
G12	12:15	-	12:20	12:28	12:35	-	-	-	12:41	12:48	12:56	1:02
G14	12:45	12:54	-	1:02	1:07	1:10	1:17	1:25	-	-	1:31	1:37
G12	1:15	-	1:20	1:28	1:35	-	-	-	1:41	1:48	1:56	2:02
G14	1:45	1:54	-	2:02	2:07	2:10	2:17	2:25	-	-	2:31	2:37
G12	2:15	-	2:20	2:28	2:35	-	-	-	2:41	2:48	2:56	3:02
G14	2:45	2:56	-	3:04	3:09	3:13	3:19	3:27	-	-	3:34	3:40
G12	3:00	-	3:06	3:16	3:24	-	-	-	3:30	3:37	3:46	3:52
G14	3:15	3:26	-	3:34	3:39	3:43	3:49	3:57	-	-	4:04	4:10
G12	3:30	-	3:36	3:46	3:54	-	-	-	4:00	4:07	4:16	4:22
G14	3:45	3:56	-	4:04	4:09	4:13	4:19	4:27	-	-	4:34	4:40
G12	4:00	-	4:06	4:16	4:24	-	-	-	4:30	4:37	4:46	4:52
G14	4:15	4:26	-	4:34	4:39	4:43	4:49	4:57	-	-	5:04	5:10
G12	4:30	-	4:36	4:46	4:54	-	-	-	5:00	5:07	5:16	5:22
G14	4:45	4:56	-	5:04	5:09	5:13	5:19	5:27	-	-	5:34	5:40
G12	5:00	-	5:06	5:16	5:24	-	-	-	5:30	5:37	5:46	5:52
G14	5:15	5:26	-	5:34	5:39	5:43	5:49	5:57	-	-	6:04	6:10
G12	5:30	-	5:36	5:46	5:54	-	-	-	6:00	6:07	6:16	6:22
G14	5:45	5:56	-	6:04	6:09	6:13	6:19	6:27	-	-	6:34	6:40
G12	6:00	-	6:06	6:16	6:24	-	-	-	6:30	6:37	6:46	6:52
G14	6:15	6:26	-	6:34	6:39	6:43	6:49	6:57	-	-	7:04	7:10
G12	6:30	-	6:36	6:46	6:54	-	-	-	7:00	7:07	7:16	7:22
G14	6:45	6:55	-	7:02	7:07	7:11	7:17	7:25	-	-	7:30	7:35
G12	7:00	-	7:06	7:15	7:22	-	-	-	7:27	7:33	7:39	7:44
G14	7:15	7:25	-	7:32	7:37	7:41	7:47	7:55	-	-	8:00	8:05
G12	7:45	-	7:51	8:00	8:07	-	-	-	8:12	8:18	8:24	8:29
G14	8:15	8:25	-	8:32	8:37	8:41	8:47	8:55	-	-	9:00	9:05
G12	8:45	-	8:51	9:00	9:07	-	-	-	9:12	9:18	9:24	9:29
G14	9:15	9:25	-	9:32	9:37	9:41	9:47	9:55	-	-	10:00	10:05
G12	9:45	-	9:50	9:58	10:03	-	-	-	10:08	10:13	10:19	10:25
G14	10:15	10:25	-	10:29	10:34	10:38	10:44	10:52	-	-	10:57	11:02
G12/	11:00	-	11:05	11:13	-	-	-	-	-	-	-	-
❍ **G12/**	11:35	-	11:40	11:48	-	-	-	-	-	-	-	-

■ — *Buses are timed at stop under parking garage.*
Estas horas son las de la parada del autobús que está debajo del garaje del estacionamiento.

● — *These trips do not loop through shopping center. Use stops on Greenbelt Road.*
Estos viajes no darán vuelta a través del centro comercial. Use las paradas de la calle Greenbelt Road.

❍ — *Trip terminates on Lakecrest Dr. north of Greenbelt Rd.*
El viaje termina el servicio en Lakecrest Dr. al norte de Greenbelt Rd.

G12,14

Greenbelt-New Carrollton Line

Effective Sunday, August 23, 2020
A partir del domingo, 23 de agosto de 2020

► Westbound to Greenbelt station

Monday thru Friday — Lunes a viernes

Route Number	New Carrollton (Metro)	Annapolis Rd. & 85th Ave.	Doctors Community Hospital	Ora Glen Dr. & Mandan Rd.	Cipriano Rd. & Tuckerman St.	Goddard Corporate Park	Greenbelt Rd. at NASA Main Gate	Greenbelt Rd. opposite Greenway Shopping Center	Crescent Rd. & Gardenway (Roosevelt Center)	Ivy La. & Ridge Rd.	Beltway Plaza ■	GREENBELT (Metro)
AM Service — Servicio matutino												
G14	5:00	5:04	-	-	5:09	5:17	5:24	5:28	5:33	-	●	5:44
G12	5:15	5:19	5:26	5:33	-	-	-	5:39	5:46	5:51	-	5:55
G14	5:30	5:34	-	-	5:39	5:47	5:54	5:58	6:03	-	●	6:14
G12	5:45	5:49	5:56	6:03	-	-	-	6:09	6:16	6:21	-	6:25
G14	6:00	6:04	-	-	6:09	6:17	6:24	6:28	6:33	-	●	6:44
G12	6:15	6:20	6:29	6:36	-	-	-	6:44	6:51	6:57	-	7:02
G14	6:30	6:35	-	-	6:40	6:49	6:57	7:01	7:08	-	●	7:20
G12	6:45	6:50	6:59	7:06	-	-	-	7:14	7:21	7:27	-	7:32
G14	7:00	7:05	-	-	7:10	7:19	7:27	7:31	7:38	-	7:47	7:53
G12	7:15	7:20	7:29	7:36	-	-	-	7:44	7:51	7:57	-	8:02
G14	7:30	7:35	-	-	7:40	7:49	7:57	8:01	8:08	-	8:17	8:23
G12	7:45	7:51	7:59	8:07	-	-	-	8:14	8:22	8:27	-	8:32
G14	8:00	8:06	-	-	8:11	8:20	8:27	8:33	8:39	-	8:48	8:54
G12	8:15	8:21	8:29	8:37	-	-	-	8:44	8:52	8:57	-	9:02
G14	8:30	8:36	-	-	8:41	8:50	8:57	9:03	9:09	-	9:18	9:24
G12	8:45	8:51	8:59	9:07	-	-	-	9:14	9:22	9:27	-	9:32
G14	9:15	9:21	-	-	9:26	9:35	9:42	9:48	9:54	-	10:03	10:09
G12	9:45	9:51	9:59	10:07	-	-	-	10:14	10:22	10:27	-	10:32
G14	10:15	10:21	-	-	10:26	10:35	10:42	10:48	10:54	-	11:03	11:09
G12	10:45	10:51	10:59	11:07	-	-	-	11:14	11:22	11:27	-	11:32
G14	11:15	11:21	-	-	11:26	11:35	11:42	11:48	11:54	-	12:03	12:09
G12	11:45	11:51	11:59	12:07	-	-	-	12:14	12:22	12:27	-	12:32
PM Service — Servicio vespertino												
G14	12:15	12:21	-	-	12:26	12:35	12:42	12:48	12:54	-	1:03	1:09
G12	12:45	12:51	12:59	1:07	-	-	-	1:14	1:22	1:27	-	1:32
G14	1:15	1:21	-	-	1:26	1:35	1:42	1:48	1:54	-	2:03	2:09
G12	1:45	1:51	2:00	2:07	-	-	-	2:13	2:22	2:26	-	2:31
G14	2:00	2:06	-	-	2:11	2:20	2:28	2:32	2:41	-	2:50	2:55
G12	2:15	2:21	2:30	2:37	-	-	-	2:43	2:52	2:56	-	3:01
G14	2:30	2:36	-	-	2:41	2:50	2:58	3:02	3:11	-	3:20	3:25
G12	2:45	2:51	3:00	3:07	-	-	-	3:13	3:22	3:26	-	3:31
G14	3:00	3:06	-	-	3:11	3:20	3:28	3:32	3:41	-	3:50	3:55
G12	3:15	3:21	3:30	3:37	-	-	-	3:43	3:52	3:56	-	4:01
G14	3:30	3:37	-	-	3:43	3:53	4:01	4:06	4:13	-	4:22	4:29
G12	3:45	3:52	4:02	4:10	-	-	-	4:17	4:25	4:29	-	4:35
G14	4:00	4:07	-	-	4:13	4:23	4:31	4:36	4:43	-	4:52	4:59
G12	4:15	4:22	4:32	4:40	-	-	-	4:47	4:55	4:59	-	5:05
G14	4:30	4:37	-	-	4:43	4:53	5:01	5:06	5:13	-	5:22	5:29
G12	4:45	4:52	5:02	5:10	-	-	-	5:17	5:25	5:29	-	5:35
G14	5:00	5:07	-	-	5:13	5:23	5:31	5:36	5:43	-	5:52	5:59
G12	5:15	5:22	5:32	5:40	-	-	-	5:47	5:55	5:59	-	6:05
G14	5:30	5:37	-	-	5:43	5:53	6:01	6:06	6:13	-	6:22	6:29
G12	5:45	5:52	6:02	6:10	-	-	-	6:17	6:25	6:29	-	6:35
G14	6:00	6:07	-	-	6:13	6:23	6:31	6:36	6:43	-	6:52	6:59
G12	6:15	6:22	6:32	6:40	-	-	-	6:47	6:55	6:59	-	7:05
G14	6:45	6:51	-	-	6:56	7:06	7:14	7:18	7:24	-	7:31	7:38
G12	7:15	7:21	7:29	7:36	-	-	-	7:42	7:48	7:52	-	7:57
G14	7:45	7:51	-	-	7:56	8:06	8:14	8:18	8:24	-	8:31	8:38
G12	8:15	8:21	8:29	8:36	-	-	-	8:42	8:48	8:52	-	8:57
G14	8:45	8:51	-	-	8:56	9:06	9:14	9:18	9:24	-	9:31	9:38
G12	9:15	9:21	9:29	9:36	-	-	-	9:42	9:48	9:52	-	9:57
▲G14	-	-	-	-	-	-	-	-	11:20	-	-	11:30

■ — *Buses are timed at stop under parking garage.*
Estas horas son las de la parada del autobús que está debajo del garaje del estacionamiento.

● — *These trips do not loop through shopping center. Use stops on Greenbelt Road.*
Estos viajes no darán vuelta a través del centro comercial. Use las paradas de la calle Greenbelt Road.

▲ — *This trip serves the stop at Crescent Rd. & Gardenway normally served by trips going to New Carrollton station. It does not serve regular G14 stops east of Southway.*
Este viaje provee servicio a la parada de Crecent Rd. & Gardenway, la cual normalmente ofrece viajes a usuarios que van a la estación de Metrorail de New Carrollton. Este viaje no proveerá servicio a las paradas regulares de la ruta G14 al este de Southway.

G12,14

Greenbelt-New Carrollton Line

Effective Sunday, August 23, 2020
A partir del domingo, 23 de agosto de 2020

Eastbound to New Carrollton station

Saturday — En sábados

Route Number	Greenbelt Metro	Beltway Plaza ■	Ivy La. & Ridge Rd.	Crescent Rd. & Gardenway (Roosevelt Center)	Greenbelt Rd. at Greenway Shopping Center	Greenbelt Rd. opposite NASA Main Gate	Goddard Corporate Park	Cipriano Rd. & Tuckerman St.	Ora Glen Dr. & Mandan Rd.	Doctors Community Hospital	Annapolis Rd. & 85th Ave.	NEW CARROLLTON Metro
AM Service — Servicio matutino												
G14	6:30	6:39	-	6:48	6:52	6:55	7:01	7:09	-	-	7:14	7:19
G12	7:00	-	7:05	7:11	7:17	-	-	-	7:22	7:28	7:35	7:40
G14	7:30	7:39	-	7:48	7:52	7:55	8:01	8:09	-	-	8:14	8:19
G12	8:00	-	8:05	8:11	8:17	-	-	-	8:22	8:28	8:35	8:40
G14	8:30	8:39	-	8:48	8:52	8:55	9:01	9:09	-	-	9:14	9:19
G12	9:00	-	9:05	9:11	9:17	-	-	-	9:22	9:28	9:35	9:40
G14	9:30	9:39	-	9:48	9:52	9:55	10:01	10:09	-	-	10:14	10:19
G12	10:00	-	10:05	10:11	10:17	-	-	-	10:22	10:28	10:35	10:40
G14	10:30	10:39	-	10:48	10:52	10:55	11:01	11:09	-	-	11:14	11:19
G12	11:00	-	11:05	11:11	11:17	-	-	-	11:22	11:28	11:35	11:40
G14	11:30	11:40	-	11:50	11:54	11:58	12:05	12:12	-	-	12:18	12:23
PM Service — Servicio vespertino												
G12	12:00	-	12:05	12:14	12:21	-	-	-	12:26	12:33	12:41	12:46
G14	12:30	12:40	-	12:50	12:54	12:58	1:05	1:12	-	-	1:18	1:23
G12	1:00	-	1:05	1:14	1:21	-	-	-	1:26	1:33	1:41	1:46
G14	1:30	1:40	-	1:50	1:54	1:58	2:05	2:12	-	-	2:18	2:23
G12	2:00	-	2:05	2:14	2:21	-	-	-	2:26	2:33	2:41	2:46
G14	2:30	2:40	-	2:50	2:54	2:58	3:05	3:12	-	-	3:18	3:23
G12	3:00	-	3:05	3:14	3:21	-	-	-	3:26	3:33	3:41	3:46
G14	3:30	3:40	-	3:50	3:54	3:58	4:05	4:12	-	-	4:18	4:23
G12	4:00	-	4:05	4:14	4:21	-	-	-	4:26	4:33	4:41	4:46
G14	4:30	4:40	-	4:50	4:54	4:58	5:05	5:12	-	-	5:18	5:23
G12	5:00	-	5:05	5:14	5:21	-	-	-	5:26	5:33	5:41	5:46
G14	5:30	5:40	-	5:50	5:54	5:58	6:05	6:12	-	-	6:18	6:23
G12	6:00	-	6:05	6:14	6:21	-	-	-	6:26	6:33	6:41	6:46
G14	6:30	6:40	-	6:50	6:54	6:58	7:05	7:12	-	-	7:18	7:23
G12	7:00	-	7:05	7:13	7:19	-	-	-	7:24	7:31	7:37	7:42
G14	7:30	7:39	-	7:45	7:49	7:53	7:59	8:07	-	-	8:13	8:18
G12	8:00	-	8:05	8:13	8:19	-	-	-	8:24	8:31	8:37	8:42
G14	8:30	8:39	-	8:45	8:49	8:53	8:59	9:07	-	-	9:13	9:18
G12	9:00	-	9:05	9:13	9:19	-	-	-	9:24	9:31	9:37	9:42
G14	9:30	9:39	-	9:45	9:49	9:53	9:59	10:07	-	-	10:13	10:18
G12	10:00	-	10:05	10:13	10:19	-	-	-	10:24	10:31	10:37	10:42

■ — *Buses are timed at stop under parking garage.*
Estas horas son las de la parada del autobús que está debajo del garaje del estacionamiento.

On Columbus Day and Veterans Day, Metrobus will run on a Saturday schedule. On these holidays, this route will operate on a Saturday schedule.

Metrobus dará servicio con horario de sábado durante los días festivos de Columbus y Veterans Day. Esta ruta operará con un horario de sábado durante esos días festivos.

G12,14

Greenbelt-New Carrollton Line

Effective Sunday, August 23, 2020
A partir del domingo, 23 de agosto de 2020

Westbound to Greenbelt station

Saturday — En sábados

Route Number	New Carrollton (Metro)	Annapolis Rd. & 85th Ave.	Doctors Community Hospital	Ora Glen Dr. & Mandan Rd.	Cipriano Rd. & Tuckerman St.	Goddard Corporate Park	Greenbelt Rd. at NASA Main Gate	Greenbelt Rd. opposite Greenway Shopping Center	Crescent Rd. & Gardenway (Roosevelt Center)	Ivy La. & Ridge Rd.	Beltway Plaza ■	GREENBELT (Metro)
AM Service — Servicio matutino												
G12	6:30	6:35	6:42	6:50	-	-	-	6:56	7:05	7:09	-	7:13
G14	7:00	7:05	-	-	7:10	7:18	7:24	7:29	7:35	-	7:43	7:48
G12	7:30	7:35	7:42	7:50	-	-	-	7:56	8:05	8:09	-	8:13
G14	8:00	8:05	-	-	8:10	8:18	8:24	8:29	8:35	-	8:43	8:48
G12	8:30	8:35	8:42	8:50	-	-	-	8:56	9:05	9:09	-	9:13
G14	9:00	9:05	-	-	9:10	9:18	9:24	9:29	9:35	-	9:43	9:48
G12	9:30	9:35	9:42	9:50	-	-	-	9:56	10:05	10:09	-	10:13
G14	10:00	10:05	-	-	10:10	10:18	10:24	10:29	10:35	-	10:43	10:48
G12	10:30	10:35	10:42	10:50	-	-	-	10:56	11:05	11:09	-	11:13
G14	11:00	11:06	-	-	11:11	11:19	11:26	11:30	11:36	-	11:45	11:51
G12	11:30	11:36	11:44	11:52	-	-	-	11:58	12:07	12:11	-	12:16
PM Service — Servicio vespertino												
G14	12:00	12:06	-	-	12:11	12:19	12:26	12:30	12:36	-	12:45	12:51
G12	12:30	12:36	12:44	12:52	-	-	-	12:58	1:07	1:11	-	1:16
G14	1:00	1:06	-	-	1:11	1:19	1:26	1:30	1:36	-	1:45	1:51
G12	1:30	1:36	1:44	1:52	-	-	-	1:58	2:07	2:11	-	2:16
G14	2:00	2:06	-	-	2:11	2:19	2:26	2:30	2:36	-	2:45	2:51
G12	2:30	2:36	2:44	2:52	-	-	-	2:58	3:07	3:11	-	3:16
G14	3:00	3:06	-	-	3:11	3:19	3:26	3:30	3:36	-	3:45	3:51
G12	3:30	3:36	3:44	3:52	-	-	-	3:58	4:07	4:11	-	4:16
G14	4:00	4:06	-	-	4:11	4:19	4:26	4:30	4:36	-	4:45	4:51
G12	4:30	4:36	4:44	4:52	-	-	-	4:58	5:07	5:11	-	5:16
G14	5:00	5:06	-	-	5:11	5:19	5:26	5:30	5:36	-	5:45	5:51
G12	5:30	5:36	5:44	5:52	-	-	-	5:58	6:07	6:11	-	6:16
G14	6:00	6:06	-	-	6:11	6:19	6:26	6:30	6:36	-	6:45	6:51
G12	6:30	6:36	6:44	6:52	-	-	-	6:58	7:07	7:11	-	7:16
G14	7:00	7:05	-	-	7:09	7:17	7:23	7:27	7:33	-	7:41	7:47
G12	7:30	7:35	7:43	7:50	-	-	-	7:55	8:04	8:08	-	8:12
G14	8:00	8:05	-	-	8:09	8:17	8:23	8:27	8:33	-	8:41	8:47
G12	8:30	8:35	8:43	8:50	-	-	-	8:55	9:04	9:08	-	9:12
G14	9:00	9:05	-	-	9:09	9:17	9:23	9:27	9:33	-	9:41	9:47
G12	9:30	9:35	9:43	9:50	-	-	-	9:55	10:04	10:08	-	10:12
G14	10:00	10:05	-	-	10:09	10:17	10:23	10:27	10:33	-	10:41	10:47

■ — *Buses are timed at stop under parking garage.*
Estas horas son las de la parada del autobús que está debajo del garaje del estacionamiento.

On Columbus Day and Veterans Day, Metrobus will run on a Saturday schedule. On these holidays, this route will operate on a Saturday schedule.

Metrobus dará servicio con horario de sábado durante los días festivos de Columbus y Veterans Day. Esta ruta operará con un horario de sábado durante esos días festivos.

G12,14

Greenbelt-New Carrollton Line

Effective Sunday, August 23, 2020

A partir del domingo, 23 de agosto de 2020

Eastbound to New Carrollton station

Sunday — En domingo

Route Number	Green-belt M	Beltway Plaza ■	Ivy La. & Ridge Rd.	Crescent Rd. & Garden-way (Roosevelt Center)	Greenbelt Rd. at Greenway Shopping Center	Greenbelt Rd. opposite NASA Main Gate	Goddard Corporate Park	Cipriano Rd. & Tucker-man St.	Ora Glen Dr. & Mandan Rd.	Doctors Com-munity Hospital	Annapolis Rd. & 85th Ave.	NEW CAR-ROLL-TON M
AM Service — Servicio matutino												
G12	8:00	-	8:05	8:13	8:19	-	-	-	8:24	8:30	8:37	8:42
G14	8:30	8:39	-	8:48	8:52	8:55	9:01	9:09	-	-	9:14	9:19
G12	9:00	-	9:05	9:13	9:19	-	-	-	9:24	9:30	9:37	9:42
G14	9:30	9:39	-	9:48	9:52	9:55	10:01	10:09	-	-	10:14	10:19
G12	10:00	-	10:05	10:13	10:19	-	-	-	10:24	10:30	10:37	10:42
G14	10:30	10:39	-	10:48	10:52	10:55	11:01	11:09	-	-	11:14	11:19
G12	11:00	-	11:05	11:13	11:19	-	-	-	11:24	11:30	11:37	11:42
G14	11:30	11:40	-	11:50	11:54	11:58	12:05	12:12	-	-	12:18	12:23
PM Service — Servicio vespertino												
G12	12:00	-	12:05	12:14	12:21	-	-	-	12:26	12:33	12:41	12:46
G14	12:30	12:40	-	12:50	12:54	12:58	1:05	1:12	-	-	1:18	1:23
G12	1:00	-	1:05	1:14	1:21	-	-	-	1:26	1:33	1:41	1:46
G14	1:30	1:40	-	1:50	1:54	1:58	2:05	2:12	-	-	2:18	2:23
G12	2:00	-	2:05	2:14	2:21	-	-	-	2:26	2:33	2:41	2:46
G14	2:30	2:40	-	2:50	2:54	2:58	3:05	3:12	-	-	3:18	3:23
G12	3:00	-	3:05	3:14	3:21	-	-	-	3:26	3:33	3:41	3:46
G14	3:30	3:40	-	3:50	3:54	3:58	4:05	4:12	-	-	4:18	4:23
G12	4:00	-	4:05	4:14	4:21	-	-	-	4:26	4:33	4:41	4:46
G14	4:30	4:40	-	4:50	4:54	4:58	5:05	5:12	-	-	5:18	5:23
G12	5:00	-	5:05	5:14	5:21	-	-	-	5:26	5:33	5:41	5:46
G14	5:30	5:40	-	5:50	5:54	5:58	6:05	6:12	-	-	6:18	6:23
G12	6:00	-	6:05	6:14	6:21	-	-	-	6:26	6:33	6:41	6:46
G14	6:30	6:40	-	6:50	6:54	6:58	7:05	7:12	-	-	7:18	7:23
G12	7:00	-	7:05	7:13	7:19	-	-	-	7:24	7:31	7:37	7:42
G14	7:30	7:39	-	7:45	7:49	7:53	7:59	8:07	-	-	8:13	8:18
G12	8:00	-	8:05	8:13	8:19	-	-	-	8:24	8:31	8:37	8:42

■ — *Buses are timed at stop under parking garage.*
Estas horas son las de la parada del autobús que está debajo del garaje del estacionamiento.

G12,14

Greenbelt-New Carrollton Line

Effective Sunday, August 23, 2020

A partir del domingo, 23 de agosto de 2020

Westbound to Greenbelt station

Sunday — En domingo

Route Number	New Carrollton	Annapolis Rd. & 85th Ave.	Doctors Community Hospital	Ora Glen Dr. & Mandan Rd.	Cipriano Rd. & Tuckerman St.	Goddard Corporate Park	Greenbelt Rd. at NASA Main Gate	Greenbelt Rd. opposite Greenway Shopping Center	Crescent Rd. & Gardenway (Roosevelt Center)	Ivy La. & Ridge Rd.	Beltway Plaza ■	GREENBELT
AM Service — Servicio matutino												
G14	8:00	8:05	-	-	8:10	8:18	8:24	8:29	8:35	-	8:43	8:48
G12	8:30	8:35	8:42	8:50	-	-	-	8:56	9:05	9:09	-	9:13
G14	9:00	9:05	-	-	9:10	9:18	9:24	9:29	9:35	-	9:43	9:48
G12	9:30	9:35	9:42	9:50	-	-	-	9:56	10:05	10:09	-	10:13
G14	10:00	10:05	-	-	10:10	10:18	10:24	10:29	10:35	-	10:43	10:48
G12	10:30	10:35	10:42	10:50	-	-	-	10:56	11:05	11:09	-	11:13
G14	11:00	11:06	-	-	11:11	11:19	11:26	11:30	11:36	-	11:45	11:51
G12	11:30	11:36	11:44	11:52	-	-	-	11:58	12:07	12:11	-	12:16
PM Service — Servicio vespertino												
G14	12:00	12:06	-	-	12:11	12:19	12:26	12:30	12:36	-	12:45	12:51
G12	12:30	12:36	12:44	12:52	-	-	-	12:58	1:07	1:11	-	1:16
G14	1:00	1:06	-	-	1:11	1:19	1:26	1:30	1:36	-	1:45	1:51
G12	1:30	1:36	1:44	1:52	-	-	-	1:58	2:07	2:11	-	2:16
G14	2:00	2:06	-	-	2:11	2:19	2:26	2:30	2:36	-	2:45	2:51
G12	2:30	2:36	2:44	2:52	-	-	-	2:58	3:07	3:11	-	3:16
G14	3:00	3:06	-	-	3:11	3:19	3:26	3:30	3:36	-	3:45	3:51
G12	3:30	3:36	3:44	3:52	-	-	-	3:58	4:07	4:11	-	4:16
G14	4:00	4:06	-	-	4:11	4:19	4:26	4:30	4:36	-	4:45	4:51
G12	4:30	4:36	4:44	4:52	-	-	-	4:58	5:07	5:11	-	5:16
G14	5:00	5:06	-	-	5:11	5:19	5:26	5:30	5:36	-	5:45	5:51
G12	5:30	5:36	5:44	5:52	-	-	-	5:58	6:07	6:11	-	6:16
G14	6:00	6:06	-	-	6:11	6:19	6:26	6:30	6:36	-	6:45	6:51
G12	6:30	6:36	6:44	6:52	-	-	-	6:58	7:07	7:11	-	7:16
G14	7:00	7:05	-	-	7:09	7:17	7:23	7:27	7:33	-	7:41	7:47
G12	7:30	7:35	7:43	7:50	-	-	-	7:55	8:04	8:08	-	8:12
G14	8:00	8:05	-	-	8:09	8:17	8:23	8:27	8:33	-	8:41	8:47

■ — *Buses are timed at stop under parking garage.*
Estas horas son las de la parada del autobús que está debajo del garaje del estacionamiento.

WEEKDAY SCHEDULE

PENN LINE NORTHBOUND

Effective September 8, 2020

TRAIN NUMBER			554	400	502	404	408	410 R	610	612 R	412	414 R	416 R	418	520 R	422	424 R	426 Q/R	428* Q	430	532 Q/R	634 Q/R	536* Q/R	438 Q	440 Q/R	642 Q/R	544 Q/R	446 Q	448 Q/R	548	452
*Trains **DO NOT** stop at BWI Airport.			AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM
Washington	♿	DP	-	5:42	6:10	6:30	7:00	7:10	7:55	8:20	8:40	9:15	10:15	11:15	12:15	1:15	2:15	3:15	4:08	4:15	4:17	4:45	5:10	5:20	5:25	5:58	6:23	7:01	8:00	9:00	10:55
New Carrollton	♿	DP	-	5:53	6:21	6:41	-	7:21	8:06	8:31	8:51	9:26	10:26	11:26	12:26	1:26	2:26	3:28	4:20	-	4:29	4:55	5:21	-	5:37	6:13	6:35	7:12	8:11	9:11	11:06
Seabrook	♿	DP	-	5:57	6:25	-	-	7:25	-	8:35	8:55	9:30	10:30	11:30	12:30	1:30	2:30	3:32	4:24	-	4:33	4:59	-	-	5:41	6:17	6:39	7:16	8:15	9:15	11:10
Bowie State Univ.	♿	DP	-	6:03	6:31	-	-	7:31	8:17	8:41	9:01	9:36	10:36	11:36	12:36	1:36	2:36	3:39	4:31	-	4:40	5:06	-	-	5:48	6:24	6:45	7:22	8:21	9:21	11:16
Odenton	♿	DP	-	6:09	6:37	6:55	-	7:37	8:23	8:47	9:07	9:42	10:42	11:42	12:42	1:42	2:42	3:47	L4:39	-	4:48	5:14	L5:35	-	5:56	6:32	6:51	7:28	8:27	9:27	11:22
BWI Airport	♿	DP	-	6:16	6:44	7:02	-	7:47	8:32	8:54	9:14	9:49	10:49	11:49	12:49	1:49	2:49	3:58	-	L4:41	R	5:27	R	L5:46	6:05	6:41	6:58	7:37	8:36	9:34	11:29
Halethorpe	♿	DP	-	-	-	-	-	7:53	8:38	9:00	L9:20	9:55	10:55	11:55	12:55	1:55	2:55	4:04	-	L4:47	R	L5:31	R	L5:52	6:11	6:47	7:04	7:43	8:42	9:40	L11:35
West Baltimore		DP	-	L6:26	L6:54	-	-	L7:59	L8:44	L9:06	L9:26	L10:01	L11:01	L12:01	1:01	L2:01	L3:01	L4:11	-	L4:54	R	L5:37	-	L5:58	L6:21	L6:54	7:10	L7:49	L8:48	9:46	L11:41
Baltimore/Penn	♿	DP	5:25	6:40	7:06	7:23	7:41	8:13	L8:56	L9:18	9:42	10:15	11:15	12:15	1:20	2:15	3:15	4:24	5:01	5:06	5:11	L5:47	5:58	6:14	6:39	L7:07	7:24	8:01	9:00	10:00	11:55
Martin Airport		DP	-	-	L7:18	-	-	-	9:17	9:39	-	-	-	-	L1:32	-	-	-	-	-	L5:21	6:10	L6:09	-	-	7:28	L7:36	-	-	L10:12	-
Edgewood	♿				L7:36*											-	-	-	-	-	L5:32	-	L6:21	-	-	-	L7:49	-	-	L10:25	-
Aberdeen	♿	DP	L6:05	-	L7:44*	-	-	-	-	-	-	-	-	-	L1:57	-	-	-	-	-	L5:44	-	L6:31	-	-	-	L7:57	-	-	L10:33	-
Perryville	♿															-	-	-	-	-	5:55	-	6:42	-	-		8:09	-	-	10:45	-

PENN LINE SOUTHBOUND

														421 Q/R	423	525 Q/R	427 R	429	431 R	433	435 R	537 R	439	641 R	443 R	445	447	449 R	579	451	453
			AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM
	♿													-													-				
Aberdeen	♿	DP	-	-	4:33	-	-	-	5:53	-	-	6:38	-	-	-	8:38	-	-	-	-	-	2:42	-	-	-	-	-	-	6:33	-	-
Edgewood	♿	DP			4:43				6:03			6:48		-													-				
Martin Airport		DP	-	-	4:55	-	5:45	-	6:15	-	-	7:00	-	-	-	9:00	-	-	-	-	-	3:02	-	3:50	-	-	-	-	6:55	-	-
Baltimore/Penn	♿					5:35	6:01	6:15	6:30	6:40	7:00	7:20	7:45	8:15													5:50				
West Baltimore		DP	4:17	4:52	5:18	5:43	-	6:23	R	6:48	7:08	7:28	7:53	8:23	8:58	9:22	10:35	11:42	12:42	1:37	2:42	-	3:52	R	-	-	5:56	R	-	-	9:42
Halethorpe	♿													8:30										R			6:01	R			
BWI Airport	♿	DP	4:30	5:05	5:32	5:57	-	6:37	6:44	7:02	7:22	7:42	8:07	8:37	9:12	9:35	10:48	11:55	12:55	1:50	2:55	3:39	4:05	4:32	5:06	5:49P	6:06	6:49	-	7:49	9:55
Odenton	♿	DP	4:37	5:12	5:39	6:04		6:44	6:51	7:09	7:29			8:44													-				
Bowie State Univ.	♿	DP	4:43	5:18	5:46	6:11	-	-	6:58	7:16	7:36	R	8:21	8:51	9:26	9:48	11:01	12:08	1:08	2:03	3:08	-	4:18	4:45	5:19	6:03P	-	7:02	-	8:02	10:08
Seabrook	♿		4:49	5:24		6:17			7:04	7:22	7:42	R	8:27	8:57										R			-	R			
New Carrollton	♿	DP	L4:53	L5:28	L5:56	L6:23	-	L6:55	L7:10	L7:28	L7:48	L8:03	L8:33	L9:03	L9:36	L9:56	L11:11	L12:18	L1:18	L2:11	L3:18	L3:56	L4:28	L4:53	L5:29	L6:13P	L6:22	L7:10	-	L8:10	10:18
Washington	♿													9:18													6:38				

Tickets purchased on board at a station with a Ticket Vending Machine or ticket agent are subject to a $5.00 penalty.

L - Train may leave 5 minutes early.

Q - Trains operate with a "Quiet Commute" car. No cell phones, electronic devices that make noise or loud conversations. We request a library-like atmosphere in the "Quiet Commute" car. This car is adjacent to the locomotive.

R - ONLY trains designated with an R at the top of the column will operate when limited service conditions or special circumstances warrant. On days of heavy snowfall or other severe weather, MARC will operate this special schedule. Additional stops marked with an R will be made when this schedule is in effect.

🚲 - Train offers bike racks for full-size bicycles. See more bike information below the weekend timetable on the other side.

***** - Train 502 will board passengers at Edgewood and Aberdeen on the southbound platform.

Amtrak has notified MARC Train that they have suspended operation of trains 111, 85, 136/196 and 186 until further notice. As a result, Amtrak-MARC cross honoring to and from Aberdeen station is suspended.

HOLIDAY SERVICE: The Penn Line will operate on the "R" schedule on October 12 (Columbus Day) and November 11 (Veterans Day) and will operate on a Saturday schedule on Friday, November 27 (day after Thanksgiving). There will be no MARC Train service on Labor Day, Thanksgiving Day, Christmas Day, or New Years Day. Operating schedules for the last week of December and first week of January will be posted to the MTA website, www.mta.maryland.gov, no later than December 1.

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Appendix B. MWCOG Planned Projects 2045

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Major Highway Projects

DISTRICT OF COLUMBIA

MAJOR HIGHWAYS

1. I-295 - reconstruct interchange at Malcolm X Blvd, 2020 ($200M)
2. I-395 - remove 3rd St SB exit ramp, reconfigure 3rd St SB entrance and 2nd St NB exit ramps, reconnect F St between 2nd and 3rd St, 2019 ($27M)

LOCAL ROADS

3. South Capitol St - convert to 6 lane urban blvd, incl. Frederick Douglass Bridge Reconstruction, 2021 ($822M)
4. **Lane Reductions/Reconfigurations for Bicycle Lanes, 2018, 2019, 2020, 2024 (not mapped)**

MARYLAND

MAJOR HIGHWAYS

5. I-70 - widen to 6 lanes with interchange at Meadow Rd, 2025, 2035 ($143M)
6. I-95/I-495 - interchange at Greenbelt Metro Sta, 2030 ($196M)
7. **I-95/I-495 Traffic Relief Plan, construct 4 managed lanes, 2025 ($4.2B)**
8. **I-270 Traffic Relief Plan, construct 4 managed lanes, 2025 ($3.4B)**
9. **I-270 - "Innovative Congestion Management" project to includes auxiliary lanes & add'l improvements, 2019 ($114M)**
10. I-270 - interchange at Watkins Mill Rd Ext, 2021 ($120M)
11. Baltimore Washington Parkway (MD-295) at MD-193 (Greenbelt Rd) - intersection improvement, 2020 ($8.5M)
12. Suitland Pkwy - interchange at Rena/ Forestville Rd, 2025 ($2.8M)
13. US-1 (Baltimore Ave) - reconstruct 4 lanes, 2030 ($116M)
14. US-15 (Catoctin Mtn Hwy) - reconstruct intersection at Monocacy Blvd, 2018 ($61M)
15. **US-15 (Frederick Fwy and Catoctin Mtn Hwy) - widen to 6 lanes with interchange at Biggs Ford Rd, 2030, 2040, 2045 ($220M)**
16. **US-29 (Columbia Pke) - improve interchanges at Stewart Ln, Tech Rd/ Industrial Pkwy, Musgrove Rd/Fairland Rd, Greencastle Rd, and Blackburn Rd, 2045 ($646M)**
17. US-50 (John Hanson Hwy) - westbound ramp to Columbia Park Rd, 2025 ($64M)
18. **US-301 (Crain Hwy) - widen to 6 lanes, 2045 ($4.6B)**
19. US-301 - widen Governor Harry Nice Memorial Bridge, 2023 ($768M)

STATE ROUTES

20. MD-3 (Robert Crain Hwy) - widen to 6 lanes, 2035 ($1.8B)
21. MD-4 (Pennsylvania Ave) - widen to 6 lanes with interchanges at Dowerhouse Rd, Westphalia Rd, and Suitland Pkwy, 2040 ($533M)
22. MD-5 (Branch Ave) - upgrade, widen to 6 lanes including interchanges, 2035 ($790M)
23. MD-28 (Norbeck Rd) / MD-198 (Spencerville Rd) - widen to 4, 6 lanes, 2045 ($413M)
24. MD-85 (Buckeystown Pke) - widen to 4, 6 lanes, 2021, 2035 ($220)
25. **MD-97 (Georgia Ave) - widen to 7, 8 lanes, 2025 ($52M)**
26. MD-97 (Brookeville Bypass) - construct 2 lane bypass, 2021 ($52M)
27. MD-117 (Clopper Rd) - widen to 4 lanes, 2030 ($69M)
28. MD-118 (Germantown Rd) - widen to 4 lanes, 2020 ($4.0M)
29. MD-124 (Woodfield Rd) - widen to 6 lanes, 2035 ($129M)
30. MD-197 (Collington Rd) - widen to 4/5 lanes, 2025 ($94M)
31. MD-202 (Landover Rd) - Largo Town Center Metro Access Improvement, reconstruct 6 lanes, 2045 ($24M)
32. MD-210 (Indian Head Hwy) - upgrade to 6 lanes and interchange improvement, 2040 ($754M)
33. MD-223 (Woodyard Rd) - widen to 4 lanes, 2020 ($2.8M)
34. MD-450 (Annapolis Rd) - widen to 4 lanes, 2030 ($67M)

LOCAL ROADS

35. Mid county Hwy Extension (M-83) - construct 4, 6 lanes, 2025 ($202M)
36. Middlebrook Rd Extended - widen to 4 lanes, 2025 ($16M)
37. Montrose Pkwy East - construct 4 lanes, 2025 ($140M)

VIRGINIA

MAJOR HIGHWAYS

38. I-66 HOT (Inside Beltway), revise operations from HOV 2+ to HOT during peak hours and bus service, 2017, 2021, 2040 ($375M)
39. I-66 HOT (Outside Beltway) - widen to 6 lanes (3 general purpose, 2 HOT, and 1 auxiliary) and bus service, 2021, 2040 ($4.4B)
40. I-66 - Extend existing westbound acceleration/ deceleration lane, 2020, 2022 ($59M)
41. I-95/Fairfax County Parkway - enhanced interchanges for BRAC, 2025 ($57M)
42. **I-95 - add southbound auxiliary lane, 2028 ($27M)**
43. I-95/I-495 - reconstruct interchange at Van Dorn St, 2030 ($40M)
44. I-395 HOT - additional lane and revise operation from HOV 3+ during peak to HOT 3+, 2019 ($220M)
45. I-395 - construct new south bound lane, 2018, 2020 ($58M)
46. **I-495 - construct 4 HOT lanes, 2025 ($500M)**
47. I-495 Auxiliary Lanes - construct 2 auxiliary lanes in both directions, 2030
48. I-495 - interchange at VA 267, 2030 ($70M)
49. Dulles Toll Rd (VA-267) - Collector-Distributor Road west-bound, 2037 ($62M)
50. Dulles Toll Rd (VA-267) - Collector-Distributor Road east-bound, 2036 ($124M)
51. Dulles Toll Rd (VA-267) - interchange at New Boone Blvd Extension, 2037 ($79M)
52. Dulles Toll Rd (VA-267) - interchange at Greensboro Drive/Tyco Rd, 2036 ($28M)
53. Dulles Access Rd (VA 267) - widen to 6 lanes including interchange reconstruct at I-495, 2030 ($40M)
54. US-1 (Jefferson Davis Hwy) - widen to 6 lanes, 2040 ($58M)
55. US-1 (Richmond Hwy) - widen to 6 lanes, 2025, 2035 ($37M)
56. US-1 (Richmond Hwy) - widen to 6 lanes, 2024, 2030 ($127M)
57. US-1 (Richmond Hwy) - widen to 6 lanes, 2035 ($125M)
58. US-15 (James Madison Hwy) - widen to 4 lanes, 2024, 2030 ($45M)
59. **US-15 (James Madison Hwy) - widen to 4 lanes, 2022, 2025 ($33M)**
60. US-15 (James Madison Hwy) - widen to 4 lanes, 2030, 2040 ($54M)
61. US-29 (Lee Hwy) - widen to 5 lanes and improve I-66 interchange, 2030 ($255M)
62. US-29 (Lee Hwy) - widen to 3, 6 lanes, 2017, 2025 ($130M)
63. US-50 (Lee Jackson Memorial Hwy) - widen to 6 lanes, 2025 ($100M)
64. US-50 (Arlington Blvd) - widen/reconstruct 6 lanes including interchanges, 2020, 2025 ($249M)

STATE ROUTES

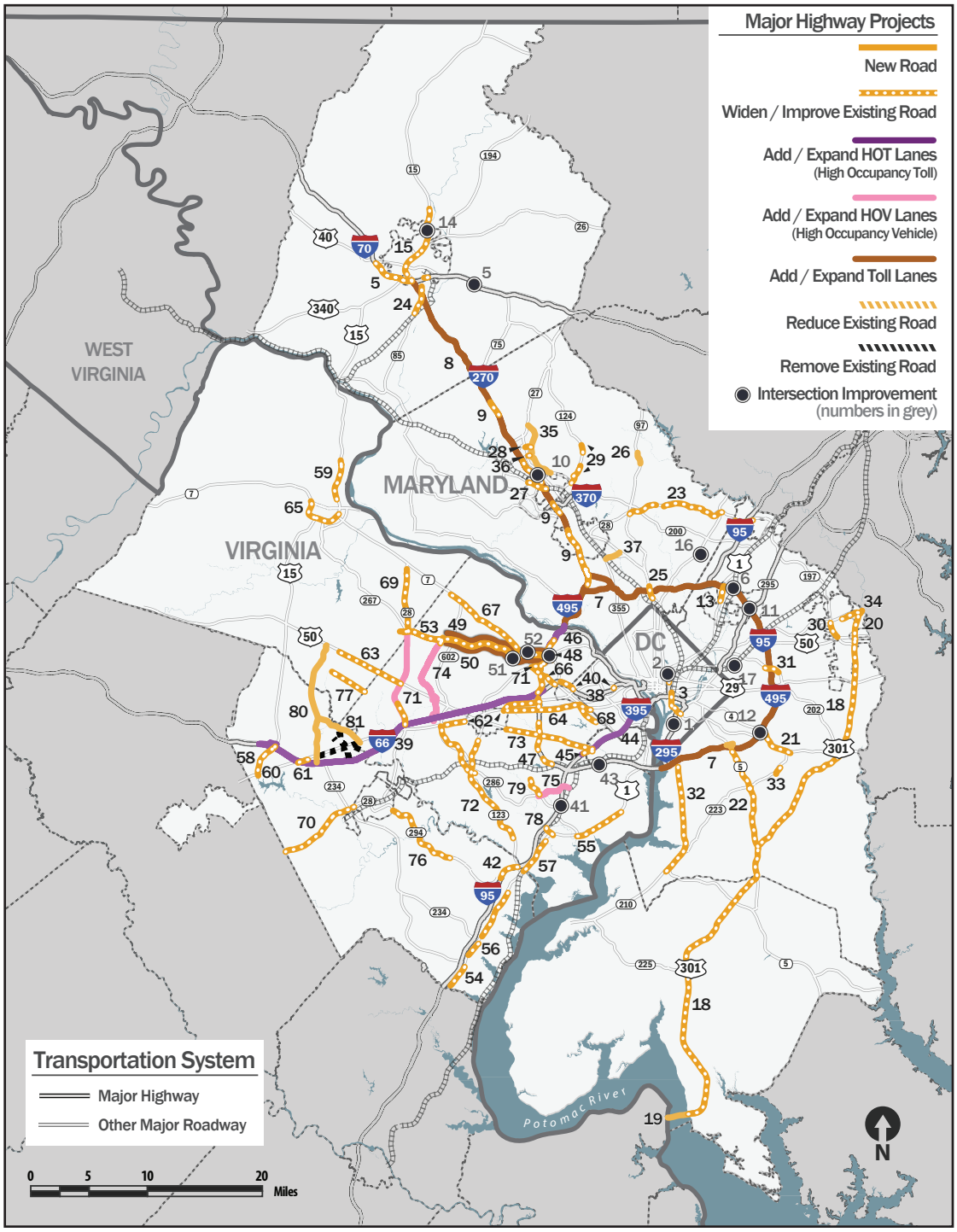
65. VA-7/US-15 Bypass (Harry Byrd Hwy) - widen to 6 lanes, 2035, 2040 ($55M)
66. VA-7 (Leesburg Pke) - widen to 6 lanes, 2021 ($71M)
67. VA-7 (Leesburg Pke) - widen to 6, 8 lanes, 2021, 2025, 2030 ($49M)
68. VA-7 (Leesburg Pke) - widen to 6 lanes, 2020, 2025 ($34M)
69. VA 28 (Sully Rd) HOV, widen to 8-10 lanes, HOV in additional lanes during peak, 2016, 2025, 2040 ($100M)
70. VA-28 (Nokesville Rd) - widen to 4 or 6 lanes, 2019, 2025, 2022, 2040 ($71M)
71. VA-123 (Chain Bridge Rd) - widen to 8 lanes, 2021 ($22M)
72. VA-123 (Ox Road) - widen to 4, 6 lanes, 2020, 2025 ($69.9M)
73. VA-236 (Little River Tpke) - widen to 6 lanes, 2030 ($58M)
74. VA-286 (Fairfax County Pkwy) HOV - widen to 6 lanes, HOV in additional lanes during Peak, 2025, 2035 ($295M)
75. VA-289 (Franconia/ Springfield Parkway), HOV lanes with interchange at Neuman St, 2025 ($16M)
76. VA-294 (Prince William Pkwy) - widen to 6 lanes, 2040 ($263M)
77. **VA-620 (Braddock Rd) - widen to 4 lanes, 2025, 2027 ($165M)**
78. VA-638 (Pohick Rd) - widen to 4 lanes, 2020 ($12M)
79. VA-638 (Rolling Rd) - widen to 4 Lanes, 2025 ($31M)

LOCAL ROADS

80. Manassas Bypass (VA-234 Bypass) - construct 4 lanes, 2040 ($96M)
81. Manassas Battlefield Bypass - construct 4 lanes and close portions of US-29 (Lee Hwy) and VA-234 (Sudley Rd), 2035, 2040 ($28M)

Note: New or significantly changed projects are identified with **bold text**. Costs identified include total project costs which may include additional elements presented in another list(s).

Figure 5.2 Major Highway Projects



Major HOT, HOV, and Toll Lane Projects

Note: New or significantly changed projects are identified with **bold text**. Costs identified include total project costs which may include additional elements presented in another list(s).

*HOT = High-Occupancy Toll Lanes
HOV = High-Occupancy Vehicle Lanes

MARYLAND

MAJOR HIGHWAYS

1. **I-95/I-495 Traffic Relief Plan, construct 4 managed lanes, 2025 ($4.2B)**
2. **I-270 Traffic Relief Plan, construct 4 managed lanes, 2025 ($3.4B)**

VIRGINIA

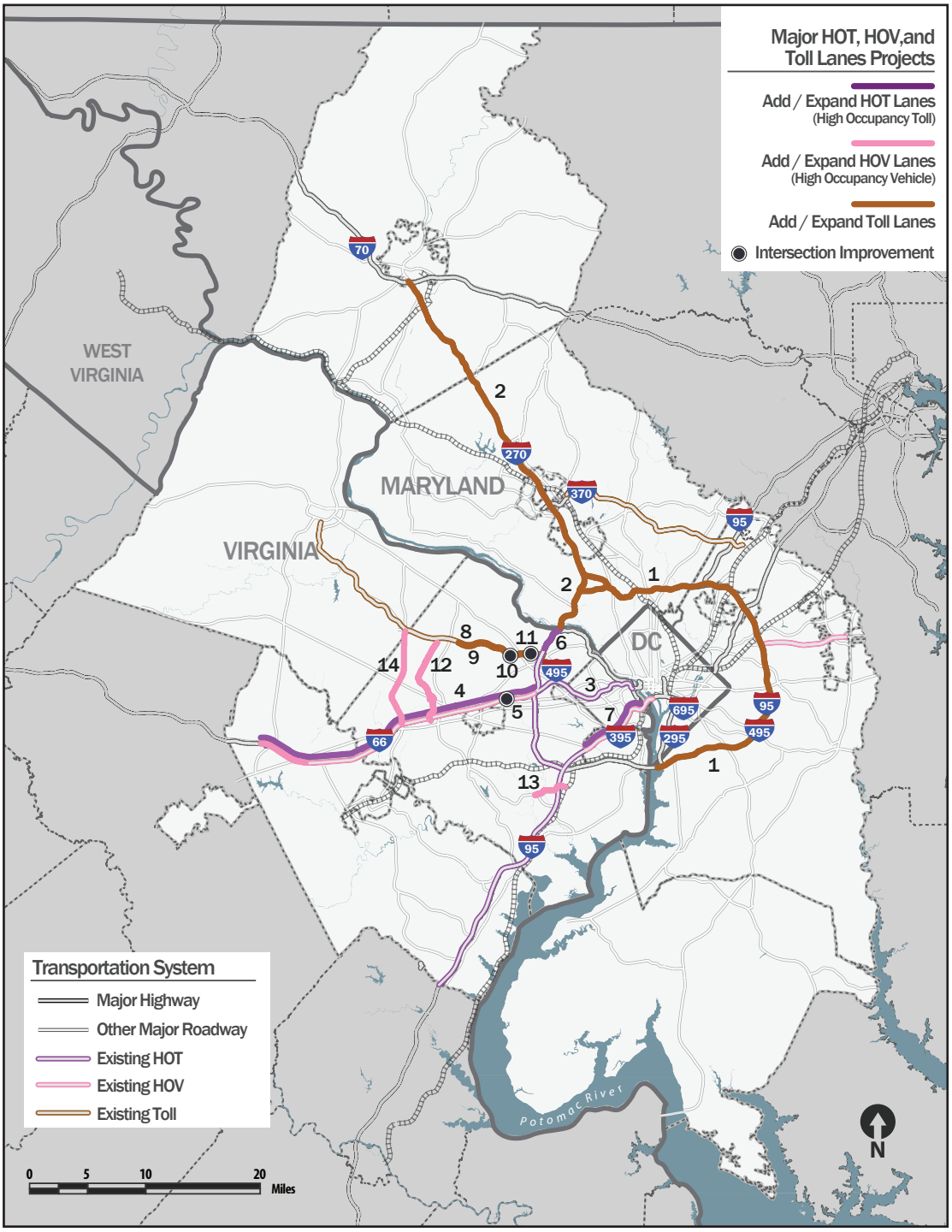
MAJOR HIGHWAYS

3. I-66 HOT (Inside Beltway), revise operations from HOV 2+ to HOT during peak hours and bus service, 2017, 2021, 2040 ($375M)
4. I-66 HOT (Outside Beltway) - widen to 6 lanes (3 general purpose, 2 HOT, and 1 auxiliary) and bus service, 2021, 2040 ($4.4B)
5. I-66 - construct HOV ramps to access Vienna Metro Sta, 2021 ($41M)
6. **I-495 - construct 4 HOT lanes, 2025 ($500M)**
7. I-395 HOT - additional lane and revise operation from HOV 3+ during peak to HOT 3+, 2019 ($220M)
8. Dulles Toll Rd (VA-267) - Collector-Distributor Road west-bound, 2037 ($62M)
9. Dulles Toll Rd (VA-267) - Collector-Distributor Road east-bound, 2036 ($124M)
10. Dulles Toll Rd (VA-267) - interchange at New Boone Blvd Extension, 2037 ($79M)
11. Dulles Toll Rd (VA-267) - interchange at Greensboro Drive/Tyco Rd, 2036 ($28M)

STATE ROUTES

12. VA-286 (Fairfax County Pkwy) HOV - widen to 6 lanes, HOV in additional lanes during peak, 2025, 2035 ($296M)
13. VA-289 (Franconia/Springfield Parkway), HOV lanes with interchange at Neuman St, 2025 ($16M)
14. VA-28 (Sully Rd) HOV, widen to 8-10 lanes, HOV in additional lanes during peak, 2016, 2025, 2040 ($100M)

Figure 5.3 Major HOT, HOV, and Toll Lane Projects



Major Transit Projects

DISTRICT OF COLUMBIA

1. DC Streetcar, 2023, 2026 ($348M)
2. DC Dedicated Bicycle Lane Network, 2019, 2024 (not mapped) ($800k)
3. 16th Street Bus Priority Improvements, 2021 ($15M)

MARYLAND

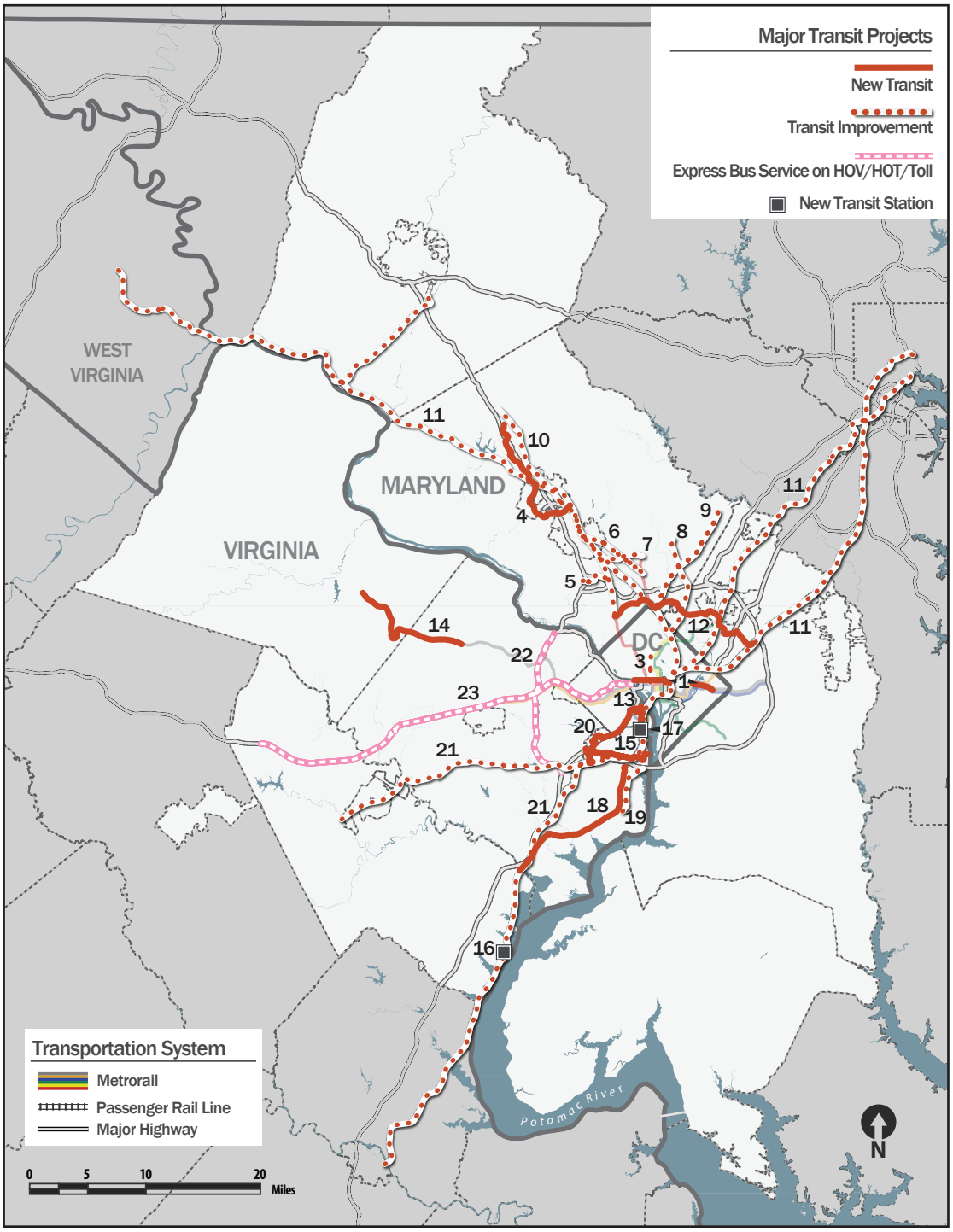
4. Corridor Cities Transitway BRT - from Shady Grove to COMSAT, 2020 ($545M)
5. **North Bethesda Transitway BRT - from Montgomery Mall to White Flint Metro, 2040 ($115M)**
6. **Veirs Mill Rd BRT - from Wheaton Metro to Rockville Metro, 2030 ($6M)**
7. **Randolph Rd BRT - from US-29 to MD-355, 2040 ($102M)**
8. **New Hampshire Ave. BRT - from Takoma Metro to Colesville P&R, 2045 ($285M)**
9. US-29 BRT - from Silver Spring Metro to Burtonsville P&R, 2020 ($39M)
10. **MD-355 BRT - from Bethesda Metro to Clarksburg, 2040 ($1B)**
11. MARC - Increase trip capacity and frequency along all commuter rail lines, 2029 ($1B)
12. Purple Line - Bethesda to New Carrollton, 2020 ($2.4B)

VIRGINIA

13. Crystal City Transitway: Northern Extension BRT, 2023 ($24M)
14. Metro Silver Line (Dulles Corridor Metrorail Project) - Phase 2, 2020 ($2.9B)
15. Duke St Transitway - King St Metro to Fairfax County line, 2024 ($19M)
16. Potomac Shores VRE Station, 2019 ($26M)
17. Potomac Yard Metro Station, 2021 ($268M)
18. US-1 BRT from Huntington Metro Station to Woodbridge, 2030 ($504M)
19. US-1 bus lanes and improved intersections, 2035 ($37M)
20. West End Transitway - Van Dorn St Metro to Pentagon Metro, 2024 ($140M)
21. VRE - Reduce headways along the Manassas and Fredericksburg Lines, 2020 ($105M)
22. I-495 HOT Lane Express Bus Service, 2030 ($254M)
23. I-66 HOT Lane Enhanced Bus Service, 2025, 2040

Note: New or significantly changed projects are identified with **bold text**. Costs identified include total project costs which may include additional elements presented in another list(s).

Figure 5.4 Major Transit Projects



Appendix C. Bikes Around Goddard Brochure

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Where can I find one?

The program is placing a fleet of bicycles at major buildings around the Goddard Greenbelt campus. As they are used, bicycles may collect in high-traffic areas as well as at less frequently used locations. So if you see one, feel free to hop on and take it for a spin!

A Goddard Bike Rack map (and other bike information) is located at the website listed on the back page.

The bicycles are provided by donations from projects and organizations around the center.

Who are we?

The Bikes Around Goddard program began on Earth Day 2013.

It began as a project of the Logistics and Transportation Management Branch and the 2012 Goddard NASA FIRST leadership team. The Foundations of Influence, Relationships, Success, and Teamwork (FIRST) is an agency-wide, year long leadership program.

BIKES AROUND GODDARD

It's practical

It's healthy

It's popular

It's green

The Goddard Bikeshare Program is managed by the

Logistics and Transportation Management Branch (Code 274)

For more information contact:

Carl Phipps / Code 274
carl.c.phipps@nasa.gov
x6-4541

and the

Information and Logistics Management Division website

logistics.gsfc.nasa.gov

June 4, 2018

National Aeronautics and Space Administration

Bikes Around Goddard

Goddard's Bikeshare Program

www.nasa.gov

What is it?

Bikes Around Goddard is an on-campus bikeshare program at GSFC Greenbelt. The program consists of specially-marked bicycles in convenient locations around center for employees, contractors, and visitors to use for transportation between buildings. The program is entirely free! If you see a bikeshare bicycle, just hop on and ride, with no formal checkout or notification needed.

Why a bikeshare program?

Have you ever had a meeting in a building located across campus from your office? Walking to such meetings can be impractical. Most people drive, but this may be inefficient and can be a hassle. Wouldn't it be nice if there was another way; something fast yet convenient, and maybe even a bit fun?

This is what the Bikes Around Goddard program was created to achieve. Many other organizations have implemented such programs, including: Washington DC, several Department of Energy labs, and many universities. They've found it to be a popular and environmentally-friendly way for people to get around their respective locations, all while encouraging a community atmosphere and a culture of wellness and exercise.

How does it work?

As an employee, contractor, or visitor to Goddard's Greenbelt campus, you'll be able to use Bikes Around Goddard for free.

When you have somewhere to go, just look for a yellow Bikes Around Goddard bicycle, hop on, and go! The bikes are available on a "first come, first serve" basis.

Park the bike in bike racks or other locations at buildings that do not block the sidewalks or building entrances. Bikes are also not allowed to be parked within 100 feet of the gate entrances and should be parked instead at the nearest building.

The bikes are for use by everyone. Therefore, do not try to "reserve" the bike or keep it for yourself.

What about...

Safety

All riders are expected to follow Goddard and Prince George's County rules of the road when riding the bicycles. This means wearing a helmet if you are under the age of 16, riding in the street with the flow of vehicle traffic, and using the appropriate hand signals.

Security

The bikes are confined to the Greenbelt campus, and are only for use between the main gates. They are painted bright yellow and bike locks are not allowed to be used.

The bicycles

The Bikes Around Goddard program consists of industrial-style ruggedized bicycles with custom markings that identify them as official bikes. The bikes are fully weather-proof and low-maintenance. They have solid airless tires to prevent flats and a special chain-free drivetrain to prevent rusting and other issues.

They have a single gear and coaster brakes for ease of use, and mud guards and baskets for convenience. The following is a picture of what the bikes look like.

Appendix D. 2020 Pulse Telework Survey

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Appendix E. Employee Commute Survey Example

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The Sample Employee Commute Survey was designed to be adapted and created within an online tool to survey the employees of an organization or location. It is divided into several sections:

Introduction

The introduction provides a quick introduction of appreciation for the employee's time and some context for why the survey information is important.

Employee Designation

Most organizations and locations have multiple divisions of people that the survey may be distributed to. It is important in this section to clearly identify in what group the employee belongs.

Current Commute

The current commute information of employees is a measure of the commuting patterns and also serves as a benchmark in transportation and multimodal analysis for the ETC.

Commute Alternatives Information

Through the information gathered in this section, the ETC and others can focus their alternative commute plans. Within the questions regarding the commuting alternative information that they already understand is an opportunity to promote and educate employees about the things that may already be available.

Future Commute

This section asks the employee about their anticipated commute after the consolidation or new project associated with the work site in the future. This information is used in technical analysis and work plans for transportation and multimodal reports.

Survey Completion Note

In addition to conveying appreciation to the employee for their time, this section is an opportunity to provide information about how the employee can be in contact with the ETC.

Sample Employee Commute Survey

Introduction

Thank you for choosing to participate in this short Employee Commute Survey. Results of the survey are used to inform the coordination of the commuting related support as well as the technical transportation planning for INSERT LOCATION HERE. Please be as accurate as possible when indicating your future commuting plans.

Employee Designation – Who is taking the survey

1. What Department do you work for?
    a. Option A
    b. Option B
    c. Option C

Current Commute – What are the current commuting patterns (used for TRANSPORTATION AND MULTIMODAL PLANS, and by ETC for benchmark information)

2. What is the 5-digit ZIP code of your residence?
3. What is the location of your current main worksite?
    a. Option A
    b. Option B
    c. Option C
4. Indicate your approximate arrival and departure (at the end of your workday) from your worksite on INSERT WEEKDAY last week.
    a. Current Arrival Time at Worksite: Dropdown Options to be before 5 AM … to after 7 PM, every 15 minutes
    b. Current Departure Time from Worksite: Dropdown Options to be before 5 AM … to after 7 PM, every 15 minutes
5. Indicate how many miles and how many minutes you commute to your worksite on a typical day.
    a. Current Commute Distance (In Miles): Dropdown Options start at <5 miles … to >100 miles, every 5 miles
    b. Current Commute Distance (In Minutes): Dropdown Options start at < 5 minutes … to > 120 minutes, every 5 minutes

6. Describe the mode you used to ARRIVE at your worksite last week
    a. Arrival Transportation Mode (Monday, Tuesday, Wednesday, Thursday, Friday)
        i. Drove alone the entire commute
        ii. Motorcycle
        iii. Ride-hailing (e.g. Lyft, Uber, Via, or a Taxi)
        iv. Ride-sharing passenger drop off - vehicle does not park at work (commute with SLUG\spouse\fellow employee)
        v. Ride-sharing passenger – vehicle does park at work (commute with 1 or more fellow employee)
        vi. Ride-sharing driver - arrive alone, vehicle does park at work (commute with SLUG\spouse\fellow employee)
        vii. Ride-sharing driver – vehicle does park at work (commute with 1 fellow employee)
        viii. Ride-sharing driver – vehicle does park at work (commute with 2 fellow employees)
        ix. Ride-sharing driver – vehicle does park at work (commute with 3 fellow employees)
        x. Ride-sharing driver – vehicle does park at work (commute with 4 or more fellow employees)
        xi. Metrobus from Metro station
        xii. Metrobus from residence to worksite
        xiii. Shuttle from Metro station
        xiv. Shuttle from another worksite
        xv. Walk from Metro station
        xvi. Walk from residence to worksite
        xvii. Bicycle from Metro station
        xviii. Bicycle from residence to worksite
        xix. Worked Off-Site
        xx. Worked from home (Telecommute)
        xxi. Did Not Work (due to Alternative Work Schedule)
7. During your current typical commute to your worksite, how many transfers do you complete? *A transfer includes both transfers between transit (such as Red Line to Green Line) as well as transfers between modes (such as driving to a park and ride before boarding the Metro).*
    a. Dropdown Options start at 0 transfers to > 8 transfer

Commute Alternatives Information – Understanding and Assisting Alternative Commute Modes (used in TRANSPORTATION AND MULTIMODAL PLANS, used by ETC)

8. Indicate if the following would support your decisions to use alternative commute modes instead of driving alone (unlikely, neutral, likely, alternative commute mode(s) not an option)
    a. A commuting orientation program and information for employees new to INSERT LOCATION\COMPANY HERE.
    b. Transportation fair, with information about all the commuting options available.
    c. Current and relevant commuting information posted and maintained on internal websites. (This would include information produced specifically for INSERT LOCATION\COMPANY HERE.)
    d. An online location to submit feedback regarding commute options and issues.
    e. A designated Employee Transportation Coordinator (ETC) or a Commuter Coordination Service that coordinate the various commuting options available and provide education and support to employees regarding these commuting options.
    f. A guaranteed ride home in the case of unexpected emergencies (such as personal or child illness) or unscheduled overtime.
    g. Designated short term parking spots available for employees who typically do not drive to the INSERT LOCATION\COMPANY HERE, but are experiencing unexpected situations.
    h. A Health and Safety Program with rewards and incentives for participation in non-auto commuting options.
    i. A financial incentive to use alternative commute modes.
9. Indicate if the following would support your decisions to use Ride-sharing (carpools\vanpools) commute modes instead of driving alone (unlikely, neutral, likely, alternative commute mode(s) not an option)
    a. Assigned preferential (and convenient) spots for carpools and vanpools.
    b. Online matching services for Ride-sharing (carpools\vanpools).
    c. Ride-share (carpool\vanpool) matching assistance among the employees at INSERT LOCATION\COMPANY HERE.
    d. Shuttle or bus service from nearby park and ride facilities to INSERT LOCATION\COMPANY HERE.
    e. Subsidized vanpool costs.
    f. Casual or Flexible Ride-sharing (carpool\vanpool) options.

10. Indicate if the following would support your decisions to use Transit commute modes instead of driving alone (unlikely, neutral, likely, alternative commute mode(s) not an option)
    a. Designated shuttle for INSERT LOCATION\COMPANY HERE employees from INSERT SPECIFIC STATION NAME Metro Station
    b. A general shuttle from INSERT SPECIFIC STATION NAME Metro Station to a stop located near a INSERT LOCATION\COMPANY HERE pedestrian (walk\bicycle) access point.
    c. A streetcar operating near INSERT LOCATION\COMPANY HERE.
    d. Commuting Bus Stop at the INSERT LOCATION\COMPANY HERE by additional transit agencies.
    e. Shuttles connecting to other INSERT LOCATION\COMPANY HERE locations such as Example 1, Example 2, and Example 3.
    f. Subsidized transit passes.
    g. Ability to designate pre-tax dollars towards transit fares.
    h. Addition of Capital Bikeshare stations near INSERT LOCATION\COMPANY HERE (for midday and commute use).
    i. Addition of bike racks\staging areas near campus for bike, scooter, and other mode sharing services
    j. Discounted Capital Bikeshare membership.
    k. Flexible work schedule for those that use transit commute modes.
11. Indicate if the following would support your decisions to use Pedestrian (walk\bicycle) commute modes instead of driving alone (unlikely, neutral, likely, alternative commute mode(s) not an option)
    a. A wide multiuse trail to INSERT LOCATION\COMPANY HERE.
    b. Shower\locker room facilities on the INSERT LOCATION\COMPANY HERE.
    c. Secure bicycle storage options on the INSERT LOCATION\COMPANY HERE.
    d. Addition of Capital Bikeshare stations near INSERT LOCATION\COMPANY HERE (for midday and commute use).
    e. Addition of bike racks\staging areas near campus for bike, scooter, and other mode sharing services
    f. Discounted Capital Bikeshare membership.
    g. A Pedestrian guide to walking and bicycling in the area.
    h. Infrastructure improvements to sidewalks\pathways and lighting to and from the INSERT LOCATION\COMPANY HERE.
    i. Traffic calming measures for traffic along the pedestrian (walk\bicycle) routes to and from the INSERT LOCATION\COMPANY HERE.
    j. Improved and additional wayfinding devices along the pedestrian (walk\bicycle) routes and at transit facilities.
    k. A subsidy for Pedestrian (walk\bicycle) commute modes

12. Indicate if the following would support your decisions to use Telework\Alternative Work Schedule commute modes instead of driving alone (unlikely, neutral, likely, alternative commute mode(s) not an option)
    a. Option of a teleworking program.
    b. Technology support of a teleworking program.
    c. Option of an alternative work schedule.
13. What would be your ideal alternative commute (to driving alone) arrival mode to the INSERT LOCATION\COMPANY HERE in the future?
    a. Dropped off (e.g. dropped off by SLUG, or spouse)
    b. Ride-hailing (e.g. Lyft, Uber, Via, or a Taxi)
    c. Ride-sharing (carpool\vanpool)
    d. Walk from Metro station
    e. Walk from residence to worksite
    f. Bicycle from Metro station
    g. Bicycle from residence to worksite
    h. Metrobus from Metro station
    i. Metrobus from residence to worksite
    j. Shuttle from Metro station
    k. Shuttle from another worksite
    l. Work from home (Telecommute)
    m. Alternative Work Schedule
    n. An alternative commute mode is not an option.
14. What other public transportation or infrastructure improvements not previously mentioned would improve your commute to the INSERT LOCATION\COMPANY HERE in the future?

Future Commute – after the consolidation of the INSERT LOCATION\COMPANY HERE – What is the commute expected in the Future? (used in TRANSPORTATION AND MULTIMODAL PLANS)

15. With the consolidation and relocation to the INSERT LOCATION\COMPANY HERE, do you anticipate moving to a new or different place of residence?
    a. No
    b. Yes, a general identifier of the area of my future residence is: (e.g.: 5-digit ZIP code, neighborhood name, or nearby landmark)
16. Indicate your future anticipated approximate arrival and departure (at the end of your workday) from the INSERT LOCATION\COMPANY HERE.
    a. Future Arrival Time at INSERT LOCATION\COMPANY HERE: Dropdown Options to be before 5 AM … to after 7 PM, every 15 minutes
    b. Future Departure Time from INSERT LOCATION\COMPANY HERE: Dropdown Options to be before 5 AM … to after 7 PM, every 15 minutes
17. Indicate how many miles and how many minutes you anticipate you will commute to the INSERT LOCATION\COMPANY HERE in the future.
    a. Future Commute Distance (In Miles): Dropdown Options start at <5 miles … to >100 miles, every 5 miles
    c. Future Commute Distance (In Minutes): Dropdown Options start at < 5 minutes … to > 120 minutes, every 5 minutes

18. Describe the mode you anticipate you will use to ARRIVE at the INSERT LOCATION\COMPANY HERE in a typical future week.
    a. Arrival Transportation Mode (Monday, Tuesday, Wednesday, Thursday, Friday)
        i. Drove alone the entire commute
        ii. Motorcycle
        iii. Ride-hailing (e.g. Lyft, Uber, Via, or a Taxi)
        iv. Ride-sharing passenger drop off - vehicle does not park on campus (commute with SLUG\spouse\off campus employee)
        v. Ride-sharing passenger – vehicle does park on campus (commute with 1 or more on campus employee)
        vi. Ride-sharing driver - arrive alone, vehicle does park on campus (commute with SLUG\spouse\off campus employee)
        vii. Ride-sharing driver – vehicle does park on campus (commute with 1 on campus employee)
        viii. Ride-sharing driver – vehicle does park on campus (commute with 2 on campus employees)
        ix. Ride-sharing driver – vehicle does park on campus (commute with 3 on campus employees)
        x. Ride-sharing driver – vehicle does park on campus (commute with 4 or more on campus employees)
        xi. Metrobus from Metro station
        xii. Metrobus from residence to worksite
        xiii. Shuttle from Metro station
        xiv. Shuttle from another worksite
        xv. Walk from Metro station
        xvi. Walk from residence to worksite
        xvii. Bicycle from Metro station
        xviii. Bicycle from residence to worksite
        xix. Work Off-Site
        xx. Work from home (Telecommute)
        xxi. Not Work (due to Alternative Work Schedule)
19. During your future commute to INSERT LOCATION HERE, how many transfers do you anticipate you will complete? *A transfer includes both transfers between transit (such as Red Line to Green Line) as well as transfers between modes (such as driving to a park and ride before boarding the Metro).*
    a. Dropdown Options start at 0 transfers to > 8 transfers

Survey Completion Note

Thank you for completing this Commute Survey. The details provided will assist the transportation planning effort to support the employees of INSERT LOCATION/COMPANY HERE. Send a message to the email address listed below if you would like to provide additional feedback or to request specific assistance from the Employee Transportation Coordinator (ETC).

example@email.abc

Appendix F. 2016 Employee Commute Survey

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Employee Commuter Survey - Questions

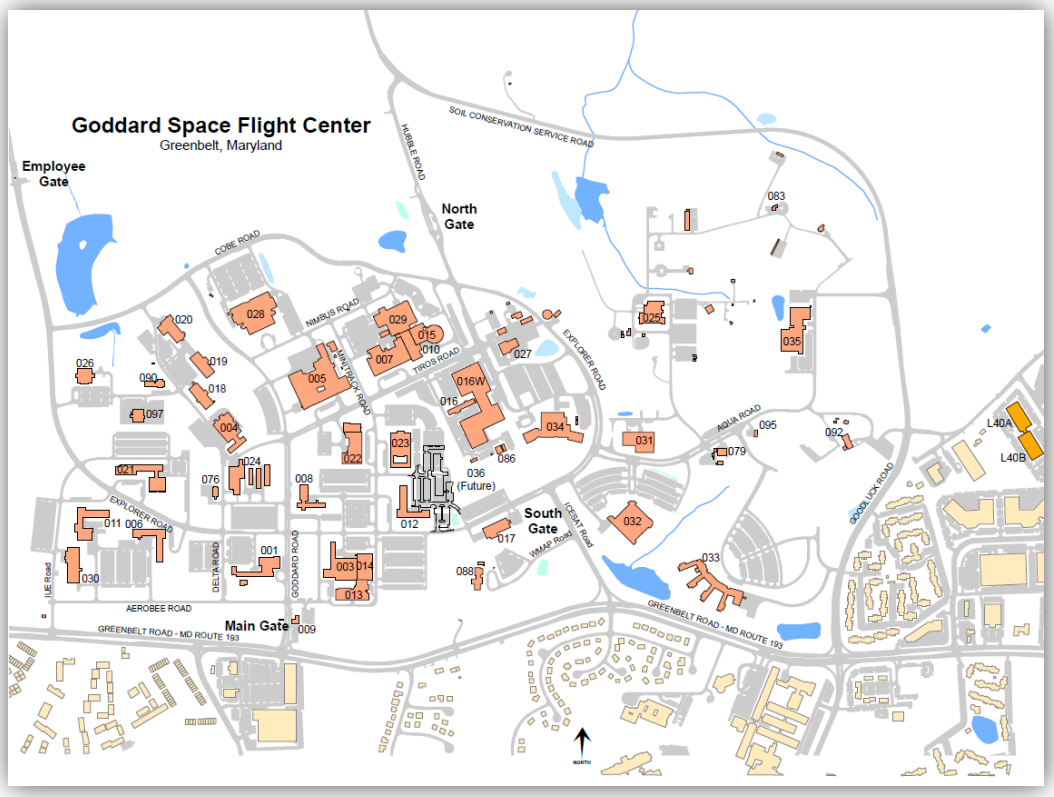
The Goddard Space Flight Center is conducting an Employee Commuter Survey in order to gather information about employees commuting to/from work and identify areas of improvement to be captured in our center Master Plan. Your feedback will not only help us gauge current transportation needs, but identify future transportation initiatives.

This survey should only take about 5 minutes to complete, and your responses are completely anonymous. All responses will be compiled together and analyzed as a group. At the end of the survey, you will have an opportunity to share any additional comments or recommendations to improve transportation services for the Goddard Space Flight Center, Greenbelt Campus.

If you have any questions or concerns, please contact Chelsea M. Liedstrand, Directorate Planner at *301-286-8644 or chelsea.m.liedstrand@nasa.gov*.
Please select the response that best describes your current employment status.

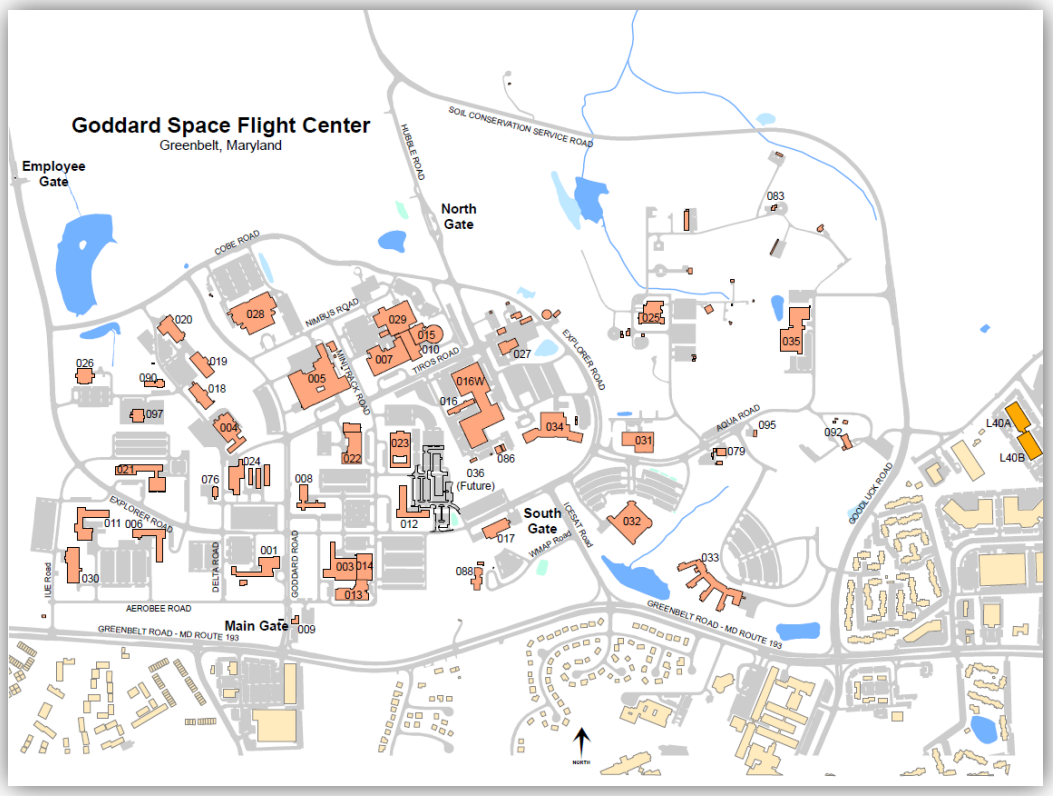
1. Are you :
    a. Full-time
    b. Part-time

2. Please specify the building number in which you currently work. A map of the campus is provided below for reference.



Note – An interactive map will be provided in the online survey where the user will be able to click the building and register the response.

3. Where on campus do you park (specify your parking lot)? A map of the campus is provided below for reference.



Note – An interactive map was provided in the online survey where the user could click the building and register the response.

4. How difficult is it to find a parking spot at your work location?
    a. Very easy
    b. Easy
    c. Neutral
    d. Difficult
    e. Very difficult
    f. Not sure
5. What is the travel distance of your normal commute to work?
    a. Less than 5 miles
    b. 5 – 10 miles
    c. 11 – 20 miles
    d. 21 – 30 miles
    e. Greater than 30 miles
6. On average, what is your daily commute time?
    a. Less than 15 minutes
    b. 16 - 30 minutes
    c. 31 - 45 minutes
    d. 46 - 60 minutes
    e. 61 - 90 minutes
    f. Greater than 90 minutes
7. What factors are most important to you in choosing your mode of transportation to work? (Select up to three)
    a. Travel time
    b. Cost
    c. Convenience / flexibility
    d. Comfort and safety
    e. Reducing pollution, conserving energy
    f. Ability to make stops en route
    g. Stress
8. Are there shower facilities or locker rooms available for employee use at your location?
    a. Yes
    b. No
    c. Not sure
9. The following questions are used to gain more knowledge on your work hours. Please select a response for each of the following categories:
    a. Does your position provide a flexible work schedule?
        i. Yes.
        ii. No.
    b. Does your position require overtime?
        i. Yes.
        ii. No.
    c. Does your position require you to be on campus between 6pm-6am?
        i. Yes.
        ii. No.
10. On a typical day, when do you arrive at work and when do you depart from work?
    a. Arrive
        i. 5am-8am
        ii. 8am-10am

iii. After 10am

b. Depart
   i. 2pm-4pm
   ii. 4pm-6pm
   iii. After 6pm

11. On a typical day, how do you travel to work? Select the option that corresponds to your mode of transportation.
    a. Single Occupancy Vehicle b. Carpool c. Public Transportation
    d. Active Transportation (bicycle, walk, rollerblade, etc.)
    e. Motorcycle/Scooter f. Work remotely (telecommute) 3 days or more
    g. Other-please specify_____

12. How many times do you travel to and from work each week?
    a. 0 – 2
    b. 3 – 5
    c. 6 or more

13. Do you telecommute?
    a. Yes
    b. No

    If yes, how many times per week?
    i. 1 – 2
    ii. 3 – 4
    iii. All week

14. If you normally commute using a method other than a single-occupant vehicle, what motivates you to do so? (check all that apply)
    a. Cost savings
    b. Stress reduction
    c. Guaranteed Ride Home program
    d. Time savings
    e. Convenience
    f. Prizes, drawings, contests etc.
    g. Environmental concerns (i.e. improved air quality)
    h. Save wear and tear on personal vehicle
    i. Parking cash out
    j. Preferential parking spaces
    k. Flextime program
    l. Showers and clothing lockers

m. Other cash incentives
n. Other:_____

Please answer questions 15 through 19 if you commute using a single occupant vehicle.

15. What is your main reason for driving alone to work? (Choose one)

a. Need my car at work for company business
b. Need my car at work for personal business
c. Parking is free or inexpensive
d. Need to run errands before or after work
e. Need to transport my children
f. No reasonable transit options
g. Safety concerns
h. Cannot get home in an emergency
i. Live close to work
j. Don't have anyone to ride with
k. Don't like to depend on others
l. Irregular work schedule
m. Anything else takes too much time
n. Poor bicycle and pedestrian access
o. Other: _____

16. What would encourage you to share a ride to work in a carpool / vanpool? (choose up to four)

a. Higher parking rates for those driving alone
b. Reserved parking close to the building
c. Company subsidy for carpoolers
d. Help finding people with whom to carpool
e. Change of work shift
f. Guaranteed ride home in the event of an emergency
g. Prizes, drawings, contests etc. for carpool / vanpools
h. More flexible work hours
i. More fixed work hours
j. Use of company car during work hours
k. Child care facilities at or near the work site
l. Other:_____
m. I do not want to carpool / vanpool to work at this time

17. What would encourage you to take public transit (rail / bus) to work? (choose up to four)
    a. Bus / rail located close to work site
    b. Sale of bus / rail passes at work
    c. Company subsidy for public transit riders
    d. Change of work shift
    e. Guaranteed ride home in the event of an emergency
    f. Prizes, drawings, contests, etc. for public transit riders
    g. More flexible work hours
    h. More fixed work hours
    i. Public transit route and schedule information
    j. Child care facilities at or near the work site
    k. Use of a company car during the work day
    l. Other: _____
    m. I do not want to take public transit (bus / rail) to work at this time

18. What would encourage you to use active transportation (bike, walk etc.) to work?
    a. Secure convenient bicycle parking racks.
    b. Bicycle lockers
    c. Showers and clothing lockers
    d. Company subsidy for active transportation users
    e. Seminars on riding safely in traffic
    f. Guaranteed ride home in the event of an emergency
    g. Prizes, drawings, contests, etc. for active transportation users.
    h. Maps of bicycles & Pedestrian routes
    i. Other:_____
    j. I do not want to take active transportation to work at this time

19. Would you consider using a commute mode other than a single occupant vehicle on an occasional basis (two or more times a week)?
    a. Yes
       If yes, what modes?
       i. Carpool / vanpool driver
       ii. Carpool / vanpool rider
       iii. Public Transit
       iv. Active Transportation (walk, bike etc.)
       v. Other:_____
    b. No

20. If a shuttle bus service was available from the campus to a nearby public transportation facility (train or major bus stops), would you be inclined to use public transportation?
    a. No
    b. No, I walk/bike to work
    c. Not likely
    d. Possibly
    e. Very likely
    f. Yes
    g. I already use Public Transportation

21. How far are you willing to walk to get to meetings, the cafeteria and other amenities/activities on campus while at work?
    a. 5 minute walk b. 10 minute walk c. 15 minute walk
    b. 20 minute walk e. 25 minutes or more

22. Please provide your comments/recommendations to improve transportation services for the campus. Also let us know if you have any transportation related concerns. All of your comments will be anonymous.

Employee Commuter Survey - Results

Characteristics of GSFC Employees

The following questions focused on the characteristics of employees at GSFC, including campus location, employment status, building location as well as parking location and the difficulty level in finding a parking spot.

a) Employment Status

Table 1 below shows the employment status of GSFC employees who completed the survey.

Table 1: Employment Status

Part-time	105	3.8%

b) Building Location

Table 2 below shows the building location of GSFC employees who completed the survey.

Table 2: Building Location

		Building Number	Total Responses	Building Number	Total Responses	Building Number	Total Responses
		24	2	**16W**	74	**B40**	1
3	83	**25**	9	**29T**	2	**B5A**	1
		26	48	**29TA**	1	**B8**	1
5	107	**27**	15	**40A**	1	**B8**	2
		28	154	**40B**	1	**D**	1
7	83	**29**	64	**40L**	1	**E**	2
		30	13	**5A**	1	**G**	1
9	2	**31**	1	**Aerospace**	2	**GCP**	1
		32	176	**B11**	1	**GD**	1
11	106	**33**	306	**B12**	1	**GS-003**	1
		34	169	**B13**	1	**Home**	1
13	21	**35**	11	**B14**	1	**K**	1
		36	2	**B16W**	1	**L40**	28
15	23	**40**	2	**B18**	1	**L40A**	46
		79	6	**B22**	2	**L40B**	41
17	47	**86**	6	**B23**	2	**N**	1
		88	3	**B28**	1	**Offsite**	2
19	13	**97**	9	**B29**	2	**SD**	1

Building Number	Total Responses
20	19
21	99
22	136
23	219

Building Number	Total Responses
201	1
208	1
2628	1
16B	5

Building Number	Total Responses
B3	1
B32	2
B33	8
B34	1

Building Number	Total Responses
T29	8
V	1
Multiple	13
Unknown	6

c) Parking Location and Difficulty Level

Table 3 below shows the parking location of GSFC employees who completed the survey and Table 4 shows the difficulty level in finding a parking spot.

Table 3: Parking Location

Response	Total	Percentage
A	50	2%
B	74	3%
C	10	0%
D	92	4%
E	215	8%
F	156	6%
G	46	2%
H	39	1%
I	67	3%
J	101	4%
K	160	6%
L	89	3%
M	212	8%

Response	Total	Percentage
N	184	7%
O	209	8%
P	18	1%
Q	158	6%
R	30	1%
S	29	1%
T	24	1%
U	2	0%
V	205	8%
W	27	1%
X	148	6%
Y	274	10%
Z	3	0%

Table 4: Level of Parking Difficulty

Answer Option	Total	Percentage
Very easy	960	34.4%
Easy	871	31.2%
Neutral	518	18.5%
Difficult	288	10.3%
Very difficult	118	4.2%
Not sure	39	1.4%
Total	**2794**	**100.0%**

Commute Characteristics of GSFC Employees

The following questions focused on the commute characteristics of employees at GSFC, including their travel distance to and from work, commute time, most important factors for

choosing their mode of transportation to work, details on work hours including arrival and departure times, and which mode of transportation they currently use to get to work.

a) Travel Distance

Table 5 below shows the approximate commute distance of GSFC employees from home to work that completed the survey.

Table 5: Travel Distance

Answer Option	Number of Employees	Percentage
Less than 5 miles	190	6.8%
5 - 10 miles	315	11.3%
11 - 20 miles	867	31.0%
21 - 30 miles	807	28.9%
Greater than 30 miles	615	22.0%
Total	2794	100.0%

b) Commute Time

Table 6 shows the daily commute time of GSFC employees from home to work that completed the survey.

Table 6: Commute Time

Answer Option	Number of Employees	Percentage
Less than 15 minutes	270	9.7%
16 - 30 minutes	644	23.0%
31 - 45 minutes	788	28.2%
46 - 60 minutes	580	20.8%
61 - 90 minutes	334	12.0%
Greater than 90 minutes	178	6.4%
Total	**2794**	**100.0%**

c) Mode of Transportation Factors

Table 7 below shows the top three factors that are most important to GSFC employees in choosing their mode of transportation to work (employees were able to select up to three options).

Table 7: Mode of Transportation Factors

Answer Option	Total	Percentage
Convenience / flexibility	2149	76.9%
Travel time	2107	75.4%
Cost	696	24.9%
Comfort and safety	695	24.9%
Stress	523	18.7%
Ability to make stops en route	445	15.9%
Reducing pollution, conserving energy	307	11.0%

d) Shower Facilities & Locker Rooms

Table 8 below shows the employees' awareness of shower facilities and locker rooms at GSFC.

Table 8: Shower Facilities & Locker Rooms

Answer Option	Number of Employees	Percentage
Yes	882	31.6%
No	1153	41.3%
Not sure	759	27.2%
Total	**2794**	**100.0%**

e) Work Schedules

Table 9 and Table 10 below show the work hour details of GSFC employees who completed the survey.

Table 9: Work Position

Questions	Yes	No	Total
Does your position provide a flexible work schedule?	2427 (87%)	367 (13%)	2794
Does your position require overtime?	770 (28%)	2024 (72%)	2794
Does your position require you to be on campus between 6pm-6am?	465 (17%)	2329 (83%)	2794

Table 10: GSFC Employee Arrival / Departure

Arrival			Departure		
Answer Option	Number of Employees	Percentage	Answer Option	Number of Employees	Percentage
5am-8am	1123	40.2%	2pm-4pm	530	19.0%
8am-10am	1561	55.9%	4pm-6pm	1803	64.5%
After 10am	110	3.9%	After 6pm	461	16.5%
Total	**2794**	**100.0%**	**Total**	**2794**	**100.0%**

f) Mode of Transportation to Work

Table 11 below shows the current mode of transportation of GSFC employees who completed the survey.

Table 11: Mode of Transportation to Work

Answer Option	Number of Employees	Percentage
Single Occupancy Vehicle	2470	88.4%
Carpool	153	5.5%
Public Transportation	51	1.8%
Active Transportation (bicycle, walk, rollerblade, etc.)	35	1.3%
Motorcycle/Scooter	12	0.4%
Work remotely (telecommute) 3 days or more	10	0.4%
Other	63	2.3%
Total	**2794**	**100.0%**

Single Occupancy Vehicle Commute Characteristics

The following questions focused on the commute characteristics of employees who drove alone (single occupancy vehicle) to GSFC, including how many times they travel to and from work each week, if they telecommute and how often, main reasons for driving alone to work, what would encourage them to use an alternate commute mode and whether they would consider using an alternate commute mode.

a) Travel Count to GSFC

Table 12 below shows how many times employees who drive alone travel to and from GSFC each week.

Table 12: Travel Count to GSFC (Single Occupancy Vehicle Commute)

Answer Option	Number of Employees	Percentage
0-2	47	1.9%
3-5	2157	88.1%
6 or more	244	10.0%
Total	**2448**	**100.0%**

b) Telecommute

Table13 below identifies the telecommuting details of GSFC employees who drive alone to work. If an employee does telecommute, they were asked to indicate the number of days per week that they telecommute.

Table 13: Do you Telecommute? (Single Occupancy Vehicle Commute)

Answer Option	Number of Employees	Percentage
Yes	915	37.4%
No	1532	62.6%
Total	**2447**	**100.0%**

**Note: Responses for the number of days an employee telecommutes were reported monthly by many respondents, rather than weekly. The results have been removed from this table due to inconsistent responses.*

c) Main Reason for Driving Alone

Table 14 below shows the main reason for GSFC employees who drive alone to work.

Table 14: Main Reasons for Driving Alone

Answer Option	Number of Employees	Percentage
No reasonable transit options	634	25.9%
Irregular work schedule	243	9.9%
Anything else takes too much time	235	9.6%
Need to transport my children	234	9.6%
Need to run errands before or after work	217	8.9%
Don't like to depend on others	209	8.5%
Live close to work	149	6.1%
Don't have anyone to ride with	133	5.4%
Other	120	4.9%
Cannot get home in an emergency	81	3.3%
Need my car at work for company business	69	2.8%
Need my car at work for personal business	57	2.3%
Poor bicycle and pedestrian access	37	1.5%
Parking is free or inexpensive	24	1.0%
Safety concerns	5	0.2%
Total	**2447**	**100.0%**

d) Encouragement to Carpool or Vanpool

Table 15 below lists the options that would encourage SOV employees to share a ride to work in a carpool/vanpool (employees were able to select up to three options).

Table 15: Encouragement to Carpool or Vanpool

Answer Option	Number of Employees	Percentage
I do not want to carpool / vanpool to work at this time	1356	55.4%
Help finding people with whom to carpool	676	27.6%
Guaranteed ride home in the event of an emergency	618	25.2%
Company subsidy for carpoolers	420	17.2%
Use of company car during work hours	199	8.1%
More flexible work hours	186	7.6%
Other	175	7.1%
More fixed work hours	75	3.1%
Prizes, drawings, contests etc. for carpool / vanpools	69	2.8%
Reserved parking close to the building	59	2.4%
Child care facilities at or near the work site	41	1.7%
Higher parking rates for those driving alone	41	1.7%
Change of work shift	21	0.9%

e) Encouragement to Take Public Transit

Table 16 below lists the options that would encourage SOV employees to take public transit to work (employees were able to select up to three options).

Table 16: Encouragement to Take Public Transit

Answer Option	Number of Employees	Percentage
I do not want to take public transit (bus / rail) to work at this time	1217	49.7%
Bus / rail located close to work site	775	31.7%
Other	554	22.6%
Company subsidy for public transit riders	411	16.8%
Guaranteed ride home in the event of an emergency	408	16.7%
Public transit route and schedule information	161	6.6%
Use of a company car during the work day	133	5.4%
More flexible work hours	97	4.0%
Sale of bus / rail passes at work	93	3.8%
Child care facilities at or near the work site	27	1.1%
More fixed work hours	27	1.1%
Prizes, drawings, contests, etc. for public transit riders	22	0.9%
Change of work shift	8	0.3%

f) Encouragement to Use Active Transportation

Table17 below lists the options that would encourage SOV employees to use active transportation to work (employees were able to select up to three options).

Table 17: Encouragement to Use Active Transportation

Answer Option	Number of Employees	Percentage
I do not want to take active transportation to work at this time	1576	64.4%
Other	616	25.2%
Showers and clothing lockers	322	13.2%
Guaranteed ride home in the event of an emergency	223	9.1%
Company subsidy for active transportation users	182	7.4%
Maps of bicycles & Pedestrian routes	157	6.4%
Secure convenient bicycle parking racks	155	6.3%
Bicycle lockers	81	3.3%
Seminars on riding safely in traffic	25	1.0%
Prizes, drawings, contests, etc. for active transportation users	14	0.6%
Total	**241**	**100.0%**

g) Other Commute Mode Consideration

Table 18 below shows which modes GSFC employees who completed the survey would consider using other than a single occupant vehicle on an occasional basis (two or more times a week).

Table 18: Other Commute Mode Considerations

Answer Option	Number of Employees	Percentage
Carpool / vanpool rider	919	37.6%
Not interested in other commute modes	924	37.8%
Carpool / vanpool driver	633	25.9%
Public Transit	667	27.3%
Active Transportation (walk, bike etc.)	346	14.1%
Other	149	6.1%
Total	**2447**	**100.0%**

Alternate Transportation Mode Commute Characteristics

The following questions focused on the commute characteristics of employees who used an alternative mode of transportation to GSFC, including how many times they travel to and from work each week, if they telecommute and how often, main reasons for driving alone to work, what would encourage them to use an alternate commute mode and whether they would consider using an alternate commute mode.

a) Travel Count to GSFC

Table 19 below shows how many times employees who use an alternate commute mode travel to and from GSFC each week.

Table 19: Travel Count to GSFC (Alternate Transportation Mode Commute)

Answer Option	Number of Employees	Percentage
0-2	24	5.4%
3-5	218	84.5%
6 or more	26	10.1%
Total	258	100.0%

b) Telecommute

Table20 below identifies telecommuting details of GSFC employees who use an alternate commute mode to work. If an employee does telecommute, they were asked to indicate the number of days per week that they telecommute.

Table 20: Do You Telecommute? (Alternate Transportation Mode Commute)

Answer Option	Number of Employees	Percentage
Yes*	91	35.3%
No	167	64.7%
Total	**30**	**100.0%**

**Note: Responses for the number of days an employee telecommutes were reported monthly by many respondents, rather than weekly. The results have been removed from this table due to inconsistent responses.*

c) Motivation for Using Alternate Commute Mode

Table21 below shows the motivation for GSFC employees who use an alternate commute mode (employees were allowed to select all that apply).

Table 21: Motivation for Using Alternate Commute Mode

Answer Option	Number of Employees	Percentage
Cost savings	151	58.5%
Environmental concerns (i.e. improved air quality)	125	48.4%
Stress reduction	119	46.1%
Save wear and tear on personal vehicle	100	38.8%
Convenience	98	38.0%
Other	54	20.9%
Time savings	46	17.8%
Showers and clothing lockers	25	9.7%
Flextime program	14	5.4%
Guaranteed Ride Home program	13	5.0%
Other cash incentives	11	4.3%
Preferential parking spaces	7	2.7%
Prizes, drawings, contests etc.	5	1.9%
Parking cash out	4	1.6%

Other

The following remaining questions focused on whether employees would be inclined to use a shuttle bus service and how far they are willing to walk around campus while at work. In addition, employees were given an opportunity to provide general comments and recommendations to improve campus transportation services as well as any transportation related concerns.

a) Shuttle Bus Service

Table22 below shows how many GSFC employees who took the survey would be inclined to use public transportation if a shuttle bus service was available from the campus to a nearby transportation facility (train or major bus stop).

Table 22: Shuttle Bus Service

Answer Option	Number of Employees	Percentage
No	934	34.8%
No, I walk/bike to work	27	1.0%
Not likely	622	23.2%
Possibly	629	23.5%
Very likely	187	7.0%
Yes	230	8.6%
I already use Public Transportation	53	2.0%
Total	**2682**	**100.0%**

b) Walking Distance

Table 23 below shows the distance GSFC employees who completed the survey are willing to walk to get to meetings, the cafeteria and other amenities/activities on campus while at work.

Table 23: Walking Distance

Answer Option	Number of Employees	Percentage
5 minute walk	502	18.7%
10 minute walk	1041	38.8%
15 minute walk	796	29.7%
20 minute walk	212	7.9%
25 minutes or more	131	4.9%
Total	**2682**	**100.0%**

c) Comments / Recommendations

Table24 below details the comments and recommendations as well as transportation related concerns provided by GSFC employees who completed the survey to improve transportation services for the campus.

Table 24: Comments/Recommendations

Comments/Recommendations
route is 90 min, versus 20 min by car, and that route has sections that are not safe. All of the bike
On campus, there are not sidewalks between building or convenient ways to get from a building to any of the gates or cafeterias. There are no sidewalks even going over to the rec center. There are no bike racks at most buildings.
None at this time. I walk to other building and project sites, and am aware of the campus taxi.
In area where I live, there are few employees if any that would want to carpool. I tried at one time.
N/A
Build parking decks in central locations (like near B8/23, B7/29, and B32/34. There are already not enough spaces on campus. Make parking spaces big enough to hold larger cars (a lot of them are too small now for mid-large size cars, SUVs, and trucks.
Not a real easy way to get to Goddard when you live a distance away, and rural.
Provide incentives for carpooling
If there could be a NASA-run, free shuttle to the DC metro, that would be wonderful. I would use it periodically and it would be a great help to me.
Your questions did not recognize the problem that access to public transportation is an issue both from work to the nearest bus/rail facility as well as from the end bus/rail facility to my home. Providing a shuttle from campus to bus/rail stops does not solve the problem of how to get from the end bus/rail stop to my house. If I could walk a short distance from my house and get on a direct bus/train that would drop me off a short distance from work, I would consider it. However, that is unlikely to happen, so I drive.
For me, time is of utmost importance. Given the location of the nearest metro/rail stations, I simply think I would not switch to public transportation. Even a shuttle service would take about 30 minutes to / from the station, then one would have to wait for the train, then change, etc. Simply, life is short.
Shuttles to/from metro that operate at times that are different from bus options would be helpful. Example: PG County 15X bus runs every 40 min during rush hours; MetroBus is every 30-45 minutes. A shuttle that runs every 30 min but at different intervals/times that these options would provide additional flexibility. Additionally, the on site taxi is not always reliable and sometimes requires up to a 15 minute wait; additional taxis or maybe a routine loop around campus (especially during rush hours) might help.
We need EV charging stations at every parking lot to encourage the use of EVs. Majority of employees I think it is safe to say do not live close enough to GSFC to have enough battery power to get to/from work without charging. We need expanded mass transit options across the state. I had someone come visit me from National Harbor, and they asked about public transportation options. I looked it up; the current options would have taken them 3 HOURS to get here. 3 HOURS! They ended up having to take a cab and paying an exorbitant cab fare. The current state of mass transit in this state is downright embarrassing. Not much GSFC can really do about that, it's up to the state. The state needs to focus less on putting in more roads, and more focus on putting in faster, better, more accessible mass transit options. Period!

There is too much time involved in the other transportation options. I would like to bike to work but then my commute is 50 minutes instead of 17 and I still have to get myself clean once I get here. Similar thing with walking to cafeterias or meetings on the other side of campus; all the time I'm walking, I'm not getting my work done. All of these mean less time with my family at the end of the day. Parking is free and plentiful, mass transit options are inconvenient and time consuming.
I travel from near Baltimore to GSFC. The B/W Parkway is plagued with pot-holes and congestion. Route 1 has many stop-lights. I-95 is too far and congested. I currently use the B/W Parkway but at extreme risk.
More telecommuting needs to be permitted or more roads need to be built. Carpooling is not the answer.
Commute time question was confusing as it did not indicate if it meant 1-way or round trip. My answer was round-trip.
There are currently no public transportation options near my home, but I also think the MTA has become a drain to the State's budget. I also feel that Public transportation is not convenient or safe. I would prefer carpools or better yet building share programs that would allow employees to commute to alternate locations closer to home, or an expansion/improvement of the Telecommuting Program. Current Roadways (295 & Route 32) are overcrowded and insufficient to handle the volume of traffic, and there are no expressway/toll way options to Route 70.
none
I live too far away to take public transportation & no need once I'm close it cost a lot to ride & park there. Too many reserved spots it should be a first come first serve not just for higher ups whenever they want to show up for work.
Please set-up some kind of shuttle service to the Anne Arundel area - so many employees live in this area and it would be very welcomed. Also, set-up some kind of website that shows employees looking for carpool riders in their area - that would also be very useful!
With a sixty-seven mile commute, it is just about impossible to carpool. Also if I take public transportation from Frederick MD, it will take about 2 to 2 1/2hours to get to work. Also when the occasion arises I have to work overtime.
I really think it would be beneficial to have a dedicated method of transportation from GSFC to major train and bus stops for those interested in public transportation. I also think it would be beneficial to have shower facilities in more buildings for those that do prefer to walk/run/bike.
I commute later in the morning to avoid traffic. I would rather have a smooth ride in to assist with setting my calm mood for the day instead feeling rushed and stressed.
Dedicated bike and walking paths would be nice. Bike riders seem to think traffic laws do not apply to them.
More public bikes available will be nice.
If there were a frequent bus or shuttle from the Greenbelt Metro station, I would consider this to be a very viable alternative to driving. The county bus runs every 40 minutes and there are only three morning and evening, making it hard to coordinate with connecting transit. In addition, I would consider leaving a bike at the metro station and riding the distance to GSFC if there were a safe (and easy) route. At one time I thought a pedestrian overpass from Old Greenbelt to GSFC was in the plans. That would be great.
(1) Provide more of the yellow bikes!! I only see them occasionally at our building, and only 1 or 2 at a time (mostly just 1 at a time, and rarely). If there were more available, I would ride the bike to seminars. I think our Building (033) could have 3-5 bikes at a time and they would be used. (2) Given how far away from work I live, I wish I could telecommute more days (I'm a technical writer -- my work can be done totally by telecommuting - most members of the team I'm on are offsite anyway), but there is an unwritten rule that if you don't come in, you isolate yourself from what is going on, and if management doesn't know you, they can see it as a negative.
I would love to have a secure place to leave my expensive bike while I work. I would also like to have showers available nearby.

I live 25 miles from campus and sometimes work unpredictable hours, and there isn't any convenient public transportation from Columbia to Greenbelt. Also, I am not comfortable with mass transit.
I have to be in business attire daily so walking would not be prudent
There are way too many stop signs on campus. I understand the safety concern. Can some major junctions have circles instead of stop signs? Just my 2p.
I frequently need to move time and temperature sensitive items across campus, so I need access to quick transportation, and the current Goddard taxi is not convenient enough.
no thanks
If we would reward carpool users with earlier hours it would not only increase their use but also help reduce congestion on 295.
I would like to have a telecommute option available to work from home at least 1-2 days a week. Because I am driving to work more than 50 miles, with evening commute from GSFC to home it take approximately 2:50 hrs. I am tired of long commute. Please help me to find carpool or telecommute option. Thank you.
The time for the GSFC taxi is too long especially summer to use on center. too much time lost. Maybe
Need covered bike parking on center. Also the center does not connect to preferred bike routes. Being able to bicycle on/off center via the shipping and receiving gate would be great and much safer.
Now that I think of it, there are several "kiss-and-ride" stations near me (in Columbia, Ellicott City) that I
Closing the gate near the Visitor's Center during the middle of the day discourages use of public transportation. Anyone riding a bus during these hours and working on the east side of campus will have a very long walk from the main gate. Please consider closing the north gate instead since that is not used by pedestrians or installing a person-only turnstile at the visitor center gate.
My management responsibilities make telecommuting possibilities infrequent, and public transportation
If the weather is hot, I am not going to walk because I will sweat and I hate being wet while setting in a meeting.
There is no public transportation from my home, so I would need to use my vehicle just to get to public transport. I also need to work off-site multiple times/day and cannot rely on public transport.
Additional parking near buildings 22 and 23 would be helpful.
I've tried biking to work, but found it terrifying on the available roads from Bowie. Many car drivers don't
keep the south gate open all day not just in the morning and evenings.
Fix the pot holes on BWI parkway.
Less handicapped spaces.
I already use public transit / active transportation the majority of the time, which entails a bicycle to get to the MARC train. A shuttle bus in the event of inclement weather would be very nice.

Also, the MARC train has limited trains that go north of the Baltimore Penn Station. An increase in **the service/schedule for train** stations north of Penn would help increase the number of days I can ride the train.
I would consider riding public transportation if there were express transit options that would get me to work within an hour. I cannot afford to have a nine hour work day plus more than two hours commute on a daily basis. My tolerable limit is 11 hours. If there were express bus service from the Columbia Mall that made no other stops between Columbia and Goddard I would consider it providing that there was free parking at the bus stop.
There needs to be more parking spaces available at each building. I try not to leave for fear of losing my parking space. With the addition of the new building, parking is going to be worse on center. Maybe building a parking garage would help alleviate this issue. The parking area/garage should have covered shelter to each building.
Parking at my location between 10:00 and 3:00 is very difficult as little to no parking is locally available.
I come in early to get a parking spot.
on campus options are fine with the shared bikes. It's rare that anything is too far to walk.
Building 32 motorcycle parking lot is under utilized because it is far away from any entrances, and it is sloped. Riders chose to park at safer and/or closer space than what is allocated. Who would come to empty parking lot in the morning and park in a far away spot that has higher risk tipping over the vehicle in high wind? I see congestion at main gate at lunch time because other entrances are closed. It is a waste of productivity.
Need the Interns to park in a separate parking lot and have a bus transport them around base. Parking is difficult without the extra 300 occupants and horrendous when they are here.
Driving the 295 parkway is horrible. We need to get over the fact that it is a national park, add two additional lanes in both directions, and lengthen access ramps to the parkway.
Reopening side gate by B32. That has become a time issue with that gate being closed.
Provide frequent shuttle between GSFC and HQ!! Or frequent shuttle GSFC to Metro. More public bicycles on campus and/or protected parking (from rain etc.) for bikes. Better access between campus and Metro (more frequent, more pickup points).
There are a lot of people that work at GSFC who live in Calvert County. In order to get to GSFC you have to take the commuter bus to metro then a public bus to GSFC. There are multiple park n rides throughout the county. If there was a direct bus from Calvert County, I would use it. I don't consider public transportation in PG County safe.
have the Icesat gate open before 230
Traveling between GSFC and HQ is also difficult. It we have meetings off-site, need to rely on self-transportation and cannot take advantage of public transportation (i.e. no transportation to/from any metro station).
Very little shade for parked vehicles. Solar panels could offer shade for vehicles. Would own an electric vehicle if there were plug-in stations.
The greatest benefit would be to have a dedicated shuttle running from the MARC station to Goddard.
PAAC employees should be allowed to work from home. If more employees could work from home at least 2 days a week that would help improve pollution, traffic, traffic accidents and many other variables.
none
Primary concern is the deteriorating condition of the BW Parkway and daily traffic congestion at intersection with MD 32. Fort Meade BRAC realignment occurred without any improvements to the Parkway. This is the worst part of my commute. I often avoid it in the evening my taking Springfield Drive off Power Mill Road and then Muirkirk to Konterra to I-95. Would be nice to improve direct access from Goddard to I-95, and also make it possible to take that route in the morning. In the morning it is dangerous to make the left from stop sign at Springfield Drive onto East bound Powder Mill Road (under Parkway). The failure of the ICC is it needs to come further to BW Parkway.

i drive in passing several vrides but none of them get me close enough to campus
Keep the Goddard Taxi rolling.
Provide regular shuttle to HQ.
Active transportation (biking/walking) is not possible for those living far from campus. Having good housing options in the area may encourage more employees to live in Greenbelt, and thus have shorter commute, and be able to get to work with public or active transportation fast. Having routine shuttle service from Greenbelt metro to campus and to different buildings (similar to University of Maryland shuttle service from College Park metro to campus and across the campus) can increase the number of employees commuting to work with metro.
Public transportation between Greenbelt and Laurel is zero. Until that happens, nothing much at GSFC will help me. However, within campus more bike riding opportunity (the yellow bikes) seems like a good option
None
Thanks for asking. Consider WAZE-driven analysis.
My commute time would double or triple if I used public transportation. More public transit options throughout the region, better maintained roads and highways, a 3rd lane on the Baltimore-Washington Parkway would all improve the situation.
Unfortunately there is no practical public transportation for me. It would involve 2.5-3 hrs. each way. Look into building indoor garages on center. Parking lots are full! Worse w new bldg. 36. I spend 10-15mins looking for a spot most days then walking 5-10 minutes to my bldg. That's not productive.
Re-opening the South Gate from 10 am to 3 pm each day would definitely cut down on employees lining up to enter and exit the main gate of Goddard, especially at lunch time. It also would cut down on requests for Security escorts for tours coming from the Visitor Center. It would also decrease the time for each tour. Due to the heavy traffic at the main gate, it is also very dangerous for pedestrians crossing at the main gate.
A commuter bus from Maryland's eastern shore would be great
I am willing to walk to meetings if the weather conditions are not too hot or too cold; or other adverse weather conditions.
GSFC should have off campus office or conference centers available around the region. Many people come in to only attend a meeting. With traffic the way it is on the BW Parkway, it can waste half a day coming and going. We should be encouraging tele-commuting to lessen the pollution, & traffic issues and to increase productivity
shuttle bus to train station in greenbelt
Since viable public transport options are unlikely to become available in the near term, please stop removing parking places (e.g. by building B36) which causes the occupants of adjacent buildings (B12 and B23) to use and overflow the parking lots of the surrounding buildings.
It is astonishing that with all the government agencies in the 295/95 corridor there is no reasonable public transport available. Commuting from Columbia to Goddard with train/metro would take a ridiculous amount of time.
Public transportation is not an effective mode for most people that work at Goddard.
more parking, Washington metro train stop
Biking to work would be nice, but the traffic on Greenbelt road is intimidating. There's limited on campus showering too (at fitness center only is all I'm aware of) that makes biking too much of a hassle. A reason I need to drive is to get to HQ. With no shuttle anymore, personal vehicle is only way to make meetings there.
If there were public transport between my home and GSFC, I would use it.
To me, every waking minute is important in which to stay productive. If any commuting method increases the amount of time I spend traveling, then I'll be compelled to rely on complete autonomy to regarding travel.
If I could rely on the Metro from the Fairfax, VA vicinity and didn't have to rely on the public bus to and from the Metro I may consider public transportation. Currently it would take me more than 2.5 hours each way (takes me about an hour to an hour and a half each way now), and I burn about two gallons of fuel. My old commuter car is paid for, so riding the Metro is currently a lot more expensive. And the

A modified work week would be nice to reduce the number of days one has to commute. Several companies and government agencies have moved to 9 hours days with one day every two weeks off. I would support this change.
I have no campus related transportation concerns at this time. Walking or occasional use of my automobile on campus works well.
Commuter access through Patuxent Research Refuge OR a bridge over the Patuxent river on the WB&A trail would allow me to ride a bike to work a few days a week. A shuttle but to a MARC line that ran every 10 or 15 minutes, would allow me to take the MARC to work a few days a week.
are outside where bike are subject to rain, snow, sun, etc. which over time destroys bikes. We can not
parking around the B12 area is very, very challenging
Live in Annapolis area - 33 mile commute too far to bike, bus ride not feasible.
There is no public transportation where I live.
A metro shuttle would be a great idea.
I live in DC about a 5 minute a metro stop, and approximately 10 miles from Goddard. I would love to take public transportation to work, but the whole commute takes about 1 hour 40 minutes instead of the 30 minutes it takes to drive. The only way I would choose public transportation is if the travel time was comparable or shorter than driving time, which is not at the moment.
Run the metro line over to Greenbelt road or the BW Parkway where it should have gone in the first place.
1) open the gate by visitor center during lunch 2) buses that leave from near visitor center and go to someplace other than Greenbelt. For me, personally, how about a bus that traverses up and down R**te.** 193 (College Park, Takoma, Silver Spring, Wheaton, Rockville). Many of us live along this corridor. Eventually there will be a Purple Line, but does not really help getting to GSFC
Assigned parking spaces especially for those over a particular age maybe an area for seniors. We are still working and parking should not be a reason for not wanting to drive to work.
It seems that center would greatly benefit from one or two well-placed parking garages.
During the summer months when days are longer it would be more desirable to use alternate methods of transportation to work but when it gets dark early, I am not willing to jeopardize my safety for the seek of reducing carbon footprints.
Some of the questions regarding car pooling or using alternative methods of commuting will not work for people like me that have to drop off their kids in the morning and the on-site daycare is quite expensive.
metro shuttle!!!!!!
Traffic from Baltimore to Goddard is becoming increasing congested. Road conditions on the BW Parkway are worsening. Best solution would be more telework options for contractors.

The on campus bus service could be improved - maybe a defined schedule rather than having to call for a ride and waiting for a bus to reach your location
The weather would be a factor in my answers above.
bus to Metro station runs too infrequently and takes too long to be something I would consider.
You will be hard pressed to make progress where people are expected to be a place at a certain time, and have full schedules. Weather, emergencies, all manner of thing will foil public commutes, even walks across campus, other than for those who live close by. More teleworking (make easier to enroll).
While I have a MARC rail station near my house (Dorsey), the only convenient MARC stop that was possible walking distance was Seabrook on the other line (Penn). If there was a shuttle bus from the Greenbelt station directly to GSFC from the MARC stop on that line (Camden), it could work; schedule says it is 25 minutes. Might work for a few others in the Columbia general area, too.
N/A
I'm not completely against using public transportation or alternative methods like carpools or bicycles, but these are often inconvenient, especially when it comes to getting to and from work on a daily basis. They generally take longer than driving, require depending on others, and can lead to added costs. In some cases, they can be dangerous: bicycling or walking on major roads to get to work doesn't seem like a great idea, for example. So for me, driving to work is the best option: it's the fastest and provides the greatest flexibility. However, once on campus, I walk almost everywhere. I typically won't drive unless I have to go off-campus or I need to go somewhere on-campus in particularly bad weather. This is where things like the Goddard Taxi service or bike share program can be helpful: I think these are generally better options than driving your own car around campus. Trying to add incentives to use certain transportation options is OK, but I would prefer not to see penalties enacted for using other options.
A service to help connect with carpoolers that live near me would be very useful.
I live close enough to occasionally ride my bicycle to work, but then my wife would still have to drive--one of us must drive to get our child to school (which is close to Goddard). We don't live close enough to a bus line that would efficiently get us from home, to our daughter's school, and then back home. Doing that would turn our ~30 minute commute in over an hour.
yellow bikes are good - need info on carpool/vanpool
GSFC only has one active TAXI service available. Addition of a second TAXI during peak times would be helpful. Also, during Intern season.
It would be nice to have Commuter Bus that will pick up from Southern MD in the Waldorf, MD area or all parts of DMV area.
It would be nice if there was a safe/secure route to walk between the main campus and Building 40 (JPSS). The area surrounding Building 40 is not a safe area to walk outside of the gate, so for those of us who used to like to walk to/from meetings on the main campus, it is not an option here.
Any carpooling or public transit would require flexibility. A massive bottleneck to using public transit has been the transport to and from Goddard and the public transit station. The cost of public transit is prohibitive compared to a POV.
Weather at GSFC is unpredictable, with plenty of precipitation and often humidity. The campus is large and there are few jitney services. The campus is far from the Greenbelt metro station, and again, there are few services to get to GSFC from the Metro. The campus does not lend itself to other non-Metro public transit. The nature of the job is one that requires dedication and may sometimes mean staying late until the work is done, not going by a carpool schedule. Given the nature of the job along with the snow, rain, sleet and miserable summer humidity, I'm in no hurry to change my way of coming to work.
I would LOVE to not drive to work - unfortunately I live in Kensington, Md. So there's no direct transit route - not even a bus. What keeps me from public transit is that it turn my ~20/30 minute commute into an hour or longer.
I live in an area with no public transportation nearby (buses or trains). It would take me longer to drive to the train station, park and wait for the train (not even counting train and bus travel times and more wait times since there's no direct connection to GSFC) than it would to just drive to work. But I could see how a shuttle from Greenbelt and/or New Carrollton train stops could help a lot of other people. The nature of my job has me traveling around campus a lot, often times with equipment, so I need my car. I'd love more bikes, but there never are any at my building. And when I do find one to ride to a

meeting, it's often gone by the time my meeting is done even though I have the "bike not available" tag in full view. By the way, designing a building with fewer parking spaces than there are building occupants (i.e. B34, B33) to "encourage" carpooling is just plain stupid not to mention pisses ("annoys" is not a strong enough word. people off.
Key issue is lack of infrastructure surrounding the GSFC campus. BW Parkway and 495/95 are parking lots before and after standard work hours, and drivers are insanely unsafe on other nearby roads - and the local police departments do little to control (or adhere to) safe driving.
When we looked at this before, the best option was to run a dedicated shuttle bus from GSFC to the Metro station. I know a bus comes on Campus, but I don't know if it makes stops at other locations between GSFC and the Metro.
Since I travel a long distance to work not sure my case is typical.
The MAJOR problem with using the subway to access GSFC is the very slow/infrequent bus schedule between GSFC and the subway station. This can add an hour in each direction if you miss your connection. It is simply a non-starter.
There needs to be shuttle service to/from the metro stations (New Carrollton and Greenbelt) every 10 minutes from 6-9AM and 4-7PM weekdays.
Public transportation in the PG area is very time consuming, especially since I would need to change rides one or more times to get to Columbia, MD. An express bus for GSFC employees, say to stop at several building across campus would be ideal.
I would like to see an express bus to the greenbelt metro station that has no stops between the front gate and the metro station and also includes the ability to transport a bicycle. The bus service would need to run every hour or half hour during peak commuting times to limit the need to wait on the bus if the metro is late.
I live in Baltimore. Carpooling is hard because I need to be flexible with my work hours. I would take the MARC if there was a Goddard shuttle. I don't feel comfortable taking the bus, it takes a long time, and it isn't always reliable.
Suggest free shuttle bus from Greenbelt and New Carrollton Metro stations to GSFC during rush hours.
Express buses are convenient but not frequent enough for my preference and the regular buses are on a schedule that makes my wait times for transfers ~30min plus. If you get that worked from a cross-county (PG-to-AA) perspective then my commuting will be more consistent by bus.
I would happily take public transportation to work, but taking a bus to train to bus each direction would take me on average 3+ hours a day. That is an unreasonable amount of time. I am additionally don't trust WMTA to get me to work on time or safely. The recent mechanical problems and violence are terrifying.
Some of my answers negative to ride sharing/public transportation because of physical issues.
Parking at building 23 is terrible and will only get worse when the new building opens. Also, I see a re-occurring them in the questions about charging for parking. It is disingenuous to suggest charging for parking when there is no real viable public transportation option for commuters. The metro bus is not viable for the number of employees at the campus and is inflexible on schedule. There is no close rail station, or metro rail station. Also, Metro riders who are federal employees in DC get a metro subsidy; explain how it is fair to suggest charging for parking at this facility when there is adequate acreage to support parking yet those working in DC are subsidized. Also, your questionnaire does not take into account those with physical disabilities that may cause them to limit walking distance between buildings or across campus.
There is no convenient way to get here from Annapolis other than car.
JWST integration work schedule and my distance from work (53 miles away) does not allow me to use public transportation. Not practical. Sorry.
The bike program on campus is a big hit. However, there are not enough bikes. Please provide more bikes.
N/A
I work off campus at Greentech. I would love to be able to use the yellow bikes to get to campus.

Gentrify the surrounding area.
I've been here 25 years. I biked every day from Old Greenbelt for years, but now live in Baltimore. I'd LOVE to walk/bike to the MARC at Camden Yards but with about *3* The Bus choices in the AM and PM, I don't trust it (and I used to take the T15/16/17 back in the day too!). If I could also get 'credit' for some work done on the train, I'd be happy to be one less car on the BW Pkwy!
I'd like to take public transportation (metro) once a week or more and used to do this regularly. However with all of Metro's problems and unpredictability I haven't recently and don't know when I'll resume.
Making commuter benefits available for contractors using public transportation would be appreciated
metro would be a great option, if there were direct shuttles available, and at better times than "normal" commuting hours, I would definitely use it more often. Also, walking around campus is great, but especially because it is the DC area, this is very weather dependent (rain, excessive humidity, etc.).
more work-at-home options are beneficial for all.
I live about 90 miles from the work site. The closest public transportation is at least 50 miles away from my house. If I drive, it takes 2 hours in traffic. If I used public transportation, I would still have to drive an hour and then it would take 1.5 hrs. on metro. Public transportation is just not practical. My hours are irregular, and given the long commute, it is not possible to car pool.
hen I first came here, I thought I might bike to work. The roads here are very dangerous and no shoulders! Way too many GSFC folks have been killed doing this. I was warned about this when I came. I think it is irresponsible to recommend this mode of travel unless you live very close to GSFC.
I live very close to the Halethorpe MARC station. I would *love* to be able to take the train to work but the Seabrook MARC station is simply too far from GSFC for it to be feasible.
getting to Goddard from Bethesda by public transportation takes way too long similar results when I lived in Bowie I don't see how to do it without sacrificing many hours to commuting
Lobby for a Railway to be constructed down the median of the BW Parkway.
BW Parkway is serious issue for people who live north of GSFC.
Greenbelt road has become very congested coming in from the East. Alternate routes to the back entrance to the East would be nice to have.
N/A
schedules and the weather play a big part...meetings are scheduled last minute and/or right on top of other meetings which leaves no room for walking or waiting for a shuttle. in addition, the weather (hot, cold, rain, snow, etc.) also factors into walking to get to other buildings
I think it would be very beneficial for there to be a shuttle bus service to major commuter locations, such as the train. Personally, I take the MARC train to the Seabrook stop on the Penn Line. It is an energy-efficient option, but difficult to get from the train station to work. I have started biking, but that is inconvenient since there are no shower facilities in my building (007).
- My answer to #16 is based on the fact that there is no public transportation between my community to the D.C. area. - My desire to arrive early is tempered by the fact that the B-W Parkway gate opens no earlier than 6 a.m. - Meetings are typically scheduled to accommodate those employees who choose to arrive later in the morning and depart later in the evening, rather than those who choose the converse. As a consequence, those of us who travel some distance and arrive earlier must work later, thus encountering longer commuting time. - Teleworking is great for both work-time efficiency (for those employees who practice self-discipline in unmonitored work) and emissions/traffic reduction. However, an employee who teleworks is afforded fewer opportunities (incl. for promotion) than those who primarily work on-site. Although teleworking is considered a privilege, this lack of opportunity and some negative perception on the part of some management, is tantamount to discrimination.

REOPEN THE VISITOR CENTER GATE! Stop worrying about the CM&O budget and cut out something else; this closure backs up traffic at other gates, in particular the front gate at lunch hour in case you didn't know it
- You forgot to mention the NASA Taxi - Lunch has good but limited on-center options - This isn't DC, until we get a metro stop public transportation is going to be VERY time consuming. - ** on-center parking places are (allegedly) limited by HQ to < 100% based on office space. When HQ comes to visit, their driver pulls up to the front of the building and parks there. When will the decision leaders use mass transit to show that they lead from the front? **
May be interested if there was a commute from the Columbia/Ellicott City area to the Goddard campus.
Greenbelt needs to prioritize safe bike routes. The unprotected paint-only bike lane along Greenbelt Road looks and feels very dangerous. At minimum, a >1 foot buffer with flex-posts to separate bikes from car traffic would help; a proper cycle track with concrete separators would be better. Also, can we get a bike sign on the Parkway overpass to warn motorists about bikes? Cyclists and pedestrians use this all the time to get to the trail, but there's no notice of this for motorists and the trail entrance itself is completely invisible from the road. It seems like an accident waiting to happen.
A shuttle/bus from Annapolis to GSFC would be a great idea!
Taking the metro from D.C. is expensive but done for stress reduction and environmental reasons. Support in those cost from agency/contractor company (USRA) would be appreciated.
i tried taking metro to and from GSFC. if I didn't time the bus arrival to and from GSFC correctly, it would take me 1.5 hours each way. that's almost 3x the time it takes to drive myself. I would love to ride my bike some days but its too dangerous. I cant get to a bike trail/lanes without going on the street near my house in DC and I would have to go through the part of the trail where a couple of people have been viscously attacked. not doing it.
We currently have the "The Bus 15X" that stops at NASA GSFC and expresses between New Carrolton Metro and Greenbelt Metro stations, but only runs every 40 minutes "headways". If the headways were reduced to 20 minute headways during peak times that would be great. Add more MARC trains in the early afternoon that travel North all the way up to the Perryville stop would also be great. If you commute via MARC train from Martins State, Edgewood, Aberdeen, and Perryville to New Carrolton, then you have very limited North bound MARC trains only in the evenings (after 4:20 PM), but none in the early afternoon, so you always have to stay the entire day even if you have to get home earlier than normal. This forces you to take the day off for simple appointments at home.
Health issues make it very difficult to have me change my preferences!
Taking a bus from where I live is just not practical, but I would like to see more bikes available at the various buildings for use within the Center.
The main gate is not easily accessible by bicycle.
I believe that NASA Goddard does an excellent job at providing Company Cars, Bike Transportation and Goddard Taxi for transport on Center.
Shuttle on Center is great. It would take me longer to get to work and cost more to get to work if I used public transportation because of the location of my home to Goddard and to the Metro. There is no bus service near my home and by the time I drive to the closes metro I could be at work.
It would be useful to gather folk's home ZIP code to coordinate organizing carpools
Provide pay as you go car chargers for drivers of PEV's and PHEV's.
The yellow bikes are a good idea.

People will carpool when gas gets expensive
When I was a student I bicycled from my home in Greenbelt to Goddard sometimes. It is dangerous, and in view of several deaths of cyclists on local roads, I have no interest at my present age in bicycling to/from work.
Electric vehicle charging facilities are needed at Goddard. Other government facilities (like NIH) have them. I had to sell my electric vehicle last Thanksgiving because there's no place to charge the vehicle at work and the battery capacity on the car had diminished such that I could no longer get to and from work in the winter and have any heat turned on (and on a 17 degree day, you want some heat).
The Purple Line could be a game-changer, if it actually came to GSFC.
Leave things as they are...trying to shoehorn people into idealistic outcomes discourages folks to wanting to stay at Goddard. MIND YOUR OWN BUSINESS!
Public transportation in Maryland focuses on major urban areas. Greenbelt MD is not on any routes from Anne Arundel county.
If the center paid for the commute cost I would definitely go by rail/bus. I sometimes bike to work and would like more shower/locker room locations. Also providing better health benefits for those who walk/bike to work.
I need to be available at a moments notice for emergency calls for my grandchildren. I live 83 miles one way from home and my grandchildren are 35 miles from work site
Public transportation option will not help me.
None.
A "Goddard Circulator" bus around the middle of the day would be nice, so I could go over to the Bldg. 1 cafeteria from bldg. 32 without taking my car. That's a long walk, especially in extreme temperatures.
I already try to carpool as much as possible with my mate who works in Gambrills, MD. (Can you offer him a position here at Goddard? That would be perfect. Lol.) :) I have carpooled previously for a few years with others who also live in PA but work here at GSFC. It's not always convenient for me to do so, as it doesn't allow me the convenience of having my own vehicle each day in order to make my graphics deliveries when necessary to the AETD Directorate in Bldg. 11, or leave in the case of an emergency, etc. One day we had a surprise snowstorm that started around lunchtime. I did not drive that day but rode in with my carpool person and had to wait on the carpool driver that day, and he only allowed us to leave 20 minutes early. It took us 5 HOURS to get back to PA that evening. I COULD HAVE RUNG HIS NECK! Anyhoo, that is just one of the inconveniences of carpooling with someone else who isn't within your own household. I have used the GSFC taxi multiple times, but as you are aware, it is a very busy service and they have a lot of requests and you can sometimes wait 20 minutes or more if it happens to be during a peak period time for the shuttle when you need to go to a meeting. I usually walk, take my own vehicle, or try to schedule my deliveries at the end of the day so I may drop them off before I exit the Center for the day. A major concern for me personally is that the parking in Bldg. 23 and Bldg. 12 was significantly decreased due to the recent construction of Bldg. 38 (?) behind 12 and 23. If I exit my parking spot outside of Bldg. 23, anytime in the morning after 9:00 a.m. for a meeting or photograph request, and then return before 11:30 a.m., I am highly unlikely to find a spot anywhere near Bldg. 23. Same goes for the time frame between 1:00-3:30 p.m. Folks literally stalk you for your parking spot, because all the other spots at parking lots around the nearby buildings are also taken so then you are left with trying to find a parking spot at one of the far lots to the south of Bldg. 12, or the west of Bldg. 8. I don't mind walking when then weather is conducive, but most times, due to my significant workload, I am not able to allow myself ample time to walk to a meeting and or make a delivery. Most times, I am carrying large poster rolls and or multiple packages that need to be taken Bldg. 11, or I may need to take the government camera with me somewhere to photograph and awards program, etc. Of course, this may not seem like a big deal to someone who hasn't had to hump their computer, camera, handbag, and packages for delivery, etc., until you actually experience it. Oh and add in the

factor of rain, that makes it SUPER FUN! Seriously, I can't make deliveries if it's raining, as it would ruin my posters that I print for my customers as the ink would run if they got even a little bit wet. Also, can't risk the camera being exposed to rain.

I do have a sign that I put in my windshield that states that I am on "official government photography duty" and do not ticket my car, so that I can put my flashers on and park in front of a building to make a delivery or take a quick photo, if parking is not available. Of course, I DO NOT use this sign or park illegally when I am in Bldg. 23, where my office is located

I understand that parking garages are not permissible on Center, but it would have been really great if there had been more consideration made for those of us who work in Bldgs. 12, 23, and 38 (?), prior to construction moving forward.

So, basically, it's just a real inconvenience and waste of time when you can't find a parking spot within the general vicinity of the building that you work in and you don't have time to wait for the taxi (they used to run 2 taxis, but now only 1), and you know it's just a matter of time before who knows how many future inhabitants will be moving in to the new building and also trying obtain a parking spot in lots that are already lacking enough spaces for the current employees of the surrounding buildings.

One last thing: you may wonder why do you live so far from work and make that very long commute? Well, I moved out of the area due to the school system in Prince George's County being really poor for my youngest child as my oldest had already graduated from the PG school system in 2003, and knew it was not a good learning environment for his sibling to be in. Due to the high cost of homes in the area in 2005, I couldn't afford to relocate into a better school district and also afford to purchase a similar home to the one that I had. So I made the sacrifice to do the commute to improve the learning opportunities for my child. I think it has been worth it.

I continue to work here because I LOVE what I do. I am able to use my design abilities to visually display the data and technology of my AETD customers in a way that is understandable by the multiple audiences in which they need to get their message across to. Making my customers happy with the work that I do is extremely fulfilling and that is something I feel extremely fortunate to be able to do while earning an income.

Goddard is really a wonderful and safe place to work (I so appreciate our security personnel), and I can't think of anywhere else that I would like to do what I do than here at NASA Goddard Space Flight Center.

Thank you for taking the time to read all of my lengthy blah, blah, blah, and for actually asking for my opinion on how things can be made better.

Sincerely,
