

Harrisonburg Department of Public Transportation Transit Development Plan FY2018 - FY2027

Executive Summary

INTRODUCTION

In the Commonwealth of Virginia, a transit development plan (TDP) is a short-to mid-range plan that outlines the transit improvements that are planned for implementation during a ten-year planning horizon; estimates what resources will be needed; and what funding programs are likely to be available. The Virginia Department of Rail and Public Transportation (DRPT) requires that all grantees that receive state public transportation funds prepare, adopt, and submit a TDP. Prior to 2017, DRPT required a six-year plan with an annual update letter. DRPT transitioned to a ten-year planning cycle with annual updates in FY2017. DRPT provides funding and technical assistance to complete these ten-year plans.

This Executive Summary provides an overview of the TDP that has been prepared for the Harrisonburg Department of Public Transportation's (HDPT) transit program for the planning period that includes FY2018 through FY2027. The development of the HDPT TDP has included four draft chapters that provided an overview of public transportation in the City of Harrisonburg and developed alternatives for consideration for the 10-year plan. The chapters discussed goals, objectives, and standards; analyzed the current services operating in the region; documented unmet transit needs; and proposed alternatives for HDPT and local stakeholders to consider for implementation over the ten-year TDP planning period. Chapters 4-6 provide the ten-year Service and Capital Improvement Plan, along with the companion implementation and financial plans.

A TDP study committee, comprised of area stakeholders and HDPT staff, has guided the development of the plan. Public opinion has been considered and was sought through a rider survey, as well as through a public survey that was primarily administered online. The TDP process was initiated in September 2016, completed in September 2017, and the final report issued in November 2017.

OVERVIEW OF THE TEN-YEAR PLAN

This Executive Summary provides an overview of the specific projects that HDPT and local stakeholders have chosen to implement over the ten-year period. The plan is organized into

two primary sections: Service Plan and Capital Plan. The service plan includes a section outlining marketing and planning projects. While the TDP proposals have been assigned specific implementation years, the implementation schedule for each plan will be dependent upon funding from federal, state, and local entities.

SERVICE PLAN

The service plan focuses on the following types of improvements:

- Schedule improvements, which serve to extend the hours of operation for the existing route network,
- Specific route improvements and additional routes, which propose changes and expansions to the existing route network, and
- Marketing and planning projects.

The proposed projects are outlined below.

Schedule Improvements

The projects outlined in this section focus on a number of scheduling initiatives that apply to more than one route or service. The origin for most of these proposed improvements was either the customer survey or the stakeholder input.

Scheduling Improvement #1- Add Service Later in the Evening for City Routes (Monday- Friday)

Currently the HDPT city routes end service for the day between 6:16 p.m. and 6:56 p.m., Monday through Friday. The focus of this improvement is to add three hours of service for each of the city routes so that riders have increased opportunities to access jobs that end later than 6:00 p.m., and to make evening shopping/social/personal errand trips. Of the four scheduling options described within this section, the consensus of the stakeholders was that service later in the day during the week for the city routes is the most important of the four scheduling improvements. Additional ADA paratransit coverage will also be needed for these added hours for the summer when no other routes are operating. This improvement is scheduled for implementation in FY2019.

Schedule Improvement #2- Operate Full Schedule on Saturdays for City Routes

Feedback from drivers indicated that the city routes need to operate on the same schedule on Saturdays that they do during the week, particularly to access work opportunities. Currently,

the city routes do not start operating until between 8:30 a.m. and 9:09 a.m., and end service between 5:16 p.m. and 5:56 p.m. depending upon the route. This improvement will add two additional revenue hours in the morning for each route and one additional revenue hour in the afternoon, for a total of three additional revenue hours per route per Saturday. The total additional annual revenue hours estimated for this improvement is 936. Additional ADA paratransit coverage will also be needed. This improvement is scheduled for implementation in FY2019.

***Schedule Improvement #3 –
Start the City Routes Earlier in the Morning (Monday-Friday)***

The rider surveys and stakeholder input suggested that the city routes do not start early enough for people who have a work report time of 7:00 a.m. Starting the city routes one hour earlier will provide this option for most riders. Adding one revenue service hour per route will add six revenue hours per weekday, for a total of about 1,530 annual revenue hours. Some minimal additional ADA paratransit service may also be needed, though paratransit riders can typically already reach a 7:00 a.m. destination. This improvement is scheduled for implementation in FY2020.

***Schedule Improvement #4-
Add Service on Sundays for City Routes - Shorter Schedule***

Feedback from riders and stakeholders indicated that service is needed on Sundays for the city routes. Driver input suggested that all of the city routes should be operated, but that a shorter service day would likely be sufficient to meet the demand for service on Sundays. A suggested schedule is 8:30 a.m. to 4:30 p.m. This level of service will allow riders access to church, shopping, and other activities on Sundays, but will likely only be helpful for limited work schedules. The total number of revenue hours per Sunday (all six routes, eight hours each) is 48 hours per Sunday. Additional ADA paratransit coverage will also be needed for the summer months when no other services are operating, as well as to cover areas of the city that are not served by the JMU Sunday routes. This improvement is scheduled for implementation in FY2021.

Specific Route Improvements and Additional Routes

The improvements set out in this section represent changes to routes, route extensions, and/or new routes. These are intended to enhance service, efficiency, and the passenger experience. They were developed and refined based on discussions with HDPT staff, suggestions provided by customers via the rider survey, and input from other stakeholders.

**Route Improvement #1 –
Downtown/JMU Circulator – Event Shuttle: Routes 210/Route 505**

Feedback from James Madison University (JMU) stakeholders and Harrisonburg Downtown Renaissance (HDR), requested the exploration of circulator service through downtown, with a connection to JMU. The purpose of this route is to provide a direct connection between JMU and downtown, as well as connecting downtown locations with parking opportunities. This type of route was viewed as especially helpful for event days at JMU. Event days could include those where there is a significant increase in visitors and a high demand for parking, such as JMU home football games, JMU graduation, and the city’s holiday parade.

HDPT is implementing these concepts in FY2018 using two routes – the Route 210, which operates Friday and Saturday evenings from 10:00 p.m. to 2:17 a.m. during the JMU academic year; and the Route 505, which will operate for event days.

The Route 210 will replace one of the previous late night routes (Route 35) and will provide a connection from several campus locations to downtown Harrisonburg via Grace Street Apartments. The Route 505 will provide service from area hotels to the JMU campus and downtown, operating on days where there are special events planned in Harrisonburg. Figure ES-1 provides a map of the Route 210 and Figure ES-2 provides a map of the Route 505.

Figure ES-1: HDPT Route 210

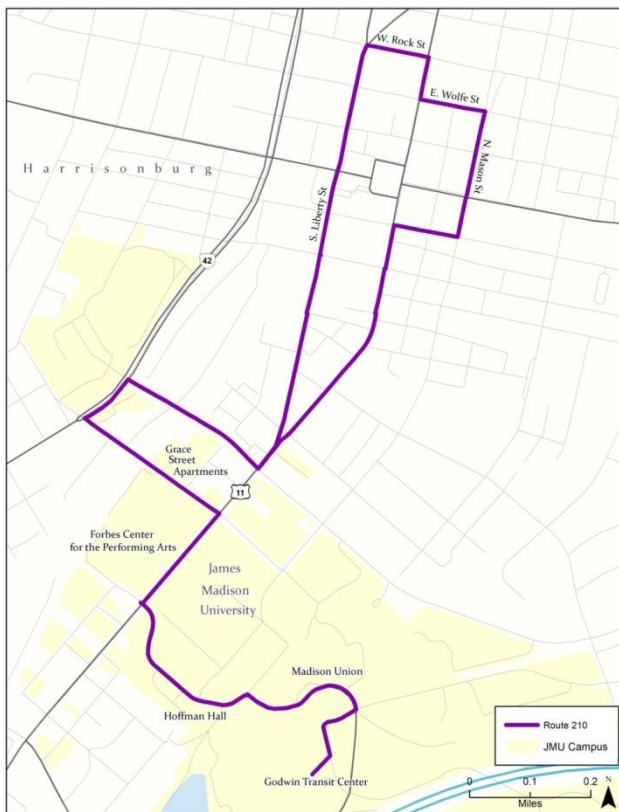
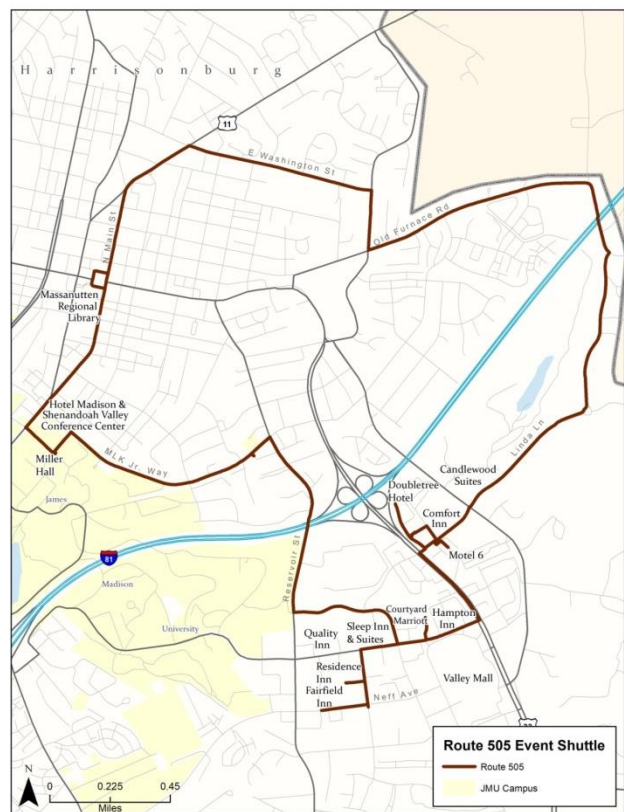


Figure ES-2: HDPT Route 505 Event Shuttle

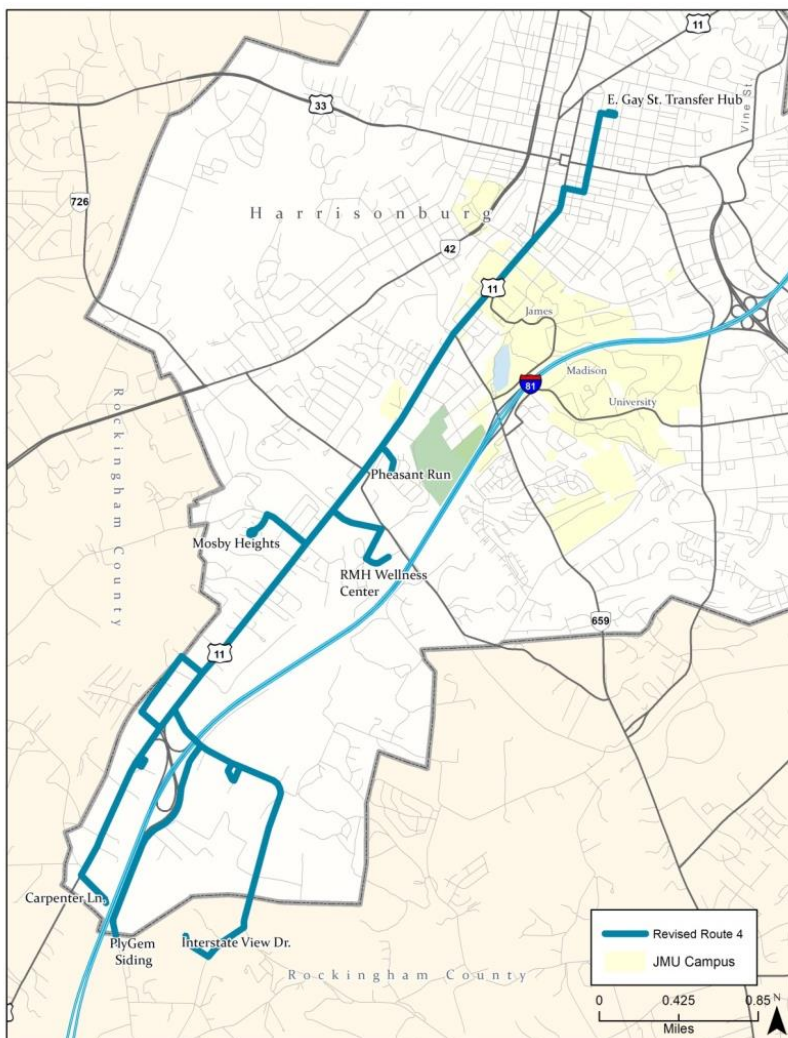


Route Improvement #2 – Adjust Route 4 to Remove it from the Cloverleaf Shopping Center

Feedback from drivers indicates that Route 4 does not have enough time built into the schedule to complete the route when there are deviations. HDPT sends out a tripper bus to help the route maintain its schedule if too many people call to request deviations. One possible solution is to remove the part of the route that travels to Cloverleaf Shopping Center (a 2.2 mile segment) to reduce the mileage traveled and the associated time. The Cloverleaf Shopping Center serves as a secondary hub for HDPT, and is also served by Routes 1, 2, 3, and 5.

Removing this segment will simplify the route, keeping it on the South Main Street corridor. A map of this proposed change is provided as Figure ES-3. This improvement is scheduled for implementation in FY2019.

Figure ES-3: Revised Route 4



**Route Improvement #3 –
Provide a Daily (Monday-Friday) Route to Bridgewater and Dayton and possibly Mt. Crawford**

HDPT currently offers limited service to Bridgewater and Dayton (Tuesdays and Thursdays, two to three vehicle round trips). In addition, BRITE's BRCC North service links Harrisonburg, Dayton, and Bridgewater as it travels south to BRCC. The unmet need, according to area stakeholders, is for bi-directional service between Bridgewater, Dayton, and Harrisonburg that would allow residents of Harrisonburg to access job opportunities at the major employers in the Route 42 South Corridor, as well as allowing Bridgewater and Dayton residents to access job opportunities and services in Harrisonburg. There have also been requests for service to and from Mt. Crawford and this option could be included. Dayton, Bridgewater, and part of Mt. Crawford are located within the Harrisonburg Urbanized Area. This route would also provide a northbound connection between Bridgewater College and JMU.

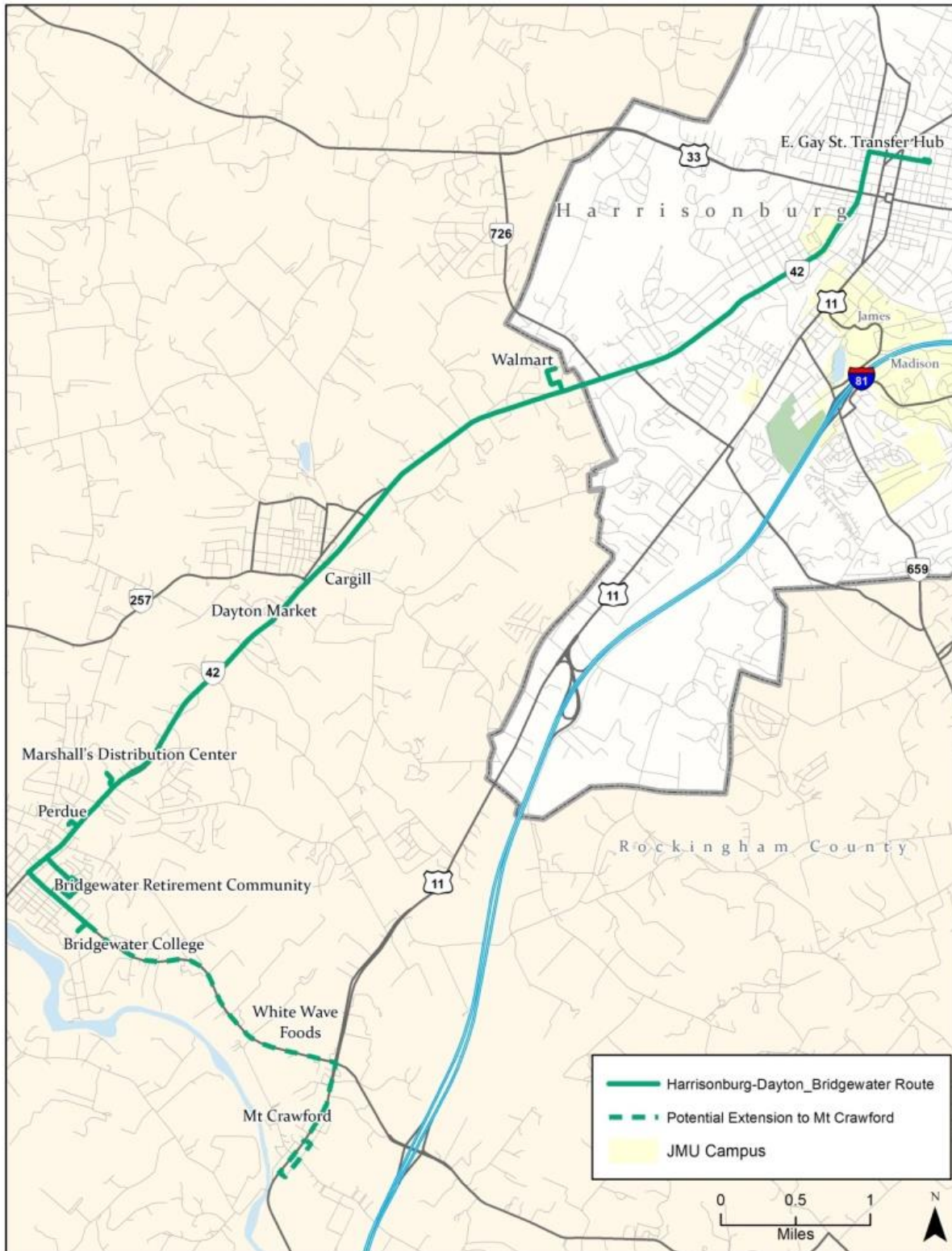
It is proposed that this route operate as a deviated fixed route once outside the City of Harrisonburg, in recognition of the more dispersed origins and destinations, and to provide service for people with disabilities.

As shown in Figure ES-4, the route without deviations and without Mt. Crawford is about 9.3 miles each way. Given this route length, each round trip would likely take about one hour and 15 minutes, assuming modest deviations. If the route were to extend to Mt. Crawford, each round trip would likely take about 1.5 hours. The total one-way mileage of the route with the Mt. Crawford option is 12.6 miles. The current operating speed for the Dayton-Bridgewater Shuttle is 16.7 miles per hour.

When this route is implemented, it is recommended that HDPT work closely with BRITE to ensure that service is complementary, rather than duplicative from Harrisonburg south to Bridgewater. The current BRCC North schedule leaves JMU southbound at 7:07 a.m. and again at 17 minutes after the hour, on hourly headways from 8:17 a.m. to 10:17 p.m.

Outreach will be needed to the Towns of Bridgewater, Dayton and Mt. Crawford; major employers in the corridor; Bridgewater College; and Rockingham County to gauge interest in contributing to the necessary local match to fund the route. This improvement is tentatively scheduled for implementation in FY2022, pending further study and the availability of local funding.

Figure ES-4: Harrisonburg-Dayton-Bridgewater-Mt. Crawford



**Route Improvement #4 –
Add a Reverse Loop Vehicle for Route 1 and Route 3**

Riders and stakeholders indicated that shorter travel times via HDPT are desired. Improved frequency was also highly desired. One option that could help with travel time would be to add a vehicle in the reverse direction for HDPT's most productive, loop-style, city routes. These routes are Route 1 and Route 3. In FY2016, these routes each provided about 80,000 passenger trips with productivities of about 23 passenger trips per revenue hour. A reverse direction vehicle would be particularly helpful with Route 1's path of travel through the Valley Mall and Walmart areas, as it is currently circuitous to allow for bi-directional service to these major trip destinations. This improvement is tentatively scheduled for implementation in FY2025.

**Route Improvement #5 –
Continue to Partner with JMU on Service Needs**

While there is not a specific additional project to be described to help meet the mobility needs of the JMU community, the campus is dynamic and locations where students choose to live change with relative frequency. This improvement is a place-holder to ensure that HDPT continues to partner with JMU to help minimize the need for students, faculty and staff to drive to campus. There will likely be transit projects associated with JMU that arise during the ten-year planning period that are not articulated within this plan. HDPT can adjust the plan accordingly as the need arises.

Marketing and Planning Projects**Marketing Improvement #1 –
Develop Full System Map**

Comments received from passenger and public surveys, and from stakeholders, indicated that it is difficult to understand how the bus route network works as a system, as a full system map is not available. Maps for individual city routes are posted on HDPT's website in PDF form, but there is no map of all the routes together. This improvement includes developing the system map so it can be viewed via computer or mobile device, as well as downloaded and printed. As part of the route analysis for the TDP, KFH Group has updated all route maps using ArcGIS. These files have been sent to HDPT so that the full system map can be developed. The city's Community Development staff members have some expertise with GIS and will be able to complete this task. HDPT is implementing this improvement in FY2018.

Marketing Improvement #2 – Education for JMU Students

One of the initial concepts discussed for JMU service was an increase in Inner Campus Shuttles (ICS) service, as these vehicles often operate at capacity. Comments from the survey discussed a desire for less crowding. Subsequent discussions with operating staff revealed there may not be road capacity for additional ICS buses on campus during peak times, and that the way in which the off-campus routes are designed serves to provide significant additional cross-campus service. The problem is that students do not necessarily know that many of the HDPT routes also travel from one side of campus to the other, as the head signs indicate other destinations.

The focus of this improvement is to develop an educational piece, perhaps a YouTube video, that explains how the routes work together to help provide additional on-campus mobility. Another facet could include adding additional staff or volunteers at each on-campus bus stop at the beginning of each semester to provide specific information about how to use the system. HDPT already provides some outreach to students during orientation, but until the students use the system, the nuances may not seem relevant. HDPT is implementing this improvement in FY2018.

Planning Project #1 – JMU Route Optimization

Including the weekday, evening, late-night, and weekend transit services, HDPT operates about 30 routes that are oriented to the needs of the JMU community. These routes provide service from local student apartment complexes to campus, provide campus mobility, and allow on-campus students to access a number of destinations in Harrisonburg. Together, these routes provide over 2.4 million passenger trips each year.

The route network has grown incrementally over the years as apartment developers have continued to add new student-oriented housing throughout Harrisonburg and into Rockingham County. As the network has grown, HDPT has worked to develop synergies among the routes so that they work together to maximize mobility, both on and off-campus.

Given the size and complexity of this route network, JMU would like an in-depth study of how they operate in order to optimize the service provided. While the TDP does address some routing initiatives, an in-depth study of the JMU network was beyond the scope of the TDP. This type of analysis will be significantly easier to conduct once HDPT fully integrates the new automatic passenger counters (APCs) for fixed routes, the implementation of which is currently in process.

The following issues should be addressed within the route optimization study:

- Should the routes continue to operate on different schedules based on the Monday-Wednesday-Friday and Tuesday-Thursday class schedules?
- Do the “long” and “short” versions of the routes make sense? Is this the best way to maximize service hours?
- Should there be a consideration of “clock-face” scheduling, where routes are scheduled to leave at a particular time past the hour, each hour?
- Are there ways to increase capacity and reduce travel time?

This project is scheduled for implementation in FY2020.

Planning Project #2 – Work with Rockingham County to Develop UDA Service

Rockingham County has a designated urban development area (UDA), located adjacent to the City of Harrisonburg, along the southeastern border of the city. The county received an Urban Development Area Grant in 2016 to help develop a vision for future growth within the UDA.

A presentation concerning the UDA planning process indicated that the Draft UDA Plan will provide a “Complete Streets” approach that will include a variety of travel options (vehicular, transit, pedestrian, and bicycle.)¹ It will be important for HDPT to stay involved with this process to ensure that transit services planned for the UDA can be integrated with the existing HDPT fixed route network.

HDPT currently provides service to Sentara Rockingham Memorial Hospital, as the hospital is an important destination for city residents. In addition, HDPT provides service to the Aspen Heights apartment complex during the JMU academic year, as well as to the recently constructed Retreat on Reservoir Street (through contractual arrangements with the developers). The UDA overlaid with the current transit services is provided as Figure ES-5.

The focus of this planning project is to work with the county to design new transit services for the UDA as it develops. New transit services within the UDA should connect new housing, shopping, medical, and employment destinations within the UDA, as well as directly connecting to the city’s established route network.

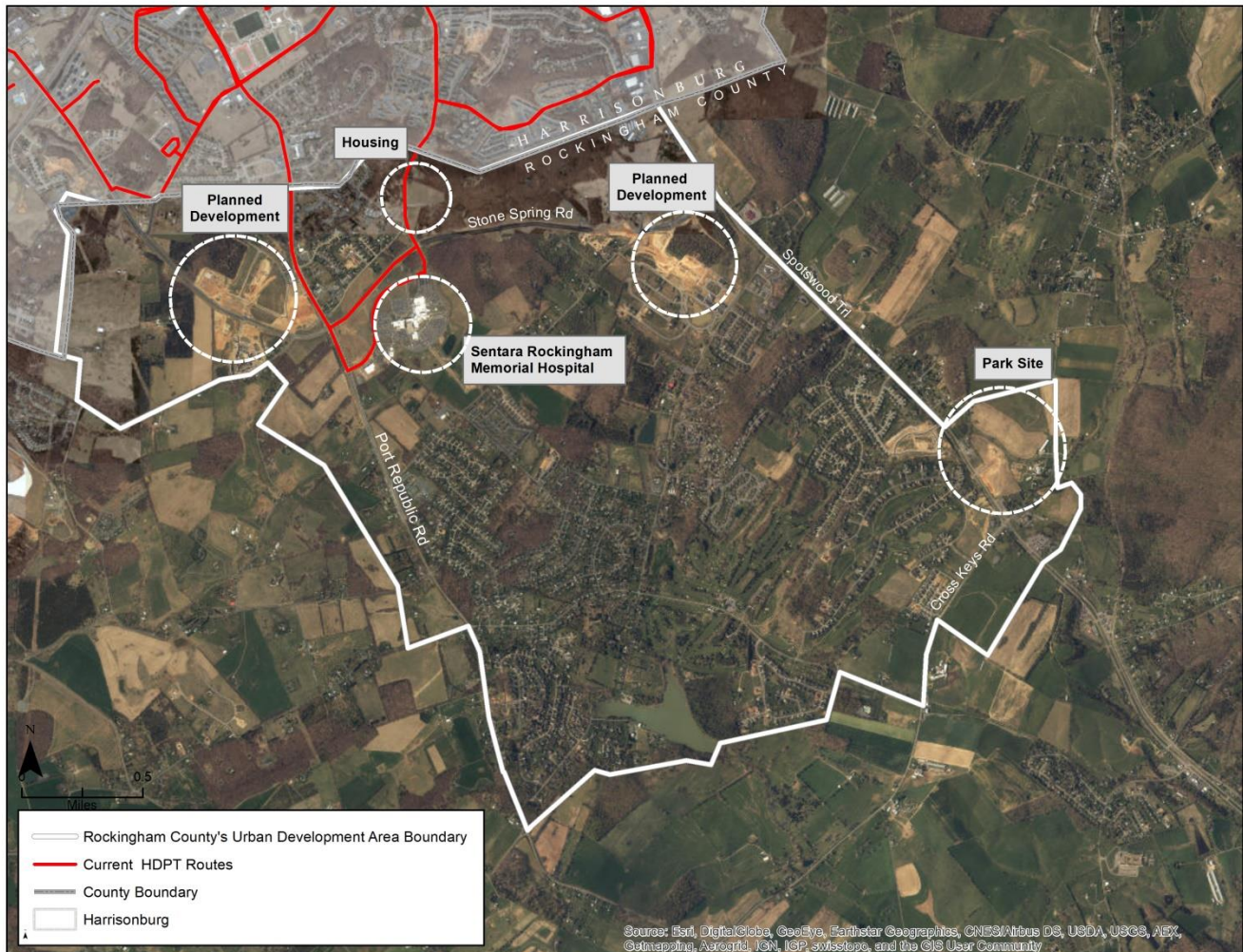
Because the UDA Plan is not yet completed, additional details regarding this improvement have not been fully crafted. It is included as a TDP project, as development will likely occur within the ten year period covered by the HDPT TDP. Once the need for service is more fully

¹ Draft UDA Plan, page 13.

defined, it will be possible to propose specific transit projects to meet new transit needs within as well as to/from the UDA.

Any services implemented within the UDA could be funded through FTA Section 5307, state operating assistance, and local funding provided through fares, Rockingham County and/or local developers and major employers. This planning project is tentatively scheduled for implementation in FY2022.

Figure ES-5: Rockingham County's UDA and Existing HDPT Routes



Planning Project #3 – Work with Rockingham County on Other Potential Route Extensions

Survey comments and feedback from HDPT drivers, indicated that there are unmet transit needs for other areas of Rockingham County, including areas that are directly adjacent to the City of Harrisonburg. These areas include the following:

- U.S. Route 11 South, south of the current Route 4 terminus
- U.S. Route 11 North, north of the service currently provided via Route 3
- Pleasant Valley Road and Greendale Road, east of the current Route 4 terminus

While service into these areas may currently be beyond the mission of HDPT, if Rockingham County were to invest in transit services these areas (in addition to the UDA area) would be good candidates for services that feed into current HDPT routes. This planning project is tentatively scheduled for FY2024.

CAPITAL IMPROVEMENT PLAN

Capital Improvement #1- Develop a Purpose-Built Transfer Center and Park and Ride

HDPT has historically provided public transportation throughout the city using a timed transfer route network, whereby the city routes meet each hour at a central location so that passengers can transfer from one route to another to access most areas of the city. Currently the primary transfer location is in the Roses/Merchant Tire shopping center parking lot. There is a secondary transfer location for the city routes at the Cloverleaf Shopping Center. In addition, the JMU-oriented routes, as well as Route 3, use the Godwin Center on the JMU campus as a transfer location.

This location has proven to be acceptable geographically for the routes; however, there are several issues about the site that make it less than ideal. The issues are listed below.

- There is no protected pedestrian access to the site.
- There are no driver restrooms, though HDPT does have an arrangement whereby Merchant's Tire allows drivers to use their restroom.
- HDPT does not control the site which makes it difficult to make improvements.
- There are limited security features at the site.

The focus of this option is for HDPT to construct its own facility that would be built specifically as a bus transfer center, including covered passenger waiting, bicycle and pedestrian facilities, driver restroom, information kiosk, and security cameras. A park and ride lot should also be considered, as there is not one located in Harrisonburg. HDPT staff indicated that the site for the transfer center does not necessarily have to be downtown given the high cost of real estate within the downtown area.

This planned facility could be considered for a future intercity bus stop. Intercity bus service in the I-81 corridor was recently initiated, with the Harrisonburg stop located at the Godwin Transfer Center on the JMU Campus.

The City of Harrisonburg currently has \$500,000 set aside for the development of a transit center. Given that federal and state funds will typically fund up to 90% of the cost, Harrisonburg's \$500,000 could be used as match for a total facility cost of up to \$5 million, if federal and state funds are available for the project. This type of project, assuming a park and ride lot were to be included, may be a good candidate for SMART SCALE Grant funding. This improvement is scheduled for implementation over a three-year period (FY2018, FY2019, and FY2020) to allow for real-estate acquisition, design, and construction.

Capital Improvement #2 – Continue to Provide Additional Shelters and Benches

HDPT has added sixteen shelters since the 2011 TDP and plans to continue its program of providing passenger amenities at stops with usage that warrants these improvements, as well as for new stops. Staff noted that currently the high priority areas for additional shelters are as follows:

- Larger shelter at Walmart
- Shelter at Target
- Shelters at the bus stops that serve Squire Hill Apartments and Fox Hill Apartments on Devon Lane
- The shelter at Harrisonburg High School on Garber's Church Road is on the opposite side of the street as the direction of travel for Route 3. There should be a shelter on the other side of the street.

These improvements are scheduled for each year of the TDP period.

SUMMARY OF PLANNED IMPROVEMENTS

Table ES-1 provides a summary of the potential improvements described within this chapter.

Table ES-1: Summary of Service Improvement Options

Planned Implementation Year	Service Improvement Options	Annual Operating Hours	Annual Operating Costs	Capital
Schedule Improvements				
FY2019	#1 - Add Service Later in the Evening for the City Routes (Monday- Friday)	4,990	\$294,410	\$0
FY2019	#2 - Operate Full Schedule on Saturdays for the City Routes	1,092	\$64,428	\$0
FY2020	#3 - Start the City Routes Earlier in the Morning (Monday - Friday)	1,530	\$90,270	\$0
FY2021	#4 - Operate Service on Sundays for the City Routes - Shorter Schedule	2,704	\$159,536	\$0
Route Improvements				
FY2018	#1 - Downtown/JMU Circulator - Route 210/Route 505	Minimal new hours	Included in FY2018 budget	\$0
FY2019	#2 - Adjust the Route 4 to Eliminate the Cloverleaf Shopping Center		Minor savings	
FY2022	#3 - Add a Daily (M-F) Route to Dayton/Bridgewater	3,060	\$180,540	\$420,000
FY2025	#4 - Add a Reverse Loop for Routes 1 and 3	7,000	\$413,000	\$840,000
Marketing and Planning Projects				
FY2018	Marketing Project #1 - Develop Full System Map		Staff Time	
FY2018	Marketing Project #2 - Education for JMU Students		\$5,000	
FY2020	Planning Project #1 - JMU Route Optimization		\$100,000	
FY2022/23	Planning Project #2 - Development of UDA Service		Staff Time	
FY2024	Planning Project #3 - Other Route Extensions into Rockingham County		Staff Time	
Totals		20,376	\$1,307,184	\$1,260,000
Capital Improvement Options				
FY2018/19/20	#1 - Develop a New Transfer Center and Park and Ride			\$5,000,000
Each Year	#2 - Continue to Provide Additional Shelters and Benches		Per Year	\$20,000

Note: This implementation schedule is dependent upon further study and funding from federal, state, and local entities.

Funding TDP Improvements

The cost information provided within the TDP is based upon the fully allocated operating costs for service expansions. The capital costs are shown as full costs. The local costs required to implement improvements will likely be significantly less than the total costs shown, as HDPT does not currently use all of the federal operating funds for which it is eligible. Federal operating funds can be used to fund up to 50% of the total operating cost for a service. In addition, DRPT has historically funded about 16% of the operating costs for service. The DRPT funding is not guaranteed, but is typically available.

An example of how these federal and state funds could reduce the local cost required for improvements is provided below:

Sample Total Operating Cost	\$200,000 total cost for service
Subtract Fare Revenue	- \$ 12,000 (assuming a city route)
Net Deficit	= \$188,000
Apply Federal S.5307	- \$94,000
Apply State Funding	- \$30,080
Local Funding Needed	= \$63,920

In addition, federal and state funds are typically available for 90– 95% of capital purchases, depending upon the purchase.

FINANCIAL PLAN

The financial plan addresses both operations and capital budgets, focusing on the project and capital recommendations that are highlighted in Chapter 4 and the implementation schedule and capital needs highlighted in Chapter 5. The projects indicated in years 1-3 should be considered short-term, those in years 4-7 are considered mid-term, and those planned for years 8 - 10 should be considered long-term projects. It should be noted that over the course of the ten-year period there are a number of unknown factors that could affect transit finance, including: the future economic condition of the City of Harrisonburg, James Madison University, and the Commonwealth of Virginia; the availability of funding from the Federal Transit Administration; the Commonwealth Transportation Fund; local sources; and the results of the 2020 U.S. Census. In addition, the Virginia Department of Rail and Public Transportation (DRPT) is currently conducting a financial planning study to determine the most feasible way to replace revenue bonds that expired in Fy2016 and had been used to fund transit capital projects. The decisions made based on the funding study will affect future transit capital funding scenarios.

Operating Expenses and Funding Sources

Table ES-2 provides a financial plan for the operation of HDPT's services under the ten-year plan, including the existing transit program as well as for the service projects that are recommended. Table ES-3 identifies the funding sources associated with these service projects. A number of assumptions used in developing the operating cost estimates are described below.

For FY2018, the first year of the plan, the expenses and revenues are based on HDPT's adopted budget for the fiscal year. The projected cost per revenue hour and the operating costs to maintain the current level of service between FY2019 and FY2027 assume a 3% annual inflation rate. It is understood that none of the funding partners (DRPT, the city, JMU, and other local partners) are committing to these funding levels, but that they are planning estimates. Specific funding amounts for each year will be determined during the annual (Six-Year Improvement Plan (SYIP) adoption and budget cycle for the Commonwealth of Virginia and the City of Harrisonburg.

Table ES-2: HDPT Financial Plan for Operating Expenses- FY2018-FY2027

Projects	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
Projected Operating Expenses										
Cost Per Revenue Hour	\$63.63	\$65.54	\$67.51	\$69.53	\$71.62	\$73.77	\$75.98	\$78.26	\$80.61	\$83.03
Current Level of Service	\$4,949,079	\$5,097,551	\$5,250,478	\$5,407,992	\$5,570,232	\$5,737,339	\$5,909,459	\$6,086,743	\$6,269,345	\$6,457,426
Schedule Improvements										
#1 - Add service later on City Routes	\$0	\$327,059	\$336,871	\$346,977	\$357,387	\$368,108	\$379,151	\$390,526	\$402,242	\$414,309
#2 - Operate full schedule on Saturdays for City Routes	\$0	\$71,573	\$73,720	\$75,932	\$78,210	\$80,556	\$82,973	\$85,462	\$88,026	\$90,666
#3 - Start the City routes earlier in the morning	\$0	\$0	\$103,289	\$106,388	\$109,579	\$112,867	\$116,253	\$119,740	\$123,333	\$127,033
#4 - Operate service on Sundays	\$0	\$0	\$0	\$188,021	\$193,662	\$199,472	\$205,456	\$211,620	\$217,968	\$224,507
Route Improvements										
#1 Downtown/JMU/Event Circulator (Route 210/Route 505)										
#2 - Adjust Route 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
#3 - Daily route to Dayton/Bridgewater/Mt. Crawford	\$0	\$0	\$0	\$0	\$219,159	\$225,734	\$232,506	\$239,481	\$246,665	\$254,065
#4 - Reverse loop for Routes 1 and 3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$547,832	\$564,267	\$581,195
Planning and Marketing Projects										
Marketing #1 - Full system map	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Marketing #2 - Education for JMU students	\$0	\$5,000	\$5,150	\$5,305	\$5,464	\$5,628	\$5,796	\$5,970	\$6,149	\$6,334
Planning #1 - JMU route optimization	\$0	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Planning #2 - UDA service planning	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Planning #3 - Route extensions into Rockingham County	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Projected Operating Expenses	\$4,949,079	\$5,601,184	\$5,769,508	\$6,130,615	\$6,533,692	\$6,729,703	\$6,931,594	\$7,687,374	\$7,917,995	\$8,155,535
% Change Year by Year		13%	3%	6%	7%	3%	3%	11%	3%	3%

Table ES-3: HDPT Proposed Funding Sources for the TDP Period – FY2018-FY2027

Anticipated Funding Sources	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
Section 5307	\$1,455,962	\$1,730,638	\$1,782,557	\$1,836,034	\$1,891,115	\$1,947,848	\$2,006,284	\$2,337,977	\$2,408,117	\$2,480,360
State										
Formula Assistance	\$1,319,254	\$1,452,000	\$1,495,560	\$1,540,427	\$1,586,640	\$1,634,239	\$1,683,266	\$1,733,764	\$1,785,777	\$1,839,350
Local										
Fares and Contracts	\$1,957,156	\$2,045,871	\$2,117,247	\$2,190,764	\$2,277,487	\$2,345,812	\$2,416,186	\$2,538,672	\$2,614,832	\$2,693,277
Advertising	\$80,000	\$82,400	\$84,872	\$87,418	\$90,041	\$92,742	\$95,524	\$98,390	\$101,342	\$104,382
Local Funds	\$136,707	\$290,275	\$289,272	\$475,972	\$688,410	\$709,062	\$730,334	\$978,571	\$1,007,929	\$1,038,166
Total Projected Operating Funds	\$4,949,079	\$5,601,184	\$5,769,508	\$6,130,615	\$6,533,692	\$6,729,703	\$6,931,594	\$7,687,374	\$7,917,995	\$8,155,535

Capital Expenses and Funding Sources

DRPT has implemented a tiered approach to funding transit capital expenses. There are three tiers, each of which is described below.

Tier 1: Replacement and Expansion Vehicles and Associated Equipment

Eligible activities for funding under Tier 1 include²:

- Replacement and expansion vehicles
- Assembly line inspection
- Fare collection equipment
- Automated passenger counters
- On-vehicle radios and communication equipment
- Surveillance cameras
- Aftermarket installation of farebox, radios, and surveillance cameras
- Vehicle tracking hardware and software
- Rebuilds and mid-life repower of rolling stock

Over this plan's ten-year timeline a total of ten expansion and 52 replacement vehicles are recommended. These vehicles are ordered with bicycle racks and manual fareboxes.

Federal and state matching ratios for Tier 1 projects are currently as follows: federal – 80%; state – 16%.

Tier 2: Infrastructure Facilities

Eligible activities under Tier 2 include³:

- Construction of infrastructure or facilities for transit purposes
- Real estate used for a transit purpose
- Signage
- Surveillance/security equipment for facilities
- Rehabilitation or renovation of infrastructure and facilities
- Major capital projects

The focus of the Tier 2 projects for HDPT is to improve passenger facilities, including the planned transfer center and park and ride lot and additional shelters and benches. In order to help improve bus stops throughout the service area, a budget of \$20,000 per year of the TDP was included.

² DRPT FY2015 Revised Budget. <http://www.drpt.virginia.gov/media/1293/fy15-drpt-agency-budget-revised.pdf>

³ DRPT FY2015 Revised Budget. <http://www.drpt.virginia.gov/media/1293/fy15-drpt-agency-budget-revised.pdf>

Federal and state matching ratios for Tier 2 projects are currently as follows: federal – 80%; state – 16%. These are the ratios that have been used for the financial plan; however, it should be noted that DRPT has indicated that there may not be this level of state support in the future for Tier 2 projects and HDPT may need to be prepared to supply up to a 20% match for these projects.

Tier 3: Other Capital Projects

Other capital projects, considered Tier 3 capital projects, include³:

- All support vehicles
- Shop equipment
- Spare parts
- Hardware and software not installed on a vehicle
- Project development expenses for capital projects
- Office furniture and other equipment
- Handheld radios
- Landscaping
- Other transit-related capital items

Federal and state matching ratios for Tier 3 projects are currently as follows: federal – 80%; state – 16%. DRPT has indicated that there may not be this level of state support in the future for Tier 3 projects and HDPT may need to be prepared to supply up to a 20% match .

Total Capital Expenses over TDP Timeframe

Table ES-4 presents a summary of the total capital program categorized by tier for the TDP period. Under each tier, the projects are listed by fiscal year. Actual project implementation will be determined each year based on available funds. As indicated in Table ES-4, FY2020 is programmed to need the largest level of capital funds, with construction of the transfer center and park and ride lot, as well as a significant number of vehicle replacements.

Table ES-4: HDPT Capital Budget, FY2018-FY2027

	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
Tier 1 Costs										
Replacement Vehicles	\$65,000	\$270,400	\$3,006,848	\$3,925,776	\$0	\$3,576,958	\$82,246	\$1,447,526	\$2,080,225	\$2,576,194
Expansion Vehicles	\$840,000	\$0	\$0	\$0	\$982,682	\$0	\$1,062,868	\$1,105,382	\$1,149,598	\$0
Radios	\$15,000	\$15,600	\$16,224	\$16,873	\$8,436	\$0	\$9,125	\$9,490	\$9,869	\$10,264
Sub-Total Cost	\$920,000	\$286,000	\$3,023,072	\$3,942,649	\$991,118	\$3,576,958	\$1,154,239	\$2,562,398	\$3,239,692	\$2,586,458
Tier 2 Costs										
Transfer Center and Park and Ride	\$500,000	\$1,000,000	\$3,500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Additional Shelters and Benches	\$20,000	\$20,800	\$21,632	\$22,497	\$23,397	\$24,333	\$25,306	\$26,319	\$27,371	\$28,466
Sub-Total Cost	\$520,000	\$1,020,800	\$3,521,632	\$22,497	\$23,397	\$24,333	\$25,306	\$26,319	\$27,371	\$28,466
Tier 3 Costs										
Shop Equipment/Parts	\$15,000	\$15,450	\$15,914	\$16,391	\$16,883	\$17,389	\$17,911	\$18,448	\$19,002	\$19,572
Technology Equipment	\$10,000	\$10,300	\$10,609	\$10,927	\$11,255	\$11,593	\$11,941	\$12,299	\$12,668	\$13,048
Sub-Total Cost	\$25,000	\$25,750	\$26,523	\$27,318	\$28,138	\$28,982	\$29,852	\$30,747	\$31,670	\$32,620
Total Capital Cost	\$1,465,000	\$1,332,550	\$6,571,227	\$3,992,464	\$1,042,653	\$3,630,273	\$1,209,397	\$2,619,464	\$3,298,733	\$2,647,544
Anticipated Funding Sources - Current Federal/State/Local Matching Ratios										
Federal	\$1,172,000	\$1,066,040	\$5,256,982	\$3,193,971	\$834,122	\$2,904,218	\$967,518	\$2,095,571	\$2,638,986	\$2,118,035
State	\$234,400	\$213,208	\$1,051,396	\$638,794	\$166,824	\$580,844	\$193,504	\$419,114	\$527,797	\$423,607
Local	\$58,600	\$53,302	\$262,849	\$159,699	\$41,706	\$145,211	\$48,376	\$104,779	\$131,949	\$105,902
Total Funding	\$1,465,000	\$1,332,550	\$6,571,227	\$3,992,464	\$1,042,653	\$3,630,273	\$1,209,397	\$2,619,464	\$3,298,733	\$2,647,544

TDP MONITORING AND UPDATES

DRPT guidance requires that grantees submit an annual TDP update letter that describes the progress that has been made toward implementing the adopted TDP. HDPT's annual update to DRPT should include the following elements:

- Operating statistics for the twelve-month period, including the ridership attributed to any new proposals implemented as a result of the TDP.
- Any changes to system goals, objectives, or service standards.
- A description of any service or facility improvements that have been implemented during the twelve-month period.
- An update to the TDP recommendations to identify additional projects, deferment of projects to later years, or elimination of projects.
- Updates to the financial plan to more accurately reflect current funding scenarios.