



THE CITY OF
HARRISONBURG
VIRGINIA

TRANSIT STRATEGIC PLAN

Harrisonburg Department of Public Transportation (HDPT)

May 2024

Executive Summary

The Harrisonburg Department of Public Transportation (HDPT) Transit Strategic Plan (TSP) is a blueprint for implementing better transit, over a 10-year horizon, across the region’s core area that is served by HDPT. The plan consists of five chapters and provides an overview and evaluation of the current system and proposes non-binding system changes and how to implement them. The plan is required for transit agencies operating in urbanized areas in Virginia by the Department of Rail and Public Transportation, and its contents are based on specific guidelines approved by the Commonwealth Transportation Board.

The existing HDPT fixed-route network includes 16 routes that operate within the city limits of Harrisonburg. Six of these routes serve the City of Harrisonburg itself, while 10 routes operate on James Madison University (JMU) campus. The six city routes operate from Monday to Saturday, generally on an hourly schedule. The 10 JMU routes are offered during the fall and spring semesters. Generally, these routes operate on a 20-to 60-minute schedule. One route is offered only on Sundays and acts as a shuttle to nearby shopping areas. During the summer months, the JMU routes operate on a modified service schedule.

HDPT provides ADA complementary paratransit service. Paratransit services are available to people with a disability that prevents them from using regularly scheduled fixed-route service. Riders must apply and be approved to utilize the paratransit service. HDPT recommends a reservation the day before a trip. However, when this is not possible same day reservations are taken on a first come, first serve basis as the schedule permits.

In 2022 HDPT had an annual ridership for their fixed route network of 1,372,799. Fixed-route buses operated 60,482 revenue hours and 603,509 revenue miles, while HDPT’s demand response service operated 32,274 revenue hours and 150,127 revenue miles. HDPT’s highest ridership routes are their JMU routes and almost all routes have higher ridership during the weekday than on weekends. **Table 1** shows the breakdown of riders by route for all HDPT fixed-route service.

Table 1: HDPT Route Ridership

Route	Annual Ridership	Average Weekday Ridership	Average Saturday Ridership	Average Sunday Ridership
City Route 1	47,316	212	171	-
City Route 2	38,741	141	105	-
City Route 3	30,969	120	80	-
City Route 4	12,703	88	45	-
City Route 5	47,391	192	134	-
City Route 6	25,324	114	91	-
JMU - Black Line	25,784	159	-	-
JMU - Blue and Purple Line	67,142	248	-	-
JMU - Green and Red Line	140,416	702	-	-
JMU - Inner Campus Shuttle	702,473	5,098	276	-
JMU - Pink Line	26,344	166	-	-



Route	Annual Ridership	Average Weekday Ridership	Average Saturday Ridership	Average Sunday Ridership
JMU - Shopper	51,988	217	306	374
JMU - Yellow Line	42,836	283	-	-
JMU - Gold Line	7,884	40	101	-
JMU - Silver Line	10,740	44	102	-
Special Services	93,490			

In the process of developing proposals to improve service through the TSP, HDPT developed goals and associated objectives to focus on changes which would result in desired outcomes for the system. The goals and objectives are shown in **Table 2**.

Table 2: TSP Goals & Objectives

Goal	Objective
Provide an equitable, safe, and reliable transportation service that improves people’s lives.	Provide reliable service.
	Improve service for need-based trips.
Improve quality of life and foster economic growth in the region.	Maximize access to major employment centers and development opportunities.
	Contribute to local and regional sustainability goals.
	Contribute to congestion mitigation and overall improved mobility.
Foster connections with local and regional stakeholders.	Improve service for K-12 schools and colleges/universities.
	Educate local and regional partners on how to use the HDPT system.
	Coordinate with nearby cities and counties for potential service connections.
Prioritize exceptional customer service.	Provide excellent customer service through timely service, well-trained drivers, and comfortable accommodations.

An evaluation of the network’s operating efficiency also found four key areas where improvements could be made:

1. Service should operate at regular intervals
 - Using a repeating pattern based on a clockface schedule for when buses are scheduled to arrive will make it easier for riders to plan their trips
2. Routes should operate along a direct path
 - Fewer deviations from the most direct path between major destinations will reduce travel times and also make routes easier to understand
3. Routes should be symmetrical
 - Routes should travel along the same alignment in both directions to make it easier for riders to know where to catch return trips
4. Routes should serve well-defined markets



- The purpose of each route should be clear, connecting strong anchors and a mix of origins and destinations

Using these principles and the objectives, HDPT developed two initial scenarios which were presented to the public using stakeholder meetings, online and paper surveys, and five pop-ups around Harrisonburg. Feedback on the scenarios was compiled and used to create a new final scenario in conjunction with the TSP goals and objectives, and operating performance of the current routes.

The recommendations in the TSP are intended to improve the experience of existing and potential customers, expand the travel possibilities for passengers and increase the efficiency and effectiveness of transit across the region. They simplify the operations and usage of transit services across the Harrisonburg region. Many of the existing large looping services are replaced with bi-directional services that will get passengers to and from their destinations more quickly, spending more time on what they want to, rather than riding transit. On-time performance and operational efficiencies will also be realized through the implementation of these service changes. The proposed changes for both the City and JMU routes are shown in **Figure 1 & Figure 2** on the following pages.



Figure 1: Proposed City Route Network

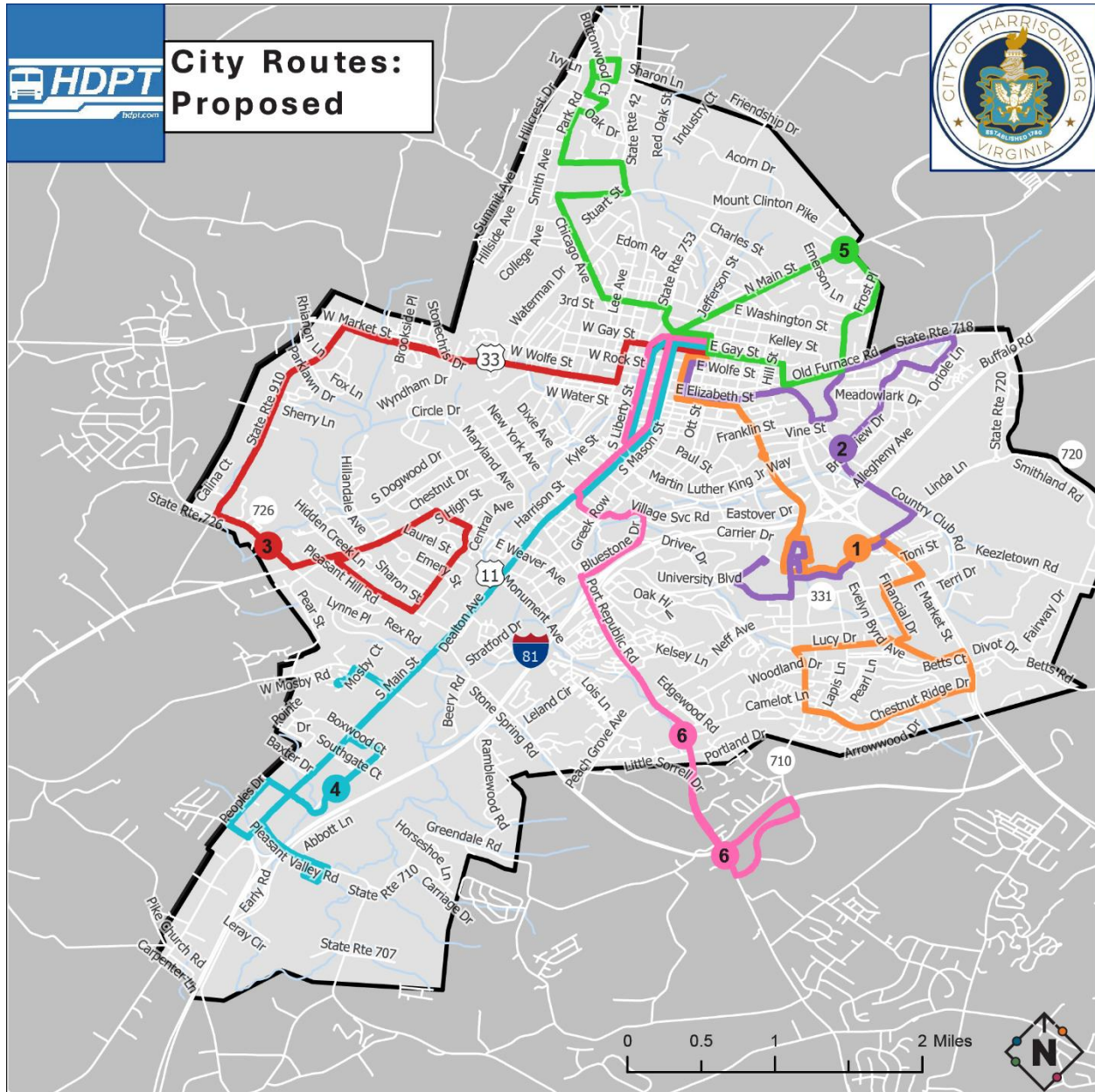
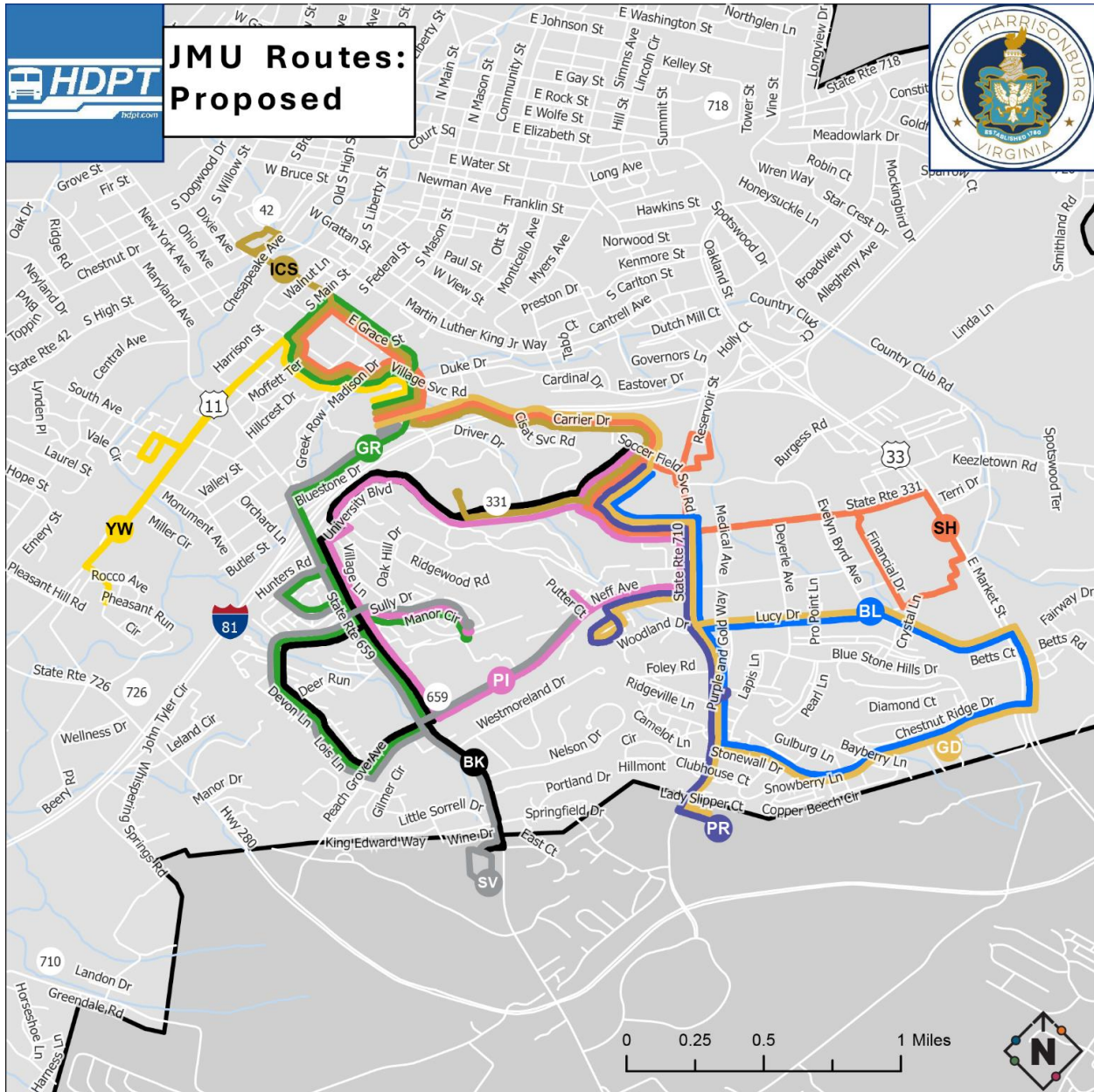


Figure 2: Proposed JMU Route Network



The recommended changes are not intended to be implemented all at once recognizing that some of the changes may require additional vehicles or staff to be available. The implementation was split into three phases: short-term, mid-term, and long-term.

The short-term horizon is intended to be implemented in FY 25. These changes predominantly increase service frequency and hours with some alignment changes. Route 1 and the ICS see longer service hours in the short-term phase. Route 6 and the Green Line will see increased frequency. The current Blue/Purple Line will be split into two separate routes covering separate parts of the current combined route. These changes result in an overall increase in annual revenue hours and would require one additional peak vehicle compared to current operating needs. After the short-term changes are implemented, annual ridership is forecast to be 1,392,449. **Table 3** summarizes the changes.

Table 3: Short-Term Proposed Service Improvements

Time Frame	Key Service Improvements	Routes Impacted	Operational Needs – Total Additional Revenue Hours (versus prior term)	Capital Needs – Total Additional Vehicles at Peak (versus prior term)
Short-Term (FY2025)	Extend the service span; Increase service frequency; remove some services, including Bridgewater-Dayton Shuttle	Route 1; 6; Blue; Purple; Green; Shopper; ICS; Bridgewater-Dayton Shuttle	475	1

The Mid-Term horizon is intended to be implemented in FY2029. In this phase of the implementation, there is a large increase in annual revenue hours associated with extending evening service on Routes 1,2,3,4, and 6. Routes 2,3, and 4 will also have new Saturday service. Due to strong ridership on Saturdays for Route 1 and 6, these routes will have new Sunday service and increased frequency during daytime service. This service expansion will require an additional peak vehicle compared to the short-term phase. Once the mid-term changes are implemented, the annual ridership is forecast to be 1,504,770. **Table 4** summarizes the changes.

Table 4: Mid-Term Proposed Service Improvements

Time Frame	Key Service Improvements	Routes Impacted	Operational Needs – Total Additional Revenue Hours (versus prior term)	Capital Needs – Total Additional Vehicles at Peak (versus prior term)
Mid-Term (FY2029)	Extend the service span for more routes; increase service frequency for more routes	Route 1, 2, 3, 4,	5,936	1

The long-term horizon is intended to be implemented in FY2033. The only further change in the long-term phase is large frequency improvements for Route 6 during weekday and Sunday service to 20-minutes and 30-minutes respectively. This change will also result in a large increase in annual revenue hours and will require an additional peak vehicle compared to the



mid-term phase. After the service improvements to Route 6 are made, ridership is forecast to be 1,517,254. **Table 5** summarizes this change.

Table 5: Long-Term Proposed Service Improvements

Time Frame	Key Service Improvements	Routes Impacted	Operational Needs – Total Additional Revenue Hours (versus prior term)	Capital Needs – Total Additional Vehicles at Peak (versus prior term)
Long-Term (FY2033)	Increase service frequency	Route 6	3,912	1

Once the long-term phase is implemented, most routes will see an increase in weekly trips. Most routes will see a 20-80% increase in weekly trips, though, Route 6 weekly trips will almost quadruple to 258 by FY2033. The Green Line and the Shopper Shuttle are the only routes which will see a decrease in their weekly trips. Ridership is forecasted to increase as the service changes are implemented. By FY2033 the average daily weekday boarding is forecasted to be 7,496, up 8% from 6,938 in February 2022.

To deliver the proposed service changes, HDPT will need to ensure investment is prioritized effectively. The prioritization of assets for HDPT is done within its Transit Asset Management Plan (TAMP). Assets are prioritized into three tiers based on their age or condition. The asset prioritization tiers are shown in **Table 6**.

Table 6: HDPT Asset Prioritization Tiers

Prioritization Tiers	Vehicle/Equipment Age Beyond ULB	Facility TERM Rating
Tier 1	Over 6 years beyond ULB	1
Tier 2	3 to 6 years beyond ULB	2
Tier 3	1 to 2 years beyond ULB	3

This prioritization informs the Capital Implementation Plan (CIP) which outlines HDPT’s capital needs over the next ten years. The CIP determines the need for replacing and expanding assets such as revenue vehicles, non-revenue vehicles, facilities, and equipment. As HDPT fleets vehicles age, they need to be replaced, in addition to new expansion vehicles which will be required to implement the TSP’s recommended service changes. **Table 7** shows the current fleet replacement schedule to maintain and expand service per the TSP:



Table 7: Vehicle Replacement and Expansion Schedule

	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034
Replacement – Large Bus	15	-	5	4	-	8	-	-	-	-	-
Replacement – Cutaway, Light Duty	2	-	-	2	-	4	-	-	2	-	-
Replacement – Minivan	-	-	2	-	-	-	-	2	-	-	-
Replacement – Total	17	0	7	6	0	12	0	2	2	0	0
Expansion – Large Bus	-	1	-	-	-	1	5	-	-	1	-
Expansion – Cutaway, Light Duty	-	-	-	-	-	1	-	-	-	-	-
Total Revenue Fleet Size	54	55	55	55	55	57	62	62	62	63	63
Non-Revenue Replacement	-	-	3	3	3	2	-	3	-	-	-
Non-Revenue Expansion	-	-	-	-	-	-	-	-	-	-	-
Total Non-Revenue Fleet Size	14	14	14	14	14	14	14	14	14	14	14

HDPT owns and maintains one administrative and one maintenance facility. Both are currently rated above 3.0 on the TERM scale and are not in need of immediate repair. However, the CIP does include funds to replace equipment within the facilities such as new mobile bus lifts in FY24 and the replacement of the existing bus wash in FY25.

In order to implement the recommended services changes, a financial plan is included in the TSP providing projections of anticipated expenditures and revenues over the ten-year TSP timeframe. The proposed service expansions in FY25, FY29, and FY33 increase the total number of revenue hours and thus the total operating cost of the system. These additional costs are incurred annually and increase with inflation as HDPT’s baseline operating costs increase.

Table 8 shows how much HDPT’s operating cost will increase relative to the current system for each fiscal year.



Table 8: Increase in Operating Costs due to Service Improvements

	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033	FY2034
Operating Cost Increase (\$1,000s)	\$468	\$482	\$497	\$512	\$1,657	\$1,707	\$1,758	\$1,810	\$2,797	\$2,881

The total operating costs are projected to be covered by HDPT’s current revenue sources. The TSP forecast how much money HDPT would receive from local, state, and federal sources to ensure the service changes are fiscally feasible with current revenue sources. **Table 9** shows the project revenue and total operating costs for HDPT in \$1,000s:

Table 9: Projected HDPT Revenue for Operations

	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033	FY2034
Revenue Hours	50,461	50,461	50,461	50,461	50,461	50,461	50,461	50,461	50,461	50,461
Total Operating Cost	\$9,494	\$9,779	\$10,073	\$10,375	\$10,686	\$11,007	\$11,337	\$11,677	\$12,027	\$12,388
Expected Operating Revenue Sources										
Fare Free										
Farebox	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
JMU	\$2,172	\$2,237	\$2,304	\$2,374	\$2,445	\$2,518	\$2,594	\$2,672	\$2,752	\$2,834
Rockingham Apartments	\$291	\$299	\$308	\$318	\$327	\$337	\$347	\$358	\$368	\$379
Advertising	\$82	\$85	\$87	\$90	\$93	\$96	\$98	\$101	\$104	\$108
Federal	\$4,920	\$5,068	\$5,220	\$5,376	\$5,538	\$5,704	\$5,875	\$6,051	\$6,233	\$6,420
State	\$1,974	\$2,013	\$2,055	\$2,094	\$2,128	\$2,170	\$2,214	\$2,258	\$2,303	\$2,349
Harrisonburg	\$55	\$77	\$97	\$123	\$156	\$182	\$209	\$237	\$267	\$298

