



Document and Peer Review

Capital District Transportation Authority Transit Development Plan

September 2023

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Document Review

Multiple documents guide CDTA's transit service planning and policy. These documents detail transportation needs, goals, and future plans. The following documents were reviewed:

- Transit Development Plan (CDTA, 2013)
- Strategic Plan (CDTA, 2020)
- New Visions 2050 Regional Transportation Plan (CRTC, 2020)
- Coordinated Public Transit-Human Services Transportation Plan (CRTC, 2019)
- Facilities Master Plan (CDTA, 2023)
- Bus Lane Feasibility Study (CRTC and CDTA, 2023)
- BRT/Priority Corridor Feasibility Study (CDTA, ongoing)
- Public Transportation Agency Safety Plan/Safety Management System (CDTA, 2022)
- Climate Action Plan (CDTA, 2023)
- Zero Emission Bus Transition Plan (CDTA, 2023)
- Title VI Program (CDTA, 2020)
- LEP Language Assistance Plan (CDTA, 2020)
- Job Access in New York's Capital Region (CRTC, 2022)
- Executive Order 13985 (2021)
- Executive Order 13990 (2021)
- Executive Order 14008 (2021)

A summary of each document is provided below.

2013 Transit Development Plan

Date: 2013

Author: Capital District Transportation Authority (CDTA)

PURPOSE

The Transit Development Plan (TDP) is a five-year strategy developed to help CDTA effectively use resources to increase ridership through improved service, infrastructure, and customer outreach. The document includes refinements to service monitoring guidelines and recommended projects.

SUMMARY

The 2013 TDP outlines previous successes since the 2007 TDP. These included the implementation of the Bus Plus Bus Rapid Transit (BRT) System between Albany and Schenectady on NY Route 5 (also known as the Red Line), a route restricting, bus stop consolidation, and the development of a route classification system. The TDP also outlines new standards to monitor route performance and a Transit Propensity Index to monitor where CDTA should expand service.

The TDP recommends enhancements to service delivery, technology, and facilities. Highlights include:

- The introduction of mobile ticketing technology
- Increased span and frequency on the Red Line and trunk routes
- Two new BRT corridors:
 - The Blue Line (i.e., the “River Corridor”) serving Albany, Troy, Watervliet, and Waterford
 - The Purple Line running along the Washington and Western Avenue corridor from downtown Albany to Crossgates Mall
- Upgrading to premium vehicles on BusPlus corridors to offer increased seating, standing room, and passenger capacity.
- Constructing transit hubs with waiting areas and passenger amenities in downtowns of Albany, Schenectady, Troy, and Saratoga, as well as Latham Farms, Colonie Center, and Crossgates Mall.
- Increased maintenance (e.g., snow clearance) at shelters and fifty new bus shelters
- New park and ride lots, including shelters and wayfinding
- Establish new relationships with development community to communicate benefits of transit-oriented development.

IMPLICATIONS

The 2013 TDP recommendations should be reviewed to determine which have been implemented and which remain relevant to current service gaps and needs. Although the TDP is ten years old, it remains a valuable resource to this study.

Policy Principles from the 2013 TDP

The 2013 TDP maintained the same principles as the original TDP:

1. **Market Segmentation:** CDTA differentiates services – including design, delivery, and promotion – to respond to *likely* rider markets.
2. **Proactive Stance:** CDTA holds a leadership role to mold regional growth and advocate for mobility.
3. **Frequent Service:** CDTA keeps high service levels where ridership, density, and supportive features exist.
4. **System Connectivity:** CDTA’s system promotes smooth regional connections.
5. **Performance-Based Evaluation:** CDTA develops frameworks for regular service

Strategic Plan

Date: 2020

Author: CDTA

PURPOSE

The Strategic Plan is a values-based document that developed a vision for the CDTA system over 3-5 years.

SUMMARY

CDTA updated the mission statement to the following: “CDTA provides mobility solutions that connect the region’s communities.” Additionally, the plan identifies seven pillars and goals for each pillar:

- Stakeholders: Assist regional partners by leading projects that support regional development through providing a mix of transit solutions.
- Financial stewardship: Maintain a financial foundation to optimize organizational initiatives and maintain long term viability.
- Employees: Provide career growth, flexibility, fair compensation, and effective communication.
- Customers: Provide a mix of mobility services that are easy to use.
- Innovation: Implement creative mobility solutions to improve systems and products for customers.
- Community: Embed CDTA into the community to highlight services and explore new opportunities.
- Service and Mobility: Balance frequency and service with customer needs and organizational capabilities.

IMPLICATIONS

Future recommendations and plans for the transit system should align with the values discussed in the strategic plan. The guiding principles developed as part of this TDP should draw from the seven pillars and mission statement.

New Visions 2050 Regional Transportation Plan

Date: 2020

Author: Capital Region Transportation Council (CRTC)

PURPOSE

The Regional Transportation Plan (RTP) is a statement of principles, strategies, and budgetary emphasis meant to guide more detailed project decisions. The document provides a coordinated, regional approach for future investment in the transportation system.

SUMMARY

The Transit White Paper found within the New Visions 2050 RTP states the transit planning principle as follows: “Innovative and viable transportation services support concentrated development by providing equitable access to reliable and affordable transportation.” The document says the future transit system will:

- Be an essential element of the region’s social, economic, and cultural fabric.
- Provide high-quality fixed-route transit.
- Reduce congestion, improve air quality, and save energy.
- Form the backbone for managing travel demand.
- Provide essential mobility for those who do not operate a private vehicle.

The recommended strategies and actions for CDTA include:

- Update and implement the TDP.
- Complete 40 miles of Bus Rapid Transit (BRT).
- Study the feasibility of bus lanes and future BRT routes.
- Communicate land use impacts on transit.
- Support state work and large employer transportation options.
- Develop and monitor transit-related pilot programs (e.g., bus lanes, mobility hubs, shared transportation services, scooters, automated vehicles).
- Plan for an Albany Intermodal Center and additional transit centers.
- Invest in a safe and sustainable transit fleet.
- Plan for Montgomery County transit service.
- Explore the need for a consolidated CDTA facility.
- Develop an app for public transportation services.
- Explore conversion of enhanced BRT to light rail.

IMPLICATIONS

The Transit White Paper emphasizes that the TDP will need to focus on fleet replacement and a re-evaluation of underperforming routes. Transit-supportive land use, equity considerations for service adjustments, and limited fixed route options in low density areas are also noted.

Coordinated Public Transit-Human Services Transportation Plan

Date: 2019

Author: CRTC

PURPOSE

As required by Federal guidance, this plan identifies the transportation needs of individuals with disabilities, older adults, and people with low incomes. The plan provides strategies for addressing these needs and prioritizes services for funding and implementation.

SUMMARY

The plan provides the following strategies and actions for improvement:

- Prioritize coordination efforts for 5310 funding.
- Encourage mutually beneficial transportation partnerships.
- Incentivize accessible features in federally-funded projects.
- Ensure public listings of available human services transportation are accurate.
- Research public charging for electric mobility devices.

IMPLICATIONS

The TDP should look at ways to reduce barriers to fixed-route transit. The Coordinated Human Services Plan found that fixed-route and paratransit are critical for older adults maintaining independence and for reducing loneliness and isolation.

Facilities Master Plan

Date: 2023

Author: CDTA

PURPOSE

The Facilities Master Plan is a series of reports that identify facility conditions and scopes of work for the following facilities: Albany Facility, Secondary Albany Facility, Schenectady Facility, Troy Facility, Rensselaer Rail Station, Saratoga Springs Rail Station, and a representative sample of 23 bus stops and shelters.

SUMMARY

The objectives driving the development of the scopes included the following:

- Transition from fossil fuel for facility operations (solar arrays, geothermal)
- Implement resiliency measures to allow for continued operations during severe weather events (microgrid, battery storage, stormwater management)
- Reduce dependence of municipal water for vehicle washing (rainwater collection)
- Conduct targeted improvements to facility equipment
- Apply phased approach to the transition to zero-emission fleet technology

The plan identified the following priorities:

- A new West Garage to serve current and expanding service to CDTA's western counties and accommodate both electric and hydrogen infrastructure
- Small satellite facilities to reduce deadheading
- Engage National Grid to verify full extent of electrical upgrades to allow for 100% electrification of the fleet

- Additional facility and fleet maintenance staff to meet existing needs and assist with vehicle electrification

IMPLICATIONS

The Facilities Master Plan provides a list of needs, priorities, associated costs, and labor requirements related to CDTA facilities. The TDP will need to consider these facility needs when accounting for vehicle electrification, system restructuring, and system expansions.

Bus Lane Feasibility Study

Date: 2023

Author: CRTC and CDTA

PURPOSE

This study identified bus lane candidate locations and assessed bus priority treatment options. The process evaluated twelve corridors to prioritize improvements at key locations.

SUMMARY

Based on the analysis and community feedback the following four corridors were identified for bus priority improvements:

- **Washington/State/Broadway in Albany.** Due to the high bus volumes and high ridership, this corridor was recommended for queue jump lanes with a note that ut some queue jumps could span multiple blocks and essentially function as bus lanes
 - On Broadway between State Street and Hudson Avenue, short, tactical bus lanes were recommended.
- **Central Avenue in Albany.** With the second highest delay in the system and 4,500 daily boardings, this corridor was selected for queue jump lanes. Relocation of bus stops may be warranted in some locations.
- **3rd/4th Streets in Troy.** Queue jump lanes are also recommended on this corridor, which has over 3,000 daily boardings and the third highest delay in the system. A tactical bus lane is also recommended from the Green Island Bridge southbound onto River Street and proceeding onto 3rd Street to the Riverfront Station.
- **State Street in Schenectady.** With high population density and 1,300 daily boardings, this location was recommended for queue jumps.

IMPLICATIONS

The TDP will include recommendations for transit facilities and infrastructure. The infrastructure elements and facilities identified in this document may help prioritize the improvements relative to other goals for the system.

BRT/Priority Corridor Feasibility Study

Date: 2024

Author: CDTA

PURPOSE

The Bus Rapid Transit (BRT)/Priority Corridor Feasibility Study is evaluating potential corridors for the next BusPlus route and/or priority corridor service enhancements. The study includes a multi-layered assessment of the existing system, using ridership, land use, origin-destination, and on-time performance data to identify the most beneficial locations for bus priority investments. Selected corridors will be advanced to a preliminary design phase to support funding grant applications.

SUMMARY

The Schenectady to Troy corridor emerged as a viable BusPlus opportunity through a rigorous analysis and input and prioritization from a Study Advisory Committee consisting of regional stakeholders and the New York State Department of Transportation. A BRT corridor provides opportunities to better the link the two cities, along with anchor institutions such as Hudson Valley Community College and major retail centers in Latham. The project developed service plans for the BRT corridor, supporting local route integration and modifications, and conceptual design approaches to three station and roadway typologies. Funding and implementation strategies were included for the BRT corridor.

Additional route concepts not selected for BRT development were developed as potential priority corridors, designed to employ some capital improvements and high-frequency/high-quality transit enhancements without the BusPlus or BRT designation. The study identified new opportunities to connect the Joseph L. Bruno Rail Station with key neighborhoods and destinations, along with enhanced connectivity to the Albany International Airport.

IMPLICATIONS

The TDP will identify needs related to fleet and facilities, both of which will be impacted by the selection of future BusPlus and/or priority corridors.

Public Transportation Agency Safety Plan/Safety Management System (SMS)

Date: 2022

Author: CDTA

PURPOSE

This plan is a federally-required document intended to strengthen safety processes, which include safety risk management, safety assurance, and communication.

SUMMARY

The plan notes that subject matter experts have been identified and assigned to roles that further the culture of safety throughout the organization. All CDTA employees receive training to promote safe working conditions and are provided opportunities to communicate their ideas. The plan states that employees are responsible for being vigilant of safety hazards and cognizant of CDTA's safety rules. Employees can report hazards through their supervisor or through an anonymous reporting process. Once reported, CDTA will work in good faith to implement risk mitigation measures.

The plan also notes that a safety committee comprised of frontline transportation staff and non-essential transportation, maintenance, and management staff is responsible for identifying and recommending risk-based mitigations to reduce the likelihood and severity of items identified through the risk assessment process.

IMPLICATIONS

The plan notes that CDTA provides safe and dependable transportation services at a reasonable cost and that no function will ever compromise safety. The ability to work safely has a direct role in the overall efficiency of the system. Recommendations developed through the TDP should work to mitigate risk associated with service delivery.

CDTA Climate Action Plan

Date: 2023

Author: CDTA

PURPOSE

To augment the Zero-Emission Fleet Transition Plan, CDTA developed the Climate Action Plan to provide a comprehensive approach to a cleaner climate. The plan sets a baseline of current emissions levels, describes existing sustainability initiatives, and proposes future goals and implementation strategies to improve air quality and reduce greenhouse gas (GHG) emissions.

SUMMARY

The Climate Action Plan outlines three goals and related strategies:

- **Increase the percentage of the fleet that is zero-emission and the average miles per zero-emission buses (ZEBs).** Strategies include purchasing more battery electric buses (BEB), expanding the charging capacity at Albany division, and leveraging technology to increase average mileage per bus.
- **Increase transit use in the CDTA service area.** Strategies include expanding service to Montgomery County, expand BRT offerings in the region, provide a range of mobility options (e.g., micromobility, on-demand transit, car-share), and partner with municipalities on mutually beneficial programs.

- **Implement sustainable features in new facility construction.** Strategies include renewable energy features of new West Facility and identifying opportunities to retrofit existing facilities.

IMPLICATIONS

The Climate Action Plan notes that the greatest challenge in meeting the sustainability goals is to upgrade facilities to support an expanded ZEB fleet. As per the Climate Action Plan's goals to expand the ZEB fleet and increase average miles per ZEBs, the TDP project team will need to consider facility capacity, range, fleet capacity, and other needs.

Zero Emission Bus Transition Plan

Date: 2023

Author: CDTA

PURPOSE

This plan summarizes CDTA's progress and planned steps in achieving the goal of a fully zero-emission bus (ZEB) fleet. According to Governor Andrew Cuomo's 2020 State of the State address, transit authorities in New York should aim to electrify 25% of their fleet by 2025 and 100% by 2035.

SUMMARY

The plan includes a discussion of which technologies are feasible, how prepared the workforce is, and known barriers to achieving a fully electric fleet. In 2020, CDTA purchased four battery-electric buses (BEBs) as an initial pilot. By the end of 2022, CDTA operated a total of eight BEBs. The plan acknowledges that significant modifications to the Albany, Troy, and Schenectady facilities would be required to achieve a 100% ZEB fleet. Additional chargers and dispensers and coordination with National Grid will be required at all divisions. Internal coordination across multiple departments, including Facilities, Maintenance, Transportation, Safety & Training, Planning, IT, Procurement, and Finance, will be required to plan for a safe and efficient transition.

IMPLICATIONS

The plan includes milestones to have 16 ZEBs by 2025, 76 by 2030, and 136 by 2035. The plan does not expect a fully electric fleet until 2045. To account for this transition, the TDP will need to address the range of vehicles and capacity needs at facilities.

Title VI Program

Date: 2020

Author: CDTA

PURPOSE

As a recipient of federal funding, CDTA complies with regulations related to nondiscrimination. This includes ensuring the level and quality of transit service is provided without regard to race, color, or national origin; identifying and addressing disproportionately high and adverse human health and environmental effects; promoting the full and fair participation of all populations; preventing the denial, reduction, or delay in benefits related to programs that benefit minority populations or low-income populations; and ensuring meaningful access to programs by persons with limited English proficiency (LEP).

SUMMARY

This document outlines the general requirements related to Title VI. Key components that relate to the TDP include:

- The **Complaint and Investigation Procedure** for anyone who believes they have been discriminated against based on race, color, or national origin.
- The **Determination of Site or Location of Facilities** states that CDTA must conduct an equity analysis during the planning stages of certain capital projects, to ensure that locations are selected without regard to race, color, or national origin.
- The **Public Participation Plan (PPP)** provides opportunities for public comment, public and stakeholder input during planning of projects, and opportunities for inclusion of minority, low-income, and LEP populations through public workshops and information meetings.
- The **Level of Service Standards** define the route classification system (i.e., trunk, neighborhood, express, and commuter routes), load, headway, and service availability standards.
- The **Quality-of-Service Standards** detail the distribution of transit amenities (i.e., shelters, benches, and trash/recycling) at stops, vehicle assignment, and on-time performance.
- The **Service and Fare Change Policies** outlines the process by which major service or fare changes are implemented. A major change of either will trigger a service or fare equity analysis requiring approval by the CDTA Board of Directors.

IMPLICATIONS

The Level of Service and Quality-of-Service Standards cannot show a discriminatory pattern pertaining to availability of minority areas versus non-minority areas. The latest Title VI report found no discriminatory pattern, and the TDP should support changes that promote equity systemwide.

LEP Language Assistance Plan

Date: 2020

Author: CDTA

PURPOSE

As an agency that receives federal funding, CDTA is required to provide language assistance to Limited-English Proficient (LEP) populations. This document outlines an implementation plan for assisting LEP populations that identifies the level of need and resources available.

SUMMARY

The results of a survey conducted in 2013, CDTA found that Spanish is the most common LEP need in the region. CDTA's analysis of 2017 American Community Survey 5-Year Estimates data found that the highest concentrations of LEP populations were in Niskayuna (7.2% of total population), Albany (6.4%), Schenectady (5.9%), and Watervliet (5.3%). The CDTA survey of riders found that nearly 30% of riders speak a language other than English in their home. As a result of this analysis, CDTA developed the following actions to provide support:

- Oral language assistance at public meetings and at the CDTA Customer Service Call Center
- Translated emergency and safety information on buses
- Pictographs for key functions
- Website that is capable of being translated into over 60 languages

IMPLICATIONS

The TDP planning effort should work to engage LEP populations. The community engagement for the TDP will need to provide notices in Spanish and language interpretation at public meetings.

Job Access in New York's Capital Region

Date: 2022

Author: CRTC

PURPOSE

The Job Access report provides data-driven information about inequities in the region's transportation system, noting how these inequities impact job access.

SUMMARY

The report offered the following findings:

- Vehicle access, income, and race/ethnicity are all factors influencing commute mode choice.

- Those who take the bus can have twice the commute time as those who drive.
- Limited access to affordable housing for low-income workers can create a disproportionate transportation burden. This has been exacerbated by a net loss in area that can be zoned for multi-family housing.

The report recommends the following:

- CRTC should partner with businesses to develop Transportation Demand Management Plans.
- CRTC should form partnerships with 511NY Rideshare and CDTA to find transportation options for remote job centers.
- Local governments should consider projected housing development relative to project job growth.
- Transit providers should look to provide equitable access and reduce gaps in their system.

IMPLICATIONS

The TDP should consider gaps in the existing network and how those impact job access, particularly for low-income and minority populations. Employment hubs, such as warehouses and distribution facilities not located on existing fixed-route services, should be considered for potential service expansion.

Executive Order 13985

Date: 2021

Author: Executive Office of the President

PURPOSE

The Executive Order on Advancing Racial Equity and Support for Underserved Communities through the Federal Government aims to advance equity across the Federal Government. It directed the federal government to revise inequitable implementation policies.

SUMMARY

This order defined equity to include the “consistent and systematic fair, just, and impartial treatment of all individuals.” It indicated that this includes historically underserved communities, including “Black, Latino, and Indigenous and Native American people, Asian Americans and Pacific Islanders and other people of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) people; people with disabilities; people who live in rural areas; and people otherwise adversely affected by persistent poverty or inequality.” It directed federal agencies to examine whether policies create or maintain structural obstacles for underserved populations.

This order revoked the previous administration's Executive Order 13950, which restricted diversity training. As a result of this order, federal grant recipients may resume their workplace diversity training programs without restrictions that had previously been in place.

IMPLICATIONS

The TDP may borrow the definition of underserved communities from this executive order. The TDP can consider ways CDTA's transit service advances equity and reduces barriers to opportunities for these communities.

Executive Order 13990

Date: 2021

Author: Executive Office of the President

PURPOSE

The Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis directed federal agencies to review policies that hinder environmental protection or public health.

SUMMARY

The Executive Order directed all executive departments and agencies to review and act on initiatives to confront the climate crisis. It also included the establishment of emission guidelines.

IMPLICATIONS

This Executive Order encourages greenhouse gas (GHG) reductions, so the TDP will consider potential needs related to battery electric buses and other potential opportunities for reduced emissions.

Executive Order 14008

Date: 2021

Author: Executive Office of the President

PURPOSE

The Executive Order on Tackling the Climate Crisis at Home and Abroad supported climate action, including support for clean and zero-emission vehicles.

SUMMARY

This Executive Order stated that procurement authorities facilitate zero-emission vehicles for Federal, State, and local governments. It also noted that union jobs be involved in running and maintaining the clean and zero-emission fleets.

IMPLICATIONS

The TDP will need to facilitate the transition to low- or zero-emission bus fleet.

Peer Review

Reviewing peer documents provides insight into regional trends and allows for greater contextualization of CDTA's standing within the region. The following agencies were identified as peers of CDTA:

- | | |
|------------------------------|--------------------------------|
| 1. CT Transit – Hartford, CT | 5. RIPTA – Providence, RI |
| 2. RTS – Rochester, NY | 6. Metro Transit – Madison, WI |
| 3. NFTA – Buffalo, NY | 7. PRT – Pittsburgh, PA |
| 4. PVRTA – Springfield, MA | 8. GRTC – Richmond, VA |

A summary of each peer document is provided below.

CT Transit, Hartford, Connecticut

PUBLIC TRANSPORTATION TRANSIT ASSET MANAGEMENT PLAN

Date: 2022

Author: CTDOT, owner of CT Transit. CT Transit is the state-owned bus service and largest bus operation in Connecticut. There are eight divisions serving different areas of the state: Hartford, New Haven, Stamford, Waterbury, New Britain, Bristol, Meriden, and Wallingford.

PURPOSE

The Transit Asset Management Plan documents the agency's asset management processes and policies and helps ensure that the agency is meeting FTA requirements. It also identifies priority investments for maintaining a State of Good Repair.

SUMMARY

The plan includes the following chapters:

- Goals and Objectives
- Inventory and Condition
- Analytical Approach
- Investment Scenarios
- Investment Plan
- Implementation and Monitoring

The Goals and Objectives chapter focuses on the vision laid out in the state's long range transportation plan. The following were included in the plan's vision:

- “The economy is strong because improved and sustained multimodal and intermodal transportation contribute to an environment in which businesses and people thrive”
- “Travel is safe and high safety standards are sustained on all modes of transport”
- “Transportation infrastructure is in a state of good repair”
- “Transportation services provide efficient mobility for people and goods, both within and beyond state borders”
- “Congestion is managed”
- “The natural environment is protected, air quality is good, and energy is conserved”
- “Urban, suburban, and rural centers are transformed into livable communities that provide opportunities for walking and bicycling and are enhanced by accessible transportation systems”

The Inventory and Condition chapter is particularly thorough, with detailed descriptions and graphics for each type of asset. The assets are grouped into one of the four following categories:

- Rolling Stock: bus, rail, or ferryboat
- Equipment: service vehicles
- Infrastructure: rail or bus
- Facilities: administrative/maintenance or passenger/parking

An inventory was recorded for each asset and assessments were done to determine the percentage that had exceeded their useful life benchmark. Based on these results, investment needs were prioritized and considered through the following three funding scenarios: no funding, expected funding, and achieve SGR.

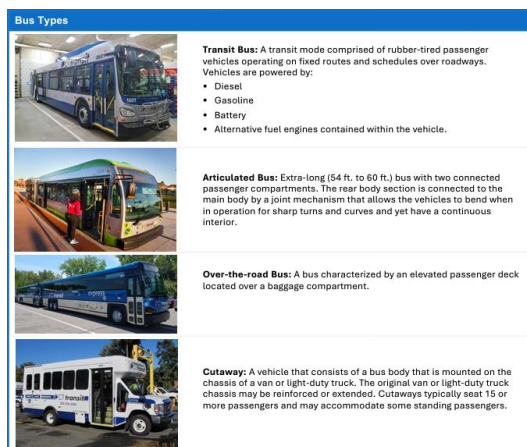


Figure 3-1. Transportation Assets in Connecticut

IMPLICATIONS

The inclusion of photos and graphics is useful for identifying fleet and facilities assets. Grouping assets into separate categories helps with report organization and visual aesthetics of the graphics.

RTS, Rochester, New York

CONNECTING COMMUNITIES

Date: 2023

Author: Regional Transit Service (RTS), a regional transit authority established by New York State serving Monroe, Genesee, Livingston, Ontario, Orleans, Seneca, Wayne, and Wyoming counties. RTS serves nearly eight million passengers per year by providing 31 fixed routes as well as on-demand and paratransit services.

PURPOSE

Connecting Communities serves as RTS's 2023-2026 Comprehensive Strategic Plan and 2023-2024 Financial Plan and was prepared to establish agency goals and provide a roadmap for achieving those goals. The plan also provides a plan for implementation of Reimagine RTS, the agency's redesign of the transit system.

SUMMARY

The overall structure includes:

- Organizational Overview
- 2022 Year in Review
- Strategic Plan and Operational Initiatives
- Financial Plan
- Operating Budget
- Financial Policies
- Performance Measurements

As part of the strategic plan, the organization introduces their commitments to fiscal discipline, quality service, and increased productivity to connect riders to jobs, healthcare, education, shopping, and recreation. The plan specifically defines four key strategies:

- Ensure Financial Sustainability
- Engage Employees on the RTS Way
- Enhance the Customer Experience and Deliver Safe, Quality Service
- Demonstrate Climate Leadership

The financial plan provides a report of the agency's budget and expenses, a Ten-Year Capital Improvement Plan, and highlights the agency's financial policies.



IMPLICATIONS

The integration of a strategic plan and a financial plan allows the agency to define measurable goals and provide a roadmap to achieving goals through capital improvements and investments. Report graphics and page design enhance visual aesthetics and reader interest.

The plan states that RTS is guided by a “commitment to meet the needs of the community,” and lists the audiences whose needs should be focused on. CDTA’s plan should also do this. This information should guide service planning decisions.

The plan also states assumptions which characterize federal support and regional trends underpinning the strategic plan.

NFTA Metro, Niagara Falls, New York

BUS NETWORK IMPROVEMENTS

Date: 2021

Author: Niagara Frontier Transportation Authority-Metro (NFTA Metro), the regional transportation authority serving Erie and Niagara Counties in New York. NFTA Metro reported 13 million systemwide riders in FY 2022, with a system of 54 bus routes and a 6.4-mile light rail system.

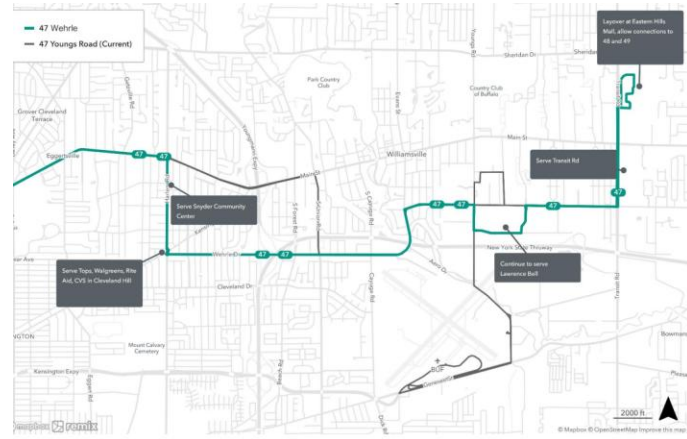
PURPOSE

The Bus Network Improvements plan was developed to adjust the bus network in Erie and Niagara Counties in response to ridership patterns and operational challenges.

SUMMARY

NFTA Metro proposed changes to their bus network after observing reduced ridership, reduced service, and noticeable changes in travel patterns following the pandemic. The plan includes details of the following:

- Public Engagement Plan: three rounds of outreach including a survey to understand rider needs and priorities, a draft plan comment period, and a final proposal comment period.
- Approaches to Service Change: establishes new guidelines for route design based on the agency's Service Design Guidelines and Delivery Standards, which calls for direct routes with limited deviations from major thoroughfares.
- Paratransit Implications: individuals who will no longer be within the paratransit coverage area (within $\frac{3}{4}$ mile of the fixed-route network) will continue to receive paratransit trips for up to one year after changes are made.
- Timeline for Implementation: network changes phased by county from Winter 2021 to Summer 2022.
- Fare Changes: proposed changes include 31-day fare capping, elimination of enhanced expressed surcharge, and addition of a "premium fare".
- Route Change Profiles: includes route-by-route maps and full network maps of proposed changes.



IMPLICATIONS

Future recommendations and plans for the transit system should align with design guidelines. Design guidelines should align with and be driven by guiding principles within the agency. Individual route change maps are useful for quickly visualizing how service will be altered.

PVTA, Pioneer Valley Region, Massachusetts

COMPREHENSIVE REGIONAL TRANSIT PLAN (CRTP)

Date: 2021

Author: Pioneer Valley Transit Authority (PVTA) provides transportation services to the Pioneer Valley Region, specifically Hampden and Hampshire counties, and provides connecting service to the FRTA in Franklin County. PVTA operates 45 bus routes and a senior van service across 20 communities in Massachusetts.

PURPOSE

The Comprehensive Regional Transit Plan is a five-year regional vision for future investment in the transportation system. The document provides a general service overview, identifies gaps in service, and provides recommendations.

SUMMARY

The CRTP is in response to a task force recommendation that regional transit authorities “will continue to succeed by understanding their markets and by aiming to have their service networks meet the current and future mobility needs of their region as well as support connectivity to other regions where possible.” PVRTA aims to do this by updating their CRTP every five years. To help consider the agency’s needs and develop recommendations, the document outlines the following guiding principles:

- Safety
- Top-Notch Customer Experience
- Equity Responsibility/Title VI
- Fiscal Considerations
- Environmental Stewardship
- Regional Land Use and Economic Development Goals
- Data Driven and Performance Based Decision Making

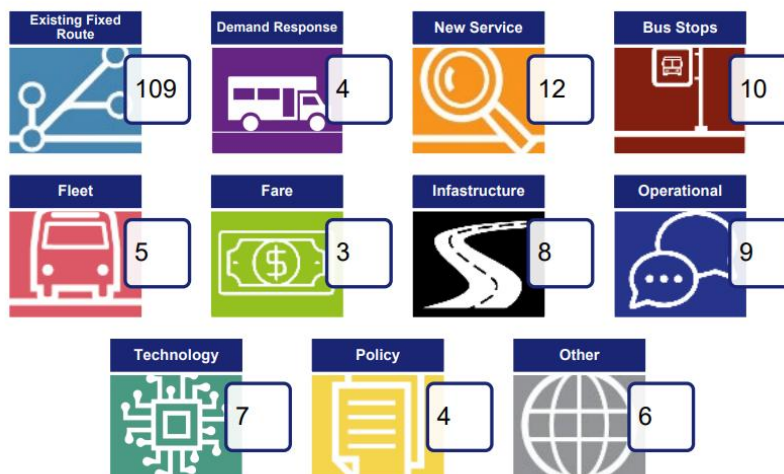
In addition to the guiding principles, the plan also summarizes six key goals developed based on feedback from PVRTA staff and contracted operators. The following goals are aimed at supporting the recommendations laid out in the plan:

1. Maximize mobility options for residents of the region
2. Deliver the service of choice
3. Obtain sustainable funding options
4. Operate in the most cost-effective and efficient way possible
5. Support economic development
6. Develop a capital program that aligns with the Governor’s Commission on the Future of Transportation

Based on an analysis of existing conditions, a total of 197 needs and 177 recommendations were identified that PVRTA can address over the next five years. These recommendations were categorized into the following eleven categories:

- Existing Fixed Route
- Demand Response
- New Service
- Bus Stop
- Fleet
- Infrastructure
- Fares
- Policy
- Operational
- Technology
- Other

Each need was categorized as either a core need or ridership dependent. The recommendations were then scored based on the scenario and the complexity, impact, and cost of each.



IMPLICATIONS

The identification of needs and development of recommendations should be driven by internal project goals and guiding principles. Categorizing recommendations can help manage a wide array of needs and facilitate prioritization.

RIPTA, Rhode Island

RHODE ISLAND COORDINATED PUBLIC TRANSIT-HUMAN SERVICES TRANSPORTATION PLAN

Date: 2023

Author: Rhode Island Public Transit Authority (RIPTA) is the sole public transportation authority in Rhode Island, providing eight express routes, 41 fixed routes, on-demand service, and paratransit service throughout the state.

PURPOSE

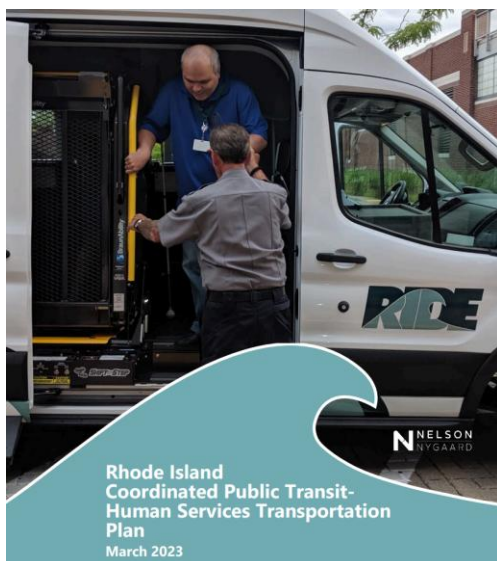
This plan identifies the transportation needs of individuals with disabilities, older adults, and people with low incomes. The plan provides strategies for addressing these needs and prioritizes services for funding and implementation.

SUMMARY

The Coordinated Plan includes a summary of the engagement process, an inventory of existing services, identification of needs, strategies, recommended priorities, and an action plan. The plan identifies the following eight strategies and actions for improvement:

- Increase transportation service offerings
- Pursue additional funding for human services transportation
- Enhance bus stops, mobility hubs, and availability of vehicles
- Expand customer service and driver sensitivity training
- Develop a statewide mobility management network

- Strengthen coordination among providers, funders, and advocates
- Strengthen communications and information sharing
- Increase coordination of travel training services statewide



IMPLICATIONS

The TDP should look at ways to reduce barriers to transit. Ensuring that there is proper training, infrastructure, and services available is critical for individuals with disabilities, older adults, and people with low incomes maintaining independence. Inclusion of outreach materials provides valuable insight into engagement efforts and techniques.

Metro Transit, Madison, Wisconsin

TRANSIT NETWORK REDESIGN DRAFT PLAN

Date: 2022

Author: Metro Transit, a public transit agency that provides service throughout the Madison, Wisconsin area as well as in Middleton, Fitchburg, Verona, Sun Prairie, and the Town of Madison. Metro Transit operates a total of 24 bus routes in addition to specialized paratransit services.

PURPOSE

The Transit Network Redesign Draft Plan proposes an overhaul of the bus network to serve Madison more conveniently and better meet the goals of the region.

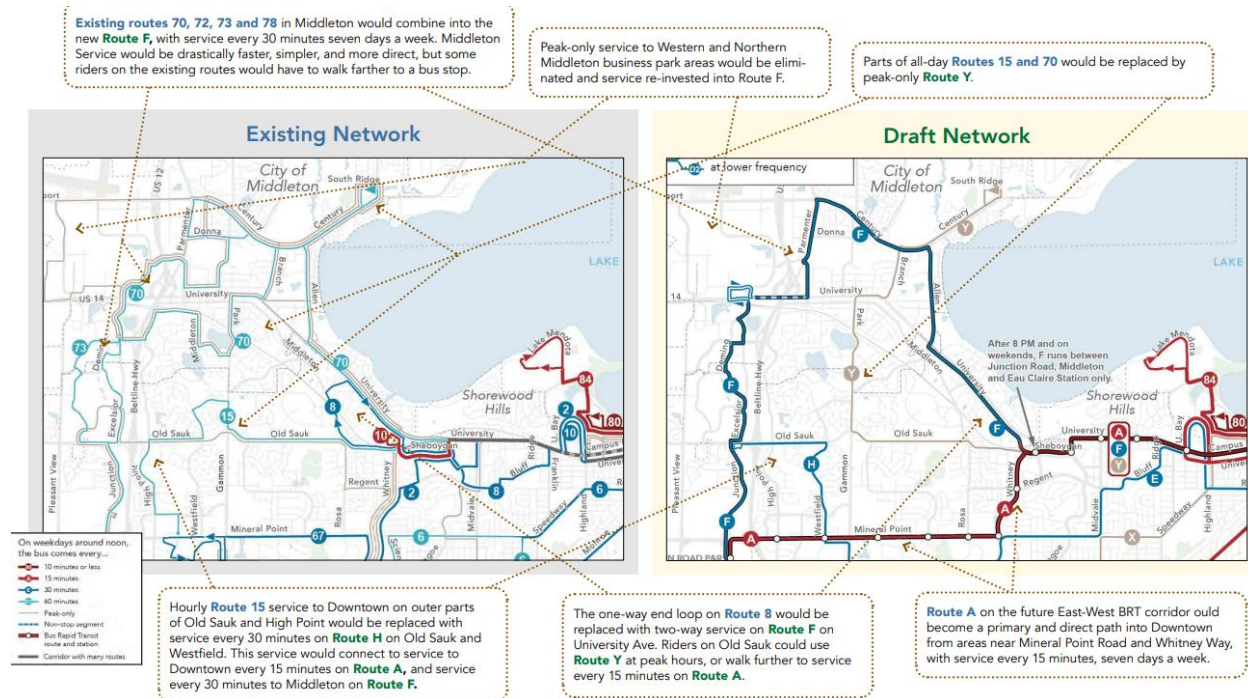
SUMMARY

As part of the network redesign, the plan outlines the following trade-offs:

- Ridership versus coverage

- Walking further to stops versus waiting at stops
- One-seat rides versus transfers
- Peak versus all day needs

Given these challenges, the plan aims to provide a proposed network of more frequent and direct routes and more consistent service, with a consequence of potentially longer walks to service. In addition to outlining these network changes, the plan also details the public participation process, equity considerations, and key benefits of implementation.



IMPLICATIONS

Proposed network changes should consider potential tradeoffs of service improvements as well as any equity implications of those tradeoffs. Annotated network graphics help highlight areas of interest and help the reader understand proposed network changes.

PRT, Pittsburgh, Pennsylvania

FY 2023-2028 STRATEGIC PLAN

Date: 2022

Author: Pittsburgh Regional Transit (PRT) provides public transportation throughout Allegheny County, PA, serving approximately 1.2 million people with 96 bus routes, 26.2 miles of light rail, two inclines, and specialized paratransit services.

PURPOSE

This five-year strategic plan establishes the framework for the agency to respond to needs and challenges in the region and develops tailored workplans for achieving their goals and implementing improvements.

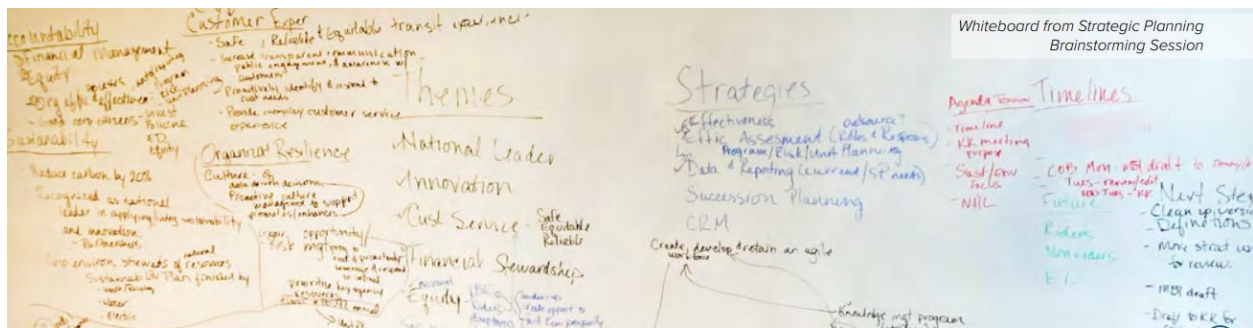
SUMMARY

The plan redefines PRT's vision, which states that the agency should "be our region's transportation mode of choice by delivering an innovative network that is clean, sustainable, and equitable; a network that enables individuals, businesses, and economies to thrive." Additionally, the plan identifies six values to guide PRT's operations:

- Collaboration
- Safety
- Customer Service
- Equity
- Flexibility
- Integrity

The plan focuses on rebuilding transit for the post-pandemic world, highlighting specific trends such as a rebound in ridership, operator shortages, and budget constraints. In response to these changes, the plan outlines several objectives to accomplish the following four strategic goals:

- **Accountability:** "Institute key operational processes that produce exceptional service to customers in a transparent, equitable manner that aligns with PRT's mission and goals."
- **Organizational Resilience:** "Adapt and respond to new and changing conditions through proactively implementing policies, processes, and initiatives."
- **Customer Experience:** "Provide an exceptional customer experience with PRT by providing safe, equitable, and reliable service."
- **Sustainability:** "Be a positive impact on Allegheny County and the region through intentional and innovative environmental and climate initiatives."



IMPLICATIONS

The TDP should establish guiding principles that align with the agency's mission and vision. The formation of long-term goals and recommendations should be tailored to the defined guiding

principles. The inclusion of whiteboard images from brainstorming sessions helps convey the process for defining values and goals.

GRTC, Richmond, Virginia

TRANSIT DEVELOPMENT PLAN (TDP) 2018-2028

Date: 2018

Author: Greater Richmond Transit Company (GRTC), a public transit agency that provides services to the Richmond, Virginia area and parts of Chesterfield and Henrico counties. GRTC services include 45 local and express bus routes, as well as specialized paratransit services.

PURPOSE

The updated TDP provides an overview of the current state of the system and redefines the agency's goals and objectives for the future. The plan also serves as a guide for the expansion of GRTC's transit services.

SUMMARY

GRTC's TDP outlines the following eight goals for the agency:

- | | |
|---|-------------------------------------|
| 1. Improve Employee Experience | 5. Promote Environmental Efficiency |
| 2. Promote Safety First, Service Always | 6. Improve Financial Efficiency |
| 3. Improve Operational Efficiency | 7. Improve Public Image |
| 4. Improve Paratransit Options | 8. Improve Customer Satisfaction |

The plan focused on the planning efforts and implementation timeline for the GRTC's bus network redesign and the implementation of a BRT line. The plan outlines the agency's needs and details specific route-level service improvements from the network redesign. The recommendations include route extensions and enhancements as well as major capital projects, and are categorized into one of the following phases based on the level of need and implementation complexities:

- Recommended Short-Term Expansion (Years 1-5)
- Recommended Mid-Term Expansion (Years 6-10)

These recommendations are driven by the outlined goals and objectives, GRTC's service design standards, and a service and system evaluation. GRTC's service design standards use four measures specific to route design when developing new services:

- **Service Coverage Allocation:** the distribution of revenue service hours system wide based upon balancing high frequency routes and lower frequency, less productive routes.

- Directness: routes should minimize deviation from the most direct alignment between endpoints.
- Interconnectivity Capability: routes should be designed to serve the most desired origin-destination pairs.
- Transfer Wait Time: routes should be designed to make timed transfers to and from major connecting services with minimum delay to the overall trip.

Service Improvement SI:87 Route 01

Routing: No change

Frequency: Increase the frequency to every 15-minutes from 7pm to 10pm (currently every 30-minutes)

Span: No change

Additional Residents

17,100	1.88%
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Additional Jobs

15,500	3.14%
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Additional Residents In Poverty

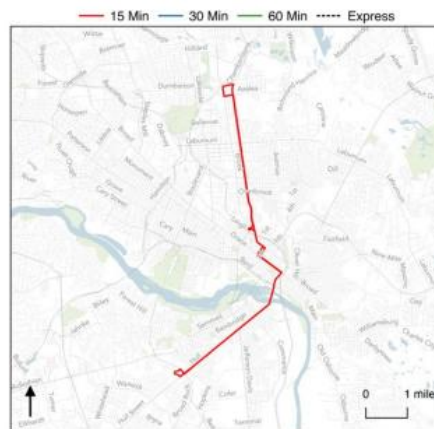
5,500	4.58%
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Additional Minority Residents

12,400	2.96%
--------	-------



Existing System



Service Improvement

IMPLICATIONS

The TDP recommendations should follow any pre-defined agency design standards and be appropriately prioritized and phased to facilitate implementation. Graphics depicting the change in minority and low-income residents for each service improvement help highlight equity implications.

Ride Gwinnett, Gwinnett County, Georgia

TRANSIT DEVELOPMENT PLAN (TDP)

Date: 2023

Author: Ride Gwinnett, a public transit agency that provides services throughout Gwinnett County, a suburb of Atlanta, Georgia. Ride Gwinnett service includes local microtransit service, nine local bus routes, and five express bus routes that connect to major employment centers in Atlanta.

PURPOSE

The purpose of the TDP is to identify recommendations for Gwinnett County's transit system, including capital priorities, operational improvements, supporting infrastructure, vehicles, and technology.

SUMMARY

The Gwinnett County TDP was centered around three main phases:

1. Phase I: Vision, Goals, and Priorities
2. Phase II: Transit Needs, Gaps, and Preliminary Strategies
3. Phase III: Draft Recommendations

The following goals were developed as part of Phase I:

- | | |
|--|--------------------------------------|
| 1. Increase mobility options. | 4. Create vibrant multimodal places. |
| 2. Improve access to mobility options. | 5. Minimize environmental impact. |
| 3. Enhance the user's experience. | 6. Provide robust information. |

These goals, along with a comprehensive assessment of transit needs in the county, resulted in specific service recommendations for Ride Gwinnett. These recommendations include expanding microtransit to the entire county and expanding fixed-route transit to a network of over 500 miles with service provided seven days a week. The vision for Gwinnett County also includes Transit Transfer Facilities, which provide infrastructure and amenities to facilitate transfers between all modes.

In order to assess the efficiency, effectiveness, and quality of recommended service changes, the TDP outlines several service standard guidelines. These service standards provide guidance on recommended thresholds by mode for several metrics, including frequency, span of service, stop spacing, and coverage density.



TRANSIT TRANSFER FACILITIES

Transit transfer facilities are the primary points of confluence between routes and modes. Gwinnett residents recognized that customer experience and convenience are important in ensuring seamless travel and building a positive transit system identity. More specifically, residents offered the following feedback about the location and style of transit and transfer facilities:

- Leverage existing County assets to invest in transfer facilities.
- Strong support for transfer facilities that reflect the local community and integrate local art installations and themes.

Small Transit Transfer Facility

Small TTFs are located at minor transfer points, facilitating connections between transit services.

Typical Amenities

- Bus shelters
- Real-time information
- Security cameras
- Lighting
- Benches

Medium Transit Transfer Facility

Medium TTFs are larger facilities, typically located off-street, that can accommodate connections to multiple routes and, in some instances, multimodal transfers.

Typical Amenities

- Bus loop and dedicated layover
- Bus shelters
- Real-time information
- Security cameras
- Lighting
- Benches
- Dedicated restroom facilities
- Part-time staffing to provide enhanced security and surveillance.

Large Transit Transfer Facility

Large TTFs represent the most important transfer nodes within the entire regional transit system. Many of these facilities will provide connections between local bus and high-capacity transit services like light rail and bus rapid transit.

Typical Amenities

- Off-road bus loop, bus bays, and layover areas
- Kiss and Ride and/or Park and Ride
- Bus shelters
- Real-time information
- Security cameras
- Lighting
- Benches
- Dedicated restroom facilities
- Indoor waiting areas
- Full-time staff presence to serve customers and provide an enhanced security presence.




Two large TTFs, one at **Gwinnett Place Mall** and one in **Lawrenceville**, are already under way. Gwinnett County was awarded a federal RAISE grant to build a new transit center at Gwinnett Place Mall.

38 | EXECUTIVE SUMMARY
RECOMMENDATIONS | 39

IMPLICATIONS

The TDP should define comprehensive service standards by mode to provide agencies with guidance on how to assess their service offerings. If TDP recommendations depend on reliable transfers, consideration should be given to creating multimodal transfer hubs to improve the customer experience.

HDPT, Harrisonburg, Virginia

TRANSIT DEVELOPMENT PLAN (TDP)

Date: 2017

Author: Harrisonburg Department of Public Transportation (HDPT), a transit agency that provides services throughout the City of Harrisonburg in the Shenandoah Valley region of Virginia. The agency provides 16 fixed bus routes as well as paratransit service.

PURPOSE

The purpose of the TDP is to outline short-term and mid-term transit improvements over a ten-year period. It also provides a plan for implementation, including an estimation of necessary resources and available funding programs.

SUMMARY

The Harrisonburg TDP includes the following chapters:

1. Overview of Public Transportation in the Region
2. Goals, Objectives, and Standards
3. Service and System Evaluation and Transit Needs Analysis
4. Service and Capital Improvement Plan
5. Implementation Plan
6. Financial Plan

The final plan also includes several appendices documenting survey questions and responses throughout the development of the TDP.

The service plan outlined in the TDP provides several specific route recommendations aimed at improving the existing network. Each recommendation focuses on one of the following broader themes or key types of improvements:

- Schedule improvements, such as extending the hours of operation;
- Specific route improvements and additional routes, which propose changes and expansions to the existing network; and,
- Marketing and planning projects.

To measure the effectiveness of recommended service changes, the TDP outlines standards that can help guide the development and assessment of current and future routes. This includes service standards such as vehicle load, vehicle headway, and on-time performance as well as performance standards such as passengers per revenue hour and operating cost per trip.

**Harrisonburg Department
Of Public Transportation
Transit Development Plan
(FY2018-FY2027)**

Final Report
November 2017
Adopted March 2018

Prepared for
KFH Group, Inc.
Bethesda, Maryland

FIXED ROUTE ON-BOARD RIDER SURVEY

Harrisonburg Department of Public Transportation (HDPT) is seeking input concerning our services. Please take a minute to complete this survey during your bus trip. Please complete only one survey. Thank you!

1. Which HDPT route did you board?
2. How many HDPT buses will it take to complete this one-way trip today?
☐ 1 ☐ 2 ☐ 3 ☐ 4+
3. Where did you board the bus? Please indicate the address, intersection, or landmark:
4. Where is your destination? Please indicate the address, intersection, or landmark:
5. What is the purpose of your trip today?
You may check more than one.
☐ Work ☐ School
☐ Social/Recreation ☐ Medical/Dental
☐ Shopping/Errands ☐ Tourism
☐ Child Care ☐ Other
6. How did you get to the bus stop for this bus?
You may check more than one.
☐ Walked - How many blocks? _____
☐ Another bus - Which route? _____
☐ Car - Drove Alone ☐ Car - Carpooled
☐ Bicycle ☐ Other: _____
7. How will you get to your final destination once off the bus? *You may check more than one.*
☐ Walk - How many blocks? _____
☐ Another bus - Which route? _____
☐ Car - Drove Alone ☐ Car - Carpool
☐ Bicycle ☐ Other: _____
8. If you walked to and from your bus stop(s), did you see a need for improvements to any of the following pedestrian amenities? (please check all that apply)
Yes: ☐ Sidewalks ☐ Crosswalks ☐ Curb ramps No: ☐ I did not see a need for improvements
Location(s) of needed improvements: _____
9. Please rate HDPT in the following areas:
10. Do you find the HDPT public information helpful and easy to use? ☐ Yes ☐ No

What can HDPT do to improve public information: _____

Turn Over Please

IMPLICATIONS

TDPs should follow a coherent structure that clearly walks readers through the development process and final recommendations for consideration. Including public outreach efforts in the TDP document, such as survey structure and responses, can help draw attention to an agency's dedication to public engagement. Service recommendations should fit into broad, but strategically defined, themes for improvement.