



CDTA

Transit Development

Plan Update



2013 CDTA Transit Development Plan Update

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Executive Summary

The Capital District Transportation Authority's Transit Development Plan is a five-year strategic road map for the effective use of resources to increase transit ridership through improved service, infrastructure, and customer outreach. The original TDP served as the foundation for CDTA's recent growth with the current fiscal year expected to reach 16 million boardings. This update will build on the success of the previous TDP, refining standards for service and proposing key capital projects.

Previous Success

CDTA's original Transit Development Plan guided the authority through an extended growth period. We unveiled Upstate New York's first Bus Rapid Transit line, BusPlus, which provides limited stop service between Albany and Schenectady via NY Route 5. The route network was restructured county-by-county to address areas with the highest demand and position CDTA for growth. CDTA developed a route classification system, consolidated bus stops while thresholds for ridership and productivity were instituted and are monitored regularly.

Focusing Investment

The Transit Development Plan update includes refinements to service monitoring guidelines and recommended projects, which include:

Detail Standards

Detailed standards were developed to enhance decision-making for service planning, infrastructure investments as well as public input and outreach. These service standards allow CDTA to better monitor the route performance and determine the appropriate adjustments needed to increase productivity.

Transit Propensity Index (TPI)

The Transit Propensity Index uses relevant factors to determine where transit is most viable in the Capital Region. The TPI depicts where CDTA should expand service by displaying geographic data on community characteristics and those of transit generators. The TPI includes more relevant indicators and refined methodology.

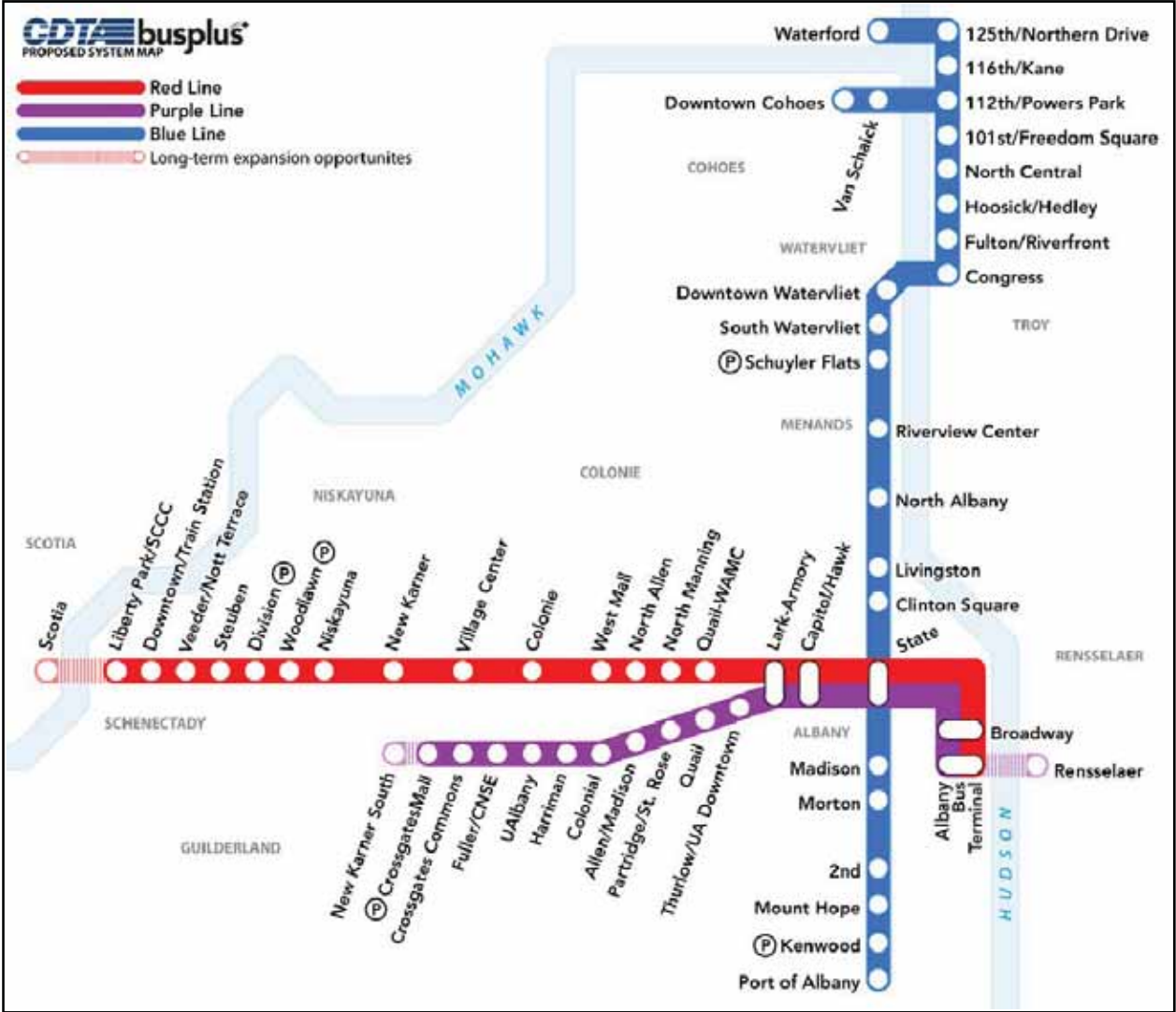
Transit Priority Network

The Transit Priority Network clearly communicates where CDTA will focus its service and infrastructure improvements to the region's planners, developers, elected officials, and major institutions. This offers partners the ability to match long-term planning and development so land-use and the built environment correspond with transit investments.

Looking Ahead

The TDP update focuses on enhancing our service delivery, our facilities and offers the Capital Region options for continued growth by way of increased reliance on public transit. The introduction of smartcard and mobile ticketing technology along with an increased presence in our urban core areas seed the next step in the evolution of public transportation across our region. The core projects of the TDP are listed below:

CDTA will expand on the success of BusPlus with additional service along with Red Line connecting Albany and Schenectady via NY Route 5. Longer hours of service and improved frequency lead the list of planned improvements for the existing BRT line. Planning for the implementation of two additional lines which will create a network envisioned as “40 Miles of BRT” is already progressing. The Purple Line will travel on the Washington and Western Avenue corridor between downtown Albany and Crossgates Mall, providing improved service to urban neighborhoods and the University at Albany. The Blue Line will operate through the “River Corridor” communities along the Hudson River including Albany, Menands, Watervliet, Troy, Cohoes and Waterford.



Service Improvements and Expansion

CDTA will increase service based on productivity and defined growth areas taking into account social and geographic equity. Trunk routes will see increased frequency and extended hours, additional trips will be added to express routes, while high-performing commuter and neighborhood routes will be increased to meet demand. CDTA’s route performance review will also address underperforming routes to determine if a decrease in service is warranted.

Premium Vehicles for Premium Service

Premium services including express and bus rapid transit are likely to attract choice riders. Vehicle upgrades will improve comfort and attract additional ridership. Articulated buses planned for BusPlus corridors offer increased seating, standing room, and passenger capacity. The deep-cushioned, forward facing seats with added leg room and complimentary Wi-Fi are planned to be used on all express routes.



*Rendering of Articulated Bus
(Rochester - RGRTA)*

Transit Hubs

Transit hubs, which will be constructed in high traffic areas, offer enhanced waiting areas, opportunity to purchase fare media and other amenities. The facilities will be located in the downtowns of each major city – Albany, Schenectady, Troy, and Saratoga – and high ridership suburban locations such as Latham Farms, Colonie Center, and Crossgates Mall.



Transit Center in Providence, RI

Improved Technology

We are deploying state-of-the-art technology to increase passenger convenience and monitor our services. There will be a fare collection system upgrade to include the use of smart cards and mobile ticketing. We also plan to replace our Computer-Aided Dispatch and Automated Vehicle Location system and expand bus rapid transit ITS elements (i.e. Transit Signal Priority & real-time arrival information) to local services.



*Mobile Ticket App
(DART - Dallas)*



*Smart Card
Reader*

Increased Shelter and Maintenance

To improve convenience at our on street facilities, there will be an increase in the maintenance of shelters and street amenities. We are proposing fifty new bus shelters, providing added snow clearance at shelters, and enhancing landscaping to improve aesthetics of the surrounding area.

Park & Ride Expansion and Improvement

Guided by the Regional Park & Ride / Express Bus study, CDTA will establish shared-use lots with an eye towards a more cost effective approach. CDTA will review outright purchase or long-term lease of property for park & rides with the highest usage. The growth of the park-&-ride network takes on added importance to support the proposed express vehicle improvements.

Park & rides will see new shelters, landscaping, and repaving. New signage will be installed for wayfinding from highways as well as uniquely branded signs at the entrances.



Improved Relationship with Development Community

CDTA will work expand its relationship with the development community to influence design of the region's built environment. We will demonstrate the benefits of transit-oriented and easily accessible development by public transit. We will conduct a coordinated outreach plan which includes offering assistance in for transit-friendly projects.

Chapter 1 - Introduction

1.1 Overview of CDTA

The Capital District Transportation Authority (CDTA) is the region's premier mobility company. CDTA operates about 270 buses from facilities in Albany, Schenectady and Troy. CDTA also owns and operates rail stations in Rensselaer and Saratoga Springs. We serve a metropolitan area of 850,000 people and have a workforce of close to 625.

CDTA operates 50 transit routes throughout the Capital Region. Our vehicles and CDTA logo are commonplace on area roadways. People use our services to travel to work; in fact, over 70% of all trips are work related. The rest are for medical, educational or recreation purposes. We serve most employment centers, retail centers, hospitals, neighborhoods, housing developments and colleges. Almost 20% of our ridership is college based due to partnerships that allow students, faculty, and staff to ride for free. Nearly every institution of higher education in the region is now a member of this Universal Access program.

We have a number of services include a bus rapid transit line called BusPlus traveling on Route 5 from Albany to Schenectady which provides limited stop service with a number of enhanced components that increase travel times and customer convenience over conventional bus service. CDTA also operates a commuter express service along the Northway (I-87) to downtown Albany and a summer trolley in Saratoga Springs. We offer a paratransit service for people with disabilities who cannot access our regular route system, called Special Available Transit by Request (STAR), which has 280,000 rides annually and growing.

Since the adoption of the last Transit Development Plan in 2007, system ridership has increased by 2 million riders and will exceed 16 million boardings this coming year. The increase is attributable to the expansion of the Universal Access program and the restructuring of our route system to relocate service where there is the most demand. High fuel costs, improved perceptions of transit, and concerns for environmental issues are also contributing factors.

Company Background

The Capital District Transportation Authority is a public benefit corporation created by New York State on August 1, 1970. The purposes of the Authority, as defined by legislation, are "the continuance, further development and improvement of transportation and other services related thereto, within the Capital District Transportation District, by railroad, omnibus, marine and air, in accordance with the provisions of the Law." The Law conveys broad powers to the Authority to fulfill its purposes in Albany, Schenectady, Rensselaer and Saratoga Counties in New York State.

Mission Statement

We plan, finance, and deliver transit services that take people where they want to go in the Capital Region safely, efficiently and at a reasonable cost.

CDTA works to accomplish this mission by:

- Continually identifying ways to increase transit ridership and revenue.
- Taking a leadership role to help mold regional growth and improve the transportation network.
- Balancing regional needs for social service, congestion relief and basic access.
- Delivering a range of transportation services that meets a diversity of markets and customers.
- Developing innovative ways to attract and retain a high quality workforce.
- Identifying appropriate funding sources to meet the region's transportation needs

Board of Directors and Organizational Structure

Governance of CDTA is the responsibility of a nine-member Board of Directors. Members are appointed by the Governor and confirmed by the State Senate. The Board is comprised of three members from Albany County, and two members each from Rensselaer, Saratoga and Schenectady counties and a non-voting member, representing labor. The Board monitors operational performance against clearly defined performance targets and plays a proactive role in setting clear strategic direction and priorities for all of CDTA's operating units and programs. The Board sets performance targets for, and evaluates the performance of the Chief Executive Officer, who is responsible for the day-to-day management of CDTA. The Board of Directors has three committees – Governance, Performance Oversight, and Planning & Stakeholder Relations.

CDTA's current organizational structure can be founded in Appendix A.

1.2 Transit Development Plan Update

This document is an update to the original Transit Development Plan, which was adopted as a five-year strategic plan. This new five-year plan builds from the original plan, which established guidelines for how CDTA would grow in the future. The 2013 update provides greater detail of CDTA's current conditions, standards for performance, and projects to be completed that will increase our impact on the region and continue to grow ridership.

1.2.1 Policy Principles

This update maintains the same principles as the original Transit Development Plan, which includes the following.

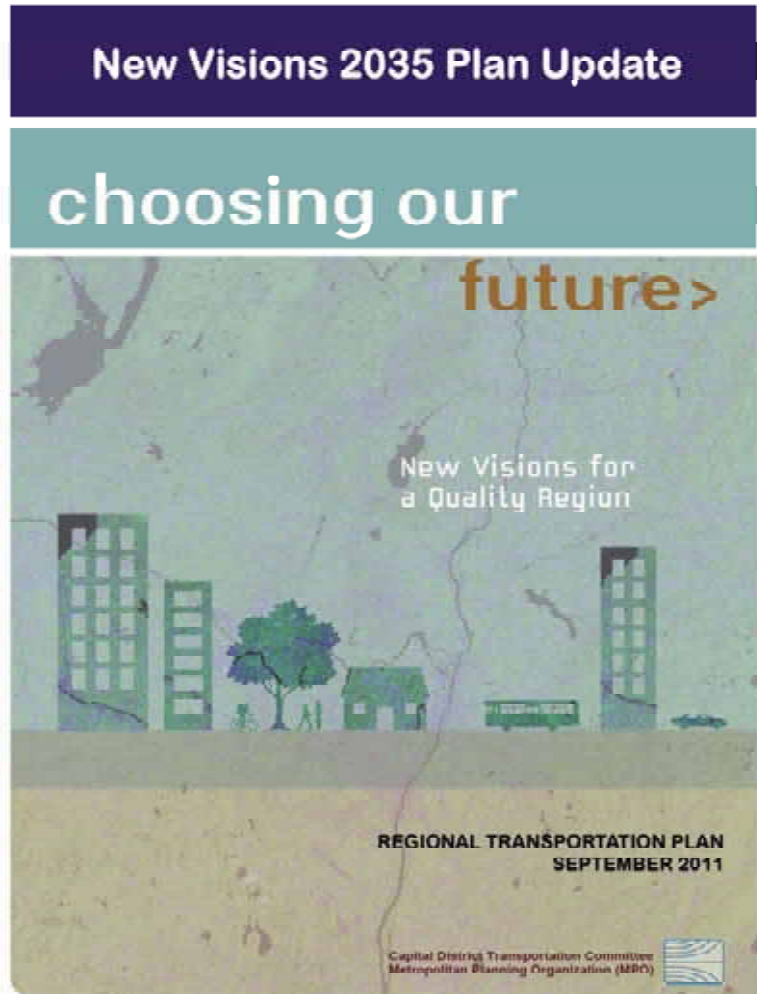
1. **MARKET SEGMENTATION: CDTA differentiates services – including design, delivery and promotion – to respond to *likely* rider markets.**
 - A “family” of products that are easy to understand and use
 - Accept that different services appeal to different target markets
 - Experimental services/special event services should be part of the service mix
 - Different types of services may have different levels of acceptable performance
 - Comparable service to comparable areas
2. **PROACTIVE STANCE: CDTA holds a leadership role to mold regional growth and advocate for mobility.**
 - Weight service investment decisions (service hours, routes, shelters) to provide incentives for community support of transit (policy, funding, zoning, site design)
 - Anticipate and respond quickly to regional development and growth trends
 - Leave some discretionary funding for unforeseen opportunities
 - An active presence at the table of major development discussions
 - Aggressive promotion of the CDTA mission and vision
3. **FREQUENT SERVICE: CDTA keeps high service levels where ridership, density, and supportive features exist.**
 - Simple to understand and use
 - Emphasize productivity on routes – get more people riding the bus!
 - Service design meets criteria of what “choice” riders have told us is important
 - Comparable service for comparable areas
4. **SYSTEM CONNECTIVITY: CDTA’s system promotes smooth regional connections.**
 - Interregional and intercity connections
 - Simple to understand and use
 - Smooth transfers among service types within CDTA system (no more than 2)
 - Efficient transfers between CDTA and other transport modes
5. **PERFORMANCE-BASED EVALUATION: CDTA develops frameworks for regular service evaluation based on route performance, service type and other considerations.**
 - Availability of alternatives (“Lifeline services”)
 - Benefits to non-users (congestion relief, air quality, etc.)
 - Degree of community/municipal/developer support a consideration
 - Cost recovery important, but not only factor
 - Importance of regular review process
 - Different types of services may have different levels of acceptable performance

1.2.2 Relationship to Regional Transportation Plan (New Visions)

The Capital District Transportation Committee (CDTC) is the Metropolitan Planning Organization for the defined metropolitan area covering the counties in which CDTA operates – Albany, Schenectady, Rensselaer, and Saratoga. A key responsibility of the Capital Region’s MPO is the maintenance of a long-range regional transportation plan. All federally-funded or federally-approved transportation actions such as highway or transit capital projects must be derived from the regional plan.

CDTC adopted its “New Visions for a Quality Region” plan in October 2007, which looks ahead to year 2030. The plan reaffirmed the principles to guide transportation planning and investment across the region. New Visions also articulated a series of short and long range strategies and action items to achieve broad regional goals, while providing an innovative budget approach to ensure implementation. The Plan was updated in September 2011 for planning through 2035 with another update for 2040 on the way.

The programs, policies, and principles developed in New Visions are reinforced in CDTA’s Transit Development Plan. The plans reinforce one another as the TDP can be seen as the short-term implementation of many New Visions recommendations.



Chapter 2 - 2007 TDP Achievements

The 2007 Transit Development Plan set specific objectives with the goal of restructuring the entire system around a framework driven by ridership and data, and making services easier to understand for existing and new customers. These objectives were accomplished, with increased ridership providing evidence for the changes implemented by the 2007 TDP.

The core principles of the 2007 TDP were used to go above and beyond its specific five-point deliverables and implement larger-scale projects. These larger initiatives included the restructuring of neighborhood services in all four counties and the introduction of Upstate New York's first Bus Rapid Transit line, all of which led to increases in ridership and efficiency.

2.1 2007 Transit Development Plan Deliverables

The primary projects that were called out in the 2007 Transit Development Plan were as follows:

1. Northway Xpress (NX) service branding
2. Enhanced service in Saratoga, including new vehicles, better communication materials and branding
3. Development of route classification system and appropriate reporting mechanisms
4. Adoption of service planning process, outreach and implementation schedule
5. Comprehensive reviews and evaluation of Albany and Schenectady-based routes

Results

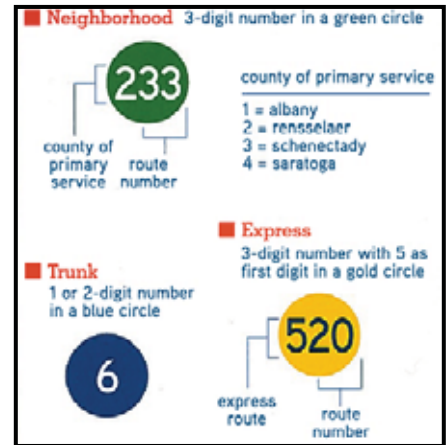
1. CDTA transformed Northway Xpress service to the NX brand in 2007 convening to the public that it is a premium service through new schedules, logos, and marketing.
2. In the summer of 2007, CDTA implemented changes to the service in Saratoga County, including a new route classification system (later introduced system-wide). Schedules were made more regular (service coming every 30, 45, or 60 minutes) with simplified route patterns and refocused around areas of highest transit propensity, with an increase in the overall level of service.

Route #50 was a great success story of the Saratoga County restructuring. This route was transformed from a lifeline commuter service traveling twice in the morning and afternoon into a neighborhood route operating every 60 minutes from early morning until late night with service 7-days a week. Ridership increased hundreds of times over, and Route #50 is now a key neighborhood service that exceeds performance thresholds.

3. CDTA designed a route classification system in 2009. Under the system, routes are classified as:

- BusPlus, CDTA’s flagship Bus Rapid Transit (BRT) service. BusPlus services are branded silver on their stations and dedicated fleet. A second color denotes the corridor of service – (red, blue, or purple). BusPlus routes have three-digit numbers starting with 9.
- Trunk routes, operating 7 days a week, generally with a 20-minute frequency or better. Trunk routes have one- or two-digit numbers and are shown with a dark blue circle.
- Neighborhood routes, operate Monday through Saturday with a 60-minute frequency or better. Neighborhood routes have three-digit numbers, the first digit indicates the county in which the route operates:
 - 1xx for routes in Albany County.
 - 2xx for routes in Rensselaer County.
 - 3xx for routes in Schenectady County.
 - 4xx for routes in Saratoga County.

Neighborhood route numbers are shown with a green circle.



- Express routes, providing peak service for long distance commuters, generally using the interstate system and Park and Ride lots. They operate Monday through Friday with some mid-day service. Express routes have three-digit numbers starting with a 5 and are shown with a yellow circle.
- Commuter routes, providing peak service in areas difficult to reach with the neighborhood route network. They operate Monday through Friday with some additional mid-day service. Commuter routes have three-digit numbers starting with 7 and are shown with an orange circle.

CDTA introduced route performance standards according to route classification, as well as mechanisms to report performance. These standards are monitored in the annual Route Performance Report, and services restructured accordingly (see section 4.1.4).

4. CDTA developed a service planning process and implementation schedule. This will be updated and more detailed as a deliverable of this updated TDP. (see section 6.3.6)
5. CDTA implemented the Schenectady County Route Restructuring in 2010, including the route classification system (see section 3.1.1).

2.2 Associated Achievements

The following is a timeline of major projects completed that were called out in the original Transit Development Plan or grew out of its principles.

2008

Transit Supportive Development Study

CDTA conducted a study to determine major transit capital improvements in Downtown Albany. The study developed a plan for bus-only lanes on State Street and to replace the Greyhound station with a new state-of-the-art intermodal center on Broadway, which would be the confluence of bus rapid transit lines, CDTA's other services, and intercity bus carriers. The intermodal station is being considered as an alternative to the Albany Convention Center which is likely to be relocated to another site in downtown Albany. The construction of this and other transit centers in the region is a major component of this updated TDP (see section 6.6.1).

NY5 Bus Rapid Transit Management and Operations Plan

After the completion of the conceptual design study for BRT on Route 5, recommendations were developed to implement the line. This included service design, how to manage the operation, facility and technology needs, and communication strategy.

2009

Southern Rensselaer County Route Restructuring

A collection of underperforming routes in southern Rensselaer County were redesigned to increase ridership and productivity. For example, Route #33 was one of CDTA's most confusing routes, with five different variants preventing easy schedule understanding. Its most unproductive variants were eliminated and others spun off to form their own routes. In the city of Rensselaer, two duplicative routes were consolidated into one (Route #214) that has become one of CDTA's most efficient neighborhood routes. All the new routes (#214, #224, #233, and #520) continue to perform above productivity thresholds for their service type.

Bus Stop Consolidations

To improve operating efficiency, CDTA consolidated over 300 bus stops along trunk routes and neighborhood routes. Bus stop spacing was increased from every block to every 2-3 blocks and located to intersections with crosswalks and other pedestrian infrastructure.

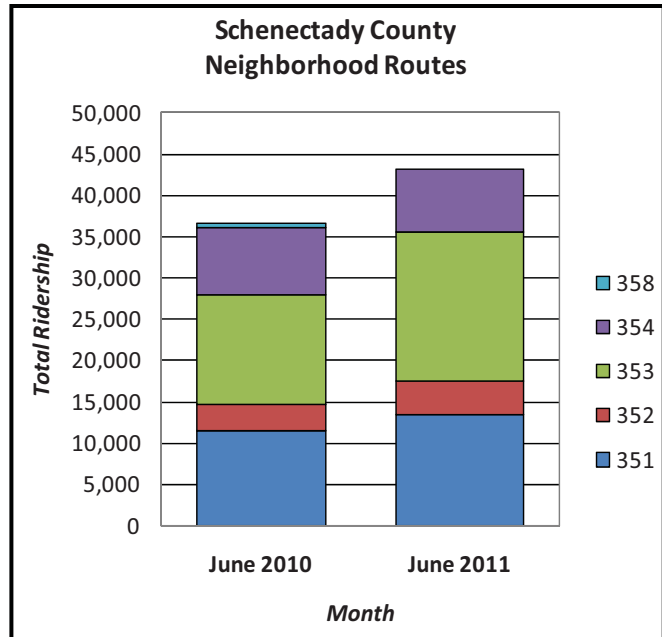
2010

Schenectady County Route Restructuring

Neighborhood routes in the city of Schenectady and surrounding areas were redesigned to improve service for customers. The planning process involved community input through stakeholder interviews and public meetings. The restructuring was budget neutral, with no increase in service hours.

Nearly a dozen routes were consolidated into four neighborhood routes featuring longer spans of service, weekend service, and reduced the need to transfer.

After 2 years of operation, ridership has increased by 18% and continues to rise.



Ridership on Schenectady County Neighborhood Routes (18% increase after one year of operation).

2011

Albany County Route Restructuring - Phase 1

CDTA services in the city of Albany and adjacent suburbs were improved as part of Phase 1 of the Albany County Route Restructuring. A detailed public input process included community meetings, on-board surveying of riders, mail/email surveys and interviews with stakeholders (employers, colleges, and hospitals). The project, encompassing the largest single service change in CDTA history, had no increase in overall service hours.

Service on existing trunk routes was enhanced and eight new crosstown neighborhood routes were created with the following improvements:

- Improved frequency in corridors at capacity
- Later night service
- Reduced transfers
- Increased service to hospitals, malls and colleges
- Increased options in transit-dependent neighborhoods

Ridership on restructured routes increased by 15% and continues to rise. Some Albany neighborhood routes (#100, #114) perform above at or near threshold for trunk routes and may justify enhancements.



Map of restructured services in the City of Albany.

Bus Rapid Transit (BusPlus)

CDTA opened the first Bus Rapid Transit service in Upstate New York with the unveiling of BusPlus (Route #905). BusPlus features limited stop service between downtown Albany and downtown Schenectady, stopping at 19 stations (down from 90 stops that previously dotted the corridor).

These stations feature upgraded waiting shelters with real-time passenger information (RTPI). The corridor features transit signal priority and queue jumpers that shorten trip times and improve on-time performance. BusPlus vehicles use a hybrid diesel-electric propulsion to improve emissions and fuel efficiency, and offer complimentary wireless internet.



A BusPlus Vehicle at North Allen Station.

Local service was restructured to match demand on each end of the 17-mile corridor. Local service was replaced by two “bookend” routes that meet at a transfer hub between Colonie Center and Northway

Mall. Express routes were modified to become park-and-ride-based services that travel primarily on highways.

In the first year of operation, ridership on Route 5 increased by 20% over the previous configuration of services. The final set of BusPlus stations constructed at Niskayuna, Broadway, and Albany Bus Terminal were completed in summer 2013.

Regional Park & Ride / Express Bus Study

In April 2012, CDTA and the Capital District Transportation Committee (CDTC) completed a study to provide a regional framework for park & ride and express services. The objective was to develop alternatives that encourage a shift among single occupancy motorists to transit services, carpooling or vanpooling. This would occur by building a coordinated network of park & ride lots at strategic points in the region. An inventory of the park & ride system in the Capital Region was taken, and strategy developed to expand and improve park & ride facilities.



Shared-Use Park & Ride at Exit 9.

The study recommended that CDTA pursue shared-use lot agreements with assistance from local municipalities to expand the network. Another short-term recommendation was to install signage along highways and at park & rides as a means of wayfinding.

The study determined that downtown Albany was the only location with the density to warrant expansion of express service. The study recommended additional service along the I-87, I-90, and 787 corridors.

Washington-Western Bus Rapid Transit Conceptual Design Study

Station locations, a conceptual service plan, and alignment alternatives were developed for a bus rapid transit line between Downtown Albany and Crossgates Mall via the University at Albany. This study established viability of the corridor as a recipient of FTA Small Starts funding and advanced the project to the Alternatives Analysis planning phase (see section 6.2.2).

2012

Albany County Route Restructuring - Phase 2

In our final major route restructuring, neighborhood and express routes in the northern and western areas of Albany County were redesigned. The planning process included public meetings to determine improvements most desired by customers and stakeholders.

A draft plan was developed based on the input received, as well as analyzing ridership to determine what corridors needed more service. Another round of meetings was held for the public to review and comment on the draft plan.

Major improvements of Phase 2 included:

- Late night and weekend service in Cohoes, Latham, and Watervliet.
- Increased frequency in Troy, Watervliet, Latham, and Schenectady via Routes 2 & 7.
- Express service extended to Cohoes for faster connections to Troy and Albany
- Increased trips to Altamont and Voorheesville during peak commute times
- New service along parts of Fuller, Wade and Watervliet-Shaker Roads
- Improved connections in Guilderland and Colonie including new service on Western Avenue, Wolf Road, and to Albany International Airport

Northway Xpress Service and Fare Restructuring

In an effort to improve the attractiveness of the service, schedules and fares were redesigned and introduced in October 2012. The redesign was intended to improve service for existing riders and attract new customers, while increasing efficiency.

FORMER NX FARES

Current Zone		Cash	10-Trip
Zone 1	Clifton Park	\$4.50	\$35
Zone 2	Malta	\$6.00	\$39
Zone 3	Ballston Spa	\$7.50	\$44
Zone 4	Saratoga	\$9.00	\$53
Zone 5	S. Glens Falls	\$10.50	\$60

NEW NX FARES

New Zones		Cash	10-Trip	Monthly Swiper
New Zone 1	Clifton Park	\$4.00	\$35	\$110
New Zone 2 (Former 2 & 3)	Malta Ballston Spa	\$5.00	\$39	\$125
New Zone 3 (Former 4 & 5)	Saratoga S. Glens Falls	\$7.00	\$50	\$170

Service changes included additional mid-day trips, and more service to park & rides with high ridership. Redundant trips or those with little ridership were eliminated. Changes included an overall fare reduction to make the NX a more attractive alternative to automobile travel. The fare structure was consolidated from 5 to 3 zones and an unlimited ride prepayment card introduced. The plan was developed with significant public outreach, which included on-board surveys and extensive public meetings throughout Saratoga County.

Chapter 3 – Existing Conditions

3.1 Existing Transit Services

CDTA provides a variety of services to the four-county Region, with each tailored to the needs and market demand of the area. CDTA’s service is comprised of primarily conventional bus service, which is divided into classifications based on levels of frequency and span. CDTA operates a limited-stop bus rapid transit line called BusPlus along Route 5 between Albany and Schenectady as well as the Northway Xpress commuter service in Saratoga County along the I-87 to downtown Albany.

3.1.1 Route Classification

All routes fall into one of five classifications with each having a distinct color branding, naming, and numbering. Routes are divided into classes so that customers can identify the level of service.

CDTA Route Classification System

Type	Peak Frequency	Off Peak Frequency	Days / Week	Hours of Operation	Routes
Bus Rapid Transit	Every 10-15 minutes	Every 15-20 minutes	7 days	Early morning to late night	905 – BusPlus Red Line
Trunk	Every 10-20 minutes	Every 20-30 minutes	7 days	Early morning to late night	1, 6, 7, 10, 11, 12, 13, 18, 22, 80, 85
Neighborhood	Every 30-60 minutes	Every 30-60 minutes	6-7 days	6:00am to 9:00pm	50, 100, 114, 116, 117, 125, 138, 155, 182, 190, 214, 224, 233, 280, 286, 289, 351, 352, 353, 354, 355, 370, 472, 473
Commuter	Multiple trips between 6-9am and 3-6pm	0-4 mid-day trips	Monday to Friday	6:00am to 6:00pm	719, 737, 763
Express	Multiple trips between 6-9am and 3-6pm	0-2 mid-day trips	Monday to Friday	6:00am to 6:00pm	520, 522, 530, 531, 540 – Northway Xpress

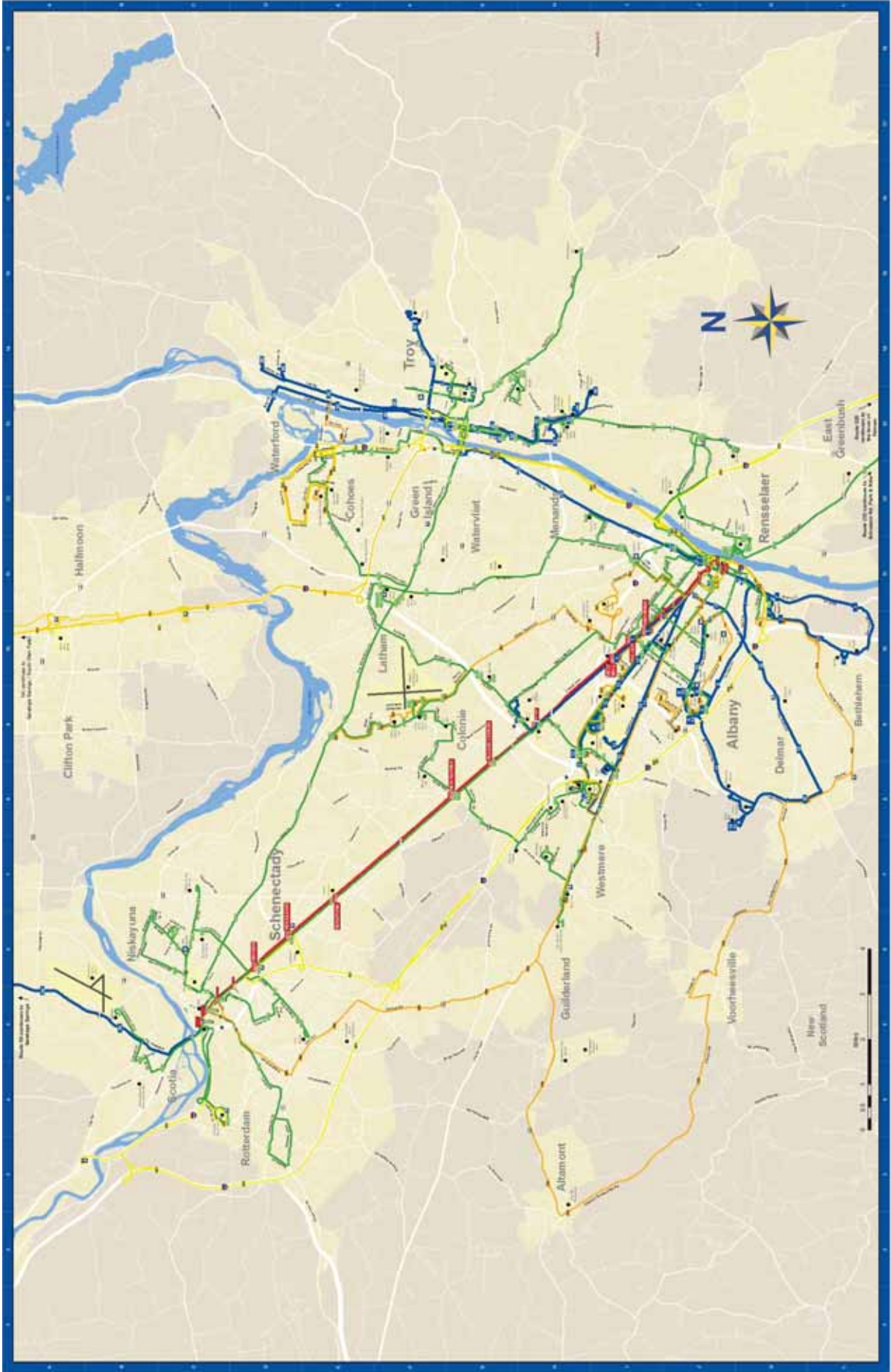
As recommended in the previous Transit Development Plan, routes have been renumbered to indicate their route classification. The numbering scheme is as follows:

- **0 to 99** (1 or 2 digits) – Trunk Route
- **100’s** – Neighborhood Route in Albany County

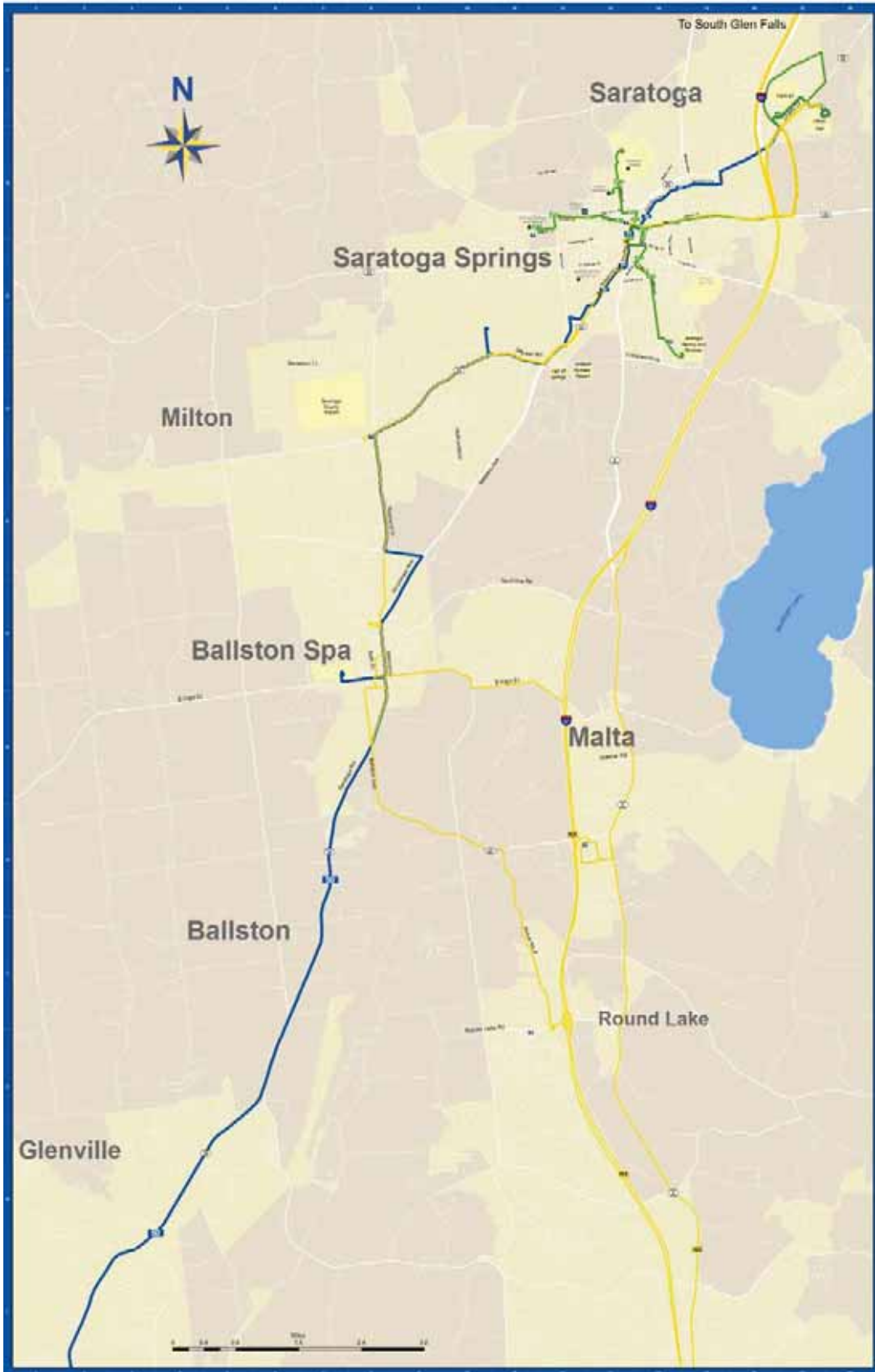
- **200's** – Neighborhood Route in Rensselaer County
- **300's** – Neighborhood Route in Schenectady County
- **400's** – Neighborhood Route in Saratoga County
- **500's** – Express Route
- **600's** – Shuttle Route (discontinued)
- **700's** – Commuter Route
- **800's** – Rural Route (discontinued)
- **900's** – Bus Rapid Transit

In 2012, rural routes were eliminated due to very low ridership while shuttle routes were replaced with neighborhood routes as part of Phase 2 of the Albany County Route Restructuring.

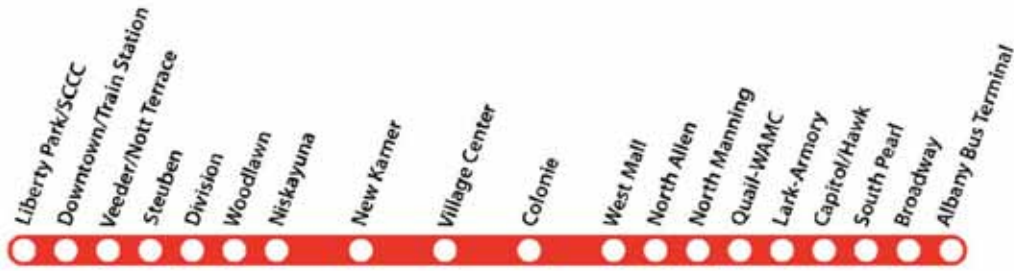
CDTA Route Map- Albany, Rensselaer, Schenectady, and southern Saratoga County



CDTA Route Map (Upper Saratoga County / Saratoga Springs)



3.1.2 BusPlus - Bus Rapid Transit



BusPlus is CDTA's Bus Rapid Transit (BRT) service with enhanced features that improve operations and make it a more attractive travel option than conventional bus service. CDTA began operation of its first BusPlus line (Route #905 – Red Line) in April 2011 along the 17-mile stretch of Route 5 between downtown Albany and downtown Schenectady. Ridership on the corridor has since increased by over 20% increasing the need for bus rapid transit in other areas of the region. BusPlus has reduced travel times, increased reliability, and attracts higher ridership due to:

Improved Service – Frequent bus service throughout the day to limit wait times; service 365 days a year, and longer hours of operation.

Limited Stops – Buses stop at key destinations with high ridership and bypass intermediate stops, which are served by local routes.

Advanced Bus Fleet – Uniquely branded buses with on-board Wi-Fi and hybrid electric-diesel propulsion technology.

Larger Stations – Uniquely branded stations with more seating, lighting, security, and protection from the elements.

ITS and Transit Priority Infrastructure – This includes transit signal priority, queue bypass lanes, and real-time bus arrival information (all described in section 3.5.3)



3.1.3 Northway Xpress (NX) - Commuter Coach Express Service



The Northway Xpress (NX) is CDTA's express service that operates from various Saratoga County park & ride lots along the Northway (I-87), to downtown Albany. The NX is uniquely branded, providing commuter service with improved passenger amenities. Because the NX operates longer distances and is a more attractive ride than a conventional transit bus it has a separate zone-based fare structure (see section 3.2).

In October 2012, CDTA restructured the schedule and fare structure based on recommendations of the Regional Park & Ride Study, and in less than a year ridership has increased 25% (see section 2.2).

3.1.4 STAR Paratransit Service



In addition to our fixed route service, CDTA offers STAR (Special Transit Available by Request), a paratransit service that provides curb-to-curb transportation, on an advance reservation basis for people with disabilities who are not able to ride fixed-route buses. STAR operates within 3/4 of a mile of a CDTA's fixed route system on the same days and times of the specific bus route.



To become eligible to use STAR, an individual must submit a completed pre-evaluation form and be certified eligible

3.1.5 Saratoga Summer Trolley

CDTA operates a Summer Trolley service in the city of Saratoga Springs to accommodate the increased volume of people who occupy the city during the tourist-intensive summer months. Trolley service connects Saratoga Spa State Park, the Saratoga Performing Arts Center (SPAC), Saratoga Gaming and Raceway, the Saratoga Race Course, and the shopping and entertainment district. The trolley operates between Memorial Day and Labor Day, and provides additional service between SPAC and downtown on event nights.



3.1.6 Other Services and Programs

Albany County Department For Aging Brokerage

CDTA provides brokerage services for the Albany County Department for Aging. Our call center conducts trip scheduling and coordination for eligible senior citizens in Albany County. Our Customer Service Center provides oversight with respect to eligibility requirements and the management of billing and reimbursements. The program uses multiple transportation providers, including non-profit agencies to provide vital transportation services for County residents. The program provides roughly 3,500 trips per month and is funded by the County.

Travel Demand Management

CDTA and CDTC jointly administer Travel Demand Management programs to reduce the amount of travel by single-occupant vehicle. This include iPool2.org a regional online carshare platform, vanpool program through VPSI, Inc, Capital Moves.org a website providing information on sustainable transportation options in the region, and a Guaranteed Ride Home program, which provides emergency taxi rides to *Swiper* card holders or any registrant to the iPool2 website. The TDM program also funds transit pass subsidy programs, which are described in section 3.7.3.



3.2 Fare Structure

CDTA has a number of fare products to meet customer needs. The fare structure is based on the quality of service. It is a flat fare policy with one base rate while seniors and disabled customers ride for half the cash fare. Children under six ride for free with an adult..

The following tables list each fare product, its cost, and where they are available for purchase.

Fixed Route Fares and Products

Type	Amount	Description	Available
Regular Route Base Fare*	\$1.50	Cash fare for Trunks, Neighborhoods, Commuters, and Express Routes	On Bus
BusPlus Base Fare*	\$2	Cash fare for Bus Rapid Transit service	On Bus
Day Card*	\$4	1 Day of Unlimited Rides	On Bus
3-Day Pass	\$10	3 Days of Unlimited Rides	Online, by phone, or sales outlet
10-Trip Pass	\$13	Allows boarding 10 times	Online, by phone, or sales outlet
Weekday Rolling Swiper*	\$55	Unlimited use Monday-Friday only, expires 31 days after first use	Online, by phone, or sales outlet
31-Day Rolling Swiper*	\$65	Unlimited use, expires 31 days after first use	Online, by phone, or sales outlet
Summer Fun Pass	\$30	Unlimited use for youth between July 1 st and August 31 st	Customer Service Center, Mr. Subb locations

* Half-fare (50% off) for seniors and disabled

Northway Xpress Fares and Products

Zones	Amount		Available
Zone 1 Clifton Park and Halfmoon	Base Fare	\$4	On bus
	10-Trip Pass	\$35	On bus Online, by phone, or sales outlet
	Rolling Swiper	\$110	Online, by phone, or sales outlet
Zone 2 Malta and Ballston Spa	Base Fare	\$5	On bus, online, and by phone
	10-Trip Pass	\$39	On bus Online, by phone, or sales outlet
	Rolling Swiper	\$125	On bus
Zone 3 Saratoga Springs, Wilton, and South Glens Falls	Base Fare	\$7	On bus, online, and by phone
	10-Trip Pass	\$50	On bus Online, by phone, or sales outlet
	Rolling Swiper	\$170	On bus

** All NX fares and products available at half-fare (50% off) for seniors and disabled*

STAR Fares and Products

Type	Amount	Description	Available
STAR Base Fare	\$2.50	Cash fare for paratransit service	On bus
STAR Ticket Books	\$30	Allows boarding 13 times	Online, by phone, or sales outlet

3.3 Vehicle Fleet

CDTA's fleet consists of vehicle types that match their mode of service. CDTA has an established a maintenance and replacement program to ensure that the fleet includes modern amenities and technologies. A full inventory of our fleet is available in Appendix B. CDTA also maintains a non-revenue fleet for maintenance and administration functions.

3.3.1 Transit Buses

The bulk of our fleet is comprised of 30', 35', and 40' transit buses. We have 214 buses operating from three manufactures – Gillig (Hayward, CA), Nova Bus (Plattsburgh, NY), and NABI (Anniston, AL). 54% of all CDTA fixed-route vehicles are fitted with automatic passenger counters (APCs).

Bus Rapid Transit (BusPlus) Buses

These buses have unique design and branding to distinguish them from other transit buses. BusPlus buses are housed at the Schenectady garage and are a subfleet dedicated only to the bus rapid transit line.



Green Vehicles

CDTA introduced hybrid technology in 2007 with a Gillig diesel-electric hybrid bus. 73 of these hybrid buses are in operation (over a third of our bus fleet). Hybrid buses are environmentally sustainable, produce higher gas-mileage and make less noise, which is advantageous when operating in neighborhoods. The remaining Gillig buses use clean diesel technology. Our 2013 order of 20 buses includes 14 clean diesel vehicles and four hybrid models.

Accessibility

All buses are ADA compliant and accessible to disabled customers. Buses are low-floor and customers do not have to climb steps when boarding. Each is equipped with a fold out ramp for customers who use wheelchairs and a kneeling system.



Wheelchair Ramp

Bike Racks

All CDTA buses are equipped with a bike rack on the front of the vehicle. These are customer operated and easy-to-use. Before boarding a customer pulls down on the rack, places the bike in one of two holders, and secures onto the front wheel.



On-Board Technology

CDTA buses are equipped with front and curb side destination signs. These digital displays indicate route number, name, and specific destinations. This is coordinated with external announcements broadcasting the same information verbally. Interior displays are integrated with GPS technology to inform customers of approaching bus stops. Buses are also equipped with automatic passenger counters (APCs) which is integrated with GPS technology and can count the number of customers boarding and disembarking at specific bus stops. Ridership information can also be obtained from the farebox which accepts fares through cash payment, a fare product, or ID card of an institution enrolled in our Universal Access program.

3.3.2 Commuter Coaches (NX)

The Northway Xpress is a unique express service primarily operated with over-the-road commuter coaches. These vehicles are housed and maintained at the contracted operator Upstate Transit. The manufacturer of these buses is Motor Coach Industries (MCI).

Commuter coaches provide more passenger amenities including free wi-fi, luggage compartments and restrooms. Coach back seating is cushioned and entirely forward facing with substantial leg room. These amenities provide value to NX customers paying to travel longer distances.



MCI commuter coaches, however, do not feature hybrid technology, automated passenger announcements, or automatic passenger counters. They also do not allow low-floor boarding, but are wheel-chair accessible.

3.3.3 Paratransit Buses (STAR)

The STAR fleet consists of 44 cutaway vehicles equipped with backdoor lifts for accessibility and can transport multiple disabled customers, including wheelchairs. A portion of STAR service is provided through an agreement with Advantage Taxi. They provide their own vehicles, which are branded with CDTA and STAR logos to provide consistency.



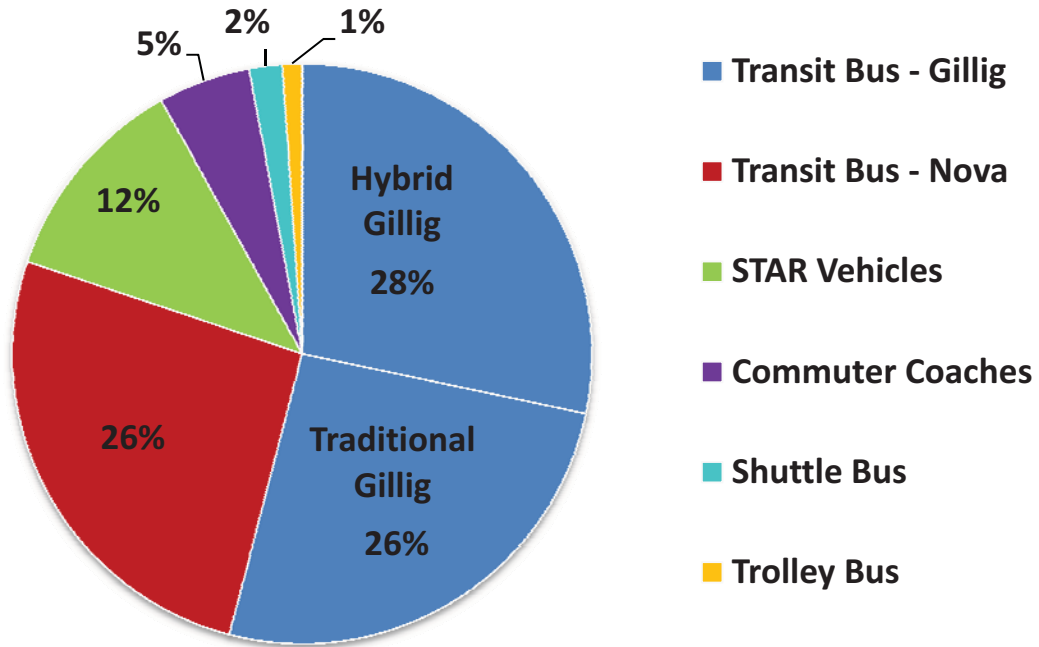
3.3.4 Trolleys

The Saratoga Trolley service and some special events use a unique dedicated vehicle that is designed to evoke the feel of turn-of-the-century electric trolleys. This attracts tourists and customers that might otherwise not try transit.

3.3.5 Fleet Summary

A breakdown of CDTA's revenue fleet is below. Over half of all CDTA vehicles are manufactured by Gillig and over a quarter are hybrid vehicles. With the retirement of the last NABI vehicles, the oldest transit buses are Nova vehicles, which compose more than one-quarter of the fleet.

Breakdown of CDTA Fleet by Manufacturer and Configuration.



3.4 Facilities

CDTA's facilities are maintained and operated by the authority, have a constant personnel presence, and have a direct relation to the day-to-day operations. CDTA operates its services out of three facilities which include storage, maintenance garages, dispatch rooms, and administrative offices.

3.4.1 Operating Divisions

Albany Facility

The Albany facility, located at 110 Watervliet Avenue, is CDTA's largest and serves a variety of functions. About half of the fixed route buses, with the majority of its routes serving Albany County and southern Rensselaer County operate here. The facility is 150,000 square feet, can house up to 150 buses, and is open 24 hours a day / 7 days a week. It includes 16 bus lifts, two fueling lanes, and two wash racks. It is the center of operations with the highest number of technicians, bus operators, road supervisors, and includes the Central Communications office which monitors the system. It is home to the STAR management and dispatch center as well as driver and mechanic training areas. It is also the administrative headquarters for the organization.



Albany Division Bus Garage

Troy Facility

The Troy facility is located at 40 Hoosick Street. It is home to the majority of services that operate in Rensselaer County as well as northern Albany County. About 25% of the system's fixed route service operates from this facility. The garage is 60,000 square feet and can house up to 60 buses.

Schenectady Facility

The Schenectady facility is located at 2401 Maxon Road Extension. It is home to the majority of services that operate in Schenectady County and all Saratoga County services. About 25% of the system's fixed route service operates from this facility. The garage is 45,000 square feet and can house up to 60 buses. Our BusPlus bus rapid transit service operates from Schenectady.

3.4.2 Rail Stations

CDTA's regional role extends to the construction and operation of two regional rail stations with service provided by Amtrak. We have reconstructed these stations into modern facilities that have resulted in increased rail travel. Our management model has proven successful at handling transit operations, developing innovative partnerships, and nurturing community stewardship. CDTA's owner/operator role at the Rensselaer Rail Station provided the blueprint to expand into other Capital Region intermodal facilities and to advance its mission as a mobility provider. Our rail stations have created additional revenue through parking and advertising receipts. We recently restructured parking rates in Rensselaer and instituted special event parking at the Saratoga Springs Train Station. We continue to improve the customer experience and are looking at expanding parking capacity to accommodate increased usage.

Rensselaer Rail Station

The Rensselaer Rail Station is a key transportation gateway to the Capital Region, serving as a destination for travelers from the Capital Region to New York City and Canada. CDTA manages the station, while Amtrak delivers passenger rail service, including ticketing and baggage-handling. The facility was CDTA's first expansion beyond buses and cemented the Authority's position as the area's mobility leader. The facility is the ninth-busiest train station in the country, serving over 800,000 passengers each year.

CDTA has delivered a first-class facility that brings an intermodal approach to the Capital Region, while offering a safe and convenient customer experience. A new parking garage has increased parking availability to a total of 1,300 cars at the station. The station took three years to build and included construction of the Herrick Street Bridge for direct access and improved community infrastructure.



CDTA's Rensselaer Rail Station – Interior



*CDTA's Rensselaer Rail Station
Station and Boarding Platforms*

Over the last 10 years, the Rensselaer Rail Station has accommodated over 7 million travelers. The station is a true intermodal center, allowing for connections with Amtrak, Megabus, CDTA buses, and taxis, along with ample parking for cars, motorcycles, and bicycles. The Rensselaer Rail Station is full-service, offering a variety of amenities, including a boardroom and veranda overlooking the third floor. Plans are underway for the construction of a fourth track and platform extensions to accommodate the station's growth and a vision for High Speed Rail service.

Saratoga Springs Train Station

CDTA expanded further into facility operations with the opening of the Saratoga Springs Train Station in 2004. The facility serves more than 32,000 Amtrak passengers annually traveling the Empire Corridor, the Adirondack route to and from Canada, and the Ethan Allen route to and from Vermont. The station features a customer lobby and waiting area, a staffed ticket sales counter, food amenities and adjacent surface parking. Additional travel service options include Adirondack Trailways and Greyhound bus services and themed rail service provided Saratoga & North Creek Railway, which provides recreational trips north to the Adirondacks.



Schenectady Amtrak Station

CDTA does not operate the train station in downtown Schenectady but has been involved in the planning for the replacement of the aging facility and remains a funding partner as described in section 6.6.4.

3.5 Transit Infrastructure

CDTA’s transit infrastructure covers bus stops, shelters and other on street amenities that shape the customer experience as well as park & rides to allow drivers connections to our service and intelligent transportation systems to improve operations and customer convenience. CDTA considers transit infrastructure as any “on the street” capital investment that improves transit operations or the ability to use that service.

3.5.1 Bus Stops, Shelters, and Street Amenities

CDTA shelters, benches, and other customer amenities are rolled out based on thresholds of boardings per day. Shelters provide customers protection from the elements, offer service information, along with safety and security. Additional amenities include trash receptacles, newspaper dispensers, and bicycle parking.

Shelter locations require at least fifty boardings per day, while a bus stop needs roughly twenty boardings per day for a bench allocation. For a more detailed breakdown of these standards, see section 4.2.1.

CDTA has shelters at 266 bus stops and benches at an additional 194 locations. We deploy multiple sizes of shelters by Brasco International which all have a identical design for a consistent branding program. BusPlus service stops at specific BRT stations, which



feature larger waiting areas and enhanced customer amenities, which are identifiable by BusPlus' red and silver color scheme.

Our shelter design includes a green casing branded with the CDTA logo and website. Two advertising panels are in the rear and far-side windows, for contracted agreements and public information.

There is also a rear panel used to display CDTA maps and route scheduling information. Shelters on high volume travel corridors are illuminated at night using solar or traditional lights.

CDTA conducts a shelter replacement plan to improve the quality of the passenger waiting experience and the overall appearance of our facilities.

The Facilities Department is responsible for the general day-to-day handling of street amenities. An in-house crew keeps shelters clean and repairs damage caused by accident, vandalism, or other causes. Landowners perform maintenance when the shelter is located on private property. In some cases, shelters are maintained by municipal or community organizations.

3.5.2 Park and Ride Facilities

Park & Ride facilities extend the potential area of transit services, by allowing people who live farther distances from transit to connect to these services from convenient areas like a parking lot or garage. Park-&-ride lots are attractive to suburbanites who work in downtown areas where parking is limited or expensive. Park & Ride facilities tend to be located near the end of a route offering the potential to provide a boost in productivity along segments that might see less ridership.



Elm Avenue Park & Ride in Bethlehem

CDTA buses stop at 24 Park-&-Ride lots across the region. We own the Defreestville Park-&-Ride lot near Route 4, and one in Schodack at the old Town Hall and Senior Center. CDTA holds leases at Wilton Mall, Rotterdam Square Mall, Woodlawn Plaza and St. Luke's Church in Schenectady. A full listing of all area Park & Ride facilities is available in Appendix C.



*St. Luke's Church Park & Ride
at a BusPlus Station in Schenectady.*

The regional Park & Ride/Express Bus Study recommended expansion of the

CDTA Park & Ride system by pursuing shared-use agreements, increasing serving along express corridors, and installing highway signage along with enhanced wayfinding.

A shared use Park & Ride lot has been established at Rotterdam Square Mall. Customers can make connections to Schenectady neighborhood service and express services into Downtown Albany. This location totals 65 daily boardings to enhance already established lots at Division and Woodlawn Stations along the BusPlus Red Line.

Recent scheduling improvements have increased the amount of service to and from Park & Rides aiding our ability to reach a more diverse set of commuters.

3.5.3 Intelligent Transportation Systems (ITS)

Intelligent Transportation Systems are advanced technologies that enhance transportation infrastructure to be more efficient, improve travel speeds, travel experience, and provide data on travel patterns. Transit priority infrastructure is considered for this report an physical improvement that gives priority to transit buses over personal vehicles. CDTA has installed technology to improve the customer experience, to make our system easier to use and to get people where they want to go.

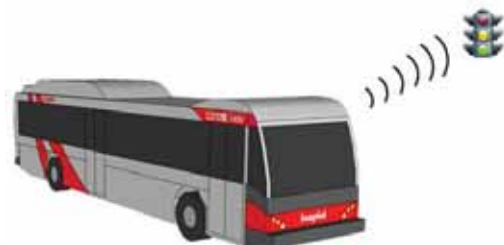
Real-Time Bus Arrival Information

BusPlus service offers real-time information with estimated arrival times at individual stations. Bus arrivals are determined with GPS / AVL technology and posted on permanent LED signs that display times for customers. Riders can obtain real-time information from bustime.cdta.org through an internet at home, or on mobile devices by using our BusPlus application. Real-time information is currently limited to BusPlus service only and is not available for local services operating on the corridor.



Traffic Signal Priority

Traffic Signal Priority (TSP) is equipped along NY Route 5 to decrease travel time and increase reliability for bus rapid transit service. Buses communicate to approaching signals equipped with TSP hardware. If a bus is behind schedule, the system extends green lights or shortens red lights to allow the bus through the intersection. TSP is currently installed on 45 intersections along the corridor.



Queue-Jump Bypass Lanes

Queue-jump bypass lanes are bus-only lanes that allow buses to bypass queued traffic to reduce travel time. This provides proof for customers that BRT travel is faster than conventional



public transit service or taking an automobile. Buses receive a separate green light that gets the vehicle ahead of traffic, essential on signal lane roads, where a bus can be delayed by vehicles temporarily blocking a lane.

There are four queue-jump bypass lanes in the region. Three are in operation along NY Route 5; at intersections with Wolf Road in Colonie, New Karner Road in Colonie, and Veeder Avenue / Nott Terrace in downtown Schenectady. The fourth queue-jump bypass is located in downtown Troy at the intersection of 3rd Street/River Street and Fulton Street.

Security Cameras

More than a dozen stations along our BusPlus line in Schenectady County have security cameras to monitor the area and deter criminal activity. These cameras help address passenger safety, timely incident response and other operational efficiencies. The cameras are part of a state of the art wireless infrastructure network that transmits data in real time along with post incident reporting. CDTA has information access to help control criminal activity and improve the quality of life for residents.



Additional cameras are slated for installation in the City of Albany.

Computer Aided Dispatch (CAD) /Automatic Vehicle Location (AVL)

Our service delivery and managerial oversight works off on Computer Aided Dispatch (CAD) and Automatic Vehicle Location (AVL) technologies. CDTA's existing CAD/AVL system and ITS technologies provide dispatchers and supervisors real-time fleet monitoring and operational management through the use of GPS, passenger information, and performance reliability evaluations.

On-board technology includes GPS, radio frequency communications, destination signs, next-stop internal displays, audio announcements, passenger counters, emergency alarms, mobile data terminals and other display peripherals. Other central software provides for vehicle tracking, operational displays, voice and data communication, computer aided dispatching, and automated reporting.

Vehicle ITS

A number of ITS elements exist on CDTA vehicles use a combination of GPS/AVL technology to determine the exact location of a bus along with a mobile data collection to broadcast the appropriate information.

- **Interior / Exterior Displays and Announcements** - CDTA buses are equipped with LED signs on each vehicle. The exterior displays indicate the bus route, name, direction, and destinations. Interior displays show approaching bus stops and other passenger information. Speakers call out information for visually impaired customers.

- **Automatic Passenger Counters (APC)** - APCs are located at the doorways of vehicles to count the number of passengers boarding and alighting. The infrared beams at the doorways work in combination with GPS / AVL technology to generate data for specific bus stops. APCs are restricted to transit buses and are rotated between vehicles to insure adequate sampling of trips.

Ridership data from APCs assist the service planning by providing detail of customer travel patterns and what stops or route segments are used most often and which are not.

- **Fareboxes** – All transit buses and commuter coaches are equipped with fare boxes that collect payment from passengers. CDTA’s fare collection system, provided by SPX-Genfare, includes Odyssey digital fareboxes, software and infrastructure at each garage. A central database at the Albany Facility compiles reports on ridership, revenue and other fare payment related activities. The system processes cash, coins and period based magnetic stripe media. We have procured a fare collection system upgrade that will include potential for smart cards and mobile ticketing to be deployed in 2015.



- **On-Board Security Cameras** - To ensure the safety of our customers and employees, CDTA uses on-board mobile digital video recorders (MDVR) or video surveillance cameras. The cameras have proven to be invaluable in addressing criminal activity, accidents and customer altercations. Each vehicle houses 8 cameras with the ability to capture multiple angles onboard and outside the vehicle. CDTA works with local law enforcement agencies by providing access to video associated with potential investigations. In all more than 125 vehicles are equipped with digital video recorders and each new vehicle purchased also includes this feature.

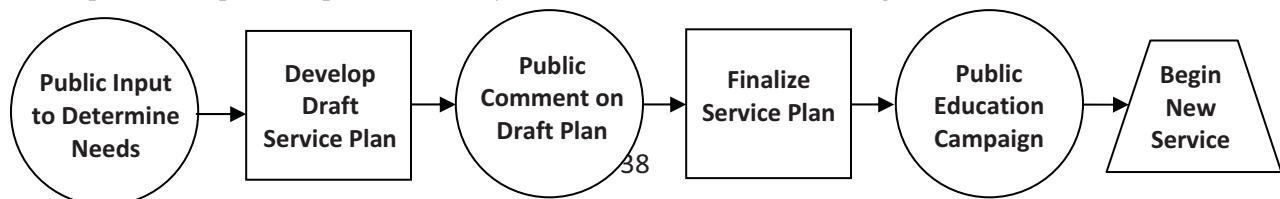


3.6 Public Input and Outreach Efforts

CDTA maintains strong relationship with the riding public, residents who live near our services, and major stakeholders in the region. CDTA has developed a system to gather public comment and provide timely responses. CDTA involves the public when changes are made to service, fares, or any other aspect of the business that impacts riders, residents, and stakeholders. Public outreach is essential to ensure riders’ voices are heard and that changes are based on customer needs.

3.6.1 Public Outreach for Major Service Changes

The current CDTA outreach model for major service changes was established as part of the original Transit Development Plan. Success of the public engagement has been seen in restructurings for the Northway Xpress and Albany County Route Restructuring. The constant back and forth between plan development and public input ensured key customers were involved throughout.



Initial Public Input

Initial input is gathered from riders, residents, and stakeholders on needs for transit improvements. This was accomplished through stakeholder meetings, customer surveys, and comments delivered to CDTA through our website, phone calls, and letters. Previous customer requests are also included to assist creation of routes and service change.

We have found the most effective input occurs when CDTA attends community meetings or holds its own in affected communities. CDTA describes the project and offers an exercise to include a full spectrum of concepts. The audience is invited to vote on the areas of highest priority, which helps CDTA to better allocate resources.



Public Comment on Draft Plan

After a draft service plan is developed, CDTA begins a month-long comment period for the public. The draft plan is posted on CDTA’s website, summarized in local newspapers, and in brochures that are distributed on vehicles or at facilities. Comments are taken through the website, call center, by letter, or at public meetings.

Additional comments are gathered at public open house meetings held in the affected communities. The meetings are easily accessible by foot or public transit and scheduled to accommodate flexibility towards customer’s personal schedules. A presentation describing the details of the service plan is provided, leading into conversations between CDTA employees and customers to answer their specific questions. Everyone in attendance is encouraged to fill out a comment form.

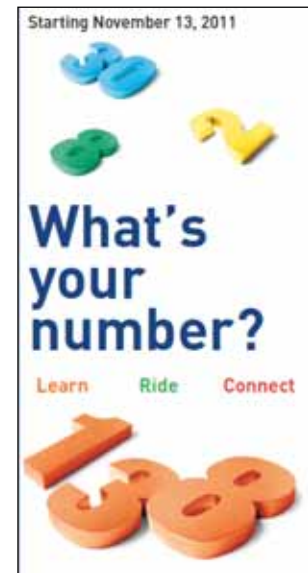
After the public comment period, CDTA creates a master comment list that helps identify major areas that should be addressed with the final service plan.



Public Education Campaign

CDTA's Marketing Department conducts public education campaigns to ensure that customers are aware of the final service changes and schedules. This begins six weeks prior to enactment of the changes and includes messaging through local news agencies, social media, mass market advertising CDTA's website along with postings in shelters and on buses. Our Travel Trainers ride along to talk directly with customers and provide educational brochures and new schedules. Our operators and call takers are the front liners and are also trained to respond to service change questions.

CDTA employees covering multiple departments are on the street and buses just before and after a major service changes hit the street. We position them at high volume locations to speak directly to people waiting for a bus, hand out schedules, or answer any questions.



3.6.2 Minor Service Changes

A minor service change is any alteration to the pattern or schedule of a route or small group of routes. For these types of changes, public schedules are and available on the CDTA website at least one month prior to the service change date. Customers are also alerted to the change by a combination of postings on the CDTA website, in local newspapers, pushed out via social media, and through onboard seat drops. Letters describing the changes are sent to public officials, community groups, and relevant stakeholders no less than one month before the effective date.

3.6.3 Public Hearings for Fare Changes

Fare changes require public meetings along with a set of public hearings. These meetings allow the public to state their comments on record. CDTA's Board of Directors designates the time and place for public hearings at least 10 days in advance of the proposed date and publishes notice of the meeting in a major newspaper of general circulation within the service area.

3.6.4 Monthly On-board Rider Evaluation (MORE) Research Program

CDTA works with a research consultant, Fact Finders, to gather customer information about customers, what they like, what they don't like and how they perceive our services. This is done through monthly onboard surveys. These surveys gauge customer satisfaction and communication touch points, travel behaviors, and demographic characteristics. This format, allows us to monitor trends and investigate solutions more quickly. The results of the monthly surveys are summarized to produce a year-end report comparable to an annual survey.

The conclusions gleaned from the Monthly On-board Rider Evaluation (MORE) allow CDTA to plan for its largest and most important markets. The demographic information that it collects is also used to provide data in support of federal Title VI requirements.

3.6.5 Technologies for Customer Communication

CDTA is a progressive organization deploying technology that allows us to interact with customers efficiently through digital communications, social media and building a platform for the future use of real-time information and mobile ticketing.

Hastus Comment Database

Customer comments submitted to CDTA are documented and tracked in an internal database through our Hastus program. Each comment is assigned to an employee who is responsible for providing an appropriate response. We work to have comments responded to within ten business days. A monthly report is compiled and submitted to the Board of Directors. This reinforces staff accountability and encourages close contact with customers.

Trip Planners

CDTA's Trip Planners allow customers to plan trips from specific access points across our route network. Customers can plan trips using an address, bus stop, street intersection or landmark. CDTA's trip planners also provide information on park & ride locations, while also offering bike and ride planning, cost saving calculations, and for access into or out of our service area (i.e. connecting via Amtrak). We see real time bus information from across the CDTA route network as the next system enhancement. This will improve trip planning by detailing when a bus will be at specific stops, while incorporating this feature into mobile applications will allow customers to access additional services.



Mobile Applications

CDTA's mobile applications offer customers mobile-friendly schedules, payment options and service advisories. Our schedules serve as a contract with customers, so offering an immediate and convenient way to stay updated remains critical. CDTA offers two mobile applications that support its customers and enhance initiatives.



CDTA BusPlus for the iOS, Android and Blackberry platforms is designed for our Bus Rapid Transit (BRT) service. The application displays real time arrivals, schedules, interactive maps, frequently asked questions and contact links. The application has 4,500 active downloads. With a plan to create a 40 Miles of BRT Network, this application will become even more important to a growing number of customers.



CDTA iRide for the iOS platform is our primary mobile application featuring schedule arrivals, service advisories, trip planning and social media tools. This application has 6,500 active downloads. A new version is being developed and will be available to the public in early 2014. An Android version will be out by Spring with a Windows to version to follow. This application will be the platform for future initiatives including mobile ticketing and real-time arrivals for CDTA's regular route system.

3.7 Business Development & Ridership Programs

CDTA works to develop positive relationships centered on proactive stakeholder engagement. Our dialogue with customers, business partners and elected officials guides service planning, delivery and public outreach. Those affected by CDTA's services have a right to participate in a transparent manner about how our services affect them. We provide timely and accurate information about our business and encourage stakeholders to define the manner in they wish to be consulted.

By understanding issues and striving for solutions, CDTA can sustain quality operations and strategic growth. The best decisions are made when we inform stakeholders about our plans, identify issues they have and respond appropriately. CDTA helps build strong communities by collaborating to build trust that creates positive environments for our employees, their families and residents. We strengthen loyalty by listening and responding to the needs of customers, and delivering quality transportation products that meet demand.

CDTA seeks input from a wide range of stakeholders, most importantly from customers who use our services. Our employees have a key voice, especially those closest to service – bus operators and field supervisors. Input is also sought from employers, developers and elected officials. This insures that service review is detailed and the development of proposals is community-based.

3.7.1 Branding and Marketing

The Transit Development Plan calls for further development of our family of services to meet various market needs. Our product line is flexible and adaptable to the changing needs of the region. Managing the customer experience of interaction with CDTA and its services is the essence of branding.

Understanding different markets and they way people react, has guided our branding strategy. Although each service is part of the CDTA family, and our logo and company brand is prominently displayed, we develop different looks and feels for services, buses and promotional materials.

The umbrella brand is the corporate CDTA logo, with the principal color scheme of the Authority transitioned between dark blue and white. We conduct marketing campaigns within the family of services (i.e. Northway Xpress Commuter Service (NX), BusPlus, Bus Rapid Transit) and carry unique sub-logos with appropriate message delivery.

Now that the county and number-based classification of routes has been implemented, we can further appropriate marketing campaigns from the top down. Route classifications make it easier for customers to identify, understand and use our services. Our branding package extends to new services and products, with tag lines and brand extensions developed as appropriate. Public transit services are the main focus of CDTA and are broken into succinct groups (i.e. trunk, neighborhood, express & commuter) which tied together by a single branding element, known as "*iRide*".

The strength and recognition of the CDTA corporate brand is paramount. The corporate brand will always be a primary focus to family extensions as our iconic logo is recognizable throughout the region. This core strength has led recent branding efforts that have rejuvenated our corporate identity and increased

recognition throughout the community. This has allowed CDTA to design services that people want and to deliver services people can rely on.

3.7.1 Universal Access Program

The Capital District Transportation Authority has partnerships with area businesses, schools and universities to provide unlimited access to the CDTA service network. CDTA service stretches across the Capital Region with local, express and commuter routes that connect residential, employment, retail and medical centers. With these arrangements, progressive employers and schools are seeing the benefits of providing affordable, environmentally-responsible commuting options for their community.

Capital Region employees and students use CDTA bus services by swiping their company or school ID card through fare boxes on buses. Service access is paid for through an annual fee based on usage. Access to convenient and reliable transportation services provides strong incentive for people to ride buses instead of using cars. Some organizations pass a portion this expense on to employees or students as a fee to help pay for the arrangement.

Once the agreement is finalized, the fare box system is programmed to recognize and read the corresponding ID cards. The system allows valid card holders to board buses; the fare box system records boardings and data is used to compile monthly ridership reports. These reports are the basis for annual cost calculation and payments.

The annual cost is dependent upon the level of ridership. A predetermined price per ride is used as the basis for computing cost. The agreements may include annual price ceilings to control cost exposure while also providing budget predictability.

Additional Benefits of Universal Access include:

- **Decreased Parking Demand** – More transit riders equal fewer cars, which translates into less on-site parking. This allows for better land use and less need to construct costly parking facilities.
- **Enhanced Employee Retention** – Customers enjoy savings on fuel, parking and auto ownership costs. Studies show that transit users arrive more rested and ready for work for school, avoiding stressful commutes.
- **Environmental Sustainability** – A partnership with CDTA is a major step towards promoting environmental sustainability by reducing carbon footprints (air pollution & protecting green space). With green consciousness growing throughout our community, a sustainable program provides a positive image for businesses.

The Universal Access program is a critical part of CDTA's strategic plan. Partnerships and community outreach are at the core of our efforts to increase ridership, revenue and relevance. Universal Access arrangements accounted for roughly 3 million annual boardings on CDTA buses last year. This represents

20% of CDTA's annual boarding count. More important, is the growth in Universal Access arrangements and their impact on the attractiveness of transit in the region.

Our Universal Access program provides improved mobility for the region and its residents. Customers have access to work, to school, to retail areas, and services, along with an enhanced quality of life. Programs like this strengthen economic development opportunities with a more mobile work force and access to a broad applicant and resource pool. The current list of institutions can be found below.

Colleges / Universities

- University at Albany
- Rensselaer Polytechnic Institute
- The College of Saint Rose
- Skidmore College
- The Sage Colleges
- Schenectady County Community College
- Branford Hall Career Institute
- Hudson Valley Community College
- Albany College of Pharmacy
- Siena College
- Maria College

Private Employers

- ShopRite Supermarkets

3.7.2 Corporate *Swiper* Program

Some business partners do not have the employee population or access to appropriate funding for a Universal Access partnership. Those businesses make CDTA's Corporate *Swiper* Program part of their employee benefit package because the program provides progressive discounts for bulk purchases. Employees enjoy an easier commute, the convenience of purchasing discounted monthly *Swipers* right where they work, and more money in their pockets. Our *Swiper* Program is easy to administer and designed to fit individual company needs.

The *Swiper* benefits include a low stress, low-cost commute featuring unlimited access to the CDTA route network and savings off regular cash fares. An additional benefit of being a *Swiper* card holder is our Guaranteed Ride Home program. CDTA provides a Guaranteed Ride Home (GRH) to *Swiper* cardholders, and others who take a bus, carpool, vanpool, walk or bike to work and have registered through the iPool2 web site. These programs provide a free taxi ride in case of an emergency, eliminating a barrier to commuting by any non-Single Occupancy Vehicle mode.

Employer benefits include the ability to attract and keep the best talent, an expanded labor pool, employee productivity, reduced parking needs and expenses along with being an environmentally-responsible neighbor. Employers can offer a "pre-tax" benefit from the cost of a *Swiper* from employee paychecks. The employee does not pay state or federal income tax, or payroll taxes on the benefit. There is also the

option for the employer to cover the full cost of the passes, or pay a portion with the employee paying the remaining portion before taxes, giving both a tax savings.

3.7.3 Transit Pass Subsidy Programs

CDTA administers pass subsidy programs to encourage the use of transit to target populations by providing complimentary *Swiper* passes for a limited period. The intended purpose is to highlight the benefits of CDTA service so they will continue to ride after they complete the program. The programs are supported by Travel Demand Management funding and include the following.

Homeowner's Incentive

The Homeowners Incentive Program provides two free passes per household to eligible participants as determined by each of the following participating organizations:

- Affordable Housing Partnership (AHP)
- Albany Local Development Corporation (Albany Midtown)
- Better Neighborhoods, Inc. (BNI)
- City of Albany
- Office for People with Developmental Disabilities (OPWDD)
- Schenectady Housing Development Fund Corporation (Schenectady)
- South End Improvement Corporation (SEIC)
- TRIP NeighborWorks Homeownership Center

All participants of the Homeowners Incentive program complete entry surveys before they begin receiving passes. After two years, they also receive an exit survey. At the completion of the program, almost half of the participants have stated they will continue to ride transit.

Transit for Refugees and Immigrants

The Transit for Refugees and Immigrants Program provides a pass every month for each eligible participant living within 0.5 mile of a transit line. Two organizations participate in this program, with each receiving passes for 6 months. CDTA began providing passes to the United States Committee for Refugees and Immigrants (USCRI) in March 2008 and to Catholic Charities in November 2009.

According to USCRI, the program has been a significant resource for successful resettlement of refugees in the Capital Region. The free access to public transportation helps refugees become self-sufficient members of the community and removed many transportation barriers. For example over 75% of the program participants find employment in 6 months due to the increased access by transit. Nearly 85% of employers hiring USCRI's clients are located on a bus line and in many cases availability of reliable transportation is a decisive factor in hiring.

Sustainable Housing Partnership

The Sustainable Housing Partnership began in July of 2009 and was renewed in 2012. It provides passes for a maximum of 24 months to qualified participants receiving services from the Domestic Violence and Rape Crisis Services (DVRC) of Saratoga County. CDTA provides participants with a subsidy for one of

two tiers. Participants receiving 6-12 months housing assistance receive up to 12 months of subsidy, and participants receiving more than 12 months housing assistance receive up to 24 months.

3.8 Land-Use and Development

CDTA understands that the pattern at which the built environment develops has a direct influence on transportation system and in particular the success or failure at establishing efficient transit service to areas with high ridership demand. We work to influence development patterns with the goal of making the region more transit-oriented.

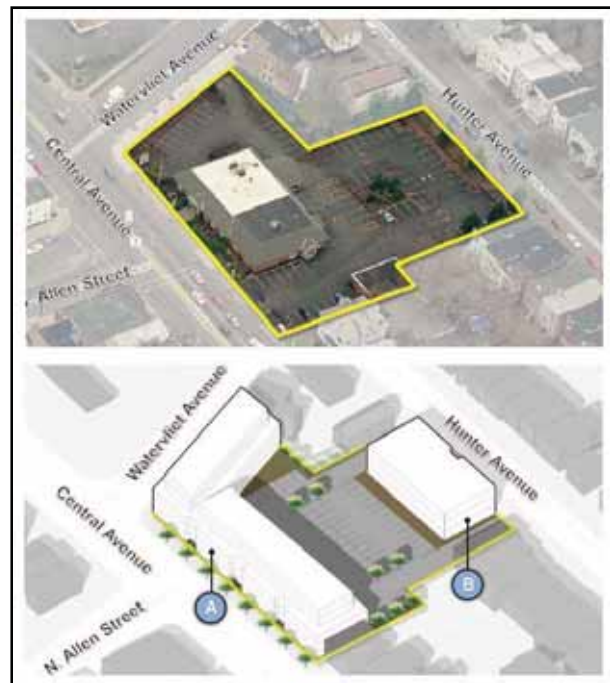
Development Reviews

CDTA works with municipalities and area developers in support of transit-oriented strategies for major development proposals on or near transit lines. We communicate directly with groups including the NYS Department of Transportation and submit written development reviews as CDTA is an “interested agency” under New York’s State Quality Review Environmental Review ACT (SEQRA). After reviewing a proposed site plan, CDTA documents desired changes that will make the development more accessible to transit service.

Zoning and Transit Oriented Development

CDTA encourages municipalities to adopt transit-oriented design principles into their zoning codes, the strongest tool to influence development. Some of the principles are higher densities along transit lines, limiting parking, provision of adequate sidewalks leading to a bus stop, and limiting the length of building setbacks to shorten walking distances from a bus stop.

CDTA funded the City of Albany’s Transit Oriented Development Guidebook. The guide created a framework for a zoning overlay district around existing and planned bus rapid transit stations in the city. The guidebook created a number of innovative techniques that will tie development directly to transit, increasing economic growth and ridership.



Participation in Planning Studies

CDTA participates in planning and development studies to ensure that transit is taken into consideration both short and long-term. These studies are usually conducted by local municipalities or NYSDOT, but may also include masters plans for colleges and universities. Many of these studies are part of the Capital District Transportation Committee’s (CDTC) Community and Transportation Linkage Planning

Program. The linkage program funds several studies each year with many focused on making smart growth communities a reality. (see <http://www.cdtcmmpo.org/linkage.htm>).

Small Scale Infrastructure

CDTA partners with municipalities and private landowners to fund improvements to pedestrian or transit infrastructure to increase accessibility and maximize ridership. This work is limited to extending sidewalks from a bus stop or building a safe location for a bus to stop on a roadway.

Chapter 4 – Standards and Guidelines

4.1 Service Performance Standards

4.1.1 Coverage

Coverage of CDTA services is guided by the Transit Propensity Index described in section 6.1. This combines demographic and economic statistics on geographic areas to determine those most likely to support transit service.

Transit service should be available in at least 75% of the block groups with a TPI classification of 2 through 4.

4.1.2 Headways and Span of Service

CDTA's resources are allocated in proportion to the level of demand. Route headways can be opened to maintain service while conserving resources where it is necessary to provide coverage but ridership is minimal. Routes should not exceed prescribed headway maximums based on their service type, to keep schedules understandable and service reliable.

Clockface Headways

CDTA prefers to use "clockface" headways that evenly divide into sixty minute segments. Passengers find schedules on clockface headways easier to understand, as vehicles arrive at the same time each hour. This allows routes to meet together at the same times throughout the day and ensure shorter wait times for transferring riders.

Although clockface headways are desirable, it is not recommended to provide a route excess resources or layover time to ensure them.

Minimum Frequency and Trips

A route's headway should not exceed sixty minutes unless absolutely necessary. The TCRP Transit Capacity and Quality of Service Manual (TCRP 100) assigns headways above sixty minutes a Level Service of F and comments that this service is "unattractive to all riders".

A general exception to these standards applies to express and commuter routes, whose trip times are demand-driven. To be considered useful, express and commuter routes should provide at least three trips in each direction during peak morning and afternoon travel times.

Headway Standards

Service type	Headway Ranges					
	Weekday				Weekend	
	Peak	Midday	Evening	Late Night	Day	Early AM / Evening
BusPlus	10-15	10-15	15-20	20-30	15-20	20-30
Trunk	10-20	15-30	20-30	30	15-30	30
Neighborhood	30-60	30-60	60	60	60	60
Express	3+ trips	0-3 trips	-	-	-	-
Commuter	3+ trips	0-4 trips	-	-	-	-

Span of Service

Although ridership levels are lower at night, it is necessary to maintain service to increase the viability of transit as a travel option and to incentivize trips earlier in the evening. Ridership generators such as hospitals, universities, and entertainment districts often provide unique opportunities to capture significant ridership later at night.

In general, bus routes operate using the following spans of service. Contracted partnerships may provide enhanced service late at night or early in the morning.

Span of Service Standards

Service type	Span		
	Weekday	Saturday	Sunday
BusPlus	4:00 AM – 2:00 AM	5:00 AM – 2:00 AM	6:00 AM – 1:00 AM
Trunk	5:00 AM – 12:30 AM	6:00 AM – 12:30 AM	7:00 AM – 11:30AM
Neighborhood	6:00 AM – 9:00 PM	7:00 AM – 7:30pm	-
Express	Primarily Peak Periods	-	-
Commuter	Primarily Peak Periods	-	-

4.1.3 Passenger Loads

Average load factor is the mean of the number of customers on a vehicle at all stops divided by the maximum seating capacity of the bus. It indicates passenger comfort and convenience during travel. An average load factor of 100% indicates all customers are seated (that is, 100% of seats are occupied), while an average load factor of 125% is the maximum comfortable standee load (25% of passengers must stand). An average load factor above 125% indicates that the number of passengers aboard the vehicle could lead to discomfort.

For this reason, trips should not exceed an average load factor of 125% on all service types except express routes. The average load factor on express routes should not exceed 100% because the high speeds of interstate highway travel may cause comfort and safety issues for customers.

Service type	Max Avg Load Factor	
	Peak	Off-Peak
BusPlus	125%	100%
Trunk	125%	100%
Neighborhood	125%	100%
Express	100%	
Commuter	125%	

4.1.4 Ridership Productivity

CDTA service productivity is measured in boardings per revenue hour of service. All routes are designed to perform above productivity thresholds of their service classification. CDTA's annual report performance report has tracked productivity while the TDP includes additional thresholds based on time and day of the week. The thresholds break down as follows:

Service Type	Productivity Thresholds				
	Annual Average	Weekday Peak	Weekday Off-Peak	Weekends	Late Night / Early AM
Trunk/BusPlus	25	30	25	20	15
Neighborhood	15	18	15	12	10
Express	25	25	N/A	-	-
Commuter	12	12	8	-	-

Thresholds are determined by calculating the first quartile of ridership productivity for routes by service classification for a defined period. This isolates the bottom 25% performing routes in each classification.

Late night / early morning service is defined as any service operating between 9:00pm – 6:00am. Off-peak express service does not have a productivity threshold with few trips that allow riders the ability to return home in case of a personal emergency or work-related concerns.

Routes that consistently perform above productivity thresholds may become overcrowded at times and are considered for enhancements. Routes that consistently perform below productivity thresholds are examined for restructuring to increase productivity.

4.1.5 Bus Rapid Transit

CDTA has identified bus rapid transit as its premium service mode. Because of the large capital and operating costs associated with building a BRT line, potential service corridors must meet certain ridership criteria to justify funding and ensure a satisfactory return on investment.

Each prospective bus rapid transit corridor must attract **a minimum of 2 million annual riders** on existing services. This is measured through an aggregate of all routes and segments for which the prospective BRT corridor serves as the primary area of travel.

To justify a BRT station, an existing pair of bus stops must attract a **minimum of 100 boardings per weekday** after the institution of new service. This is calculated by applying a 20% BRT ridership increase to the existing number of boardings.

4.1.6 On-Time Performance (OTP) and Scheduling

CDTA defines an “on-time” trip as arriving between 1 minute earlier or 5 minutes later than the scheduled arrival time. CDTA fixed-route services achieve system on-time performance at or just below 70%. The Transit Cooperative Research Program’s Report (TCRP) 100 assigns a Level of Service to on-time performance percentages.

To bring CDTA on-time performance in line with industry standards, **at least 85% of trips should arrive on time**. To reach this goal, route schedules will be modified to include **a time point for every ten minutes of travel time**.

4.2 Street Amenities Standards

4.2.1 Street Amenities

The availability of street amenities are determined by the number of weekday boardings. Individual stops may require recommended amenities due to unique circumstances (i.e. a stop with sixty boardings per day located under a large bridge does not necessarily require a shelter, but should have a bench and trash receptacle). These needs should be addressed on a case-by-case basis.

Waiting Amenities Standards

Boardings / weekday	Shelter	Bench	Trash / Recycling
< 15	No	No	No
15-35	No	Yes	Case-by-case
35+	Yes	Yes	Yes

4.2.2 Bus Stop Spacing

The spacing of local bus stops should balance convenient walk distances with shorter and more reliable trips. Spacing should correspond to the surrounding built environment and reflect the density of potential ridership in the area. The following standards apply in most applications.

The spacing of BusPlus stations should be determined independently as part of the dedicated planning studies of projects.

Environment	Local Stop Spacing	
	Typical	Maximum
Central Core	750 ft	1,000 ft
Urban Areas	1,000 ft	1,500 ft
Suburban & Rural Areas	1,250 ft	2,000 ft

4.3 Public Input and Outreach Standards

4.3.1 Major Service Changes

For all major service changes, the following standards apply:

- Public meetings are held to gather input at least six months before the change is scheduled to go into effect.
- A draft plan should be presented to the public at least four months before the change is scheduled to go into effect. Public comment period should last 4 weeks.
- A finalized plan should be presented to the public at least three months before the change is scheduled to go into effect. The finalized plan should attempt to address more than half (+50%) of issues raised during the public comment period.

The definition of a major service change for the 2013 Title VI report is any change that alters 15% or more of system service hours. This should be considered the maximum threshold. CDTA may choose to use the above standards for service changes impacting less than 15%, but warrant a higher degree of public input and outreach.

4.3.2 All Service Changes

- Public schedules and marketing materials should be available at least thirty days before change is scheduled to go into effect.
- Issues arising from a service change should be rectified by the next operator pick date.

4.4 Land Use Guidelines

CDTA recognizes the relationship between land use and transit – or how the design of the built environment can encourage or deter transit service. Land use patterns that require deviations from primary roadways to distant residential or employment centers result in expensive, less efficient transit services with low ridership. Communities need to recognize this connection so transit supportive land use policies are included as part of local planning regulations. CDTA prioritizes service to locations that encourage transit use unless subsidies are provided to support service. This includes universal access agreements, employee transportation programs or shared-use park & ride parking.

The following guidelines illustrate land use conditions that encourage transit use. They are used by CDTA to determine proper land use in an area proposed for new or improved transit service.

- **Residential Densities** of at least seven units per acre are necessary to support 30-minute transit service. When residential densities reach about 30 units per acre, transit service every 10 minutes is possible. The affluence of the population, even at higher residential densities is also a major consideration.

- **Employment Densities** of 50-60 employees per acre are necessary to support 10-15 minute local transit service when the total employment base is at least 10,000. Employment densities of 10 to 20 employees per acre are necessary for 30-60 minute service. Lower employment densities may require employer subsidy to support transit service.
- **Land Use Patterns** that encourage a mix of buildings constructed closer to the street with parking in the rear or sides foster walking and transit use, especially those within ¼ mile of a transit stop. Good pedestrian infrastructure should connect buildings to street sidewalks. Strip mall or big box development on roadways with large, front door parking lots discourage walking and transit use. Parking management strategies such as maximums, shared use parking or park and ride spaces near transit stops should be considered.
- **Public Street Designs** should incorporate “Complete Street” principles which consider the convenient access and mobility of motorists, pedestrians, bicyclists and public transit users. These include sidewalks, signalized pedestrian crossings, marked crosswalks, and adequate lighting at transit stops. Street designs should consider efficient movement of transit vehicles through signal optimization or transit signal priority, limited or shared-use driveways that reduce turning conflicts. In areas with higher speeds (those over 40 MPH) bus pull-outs and a balanced approach to the turning radius at intersections should be considered.
- **Large Development Private Street Design**, or streets that are built on private property and owned by a private entity but provide public access, should be regulated at site plan review by the municipality. If a private development is to receive transit service, the following should be considered: a balanced approach to driveway and intersection turn radius, appropriate lane widths, low roadway grades (or slopes), pavement to handle vehicle loads of 20,000 pounds per axle, and proper bus loading pads (eight inch Portland cement concrete jointed reinforced pavement and a four inch sub base of stabilized granular material).

Chapter 5 – Service and System Evaluation

5.1 Existing Service and System Evaluation

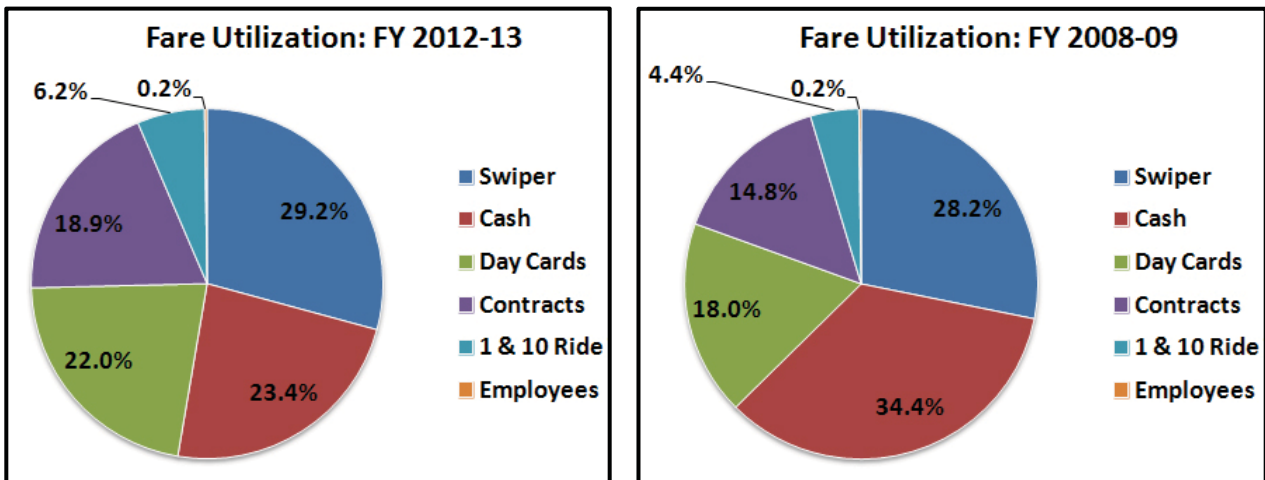
2013 Route Performance Report

In April 2013, CDTA conducted its annual Route Performance Report to measure ridership and productivity, assess previous service changes, and recommend service changes for fiscal year 2014. Major findings included a continuing increase in ridership, successful service changes that have a majority of routes above productivity thresholds. The report recommended improving service with a focus on Bus Rapid Transit, enhancing trunk frequency and span, and establishing universal access contracts with more area businesses.

The full 2013 Route Performance Report is included in Appendix D.

5.2 Fare Utilization

CDTA offers a variety of ways to access its services, including cash, period passes (from 1 to 31 days), debit tickets, and college or business IDs that allow members to ride for free as part of the universal access program. While cash is an unavoidable component of our fare policy for the foreseeable future, CDTA works to increase the use of pre-paid fare media wherever possible.



Pre-paid fare media is preferred because it reduces dwell time, encourages customer loyalty, and offers built-in discounts that incentivize ridership. Seventy-seven (77%) percent of all CDTA rides (fixed route and Northway Xpress) are accessed through pre-paid media. The largest single fare type is our monthly *Swiper* pass, which offers the greatest per-ride discount for customers. Over the past five years, prepaid fare media use has increased, while cash transactions have decreased.

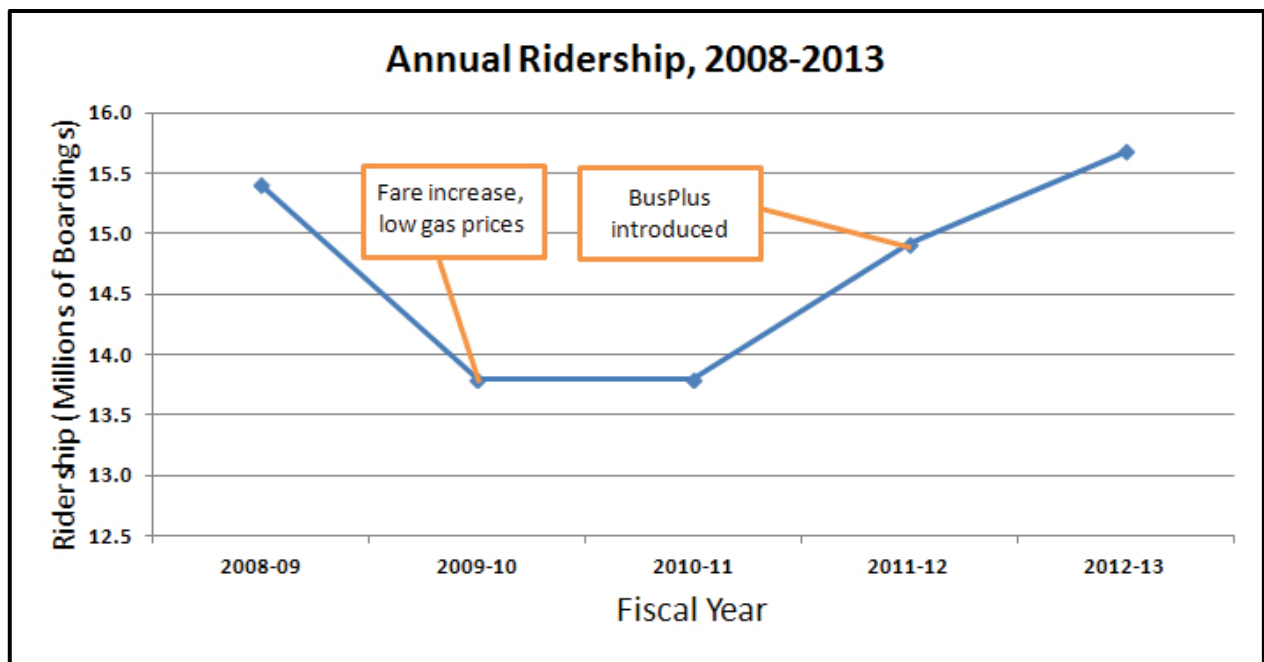
BusPlus bus rapid transit service introduced in April 2011 increased the cash fare by fifty cents to \$2 while maintaining the same discounts for all prepaid media.

The number of universal access contracts has also been on the rise, increasing ridership while reducing the need for cash. Both factors have shifted our growing customer base toward prepaid media. We see this trend continuing with the introduction of smart card and mobile ticketing technology – see section 6.7.8.

5.3 Five-Year Historical Trends Analysis

Ridership on CDTA fluctuated significantly over the past half decade beginning with the dissipation of high gasoline prices and a fare increase in 2009 that shifted ridership below usual levels. The introduction of BusPlus on NYS Route 5 increased ridership while route restructuring initiatives in Albany and Schenectady counties also contributed to the rebound.

That growth was spurred on by a second phase of restructuring in Albany County, the redesign of the Northway Xpress commuter service, along with several new educational and commercial institutions the universal access program. All of the above contributed to ridership increases born out of TDP principles and not high gasoline prices or a sluggish economy.



5.4 Transit Propensity Index

The majority of development in CDTA's service area over the last 50 years has benefitted automobiles and does not fit the Land Use Standards outlined in Chapter Two. Serving these areas is not financially responsible as transit is unlikely to generate ridership to meet service performance standards.

After many years of development, a significant portion of residences and jobs have migrated to these areas. Roadways that have poor connectivity, single family residences on large lots or 99% of households have two vehicles keep some locations out of transit's reach. However, in recent years some areas have begun to fill in roadway connectivity, added higher density residences with local services and jobs, and a growing percentage of households with no vehicle. The Transit Propensity Index (TPI) takes a comprehensive view of relevant factors to determine where transit is most viable.

CDTA first used a TPI with the 2007 Transit Development Plan. The TPI shown includes characteristics summarized below.

Note: Data is shown at the Block Group level, although some characteristics were only attainable at the Census Tract level. In those instances, all Block Groups in the Census Tract were assigned the same value for those characteristics. In addition, employment data was at the block level and was aggregated to the block group level. Attributes at the Tract level are income below poverty, population and age, and households by vehicles. Since these are all demographic attributes, the ridership generators index appears to be more finely grained than the demographic index.

DEMOGRAPHICS			
Category	Maximum Points	Reason Included	How points assigned
Percent with income below poverty level (American Community Survey)	10	Lower incomes more likely to use transit	Standard deviation
65+ population density (Census DP-1)	5	Elderly use transit in disproportionate numbers	Standard deviation
Density of households with more workers than vehicles (American Community Survey)	10	People without personal vehicle access more likely to use transit	Standard deviation
Population Density (Census DP-1)	15	High density necessary for viable transit	Standard deviation
Density of 4-way intersections (NYS GIS Program Office, US Census)	10	Grid street patterns provide good transit and pedestrian access	Standard deviation
Subtotal	50		

TRANSIT RIDERSHIP GENERATORS			
Category	Maximum Points	Reason Included	How points assigned
Mall/Shopping Plaza (Previous TDP; 2012 Book of Lists)	10	Major destination, including of transit to work journeys	Square Feet per Square Mile 1-200,000 = 1; 200,000-300,000 = 2; 300,000-400,000 = 3; 400,000-500,000 = 4; 500,000-600,000 = 5; 600,000-700,000 = 6; 700,000-800,000 = 7; 800,000-900,000 = 8; 900,000-1,000,000 = 9; >1,000,000 = 10
Universities, Colleges (Previous TDP)	10	Students ride transit more; many have unlimited access	Students per Square Mile 1 – 499 = 1; 500 – 1,999 = 2; 2,000 – 4,999 = 3; 5,000 – 9,999 = 4; >10,000 = 5
Hospital (Previous TDP)	5	Major generator	Beds per Square Mile - Points 1 - 99 = 1; 100 - 199 = 2; 200 - 299 = 3; 300 - 399 = 4; 400 - 499 = 5; > 500 = 6
Employment Density (LEHDODES*)	20	Work trips are frequent and have high transit use	Standard deviation
Employment Density (jobs less than \$1,200/month) (LEHDODES*)	5	Workers at lower-income jobs likely to seek transit	Standard deviation
Subtotal	50		

**Longitudinal Employer-Household Dynamics Origin-Destination Employment Statistics)*

Capital District Transit Propensity Index

Demographic Index

**Darker Shade Indicates
Higher Demographic Index**

This index is based on a 0 - 50 scale ranking of the intensity of the following characteristics:
Population Density, Population Density (Age 65 +), Percent Income Below Poverty, Density of Households with More Vehicles Than Workers and Density of Four Corner Intersections by Census Block Group.

Weights

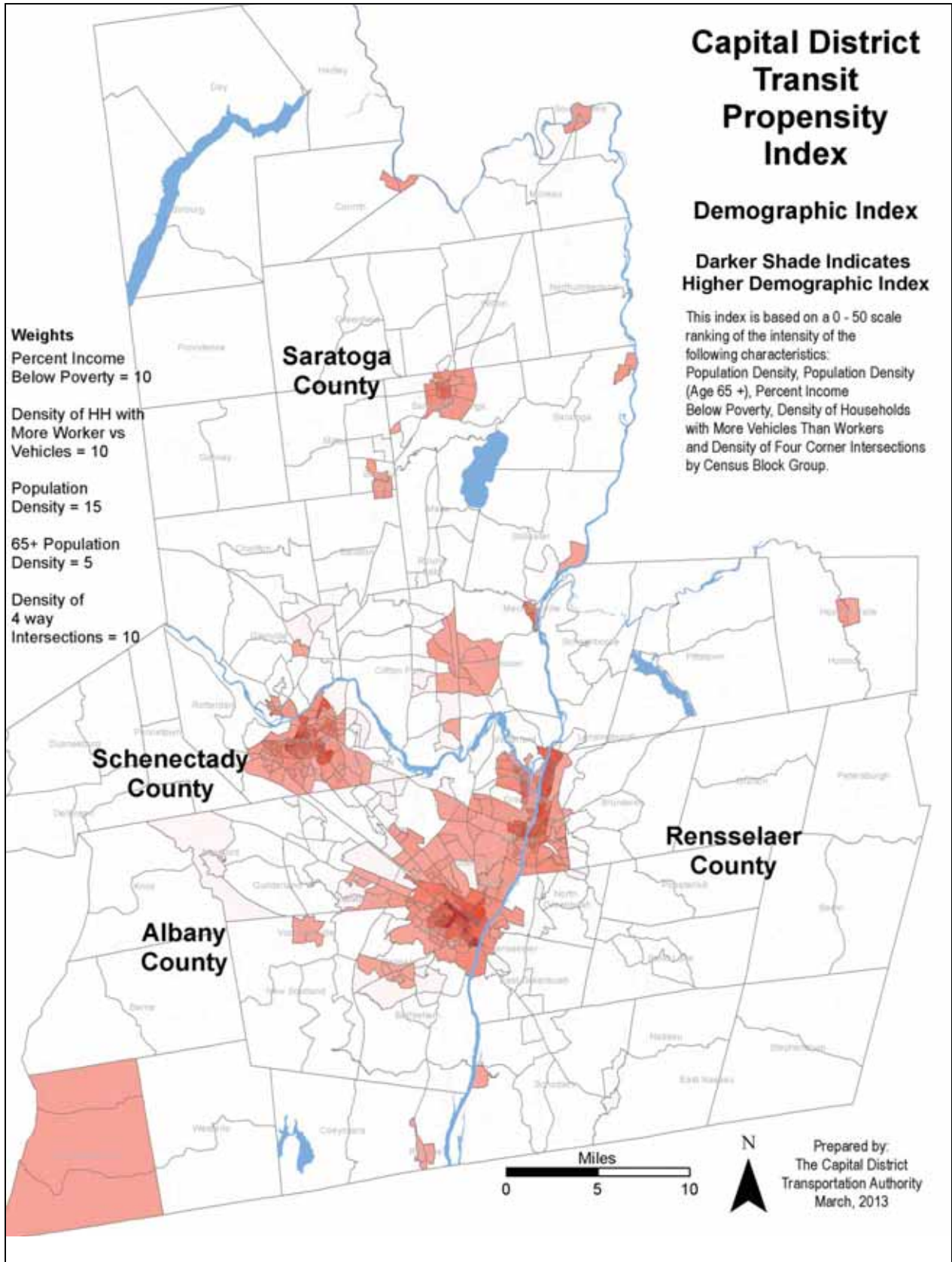
Percent Income Below Poverty = 10

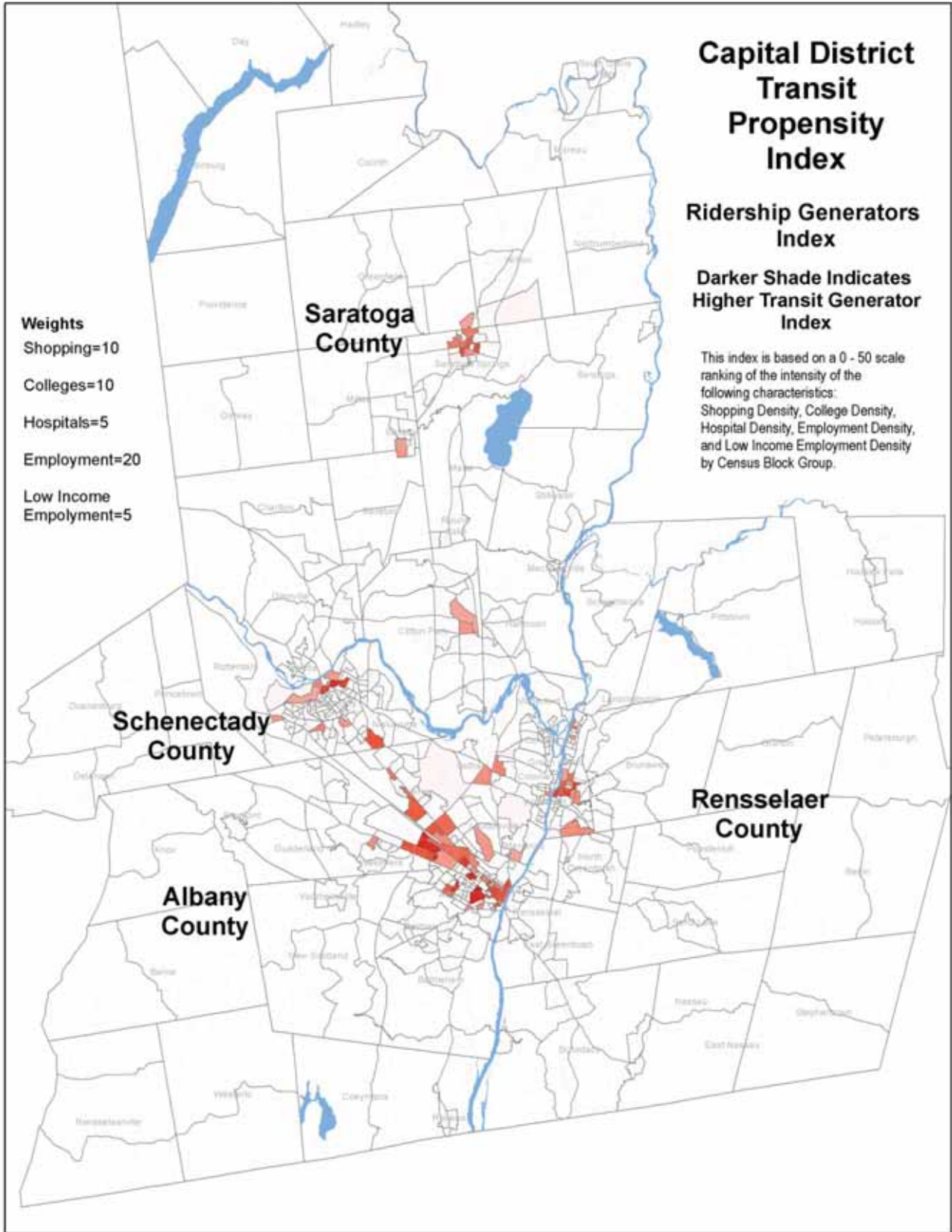
Density of HH with More Worker vs Vehicles = 10

Population Density = 15

65+ Population Density = 5

Density of 4 way Intersections = 10



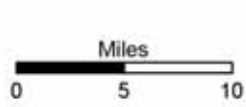
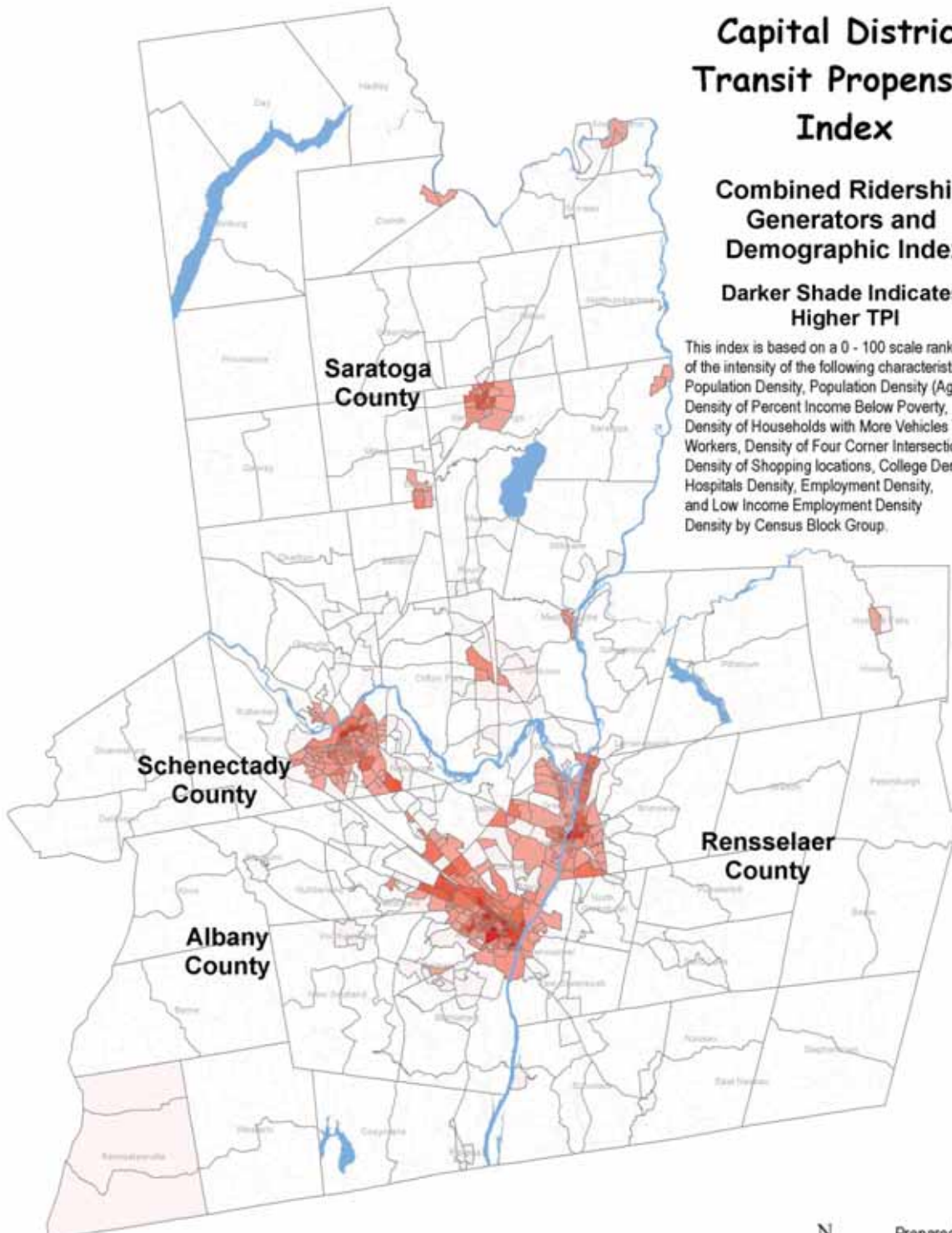


Capital District Transit Propensity Index

**Combined Ridership
Generators and
Demographic Index**

**Darker Shade Indicates
Higher TPI**

This index is based on a 0 - 100 scale ranking of the intensity of the following characteristics: Population Density, Population Density (Age 65 +), Density of Percent Income Below Poverty, Density of Households with More Vehicles Than Workers, Density of Four Corner Intersections, Density of Shopping locations, College Density, Hospitals Density, Employment Density, and Low Income Employment Density by Census Block Group.



Prepared by:
The Capital District
Transportation Authority
March, 2013

5.5 Regional Trends

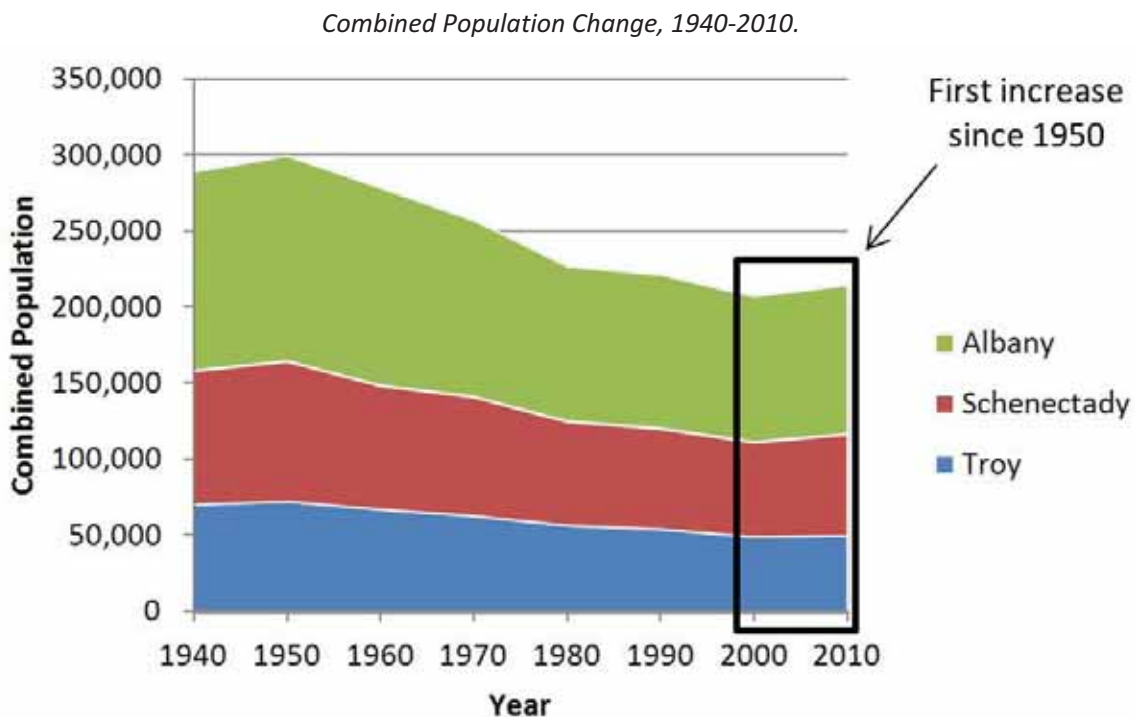
The Capital Region has undergone significant changes over the past decade, many of which may help showcase transit as a more competitive mode of transportation. In the 2010 Census report, the region's largest cities (Albany, Schenectady, and Troy) all experienced population increases for the first time since 1950. A number of high-density residential developments have emerged in downtown areas of the Capital Region. These tend to be situated within walking distance of CDTA services, increasing the likelihood that residents will use public transportation.



*17 Chapel
Condominiums in
Downtown Albany*

This indicates that more people are residing near CDTA services, increasing demand for transit along already productive corridors. The Albany-Schenectady-Troy metropolitan grew from 825,875 in 2000 to 870,716 in 2010. While much of this occurred outside central cities, suburban growth also reveals possibilities for transit growth, as shopping malls, hospitals, and office parks provide increased opportunities for reverse commuters.

This is a double-edged sword” as we may recoup expenses through fare revenues, but must respond to increasing demand with enhanced service where necessary. This is where strategic planning for increased capacity will help avoid overcrowding.



Between 2007 and 2012, the amount of new cars purchased by people under 30 dropped 30%, indicating that newly independent residents may strongly prefer urban lifestyles that do not require an automobile.

Population Growth Projections

The population of the Capital Region is expected to grow modestly over the coming years. There may be significant differences in the growth within municipalities, but the region as a whole is projected to increase its population by 3.2% between 2010 and 2020.

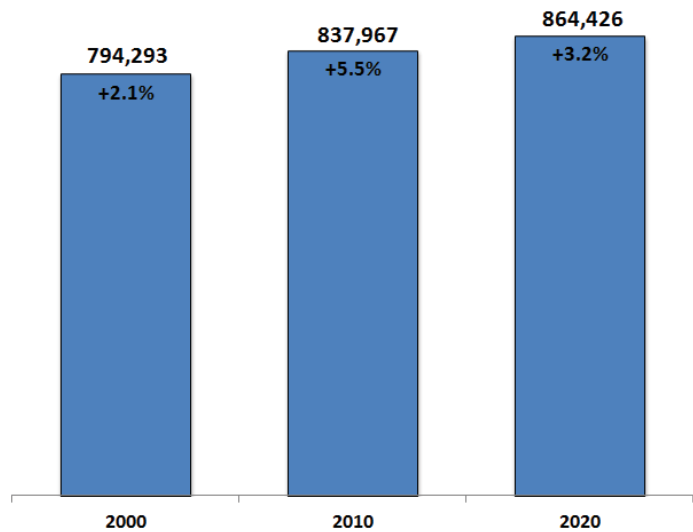
CDTA will continue to focus resources on existing markets with the highest demand as well as specific areas that have the highest potential for increased transit ridership.

Aging Population

Similar to other mid-sized regions in the Northeast United States, the population of the

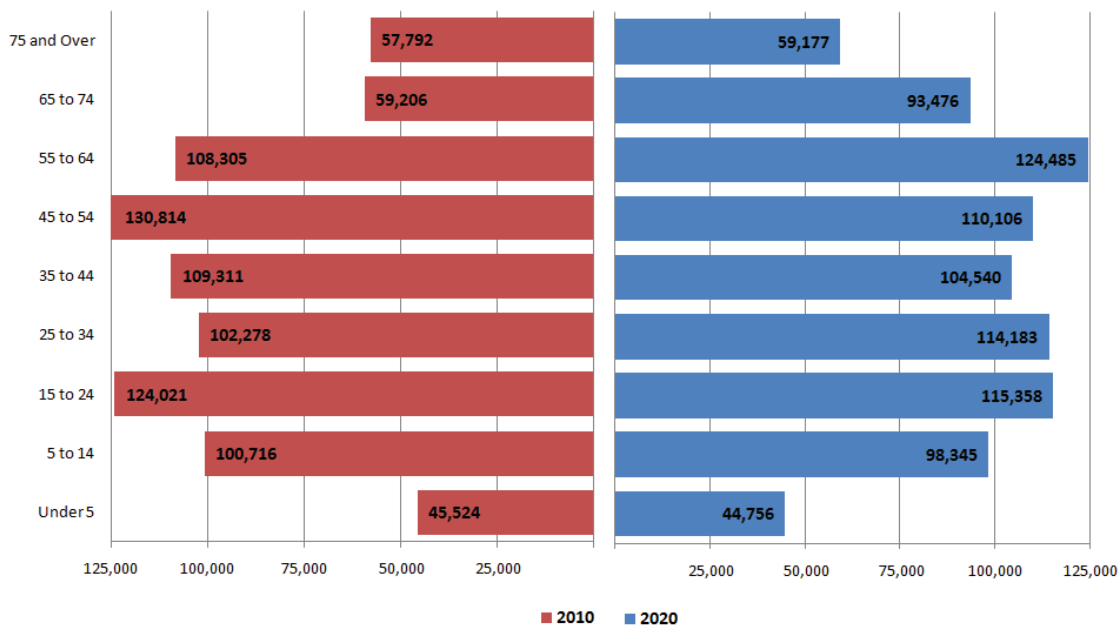
Capital Region Population & Projections

(Capital District Regional Planning Commission)



Capital Region Age Cohort Comparison: 2010 & 2020

(Capital District Regional Planning Commission)



Capital Region will continue to age over the next decade. This is largely due to the decline in births, longer life expectancies, an aging Baby-Boomer population, and modest immigration rates. The CDRPC

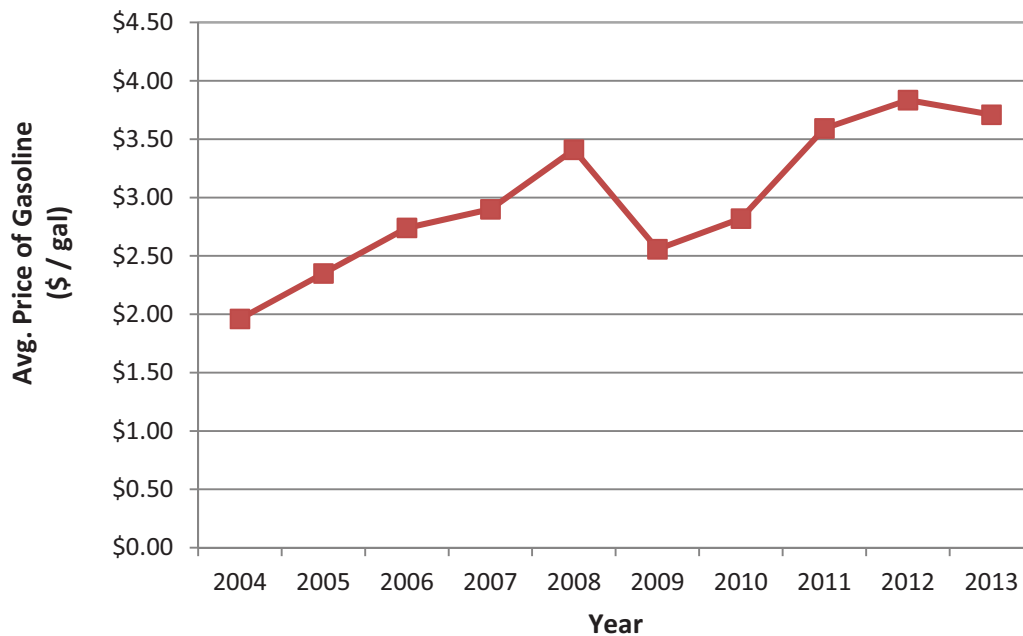
has developed projections for the growth in each age group between 2010 and 2020 as shown below. Although the overall population of the Capital Region is expected to grow by 3.2%, the population of residents over 65 is expected to increase by 30%.

This aging population will increase demand for public transit and service costs will increase correspondingly. We expect to see a continued increase in ridership on CDTA's STAR paratransit and other specialized services.

Gasoline Prices

The price of gasoline is often closely tied to transit ridership. The automobile has been the preferred mode of travel in the United States for nearly 50 years because gasoline is available at low price points. CDTA saw significant ridership gains in 2008-09 largely due to high gas prices that remained for an extended period of time. While our system is positioned to succeed without the volatility of gas prices, the higher price points make people more likely to consider transit as an option.

Average Price of Gasoline in Albany, 2004-2013.



5.6 Title VI Report

CDTA's program update was submitted March 2, 2011. The next review is due March 31, 2014 with document submission to the FTA by February 1 2013. The FTA has released additional guidelines (Circular 4702.1b) that are more specific and CDTA will include updated documentation for the 2014 review.

CDTA conducted an evaluation of its service in relation to minority census tracts, defined as tracts with at least double the average percentage of minority population. All minority (greater than 25%) census tracts were located in the Cities of Albany, Schenectady, and Troy.

The results are summarized below.

Transit Access: Because CDTA operates a radial system and the majority of minority census tracts are in the region's central cities, virtually all bus routes served minority neighborhoods. The two exceptions were Saratoga County service, where no minority concentrations existed, and suburban shuttle service, which provides jobs access (as opposed to residential area access). The provision of service at night and on weekends concentrated on urban routes. CDTA found no disparities in transit access.

Headways: CDTA analyzed headways on all routes and concluded that there was no significant difference between routes serving minority neighborhoods and those that didn't.

Vehicle Assignment: Vehicles were assigned based on the distance traveled and need for special equipment, such as Automatic Passenger Counters to fulfill National Transit Database requirements. CDTA was garaging its fleet indoors in lines, not assigning buses to specific routes. Buses were pulled from the line according to the next scheduled pull out.

Load Factor: CDTA found no system-wide problems. We monitored service daily and avoided overcrowding by deploying additional vehicles and drivers based on road supervision and operator requests.

Passenger Waiting Amenities: CDTA is monitoring the practice of locating shelters in minority census tracts as well as suburban transfer points. 40% of CDTA's shelters were located in minority census tracts.

Public Outreach Efforts: CDTA's methods included press releases, public meetings, on-board and shelter notices, social media, direct mail and on-board surveys, public service announcements, STAR focus meetings, neighborhood meeting attendance, and the authority website.

Limited English Proficiency (LEP and Multilingual Facilities): CDTA did not generally provide multilingual materials because the non-English-speaking population was less than one percent. However, interpretive services were provided through American Sign Language at public meetings and TTY technology on the telephone. One of our travel trainers, with fluency in Spanish, has been dedicated to assist people in knowledge and use of the CDTA system. The Capital District Job Access Transportation Guide was produced in both Braille and large print for visually impaired customer use.

Service Evaluation: According to the most recent surveys, there were no significant differences between responses by white and non-white transit riders.

Service Changes: The report detailed some changes to service, such as the Schenectady Route Restructuring and introduction of Bus Rapid Transit on Route 5, and concluded the changes had not disparately impacted minority communities.

Chapter 6 – Recommendations

Over the last five years, CDTA has implemented the recommendations outlined in the previous Transit Development Plan which was focused on major route restructurings and the rollout of Bus Rapid Transit service that developed a stronger transit system poised for growth. The following are the specific recommendations for CDTA from 2014-2018 which is focused on allocating service based on demand, promoting transit-oriented development, expanding BRT into its own route network, developing transit centers in high density downtown areas, and enhancing our strongest corridors with increased service and infrastructure improvements.

6.1 Transit Priority Network

There are several Capital Region corridors that have the ridership, density, and infrastructure to warrant increased transit investment. These are major arterials and main streets of neighborhoods that are served by highly-productive trunk and neighborhood routes. These will be defined as part of a **Transit Priority Network** that will allow CDTA and its partners to strategically use resources to have the greatest impact on transit ridership in the region. Defining these corridors allows for the following:

- CDTA to determine where additional frequency and span should be given to existing routes
- CDTA to determine where capital improvements should be invested (i.e. transit priority infrastructure, ITS elements, shelters, and other street amenities)
- Municipalities to update zoning codes to allow higher densities and other transit-oriented development features
- Public entities to prioritize infrastructure investments and locate social service centers that are most accessible
- Major employers and developers to determine locations for new housing, commercial and retail space that would require transit service
- Allow funding agencies like the New York State DOT and Capital District Transportation Committee to determine effectiveness of projects for competitive funding scenarios.

Corridors, roadways, and streets are included in the Transit Priority Network based on the following criteria, which is listed in terms of priority:

1. **Productivity** – Areas must produce high ridership per revenue hour based on high demand seen from the existing service.
2. **Transit Demand** – Areas must have the density, pedestrian infrastructure, demographics and other characteristics that create a high demand for transit use to insure any investment will lead to increased ridership.
3. **Social Equity** – Transit investments made in low-income and minority communities who are dependent upon public transit for travel.

4. **Geographic Equity** – Transit investments are spread to as many municipalities in the Capital Region as justified.

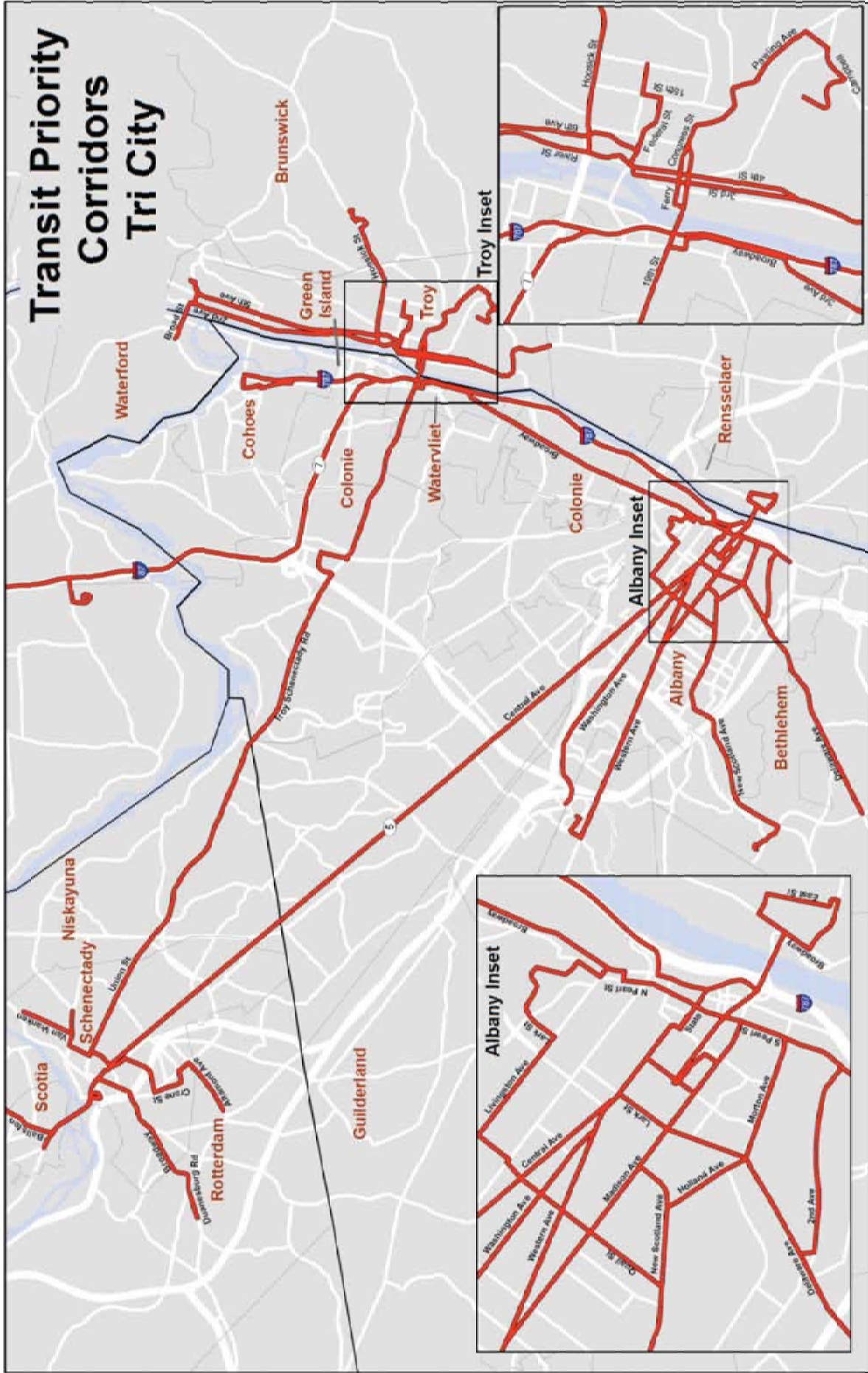
The Transit Priority Network is shown in the following pages, with individual segments listed in Appendix E. The list of Transit Priority Corridors will be updated on a more frequent basis following substantial increases in density, transit-oriented development, or ridership on corridors that already have service. Areas without service can be added to the network, but only after service is implemented successfully.

Relationship with the CDTC Transit Priority Network

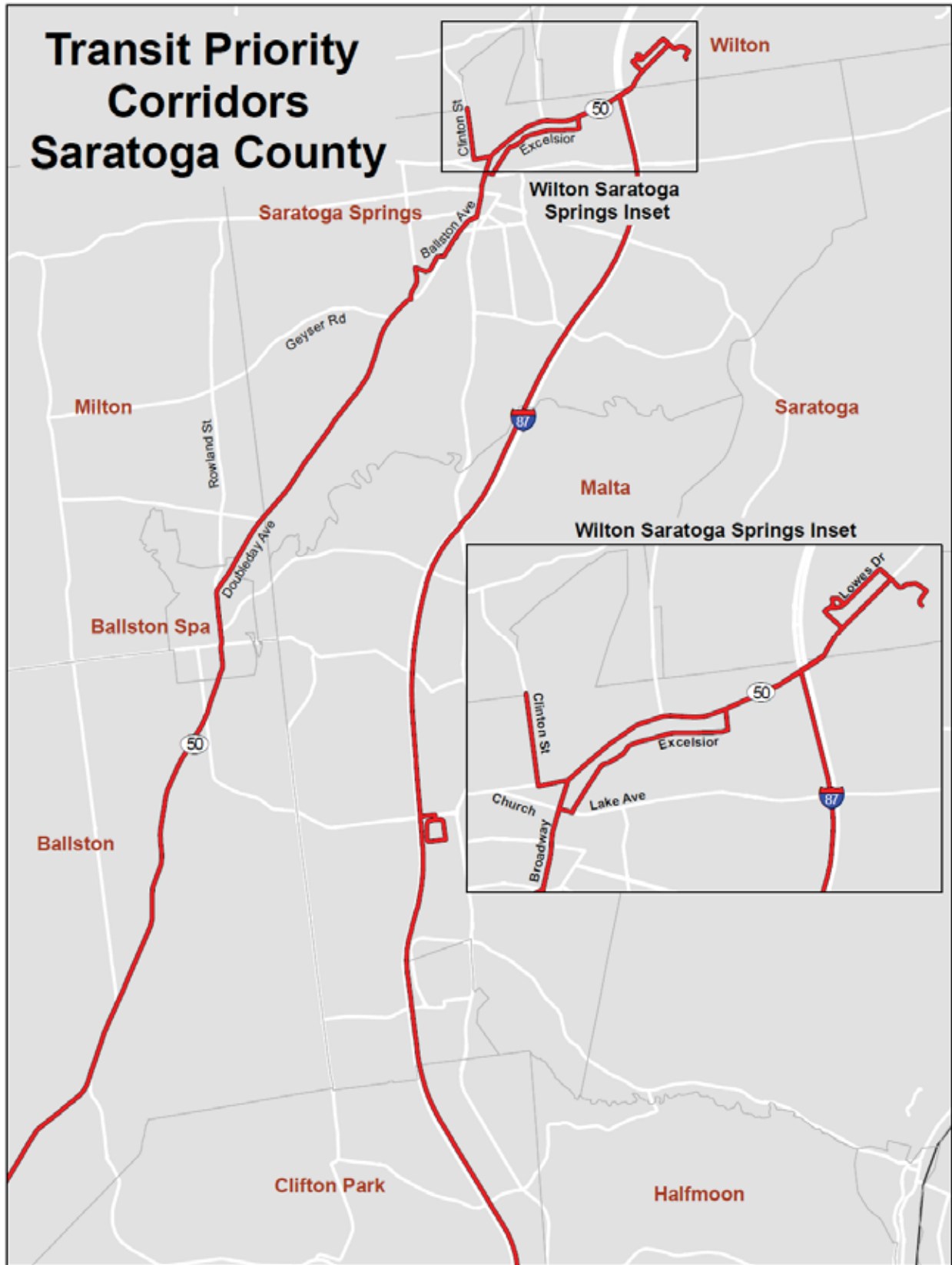
CDTC has been utilizing priority networks in planning and projects since they were developed by New Visions task forces. Priority networks exist for bicyclists, pedestrians, goods movement, intelligent transportation systems, arterial management and transit. Currently, the transit priority network considers all roadways served by CDTA fixed route service within the network.

In planning for the New Visions update (see section 1.2.2), CDTA and CDTC will determine how the two priority networks will be integrated for a number of reasons, including federal funding. This may lead to a tiered system focused on the transit priority network outlined in this report, which would be followed by all other roadways served by CDTA.

Transit Priority Corridors Tri City



Transit Priority Corridors Saratoga County



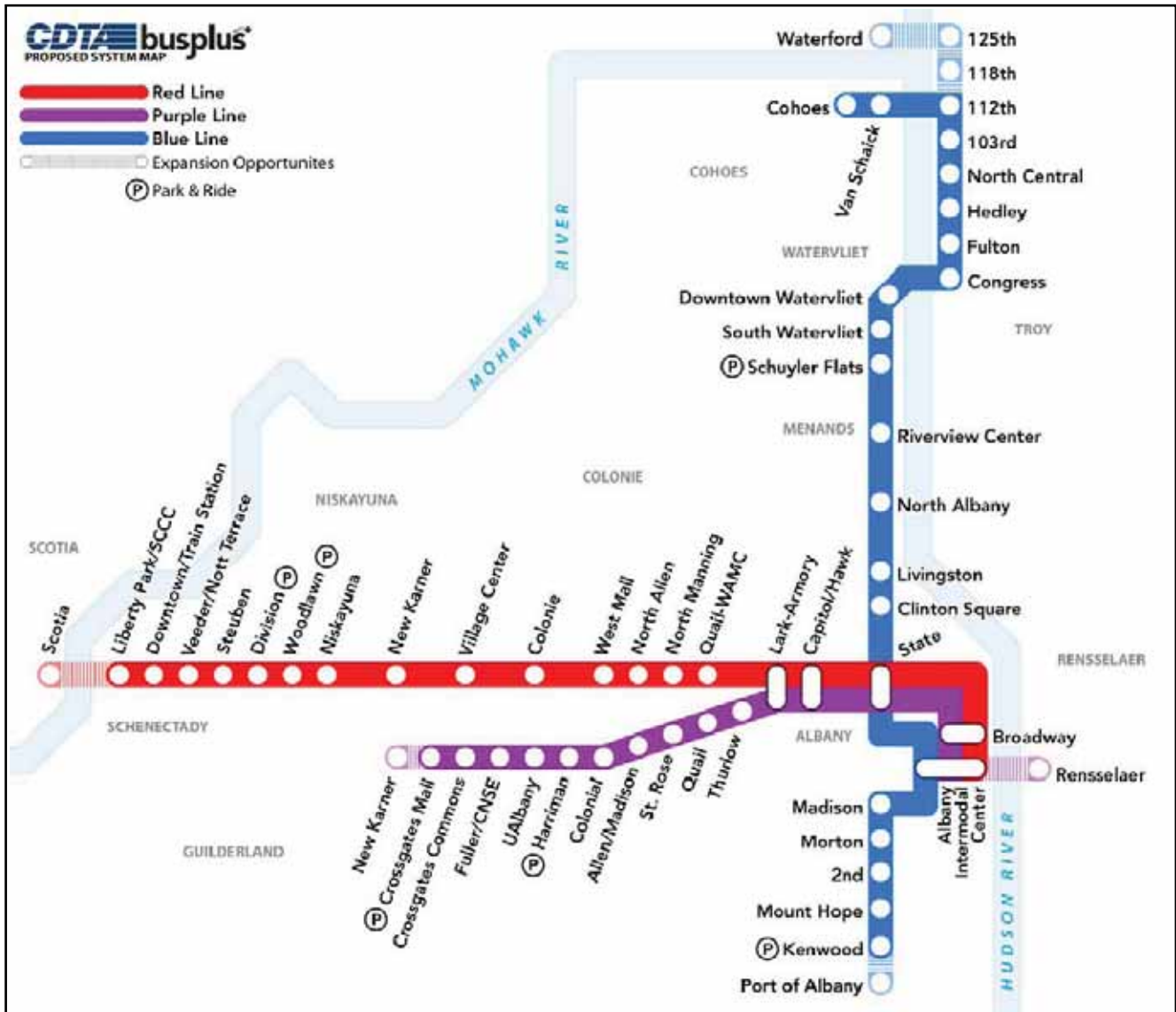
6.2 Expansion of BusPlus

The success of BusPlus on NYS Route 5 coupled with high ridership on other corridors warrant expansion from a single line to a full BRT route network. BRT expansion will allow CDTA to match the quality of service to demand, but also continue to attract choice riders that might not consider conventional bus routes. Expansion of bus rapid transit will assist the revitalization of downtowns and urban neighborhoods through increased investment surrounding transit stations.

Three corridors in the Capital Region warrant Bus Rapid Transit service which includes NY Route 5, the Washington/Western Corridor, and the River Corridor which are described and shown below. These corridors are listed under the Transit Priority Network and each has surpassed the 2 million annual riders which, as noted in section 4.1.5, is the threshold to upgrade service to bus rapid transit. Each corridor is either already in operation or is in the planning stages.

Capital Region Bus Rapid Transit Corridors

Corridor Name	Description	Municipalities	Trunk Routes	Corridor Length	Annual Ridership	Status
NY Route 5	Central Avenue and State Street from downtown Albany to downtown Schenectady	Albany, Colonie (Village), Colonie (Town), Niskayuna, Schenectady	#905-BusPlus, #1	17 miles	3.7 million	Operations began in April 2011 with final stations constructed in summer 2013. Additional service rolled out fall 2013.
Washington - Western	Washington and Western Avenues from downtown Albany to Crossgates Mall	Albany, Guilderland	#10, #11, #12	8 miles	3.3 million	Planning completed; Undergoing Environmental clearance and Engineering / Design
River Corridor	Pearl Street and Broadway (NY 32) & 2nd and 5th Avenues (NY 4)	Albany, Menands, Watervliet, Troy, Cohoes, Waterford	#6, #7, #22, #80, #85	15 miles	2.5 million	Conceptual Design Study to be completed in 2014



CDTA BusPlus Expansion – Conceptual System Map

6.2.1 Improvements to NY Route 5 Corridor (Red Line)

CDTA continues to invest in its first BRT corridor after more than two years of operation. We continue to implement elements or amenities that reduce travel times, increase service, improve customer convenience, and attract more riders.

2013-14 Improvements

This will include both capital and operating investments. Construction of larger, distinctly branded stations and real-time displays have been completed on the remaining BRT stations (Albany Bus Terminal - Greyhound, Broadway in Albany and Balltown Road in Niskayuna). Additional capital improvements include expansion of Transit Signal Priority, additional security cameras in the City of Albany, and transit art at stations within the Central Avenue Business Improvement District.

Service will be added to BusPlus to supplement the original service plan. These include:

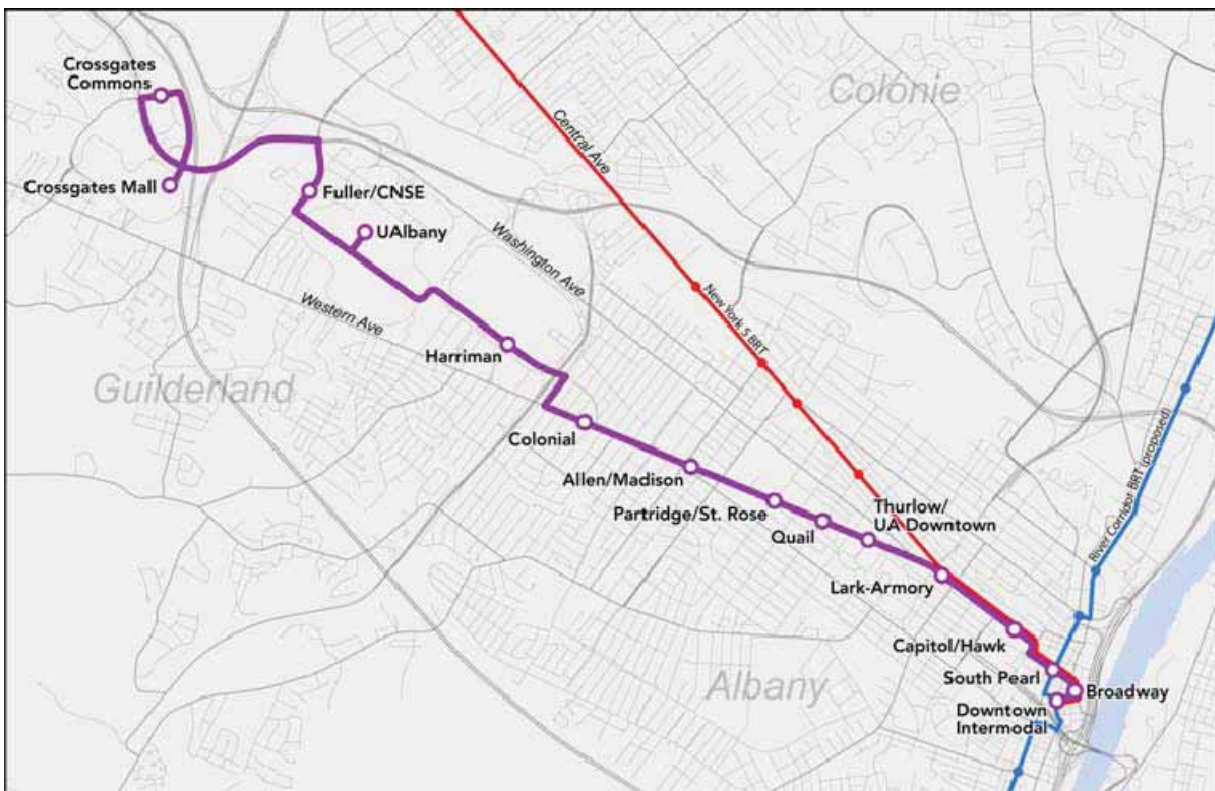
- Extending weekday night service to past 1:30am
- Extending Saturday service past midnight
- Extending Sunday service to past 11:00pm
- Increasing early evening frequency to every 15 minutes

Future Improvements

CDTA will review the possibility of increasing capacity on NYS Route 5 by increasing frequency from every 15 minutes to every 10 minutes. In CDTA will also review the potential of adding articulated buses for use specifically on BRT corridors (see section 6.5.1) as well as expanding bus-only lanes in downtown Albany (see section 6.7.2).

6.2.2 Washington / Western Corridor (Purple Line)

The Washington/Western Bus Rapid Transit line will travel from downtown Albany to Crossgates Mall. This is the second highest ridership corridor with over 3 million annual rides. The corridor is served by trunk routes #10, #11, and #12 as well as other neighborhood and commuter routes. The two avenues are one corridor because they share the same activity centers including multiple University at Albany campuses, the College of Nanoscale Science & Engineering, the College of Saint Rose, and the Harriman State Office Campus.



Washington-Western BRT with Proposed Station Locations

A conceptual design study was completed in 2011 including station locations, routing alternatives, service plan, ridership projections, transit priority infrastructure, and other elements to be accompanied by a comprehensive public outreach plan. CDTA finalized the Alternatives Analysis report – required for Federal Transit Administration funding – which provides detailed operating and capital costs, ridership forecast and a “locally preferred alternative”. This LPA was endorsed by CDTA’s Board of Directors in December 2013 and will be endorsed by the Capital District Transportation Committee (regional MPO) Policy Board in March 2014.

Washington-Western BRT involves a significant capital investment. There are more transit enhancements than NYS Route 5, which operates on existing roadway infrastructure. Two major infrastructure projects will allow direct access to major generators at the western end of the corridor. This includes a bus-way through the UAlbany Uptown and Harriman campuses which also allows access to the College of Nanoscale Science and Engineering on Fuller Road. A transit center would also be located adjacent to



Crossgates Mall including a park & ride and easy transfers to other CDTA services. These components allow for front-door access, quicker travel, and the ability to streamline services on Washington and Western Avenue into one transit line. This bus rapid transit line is a cost effective and productive use of limited resources due to the projected increase in ridership (+25%-35%). Articulated buses are being proposed to ensure adequate capacity along the line and room for future growth (see section 6.5.1).

The project timeline is dependent on the procurement of funding and CDTA will pursue multiple financing options. The project was anticipated to be part of the FTA Small Starts program and is expected to be in operation by 2017.

6.2.3 River Corridor (Blue Line)

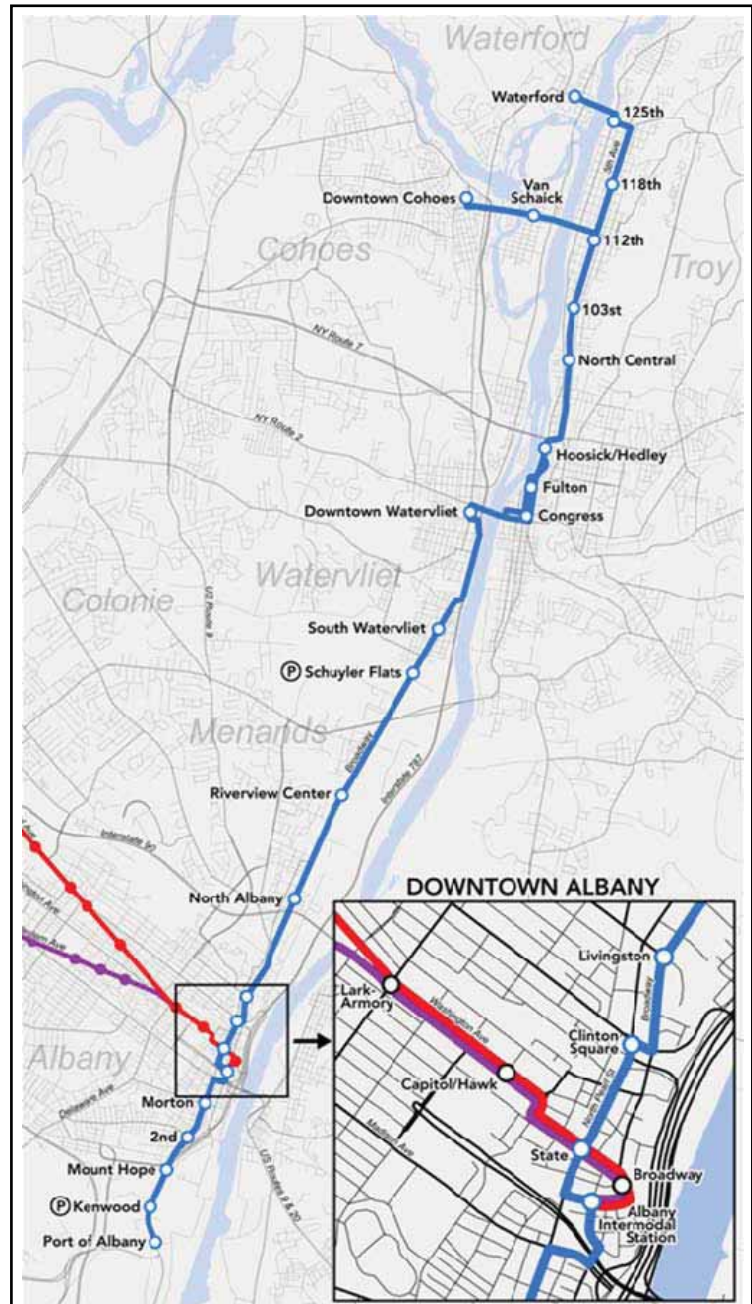
The River Corridor consists of a number of urban municipalities along the Hudson River (Albany, Menands, Watervliet, Troy, Cohoes, and Waterford) which produce 2.5 million riders per year. The corridor spans NY Route 32 from the Port of Albany to Watervliet and NY Route 4 from downtown Troy to Waterford. The corridor is served by five trunk routes (Route #'s 6, 7, 22, 80 and 85) as well as an express and neighborhood routes.

The River Corridor was identified in the *North-South Corridor Study*¹ which reviewed the feasibility of light rail in the Capital Region. It concluded that bus rapid transit would be a cost effective investment to connect the river communities and proposed routing and station locations used in the conceptual design study.

This study is expected to be completed by the fall of 2014. This will determine station locations, routing, draft service plan, capital/operating cost estimates and include input from stakeholders.

The corridor will require major infrastructure projects, but operate on existing roadways. The capital cost will include stations, transit priority infrastructure, and articulated buses (see section 6.5.1).

Similar to Washington-Western BRT, the River Corridor implementation is funding dependent. Construction will be faster than the Washington-Western because of the limited capitals needs. CDTA is projecting River Corridor BRT (Blue Line) service to also be operational in 2017.



River Corridor BRT Conceptual Routing and Station Locations

¹ Assessment of Capital Region North/South Corridors to Improve Access to Emerging Employment Centers, NYS Senate Task Force on High-Speed Rail, (2009)

6.3 Service Improvements and Expansions

Based on three years of increasing ridership and continued demand for more service, CDTA will enact improvements are based on productivity, known growth areas, and the Transit Priority Network which takes social and geographic equity into account. The investments will be focused on existing routes and corridors before expanding to new geographic locations.

6.3.1 Trunk Routes – Increased Frequency and Span

CDTA trunk routes provide the highest quality service and attract the highest level of ridership. These routes travel on main corridors and connect people to the region’s major destinations. Recent trunk route investments have resulted in ridership increases. In 2011, CDTA increased the frequency of Route #12 to every 15 minutes and resulted a 39% increase in ridership.

Trunk route service enhancements will begin in 2014. Service and route improvements will be dependent upon funding and the level of ridership. CDTA will analyze ridership data and customer requests to determine the areas for increases. These will be focused on routes operating on existing and potential BRT corridors (Route #'s 1, 10, 11, 12, 22 and 85). We plan to get as many trunk routes as possible to 10-minute frequency and expand hours of operation to before 5:00 AM and after 1:00 AM.

6.3.2 Express Service Expansion

The success of the restructuring of the Northway Xpress in 2012 along with the Regional Park & Ride/Express Bus Study findings demonstrate the need for more express bus service in the region.

Northway Xpress

Increasing ridership on the Northway Xpress has led to overcrowded on specific trips with little room for growth. The solution is additional trips to highly used park & ride lots and realigned service to certain lots based on work-starts and ends. Customers have requested an earlier afternoon trip leaving after 3:15pm and an evening trip after 6:00pm.

CDTA plans to pilot Northway Xpress service to other employment centers, most specifically Corporate Woods, Albany Medical Center / Park South area, and downtown Troy. These trips have the ability to connect with other routes giving NX riders access to a majority of destinations in the region.

Upgrade of Other Express Services

CDTA will upgrade its express system to increase ridership, geographic coverage and reduce congestion on the region’s highways. The Park & Ride/Express Bus study outlined demand for NX-style express service to downtown Albany on corridors outside the Northway. These would be heading west on I-90 via the Thruway and north on I-787, but can include travel southeast on I-90 through Rensselaer.

As discussed in sections 6.4.2 and 6.5.2, upgraded express service would include use of commuter coaches and a revised fare structure. The enhanced service will include additional trips for all major work-starts and ends as well as a mid-day trip so riders can leave work early in an emergency. Additional park & ride locations proposed in Park & Ride/Express Bus study will also be evaluated.

6.3.3 Upgrade of Commuter and Neighborhood Routes

Many of CDTA's commuter and neighborhood routes are operating above thresholds for productivity and will be examined for service increases. Commuter routes #712, #719, #737 and #763 all perform above the 12 rider/hour threshold and by adding trips along with Saturday service, the routes could move up to the neighborhood classification.

Three neighborhood routes, #100, #224 and #355 are exceeding their 15 rider/hour threshold and performing at trunk route levels (25+ riders/hour). CDTA plans to upgrade Route #100 to trunk route status by increasing frequency to every 20 minutes. Route #224 may also require an upgrade thanks to increased ridership from our Universal Access agreement with Hudson Valley Community College. An enhanced Route #224 would have 20-minute frequency in the peak, late night service and weekend service. Route #355 is planned to increased frequency during peak times to every 20 minutes as the route's ridership grows along with the rest of NY Route 5.

6.3.4 Reallocation of Service

CDTA will continue to monitor the performance of all routes and increase service where needed. Correspondingly, poorly performing services will be reviewed once all other measures have been taken. These reductions will help to fund the expansions elsewhere and allow CDTA to allocate resources where there demand is strongest.

6.3.5 Schedule Restructure and Monitoring

CDTA has comprehensively restructured its route system and will focus future efforts on restructuring schedules. These changes will help ensure:

- Segment times reflect time needed for a bus to operate during specified times of day
- Adequate layover is given to meet the schedule but also has enough recovery time
- Routes are scheduled to arrive & depart from destinations based upon employee schedules.
- Routes heavy on transfer needs meet at similar intervals and limit customer wait times.

This will be done to increase on-time performance, reliability, and offer a more connected route system.

The Planning and Transportation Departments will monitor on-time performance and adjust the schedules of at least 25% of routes each year to ensure the entire system is addressed every four years.

6.3.6 Service Delivery Process and Implementation Schedule

CDTA has developed a complex but effective service delivery process including public input, plan development, bus stop changes, driver training, and will be clearly articulated in a Service Delivery Process report. The report will include an implementation schedule with no promises of service changes made that cannot be delivered.

6.4 Fare Recommendations

6.4.1 System-wide Fare Changes

At the end of 2015, CDTA plans to implement a system-wide fare collection upgrade (see section 6.7.8) which not only includes changes in fare boxes and fare media, but fare structures and policies. Policy planning has already begun and will include extensive public outreach balancing the cost to provide service while addressing financial constraints of customers. The new fare technology will offer incentives for riders as well as provide ways for non-riders to simply try transit.

Any changes to the fare structure will include a fare equity analysis and public hearings as part of CDTA's Title VI process.

6.4.2 Targeted Fare Changes

Fare changes may be tied to specific initiatives that enhance service levels or the transit experience with the example of a 50-cent premium charged for cash fares on BusPlus. This created additional revenue and increased prepaid transactions both on the corridor, the route and across the system.

Express Fare Change

As discussed in section 6.5.2, CDTA recommends over-the-road commuter coaches for all express routes (currently only used on the Northway Xpress) along with additional service. The Park and Ride/Express Bus Study recommend expansion and enhancements to the Park-and-Ride system serviced by our express routes. An analysis of fare options may support introduction of a zone structure integrated with the NX to address the true cost of providing long-haul services.

BusPlus Fare Change – Washington-Western and River Corridors

As discussed in section 6.2, CDTA recommends expansion of BusPlus to two additional corridors. These BusPlus lines will have the same fare structure as the Red line on NYS Route 5 which is \$2.00 cash for a one way ride. All customers using CDTA Fare products can use BusPlus services for no additional fee beyond the purchase price.

6.5 Vehicle Fleet Recommendations

6.5.1 Articulated Buses

Many of CDTA's routes along high-ridership corridors are at capacity. These routes are on BRT corridors or those designated Transit Priority Corridors (see section 6.1). Articulated buses can increase capacity with 50% more space than conventional buses. This capital investment provides an alternative to increasing operating costs with more frequency while reducing dwell times due to additional exit doors.

CDTA will determine the feasibility of adding articulated buses which would also have impact on training, operations and facilities. Our garages require equipment and additional storage space to maintain these vehicles. (section 6.6.2).



Example of Articulated Bus (RGRTA)

Articulated buses would be used on bus rapid transit lines to address limited capacity, enhance the image of BRT, reduce travel time on this dedicated sub-fleet.

6.5.2 Commuter Coaches on All Express Services

As discussed in section 3.3.2, CDTA currently provides express bus service on the Northway I-87 from Saratoga County, the New York State Thruway from Schenectady County, and I-90 & I-787 in Rensselaer County. Service increases include expansion of the over-the-road commuter coach fleet to express routes beyond the Northway Xpress. Commuter coaches offer an increased number of cushioned seats, restrooms and complimentary Wi-Fi service.



Northway Xpress Commuter Coach

CDTA will determine the feasibility of outsourcing the entire express service package to a private contractor or taking commuter coaches in-house which would require additional training and upgrades to facilities that service the vehicles.

6.5.3 ITS Components on All Vehicles

Services like the Northway Xpress and BusPlus have allowed CDTA to pilot ITS technology at a lower cost to review potential issues. These tools will be expanded to the entire fixed-route fleet so that all CDTA vehicles have the full cache of ITS components (automated passenger counters, automated vehicle location, transit signal priority), and public-facing technologies to enhance the passenger experience (real-time passenger information on mobile devices and signs, wireless internet).

6.6 Facility Recommendations

6.6.1 Transit Centers

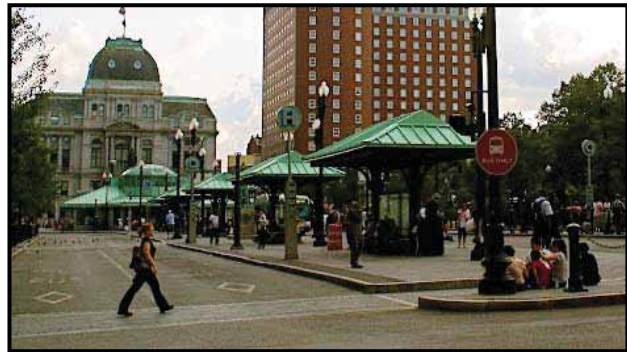
At locations in the CDTA system with exceptionally high ridership, transfer activity, and economic development opportunities, the construction of Transit Centers is appropriate. Transit Centers come in different forms – described below – and are tailored to the specific areas they are located. These facilities improve the rider experience, give strong visibility and impact development of the area. We will conduct a transit facility study to determine facility locations, including preliminary design and estimated cost.

Transit centers provide a convenient, comfortable environment including protection from the weather, along with an increased sense of safety, the ability to purchase fare products, and current information on transit services. In addition to enhanced customer amenities, these facilities give CDTA a presence in high traffic areas encouraging more people to consider transit.

Transit centers are growing in popularity with new centers open in Rochester, Syracuse, Utica, Poughkeepsie, Pittsfield, Providence, and Worcester.



CENTRO Transit Hub (Syracuse, NY)



Kennedy Plaza Intermodal Facility (Providence, RI)

CDTA has plans for Intermodal Terminals, Transit Hubs, and Transfer Stations. Intermodal Terminals offer numerous amenities, retail options, and service from all types of carriers. Transit Hubs are enclosed structures, while Transfer Stations are similar to our existing BusPlus stations. The following table defines each, and possible locations where they would be constructed.

Transit Center Tiers and Amenities

	<u>Passenger Waiting Area</u>		<u>Customer Amenities</u>				<u>Customer Information</u>			<u>Associated Transportation</u>				<u>Operations</u>		
	Covered	Enclosed	Climate Controlled	Fare Product Sales Outlet	Other Retail	Public Bathrooms	WiFi	Info Kiosks	Real-Time Arrival Displays	Customer Info Rep	Park & Ride	Parking Garage	BusPlus Service	Other Transit Providers	Driver Room	Supervisor Presence
Intermodal Terminals	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Transit Hubs	✓	✓		✓ <i>via Kiosk</i>				✓	✓	✓ <i>Part-Time</i>	✓	✓	✓			✓
Transfer Stations	✓							✓	✓							✓ <i>Part-Time</i>

Potential Locations For Transit Centers

Intermodal Terminals

- Downtown Albany – Broadway
- Downtown Troy – River St & Congress Street
- Downtown Schenectady – Liberty Park

Transit Hubs

- Troy – River Street & Hutton Street
- Colonie Center
- Crossgates Mall

Transfer Stations

- Latham Farms
- Exit 9 Park & Ride
- Downtown Saratoga Springs – Congress Park
- Hudson Valley Community College

Downtown Albany Intermodal Center

CDTA's Albany Transit Supportive Development Study of 2008 proposed concepts for an intermodal center near the Greyhound station in Downtown Albany. This concept became part of the proposed Albany Convention Center on its original site between Pearl Street, Hudson Street, and Broadway. The Convention Center site has moved leaving the previous footprint open for development. While the original site was on Broadway, the ideal location is closer to the corner of Hudson Street & Pearl Street to reduce the distance to other downtown destinations.

The structure would integrate CDTA routes including the three bus rapid transit lines with intercity coaches, taxi service, and private vehicles. The center is envisioned as a mixed-use building with retail on the first-floor and office or residential space above. The facility would feature modern amenities including a snack shop, climate control, public bathrooms, customer information and fare media sales.

The structure would include a parking garage to help consolidate surface parking lots that litter the current site and encourage transit-oriented development. The project would demolish the aging Greyhound bus station to further encourage development in the surrounding area while providing a key transfer point in the heart of downtown Albany.



Downtown Albany Intermodal Terminal – Rendering from Broadway

Crossgates Mall Transit Hub

As mentioned in section 6.2.2, a transit center at Crossgates Mall is proposed as the western terminus of the BusPlus Purple Line. The existing Crossgates Mall bus stop is the busiest one in the CDTA system, tying together multiple services and a logical location for a transit hub.



Crossgates Mall Transit Hub

6.6.2 Garage Upgrades for Articulated Buses

All three CDTA divisions may require upgrades to accommodate articulated buses. The larger vehicles require additional space, and larger equipment to perform maintenance tasks. An assessment of the current garages will be conducted, including their ability to accommodate articulated buses, necessary upgrades and the costs to make these changes.

6.6.3 Saratoga Garage

CDTA 's Saratoga County routes operate out of the Schenectady Division, while the Northway Xpress commuter service operates from our contractor's facility just outside Saratoga Springs. This leads to increased costs as we incur significant deadhead hours between garages and the start of service.

CDTA purchased real estate on Duplainville Road in Milton in 2010 for a Saratoga garage. This was based on then increased level of transit in Saratoga Springs but the need for a Saratoga-based garage has waned. CDTA will continue to assess the need for a Saratoga-based division and obtain funding for its construction as required.

6.6.4 Schenectady Rail Station

The Schenectady rail station at State Street and Erie Boulevard and was built by Amtrak in 1979, replacing the older Union Station. Fourteen trains pass through the station daily, with service to New York City, Boston, Chicago, Toronto, Montreal, and central Vermont. The station generally considered dated has fallen into disrepair, with leaks and crumbling materials throughout.

A new intermodal station is proposed to rebuild the structure and return the look and feel of the original Union Station. The intent is to create a central hub for residents to access multiple modes of transportation. The new station will include new rail platforms and canopies, a realigned staircase, ADA-compliant design throughout, and new landscaping.



Current Schenectady Rail Station



Proposed Schenectady Rail Station

CDTA is a funding partner of the Schenectady Rail Station. The connection of the new facility to the nearby BusPlus station will enhance customer options. A safe, visible, and well-lit and landscaped pedestrian connection between the station and BusPlus will meaningfully integrate CDTA services with other transportation options present at the facility.

6.7 Transit Infrastructure Recommendations

Capital improvement recommendations for the TDP will be tied to the service recommendations outlined in sections 6.1, 6.2, and 6.3. They support the expansion of bus rapid transit and service improvements outlined by the Transit Priority Network.

6.7.1 BusPlus Infrastructure

Bus rapid transit's limited stop service, distinctive branding and ITS technology provide noticeable infrastructure improvements on NYS Route 5. CDTA's BRT expansion will focus on elements that increase travel speeds and enhance the customer experience.

BRT Stations

A defining feature of bus rapid transit is its uniquely branded stations. These are larger than conventional shelters, provide protection from inclement weather, and offer passenger convenience amenities.



Rendering of Washington-Western BRT Station at Western Avenue & Quail St

CDTA currently has BRT stations at nearly all NY Route 5 locations. There

are no stations at the ends of the routes on the sides of the street where passengers primarily alight and do not board. Sites without stations feature a BusPlus pylon, signage, and branding elements to clearly indicate BRT service.

Enhanced stations will be used for the Washington-Western and River Corridor BRT service. Washington-Western will share site space with the Red Line in downtown Albany, so new stations are not needed just additions to the color scheme. In addition, the River Corridor will have select stations comprised of waiting areas only.

Queue Bypass Lanes

Queue bypass lanes allow buses to move more quickly through congested intersections. CDTA will expand the number of queue bypass lanes as part of the BusPlus expansion. Queue-jump lanes involve reconstruction of an intersection with ITS components including new traffic signals in-pavement detectors along with traffic signal programming to optimize traffic flow.

Queue-jumpers are being reviewed for the following intersections with other locations to be included based on traffic volume:

- Central Avenue & Everett Road in Albany (NY Route 5)
- Central Avenue & Fuller Road in Colonie (NY Route 5)
- State Street & Balltown Road in Niskayuna (NY Route 5)
- State Street & Route 7 in Schenectady (NY Route 5)
- Western Avenue & Manning Boulevard, Allen Street, Partridge Street, and Quail Street in Albany (Washington-Western)
- South Pearl Street & Morton Avenue / Rensselaer Street (River Corridor)
- Broadway & 1st Street / Schuyler Lane in Menands (River Corridor)
- River Street & Federal Street and Hoosick Street in Troy (River Corridor)
- 2nd Avenue & 111th Street and 125th Street in Troy (River Corridor)
- Ontario Street & Route 787 in Cohoes (River Corridor)

Traffic Signal Priority

Traffic signal priority (TSP) reduces the number of times a bus has to stop for a red light, helping increase the speed of bus rapid transit outside of dedicated lanes (section 3.5.3). TSP is enabled on NY Route 5 at over 40 intersections and has resulted in a significant travel time reductions.

Transit signal priority is planned for five more intersections along NY Route 5 as signals get replaced along Washington and Western Avenues. TSP is included with capital costs for the River Corridor BRT for its planned roll out.

Real-Time Bus Arrival Information

As discussed in section 3.5.3, NYS Route 5 BRT currently has real-time arrival information displays at stations, online, and via mobile devices. Customers know the actual time a bus will reach a station providing higher reliability. The displays sit at the majority of bus rapid transit stations along NY Route

5 and will be expanded to all stations over time. Real-time information and displays will also be incorporated into the River Corridor BRT and Washington-Western BRT.

Security Cameras

To further enhance safety at NY Route 5 BRT stations, security cameras monitor surrounding areas (section 3.5.3). Security cameras are already included as a capital component at all stations of the next two BRT lines.

6.7.3 System Wide Expansion of BusPlus ITS Elements

The ITS components rolled out with BusPlus (transit signal priority and real-time passenger information) service should be expanded to all fixed-route services. The technology to enable these features is comprised of a combination of devices installed on buses and components built into traffic control infrastructure.

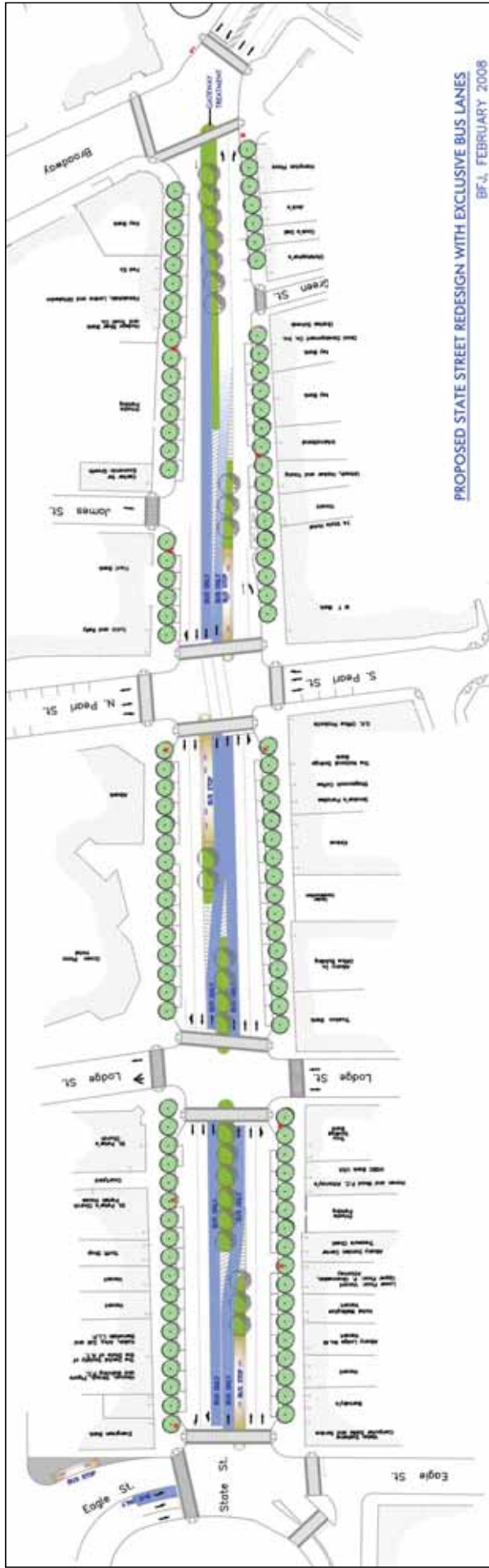
The first phase will commence with local services that duplicate BusPlus corridors, then moving to other trunk routes and high-ridership corridors, and finally to every route in the fixed-route system.

6.7.2 Bus-Only Lanes

Exclusive lanes are the most effective means of reducing travel time for BRT service. Implementing these throughout the region require taking space away from other lanes, parking, sidewalks, and/or private property. Exclusive lanes can only be included in areas with numerous bus routes, very high ridership and broad street widths.

CDTA's Albany Transit-Supportive Development Case Study developed a proposal, which was not selected, for bus-only lanes on State Street in Downtown Albany. The conceptual design site plan is shown below.

After the implementation of Washington-Western and the River Corridor, CDTA will look at bus-only lanes in downtown Albany again. Two BRT lines along with trunk and neighborhood routes now share the same corridor along Washington Avenue and State Street between Lark Street. The amount of service and length of this segment will have substantial impact on travel times while increasing transit ridership. As shown the TSD Case Study focused on State Street between Broadway and Eagle. To make the project most effective, the future project will look to extend the study area to the west to Lark Street & Washington Avenue as well as include segments of Broadway.



PROPOSED STATE STREET REDESIGN WITH EXCLUSIVE BUS LANES
 BFL, FEBRUARY 2008

6.7.4 Increased Small Scale Infrastructure Investments

CDTA has interest in the proper design of the region's transportation infrastructure and surrounding environments. As discussed in section 6.8.2, CDTA will increase involvement and advocacy for transit-oriented design in major developments and construction projects. Ideally, CDTA would contribute to projects with funding earmarked for improving pedestrian accessibility as well as infrastructure near stops requiring enhancements.

A preferred budget of \$150,000 could come from internal funds or via federal funding for the bus stop and street amenities program which does infrastructure projects for the CDTA.

6.7.5 Expansion of Shelters and Maintenance

CDTA's street amenities program has updated stop signs to a while nearly all shelters have be adorned with a green hipped roof and branded with our logo and website (see section 3.5.1). CDTA has placed a shelter at a majority of stops with more than 50 boardings per day.

CDTA will expand the number of shelters by reducing the threshold to 35 boardings. This increase roughly 50 bus shelters should allow for an additional employee to handle the maintenance.

Snow Clearance

CDTA will address the clearance of every bus stop with a shelter located in a public right-of-way. The project should increase customer convenience and access for the disabled with the possibility of contracting out of these services to ensure that shelters are cleared in a timely manner.

6.7.6 Park & Ride Expansion and Improvement

Service expansions discussed in sections 6.1, 6.2, and 6.3 will be matched with improvements to existing park & ride locations. Funding will come dedicated funds in the CDTC's Transportation Improvement Program. CDTA will work to secure long-term agreements or property purchases to ensure CDTA has the ability to operate on all park & ride property, ensure that proper signage, shelters, and lighting is installed for users, and that parking surfaces and landscaping is properly maintained.

Park & Ride Expansions

New locations will be based on guidelines established in the Regional Park & Ride / Express Bus Study. The most cost effective approach is to focus on shared-use park & ride spaces to as part of new developments that have ample parking (ex. shopping centers). CDTA may decide to outright purchase or long-term lease worthy locations.

Park & Ride Branding and Enhancements

CDTA will improve existing park & rides to ensure they are visible, aesthetically pleasing, and have customer conveniences. CDTA is already investing in new shelters, landscaping, lighting, and pavement in park & ride facilities throughout the region.

CDTA will be installing large, uniquely branded, lighted, and visible signage at area park & ride facilities. Wayfinding signage will be installed on highways and intermediate roadways directing traffic to the park & ride lot.



6.7.7 CAD / AVL Upgrade

As discussed in section 3.5.3, CDTA's management of its transit services has benefitted from Computer Aided Dispatch (CAD) and Automatic Vehicle Location (AVL) systems. CDTA will look to procure a new CAD/AVL system to be operational by 2018. We want to improve service and support new passenger amenities (e.g., real time bus arrival information and traffic signal priority) with this upgrade. The system requires new hardware for the fleet (fixed route, STAR paratransit, and non-revenue) and support equipment.

Some of the benefits include:

- Improved voice communications management capabilities for dispatchers
- Maximized on-time performance and reliability
- Timely and efficient management of service interruptions
- Improved information, monitoring and physical security
- Single point login for Operators to support onboard equipment
- Automated stop announcements and
- Automated passenger counting
- Real time passenger information next bus predictions
- Comprehensive performance and incident reporting

6.7.8 New Fare Collection System (NFCS)

CDTA is upgrading its fare system to offer a choice-based, multifunctional system that is more flexible for customers and meets the needs of the Authority for the foreseeable future.

The existing fare collection system has limited functionality which can contribute to high dwell times, fare evasion, dependency on cash, limited list tracking for partnerships with businesses and universities, and inefficient business processes. The NFCS is designed to address limitations of the existing system while adding new features and benefits.

The NFCS project is expected to be completed by fall 2015, although not all fare options may be fully implemented at that time. Customers will get a first glimpse of the new system in summer 2014 when the new FastFare fareboxes are scheduled to be installed. The new fareboxes featuring smart card and barcode readers will position CDTA for rollout of a new smart card and mobile ticketing application by spring 2015. Once completely installed, many of the CDTA-issued magnetic fare media will be replaced by smart cards and mobile tickets. In addition, all on-board sales will likely be discontinued with the exception of one-way cash transactions. The NFCS will offer many innovative features for customers including:



- Contactless smart cards with features and benefits that include the ability to carry multiple fare products on a single card (e.g. store a 30-day pass, a 10-trip ticket, and stored value), discounts and promotions.
- Web portals that give customers the ability to recharge cards at their convenience or setup a recurring autoload. This includes offering corporate partners the ability to manage smart card media online.
- The ability to purchase fare products on a mobile device (e.g. tablet, smart phone) and use that same device as the actual fare instrument.
- Retail point of sale terminals to enable retail partners to sell our products and provide customers with easy access to multiple payment options.
- Flexibility to integrate with other services and partners throughout the region, including the expansion of our Universal Access program.

A robust educational campaign will ensure that our customers and partners are aware of the changes and resources available should they need assistance. The NFCS will also provide many benefits including reduced dwell time and fare evasion, new flexible fare policies, improved data and reporting, streamlined media sales and distribution, improved business efficiencies and operations across all departments. The NFCS will support contactless credit card transactions, account-based smart cards, and near field communications for mobile devices for years to come.

6.8 Land Use and Regional Planning Recommendations

CDTA will work with municipal planning and zoning boards, developers, the state Department of Transportation, and municipal public works departments for better integration of pedestrian, bicycle, and transit infrastructure. CDTA will be represented on transportation studies and plans in the region, influencing land-use and development. We recommend the following:

6.8.1 Relationship with Development Community

CDTA will develop stronger relationships with the development community, being more proactive with proposed developments. CDTA's responsibility is to show that transit service has tangible benefits by reducing parking costs, is accessible to a wider employment base, and is a major perk for tenants.

One way to build a strong relationship with developers is to hold annual transit and development seminar. This would focus on how low-cost design practices that can make an area transit-friendly and serve as an opportunity to bring in transit-oriented developers to share their experiences.

6.8.2 Advocating on Behalf of Transit-Friendly Projects

If a development is transit-oriented and has potential to increase ridership, CDTA should provide letters of support, statements at public hearings, and contribute to transit infrastructure costs. This would have the most influence for projects wishing to obtain tax abatement from the Mortgage Recording Tax.

This type of support has the ability to influence certain developers to adopt transit-oriented principles into future projects.

6.8.3 Support Municipal Zoning Updates

CDTA will continue to encourage and support municipalities in rezoning efforts that encourage higher densities, improve pedestrian infrastructure, and other aspects that will require transit-oriented development. This will be focused in municipalities with substantial transit service, especially bus rapid transit. CDTA will also support rezoning efforts as part of the City of Albany's Transit Oriented Development Guidebook (see Section 3.8), which focused on areas surrounding city BRT stations.

6.8.4 Travel Demand Management

CDTA's Transportation Demand Management program in conjunction with the CDTC includes management of IPool2 website, vanpools, car-sharing, and the Capital Moves website. CDTA will support and assist these programs to continue and expanded, focusing on a car-sharing entity in the region. CDTA will manage LINK tickets, Guaranteed Ride Home, and transit pass subsidies for homeowners and businesses.

6.9 Public Input & Outreach Recommendations

6.9.1 Major Service Changes

We recommend that the iterative process (see section 3.6.1) of gathering input from the full cache of sources, developing and presenting a plan, integrating public reaction, and finalizing the plan – be applied for all major service changes moving forward. Additional outreach practices required by CDTA’s Title VI policy will be included as needed.

6.9.2 Social Media

Social media has become a major tool to interact with customers. CDTA’s social media presence includes a Facebook page, multiple Twitter accounts, and YouTube. It is recommended that this presence be expanded with staff time devoted to updating applications and using new platforms as they arise.

6.9.3 Use of Shelters and Buses

CDTA’s interior ad panels on shelter offer space for promotions, advertisements, and public education campaigns. These are large in size and could display a route map, schedules, public meeting announcements and sales opportunities. On CDTA buses major portions of the ceiling ad panels are unoccupied and can also be used for public information especially on upcoming service changes or major initiatives



New York City MTA – “Improving, Non-stop” Ads on buses / subway

6.9.4 Mobile Application Update

As discussed in section 3.6.5, a new version of the CDTA iRide app for iOS platform will be available in early 2014. An Android version will be out by April 2014 with a Windows to version to follow. This application will be the platform for future initiatives including mobile ticketing and real-time arrivals.



6.10 Operations Recommendations

The Transit Development Plan does not focus on operational specifics at CDTA, but maintenance and transportation are the backbone of our service and impact all areas discussed previously. The following recommendations are for an operation plans to improve how CDTA delivers its service to the public.

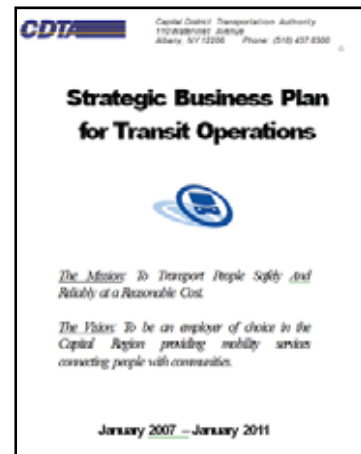
6.10.1 Transportation and Maintenance Operations Plan

It is recommended that CDTA update the Strategic Business Plan for Transit Operations which was created in 2007. It provided a vision for transit operations improvements not covered in the original TDP including staffing, training, payroll, supervision and our strategic fleet plan. The plan focused primarily on transportation, while the update should include maintenance as well.

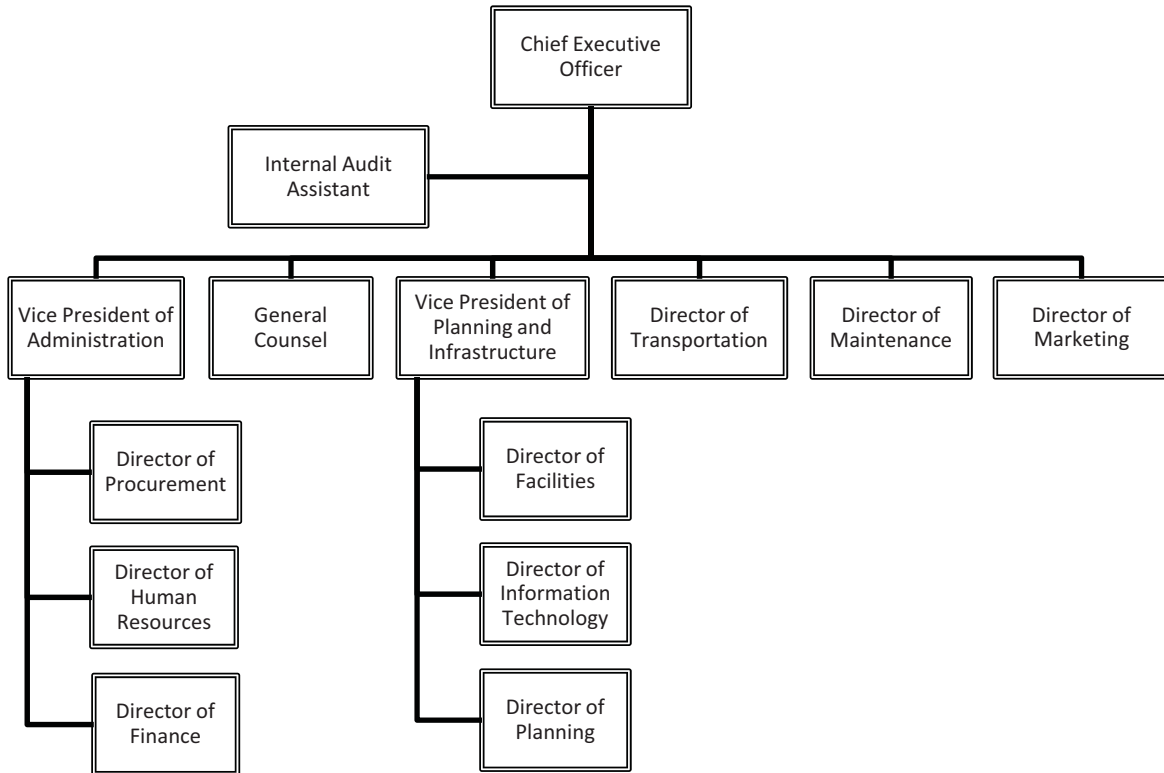
Creation of the plan will be led by the Transportation and Maintenance departments in partnership with the Amalgamated Transit Union. All mechanics, drivers, foreman, supervisors, and other related personnel will have input and feedback on how the plan is developed.

STAR Paratransit Operations Plan

Due to the increasing demand for STAR service and its high cost to provide, this will be a specific focus of the Operations Plan. The plan will determine how to reduce costs while maintaining the high level of service currently provided.



Appendix A – Organizational Structure



Appendix B – Fleet Inventory

Revenue Fleet

Manufacturer	Type	Size	Powertrain	Number of Vehicles
Chevrolet	Shuttle		Diesel	2
Chevrolet	Shuttle		Diesel	4
International	Shuttle		Diesel	5
Gillig	Standard Bus	30 ft	Diesel	8
Gillig	Standard Bus	30 ft	Hybrid	6
Gillig	Standard Bus	40 ft	Diesel	46
Gillig	Standard Bus	40 ft	Hybrid	65
NABI	Standard Bus	35 ft	Diesel	19
Nova	Standard Bus	40 ft	Diesel	72
Gillig	Commuter Coach		Diesel	1
MCI	Commuter Coach (old)		Diesel	7
MCI	Commuter Coach (new)		Diesel	7
Ford	Trolley (old)		Diesel	1
Ford	Trolley (new)		Diesel	2
Total Non-Revenue Fleet				245
Vehicles in Urban Service (non-NX, non-seasonal)				227

Paratransit Fleet

Manufacturer	Type	Powertrain	Number of Vehicles
Ford	Paratransit	Diesel	3
Ford	Paratransit	Gasoline	24
Chevrolet	Paratransit	Diesel	12
International	Paratransit	Diesel	5
Paratransit Fleet			44

Non-Revenue Fleet

Year	Manufacturer	Model	Type	Number of Vehicles
1999	Chevrolet	Astro	Van	1
2003	Chevrolet	Astro	Van	1
2002	Dodge	3500	Heavy Truck	1
2006	Dodge	1500	Light Truck	3
2006	Dodge	2500	Light Truck	1
2006	Dodge	Caravan	Van	1
1998	Ford	F-150	Light Truck	1

1999	Ford	Taurus	Sedan	1
2005	Ford	F-550	Heavy Truck	1
2006	Ford	E-350	Van	1
2006	Ford	E-450	Van	1
2008	Ford	Escape (Hybrid)	SUV	7
2011	Ford	E-150	Van	3
2011	Ford	Escape	SUV	2
2011	Ford	F-350	Light Truck	2
2011	Ford	Service Truck	Heavy Truck	1
2011	GMC	Savana	Van	1
1990	International	-	Heavy Truck	1
2002	International	4700	Heavy Truck	2
2008	Kenworth	T-800	Heavy Truck	1
2005	Toyota	-	Sedan	1
2007	Toyota	Prius	Sedan	3
Total Non-Revenue Fleet				37

Appendix C – List of Park & Ride Facilities

Regional Park & Ride Inventory

<i>Location</i>	<i>Municipality</i>	<i>Spaces</i>	<i>CDTA Service?</i>	<i>Owner</i>	<i>Maintenance</i>
Amsterdam Mall	Amsterdam	159	No	Cranesville Properties	Owner
Thruway Exit 27	Amsterdam	89	No	NYS Thruway Authority	Owner
Delaware Avenue	Bethlehem	85	Yes	City of Albany	Town
Elm Avenue	Bethlehem	112	Yes	Niagara Mohawk Power Company	Lot - Town Shelter - CDTA
Thruway Exit 21	Catskill	102	No	NYS Thruway Authority	Owner
Fire Road	Clifton Park	90	No	NYS	Owner
Northway Exit 8	Clifton Park	191	Yes	NYS DOT	Lot - Owner Shelter - CDTA
Northway Exit 9 - The Crossings	Clifton Park	200	Yes	The Crossing, LLC	Owner
I-88 Central Bridge	Cobleskill	89	No	NYS DOT	Schoharie County DPW
I-88 Exit 22 Shad's Point	Cobleskill	42	No	NYS DOT	Schoharie County DPW
Kmart Route 2	Colonie	Shared	Yes	J.F. Colonie, LLC	Owner
Latham Circle/Herbert Drive	Colonie	60	No	Plaza at Latham Associates	Owner
Latham Farms	Colonie	Shared	Yes	Kimco Realty Corporation	Lot - Owner Shelter - CDTA
Duanesburg Route 20	Duanesburg	25	No	NYS DOT	Owner
Park & East Streets Fonda	Fonda	27	No	Montgomery County	Owner
Thruway Exit 26	Glenville	60	Yes	NYS DOT	Owner
Gloversville	Gloversville	47	No	Fulton County	Owner

Crossgates Mall	Guilderland	Shared	Yes	Pyramid Corporation	Lot - Owner Shelter - CDTA
Northway Exit 11 - Malta Mall	Malta	50	Yes	Country Club Acres, LLC	Owner
Northway Exit 12 - Malta Commons	Malta	50	Yes	Lakeview Outlets, Inc.	Owner
Milton Town Hall	Milton	80	Yes	Town of Milton	Owner
Defreestville	North Greenbush	150	Yes	Rensselaer County	CDTA
North Exit 18 Media Drive	Queensbury	9	No	Town of Queensbury	Owner
Northway Exit 18 Queensbury Park	Queensbury	42	No	Town of Queensbury	Owner
Warren County Municipal Center	Queensbury	114	No	Warren County	Owner
Curry Road	Rotterdam	35	Yes	Trinity Reformed Church	Owner
Hamburg Street	Rotterdam	85	No	St. Gabriel's Catholic Church	Owner
Rotterdam Square Mall	Rotterdam	100	Yes	Macerich	Lot - Owner Shelter - CDTA
Church St & Railroad Place	Saratoga Springs	Shared	Yes	City of Saratoga Springs	Owner
Saratoga Gaming & Raceway	Saratoga Springs	Shared	Yes	Saratoga Gaming & Raceway	Owner
Saratoga Rail Station	Saratoga Springs	80	Yes	Canadian Pacific Railway	CDTA
Spring Street	Saratoga Springs	Shared	Yes	City of Saratoga Springs	Owner
St. Luke's Church	Schenectady	60	Yes	St. Luke's Parish	Owner
Woodlawn Plaza	Schenectady	70	Yes	Golden Gate Associates, LLC	Lot - Owner Signage - CDTA
Schodack Landing	Schodack	25	No	NYS DOT	Owner
Schodack Senior Center	Schodack	130	Yes	Rensselaer County Office of Aging	CDTA
West Marion Avenue	South Glens Falls	40	Yes	Town of South Glens Falls	Owner

Northway Exit 15 - Wilton Mall	Wilton	160	Yes	Macerich	Lot - Owner Signage - CDTA
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Appendix D – 2012-13 Route Performance Report

2012 - 2013 Route Performance Report

Introduction

This is CDTA's annual report on route performance for fixed route and flexible services for fiscal year 2013 (April 1, 2012 to March 31, 2013). The report includes information on our route network, specifically ridership and productivity, a description of major service changes, and recommendations for the coming year. It will guide planning activities through fiscal year 2014 and help the organization use its resources in the most effective manner possible.

State of Affairs

CDTA has focused its efforts on enhancing transit service and increasing ridership with no increases in resources. This included changes to services, as well as growth in partnerships with public and private institutions. In October 2012, the Northway Xpress (NX) commuter service underwent significant changes that both reduced overall fares and restructured trips to increase efficiency. A month later, CDTA introduced Phase 2 of the Albany County Route Restructuring in suburban Albany County, effectively completing the implementation of the five-year Transit Development Plan (TDP) of 2007.

Similar to previous years, these changes resulted in ridership increases, particularly on the NX. Ridership throughout the rest of the system also increased due to the expansion of universal access agreements with colleges and a supermarket chain. In the coming year, CDTA will fine-tune the changes from the past several years to improve efficiency and customer convenience. We will enhance the level of service on some of our best-performing routes. We will also unveil an update to the TDP, and continue to lay the groundwork for the expansion of the BusPlus service into a full 40-mile system.

Existing Route Evaluation

This evaluation focuses on CDTA's regular route service, which are evaluated on two criteria:

- **Total Riders:** The best way to evaluate transit service is to look at ridership. CDTA's Route Classification system establishes thresholds and ranges of ridership by route category. Acceptable ridership thresholds vary by the type of service:
 - Trunk/BusPlus – 250,000 annual riders
 - Neighborhood – 100,000 annual riders
 - Shuttle – 75,000 annual riders
 - Express – 30,000 annual riders
 - Commuter – 15,000 annual riders

- **Ridership Productivity:** Riders per revenue-hour measures route productivity and indicates whether resources are used efficiently. A route may have high ridership, but due to over allocation of resources, still be unproductive. Productivity thresholds vary depending on the type of service:
 - Trunk/BusPlus – 25 riders/hour
 - Express – 25 riders/trip
 - Neighborhood – 15 riders/hour

Commuter – 12 riders/hour
Shuttles – 10 riders/hour

Routes that fall below acceptable thresholds are considered for corrective actions and assessments of promotional opportunities to increase usage. Routes that exceed the range for a category, or perform well above average, are examined to determine if a change in category is warranted, or if a route restructuring is advisable.

It is possible that a route may perform well in one criterion but not in another. If a route is underperforming in total ridership but over-performing in riders per hour, this could indicate the route warrants increased resources. If the opposite is true, a reduction in service may be warranted. Although total riders and riders per hour are clear quantitative measures, routes are also evaluated on the following:

- **Ridership Trend over the Previous Three Years:** Changes over time are used to judge the effectiveness of route changes and other factors. CDTA provides new and restructured services with a trial, or growth period to obtain ridership targets.
- **Community Service Needs:** We consider community services, such as medical facilities, convalescent centers, and locations that serve seniors, disabled, and other special need populations.

The tables in this report show fiscal year 2013 performance data by route classification. Data for routes that were discontinued prior to March 2013 reflect 12 months of service prior to that route's elimination.

Route Classification Changes

Elimination of Rural and Shuttle Routes: In May and in August of 2012, the remaining rural routes in the system (#810, #811, and #812) were eliminated due to very low ridership. In November 2012, shuttle routes were replaced with neighborhood routes as part of Phase 2 of the Albany County Route Restructuring.

FY 2012-2013 PERFORMANCE
TRUNK ROUTES

Ranked by Riders per Revenue-Hour

Route	Description	Total Riders	Revenue-Hours	% Rider change 11-13	Riders per Revenue Hour	Comment
1	Central Avenue	1,341,562	32,697	N/A	41.0	
11	UAlbany Shuttle	425,216	10,369	7.1%	41.0	
12	Washington Avenue	1,301,680	35,719	22.8%	36.4	
905	BusPlus Albany-Schenectady	1,595,661	44,392	N/A	35.9	
22	Albany-Troy via Watervliet	1,152,272	34,729	11.5%	33.2	Service changes as part of Albany County Phase 2 (November 2012)
85	Troy-Waterford	624,079	22,705	10.6%	27.5	
10	Western Avenue	875,642	32,547	-5.0%	26.9	Service changes as part of Albany County Phase 2 (November 2012)
87	Beman Park/Sycaway	397,270	16,336	8.4%	24.3	
70	Troy-Schenectady	278,334	11,615	11.5%	24.0	Eliminated as part of Albany County Phase 2 (November 2012) and route replaced by #370
80	Fifth Avenue	297,271	12,729	-13.3%	23.4	
6	Second Avenue	428,228	19,192	N/A	22.3	
90	Troy-Latham-Crossgates	318,271	14,392	10.9%	22.1	Eliminated as part of Albany County Phase 2 (November 2012) and portions of route replaced by #190 and #370
7	Glenmont	318,749	14,465	N/A	22.0	
13	New Scotland Avenue	458,116	21,122	-19.4%	21.7	Service changes as part of ShopRite universal access contract (November 2012)
18	Delaware Avenue	431,557	19,902	28.3%	21.7	Service changes as part of ShopRite universal access contract (November 2012)
TOTAL		10,243,908	342,910			
AVERAGE		682,927	22,861		29.9	

Above productivity threshold

Below productivity threshold

NOTES:

- Routes #70 and #90 were reconfigured as neighborhood routes to reflect their lower level of service, bringing them above the ridership threshold for the route classification.
- Routes #13 and #18 saw a reduction to peak frequency due to need to extend routes to Slingerlands ShopRite in November 2012. In the coming year this reduction in service hours should bring their productivity above the threshold for trunks.
- Routes marked “N/A” have not existed for a full 3-year period or have been substantially changed.
- Route #50 reclassified as a neighborhood route due to its low frequency
- As part of TDP update, the 25 riders/hour will be reevaluated for trunk routes as a number of routes are below the threshold are considered successful by other standards.

FY 2012-2013 PERFORMANCE NEIGHBORHOOD ROUTES

Ranked by Riders per Revenue-Hour

Route	Description	Total Riders	Revenue-Hours	% Rider change 11-13	Riders per Revenue Hour	Comment
100	Mid-City Belt	656,125	22,855	N/A	28.7	
355	Schenectady / Colonie	640,422	22,651	N/A	28.3	
224	Albany-Troy via I-90	234,399	8,977	39.7%	26.1	
354	Nott Street / Rotterdam Sq. Mall	130,179	5,178	17.0%	25.1	
353	Mont Pleasant / Scotia	251,058	10,339	44.3%	24.3	
351	Broadway / Van Vranken	187,685	9,553	34.4%	19.6	
289	Griswold Heights - St. Mary's	101,198	5,191	24.6%	19.5	
29	Albany - Cohoes via Route 9	215,611	11,620	31.9%	18.6	Eliminated as part of Albany County Phase 2 (November 2012) and portions of route replaced by #129 and #182
114	Madison / Washington	267,579	14,341	N/A	18.7	
125	Clinton / Sand Creek	226,211	12,276	N/A	18.4	
50	Route 50	326,582	18,133	34.7%	18.0	Reclassified from trunk to neighborhood route due to low frequency (every 60 minutes)
138	Allen / Livingston	185,937	10,845	N/A	17.1	
214	Rensselaer 3rd Street	185,964	11,054	-7.7%	16.8	
116	Albany / Menands	67,157	4,492	N/A	15.0	Above productivity threshold
233	Albany / Schodack	65,911	4,649	16.8%	14.2	Below productivity threshold
82	Troy-Cohoes Via Green Island	162,480	11,754	-3.0%	13.8	Eliminated as part of Albany County Phase 2 (November 2012) and portions of route replaced by #182
352	Altamont Ave / McClellan	62,657	5,207	54.9%	12.0	
280	Troy-Albia	57,244	5,258	-6.8%	10.9	
473	Jefferson Street	103,426	10,897	27.7%	9.5	
472	Lake Avenue	34,935	5,771	-19.1%	6.1	
286	RPI Shuttle	18,269	3,547	-36.9%	5.2	Contracted service with RPI
TOTAL		4,181,029	214,588			
AVERAGE		199,097	10,218		19.5	

NOTES:

- In 2011, three-quarters of neighborhood routes were below threshold for riders per revenue-hour compared to only a third in 2013. This points to the success of our restructuring efforts.
- Routes marked “N/A” have not existed for a full 3-year period or have been substantially changed.
- Limited data exist for new routes introduced as part of Albany County Route Restructuring Phase 2, and will be addressed in a dedicated section later in the document.

FY 2012-2013 PERFORMANCE COMMUTER ROUTES

Ranked by Riders per Revenue-Hour

Route	Description	Total Riders	Revenue-Hours	% Rider change 11-13	Riders per Revenue Hour	Comment
712	Harriman Campus / Patroon Creek	84,585	3,155	N/A	26.8	
63	Route 20	71,859	3,932	59.4%	18.3	Eliminated as part of Albany County Phase 2 (November 2012) and replaced with #763
737	Corporate Woods / Airport	51,561	3,683	N/A	14.0	
734	Hackett / Buckingham Pond	30,922	2,286	N/A	13.5	
21	Altamont	12,758	1,238	-31.2%	10.3	Eliminated as part of Albany County Phase 2 (November 2012) and portions of route replaced by #719
19	Voorheesville	12,572	1,277	-40.7%	9.8	Eliminated as part of Albany County Phase 2 (November 2012) and portions of route replaced by #719
232	Hampton Manor	12,515	1,531	20.3%	8.2	Eliminated due to low ridership (May 2012)
432	Mechanicville/Troy	1,483	700	-50.2%	2.1	Eliminated due to low ridership (May 2012)
TOTAL		278,255	17,802			
AVERAGE		34,782	2,225		15.6	

Above productivity threshold

Below productivity threshold

NOTES:

- Limited data exist for new routes introduced as part of Albany County Route Restructuring Phase 2 and will be addressed in a dedicated section later in the document.

FY 2012-2013 PERFORMANCE EXPRESS ROUTES

Ranked by Riders per Revenue-Hour

Route	Description	Total Riders	Total Trips	% Rider change 11-13	Riders per Trip	Comment
531	St. Luke's/Woodlawn Express	62,045	2,530	N/A	24.5	
540	Northway Express	170,325	7,398	7.7%	23.0	Major schedule and fare restructuring in October 2012
35x	Albany-Troy Express	43,630	2,277	-13.2%	19.2	Eliminated as part of Albany County Phase 2 (November 2012) and replaced with #522
530	RSM/Exit 26 Express	17,231	1,012	N/A	17.0	
520	Nassau Express	31,468	3,036	7.7%	10.4	
TOTAL		324,699	16,253			
AVERAGE		64,940	3,251		18.8	

Below productivity threshold

NOTES:

- In October 2012, service and fares of Northway Xpress were restructured increasing overall ridership in the latter part of the fiscal year.
- Limited data exists for new routes introduced as part of Albany County Route Restructuring Phase 2 and will be addressed in a dedicated section later in the document.
- As part of TDP update, 25 riders/trip will be revaluated for express routes as all perform below this threshold.

FY 2012-2013 PERFORMANCE SHUTTLE ROUTES

Ranked by Riders per Revenue-Hour

Route	Description	Total Riders	Revenue-Hours	% Rider change 11-13	Riders per Revenue Hour	Comment
610	Flex Service Wolf Road	98,864	11,133	N/A	8.9	Eliminated as part of Albany County Phase 2 (November 2012) and portions of route replaced by #117, #155 and #190
611	Flex Service Xgates - 20 Mall	32,846	3,879	N/A	8.5	Eliminated as part of Albany County Phase 2 (November 2012) and portions of route replaced by #117 and #155
612	Flex Service Xgates - Route 5	45,364	5,429	-50.7%	8.4	Eliminated as part of Albany County Phase 2 (November 2012) and portions of route replaced by #155
TOTAL		177,074	20,442	XXXX	XXXX	
AVERAGE		59,025	6,814	XXXX	8.7	

Below productivity threshold

NOTES:

- As part of Albany Route Restructuring Phase 2, these routes were discontinued and service areas were incorporated into CDTA's fixed-route system

FY 2012-2013 PERFORMANCE RURAL ROUTES

Ranked by Riders per Revenue-Hour

Route	Description	Total Riders	Revenue-Hours	% Rider change 11-13	Riders per Revenue Hour	Comment
810	Berne / Knox	1,221	145	N/A	8.4	Eliminated due to low ridership (August 2012)
812	Rensselaerville	973	174	N/A	5.6	Eliminated due to low ridership (August 2012)
870	County Shuttle	381	578	N/A	0.7	Eliminated due to low ridership (May 2012)
TOTAL		2,574	896	XXXX	XXXX	
AVERAGE		858	299	XXXX	2.9	

NOTES:

- All rural routes were discontinued due to very low ridership.

FY 2012-2013 PERFORMANCE SEASONAL SERVICE

Route	Description	Total Riders	Revenue-Hours	% Rider change 11-13	Riders per Revenue Hour	Comment
875	Saratoga Trolley	4,779	1,729	N/A	2.8	

Major Service Changes

We implemented a number of service changes in the months leading up to the writing of this report. The following is a summary of these activities and an assessment of the impact on ridership and productivity.

Northway Xpress Service and Fare Restructuring

Communities: South Glens Falls, Wilton, Saratoga Springs, Ballston Spa, Malta, Round Lake, Clifton Park

Route: #540

Ridership on Northway Xpress (NX) service had been on the decline and new customers were not being attracted to the service. In an effort to improve the attractiveness of the service, schedules and fares were redesigned and introduced in October 2012. The redesign was intended to improve service for existing riders, attract new customers, while increasing the efficiency of NX operation.

The plan was developed after a significant public outreach campaign, which included on-board customer surveys, input through our website, and our extensive public meetings throughout Saratoga County.

Service changes included additional mid-day trips, and more service to park & rides with high ridership. Trips that were redundant or had little ridership were eliminated. Changes included an overall fare reduction to make NX a more attractive alternative to the automobile. The fare structure was consolidation from 5 zones to 3 zones and an unlimited ride prepayment card was introduced alongside the cash and ten-trip ticket system.

FORMER NX FARES				NEW NX FARES				
Current Zone		Cash	10-Trip	New Zones		Cash	10-Trip	Monthly Swiper
Zone 1	Clifton Park	\$4.50	\$35	New Zone 1	Clifton Park	\$4.00	\$35	\$110
Zone 2	Malta	\$6.00	\$39	New Zone 2 (Former 2 & 3)	Malta Ballston Spa	\$5.00	\$39	\$125
Zone 3	Ballston Spa	\$7.50	\$44	New Zone 3 (Former 4 & 5)	Saratoga S. Glens Falls	\$7.00	\$50	\$170
Zone 4	Saratoga	\$9.00	\$53					
Zone 5	S. Glens Falls	\$10.50	\$60					

Initial Outcome

In the six months since these changes were introduced, ridership has increased 25%, or 150 new boardings per day. In some cases, increases are seen reaching as high as 35%.

Northway Xpress Service & Fare Restructuring Before & After by Month



Albany County Route Restructuring – Phase 2

Communities: Cohoes, Latham, Green Island, Watervliet, Colonie, Guilderland, Voorheesville, and Altamont

Routes: #19, #21, #29, #63, #82, #70, #90, #610, #611, and #612

In November 2012, CDTA launched its last major route restructuring. Phase 2 focused on routes in the northern part of the county, (#29, #82, #70, and #90) and routes in suburban areas to the west (#19, #21, #63, #610, #611, and #612). Many of these routes were underperforming in terms of ridership and productivity. This was the last of four restructurings called for in our Transit Development Plan.

The planning process included public meetings throughout the project area to determine improvements desired by customers and stakeholders. A draft plan was developed based on the input received, as well as analyzing ridership to determine what corridors needed more service, and what corridors required reduction or elimination. Another round of meetings was held for the public to review and comment on the draft plan.

Major improvements of Phase 2 final plan included:

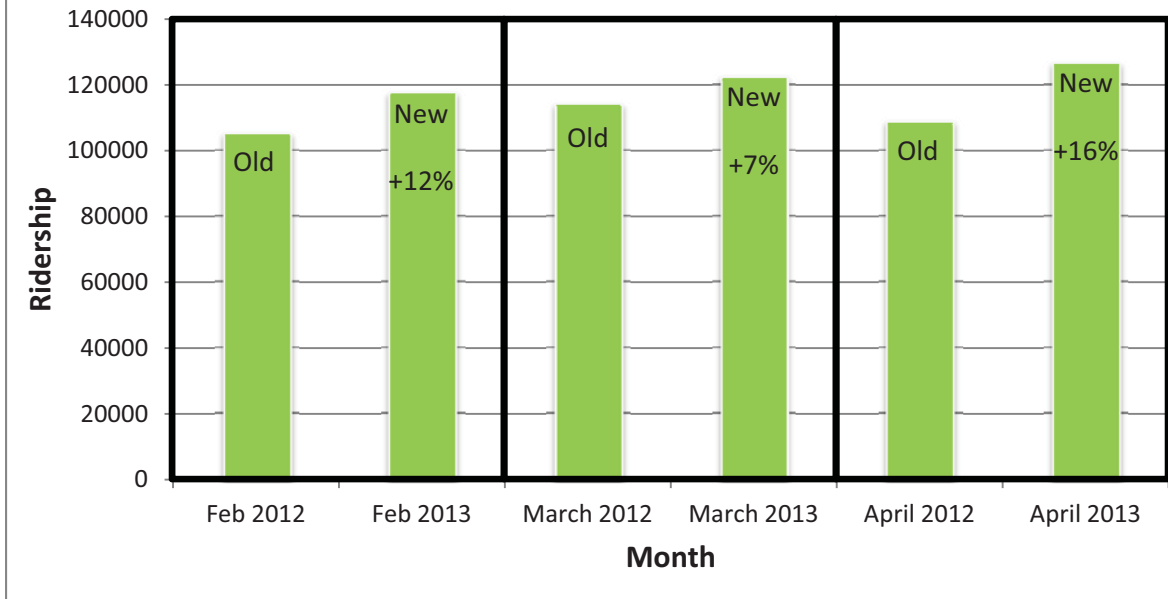
- Late night service and additional weekend service in Cohoes, Latham, and Watervliet, and between Troy and Schenectady.
- Increased frequency between Troy, Watervliet, Latham, and Schenectady via Route 2 & 7.
- Express service extended to Cohoes allowing faster connections to Troy and Albany
- Increased trips to Altamont and Voorheesville during peak commute times
- New service along parts of Fuller, Wade, and Watervliet-Shaker Roads
- Improved crosstown connections in Guilderland and Colonie, and new service on Western Avenue, Wolf Road, and to the Albany International Airport

Shuttle routes were replaced with regular route service as roadways that required deviated service in the past have been reconstructed with sidewalks and other pedestrian infrastructure.

Initial Outcome

Only limited ridership data exist for the new routes that began operation in November. This is due to the fact that the new routes operated for the first three months during holidays and winter periods (traditionally CDTA's lowest ridership occurs during this time), and many routes were interlined with one another before adjustments to the schedule in late January.

Albany Route Restructuring Phase 2 - Ridership *Before & After by Month*



In order to provide an early look at ridership and productivity on the new routes, we have examined their last three months of operation (February to April) and compared to the same three months of the old routes in early 2012. Next year they will be included in the ridership evaluation tables as their data will reflect a full year of operation.

On average, ridership on restructured Albany Phase 2 routes increased by 12% versus last year.

2012-13 Other Service Eliminations

Routes #232 and #432 were eliminated due to very low ridership. Both routes were producing fewer than 10 riders per revenue hour.

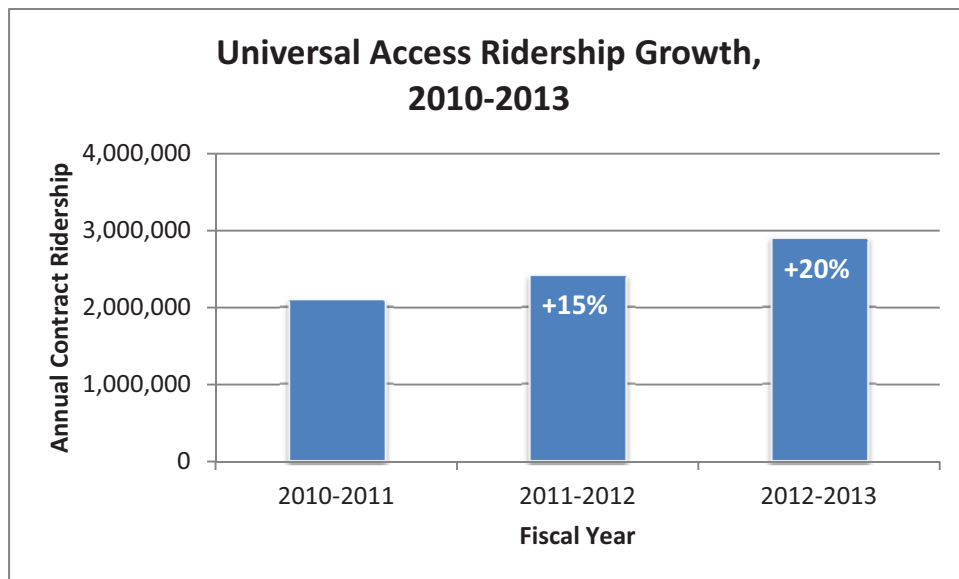
Rural Routes #810, #812, and #870 were also eliminated due to very low ridership. We were able to coordinate agreements with municipalities to provide coverage in place of the routes.

Universal Access Contracts

In 2012-13, CDTA's universal access contracts increased significantly, including our first contract with a private institution. These partnerships have contributed to this year's ridership increases, and enabled us to provide transit service where it might not otherwise be feasible. Contracts were established with the Albany College of Pharmacy and Health Sciences, Branford Hall Career Institute, Siena College, and ShopRite Supermarkets. We have engaged HVCC and their arrangement is scheduled to begin in August of 2013.

As part of the contract established with ShopRite, trunk routes #13 and #18 were extended to the new Vista Tech Campus development, where a ShopRite supermarket is the anchor tenant.

Over the past three years, contract ridership has increased by nearly 40% overall (300,000-400,000 rides per year). This has had a significant effect on overall system ridership.



Service Recommendations for 2013 - 2014

With the route restructurings successfully completed, our focus for 2013-2014 is to fine-tune the changes we have made over the past few years, improve on our successes, and plan our future Bus Rapid Transit expansion. The guiding policy for this will be an updated Transit Development Plan, which will provide a framework for service planning from the smallest schedule adjustment to the completion of a BRT network.

Adjustments to Albany County Route Restructuring – Phase 2

Communities: Cohoes, Latham, Green Island, Watervliet, and Troy

Routes: #129, #182, and #370

The implementation of Albany County Route Restructuring Phase 2 resulted in a significant ridership increase. As is our practice, we always look back and make adjustments after learning how our customers have reacted to new services.

One of our largest issues is the lack of a direct connection from Albany to Cohoes via Latham, which was previously provided by Route #29. We have decided to reestablish this connection by merging the patterns of Routes #129 and #182 to create a new Route #182 that will travel from Albany to Cohoes via Latham Farms.

Service levels of Route #182 will be retained for the entire route, resulting in later night service and Sunday service along US Route 9. This change will reduce the amount of platform hours required to run the service, resulting in improved efficiency and increased productivity.

In response to on-time performance issues, Route #370 will undergo minor changes to its pattern in downtown Schenectady, allowing the route more time and improving service reliability.

Throughout the year, we will monitor the performance of these and any other Phase 2 routes and make adjustments as necessary.



Route Enhancement on Key Corridors

Some of our highest performing routes exceed capacity and warrant service enhancements to accommodate the ridership increases.

Job Access and Reverse Commute (JARC) – Service Improvements

In August 2013, service enhancements to selected routes will be partially funded by the Job Access and Reverse Commute (JARC) program, which focuses on connecting low-income residents in urban centers to employment opportunities in suburban areas. These routes are also at capacity and travel along existing or planned Bus Rapid Transit corridors. Improvements include:

Route #12 - Washington Avenue (Connects Albany neighborhoods to University at Albany and Crossgates Mall)

- Increased frequency on Saturday

Route #224 – Albany-Troy via I-90 (Connects Albany and Troy neighborhoods to Hudson Valley Community College)

- Increase frequency during the midday period

Route #712 – Harriman Campus / Patroon Creek (Connects Albany neighborhoods to Harriman Campus, Patroon Creek Campus, University at Albany, Crossgates Mall, and Crossgates Commons)

- Additional weekday trips

Route #905 BusPlus (Connects Albany and Schenectady neighborhoods to Colonie Center, Northway Mall, Mohawk Commons, and other suburban employment centers)

- Increase night service seven days a week
- Extend 15 minutes frequency into the evening

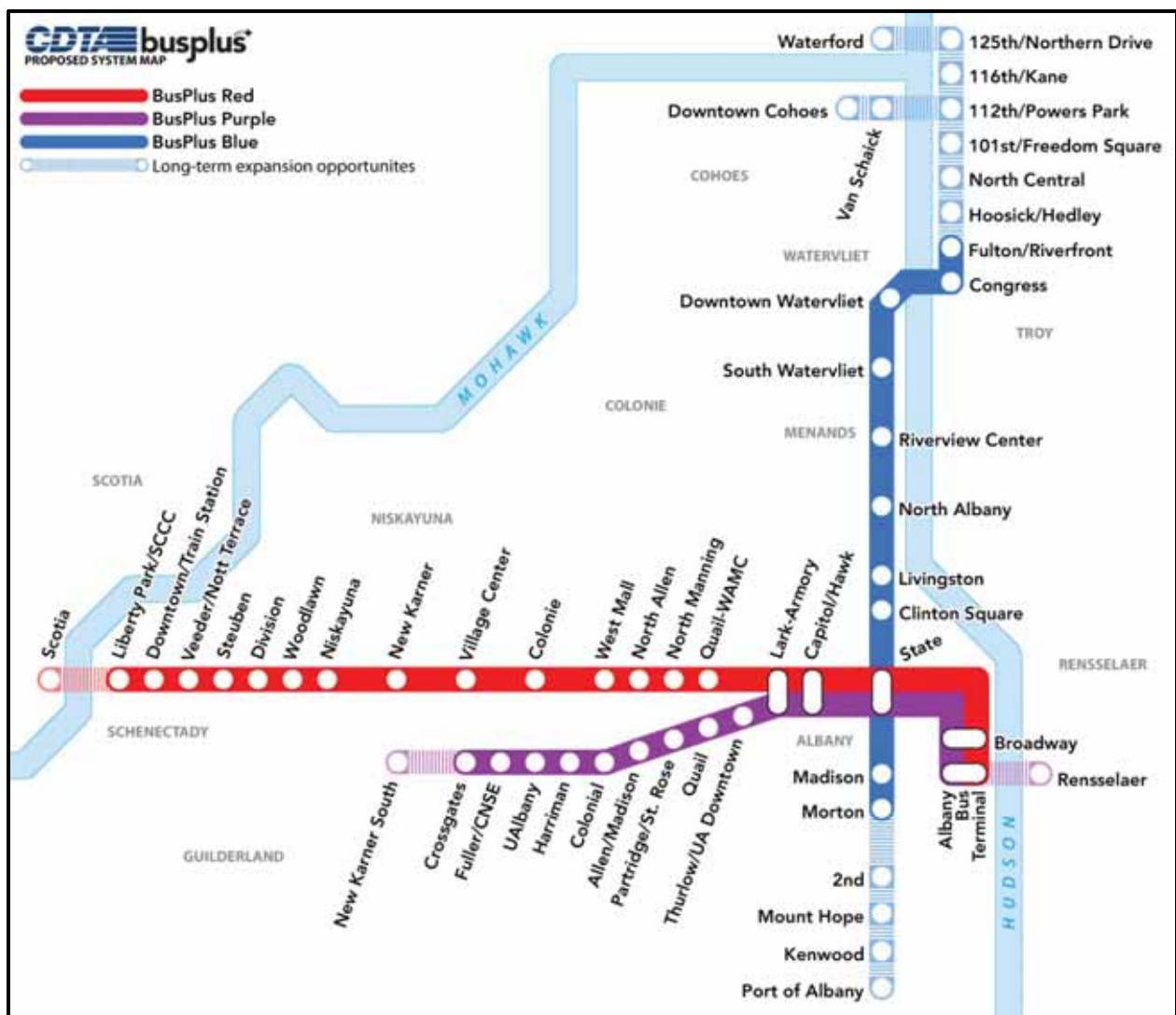
Route #530

Route #530 connecting the Rotterdam Square Mall and Exit 26 Park & Rides with Downtown Albany will have added trips in May 2013. This route has experienced overcrowding and warrants additional service for peak work start and end times. This also brings the route to the minimum level of service for a route as outlined in the upcoming TDP update.

Expansion of BusPlus – 40 Miles of BRT

BusPlus on Route 5 continues to grow ridership, reinforcing the necessity to make the expansion of Bus Rapid Transit in the Capital Region a top priority. Moving forward, BusPlus no longer represents a single route on a special corridor, but a package of integrated services under the BusPlus brand.

This year, we will enhance our existing BusPlus service on Route 5 (BusPlus Red) as described above while planning for two new BRT lines on the Washington-Western corridor between downtown Albany to UAlbany and Crossgates and the River Corridor connecting Albany, Watervliet, Troy, and potentially Cohoes and Waterford.



River Corridor BRT

The River Corridor (BusPlus Blue) consists of communities along the Hudson River whose compact development and pedestrian-friendly street networks have created an ideal corridor for bus rapid transit. In total, this accounts for more than 2 million rides per year.

We have begun data collection for a conceptual design study that will assess station locations, establish a service plan, and estimate capital & operating costs.

A passenger survey will be conducted in May 2013 to identify the strongest connections along the corridor and to lay the groundwork for the best service alternatives.

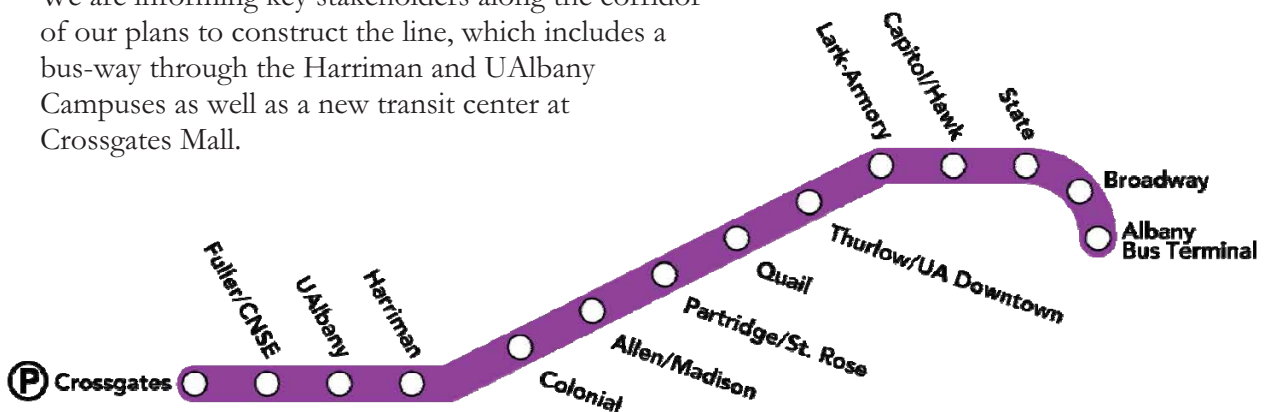


Washington – Western BRT

The Washington-Western Corridor (BusPlus Purple) connects downtown Albany with Crossgates Mall via the Harriman State Office Campus, the University at Albany, and College of Nanoscale Science and Engineering.

CDTA is working with the Capital District Transportation Committee and consultant team on completion of the Alternatives Analysis component of the Federal Transit Administration’s Small Starts program that funds Bus Rapid Transit projects. The focus of this process is to develop routing and service alternatives with detailed capital and operating cost estimates. The objective is to identify the Locally Preferred Alternative, which will be endorsed by CDTA and CDTC’s respective boards.

We are informing key stakeholders along the corridor of our plans to construct the line, which includes a bus-way through the Harriman and UAlbany Campuses as well as a new transit center at Crossgates Mall.



Proposed Crossgates Transit Center at the terminus of the Washington-Western BRT Corridor.



Transit Development Plan Update

The recommendations of the 2007 Transit Development Plan (TDP) have now been fully implemented. Staff has begun work on a new five-year TDP update. This document will set forth guiding principles and processes for service planning changes. The renewed TDP will reaffirm CDTA's vision, mission, and core values, establish measurable standards for service performance, facilities and marketing, and make mid-term service and capital recommendations. A public participation policy for all service changes will be also be included. The TDP will identify the expansion of Bus Rapid Transit as CDTA's top planning priority for the next five years.

Schedule Restructuring

Large quantities of reliable on-time performance and segment time data are now available through the Automated Vehicle Location (AVL) system. This information allows us to make adjustments down to the minute along the length of a route. AVL segment time data were used to schedule the services of the Albany County Route Restructuring Phase 2 and have performed well in this capacity.

Over the next several years, the entire CDTA route system will be evaluated gradually in this manner, adding time where buses cannot make their schedules and removing it where buses have to wait at time points. This improves on-time performance and ensures the effective delivery of our service to the public. In addition to optimizing segment times, schedules will also be examined to better provide for transfers between intersecting routes. Schedule restructuring is not be a one-time project, but a repeated process that feeds data back to itself over time and evolves toward an optimal schedule for each route.

Expansion of Universal Access Contracts

CDTA intends to establish universal access contracts with more institutions throughout the region. A partnership of this type with Hudson Valley Community College will begin in 2013, providing access for students, faculty and staff for one of the Capital Region's largest educational institutions.



During months when colleges and universities are in session, more than 20% of CDTA's ridership comes from contract rides. This ridership is significant enough that service changes should and will be in part, based upon the presence of contracts.

Since nearly all educational institutions in the region will soon have contracts with CDTA, future efforts to establish these agreements should focus on other institutions – in particular, large employers.

Appendix E – Transit Priority Network Segments

Segment	End Points	Municipality
Albany County		
State Street	Eagle Street – Broadway	Albany
Washington Avenue	Eagle Street – Crossgates Mall	Albany, Guilderland
Western Avenue	Washington Avenue – Crossgates Mall	Albany, Guilderland
Central Avenue and State Street (NY Rte 5)	Lark Street – Schenectady County Community College	Albany, Colonie (Village and Town), Niskayuna, Schenectady
New Scotland Avenue	Madison Avenue – Vista Technology Park	Albany, Bethlehem
Lark Street and Delaware Avenue	Washington Avenue – Cherry Avenue	Albany, Bethlehem
South Pearl Street (NY Rte 32)	State Street – Mount Hope Drive	Albany
Broadway and 3 rd Avenue (NY Rte 32)	Madison Avenue – 15 th Street	Albany, Menands, Watervliet
Second Avenue	South Pearl Street – Delaware Avenue	Albany
North Pearl Street (NY Rte 32)	State Street – Lark Drive	Albany
Quail Street	Livingston Avenue – New Scotland Avenue	Albany
Livingston Avenue and Lark Drive	North Pearl Street – Quail Street	Albany
Morton Avenue and Holland Avenue	New Scotland Avenue – South Pearl Street	Albany
Second Avenue	Delaware Avenue – South Pearl Street	Albany
Madison Avenue	Allen Street – North Pearl Street	Albany
South Swan Street	Washington Avenue – Madison Avenue	Albany
19 th Street, Troy-Schenectady Road, and Union St (NY Rte 2 & 7)	Congress Street Bridge – Nott Terrace	Watervliet, Colonie, Niskayuna, Schenectady
South Mall Arterial, Interstate 787, and NY Rte 787	Empire State Plaza – Rte 32	Albany, Menands, Watervliet, Colonie, Cohoes
Alternate Rte 7 and Interstate 87	Interstate 787 – Mohawk River	Colonie
Remsen Street and Main Street	Rte 32 – Cayuga Street	Cohoes
Rensselaer County		
Dunn Memorial Bridge, Broadway, 3 rd Avenue, East Street, & Herrick Street	Hudson River – Rensselaer Rail Station	Rensselaer

Ferry St & Congress Street	Congress Street Bridge to Pawling Avenue	Troy
Pawling Avenue	Congress Street – Myrtle Avenue	Troy
Maple / Myrtle Avenues, & Project Road / Madison Avenue	Pawling Avenue – Griswold Heights	Troy
Federal Street, Sage Avenue, 15 th Street, and People’s Avenue	River Street – Burdett Avenue	Troy
River Street and 2nd Avenue (Rte 4)	Fulton Street – 126 th Street	Troy
5 th Avenue and 6 th Avenue	Federal Street – 125 th Street	Troy
Northern Dr and 8 th Avenue	5 th Avenue – Corliss Park	Troy
3rd / 4th Avenue, Mill Street, and Vandenburg Avenue (Rte 4)	Fulton Street – Hudson Valley Community College	Troy
Hoosick Street	6 th Avenue – Brunswick Walmart	Troy, Brunswick

Schenectady County		
Altamont Avenue	Curry Road – Chrisler Avenue	Schenectady, Rotterdam
Ballston Road (Rte 50)	Mohawk Avenue – County Line	Glenville, Scotia
Broadway and Duanesburg Road	State Street to Rotterdam Industrial Park	Schenectady, Rotterdam
Crane Street and Chrisler Avenue	Altamont Avenue – Main Avenue	Schenectady
Main Avenue and Craig Street	Chrisler Avenue – Albany Street	Schenectady
Nott Street	Seward Place – Rosa Road (Ellis Hospital)	Schenectady
Nott Terrace, Seward Place, and Van Vranken Avenue	State Street – Wood Avenue	Schenectady
State Street and Mohawk Ave (Rte 5)	County Line – Sacandaga Road	Schenectady, Niskayuna, Scotia
Saratoga County		
Broad St (Rte 4)	Hudson River – 6 th Street	Waterford (Village)
Northway (Interstate 87) <i>and roadways leading to park & rides</i>	Mohawk River – Exit 15	Clifton Park, Halfmoon, Malta, Saratoga Springs
Rte 50	County Line – Wilton Mall	Saratoga Springs, Wilton
Clinton Street & Church Street	Broadway – Skidmore College	Saratoga Springs