

2008 -- 2009 Route Performance Review

Introduction

This is the CDTA's annual report on route performance for fixed route service covering fiscal year 2009. The report includes an evaluation of objective information on ridership and productivity along with recommendations for route adjustments in the coming year. This report will guide our planning activities through 2010 and help the organization respond to a recent reduction in ridership.

State of Affairs

During 2008-09 dramatic changes occurred at the national and global level, which made public transit a more attractive option in the Capital Region, but at the same time limited CDTA's ability to meet the growing demand. Rising gas prices coupled with environmental concerns increased ridership on the entire CDTA system by record numbers. At the same time, a slowing economy reduced the funding available for our operations.

A funding deficit forced CDTA to raise fares in April 2009 and reduce nearly 30,000 hours of service hours in January, May, and September of this year. These changes, couple with a fall in gas prices, have impacted ridership which has dropped about 10% in recent months.

This report is on route performance for the fiscal year from April 2008 to March 2009. It reflects the ridership increases of that year as it is before the decline in gas prices, the fare increase, and a majority of the service changes.

Existing Route Evaluation

This evaluation focuses on trunk and neighborhood routes because they comprise 90% of CDTA's service. Express routes, rural services, school services, and flexibly routed services are addressed on a qualitative basis. Routes are evaluated on two primary criteria:

- **Total Riders:** The easiest way to understand and evaluate transit service is to look at annual ridership. CDTA's Route Classification system establishes thresholds and ranges of ridership by route category. A trunk route should have over 250,000 riders per year and a neighborhood route should have over 100,000 per year.
- **Riders per Revenue Hour:** The number of riders per revenue-hour measures a route's productivity and indicates whether resources are being used as efficiently as possible. A route may have high ridership, but due to an over allocation of resources, be unproductive. Acceptable productivity thresholds are 25 riders/hour for trunk routes and 15 riders/hour for neighborhood routes.

Routes that fall below the acceptable thresholds are analyzed, including an assessment of promotional opportunities, route changes and schedule adjustments to increase patronage. Routes that exceed the range for the category, or perform well above the 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 criteria but not the other. If a route is underperforming in terms of total riders but overperforming in terms of riders per hour, this could indicate that the route warrants increased resources. If the opposite is true, a reduction in service may be called for.

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:** The percent ridership change over time is used to judge the effectiveness of past route changes and other factors. CDTA provides new and restructured services with a trial, or growth period to obtain ridership targets.
- **Community Service Needs:** CDTA provides consideration for vital community services, such as medical facilities, convalescent centers, and locations that serve the elderly, disabled, and other special need populations.

The following tables show the fiscal year 2009 (April 2008 to March 2009) performance data for CDTA trunk and neighborhood routes.

FY 2008-2009 PERFORMANCE OF TRUNK ROUTES

Ranked by Riders per Revenue-Hour

Route	Description	Total Riders	Revenue-Hours	% Rider change 06-09	Riders per Revenue Hour	Comment
55	Schenectady-Albany*	2,115,517	48,230	3.7%	43.9	Warrants additional resources; Bus Rapid Transit service proposed for 2010
12	Washington Avenue	1,196,331	28,824	19.3%	41.5	Warrants additional resources; Corridor currently being studied for future Bus Rapid Transit
1	Central Ave./Wolf Rd.	908,365	25,286	67.3%	35.9	Bus Rapid Transit service proposed for 2010
6	Second Avenue	454,743	12,714	16.0%	35.8	Consolidated with route #5 in May 2010
11	UAlbany Shuttle	403,158	11,476	-2.5%	35.1	UAlbany contract service; Corridor currently being studied for future Bus Rapid Transit service
22	Albany-Troy-Watervliet	1,073,079	34,883	11.7%	30.8	
7	Glenmont	277,845	9,140	38.5%	30.4	
10	Western Avenue	992,546	32,971	16.8%	30.1	Corridor currently being studied for future Bus Rapid Transit service
18	Delaware Avenue	396,506	13,536	11.0%	29.3	Fernbank route variant eliminated in May 2009; Sunday service needed
85	Troy-Waterford	618,544	22,791	39.2%	27.1	
87	Beman Park Sycaway	439,520	16,253	41.6%	27.0	
8	Arbor Hill	672,739	25,445	36.9%	26.4	
13	New Scotland Avenue	657,271	25,151	16.9%	26.1	
80	Albia-Fifth Avenue	487,085	20,156	14.3%	24.2	
70	Troy-Schenectady	257,190	11,883	23.9%	21.6	Underperforming due to lack frequency/span and no Sunday Service
90	Troy-Latham-Crossgates	278,314	14,351	2.8%	19.4	Underperforming due to lack frequency/span and no Sunday Service
50	Route 50	226,722	18,085	682.1%	12.5	Built into a trunk route in July 2007; Increased frequency desirable
TOTAL		11,455,475	371,173			
AVERAGE (excluding #55)		542,908	20,184		29.4	
% of System		75.4%	59.5%			

* #55 not included in determining averages and standard deviations because ridership and revenue-hours drastically higher than any other route

NOTES:

- Trunk routes carry the majority of our customers and on average have the highest productivity. The most productive trunk routes are experiencing overcrowding during peak time periods as capacity is inadequate for the level of demand.

When improvements have been made in terms of frequency and span, they have yielded strong returns. This can be seen by the substantial growth in ridership on the #50 after it was upgraded to a trunk. Strengthening our base at every opportunity should continue.

FY 2008-2009 PERFORMANCE OF NEIGHBORHOOD ROUTES

Ranked by Riders per Revenue-Hour

Route	Description	Total Riders	Revenue-Hours	% Rider change 06-09	Riders per Revenue Hour	Comment
52	Scotia/Crane Street	138,948	3,879	62.8%	35.8	Included in planned Schenectady route restructuring
62	State-McClellan	136,796	3,822	29.4%	35.8	Included in planned Schenectady route restructuring
19	Voorheesville	42,072	1,285	5.3%	32.7	Highly productive route due to peaked nature of ridership
61	Van Vranken Avenue	110,315	3,866	26.7%	28.5	Included in planned Schenectady route restructuring
33 <i>(now 232, 233, 520)</i>	Nassau	171,134	6,510	17.8%	26.3	Restructured and divided into three distinct routes in May 2009
24	Albany-Troy-Via Rensselaer	214,189	9,013	57.1%	23.8	Restructured in May 2009
51	Broadway	90,319	3,810	13.8%	23.7	Included in planned Schenectady neighborhood route restructuring
59	Nott Street	69,069	3,072	12.6%	22.5	Included in planned Schenectady neighborhood route restructuring
3	Quail St. Belt	175,612	8,226	-21.9%	21.3	
2	West Albany	332,430	16,159	-13.5%	20.6	
54	Scotia Wal-Mart	81,912	4,060	23.6%	20.2	Included in planned Schenectady neighborhood route restructuring
63	Route 20	83,172	4,220	34.8%	19.7	
14 <i>(now #214)</i>	Rensselaer-Third Street	185,847	9,570	6.5%	19.4	
29	Albany-Cohoes Via Route 9	196,753	11,436	26.6%	17.2	Route with level of service similar to trunk, but productivity of a neighborhood route - To be restructured with #82
9	Whitehall Rd.	119,693	7,109	-12.6%	16.8	
30	Belt via Hackett	128,132	7,618	20.8%	16.8	
4	#4 Pine Hills & #27 Corp Woods	119,013	7,454	29.7%	16.0	
82	Troy-Cohoes Via Green Island	178,040	11,930	13.1%	14.9	Route with level of service similar to trunk, but below average for a neighborhood route - To be restructured with #29
53	Altamont Avenue/Hamburg Street	49,364	3,529	-10.6%	14.0	Included in planned Schenectady route restructuring
77	Schenectady North Loop	15,300	1,104	N/A	13.9	Included in planned Schenectady neighborhood route restructuring
5 <i>(Eliminated)</i>	Northern Blvd.	40,113	2,936	13.5%	13.7	Route consolidated with the #6 in May 2009
31	Shaker Road	20,773	1,545	-6.3%	13.4	
89 <i>(now #289)</i>	Griswold Heights	50,995	3,883	-12.4%	13.1	Route consolidated with the #89 to become the #289 in September 2009
84 <i>(Eliminated)</i>	Watervliet-Oakwood	39,562	4,161	57.9%	9.5	Route consolidated with the #89 to become the #289 in September 2009
66	Schenectady South	6,885	740	21.7%	9.3	Included in planned Schenectady neighborhood route restructuring
15 <i>(Eliminated)</i>	Rensselaer-East Street	23,067	2,469	11.0%	9.3	Route consolidated with the #14 to become the #214 in May 2009

Above productivity threshold
Below productivity threshold

Route	Description	Total Riders	Revenue-Hours	% Rider change 06-09	Riders per Revenue Hour	Comment
473	Jefferson Street	75,009	11,258	N/A	6.7	
472	Lake Avenue	36,696	5,819	N/A	6.3	
78 (Eliminated)	Schenectady West Loop	8,925	1,607	N/A	5.6	Route eliminated in May 2009
86	RPI Shuttle	15,634	6,725	-16.0%	2.3	RPI contract service; To be restructured into #286 in September 2009
474 (Eliminated)	City Shuttle	4,886	2,346	N/A	2.1	Route eliminated in May 2009
16 (Eliminated)	Downtown Circulator	7,545	3,890	N/A	1.9	Route eliminated in January 2009
471 (now seasonal)	Union Avenue	6,407	4,571	N/A	1.4	Route converted to seasonal-only service in January 2009
TOTAL		2,974,607	179,620			
AVERAGE		90,140	5,443		16.2	
% of System		19.6%	28.8%			

*% Rider Change unavailable for certain routes due to data unavailable or routes that are not in service for entire three years

Route eliminated in 2009 route restructuring

NOTES:

- Many neighborhood routes underperform in terms of yearly ridership and riders per revenue-hour. This is where route restructuring and public outreach is most warranted.
- Routes such as the #2, #29, and #82 are allocated revenue-hours that are at trunk route levels. Restructuring may provide a more efficient level of service and reallocation to trunk routes.

New Service Evaluation Process

Due to changing development patterns, employment sites, and residential population, CDTA has an approach to analyzing new service needs. New services or improvements to existing services are evaluated with respect to design guidelines and consistency with adopted policy principles. CDTA weighs service investment decisions to provide incentives for community support of transit in policy, funding, zoning, and site design.

Introduction of new services are subject to a trial period before becoming permanent, and have performance targets identified prior to implementation.

Proposals are evaluated in terms of market effectiveness using objective criteria.

- **Market Potential:** Potential ridership for new or improved service is determined based on the demographic profile of an area or corridor (density, income level, ridership generators, and other demographic characteristics). The Transit Propensity Index (TPI) is a measurement tool developed by CDTA and CDRPC as part of the CDTA Transit Development Plan. It provides a relative measure of an area's likelihood to support new or improved service based on the characteristics identified earlier.

Market potential can also be determined by employer commitment to fare subsidies, parking surcharges, and/or priority bus entry onto properties. Travel demand management programs may present another opportunity area.

CDTA serves areas that have unique demographic profiles and thus differentiates its services – including design, delivery and promotion – to respond to *likely* rider markets.

- **Route Spacing & Network Connectivity:** New service should avoid duplication with existing services. In general, a quarter mile is the maximum distance a customer will walk to a major bus line so to avoid overlapping service areas trunk routes should be no closer than half a mile. In the Capital Region the radial street pattern into city centers makes this a difficult rule to follow precisely, but the goal is for major routes to be spaced so people are within walking distance of a bus route stop. In rural or suburban areas, route spacing is dictated by travel corridors and park and ride lots.

For neighborhood and feeder routes, the focus is connections to trunk routes to maximize geographic coverage. These routes should provide cross-town service interconnecting trunk routes and providing multiple directions of travel. Local and trunk services should be designed so that trips to require no more than one transfer.

- **Pedestrian Accommodations:** Transit accessibility is directly related to the pedestrian environment. The presence of pedestrian infrastructure (sidewalks, ramps, crosswalks, signals with pedestrian phases) has a major impact on whether transit service is successful. Lack of safe pedestrian access to a route *can* be sufficient to prevent a new route from attracting riders.

- **Geographic Equity:** Underserved areas of the region are identified by objective data related to underlying market characteristics. Comparable service should be provided in comparable areas.

- **Community-Based Service Needs:** We provide special consideration for community services, like medical facilities, convalescent centers, and locations that serve the elderly, disabled, and other special need populations. Benefits to non-users of transit services can also be a consideration, such as reducing travel congestion.

Service Recommendations for 2010

A goal of this route performance review is to determine service changes for the upcoming year. While the goal of 2009 was to reduce service, the focus of 2010 is to maintain service levels, but restructure routes to increase system wide productivity through reallocation of resources and a redesign of neighborhood routes.

The work plan that follows groups routes geographically as routes that interconnect and have similar service areas must be analyzed together.

Albany County

Cohoes / Green Island / Latham

Routes: #82, #29

Routes #82 and #29 are classified as neighborhood routes but have an allocation of resources that is more typical of a trunk route. These routes travel in the city of Cohoes and due to their proximity can be restructured and converted into routes with a level of service that aligns with the ridership demand.

City of Albany Neighborhood Routes

Routes: #2, #3, #9, #4, #27, #30, #31, #63

The neighborhood routes that travel in the City of Albany are relatively productive with only the Route 4 below the minimum productivity threshold. A comprehensive restructuring of these routes will eliminate duplication with trunk routes. Improved cross-town service within the city and a restructuring of neighborhood routes will allow a stronger connection to trunk routes and to employment sites outside of the main corridors.

Rensselaer County

Troy North-South Trunk Routes

Routes: #80, #85

The route 85 is a productive trunk route but the route 80 is below the minimum productivity threshold. Both routes travel from Lansingburgh and North Troy to downtown Troy while the route 85 continues south to Hudson Valley Community College and the route 80 continues south to Wynantskill.

Ridership on the route 80 north of downtown is considerably higher than the southern section. The route 80 could be split into two separate routes; one neighborhood, one trunk which would align ridership with level of demand.

In the long-term the route 85 and 80 service could be combined in North Troy and Lansingburgh into one route or have both travel on the same corridor with stagger schedules. This would eliminate duplicative services that are only a ¼ of a mile apart, while providing higher frequencies by combining services in one corridor.

Schenectady County

Schenectady County Neighborhood Routes

Routes #51, #52, #53, #54, #59, #61, #62, #63, #66, #77

CDTA has developed a plan for restructuring neighborhood routes in Schenectady County. Many of these routes are productive, but due to the lack of resources are underperforming in terms of ridership. Night and weekend service is also lacking, limiting potential riders ability to depend on transit service.

The plan creates four neighborhood routes serving all of the major ridership generators and making connections to trunk routes, especially on New York Route 5. Transfers for those traveling within the city and county will be reduced as cross-town routes travel through downtown instead of terminating there. Span of service and frequency are improved to meet the existing and potential demand.

This restructuring is currently planned for March 2010.

Saratoga County

Route 9 Service

CDTA received funding to pilot service on Route 9 in Saratoga County which will begin in March 2009. This service will operate between Latham Farms to Saratoga Springs. The route will operate for one year with an evaluation of ridership to determine if the service will continue.

NY Route 5

Routes #1, #2, #55, #55x, #56x

Most of the routes serving the New York Route 5 corridor are productive and experience overcrowding and reliability issues during most times of the day. Time of day ridership analysis shows a plateau between the peaks of consistent and heavy demand.

Bus Rapid Transit service will debut in 2010 and there will be a change to the local and express services. BRT will be introduced as a limited stop, faster service with improved amenities for customers. Local service making more stops will be enhanced to match the demand on the ends of the corridor, while through riders will be served by the BRT. With the introduction of BRT, express routes will also be modified to a park & ride based commuter service.

In the short term, the resources from the #2 will be considered for reallocation to other corridor services by eliminating duplication of common route segments between Ontario and downtown Albany. Possibilities include short-turning the route at a transfer point, changing the terminus to a cross-town destination, or having the route travel Clinton Avenue to downtown Albany.

Express Services

Routes #21x, #33x, #35x, #55x, #56x, #90x, NX

CDTA has two types of express services, with the first traveling primarily on highways serving park and ride locations, while the remainder run local in suburban or urban areas then access a highway to complete the trip.

CDTA's long term goal is for express services to be restructured to a highway/park and ride based model. Where this is not possible, because a nearby highway is not present for a portion of the route, we investigate a new classification for these routes that are a local-express mix.

CDTC has provided CDTA funding to conduct a study in 2010 on expansions of regional park and ride lots and express bus service.

Suburban Shuttle Services

Shuttle Bee, Shuttle Bug, and Shuttle Fly

CDTA operates flexible routes services in suburban locations where pedestrian infrastructure does not allow for fixed route service. Shuttles deviate from a main roadways to provide access to generators that would be unsafe or unfeasible for one to walk to and from. As these are different service types then trunk and neighborhood routes that exist for different purposes they in turn must have different productivity and ridership thresholds.

CDTA has conducted on-board surveys and focus groups to evaluate the effectiveness of the shuttles. The goal is to restructure the shuttles to make schedules and routings easier to understand and determine areas could be better served by a fixed route. Intermediate steps, such as the establishment of regular bus stops and reduction in allowed deviations will be implemented as these suburban areas develop more densely and become more pedestrian-friendly.

Rural Services

Routes: Former #95 (now #810, #811, #812, #830), #96, #870; shopper buses

CDTA operates routes to rural areas of the Capital Region on a semi-weekly basis as a lifeline service. Public outreach is showing that the primary use of these services is for shopping. These routes have both a low resource commitment and low ridership. The potential for coordinated human service agency transportation and/or dial-a-ride services to meet the needs of these customers should be further explored.

CDTA is exploring is the establishment of vanpool service so that people in these very low density areas where transit service is extremely inefficient can still be allowed transportation to major employment and shopping centers.

In January 2009 the route #95 was separated into four distinct routes, the #810, #811, #812, and #830. Due to low ridership the routes #811 and #830 were eliminated in September.

Public Outreach

During service changes and restructuring customer, public and employee input will be actively sought through several outreach methods on recommendations contained in this Route Performance Report and Service Plan. These include:

- Publication on web site;
- Bus ads;
- Employee forums and newsletters;
- Targeted surveys to riders of affected services;
- Letters to affected municipal officials;
- Notices to self-identified CDTA riders (those who provide contact information);
- Quarterly county-level meetings; and
- Ongoing customer comment program service suggestions.