Technical Note - Bus Case Studies

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Reference number
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Subject

Derek M Winning March 8, 2024 296118-00 Elizabeth Owen, Anthony Bruzzone Draft CVX Service Comparison Case Studies

Background

The Cross Valley Corridor bus service, branded as the "Cross Valley Express" (CVX), is envisioned as a significant and visible transit service in a location where transit is often not considered viable or essential. Within the Central Valley, and other areas of rural California, the service proposal can be viewed as aggressive. However, there are other examples of prophetic transit service designs that can inform the CVC discussion and provide guidance to decisionmakers.

This Note provides examples of other transit services throughout the United States similar to the proposed CVX service. It should be noted that only a few of these examples have service frequencies of better than hourly along long corridors (50 miles), although all the examples cited serve non-traditional (rural or semi-urban) locations.

Methods

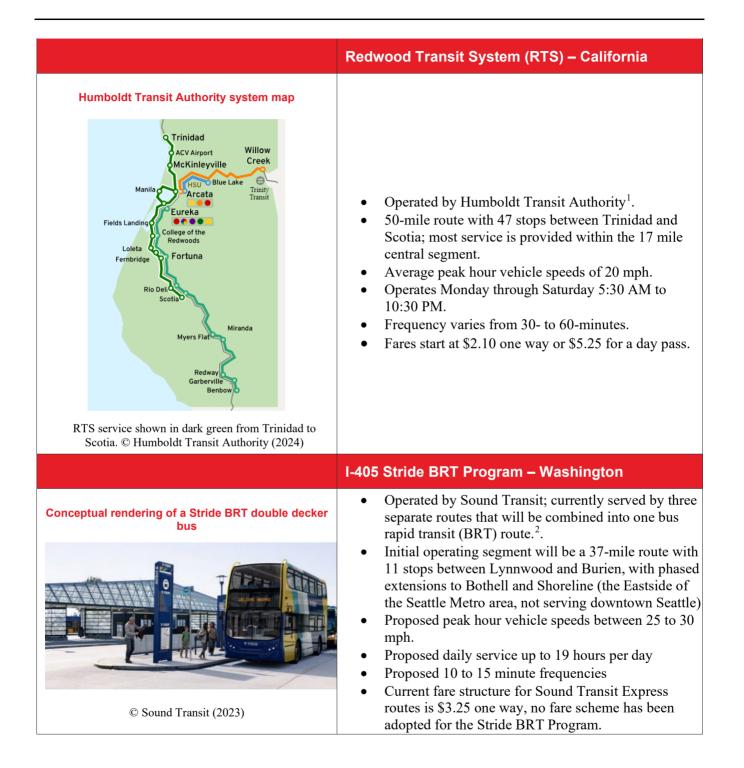
Case studies were identified based on the following criteria:

- Transit agencies within the United States
- Regional, express, or commuter bus service spanning at least 25 miles
- Service frequencies of at least 60-minutes

Case Studies

The following services were selected that can serve as a case study comparison to the proposed CVX service:

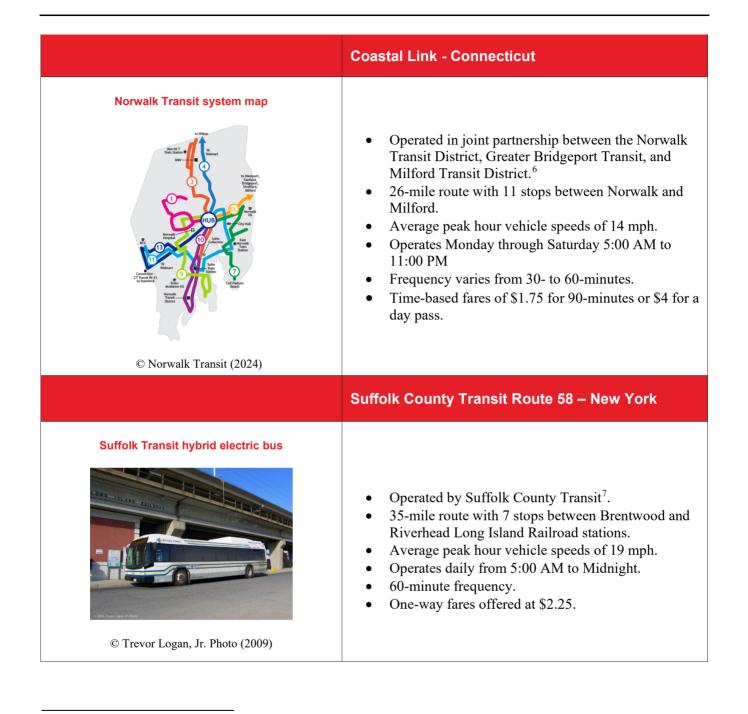
- Redwood Transit System Humboldt Transit Authority, California
- I-405 Stride BRT Program Sound Transit, Washington
- VelociRFTA BRT Roaring Fork Transportation Agency, Colorado
- EcoTransit Valley Route Eagle County Regional Transportation Authority, Colorado
- SMART Route 275 Suburban Mobility Authority for Regional Transportation, Michigan
- **Coastal Link** Norwalk Transit District in partnership with Greater Bridgeport Transit, and Milford Transit District, Connecticut
- Suffolk County Transit Route 58 Suffolk County Transit District, New York



¹ Redwood Transit System - Humboldt Transit (hta.org)

² Stride bus rapid transit | Project map and summary | Sound Transit

	VelociRFTA Bus Rapid Transit – Colorado			
	 Operated by Roaring Fork Transportation Agency³. 43-mile route with 19 stops between Glenwood Springs and Aspen. Average peak hour vehicle speeds of 34 mph. Operates daily 4:30 AM to Midnight. BRT frequency varies from 10 minutes on the 17 mile core route to 60 minutes off-peak along the extended route; underlying local service operates across the entire 43 mile route at 30 minute service frequencies. Zone-based fares starting from free to \$5. 			
	EcoTransit Valley Route - Colorado			
Eco Transit bus © Eco Transit (2020)	 Operated by Eagle County Regional Transportation Authority⁴. 43-mile core route with 23 stops between Dotsero and Vail, with transfers at Vail for commute service to Leadville (an additional 37 miles) Average peak hour vehicle speeds of 35 mph. Operates daily 6:30 AM to 11:00 PM. 60-minute frequency, additional overlays increase service in core area. Fares start at \$3 one way for the core Dotsero to Vail service. 			
	SMART Route 275 – Michigan			
SMART electric bus	 Operated by Suburban Mobility Authority for Regional Transportation, serving the suburbs of Detroit⁵. 26-mile route with 10 stops between Taylor and Southfield. Average peak hour vehicle speeds of 19 mph. Operates Monday through Saturday 5:45 AM to 11:30 PM. Frequency varies between 30- and 60-minutes. Fares start at \$2 one way with discounted DDOT transfers for trips to Detroit. 			



³ VelociRFTA - BRT Up Valley & Down Valley Bus Schedule

⁴ Bus Schedules (eaglecounty.us)

⁵ <u>SMART > Schedules > Schedules by Route (smartbus.org)</u>

⁶ Coastal Link - Norwalk (norwalktransit.com)

⁷ <u>Routes and Schedules (sctbus.org)</u>

Key Takeaways

Industry Leading Examples

While the proposed CVX route is visionary in breadth and scope, it is not the first to create a fast, useful transit service in a rural or non-urban area. Humboldt, Aspen, and Vail all operate at least parts of their routes at 30 minute service frequencies. Sound Transit in Seattle is combining existing services into a freeway BRT that only serves the Eastside of the metropolitan area, and Sea-Tac Airport.

Service Branding and Fare Schemes

The Coastal Link is one of the few services identified that is jointly operated across various transit agencies. Each of the agencies considered have varying fare pricing schemes from one way fixed pricing or zone-based fares. Each of the services identified differ in their branding – some such as the VelociRFTA emphasize connections to recreational activities, while others focus on regional commute trips.

Transit Priority Infrastructure

Agencies such as the Roaring Fork Transportation Agency and Sound Transit have been able to achieve higher vehicle speeds due to significant capital investments towards transit-priority infrastructure.

Summary Comparison to CVX Service

Location	Agency	Route Name	Route Distance (miles) and # of Stops	Service Frequency	Average Speed (miles per hour)
California	Tulare County Association of Governments	Cross Valley Corridor Express	62 mi. with 14 stops	Daily from 5:00 AM to 11:00 PM with 30- minute frequencies.	31 mph
California	Humboldt Transit Authority	Redwood Transit System	50 mi. with 47 stops.	Monday through Saturday from 5:30 AM to 10:30 PM with varied 30- and 60-minute frequencies.	20 mph
Washington	Sound Transit	I-405 Stride Bus Rapid Transit	37 mi. with 11 stops.	Daily with varied 10- to 15-minute frequencies.	25 to 30 mph
Colorado	Roaring Fork Transportation Agency	VelociRFTA Bus Rapid Transit	43 mi. with 19 stops.	Daily from 4:30 AM to midnight with varied 10- to 30-minute frequencies.	34 mph
Colorado	Eagle County Regional Transportation Authority	EcoTransit Valley Route	43 mi. with 23 stops	Daily from 6:30 AM to 11:00 PM with 60-minute frequency.	35 mph
Michigan	Suburban Mobility Authority for Regional Transportation	Route 275	26 mi. with 10 stops.	Monday through Saturday from 5:45 AM to 11:30 PM with varied 30- and 60-minute frequencies.	19 mph
Connecticut	Norwalk Transit District in partnership	Coastal Link	26 mi. with 11 stops.	Daily from 5:30 AM to 11 PM with varied 30-	14 mph

Location	Agency	Route Name	Route Distance (miles) and # of Stops	Service Frequency	Average Speed (miles per hour)
	with Greater Bridgeport Transit and Milford Transit District			and 60-minute frequencies.	
New York	Suffolk County Transit	Route 58	35 mi. with 7 stops.	Daily from 5:00 AM to Midnight with 60-minute frequencies.	19 mph