



Randolph Transportation System Feasibility Study

Randolph Town Council

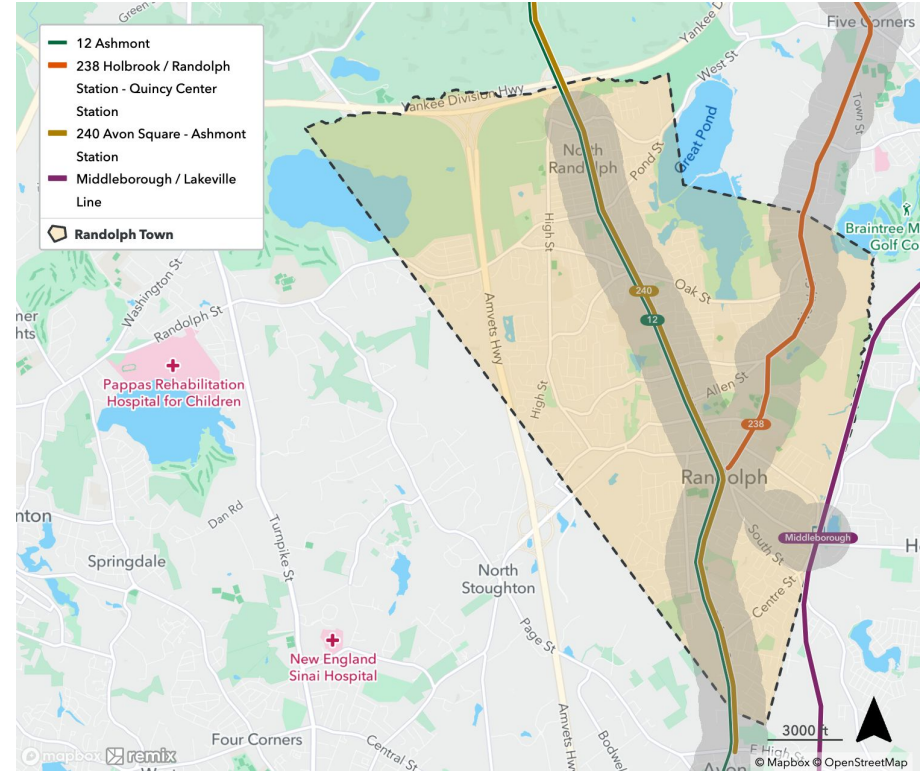
June 24, 2024

Agenda.

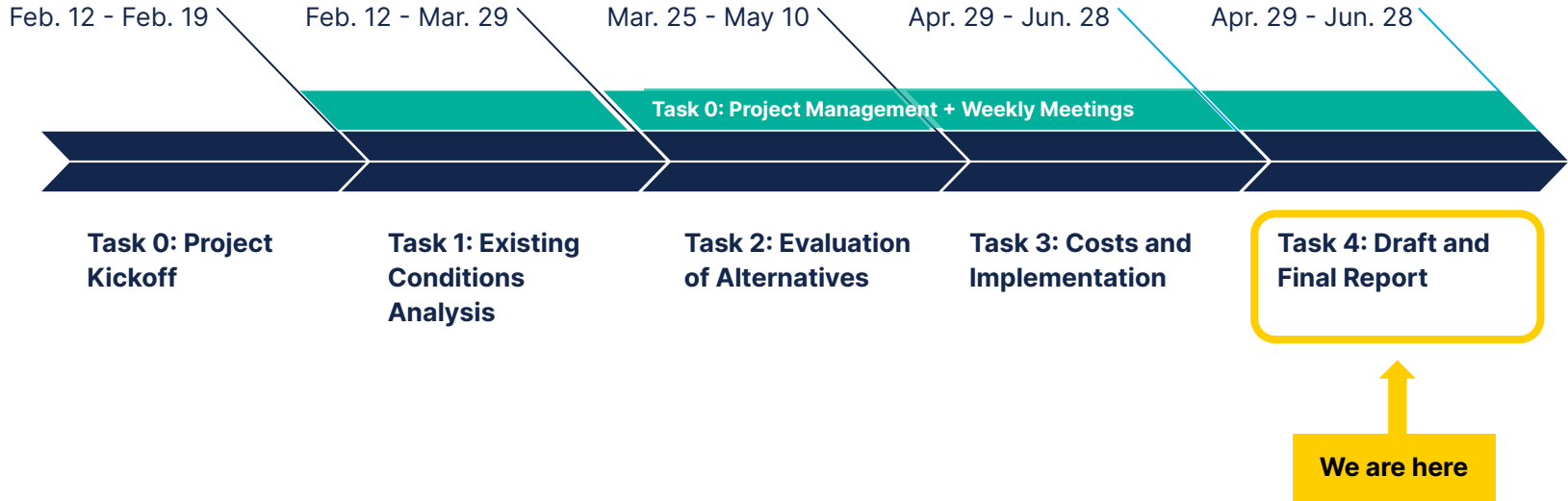
1. Project Overview, Goals, & Objectives
2. Existing Conditions Analysis
3. Service Alternative Development
4. Cost-Benefit Analysis

Study Goals and Objectives

1. Improve first- and last-mile connections to Holbrook/Randolph Commuter Rail Station
2. Expand transit coverage for areas of Randolph with poor access to bus stops
3. Leverage existing transportation services
4. Evaluate cost-effective and sustainable transportation solutions



Project Overview and Timeline



Agenda.

1. Project Overview, Goals, & Objectives
2. Existing Conditions Analysis
3. Service Alternative Development
4. Cost-Benefit Analysis

We interviewed community stakeholders and comparable cities that provide their own transit services

**Randolph Community
Partnership**

**Town of Randolph: Elder Affairs
and Library, Recreation &
Community Programs**

Randolph Town Council

Quincy Asian Resources Inc.

**Community Meeting at
Randolph Town Hall: April 24,
2024**

**Salem, Massachusetts:
Salem Skipper**

**Chandler, Arizona:
Chandler Flex**

Multiple challenges with existing public transit in Randolph

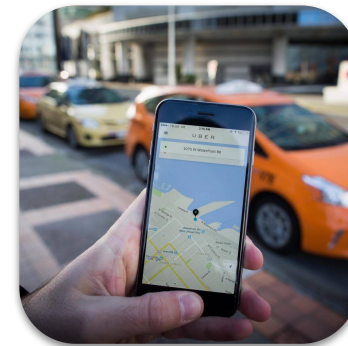
- **Infrequent service at off-peak times on MBTA Routes 238 and 240 makes relying on transit challenging.** Moderately frequent peak period service, with buses every 15-30 minutes, but frequencies are worse (40-70 minutes) during midday, evening, and weekend hours.
- **Bus service coverage is limited beyond the North/Main Street corridors.** More than half of Randolph's residents (53%) and jobs (50%) are beyond walking distance (one-quarter mile) from an MBTA bus stop.
- Programs such as the **RICC shuttle** or **MBTA's The RIDE** provide both pre-scheduled and on-demand service within Randolph, but **only for the minority (23%) of senior/disabled Randolph residents who qualify.**
- Uber/Lyft widely used by lower-income residents, but **too costly for everyday transportation.**

Agenda.

1. Project Overview, Goals, & Objectives
2. Existing Conditions Analysis
3. Service Alternative Development
4. Cost-Benefit Analysis

Three transportation modes explored as service alternatives

	Fixed-Route Circulator	Microtransit	Rideshare (Uber/Lyft)
Definition	Fixed bus stop locations and timetables	On-demand, shared, tech-enabled public transportation operating within a defined zone (e.g. Town of Randolph limits), typically operated with vans or minivans	Subsidized Uber/Lyft service for eligible groups (e.g. service-sector workers) or time periods (e.g. late-nights, weekends)
Example Service	MBTA bus service, Lexpress (Lexington, MA)	Salem Skipper (Salem, MA), NewMo (Newton, MA)	Uber/Lyft (MBTA's The RIDE Flex)

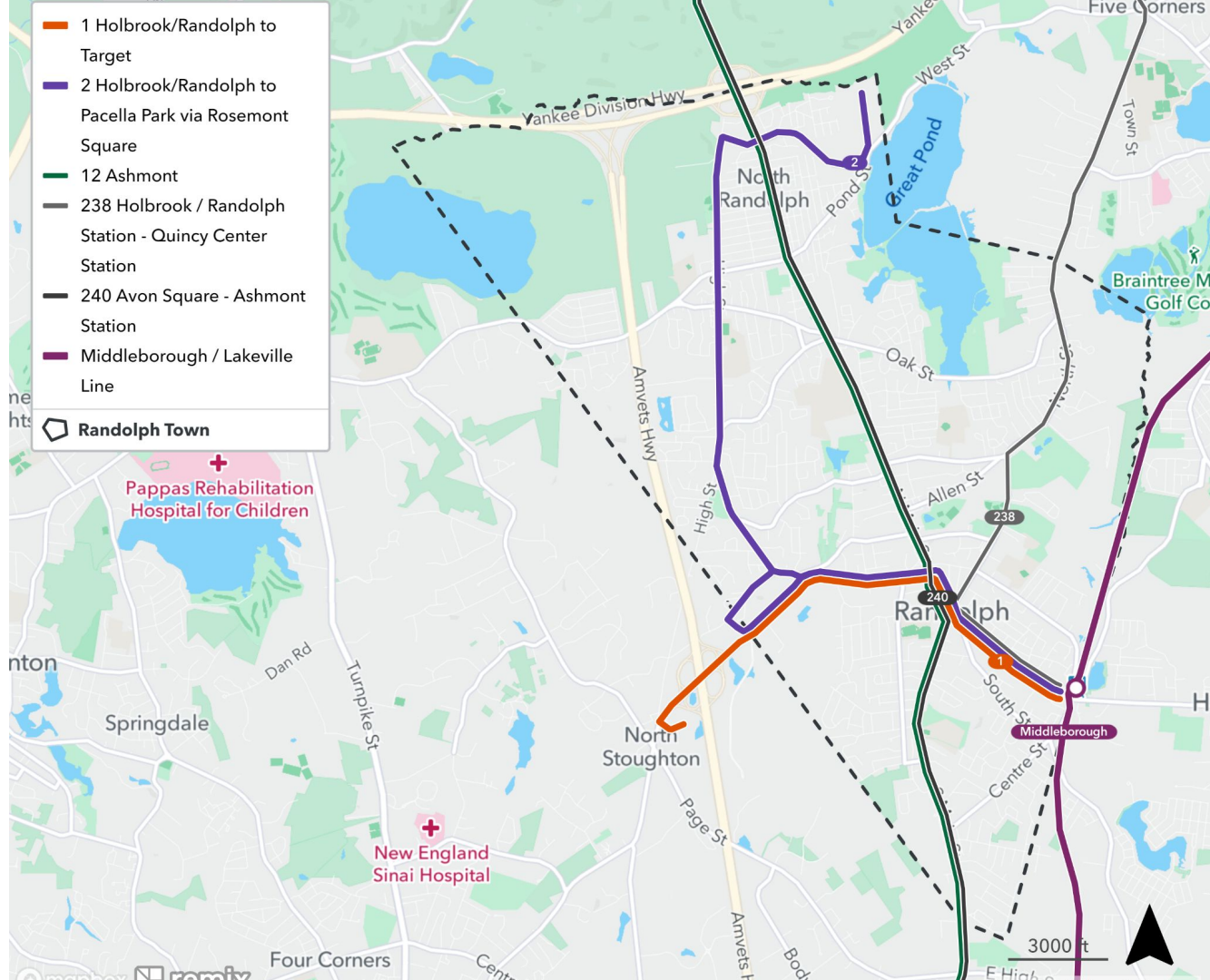


Service Alternative Development

Fixed- Route Alternatives

The project team developed two route alternatives to provide service to underserved destinations identified during the Existing Conditions Analysis.

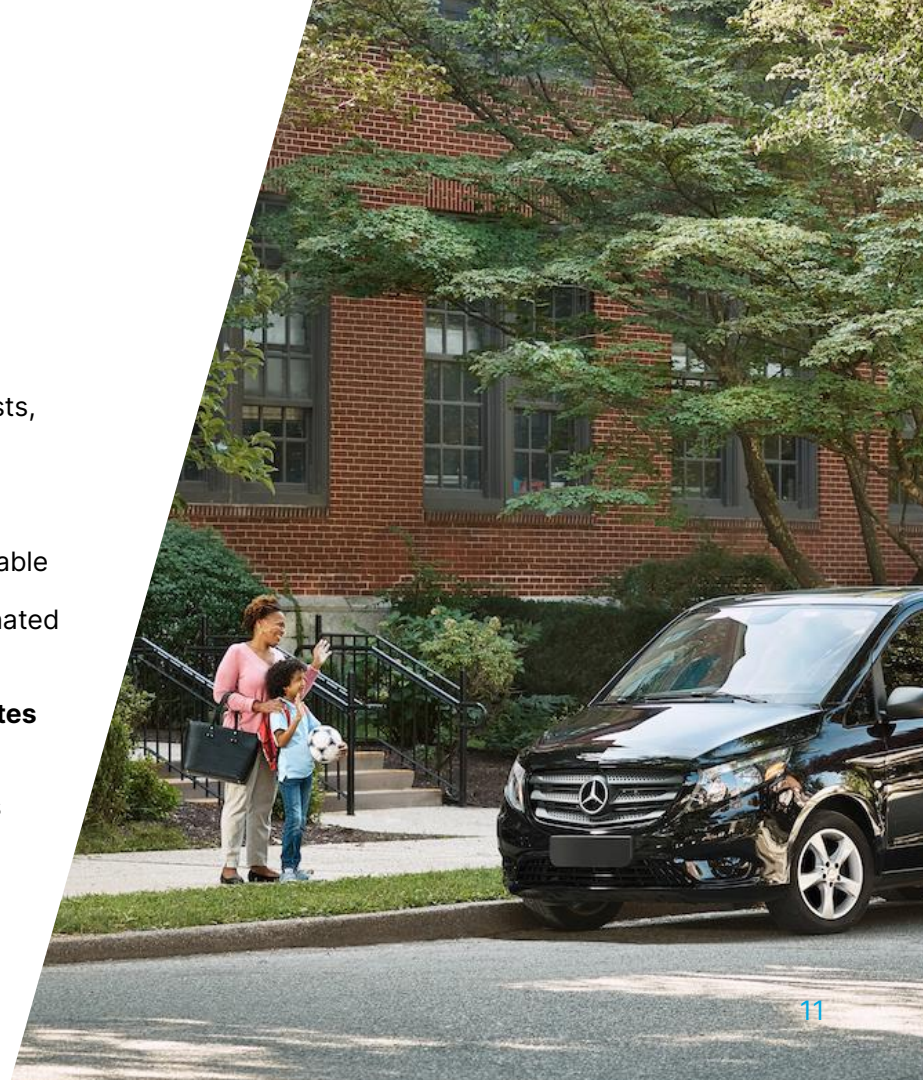
- **Route 1-Holbrook/Randolph to Stoughton Target**
- **Route 2-Holbrook/Randolph to Pacella Park via Rosemont Square**



What is Microtransit?

- Typically open to the public (anyone may use the service)
- Fares subsidized by local governments, transit agencies, or nonprofit organizations
- One or more vehicles complete trips based on passenger requests, adjusting their routes and stop locations based on where passengers need to travel
- Rides are booked on-demand, with pickup wait times of 10-25 minutes, depending on time of day and number of vehicles available
- Riders can travel **anywhere** within the service zone, or to designated transit hubs
- To improve service efficiency, riders may have to **walk 1-2 minutes** to meet the vehicle, typically to the nearest intersection*
- Rides are **shared** (where possible) between multiple passengers going in the same direction
- There are often multiple ways to book (mobile app or call center) and pay for rides (e.g., cash, bus passes, or mobile app)

Wheelchair accessible and curb-to-curb services are available for those who require them

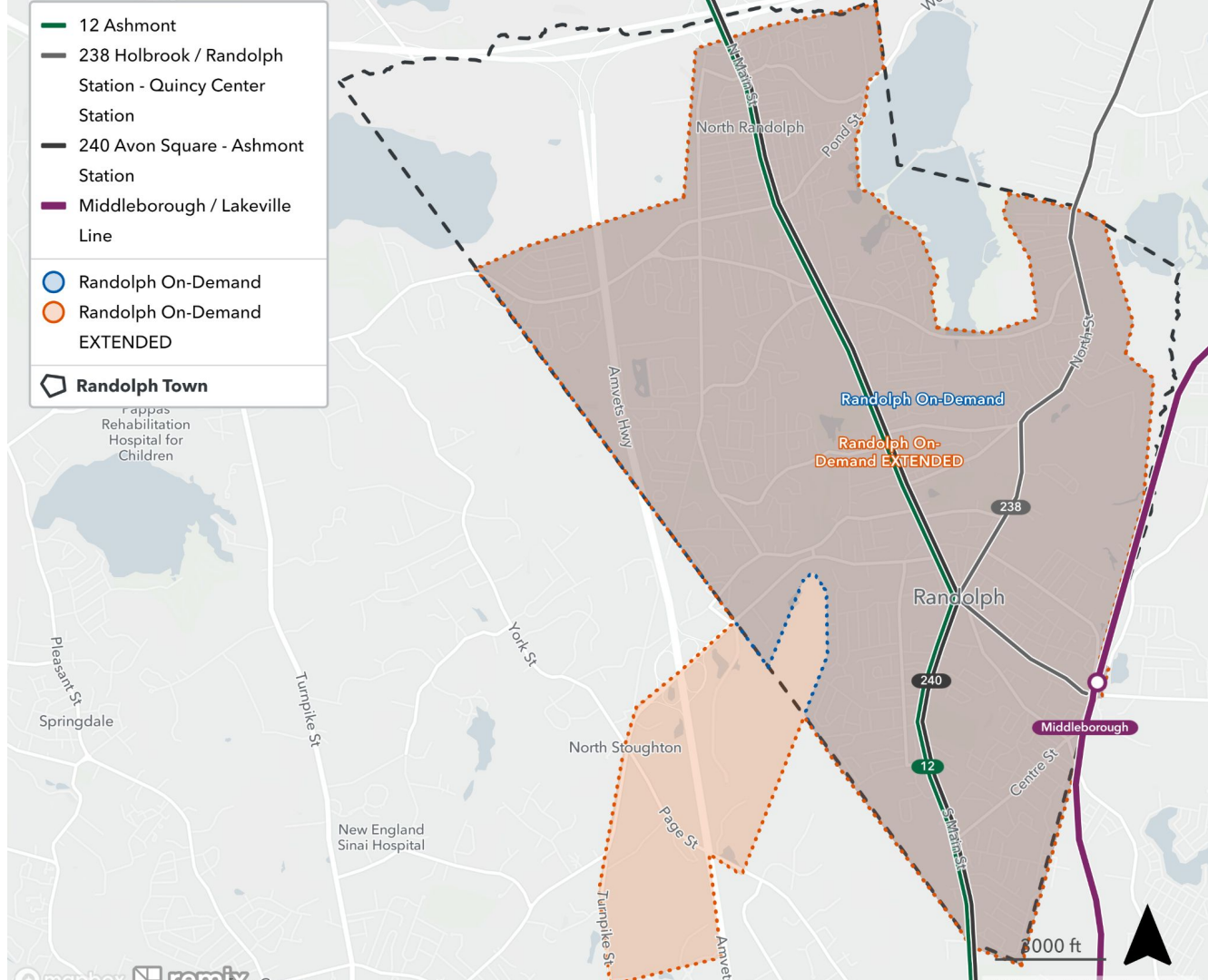
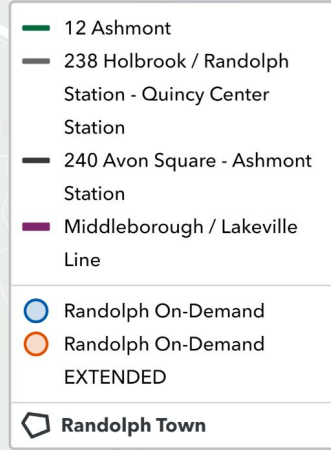


Service Alternative Development

Microtransit Service Alternatives

The project team developed two microtransit service alternatives to provide service throughout the Town of Randolph and selected nearby destinations identified during the Existing Conditions Analysis.

- Zone 1 — Service within Randolph Town limits
- Zone 2 — Service within Randolph Town limits, plus additional service to shopping destinations in Stoughton (e.g., Kohl's, Target, Costco, Ikea)



Agenda.

1. Project Overview, Goals, & Objectives
2. Existing Conditions Analysis
3. Service Alternative Development
4. Cost-Benefit Analysis

Cost-Benefit Analysis

Assumptions:

1. Assumes medium-demand scenario within 6-12 months of service launch.
2. Ride-hail service limited to seniors (60+), low-income, and disabled residents.
3. Fixed-route and microtransit service priced by number of vehicle-hours; ride-hail service priced per ride (by distance and duration).

	Fixed-Route Bus ¹		Microtransit ¹		Ride-hailing (Uber/Lyft/taxi) ²	
	1	2	3	4	5	6
	Holbrook/ Randolph to Stoughton Shopping Centers	Holbrook/ Randolph to Pacella Park	Randolph Town Limits	Randolph Town Limits + Stoughton Shopping Centers	Randolph Town Limits	Randolph Town Limits + Stoughton Shopping Centers
Key Statistics						
Percent Coverage of Randolph Employment	36%	56%	100%	100%	100%	100%
Percent Coverage of Randolph Population	17%	39%	100%	100%	100%	100%
Investment						
Annual Ridership	10,400	35,200	41,000	53,000	14,000	18,000
Vehicles Required	1	2	3	3	N/A	N/A
Annual Operating Cost ³	\$515,000	\$853,000	\$930,000	\$930,000	\$174,000	\$221,000
Efficiency						
Avg. Productivity <i>Passengers per revenue-hour</i>	1.9	4.0	3.1 - 3.7	4.1 - 4.7	N/A	N/A
Avg. Operating Cost per Trip	\$50	\$24	\$23	\$18	\$12	\$12



Ride-hail model carries regulatory and pricing risk not present in fixed-route or microtransit options

	Fixed-Route	Microtransit	Ride-Hail
ADA compliance (wheelchair-accessibility)	Yes	Yes	No*
Title VI compliance (cash payment, call-in booking option available)	Yes	Yes	No*
Drug/alcohol testing, criminal background checks of drivers	Yes	Yes	No*
On-demand service available	No	Yes	Yes
Pre-scheduled service available	No	Yes	Yes
Driver employment stability	High	Medium**	Low
Pricing risk	Low	Low	High
Wait time reliability	High	Medium	Low
Typical pickup walk distance	High (bus stop-to-bus stop)	Medium (Corner-to-corner)**	Low (Curb-to-curb)
Vehicle capacity	High (12-24 pax. cutaway)	Medium (6-passenger minivan)**	Low (4-pax. sedan/SUV)

Key Takeaways

- Microtransit or ride-hail alternatives would offer **ubiquitous service coverage** to all Randolph residents and jobs, whereas fixed-route options would serve 39% of Randolph residents and 59% of Randolph jobs (within ¼ mile walking distance to bus stops)
- Microtransit option including Stoughton shopping centers and operating 14 hours per weekday is the more cost-effective and productive service of the four alternatives
- Cost of ride-hail options increases in direct proportion to ridership (no shared-ride aggregation)
 - **Limiting subsidized ride-hail service to high-need groups** (seniors, people with disabilities, and low-income residents) recommended an important guard against escalating costs
- However, **ride-hail options would require additional, conventional taxi vendors to participate** for service to comply with FTA regulations required for most federal and state funding (e.g., ADA, Title VI, drug/alcohol testing)
 - Significant shares of specialized populations will require cash payment, phone-in booking, and/or wheelchair-accessible vehicles, driving up costs from traditional taxi vendor(s) providing these services



Appendix

Service parameters for Randolph Fixed-Route Service



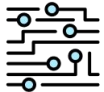
Service Frequency:

30 minutes



Eligibility Restrictions:

None, service is open to general public



Pickup Style

Stop-to-stop, with stops every ~1,000 feet



Vehicles:

Service is operated with CDL drivers and ADA-compliant cutaway vehicles (capacity 12-24 passengers)



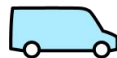
Hours of Operation:

M-F 7am - 9pm, Sat/Sun 9am - 5pm

Microtransit service parameters for Randolph



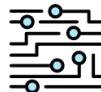
Booking Model:
On-Demand



Vehicle Capacity:
Two configurations, including:
2-passengers + 1 wheelchair
5-passengers + 0 wheelchair



Max. Wait Time:
30 minutes



Pickup Style
Corner-to-corner



Max. Vehicle Detour:
10 minutes



Max. Walking Distance:
 $\frac{1}{4}$ mile, about a 5-minute walk
Riders with disabilities will be offered curb-to-curb service



Trip Restrictions:
None: riders can travel anywhere to anywhere within the zone.

Service parameters for Randolph Ride-Hail Service



Booking Model:

On-Demand via mobile app



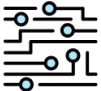
Aggregation:

None — Rides are not shared.



Eligibility Restrictions:

Riders must be Randolph residents and either seniors (60+), disabled, or low-income to participate — about one-third (34%) of Town population qualifies



Pickup Style

Curb-to-curb



Accessibility / Equity Policies:

Riders who require wheelchair-accessible vehicles, call-in booking, or cash payment are referred to local taxi operator in lieu of Uber/Lyft



Fare Policy

Passenger pays first \$3, Town of Randolph pays remaining subsidy up to \$20, with passenger picking up any fare in excess of \$20



Coverage Zone

Two options: 1) Randolph Town limits or 2) Randolph Town limits plus Stoughton shopping centers