

SELECT BOARD SCENARIOS

Prepared by the Sudbury Transportation Committee

Introduction

On 19 October 2021, the Sudbury Transportation Committee presented an update of transportation services to the Select Board. This included a summary of initiatives to date, provided background on transportation in the town and MAGIC region, and concluded with questions about sustaining services beyond current *ad hoc* funding opportunities (e.g., MAPC emergency taxi grant program).

In response, the Select Board requested that the committee provide a business plan for sustainability, to be reviewed in the context of 2023 budget cycle.

We want to make clear that the GoSudbury! programs were designed as pilot initiatives. They are heavily subsidized in order to provide maximum data on as many transportation variables as possible for the most needy riders (e.g., destinations, heavily traveled routes, times of requests). Uber program copays are based primarily on CoA fees that in turn are heavily subsidized by the MetroWest Regional Transit Authority (MWRTA). The taxi program, because of the funding agency's (MAPC) goal, is entirely free to riders. The Metropolitan Area Planning Council and MassDevelopment awards require 95% of their total to support taxi, hackney, and livery companies, with no funds going to TNCs.

We understand that rider fees will not support the cost of a transportation program and that additional funding will be necessary. Thus, the Transportation Committee has already undertaken a number of steps to prepare for the imposition of rider fees, although subsidies will always be available for residents with financial limitations. These steps include:

- Informing all program registrants that fees will be increased (and, in the case of taxis, levied) in the future.
- Designing a brief survey to ascertain the price elasticity of demand, under several fee scenarios based on distance from Sudbury.
- Examining fee structures used in area communities (Weston, Newton, Lexington, etc.) and, where available, what proportion of total costs they cover.
- Assessing contribution from fees to Sudbury transportation options, based on several demand assumptions (reduced, same, increased) and fee structures, in order to identify likely overall costs to the Town.

Purpose

The purpose of this document is to describe three scenarios based on different measures of ride volume and cost, acknowledging the uncertainty of co-payment impacts:

1. **LOW:** e.g., continuing with current (or reduced) services;
2. **MEDIUM:** e.g., modest expansion of services (additional target riders, additional destinations); and
3. **HIGH:** e.g., expanding transportation to meet needs identified by the Livable Sudbury research.

Each scenario includes assumptions relevant to the above measures. However, certain assumptions apply to all scenarios. These include:

- The overarching goal is *mobility as a service*—this means primary emphasis on *coverage* (including social goals, such as inclusion and environmental stewardship) rather than *patronage* (only numerical size of ridership). Affordable and reliable accessible options will be a hallmark.
- Service coverage by a transit authority is economically infeasible. Partnering with these authorities and supplementing with microtransit, as well as regionalizing Council on Aging vehicles, should be part of service design.
- Strong and continuous marketing is required, as is continuous quality improvement processes.
- Although all scenarios should include smartphone app(s), some concierge service must be part of the system, for residents unable to use smartphone/app.
- All scenarios must address environmental concerns; *specifically, the reduction of single-occupancy vehicles (SOV).*ⁱ Of course, providing multi-passenger service is contingent on the pandemic situation.

The scenarios are described below. Attachments provide background material and additional detail.

Scenario 1 (Low Volume/Cost): Do Nothing, Low Option 1, Low Option 2

Assumptions specific to Scenario 1 are the following:

- Elimination of the GoSudbury! programs (*do nothing*) will result in hardships for residents who have relied on them for transportation to medical care and work. Elimination will also increase the likelihood of social isolation for residents who cannot drive or who do not have access to cars (or individuals to drive them).
- Low options 1 and 2 presume no change in number of riders, types of destinations, and pricing of contracted services; however, adding fees, capping services, and/or increasing co-payments will alter the use of services.
- Existing Town staff and Transportation Committee volunteers will be able and willing to oversee and manage the services.

Do Nothing. With a do-nothing approach, it is reasonable to expect that the GoSudbury! Taxi and Uber programs would be discontinued. Keeping skeleton versions may be possible with

various grants, but as such would be subject to stopping with little to no notice. Any services provided would have to be managed by Transportation Committee volunteer and staff time, assuming Transportation Committee is extended by the Select Board beyond its current sunset date (Spring 2022).

Transportation options would include only Sudbury Connection Vans and the MWRTA Dial-a-Ride, limited to those aged 60+ or 18+ with a disability verified by a doctor’s note. Services provided are summarized below.

Service	Sudbury Connection Van	MWRTA Dial-a-Ride = MWRide
Service Summary	<ul style="list-style-type: none"> · Door to door rides · Weekdays, 9:00 AM to 4:00 PM · Wheelchair accessible 	<ul style="list-style-type: none"> · Door to door rides · T & TH 4:00 PM to 6:30 PM · Wheelchair accessible · MWRTA is MetroWest Regional Transit Authority
Where do rides go?	<ul style="list-style-type: none"> · M-F local & 4 nearby towns: Concord, Wayland, Framingham, Marlborough · T & Th local only 	Local, Marlborough, Wayland, Framingham, Natick, Southborough, Ashland, Hopkinton, Holliston
How much is the fare?	<ul style="list-style-type: none"> · \$ 1 in town, one-way ride · \$ 2 out of town, one-way ride · Personal Care Assistant (PCA) free 	<ul style="list-style-type: none"> · \$ 2 out of town, one-way ride · Personal Care Assistant (PCA) free · No cash: set up account with MWRTA (<i>see Other Notes, below</i>)
What purposes for rides?	<ul style="list-style-type: none"> · Medical/dental appointments · Grocery shopping · Pharmacy · Errands (only Tuesday & Thursday) 	<ul style="list-style-type: none"> · Medical/dental appointments · Grocery shopping · Pharmacy & errands · Social/community events
Who is eligible?	<ul style="list-style-type: none"> · Sudbury resident · 60+ years · 18+ with disability verified by doctor’s note 	<ul style="list-style-type: none"> · Sudbury resident · 60+ years · 18+ with disability verified by doctor’s note

Low Option 1: \$50,000/yr. A low-cost option funded at \$50,000/yr would likely yield significantly limited Taxi and Uber services. Between May through December 2021, the average taxi ride cost was \$68. During 7 months of taxi usage (after one month of startup), the two companies provided an average of 69 rides/month. Annualized, this results in 828 rides at \$68/ride or \$56,304 (assuming no copay). Between February and December 2021, Uber average ride cost was \$18. During 7 months of Uber usage after an earlier beta test, the company provided an average of 153 rides/month. Annualized, this results in 1,836 rides at \$18/ride or \$33,048 cost (assuming no change in rider co-pays). Total cost under these assumptions—no change in number of riders or in copayments where applicable—would be \$89,352.

Hence, at \$50,000/yr funding under the above assumption, the current service would have to be reduced by a little more than half. However, limitations on riders could extend the service. These include capping the numbers of Uber and Taxi rides users could take per month, increasing co-pays for Uber and levying copays for the taxi, or imposing both. Note that providing partially subsidized Uber services without offering at least JFK taxi transport is not an option under ADA, because Uber does not provide wheelchair accessible vehicles.

Like the prior do-nothing option, existing Town staff and Transportation Committee volunteers would be relied on to sustain the program as they do currently.

This option is independent of the Sudbury Connection Van and MWRTA Dial-A-Ride services, as they are funded by the regional transit authority.

Low Option 2: \$100,000/yr. Given the extrapolation above, the current level service **might** be possible for \$100,000/yr under the same assumptions. However, it would still be prudent to cap rides and/or increase/levy co-pays to ensure funds do not run out before the year is over. Again, no new dedicated staff would be available to manage this scenario beyond existing Town staff and Transportation Committee volunteers.

This option is also independent of the Sudbury Connection Van and MWRTA Dial-A-Ride services for the same reason.

Scenario 2 (Medium Volume/Cost)

Assumptions specific to Scenario 2 are the following:

- Eligible participants in the Go Sudbury! Program will still be restricted to the following categories:
 - 50 years of age or older
 - 18 years of age or older with a disability that limits driving
 - Active duty military or veteran
 - Resident with financial need
 - Essential worker requiring transportation for work.

- Expanding the purposes for which Program transportation can be used and keeping fares the same (free taxi, heavily subsidized Uber) will have a modest impact on service volume.
- Under Option 1, existing Town staff and Transportation Committee volunteers will be able and willing to oversee and manage the expanded services.
- Under Option 2, ARPA funds are allocated to a part-time staff person, and that is sufficient to oversee and manage expanded services.

Medium Option 1: \$138,000. This option expands the purposes of rides for the above residents but keeps co-pays the same for Uber and free fare for taxis (see table below, with changes highlighted in yellow):

Service	Taxi Rides Current	Uber Rides Current	Taxi Rides Proposed	Uber Rides Proposed
Service Summary	<ul style="list-style-type: none"> • Door to door rides • Sunday to Thursday, 5:00 AM to 1:00 AM; Friday and Saturday 5:00 AM to 2:00 AM • Wheelchair accessible, but limited Monday to Friday early mornings and afternoons 	<ul style="list-style-type: none"> • Door to door rides • 24 hours a day/7 days a week (subject to driver availability) 	<ul style="list-style-type: none"> • Door to door rides • Sunday to Thursday, 5:00 AM to 1:00 AM; Friday and Saturday 5:00 AM to 2:00 AM • Wheelchair accessible, but limited Monday to Friday in early mornings and afternoons 	<ul style="list-style-type: none"> • Door to door rides • 24 hours a day/7 days a week (subject to driver availability)
Where do rides go?	<ul style="list-style-type: none"> • Within Sudbury and up to 25 miles outside of Sudbury • All rides must begin or end in Sudbury • No access to Logan Airport 	<ul style="list-style-type: none"> • Within Sudbury and up to 25 miles outside of Sudbury • All rides must begin or end in Sudbury • No access to Logan Airport 	<ul style="list-style-type: none"> • Within Sudbury and up to 25 miles outside of Sudbury • All rides must begin or end in Sudbury • No access to Logan Airport 	<ul style="list-style-type: none"> • Within Sudbury and up to 25 miles outside of Sudbury • All rides must begin or end in Sudbury • No access to Logan Airport
How much is the fare?	<ul style="list-style-type: none"> • Free 	<ul style="list-style-type: none"> • \$ 1 within Sudbury • \$ 2 to/from neighboring towns • \$ 10 to/from location up to 25 miles outside Sudbury 	<ul style="list-style-type: none"> • Free 	<ul style="list-style-type: none"> • \$ 1 within Sudbury • \$ 2 to/from neighboring towns • \$ 10 to/from location up to 25 miles outside Sudbury

What purposes for rides?	<ul style="list-style-type: none"> • Non-urgent healthcare appointments only 	<ul style="list-style-type: none"> • Non-urgent healthcare appointments • Work • Shopping • Get to community resources 	<ul style="list-style-type: none"> • Non-urgent healthcare appointments • Work • Shopping • Get to community resources 	<ul style="list-style-type: none"> • Any purpose
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Within the last 12 months, the Go Sudbury! Program expended over \$78,000 providing taxi and Uber rides. This amount includes a pause on taxi rides in March and April of 2021, and only 10 months of Uber rides since that portion of the program got underway. Over the last six months, the program has expended over \$45,000 with an average of \$7,569 in expenditures each month. This is a more accurate reflection of the per month charges for the Go Sudbury! Program in its current state, which extrapolates to almost \$91,000 in expenditures for rides over a 12 month period. On top of this, the yearly fee for dispatching taxi rides by CrossTown Connect is \$4,950. This brings the approximate total yearly cost to operate the Go Sudbury! Program at its current service level to \$96,000.

In the proposed increased service level above, options for taxi rides would shift from only non-urgent healthcare appointments to allowing work, shopping, and community resource trips as well. Additionally, the types of permissible Uber rides would be shifted to allow rides for any purpose to eligible Go Sudbury! Program participants.

This proposed broadening of permissible types of taxi and Uber rides will likely increase the number of overall rides by at least 33% due to the following. First, by broadening the permissible types of Uber rides, there will be instances where program participants will take rides for purposes beyond essential living services. This might include rides to educational classes for themselves or family members, child care drop off/pickup, or even an occasional recreational activity. Second, pickup times for taxi rides can be scheduled in advance, while Uber rides cannot. As such, program participants find this service more reliable which makes it easier to coordinate their schedules. By expanding the types of permissible taxi rides, the fact that taxi rides are completely free of charge under the Go Sudbury! Program, and the probability that participants who may have been taking other forms of transportation to some of these destinations would now use a taxi ride instead, the number of taxi rides would increase an estimated 33% under this proposed scenario. Estimated total annual cost for rides would be \$127,680.

No new dedicated staff would be added to manage this option; however, due to the increased number of rides, this would likely raise the CrossTown Connect dispatching fee one level which would cost an additional \$5,000 per year (approximately \$10,000 in total). Existing Town staff and Transportation Committee volunteers might be able to sustain other aspects of the program as they do currently for a lower volume.

Based on the above assumption—*only* a 33% increase in ride volume and no increase in staff to manage the programs—the cost per year of this increased level of service would be \$138,000.

This proposed scenario is independent of the Sudbury Connection Van and MWRTA Dial-A-Ride services, as they are managed outside of the Go Sudbury! Taxi and Uber Rides Programs.

Medium Option 2: \$188,000

Medium Option 2 assumes one year of ARPA funding (\$50,000) for a part-time Transportation Coordinator, in addition to the cost of expanded services identified in Medium Option 1 (\$138,000).

A major segment of the October 2021 presentation by the Transportation Committee to the Select Board was enumeration of transportation responsibilities. As discussed above, these are currently handled by several Town staff as well as volunteers on the Transportation Committee, with the addition of a paid dispatch service for taxis provided by TransAction Associates (available to Sudbury as member of the TMA, CrossTown Connect). Attachment 3 provides some of these examples.

Given any increase in transportation services, additional part-time staff will be required. Most of the area municipalities with which Sudbury might be compared employ such staff. Thus, in November 2021, the Transportation Committee requested \$150,000 in ARPA funds for transition support of a part-time Transportation Coordinator for 3 years: “A point person to oversee transportation services, and to identify, apply for and manage grant funds to expand services. This person would also be Sudbury’s representative to regional meetings on transportation...” Full details can be found in the formal letter to the Town Manager.

Scenario 3 (High Volume/Cost): Addressing Livable Sudbury Needs

Scenario 3 addresses three priority needs from the Livable Sudbury report. Attachment 1 provides background on the Livable Sudbury research, and Attachment 2 shows results of a question about transportation from the research. The priority needs are as follows:

- (1) Special populations (seniors, people with disabilities, veterans, financially vulnerable): reliable, efficient, and attractive on-demand, door-to-door service both within Sudbury and to specific destinations, with subsidies for those meeting affordability criteria;
- (2) Commuters: reduction in single-occupancy vehicle traffic in and through Sudbury by means of reliable, efficient, and attractive multi-passenger commuter connections to public transit links;

(3) All residents (including children/youth, age TBD): reliable, efficient, and attractive multi-passenger options within Sudbury, to specific destinations, including evenings and weekends.

In addition to assumptions relevant to all scenarios, the following are particular to Scenario 3.

- **Scale.** Given the comparatively small size of Sudbury, provision of transportation services that are affordable implies scale economies achieved by (a) collaboration of multiple towns, (b) regionalization of some common services (e.g., CoA vans), and (c) software appropriate to the desired system (reliable, efficient, attractive). Fortunately, examples of these are readily available.
- **Multiple service providers.** Meeting the three priority needs described above will entail state (e.g., MBTA), regional transit authorities, transportation management, and microtransit providers. Partnerships with bike- and car-share companies may also be considered.
- **Smart applications for riders and providers.** The more complex a system, the greater the efficiencies gained by decentralized software allowing real-time coordination among providers and riders. Again, examples are readily available.
- **Sustainability.** Even with scale economies, rider fees will fund only a small portion of the cost of the desired system. Funds from collaborating towns, transit authorities, and grants, along with intelligent negotiation of rates with microtransit providers, and rider co-pays/fares must sustain the system. Examples are readily available.

Elements of System Design

Currently, in the Making the Connections initiative, five towns in the MAGIC region are collaborating: Sudbury (lead), Acton, Concord, Maynard, and Stow. If we add Lincoln to this group, we have a total population of about 85,000 people as well as:

- Four commuter rail stations (Fitchburg line to North Station) in three towns (Acton, Concord [2], and Lincoln) and close proximity of Sudbury to the Framingham-Worcester to South Station rail. Stow is about the same distance to Acton and Framingham commuter rail.
- Maynard and Acton utilize the CrossTown Connect shuttle system (vehicles are CoA vans) service to South Acton commuter rail.
- The MWRTA offers bus service in Wellesley and Newton, providing connections to the MBTA. Connecting transit to that service is possible from Marlborough and Framingham.
- Potential for regionalizing all CoA vans in the collaboration.

Challenges, of course, are the rural nature of these communities and the very large geographic area they represent—about six times the size of Newton for about the same population. For this

reason, the following types of transportation services will be required using, most likely, micro-transit in the form of taxis, livery, TNCs, etc. (note that each type implies return service):

- *Spoke to hub* (pick up at residences and drop off at transit authority hub for further service; e.g., to bike share, car share, commuter rail)
- *Shuttle* (from designated parking lots to specific destinations, including work sites as well as transit hubs)
- *Predictable on-demand* (non-commute multi-passenger service to shared destinations, such as library, bank, etc.)
- *Loop* (similar to shuttle; short, fixed route, multi-passenger vehicles traveling high-use corridors)
- *Unexpected on-demand* (for single-passenger service to meet unexpected needs that cannot be provided by the above).

For a scenario of this complexity, only the following matrix of potential sources and uses of funds is provided (estimated costs for each would be required, once a potential design is agreed upon):

Source of Funds	Examples	Use of Funds
Collaborating communities	Sudbury, Stow, Maynard, Acton, Concord, Lincoln	Tax levy assigned to subsidies for resident transportation services
Regional Transit Authorities	MWRTA, LRTA, MART	Vehicles and drivers, operating costs, etc., for fixed route and “loop” services
State Transit Authority	MBTA	Public mass transit hubs (commuter rail, etc.) and paratransit within area (RIDE)
Transportation Management Association	CrossTown Connect	Regionalizing CoA vans for commute and other services
Federal grants	ARPA, US DOT, etc.	Transit authority support for above uses, including smart software
State grants	MPO, Community Transit, CCC, etc.	Community support (pilots, subsidies, etc.), including smart software
System software	Spare Labs, TransLoc, Uber, etc.	Route optimizing and rider matching system software (app based)

Demonstration grant agencies	RW Johnson, Ford, etc.	Targeted transportation pilots (health care, reducing social isolation, developing work-force, smartphone education, etc.)
Rider co-pays	Geofence co-pays within and beyond communities; targeted destinations, etc.	Partial support for services
Donations, gift vouchers, etc.	Community residents	Partial support for individuals and/or services

Some examples of community transportation systems with at least some of the above components are the following:

- Acton (town fund for transportation)
- Lexington (bus and taxi)
- Newton (Via system, seniors and all residents)
- Weston (taxi, CoA van)
- Marin County (Transportation Authority partnership with Uber).

Attachment 1: The Livable Sudbury Needs Assessment

Transportation is the second of eight domains of community attributes that the World Health Organization characterized as vital to population health and quality of life: physical, social, economic, psychological, etc. During 2018, researchers from UMass Boston's John W. McCormack Graduate School of Policy and Global Studies conducted an assessment of the livability of Sudbury. The final report published in 2019 noted:

...In this study, transportation issues relating to driving barriers, traffic, walkability, and overall satisfaction with available transit options emerged as significant issues.... Expanding transportation options for specific segments of the community, such as supported options for those with mobility limitations, was also desirable.

Data from research for the Livable Sudbury report revealed the following (Attachment 1 provides additional detail):

- **Transportation is identified as crucial by a wide range of stakeholders:**
 - Families with children under 18 years
 - Residents age 60+
 - Residents of all ages with a participation limitation
 - Residents of all ages who are not financially secure.
- **The range of specific transportation needs identified implies a variety of options to meet them**
 - After-school transportation for children and youth (fixed route, vans)
 - Transportation to medical appointments, social service appointments, respite opportunities such as adult day care, etc. (scheduled and on-demand)
 - Transportation to shopping, appointments, evening, and weekend services, meetings, and socialization opportunities (shuttles, vans, etc.)
 - Affordable transportation to employment venues, childcare facilities, commuter rail, MBTA routes, as well as services similar to the preceding.
- **A number of the transportation options must be both affordable and accessible**
 - 42% of residents with a participation limitation reported they “had missed, canceled, or rescheduled a medical appointment due to lack of transportation.”
 - More than a third of residents who are not financially secure are not satisfied with their “ability to get where they want to go.”
 - Nearly half of residents 60+ are not satisfied with their “ability to get where they want to go.”
- **Transportation gaps affect all livable domains, reducing the overall “livability” and long-term attractiveness of the town**
 - Lack of transportation limits *social participation*

- Lack of transportation affects overall well-being (*domain of community and health services*)
- Lack of transportation affects *housing* options and limits access to *outdoor spaces*
- Lack of transportation limits *civic participation and employment*
- Lack of transportation can result in segments of the town population “not feeling welcomed” (*respect and social inclusion*).

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Attachment 2: Details on Transportation

Table 4. “Which of the following would you use for trips in Sudbury or surrounding communities, if they were available?”		
Groups reporting lower interest	Type of transportation	Groups reporting higher interest
	Ride-sharing: 50%	Not financially secure (41%) With a participation limitation (32%)
Age 60+ (1%) With a participation limitation (11%)	Afterschool transportation: 35%	With children under 18 at home (61%)
With children under 18 at home (26%)	Fixed-route, fixed-schedule local bus: 31%	Not financially secure (43%) With a participation limitation (47%)
With children under 18 at home (18%)	On-demand local bus/van: 25%	Age 60+ (38%) Not financially secure (31%) With a participation limitation (63%)
	Taxi service: 20%	With a participation limitation (26%)
With children under 18 at home (6%)	Transportation to medical appointments: 14%	Age 60+ (33%) Not financially secure (33%) With a participation limitation (58%)

Attachment 3: Examples of Transportation Responsibilities

General Fundraising:

- Grant, foundation proposal writing
- Oversight of grants (tactical and financial performance)
- Relationships/communications with vendors, grant providers, other collaborating towns
- Data gathering and reporting on services provided

Coordination:

- Day to day work with participants in the program
- Technical assistance with registration, application, use of service (CrossTown Connect, taxi dispatch, Uber smartphone app)
- Education of users about all transportation options
- Referral to Tech help, volunteers
- Troubleshooting issues

Current Grant Responsibilities

- Regional meetings organized by Sudbury as lead of 6 towns
- Communication with other town leadership/planning
- Implementation of RFP for consultants, etc.
- Communication with Program Manager consulting firm
- Reporting to town and other entities on services provided
- Taxi company relations
- Creation of online application and database
- Management of online database
- Client relations and tech assistance
- Uber contract management
- Creation of online application and database
- Management of online database
- Client relations and tech assistance
- Uber user contact re: technical assistance, trouble shooting, access for visual or other impairment issues
- Education about transportation options

ⁱ Boston Region Metropolitan Planning Organization notes: “There is a ... direct relationship between policies that manage parking supply and policies that manage vehicle trip generation [i.e., parking availability increases SOV use].”