June 3, 2025

Lextran Microtransit Feasibility Study

Lexington-Fayette Urban County Council Work Session

Agenda

- What is microtransit?
- Case studies
- Existing conditions and market analysis
- Recommendations development

What is Microtransit?

Transit Modes

Fixed-Route Bus

- Most efficient type of bus service
- Travels on fixed routes to activity centers and along travel corridors
- Serves higher density areas

Ridehail

- Curb-to-curb service similar to taxis offered by companies like Uber and Lyft
- Book trips via smartphone app
- Drivers use their personal vehicles
- Not ADA accessible

ADA Paratransit

- Origin-to-destination ADA service (Wheels)
- Limited to eligible riders with disabilities that prevent them from using Lextran bus service (or travel to/from bus stops)
- Reservations required the day before travel

Microtransit

- Book trips via phone app or calling in
- Leverages trip dispatching technology like ridehailing companies
- More expensive and less efficient with higher ridership
- Must include accessible vehicles

Fixed Service

Flexible Service

Case Studies

Case Studies – Programs, Technology, and Uses

Programs and Technology

- **Case studies** – six programs from five agencies, including two partnerships with ridehail companies and four microtransit programs
- **Microtransit operations** – two operated in-house and two contracted to third party
- **Microtransit technology** – three contract with Via and one contracts with RideCo

Project Purpose and Use Case

- **Pilot project** – most began as pilots
- **Areas not suitable for other services** – service are offered in places too difficult to serve effectively with fixed routes such as in low density/low ridership environments
- **Coordination** – implementation is coordinated with other transit services to work as a connected network

Case Studies – Funding and Operations

Funding

- **Funding sources** –typically from same source as other transit services (local, state, and federal)
- **Local funding partners** – local government (MPO, county, state DOT), and local businesses (corporations and community colleges)
- **Fares** – fares typically account for a small fraction of the operating costs
- **Grants** – typically pilots for testing service in short term; needs sufficient longer-term funding

Implementation and Operations

- **Contracted service delivery** – can enable service to be implemented quickly
- **Fares** – passenger fares vary by agency from zero to a premium price (several cases of increasing fares because of overwhelming demand)
- **Fare payment** – app-based fare payment is the norm; this can present challenges
- **Trip booking** –multiple methods of booking trips (smartphone app, call center)

Case Studies – Results and Lessons Learned

Outcomes

- **Capacity** – microtransit has capacity limitations and can become overwhelmed if demand exceeds capacity
- **Denied trip requests** – if demand overwhelms supply, trip requests are denied and customers become frustrated with service
- **KPIs** – agencies recommended measuring key performing indicators to make sure service is on track

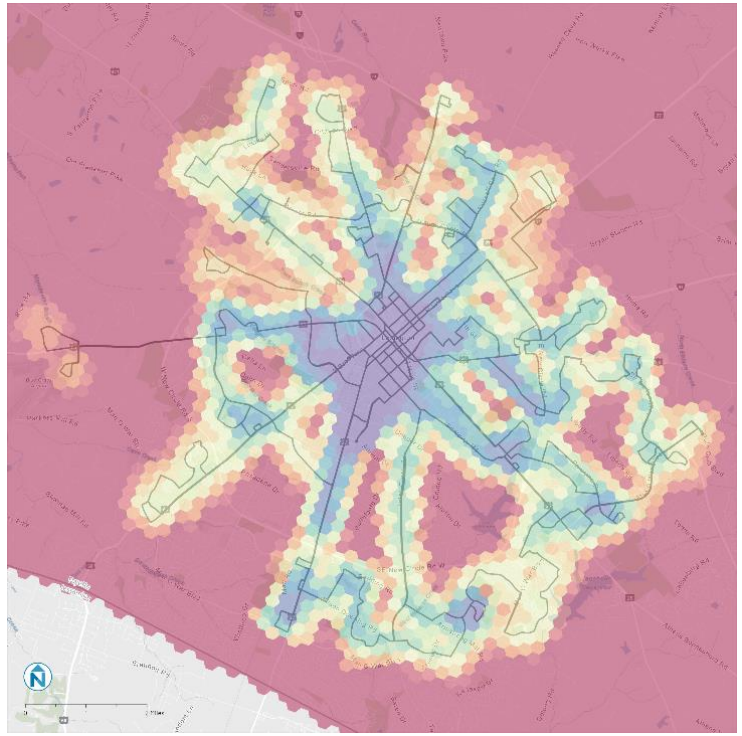
Challenges and Lessons Learned

- **Control demand** – agencies advised limiting demand
- **Education** – staff need to educate riders on how to use new service
- **Staffing** – new service may require additional staff
- **Ridehail partnerships** – partnering with ridehailing companies comes with limitations (driver availability and uncertainty of drug and alcohol testing)

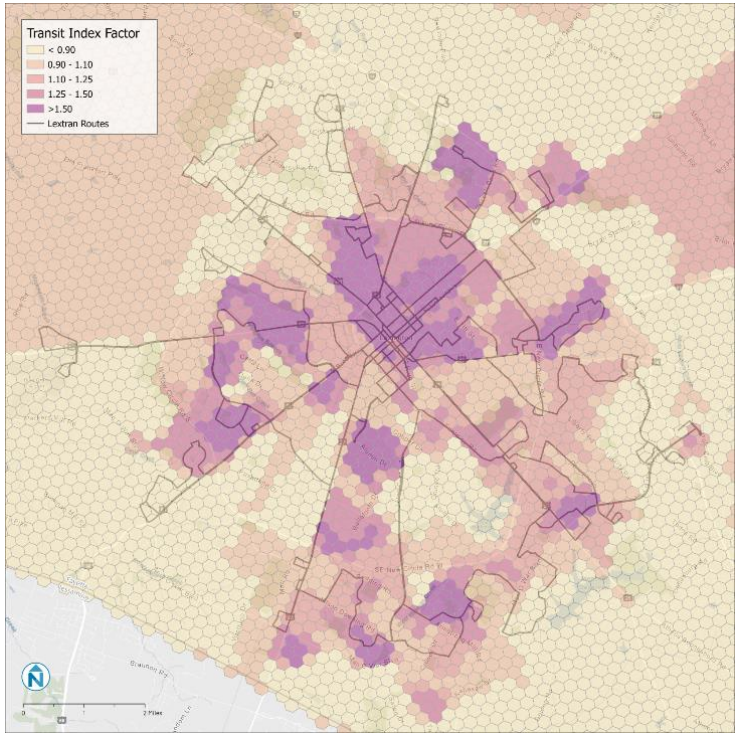
Existing Conditions and Market Assessment

Existing Service and Market Assessment

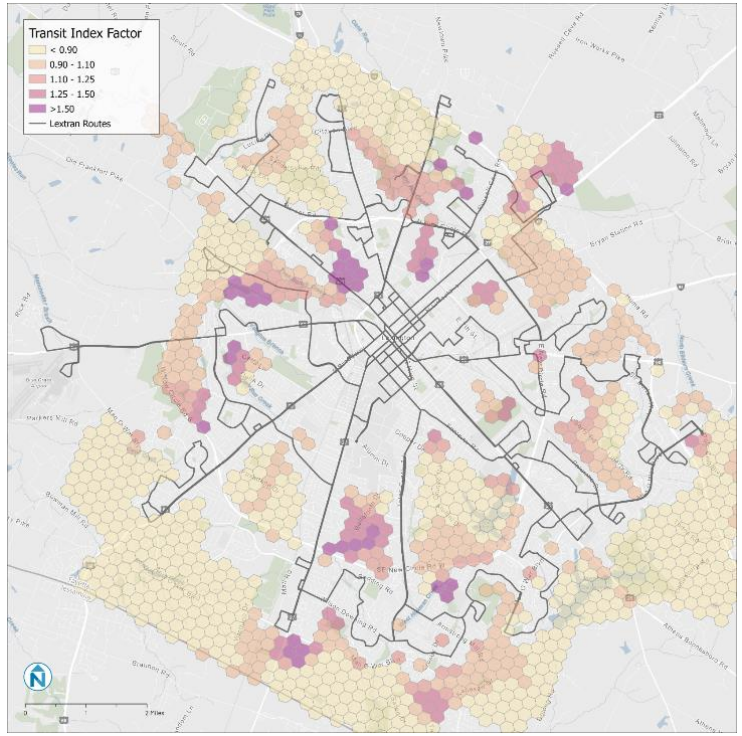
1. Map existing transit service



2. Map demand for transit service



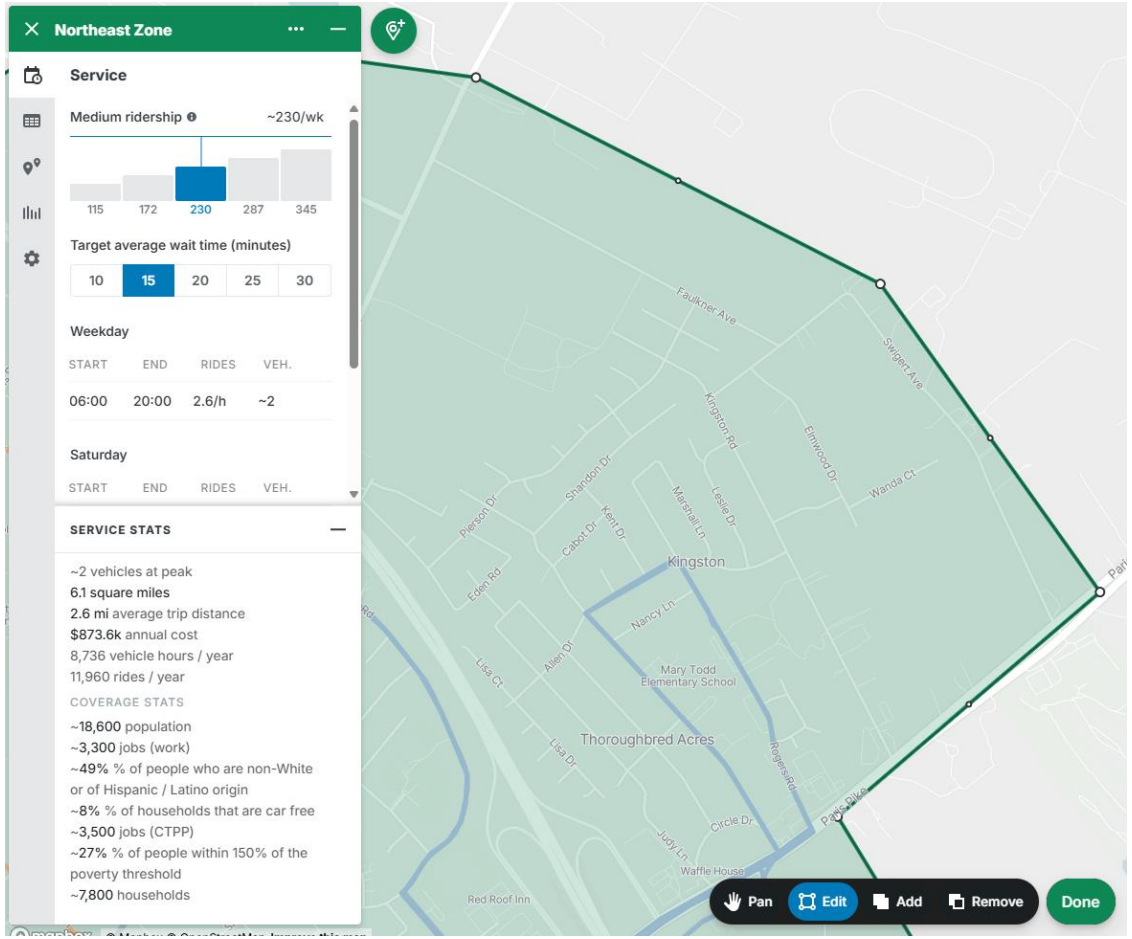
3. Locate gaps



Recommendations Development

Microtransit Zone Best Practices

1. Complement existing services
   - Connect with fixed routes at an anchor point
   - Avoid cannibalizing existing bus routes
2. Mix of trip types
   - Demographics – serve populations that need and would use transit service
   - Places to go – jobs, shopping (especially grocery), medical, other trips generators at an activity center
3. Manageable but productive zone size
   - Approximately 5 square miles is a good starting point/rule of thumb
   - Zones can be smaller or larger depending on density
   - Design zone for at least two vehicles (one-vehicle zones do not provide enough coverage (except at very low demand times)
4. Easy to understand and approachable
   - Easy to remember area/location
   - Logical boundaries such as well-known roads



Constructing Microtransit Zones

Best Practice

- Complement existing service
- Mix of trip types
- Zone size
- Easy to use

Case Studies

- Similar agencies
- Microtransit implementation experience
- Lessons learned

Existing Conditions / Market Assessment

- Identify needs
- Identify transit gaps

Staff Workshop

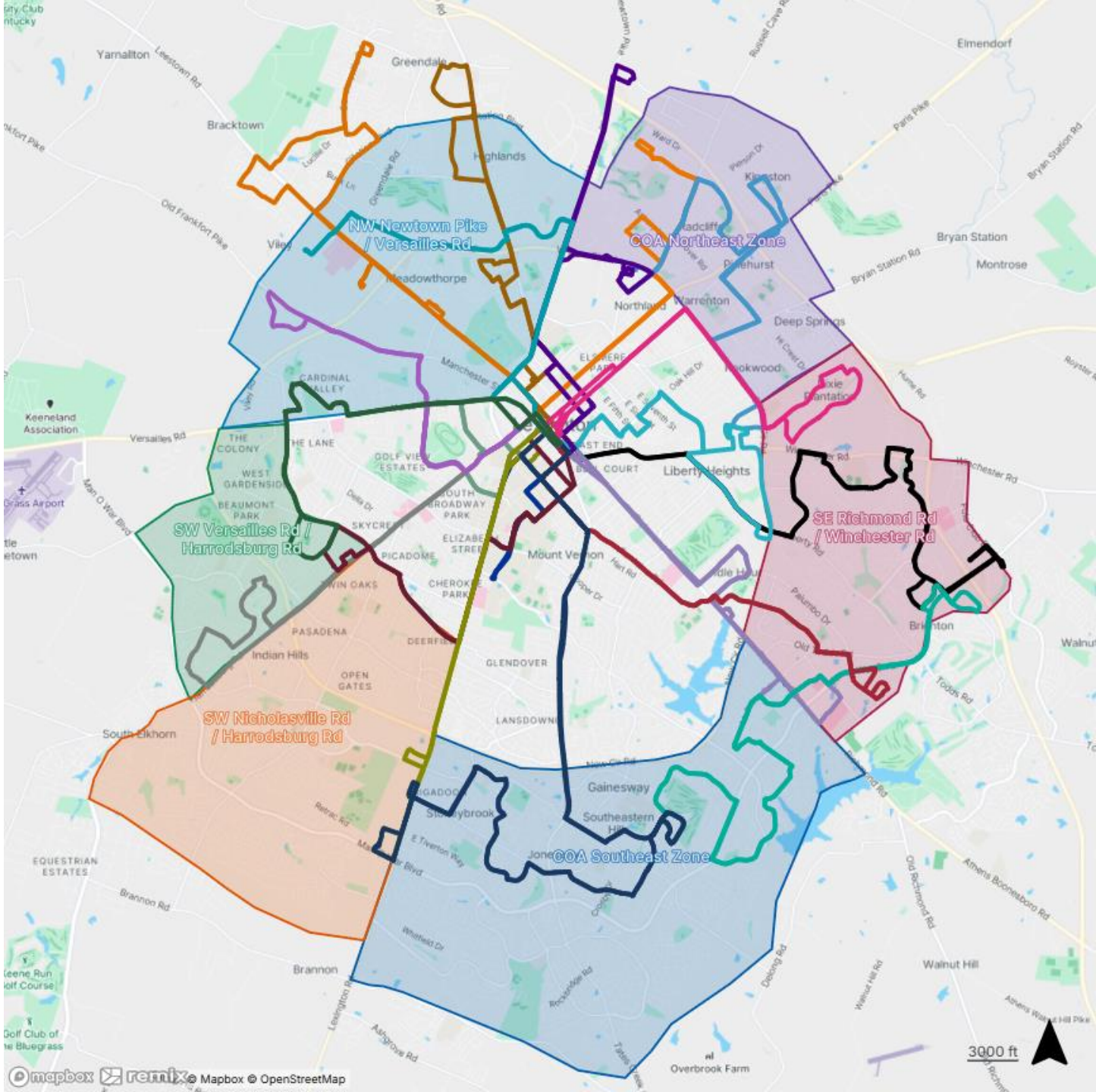
- Local expertise / knowledge
- Draft and revise zonal boundaries

Engagement

- Public survey
- Stakeholder engagement

Zone Screening

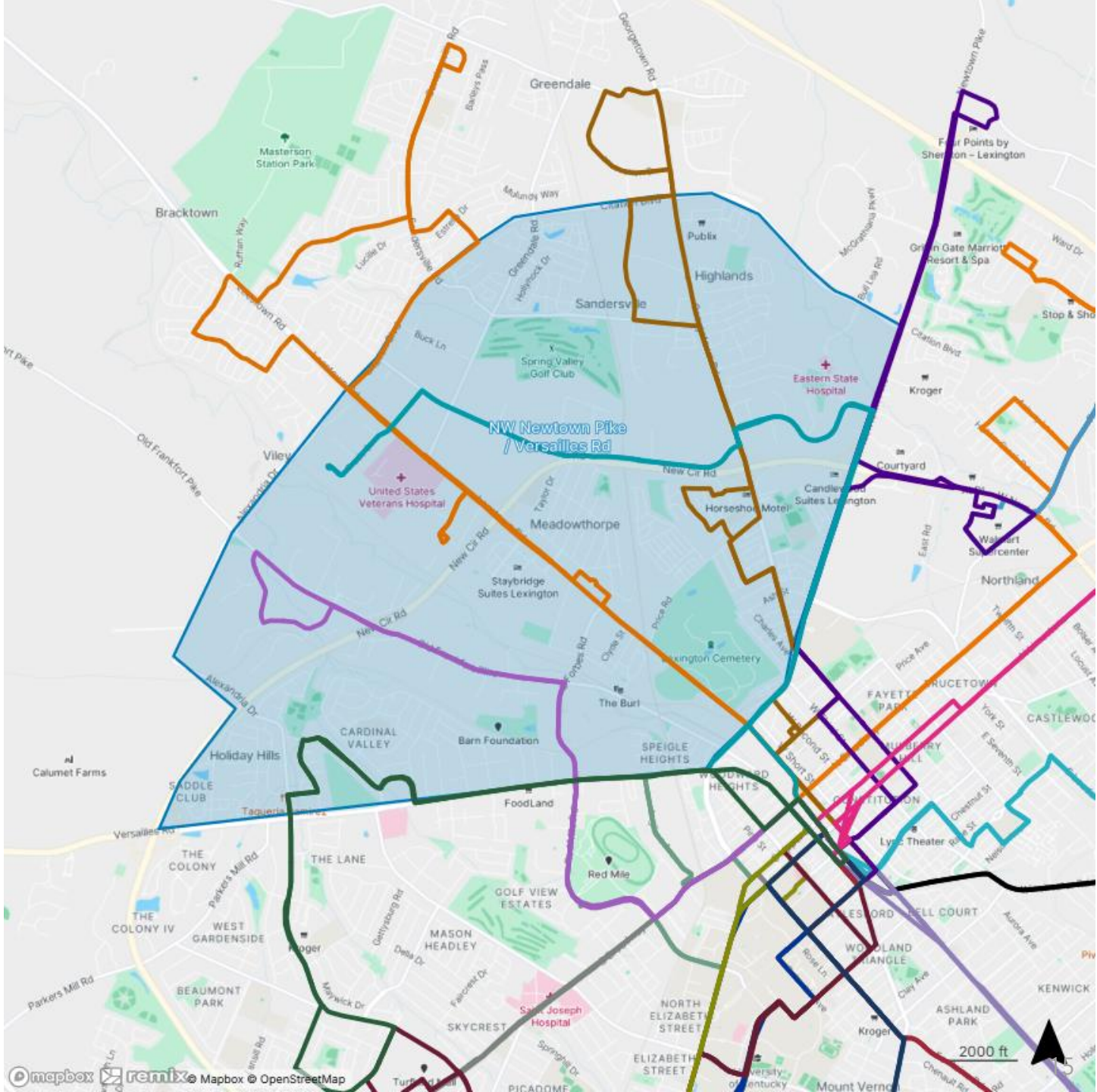
- Evaluate zones based on:
  - Population and jobs
  - Services (healthcare facilities, grocery stores, education)
  - Potential fixed route benefits
  - Service expansion
  - Connections to fixed route service
  - Ridership estimates
  - Cost/efficiency of zones



Lexington Zone Recommendation

Zone recommendations can vary according to the problem that microtransit seeks to solve. Northwest Newtown Pike / Versailles Rd zone presents strong potential for success and cost effectiveness for a pilot zone.

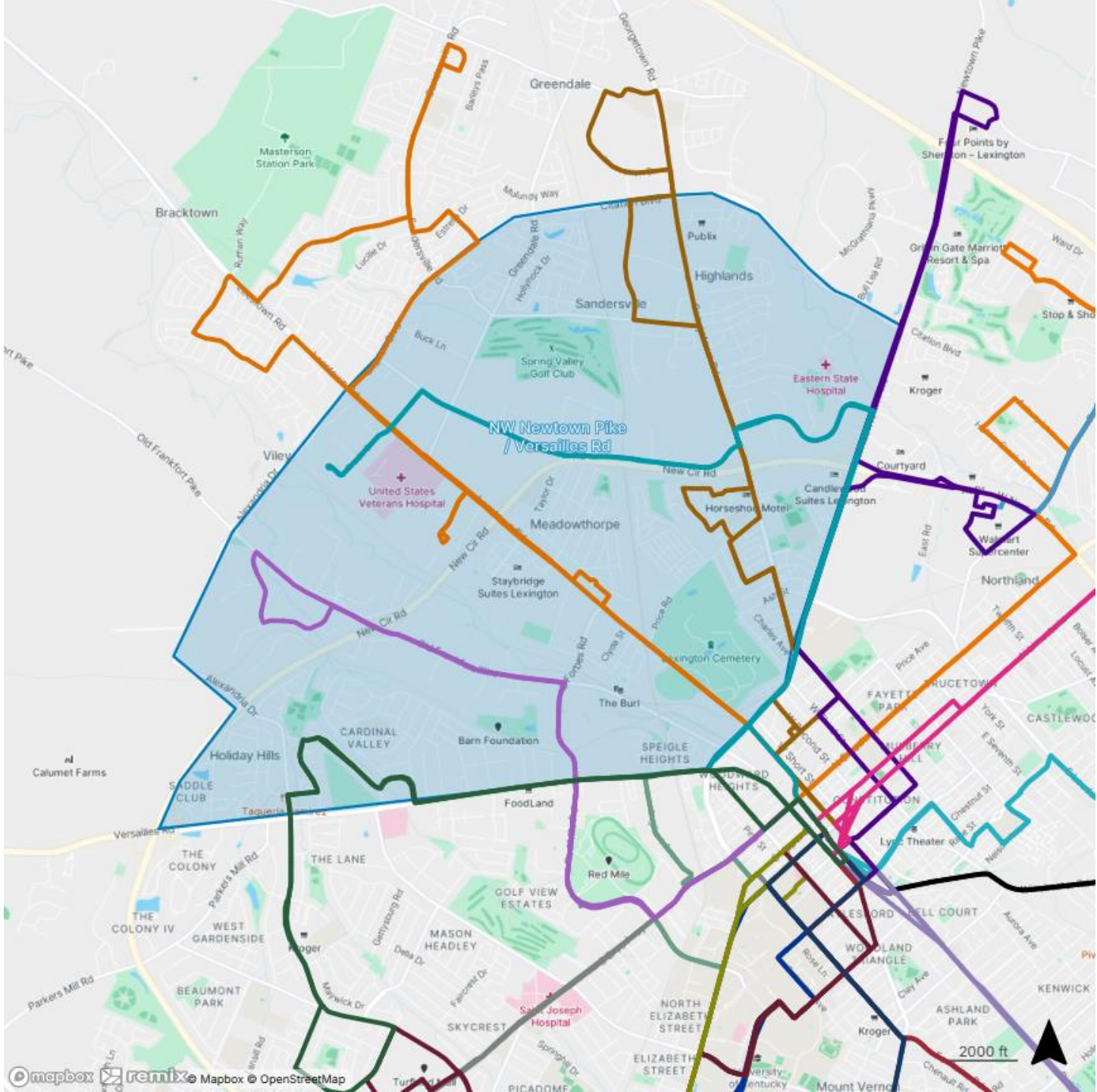
- Economic opportunity – high concentration of jobs (full range of shifts) - potential funding partnerships
- Healthcare access – service to VA hospital, Eastern State Hospital, and busiest dialysis clinic served on Wheels
- Demographically varied, high transit dependent population, large number of paratransit origins & destinations
- Strong anchor with central Route 12 and Routes 8 and 4 bordering zone
- Area of growth in Lexington



Operating Costs

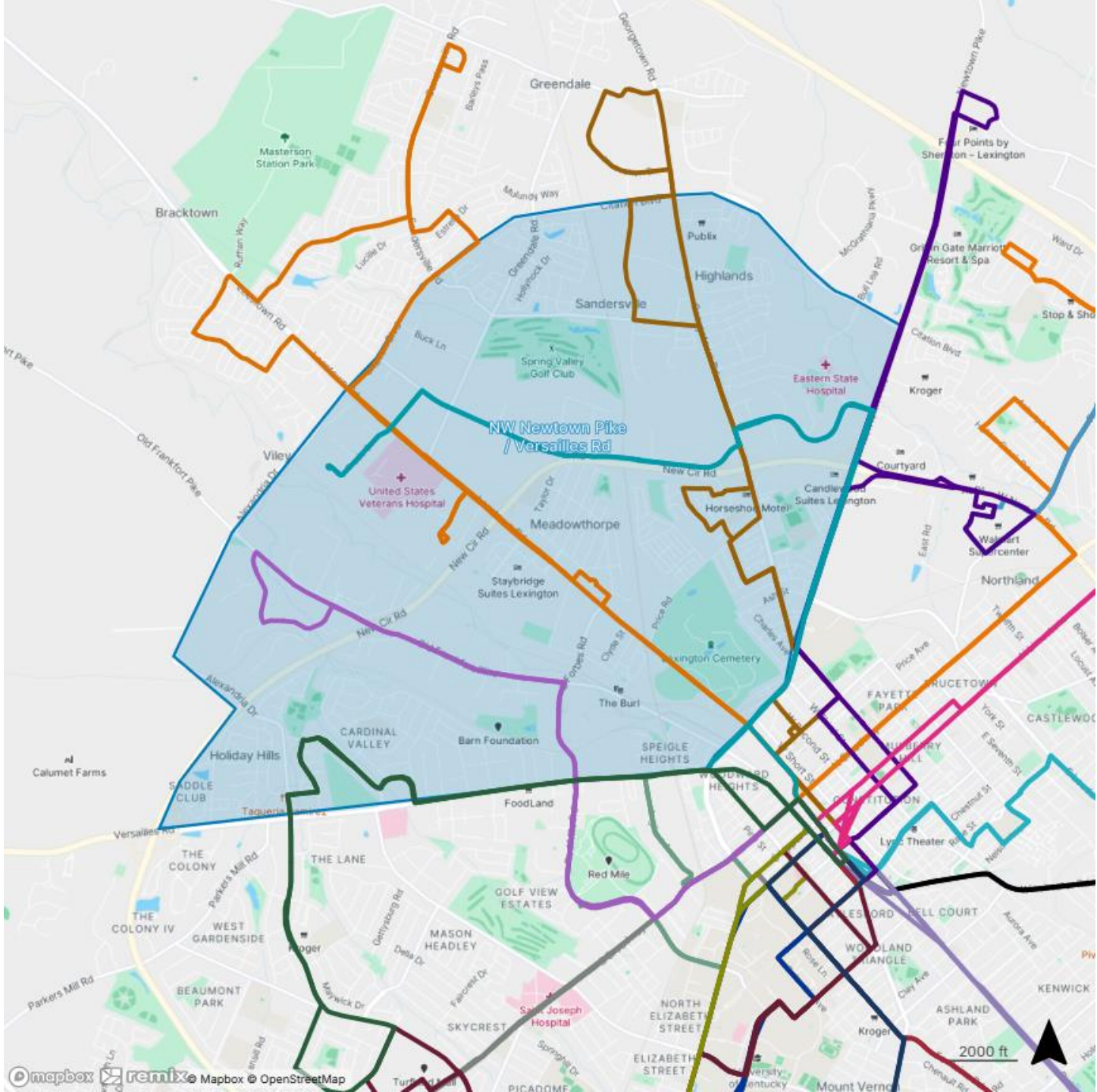
- Assume:
  - Service hours 6 a.m. to 8 p.m.
  - Two vehicle-operation
  - Additional administrative cost to agency managing contract and new service model (contract management, marketing, procurement)
- Hourly cost: $95
  - Based on $90/hour cost in 2024 for turnkey service in Baton Rouge, LA (was $80/hour in 2022)

Variable	Assumption
Span of service	6 AM-8 PM
Number of vehicles	2
Daily vehicle hours	28
Days a year	365
Contract cost per hour	$95
Annual contract cost	$970,900
Annual administrative cost	$200,000
Total annual operating cost	$1,170,900
Total cost for 2-year pilot	**$2,341,800**



Ridership and Fares

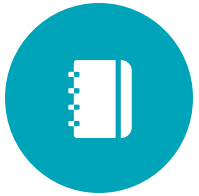
- Ridership:
  - Weekday (daily): 59
  - Weekends (daily): 41
  - Annual: 19,500
- Fares:
  - Fixed route: $1
  - Wheels: $1.60 ($2 for premium)
  - Microtransit: $3.00 (fixed route transfer included)
  - Approximate fare revenue: $58,500
- Performance metrics:
  - Passengers per hour: 1.9
  - Cost per passenger: $59.75
  - Farebox recovery ratio: 5.0%



Microtransit Funding Opportunities & Limitations

Federal Formula Funding

- Fully allocated to Lextran Paratransit and Maintenance needs
- Formula increases are rare.



Federal Grant Funding

- Limited grant opportunities available
- Competitive application process
- Long-term funding not available

Local Funding

- Reliant on continued LFUCG support
- Ballot initiatives are expensive and uncertain
- Service scope does not benefit entire city

Local Partnerships

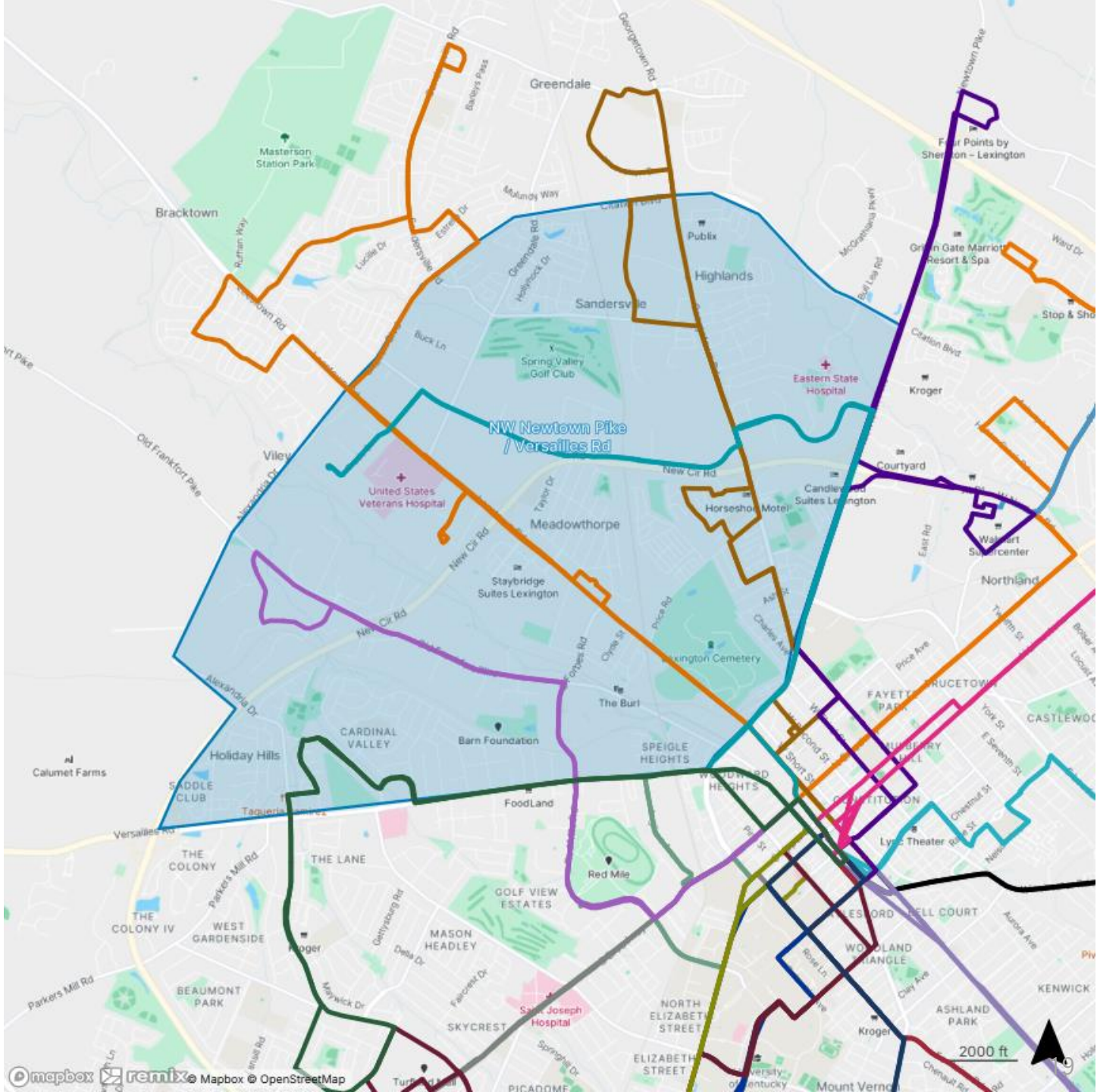
- Colleges and Universities
- Major Employers (e.g. Hospitals, Warehouse Distribution Centers)
- Nonprofit Organizations or Foundations

Supplemental Funding

- Subsidized fares generate little revenue
- Advertising (e.g. in-app ads, vehicle wraps, naming rights) offer limited revenue

Implementation Strategy Recommendations

- Implementing microtransit comes down to agency goals and funding
- Start with a pilot (preferably two or three years) and test the market
- Make careful, conservative policy decisions to avoid overpromising and underdelivering
- Advertise the new service and educate riders on how to use it
- Track performance monthly, evaluate every 6 months
- If pilot program meets goals (coverage, access, performance metrics), secure additional longer-term funding
- Avoid modifying fixed route service until microtransit service is permanent



Conclusion

Microtransit Benefits

- Effective at **filling service gaps** that fixed route cannot
- Flexible pickup/drop-off locations – creates **improved access** (less walking to reach stops)
- **Flexible timing** – passengers call when they need a ride, and a vehicle arrives shortly (typically between 15-30 minutes)
- **Technology** enables robust data collection and insights

Microtransit Drawbacks

- **Cost per trip is high compared to other modes**
  - Estimated $59.75 for northwest zone
  - Lextran core fixed routes average $5.04
- **Limited productivity** - passenger per hour (PPH)
  - Most productive case study was 5-6 PPH
  - Some microtransit programs have <1 PPH
  - Typically microtransit is around 2-3 PPH
  - Lextran core fixed routes average 22 PPH
  - Wheels paratransit approximately 2 PPH

Thank you!

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