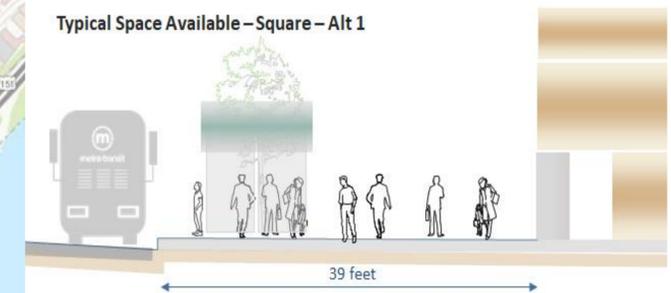
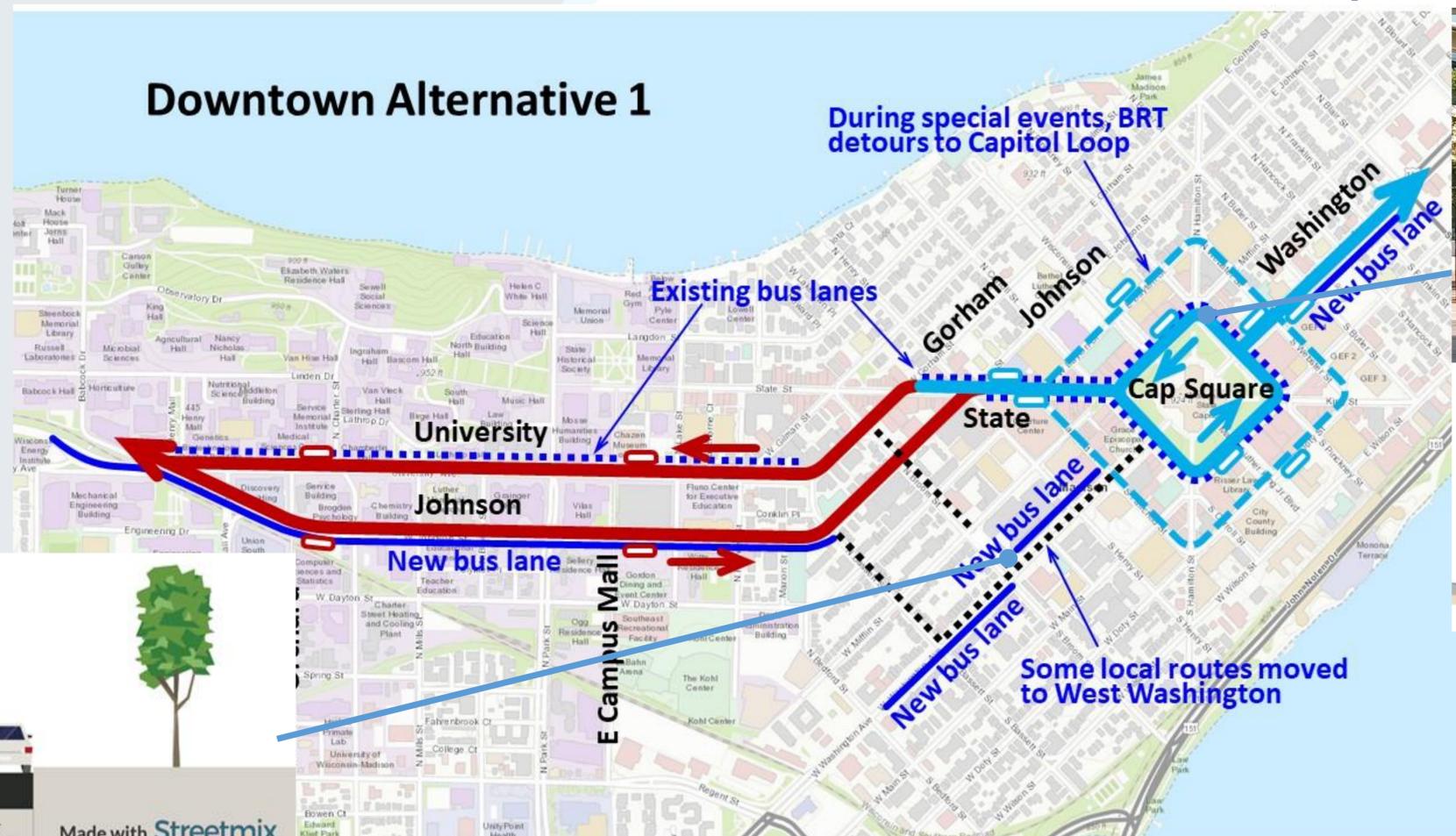


Item	Alt 1	Alt 1A	Alt 2	Alt 3
Access to major destinations	State Street – Good Capitol Square – Good	State Street – Good Capitol Square – Fair	State Street – Fair Capitol Square – Fair	State Street – Fair Capitol Square – Fair
Maximum distance between Station Pairs	0.2 miles	0.4 miles	0.2 miles	0.2 miles
Size of station serving State St	Moderate – 15 riders	Moderate – 15 riders	Small – 8 riders	Small – 8 riders
Number of Buses on State Street	~50% fewer	~50% fewer	Same as existing	Same as existing
Size of station serving Capitol Square	Large – 30 people	Doty/MLK – Moderate 15 people Dayton/Wisc - Small 8 people	Doty/MLK – Moderate 15 people Wilson/MLK - Moderate 15 people	Doty/MLK – Moderate 15 people Wilson/MLK - Moderate 15 people
Safety/visibility	Stations are in highly trafficked visible areas	Stations are in highly trafficked areas	Henry St station in area with low visibility and traffic	Stations in moderately trafficked areas
Transfers and Local Route Integration	Good	Fair Local routes could compete with BRT	Fair Local routes could compete with BRT	Fair Local routes could compete with BRT
Detours	10 percent	3 percent	3 percent	1 percent
Travel Times	EB – 8:02 WB – 7:00	EB – 6:58 WB – 6:10	EB – 10:21 WB – 9:25	EB – NA WB – 9:25
Traffic Impacts	None (no travel lanes removed)	Minimal (peak travel lane removed on Doty)	Minimal (peak travel lane removed on Doty)	Minimal (peak travel lane removed on Doty)
Bike Routing	West Wash does not have protected bike lanes.	Lose bike lanes around a portion of the loop. West Wash does not have protected bike lanes.	Broom St bike lanes converted to shared bus/bike lane. (Precludes protected bike lane.)	Precludes protected bike facilities for a portion of Broom St.
Total Parking Spaces Removed	4	85	110	107
Total Metered Parking Spaces Removed	4	85	100	97
Total Parking Revenue Lost yearly	\$8,000	\$170,000	\$200,000	\$195,000

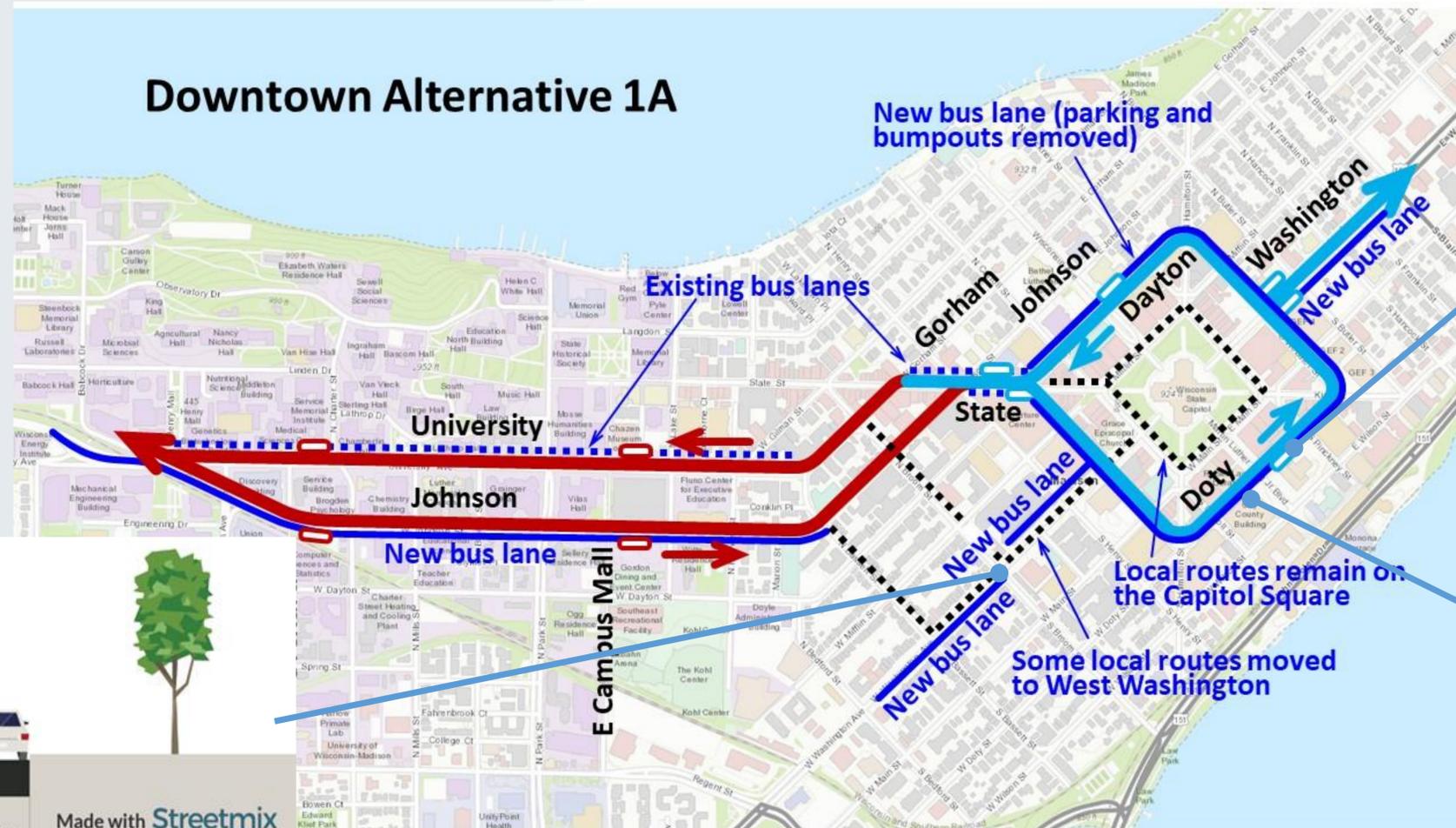
Downtown Alternative 1 – State Street/Capitol Square



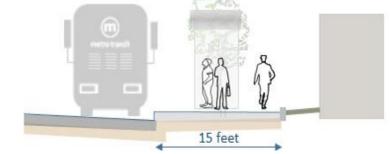
- » **Good** access to State Street and Capitol Square
- » **Acceptable distance** between station pairs (0.2 miles)
- » **Moderate** station size serving State Street (15 riders)
- » **Large** station size serving Capitol Square (30 riders)
- » **Good** safety and visibility
- » **Good** connections to transfers and local routes

- » BRT would be **detoured** for events (~10%). (Events would still be able to occur.)
- » **Good travel times**
 - Eastbound 8:02
 - Westbound 7:00
- » **Minimal traffic impacts**, no travel lanes removed
- » **Allows** protected bike facilities on Broom Street
- » **4 parking spaces removed** (all metered), resulting in \$8,000 in annual revenue lost

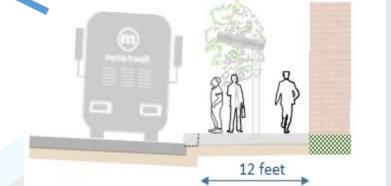
Downtown Alternative 1A – Outer Loop



Typical Space Available – Outer Loop – Alt 1A, 2, 3



Typical Space Available – Outer Loop Alt 1A



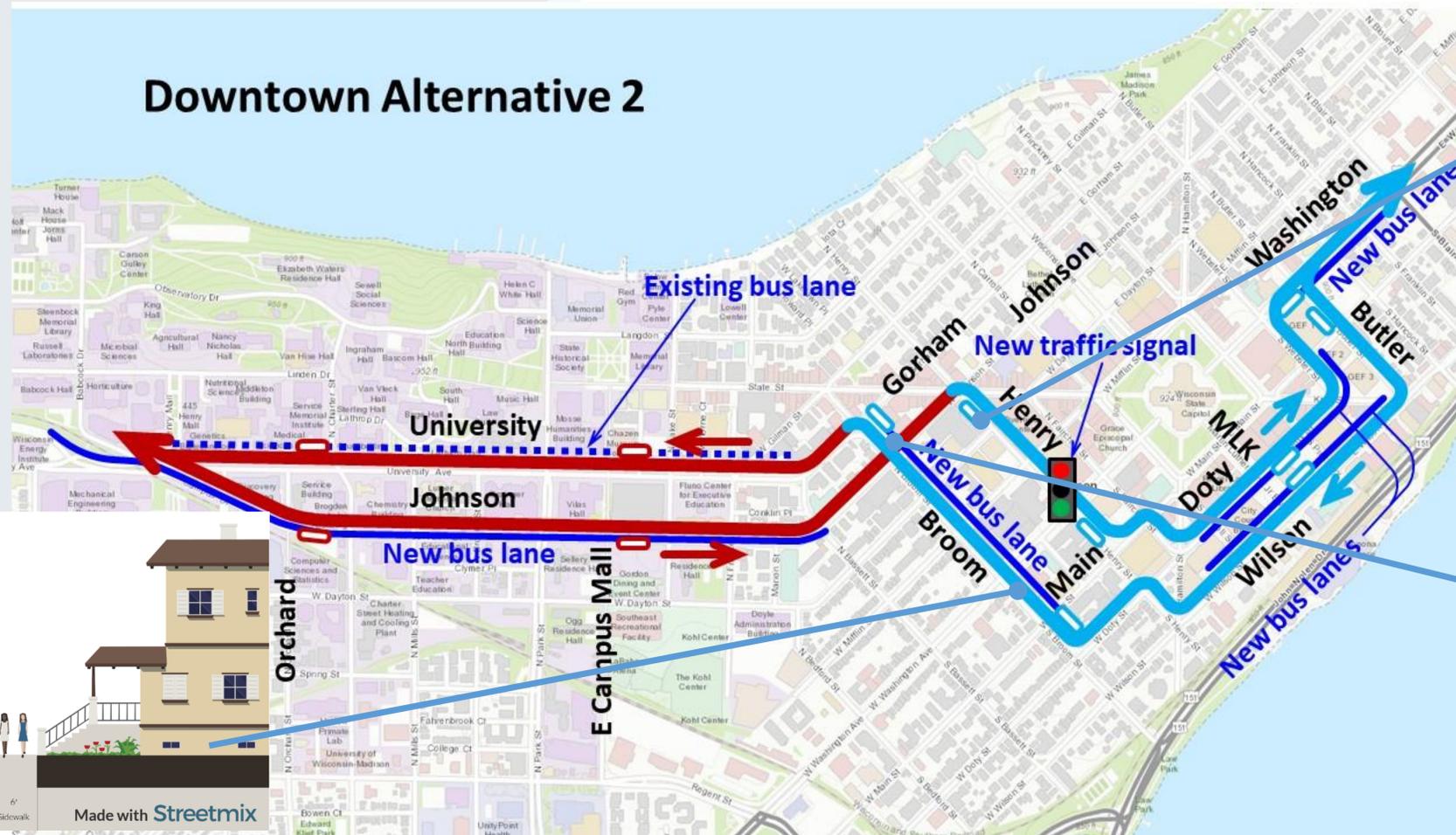
West Washington Ave with a bus lane



- » **Good** access to State Street and **Moderate** access to Capitol Square
- » **Long distance** between station pairs (0.4 miles)
- » **Moderate** station size serving State Street (15 riders)
- » **Moderate** to **Small** station size serving Capitol Square (8-15 riders)
- » **Good** safety and visibility
- » **Moderate** connections to transfers and local routes
- » Would require **less detours** than other options (3%)

- » **Good travel times**
 - Eastbound 6:58
 - Westbound 6:10
- » **Minimal traffic impacts**, peak travel lane removed on Doty
- » **Allows** protected bike facilities on Broom Street
- » **85 parking spaces removed** (all metered), resulting in \$170,000 in annual revenue lost

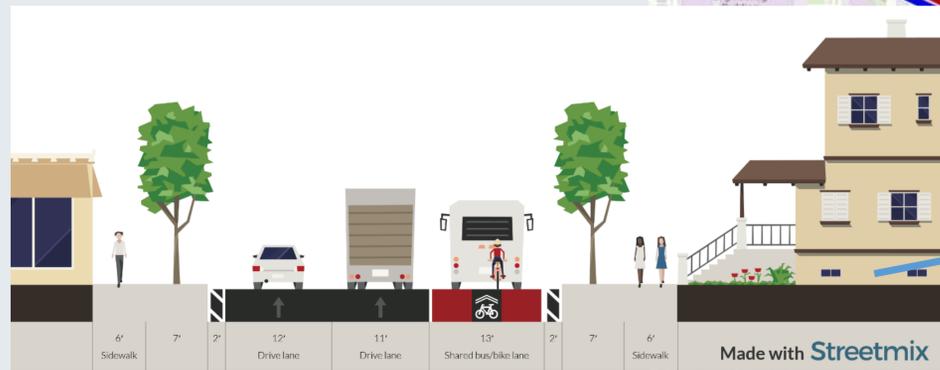
Downtown Alternative 2 – Broom/Henry & Wilson/Doty



Possible Station Size/Type at Henry Street



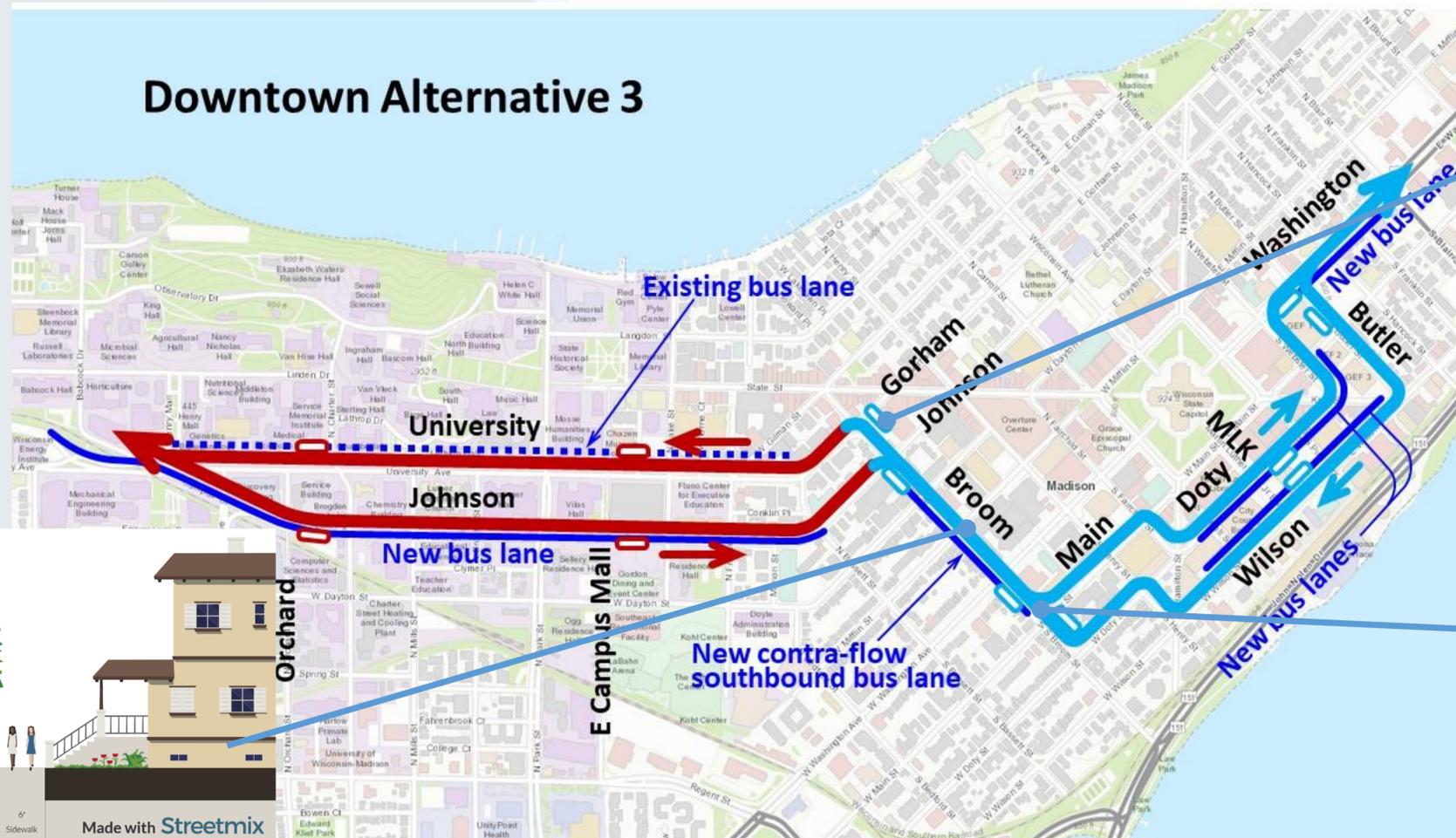
Typical Space Available – NB Broom – Alt 2,3



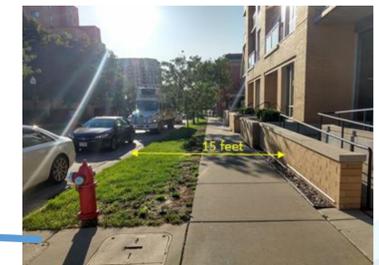
- » **Moderate** access to State Street and **Moderate** access to Capitol Square
- » **Acceptable distance** between station pairs (0.2 miles)
- » **Small** station size serving State Street (8 riders)
- » **Moderate** station size serving Capitol Square (15 riders)
- » **Poor** safety and visibility
- » **Moderate** connections to transfers and local routes
- » Would require **less detours** than other options (1%)

- » **Moderate travel times**
 - Eastbound 10:21
 - Westbound 9:25
- » **Minimal traffic impacts**, peak travel lane removed on Doty
- » **Does not allow** protected bike facilities on a portion of Broom Street
- » **110 parking spaces removed** (100 metered), resulting in \$200,000 in annual revenue lost

Downtown Alternative 3 – Two-way Broom & Wilson/Doty



Typical Space Available – NB Broom – Alt 2,3



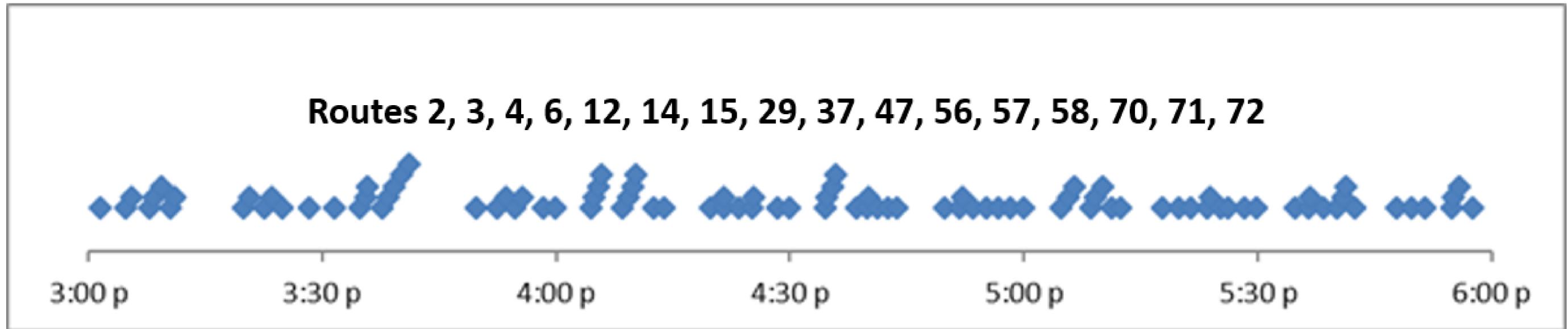
Typical Space Available – SB Broom – Alt 3



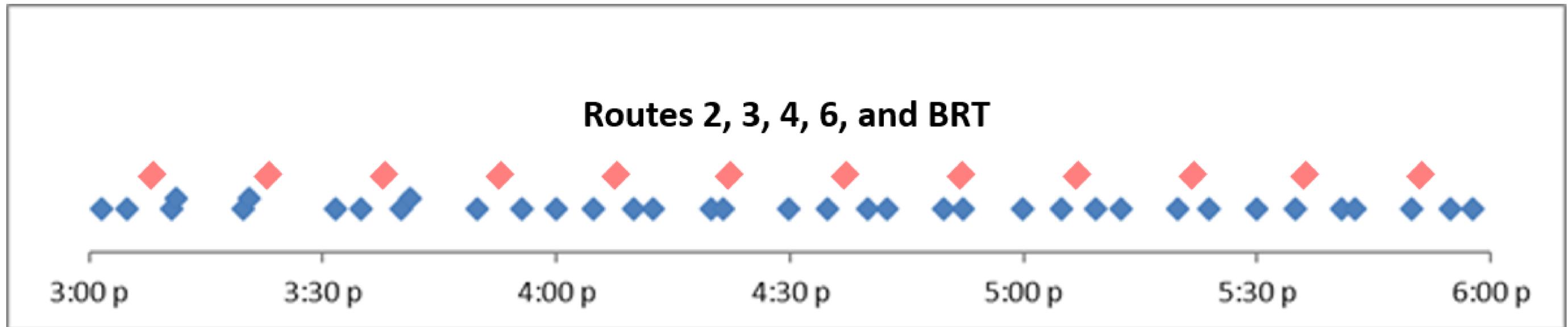
- » **Moderate** access to State Street and **Moderate** access to Capitol Square
- » **Acceptable distance** between station pairs (0.2 miles)
- » **Small** station size serving State Street (8 riders)
- » **Moderate** station size serving Capitol Square (15 riders)
- » **Moderate** safety and visibility
- » **Moderate** connections to transfers and local routes
- » Would require **less detours** than other options (1%)

- » **Moderate travel times**
 - Eastbound - NA
 - Westbound 9:25
- » **Minimal traffic impacts**, peak travel lane removed on Doty
- » **Does not allow** protected bike facilities on a portion of Broom Street
- » **107 parking spaces removed** (97 metered), resulting in \$195,000 in annual revenue lost

Existing Westbound Bus Service on State Street, Afternoon Peak



Alternative 1 and 1A Westbound Bus Service on State Street, Afternoon Peak



◆ Local Metro Bus

◆ BRT Bus

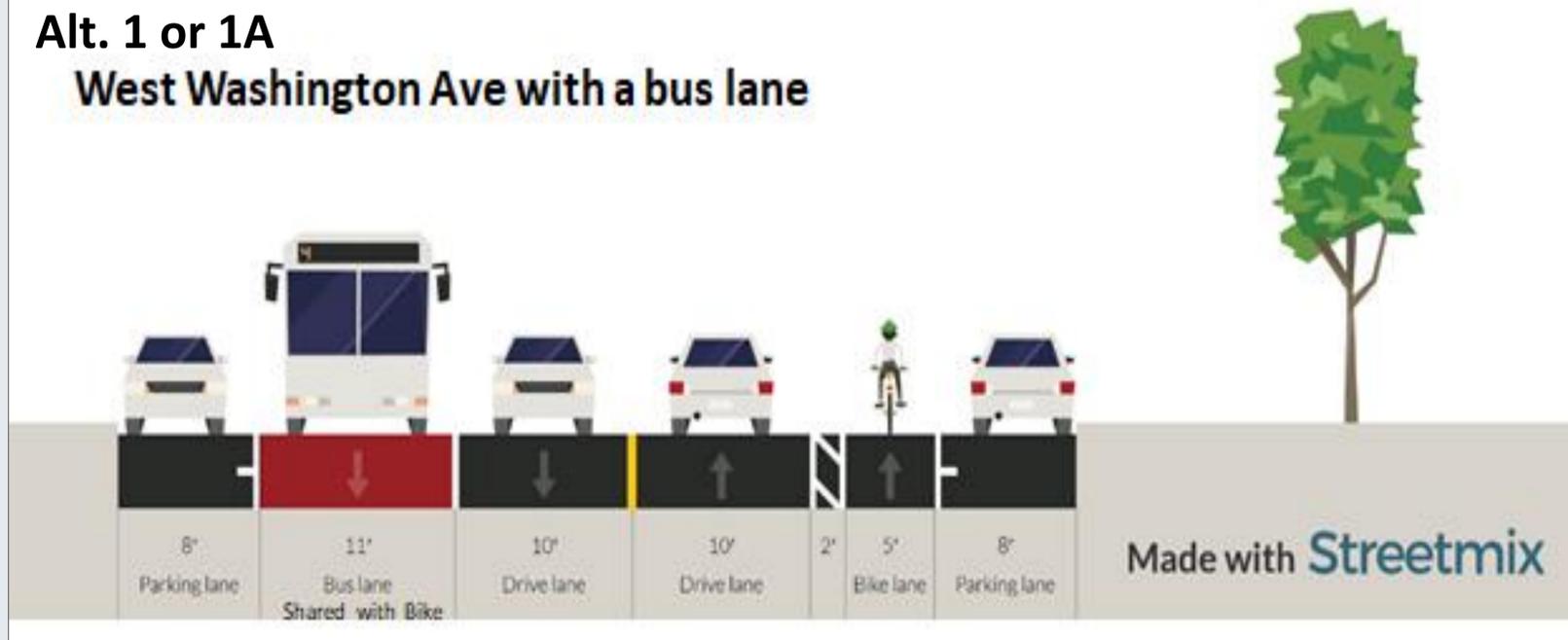
DEPARTMENT OF



TRANSPORTATION

Street Cross-Sections

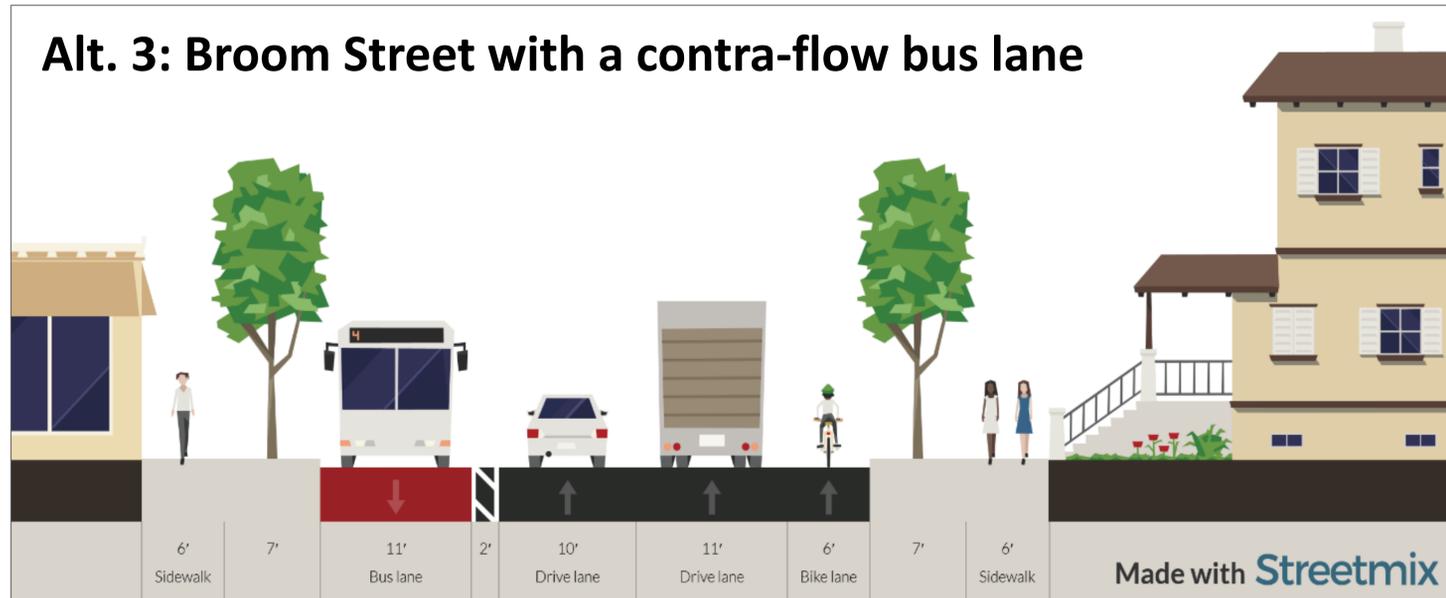
Alt. 1 or 1A
West Washington Ave with a bus lane



Alt. 2: Broom Street with a bus lane



Alt. 3: Broom Street with a contra-flow bus lane

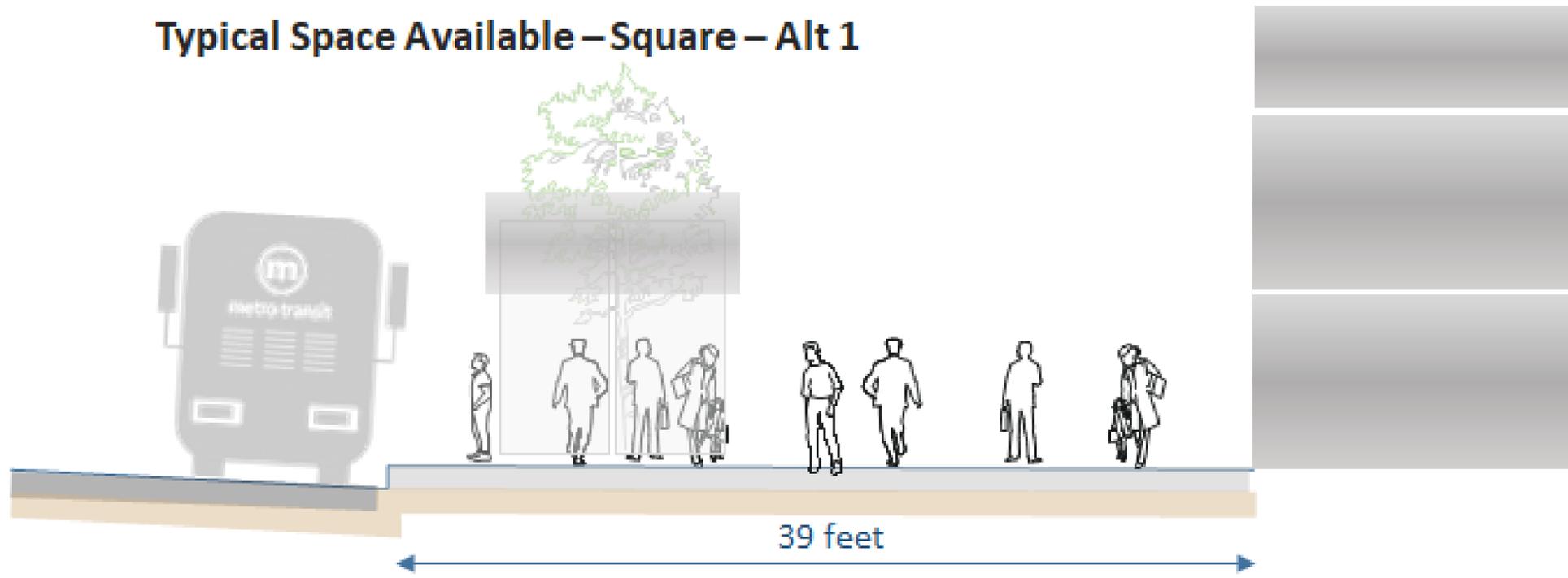


DEPARTMENT OF

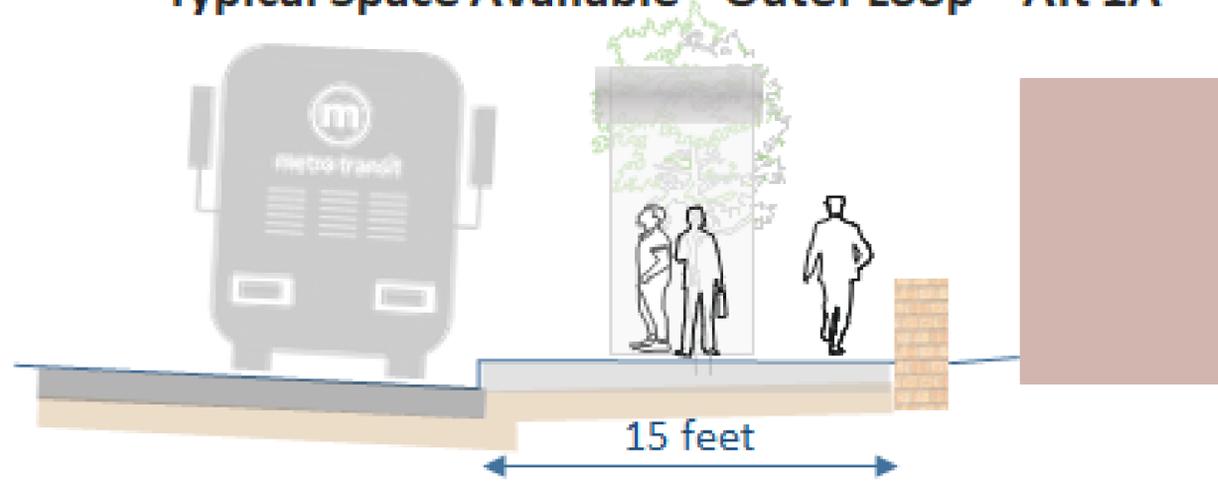


TRANSPORTATION

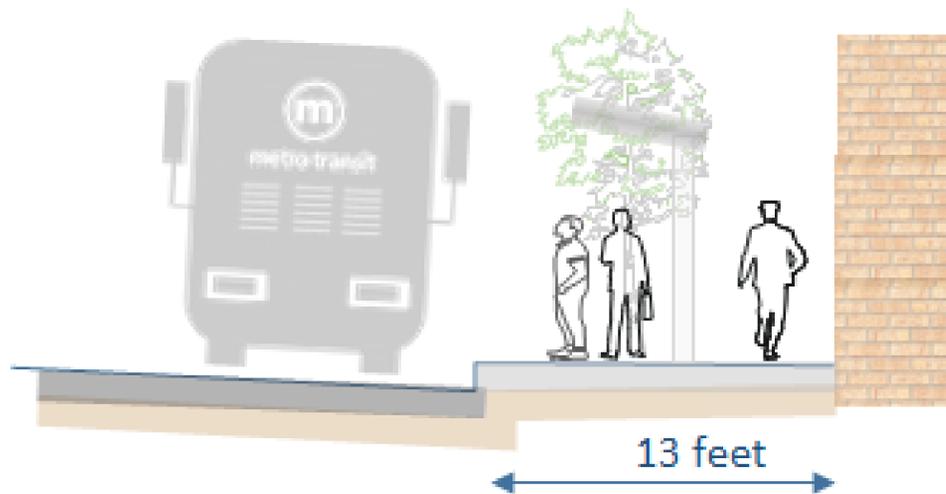
Typical Space Available – Square – Alt 1



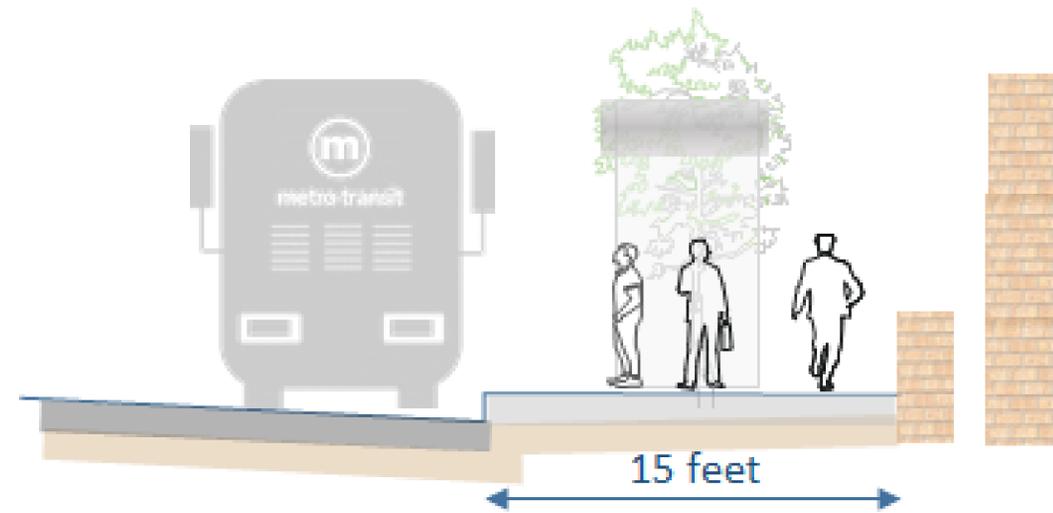
Typical Space Available – Outer Loop – Alt 1A

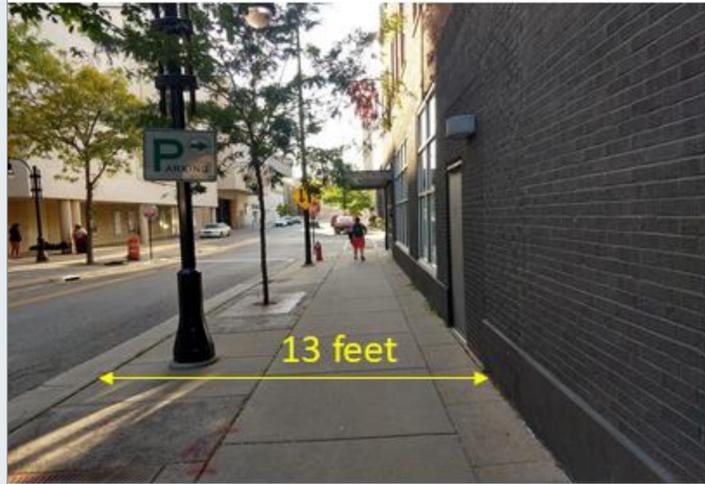


Typical Space Available – Henry – Alt 2

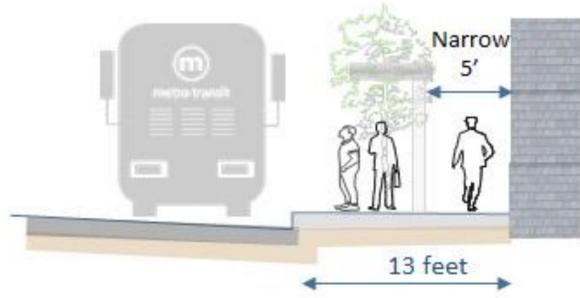


Typical Space Available – SB Broom – Alt 3





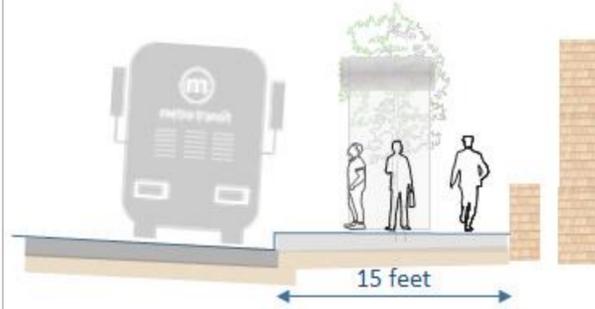
Typical Space Available – Henry– Alt 2



Possible Station Size/Type at Henry Street

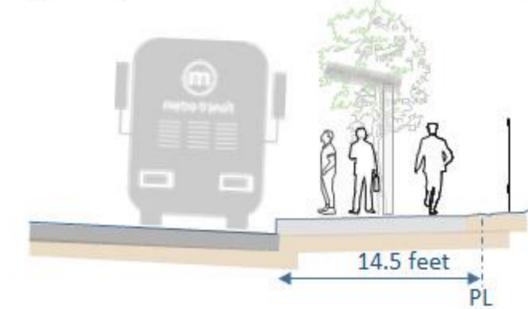


Typical Space Available – SB Broom– Alt 3



Possible Station Size/Type at Broom Street

Typical Space Available – NB Broom– Alt 2,3



Available Space for Downtown Stations

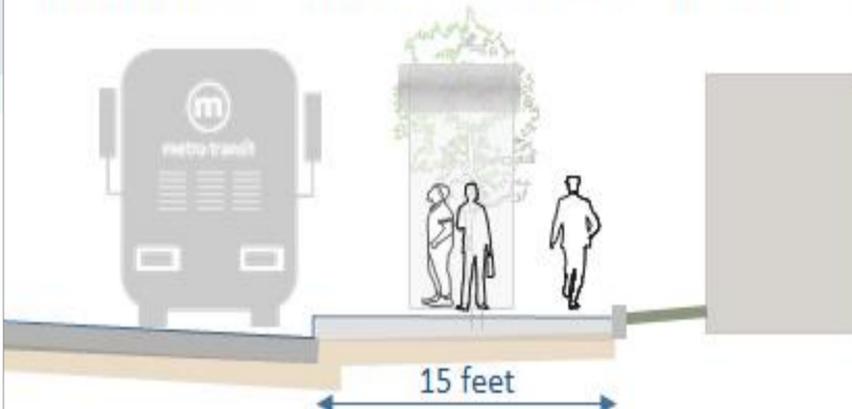
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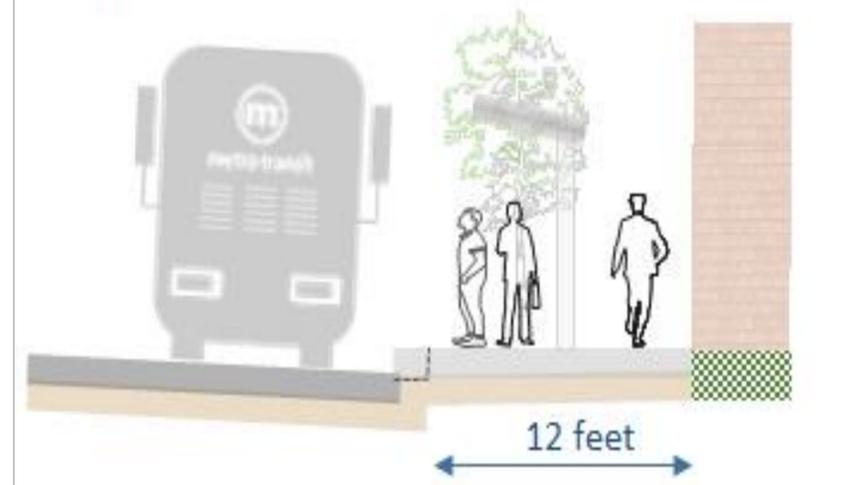
TRANSPORTATION



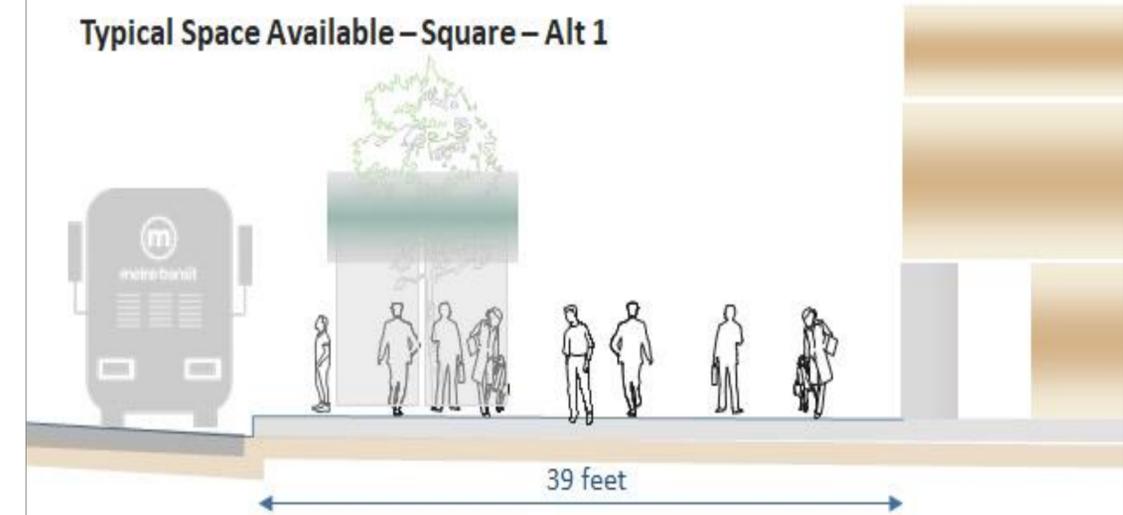
Typical Space Available – Outer Loop – Alt 1A, 2, 3



Typical Space Available – Outer Loop Alt 1A



Typical Space Available – Square – Alt 1



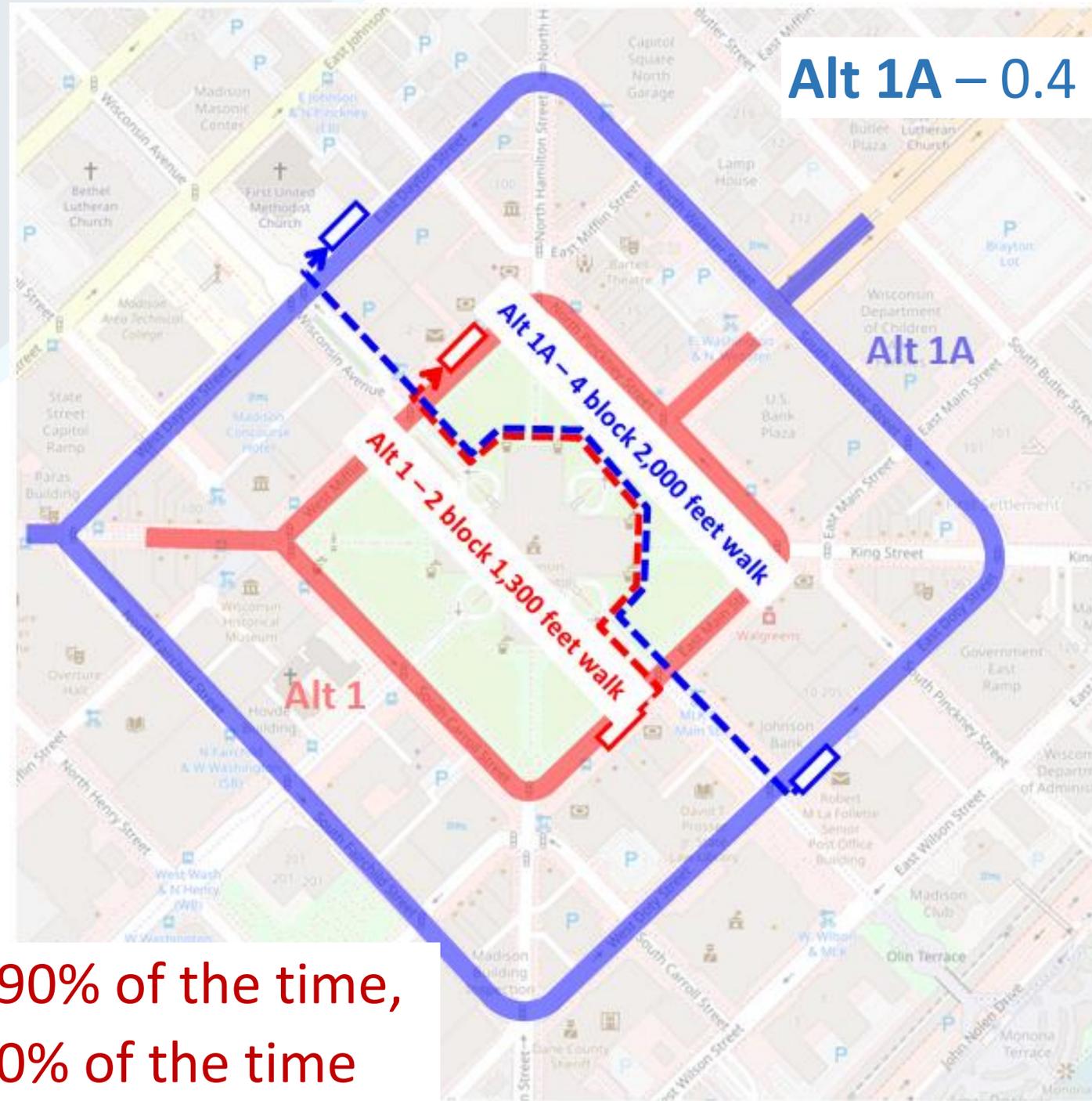
Available Space for Downtown Stations

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TRANSPORTATION

Walking Distance



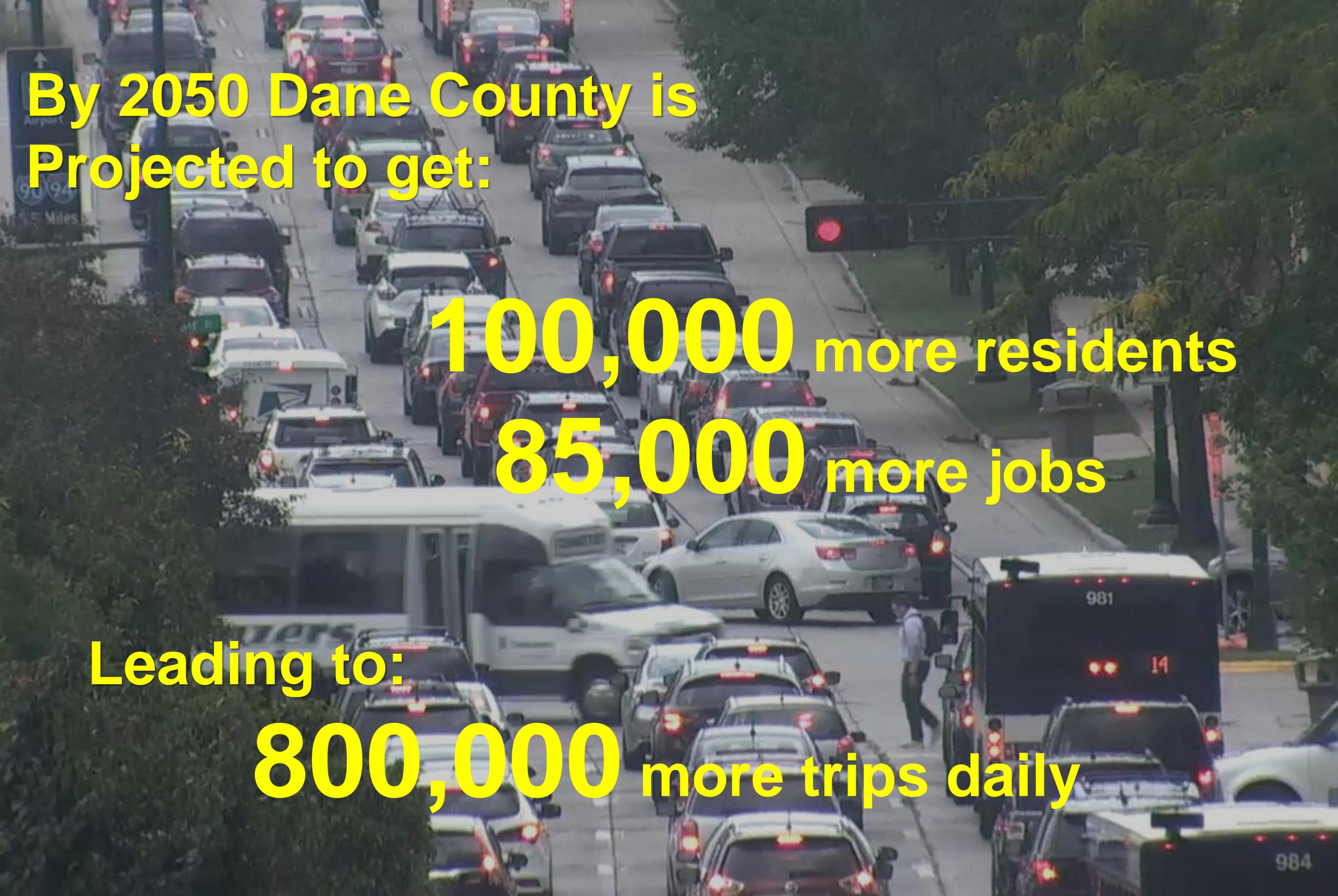
Alt 1A – 0.4 miles 100% of the time

Alt 1 – 0.25 miles 90% of the time,
0.4 miles 10% of the time

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TRANSPORTATION



**By 2050 Dane County is
Projected to get:**

100,000 more residents

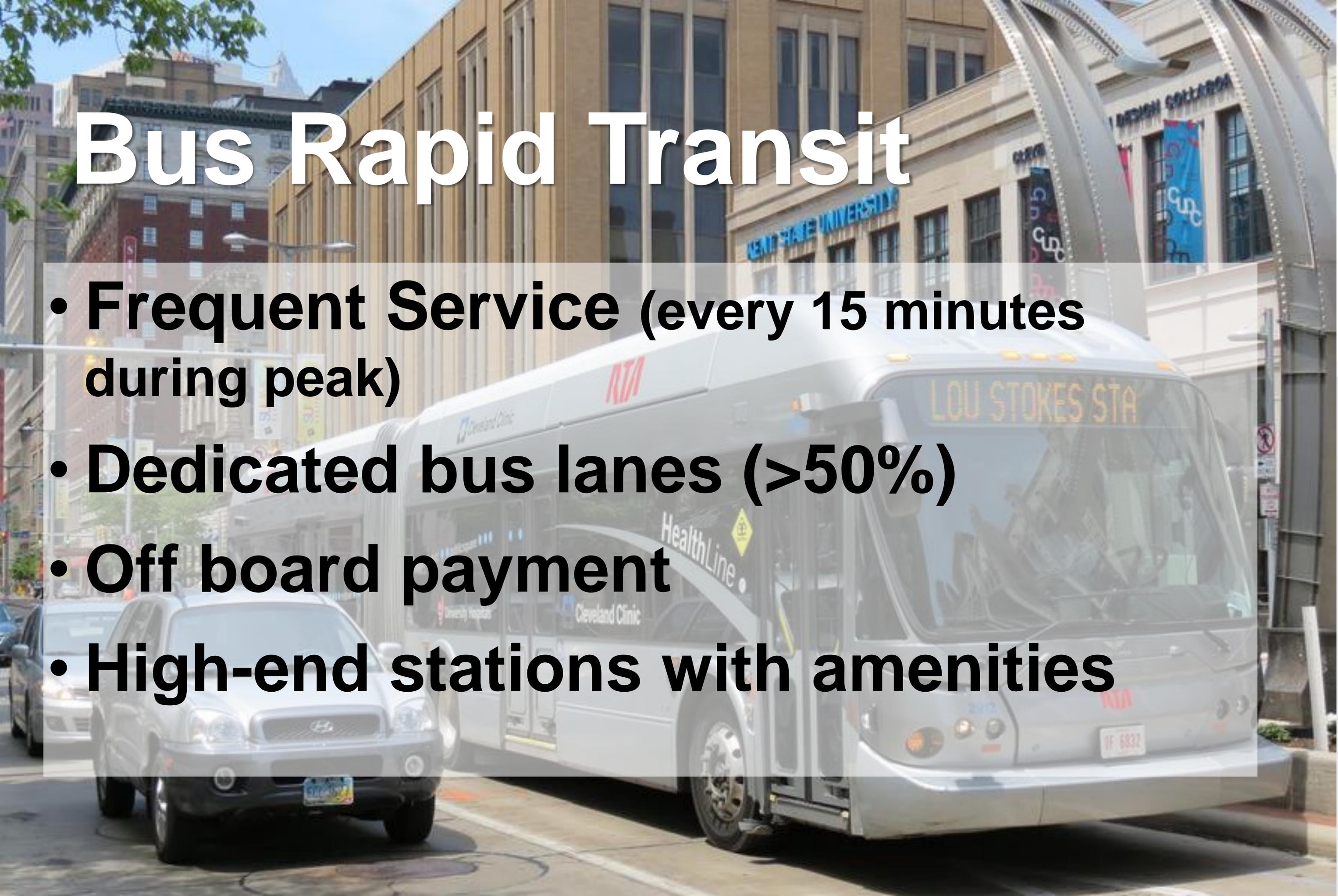
85,000 more jobs

Leading to:

800,000 more trips daily

Bus Rapid Transit

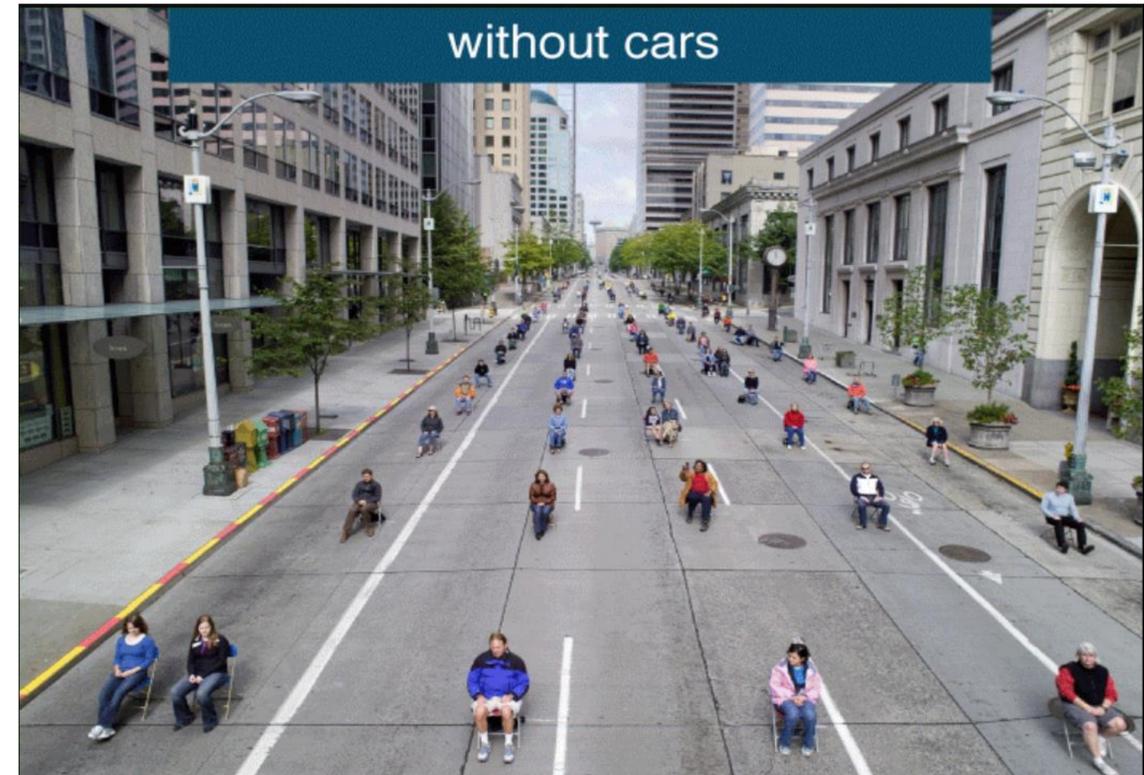
- **Frequent Service (every 15 minutes during peak)**
- **Dedicated bus lanes (>50%)**
- **Off board payment**
- **High-end stations with amenities**



Transit is More Efficient



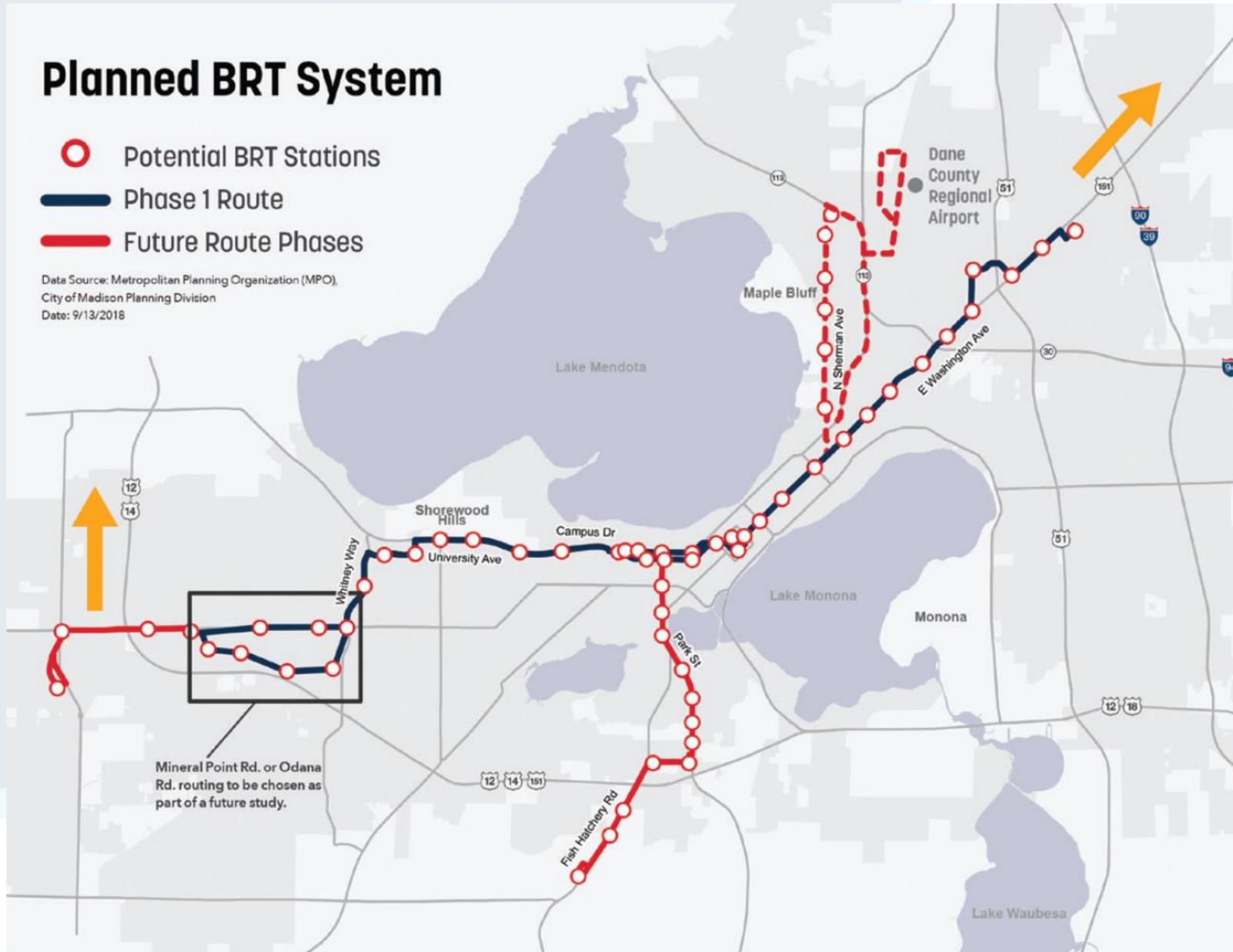
<http://i.imgur.com/kw8DaST.gif>



Planned BRT System

- Potential BRT Stations
- Phase 1 Route
- Future Route Phases

Date Source: Metropolitan Planning Organization (MPO),
City of Madison Planning Division
Date: 9/13/2018



Phase 1 of the BRT System will be within a 10 minute walk from:



80,000
Dane County residents



117,000
Dane County jobs



4
Area hospitals



Annual carbon reduction from BRT in 2050 is the same as planting.

120,000 mature trees

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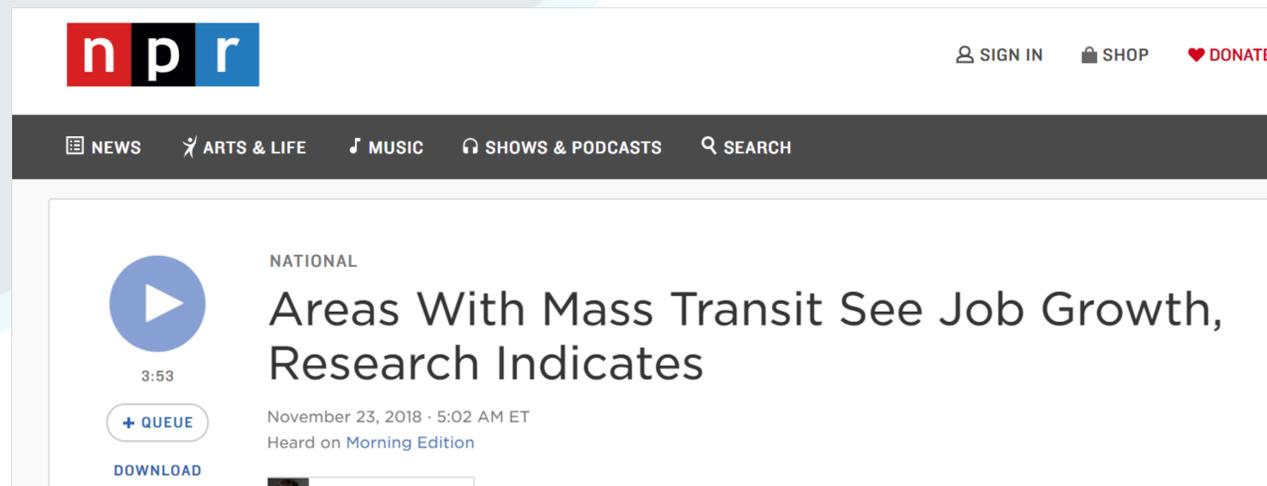


TRANSPORTATION

Economic Impact of Transit

For every \$1 
communities invest in public transportation,
approximately \$4
is generated in economic returns.

<https://www.apta.com/research-technical-resources/economic-impact-of-public-transit/>



SCHAPER: The council's research shows that more than half of the jobs created in the Chicago area now are located within a half-mile of public transportation stops. Other studies show similar economic development patterns in downtown areas all across the country, with job growth greatest in the areas that are well-served by transit. And Wennink says it appears that mass transit also fosters economic resiliency.

SCHAPER: Chicago isn't the only region experiencing this kind of business boom. From Seattle to St. Louis and Minneapolis to Atlanta, companies are relocating to be near transit lines. But Kirk Dillard, who heads Chicago's Regional Transportation



Benefits

\$9.5 billion in economic development along BRT corridor in Cleveland

The HealthLine has been credited with having the highest return-on-investment of any public transit project in the nation, leveraging \$190 for every transit dollar invested.

Study finds BRT leads to economic development

Jan 22, 2016 | by Active Trans

<https://activetrans.org/blog/study-finds-brt-leads-economic-development>

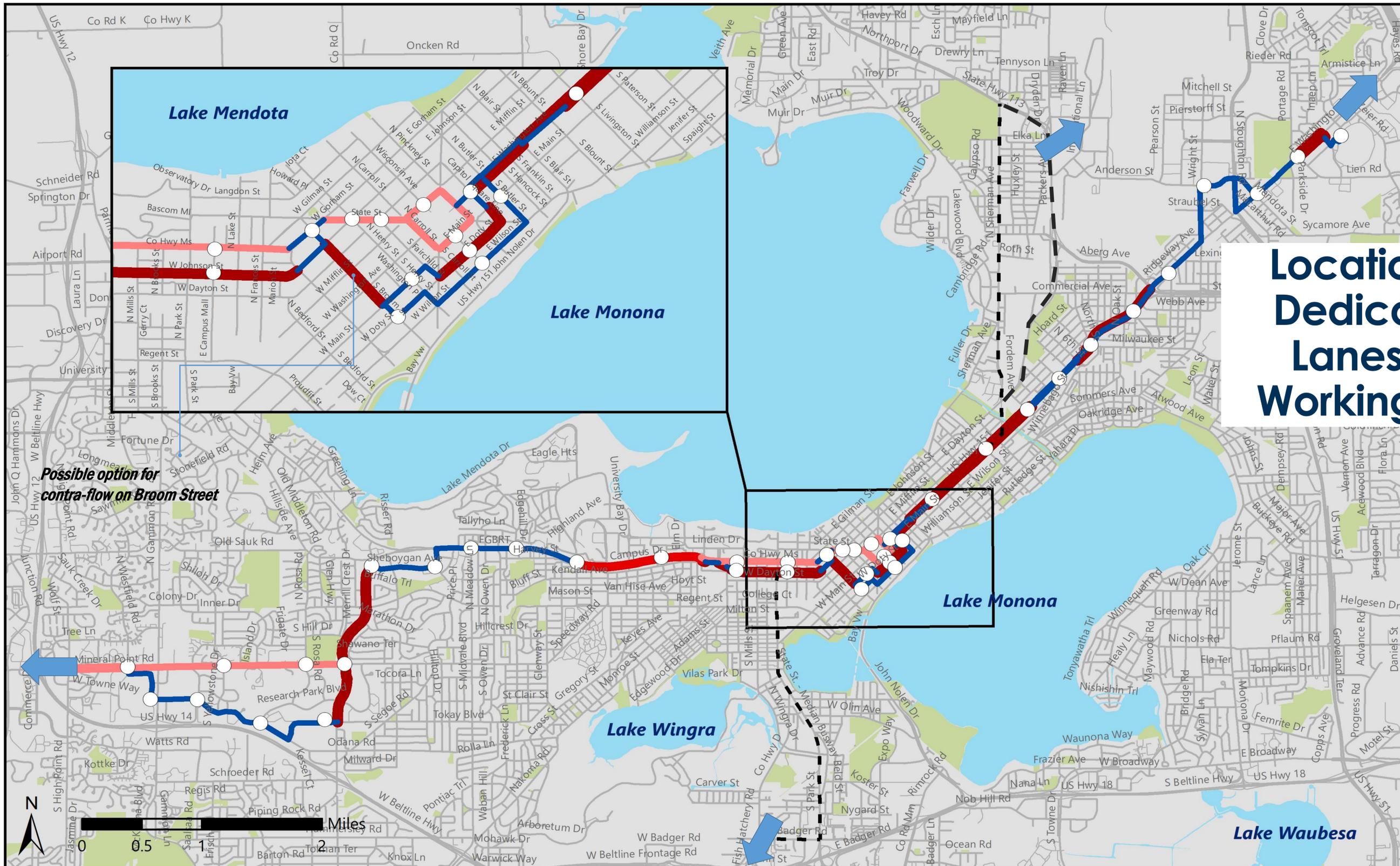


... Areas located within a half-mile of BRT corridors experienced stimulated office space growth. New multi-family residential development increased and premium rents gained foothold for offices spaces

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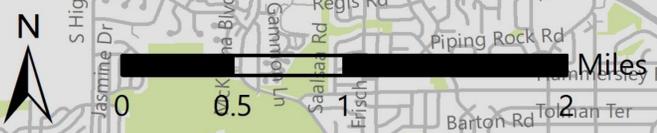


TRANSPORTATION



Location of Dedicated Lanes for Working LPA

Possible option for contra-flow on Broom Street



MADISON EAST-WEST BRT PLANNING STUDY

Capital Costs for Working LPA

Cost Categories	Working LPA Cost (\$2019 in millions)
Dedicated Lane Marker (Paint)	\$2
Stations and Shelters	\$24
Maintenance Facility	\$7
Roadway Improvements	\$19
Transit Signals and Intersection Improvements	\$22
Right-of-Way Acquisition	\$1
Electric Buses	\$30
Engineering, Environmental, and Construction Design	\$17
Contingencies	\$4
Total	\$120-\$130 million
Federal Contribution	(up to) \$100 million
Local (Non-Federal) Contribution	\$20-\$30 million

Project Development Process

DESIGN



2019

2020

2021

2022

2023

2024



Federal (FTA) Project Development

FUNDING

Request Entry into Project Development

Adopt Locally Preferred Alternative

Start Federal (FTA) Project Development Process

Request Eligibility Review from FTA

Apply for FTA Capital Funding

Receive Capital Funding from FTA

CONSTRUCTION

Begin Service

ENVIRONMENTAL

Start Analysis

Receive Clearance from FTA