Spokane Transit Authority
North Monroe Advisory Board
September 8, 2016
Karl Otterstrom, AICP
Steve Hopkins
Goals

- Share history of transit on North Monroe Street
- Describe existing transit conditions
- Provide data to address board questions
- Discuss stop placement and design
- Share future plans for transit along the corridor
- Answer transit-related questions
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Historical Service
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Current Service
Current STA Service to Emerson/Garfield
Route 24 – Monroe

- Connects Five Mile P&R with downtown Spokane
- 3rd busiest route in network
- 649 weekly trips
  - 58 weekday roundtrips
  - 28 Saturday roundtrips
  - 12 Sunday roundtrips
- 2015 boarding data
  - 2,199 average weekday
  - 883 average Saturday
  - 435 average Sunday
  - 628,615 annually
About 12,725 people’s homes, 21,212 people’s jobs, and 2,061 residents without access to a private vehicle…

…are within ¼-mile of a Route 24 stop.

Data: 2013 American Community Survey
Existing Conditions

- Four stop pairs
  - Dalton
  - Frederick
  - Grace
  - Montgomery/Carlisle
About 3,747 people’s homes, 1,251 people’s jobs, and 431 residents without access to a private vehicle…

…are located within ¼-mile of Route 24 stops serving the Indiana-to-Dalton corridor.

Data: 2013 American Community Survey
Route 124 – North Express

- Connects Hastings P&R with downtown Spokane
- 15 southbound weekday trips
- 11 northbound weekday trips
- Makes no stops on Monroe between Wellesley and Broadway
- 2015 boarding data
  - 334 average weekday
  - 84,816 annually
Goals

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Board Questions

- How many people get on and off the bus?
- How long does the bus wait at each stop?
- How often do wheelchair ramps get deployed?
- How often do bicycle racks get used?
- Are there plans to close any stops?
Southbound Average Weekday Passenger Activity

- **Boardings**
- **Alightings**

- **Dalton**
- **Frederick**
- **Grace**
- **Montgomery**
Northbound Average Weekday Passenger Activity

- Carlisle: Boardings (30), Alightings (160)
- Grace: Boardings (5), Alightings (20)
- Frederick: Boardings (10), Alightings (40)
- Dalton: Boardings (5), Alightings (40)
Average Weekday Boardings and Alightings

<table>
<thead>
<tr>
<th>Route</th>
<th>Boardings</th>
<th>Alightings</th>
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### Northbound Monroe Weekday Dwell and Travel Time Measurements, August 25 - September 2, 2016

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<tr>
<th>Plaza Departure Time</th>
<th>Monroe @ Carlisle</th>
<th>Dwell</th>
<th>Monroe @ Grace</th>
<th>Dwell</th>
<th>Monroe @ Frederick</th>
<th>Dwell</th>
<th>Monroe @ Dalton</th>
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<td>3.5 sec</td>
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- 24 surveys
- Trip with longest total dwell at all 4 stops: 40 sec of dwell
- Trip with shortest total dwell at all 4 stops: 14 sec of dwell
- 4 bikes, 5 strollers, 0 wheelchairs
Delay (in seconds) between Indiana and Dalton - 5-6pm

Includes 45-second cycles of traffic light at Montgomery (two 13-second red phases and one 25-second red phase)
But what about the wheelchair ramp?
Ramp deployments occur about once every 90 trips through the corridor. (7.17 / 649 weekly trips)

Ramp deployments occur in the peak direction about once every 96 trips through the corridor. (1.25 / 120 peak trips / week)

7.17 total average lift deployments per week (includes peak and off-peak trips)


- Dalton/Frederick (Combined): 2.25
- Montgomery: 1.00
- Grace: 0.33
- Carlisle: 1.17

1.25/wk peak
And what about bikes? 
Don’t they slow down buses, too?
Bikes usually take about 15-20 seconds to load.
Average Bike Loadings Per Week – 649 trips

Montgomery / Carlisle  Grace  Frederick  Dalton

= 1 bike loading

Data: 10/2015
Doesn’t the bus stop every block?
It once seemed like it, but not anymore.
Bus Stop Consolidation on North Monroe September 2010

- Removed stop pairs at Knox & York
- Consolidated Montgomery and Carlisle northbound
- Relocated southbound stop at Indiana to Nora due to public feedback
- Maintained Frederick due to public feedback
Minimal Loss of $\frac{1}{4}$-mile Coverage from Stop Consolidation Process

Coverage including stop at W Dalton Ave

Coverage without stop at W Dalton Ave

= $\frac{1}{4}$-mile radius from existing STA bus stop
Minimal Loss of ¼-mile Coverage from Stop Consolidation Process

Coverage including stop at W Frederick Ave

Coverage without stop at W Frederick Ave

= ¼-mile radius from existing STA bus stop
Combined Boardings and Alightings with Stop Consolidation
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Bus Stop Locations
Bus Stop Locations: Pullouts
Pullouts

Advantages:
• Reduce blocking of travel lane
• Reduce delay for other vehicles

Disadvantages:
• Increase potential for side-swipe or rear-end collisions upon re-entry
• Increase delay for transit passengers
• Reduce area available for parking
• Reduce space for transit amenities

STA prefers not to use pullouts due to increased costs, risks, and transit delays
Pullout for 40’ transit coach

- Requires approximately 150’
  - 60’ to decelerate and enter
  - 40’ for coach
  - 50’ to reenter travel lane

- Equivalent to 7-8 parking stalls
- Requires 5’ x 8’ ADA landing pad
BE A COURTEOUS DRIVER AND

PLEASE YIELD TO BUSES SIGNALING TO RE-ENTER TRAFFIC

(it's the law: RCW 46.61.220)

www.linktransit.com

Yield-to-Bus signage has “no significant safety and operational effect”

-Center for Urban Transportation Research, 2007
Bus Stop Locations: Bumpouts

NEARSIDE STOP

FARSIDE STOP

MIDBLOCK STOP

8' x 8' BOARDING AND ALIGHTING PAD AND BUS STOP SIGN

TYPICAL BUS SHELTER, SEE STA STANDARD PLAN C1 FOR REQUIREMENTS

Spokane Transit
Bumpouts

Advantages:
• Eliminate bus merging
• Increase transit efficiency
• Increase space available for transit amenities (shelters, signage, etc.)
• Reduce loss of parking for businesses

Disadvantages:
• Other vehicles delayed by boarding
• Potential for unsafe passing
• Farside may block intersections

STA prefers the use of bumpouts to reduce costs, risks, and delays
- Bumpout for 40’ transit coach
  - At a nearside or farside stop, extension of pedestrian bumpout
  - Requires approximately 40’
  - Equivalent to 2 parking stalls
  - Requires 5’ x 8’ ADA landing pad (part of sidewalk)
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STA MOVING FORWARD
HPT Line Routing Option

- Five Mile Park & Ride
- Wellesley
- Garland District
- North Monroe Business District
- Spokane County Campus
- Kendall Yards
- Downtown Spokane
- Manito Park
- Lincoln Heights
- South Regal Street
- Moran Prairie Park & Ride
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