

Bloomington Transit

# High-Frequency Transit Corridor Feasibility Study

Phase 1 Findings

July 16, 2024



Prepared by:



In Partnership with:



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# Overview

- The Feasibility Study
- Phase 1 Recap
- Green Line Alternatives
- Cost Estimates
- Next Steps



# The Feasibility Study

Phase 1 recap, existing conditions, and public's priorities

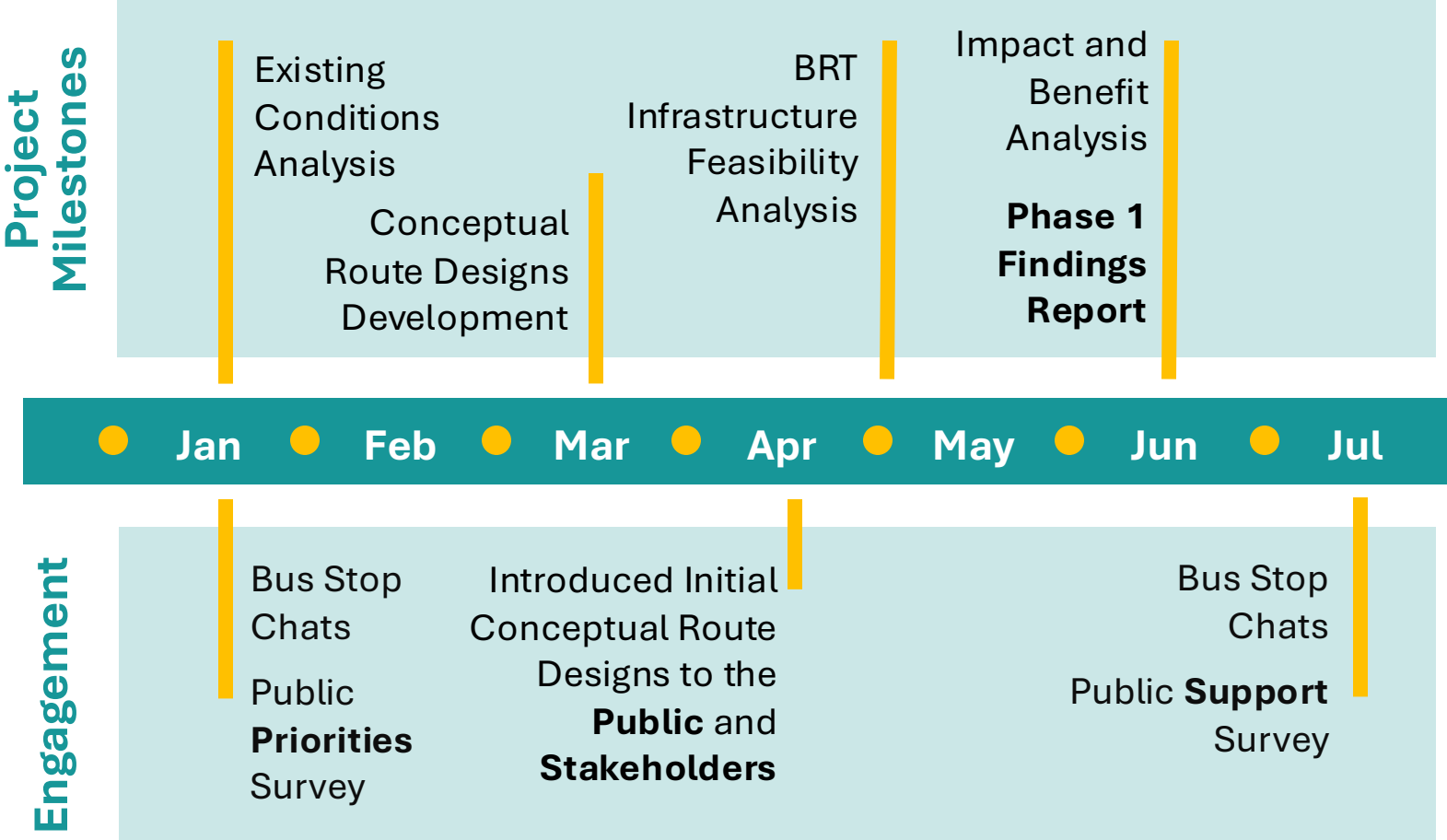
# What is the High-Frequency Transit Corridor?

- Called the **Green Line**, this corridor would extend east to west across Bloomington
- The service would:
  - **Come more often** than existing BT routes
  - Run for **longer hours**
  - Serve some destinations outside the city (like Ivy Tech)
  - Accommodate a projected increase in population



# Phase 1 Recap

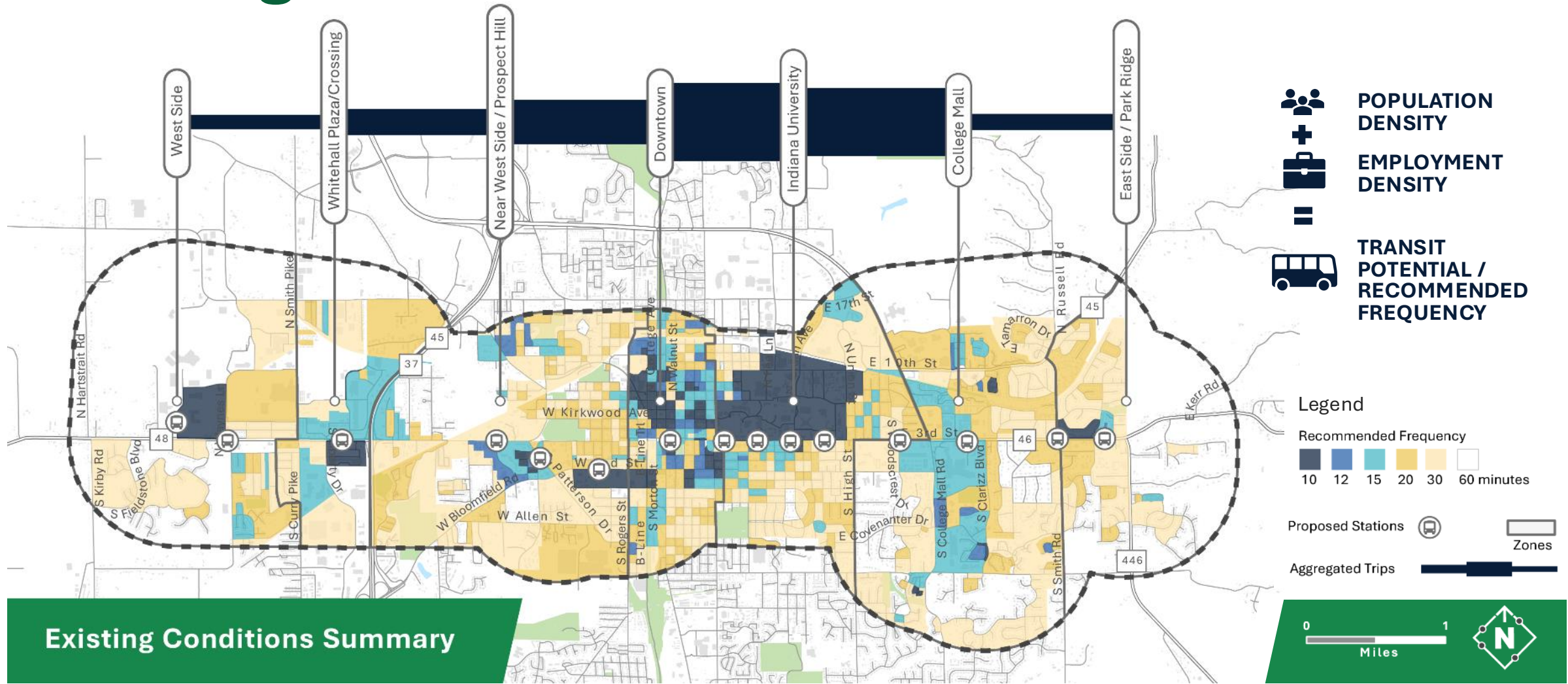
## PHASE 1



- ### DELIVERABLES
- Existing Conditions Review and Market Analysis
  - Conceptual Route Designs
  - Financial Analysis
  - Finding and Recommendations
  - Phase I Presentation

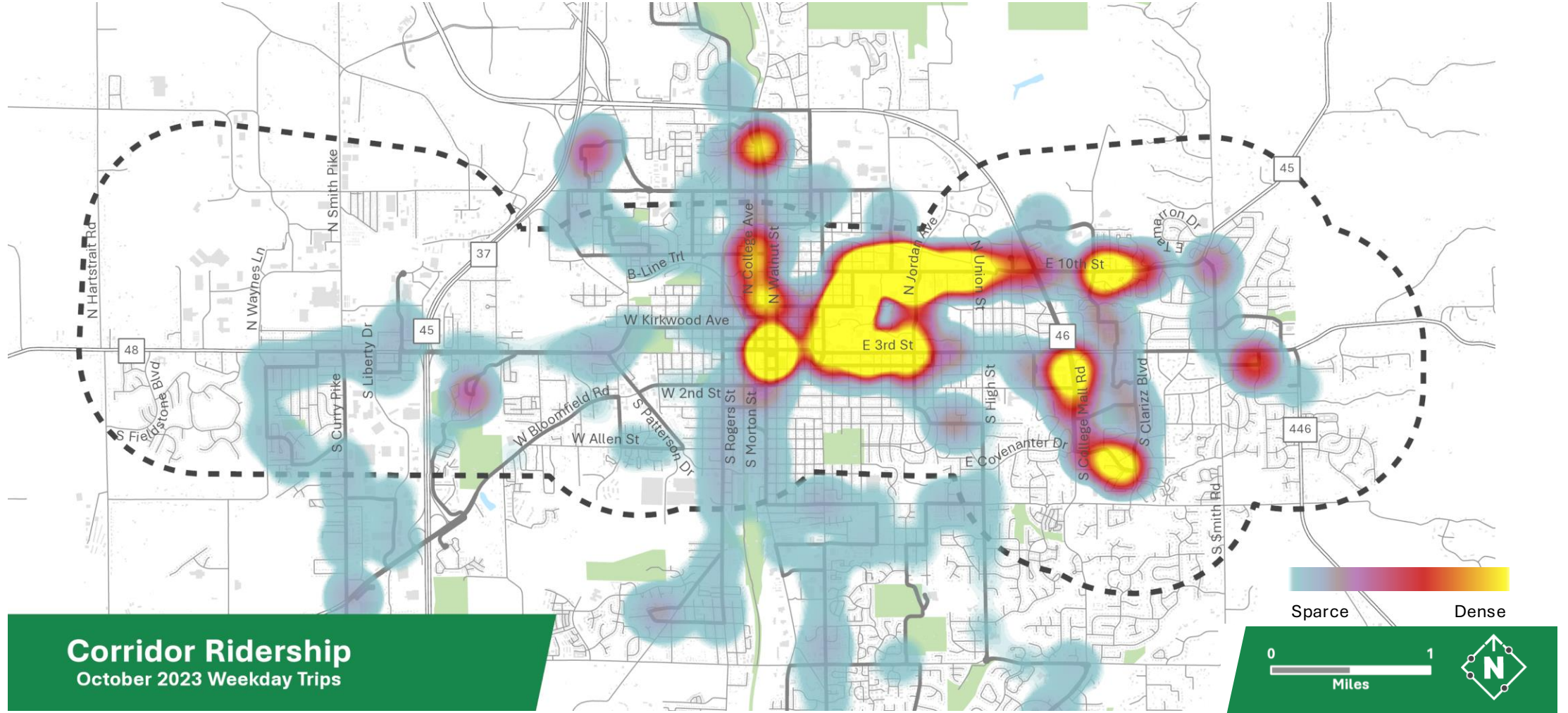


# Existing Conditions



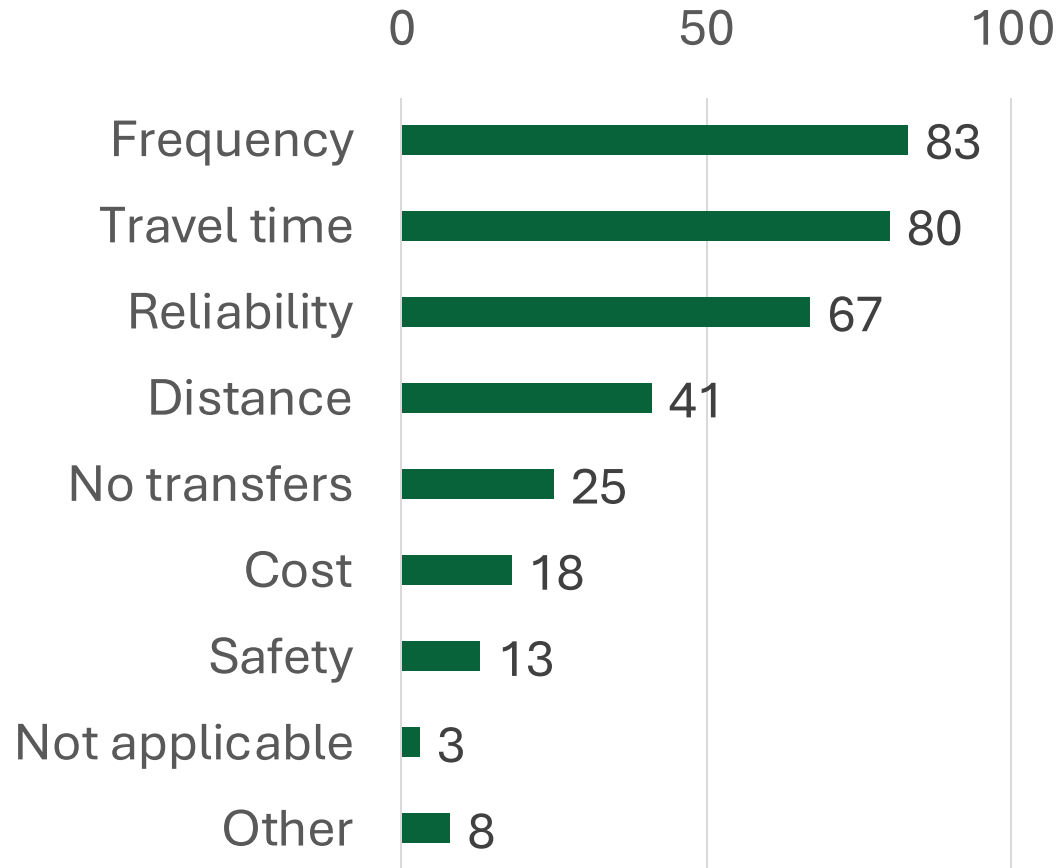
## Existing Conditions Summary

# Current Transit Ridership

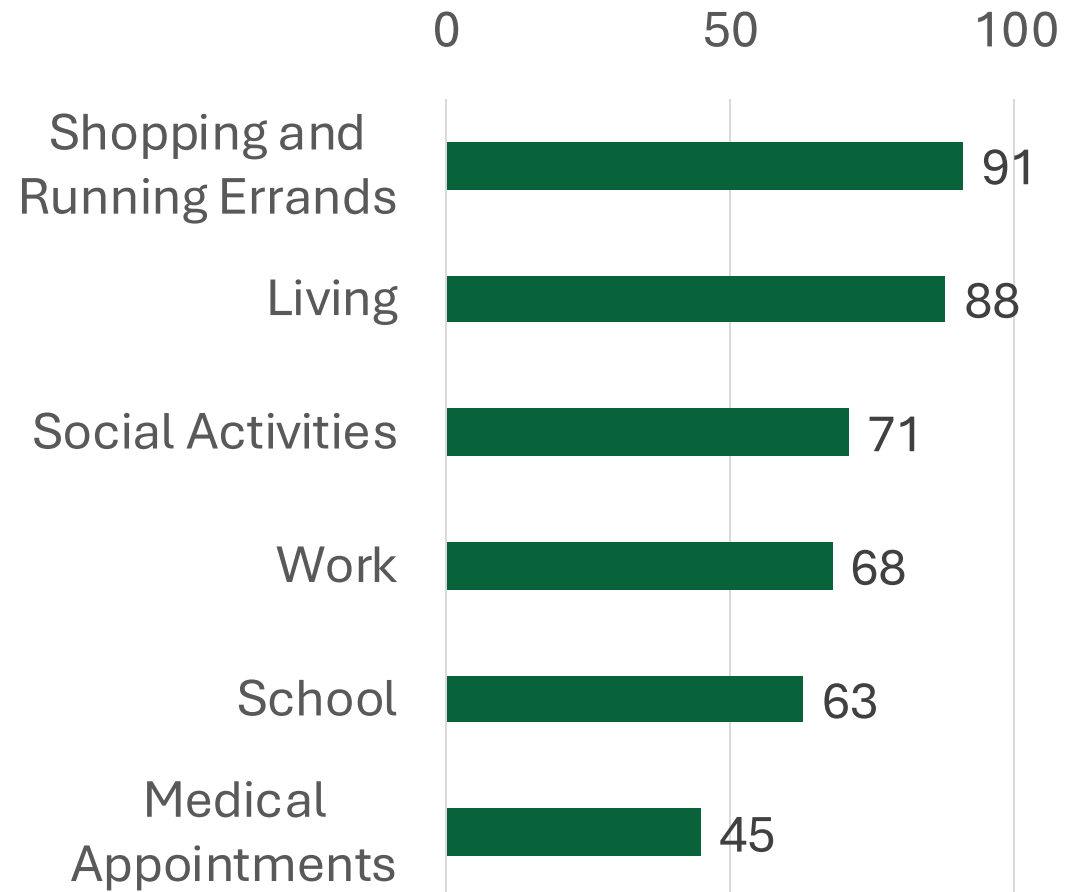


# Priorities Survey Results

## DECIDING FACTORS ON TAKING THE BUS



## ACTIVITIES ALONG THE CORRIDOR





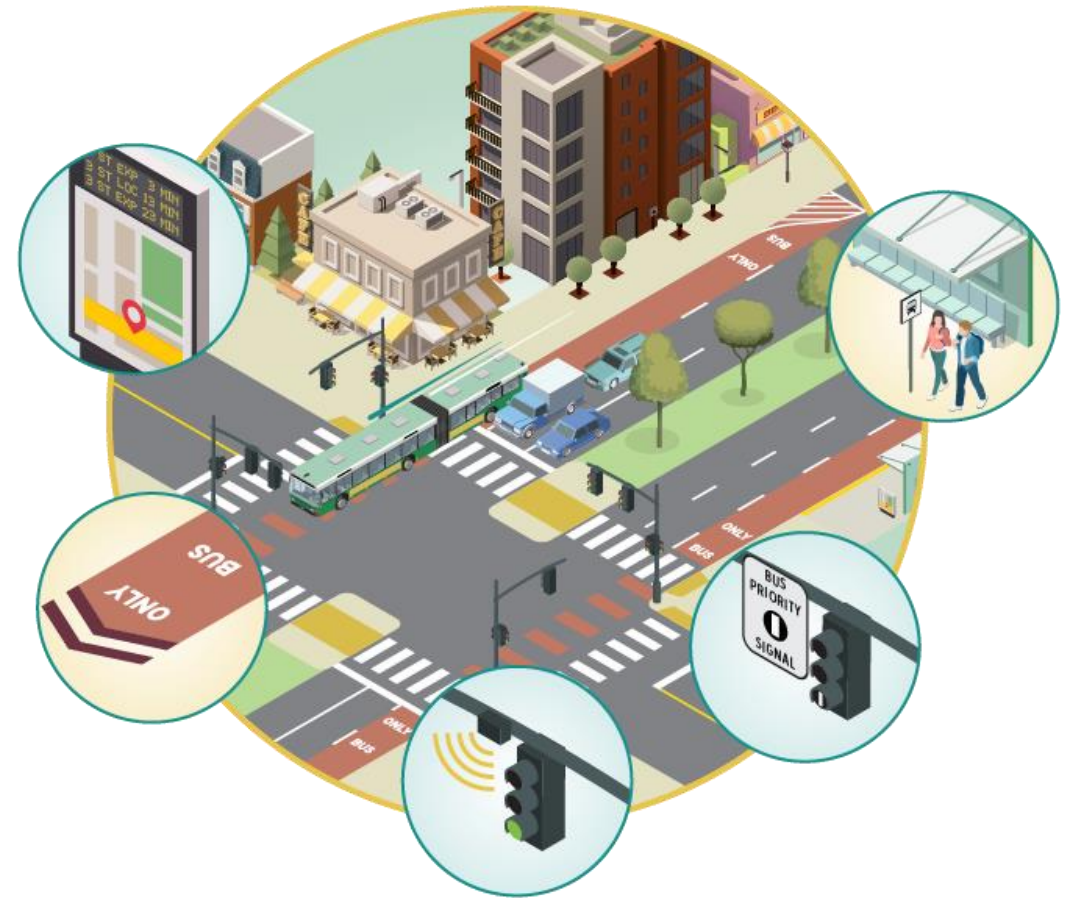


# The Green Line

The service and the corridor

# Services Enhancements

- Increased service
  - More frequency
  - Longer hours
- Priority at intersections
  - Transit signal priority
  - Queue jump
- Dedicated bus lanes
  - Bus lanes during peak times
  - All-day bus lanes
  - Exclusive busways



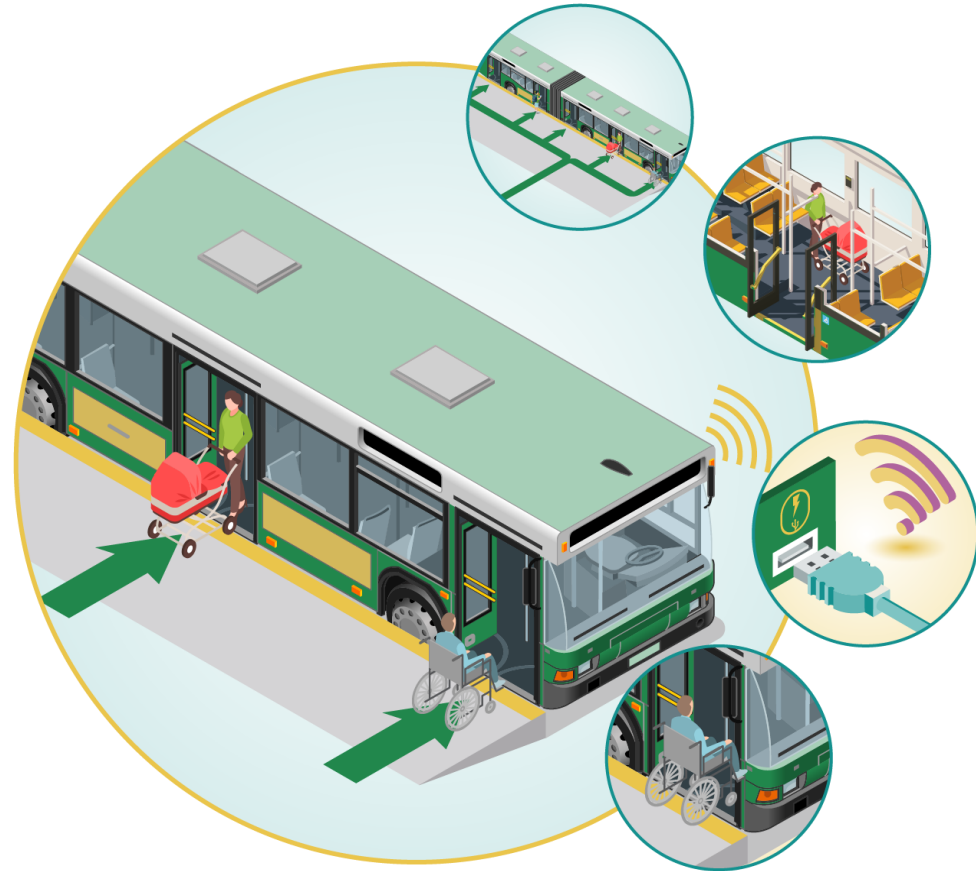
# Station Enhancements

- Shelters
- Larger, raised platforms
- Real-time arrival information
- Safe and accessible connections for riders
  - ADA accessibility improvements
  - Bike infrastructure considerations

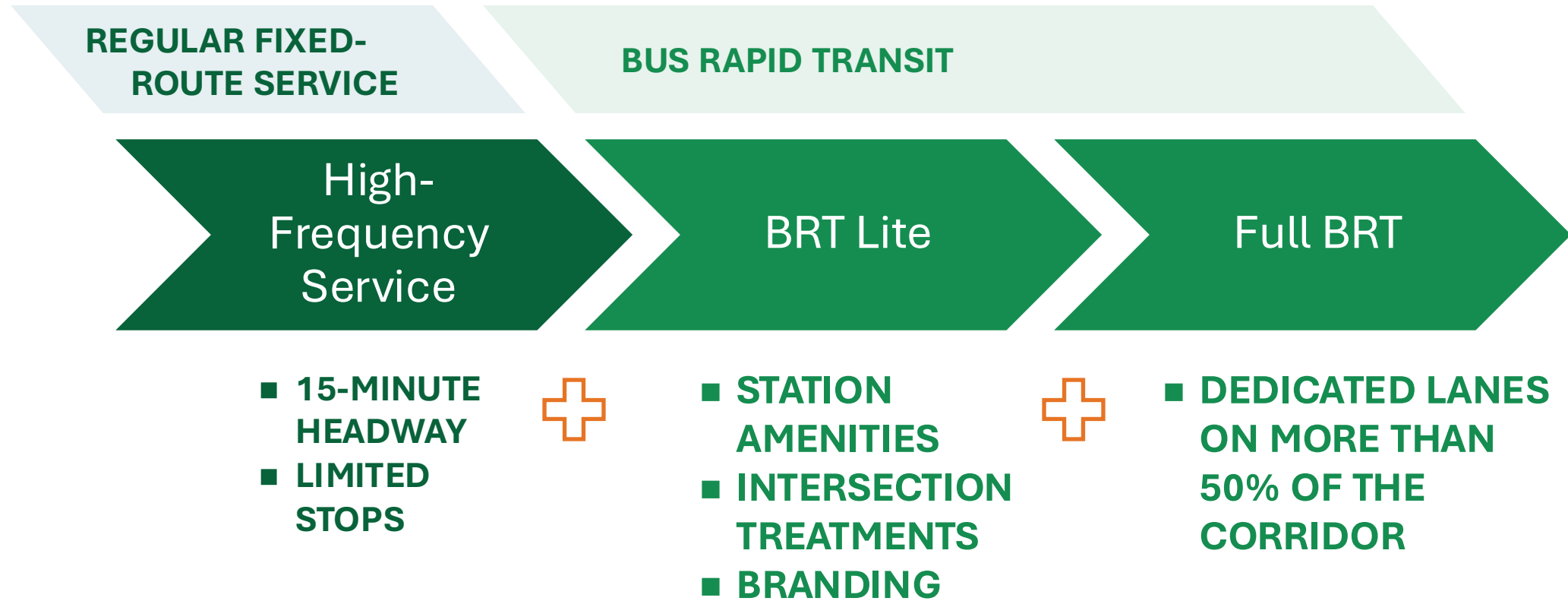


# Enhanced Vehicles

- All-door, level boarding
- On-board amenities
- Unique vehicles and branding



# What Could the Green Line Look Like?





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# Green Line Principles

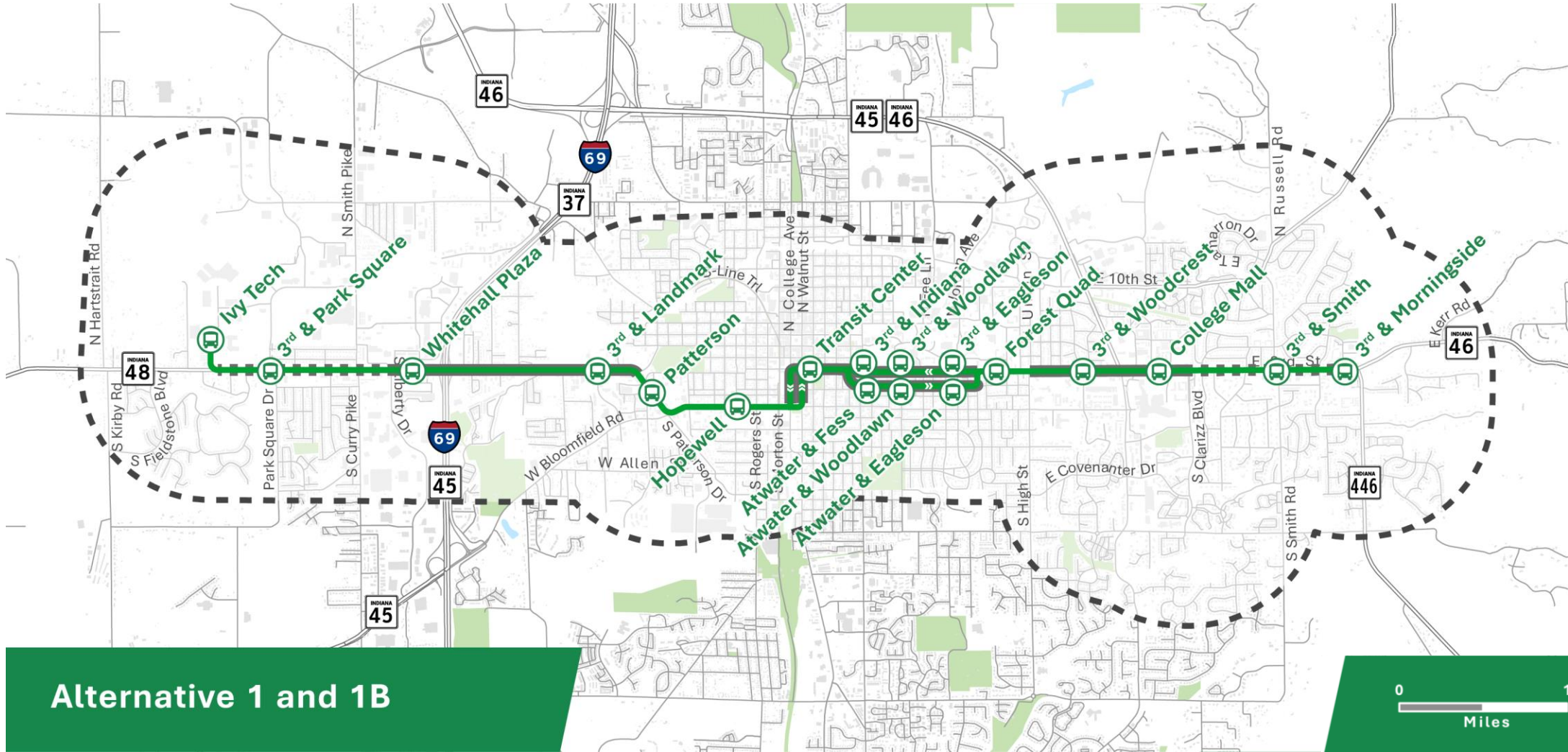
- Serve **key destinations**
- Increase **reliability** and decrease **travel time**
- Improve **levels of service**
  - On Weekdays:
    - Every **15 minutes** from 6:00 a.m. to 8:00 p.m.
    - Every **30 minutes** from 5:00 a.m. to 6:00 a.m. and from 8:00 p.m. to 11:00 p.m.
  - On Saturdays, every 30 minutes from 7:00 a.m. to 9:00 p.m.
  - On Sundays, every 30 minutes from 7:00 a.m. to 7:00 p.m.

# Green Line Alternatives

- Differences between Alternative 1 and 2:
  - **Alignment.** The alignments differ as they travel between 2<sup>nd</sup> and 3<sup>rd</sup> Streets and as they cross the IU Campus.
  - **Roadway treatment.** Both alternatives have portions of bus-only lanes and mixed traffic.
    - Alternative 1 runs almost entirely in curbside bus-only lanes
    - Alternative 1 B runs mostly in curbside bus-only lanes
    - Alternative 2 uses median lanes to cross downtown and IU campus and curbside lanes on other segments of 3<sup>rd</sup> Street
    - Alternative 2 B has shorter segments of curbside lanes on 3<sup>rd</sup> Street.
- Station amenities, transit-signal priorities, and vehicles are the same between the alternatives.

# Alternative 1

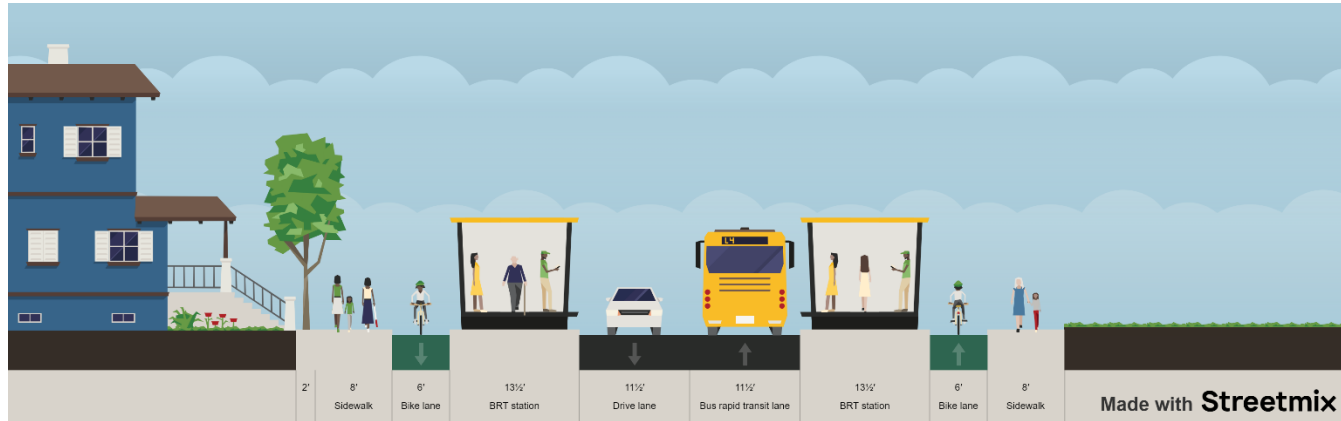
- Bus Service in Mixed Traffic
- Curb-Aligned Bus Lanes (Alternative 1 & 1B)
- - - - Curb-Aligned Bus Lanes (Alternative 1 Only)
- 🚏 Station



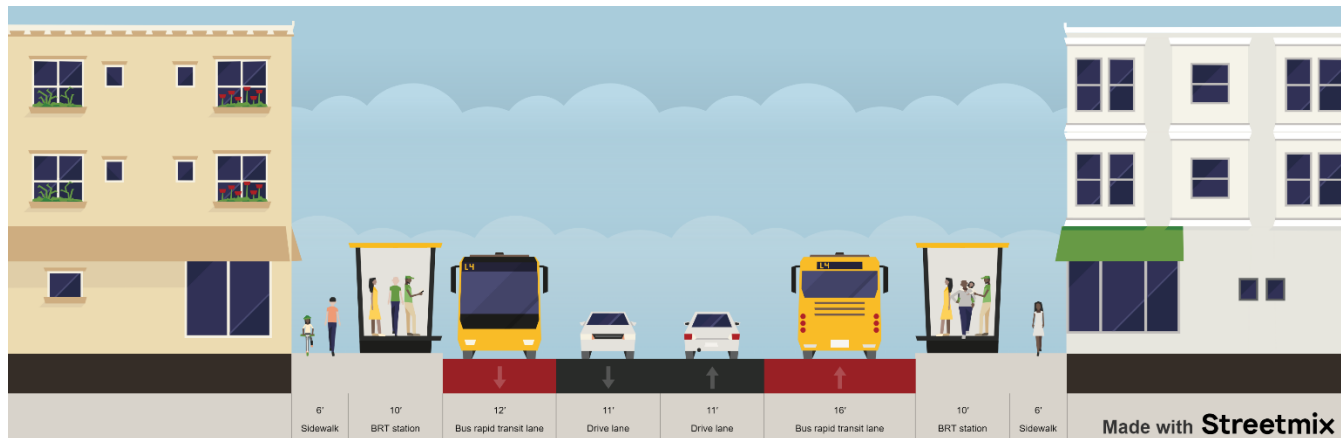
**Alternative 1 and 1B**



# Alternative 1




Regular Roadway Section,  
Curbside Station

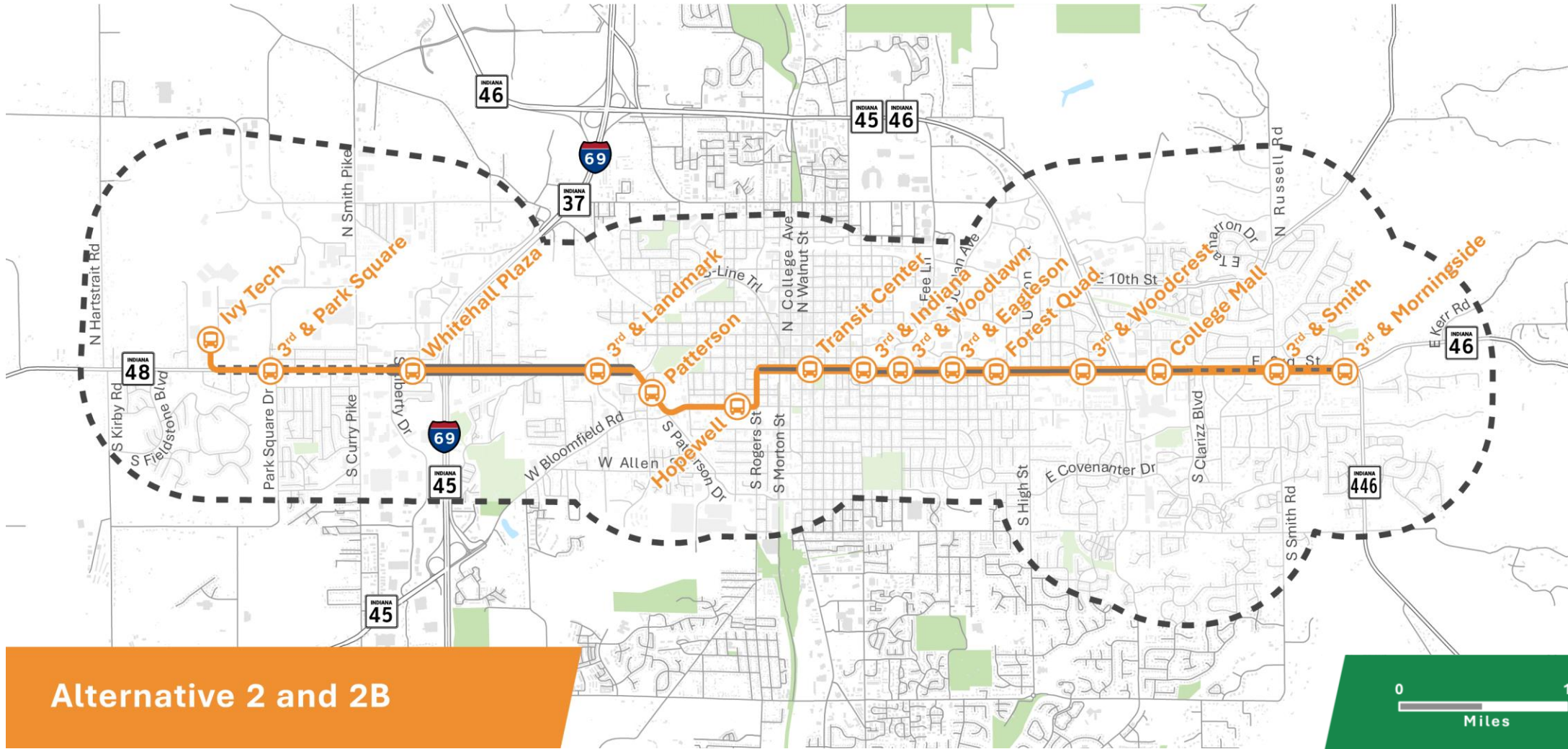


Roadway Section with  
Dedicated Lane, Curbside  
Station



# Alternative 2

- Bus Service in Mixed Traffic
-  Station
- Curb-Aligned Bus Lanes (2 & 2B)
- Median-Aligned Bus Lanes (2 & 2B)
- Curb-Aligned Bus Lanes (2 Only)
- Median-Aligned Bus Lanes (2 Only)

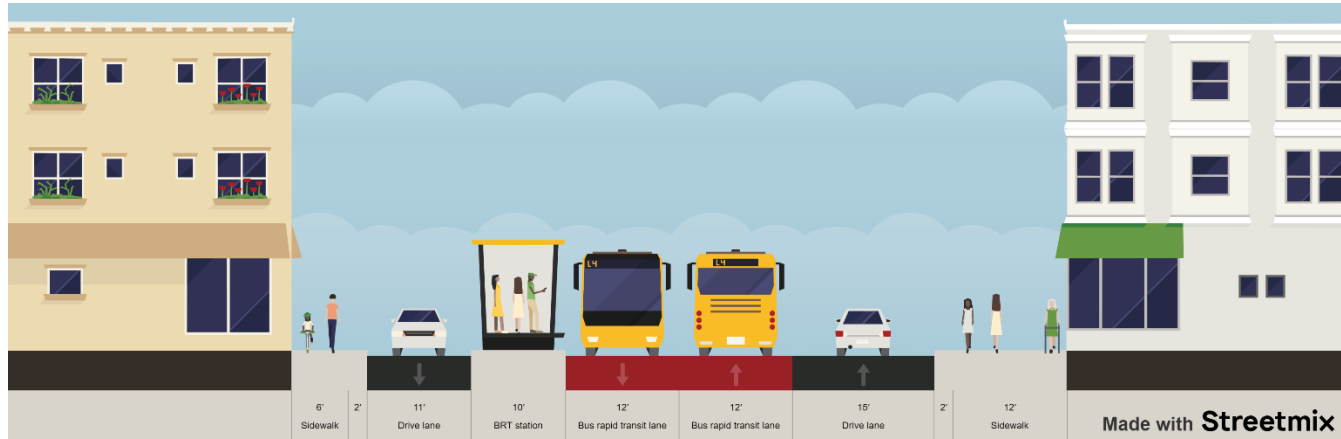


**Alternative 2 and 2B**





# Alternative 2



Median Station Downtown



Bi-Directional 3rd Street Across Campus

# Local Service Changes

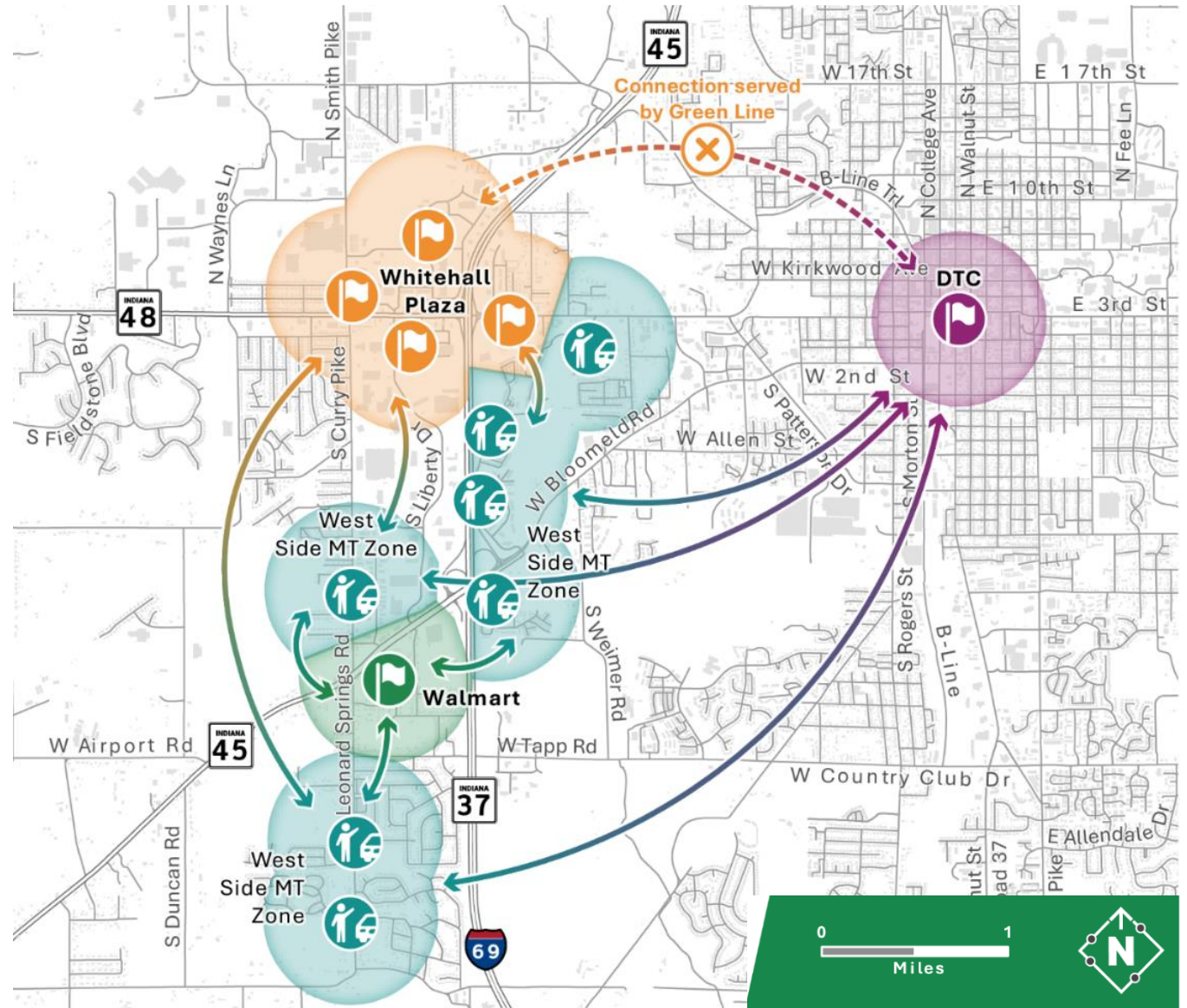
- Elimination of routes 3 East and 3 West
- Realignment of routes 14, 9, and 4 West
- Introduction of microtransit



West Side Zone  
Dropoff/Pickup  
Points



Other Dropoff/  
Pickup Points





# Cost Estimates

Capital costs and operating costs

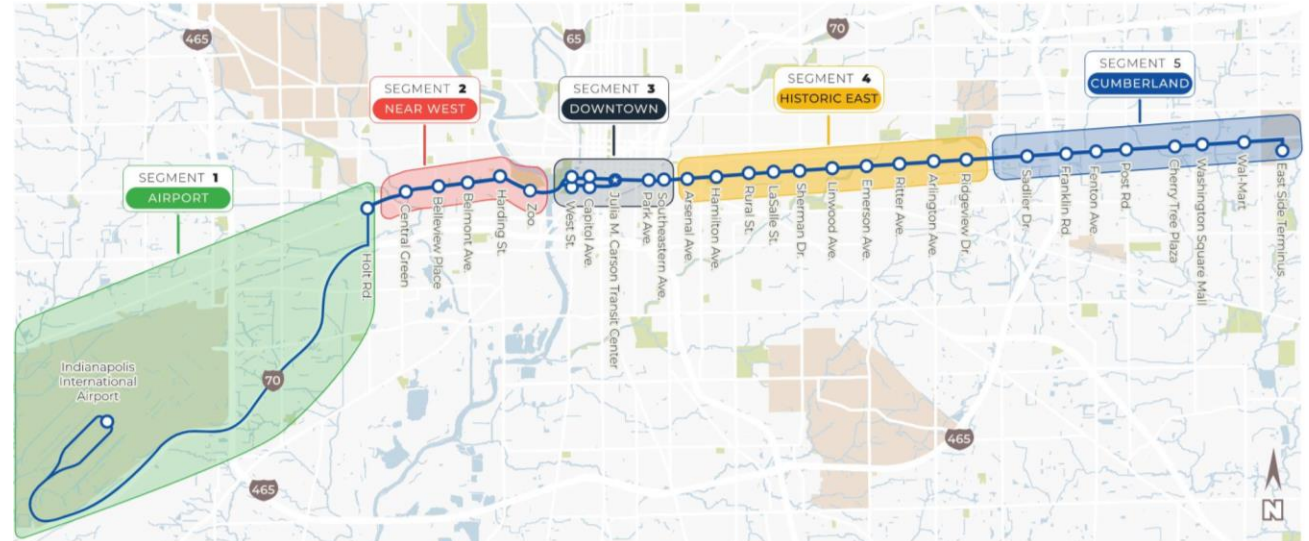
# BRT Capital Costs

- BRT systems are long-term systems with an expected useful life of 25 years or longer.
- While costly, BRT systems are less expensive than light rail systems and offer many of the same benefits.

	ALT. 1	ALT. 1B	ALT. 1C	ALT. 2	ALT. 2B
Alignment	Via Rogers Street / Atwater Avenue and 3 <sup>rd</sup> Street			Via College Avenue/ Walnut Street and 3 <sup>rd</sup> Street	
Roadway Treatment	Mostly curb-aligned bus lanes	Curb-aligned bus lanes on 50% of the alignment	Mixed traffic	Mostly bus lanes (both curb- and median-aligned)	Bus lanes on 50% of the alignment (curb- and median-aligned)
Capital Cost Range (Millions)	<b>\$91.5 to \$150.6</b>	<b>\$81.3 to \$137.6</b>	<b>\$56.0 to \$91.5</b>	<b>\$100.2 to \$165.2</b>	<b>\$90.8 to \$149.5</b>

# Comparison System 1: Indianapolis, IN

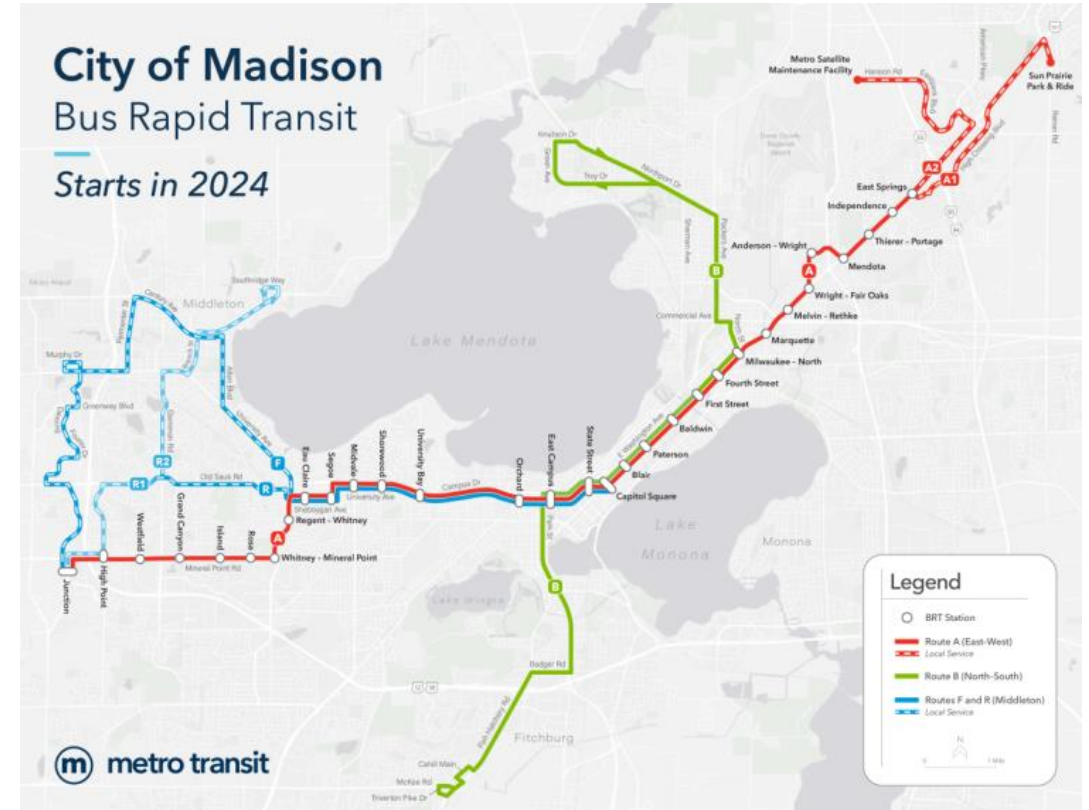
- East-west BRT line (IndyGo Blue Line) proposed to operate **24 miles** along Washington Street between the Indianapolis airport, downtown Indianapolis, and Cumberland with **30 stations**.
  - Project includes construction of **13.4 miles of dedicated transit lanes** and purchase of 18 60-foot buses.
- Capital Cost = **\$371.91 million**
- Cost per mile = **\$15.50 million**
- Capital Investment Grants funding **40.3% of cost** with **\$150 million** from a Small Starts Grant





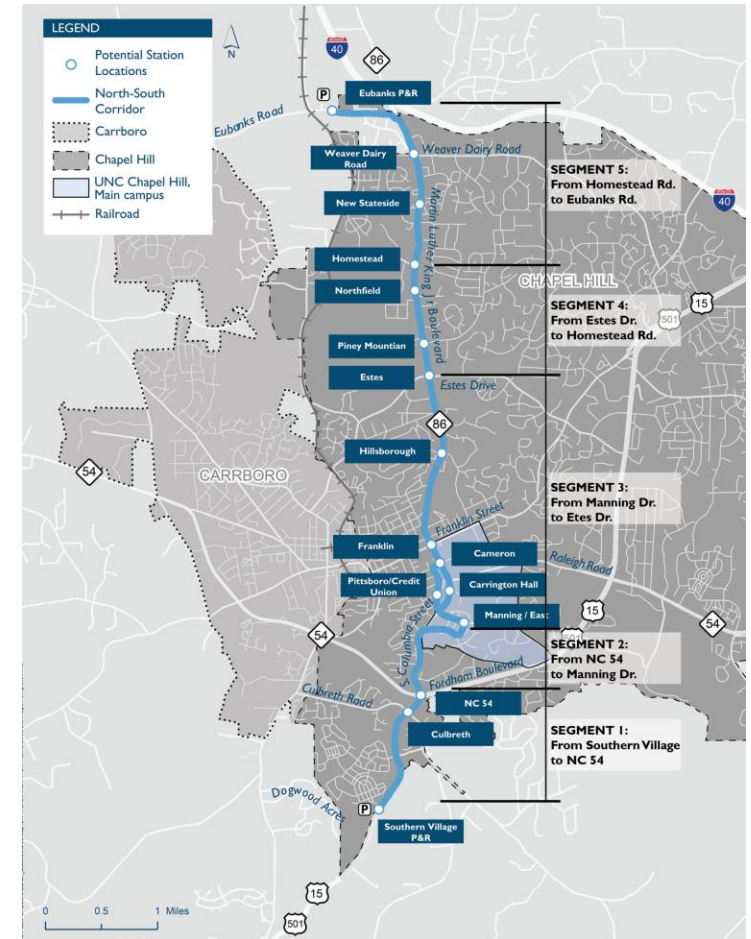
# Comparison System 2: Madison, WI

- North-south BRT line proposed to operate **11.5 miles** from neighborhoods north of Madison, through downtown and south Madison, and into the City of Fitchburg with **24 stations**.
  - Project includes **5.2 miles of new exclusive bus lanes** and planned to share a 3.5-mile segment of the Madison East-West BRT line that serves nine existing stations.
- Capital Cost = **\$150.70 million**
- Cost per mile = **\$13.10 million**
- Capital Investment Grants funding **78.4% of cost** with **\$118.13 million** from a Small Starts Grant



# Comparison System 3: Chapel Hill, NC

- North-south BRT line proposed to operate **8.2 miles** in the Town of Chapel Hill to connect UNC Chapel Hill, UNC hospitals, and Downtown Chapel Hill with **17 stations**.
  - Project includes **5.7 miles of exclusive bus lanes**, the purchase of 14 vehicles, transit signal prioritization, and near-level boarding at stations. The project also includes construction of a bicycle and pedestrian path.
- Capital Cost = **\$183 million**
- Cost per mile = **\$22.32 million**
- Capital Investment Grants funding **80% of the cost** with **\$146.40 million** from a Small Starts Grant



# BRT System Capital Costs

	GREEN LINE ALTERNATIVES			COMPARISON SYSTEMS		
	ALT. 1	ALT. 1C	ALT. 2	INDIANAPOLIS, IN	MADISON, WI	CHAPEL HILL, NC
Alignment	7.4 miles east-west (via College Avenue/ Walnut Street and Atwater Avenue)		7.3 miles east-west (via Rogers Street)	24 miles east-west	11.5 miles north-south	8.2 miles north-south
Roadway Treatment	Mostly curb-aligned bus lanes	Mixed traffic	Mostly curb- and median-aligned	55% dedicated lanes	Mostly bus lanes	Mostly bus lanes
Capital Cost (Millions)	\$91 to \$150	\$56 to \$91	\$100 to \$165	\$371.91	\$150.70*	\$183
Cost per Mile (Millions)	\$10.1 to \$16.8	\$6.0 to \$10.0	\$11.2 to \$18.7	\$15.50	\$13.10*	\$22.32

\*The estimate does not include the cost of purchasing new buses.

# Green Line Operating Cost Estimates

SCENARIO	ANNUAL REVENUE HOURS	ANNUAL COST	PERCENTAGE INCREASE
Green Line (>16 MPH)	18,672	\$1,885,872	-
Green Line (<16 MPH)	23,856	\$2,409,456	-
Existing (Estimated)	89,925	\$9,082,659	-
Scenario 1: Green Line + Basic Service Changes	99,737	\$10,103,839	10%
Scenario 2: Green Line + Enhanced Service	125,825	\$12,753,606	29%
Microtransit	-	\$489,216 - \$824,922	



# Next Steps

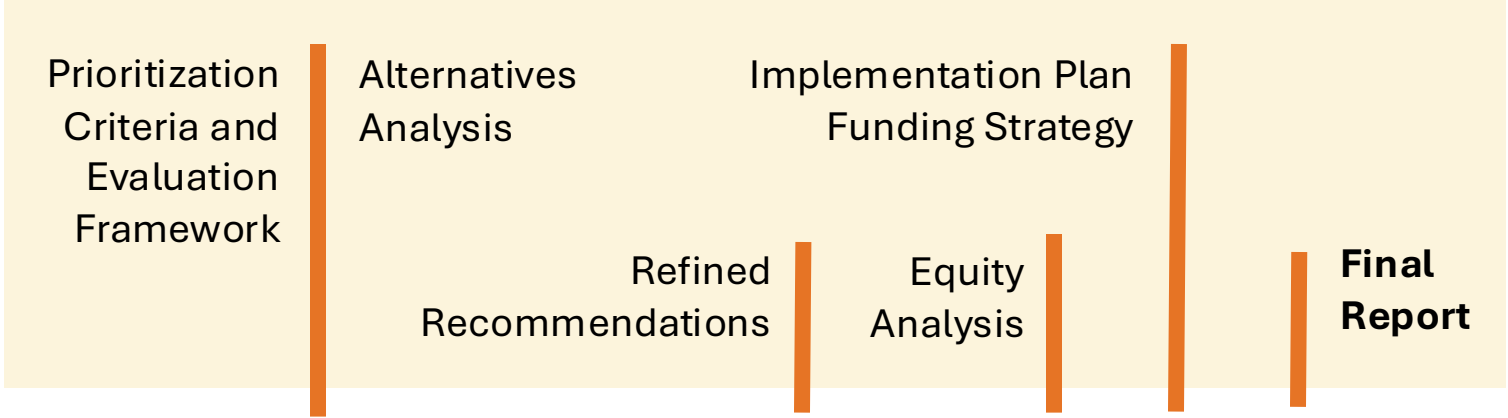
Phase 2 overview, Green Line planning process



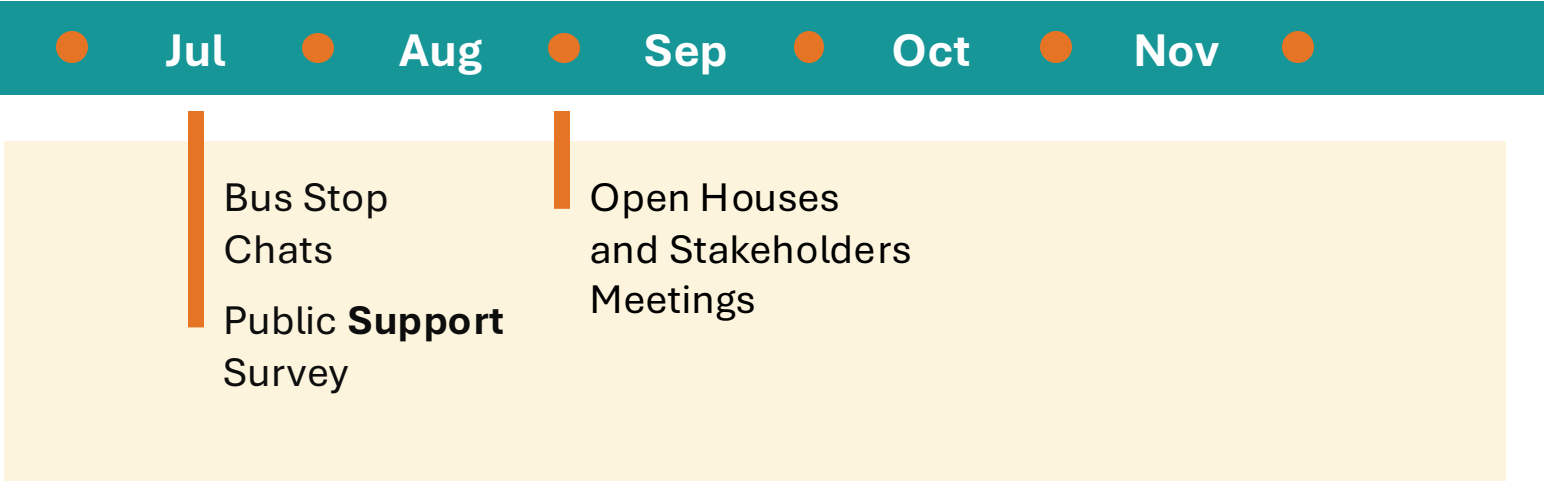
# Phase 2 Outlook

## PHASE 2

Project Milestones



Engagement



- ### DELIVERABLES
- Prioritization Criteria and Evaluation Framework
  - Refined Transit Corridor Recommendations
  - Implementation Plan and Funding Strategy
  - Final Feasibility Study Report
  - Phase II Presentation

# Overall Planning Process

1

**Feasibility Study**

2

Preliminary Planning

3

Environmental Review

4

Design and Engineering

5

Final Design

6

Construction and Implementation

# Thank you!

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