MADISON EAST-WEST BRT PLANNING STUDY Locally Preferred Alternative Report

FINAL

May 2020

Prepared for:

City of Madison



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REVISIONS

Revision No.	Date	Prepared By

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Summary of the Locally Preferred Alternative

The East-West BRT Locally Preferred Alternative (LPA) is a Bus Rapid Transit (BRT) route that will run along East Washington Avenue, around the Capitol building, through the University of Wisconsin-Madison (UW-Madison) campus, continuing west on University Avenue and Mineral Point Road to the West Towne Mall (Figure 1). The alignment is approximately 15 miles in length and key activity centers include Madison College, downtown Madison, the UW-Madison campus, the Capitol and government buildings, and major employers located throughout the corridor, including CUNA Mutual and several malls. Known locally as the "East-West BRT", the east-west roads within this corridor, including East Washington Avenue, University Avenue, Johnson Street, and Mineral Point Road are among the most congested in the region during peak times.

Prior to the final route selection, several

Length: 15 miles

Number of Stations: 27

Span of Service: 5:00 am – 12:00 a.m. weekdays, 7:00 a.m. – 11:00 p.m. weekends

Frequency: 15-minutes 5:00 a.m. -7:00 p.m. weekdays, 30-minutes 7:00 p.m. – 12:00 a.m. weekdays and weekends

Capital Costs (2019\$): \$120 - \$130 million*

Annual Operating and Maintenance Costs (2019\$): \$3.2 - \$3.7 million*

Travel Time (End-to-End, one-way): 55-59 minutes*

Average Daily Ridership: 11,700-13,600*

Residents within a half-mile of Station Areas (2017): 68,000-70,000*

Number of Jobs within a half-mile of Station Areas (2010): 49,000-56,000*

*The range is due to multiple route options evaluated during the development of the LPA.

route options were considered on the West and Downtown areas of the Corridor. These route options can be seen in Figure 2. The corridor was divided into eight segments (Figure 2). Segmenting the corridor allows for a more detailed understanding of the costs and potential impacts of the BRT route; it also gives the city the option of constructing the BRT over time, as their budget allows for. DRAFT

Figure 1. East-West BRT Locally Preferred Alternative





Figure 2. East-West BRT Corridor Segments

The alignment, station locations and specific runningway type have been determined for each of the segments. Table 1 outlines the recommended runningway for each segment for the LPA.

Table 1. Runningway by Segment for the East-West BRT Corridor

Segment	Runningway
Segment 1	Existing Bus Lane + TSP
Segment 2A: Mineral Point Road	Existing Bus Lane + TSP
Segment 2B: Rosa Road	Mixed Traffic
Segment 3A: Whitney Way	Bus Lane + TSP
Segment 3B: Sheboygan, Segoe and University Ave	Mixed Traffic + TSP
Segment 4	Shoulder Bus Lane
Segment 5	Existing and New Bus Lane + TSP
Segment 6: State Street/Capitol Square	Existing Bus Lane + TSP
Segment 7	Bus Lane + TSP
Segment 8	Mixed Traffic and Bus Lanes + TSP

TSP = Transit Signal Priority

Station Siting

The BRT stations were initially laid out by Madison Area Transportation Planning Board (MATPB) staff in 2012 and have been adjusted and modified since. The goal was to space them out so that they are about a half mile apart. Several factors were considered:

1. Physical site

There needs to be space for the BRT station; most of the time, BRT stations will end up where existing bus stops are.

2. Ridership

BRT stations should minimize walk times and be close to ridership generators to the extent possible.

3. Pedestrian infrastructure and crossings

Since BRT is mostly along arterial streets with higher traffic volumes and speeds, stations should be in places where people can cross, usually at traffic signals.

4. Modal integration

Stations are placed where other bus routes intersect as well as where the street grid provides access to neighborhoods. Stations near the end of the line are in areas that could be served by park-and-ride lots.

The initial station locations identified in 2012 resulted in about 34 station pairs for the full east-west, north-south system. In some locations, stations were closer together than ideal, but were placed to meet the criteria above. The current BRT study is looking closely at the station locations along the east-west corridor to continue to refine them.

The Locally Preferred Alternative

The East-West BRT will operate more frequently and with more reliability than the current bus service. The improved service will accommodate increasing demand for connectivity within and through the corridor and encourage residents to consider transit as an attractive daily alternative to driving.

The LPA was selected based on a thorough technical analysis as well as feedback from the public and guidance and input from a city committee. It is also responsive to the transportation needs that were defined in the project Purpose and Need Statement (P+N is on page 8).

After defining the purpose and needs, this study followed a two-phase process to develop and identify the LPA. The key outcomes of the alternative development and evaluation process are:

- Optimize station locations. By reducing the number of stations and integrating dedicated lanes/transit signal priority, the LPA will offer travel time savings for transit trips in the corridor. Station locations were also designed to facilitate connections to the existing transit network to optimize connectivity and mobility throughout the Madison Metro network.
- Optimize the route. The route chosen minimizes travel times by being as direct as possible while also serving major connections like the West Transfer Point and Capitol Square.
- Maximize use of dedicated lanes. A goal of this project is to maximize the use of dedicated lanes throughout the corridor as means to increase reliability, reduce travel times and catalyze

economic development. There may, however, be portions of the corridor where dedicated lane operations would have adverse impacts; in those area, the BRT would operate in mixed traffic. Design details will be developed in coordination with corridor stakeholders during the next project phase.

• Minimize impacts to traffic, bikes, pedestrians, and parking. Feedback from members of the public, project committees and elected officials suggest concerns regarding the potential impact of dedicated lane operations on parking and traffic.

Figure 3 shows the location of the stations and how they are spaced to optimize travel time and efficiency, allowing for faster service. It also shows the location of dedicated lanes, which make up over half of the corridor.

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Figure 3. East-West BRT LPA: Guideway Types

Introduction

This report summarizes the East-West BRT Planning Study process and outcomes and identifies the LPA that is recommended for further study. This report describes which alternatives were studied, the major steps in the decision-making process, who was involved, and the next steps to move the LPA towards implementation

Project Description

This study builds on the 2013 BRT Study, with the goal of selecting a BRT investment that meets the transportation and development needs of the community while maximizing through the Federal Transit Administration's (FTA) Small Starts Capital Investment Grant (CIG) Program.

Summary of the Process to Define and Select the LPA

In the first phase, the corridor was defined by key physical and service elements. Defining these elements first allows for a detailed evaluation of the elements in the second phase. The second phase involved a more detailed analysis and evaluated the alternative against federal criteria to identify the LPA. This process results in an LPA that meets the project purpose and need and is also competitive for federal funding.



Figure 4. The 2013 BRT System

competitiveness for federal capital funding

Project Decision-Making

The project was led by the City of Madison with participation from several stakeholders. Metro Transit, which operates the vast majority of transit service in the Madison area, is part of the City of Madison Members of these organizations worked with community stakeholders and the general public to develop a Locally Preferred Alternative that is responsive to the local need for transportation investment within the East-West corridor while being competitive for federal funding.

Figure 5. East-West BRT Planning Study Decision Making Process

Public	Provide Input	
City Committee	Provide Input	
City of Madison	Takes formal action on LPA	
MATPB	Adopts LPA into Long Range Transportation Plan	

The 2013 BRT identified both an East-West corridor and a North-South corridor for BRT implementation. Metro Transit selected the East-West corridor for initial implementation because:

- It provides the highest ridership potential.
- It serves the greatest number of jobs and attractions.
- It has more dedicated running way already in place.

It is the intent of Metro Transit to start Phase 2 of BRT, the North-South corridor, after the East-West corridor has started operating.

Public Engagement

The City of Madison has engaged the public throughout the Planning study with five public information meetings, 15 small group meetings, and online engagement through the website and two surveys. The goal of all efforts was to share study progress and receive input on the alternative development and evaluation process.

As part of the public engagement process, the City of Madison hosted five open house style Public Involvement Meetings (PIMs) in May, August, September, October and December 2019. Additionally, the city connected with neighborhood and community groups, business groups, educational institutions, employers and elected officials.

BRT Priorities

- Faster and more reliable service
- Convenient transfers
- Pedestrian connections
- Regional benefits
- Enhanced bus features
- Bicycle connections
- Parking accommodations

Figure 6

Figure 6 summarizes the overall public engagement activities throughout the project and the number of responses received. The East-West BRT Planning Study received a high level of public engagement throughout the project and the themes that emerged from this engagement are:

- Excitement and anticipation
- Desire for bold planning and design
- Faster and more reliable service

- Emphasis on universal design
- Strong interest in regional benefits
- Commuter parking solutions



More information about the public engagement activities can be found in the two Madison BRT Public Engagement Summary Reports, available under separate cover.

Project Purpose and Need

The purpose of the Madison East-West BRT Planning Study is to identify and implement the optimal transit investment strategy that will accommodate the anticipated growth in travel demand and increased ridership within the corridor, support mobility options that match emerging demographic trends and preferences, leverage the existing transportation infrastructure to improve connectivity within the corridor, and encourage sustainable development patterns that reduce reliance on single-occupant motor vehicles.

There are several project needs identified in the Purpose and Need Report and described below.

• **Improve travel times throughout the corridor.** The high level of transit demand is straining capacity, which is reducing operational efficiency and resulting in schedule slippage and bus

stacking. Further, the 2015 On-Board Survey identified overcrowding on buses as a top concern from riders. Existing and future rider demand can be accommodated by investing in the capacity of the transit system.

- Provide higher and more regular service levels connecting all neighborhoods to services and employment. Equity is a top priority of City leaders and any investment in transit should serve those who have the greatest need, including low-income populations and transitdependent individuals and households. Transit should provide efficient connections to jobs and centers of employment.
- Provide service that meets the needs of everyone, particularly Millennials and Seniors. Madison is relatively young, but the number of people between the ages of 60 to 64 has doubled between 2000 and 2015.¹ In 2014, the median age of Madison residents was 30.8; which contrasts to the median age of Wisconsin residents at 39.2². Since 2000, Madison has seen significant increases in the number of 20 to 34-year olds and 50 to 64-year olds. Even though the number of people between ages 60 and 64 has doubled since 2000, the large increase in millennials has driven down the city's median age. Academic research and industry experience have found that both of these demographic groups are increasingly choosing transit for either lifestyle/environmental/economic reasons (millennials) or mobility reasons (senior citizens).
- Accommodate increased travel demand to and from existing and planned developments, services, jobs and destinations through multi-modal transportation investments.
 Approximately 120,000 motor vehicles pass through the lsthmus on an average weekday.³ As the residential population in the corridor and commuting employees into the corridor continues to grow, the added demand will strain the capacity of the streets through downtown that are physically constrained by the lakes, therefore it is not feasible to add additional travel lanes. Providing high capacity BRT will more efficiently and quickly move people through the most congested area of the city and will better meet future demands for travel.
- Madison has demonstrated a commitment to sustainable growth strategies in their adopted plans and policies. The *Imagine Madison, Madison In Motion,* and *Regional Transportation Plan 2050* (RTP 2050) plans call for a transportation system that accommodates transportation needs and demands while mitigating congestion, promoting air quality, and supporting affordable housing goals, sustainability and energy conservation. Transit service also plays a critical role in increasing access to services. High-capacity transit system investment that leverages existing transportation facilities while reducing reliance on single-occupant motor vehicles will be necessary to achieve these goals.

These needs, outlined above, describe why investment in high-capacity transit is necessary in this corridor. The following sections provide the data to support these statements and outline why BRT is a sound investment for the City of Madison.

¹ https://imaginemadisonwi.com/sites/imaginemadisonwi.com/files/document/pdf/City%20Snapshot.pdf.

² Ibid.

³ Ibid.

Goals and Objectives

The following four goals and related objectives were established for the East-West BRT Corridor. These were utilized for the development of evaluation criteria used in comparing the alternative transit investment options for the corridor. The goals and objectives are outlined in Table 2.

Goal	Objective
Increase the efficiency, attractiveness, and utilization	• Provide reliable, frequent service that improves the experience of existing customers and attracts "choice" riders
of transit for all users	Provide capacity for future growth in transit ridership
	Provide enhanced passenger amenities and infrastructure
	Reduce travel times
Efficiently manage the forecasted increase in	Provide frequent, high-capacity, one-seat transit connections between key East-West BRT Corridor activity generators
corridor travel demand	• Manage increasing corridor travel demand through more efficient use of the existing transportation network
	• Contribute to acceptable levels of traffic operations and parking supply in the corridor
	Improve pedestrian and bicycle connections to East-West BRT Corridor transit
	Coordinate with existing and planned transit services
Contribute to a socially-,	• Promote a more efficient and sustainable transportation system
economically-, and	that reduces energy usage, emissions, and cost of living
environmentally-sustainable transportation network	Increase mobility and accessibility for transit-dependent populations
	• Support regional planning efforts for a more balanced, multi- modal transportation network in the region
	Support local and regional goals for compact, mixed-use development along the corridor
	Support institutional and key stakeholder planning efforts
Develop and select an implementable and community-supported project	• Define and select transit improvements with strong public, stakeholder and agency support
	• Define and select transit improvements that are cost-effective and financially feasible, both in the short- and long-term
	Define and select transit improvements that are competitive for ETA funding

Table 2. East-West BRT	Corridor Goals and	Objectives
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Evaluation Criteria

The East-West BRT Planning Study followed a two-phase method to identify and develop the LPA.

- Phase 1 included the detailed evaluation of the potential alignment alternative(s). The detailed evaluation resulted in the identification of the preferred alternative. The alternative resulting from this evaluation became the preferred alternative, which was advanced for further refinement in Phase 2.
- Phase 2 refined the preferred alternative selected at the end of Phase 1 to become the LPA.

The evaluation criteria associated with each phase were a combination of quantitative and qualitative performance measures. Phase 1 applied metrics that are linked to the project goals and objectives (as defined in the study Purpose and Needs) and identified the preferred alternative. Phase 2 evaluated the preferred alternative against federal criteria to determine the LPA. This two-phase process has resulted in the identification of an LPA that not only meets locally-identified project purpose and needs but is also competitive for federal funding.

	Evaluation Phases	
Project Goals	Phase 1: Detailed Evaluation	Phase 2: Refinement of the LPA
Increase the efficiency, attractiveness, and utilization of transit for all users	RidershipTransit travel times	• Mobility improvements ^a
Efficiently manage the forecasted increase in corridor travel demand	 Traffic impacts Parking impacts Potential right-of-way impacts Bicycle and pedestrian impacts 	 Mobility improvements^a Congestion relief^a
Contribute to a socially-, economically-, and environmentally- sustainable transportation network	 Station area population and employment densities Station area equity characteristics Station area land use and economic development opportunities Environmental impacts/benefits 	 Economic development^a Land use ^a Environmental benefits^a
Develop and select an implementable and community-supported project	 Capital and operating and maintenance costs Cost effectiveness Community support 	 Financial capacity analysis^a Cost effectiveness^a

Table 3. Evaluation Criteria

^aConsistent with FTA New Starts/Small Starts criteria.

Defining and Evaluating the Alternatives

Following the previously outlined study process, first the key physical and service elements of the transit alternatives were defined, and then evaluated from the criteria listed in Table 3.

Defining the East-West BRT Alternatives

In the first phase, the corridor was defined by key physical and service elements. These elements include:

- Service plan
- Station locations/spacing
- Station facilities
- Runningway
- Transit vehicles

- Fare collection
- Technology/customer information
- Identity/branding
- Maintenance facility

One of the defining features of some BRT facilities is a dedicated lane. This dedicated lane is an important feature because it allows the bus to travel without interference from other vehicles that could slow down transit service. A dedicated bus lane typically runs either in the center/median of a road or along the curb/side. The BRT alternatives are all street-running BRT; the primary differences are related to runningway configuration (dedicated curb lane vs. mixed traffic) and route alternatives/station location on the west side and around the Capitol.

Runningway Option 1: Mixed Traffic with Transit Signal Priority and Intersection Improvements

BRT vehicles would operate in mixed traffic as Metro buses do today, but they would gain speed and reliability advantages by using Transit Signal Priority (TSP) and other intersection improvements like queue jumps, queue bypasses, and other changes. TSP is technology that links bus movements to traffic signals, so that green light cycles can be extended, or red-light cycles can be shortened as a bus approaches an intersection. This helps buses to stay on schedule and maintain reliability. Queue jumps allow buses to get a "jump" on traffic at a signal by allowing them their own space with a separate signal that gives them a short window of green time before the traffic light turns green for the general traffic lanes. This allows buses to "jump" in front of traffic and get a head start (Figure 7).

Figure 7. Queue Jump Diagram



Source: National Association of City Transportation Officials (NACTO

Runningway Option 2: Curb/Shoulder Bus Lanes

Curb or shoulder bus lanes are typically located on the outside of the roadway. This lane can be used for bikes, business access, and right turns as well. Lanes may be located immediately at the curb or in an offset configuration, replacing the rightmost travel lane on a street where parking is permitted.

Bus only pavement markings should be applied to emphasize the lane and deter drivers from using it. These lanes should also be separated from other traffic, either delineated by painted lines or by a physical barrier and may be colored red.

Median busways were also considered with bus lanes and stations in the middle of the roadway. These facilities further improve speed and reliability by removing bikes and right turns from the transitway. However, space and capacity restraints make it difficult to implement median lanes (center running) for much of the corridor. Additionally, several segments of the East-West corridor were recently reconstructed, altering curb lines and reconstructing intersections would add substantially to project costs.

Characteristics Consistent Among the Alternatives

Station Facilities

Upgrades to facilities associated with BRT would only occur at locations where the BRT is proposed to stop. (some may be moved or closed) Each BRT station would include some or all of the following elements:

- Level boarding platform or curb, 14 to 15 inches above the roadway to allow a seamless transition onto the vehicle and faster boarding and reduced vehicle dwell times (Figure 8).
- Off-vehicle ticket vending machine.
- Recognizable shelters of a modular design to allow variable sizing based on demand, possibly with vertical wall panels and a roof or canopy.
- Consistent scale and level of finish to the shelters, which could be different for downtown and through the campus.
- Stop platform/curb extensions (where feasible) that are generally 70 feet long, sufficient to accommodate a 60-foot articulated bus.
- camera surveillance for safety and security.
- Seating
- Bike parking and/or bike sharing facility
- Real-time passenger information
- Route and schedule information
- Shelter lighting
- Trash and recycling receptacles
- Branding and aesthetic consistency to provide maximum visibility and an identifiable service to distinguish from existing Metro Transit services.
- Use of materials that are easy to maintain, repair and refurbish.

Transit Vehicles

There may be a combination of 60-foot articulated buses with right-door loading and 40-foot standard buses; vehicle deployment decisions will be based on operating data and service planning. The BRT bus fleet plans to be 100 percent electric.

Evaluating the East-West BRT Alternatives

The following sections provide a brief description of the different types of detailed analyses that were conducted in this phase of the project.

Station Areas

The number of people, housing units, and employment within a half-mile radius of each station are important criteria because more people and jobs near stations generally corresponds to better utilization of the transit service. These are also key rating factors used by the FTA when evaluating projects for their Small Starts program. The purpose of this analysis was to understand how many people live and work

Figure 8. Level Boarding



Figure 9. Example Station Designs





near the proposed station areas, how many of those people are minorities or disadvantaged populations, and what the development potential is around each station area.

Transportation Impacts

The Transportation Impacts analyzed potential traffic impacts, parking impacts, and bicycle and pedestrian impacts that BRT could have on the existing streets and facilities.

Potential Environmental Impacts

This analysis evaluated the potential impacts to natural resources, noise and sensitive vibration receptors, and cultural resources that BRT could have throughout the corridor.

Capital Costs

Estimating capital costs is a critical component of the FTA's Capital Investment Program. Capital costs are the one-time expenditure required to build the system, including infrastructure costs and soft costs. Infrastructure costs typically include costs associated with the guideway, stations, structures, signalization and communication systems, support facilities, vehicles, and right-of-way acquisition. Soft costs such as professional services for items including engineering, construction services, project management, surveys, testing, insurance, legal, permits and owner's costs are also included as part of the overall capital cost. Contingencies are applied to the capital cost to account for uncertainty in both the estimating process and the scope of the project.

Cost Effectiveness

The cost effectiveness measure is designed to assist the FTA in identifying the projects that will result in the highest level of usage (trips) for the minimal amount of federal investment. The FTA's cost effectiveness rating for Small Starts is based on the annualized federal share of the project's capital cost per project trip.

Operating and Maintenance Costs

Operating and maintenance (O&M) costs are ongoing annual costs to operate BRT service and maintain the BRT infrastructure, such as stations, and vehicles.

Running Times

BRT running times are determined by calculating running times at the alternative, segment, time-of-day, and direction levels, and then summing to determine the overall alignment running time. The steps for this analysis are laid out in the operating cost memo under separate cover.

Ridership

Daily ridership was modeled for the each of the proposed build alternatives.

Selecting and Refining the Locally Preferred Alternative

The LPA strikes a balance between achieving faster travel times, higher ridership, while maintaining capital and operating costs that are feasible for the City and Metro Transit to implement. A trade-off relationship exists between travel times, capital costs and ridership. For example, as travel times decrease with the Dedicated Lane and TSP option, ridership also increases, however capital cost increases significantly as well. Conversely, the mixed traffic option is the least expensive, but it also has the lowest ridership and slowest travel times. The LPA was chosen because it meets the goals and objectives of this study, while also being feasible to implement in terms of capital and operating costs.

Refining the LPA

After the completion of the Detailed Evaluation phase, several alternative routes, both on the west end and downtown area, remained. These alternatives included;

West Side Alternatives

1: Mineral Point Road: BRT vehicles would travel on new bus lanes on Whitney Way, and then travel on existing bus lanes on Mineral Point Road to High Point Road.

2: Odana Road: BRT would travel south along Whitney Way, serve Metro's West Transfer Point (at Whitney Way/Tokay Blvd), and then head to West Towne using Odana Road. Because of space constraints on Odana Road, BRT would be in mixed traffic.

*3: Mineral Point Road via Rosa Road Extension: Alternative 3 is a hybrid of Alternatives 1 and 2 in that it uses Mineral Point Road for the majority of its routing, yet also connects to the West Transfer Point. Rosa Road would be extended from University Research Park to Tokay Blvd.

4: Terminate at the West Transfer Point: Alternative 4 would terminate the west side service at the West Transfer Point on Whitney Way.



Figure 10: West Side BRT Routing Alternatives

Alternative 3: Mineral Point Road via Rosa Road Extension is the recommended alternative because it provides the highest level of employment access, takes advantage of existing bus lanes on Mineral Point Road, and connects to Metro's West Transfer Point. The City of Madison is undertaking a concurrent route structure study – if that study recommends changes to the function or location of the West Transfer Point, the detailed routing of the LPA in this small area may be revisited.

Downtown Alternatives

*1: State Street and Capitol Square: Alternative 1 uses the route used by most bus routes today. From Johnson and Gorham Streets, the route follows State Street which is restricted to buses, bikes and authorized vehicles, then continues around the Capitol Square, and to East Washington Ave.

1A: Outer Loop: Same route as Alternative 1 expect that instead of using the outer loop detour only for special events, it would use it all the time.

1B: Outer Loop without Capitol Stops: Same route as Alternative 1A but no BRT stops around capitol.

1E: Capitol Square with no stops.

2: Broom and Wilson: Alternative 2 uses a series of one-way couplets (Broom/Henry Streets, Wilson/Doty Streets, and Webster/Butler Streets) to pass through downtown south of the Capitol Square.

3: Two-Way Broom and Wilson/Doty: Alternative 3 is identical to Alternative 2 expect that eastbound buses would use a new contraflow bus lane on Broom St between Johnson Street and Main Street, rather than using Henry.

3A: State Street, Fairchild St and Wilson St.: Alternative 3A avoids the Capitol Square by using Fairchild Street in both directions, the Wilson and Doty Street one-way couplet, and Webster and Butler Street.

Alternative 1: State St and Capitol Square is the recommended alternative due to its high visibility on the Capitol Square, generous space for stations and pedestrian circulation, transfer access and it doesn't reduce parking revenue.



Figure 11: Downtown Routing Alternatives

Next Steps

The City of Madison and Metro Transit are in the beginning phase of developing high capacity transit that will serve the city through the East-West corridor. The implementation of this project relies on federal funding and in order to secure that funding there is a specific process that must be followed (Figure 12).





The project is currently completing the first phase, planning. Within this planning phase, project sponsors identify transportation problems within priority corridors, develop alternatives that address problems and evaluate the alternatives in order to determine which potential investment best meets local goals and objectives for the corridor, while at the same time demonstrating a strong likelihood of meeting the Small Starts criteria. This report is the conclusion of that phase and with the City of Madison's selection of the LPA, the project is ready to advance into the federal environmental review stage consistent with the National Environmental Policy Act (NEPA) of 1969. Once NEPA is initiated, the next step in the CIG process is to request entry into Small Starts Project Development.

Approval and Adoption of the LPA

The LPA was recommended by the project team to the City of Madison on March 31, 2020. The City of Madison Common Council approved the LPA and recommended on March 31, 2020.

National Environmental Policy Act

The City of Madison has begun preliminary work to ensure the compliance with NEPA. The first step in this process will be to work with the FTA to make a Class of Action Determination. At this time, it is anticipated that the COA for this project will be a Categorical Exclusion (CE). The COA will depend on the final LPA and the potential impacts of the LPA. The City of Madison anticipates receiving a COA determination in Summer/Fall 2020.

Request to Enter Small Starts Project Development

It is anticipated that the East-West BRT Planning Study project will be funded through a portion of the FTA's Capital Investment Program, commonly known as Small Starts. This requires the City of Madison to request entry into the Small Starts Project Development program from the FTA. This can be done either

during or following the completion of the NEPA process. The anticipated timeline for the Small Starts application is outlined below:

- Request to enter Project Development: Spring 2020
- FTA review request to enter Project Development: Spring/Summer 2020
- Request to rating and inclusion in FY22 budget: August/September 2020
- Congress approval of budget: September 1, 2021
- Negotiate/sign Small Starts Grant Agreement: Spring 2022

Small Starts Project Development

During Small Starts Project Development, the City of Madison will complete the requirements of the NEPA process, conduct final engineering and vehicle procurement. The final design will be development from the Preliminary Engineering completed for NEPA and include preparing the final plans, specifications and bid package for construction of the project.

Full Funding Grant Agreement/Construction

The City of Madison will work with the FTA to develop a Grant Agreement, with the grant anticipated in Spring 2022. A Grant Agreement is the means by which the FTA provides funds for the capital costs of Small Starts projects. It will identify the maximum federal share and capital cost of the project.

Upon receipt of the Grant Agreement, the City of Madison will begin the construction of the East-West BRT Fall 2022. The proposed construction schedule is outlined below:

- Prepare bid documents: Spring 2022 Summer 2022
- Procurement: Summer 2022
- Construction: Fall 2022 Winter 2024
- Testing: Spring 2024

Project Funding

The funding for the East-West BRT project will likely require a combination of federal, state and local funding. These funding sources will likely include FTA Small Starts funds and matching funds from the City of Madison. However, throughout the NEPA and Project Development phases, the City of Madison will continue to explore additional funding sources.