MADISON EAST-WEST BRT

Documented Categorical Exclusion

Final

May 10, 2022

Prepared for:

City of Madison

Prepared by:

SRF Consulting Group

Commonwealth Heritage Group

Cross-Spectrum Acoustics

REVISIONS

Revision No.	Date	Prepared By

Contents

1. Detailed Project Description 1
2. Location (Including Address) 12
3. Metropolitan Planning and Air Quality Conformity 13
4. Land Use and Zoning 14
5. Transportation Impacts 19
6. CO Hot Spots 30
7. PM2.5 and PM10 Hot Spots 30
8. Historic Resources 30
9. Visual Quality 37
10. Noise 42
11. Vibration 43
12. Acquisitions and Relocations Required 43
13. Hazardous Materials 45
14. Social Impacts and Community Disruption 46
15. Environmental Justice 51
16. Use of Public Parkland and Recreation Areas 55
17. Impacts on Wetlands 69
18. Floodplain Impacts 69
19. Impacts on Water Quality, Navigable Waterways, and Coastal Zones 70
20. Impacts on Ecologically-Sensitive Areas and Endangered Species 71
21. Impacts on Safety and Security 73
22. Impacts Caused by Construction 74

List of Figures

Figure 1: Madison East-West BRT 3
Figure 2: Madison East-West BRT by Lane Type 7
Figure 3: Project Location 13
Figure 4: Existing Land Use 16
Figure 5: Zoning Designations 17
Figure 6: Future Land Use 18
Figure 7: Historic and Cultural Resources between the Junction Road and Shorewood Boulevard stations 34
Figure 8: Historic and Cultural Resources between the Shorewood Boulevard and Fourth Street stations 35
Figure 9: Historic and Cultural Resources between the Fourth Street and East Springs Drive stations 36

Figure 10: Baldwin Street station rendering 41
Figure 11: Environmental Justice Populations in the Study Area, City, and State 52
Figure 12: Existing Parks, Recreation Areas, and Off-Street Shared-Use Paths 57
Figure 13: Impacts to Garner Park and Path 60
Figure 14: Impacts to Nautilus Point Park 61
Figure 15: Breese Stevens Field Relative to the Study Area 62
Figure 16: Yahara Parkway, Yahara River Bike Path, and Burr Jones Park Relative to the Study Area 63
Figure 17: Reindahl (Amund) Park Relative to the Study Area 64
Figure 18: Mineral Point Greenway/West Towne Soccer Fields Relative to the Study Area 65
Figure 19: Starkweather Creek Bike Path Relative to the Study Area 66
Figure 20: Ice Age Junction Path Relative to the Study Area 68

List of Tables

Table 1: East-West BRT Project Proposed Spans and Headways 4
Table 2: Existing and Planned Weekday Bus Volumes 5
Table 3: Station Locations 8
Table 4: Concurrent Projects in the BRT Corridor 9
Table 5: Corridor Needs 11
Table 6: Changes to Corridor Roadways 19
Table 7: Existing and Proposed Levels of Service at Controlling Intersections 22
Table 8: Transit Service Changes Necessary for East-West BRT 25
Table 9: Operating Phase Visual Impacts 37
Table 10: Summary of Potential Property Acquisitions, Easements, and Displacements 44
Table 11: Contaminated Sites within Project Limits 46
Table 12: *Socio-Economic Indicators* 47
Table 13: *Community Facilities by Project Element* 47
Table 14: Areas with Increased Bus Service: ..... **Error! Bookmark not defined.**
Table 15: Areas with Reduced Bus Service ..... **Error! Bookmark not defined.**
Table 16: Section 4(f) Parks and Recreation Areas in the Study Area Listed from west to east 57
Table 17: Wetlands within 500 feet of the East-West BRT Project 69
Table 18: State-Projected Species that May be Impacted by the Project 71
Table 19: USFWS Official Species List Results 72

Appendices

Appendix A: 30 Percent Design Plans

Appendix B: Land Use and Zoning Technical Report

Appendix C: Transportation Technical Report

Appendix D: Service Plan and Operations and Maintenance Costs Technical Report

Appendix E: Historic and Cultural Resources Technical Report

Appendix F: Visual Quality Technical Report

Appendix G: Noise and Vibration Technical Report

Appendix H: Acquisitions Technical Report

Appendix I: Hazardous Materials Technical Report

Appendix J: Social Impacts and Community Disruption Technical Report

Appendix K: Environmental Justice Technical Report

Appendix L: Public Parkland and Recreation Areas Technical Report

Appendix M: Wetlands, Floodplains, Water Quality, Navigable Waterways, and Coastal Zones Technical Report

Appendix N: Ecologically Sensitive Areas and Endangered Species Technical Report

1. Detailed Project Description

Describe the project including the type (such as bus storage, maintenance, and/or administration facilities). Indicate the size of the proposed facility, number of vehicles and staff it will house. Describe any construction, demolition, and soil excavation activities. Include a brief discussion summarizing the purpose and need for the project (e.g., congestion, state of good repair). Explain in common language how implementation of the project will address the project need, and its proposed use. Include a complete description of the project components such as length of the project in feet or miles, property size, history, ownership information (land management authority), acreage, and document previously conducted studies if applicable. Provide graphics that describe the proposed project.

The Madison East-West Bus Rapid Transit (BRT) Project (the project) is a proposed 15-mile route serving east-west travel needs in central Madison, Wisconsin. The project would connect the east and west sides of Madison, running through the isthmus, downtown, and the University of Wisconsin (UW) campus. The project is sponsored by the City of Madison, in partnership with the Greater MPO (the Metropolitan Planning Organization for the Madison urbanized area), Metro Transit, and Wisconsin Department of Transportation (WisDOT).

The East-West BRT route would operate in a combination of exclusive, semi-exclusive, and mixed traffic lanes on Junction Road, Mineral Point Road, Whitney Way, Sheboygan Avenue, Segoe Road, University Avenue, Campus Drive, Johnson Street, State Street, the Capitol Square, East Washington Avenue, Wright Street, Anderson Street, Mendota Street, and East Washington Avenue. The route would operate in center-running lanes on University Avenue. The western terminal is planned at a City of Madison-owned parcel at Junction Road south of Mineral Point Road, where a new 170-space park-and-ride would be constructed. The eastern terminal station is located on East Washington Avenue at East Springs Drive (Figure 1).

The project would include the construction of 32 BRT stations. The project would also include electric bus charging infrastructure where BRT bus layovers would occur, at Sun Prairie Park-and-Ride in the City of Sun Prairie, at the Metro Satellite Maintenance Facility along Hanson Road in the City of Madison, and at the Junction Road Terminal Park-and-Ride in the City of Madison.

With the construction of the East-West BRT Project, shown in red in Figure 1, Metro Transit would be able to introduce two additional BRT lines (Middleton and North-South BRT, which are represented by blue and green lines respectively in Figure 1) using BRT infrastructure (i.e., stations and travel lanes) in the East-West BRT corridor and local bus stops outside the corridor. The scope of this document is focused on aspects of the project that would have an impact on the natural and built environment. No physical changes would be made outside of the East-West BRT corridor except for electric bus charging infrastructure at the existing Sun Prairie Park-and-Ride and the Metro Satellite Maintenance Facility. North-South and Middleton BRT do not require infrastructure improvements outside the East-West BRT corridor, but where appropriate, required vehicles for and the impacts of increased service from these service changes will be discussed.

The project consists of the following elements:

- Frequent bus service
- Construction of an approximately 15-mile BRT line consisting of exclusive and semi-exclusive bus-only lanes and mixed traffic lanes, primarily using existing roadways
- Construction of 32 BRT station locations
- Construction of an approximately 170-space park-and-ride lot at Junction Road south of Mineral Point Road to serve as the west terminal station and include local bus bays to facilitate transfers between local and BRT service
- Purchase of 43 sixty-foot articulated buses (combination of battery electric and diesel)
- Traffic signal priority
- Electric bus charging stations and other infrastructure

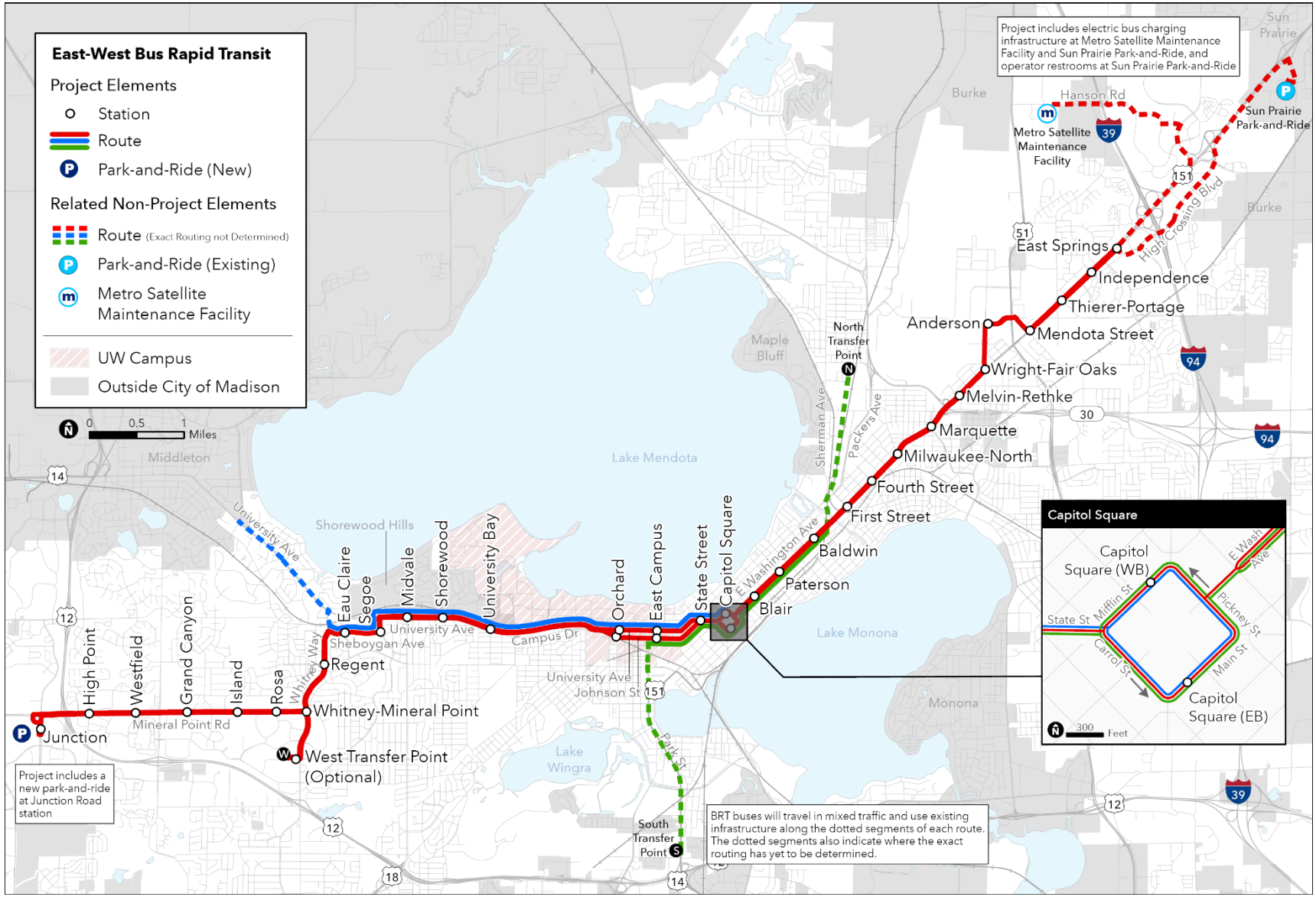
These project elements are described in greater detail in the following sections.

In 2020, Metro Transit applied for and received a Federal Transit Administration Section 5339b grant to:

- Purchase three 60-foot buses
- Upgrade the Metro Satellite Maintenance Facility to service these buses
- Install dedicated runningway along 1.2 miles of East Washington Avenue
- Install dedicated runningway along 0.75 miles of Whitney Way
- Install red pavement on existing Mineral Point Road bus lanes to increase driver compliance
- Implement spot geometric improvements at the East Transfer Point

With the exception of the East Transfer Point improvements, all of this work will be incorporated into the East-West BRT Project, and is part of the project definition analyzed in this DCE. Additionally, the 5339b funding was included in the Financial Plan submitted to FTA during the Capital Investment Grants program process. Although this work is incorporated into the East-West BRT Project and DCE, it will be completed whether or not East-West BRT is constructed. If BRT is not constructed, the City will evaluate these improvements as a separate project.

Figure 1: Madison East-West BRT



1.1. Project Elements

1.1.1. Frequent Bus Service

The East-West BRT route would serve stations from Junction Road near Mineral Point Road to East Washington Avenue at East Springs Drive (Figure 1). From East Springs Drive, the route would split into two alternating local service patterns and connect with the existing Sun Prairie Park-and-Ride or continue onto the Metro Satellite Maintenance Facility, where electric bus charging would occur during layovers. These alternating local service patterns are represented by the dotted red lines in Figure 1.

Two additional BRT routes would serve BRT stations and use bus lanes constructed as part of the East-West BRT Project. Middleton BRT runs from Middleton to the Capitol Square, using BRT infrastructure between Whitney Way and the Capitol Square (Figure 1). Some of these trips would operate between Capitol Square and Middleton on a route to be determined, and some trips would operate between the Capitol Square and Eau Claire station as a short turn. Another BRT route, North-South BRT, provides service connections between the North Transfer Point and the South Transfer Point (Figure 1). The exact alignment of the North-South BRT route would be determined through a future study but would use BRT infrastructure between East Campus Mall station and First Street station. The route would likely be on Park Street south of the corridor and either Sherman Avenue or Packers Avenue north of the corridor as shown in Figure 1. These two routes would not require additional capital investments outside of the East-West BRT corridor. Service changes and vehicle needs for all three BRT routes are discussed in this document.

Service levels on the BRT and local routes are shown in Table 1 below. The buses operating on all three BRT routes would be purchased as part of the project. In combination, the East-West BRT (depicted in red), North-South BRT, and Middleton BRT would offer a five-minute headway in the core of the system.

Table 1: East-West BRT Project Proposed Spans and Headways

Service Day	Span	East-West BRT	Middleton BRT (Capitol Square to Eau Claire)	Middleton BRT (Capitol Square to Middleton)	North-South BRT (East Campus to First Street)
Weekday	Early AM: 5 – 6 a.m.	30 mins.	-	-	30 mins.
	AM Peak: 6 – 9 a.m.	15 mins.	-	15 mins.	15 mins.
	Midday: 9 a.m. – 4 p.m.	15 mins.	15 mins.	-	15 mins.
	PM Peak: 4 – 7 p.m.	15 mins.	-	15mins.	15 mins.
	Evening: 7 p.m. – 12 a.m.	30 mins.	-	-	30 mins.
Weekend	Early AM: 6 – 7 a.m.	30 mins.	-	-	30 mins.
	Midday: 7 a.m. – 4 p.m.	15 mins.	-	-	30 mins.
	PM Peak: 4 – 7 p.m.	15 mins.			30 mins.
	Evening: 8 – 11 p.m.	30 mins.	-	-	30 mins.
Sunday	All Day: 6 a.m. – 11 p.m.	30 mins.	-	-	30 mins.

Much of the BRT routing replaces and/or complements local bus service which already exists in these corridors. Table 2 summarizes the approximate number of weekday buses in 2019 (before the COVID-19 pandemic began) and the projected number of BRT buses proposed on weekdays in 2024 along the BRT route.

Table 2: Existing and Planned Weekday Bus Volumes

BRT Route Location	2019 Weekday Buses	2024 BRT Weekday Buses
Mineral Point Road, West of High Point Road	36	128
Mineral Point Road, West of Island Drive	120	128
Whitney Way, South of Mineral Point Road	252	256
Whitney Way, North of Mineral Point Road	156	128
Sheboygan Avenue, East of Eau Claire Avenue	302	256
University Avenue at Shorewood Boulevard	504	240
Campus Drive	402	240
University Avenue and Johnson Street at Brooks Street	831	240 + 250-300 local
University Avenue and Johnson Street, Lake Street to Bassett Street	711	368 + 250-300 local
State Street at Fairchild Street	618	368
Capitol Square at Wisconsin Avenue and MLK Jr Boulevard	786	368 + 100 local
East Washington Avenue at Ingersoll Street	282	256
East Washington Avenue, East of Milwaukee Street	183	128
East Washington Avenue, East of Highway 30	129	128
East Washington Avenue at Thierer Road	123	128

The BRT span of service (hours of operation) will be the same as local service (pre-pandemic), generally from about 5 AM to midnight on weekdays. Along most of the route, bus volumes will remain about the same since the BRT project will replace bus service hours already in the corridor. On some portions of the BRT route, the number of buses will be reduced, a result of replacing 40-foot buses with 60-foot articulated buses (higher capacity buses means fewer buses are needed), as well as the overall restructuring of service to be more efficient.

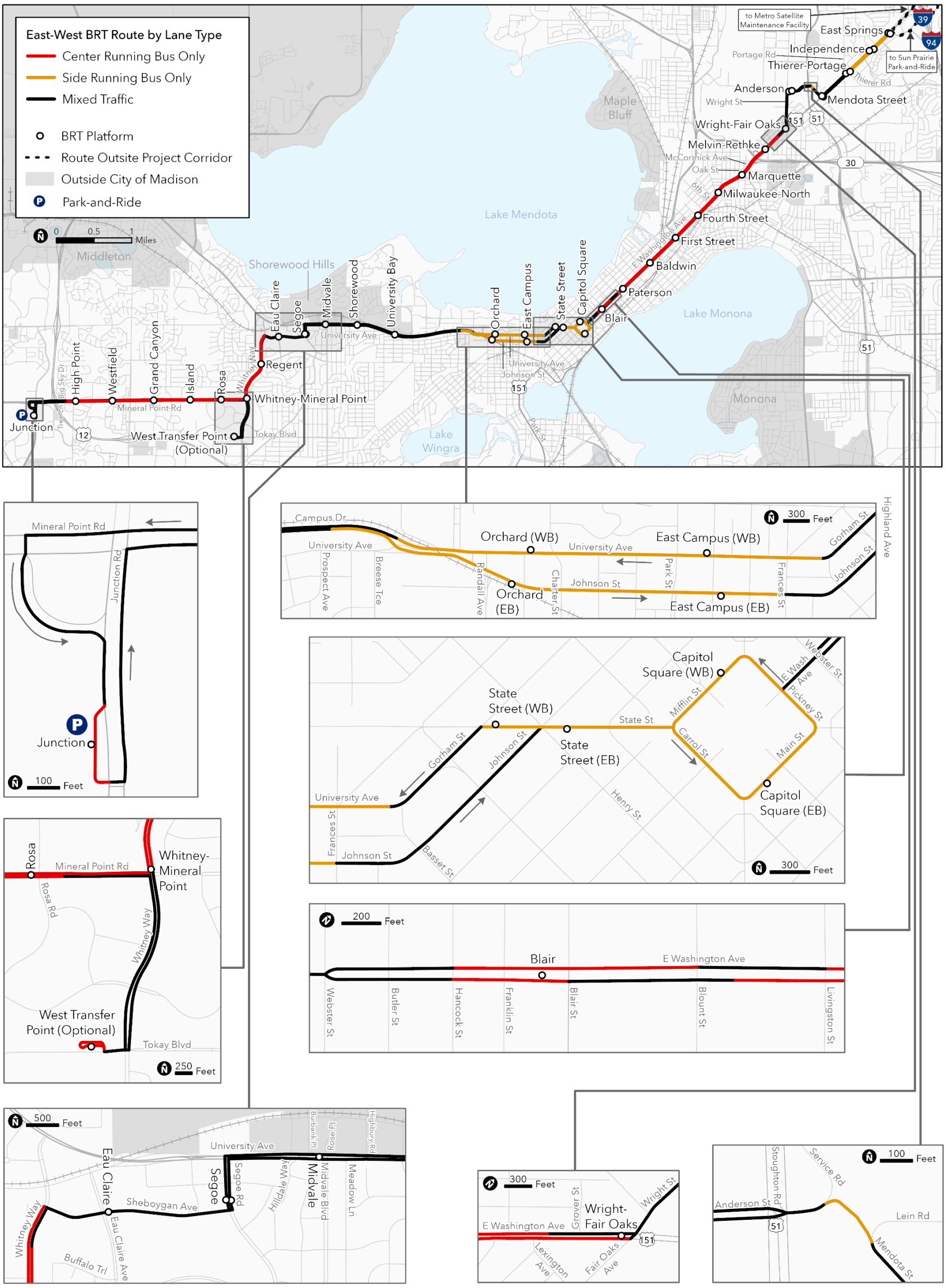
1.1.2. Construction of an Approximately 15-Mile BRT Line

The BRT route would run in a combination of exclusive and semi-exclusive center running and side running bus-only lanes, and mixed traffic lanes with priority at traffic signals and stations (see Appendix A for 30 percent design plans). The East-West BRT corridor by lane type is shown in Figure 2. The project includes:

- Junction Road: Buses would operate in mixed traffic. No roadway widening or reconstruction is required outside the station area with the exception of a new traffic signal to access the Junction Road Terminal Park-and-Ride.
- Mineral Point Road: Buses would operate in mixed traffic between Junction Road and Big Sky Drive/Tree Lane. The project would shift the existing Mineral Point Road curbside bus-only lanes to center bus-only lanes between Big Sky Drive/Tree Lane and Whitney Way. In order to accommodate bikes, the sidewalk on the north side of Mineral Point Road would be reconstructed as a shared-use path with the project.
- Whitney Way: Buses would operate in mixed traffic between Mineral Point Road and Tokay Boulevard. Center lanes would be re-striped to bus-only from Mineral Point Road to Sheboygan Avenue. No roadway widening or reconstruction is anticipated outside station areas.
- Sheboygan Avenue and Segoe Road: Buses would operate in mixed traffic. Limited to no roadway widening or reconstruction is required outside station areas.

- University Avenue between Segoe Road and University Bay Drive/Farley Avenue: Buses would operate in mixed traffic in center running lanes. Existing eastbound and westbound general-purpose traffic lanes would be maintained. No roadway widening or reconstruction is required outside station areas.
- Campus Drive between University Bay Drive/Farley Avenue and University Avenue: Buses would operate in a new bus lane that is a converted shoulder in one direction only: westbound on the west part of Campus Drive, and eastbound on the east part of Campus Drive. Outside these areas, buses would operate in mixed traffic. Some roadway reconstruction would be required to convert the shoulder to a bus lane, including slight widening of eastbound Campus Drive at the curve approaching the University Avenue intersection.
- University Avenue (westbound) through the UW campus: BRT would use the existing bus-only lane. Limited to no roadway widening or reconstruction is required outside station areas.
- Johnson Street (eastbound) through the UW campus: The existing right-most lane would be striped as bus-only, with right turning vehicles sharing the lane near intersections. No roadway widening or reconstruction is required outside station areas, aside from minor intersection modifications at Randall Avenue.
- State Street: BRT would use the existing transit mall which is restricted to buses, bikes, and authorized vehicles. No roadway widening or reconstruction is required outside station areas.
- Capitol Square: BRT would use existing bus-only lanes. No roadway widening or reconstruction is required outside station areas.
- East Washington Avenue between the Capitol Square and Wright Street: Buses would operate in mixed traffic between Webster Street and Hancock Street. Left lanes would be re-striped to bus-only from Hancock Street to Lexington Avenue (near the Wright Street – Fair Oaks Avenue station). The eastbound left lane from Sixth Street to Lexington Avenue would be open to general purpose traffic between 4:00 and 6:00 pm. The westbound left lane from Lexington Avenue to McCormick Avenue would be open to general purpose traffic between 7:00 and 9:00 am. Limited to no roadway widening or reconstruction is required outside station areas.
- Wright, Anderson, and Mendota Streets: Buses would operate in mixed traffic. Construction of a short bus-only lane (about 125 feet long) is needed to connect Mendota Street to the intersection of Anderson Street and Stoughton Road. No other widening or reconstruction of existing roadway is required outside station areas.
- East Washington Avenue between Mendota Street and Portage Road/Thierer Road: Buses would operate in mixed traffic. No roadway widening or reconstruction is required outside station areas.
- East Washington Avenue between Portage Road/Thierer Road and East Springs Drive: Curbside lanes would be re-striped as bus-only. No roadway widening or reconstruction is required outside station areas.

Figure 2: Madison East-West BRT by Lane Type



1.1.3. Construction of 32 BRT Stations

The project includes 32 stations, including side running station pairs, center stations, and off-street stations (Table 3). Stations would generally be between 50 and 60 feet long, and between 9 and 26 feet wide. The Capitol Square station includes two platforms and two auxiliary stops: eastbound and westbound BRT platforms on Capitol Square itself (Mifflin and Main Streets), as well as auxiliary stops on the Capitol Loop (Dayton and Doty Streets) for use during detours, which are estimated to occur about 70 times per year.

Station design is typical of modern BRT facilities. They are intended to provide enough space for people to circulate on the platform, be accessible to people with disabilities, and represent a better passenger experience than a typical Metro Transit bus stop. Center stations typically consist of one double-sided platform serving buses in both directions while side pair stations include a single platform in each direction. Anticipated features of the BRT stations include level boarding, fare payment equipment, enhanced shelter, seating, lighting, potential heating, real-time information, security cameras, public Wi-Fi, public address system and enhanced landscaping. Additionally, the Sun Prairie Park-and-Ride, Junction Road Terminal park-and-ride (western terminal), and the Metro Satellite Maintenance Facility would feature operator restroom facilities and electric bus charging infrastructure. Junction Road Terminal Park-and-Ride would also include up to 170 parking spaces, and berths would be available for transfers to local routes.

Table 3: Station Locations

#	Station Name	Position	#	Station Name	Position
1	Junction Road Terminal	Off street	17	State Street	Side pair
2	High Point Road	Center	18	Capitol Square	Side pair
3	Westfield Road	Center	19	Blair Street	Center
4	Grand Canyon Drive	Center	20	Paterson Street	Center
5	Island Drive	Center	21	Baldwin Street	Center
6	Rosa Road	Center	22	First Street	Center
7	West Transfer Point (optional)	Off street	23	Fourth Street	Center
8	Whitney Way – Mineral Point Road	Center	24	Milwaukee – North Street	Center
9	Regent Street	Center	25	Marquette Street	Center
10	Eau Claire Avenue	Center	26	Melvin Court – Rethke Avenue	Center
11	Segoe Road	Side pair	27	Wright Street – Fair Oaks Avenue	Center
12	Midvale Boulevard	Center	28	Anderson Street	Side pair
13	Shorewood Boulevard	Center	29	Mendota Street	Side pair
14	University Bay Drive	Center	30	Thierer Road – Portage Road	Side pair
15	Orchard Street	Side pair	31	Independence Lane	Side pair
16	East Campus Mall	Side pair	32	East Springs Drive	Side pair

1.1.3. Construction of Park-and-Ride at Junction Road

A new park-and-ride facility with approximately 170 spaces would be constructed at Junction Road. This facility would be the western terminus of the route and would include bus bays to facilitate transfers between local and BRT service. There are no new buildings planned at this location.

1.1.4. Purchase of 43 to 48 Sixty-Foot Buses

43 to 48 sixty-foot articulated buses would be procured for the project, three of which would be purchased using Section 5339b funds. These vehicles are anticipated to be a mix of low-floor, battery electric buses and possibly some diesel-powered buses that would serve both the East-West BRT route and North-South and Middleton BRT.[1] Additionally, three overhead pantograph chargers and 15 depot chargers would be procured for the project. Buses will be stored and maintained at the Metro Satellite Maintenance Facility on Hanson Road.

1.1.5. Transit Signal Priority

Transit signal priority will be implemented at intersections along the East-West BRT route to improve transit speed and reliability. The system would be able to detect the presence of a bus and predict its arrival time at an intersection, extending a green light or shortening a red light to minimize bus waiting time at traffic signals. All signals within the corridor from Junction Road to East Springs Drive would be equipped with traffic signal priority capabilities.

1.1.6. Electric Bus Charging Stations and Other Infrastructure

Metro Transit is preparing to upgrade the Metro Satellite Maintenance Facility at 3901 Hanson Road in Madison. Construction is scheduled to begin in 2023 and the facility is expected to open for operations in 2024. This project is being completed independent of the East-West BRT Project. As described in Section 1.1.4., BRT buses would be stored and maintained at this facility, and the BRT project will include the cost and construction of electric bus charging infrastructure at the facility.

Additionally, the project will include the cost and construction of electric bus charging and bathroom infrastructure at the existing Sun Prairie Park-and-Ride at 2751 O'Keeffe Avenue in the city of Sun Prairie, approximately three miles northeast of the East Springs terminal station. BRT electric buses will use the Metro Satellite Maintenance Facility and Sun Prairie Park-and-Ride for layovers and electric charging.

The project also includes construction staging using a City of Madison-owned 2.0-acre block between East Washington Avenue and Main Street and Butler and Hancock Streets near the Blair Street station. Once construction is complete, this site is planned to be redeveloped using the FTA's Joint Development program. This development would likely take the form of a mixed-use building, occupying the entire site and rising up to ten stories. Not enough is known about the joint development at this stage to analyze potential environmental impacts.

1.2. Concurrent Projects

Shown in Table 4, the City of Madison has various construction projects completed, underway, or planned along the BRT route or within the BRT project area, which largely focus on pavement replacement, incorporating multi-modal enhancements for biking and walking, and decreasing fatalities and critical injuries caused by motor vehicle crashes. The BRT route includes some of Madison's highest volume streets that are on the City of Madison's "High Injury Network," and thus safety improvements have been directed to these areas.

Table 4: Concurrent Projects in the BRT Corridor

Project	Description	Status
East Washington Avenue Pinckney Street to Marquette Street	Reduced speed limit; enhanced crosswalk markings	Complete

[1] Metro Transit is exploring the possibility of making all of the BRT fleet electric. If that occurs, the higher number of buses (48) would be procured to address charging needs.

East Washington Avenue at Livingston Street	Added median bollards for pedestrian refuge	Complete
Whitney Way Sheboygan Avenue to Tokay Boulevard	Reduced speed limit; added buffered bike lanes; improved pedestrian crossings	Complete
Mineral Point Road at Whitney Way	Reduced speed limit; added driver feedback board	Complete
University Avenue Shorewood Boulevard to University Bay Drive	Total reconstruction; add bicycle facilities	Programmed for 2022-2033
5339b grant upgrades	Purchase of three 60-foot buses; upgrade Metro Satellite Maintenance Facility to service 60-foot buses; install dedicated runningway for 1.2 miles of East Washington Avenue (and eliminate existing bumpouts); install dedicated runningway for 0.75 miles of Whitney Way; install red pavement on existing Mineral Point Road; implement spot geometric improvements at East Transfer Point	Funded; to be constructed concurrently with East-West BRT

These projects were/are separate from the BRT project, have independent utility, and BRT can operate with or without their construction. The 5339b grant upgrades are incorporated as part of the East-West BRT project NEPA analysis, but can and would be constructed independently as separate actions if East-West BRT approvals are not obtained.

1.3. Project Purpose and Need

Transit service within the Madison area is provided by buses on local routes that have many stops, serve deviations into neighborhoods, and require transfers, resulting in travel times that are not competitive with driving. Due to long travel times and infrequent service of local bus routes, transit service is not an attractive option for many trips in the City of Madison, including those within the East-West BRT corridor. Existing travel times negatively impact those without access to a private automobile, because longer travel times via transit means less access to jobs, healthcare, education, and other services. The East-West BRT would include higher frequency, direct routing, fewer stops, and transit priority, resulting in end-to-end travel time savings of about thirty minutes, thus providing equitable and reliable service to low-income and transit-dependent populations. In addition, significant population and employment growth has occurred and is expected to continue around downtown and the isthmus. The congestion caused by the growth, and the parking needed to serve the increased population if no alternative is developed will exceed the street capacity available within the isthmus. To accommodate the projected growth, an investment in alternative transportation modes is needed.

As identified in the Madison East-West BRT Planning Study Purpose and Need Report,[2] the purpose of the project 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.
- Encourage sustainable development patterns that reduce reliance on single occupant motor vehicles.

2 City of Madison, Madison East-West BRT Planning Study Purpose and Need Report, February 2019, Available at https://www.cityofmadison.com/metro/documents/brt/Madison-BRT-Purpose-and-Need-Final-v1-20190214.pdf. Accessed 19 November 2021.

The needs outlined in Table 5 below describe why investment in high-capacity transit is necessary in this corridor.

Table 5: Corridor Needs

Need	Description
Improve travel times throughout the corridor.	The high level of transit demand is straining transit's current capacity, which is reducing operational efficiency and resulting in schedule slippage and bus stacking.
Provide higher and more regular service levels connecting all neighborhoods to services and employment.	Transit should provide efficient connections to jobs and centers of employment and serve those who have the greatest need, including low-income populations and transit-dependent individuals and households.
Provide service that meets the needs of everyone, particularly Millennials and Seniors.	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 isthmus on an average weekday. 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.

Source: Locally Preferred Alternative Report, May 2020

1.4. Previous Studies

In 2019, the City of Madison completed an East-West BRT Planning Study, which recommended an initial locally preferred alternative (LPA). This LPA was approved by the City of Madison Common Council in March 2020.

Following this adoption, the city began further planning and design work and opted to modify the LPA to include center-running BRT lanes, changes to station locations, and refinements to the alignment. After a series of public engagement events regarding these changes in fall and winter 2020, the City of Madison Common Council approved the revised LPA on January 5, 2021. Through ongoing study, the revised LPA has been refined during project development and environmental review.

The approved, revised LPA included two options for the Western terminal and one optional BRT station at the existing West Transfer Point. Since that time, the alternative at Junction Road has been chosen for the Western terminal. The Metro Transit Network Redesign currently underway will determine if BRT will serve the optional station at the existing West Transfer Point. The East-West BRT has utility with or without serving the West Transfer Point. A draft transit network plan is estimated to be completed in 2022.

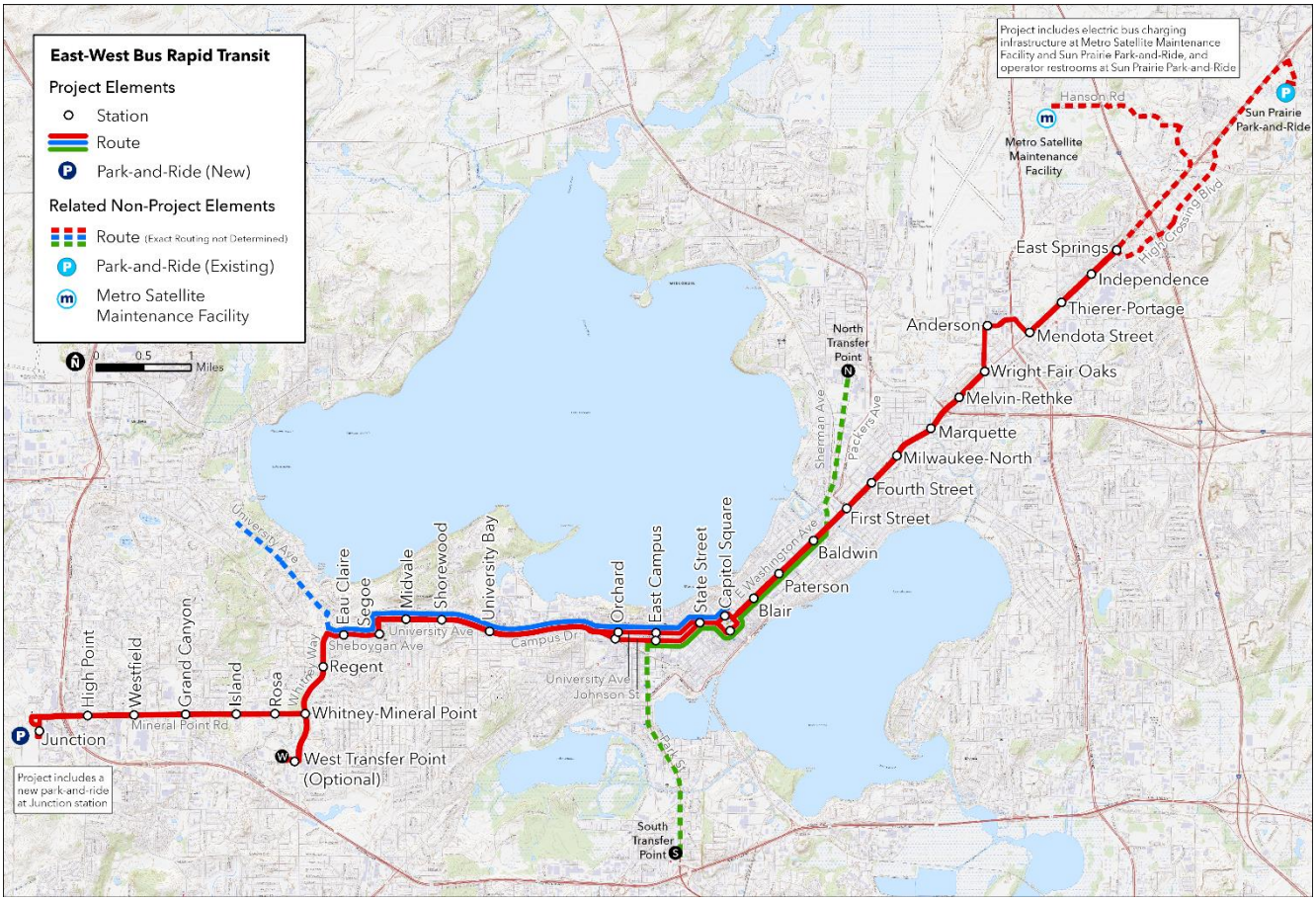
2. Location (Including Address)

Attach a project location map or diagram, such as a USGS topographic map that identifies the project location. Clearly delineate the project and include streets and features specifically called out in the "detailed project description." If the project work occurs at more than one location, include those locations and adjoining parcels on the map. This information is partly used to determine the probability of impact on the human and natural environment.

The Madison East-West BRT Project is located in the City of Madison, Dane County, Wisconsin. Local service extensions of East-West BRT will also travel to the Cities of Middleton and Sun Prairie. The City of Madison is the capital of Wisconsin and is built on an isthmus between Lakes Mendota and Monona. The roadway system consists primarily of high-volume arterials leading into the central Madison area in a radial pattern from a circumferential Beltline and Interstate route system. Major highways include US-12 and US-18 to the south of the corridor and Interstates 39, 90, and 94 to the northeast.

The East-West BRT Project would provide enhanced transit service to downtown Madison, Wisconsin State Capitol, UW campus, State Street, West Towne Mall, Hilldale Mall, East Towne Mall, and other destinations (Figure 3). North-South BRT will serve a portion of the East-West BRT corridor and connect to the North and South Transfer Points outside the corridor, though still within the City of Madison. Middleton BRT will serve the East-West BRT corridor between the Capitol Square and Eau Claire station, then continue outside the corridor to the City of Middleton. Additionally, the project would include construction of electric bus charging infrastructure at the proposed west terminal and park-and-ride at 3707 South Junction Road, the Metro Satellite Maintenance Facility at 3901 Hanson Road, and at the existing Sun Prairie Park-and-Ride at 2751 O'Keeffe Ave in the City of Sun Prairie.

Figure 3: Project Location



3. Metropolitan Planning and Air Quality Conformity

Is the proposed project included in the current adopted MPO plan, either exclusively or in a grouping of projects or activities? What is the conformity status of that plan? Is the proposed project, or appropriate phases of the project, included in the TIP? What is the conformity status of the TIP? Is the project located in an air quality nonattainment area? Is the project exempt from a conformity review per Table 2 of 40 CFR 93.126? Refer to the nonattainment/maintenance area maps at the US EPA website to determine if the project is located in an area that meets all National Ambient Air Quality Standards.

The *Regional Transportation Plan 2050* was amended in August 2020 to add the East-West BRT project to the fiscally constrained plan.[3] The Metro Satellite Maintenance Facility that will house BRT buses was added at the same time. The East-West BRT project is also included in the 2021-2025 Transportation Improvement Program (TIP). Specific project elements listed in the TIP include the alternatives analysis, environmental study (NEPA) and design, roadway improvements including transit signal priority (TSP), construction of BRT stations, purchase of articulated buses and maintenance equipment for articulated buses, and the Metro Satellite Maintenance Facility.[4]

3 Madison Area Transportation Planning Board, Resolution TPB No. 175: Approving Amendment #2 to the Regional Transportation Plan 2050 for the Madison Metropolitan Area. 2020. https://www.greatermadisonmpo.org/planning/documents/Resolution_TPB_No175_Amendment2_RTP2050.pdf.

4 Greater Madison MPO, Madison Metropolitan Area and Dane County Transportation Improvement Program 2021-2025. 2020. https://www.greatermadisonmpo.org/planning/documents/TIP_2021_2025_ForWeb.pdf.

The project is not exempt from a conformity review per Table 2 of 40 CFR § 93.126. Although most project elements are listed in Table 2, construction outside existing right-of-way is anticipated. However, since the Greater Madison MPO area is in attainment for all transportation-related pollutants,[5] transit projects within the TIP are considered to conform to National Ambient Air Quality Standards. Therefore, the East-West BRT Project is in conformity.

4. Land Use and Zoning

Describe property zoning and consistency with proposed use. Attach a zoning map of the project area and surrounding area. Attach a land use map that identifies land and water uses in the project area. This information is partly used to determine the probability of impact on the human and natural environment. Land use plans and zoning maps can be obtained from the tax assessor, city, county, or metropolitan planning organizations.

4.1. Existing Land Use and Zoning

The study area for the planned East-West BRT is in Dane County, WI and includes densely populated and developed areas[6] in the City of Madison, the University of Wisconsin-Madison campus, as well as three municipalities mostly located within the borders of Madison: The Village of Shorewood Hills, the Town of Madison, and the Town of Blooming Grove. Land use in the City of Sun Prairie is also considered in this study because of the charging facilities that would be added to the Sun Prairie Park and Ride for BRT vehicles. For the land use and zoning analysis, the study area was defined as the area within one-half mile of the proposed BRT route. The one-half mile study area is commonly used by transit planners to represent the distance transit users are willing to walk to access a transit station and the station's area of real estate development influence. Existing residential and commercial densities in the corridor support the Project. Commercial and residential uses along the corridor are typical for urban and suburban arterials, and there is potential for denser and more intensive development. Figure 4 and Figure 5 show existing and future land uses and zoning designations along the East-West BRT corridor.

4.2. Future Land Use

The City of Madison's *Imagine Madison Comprehensive Plan* and *Madison in Motion*, and Dane County's *Regional Transportation Plan 2050* (RTP 2050) 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. *Imagine Madison Comprehensive Plan* calls for concentration of the highest intensity development along transit corridors, downtown, and at activity centers, and identifies as an action item implementation of a transit-oriented development (TOD) overlay zoning district along BRT and other existing and planned high-frequency transit service corridors. During preparation of this documented categorical exclusion, the City of Madison is considering a TOD overlay zoning district framework. While TOD overlay zoning and the East-West BRT project are separate actions, implementation of the TOD overlay zoning and changes in development patterns, population density, growth rates, and property values in the East-West BRT project area are indirect effects of the project.[7]

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5 United States Environmental Protection Agency, Nonattainment Areas for Criteria Pollutants. Last modified June 30, 2021. https://www3.epa.gov/airquality/greenbook/anayo_wi.html.

6 Greater Madison MPO, Madison Metropolitan Area and Dane County 2021-2025 Transportation Improvement Program, October 2020, https://www.greatermadisonmpo.org/planning/documents/TIP_2021_2025_ForWeb.pdf.

7 Indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems. (40 CFR § 1508.8)

Policies from the UW's *Campus Master Plan*[8] were also incorporated in this land use analysis. The *Campus Master Plan* includes East-West BRT in design plans for improving the aesthetics and utility of the corridors. Additionally, the *Village of Shorewood Hills 2021 Comprehensive Plan*[9] includes action items that correlate with the East-West BRT line along University Avenue.

4.3. Operating Phase Impacts

The project is compatible with current and planned land use and zoning designations in the study area and would advance the transportation network in alignment with future land use plans shown in Figure 6 and described in further detail in Appendix B, Land Use and Zoning.

Indirect and Cumulative Effects

The East-West BRT project could have indirect and cumulative effects in two areas. First, the provision of high-quality transit is likely to increase development and investment, jobs, and property values throughout the project area. Second, as a separate action from the BRT project, and mentioned in Section 4.2, the City of Madison is considering the implementation of TOD overlay zoning, which would allow for increased densities near BRT stations. See Appendix B for additional detail on indirect effects.

8 University of Wisconsin Campus Master Plan. Available at https://cpla.fpm.wisc.edu/planning/campus-master-plans/. Accessed 17 November 2021.

9 Village of Shorewood Hills 2021 Comprehensive Plan. Available at https://www.shorewood-hills.org/vertical/sites/%7B00D5AF3F-ADFE-4173-AF3A-FC0C1A78DA4B%7D/uploads/SH_Comprehensive_Plan_2021_8_13_reduced.pdf. Accessed 17 November 2021.

Figure 4: Existing Land Use

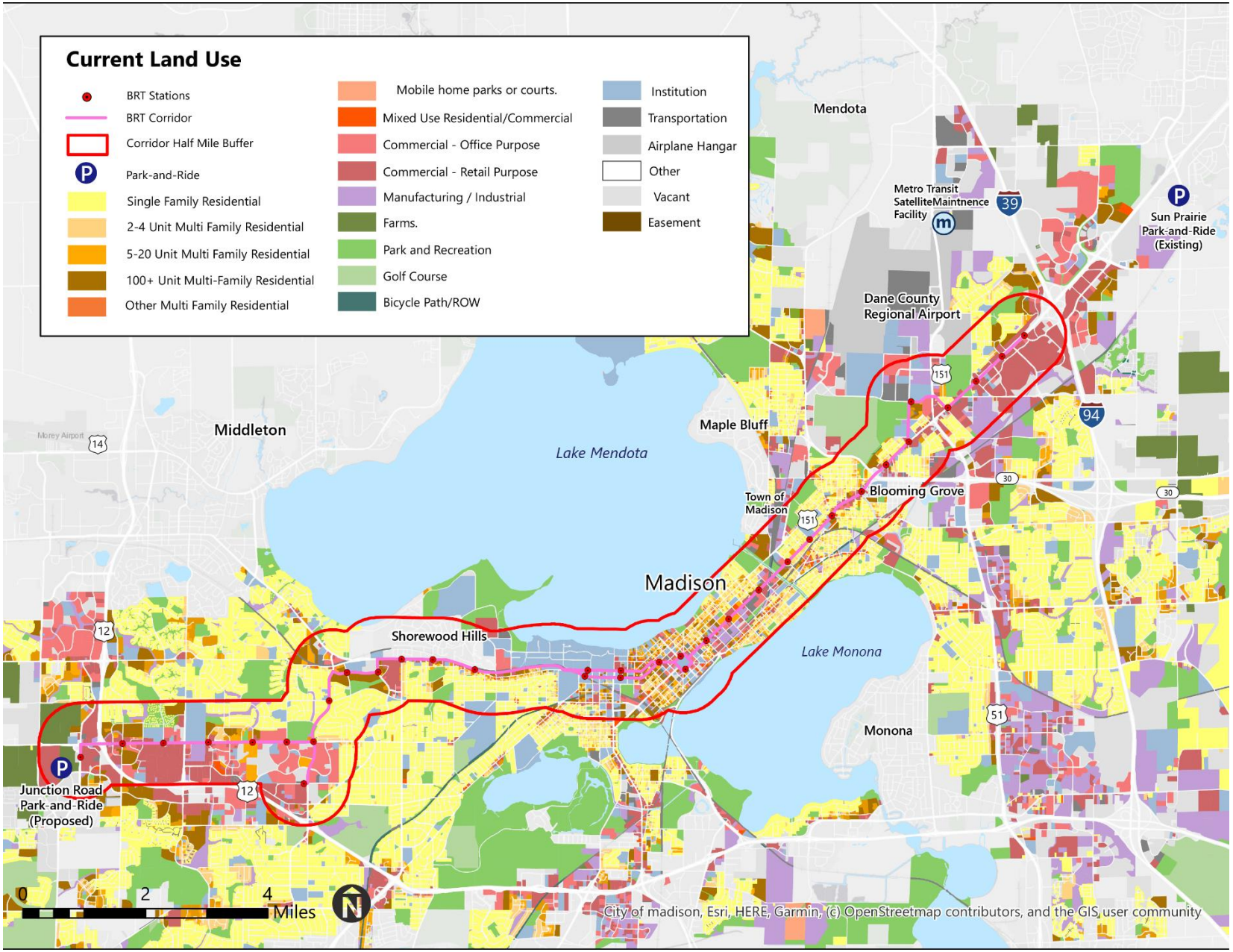


Figure 5: Zoning Designations

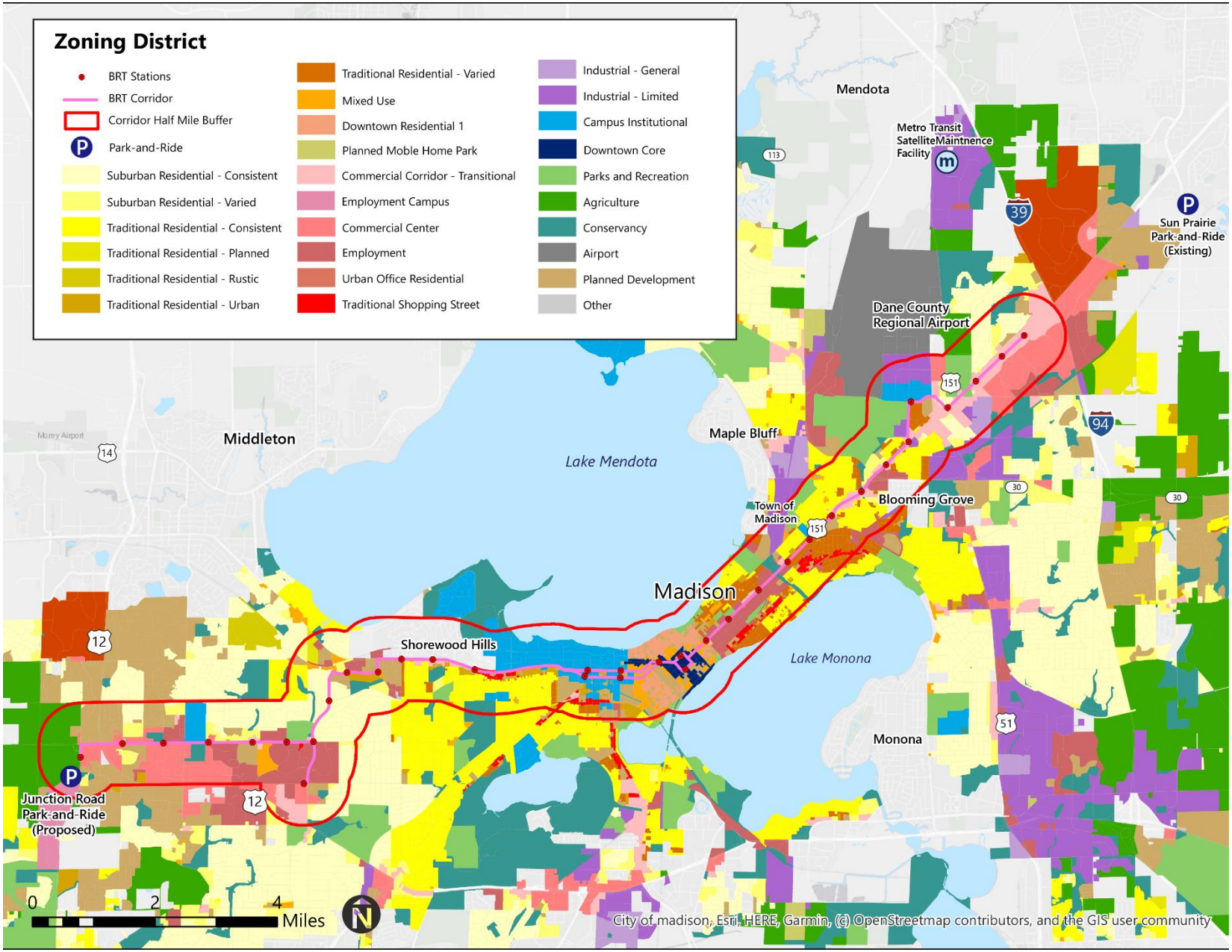
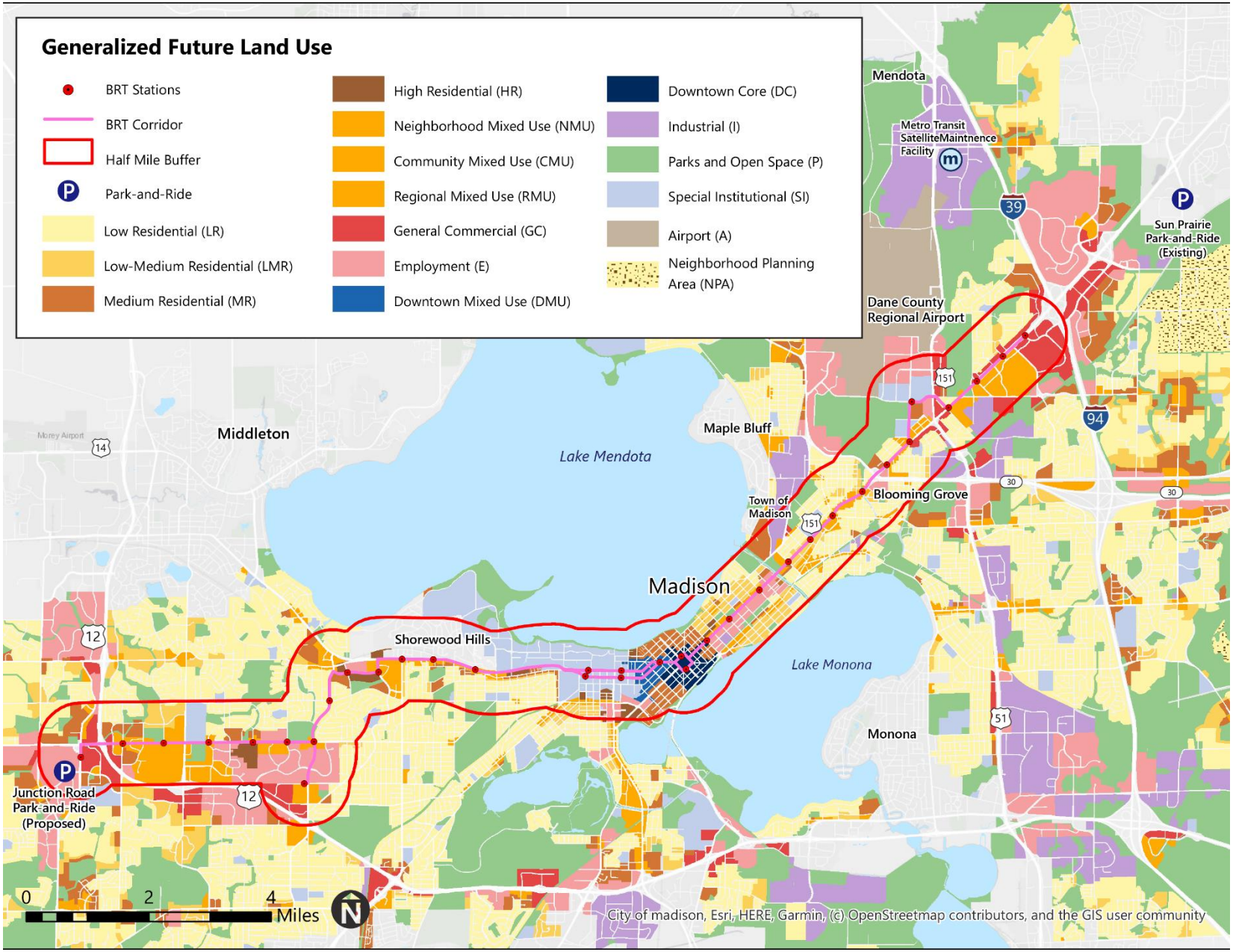


Figure 6: Future Land Use



5. Transportation Impacts

5.1. Motor Vehicle Impacts

The project would introduce physical and operational changes to the proposed roadways. These would be in the form of physical lane changes, operational changes at traffic signalized intersections, and the addition of BRT buses to the traffic flow. Changes to each roadway in the BRT corridor are listed below in Table 6.

BRT operations were analyzed using 2019 traffic volumes; to date, traffic has not returned to 2019 levels because of travel behavior changes caused by the COVID-19 pandemic, suggesting that the modeling results are conservative. A City of Madison traffic volume analysis found that most arterials carried approximately 10 percent less traffic in September 2021 than in September 2019, and much of the traffic volume reduction is in the morning and evening peak periods. On East Washington Avenue, traffic volumes are approximately 55 percent and 70 percent of their pre-covid levels in the morning and evening peaks, respectively, from 2019 to 2021. An increase in telework and other travel behavior changes resulting from the pandemic may create a lasting pattern of reduced traffic volumes, leading to better traffic operations than what are portrayed in the operations analysis and throughout this section. In many cases where the overall intersection level of service (LOS) deteriorates, critical intersection movements are largely unchanged; some intersections operated poorly prior to the pandemic.

Converting one of the three existing general purpose lanes on East Washington Avenue to bus-only lanes impacts the LOS at certain intersections, as noted below. However, microsimulation traffic modeling at these intersections indicates modest increases in queue lengths that can still be cleared during a single signal cycle. Additionally, while the implementation of East-West BRT is anticipated to result in reduced LOS at certain intersections, the project would increase the overall person throughput of the corridor.

Table 6: Changes to Corridor Roadways

Segment	Changes	Traffic Impact
Mineral Point Road, Tree Lane to Whitney Way	The right lane would be converted from bus, bike, and right turn only to general purpose, left lane converted to buses and left turns only. A widened sidewalk on the north side would accommodate bicyclists and pedestrians.	Most left turns would be converted to protected only; right turns shared with through traffic. Total number of through lanes would remain the same. Bike infrastructure would improve with the widened sidewalk. Intersection operations at Gammon Road would be reduced from LOS D without the project to LOS E with the project during the a.m. and p.m. peak.
Whitney Way, West Transfer Point to Mineral Point Road	None. The right lane was converted to a buffered bike lane in 2021. This was a separate project from BRT.	None.

Segment	Changes	Traffic Impact
Whitney Way, Mineral Point Road to Sheboygan Avenue	Left lane would be converted from general purpose to buses and left turns only. The combined parking and bike lane was converted to a buffered bike lane in 2021. This was a separate project from BRT. A new traffic signal would be added at Sheboygan Avenue.	Intersection operations at Mineral Point Road and Whitney Way would remain LOS C during the a.m. peak with or without the project and during the p.m. peak without the project; with the project, intersection operations would be reduced to LOS D during the p.m. peak. At Regent Street, intersection operations would be LOS A with or without the project during the a.m. peak; during the p.m. peak, intersection operations are LOS B without the project and LOS C with the project.
Sheboygan Avenue, Whitney Way to Segoe Road	None. Buffered bike lanes are planned to be added in 2022. This is a separate project from BRT. The intersection at Eau Claire Avenue would be converted from a two-way stop to a four-way stop.	None.
Segoe Road, Sheboygan Avenue to University Avenue	A new signal would be added at Sheboygan Avenue. The southbound right lane would become right turn only at Sheboygan Avenue. The northbound middle lane at University Avenue will be converted from left turn lane to a bus-only right turn lane.	None. The southbound two-lane cross section currently narrows to one lane at Regent Street. The reduction of one travel lane between Sheboygan Avenue and Regent Street is not anticipated to have an impact. The existing northbound double left turn lane is currently underutilized.
University Avenue, Segoe Road to University Bay Drive	University Avenue will be reconstructed between Shorewood Boulevard and University Bay Drive in 2022 and 2023 with an added eastbound left turn lane and westbound right turn lane at University Bay Drive. This is a separate project. The BRT station Shorewood Blvd/Hill Street may remove the westbound left turn.	No significant impacts. The intersection improvements at University Bay Drive would improve operations for buses as well as general purpose traffic. Changes to left turn configurations to accommodate BRT stations would not add to overall delay at intersections. If the westbound left turn at Shorewood Blvd/Hill Street intersection is removed, it is expected to have limited impact on accessibility. This is a low volume movement and there are alternate locations to make this left turn and access the neighborhood to the south.
Campus Drive, Farley Avenue/University Bay Drive to Babcock Drive	The eastbound shoulder at the east end of this segment would be converted to a bus lane.	None.

Segment	Changes	Traffic Impact
Gorham Street and University Avenue, Babcock Drive to State Street	The westbound bus lane that currently ends at Babcock Drive would be extended west past the intersection. The bike lanes would be replaced with a side path.	At University Avenue and Park Street, intersection operations would be LOS C during the a.m. peak and LOS D during the p.m. peak with or without the project.
Johnson Street, Babcock Drive to State Street	The right lane would be converted from general purpose to bus only from Campus Drive to Frances Street.	No significant impacts are anticipated because the right lane serves as a de facto right-turn-only lane at Park Street and becomes a right-turn-only lane at Bassett Street. Traffic modelling shows no change in LOS.
State Street, Gorham Street to Capitol Square	None.	None.
Capitol Square	None.	None.
East Washington Avenue, Capitol Square to Blair Street	The left lanes would be converted from general purpose lanes to bus-only lanes from Hancock Street to Blair Street.	At East Washington Avenue and Blair Street, intersection operations would be LOS C during the a.m. peak without the project and LOS B with the project; operations would be LOS E during the p.m. peak without the project and reduced to LOS F with the project because of the reduction in general purpose lanes. See Appendix C.
East Washington Avenue, Blair Street to Milwaukee Street (eastbound) and Highway 30 (westbound)	The left lane would be converted from general purpose to bus and left turns only. During peak periods in the peak direction, the right lanes would be converted from parking and bike lanes to general purpose travel lanes. Five left turns would be removed (eastbound to Paterson Street, eastbound to Baldwin Street, westbound to Fourth Street, westbound to Milwaukee Street, and eastbound to Melvin Court).	At East Washington Avenue and First Street, intersection operations would be reduced from LOS D in the a.m. peak without the project to LOS E with the project; intersection operations would be LOS F during the p.m. peak with or without the project. Most left turns will be converted to protected only. Neighboring left turn bays were determined to be adequate to accommodate additional left turn traffic and queuing. Bicycle facilities would be eliminated during peak periods in peak directions, but parallel facilities are available and additional upgrades are planned under separate City projects that do not affect BRT. See Appendix C.

Segment	Changes	Traffic Impact
East Washington Avenue, Milwaukee Street (eastbound) and Highway 30 (westbound) to Wright Street	The left lane would be converted from general purpose to bus and left turns only except during peak periods.	Most left turns would be converted to protected only. Bike lanes would be maintained. At East Washington Avenue and Milwaukee Street, intersection operations would improve from LOS F without the project to LOS C with the project during the a.m. and p.m. peak periods. At Zeier Road, intersection operations would be LOS C in the a.m. peak and LOS D in the p.m. peak under both alternatives.
Wright Street, Anderson Street, and Mendota Street	None.	None.
East Washington Avenue, Mendota Street to Portage Road	None.	None.
East Washington Avenue, Portage Road to East Springs Drive	The right lane would be converted from general purpose to buses and right turns only.	No significant impacts are anticipated. Because the fourth lane only exists for about three quarters of a mile and currently acts as a de facto right turn lane. Bike lanes will be maintained.

The project proposes adding five new traffic signalized intersections to the roadways. All new traffic signals would be optimized to maximize efficiency and reduce delay at these intersections and adjacent signalized intersections. Most signalized intersections along the proposed route would be outfitted with transit signal priority (TSP) infrastructure to help maximize efficiency of the BRT system.

The traffic analysis examined changes to level of service at nine controlling intersections along the East-West BRT route. Controlling intersections typically have the highest Vehicle to Capacity (V/C) ratio in the corridor – an indicator of congestion. Controlling intersections also serve as the basis for traffic signal cycle, timing, and progression through the corridor. As shown in Table 7, the addition of new signals and TSP would improve operations at several intersections compared with the project not being constructed (highlighted in green) and would degrade operations at select intersections (highlighted in yellow), causing a deterioration to LOS F at only one intersection: East Washington Avenue at Blair Street in the p.m. peak period. This intersection is located in the downtown grid and several alternative routes are available for drivers to use if there is severe congestion. (Note that the Johnson Street and Park Street intersection also experiences LOS F with or without the project.)

Table 7: Existing and Proposed Levels of Service at Controlling Intersections

Intersection	AM Peak		PM Peak	
	LOS without Project	LOS with Project	LOS without Project	LOS with Project

Mineral Point Road at Gammon Road	D	E	C	C
Mineral Point Road at Whitney Way	C	C	C	D
Whitney Way at Regent Street	A	A	B	C
Johnson Street at Park Street	C	C	F	F
University Avenue at Park Street	C	C	D	D
East Washington Avenue at Blair Street	C	B*	E	F
East Washington Avenue at First Street	D	E	F	F
East Washington Avenue at Milwaukee Street	F	C*	F	C*
East Washington Avenue at Zeier Road	F	C*	D	D

*Traffic signal timings were optimized with the implementation of the BRT service and some overall intersection LOS results improved.

As shown in Table 7, there are three intersections that are anticipated to operate at LOS F with the project, two of which (Johnson Street at Park Street and East Washington Avenue at First Street) would also operate at LOS F without the project. At the East Washington Avenue and Blair Street intersection, the increase in overall intersection delay during the evening peak period would result in a deterioration from LOS E without the project to LOS F with the project. This impact results from a reduction in the number of general purpose lanes on eastbound East Washington Avenue. Three blocks south of East Washington Avenue along Blair Street, the City is currently making improvements to increase throughput at the five-way intersection of Blair Street, John Nolen Drive, and Wilson Street. These improvements are anticipated to help mitigate the loss of capacity on East Washington Avenue. Further, the City has adopted several plans and policies that accept some increase in vehicle delay to improve safety by reducing speeding and improve alternative modes of transportation. These plans include Madison in Motion, the City's transportation master plan[10]; Vision Zero[11]; and Complete Green Streets.[12]

The delays for movements on US Highway 151 (right turn from northbound Blair Street to East Washington Avenue and left turn from westbound East Washington Avenue to southbound Blair Street) are unchanged or improved and signal timings are optimized with implementation of the project.

Observation of microsimulation traffic modeling suggests similar northbound Blair Street (US Highway 151) queue lengths with or without the project. Microsimulation reports averaging the results from nine simulation runs indicate modestly longer northbound queue lengths without the project, with an average length of 640 to 660 feet and 95th percentile length of 1,030 to 1,070 feet. With the project, the average queue length is 580 to 590 feet, with a 95th percentile length of 920 to 950 feet. The eastbound queuing would worsen with the conversion of one of the three existing eastbound general purpose lanes to a bus-only lane, but as noted above, City policy supports these conditions considering the context adjacent to the Capitol Square and Capitol Loop in the City's downtown area.

10 Madison in Motion Transportation Plan. Available at https://www.cityofmadison.com/transportation/documents/MIM/MIMReportWeb.pdf. Accessed 5 May 2022.

11 Vision Zero Initiative. Available at https://www.cityofmadison.com/transportation/initiatives/vision-zero. Accessed 5 May 2022.

12 Complete Green Streets. Available at https://www.cityofmadison.com/transportation/initiatives/complete-green-streets. Accessed 5 May 2022.

5.2. Parking Impacts

The project would have some effect on street parking availability. Mineral Point Road, Whitney Way, University Ave, State Street currently do not have on-street parking and so, would be unaffected by BRT routing. The limited parking that exists on portions of Johnson Street, the Capital Square, and East Washington Ave from Pinckney to Blair Street will remain.

On East Washington Avenue from Blount Street to Milwaukee Street/Highway 30, approximately 120 on-street parking spaces would be prohibited for about two hours in the a.m. peak direction and 142 on-street parking spaces would be prohibited for about two hours in the p.m. peak direction.

Some riders currently access transit by driving to bus stop, and parking on a public street prior to boarding the bus. As the BRT service would provide greater access to the transit system for area residents, driving to a BRT station and then parking on-street could be an attractive means of access. However, it could reduce the availability of on-street parking. Concern about parking on Regent Street was expressed by stakeholders in the University Hill Farms neighborhood. There are approximately 81 parking spaces along this segment. City staff conducted a parking inventory in this area on Tuesday, December 14, 2021 at approximately 9:30 a.m. and found 16 vehicles parked for a utilization of 20 percent. Satellite imagery from Google taken on Wednesday, October 3, 2018, showed 13 vehicles parked on the street in this stretch, a utilization of approximately 16 percent. Satellite imagery from Wednesday, June 4 and Thursday, June 12, 2014 and earlier dates shows similar or lower parking utilization. During this period of time before the COVID 19 pandemic, commuter bus traffic has served Regent Street and Eau Claire Avenue with equal or better service compared to the proposed BRT service during commute times.

To manage parking impacts, the City of Madison has a Residential Parking Permit Program (RP3) where residents can be given priority for parking through the purchase of permits, generally allowing them to park on streets for two days while unpermitted cars can only park for two hours. Program details are described in Madison General Ordinance 12.138 and on the City's website.[13] Areas in the BRT corridor that are covered by the RP3 program include most of the BRT routing within the central city, roughly from Whitney Way and Mineral Point Road to Sixth Street and East Washington. RP3 areas include most of the historic districts and neighborhoods impacted by commuter parking. More information on the RP3 program is included in Appendix C.

The project would also add surface lot parking at the west terminal and would serve the existing Sun Prairie Park-and-Ride. This parking would allow riders outside the BRT walkshed the opportunity to drive to the BRT terminal to access the system, and would also accommodate bike parking, pickups, and drop-offs. By expanding frequent service further from the central city and providing parking at the west terminal, the project could prompt riders who live farther out to access transit without parking on public streets.

5.3. Transit Impacts

Madison's proposed BRT routes are intended to serve as the core of the Metro Transit network. The East-West BRT Project would include bus lanes, BRT stations and infrastructure, TSP, and other components as described in Section 1.1. North-South and Middleton BRT would use this BRT infrastructure when operating in the East-West BRT corridor and would use local bus stops outside the corridor. All three routes would use new branded BRT buses, most or all of which are planned to be electric.

Several changes would need to be made to existing transit service when East-West BRT operations begin to reflect the enhanced service provided by East-West BRT. Most of the BRT system would operate on center running lanes with station platforms requiring left side doors. Metro Transit's existing fleet of more than 200 buses have doors only on the right side and thus would not be able to serve BRT platforms. Several overlapping

13 City of Madison Parking Permits. Available at https://www.cityofmadison.com/parking-utility/permits/residential-parking-permits. Accessed 23 November 2021.

local routes with lower service frequencies would be replaced with the three BRT routes.[14] This service change would provide more frequent and reliable service than what currently exists in the corridor.

The changes to the transit network described in Table 8 reflect those described and mapped in Appendix D Service Plan and Operations and Maintenance Cost memo (March 2022).

Metro Transit is also engaged in a separate project called the Transit Network Redesign (TNR). The TNR seeks to address longstanding concerns regarding long trip times and high transfer rates, particularly for riders in peripheral areas. The goal is to create a route system that will better serve Madison area residents and businesses by increasing access and frequency, decreasing travel times, and improving the quality of transit riders' experience. The TNR is scheduled to be adopted in June 2022 and implemented in June 2023; East-West BRT construction is expected to begin in 2023 and operations are anticipated to begin in late 2024. When BRT revenue service begins the new fleet will be deployed on the East-West, North-South, and Middleton routes.

The TNR is a separate action with independent utility. As such, its effects are not evaluated in this BRT document. The BRT and TNR projects acknowledge the effects of each other, but each project has value with or without the implementation of the other. Neither project restricts the consideration of alternatives of the other project nor do they trigger the other action. The BRT project can be implemented with or without the Transit Network Redesign planned network. The Transit Network Redesign is anticipated to make broader changes to local bus service beyond the BRT corridor.

Table 8: Transit Service Changes Necessary for East-West BRT

Route	Service Change/Potential Impact	Proposed Mitigation	Reduction in Service?
East-West BRT Project	New east-west BRT route with local service continuing past the eastern terminus to Sun Prairie and American Center; generally replaces the west half of Route 2, the east half of Route 6, Route 14, and Routes 26 and 36	Improves service; no mitigation needed	No
Middleton BRT	New Middleton BRT route with local service continuing west along Route 71 and 72 route patterns; generally replaces Routes 70, 71, and 72	Improves service; no mitigation needed	No
North-South BRT	New north-south BRT route from North Transfer Point to South Transfer Point via Packers Avenue and Park Street; generally replaces southern half of Route 5	Improves service; no mitigation needed	No

14 Routes 2, 10, 11, 12, 15, 28, 56, 57, 70, 71, and 72 on University Avenue, and Routes 6, 14, 15, 25, 27, 29, 56, and 57 on East Washington Avenue would be substantially or entirely replaced by the East-West BRT Project, as summarized in Table 8.

Route	Service Change/Potential Impact	Proposed Mitigation	Reduction in Service?
1, 4, 7, 8, 13, 16, 17, 18, 19, 20, 21, 22, 31, 32, 33, 34, 35, 38, 39, 40, 44, 47, 48, 49, 50, 51, 52, 55, 58, 59, 63, 68, 75, 80, 81, 82, 84	No change	No mitigation needed	No
2	Route shortened so that the western terminus is the UW hospital (western portion replaced by East-West BRT service); frequency reduced from 15 to 30 minutes during peak periods and remains 30 minutes the rest of the day	Although some riders would have to walk up to one-quarter mile farther to access a bus stop, East-West BRT would provide higher-frequency, more direct service than the Route 2 and results in a net improvement to transit access. No mitigation needed.	No
3	Route moved from University Avenue, Johnson/Gorham Street, and William Street to Broom Street/Bassett Street and Wilson Street/Doty Street to avoid duplication with BRT	Although some riders would have to walk up to one-quarter mile farther to access a Route 3 bus stop (one-half mile at the heart of Capitol Square), the existing level of service on Route 3 would be maintained. No mitigation needed.	No
5+6	The eastern half of Route 5 is combined with the western half of Route 6; the southern part of Route 5 would be replaced by North-South BRT and the eastern part of Route 6 would be replaced by the East-West BRT Project	Existing service along Routes 5 and 6 would be maintained or improved by the proposed changes: BRT service would provide better frequency throughout the day every day, and the new combined local route would maintain service in areas not served by BRT. No mitigation needed.	No
10	Route shortened and replaced by BRT east of Broom Street	East of Broom Street, Route 10 is redundant with Routes 2 and 5; while some riders south of Washington Avenue would have to walk up to one-quarter mile farther to access service, BRT would improve the frequency and quality of service. No mitigation needed.	No

Route	Service Change/Potential Impact	Proposed Mitigation	Reduction in Service?
11+12	Route shortened so that it operates from the Capitol Square to the east only; the western half of the route would be replaced by East-West BRT	Duplicative service would be eliminated when BRT is implemented and BRT would provide high-frequency service throughout the day; where BRT and local routes do not overlap, local service would be maintained with the same alignment and frequency. No mitigation needed.	No
14+15	Route combined into one route serving the Route 14 area north of Mineral Point Road and the Route 15 service area near Old Sauk Road	The service area along Mineral Point Road would be replaced with East-West BRT, which would improve service frequency and span. No mitigation needed.	No
23	Route shortened so that the southern terminus is the East Towne Mall; revised route would operate as a circulator from the East Towne Mall to Sun Prairie Park-and-Ride consistent with current route	BRT service south of the East Towne Mall would provide improved frequency and span compared with existing service and the revised Route 23 would provide the same level of service to the same areas that are currently served. No mitigation needed.	No
25	Replaced by East-West BRT	BRT service would provide improved frequency and span compared with existing service. No mitigation needed.	No
26	Replaced by East-West BRT	The East-West BRT extension to the Metro Satellite Maintenance Facility would serve the area currently served by Route 26. BRT service would provide improved frequency and span compared with existing service. No mitigation needed.	No
27	Replaced by North-South BRT	BRT service would provide improved frequency and span compared with existing service. No mitigation needed.	No

Route	Service Change/Potential Impact	Proposed Mitigation	Reduction in Service?
28+56+57	Routes combined and moved from Sheboygan Avenue to Old Middleton Road and from East Washington Avenue to Johnson Street / Gorham Street to avoid duplication with BRT. Service offered every 30 minutes all day, weekdays only.	Existing routes operate during peak periods on weekdays only. Route 28 provides 10- to 15-minute frequency and Routes 56 and 57 operate at 30-minute frequencies. The new combined route would provide improved span of service at a similar frequency. No mitigation needed.	No
29	Shortened so that the North Transfer Point is the southern terminus; south of this point, Route 29 would be replaced by North-South BRT	Duplicative service would be eliminated when BRT is implemented and BRT would provide high-frequency service throughout the day; where BRT and local routes do not overlap, local service would be maintained with the same alignment and frequency. No mitigation needed.	No
30	Extended to Portage Haye to replace part of the discontinued Route 6	Increase in service. No mitigation needed.	No
36	Replaced by East-West BRT	The East-West BRT extension to the Metro Satellite Maintenance Facility would serve the area currently served by Route 36. BRT service would provide improved frequency and span compared with existing service; no mitigation needed.	No
67	Replaced by East-West BRT	BRT service would provide improved frequency and span compared with existing service; no mitigation needed.	No
70	Shortened so that the Eau Claire station is the southern/east terminus; east of this point, Route 70 would be replaced by North-South BRT	Duplicative service would be eliminated when BRT is implemented and BRT would provide improved frequency compared with existing 60-minute frequency; where BRT and local routes do not overlap, local service would be maintained with existing circulation and service characteristics. No mitigation needed.	No

Route	Service Change/Potential Impact	Proposed Mitigation	Reduction in Service?
71+72	Routes 71 and 72 are replaced by Middleton BRT	BRT service would provide improved frequency and span compared with existing service. No mitigation needed.	No

While there are reductions and even elimination of some local routes, the East-West BRT Project, along with the North-South and Middleton BRT, would replace this service, consolidating many overlapping low-frequency routes into more frequent, visible, and higher-capacity service. The service changes described above intend to eliminate local service that duplicates BRT. BRT would improve transit service in the corridor and existing local routes would be modified as needed to retain service outside the area served by BRT. With these changes, no impacts to transit service are anticipated as a result of the East-West BRT Project.

5.3.1. Indirect and Cumulative Effects

The analysis of future transit impacts in Section 5.3 is a cumulative analysis based on the East-West BRT Service Plan (Appendix D). In addition to planning for potential transit service changes to reallocate service to be more efficient and avoid duplication of service in the East-West BRT Project service area, Metro Transit is currently conducting a system-wide Transit Network Redesign (TNR) independent of the project.[15] As mentioned, the TNR assumes implementation of East-West BRT; however, neither project requires completion of the other to be implemented. One of the objectives of the TNR is to address concerns raised by low-income communities and people of color in Madison. Implementation of the BRT project together with implementation of the TNR could result in further cumulative effects to the overall transit system. Separate from this environmental process for the East-West BRT project, the TNR will later complete a Title VI evaluation to ensure that the service changes across the system, including the East-West BRT corridor, do not result in disparate impacts to or disproportionate burdens for minority or low-income populations.

5.4. Bicycle Impacts

In most cases bicycle accommodations would remain unchanged. The two exceptions are Mineral Point Road, where there would be an improvement, and East Washington Ave, where the westbound bike lane would be closed in the morning peak period and the eastbound bike lane would be closed in the evening peak period.

The East-West BRT lane configuration on Mineral Point Road would eliminate the existing shared bus and bike lane on the segment of Mineral Point Road. A widened sidewalk parallel to this segment of Mineral Point Road is proposed. It will replace the existing sidewalk and accommodate both pedestrians and bicyclists and provides a protected "All Ages and Abilities" enhancement to the bicycle network.

During peak hours, the proposed lane configuration along East Washington Avenue would eliminate an existing bike lane in the peak direction between Blair Street and Milwaukee Street/Highway 30. This measure is necessary to avoid significant motor vehicle delays and traffic diversion onto local streets.

The change is expected to require cyclists to divert to lower-stress parallel streets or paths during peak hours. The most convenient parallel routes include Capital City Trail and East Mifflin Street.[16] Wayfinding signage would be added to help bicyclists navigate to alternative routes. The impact from the reduction of bicycle facilities in the peak hours in the peak direction is expected to be moderated with nearby parallel low-stress options, and

15 Transit Network Redesign. Available at https://www.cityofmadison.com/metro/routes-schedules/bus-rapid-transit/transit-network-redesign. Accessed 20 December 2021.

16 Greater Madison Metropolitan Planning Organization Low Stress Bike Route Finder.

https://www.arcgis.com/apps/webappviewer/index.html?id=cb7a2e78477044c19bf6a5eaa1820e38. Accessed August 2021.

with further planned expansion of the low-stress bicycle route network on the city's East Side. Though specific projects have not yet been identified, expansion of the East Side bicycle network is funded in the City's 2022-2026 Transportation Improvement Program.[17]

6. CO Hot Spots

If there are serious traffic impacts at any affected intersection or area where buses congregate, and if the area is in an air quality nonattainment area for CO, demonstrate that CO hot spots will not be created as a result of the project.

Concerns about CO do not apply because the project area is fully in attainment for CO.[18]

7. PM2.5 and PM10 Hot Spots

If there are serious traffic impacts at any affected intersection or area where buses congregate, and if the area is a nonattainment or maintenance area for any particulate matter (PM2.5 or PM10), then demonstrate that PM2.5 or PM10 "hot spots" will not result. In nonattainment areas, interagency concurrence and documentation must be attached. If the proposed project is not in a nonattainment or maintenance area for PM2.5 and PM10, then state this in the discussion. Refer to the nonattainment/ maintenance area maps at the US EPA website to determine if the project is located in an area that meets all National Ambient Air Quality Standards.

The project area is fully in attainment for both PM2.5[19] and PM10.[20] In addition to this, serious traffic impacts are not expected.

8. Historic Resources

Describe any cultural, historic, or archaeological resources located in the immediate vicinity of the proposed project and the impact of the project on the resources. Show these resources on a map. FTA initiates all consultations per Section 106 of the National Historic Preservation Act (NHPA). FTA also makes a determination of "No Effect/No Historic Properties" or "No Historic Properties Affected," if no historic resources or potential to affect resources exists. FTA requests concurrence for this determination from the appropriate State Historic Preservation Office (SHPO) or Tribal Historic Preservation Office (THPO). SHPO/THPO concurrence must be included as an attachment before NEPA approval. If an "Adverse Effect" determination is made as a result of the proposed project, rather than a "No Effect/No Historic Properties" or "No Historic Properties Affected" determination, then FTA may determine a new NEPA class of action to evaluate alternatives or mitigation measures to deter these adverse effects. If the project has potential effects to NRHP-eligible or listed projects, the Section 106 process must be followed. Refer to the ACHP website for more information. Projects involving modifications to historic buildings or structures should

17 Madison Metropolitan Area and Dane County 2022-2026 Transportation Improvement Program. Available at https://www.greatermadisonmpo.org/planning/documents/TIPfinal22_WEB.pdf. Accessed 22 November 2021.

18 U.S. EPA Green Book Carbon Monoxide (1971) Area Information. Available at https://www.epa.gov/green-book/green-book-carbon-monoxide-1971-area-information. Accessed 19 November 2021.

19 U.S. EPA Green Book PM-2.5 (2012) Area Information. Available at https://www.epa.gov/green-book/green-book-pm-25-2012-area-information. Accessed 19 November 2021.

20 U.S. EPA Green Book PM-10 (1987) Area Information. Available at https://www.epa.gov/green-book/green-book-pm-10-1987-area-information. Accessed 19 November 2021.

comply with the Secretary of the Interior Standards for the Rehabilitation of Historic Structures, which is available from the SHPO/THPO and the National Park Service.

Because federal funding from the Federal Transit Administration will be pursued for the East-West BRT Project, the project is considered a federal undertaking and must comply with Section 106 of the National Historic Preservation Act of 1966 (Section 106)[21] and its implementing regulations (36 CFR Part 800).[22]

Per 36 CFR Part 800, the Federal Transit Administration, as the lead federal agency for the proposed project, has authority to initiate the Section 106 process; designate consulting parties; and make associated determinations regarding the area of potential effect (APE), National Register of Historic Places eligibility, and effects to historic resources within the APE. The Federal Transit Administration also has authority to negotiate terms and conditions of any Memorandum of Agreement resulting from the identification of adverse effects through Section 106 consultation.

Pursuant to 36 CFR § 800.2(a)(3), the City of Madison has been authorized to prepare Section 106 documentation, analyses, and recommendations to inform the Federal Transit Administration determinations. The City of Madison is also authorized to consult directly with the Wisconsin State Historic Preservation Office on technical matters related to Section 106 documentation and analysis as well as to disseminate information to, and coordinate and schedule meetings with, consulting parties in coordination with the Federal Transit Administration.

The Federal Transit Administration, in consultation with the Wisconsin State Historic Preservation Office, defined two areas of potential effect (APE) in 2021: one for architectural/historic properties and one for archaeological properties. Please refer to Appendix E for maps of the APEs. Resources within the APE were surveyed to identify and evaluate historic properties and determine their eligibility for the National Register of Historic Places.

The architecture/history investigation identified the following eleven historic properties and three historic districts that are listed on, or determined eligible or potentially eligible for listing on, the National Register of Historic Places:

- Wisconsin State Capitol
- Dane County Courthouse / Madison City Hall
- St. Patrick's Roman Catholic Church
- Breese Stevens Field
- Kleuter Wholesale Grocery Warehouse
- Gisholt Machine Co.
- Madison East High School
- Garner Park Shelter
- James Madison Memorial High School
- UW Central Heating Station
- UW Vilas Hall
- University Hill Farms Historic District
- Bascom Hill Historic District
- State Street Historic District

21 54 U.S.C. 306108 Effect of undertaking on historic property. Available at https://www.govinfo.gov/app/details/USCODE-2014-title54/USCODE-2014-title54-subtitleIII-divsnA-app-dup4-chap3061-subchapI-sec306108. Accessed 8 February 2022.

22 Code of Federal Regulations Title 36 Chapter VIII. Available at https://www.ecfr.gov/current/title-36/chapter-VIII/part-800?toc=1. Accessed 8 February 2022.

The APE was defined to include properties within approximately 100 feet of proposed station locations. The full APE definition is included in Appendix E. Most historic properties within the APE are located far enough from a proposed BRT station or stations that visual and other physical and non-physical effects to these properties are anticipated to be minimal. These historic properties are located along major, modern transportation corridors with existing bus service and are near existing bus stops, most of which include shelters. As a result, the addition of BRT stations would not significantly change the current character of the immediate setting or overall urban environment.

Near the Westfield and Grand Canyon stations, the existing five-foot sidewalk would be widened to a 10-foot shared-use path. This expansion would be made toward the James Madison Memorial High School fields to preserve the row of trees in the terrace area between the sidewalk and the road.

In the University Hill Farms Historic District, the proposed Regent Street station would be within the existing median of Whitney Way. In response to comments received from the University Hill Farms Neighborhood Association, this station has been modified to have a reduced platform and shelter size and greater transparency to minimize potential visual impacts within the historic district. The station would be separated from the nearest properties by two travel lanes, a terrace, and a sidewalk. The addition of a BRT station at this location would not be a significant change to the current character of the immediate setting, nor would it impact views toward or from any historic properties or otherwise have any effect on the integrity of the overall historic district. Whitney Way has historically been a primary transportation corridor for this neighborhood and for traffic in general moving through this part of the city. Given these existing conditions and the station design modifications, construction of the project is not anticipated to physically affect the historic district or diminish its integrity of location, design, materials, or workmanship.

The proposed Orchard Street station would be located near the UW Central Heating Plant with the westbound platform on the north side of University Avenue, The addition of the platform would not be a significant change to the current character of the immediate setting, nor would it impact views toward or from the facility.

The proposed University Avenue/East Campus Mall station would include platforms in the vicinity of the Bascom Hill Historic District. The Elvehjem Building, a contributing resource of the historic district, is located approximately 100 feet north of the proposed far side platform. Based on the distance of the station and the visual context between the platform and the building, there may be minor visual effects to the Elvehjem Building and the historic district overall.

There are two station platforms proposed within the State Street Historic District, which is eligible for the National Register. The design of these stations has been modified to be smaller and more transparent than stations along other parts of the route. The proposed eastbound platform is adjacent to the Madison Museum of Contemporary Art, which is not a contributing resource for the historic district. The proposed westbound platform is adjacent to 346 State St., an Italianate-style building constructed circa 1890. This building is a contributing resource for the State Street Historic District. Construction of these platforms is not anticipated to result in visual impacts to these buildings. Furthermore, State Street has acted as a transit corridor since the electric streetcar era of the late 19th and early 20th centuries. Upon implementation of East-West BRT, total bus volumes and the number of bus stops would be reduced on State Street and bus service would be removed entirely from the 400 to 600 blocks of State Street, which is an area within the historic district.

The Capitol Square station includes two platforms, both of which are directly adjacent to the Wisconsin State Capitol. In response to comments from the Wisconsin State Historic Preservation Office, the design of these platforms has been modified to be more transparent than stations along other parts of the route; however, because ridership is anticipated to be high at this location, the size of the stations was not adjusted.

An auxiliary BRT station is proposed on Doty Street, adjacent to the Dane County Courthouse/Madison City Hall. It would be located on a side elevation of the building in an area that is currently a roadside seating area for pedestrians. This station would not normally be used and the design only includes a BRT sign, seating, and

potentially a small shelter and lighting improvements. Based on its location and limited features there would be minimal effects, visual or otherwise, to the Dane County Courthouse/Madison City Hall, and no potential to diminish the property's historic integrity in any way. There would be no changes to the property's historic character or use or to any physical features within the property's setting that contribute to its significance.

Once BRT construction is complete, the construction staging site on East Washington Avenue between Butler Street and Hancock Street may be redeveloped by the City using the FTA's Joint Development program. The development is expected to include a mixed-use building that may be up to ten stories in height. Northeast of this site, and fronting on Main Street, is the National Register-listed St. Patrick's Roman Catholic Church. Between the church building and the potential development site is a two-story parish addition, circa 1960, that does not contribute to the property's architectural significance. Because of this addition, there is no direct line of sight to the redevelopment site. Further, the new building would not be behind the church building and therefore would not detract from views of the historic property.

The City may implement TOD zoning as outlined in the City's 2040 Comprehensive Plan, which would include BRT station areas. Local planning efforts in these areas will consider potential indirect effects to nearby historic properties. FTA may assess the need to adjust the project APE and/or reconsider effects of the BRT to historic properties if TOD zoning is implemented and development is planned proximate to historic properties.

Archaeology resources recommended as eligible in the APE include six previously-reported sites (four cemetery/human burial sites and two archaeological sites) that intersect or are directly adjacent to the APE. Based on the project's current limits of potential disturbance, no further work is recommended at the following sites:

- Sunset Memory Gardens (BDA0080)
- H. P. Hall Bird Effigy (47DA0058/BDA0327)
- Toepfer Farm (47DA0817)
- State Capitol (47DA0868)

The portions of these sites that may be affected by the project have already been extensively impacted or there is no potential for the project to impact subsurface features associated with these sites based on the current project design. Further, it does not appear that any of these sites may be eligible for the National Register. No additional archaeological work is recommended for the rest of the project as designed to date. However, any future changes to the project should be reviewed against survey recommendations to determine if additional survey may be warranted.

In accordance with Wisconsin's burial sites preservation law,[23] it is recommended that ground-disturbing construction activities be monitored by a qualified archaeologist within the Monona Avenue Park Mound Group (47DA0136/BDA0389) and Capitol Park Effigy (47DA0177/BDA0586). This is based on the potential for burials within the APE and the proposed location of one or more BRT stations within the boundaries of these sites. Archaeological monitoring would not be required if ground disturbance does not occur within the boundary of either site.

Additional information on the cultural resources evaluation is included in the Architectural Survey Report, Archaeological Survey Report, and Determination of No Adverse Effect Report contained in Appendix E. Historic and cultural resources are shown in Figures Figure 7 through Figure 9.

23 Wisconsin State Statute §157.70. Available at https://docs.legis.wisconsin.gov/statutes/statutes/157/iii/70. Accessed 8 February 2022.

Figure 7: Historic and Cultural Resources between the Junction Road and Shorewood Boulevard stations

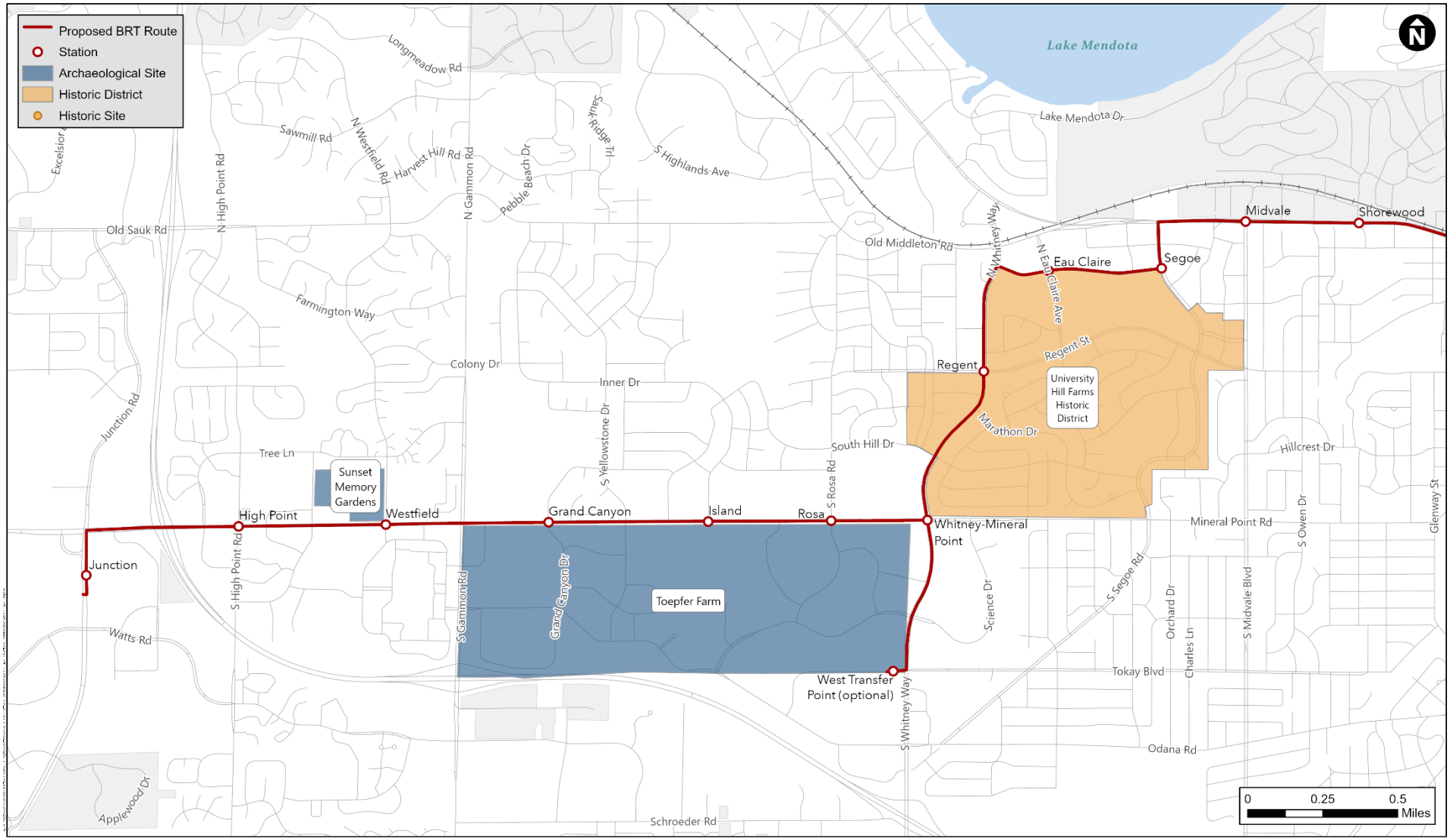


Figure 8: Historic and Cultural Resources between the Shorewood Boulevard and Fourth Street stations

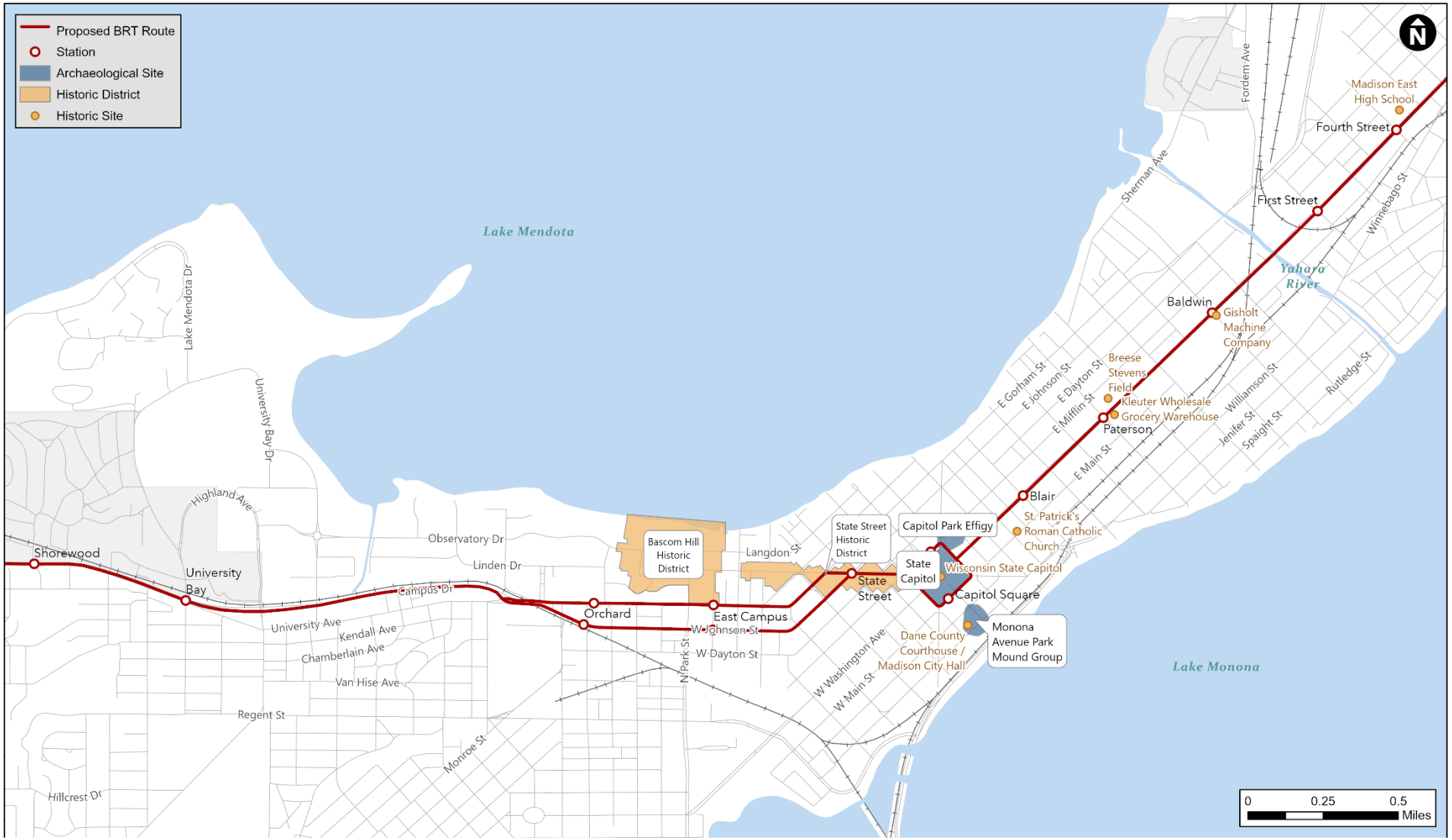
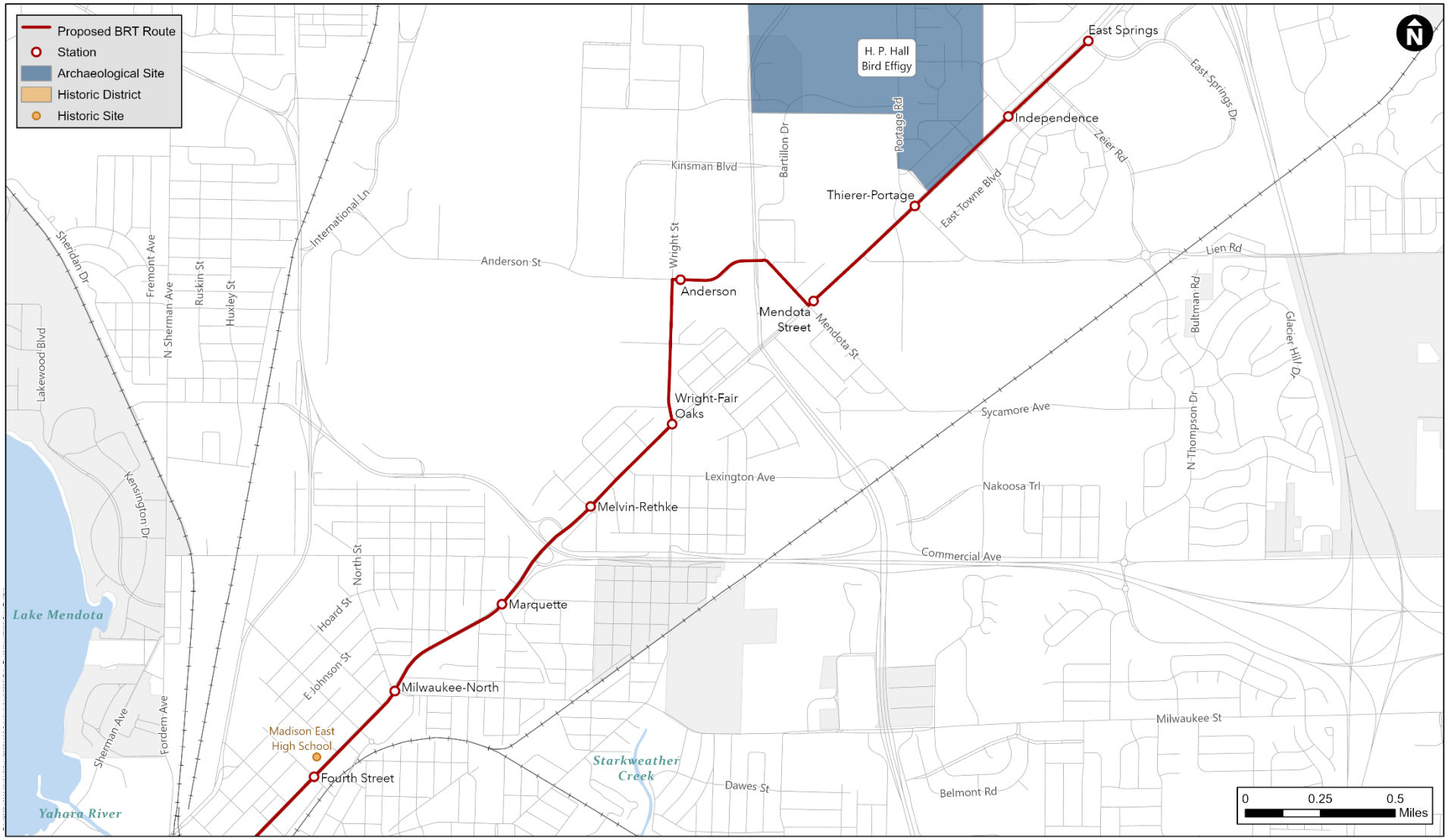


Figure 9: Historic and Cultural Resources between the Fourth Street and East Springs Drive stations



9. Visual Quality

Describe the existing visual setting, identify any sensitive views/viewers, and describe the visual impact of the proposed project.

The project would be constructed in a developed urban environment, in an area with high levels of existing bus service. The visual changes of the project are minor, and no negative impacts are expected to sensitive views or sensitive viewers based on the setting, orientation, scale of infrastructure planned, and the highly compatible nature of upgrading transit amenities within this area already that is already well-served by buses. As described in Section 8. Historic Resources, the size of the station platform and shelter are reduced for stations along State Street to maintain storefront visibility in this area. Similarly, the westbound platform of the East Campus Mall station was shifted and the local bus platform design does not include a canopy to avoid potentially obstructing views of the modern architecture and landscaping at the Chazen Museum of Art; the eastbound platform for this station is in an area that would not cause visual impacts to the museum and is planned to include a shelter.

Visual change would result from the presence of new BRT infrastructure and buses, with most change occurring proximate to the dedicated guideway and stations. Operating phase impacts related to specific project elements are listed in Table 9. Visual contrast is defined as the degree of perceived change that occurs in the landscape due to alterations necessary for a project.

See the Visual Quality Technical Report in Appendix F for photos of the corridor and additional analysis.

Table 9: Operating Phase Visual Impacts

Project Element	**Impacted Area/Resource**	**Visual Contrast (Low/Moderate/High)**
Junction Road Terminal	Nearby commercial properties	**Moderate:** Some change from existing visual context (park-and-ride)
High Point Road station	Nearby commercial properties	**Low:** Consistent with current visual context (multi-lane roadway corridor)
Westfield Road station	Sunset Memory Gardens Cemetery, nearby commercial properties	**Low:** Consistent with current visual context (multi-lane roadway corridor; existing bus stops)
Grand Canyon Drive station	Nearby commercial properties	**Low:** Consistent with current visual context (multi-lane roadway corridor; existing bus stops)
Island Drive station	Oakwood Village Seminary, nearby commercial properties	**Low:** Consistent with current visual context (multi-lane roadway corridor; existing bus stops)
Rosa Road station	Garner Park, nearby commercial properties	**Low:** Consistent with current visual context (multi-lane roadway corridor; existing bus stops)

Project Element	Impacted Area/Resource	Visual Contrast (Low/Moderate/High)
Whitney Way – Mineral Point Road station	Nearby commercial and residential properties, adjacent to visually sensitive University Hill Farms Historic District (NRHP-listed district) *Sensitive view*	**Low:** Consistent with current visual context (multi-lane roadway corridor; existing bus stops)
West Transfer Point station (optional)	Nearby commercial properties	**Low:** Consistent with current visual context (transit center)
Regent Street station	Red Village Church, nearby residential properties, adjacent to visually sensitive University Hill Farms Historic District (NRHP-listed district) *Sensitive view*	**Low:** Consistent with current visual context (multi-lane roadway corridor; existing bus stops)
Eau Claire Avenue station	Red Cross, the Wisconsin Department of Transportation, nearby commercial and residential properties, adjacent to visually sensitive University Hill Farms Historic District (NRHP-listed district) *Sensitive view*	**Low:** Consistent with current visual context (access street corridor; existing bus stops)
Segoe Road station	Nearby commercial and residential properties	**Low:** Consistent with current visual context (multi-lane roadway corridor; existing bus stops)
Midvale Boulevard station	Nearby commercial and residential properties	**Low:** Consistent with current visual context (multi-lane roadway corridor; existing bus stops)
Shorewood Boulevard station	Nearby commercial and residential properties	**Low:** Consistent with current visual context (multi-lane roadway corridor; existing bus stops)
University Bay Drive station	University of Wisconsin – Madison hospitals complex, nearby commercial and residential properties	**Low:** Consistent with current visual context (multi-lane roadway corridor; existing bus stops)
Orchard Street station	University of Wisconsin – Madison	**Low:** Consistent with current visual context (multi-lane roadway, core urban area, and existing bus stops)
East Campus Mall station	University of Wisconsin – Madison, nearby commercial and residential properties, adjacent to Bascom Hill Historic District (NRHP-listed district)	**Low:** Consistent with current visual context (multi-lane roadway, core urban area, and existing bus stops)

Project Element	Impacted Area/Resource	Visual Contrast (Low/Moderate/High)
State Street station	Madison Museum of Contemporary Art, nearby commercial and residential properties, adjacent to State Street Historic District (NRHP-listed district) *Sensitive view*	**Low:** Consistent with current visual context (core urban area; existing bus stops; transit mall)
Eastbound: Main Street at Carroll – Capitol Square station	State Capitol building, nearby commercial and residential properties, adjacent to State Street Historic District (NRHP-listed district) and Capitol Square (NRHP-listed property) *Sensitive view*	**Low:** Consistent with current visual context (core urban area; existing bus stops)
Westbound: Mifflin Street at Pinckney – Capitol Square station	State Capitol building, nearby commercial and residential properties, adjacent to State Street Historic District (NRHP-listed district) and Capitol Square (NRHP-listed property) *Sensitive view*	**Low:** Consistent with current visual context (core urban area; existing bus stops)
Blair Street station	Nearby commercial and residential properties	**Low:** Consistent with current visual context (multi-lane roadway corridor; existing bus stops)
Paterson Street station	Breese Stevens Field soccer stadium, nearby commercial and residential properties	**Low:** Consistent with current visual context (multi-lane roadway corridor; existing bus stops)
Baldwin Street station	Madison Metro garage, nearby commercial and residential properties, adjacent to Gisholt Machine Company (NRHP-listed property)	**Low:** Consistent with current visual context (multi-lane roadway corridor; existing bus stops)
First Street station	Nearby commercial and residential properties	**Low:** Consistent with current visual context (multi-lane roadway corridor; existing bus stops)
Fourth Street station	East High School (NRHP-listed property), nearby residential properties	**Low:** Consistent with current visual context (multi-lane roadway corridor; existing bus stops)
Milwaukee – North Street station	Nearby commercial and residential properties	**Low:** Consistent with current visual context (multi-lane roadway corridor; existing bus stops)

Project Element	Impacted Area/Resource	Visual Contrast (Low/Moderate/High)
Marquette Street station	Starkweather Creek, nearby commercial and residential properties	**Low:** Consistent with current visual context (multi-lane roadway corridor; existing bus stops)
Melvin Court – Rethke Avenue station	Nearby commercial and residential properties	**Low:** Consistent with current visual context (multi-lane roadway corridor; existing bus stops)
Wright Street – Fair Oaks Avenue station	Nearby commercial and residential properties	**Low:** Consistent with current visual context (multi-lane roadway corridor; existing bus stops)
Anderson Street station	Madison Area Technical College, Unity Park, nearby residential properties	**Low:** Consistent with current visual context (access street corridor; existing bus stops)
Mendota Street station	Nearby commercial and residential properties	**Low:** Consistent with current visual context (multi-lane roadway corridor; existing bus stops)
Thierer Road – Portage Road station	Nearby commercial properties	**Low:** Consistent with current visual context (multi-lane roadway corridor; existing bus stops)
Independence Lane station	Nearby commercial properties	**Low:** Consistent with current visual context (multi-lane roadway corridor; existing bus stops)
East Springs Drive station	Nearby commercial properties	**Low:** Consistent with current visual context (multi-lane roadway corridor; existing bus stops)
Sun Prairie Park-and-Ride (bus charger and restroom facility only)	Nearby commercial properties	**Low:** Consistent with current visual context (existing park-and-ride transit facility)
Metro Satellite Maintenance Facility (bus charger only)	Nearby commercial properties	**Low:** Consistent with current visual context (existing transportation facility)
Dedicated Bus Lanes (Center or Curbside)	Mineral Point Road, Whitney Way, Campus Drive, University Avenue, Johnson Street, Capitol Square, East Washington Avenue	**Moderate:** Some change from existing visual context. Portions of the dedicated bus lane would be painted red, and the street layout modified in some locations.
Multi-use path (Mineral Point Road)	Mineral Point Road from Junction Road to Whitney Way	**Low:** Consistent with current visual context (existing transportation facility with sidewalks adjacent to roadway)

Design and construction best practices would be used to avoid, minimize, and mitigate impacts of the project on neighboring properties and communities, including visual impacts. Design and materials complementary to

existing Madison Metro Transit shelters and the surrounding urban landscape would be used to minimize the visual impacts.

Visual impacts are an important environmental consideration in ongoing concept coordination phases with the public and other stakeholders, as well as for project elements that would be included in future planning projects for further public engagement and refinement. The City began public engagement efforts related to station design with a public workshop in September 2019. Participants at this meeting identified solar power and heat lamps as priorities for optional station features and showed a strong preference for the "prairie" station design style.[24]

In February 2021, the City furthered these public engagement efforts with the launch of a station design competition. This competition invited community members to help design stations that enhance Madison's urban landscape and reflect community priorities of accessibility and sustainability. The City received 61 submissions, 23 of which met the criteria to advance for public review and input.[25] These designs were available for public review for one week in April 2021, during which time the City received more than 2,600 comments. Based on public input and staff recommendations, in May 2021 the City of Madison Urban Design Commission confirmed a winning station design that reflects Madison's community values of environmental conservation, artistic expression, and celebration of distinct neighborhoods. The concept also allows for modifications so the station design can be integrated into the surrounding urban context, particularly in sensitive areas. The station design is progressing using this concept, as shown in Figure 10.

Figure 10: Baldwin Street station rendering

The City of Madison does not anticipate adverse visual impacts along the corridor, therefore, it does not propose additional avoidance, minimization, or mitigation measures for the corridor.

24 Madison East West BRT Planning Study: Public Engagement Final Summary Report. Available at https://www.cityofmadison.com/metro/documents/brt/2019_11-04-MadisonBRT-Public-Engagement-Final-Summary-Report_Final.pdf. Accessed 19 November 2021.

25 East-West BRT Station Design Competition summary. Available at https://www.cityofmadison.com/metro/documents/brt/brt_fullsummaryreport.pdf. Accessed 19 November 2021.

10. Noise

Compare distance between the center of the proposed project and the nearest noise receptor to the screening distance for this type of project in FTA's noise and vibration guidelines (Section 4.2 in FTA guidelines). If the screening distance is not achieved, attach a "General Noise Assessment" with conclusions. Refer to FTA's Transit Noise and Vibration Impact Assessment manual (May 2006).

Noise impacts were assessed in accordance with guidelines specified in the FTA's Transit Noise and Vibration Impact Assessment manual.[26] This section describes the methodology and results of assessing the potential noise impact of the project. Further details are available in Appendix G.

The noise assessment methodology for assessing noise impact from BRT operations included the following steps:

- Identifying noise-sensitive land uses in the corridor using aerial photography, GIS data and field surveys, typically within 200 feet of the alignment.
- Measuring or estimating existing noise levels in the corridor near sensitive receptors.
- Predicting future project noise levels from transit operations, using preliminary engineering plans and information on speeds, headways, and vehicle type. The project noise level assessment includes BRT operations and station noise. Details regarding the information used to predict future project noise levels can be found below.
- Assessing the impact of the project by comparing the projected future noise levels with existing noise levels using the FTA noise impact criteria.
- Recommending mitigation at locations where projected future noise levels exceed the FTA impact criteria.

Specific inputs used in the noise assessment include:

- Location of noise sensitive receptors relative to the roadway
- Speed of buses along the roadway, which vary from 15 to 40 miles per hour
- Operating schedule:
    - 15-minute headways from 5:30 a.m. to 7:30 p.m.
    - 30-minute headways from 7:30 p.m. to 12 a.m.
- A bus source reference noise level of electric buses of 80 dBA SEL at 50 feet and 50 miles per hour

Noise-sensitive land uses in the study area include single- and multi-family homes, churches, hotels, theaters, schools, and campus facilities such as classrooms, laboratories, libraries, and other noise sensitive areas. The noise assessment measured noise at 33 residential locations and 46 institutional locations. At each of these locations, the calculated future noise level is lower than the existing condition (see Tables 6 and 7 in Appendix G for more information).

The results of this noise assessment indicate that there would be no operating phase impacts due to the proposed project; therefore, no sensitive noise receptors would be impacted. The noise assessment was conducted using the assumption that all East-West BRT vehicles would be electric buses. There is a possibility that some diesel buses would be used. If diesel buses are used for some or all of the fleet, there would be an increase in operational noise, but no change to the impact designations. Idling buses at the terminal stations

26 FTA Transit Noise and Vibration Impact Assessment Manual. Available at https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Accessed 19 November 2021.

would generate additional noise. But, because there are no sensitive receptors near these stations, there would not be a noise impact from buses idling.

During the construction phase, activities would be carried out in compliance with all applicable local noise and vibration regulations. Specific construction noise and vibration mitigation measures would be developed during the design phase and would be summarized in the contractor's detailed Noise Control Plan.

11. Vibration

If the proposed project includes new or relocated steel rails/tracks, compare the distance between the center of the proposed project and the nearest vibration receptor to the screening distance for this type of project in FTA's guidelines (Section 9.2 in FTA guidelines). If the screening distance is not achieved, attach a "General Vibration Assessment" with conclusions. Refer to FTA's Transit Noise and Vibration Impact Assessment manual (May 2006).

Because the Madison East-West BRT Project includes a rubber-tired vehicle, a vibration screening assessment would only be conducted under unusual circumstances, as described in Appendix G Noise and Vibration Technical Report. There are possible vibration-sensitive research and medical buildings along the proposed route. However, adding additional rubber-tired vehicles to an existing roadway that is already in use by other buses and trucks would not significantly increase the vibration levels above those already experienced at sensitive locations.

The results of the vibration assessment indicate that there would be no operating phase impacts due to the proposed project; therefore, no mitigation would be required. During the construction phase, activities would be carried out in compliance with all applicable local noise and vibration regulations. Specific construction noise and vibration mitigation measures would be developed during the design phase and would be summarized in the contractor's detailed Noise Control Plan.

12. Acquisitions and Relocations Required

Describe land acquisitions and displacements of residences and businesses. Include current use, ownership, and the date and type of property transaction (such as lease or purchase). If FTA funds are used to acquire property or the property is used as local match, then the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 must be followed and documented. No offers or appraisals may occur prior to FTA's approval of a NEPA evaluation.

Specific regulations govern the displacement and relocation of residents and businesses resulting from publicly funded transportation projects. The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970[27], as amended, (referred to as the Uniform Relocation Act) requires public agencies to compensate landowners for property the agencies acquire for public uses. The project would use public funds and acquire property. In accordance with the Uniform Relocation Act, the City of Madison would provide fair and equitable treatment to people whose real property is acquired or who are displaced because of the project; provide relocation assistance; and provide decent, safe, and sanitary housing within the displaced person's financial means.

Project-related property acquisition is also subject to the regulations within Wisconsin Statutes Chapter 32, which require compensation and standardized relocation benefits.[28] The Uniform Relocation Act and the

27 Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970. Available at https://uscode.house.gov/view.xhtml?path=/prelim@title42/chapter61&edition=prelim. Accessed 17 November 2021.

28 Wisconsin Statutes Chapter 32: Eminent Domain. https://docs.legis.wisconsin.gov/statutes/statutes/32. Accessed 18 November 2021.

Wisconsin Statutes requirements apply to full and partial acquisitions, displacement, and permanent and temporary easements, described below.

Land acquisitions, easements, and displacements of residences and businesses were estimated using the limits of disturbance and approximate right-of-way requirements as delineated on the 30 percent engineering plan set for the project, provided in Appendix A. The limits of disturbance encompass land and property that the project may need for construction or operation. The City of Madison would further refine the acquisition, displacement, and relocation requirements as the project design advances.

Table 10 summarizes the number and size of acquisitions and temporary easements, and the number of subsequent displacements required to construct and operate the project. The types of real estate transactions and impacts anticipated as a result of the project include full and partial acquisitions (fee-simple permanent incorporation or permanent easement), and full and partial temporary easements for construction. These are described in greater detail below. No displacements of housing units or businesses are expected from potential acquisitions and/or temporary easements. Appendix H includes a technical report with additional details pertaining to this review.

Table 10: Summary of Potential Property Acquisitions, Easements, and Displacements

		Acquisition		Temporary Easement		Displacement	
Ownership	**Extent**	**No. Parcels**	**Acres**	**No. Parcels**	**Acres**	**Housing Units**	**Businesses**
Private	Partial	39	0.89	101	1.86	--	--
	Full	0	0.00	0	0.00	--	--
	All	*39*	*0.89*	*101*	*1.86*	*0*	*0*
Public	Partial	13	0.77	20	25.63	--	--
	Full	1	3.46	2	4.03	--	--
	All	*14*	*4.23*	*22*	*29.66*	*0*	*0*
Total	Partial	52	1.66	121	27.50	--	--
	Full	1	3.46	2	4.03	--	--
	All	*53*	*5.12*	*124*	*31.53*	*0*	*0*

12.1. Acquisitions and Easements

The project would affect 101 privately-owned parcels.[29] All 101 parcels would require temporary easements totaling approximately 1.86 acres, and 39 of these parcels would also be affected by permanent partial acquisitions totaling about 0.89 acres (Table 10). All impacted parcels are located within the City of Madison.

The project would also affect 25 publicly-owned parcels.[30] Temporary easements, totaling roughly 29.66 acres, would affect 22 of these parcels. Fourteen of the 25 publicly-owned parcels would be affected by permanent acquisitions totaling about 4.23 acres (Table 10), and three of these 14 would be affected by permanent acquisitions only, without additional temporary easements. All but two public parcels that would be affected are located within the City of Madison. The parcel at 2751 O'Keeffe Ave. is within the City of Sun Prairie; the parcel at the northwest corner of Shorewood Boulevard and University Avenue is within the Village of Shorewood Hills.

29 See Table 2 of Appendix H for a complete list of the 102 privately-owned properties that would be impacted by the project by impact type, extent, and size, parcel location, owner, and current use.

30 See Table 3 of Appendix H for complete list of the 25 publicly-owned properties that would be impacted by the project by impact type, extent, and size, parcel location, owner, and current use.

One public parcel would be allocated and designated for use as the west terminal and park-and-ride on Junction Road. Located at 432 S Junction Rd., the parcel is currently undeveloped and is already owned by the City of Madison.[31] Two full public parcels may be subject to a temporary easement for construction: 1 S Butler St. in Madison which is the City of Madison Brayton Parking Lot; and 2751 O'Keeffe Ave. in Sun Prairie which is the Sun Prairie Park-and-Ride owned by the City of Sun Prairie.

The project would require partial acquisition and/or temporary easements on three parcels containing a park or recreation facility. Garner Park, (parcel address 5351 South Hill Dr.) which is located north of Mineral Point Road between Rosa Road station and Whitney Way–Mineral Point Road station, and Nautilus Point Park, (321 Nautilus Dr.) which is located northeast of Island Drive station, are both owned by the City of Madison. Temporary easements would be required along the southern edges of both of these public parkland parcels, and partial acquisition (permanent incorporation or permanent easement) would be required of the parcel containing Garner Park in order to expand the existing sidewalk. A small portion of a third recreational facility, the Ice Age Junction Path just west of the Junction Road Terminal Park-and-Ride, would be impacted by a temporary easement. A temporary partial closure may be required on a short segment of the Ice Age Junction Path adjacent to the proposed Junction Road Terminal park and ride to construct a new connection from the trail facility to the Park-and-Ride. Additional information about the impacts to these parklands are found in Appendix L of the DCE, Public Parkland and Recreation Areas Technical Report.

12.2. Relocations

No displacements or relocations of housing units or businesses are expected from potential acquisitions and/or temporary easements required by the project.

13. Hazardous Materials

If real property has been acquired, has a Phase I site assessment for contaminated soil and groundwater been performed? If a Phase II site assessment is recommended, has it been completed? What steps will be taken to ensure that human and ecological receptors in the project area are protected from contamination encountered during construction and operation of the project? State the results of consultation with the State agency with jurisdiction over proposed remediation of soil and/or groundwater contamination. Include anticipated effects of the project on asbestos-containing building materials and lead-based paints.

The Wisconsin Department of Natural Resources (DNR) oversees regulations pertaining to hazardous waste management per Ch. NR 660-679,[32] Wis. Adm. Code and as required by the federal Resource Conservation and Recovery Act.[33] The DNR's Wisconsin Remediation and Redevelopment Database (WRRD)[34] provides information on different contaminated land activities in Wisconsin, including investigations and cleanups of contaminated soil and/or groundwater, spills, and Superfund sites.

Project staff conducted a review of the WRRD database to identify and evaluate sites potentially containing hazardous or regulated materials or other sources of potential contamination. The study area included sites within 500 feet from the East-West corridor. Within the study area, project staff identified 15 open sites and 177 closed sites. Thirteen of these sites—one open and 12 closed—are within the project limits (Table 11).

31 For the purposes of this report, this 3.46-acre parcel is treated as a full acquisition, though the City of Madison already owns the undeveloped parcel.

32 Wisconsin Administrative Code Chapters NR 660-679. Available at https://docs.legis.wisconsin.gov/code/admin_code/nr/600. Accessed 18 November 2021.

33 42 U.S.C. §6901 Resource Conservation and Recovery Act (1976). Available at https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act. Accessed 24 November 2021.

34 Wisconsin Remediation and Redevelopment Database. Available at https://dnr.wisconsin.gov/topic/Brownfields/WRRD.html. Accessed 24 November 2021.

Table 11: Contaminated Sites within Project Limits

Site Name	BRRTS No.	Activity Type	Substances	Status
Breese Stevens Field	02-13-550026	ERP	VOC	Open
1401 E Washington Ave.	03-13-449121	LUST	Petroleum	Closed
2526 E Washington Ave.	03-13-551915	LUST	Petroleum	Closed
2900 E Washington Ave.	03-13-550755	LUST	Petroleum	Closed
3098 E Washington Ave.	03-13-554252	LUST	Petroleum, VOC	Closed
612 University Ave.	03-13-553732	LUST	Petroleum, VOC	Closed
AT&T	03-13-001238	LUST	Petroleum	Closed
Firstar Bank Madison	03-13-002530	LUST	Unknown	Closed
Humiston Keeling Company	03-13-561428	LUST	Petroleum, VOC	Closed
M & I Parking Lot (Former)	03-13-292786	LUST	Unknown	Closed
One East Main Associates Ltd.	03-13-113257	LUST	Unknown	Closed
PDQ #120	03-13-000785	LUST	Petroleum	Closed
Speedy Muffler	02-13-548255	ERP	Unknown	Closed

**Activity Code: Environmental Repair Program (ERP), leaking underground storage tank (LUST)*
***Substances: Volatile organic compounds (VOC), Tetrachloroethene (PCE), Polynuclear aromatic hydrocarbons (PAHs)*
Yellow highlighting indicated sites within 200 feet of proposed BRT stations.

Appendix I includes a technical report summarizing the results of this review and a map showing the potentially contaminated sites within the project limits.

During final design, the City of Madison will conduct a Phase I Environmental Site Assessment (ESA) for all disturbance areas in accordance with the US Environmental Protection Agency's All Appropriate Inquires Rule.[35] The results of the investigation would be used to determine if impacts to contaminated sites could be minimized or avoided or if additional investigation is needed (Phase II ESA).

14. Social Impacts and Community Disruption

Provide a socio-economic profile of the affected community. Describe the impacts of the proposed project on the community. Identify any community resources that would be affected and the nature and extent of the effect.

There are approximately 97,700 residents within one-half mile of the proposed project. Based on the U.S. Census Bureau 2015-2019 American Community Survey, median household income in this area is $54,531. This is lower than the median household incomes for the City of Madison and the State of Wisconsin, which are shown in Table 12. Of the total population in the study area, 30.2 percent of residents are living with an income below the federal poverty level. [36]

Table 12Table 12 shows that compared to the City of Madison and the State of Wisconsin, the project area has a higher percentage of renter-occupied housing, a higher percentage of people with a bachelor's degree or higher, and a higher percentage of zero-vehicle households. The project area has a lower percentage of people

35 All Appropriate Inquiries Rule (40 CFR 312.20). Available at https://www.ecfr.gov/current/title-40/chapter-I/subchapter-J/part-312. Accessed 18 November 2021.

36 For a description on how the U.S. Census sets the poverty thresholds, see U.S. Census Bureau. How the Census Bureau Measures Poverty. Available at https://www.census.gov/topics/income-poverty/poverty/guidance/poverty-measures.html. Accessed August 2021.

experiencing disabilities and a lower percentage of seniors over the age of 64 than the City of Madison and the State of Wisconsin.

As of January 2021, the U.S. Bureau of Labor Statistics estimates the labor force in the Madison Metropolitan Area to be 379,574 persons, with an unemployment rate of 3.5 percent. This is lower than the unemployment rate of both the State of Wisconsin (4.5 percent) and the United States (6.3 percent).[37]

Table 12: *Socio-Economic Indicators*

Indicator	State of Wisconsin	City of Madison	Project Area (One-Half Mile)*
Population	5,790,716	254,977	97,693
Median Household Income	$61,747	$65,332	$54,531
Individuals Below Poverty Level	11.3%	16.9%	30.2%**
Renter Occupied Housing Units	33.0%	53.0%	71.4%
Individuals with a Disability	11.8%	8.6%	4.6%
Senior Population (Age 65 and Older)	17.5%	11.4%	8.2%
Educational Attainment (Population Age 25 or Older with a Bachelor's Degree or Higher)	31.3%	58.1%	66.1%
Zero-Vehicle Households	6.7%	12.6%	20.1%

Source: U.S. Census Bureau 2015-2019 American Community Survey (ACS)

**Project area statistics derived from U.S. Census block groups within one-half mile of the corridor. For block groups partially within the one-half mile buffer, the indicator populations and statistics for each block group were multiplied by the percentage of the block group area within the one-half mile buffer area.*

***The project area includes a significant student population living in residence halls. The U.S. Census ACS excludes populations living in group quarters (including dorms) for income and poverty measures.*

The community facilities impact analysis is based on the geographic location of facilities such as schools, colleges, libraries, community centers, parks, medical facilities, places of worship, police and fire departments, and community service organizations in relation to the route. Table 13 identifies these community resources within one-half mile of the proposed project, organized by station area.

The one-half mile study area considers not only potential negative impacts that project construction and operations could have on the facility, but also the improved access that the project would provide to community resources within a short walk of stations. Transit access to community resources would be improved by the enhanced transit service and facilities. The project would not affect, separate, or isolate any neighborhoods or communities along the corridor, nor would it result in negative impacts to community resources based upon the analysis in this document.

Table 13: *Community Facilities by Project Element*

Project Element	Existing Community Facilities
Junction Road Terminal	Kids Junction Learning Center, Metro Believers Church (two locations), All Saints Neighborhood Church

37 "Civilian Labor Force and Unemployment by State and Metropolitan Area," January 2021, U.S. Bureau of Labor Statistics. Available at https://www.bls.gov/news.release/metro.t01.htm. Accessed March 22, 2021.

Project Element	Existing Community Facilities
High Point Road station	Lake Trails Presbyterian Church, Medical Education Institute, Upper Iowa University-Madison Center, US Army Corporation of Engineers
Westfield Road station	La Petite Academy, Sunset Memory Gardens
Grand Canyon Drive station	City of Madison FD 2, Cultured Kids of Madison – West Child Care, Darul Iman, James Madison Memorial High School, Thomas Jefferson Middle School, John Muir Elementary, Lussier Community Center, Capital High Westside
Island Drive station	Community Coordinated Child Care, East West Healing Art Institute, Einstein School, Gan Hayeled Preschool, Jewish Federation of Madison, Koala-T-Kare, South Central Synod of Wisconsin ELCA, Turkish American Cultural Center of Madison
Rosa Road station	Glenn Stephens Elementary School, Grace Lutheran Church, Learning Gardens Child Development Center, Wellspring United Methodist Church
Whitney Way – Mineral Point Road station	Preschool of The Arts, US Geological Survey, Red Village Church
West Transfer Point station (optional)	Church of Christ, Intervarsity Christian Fellowship, Madison Reading and Learning Center, Montessori Children's House, State of Wisconsin Probation & Parole Offices, Westwood Christian Church
Regent Street station	Hamilton Middle School, Mount Olive Lutheran Church
Eau Claire Avenue station	Horizon High School, Little Chicks Learning Academy, State of Wisconsin Public Service Commission
Segoe Road station	Church of Jesus Christ of Latter-Day Saints, City of Madison FD 9, Madison School of Music, Van Hise Elementary School, Wisconsin Department of Transportation, Wisconsin State Department of Transportation Library, Community Service Center
Midvale Boulevard station	None
Shorewood Boulevard station	Shorewood Hills Community Center, Shorewood Hills Elementary, Village of Shorewood Hills Police Department
University Bay Drive station	Calvary Cemetery, F B Power Pharmacy Library, First Baptist Church, First Unitarian Society Meeting House, Holy Cross Cemetery, Madison School & Community Recreation, Madison Seventh Day Baptist, Madison West High School, Meeting House Nursery School, Resurrection Cemetery, Shaarei Shamayim Reconstructionist Congregation, University of Wisconsin – Ebling Library, University of Wisconsin Hospital and Clinics, US Agricultural Research Service, US Animal Plant/Health Inspection, US Forest Service – Forest Products Laboratory, UW Med Flight, Waisman Center, Waisman Early Childhood Program, William S Middleton Memorial Veterans Hospital

Project Element	Existing Community Facilities
Orchard Street station	Air Force ROTC, Beth Israel Center, Campus Community Church, Chabad Lubavitch House, City of Madison FD 4, Cooperative Children's Book Center, Crossing Campus Ministry, First Congregational United Church of Christ, Geneva Campus Church, Geology & Geophysics Library, Geology Museum, Good Shepherd Catholic Parish, Horizon High School, Islamic Center of Madison, LR Ingersoll Physics Museum, Lutheran Campus Center, Madison Chinese Christian Church, Neighborhood House Community Center, Providence Presbyterian Church, Randall Elementary School, Saint James Catholic Church, Service Memorial Institute & Bardeen Medical Laboratories, Society of Friends, St Andrews Episcopal Church, Steenbock Gallery, University Ave Discovery Center, University of Wisconsin – Madison, University of Wisconsin – Social Work Library, University of Wisconsin Police Department, US Agricultural Research Service, US Army ROTC, US Navy ROTC, Water Resources Center
East Campus Mall station	Arthur H Robinson Map Library, Aveda Institute Madison, Calvary Lutheran Church, Cartographer's Office, Center for Advanced Studies in Business, Chazen Museum of Art, Faith Community Bible Church, Francis House Episcopal Student Center, Hillel Foundation, Intervarsity Christian Fellowship UW Campus, Luther Memorial Church, Madison Housing Operations, Madison Metro Board-Education, Meriter Hospital, Nieman Grant Journalism Room, Pyle Center UW Extension, Saint Paul's Catholic Center, School of Music, Select Specialty Hospital-Madison, Sellery Hall, State of Wisconsin Historical Society, The Fluno Center for Executive Education, The Wisconsin Union Galleries University, University of Wisconsin – Business Library, University of Wisconsin – Kohler Art Library, University of Wisconsin Theatre, US Food & Drug Administration, US Labor Department, US Small Business Administration, Kohl Center, Blackhawk Church – Downtown
State Street station	Adult Christian Education, Bethel Lutheran Church, Catedral Parish Of St Raphael, Chabad at the University of Wisconsin, City of Madison FD 1, Holy Redeemer Catholic Church, James Watrous Gallery of The Wisconsin Academy of Sciences, Madison Creative Art Program, Madison Museum of Contemporary Art, Madison Public Library Central Library, Norwegian American Genealogical Center & Naeseth Library, Overture Center For The Arts, US Attorney Office, Wis Technical College District Boards Assoc, Wisconsin Historical Museum, Wisconsin Lutheran Chapel
Eastbound: Main Street at Carroll (Capitol Square station)	City of Madison Police Department, City-County Building, Dane County Courthouse, Dane County Sheriff's Office, Grace Episcopal Church, Land Commissioner, Legislative Reference Bureau, Madison Municipal Building, Minority Business Development, Monona Terrace Community and Convention Center, State Capitol Police, State of Wisconsin Administration Building, Tourism Department, US Representative Mark Pocan, Wisconsin Department of Health Services, Wisconsin Department of Justice, Wisconsin Department of Natural Resources, Wisconsin Housing & Economic Development Authority (WHEDA), Wisconsin State Capitol, Wisconsin State Law Library, Wisconsin Supreme Court, Wisconsin Council of Churches

Project Element	Existing Community Facilities
Westbound: Mifflin Street at Pinckney (Capitol Square station)	Capital Area Regional Planning Commission (CARPC), First United Methodist Church, Gates of Heaven Synagogue, Madison Children's Museum, Wesli-Wisconsin English, Wisconsin Department of Workforce Development, Wisconsin Ethics Commission, Wisconsin Legislative Reference Bureau, Wisconsin Veterans Museum
Blair Street station	Creative Learning Preschool & Child Care Center, Red Caboose Child Care Center, Saint John's Lutheran Church, State of Wisconsin Probation & Parole Offices, St. Patrick Church Cathedral Parish
Paterson Street station	Christ Presbyterian Church, Immanuel Lutheran Church LCMS, Lapham Elementary School, Wil-Mar Neighborhood Center, Wisconsin Literacy
Baldwin Street station	Madison Church & Capital City Sanctuary Chr-God, City of Madison FD 3, Marquette Elementary School, Metro Transit System, Red Caboose School Age Program, Tenney Nursery & Parent Center
First Street station	Bethany Evangelical Free Church, O'Keeffe Middle School, Trinity Lutheran Church
Fourth Street station	Big Oak Child Care Center, Bread of Life Anglican Church, Madison East High School, James Reeb Unitarian Universalist Congregation, Plymouth Church of Christ, Zion Lutheran Church, Journey Church Madison
Milwaukee-North Street station	Assumption Greek Orthodox Church, Bashford United Methodist Church, Emerson Elementary School, Goodman Community Center, Madison Public Library – Hawthorne Library, St Bernard Catholic Church
Marquette Street station	Wisconsin Department of Corrections
Melvin Court – Rethke Avenue station	Chapel of Faith Anglican Church, Claudis Kids Daycare, Ridgeway Church, Sunny Ridge Kids
Wright Street – Fair Oaks Avenue station	Hawthorne Elementary School, Head Start Dane County Parent Council, Army National Guard, US Army Reserve Center, Madison Housing Operations
Anderson Street station	East Madison Community Center, Madison Area Technical College, Madison Area Technical College – Truax Library, Madison College Community Clinic, Wisconsin Department of Transportation – Southwest Region Office
Mendota Street station	Christ The Solid Rock Baptist Church, Lighthouse Kids
Thierer Road – Portage Road station	Barbie's Home Child Care Center, City of Madison FD 8, Islamic Center of East Madison, Victory Center Church
Independence Lane station	Eastside Lutheran School, Madison Baptist Church
East Springs Drive station	Salvation Army, Wisconsin Realtors Association
Sun Prairie Park-and-Ride (bus charger and restroom facility only)	SSM Health Emergency Center
Metro Satellite Maintenance Facility (bus charger only)	Boys Scouts of America, Armed Forces Reserve Center

See Appendix J, Social Impacts and Community Disruption Technical Report, for maps and further detail on community facilities. Project staff found visual impacts in the corridor (see Section 9), but these are not expected to adversely affect community facilities. Project staff found that there would be no noise impacts to community facilities in the corridor (see Section 10).

Minimal permanent right-of-way and temporary easement impacts along the current right-of-way would be required at six community facilities (James Madison Memorial High School, Madison East High School, Madison Area Technical College - Truax Library, Madison Area Technical College, Garner Park, and Nautilus Point Park). The easements affecting the high schools and Madison Area Technical College would all be partial acquisitions along the edge of the affected parcel and are not expected to adversely affect these community facilities. Acquisitions affecting Garner Park and Nautilus Point Park and potential impacts are described in detail in Section 16.

There are approximately 31 community facilities within 200 feet of the corridor with primary access along Junction Road, Mineral Point Road, Whitney Way, Sheboygan Avenue, Segoe Road, University Avenue, Campus Drive, Johnson Street, State Street, Capitol Square, East Washington Avenue, Wright Street, Anderson Street, and Mendota Street. These facilities may experience construction impacts for up to one construction season, which lasts for six to eight months.

Although temporary in nature, construction phase impacts may affect community facilities and neighborhood cohesion. Detours may increase traffic through residential neighborhoods or change access to community facilities, and parking closures may change access to these facilities as well. Similarly, sidewalk closures and detours may affect pedestrian traffic patterns. Construction impacts such as increased levels of noise and dust may temporarily affect neighborhood character, primarily in areas that are relatively quiet. The presence of large construction equipment may be perceived as visually disruptive, resulting in temporary effects to community character, particularly in residential settings.

Consideration of visual, noise, right-of-way, and construction impacts determined that the Project would not have impacts to community facilities beyond 200 feet of the corridor based on their distance from the proposed alignment. Ultimately, the Project would improve access to community facilities and destinations throughout the corridor by creating a reliable, fast, and frequent transit connection.

In addition, the project would reconstruct the existing sidewalk along Mineral Point Road as a shared-use path: an improvement that would help foster an all ages and all abilities bike network in the city. These bike connections would improve multimodal access to community facilities along Mineral Point Road.

Local service along the East-West BRT route would be reduced when the project begins operating. Residents would have to walk farther to access transit service because BRT would make fewer stops than local service did and because the East-West BRT route is more direct than local routes, reducing the geographic coverage of transit service. However, people in these neighborhoods would be able to access more destinations in less time via transit because the service is faster, more frequent, and more reliable; thus, access to community facilities would not be impacted by implementation of the project.

The City of Madison does not anticipate adverse impacts to community facilities along the corridor, therefore, does not propose additional avoidance, minimization, or mitigation measures for the corridor.

15. Environmental Justice

Identify the concentrations of minority and low-income populations in the area. Following FTA guidelines on environmental justice (FTA Circular 4703.1), define "minority" and "low-income" populations, and describe whether

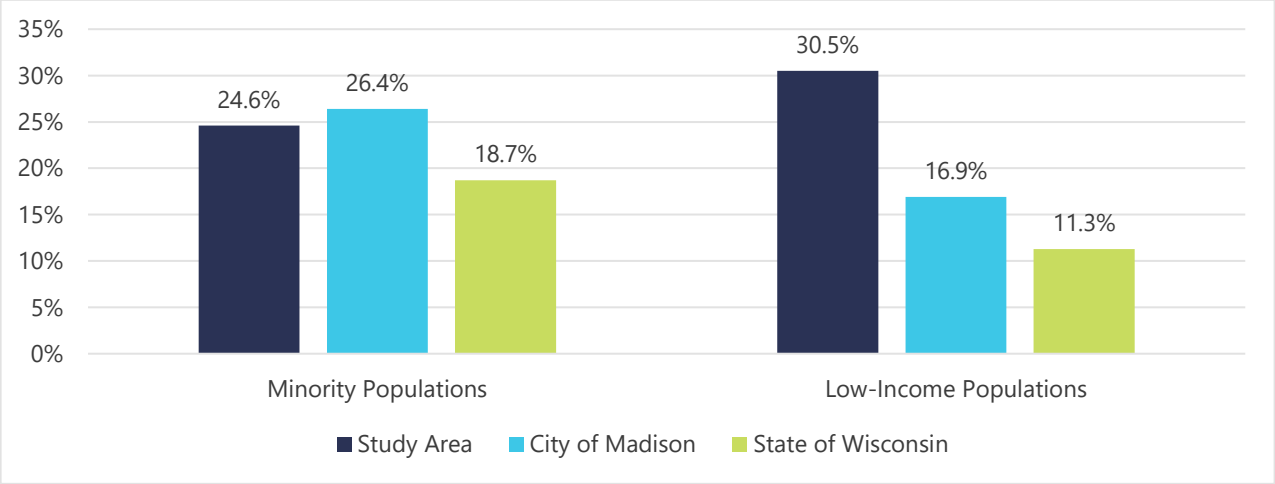
or not the project would result in disproportionately high and adverse impacts on minority or low-income populations.

Executive Order 12898: *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (1994)[38] serves as the basis for the implementation of environmental justice strategies in all federal agencies within the executive branch. Each agency is required to identify and address disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations and include environmental justice analysis in the National Environmental Policy Act process.

The study area for this environmental justice analysis includes the area within one-half mile of the proposed project route. Of the approximately 97,700 individuals living within the study area, 24.6 percent are members of a minority group. Minority populations are identified in census block groups based on the percentage of the population that self-identifies as a racial or ethnic minority (American Indian and Alaska Native, Asian, Black or African American, Native Hawaiian and other Pacific Islander, and/or Hispanic or Latino).[39] This is a slightly lower proportion than the City of Madison as a whole, but higher than the State of Wisconsin (**Error! Reference source not found.**).

Of the population for whom poverty status is determined (and excluding group quarters, such as dorms), 30.5 percent of individuals within the study area are considered low-income. A low-income person is one whose median household income is at or below the Department of Health and Human Services federal poverty level. This is a significantly higher proportion than both the City of Madison and the State of Wisconsin (**Error! Reference source not found.**). See Appendix K for maps of environmental justice populations in the study area.

Figure 11: Environmental Justice Populations in the Study Area, City, and State



Public engagement efforts for the East-West BRT Project have included traditional strategies, such as open houses and surveys, as well as targeted methods including pop-up meetings and focus groups. Project staff held eight pop-up meetings at destinations frequented by minority and low-income residents including Mt. Zion Baptist Church, a predominantly African American faith community; El Mercadito de Centro, a Latino community market; and Warner Park Community Recreation Center, a community facility located in a neighborhood with

38 Executive Order 12898. Available at https://www.archives.gov/files/federal-register/executive-orders/pdf/12898.pdf. Accessed 23 November 2021.

39 See FTA Circular 4703.1 (page 6) for additional information about the definition of minority populations: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_EJ_Circular_7.14-12_FINAL.pdf. Accessed 17 November 2021.

high proportions of minority and low-income residents. Participants in these events were largely supportive of the project and generally preferred the on-square and Mineral Point route options, which were ultimately selected for the preferred alternative. Some participants expressed concerns about cleanliness and safety on buses and at stations, which are addressed through station design features and the Operations and Maintenance Plan. Others noted support for shorter travel times as well as longer service hours and greater frequency on weekends.

In addition to these BRT-specific engagement efforts, the City has held or attended 21 meetings and events focused on the Transit Network Redesign and another 17 meetings about both the East-West BRT Project and the Transit Network Redesign. The Transit Network Redesign is intended to design a route system that will better meet the needs of Madison area residents and businesses by increasing transit access and frequency, decreasing travel time, and improving the transit rider experience. These meetings included a pop-up at the Catholic Multicultural Center Food Pantry, a pop-up at a Juneteenth event, and "intercept" interviews with transit riders at major transfer points. Feedback provided for both the East-West BRT Project and the TNR has been mostly positive, with strong support for more frequent service, routes that are easy to understand, fewer transfers, and transfers that are more convenient when they are needed. There are some concerns about lack of local service outside the BRT service area; these are being addressed through the TNR. More detail about engagement efforts is provided in Appendix K.

15.1.1. Analysis of Impacts to Environmental Justice Populations

Of the impact areas considered in the environmental document, three were identified with potential negative impacts requiring study in the environmental justice analysis:

- Acquisitions and Relocations
- Use of Park and Recreation Areas
- Construction Impacts

Acquisitions and Relocations

Per Section 12. Acquisitions and Relocations, the project would result in temporary easements affecting up to 123 parcels, and permanent acquisitions would impact 53 parcels. No displacements of housing units or businesses are expected from potential acquisitions and/or temporary easements on private property. Most of the acquisitions and easements would be minor, partial parcel impacts adjacent to public right-of-way and largely in commercial areas. Nearly all of these acquisitions and easements would be near proposed BRT stations and distributed throughout the study area. These partial acquisitions and easements would not impact access to or primary use of the affected parcels.

During the construction phase, up to two temporary full parcel easements would affect properties with public transit- and parking-related uses: 1 S Butler St. in Madison (existing City-owned parking lot) and 2751 O'Keeffe Ave. in Sun Prairie (the existing Sun Prairie Park-and-Ride). Neither property has a residential population within 500 feet of the impacted properties; rather, both properties are surrounded by commercial and other non-residential land uses. For the two full parcels that would have temporary easements, construction activities would not impact access to or primary use of the property nor would minority or low-income populations or businesses experience disproportionately high or adverse impacts.

One public parcel would be allocated and designated for use as a public park-and-ride at Junction Road station at the western terminus of the route. The parcel is currently undeveloped open/green space, has no structures or programmed use, and is already owned by the City of Madison. The parcel is surrounded by agricultural and commercial land uses today and is planned for employment and commercial future land uses; there are currently no residential uses within 1,000 feet of the parcel. The future use of the parcel as a park-and-ride would not pose negative impacts to low-income or minority residents or business owners.

Use of Park and Recreation Areas

As described in Section 16. Use of Park and Recreation Areas, portions of nine park and recreation areas are within the project limits. The project is anticipated to result in permanent incorporation (anticipated *de minimis* impact) or temporary easement (anticipated temporary occupancy) of three public park and recreation resources. These resources are located near the proposed Rosa Road, Island Drive, and Junction Road stations, impacting Garner Park, Nautilus Point Park, and Ice Age Junction Path, respectively.

The project would result in impacts to Garner Park, located at 333 S. Rosa Rd., just north of Mineral Point Road near the proposed Rosa Road station. Project impacts to Garner Park would occur along the southern edge of the park property, where the existing sidewalk would be reconstructed into a shared-use path. The project would permanently incorporate (through acquisition or easement) a 0.27-acre strip of land along the southern edge of the 41.83-acre community park. An additional 0.31-acre temporary easement would be required for construction of the shared-use path. In consultation with City of Madison Parks Division staff, project staff designed the shared-use path to minimize and mitigate impacts to Garner Park. Access to Garner Park would be maintained for the duration of construction via multiple existing points of entry along Rosa Road and Hill Drive. Use of the property by the project would not adversely affect the features, attributes, or activities of the park. Rather, City of Madison Parks Division staff have suggested that the source of impacts to Garner Park – reconstruction and widening of the existing sidewalk for shared-use – would enhance the recreational access to the park.

Nautilus Point Park, the second park and recreation resource potentially adversely impacted by the project, is a small, 4.83-acre park located at 321 Nautilus Dr., just north of Mineral Point Road near the proposed Island Drive station. Aside from open space and stormwater management, the only activity or facility at Nautilus Point Park is a small playground. Construction of the project would require an 0.11-acre temporary easement along the southern edge of Nautilus Point Park, where the existing sidewalk would be reconstructed and widened into a shared-use path; this is the same existing sidewalk that currently runs through Garner Park. Project staff specifically designed the widened sidewalk to minimize impacts to Nautilus Point Park. Potential adverse impacts would not be meaningfully felt by park users or nearby residents. Access to the Nautilus Point Park playground via Nautilus Drive, the sole access point to the playground, would be maintained during construction.

Lastly, the project would require a temporary easement for construction along up to 200 linear feet of the Ice Age Junction Path, a seven-mile shared-use path that runs parallel to the Junction Road/County Road M corridor. The impacted area is adjacent to the proposed Junction Road Terminal and Park-and-Ride. Here, a small segment of the existing shared-use path would be temporarily impacted to allow the project to construct a connection from the Ice Age Junction Path to the adjacent Junction Road Terminal Park-and Ride. This connection would provide a new multimodal connection benefitting both path and transit users. Construction may require temporary traffic control measures on a small portion of Ice Age Junction Path, though access to the path would remain open during construction. No permanent adverse physical impacts are anticipated, nor is there interference with the protected activities, features, or attributes of the property on either a temporary or permanent basis.

There are no residents within approximately 1,000 feet of the potentially affected segment of the Ice Age Junction Path. Thus, no localized impacts to surrounding residents are anticipated. If any adverse impacts occur, they would be experienced by the broader groups of Ice Age Junction Path users; however, because trail access would be maintained throughout construction and operation of the project, no adverse impacts to trail users are anticipated.

Construction impacts, described in Section 22, would be distributed relatively evenly along the project route and include temporary impacts in both minority and low-income areas as well as non-minority and non-low-income areas. As noted above, nearly all of the project-related acquisitions and easements required for operations and construction of the project are near proposed BRT stations and distributed throughout the study area.

15.1.2. Summary of Findings

After consideration of the distribution of adverse impacts, distribution of benefits, and mitigation measures, none of the project activities are expected to have a disproportionately high and adverse impact on minority or low-income populations. This was determined given that:

- any adverse impacts occurring during the operating or construction phases of the project would not be predominantly borne by minority populations or low-income populations; and
- there is no evidence that the limited adverse impacts would be suffered by minority populations or low-income populations appreciably more than the adverse effect that will be suffered by the non-minority populations or low-income populations.

Therefore, there are no environmental justice impacts anticipated and no environmental justice-specific mitigation measures required.

Furthermore, the project would benefit minority and low-income populations by improving the speed, reliability, and frequency of bus service throughout the study area and by improving the quality of transit station amenities. The proposed project would provide better access to employment, healthcare, shopping, and parks, as well as new connections to the broader regional transit network. As discussed in Section 14, existing local service along the East-West BRT route would be reduced when the project is implemented. Some residents throughout the project area would have to walk farther to access BRT service; however, they would be able to access more destinations in less time via transit because the service is faster, more frequent, and more reliable. These changes would occur throughout the project area.

16. Use of Public Parkland and Recreation Areas

Indicate parks, recreational areas, wildlife refuges, and/or trails on a project location map (Section 4(f) resources). Describe how the activities and purposes of these resources will be affected by the project. Based on the definitions of use outlined in 23 CFR § 774, determine if the project will result in an actual (direct), temporary, or constructive (proximity impacts) use of the Section 4(f) resource. Locate Section 4(f) properties on project map. Refer to the Section 4(f) overview at FTA's website.

Section 4(f) of the U.S. Department of Transportation Act of 1966 is a federal law that protects publicly owned parks, recreation areas, wildlife and/or waterfowl refuges, and publicly or privately owned significant historic sites. Section 4(f) requirements apply to all transportation projects that require funding or other approvals by the U.S. Department of Transportation, including FTA. This law, commonly known as Section 4(f), is now codified in 23 USC § 138[40] and 49 USC § 303[41] and is implemented by FTA through the regulation in 23 CFR Part 774[42]. Additional guidance on the implementation of Section 4(f) is provided in the Federal Highway Administration's *Section 4(f) Policy Paper*.[43] FTA has formally adopted this guidance, and the following was conducted consistent with this guidance.

Section 4(f) requires consideration of:

- Parks and recreational areas of national, state, or local significance that are both publicly owned and open to the public.

40 23 U.S.C. § 138 (2011). Available at https://www.govinfo.gov/app/details/USCODE-2011-title23/USCODE-2011-title23-chap1-sec138. Accessed 19 November 2021.

41 49 U.S.C. § 303 (2009). Available at https://www.govinfo.gov/app/details/USCODE-2009-title49/USCODE-2009-title49-subtitleI-chap3-subchapI-sec303. Accessed 19 November 2021.

42 23 C.F.R. Part 774. Available at https://www.ecfr.gov/current/title-23/chapter-I/subchapter-H/part-774. Accessed 19 November 2021.

43 Federal Highway Administration, Section 4(f) Policy Paper. Available at https://www.environment.fhwa.dot.gov/legislation/section4f/4fpolicy.aspx. Accessed 19 November 2021.

- Publicly owned wildlife and waterfowl refuges of national, state, or local significance that are open to the public to the extent that public access does not interfere with the primary purpose of the refuge.
- Historic sites of national, state, or local significance in public or private ownership, regardless of whether they are open to the public.

The study area for parks, recreational areas, and wildlife and waterfowl refuges includes those properties within, or directly adjacent to, the project limits of disturbance, as delineated on the 30 percent engineering plan set for the East-West BRT Project, included in Appendix A. Historic sites are addressed separately in Appendix E.

For Section 4(f) to apply to parks, recreation areas, and wildlife and waterfowl refuges, they must meet all of the following criteria:

- Publicly owned
- Open to the public
- Designated as a park, recreation area, or refuge
- Considered a significant property[44]

Figure 12 displays existing parks, recreation areas, and off-street shared-use paths relative to the project. There are no wildlife or waterfowl refuges located within the study area. Parks, recreation areas, and off-street paths/trails within the study area were reviewed, and nine were identified that met the above criteria; these are listed in Table 14.[45]

44 Federal Transit Administration Section 4(f) Evaluations Standard Operating Procedure outlines the requirements for Section 4(f) protection. Available at https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/SOP%2018.pdf. Accessed 4 May 2022.

45 Path/trail facilities within transportation right-of-way and those that are part of the local transportation system and which function primarily for transportation were not considered to be designated recreation areas in accordance with 23 CFR § 774.13(f) (https://www.ecfr.gov/current/title-23/chapter-I/subchapter-H/part-774) and the Federal Highway Administration's Section 4(f) Policy Paper (https://www.environment.fhwa.dot.gov/legislation/section4f/4fpolicy.aspx). Many of the off-street shared-used paths shown in Figure 12 were not considered to be designated recreation areas.

Figure 12: Existing Parks, Recreation Areas, and Off-Street Shared-Use Paths

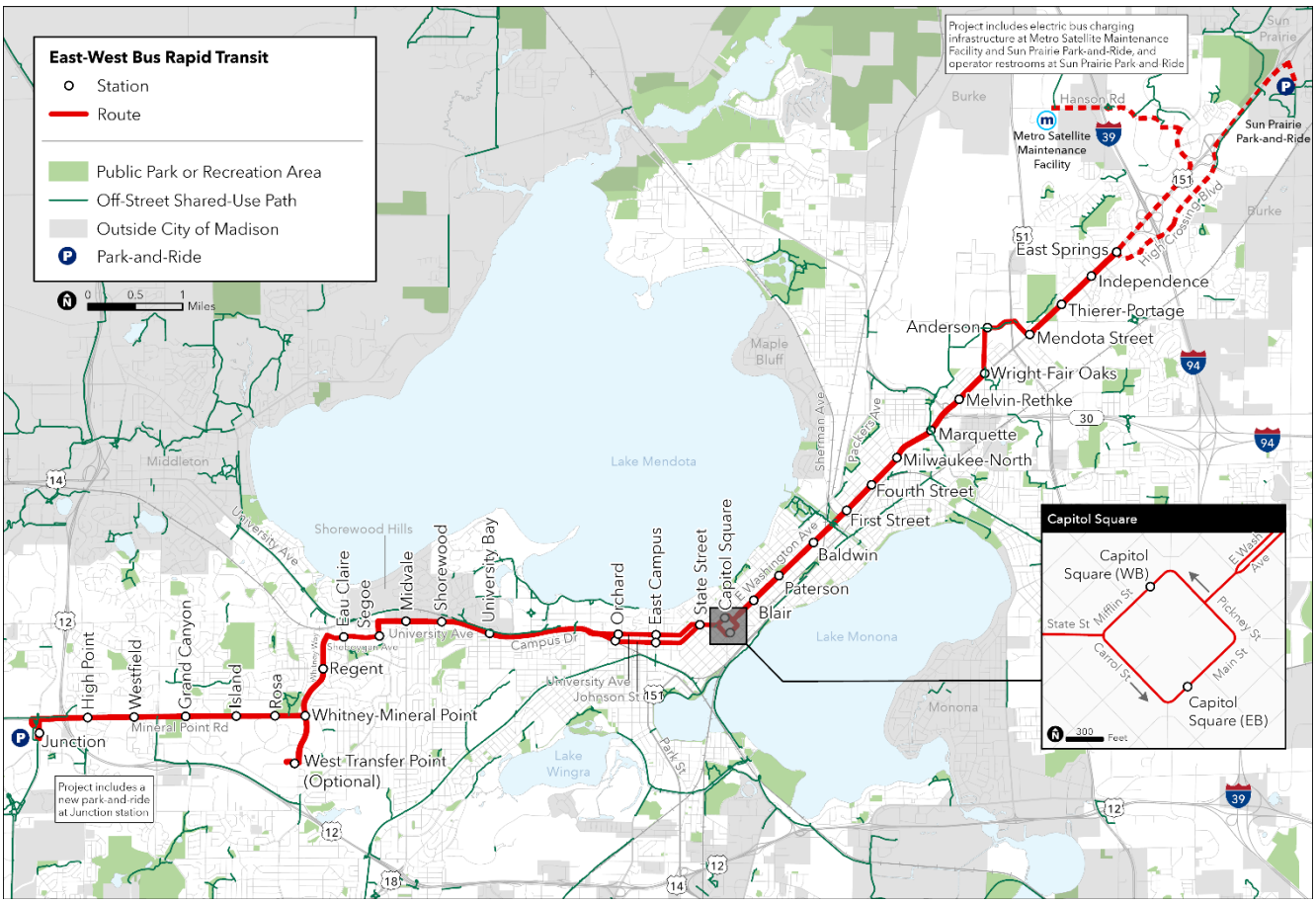


Table 14: Section 4(f) Parks and Recreation Areas in the Study Area
Listed from west to east

Name	Location	Type	Activities and Facilities	Official(s) with Jurisdiction
Ice Age Junction Path	Parallel to the Junction Road/ County Road M corridor, near the proposed Junction Road station	Path	Paved, off-street shared-use path	City of Madison Engineering Division; UW
Mineral Point Greenway/ West Towne Soccer Fields	6705 Mineral Point Rd., south of Mineral Point Road near the proposed Grand Canyon Drive station	Greenway	Stormwater management, soccer fields	City of Madison Engineering Division
Nautilus Point Park	321 Nautilus Dr., just north of Mineral Point Road near the proposed Island Drive station	Mini park	Playground	City of Madison Parks Division

Name	Location	Type	Activities and Facilities	Official(s) with Jurisdiction
Garner Park and Path	333 S. Rosa Rd., just north of Mineral Point Road near the proposed Rosa Road station	Community park with paths	Basketball court, pickleball court, lacrosse field, soccer field, open field, playground, sledding, snowshoeing, shelter, fireplace, scenic overlook, restrooms; Paved, off-street shared-use path (sidewalk)	City of Madison Parks Division
Breese Stevens Field	917 E. Mifflin St., near the proposed Paterson Street station	Sports complex	Soccer field, lighting, bleachers, restrooms	City of Madison Parks Division
Yahara River Parkway and Path	Near E. Washington Ave. and Sparkle Ct., between the proposed Baldwin Street and First Street stations	Open space with paths	Fishing; paved, off-street shared-use path within and connecting to the Yahara River Parkway	City of Madison Parks Division
Burr Jones Park	1820 E. Washington Ave., near the proposed First Street station	Neighborhood park	Basketball courts, open field, fishing	City of Madison Parks Division
Starkweather Creek Bike Path	Bridge over E. Washington Ave. at Marquette Street, near the proposed Marquette Street station	Path	Paved, off-street shared-use path	City of Madison Engineering Division
Reindahl (Amund) Park	1818 Portage Rd., near the Thierer Road-Portage Road station	Community park	Basketball court, tennis court, cricket field, soccer field, playground, splash park, community garden, shelter, scenic overlook, restrooms	City of Madison Parks Division

16.1. Environmental Consequences

The following sections include descriptions of how the activities and purposes of the resources in Table 14 would be affected by the project and whether there would be a use under Section 4(f). Section 4(f) parks and recreation areas are grouped by official with jurisdiction.

16.1.1. Official with Jurisdiction: City of Madison Parks Division

Garner Park and Path

Garner Park is a 41.83-acre community park bound on the south by Mineral Point Road. Owned by the City of Madison Parks Division, the park features several activities and facilities (Table 14). Approximately 0.87 miles of

paved, shared-use paths are located within the park boundaries. Garner Park and its paths are accessible from South Hill Drive, Rosa Road, and Mineral Point Road.

The project would reconstruct and widen the existing sidewalk on the north side of Mineral Point Road that runs through the park for shared-use. This would require about 0.27-acre direct use (permanent incorporation or permanent easement) from the park (Figure 13Project staff met with City of Madison Parks Division staff on October 8, 2021 to review proposed impacts to the Garner Park property and receive input on the preliminary assessment that the project would have a *de minimis* impact on the property. In the meeting, Parks Division staff concurred with the preliminary assessment of *de minimis* impact, while also commenting that reconstruction and widening of the existing sidewalk in this location for shared-use would enhance the recreational access to the facility.

The public was provided opportunity to review and comment on the preliminary assessment of *de minimis* impact on Garner Park at four public meetings occurring in September and October 2021. Additionally, comments were sought during an official public comment period spanning September 27, 2021 through November 14, 2021. One public comment was received relevant to potential project impacts on Garner Park and other Section 4(f) resources; the comment was supportive of the project.

After considering comments received from the public, the City of Madison Parks Division concurred in writing that the project would not adversely affect the activities, features, or attributes that make Garner Park eligible for Section 4(f) protection. This letter, along with public comments received, are included in Appendix L, Public Parkland and Recreation Areas Technical Report.

Figure 13). The use would include about 10 feet of the existing sidewalk/path that connects Garner Park to Mineral Point Road. Aside from the existing sidewalk/path, the area is sloped, passive green space. An additional 0.31-acre temporary easement would also be needed for construction-related activities. Access to Garner Park and its path network would be maintained for the duration of construction via multiple existing points of entry along Rosa Road and Hill Drive.

Reconstruction of the existing sidewalk along Mineral Point Road as a shared-use path is included as part of the City of Madison's Odana Area Plan.[46] A supplement to the City of Madison's comprehensive plan, the Odana Area Plan was approved by the Common Council on September 21, 2021.

Anticipated Determination: Construction of the project would result in a direct use of Garner Park, but a *de minimis* impact is anticipated.

Project staff met with City of Madison Parks Division staff on October 8, 2021 to review proposed impacts to the Garner Park property and receive input on the preliminary assessment that the project would have a *de minimis* impact on the property. In the meeting, Parks Division staff concurred with the preliminary assessment of *de minimis* impact, while also commenting that reconstruction and widening of the existing sidewalk in this location for shared-use would enhance the recreational access to the facility.

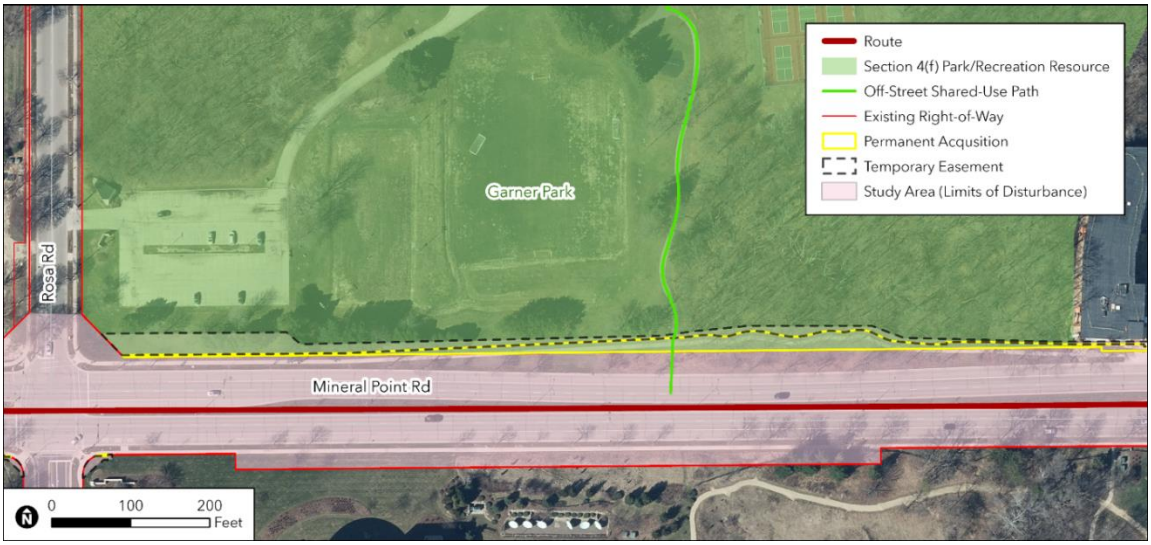
The public was provided opportunity to review and comment on the preliminary assessment of *de minimis* impact on Garner Park at four public meetings occurring in September and October 2021. Additionally, comments were sought during an official public comment period spanning September 27, 2021 through November 14, 2021. One public comment was received relevant to potential project impacts on Garner Park and other Section 4(f) resources; the comment was supportive of the project.

After considering comments received from the public, the City of Madison Parks Division concurred in writing that the project would not adversely affect the activities, features, or attributes that make Garner Park eligible for

46 City of Madison, Odana Area Plan. Available at https://www.cityofmadison.com/dpced/planning/odana-area-plan/3296/. Accessed 19 November 2021.

Section 4(f) protection. This letter, along with public comments received, are included in Appendix L, Public Parkland and Recreation Areas Technical Report.

Figure 13: Impacts to Garner Park and Path



Nautilus Point Park

Located on the northeast corner of Nautilus Drive and Mineral Point Road, (321 Nautilus Drive) Nautilus Point Park is a mini park owned by the City of Madison Parks Division. The park features a small playground accessible via Nautilus Drive about 200 feet north of Mineral Point Road, though the majority of the 4.83-acre parkland property is passive open space, primarily for stormwater management.

The project would reconstruct and widen the existing sidewalk on the north side of Mineral Point Road for shared-use. Construction-related activities would require about an 0.11-acre temporary easement on the property. (Figure 14). The property would not be permanently incorporated into the project. There are no anticipated permanent adverse physical impacts, nor is there interference with the protected activities, features, or attributes of the property on either a temporary or permanent basis. Access to the playground via Nautilus Drive would remain during construction.

Reconstruction and widening of the existing sidewalk along Mineral Point Road for shared-use is recommended as part of the City of Madison's Odana Area Plan.[47]

47 Ibid.

Figure 14: Impacts to Nautilus Point Park

Anticipated Determination: Construction of the project would result in a temporary occupancy; no permanent Section 4(f) use is anticipated for Nautilus Point Park.

Project staff met with City of Madison Parks Division staff on October 8, 2021 to review proposed impacts to Nautilus Point Park and receive input on the preliminary assessment that construction of the project would result in a temporary occupancy with no Section 4(f) use. In the meeting, Parks Division staff concurred with the preliminary assessment, while also commenting that reconstruction and widening of the existing sidewalk in this location for shared-use would enhance the recreational access to the facility. Included in Appendix L, the City of Madison Parks Division concurred in writing that the impacts to Nautilus Point Park would meet the conditions under which a temporary occupancy does not constitute a Section 4(f) use. During public involvement, one public comment was received relevant to potential project impacts on Section 4(f) resources. The comment received was supportive of the project and is included in Appendix L.

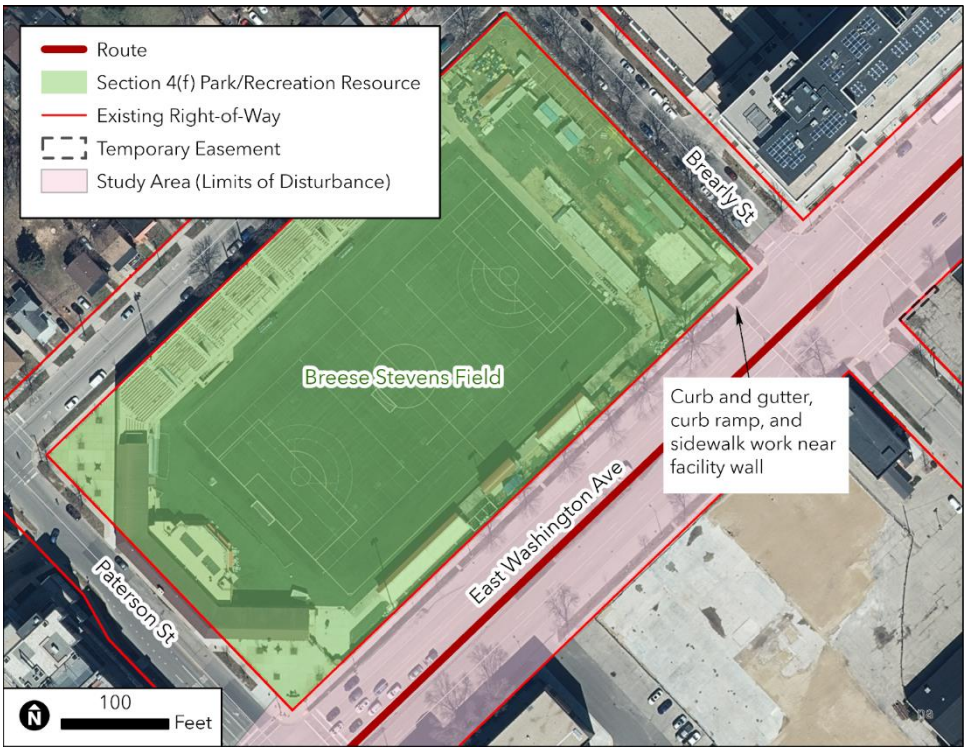
Breese Stevens Field

Breese Stevens Field is a sports complex owned by the City of Madison Parks Division and managed by a private company. The facility's primary function is as a soccer field, featuring lighting, bleachers, and other amenities. Breese Stevens Field is the home venue for Forward Madison FC, an American professional soccer team, and the Madison Radicals, a professional ultimate frisbee team. The stadium has a capacity of 5,000 and hosts numerous high school and recreational events, concerts, and community events. Constructed in 1926, Breese Stevens Field was designated a City of Madison Landmark on October 16, 1995 and was listed on the National Register of Historic Places in September 2015.

As part of the project, limited curb and gutter, curb ramp, and sidewalk replacements are planned on the northwest corner of East Washington Avenue and Brearly Street, adjacent to Breese Stevens Field (Figure 15).

This work would take place within existing transportation right-of-way and would not infringe on the existing perimeter stone wall surrounding Breese Stevens Field. Construction would not affect access to or use of Breese Stevens Field. Operation of the project would not affect Breese Stevens Field, rather, it would improve access to it.

Figure 15: Breese Stevens Field Relative to the Study Area



Anticipated Determination: There would be no Section 4(f) use of the Breese Stevens Field.

City of Madison Parks Division staff agreed with this preliminary assessment during the agency coordination meeting that took place on October 8, 2021.

Yahara River Parkway and Paths

The Yahara River Parkway is open space parallel the Yahara River, owned and overseen by the City of Madison Parks Division. Paved, shared-use paths run through and make connections to the Yahara River Parkway. Designed by noted landscape architect O. C. Simonds and constructed between 1903 and 1906, the Yahara River Parkway is an example of the Prairie School of landscape architecture. The Yahara River Parkway was designated a City of Madison Landmark on July 10, 1995 and is listed on the National Register of Historic Places.

The East-West BRT Project would operate in center-running bus-only lanes on East Washington Avenue over the Yahara River Parkway and shared-use paths (Figure 16). The project would not use any part of the Yahara River Parkway or its shared-use paths for construction or other temporary activities. Construction of the project would not affect access to or uses of the facilities. Operation of the project would not affect the Yahara River Parkway and paths, rather, it would improve access to them.

Anticipated Determination: There would be no Section 4(f) use of the Yahara Parkway and paths.

City of Madison Parks Division staff agreed with this preliminary assessment during the agency coordination meeting that took place on October 8, 2021.

Burr Jones Park

Burr Jones Park is a neighborhood park owned and overseen by the City of Madison Parks Division. The park's western border is the Yahara River, and its southern border is East Washington Avenue (Figure 16).

The East-West BRT Project will operate in center-running bus-only lanes on East Washington Avenue, adjacent Burr Jones Park. The project would not use any part of the park for construction or other temporary activities. Construction of the project would not affect access to or uses of the park. Operation of the project would not affect Burr Jones Park, rather, it would improve access to it.

Figure 16: Yahara Parkway, Yahara River Bike Path, and Burr Jones Park Relative to the Study Area

Anticipated Determination: There would be no Section 4(f) use of Burr Jones Park.

City of Madison Parks Division staff agreed with this preliminary assessment during the agency coordination meeting that took place on October 8, 2021.

Reindahl (Amund) Park

Reindahl Park is a 90-acre community park owned and overseen by the City of Madison Parks Division, featuring athletic fields, tennis courts, a splash park, and a community garden. The park is bounded on the east by Portage Road and Parkside Drive, and intersected by East Washington Avenue, resulting in parkland on either side of East Washington Avenue (Figure 17).

The Madison East-West BRT Project would operate along East Washington Avenue, in mixed traffic lanes west of Portage Road/Thierer Road and on side running bus-only lanes east of Portage Road/Thierer Road. Buses would stop at the Thierer Road-Portage Road station platforms; the westbound station platform, the closer of the two platforms to Reindahl Park, would be approximately 200 feet away from the park's eastern boundary. Construction and operation would not affect access to or use of Reindahl Park. The project would not use any part of the park for construction or other temporary activities. Construction of the project would not affect access to or uses of the park. Operation of the project would not affect Reindahl Park, rather, it would improve access to it.

Anticipated Determination: There would be no Section 4(f) use of Reindahl (Amund) Park.

City of Madison Parks Division staff agreed with this preliminary assessment during the agency coordination meeting that took place on October 8, 2021.

Figure 17: Reindahl (Amund) Park Relative to the Study Area

16.1.2. Official with Jurisdiction: City of Madison Engineering Division

Mineral Point Greenway/West Towne Soccer Fields

The Mineral Point Greenway is public land located south of Mineral Point Road between Gammon Place and Grand Canyon Drive (Figure 18). The land is used primarily for stormwater management, but also serves as soccer fields when dry. This area is sometimes referred to as the West Town Soccer Fields.

This location is not an officially designated park. Rather, it is recognized as a greenway by the City of Madison. The City of Madison defines greenways as public land managed and administered by the City of Madison Engineering Division for detention ponds and drainage corridors.[48] Sometimes greenways are considered part of a park, but can also be completely separate from Madison Parks, as in the case of the Mineral Point Greenway. In this report, Mineral Point Greenway is being reviewed as a Section 4(f) resource given its recreation use and that it is open to the public.

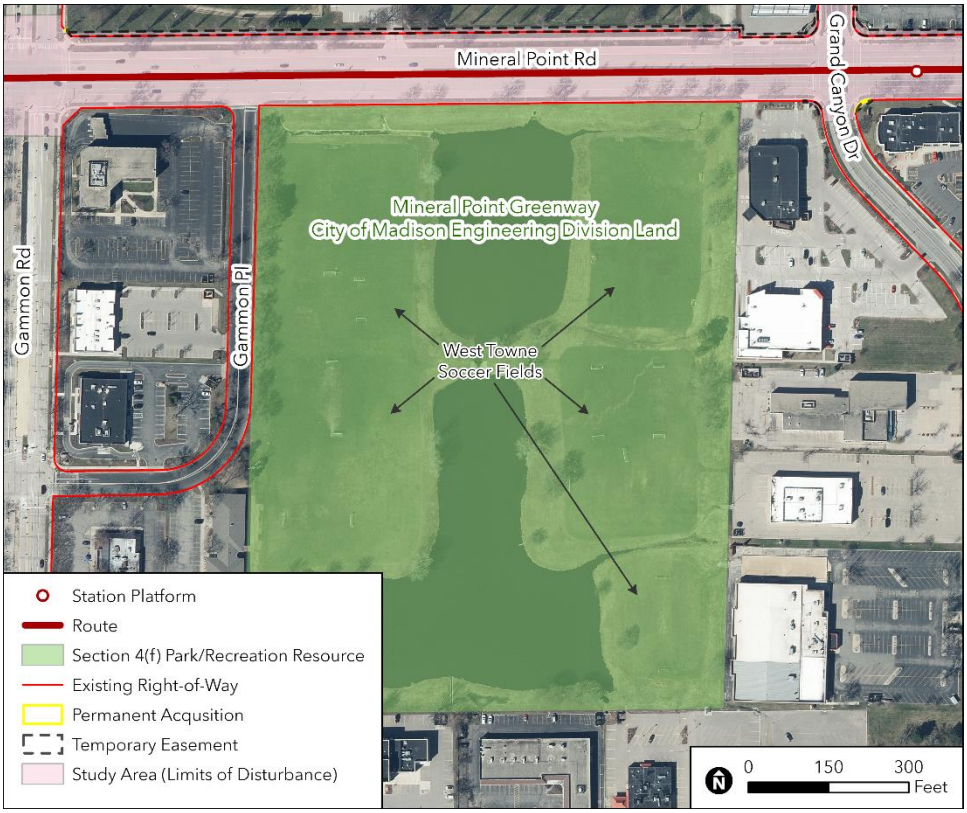
[48] City of Madison, 2018-2023 *Park and Open Space Plan*, Oct. 20, 2018, pages 57 and 61, https://www.cityofmadison.com/parks/documents/2018-2023%20POSP.pdf.

The project would operate near the Mineral Point Greenway in center-running bus-only lanes on Mineral Point Road, with buses serving the Grand Canyon Drive station just east of the intersection of the same name. The project would not use any part of the Mineral Point Greenway for construction or other temporary activities. Construction of the project would not impact access to or uses of the property, including the soccer fields. Operation of the project would not impact the Mineral Point Greenway, rather, it would improve access to it.

Anticipated Determination: There would be no Section 4(f) use of the Mineral Point Greenway.

City of Madison Engineering Division staff agreed with this preliminary assessment during the October 28, 2021 agency coordination meeting. City of Madison Parks Division staff also agreed with this assessment during their agency coordination meeting on October 8, 2021. While not representing the official with jurisdiction, Parks Division staff are more familiar with the recreational uses of the Mineral Point Greenway than their Engineering Division counterparts.

Figure 18: Mineral Point Greenway/West Towne Soccer Fields Relative to the Study Area



Starkweather Creek Bike Path

The Starkweather Creek Bike Path is a series of paved, off-street, shared-use path segments largely following Starkweather Creek. One segment of the path runs over East Washington Avenue on a bicycle-and-pedestrian-only bridge.

The Madison East-West BRT Project would operate in center-running bus-only lanes on East Washington Avenue underneath the Starkweather Creek Bike Path. The project will construct Marquette Street station and curb ramps just south of the bicycle-and-pedestrian-only bridge (Figure 19). The project would not use any part of the Starkweather Creek Bike Path for construction or other temporary activities. The path is accessible from the north and south sides of East Washington Avenue, and from nearby Darbo Drive and Hoard Street. Construction

of the project would not impact access to or uses of the path. Operation of the project would not impact the Starkweather Creek Bike Path, rather, it would improve access to it.

Anticipated Determination: There would be no Section 4(f) use of the Starkweather Creek Bike Path.

City of Madison Engineering Division staff agreed with this preliminary assessment during the October 28, 2021 agency coordination meeting.

Figure 19: Starkweather Creek Bike Path Relative to the Study Area

16.1.3. Officials with Jurisdiction: City of Madison Engineering Division and UW

Ice Age Junction Path

The Ice Age Junction Path is a paved shared-use (bicycle and pedestrian) path used for recreation and transportation. The path extends from the area just north of Mineral Point Road near the westbound on-ramp to Highway 12/14 in Madison south to the City of Verona. The Ice Age Junction Path connects to the separate Ice Age National Scenic Trail – a scenic hiking trail that winds across Wisconsin, including through Dane County. Jurisdiction over the Ice Age Junction Path differs depending on the location, with the Cities of Madison and Verona, and Dane County each having jurisdiction at various points along the path.

About 500 linear feet of the approximately seven-mile Ice Age Junction Path intersect the Madison East-West BRT Project study area. The City of Madison Engineering Division has jurisdiction over this segment of the Ice Age Junction Path. Further, a smaller section of the path that is within the project study area and would be impacted by the project is on land owned by UW; thus, UW is named here as a second official with jurisdiction.

Shown in Figure 20, the Ice Age Junction Path intersects the study area near the westbound on-ramp to Highway 12/14, north of Mineral Point Road. This portion of the path is within existing transportation right-of-way. Therefore, this portion of the path is subject to exemption to the requirement for Section 4(f) approval in

accordance with 23 CFR § 774.13(f)(3)[49] and the Federal Highway Administration's *Section 4(f) Policy Paper*.[50] Reconstruction of the existing sidewalk on the north side of Mineral Point Road as a shared-use path would extend to this point of the Ice Age Junction Path but would not incorporate land permanently or temporarily from the Ice Age Junction Path. Access to the Ice Age Junction Path would remain from the west and from the north and east via Tree Lane.

As the Ice Age Junction Path continues south toward the proposed Junction Road station (west terminal), it exits the transportation right-of-way and resumes on property owned by UW within the project study area, adjacent the planned park-and-ride (Figure 20). A temporary easement and temporary partial closure may be required on a section of the Ice Age Junction Path adjacent to the proposed park-and-ride at Junction Road station to construct a new connection from the path to the park-and-ride.

Shown in Figure 20, the 0.08-acre temporary easement overlapping approximately 200 linear feet of the Ice Age Junction Path encompasses the area where the new connection from the path to the park-and-ride could be constructed. The actual temporary easement and temporary closure would be limited to the small area selected for the new connection, which has not yet been finalized.

Construction of the proposed park-and-ride facility at Junction Road station may require temporary traffic control measures on a small portion of Ice Age Junction Path. The path would not be permanently incorporated into the project. There are no anticipated permanent adverse physical impacts, nor is there interference with the protected activities, features, or attributes of the property on either a temporary or permanent basis. Access to the path would remain open during construction.

Anticipated Determination: Construction of the project would result in a temporary occupancy; no permanent Section 4(f) use is anticipated for the Ice Age Junction Path.

Project staff met with City of Madison Engineering Division staff on October 28, 2021 to review proposed impacts to the Ice Age Junction Path and receive input on the preliminary assessment that construction of the project would result in a temporary occupancy with no Section 4(f) use. Engineering Division staff in the meeting concurred with the preliminary assessment. Engineering Division staff noted the importance of effective communication with path users during project construction, and City of Madison project staff committed to doing so. Included in Appendix L, the City of Madison Engineering Division concurred in writing that the impacts to the Ice Age Junction Path would meet the conditions under which a temporary occupancy does not constitute a Section 4(f) use.

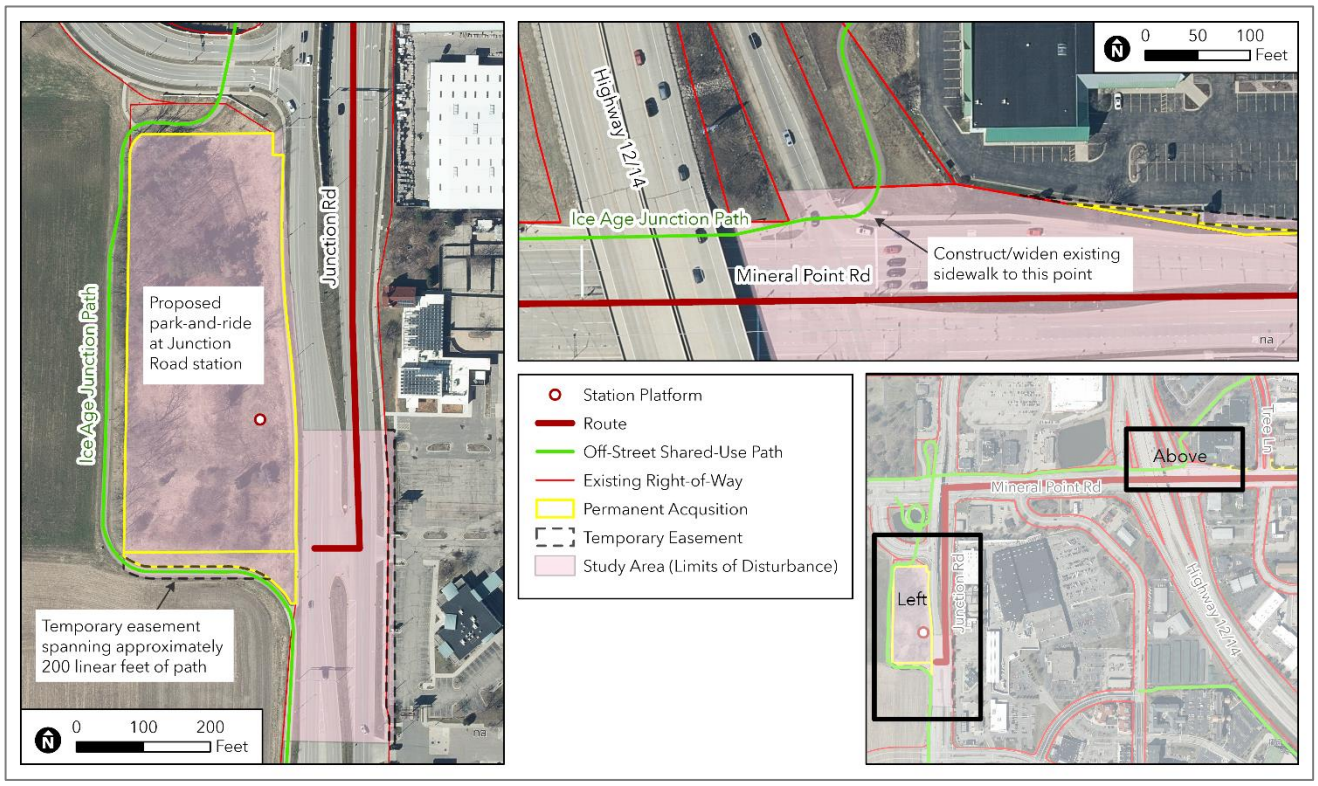
Additionally, project staff shared this information with UW staff, who concurred with the preliminary assessment that construction of the project would result in a temporary occupancy with no Section 4(f) use of the Ice Age Junction Path. A concurrence letter from UW is included in Appendix L.

One public comment was received relevant to potential project impacts on Section 4(f) resources during public meetings and the public comment period. The comment received was supportive of the project and is included in Appendix L.

49 Code of Federal Regulations Part 774. Available at https://www.ecfr.gov/current/title-23/chapter-I/subchapter-H/part-774. Accessed 19 November 2021.

50 FHWA Section 4(f) Policy Paper. Available at https://www.environment.fhwa.dot.gov/legislation/section4f/4fpolicy.aspx. Accessed 19 November 2021.

Figure 20: Ice Age Junction Path Relative to the Study Area



16.2. Summary of Findings

Nine publicly-owned parks and recreational resources were identified within the study area, and no publicly-owned wildlife and waterfowl refuges were identified within the study area. In conclusion, based on the considerations described in this technical report, agency coordination with the officials with jurisdiction, and outcomes of public involvement, it is anticipated that the proposed project:

- Would not adversely affect existing or planned public parklands within the Madison East-West BRT Project study area
- Would not adversely affect the features, attributes, or activities that qualify the properties for protection under Section 4(f), as defined by 23 CFR § 774[51]
- Would not result in a use greater than *de minimis* of Section 4(f) properties within the study area
- Would result in the following impacts to each of the parks and recreational resources:
    - Direct use (*de minimis)*
        - Garner Park and Path
    - Temporary occupancy with no use
        - Ice Age Junction Path
        - Nautilus Point Park
    - No use
        - Mineral Point Greenway/West Towne Soccer Fields
        - Breese Stevens Field

51 23 C.F.R. Part 774. Available at https://www.ecfr.gov/current/title-23/chapter-I/subchapter-H/part-774. Accessed 19 November 2021.

- Yahara Parkway and Path
- Burr Jones Field
- Starkweather Creek Bike Path
- Reindahl (Amund) Park

17. Impacts on Wetlands

Show potential wetlands and boundaries on a map. Integrate data from the National Wetlands Inventory. Describe the project's impact on on-site and adjacent wetlands. If the project impacts wetlands, provide documentation of consultations and permits from the U.S. Army Corps of Engineers, as well as, minimization and mitigation efforts. If applicable, provide documentation to demonstrate that wetlands are not present, or the proposed project will not impact any wetland areas.

Project staff identified wetlands within or adjacent to the Project area using the DNR Wisconsin Wetland Inventory (WWI) database[52] (updated December 13, 2019), U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) data,[53] and U.S. Geological Survey (USGS) National Hydrograph Dataset[54] (published December 1, 2020). Project staff reviewed the DNR's Surface Water Data Viewer[55] including the DNR wetland indicators map (updated May 5, 2021). The DNR wetland indicators map identifies locations of hydric soils mapped by the U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) and topography indicative of a wetland landscape based on USGS topographic data. Table 15 lists wetland resources identified within 500 feet from the proposed BRT route. Appendix M includes a technical report summarizing the results of the wetlands evaluation.

Table 15: Wetlands within 500 feet of the East-West BRT Project

WWI ID	Wetland Code	Wetland Class
13423692992	T3K	Forested, Broad-leaved deciduous
13423692994	E2K	Emergent/wet meadow, Narrow-leaved persistent
13423693955	W0H	Open Water
13423693994	W0Hx	Open Water, Excavated
13423694004	W0Hx	Open Water, Excavated

Project staff reviewed the preliminary disturbance limits to identify potential areas of encroachment within wetland resources. Based on the preliminary disturbance limits, it is not anticipated that the project would result in impacts to wetland resources, as there are no wetlands within the limits of disturbance. Therefore, no avoidance, minimization or mitigation measures were considered, and it is not anticipated that a US Army Corps of Engineers (USACE) Section 404 permit or DNR wetland permit would be required. This finding is subject to change as the final design is developed.

18. Floodplain Impacts

Determine if the project is within a 100-year floodplain. Review FEMA 100-year FIRMs on the FEMA website. Include a FIRM floodplain map, if available. Include all floodplain FIRM numbers that occur in the project area and the

52 Wisconsin Wetland Inventory Geodatabase. Available at https://www.arcgis.com/home/item.html?id=200c06fc04074ef7ae24c0b74737b187. Accessed 19 November 2021.

53 U.S. Fish and Wildlife Service National Wetlands Inventory. Available at https://www.fws.gov/wetlands/data/Mapper.html. Accessed 19 November 2021.

54 U.S. Geological Survey National Hydrograph Dataset. Available at https://apps.nationalmap.gov/downloader/#/. Accessed 19 November 2021.

55 Wisconsin Department of Natural Resources Surface Water Data Viewer. Available at https://dnrmaps.wi.gov/H5/?Viewer=SWDV. Accessed 19 November 2021.

effective or revision date for each FIRM. Include the FEMA FIRM numbers for the project area, even if the 100-year floodplain has not been delineated. If the proposed project is located within the 100-year floodplain describe what will be done to address possible flooding of the proposed project location and flooding induced by the project due to reduced capacity to retain storm water runoff. Provide documentation on how the project will be designed to restore floodplain capacity. If applicable, provide documentation to demonstrate that the project is not sited in a floodplain. If a determination cannot be made whether or not the project is within a 100-year floodplain, contact the county flood control district or the local floodplain manager for assistance.

Portions of the project intersect the 100-year floodplain boundary and regulatory floodway. The proposed BRT route along Washington Avenue intersects the 100-year floodplain (FEMA Zone AE) associated with the Yahara River and the 100-year floodplain (FEMA Zone AE) and floodway associated with the Starkweather Creek West Branch near the Marquette Street intersection.[56] Appendix M provides a technical report summarizing the results of the floodplain impacts evaluation.

Proposed improvements within the regulated 100-year floodplain associated with the Yahara River are limited to pavement markings and lane re-striping within the existing right-of-way. The project will not affect the existing Washington Avenue bridge over the Yahara River. The project would not add new impervious surface and no impacts to the Yahara River floodplain would result from the project.

The proposed BRT route would intersect the 100-year floodplain and floodway for the Starkweather Creek West Branch. The proposed Marquette Street station is located approximately 90 feet west of the 100-year floodplain and floodway associated with the Starkweather Creek West Branch. Curb improvements on the east side of the East Washington Avenue/ Marquette Street intersection would be minimal and not result in changes to the roadway elevation. The project would not result in fill within the regulated floodplain. Existing impervious surface would be replaced, but no new impervious surface would be added.

19. Impacts on Water Quality, Navigable Waterways, and Coastal Zones

If any of these resources are implicated, describe the project's potential impacts. Determine if National Pollutant Discharge Elimination System (NPDES) permits are applicable as a result of ground disturbance or point sources that will discharge pollutants into waters of the United States. Refer to BMPs at the US EPA website. How will stormwater be treated during and after construction? How will wastewater from bus washing facilities be treated? Determine if project area is in a sole-source aquifer, if not document in narrative (refer to the US EPA website).

The proposed project is not within a coastal zone and does not propose any work within a navigable waterway, and thus would not result in impacts to navigable waterways and coastal zones. Project staff reviewed the Environmental Protection Agency's (EPA) Map of Sole Source Aquifers.[57] No sole source aquifers are located within or in close proximity to the project. The project would not include a bus washing facility.

Pursuant to Ch. NR 216,[58] the DNR administers the Wisconsin Discharge System (WPDES) Storm Water Discharge Permit Program and the National Pollutant Discharge Elimination System (NPDES). Construction activities would disturb one or more acres of land area (including clearing, grading, and excavation); therefore, the city would be required to obtain a WPDES Construction Site Storm Water Discharge Permit. The permit application must be

56 FEMA National Flood Hazard Viewer. Available at https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd. Accessed 18 November 2021.

57 U.S. Environmental Protect Agency (EPA). Map of Sole Source Aquifer Locations. Available at https://www.epa.gov/dwssa/map-sole-source-aquifer-locations. Accessed 27 May 2021.

58 Wisconsin Administrative Code Chapter NR 216: Storm Water Discharge Permits. Available at https://docs.legis.wisconsin.gov/code/admin_code/nr/200/216. Accessed 18 November 2021.

submitted at least 14 working days prior to commencing any land disturbing construction activities and is valid for a maximum of three years. Chapter 37 of the City of Madison's ordinance establishes state stormwater design standards and requirements.[59] The Clean Water Act establishes national regulations for pollutant discharge and water quality.[60]

Project staff would design proposed stormwater best management practices (BMPs) to comply with DNR and city stormwater management requirements. In accordance with state and federal regulations, a storm water management plan and an erosion and sediment control plan would be submitted as part of the WPDES permit application.

Construction of the project would increase the total amount of impervious surface area by approximately 3.4 acres. Construction of the park-and-ride facility would require stormwater BMPs. The project proposes to construct an infiltration basin and wet pond adjacent to the proposed park-and-ride facility near the intersection of Mineral Point Road and Junction Road. Stormwater BMPs will be confirmed during final design of the project. Appendix M provides a technical report summarizing the water quality evaluation.

20. Impacts on Ecologically-Sensitive Areas and Endangered Species

Describe any natural areas (woodlands, prairies, wetlands, rivers, lakes, streams, designated wildlife or waterfowl refuges, and geological formations) on or near the proposed project area. If present, state the results of consultation with the state department of natural resources and, if appropriate, the US Fish and Wildlife Service on the impacts to critical habitats and on threatened and endangered fauna and flora that may be affected. Refer to the US Fish and Wildlife Service website.

The project is largely located within an urban roadway corridor within the existing right-of-way. Potential habitat for endangered species is present at the proposed park-and-ride facility site in the southwest quadrant of the Mineral Point Road/Junction Road intersection. The site consisted of undeveloped land. Woody vegetation removal will be required to construct the proposed park-and-ride facility and stormwater BMP improvements. Appendix N includes a summary of potential impacts to ecologically-sensitive areas and endangered species, and correspondence with the DNR and USFWS.

20.1. State-Protected Species

The DNR completed an Endangered Resources Review of the project and identified required and recommended measures to avoid impacts to endangered resources (found in Appendix N Attachment A). Table 16 identifies endangered species that may be impacted by the project.

Table 16: State-Projected Species that May be Impacted by the Project

Common Name	Scientific Name	Status
Rusty Patched Bumble Bee	*Bombus affinis*	Federal endangered, State Special Concern
Yellow Bumble Bee	*Bombus fervidus*	State Special Concern
Lake Sturgeon	*Acipenser fulvescens*	State Special Concern

The DNR determined that the project may have an impact on the Rusty Patched Bumble Bee and that the impact is likely to be adverse. As described in Section 20.2, USFWS found that the project may affect, but is not likely to

59 City of Madison Code of Ordinances, Chapter 37. Available at https://library.municode.com/wi/madison/codes/code_of_ordinances?nodeId=COORMAWIVOIVCH32--45_CH37THPUSTSYINERCO. Accessed 18 November 2021.

60 33 U.S.C. §1251. Available at https://www.govinfo.gov/content/pkg/USCODE-2018-title33/pdf/USCODE-2018-title33-chap26.pdf. Accessed 1 December 2021.

adversely affect, the Rusty Patched Bumble Bee. The Yellow Bumble Bee and Lake Sturgeon may also be impacted, though these impacts are not expected to be adverse. The DNR identified required actions to avoid, minimize, or mitigate impacts to the Rusty Patched Bumble Bee as well as recommended actions to avoid, minimize, or mitigate impacts to the Yellow Bumble Bee and Lake Sturgeon.

20.2. Federally-Protected Species

Consultation with the USFWS was initiated through the USFWS Information for Planning and Conservation (IPaC) tool.[61] An official species list was generated through the USFWS to identify federally-protected threatened and endangered species that may occur within the project area. Table 17 lists species identified in the USFWS official species list. Attachment C to Appendix N includes results of the online consultation.

Table 17: USFWS Official Species List Results

Common Name	Scientific Name	Status	IPaC Determination
Northern Long-Eared Bat	*Myotis septentrionalis*	Threatened	May affect, likely to adversely affect
Rusty Patched Bumble Bee	*Bombus affinis*	Endangered	May affect, not likely to adversely affect
Whooping Crane	*Grus americana*	Experimental population, Non-Essential	No effect
Eastern Prairie Fringed Orchid	*Platanthera leucophaea*	Threatened	No effect
Mead's Milkweed	*Asclepias meadii*	Threatened	No effect
Prairie Bush-clover	*Lespedeza leptostachya*	Threatened	No effect

The project was reviewed through the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and Federal Transit Administration (FTA) Programmatic Biological Opinion (PBO) for Transportation Projects within the range of the Northern Long-Eared Bat (revised February 5, 2018) to satisfy the requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA).[62] The results of the review determined that the project *may affect, is likely to adversely affect* the Northern Long-Eared Bat (dated May 24, 2021). Therefore, consultation with USFWS was required. The USFWS Green Bay Field Office reviewed the effects of the project and determined that the project is consistent with the conservation measures and scope of the PBO and is not likely to jeopardize the continued existence of the Northern Long-Eared Bat.

The Rusty Patched Bumble Bee (*Bombus affinis*) is a federally-listed endangered species. The project is located within a High Potential Zone (HPZ) for the Rusty Patched Bumble Bee, defined by the USFWS as an area in which the Rusty Patched Bumble Bee is likely present. The proposed park-and-ride site was identified as suitable habitat for the Rusty Patched Bumble Bee. USFWS determined ground disturbance to potential Rusty Patched Bumble Bee in the HPZ is low quality because it is adjacent to a roadway corridor that is subjected to highway noise and likely has soil with a high salt content from winter highway maintenance. The USFWS concurred that the project *may affect, not likely to adversely affect* the Rusty Patched Bumble Bee.

61 Information for Planning and Conservation tool. Available at https://ecos.fws.gov/ipac/. Accessed 24 November 2021.

62 Endangered Species Act of 1973. Available at https://www.fws.gov/endangered/esa-library/pdf/ESAall.pdf. Accessed 24 November 2021.

20.3. Avoidance, Minimization, and Mitigation Measures

The following measures would be implemented to minimize potential impacts to federally-listed threatened and endangered species and Wisconsin State Special Concern species:

- Northern Long-Eared Bat.
    - New or replacement permanent lighting will use downward-facing, full cut-off lens lights (with same intensity or less for replacement lighting); or for those transportation agencies using the BUG system developed by the Illuminating Engineering Society, be as close to 0 for all three ratings with a priority of "uplight" or 0 and "backlight" as low as practicable.
    - Tree removal will be limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field.
    - Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all environmental commitments, including all applicable avoidance and minimization measures (AMMs).
- Rusty Patched Bumble Bee.
    - Implement BMPs, especially those that serve to minimize the spread of invasive species and to avoid or minimize soil compaction.
    - Avoid or minimize soil disturbance and heavy equipment operation during overwintering (mid-October to mid-March).
    - Avoid or minimize forest management that may destroy spring blooming flowers during their bloom periods.
    - Consider thinning or single tree selection and dense invasive shrub removal that may improve overwintering and spring foraging habitat.
- Rusty Patched Bumble Bee and Yellow Bumble Bee.
    - Use native trees, shrubs and flowering plants in landscaping.
    - Provide plants that bloom from spring through fall.
    - Remove and control invasive plants in any habitat used for foraging, nesting, or overwintering.
- Lake Sturgeon.
    - Implement erosion and runoff prevention measures if project activities would cause land disturbance near the Yahara River or Starkweather Creek.

21. Impacts on Safety and Security

Describe the measures that would need to be taken to provide for the safe and secure operation of the project after its construction. List any security measures that are planned as part of the project (e.g., security guards, fencing, secured access, lighting, cameras, etc.).

Operation of the BRT line would be consistent with the Safety Management System at Metro Transit, which has adopted a Public Transit Agency Safety Plan in compliance with 49 CFR § 673.1.[63] The agency monitors and mitigates potential safety hazards and encourages employees to report hazards by making coaching and retraining a first step, rather than discipline or retaliation. All operators are required to attend annual refresher training courses.

The following security elements are proposed for BRT stations.

63 Code of Federal Regulations 49 CFR Part 673.1. Available at https://ecfr.io/Title-49/Part-673. Accessed 18 November 2021.

- Stations would be fitted with security cameras. They would incorporate structures to protect riders from the elements, such as windscreens and roof panels. LED luminaires would provide functional illumination within the shelter and the pedestrian access areas along the platform.
- Platforms would include ADA-compliant concrete pads and ramps with raised platforms for level boarding, snowmelt systems, tactile warning plates, braille cuff signs, benches, and railings. Waiting passengers would be able to see and hear next-arrival updates. Electrical equipment would be stored in an enclosed and locked cabinet. Vehicle docking strips would ensure bus operators correctly align the vehicle to the platform edge at each station.

Extra traffic safety features would be considered where an existing dedicated bicycle and pedestrian path would be converted to a busway between Anderson Street/Stoughton Road and Mendota Street. To prevent general purpose traffic from using this connection, the following features would be considered:

- Lanes with a raised or depressed center that are designed to fit only BRT buses and not smaller vehicles
- Clear warning signage
- Video monitoring
- Landscaping and other features that obscure the busway entrance from private motorists
- Access control gates that open for approaching buses

22. Impacts Caused by Construction

Describe the construction plan and identify construction impacts with respect to noise, dust, utility disruption, debris and spoil disposal, air quality, water quality, erosion, safety and security, and disruptions of traffic and access to businesses or residential property. Identify steps that will be taken to provide alternatives or mitigate the impacts of construction impacts. Cite applicable local, state, and federal regulations, and any standards or BMPs that will be followed. If applicable, please include any NPDES best practice measures (refer to the U.S. EPA website).

Construction would primarily consist of earth removal and hauling, grading, repaving, and restriping of lanes, sidewalk improvements, other infrastructure improvements, and placement of shelters and other BRT station features. Construction would primarily occur during daylight hours, accounting for peak travel hours to minimize traffic delays wherever possible.

Construction activities are anticipated to occur primarily in commercial and already-disturbed areas with high ambient noise levels though they would result in some impacts on the community. Local bus stops may be temporarily relocated during the construction phase, but transit service to this area would be maintained. All construction activities would remain compliant with local, state, and federal regulations as described in the following sections:

All reasonable and feasible practices to minimize noise, vibration, dust, and erosion would be employed.

22.1. Land Use

Construction phase impacts would generally include:

- Road closures, lane closures, and detours resulting in traffic delays and possible redirection
- Shared-use path temporary closures and detours
- Noise, dust, and visual impacts due to construction
- Temporary effects to land use caused by staging areas

These impacts do not pose compatibility issues with planning policy documents but are addressed under other topic areas (community cohesion, economic impacts, etc.) in the documented categorical exclusion.

22.2. Transportation/Access

Localized temporary impacts to parking during construction are anticipated. Construction is scheduled for two years; however, the contractor is anticipated to complete stations in small groups which would limit the duration of impacts to a single station location. The anticipated parking impacts at an individual station during construction is anticipated to be less than 3 months.

Pedestrian access would be maintained as required in chapter six of the State of Wisconsin Manual on Uniform Traffic Control Devices.[64] The Manual prescribes that adequate pedestrian access and walkways shall be provided if a temporary traffic control (TTC) zone affects the movement of pedestrians or pedestrian access or detection of pedestrian facilities.

22.2.1. Traffic

The construction phase is scheduled to last two years. During this time, short-term impacts to traffic are expected. These may include the temporary closure of lanes, which may in turn cause localized congestion.

The contractor is expected to complete stations in small groups, which would limit the traffic impacts to small stretches of the alignment near groups of stations. Construction-related parking impacts are expected to be less than three months long at any given station. The final design would include a detailed plan for construction staging and traffic flow management.

22.3. Visual Quality

During the construction phase, visual change would occur along the project route, except for in limited sections where no dedicated guideway or stations would be constructed. Visual impacts of construction such as presence of heavy machinery, ground disturbance and artificial lighting are expected to be temporary in nature, though they may be greater in magnitude than operating phase visual impacts.

Construction best practices would be used to avoid, minimize, and mitigate impacts of the project on neighboring properties and communities, including visual impacts.

22.4. Noise

The City of Madison recognizes that excessive noise is a public health threat and does not allow substantial use of construction equipment between 7:00 p.m. and 7:00 a.m.[65] Equipment may mean hammers, power saws, compressors, and pneumatic tools. The construction phase of the East-West BRT would comply with city code. It is also unlikely that the project would require the use of pile drivers which would produce a high level of noise pollution. For more thorough discussion on noise impacts from the construction phase and the project overall, see Appendix G.

22.5. Access to Businesses or Residential Property

Temporary easements needed for construction of the proposed project are discussed in Section **Error! Reference source not found.**. Construction plans would include phasing and other mitigation strategies to minimize impacts to access along the route where needed. Bus stops may be relocated during the construction phase, but transit service to this area would be maintained. In general, construction impacts would be limited to the immediate station platform area and would have minimal effects on the surrounding environment.

64 Wisconsin Manual on Uniform Traffic Control Devices, Part 6: Temporary Traffic Control. https://wisconsindot.gov/dtsdManuals/traffic-ops/manuals-and-standards/wmutcd/mutcd-ch06.pdf. Accessed 18 November 2021.

65 Madison Code of Ordinances Chapter 24, §8. https://library.municode.com/wi/madison/codes/code_of_ordinances?nodeId=COORMAWIVOIICH20--31_CH24OFAGPEQU_24.08NOCORE. Accessed 18 November 2021.

22.6. Hazardous Materials

The project would largely occur within the existing right-of-way. Ground disturbance and work outside of the existing right-of-way would be required at proposed BRT stations. The project would not require building demolition. Construction materials and debris, including fuels, oil, and other liquid substances, would be stored in the construction area in a manner that would prevent them from entering a wetland, waterbody, or groundwater source as a result of spillage, natural runoff, or flooding. If a spill of any potential pollutant should occur, it would be the responsibility of the City of Madison to remove such material, minimize any contamination resulting from the spill, and immediately notify the State Duty Officer. A Contaminated Materials Management Plan approved by the DNR would be implemented during construction as a proper method for handling contamination and regulated waste materials and providing protection for construction workers.

As discussed in Section **Error! Reference source not found.**, the potential exists that fill soils, which could include demolition debris and other wastes, could be encountered during construction. If fill soils are encountered, additional evaluation might be required for management and disposal purposes. It is recommended that construction documents include special provisions in the event that unknown impacts are discovered during construction. The special provisions would describe the actions and procedures to follow if unknown impacts are encountered during construction.

22.7. Air and Water Quality

While the project would conform to the National Ambient Air Quality Standards, the project would temporarily create dust for short durations of time during construction. There would also be emissions from construction equipment. Construction contractors would be required to use measures to control dust, such as applying water or other dust suppressants during dry weather.

As noted in Section **Error! Reference source not found.**, a Stormwater Pollution Prevention Plan will be developed to help mitigate runoff pollution during construction.

22.7.1. Dust

Construction activities could temporarily increase concentrations of air pollutants. Construction equipment powered by fossil fuels emits the same air pollutants as highway vehicles, and exposed soils can also produce increased particulate matter when moved by construction equipment or disturbed by wind.

Where applicable and prudent, construction best management practices would be implemented to control dust. Best management practices and US Environmental Protection Agency-recommended measures may include:

- Minimization of land disturbance during site preparation
- Use of watering trucks to minimize dust
- Covering of trucks while hauling soil/debris off-site or transferring materials
- Stabilization of dirt piles that are not removed immediately
- Use of dust suppressants on unpaved areas
- Minimization of unnecessary vehicle and machinery idling
- Re-vegetation of any disturbed land after construction

Construction contractors would be required to use measures to control dust in accordance with this guidance and construction specifications. Construction specifications would include appropriate industry standards.

22.8. Safety and Security

Worker and public safety protocols would be established as detailed construction plans are prepared. Protocols would follow guidance from relevant laws and guidelines. This list would include considerations for pedestrian

and bicyclist safety listed in The Wisconsin Work Zone Guidelines[66] for Construction, Maintenance, and Utility Operations and summarized below:

- Do not lead pedestrians or bicyclists into conflicts with work sites or traffic moving through or around the work site.
- Do not block pedestrian or bicyclist routes for non-construction activities.
- Provide pedestrians with safe, practical, and clearly marked detours where necessary
- Include provisions for disabled pedestrians where sidewalks are closed or relocated.
- Provide advance notice of sidewalk closures to agency/ies in charge of sidewalk and other pedestrian facility management.

22.9. Utility Disruption

The project team would work with the utility companies during the design phase to mitigate potential conflicts. The coordination is also important to gain understanding of the companies' requests during construction such as notification procedures, supervision policies, and schedule for necessary relocations. During construction there would be the potential for scheduling electrical line outages if needed to work near existing electrical utilities. Utility services to the field office (electric, water, communications) would be expected as part of the cost for that bid item during the duration of construction.

22.10. Debris and Soil Disposal

The construction phase for the project would be compliant with City of Madison requirement for Final Stabilization. This means that all land-disturbing construction activities at the construction site have been completed and that a uniform perennial vegetative cover has been established with a density of at least 70 percent of the cover for the unpaved areas and areas not covered by permanent structures or that employ equivalent permanent stabilization measures.

22.11. Erosion

Construction projects associated with Madison East-West BRT would be subject to regulations in chapter 37 of the Madison Code of Ordinances. [67] Section 7 of the chapter prohibits permitting or causing erosion and Section 8 establishes erosion control plan requirements. Erosion control plans must include the limits of the disturbed area and impervious areas, erosion control measures to be installed, schedules for stabilization of ditches and slopes, steps to mitigate the erosive effect of land-disturbing activities, and erosion control performance standards among other information.

Construction activities may adversely affect water quality through erosion and sedimentation. Erosion is usually greater during construction due to the exposed soil during grading and earth-moving operations, although such is expected to be minimal given the developed condition of the East-West BRT corridor and the small size of the platforms to be constructed. Temporary soil disturbance during construction would be addressed by compliance with soil erosion and sedimentation control laws.

Erosion and sedimentation on all exposed soils within the project would be minimized by using the appropriate BMPs during construction. BMPs greatly reduce construction related sedimentation and help to control erosion and runoff.

66 Wisconsin Transportation Information Center, The Wisconsin Work Zone Guidelines. https://wisconsindot.gov/Documents/doing-bus/real-estate/permits/wzsb.pdf. Accessed 18 November 2021.

67 Madison Code of Ordinances chapter 37.08. https://library.municode.com/wi/madison/codes/code_of_ordinances?nodeId=COORMAWIVOIVCH32--45_CH37THPUSTSYINERCO_37.08ERCOPLRE. Accessed 18 November 2021.

The action described above meets the criteria for a NEPA categorical exclusion (CE) in accordance with 23 CFR Part 771.118.