METRO Gold Line

BUS RAPID TRANSIT PROJECT ENVIRONMENTAL ASSESSMENT

Environmental Assessment Appendix A Technical Report

Alternatives

September 2019

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ACRONYMS AND ABBREVIATIONS

2040 TPP (2018 Update)..... *2040 Transportation Policy Plan (2018 Update)*
AA ..... Alternatives Analysis
BRT ..... Bus Rapid Transit
CIG Program ..... Capital Investment Grants
CMC ..... Corridor Management Committee
CFR ..... Code of Federal Regulations
Council ..... Metropolitan Council
EA ..... Environmental Assessment
EAW ..... Environmental Assessment Worksheet
EIS ..... Environmental Impact Statement
FHWA ..... Federal Highway Administration
FTA ..... Federal Transit Administration
GCC ..... Gateway Corridor Commission
I- ..... Interstate
LPA ..... Locally Preferred Alternative
LRT ..... Light Rail Transit
MnDOT ..... Minnesota Department of Transportation
NEPA ..... National Environmental Policy Act
NOI ..... Notice of Intent
OMF ..... Operations and Maintenance Facility
PAC ..... Policy Advisory Committee
Project ..... METRO Gold Line Bus Rapid Transit Project
RCRRA ..... Ramsey County Regional Railroad Authority
Scoping Booklet ..... *Gateway Corridor Draft Environmental Impact Statement Scoping Booklet*
TAC ..... Technical Advisory Committee
TH ..... Trunk Highway
USC ..... U.S. Code
WCRRA ..... Washington County Regional Railroad Authority

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2. ALTERNATIVES

This report presents an overview of the alternatives development process since February 2013, when the Gateway Corridor Commission (GCC) published the *Alternatives Analysis* (AA) *Final Report*[1] for the METRO Gold Line Bus Rapid Transit (BRT) Project (Project), formerly called the Gateway Corridor.

This report also summarizes the modifications and decisions that led the Federal Transit Administration (FTA) to change in October 2016 the level of documentation the Project requires, or its class of action, from an Environmental Impact Statement (EIS) to an Environmental Assessment (EA) (see **Section 2.5**). The National Environmental Policy Act of 1969 (NEPA)[2] review process requires the FTA to assign to a proposed project one of three classes of action that indicates the likely significance of the project's potential impacts, and each class of action has a corresponding level of required documentation (from least to most likely to have significant impacts): a Categorical Exclusion, an EA or an EIS.[3]

To comply with the Minnesota Environmental Policy Act,[4] the Council also prepared an Environmental Assessment Worksheet (EAW), which this EA includes in **Appendix F**.

Public and agency input identified a range of alternatives, which the Council and its partners evaluated based on the alternatives' abilities to meet the Project's purpose and need, to minimize environmental impacts, and to meet or exceed the evaluation ratings needed to qualify for the FTA's Capital Investment Grants (CIG) Program, through which major transit projects compete for capital funding grants. The *Financial Analysis Technical Report* in **Appendix A** provides additional information on the Project's proposed finance plan.

2.1. New Starts Project Evaluation Process

The Project is seeking CIG Program funding as a New Starts project. The New Starts process includes the following three phases, each of which is initiated by the FTA's approval:

- **Project Development Phase**: The FTA and Council complete the Project environmental review process including alternatives development and review, and selection of the Locally Preferred Alternative (LPA) and adoption of it into the Council's fiscally constrained long-range transportation plan, the *2040 Transportation Policy Plan (2018 Update)*,[5] which this report refers to as the 2040 TPP (2018 Update)

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[1] *Gateway Corridor Commission.* Gateway Corridor Alternatives Analysis Final Report*. February 2013. Available at: http://thegatewaycorridor.com/alternative-analysis. Accessed October 2018.*

[2] *The National Environmental Policy Act of 1969, as amended. ("The Public Health and Welfare," Title 42, USC, Sec. 4321 et seq.). Available at: https://www.gpo.gov/fdsys/pkg/USCODE-2011-title42/pdf/USCODE-2011-title42-chap55-sec4321.pdf. Accessed November 2018.*

[3] *Federal Transit Administration. "Determining NEPA Class of Action". Available at: https://www.transit.dot.gov/regulations-and-guidance/environmental-programs/determining-nepa-class-action. Accessed November 2018.*

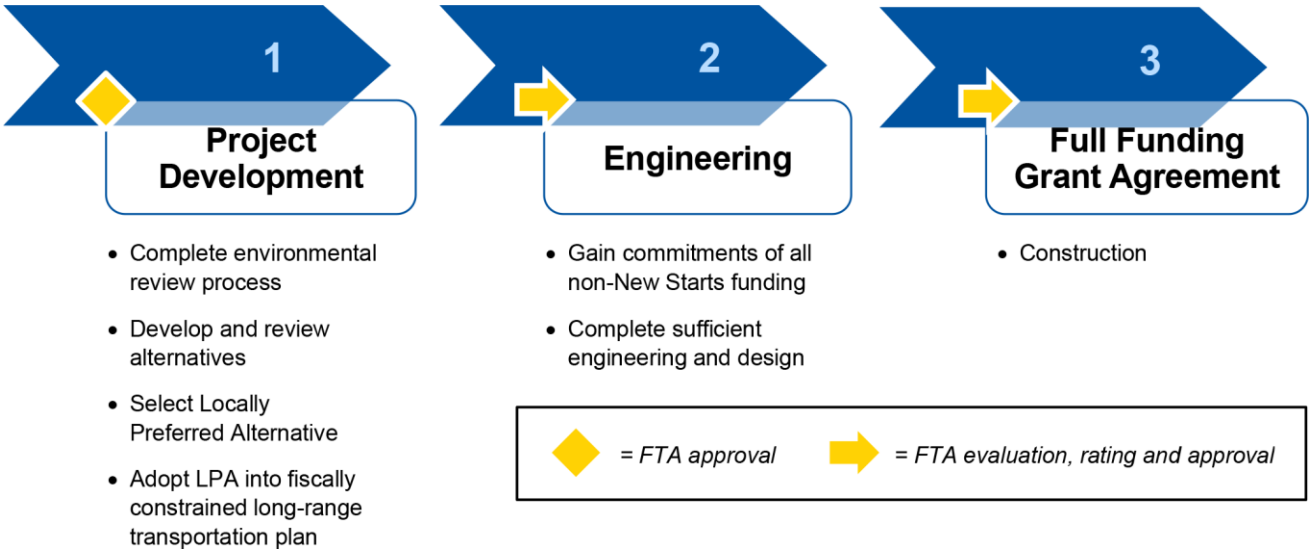
[4] *"Environmental Policy," Chap. 116D., Minnesota Statutes, 2018. Available at: https://www.revisor.mn.gov/statutes/cite/116D. Accessed October 2018.*

[5] *Metropolitan Council.* 2040 Transportation Policy Plan (2018 Update)*. Adopted October 24, 2018. Available at: https://metrocouncil.org/tpp-update.aspx?source=child. Accessed October 2018.*

- **Engineering Phase:** The FTA evaluates and rates the Project according to New Starts eligibility requirements, and the Council completes the Project engineering and design activity
- **Full Funding Grant Agreement:** The FTA evaluates and rates the Project according to New Starts eligibility requirements and commits funding

The Project is currently within the Project Development Phase, and the Council will seek approval to begin the Engineering Phase after it completes the environmental review process. **Figure 2.1-1** illustrates the eligibility and evaluation process for the Project.

FIGURE 2.1-1: FEDERAL TRANSIT ADMINISTRATION NEW STARTS PROJECT EVALUATION PROCESS



2.2. Alternatives Development Process

The Washington County Regional Railroad Authority (WCRRA) and the Ramsey County Regional Railroad Authority (RCRRA) together initiated the Project in 2010, called the Gateway Corridor. The joint powers GCC board, which became the Gold Line Partners in 2018, guided policy direction about the Project during the AA study and alternatives development processes. Representatives from the cities and counties in which the Project is located comprised the GCC (see the *Public and Agency Coordination Technical Report* in **Appendix A** for additional information on the GCC).

The Council, which is the metropolitan planning organization for the Twin Cities Metropolitan Area, became the Project's local lead agency and responsible governmental unit for completing the EA/EAW in 2017. Metro Transit, a division within the Council, operates major transit lines in the region and would operate the METRO Gold Line.

Due to the proximity and need for operational coordination with Interstate 94 (I-94) and the state trunk highway system, the Minnesota Department of Transportation (MnDOT) and Federal Highway Administration (FHWA) have interest in the Project. As the permitting authority for Clean Water Act Section 404 permit, the U.S. Army Corps of Engineers (USACE) also has interest in the Project.

Alongside the FTA as the lead federal agency, each of these agencies had a role in developing and evaluating alternatives for the Project and are included as cooperating agencies under NEPA. As the Project continues to advance through the development process, the Council will serve as the local project sponsor and federal

grantee. The Council is the lead agency for the Project Development and Engineering Phases under the FTA CIG Program, which includes advancement and completion of the design, construction, startup operations, and ongoing operations and maintenance, per agreements with local partners.

Washington and Ramsey counties, local municipalities, major institutions and corporations within the corridor; historically underrepresented communities; and the public have also had key roles in developing, evaluating and recommending Project alternatives. These entities participated in advisory bodies that helped guide the Project.

The following advisory bodies participated during early development of Project alternatives, when WCRRA was the local lead agency:

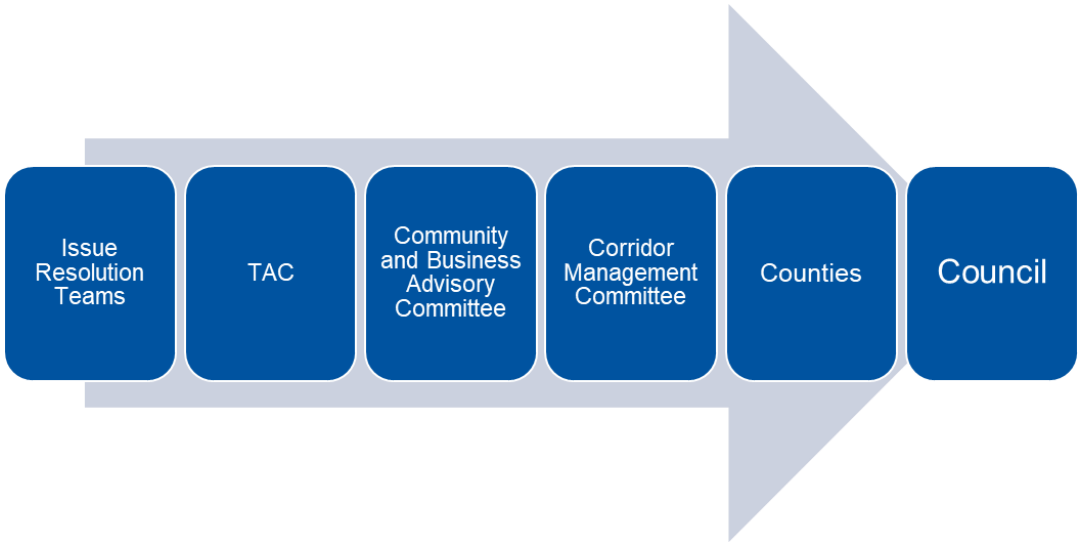
- Technical Advisory Committee (TAC)
- Community Advisory Committee
- Policy Advisory Committee (PAC)
- GCC

In early 2018, the Council, as the local lead agency, established the following advisory bodies to participate in the Project Development Phase and development of this EA:

- Issue Resolution Teams
- TAC
- Community and Business Advisory Committee
- Corridor Management Committee (CMC)

Figure 2.2-1 illustrates the reporting structure of these Project advisory bodies. The *Public and Agency Coordination Technical Report* in **Appendix A** includes more information about the advisory bodies that participated during the Preliminary Development Phase and earlier.

FIGURE 2.2-1: CURRENT COMMITTEE STRUCTURE FOR THE PROJECT



The Project alternatives are rooted in plans and studies dating back to 2008. These include feasibility studies, park-and-ride plans, managed lane studies, and long-range transportation plans, among others. As **Table 2.2-1** shows, the Project used multiple phases to develop the alternatives. The following sections provide an overview of this process, which occurred when the Project's NEPA class of action was an EIS.

TABLE 2.2-1: ALTERNATIVES DEVELOPMENT PROCESS TIMELINE

Activity	Timeframe
Gateway Corridor AA study and final report	2010-2013
Additional analysis and project definition prior to release of the *Gateway Corridor Draft Environmental Impact Statement Scoping Booklet*	2013-2014
Draft EIS Scoping process	February-August 2014
Selection of LPA and its adoption by the Council into its long-range transportation and funding plan (January 2015 version)[a]	August 2014 to January 2015
Alternatives refinement	Fall 2014 to December 2016
LPA refinement of east-end alignment and terminus	January-December 2016
Change in NEPA class of action from EIS to EA	March 2017
Alternatives refinement[b]	January 2018 to 2019
Inclusion of revised LPA in the Council's 2040 TPP (2018 Update)[c]	October 2018
Administrative amendment to LPA to extend Project terminus in Woodbury[d]	April 2019

[a] *Metropolitan Council.* 2040 Transportation Policy Plan. *Version 1.0. January 14, 2015. Available at: https://metrocouncil.org/Transportation/Planning-2/Key-Transportation-Planning-Documents/Transportation-Policy-Plan/The-Adopted-2040-TPP-(1)/Final-2040-Transportation-Policy-Plan/2040-TPP-Complete.aspx. Accessed October 2018.*

[b] *Build Alternative 2 identified by CMC to EA in September 2018*

[c] *Metropolitan Council.* 2040 Transportation Policy Plan (2018 Update). *Adopted October 24, 2018. Available at: https://metrocouncil.org/tpp-update.aspx?source=child. Accessed October 2018.*

[d] *Metropolitan Council. 2040 Transportation Policy Plan (2018 Update). Adopted April 24, 2019. Available at: https://metrocouncil.org/tpp-update.aspx?source=child. Accessed April 2019.*

2.2.1. Alternatives Analysis Study (2010-2013)

The GCC completed the AA study in February 2013 in partnership with the Council and local jurisdictions. The study's final report identified BRT and light rail transit (LRT) as the best alternatives to meet the Project purpose and need, and it recommended these options move forward for study in a Draft EIS.

The study identified BRT as the preferred option and the GCC advanced the LRT option for comparative purposes. Both transit alternatives terminated at Union Depot on the west, relying on existing connecting transit for service to Minneapolis. Manning Avenue was the eastern terminus for the dedicated guideway for both BRT and LRT alternatives, with BRT service continuing to Hudson, Wisconsin. For BRT, dedicated guideways are roadways or lanes that buses use exclusively. For LRT, dedicated guideways are rights-of-way that the rail tracks use exclusively.

Because the AA recommended both BRT and LRT from Union Depot in Saint Paul to Manning Avenue in Lake Elmo/Woodbury (about 12 miles), and BRT service continuing to Wisconsin (about 7 additional miles), the FTA determined that an EIS was the appropriate NEPA class of action.

2.2.2. Additional Analysis and Project Definition Before Release of Scoping Booklet (2013-2014)

The early stages of the Draft EIS Scoping process further refined alignment options for specific parts of the corridor based on input from corridor communities and community groups. The *Alternatives Development Technical Memorandum* in **Attachment A-2-1** further discusses this process. Further analysis and consultation resulted in refinement of the eastern terminus of the BRT alternative. Instead of continuing to Hudson, Wisconsin, the service would terminate at Manning Avenue on its eastern end. The advisory bodies approved this change, which would increase operating efficiency.

2.2.3. Draft Environmental Impact Statement Scoping Process (February-August 2014)

The first step in preparing an EIS is the Scoping[6] process, which establishes the foundation for the EIS process. Scoping defines the range of alternatives the EIS will study, and it identifies potential issues and impacts for each alternative.

The information developed and collected during the Gateway Corridor Draft EIS Scoping process built upon the AA study findings and additional analyses (as **Section 2.2.1** summarizes), and it informed the Project advisory bodies' selection of the Project LPA.

A Notice of Intent (NOI) to prepare an EIS published on Feb. 12, 2014, in the *Federal Register* officially kicked off the EIS Scoping process. On March 3, 2014, the Minnesota's *Environmental Quality Board Monitor* published a Notice of Availability for the *Gateway Corridor Draft Environmental Impact Statement Scoping Booklet* (Scoping Booklet), Scoping open houses and interagency Scoping meeting–events that began the Scoping period in accordance with the state environmental review requirements. The Scoping Booklet presented and sought stakeholder input on the Project purpose and need, its end points, and three alternatives: the No-Build Alternative; a BRT alternative; and an LRT alternative. The Draft EIS Scoping comment period was from March 3 to April 16, 2014, and it sought input from interested members of the public, representatives of affected Native American tribes, and local, state and federal agencies.

Project advisory bodies conducted two public Scoping meetings in March 2014: one at Guardian Angels Church in Oakdale, and one at Conway Recreation Center in Saint Paul. Attendees could view a video about the Project, review exhibits and maps, discuss the Project with staff, and submit their comments in writing or verbally to a court reporter. Project staff also organized "pop-up" information sessions at express-bus park-and-ride facilities and community events within the corridor study area, and they presented Project information to community and business groups, local government boards and commissions.

The Project received 97 comment letters or testimonies during the Draft EIS Scoping comment period from cities, counties, state and federal agencies, and community members. The Project video, posted at www.thegatewaycorridor.com, has had more than 1,400 views through 2018.

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[6] *Council on Environmental Quality. "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act." 2005 reprint of "Protection of Environment," Title 40, CFR, Parts 1500-1508. Available at: https://www.energy.gov/sites/prod/files/NEPA-40CFR1500_1508.pdf. Accessed October 2018.*

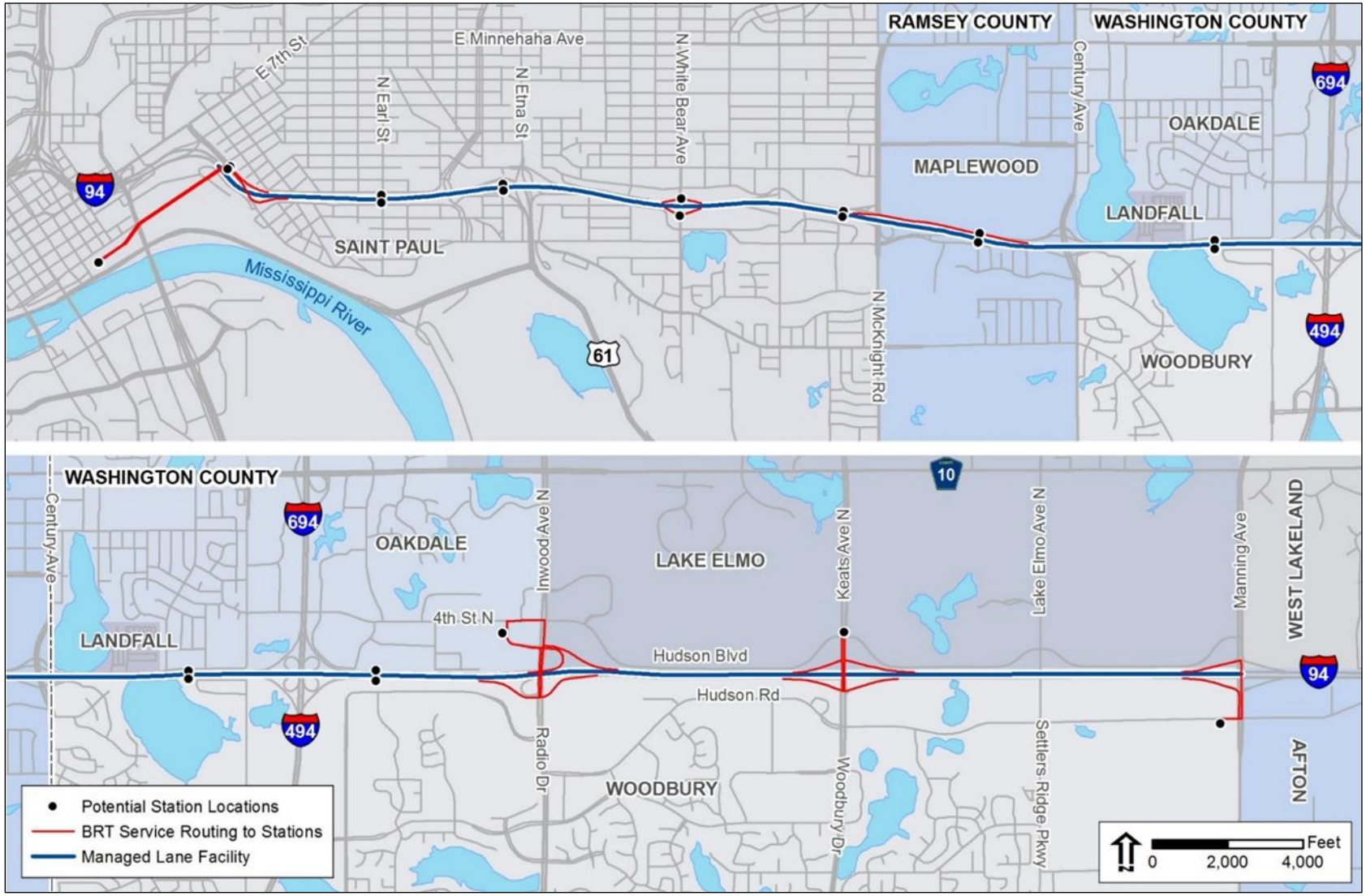
2.2.3.1. Alternatives Added During Draft Environmental Impact Statement Scoping

Although not included in the Scoping Booklet, the FHWA requested during the Scoping process that the Draft EIS further study an alternative that combined BRT with managed lanes. The FTA, as the lead federal agency, concurred, and the GCC coordinated further with the FHWA, MnDOT and the FTA to define this alternative.

The group concluded that the BRT-Managed Lane Alternative would operate BRT within a center running managed lane on I-94, where feasible, and stop at a mix of inline and offline stations. Inline stations would be located on freeway ramps and the right side of the I-94 right of way, with BRT vehicles exiting the managed lane to access stations. Offline stations would be located outside of I-94 right of way, with BRT vehicles exiting the managed lane and the Interstate and using local streets to access stations. BRT vehicles would travel within the center managed lane between stations and would mix with general traffic while traveling across general-purpose lanes to access stations. During peak periods, this alternative assumed BRT vehicles would not travel in the managed lane but operate instead on the right shoulder of I-94 between stations, to avoid mixing with traffic in congested I-94 travel lanes.

Figure 2.2-2 illustrates the BRT-Managed Lane Alternative.

FIGURE 2.2-2: BUS RAPID TRANSIT-MANAGED LANE ALTERNATIVE FOR THE GATEWAY CORRIDOR



2.2.3.2. Alternatives Not Recommended for Further Study from the Scoping Decision Document

As documented in the *Gateway Corridor Scoping Decision Document*,[7] the GCC recommended and WCRRA approved[8] eliminating the LRT alternative from further evaluation in the Draft EIS. The LRT Alternative advanced through the AA study process for comparative purposes, and through the Draft EIS Scoping process, the GCC and WCRRA found LRT would have significantly higher capital and operating costs without a substantial increase in ridership or other benefits when compared with BRT. In addition, the forecasted low cost-effectiveness rating for LRT would significantly limit the Project's ability to receive federal funding through FTA's CIG Program. LRT also has limited ability to provide flexible design options that avoid or minimize potential impacts to surrounding natural resources and land uses.

2.2.3.3. Alternatives Advanced for Further Study from the Scoping Decision Document

The *Gateway Corridor Scoping Decision Document* identified the following six alternatives for additional study in the Draft EIS:

- No-Build Alternative
- BRT-Managed Lane Alternative
- Dedicated BRT ABC-D1-E1
- Dedicated BRT ABC-D2-E1
- Dedicated BRT ABC-D2-E2
- Dedicated BRT ABC-D2-E3

NO-BUILD ALTERNATIVE

NEPA requires analysis of a No-Build Alternative to provide a baseline from which to evaluate the potential impacts, benefits and costs – also called the environmental effects–of the Build Alternatives. The Scoping Decision Document defined the No-Build Alternative as the 2030 transportation network including only improvements already planned and programmed.[9] The No-Build Alternative does not include the Project.

BUS RAPID TRANSIT-MANAGED LANE ALTERNATIVE

The BRT-Managed Lane Alternative advanced from the Draft EIS Scoping process for further study in the Draft EIS (see **Section 2.2.3.1** and **Figure 2.2-2**).

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[7] *Washington County Regional Railroad Authority, Ramsey County Regional Railroad Authority, Metropolitan Council. Gateway Corridor Scoping Decision Document. October 2014. Available at: https://www.metrotransit.org/Data/Sites/1/media/about/improvements/gold-line/scoping-decision-document.pdf. Accessed November 2018.*

[8] *The Washington County Regional Railroad Authority was the State's Responsible Governmental Unit for the project at that time.*

[9] *During the Draft Environmental Impact Statement Scoping process, 2030 was the horizon year for analysis; after scoping, the Project updated its horizon year to 2040.*

DEDICATED BRT ALTERNATIVES

The following four dedicated BRT alternatives[10] advanced from the Draft EIS Scoping process for further study in the Draft EIS:

- Dedicated BRT ABC-D1-E1
- Dedicated BRT ABC-D2-E1
- Dedicated BRT ABC-D2-E2
- Dedicated BRT ABC-D2-E3

As **Figure 2.2-3** shows, Alignments A, B and C would be the same for each of the dedicated BRT alternatives. Alignment A would extend from Union Depot in downtown Saint Paul along Kellogg Boulevard to the intersection of Kellogg and Mounds boulevards. Alignment B would generally follow Mounds Boulevard, Hudson Road and I-94 to the White Bear interchange. Alignment C would generally follow Hudson Road/Old Hudson Road to the I-694 interchange.

Alignments D and E varied in the following areas:

- **Dedicated BRT ABC-D1-E1:** Union Depot to Manning Avenue; Alignment D1 on 4th Street crossing to south side of I-94 west of Radio Drive. Under this alternative, the Draft EIS would initially evaluate two options in Alignment E1: one located immediately south of I-94 extending from Woodbury Drive for about ½-mile to the east and then dropping south to Hudson Road, and the other on Hudson Road starting at Woodbury Drive
- **Dedicated BRT ABC-D2-E1:** Union Depot to Manning Avenue; Alignment D2 on 4th Street and Hudson Boulevard (north side of I-94) to west of Woodbury Drive/Keats Avenue North in Lake Elmo, where it would cross to the south of I-94. BRT would then follow Alignment E1 south of I-94 to Manning Avenue
- **Dedicated BRT ABC-D2-E2:** Union Depot to Manning Avenue; Alignment D2 on 4th Street crossing to south side of I-94 (Alignment E2) at Lake Elmo Avenue or via a new bridge crossing I-94 at a location between Woodbury Drive and Lake Elmo Avenue
- **Dedicated BRT ABC-D2-E3:** Union Depot to Manning Avenue; Alignment D2 on 4th Street and continuing along the north side of I-94, generally following Hudson Boulevard to Manning Avenue

Each of the dedicated BRT alternatives included potential station locations (see **Figure 2.2-3**). The Project advisory bodies anticipated that as the Project advanced through additional planning, including planning focused on station areas, they would determine specific station locations, and might consider additional station(s) east of Keats Avenue/Woodbury Drive based on agency and public input and landowner development plans.

[10] *Dedicated busways are roadways or lanes that buses use exclusively. Busways can operate like light rail transit service, with similar station spacing and other characteristics; however, busways use rubber tires on vehicles instead of the rails on electric trains.*

FIGURE 2.2-3: DEDICATED BUS RAPID TRANSIT ALTERNATIVES ADVANCED FROM DRAFT ENVIRONMENTAL IMPACT STATEMENT SCOPING PROCESS

2.2.4. Alternatives Considered and Dismissed After Draft Environmental Impact Statement Scoping Process (2015)

The Project advisory bodies recommended the dismissal of two alternatives and one alignment option from further study in the Draft EIS: the BRT-Managed Lane Alternative, the Dedicated BRT ABC-D2-E1 alternative, and the Alignment E1 Option on Woodbury Drive and Hudson Road.

2.2.4.1. BRT-Managed Lane Alternative

In a letter dated Jan. 4, 2016, FHWA stated that its "*concerns had been adequately addressed with the understanding that expansion of I-94 is not precluded and that impacts to interstate operations are being avoided, minimized, and mitigated*" (see **Attachment A-2-1**). After receiving this letter, the Project advisory bodies recommended to exclude the BRT-Managed Lane Alternative from detailed analysis in the Draft EIS.

2.2.4.2. Dedicated BRT ABC-D2-E1

The Draft EIS Scoping process considered dedicated BRT ABC-D2-E1 to evaluate the potential impacts and benefits associated with extending the BRT alignment farther to the east, through Lake Elmo, before transitioning south over I-94 to the west of Woodbury Drive in Woodbury. Since completing the Draft EIS Scoping process, the Project advisory bodies consulted with Lake Elmo, Woodbury and other stakeholders about the alignment and its station locations in both communities. These discussions resulted in the exclusion of this alternative from further consideration.

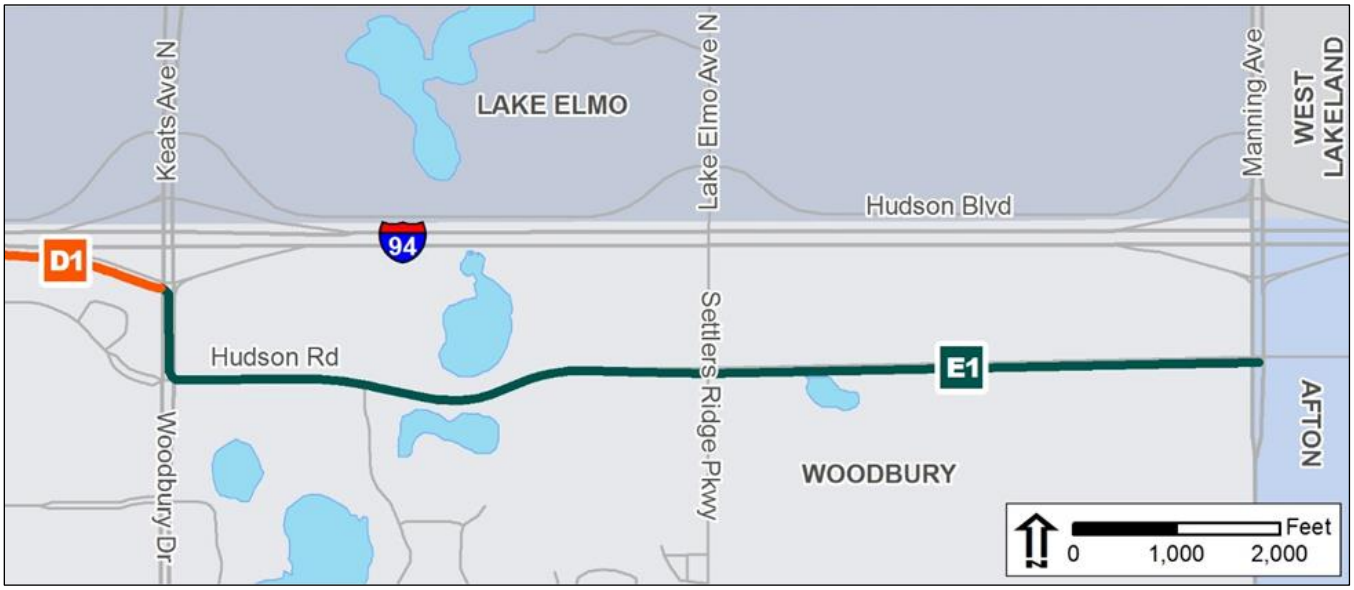
This alternative would have required constructing a new I-94 BRT-exclusive bridge crossing, which conflicted with an objective to minimize capital costs while maximizing use of existing infrastructure. Additionally, Washington County and the City of Woodbury concluded that implementing dedicated BRT on Woodbury Drive would negatively impact traffic, which could have required significant and potentially costly mitigation. The traffic impacts and associated mitigation costs, combined with the high capital and operating costs of an additional bridge structure, resulted in the exclusion of this alternative from further consideration.

2.2.4.3. Alignment E1 Option on Woodbury Drive and Hudson Road

The Draft EIS Scoping process considered two options for Alignment E1. Input from the City of Woodbury after the Scoping process led to the exclusion of the option that would follow Woodbury Drive south and then turn east on Hudson Road (see **Figure 2.2-4**). Woodbury representatives were concerned about traffic and access impacts on Woodbury Drive and Hudson Road in front of the City Walk mixed use development.

The Project advisory bodies retained the second Alignment E1 option (see **Figure 2.2-3**) – which would be located immediately south of I-94, extending east from Woodbury Drive for about ½-mile before dropping south to Hudson Road – for evaluation in the Draft EIS as part of Dedicated BRT ABC-D1-E1.

FIGURE 2.2-4: ALIGNMENT E1 OPTION EXCLUDED FROM FURTHER CONSIDERATION



2.2.5. Alternatives Carried Forward for Further Evaluation (2015)

After the Project advisory bodies eliminated two alternatives and one alignment option (see **Section 2.2.4**), the following four alternatives remained for further evaluation:

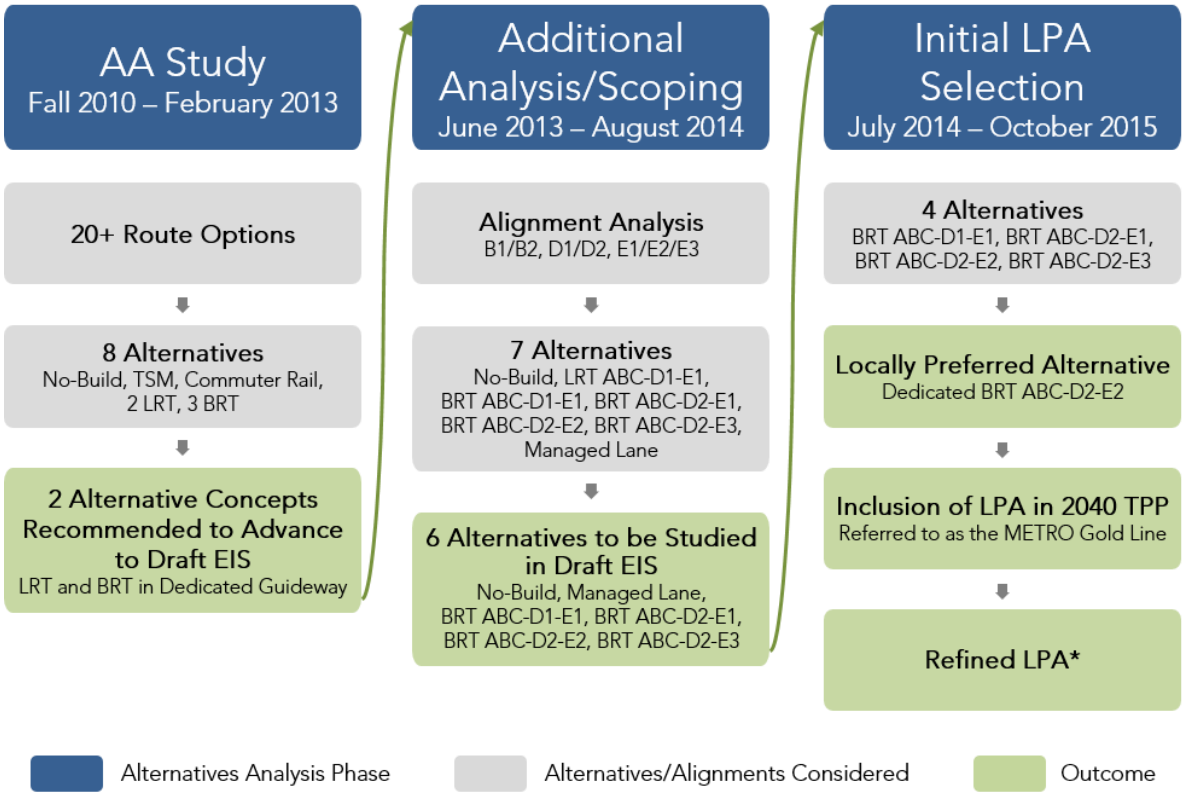
- No-Build Alternative
- Dedicated BRT ABC-D1-E1
- Dedicated BRT ABC-D2-E2
- Dedicated BRT ABC-D2-E3

During the process to identify which alternatives would be carried forward for further evaluation, the Project advisory bodies refined Alignment A to include stations and routing between the Smith Avenue Transit Center and Union Depot. This route would provide most direct access throughout downtown Saint Paul where people live, work and recreate. The *Gateway Corridor Scoping Decision Document* indicated that refinements would continue through the design process. See the *Alternatives Development Technical Memorandum* in **Attachment A-2-1** for a discussion of corridor areas where public and agency consultation resulted in improved guideway design and station refinements to improve functionality and minimize Project-related impacts.

2.3. Initial Locally Preferred Alternative Selection Process (2014-2016)

The LPA is the transitway alternative that the corridor cities, Washington and Ramsey counties, and the Council recommend for detailed study. The LPA specifies the type of transit technology, or mode, the Project would use and the general location of the transit service, or its alignment. Subsequent phases of development and engineering formally establish other Project elements such as where the service will end, and the exact station locations based on travel-demand forecasts and environmental and design-related details. **Figure 2.3-1** illustrates the initial LPA selection process.

FIGURE 2.3-1: INITIAL LOCALLY PREFERRED ALTERNATIVE SELECTION PROCESS



* The LPA alignment was refined between Lake Elmo Avenue/Settlers Ridge Parkway and Manning Avenue after publication of the 2040 TPP. This refined LPA was recommended by the PAC in October 2015 but was not advanced further due to lack of support from the City of Lake Elmo.

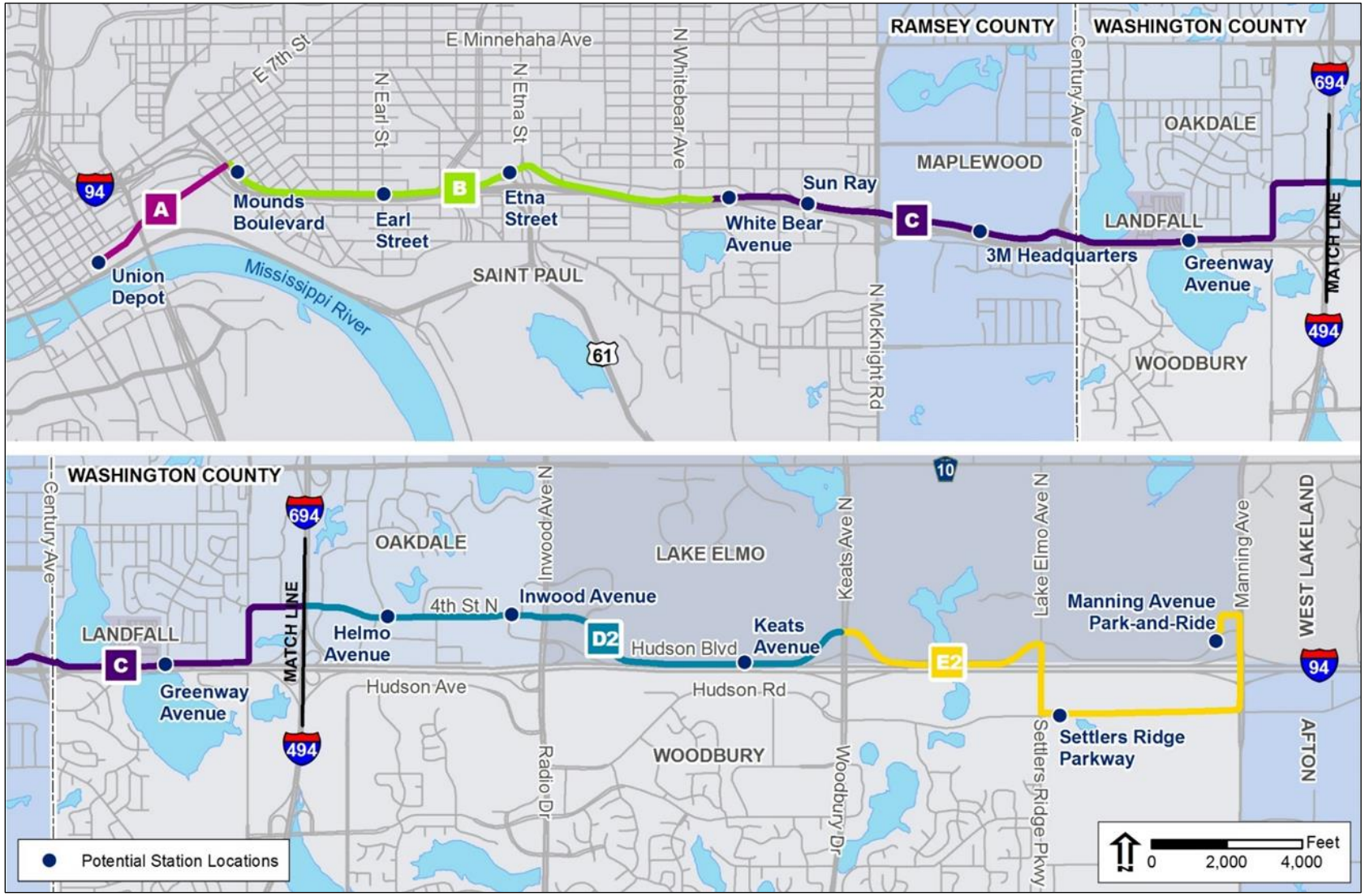
The multistep process to formally recommend and select an LPA for the Project began after the Project advisory bodies published the Scoping Decision Document. Following a public hearing, recommendations from the Project advisory bodies, and passage of resolutions of support from the Cities of Saint Paul, Maplewood, Oakdale, Landfall, Woodbury and Lake Elmo, the RCRRA and WCRRA passed resolutions at their Sept. 23 and Oct. 7, 2014, meetings, respectively, that recommended Dedicated BRT ABC-D2-E2 as the Gateway Corridor LPA, describing the alternative as BRT generally following the Hudson Road-Hudson Boulevard alignment that crosses

to the south side of I-94 roughly between Lake Elmo and Manning avenues. In January 2015, the Council adopted the LPA into its regional, fiscally constrained, long-range transportation policy and investment plan.

Although adopted into the long-range plan, the LPA did not define the route between Lake Elmo Avenue/Settlers Ridge Parkway and Manning Avenue. The Project advisory bodies coordinated further for additional analysis to determine the route in this segment of the alignment, and at their Aug. 13, 2015, meeting, they recommended a refined LPA for public comment.

After the public hearing, at a meeting on Oct. 15, 2015, the Project advisory bodies recommended Dedicated BRT ABC-D2-E2 as the LPA (see **Figure 2.3-2**). Each city and county in which the refined portion of the alignment was located needed to submit resolutions of support to finalize this LPA selection. Lake Elmo did not pass a resolution of support for the refined LPA, indicating the city did not support the Project being in its community. Therefore, the Project advisory bodies reevaluated the alignment in the eastern end of the corridor, as **Section 2.4** describes.

FIGURE 2.3-2: INITIAL LOCALLY PREFERRED ALTERNATIVE RECOMMENDATION (DEDICATED BRT ABC-D2-E2)



2.4. Locally Preferred Alternative Refinements (2016-2018)

2.4.1. Process Overview

The *East End Alignment and Stations Technical Memorandum* in **Attachment A-2-2** describes in detail the process to realign the eastern end of the corridor. The following sections summarize this process.

The Project advisory bodies established the Eastern End Realignment Working Group that included representatives from the WCRRA, the RCRRA, the cities of Woodbury and Oakdale, MnDOT and Metro Transit. The working group had the following responsibilities:

- Draft potential new routes and discuss the viability of existing routes
- Review community input regarding station locations and routes
- Develop a list of viable routes based on project goals and objectives
- Develop a stakeholder engagement and communications plan

The refined alternatives identified for the east end of the project (east of I-694) reflected the direction provided by the cities of Oakdale and Woodbury while maintaining the overall Project goals and objectives.

2.4.2. Alternatives Previously Approved for Study in the Draft Environmental Impact Statement

As part of this process, the Project advisory bodies reevaluated the three dedicated BRT alternatives previously approved for study in the Draft EIS (Dedicated BRT ABC-D1-E1, ABC-D2-E2 and ABC-D2-E3).

City of Woodbury staff said that they did not support Dedicated BRT ABC-D1-E1 due to the anticipated traffic impacts on Radio and Woodbury drives, a position that reflected the city's resolution of support for the previously identified LPA, Dedicated BRT ABC-D2-E2, which stated this concern.

Because the City of Lake Elmo did not support the Project's location in its community, it did not support Dedicated BRT ABC-D2-E2 or Dedicated BRT ABC-D2-E3.

Due to the lack of support for these three alignments, they were screened from detailed study in the Draft EIS.

2.4.3. New East End Alignments Evaluation

The Eastern End Realignment Working Group identified and evaluated seven new alignments for the east end of the corridor, five of which it excluded from further evaluation based on a qualitative assessment of their abilities to meet the project purpose and need.

Two alignments met the Tier 1 goals (see the *Purpose and Need Technical Report* in **Appendix A**) and advanced for more detailed evaluation. One alignment would continue east on 4th Street after crossing I-694 and terminate at the Inwood Avenue Station near Guardian Angels Church; the other alignment would continue east on 4th Street after crossing I-694, turn south on Helmo Avenue, cross I-94 on a new bridge, and continue south on Bielenberg Drive to the Woodbury Theatre Park-and-Ride.

The more detailed assessment evaluated these two alignments based on ridership, cost, cost-effectiveness and – at the direction of the Project advisory bodies–access to jobs. Based on these factors, the working group recommended that the environmental document should only include the alignment that terminates at the

Woodbury Theatre Park-and-Ride. **Section 2.6.2.1** describes the recommended alignment, called Alignment D3. The Project advisory bodies concurred with this recommendation at their September and October 2016 meetings.

2.4.4. Adoption of the Refined Locally Preferred Alternative

The following corridor cities submitted resolutions of support for Alternative ABC-D3 as the LPA:

- City of Oakdale, Nov. 22, 2016
- City of Maplewood, Nov. 28, 2016
- City of Woodbury, Nov. 30, 2016

After receiving these resolutions of support, the PAC made its final LPA recommendation to the GCC on Dec. 8, 2016, and the GCC passed a resolution of support for the LPA on the same date. RCRRA and WCRRA adopted the LPA on Dec. 13 and Dec. 20, 2016, respectively. In October 2018, the Council adopted an updated version of its long-term transportation policy plan[11] to include the refined LPA. Then, in April 2019, the Council adopted an administrative amendment to the 2040 TPP that extended the Project terminus in Woodbury from the Woodbury Theatre Station to the Woodbury 494 Park-and-Ride Station.

2.5. Change in National Environmental Policy Act Class of Action (2017)

As **Section 2.2** states, after the GCC completed the AA study, the FTA determined an EIS was the appropriate NEPA class of action based on the Project's multiple modes (BRT and LRT), its number of alternatives, and the lengths of the potential alignments. In 2013, the Project advisory bodies were considering multiple, 22-mile BRT Alternatives that impacted two states; a managed lane alternative; and a 12-mile LRT Alternative.

Since that time, the Scoping and LPA processes reduced the Project's eastern geographic reach from Hudson, Wisconsin, to Woodbury, Minnesota – a 10-mile reduction in total project length. Additionally, the Project reduced the transit technologies from LRT, BRT and managed lanes to only BRT. The Scoping and LPA processes also revealed only one viable BRT alternative, which has a low potential for impacts because it is primarily within existing, public right of way.

Based on these changes, the FTA, in consultation with WCRRA, MnDOT and the Council, determined that an EA would be the appropriate NEPA class of action for the Project, consistent with other projects of its scope and scale. The *Federal Register* published on March 15, 2017, the notice to rescind the NOI to prepare an EIS.

2.6. Refinement of BRT Alternatives (2018-2019)

During the CMC recommendation process for the Project scope in September 2018, the committee requested the Council evaluate a route that modified Alignment A of the LPA, and the FTA and Council agreed to its full evaluation in the EA/EAW. Therefore, the LPA is Build Alternative 1, which includes Alignments A1, B, C and D3, and Build Alternative 2 includes Alignments A2, B, C and D3. The difference between the two Build Alternatives is Alignment A in downtown Saint Paul. Alignment A2 of Build Alternative 2 would terminate at Union Depot, and

[11] *Metropolitan Council.* 2040 Transportation Policy Plan (2018 Update). *Adopted October 24, 2018. Available at: https://metrocouncil.org/tpp-update.aspx?source=child. Accessed October 2018.*

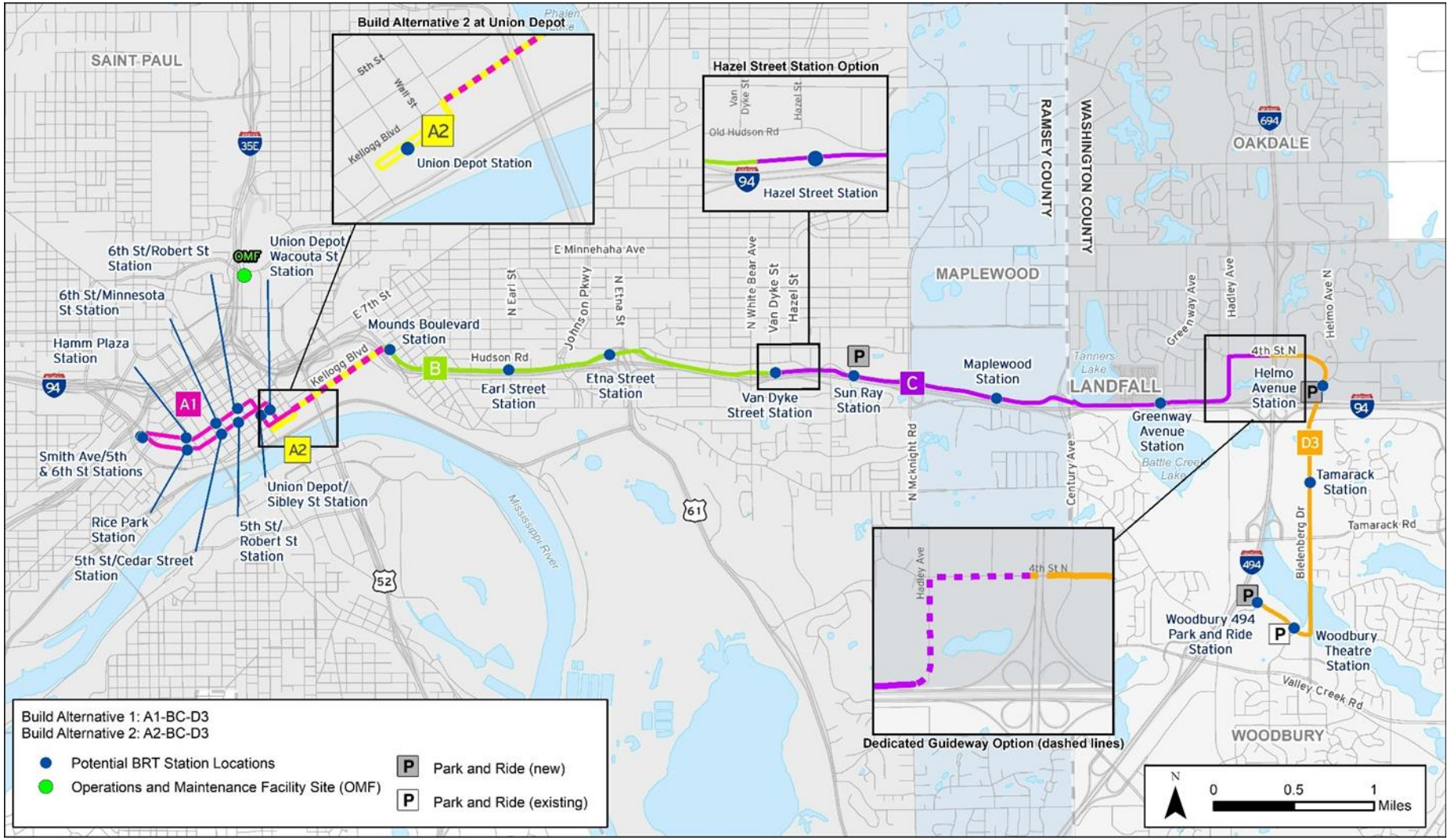
Alignment A1 of Build Alternative 1 would terminate approximately 1 mile to the west at the Smith Avenue Transit Center, similar to the Dedicated BRT Alternatives identified in 2014. The FTA determined that this route would require evaluation in the EA as a new Build Alternative due to differences in downtown Saint Paul including a change in the location of the terminus station and reduction in the number of stations and areas served by the Project.

Based on the analysis and outcomes of the LPA refinement process and CMC recommendation, the EA and supporting technical reports fully evaluate the following three alternatives:

- No-Build Alternative
- Build Alternative 1: A1-BC-D3 (LPA)
- Build Alternative 2: A2-BC-D3

Figure 2.6-1 shows the two Build Alternatives. See the *Financial Analysis Technical Report* in **Appendix A** for information on the capital cost estimates for the Project elements.

FIGURE 2.6-1: PROJECT BUILD ALTERNATIVES



2.6.1. No-Build Alternative

NEPA requires analysis of a No-Build Alternative to provide a baseline from which to evaluate the potential impacts, benefits and costs of the Build Alternatives. The No-Build Alternative represents the existing transportation system with only planned and programmed improvements through the year 2040 – and without the Project.

The analysis in this EA assumes the following improvements as part of the No-Build Alternative:

- Reconstruction/replacement of Kellogg Boulevard Bridge (City of Saint Paul)
- Reconstruction of Conway Street cul-de-sac (City of Saint Paul)
- White Bear Avenue improvement project north of I-94 (Ramsey County)
- Rush Line Corridor BRT between downtown Saint Paul and White Bear Lake (RCRRA)
- Park-and-ride in the northwest quadrant of the I-94/Manning Avenue interchange with express bus service to Minneapolis (Metro Transit)
- Addition of a managed lane on I-94 between downtown Minneapolis (5th Street/6th Street South) and Saint Paul (Marion Street) (MnDOT)
- Metro Transit Route 54 extension to Maplewood Mall (Metro Transit)
- Addition of auxiliary lanes at the I-694/I-494/I-94 interchange (MnDOT)
- Add a westbound left turn lane and a southbound channelized right turn lane at Bielenberg Drive and Tamarack Road (City of Woodbury)
- Construct extension of Nature Path from the west side of Bielenberg Drive to Tamarack Road (City of Woodbury). The analysis also assumes the addition of a traffic signal at the intersection of Bielenberg Drive and Nature Path
- Heywood Garage Expansion (Metro Transit)
- Johnson Parkway modifications at Wakefield Avenue (City of Saint Paul)
- Traffic signal construction at the 4th Street/Helmo Avenue and 4th Street/Hadley Avenue intersections, based on planned development and traffic (Oakdale)

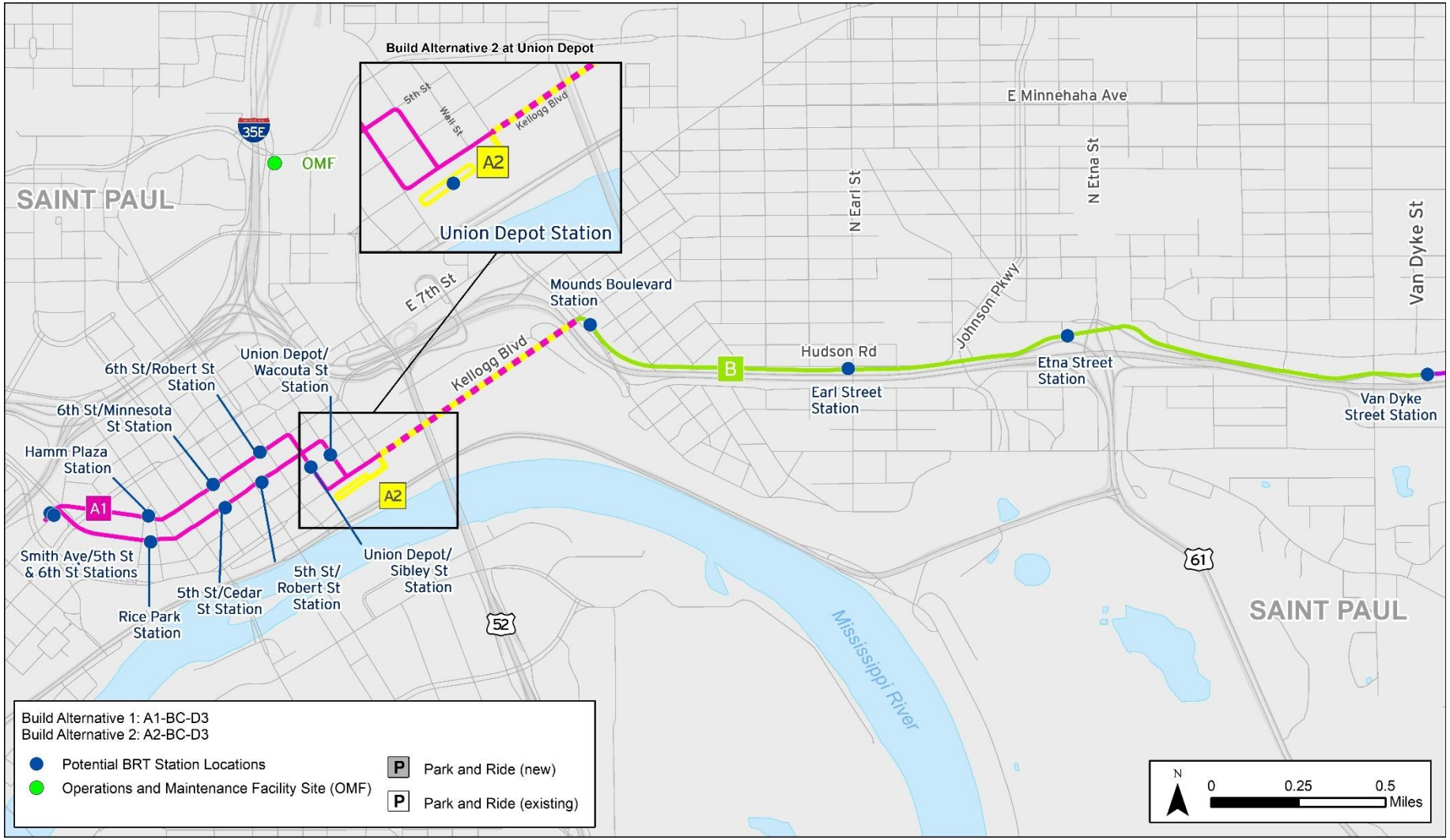
2.6.2. Build Alternatives

This EA evaluates the following two Build Alternatives:

- Build Alternative 1 (A1-BC-D3) is the LPA included in the Council's 2040 TPP (2018 Update)
- The Council added Build Alternative 2 (A2-BC-D3) to study Union Depot as a terminus for the Project

Figure 2.6-2 shows where Alignments A1 and A2 differ.

FIGURE 2.6-2: ALIGNMENTS A1 AND A2



2.6.2.1. Build Alternative 1: A1-BC-D3 (Locally Preferred Alternative)

Build Alternative 1 would include all-day, bi-directional transit service that operates from 5 a.m. to midnight on weekdays and weekends between the existing Smith Avenue Transit Center in downtown Saint Paul and a new station near the Woodbury Theatre and I-494 in Woodbury. Build Alternative 1 includes 10 stations in downtown Saint Paul, including two new stations at Union Depot, and 11 stations along the remainder of the alignment. Build Alternative 1 would operate in a guideway dedicated only to transit buses for 66 percent of its route and in mixed traffic for 34 percent. The dedicated guideway is new roadway being constructed for the Project.

Table 2.6-1 provides the percentage of dedicated guideway and mixed traffic in which the Project would operate for the Build Alternatives.

TABLE 2.6-1: PERCENTAGE OF DEDICATED GUIDEWAY VERSUS MIXED TRAFFIC BY ALTERNATIVE

Build Alternative	Dedicated Guideway	Mixed Traffic
Build Alternative 1 (A1-BC-D3)	65.6%	34.4%
With Dedicated Guideway Option at Hadley Avenue and 4th Street	*68.0%*	*32.0%*
Build Alternative 2 (A2-BC-D3)[a]	69.7%	30.3%
With Dedicated Guideway Option at Hadley Avenue and 4th Street	*72.3%*	*27.7%*

[a] *See **Section 2.6.2.2** for description of Build Alternative 2.*

Starting at the west end of the corridor in downtown Saint Paul, Build Alternative 1 includes the following alignments:

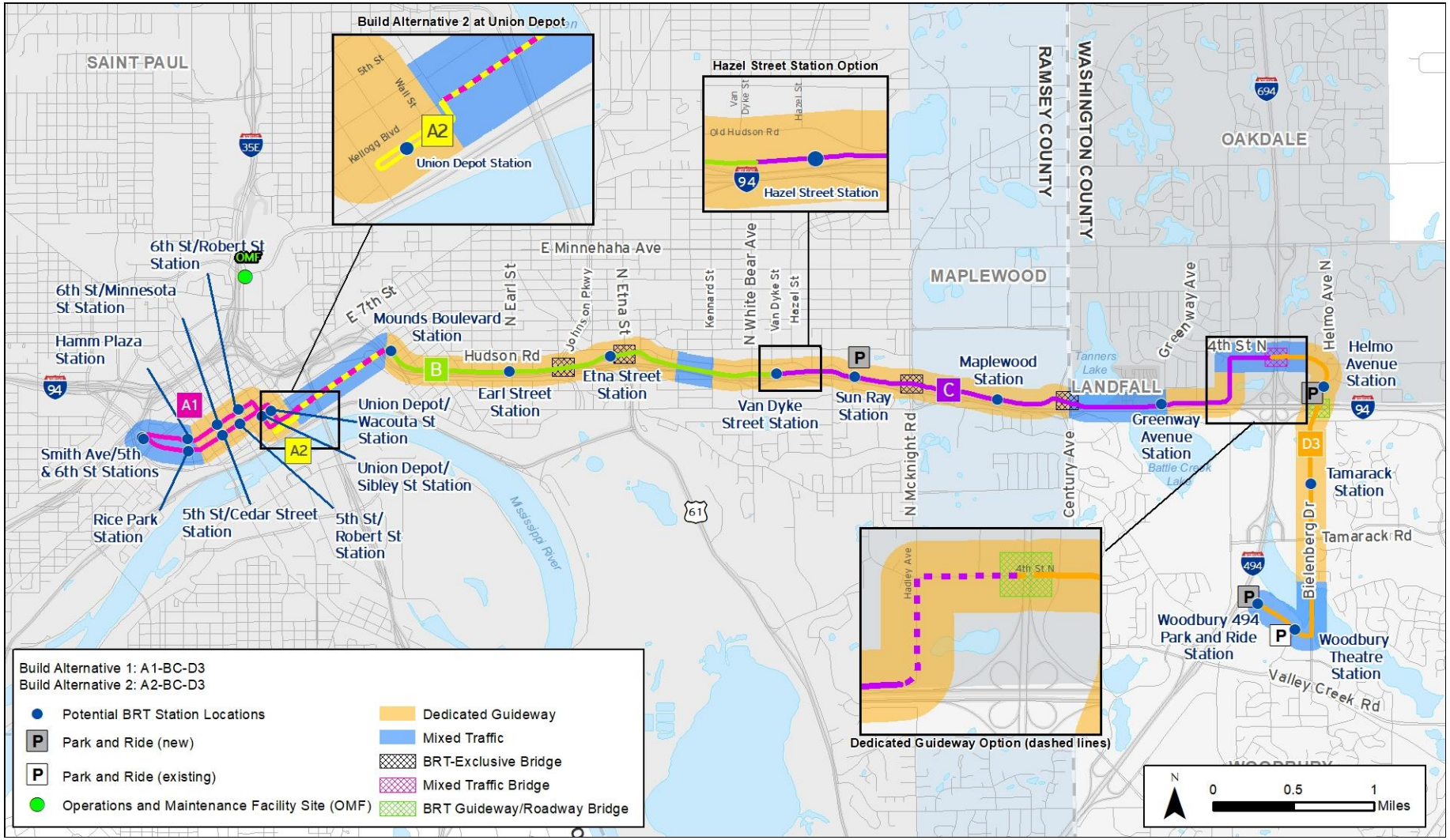
- **Alignment A1**
  - Would include all-day routing operating from 5 a.m. to midnight on weekdays and weekends, terminating at the Smith Avenue Transit Center in downtown Saint Paul. All-day BRT service would support convenient transfers for riders to more existing and planned transit routes in downtown Saint Paul
  - Westbound buses would travel on Kellogg Boulevard in mixed traffic, turning right and making a first downtown stop at the Union Depot/Sibley Street Station
  - Buses heading north along Sibley Street would run in mixed traffic before turning west on 6th Street, traveling in dedicated bus lanes with stops at the 6th Street/Robert Street Station and the 6th Street/Minnesota Street Station
  - Westbound buses would travel in mixed traffic after Wabasha Street, stopping at the Hamm Plaza Station before terminating at the existing Smith Avenue Transit Center
  - Heading eastbound, buses would stop at the Smith Avenue/5th Street Station, traveling in mixed traffic along 5th Street, with a stop at the Rice Park Station
  - Dedicated bus lanes continue after Wabasha Street and eastbound buses would stop at the 5th Street/Cedar Street Station and the 5th Street/Robert Street Station before turning south on Wacouta Street
  - Eastbound buses would run in mixed traffic along Wacouta Street with a final downtown stop at Union Depot/Wacouta Street Station before continuing east on Kellogg Boulevard in mixed traffic

- Buses from downtown Saint Paul would run in mixed traffic from the Union Depot/Wacouta Street Station to the Kellogg Boulevard/Broadway Street intersection, where it would turn northeast and continue in mixed traffic on the Kellogg Boulevard Bridge to the Mounds Boulevard intersection

- **Alignment B**
  - Buses would begin at the intersection of Kellogg Boulevard and Mounds Boulevard in Dayton's Bluff and travel to White Bear Avenue mostly in dedicated guideway
  - From the Mounds Boulevard Station, buses would head east on the northeast side of Mounds Boulevard and along the I-94 off-ramp in dedicated guideway
  - Would reconstruct the westbound I-94 off-ramp at Mounds Boulevard to accommodate the guideway, pedestrian connections and a noise barrier
  - Between Wilson Avenue and Johnson Parkway, buses would run in the dedicated guideway located between a modified Hudson Road and I-94
  - Buses would stop at the Earl Street Station and cross over Johnson Parkway on a new BRT-exclusive bridge
  - Buses would run in the dedicated guideway along the north side of the TH 61 interchange before stopping at the Etna Street Station
  - Buses would operate on a new BRT-exclusive bridge over the Wilson Avenue/Etna Street/TH 61 intersection, staying north of I-94 and its interchange ramps
  - Would shift the TH 61 westbound ramp slightly south to accommodate the guideway and a noise barrier
  - At the intersection of Old Hudson Road and Hudson Road, buses would transition into mixed traffic before continuing in dedicated guideway east of Kennard Street, passing under the White Bear Avenue Bridge

Figure 2.6-3 shows the locations where the Project would operate in dedicated guideway and mixed traffic.

FIGURE 2.6-3: PROJECT BUILD ALTERNATIVES OPERATING ENVIRONMENT



- **Alignment C**
  - Buses would begin at White Bear Avenue and end on the west side of the 4th Street Bridge over I-694
  - From White Bear Avenue, buses would continue east in a dedicated guideway on the north side of I-94, stopping at Van Dyke Street Station, passing under Ruth Street, and stopping at the Sun Ray Station
  - Buses would continue east in a dedicated guideway, crossing on a new BRT-exclusive bridge over McKnight Road
  - From McKnight Road, buses would transition to the north side of Hudson Road in a dedicated guideway, adjacent to the 3M campus, stopping at the Maplewood Station and cross over Century Avenue on a BRT-exclusive bridge
  - Buses would operate in mixed traffic on the east side of Century Avenue and south of Tanners Lake
  - Near Tanners Lake, buses would stop at the Greenway Avenue Station and operate in mixed traffic until just east of Greenway Avenue, where they would enter a dedicated guideway split along the north and south sides of Hudson Boulevard; the split guideway would turn north and follow Hadley Avenue to 4th Street, where buses would transition into mixed traffic

  Build Alternative 1 includes the following two design options in Alignment C:

  - **Hazel Street Station Option:** From White Bear Avenue, buses would continue east in a dedicated guideway, stopping at the Hazel Street Station instead of the Van Dyke Street Station, approximately 700 feet east of Van Dyke Street Station[12]
  - **Dedicated Guideway Option at Hadley Avenue and 4th Street:** On Hadley Avenue and 4th Street, buses would operate in a center running dedicated guideway across a reconstructed bridge over I-694 before turning south near Helmo Avenue (instead of operating in mixed traffic and crossing I-694 on the existing bridge). The Project would reconstruct the bridge and would include a pedestrian facility and dedicated lanes for the guideway and roadway.
- **Alignment D3**
  - Buses would begin where 4th Street crosses the bridge over I-694 in mixed traffic, then follow 4th Street east of I-694 in a center running guideway and turn south near Helmo Avenue, stopping at the Helmo Avenue Station
  - At the intersection of Helmo Avenue and Hudson Boulevard, buses would operate in a center running dedicated guideway and would continue south across I-94 on a new bridge, connecting to Bielenberg Drive on the south side of I-94 and continuing to the Tamarack Station
  - Buses would continue south on Bielenberg Drive in a center running guideway to Nature Path, where buses would then transition into mixed traffic
  - Buses would continue south in mixed traffic on Bielenberg Drive, turn west on Guider Drive, then south on Queens Drive, stopping at the Woodbury Theatre Station and terminating at the Woodbury 494 Park-and-Ride Station

[12] *In February 2019, the City of Saint Paul amended its* Gold Line Station Area Plan *to change the recommended station location from Van Dyke Street to Hazel Street based on public input received during the Project's design advancement. Prior to the amended plan, Van Dyke Street was the recommended station location, therefore this Environmental Assessment evaluates a station at both locations.*

2.6.2.2. Build Alternative 2: A2-BC-D3

Build Alternative 2 would include all-day service that would operate from 5 a.m. to midnight on weekdays and weekends between Union Depot and a new station near the Woodbury Theatre and I-494 in Woodbury. Build Alternative 2 includes 1 station in downtown Saint Paul at the Union Depot bus deck and 11 stations along the remainder of the alignment. Build Alternative 2 would operate in a guideway dedicated only to transit buses for 70 percent of its route and in mixed traffic for 30 percent. The dedicated guideway is new roadway being constructed for the Project.

Table 2.6-1 provides the percentages of dedicated guideway and mixed traffic in which the Project would operate for Build Alternative 2; **Figure 2.6-3** shows the locations where the Project would operate in a dedicated guideway and mixed traffic.

In Alignment A2, BRT would operate in mixed traffic from Union Depot along the Kellogg Boulevard Bridge to a new station on Mounds Boulevard in Dayton's Bluff. Alignments B, C and D3 (including the two Alignment C design options) are the same for Build Alternative 2.

The difference between the two alternatives is within Alignment A in downtown Saint Paul (see **Figure 2.6-2**). Alignment A2 of Build Alternative 2 would terminate at Union Depot and Alignment A1 of Build Alternative 1 would terminate approximately 1 mile to the west at the Smith Avenue Transit Center.

Starting at the west end of the corridor in downtown Saint Paul, Build Alternative 2 would include the following elements and route for Alignment A2:

- Would terminate at the bus deck of Union Depot in downtown Saint Paul
- Riders would utilize Union Depot, a regional multimodal hub, to make transfers to existing and future planned routes in downtown Saint Paul. Station infrastructure would include a pylon for signage, a tactile warning strip, heat, a ticket-vending machine, and ticket validators for inbound and outbound riders
- Buses from downtown Saint Paul would run in mixed traffic from Union Depot to the Kellogg Boulevard/Broadway Street intersection, where they would turn northeast and continue in mixed traffic on the Kellogg Boulevard Bridge to the Mounds Boulevard intersection

2.6.3. Stations

The Project proposes the following two station types:

- **Walk-up** stations that do not include designated parking for transit-riders
- **Park-and-ride** stations that include a new or existing parking facility designated for transit-riders

Build Alternative 1 would include a total of 21 stations and Build Alternative 2 would include a total of 12 stations. **Figure 2.6-1** shows the locations of both Build Alternatives' proposed stations.

All of the following stations would be walk-up stations, except those noted as park-and-ride stations:

- Proposed stations included under Alignment A1 of Build Alternative 1 only
  - Union Depot/Sibley Street
  - 6th Street/Robert Street
  - 6th Street/Minnesota Street
  - Hamm Plaza
  - Smith Avenue/5th Street

  - Smith Avenue/6th Street
  - Rice Park
  - 5th Street/Cedar Street
  - 5th Street/Robert Street
  - Union Depot/Wacouta Street
- Proposed stations included under Alignment A2 of Build Alternative 2 only
  - Union Depot Station (at bus deck)
- Proposed stations included under both Build Alternative 1 and Build Alternative 2
  - Mounds Boulevard
  - Earl Street
  - Etna Street
  - Van Dyke Street
  - Sun Ray (new 150-space surface park-and-ride lot)
  - Maplewood
  - Greenway Avenue
  - Helmo Avenue (new 100-space surface park-and-ride lot)
  - Tamarack Road
  - Woodbury Theatre (existing surface park-and-ride lot, utilizing 150 spaces)
  - Woodbury 494 Park-and-Ride (new 200-space surface park-and-ride lot)

The stations' raised platforms would be designed to integrate with existing non-BRT service platforms. The following locations would share stations with existing non-BRT service:

- 6th Street/Minnesota Street
- Hamm Plaza
- Smith Avenue/5th Street
- Smith Avenue/6th Street
- Rice Park
- 5th Street/Cedar Street

Coordination with the CMC on the design of platforms shared with existing non-BRT service will continue as the Project advances through the Project Development and Engineering phases.

Except for those located downtown Saint Paul, most stations would have a pair of platforms for westbound and eastbound buses. Stations would be approximately ½- to 1 mile apart outside of downtown. In downtown Saint Paul stations would be 2 to 3 blocks (approximately 0.15 to 0.30 miles) apart due to infrastructure constraints. In general, the Council would design the stations to include essential components for traveler safety and security, and amenities for passenger comfort and convenience. Station designs would comply with federal Americans with

Disabilities Act[13] requirements. Primary station elements would include platforms, off-board fare collection systems, shelters, wheelchair ramps and structural features such as heat, lights, benches, bike racks, trash receptacles, security systems, functional landscaping and information displays. Landscape features may include trees and other vegetation that would be introduced as part of the Project.

2.6.4. Pedestrian and Bicycle Facilities

The Project is expected to benefit pedestrians and bicyclists by providing new pedestrian and bike facilities. The pedestrian and bike connections would be ADA-compliant, and all station platforms would be aligned with crosswalks for pedestrian safety. Other examples of improvements to pedestrian and bicycle facilities constructed with the Project include:

- Sidewalk bump-outs in downtown Saint Paul to provide more space for pedestrians
- Connections for easy access to stations
- Adding facilities to fill gaps between existing facilities and station areas

Section 3.5 of the *Transportation Resources Technical Report* in **Appendix A** includes details of the pedestrian and bicycle facilities evaluation. The 15% Concept Plans in **Appendix B** show the locations of the proposed new facilities.

2.6.5. Park-and-Ride Facilities

The Project would utilize approximately 150 spaces at the existing Metro Transit express bus route park-and ride at the Woodbury Theatre, and it would construct the following three park-and-ride facilities (see **Figure 2.6-1**):

- At the Sun Ray Station in Saint Paul, a new park-and-ride surface lot with 150 spaces would be located north of the station, next to the existing Sun Ray Transit Center
- At the Helmo Avenue Station in Oakdale, a new park-and-ride surface lot with 100 spaces would be located at the west side of the guideway near the new multimodal bridge that the Project would construct over I-94 that would connect Helmo Avenue and Bielenberg Drive
- In Woodbury, a new park-and-ride would be located at Guider and Woodlane drives near I-494; this surface lot would have 200 parking spaces and a layover facility for BRT buses and drivers

[13] *Americans With Disabilities Act of 1990, Pub. L. No. 101-336, 104 Stat. 328 (1990). Available at: http://library.clerk.house.gov/reference-files/PPL_101_336_AmericansWithDisabilities.pdf. Accessed October 2018.*

2.6.6. Project Vehicle Characteristics

The Project would procure 12 articulated BRT vehicles for Build Alternative 1 and 11 for Build Alternative 2 with the following characteristics:

- **Length:** 60 feet
- **Fuel type:** Diesel, hybrid or electric
- **Capacity:** 48 passengers
- **Door location:** Right side
- **Fare collection:** At stations only; no collection on BRT vehicles

The EA evaluates diesel buses for the Project; however, Metro Transit may decide later that the Project will use electric buses, and it would then consider installing charging stations for the buses at the following locations:[14]

- Build Alternative 1 would include an electric charging station at the Smith Avenue Transit Center and Woodbury 494 Park-and-Ride Station; the buses would charge for about 10 minutes during layovers and would gain 10 miles of energy, so the vehicles can complete scheduled routes for the day
- Build Alternative 2 would include a charging station at the Union Depot bus deck and the Woodbury 494 Park-and-Ride Station; the buses would charge for about 10 minutes during layovers and would gain 10 miles of energy, so the vehicles can complete scheduled routes for the day
- Both Build Alternatives would include charging stations at the OMF

Overhead charging stations would have a mastlike appearance and connect to the bus through a pantograph on the vehicle's roof. In addition to the mast, each charging station would require a utility transformer and connection cabinet, and a power converter cabinet.

2.6.7. Operations and Maintenance Facility

The Project would not construct a new operations and maintenance facility (OMF). Project vehicles would instead use the existing East Metro Transit Facility located east of I-35E just north of downtown Saint Paul (see **Figure 2.6-1**). This facility has the capacity to house 214 buses and currently maintains 214 buses. Some of the current buses assigned to the OMF will be moved to another OMF with capacity to provide space for the 12 60-foot-long vehicles the Project would use. The Project vehicles would be inspected, maintained, cleaned, and stored at this location, which already includes administrative offices, employee facilities and an employee parking lot. Electric charging stations could also be added at the OMF, if the Project uses electric vehicles. These charging stations would be added to the interior of the OMF. There would be enough interior space for charging infrastructure for the Gold Line fleet without needing to reduce the OMF's current bus capacity of 214 buses.

[14] *The Environmental Assessment evaluates impacts based on diesel bus operations. If electric buses are determined for use in a later phase of Project advancement, the FTA and Council will determine if additional analysis is required to assess new significant impacts.*

2.6.8. Other Project Elements

2.6.8.1. Bridges and Underpasses

The Project would construct four new BRT-exclusive bridges (see **Figure 2.6-3**) that would cross the following roadways:

- Trunk Highway (TH) 61/Etna Street
- Johnson Parkway
- McKnight Road
- TH 120/Century Avenue

The McKnight Road and Century Avenue bridges would also include a multiuse trail to provide grade-separated crossings at these high-traffic intersections.

The Project would build a new mixed traffic bridge at the crossing of I-94 connecting Helmo Avenue and Bielenberg Drive. This bridge would include a center running guideway, a multiuse trail and roadway lanes for local traffic. The Dedicated Guideway Option at Hadley Avenue and 4th Street in Oakdale, which is included under Alignment C of both Build Alternatives, would reconstruct the bridge over I-694 at 4th Street to accommodate a dedicated guideway along 4th Street. The reconstructed bridge would include a center running guideway and multiuse trail. **Figure 2.6-3** shows the locations of these mixed traffic bridges. The Council coordinated with FHWA and MnDOT on the design of these bridges. The agencies will continue to coordinate as the design advances through the Project Development and Engineering phases.

The Project would also include transit-related improvements such as roadway modifications and pedestrian connections within the Project area. In general, most BRT stations would include direct pedestrian connections, both new and reconstructed, that would improve BRT operations, public safety and access to stations. Other potential improvements constructed with the Project include a pedestrian overpass at Maple Street, redecking of the Earl Street bridge in Saint Paul and underpasses for the dedicated guideway at White Bear Avenue and Ruth Street, which would optimize BRT operations and minimize impacts to traffic at these intersections. The Project would also relocate existing noise barriers along I-94 to accommodate the BRT dedicated guideway. The addition of retaining walls and implementation of stormwater best management practices would also be required for the Project.

2.6.8.2. Improvements to Roadway and Pedestrian Infrastructure

Both Build Alternatives would include transit-related improvements such as roadway modifications and pedestrian connections within the Project corridor. In general, most BRT stations would include direct pedestrian connections, both new and reconstructed, that would improve BRT operations, public safety and access to stations. **Table 2.6-2** summarizes these improvements, which the Project's 15% Concept Plans in **Appendix B** also include.

TABLE 2.6-2: BUILD ALTERNATIVES' IMPROVEMENTS TO ROADWAY AND PEDESTRIAN INFRASTRUCTURE

Alignment	Type	Location	Description
Alignments A1 and A2	Roadway	Wacouta Street/ Kellogg Boulevard	• Would modify median to allow BRT buses to turn left onto Kellogg Boulevard
Alignment B	Roadway and Pedestrian	I-94/Mounds Boulevard	• Would shift westbound I-94 off-ramp south to accommodate guideway • Would construct pedestrian crosswalk on I-94 off-ramp for access to Mounds Boulevard Station
	Roadway	Hudson Road between Mounds Boulevard and Earl Street	• Would change to one-way (westbound-only) access along Hudson Road between Wilson Avenue and Frank Street
	Roadway	Plum Street/Hudson Road	• Would close access from Plum Street to Hudson Road
	Pedestrian	Hudson Road at Johnson Parkway	• Would construct pedestrian connection from 1145 Hudson Road driveway to Johnson Parkway
	Roadway and Pedestrian	TH 61/Etna Street	• Would shift westbound I-94 on-ramp south to accommodate guideway • Would construct pedestrian connections and crosswalks near Etna Street Station • Would construct pedestrian connection to Pacific Street on east side of TH 61
	Pedestrian	West Side Etna Street to Burns Avenue	• Would construct pedestrian connection from Etna Street Station along west side of TH 61 to Burns Avenue • Would construct pedestrian tunnel under southbound ramp of I-94 at TH 61
	Pedestrian	East Side Pacific Street to Burns Avenue	• Would construct pedestrian connection from Pacific Street to Burns Avenue along the east side of TH 61
	Pedestrian	Burns Avenue/TH 61	• Would upgrade existing signal system at Burns Avenue and TH 61 to bring system into compliance with the Americans with Disabilities Act
	Roadway	Old Hudson Road	• Would reconstruct roadway to accommodate mixed-traffic BRT
	Roadway	I-94/White Bear Avenue	• Would reconstruct westbound on- and off-ramps slightly south to accommodate guideway and underpass at White Bear Avenue
	Roadway	I-94/Ruth Street	• Would reconstruct westbound on-ramp slightly south to accommodate guideway and underpass at Ruth Street

Alignment	Type	Location	Description
Alignment C	Pedestrian	Hazel Street Station Option to Ruth Street	• Would construct pedestrian connection from Hazel Street Station Option to Ruth Street
	Roadway and Pedestrian	Sun Ray Shopping Center	• Would reconstruct access to Sun Ray Shopping Center along Hudson Road to accommodate guideway • Would construct pedestrian connections along the north side of Hudson Road for access to the Sun Ray Station • Would widen existing sidewalk west of Pedersen Street to Ruth Street and east of Sun Ray Shopping Center to McKnight Road
	Roadway and Pedestrian	McKnight Road	• Would construct grade and grade-separated pedestrian crossings at McKnight Road for access to Sun Ray and Maplewood stations
	Roadway	3M campus/Hudson Road	• Would reconstruct Hudson Road to accommodate acceleration/deacceleration lanes for 3M campus traffic stopping for BRT crossings at entrances • Would construct east-west multiuse trail for Sun Ray and Maplewood station access
	Roadway and Pedestrian	Century Avenue	• Would construct grade and grade-separated pedestrian crossings at Century Avenue for access to Maplewood and Greenway stations • Would construct pedestrian connection along west side of Century Avenue under existing I-94 Bridge • Would close ramp from Century Avenue south to Hudson Road west and replace with new right turn lane slightly to the south
	Pedestrian	Tanners Lake/Hudson Road	• Would construct pedestrian connections along north side of Hudson Road for access to the Greenway Avenue Station • Would construct pedestrian connections along west side of Greenway Avenue for access to the Greenway Avenue Station
	Roadway	Hudson Boulevard/ Hadley Avenue	• Would modify roadway curves at Hudson Boulevard/Hadley Avenue and Hadley Avenue/4th Street to improve BRT operations

Alignment	Type	Location	Description
Alignment D3	Roadway and Pedestrian	4th Street/Hayward Avenue	• Would reconstruct 4th Street/Hayward Avenue intersection to control BRT traffic crossing • Would construct pedestrian facilities from 4th Street Lane to Hayward Avenue along north side of 4th Street
	Roadway and Pedestrian	Helmo Avenue Station	• Would reconstruct 2nd Street/Helmo Avenue intersection to control BRT traffic crossing • Would construct pedestrian connections along Helmo Avenue for station access
	Roadway and Pedestrian	Bielenberg Drive/Hudson Road	• Would reconstruct Bielenberg Drive/Hudson Road intersection to control BRT traffic crossing • Would construct pedestrian connections along Bielenberg Drive for access to Helmo and Tamarack stations
	Roadway	Bielenberg Drive/ Tamarack Station	• Would construct intersection to control BRT traffic crossing for local businesses along Bielenberg Drive
	Roadway and Pedestrian	Bielenberg Drive/ Tamarack Road	• Would reconstruct Bielenberg Drive/Tamarack Road intersection to control BRT traffic crossing • Would construct pedestrian connections along Bielenberg Drive for access to Tamarack Station
	Roadway and Pedestrian	Bielenberg Drive/ Nature Path	• Would reconstruct Bielenberg Drive/Nature Path intersection to control BRT traffic crossing • Would construct pedestrian connections along Bielenberg Drive for access to Tamarack Station
	Roadway	Bielenberg Drive/Guider Drive	• Would reconstruct intersection of Bielenberg and Guider drives to control BRT traffic crossing

2.6.9. Operating Assumptions

The EA analysis assumes BRT would operate in the Project corridor from 5 a.m. to midnight on weekdays and weekends. **Table 2.6-3** shows the operating frequencies for the Project.

TABLE 2.6-3: BUILD ALTERNATIVES OPERATING FREQUENCIES

Day of the Week	Period	Operating Frequency
Weekday	Early morning (5-6 a.m.)	30 minutes
Weekday	Peak (6-9 a.m. and 3-6 p.m.)	10 minutes
Weekday	Mid-day (9 a.m.-3 p.m.) and evening (6-8 p.m.)	15 minutes
Weekday	Late (8 p.m.-midnight)	30 minutes
Saturday/Sunday	Day (5 a.m.-7 p.m.)	15 minutes
Saturday/Sunday	Evening (7 p.m.-midnight)	30 minutes

2.6.10. Summary of Build Alternatives

Table 2.6-4 describes the elements of the Project's two Build Alternatives.

TABLE 2.6-4: PROJECT BUILD ALTERNATIVES DESCRIPTIONS

Element	Build Alternative 1	Build Alternative 2
Western Terminus	Smith Avenue/5th Street Station at Smith Avenue Transit Center	Bus deck of Union Depot
Eastern Terminus	Woodbury 494 Park-and-Ride Station	Woodbury 494 Park-and-Ride Station
Length	10.4 miles	9.4 miles
2040 Projected Ridership	7,100	6,350
Capital Cost Estimate[a]	$422,911,831[b]	$408,523,475[c]
Operations and Maintenance Cost	$6,129,393	$5,339,988
Park-and-Ride Facilities and Numbers of Parking Spaces	• Sun Ray: 150 • Helmo Avenue: 100 • Woodbury Theatre: 150 • Woodbury 494 Park-and-Ride: 200	• Sun Ray: 150 • Helmo Avenue: 100 • Woodbury Theatre: 150 • Woodbury 494 Park-and-Ride: 200
Total Stations	21	12

Element	Build Alternative 1	Build Alternative 2
Station Locations	• Union Depot/Sibley Street • 6th Street/Robert Street • 6th Street/Minnesota Street • Hamm Plaza • Smith Avenue/5th Street • Smith Avenue/6th Street • Rice Park • 5th Street/Cedar Street • 5th Street/Robert Street • Union Depot/Wacouta Street • Mounds Boulevard • Earl Street • Etna Street • Van Dyke Street or Hazel Street • Sun Ray • Maplewood • Greenway Avenue • Helmo Avenue • Tamarack • Woodbury Theatre • Woodbury 494 Park-and-Ride	• Union Depot • Mounds Boulevard • Earl Street • Etna Street • Van Dyke Street or Hazel Street • Sun Ray • Maplewood • Greenway Avenue • Helmo Avenue • Tamarack • Woodbury Theatre • Woodbury 494 Park-and Rid-

[a] *The addition of electric bus-charging infrastructure at the OMF and end-of-line stations would be $5,312,000. The cost of electric buses would add $6,985,000 to the Project's capital cost estimate.*

[b] *The Project's capital cost estimate with the Hazel Street Option would be $429,635,192, and with the Dedicated Guideway Option at Hadley Avenue and 4th Street the capital cost estimate would be $432,961,516.*

[c] *The Project's capital cost estimate with the Hazel Street Option would be $408,446,000, and with the Dedicated Guideway Option at Hadley Avenue and 4th Street the capital cost estimate would be $418,788.160.*

2.7. Identification of the Preferred Alternative

The FTA and Council identified Build Alternative 1 (A1-BC-D3) as the Preferred Alternative for the Project;[15] however, at the request of the CMC, the 15% Concept Plans (see **Appendix B**) developed both Build Alternatives in equivalent detail, and this EA evaluates the potential impacts of both.

The two Build Alternatives differ primarily in their downtown Saint Paul termini and in the stations within Alignments A1 and A2, that would serve downtown and Union Depot. The Project sought public feedback on Alignments A1 and A2 through outreach events in fall 2018, and of the people who responded, more than 75 percent preferred Alignment A1. Two open houses on Oct. 9, 2018, provided information about the two alignments

[15] *Build Alternative 1 (A1-BC-D3) is also the Locally Preferred Alternative included in the* 2040 Transportation Policy Plan *in October 2018.*

in downtown Saint Paul. Attendees could view the proposed downtown routing alternatives and learn more about the Project. At the two events, staff conversed with a combined total of 65 individuals, with 21 expressing a preference for Alignment A1 and six for Alignment A2.

The FTA and Council identified Build Alternative 1 as the Preferred Alternative that meets the Project's purpose and need of providing a transit service that meets long-term regional mobility and local accessibility needs for businesses and the public when compared with the No-Build Alternative. Alignment A1 under Build Alternative 1 offers the following benefits in downtown Saint Paul not provided by Alignment A2 under Build Alternative 2:

- Provides the most direct access throughout downtown Saint Paul where people live, work and recreate
- Serves the mixed-use core of Saint Paul that provides the greatest employment and housing density in the city and has a high projected population and employment growth
- Includes areas with high concentrations of zero-vehicle households
- Provides more direct access to transit for minority and low-income populations living in the downtown area
- Consistent with the Project's goal to maximize travel time savings, Alignment A1 provides a one-seat ride to and from downtown Saint Paul and to Union Depot, meaning riders who need to access western areas of downtown would not have to transfer to other modes or walk long distances to reach their destinations

Alignment A1 also provides a direct connection to Union Depot.[16] In addition, Build Alternative 1 is consistent with the Project goal to maximize ridership since Build Alternative 1 is projected to have higher ridership than Build Alternative 2, and analyses anticipate it would attract the newest transit-riders.

Within Alignment C, the Preferred Alternative includes the Hazel Street Station Option and does not include a station at Van Dyke Street. In coordination with the City of Saint Paul, the Council included the Hazel Street Station Option over the Van Dyke Street Station based on public input received during outreach efforts completed during development of the EA and the city's action to amend its Gold Line Station Area Plan to include the station at Hazel Street. The station location at Hazel Street supports the Project's need to support local and regional objectives for growth and prosperity by locating the station where it provides development opportunity coupled with increased visibility from Old Hudson Road.

The Council will identify if mixed traffic operations across the 4th Street Bridge, or the Dedicated Guideway Option at Hadley Avenue and 4th Street, will advance as part of the Project in the environmental decision document.

[16] *The connection to Union Depot under Alignment A1 is further apart than Alignment A2; however, both alignments link to this multimodal hub and provide other convenient transportation connections to local bus routes, the METRO Green Line and bike-sharing facilities.*

METRO Gold Line

BUS RAPID TRANSIT PROJECT ENVIRONMENTAL ASSESSMENT

Appendix A: Environmental Assessment Technical Reports

Attachment A-2-1:
Alternatives Development Technical Memorandum

September 2019

GATEWAY CORRIDOR
GOLD LINE BRT

Alternatives Development Technical Memorandum

January 2017

Washington County Regional Railroad Authority

RAMSEY COUNTY Regional Railroad Authority

METROPOLITAN COUNCIL

Kimley»Horn

SRF Consulting Group, Inc. | Engineers Planners Designers

Table of Contents

List of Acronyms

AA	Alternatives Analysis
BRT	bus rapid transit
CAC	Community Advisory Committee
EA	Environmental Assessment
EAW	Environmental Assessment Worksheet
EIS	Environmental Impact Statement
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GCC	Gateway Corridor Commission
LPA	Locally Preferred Alternative
LRT	light rail transit
MnDOT	Minnesota Department of Transportation
NEPA	National Environmental Policy Act
PAC	Policy Advisory Committee
RCRRA	Ramsey County Regional Railroad Authority
RGU	Responsible Governmental Unit
TAC	Technical Advisory Committee
TPP	Transportation Policy Plan
TSM	Transportation System Management
WCRRA	Washington County Regional Railroad

1.0 Introduction

The Gateway Corridor alternatives are rooted in plans and studies dating back to 2008. These include feasibility studies, park-and-ride plans, managed lane studies, and long-range transportation plans, among others. As shown in **Table 1**, Gateway Corridor project alternatives were developed in multiple phases.

Table 1. Alternatives Development Process Timeline

Phase	Timeline
Gateway Corridor Alternatives Analysis (AA) Study	2010-2013
Additional analysis and project definition prior to release of Scoping Booklet	2013-2014
Draft EIS Scoping process (as required by Minnesota Rules, part 4410.2100)	February – August 2014
Selection of a Locally Preferred Alternative (LPA) and inclusion in the region's long range transportation and funding plan, the *2040 Transportation Policy Plan* (2040 TPP, prepared by the Metropolitan Council)	August 2014 – January 2015
Alternatives refinement	Fall 2014 – December 2016
LPA refinement (refinement of east end alignment and terminus)	January 2016 – December 2016
Change in NEPA class of action from EIS to EA	October 2016
Amendment to include revised LPA in the 2040 TPP	Anticipated in summer 2017

As indicated in **Table 1**, the National Environmental Policy Act (NEPA) class of action changed from an Environmental Impact Statement (EIS) to an Environmental Assessment (EA) in October 2016. Decisions made before and after this change in class of action are described in this report. To comply with the Minnesota Environmental Policy Act (MEPA), an Environmental Assessment Worksheet (EAW) will also be prepared.

2.0 Alternatives Analysis Study (2010-2013)

The AA Study was completed by the Gateway Corridor Commission (GCC), in partnership with the Metropolitan Council and local jurisdictions, in February 2013.[1] The AA Study compared the benefits, costs, and impacts for a No-Build alternative against a range of Build alternatives consisting of pairs of transit modes (i.e., the technology used to move passengers, such as express or local bus or rail) and alignments (i.e., the route taken by the mode). Specific pairings are described in Section 2.3.

[1] Available at http://thegatewaycorridor.com/wp-content/uploads/2016/02/2013-Gateway-Final-AA-Report.pdf. The AA Study was prepared under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users.

2.1 Transit Modes

Four transit technologies (modes) were considered in the initial universe of alternatives for the Gateway Corridor project: express bus, commuter rail, light rail transit (LRT), and bus rapid transit (BRT).

2.2 Transit Alignments

Over 20 alignment options for BRT, LRT, and commuter rail were developed (see **Figure 1**). No-Build express bus was assumed to continue to operate in the I-94 corridor consistent with existing conditions.

2.3 Evaluation of Alternatives

To narrow the number of alternatives for detailed evaluation, the project team developed screening criteria in consultation with the Technical Advisory Committee (TAC), Policy Advisory Committee (PAC), and other stakeholders (**Table 2**). The purpose of this screening was to identify alternatives with practical potential to address the project purpose and need and goals and objectives. Alternatives that did not meet all the screening criteria were not advanced for further evaluation.

Figure 1. Alternatives Evaluated in the AA Study

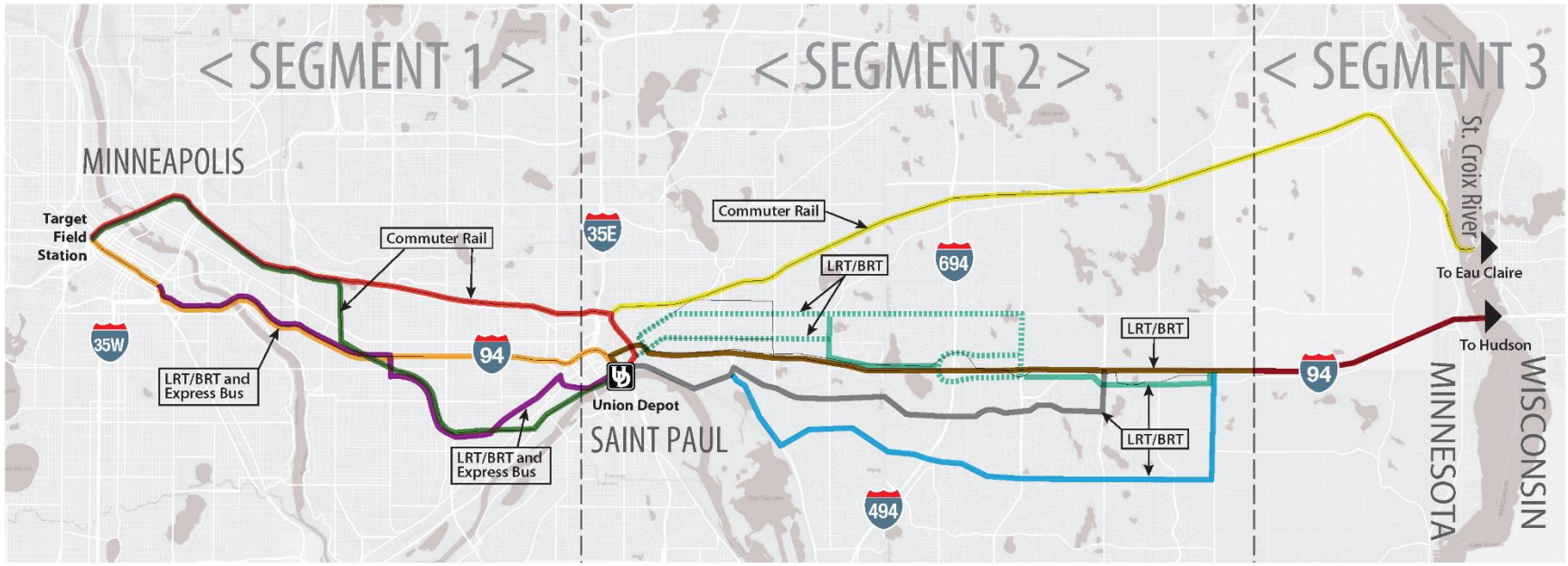


Table 2. Screening Criteria Used in the AA Study

Transportation Mobility
• Does the alternative add transportation capacity in congested areas? • Does the alternative serve the transit markets in the corridor? • Would the alternative provide new service (i.e., not duplicate current or planned transit service)? • Does the alternative connect to the major multi-modal hubs in Saint Paul and Minneapolis, supporting the region's current investment?
Community and Agency Planning: Consistency with Transportation, Land Use, and Economic Development Plans
• Is the alternative generally consistent with current regional planning? • Is the alternative generally consistent with current community plans?
Cost-Effectiveness
• Is the alternative compatible with existing and planned infrastructure? • Would the alternative result in feasible capital costs? • Would the alternative result in operating costs comparable to other transit investments the region is considering?
Natural Environment
• Is implementation of this alternative possible without impacting environmentally sensitive areas?

Based on results from this screening, the GCC advanced seven alternatives for more detailed analysis.

Following this evaluation, the PAC recommended that a managed lane[2] alternative be added to the universe of alternatives. Following consultation with the Minnesota Department of Transportation (MnDOT) and the Metropolitan Council, the new "BRT Managed Lane" alternative was added, bringing the number of alternatives recommended to be carried forward to eight.

All eight alternatives were presented during the second series of AA Study public open house meetings. Public comment supported these eight alternatives for further development and consideration:

- **Alternative 1:** No-Build – the 2030 transportation network with only those improvements already planned and programmed
- **Alternative 2:** Transportation System Management (TSM) – enhancements to facilities and bus service short of major infrastructure additions
- **Alternative 3**: BRT adjacent to Hudson Road east of I-694 and in the median of I-94 west of I-694. It features BRT in an exclusive, two-way guideway. The guideway ends at Manning Avenue, and BRT service would continue on I-94 to Hudson, Wisconsin.

[2] As defined in the *2030 Transportation Policy Plan*, managed lanes are lanes where any physical or operational technique or tool is employed to affect lane-specific traffic through managing vehicle speeds, vehicle occupancy, and/or user-based pricing. High-occupancy vehicle lanes, high-occupancy toll lanes, and bus-only shoulders are all types of managed lanes.

- **Alternative 4:** BRT on East 7th Street and White Bear Avenue in Saint Paul then adjacent to Hudson Road. It features BRT in an exclusive, two-way guideway and provides more localized access to communities in the urbanized areas of the corridor east of downtown Saint Paul.
- **Alternative 5:** LRT adjacent to Hudson Road east of I-694 and in the median of I-94 west of I-694. It provides a double-track, exclusive LRT guideway and follows an alignment identical to that of Alternative 3.
- **Alternative 6:** LRT on East 7th Street and White Bear Avenue in Saint Paul then adjacent to Hudson Road. Alternative 6 provides an exclusive, double-track LRT guideway with more localized access to corridor communities in the urbanized areas of the corridor east of downtown Saint Paul.
- **Alternative 7:** Commuter rail on Union Pacific, Canadian Pacific, and Burlington Northern Santa Fe tracks. Alternative 7 provides commuter rail transit service within existing railroad corridors between the Twin Cities Metropolitan Area and Eau Claire.
- **Alternative 8:** BRT managed lane within I-94. Alternative 8 would add managed lanes to I-94 between downtown Saint Paul and the Highway 95 interchange just west of the St. Croix River.

Quantitative and qualitative data were used to evaluate the eight alternatives, reflecting specific measures related to corridor goals and objectives. Criteria used to differentiate alternatives included:

- Daily transit ridership
- Capital cost and cost-effectiveness index (CEI)
- Economic development potential
- Property acquisition
- Traffic impacts
- Transit travel times

After an initial evaluation, Alternative 7 was dismissed because it did not meet sufficient project goals to remain a feasible alternative, and the remaining six Build alternatives were refined in an effort to improve benefits and/or reduce costs and impacts. The advisory committees then ranked the refined Build alternatives into “low,” “medium,” and “high” categories, with high being the best ranking, as summarized in **Table 3**.

Table 3. Ranking of AA Build Alternatives Based on Differentiating Criteria

Alternative	Ranking	Reason for Ranking
Alternative 2 (TSM)	Low	Lowest ridership, low station area development potential
Alternative 3 (BRT along Hudson Road/I-94)	High	High ridership, lower cost than LRT and BRT Managed Lane alternatives, few traffic impacts, better transit travel times
Alternative 4 (BRT on East 7th Street/White Bear Avenue/Hudson Road)	Low	High property acquisitions, slow transit travel times, more traffic impacts
Alternative 5 (LRT along Hudson Road/I-94)	Medium	High ridership, lower cost than other LRT alternative, few traffic impacts, better transit travel times
Alternative 6 (LRT on East 7th Street/White Bear Avenue/Hudson Road)	Low	High cost, high property acquisitions, slow transit travel times, more traffic impacts
Alternative 8 (BRT Managed Lane on I-94)	Medium	Lower cost than LRT alternatives, few property acquisitions, low station area development potential

2.4 AA Study Decision

The AA Study identified BRT and LRT alternatives adjacent to Hudson Road (Alternatives 3 and 5) as best meeting the project goals and recommended they move forward for study in the Draft EIS. The BRT alternative was identified as the preferred option, and LRT was advanced for comparative purposes to BRT. Both alternatives terminated at Union Depot on the west, relying on existing connecting transit for service to Minneapolis. The eastern terminus for the dedicated guideway was defined as Manning Avenue for both the BRT and LRT alternatives, with BRT service continuing to Hudson, Wisconsin in Alternative 3.

3.0 Additional Analysis and Project Definition Prior to the Release of the Scoping Booklet (2013-2014)

Based on input from corridor communities and community groups, alignment options for specific parts of the corridor were further defined in the early stages of Draft EIS Scoping. This process, and its influence on alternatives evaluated to be evaluated, is discussed below.

3.1 Alignment Options between Mounds Boulevard and White Bear Avenue

In the AA Study, two alignment options were considered for the area directly east of downtown Saint Paul, generally between Mounds Boulevard and White Bear Avenue. One alignment followed Mounds Boulevard, Hudson Road, and I-94 (reflected in the Draft EIS Scoping process as Alignment B1), and the other followed Mounds Boulevard, East 7th Street, and White Bear Avenue before rejoining Hudson Road north of I-94 (reflected in the Draft EIS Scoping process as Alignment B2) (see **Figure 2**). The AA Study recommendation only included Alignment B1, which was part of Alternative 3. After the AA Study was completed, a request was received from the community to further evaluate Alignment B2 during the Draft EIS Scoping process (see **Appendix A**).

The B1 and B2 alignments were evaluated during Draft EIS Scoping based on differentiating criteria consistent with the project goals and objectives. The differentiating criteria included physical and operational impacts (right-of-way, accessibility, parking impacts, traffic impacts, and cultural resources), population served, ridership and travel time, cost, neighborhood concerns, and other regional transit investments under consideration.

The evaluation results showed the advantages of Alignment B2 would not outweigh its substantial disadvantages. Alignment B2 would directly serve more people and jobs today and in the future and would generate somewhat greater ridership. However, it would also have greater capital and operating costs; longer travel time (10-13 minutes compared to four minutes for Alignment B1); more extensive neighborhood, traffic, and property impacts; neighborhood concerns; and overlap with the future East 7th Street arterial BRT service as planned in the 2030 TPP.[3]

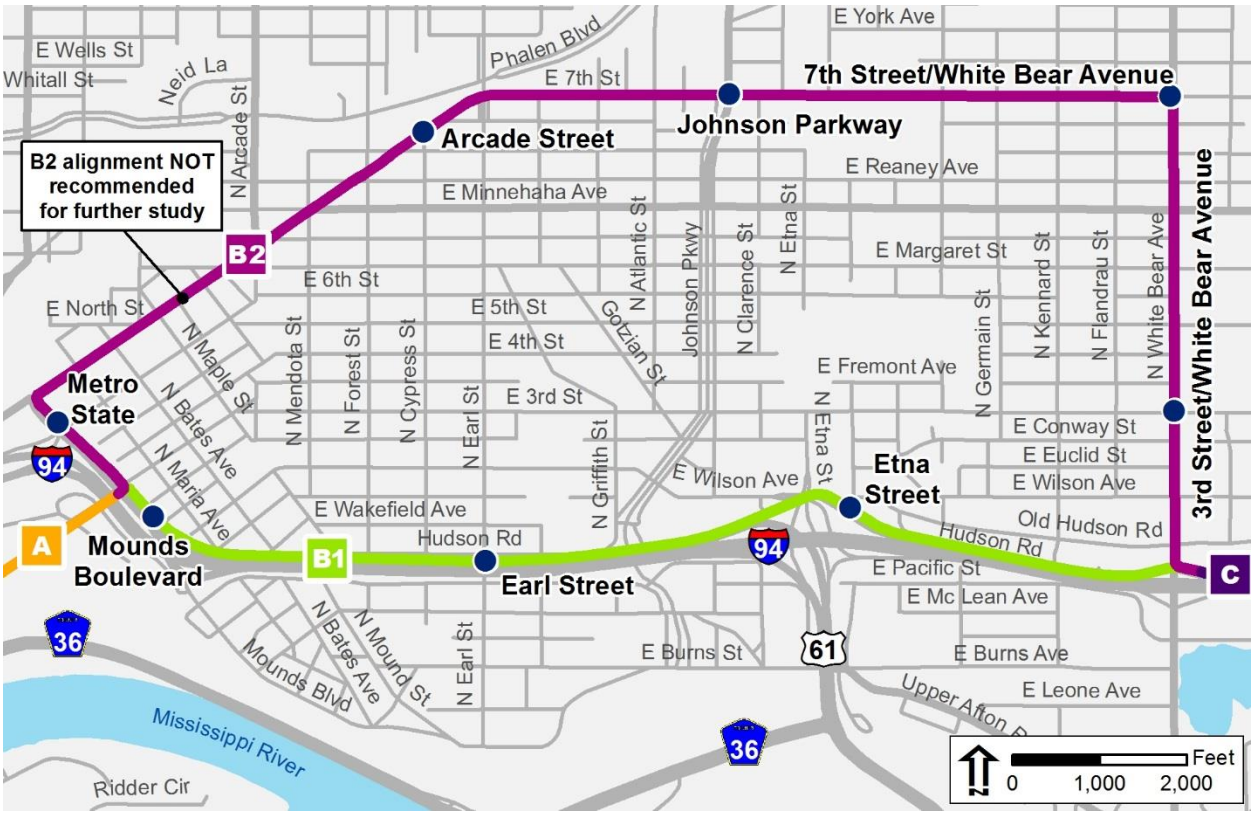
After review of this comparative analysis, the TAC, Community Advisory Committee (CAC), PAC, and GCC recommended that the findings of the AA Study were appropriate and Alignment B2 not be advanced for further consideration based on its substantial physical and operational impacts compared to Alignment B1. The committees also recommended that the portion of Alignment B2 along East 7th Street, between Metro State University and Arcade Street, should continue to be studied by others such as Metro Transit[4] and the City of Saint Paul[5] to ensure a comprehensive transit system is developed for the east side of Saint Paul. A local community based organization also provided a letter of support affirming this decision (see **Appendix A**).

[3] The analysis of Alignments B1 and B2 is documented in Technical Memorandum: Comparison of Alignment Options B1 and B2 (October 2013).

[4] Arterial Transitway Corridors Study (Metro Transit, 2012). Available at http://www.metrotransit.org/abrt-study.

[5] Saint Paul Streetcar Feasibility Study (City of Saint Paul, 2014). Available at https://www.stpaul.gov/departments/planning-economic-development/streetcar-planning.

Figure 2. Alignment Options between Mounds Boulevard and White Bear Avenue Included in the Scoping Booklet



3.2 Eastern End Point at Manning Avenue

Previously, the eastern terminus for the dedicated guideway was defined as Manning Avenue for both the BRT and LRT alternatives, with BRT service continuing to Hudson, Wisconsin. Upon further analysis and consultation, the eastern terminus of the project was refined to Manning Avenue for all alternatives to increase operating efficiency. This decision was confirmed through the project advisory body process.

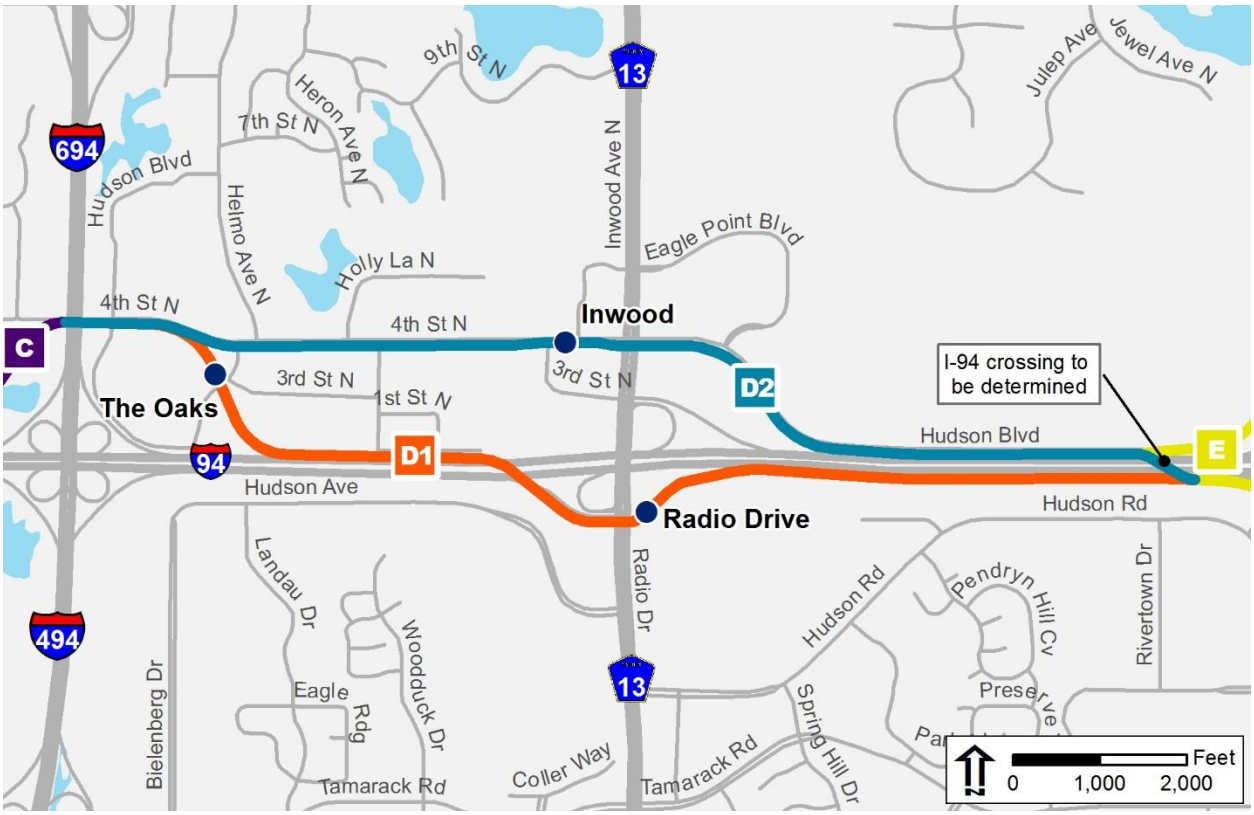
3.3 Alignment Options between I-694/I-494 and Woodbury Drive/Keats Avenue North

The AA Study included an alignment south of I-94 between I-694/I-494 and Woodbury Drive/Keats Avenue (Alignment D1) (see **Figure 3**). Based on input from communities in the eastern portion of the corridor, there was a desire to consider an alternate alignment that would directly serve areas north of I-94, including Lake Elmo, and serve an existing express bus park-and-ride lot at Guardian Angels Church. This alternate alignment (Alignment D2) generally follows 4th Street north of I-94 and continues onto Hudson Boulevard (see **Figure 3**). Either of these D alignments would combine with a variety of potential E alignments between I-694 and a point east of Woodbury Drive/Keats Avenue.

An open house meeting was held on February 6, 2014 to discuss possible station locations and routes for the eastern portion of the corridor in Oakdale, Lake Elmo, and Woodbury, including the D1/D2 alignments. Meeting participants shared input about alignment and station location

preferences. This feedback helped shape the alignments and station locations evaluated in Scoping and considered for the Draft EIS.

Figure 3. Alignment Options between I-694/I-494 and Woodbury Drive/Keats Avenue N Included in the Scoping Booklet



4.0 Draft EIS Scoping Process (February – August 2014)

In Minnesota, the Scoping process is the first step in preparing an EIS (see Minnesota Statutes, Chapter 116D), and it establishes the foundation for the EIS process. Scoping defines the range of alternatives to be studied in the Draft EIS and identifies the potential issues and impacts relating to each of the alternatives. The information developed and collected during the Draft EIS Scoping process built upon the AA Study findings and additional analyses (as summarized in Section 3.0) and informed the LPA selected by local communities and the Metropolitan Council.

The Gateway Corridor Scoping process officially began on February 12, 2014 with publication of the Notice of Intent (NOI) to prepare an EIS in the Federal Register. In addition, the Notice of Availability (NOA) of the Gateway Corridor Scoping Booklet, Scoping open houses, and interagency Scoping meeting was published in the Minnesota Environmental Quality Board Monitor on March 3, 2014. This began the Scoping period under the state environmental review requirements. The Scoping Booklet presented and sought input on the project purpose and need, the alternatives recommended from the AA Study (BRT and LRT on I-94 and Hudson Road), and the additional D and E alignments recommended for consideration following the AA Study. The mode (BRT vs. LRT) and project end points were also presented for feedback. The Draft EIS Scoping comment period extended from March 3, 2014 to April 16, 2014 and allowed interested members of the public, representatives of affected Native American tribes, and local, state, and federal agencies to provide input.

A total of two public Scoping meetings were held in March 2014, one at Guardian Angels Church in Oakdale and a second at Conway Recreation Center in Saint Paul. Attendees could view a video about the project, review project information on boards and maps, discuss the project with staff, and submit comments in writing or verbally to a court reporter. Project staff also organized "pop-up" information sessions at express bus park-and-rides and community events within the corridor study area and presented project information to community and business groups, local government boards, and commissions as part of the Draft EIS Scoping process. The project received 97 comment letters or testimonies during the Draft EIS Scoping comment period from cities, counties, state and federal agencies, and community members. The project video, posted at www.thegatewaycorridor.com, has had more than 1,200 views since March 2014.

4.1 Alternatives Presented During Draft EIS Scoping

Based on the findings from the AA Study, a No-Build alternative, a BRT alternative, and an LRT alternative were presented in the Scoping process.

4.1.1. NO-BUILD ALTERNATIVE

The No-Build alternative serves as the comparative baseline, which means the benefits and impacts of the Build alternatives will be measured against this alternative. For the purposes of Draft EIS Scoping, "No-Build" was defined as the 2030 transportation network with only those improvements already planned and programmed.[6] The No-Build alternative does not include the Gateway Corridor project.

4.1.2. BRT AND LRT ALTERNATIVES

The BRT and LRT alternatives presented during Scoping were approximately 12 miles long and included up to 12 stations between Union Depot in downtown Saint Paul and Manning Avenue in Woodbury. Both alternatives generally paralleled the north side of I-94 to just east of I-494/I-694 along Hudson Boulevard and 4th Street and were south of I-94 and adjacent to Hudson Road further east. LRT would generally travel in a double-track, exclusive right-of-way (guideway) and would include tracks, stations, and support facilities, as well as connecting bus routes.

BRT would generally include an exclusive, two-way busway in dedicated guideway for the majority of the corridor. It would include all facilities associated with the construction and operation of BRT, including right-of-way, travel lanes, stations, and support facilities, as well as BRT transit service and connecting bus routes. The BRT alternatives would be a high quality investment similar to LRT and would include a dedicated guideway, high-amenity stations, and the service, speed, reliability, and frequency characteristics of our region's other LRT transitways.

4.1.3. ALIGNMENT ALTERNATIVES

The following alignments, for both BRT and LRT, were included in the Scoping Booklet as potential alignment alternatives to consider for evaluation in the Draft EIS. In the western half of the corridor, Alignments A, B, and C would serve areas between Union Depot in downtown Saint Paul and the I-94/I-694/I-494 interchange (see **Figure 4**).

East of the I-94 interchange with I-494/I-694, Alignments D1 (south of I-94) and D2 (north of I-94) combine with a variety of potential E alignments between I-694 and a point east of

[6] During the Draft EIS Scoping process, 2030 was used as the horizon year. After Draft EIS Scoping was complete, the horizon year was updated to 2040.

Woodbury Drive/Keats Avenue (see **Figure 5**). Depending on the E alignment, the dedicated guideway could cross I-94 from north to south.

Figure 4. BRT and LRT Alignments Proposed for Study in the Western Portion of the Corridor (as defined in the Scoping Booklet)

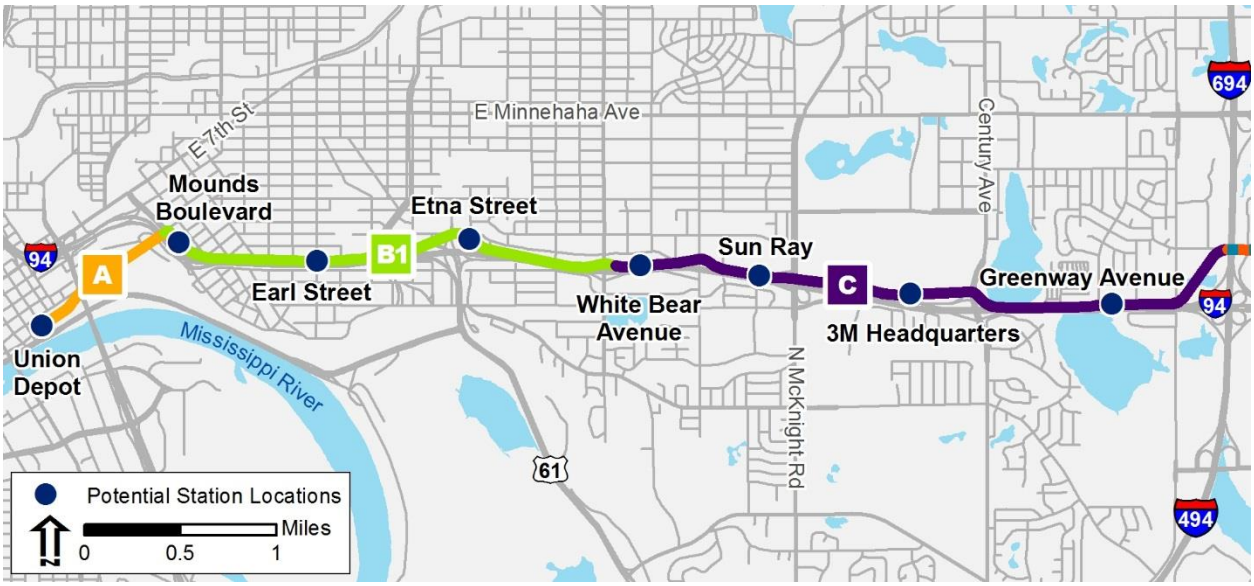
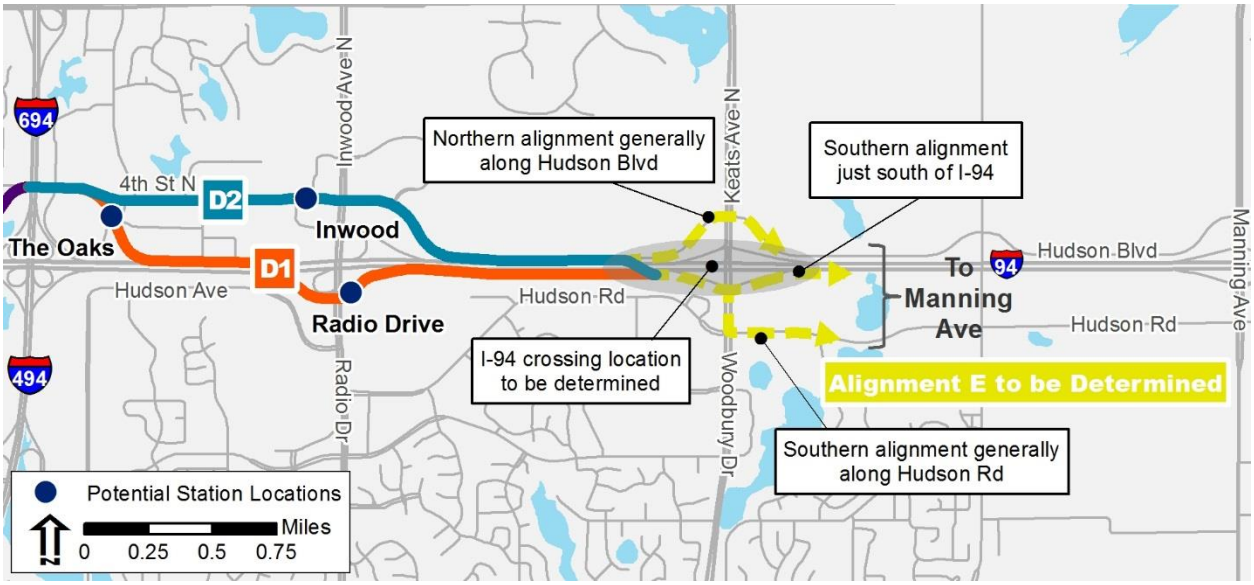


Figure 5. BRT and LRT Alignments Proposed for Study in the Eastern Portion of the Corridor (as defined in the Scoping Booklet)



4.2 Refinements to Alternatives During Draft EIS Scoping

Alignment E was further refined during the Draft EIS Scoping process to include three alignment options: Alignments E1, E2, and E3 (see **Figure 6**). Alignment E1 would follow Hudson Road south of I-94 to Manning Avenue. Alignment E2 would follow Hudson Boulevard north of I-94 to Lake Elmo Avenue/Settlers Ridge Parkway where it would cross to the south and follow Hudson

Road south of I-94 to Manning Avenue. Alignment E3 would follow Hudson Boulevard north of I-94 to Manning Avenue.

Figure 6. E Alignments Developed during Draft EIS Scoping (as shown in the Scoping Decision Document)

4.3 Alternatives Added During Draft EIS Scoping

After publication of the Scoping Booklet, a managed lane alternative was added to the range of alternatives under evaluation.

In the AA Study, the managed lane alternative (Alternative 8) was described as a new managed lane in the center of I-94. The AA Study assumed that buses would travel in the center managed lanes and would access six online stations (stations located within the vehicle runningway; i.e., in the center lane).

Through the AA process, Alternative 8 was dismissed from further evaluation for the following reasons:

- It would have fewer stations and their location within the freeway median would offer less economic development opportunity compared to other alternatives
- It would not qualify for Federal Transit Administration (FTA) New Starts funding under Moving Ahead for Progress in the 21st Century (MAP-21)

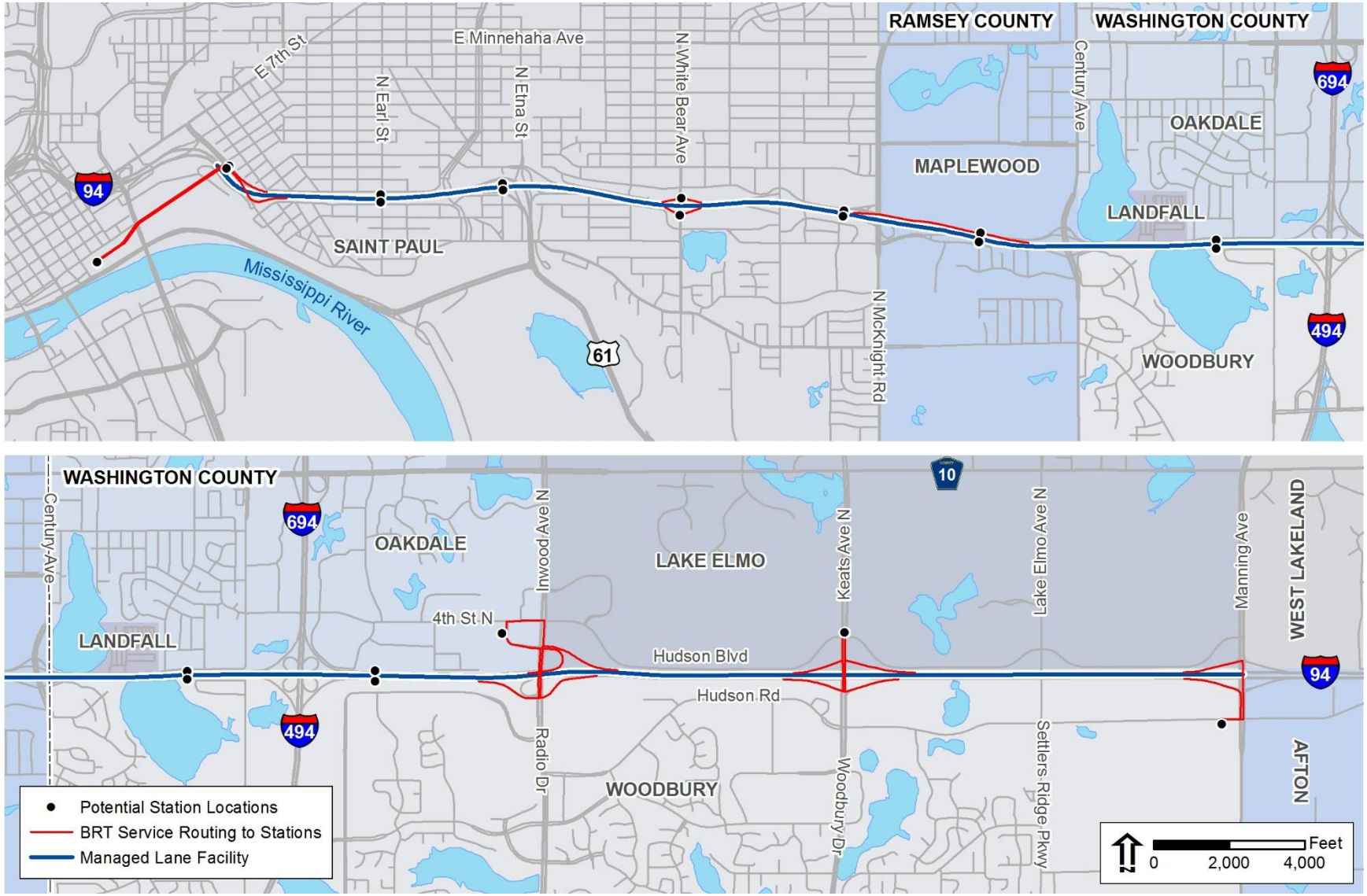
Although not including the in the Scoping Booklet, during the Draft EIS Scoping process the Federal Highway Administration (FHWA) requested further study of a managed lane alternative in the Draft EIS for the following reasons (see correspondence in **Appendix A**):

- Concerns regarding the elimination of feasible alternatives that may better achieve the project purpose and need with fewer adverse impacts

- The need to fully inform decisions on the allocation of limited right-of-way in the corridor, particularly the accommodation of future capacity expansion and the preclusion of achieving full interstate design standards
- The potential degradation of interstate ramp terminal operations due to the interaction with facilities under consideration

FTA, as the lead federal agency for the EIS, concurred with FHWA's request for additional analysis of a managed lane alternative in the Draft EIS. Further coordination with FHWA, MnDOT, and FTA was conducted to discuss the definition of that alternative. Based on meetings held in August and September 2014, a Managed Lane BRT alternative was defined that specifically addresses the project elements defined by FHWA, while minimizing impacts to I-94 and making the managed lane more comparable to the Dedicated BRT alternatives through the addition of stations. This is different than the managed lane alternative studied and dismissed in the AA process. In the current Managed Lane BRT alternative, BRT would travel within a center managed lane, where feasible, with a mix of inline and offline stations. Inline stations are located on freeway ramps and the right side of I-94 right-of-way, with BRT vehicles exiting the managed lane to access stations. Offline stations are located outside of I-94 right-of-way, with BRT vehicles exiting the managed lane and using local streets to access stations. BRT vehicles would travel within the center managed lane between stations and would mix with general traffic while traveling across general purpose lanes to access stations. During peak periods, the BRT vehicle may not travel in the managed lane and instead would operate on the right shoulder of I-94 between stations to avoid mixing with general traffic in congested I-94 travel lanes. The Managed Lane BRT alternative is illustrated in **Figure 7**.

Figure 7. Managed Lane BRT Alternative



4.4 Alternatives Not Recommended for Further Study from the Scoping Decision Document

As documented in the Scoping Decision Document, the GCC recommended and the Washington County Regional Railroad Authority (WCRRA) approved[7] the elimination of the LRT alternative, as described in Section 4.1, from further evaluation in the Draft EIS. The GCC and WCRRA recognized that LRT was advanced through the AA Study process for comparative purposes and, through the Draft EIS Scoping process, found LRT has significantly higher capital and operating costs without a substantial increase in ridership or other benefits as compared to BRT. In addition, the low cost-effectiveness rating for LRT would significantly limit federal FTA New Starts funding competitiveness for the Gateway Corridor project. LRT also has limited ability to provide flexible design options to avoid and/or minimize potential impacts to surrounding natural resources and land uses.

4.5 Alternatives Advanced for Further Study from the Scoping Decision Document

The Scoping Decision Document identified six alternatives for additional study in the Draft EIS.

4.5.1. NO-BUILD ALTERNATIVE

The No-Build alternative serves as the NEPA baseline, which means the benefits and impacts (also called the environmental effects) of the Build alternatives will be measured against this alternative. In the Scoping Decision Document, the No-Build alternative was defined as the 2030 transportation network with only those improvements already planned and programmed.[8] The No-Build alternative does not include the Gateway Corridor project.

4.5.2. MANAGED LANE BRT ALTERNATIVE

The Managed Lane BRT alternative, as described in Section 4.3 and shown in **Figure 7**, was advanced from the Draft EIS Scoping process for further study in the Draft EIS.

4.5.3. DEDICATED BRT ALTERNATIVES[9]

Four Dedicated BRT alternatives were advanced from the Draft EIS Scoping process for further study in the Draft EIS:

- Dedicated BRT A-B-C-D1-E1
- Dedicated BRT A-B-C-D2-E1
- Dedicated BRT A-B-C-D2-E2
- Dedicated BRT A-B-C-D2-E3

As shown in **Figure 8**, Alignments A, B, and C would be the same for each of the Dedicated BRT alternatives. Alignment A would extend from Union Depot in downtown Saint Paul along Kellogg Boulevard to the intersection of Kellogg Boulevard and Mounds Boulevard. Alignment B would generally follow Mounds Boulevard, Hudson Road, and I-94 to the White Bear

[7] WCRRA is the state Responsible Governmental Unit.

[8] After the Scoping Decision Document was published, the horizon year for analysis was updated to 2040.

[9] As defined in the 2030 TPP, dedicated busways are special roadways and lanes of roadways dedicated to the exclusive use of buses. Busways can operate service similar to LRT, with station spacing and other characteristics that mimic light rail transit, except they use vehicles on rubber tires instead of electric trains on rails.

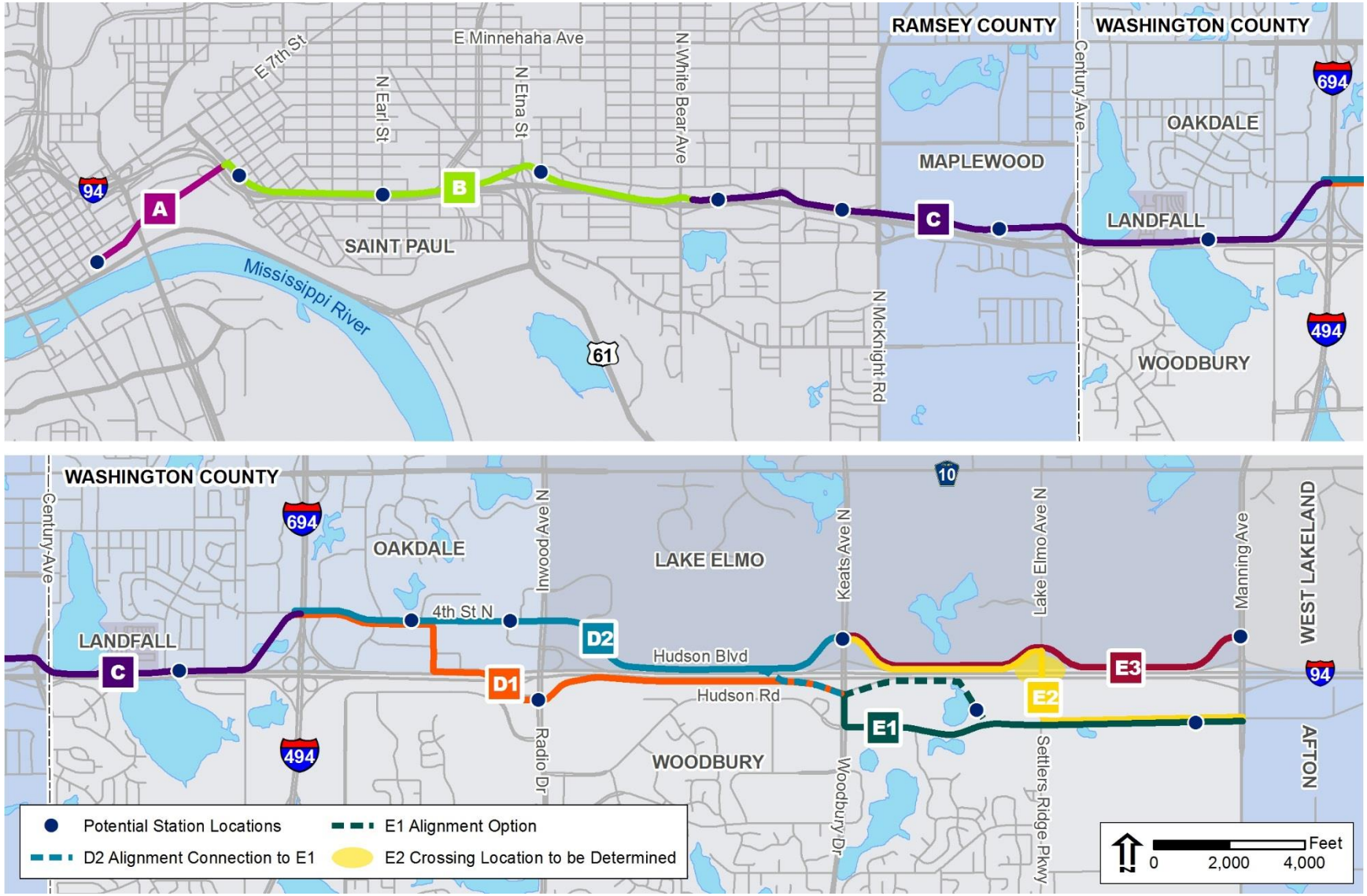
interchange. Alignment C would generally follow Hudson Road/Old Hudson Road to the I-694 interchange.

The alignments vary in the D and E segments, as summarized below.

- **Dedicated BRT A-B-C-D1-E1:** Union Depot to Manning Avenue; BRT Alignment D1 on 4th Street N crossing to south side of I-94 west of Radio Drive. Under this BRT alternative, two options would be initially evaluated in the E1 alignment: one located immediately south of I-94 extending from Woodbury Drive for about ½ mile to the east and then dropping south to Hudson Road and the other on Hudson Road starting at Woodbury Drive.
- **Dedicated BRT A-B-C-D2-E1:** Union Depot to Manning Avenue; BRT Alignment D2 on 4th Street and Hudson Boulevard (north side of I-94) to a yet-to-be-determined point west of Woodbury Drive/Keats Avenue N in Lake Elmo where it would cross to the south of I-94. BRT would then follow Alignment E1 south of I-94 to Manning Avenue.
- **Dedicated BRT A-B-C-D2-E2:** Union Depot to Manning Avenue; BRT Alignment D2 on 4th Street crossing to south side of I-94 (Alignment E2) at Lake Elmo Avenue or via a new bridge crossing I-94 at a location between Woodbury Drive and Lake Elmo Avenue.
- **Dedicated BRT A-B-C-D2-E3:** Union Depot to Manning Avenue; BRT Alignment D2 on 4th Street and continuing along the north side of I-94 generally following Hudson Boulevard to Manning Avenue.

Each of the Dedicated BRT alternatives included general station locations, as illustrated in **Figure 8**. It was anticipated that as the project advances through additional planning, including planning focused on station areas, specific station locations would be determined, and additional station(s) may be considered east of Keats Avenue/Woodbury Drive based on partner agency and public input and landowner development plans.

Figure 8. Dedicated BRT Alternatives Advanced from Draft EIS Scoping



5.0 Alternatives Considered and Dismissed After Draft EIS Scoping

The TAC and PAC recommended dismissal of two alternatives and one alignment option from further study in the Draft EIS, as discussed in the following sections.

5.1 Managed Lane BRT Alternative

While it is recognized that managed lanes, including MnPASS, and BRT service can be an efficient and cost-effective transitway investment in the Twin Cities Metropolitan Area, the GCC, its advisory bodies, WCRRA, and its federal partners agree that other Build alternatives meet the Gateway Corridor project purpose and need more effectively and with fewer impacts than the Managed Lane BRT alternative (see **Figure 7**) developed for the Draft EIS alternative evaluation. This conclusion is based on the following:

- **Station Accessibility (Goal 1):** Station locations for the Managed Lane BRT alternative would be similar to stations in the Dedicated BRT alternatives, while reflecting either inline (stations adjacent to shoulders or ramps) or offline design to minimize cost and impact (compared to the online station design concept proposed during the AA Study). Because inline stations are, in most cases, split by direction and separated by I-94, transit customers and connecting local buses would have a substantially more difficult time accessing the station as compared to Dedicated BRT station design concepts. Transit customer access would be impaired by longer walk/bike distances, and project costs would be higher due to the need for additional infrastructure such as pedestrian crossings at the Etna Street, Sun Ray, 3M Headquarters, Greenway Avenue, and Helmo Avenue Stations. Additionally, the inline station design concepts cannot be modified in a practical way to provide for effective local bus connections.
- **Transit Mobility and Operations (Goals 1 and 2):** The proposed station spacing, combined with inline station locations adjacent to shoulders, would not allow BRT service to effectively use the center managed lane. Using the center managed lane would require buses to weave across several lanes of traffic between stations, creating potential operational safety concerns and negating the benefit of using the managed lane for BRT. To avoid weaving from station to station, the BRT service would instead operate in a bus-only shoulder[10] where available on the right side of I-94 with lower speeds (35 miles per hour maximum), longer travel times, and more conflict with general traffic entering and exiting I-94. The absence of a consistent and reliable runningway that minimizes conflict with general traffic would not functionally exist for BRT service, substantially reducing the benefit from and attractiveness of BRT service in the corridor.
- **Cost-Effectiveness (Goal 2):** Three stations (Guardian Angels, Keats Avenue, and Manning Avenue) are proposed off the runningway, resulting in higher operating costs and passenger delays due to longer travel distance, slower travel speeds, and delay from presence of traffic signals. Additionally, the Managed Lane BRT alternative would not meet the FTA definition of a New Starts project, and hence would not be eligible for

[10] Bus-only shoulders are highway shoulder lanes that MnDOT has identified and signed as being available for bus use to avoid congestion. Speeds are limited to 35 miles per hour for safety.

New Starts funding. An alternative funding source, which is not available at this time in the region, would be required for the Managed Lane BRT alternative to advance.

- **Support Economic Development (Goal 3):** The proposed inline and offline stations do not provide anchor locations for the development or intensification of adjacent, local land uses.

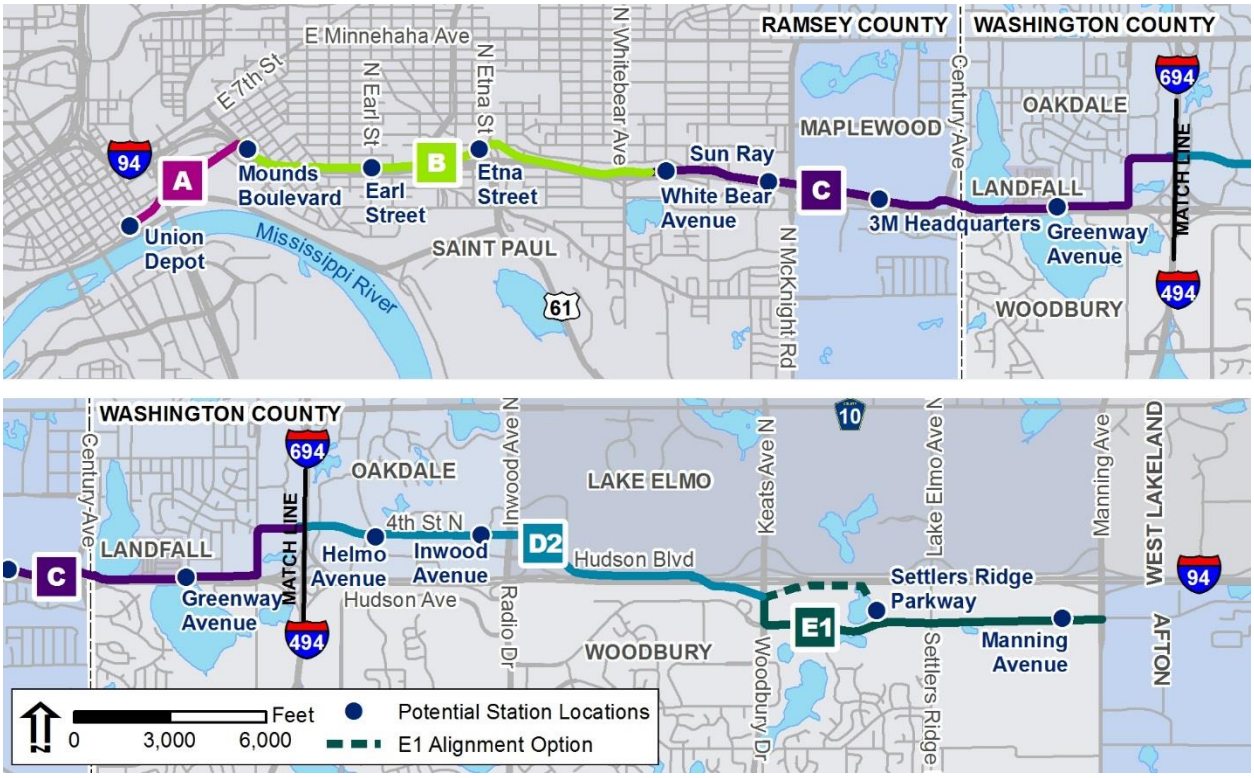
In a letter dated January 4, 2016, FHWA stated that their "concerns had been adequately addressed with the understanding that expansion of I-94 is not precluded and that impacts to interstate operations are being avoided, minimized, and mitigated" (see **Appendix A**). After receipt of this letter, the TAC and PAC recommended to screen the Managed Lane BRT alternative from detailed analysis in the Draft EIS.

5.2 Alternative A-B-C-D2-E1

Shown in **Figure 9**, Alternative A-B-C-D2-E1 was originally identified to evaluate the potential impacts and benefits associated with extending the BRT alignment further to the east, through Lake Elmo, before transitioning south over I-94 to the west of Woodbury Drive in Woodbury. Since the completion of Draft EIS Scoping, coordination with Lake Elmo, Woodbury, and other stakeholders regarding the alignment and station locations in both communities resulted in this alternative's exclusion from further consideration.

This alternative would require construction of a new I-94 bridge crossing, which conflicted with a desire to minimize capital costs while maximizing use of existing infrastructure. Additionally, Washington County and the City of Woodbury indicated that implementation of dedicated BRT on Woodbury Drive would compromise the traffic level of service and that significant (and potentially costly) mitigation would be required to obtain acceptable levels of service. These traffic impacts and mitigation costs, combined with the high capital and operating cost of an additional bridge structure, resulted in the elimination of Alternative A-B-C-D2-E1 from further consideration.

Figure 9. Alternative A-B-C-D2-E1

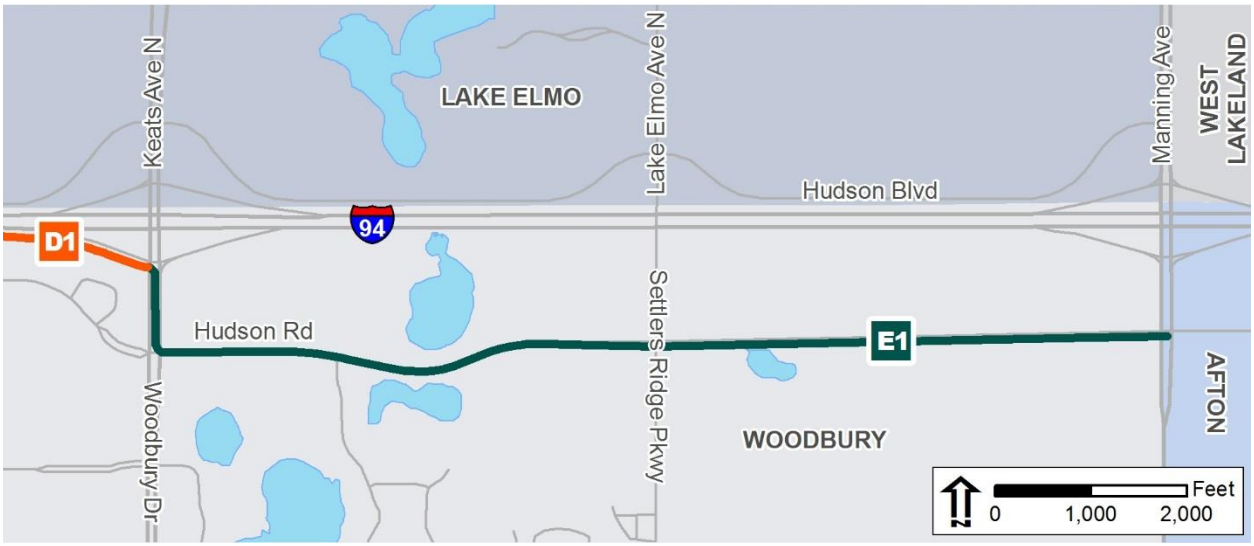


5.3 Alignment E1 Option on Woodbury Drive and Hudson Road

There were two options for Alignment E1 considered in Draft EIS Scoping. The Alignment E1 option that would follow Woodbury Drive south and then turn east on Hudson Road, illustrated in **Figure 10**, was eliminated following the Draft EIS Scoping process based on input from the City of Woodbury. The City's key concern was related to traffic and access impacts on Woodbury Drive and Hudson Road in front of the City Walk mixed use development.

The remaining E1 alignment option that would be located immediately south of I-94, extending east from Woodbury Drive for about ½ mile before dropping south to Hudson Road, was retained for evaluation in the Draft EIS. This alignment is illustrated in **Figure 8**.

Figure 10. Alignment E1 Option Not Advancing for Further Consideration



6.0 Design Refinement of Remaining Alternatives After Draft EIS Scoping

After two alternatives and one alignment option were dismissed as described in Section 2.2.4, four alternatives remained for evaluation:

- No-Build alternative
- Alternative A-B-C-D1-E1
- Alternative A-B-C-D2-E2
- Alternative A-B-C-D2-E3

The Scoping Decision Document indicated that design refinements would continue through the design process. Sections 6.1 through 6.12 highlight areas of the corridor where guideway design and station refinements were made through public and agency consultation to improve functionality and minimize project impacts.

6.1 Downtown Saint Paul (Alignment A)

Routing for BRT service in downtown Saint Paul was refined because ridership studies indicate that routing BRT service through downtown Saint Paul during peak periods would substantially improve service to Gateway Corridor riders and connectivity within the regional transit system. Peak period BRT service would operate in existing bus only lanes (or those that would be in place by 2040 per the No-Build alternative) or mixed traffic in downtown Saint Paul, and no additional guideway infrastructure would be needed. This peak period routing aligns with planning done previously by Metro Transit and its local partners, as published in the Arterial Transitway Corridors Study (2012),[11] and would allow for service coordination and integration with additional future BRT routes. Section 9.2.1 discusses the specific routing in downtown Saint Paul and the station infrastructure required; these attributes are included as part of Alignment A and shown on **Figure 25**.

[11] Available at http://www.metrotransit.org/abrt-study

6.2 3rd Street to Johnson Parkway Concepts (Alignment B)

Alignment B, between 3rd Street and Johnson Parkway, represents one of several physically constrained areas in the project corridor. I-94 is located immediately south of the proposed guideway, and immediately to the north is a residential neighborhood and locally designated historic district.[12] Property access via an existing frontage road, Hudson Road, would need to be maintained in at least one direction. Additionally, variations in the vertical alignment between Hudson Road and I-94 limit flexibility in guideway design.

Three alignment options with corresponding Earl Street Station configurations were explored to reflect potential trade-offs in terms of benefits and impacts.[13] Identified benefits and impacts were:

- Impacts to I-94 right-of-way that could limit future improvements to the interstate corridor
- Private property impacts
- Loss of on-street parking for residential and commercial uses, particularly in the Earl Street Station area
- Maintaining frontage road access to private property
- Ability to promote economic development opportunities
- Connectivity to adjacent residential areas
- Comfort and safety of transit customers at the Earl Street Station

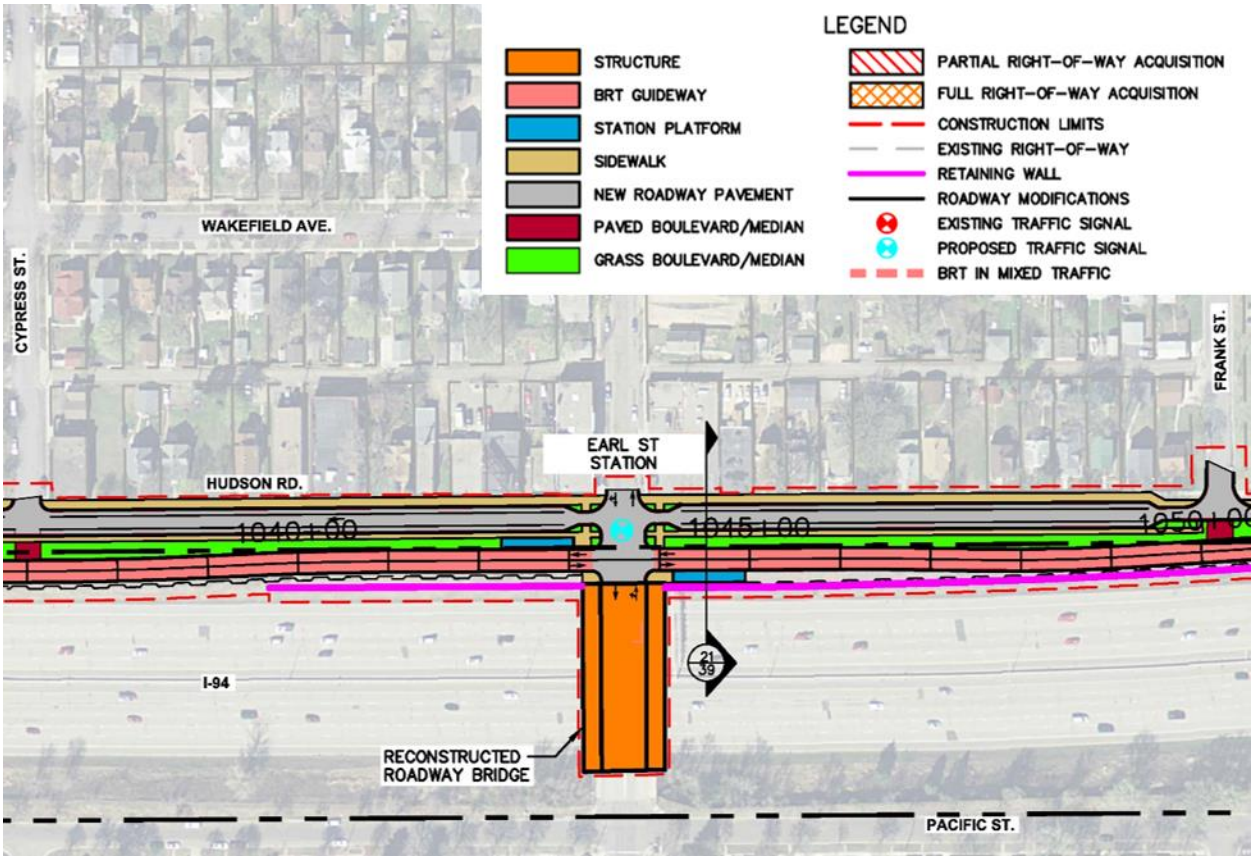
The option shown in **Figure 11** was advanced for study in the Draft EIS by the GCC, its advisory bodies, and the Saint Paul Station Area Planning Task Force[14] because it put the BRT guideway at the neighborhood level, rather than at freeway level, and would preserve on-street parking. Alignment B, as described in Section 9.2.1, incorporates this design.

[12] A historic district is a geographically defined area with a concentration of historic buildings, structures, sites, spaces, and objects unified by past events, physical development, or design. A locally designated historic district is a historic district that meets the criteria of a local preservation ordinance and is therefore protected by the local Historic Preservation Commission.

[13] The full analysis is provided in the Comparison of Saint Paul Options Technical Memorandum dated May 1, 2015.

[14] The Station Area Planning Task Force was a group of Saint Paul residents, business owners, and planning commissioners that met regularly in 2014 and 2015 to work towards creating plans to forward to the Saint Paul Planning Commission. More information on this task force is available at https://www.stpaul.gov/departments/planning-economic-development/planning/gold-line-station-area-planning.

Figure 11. Alignment Design and Earl Street Station Location

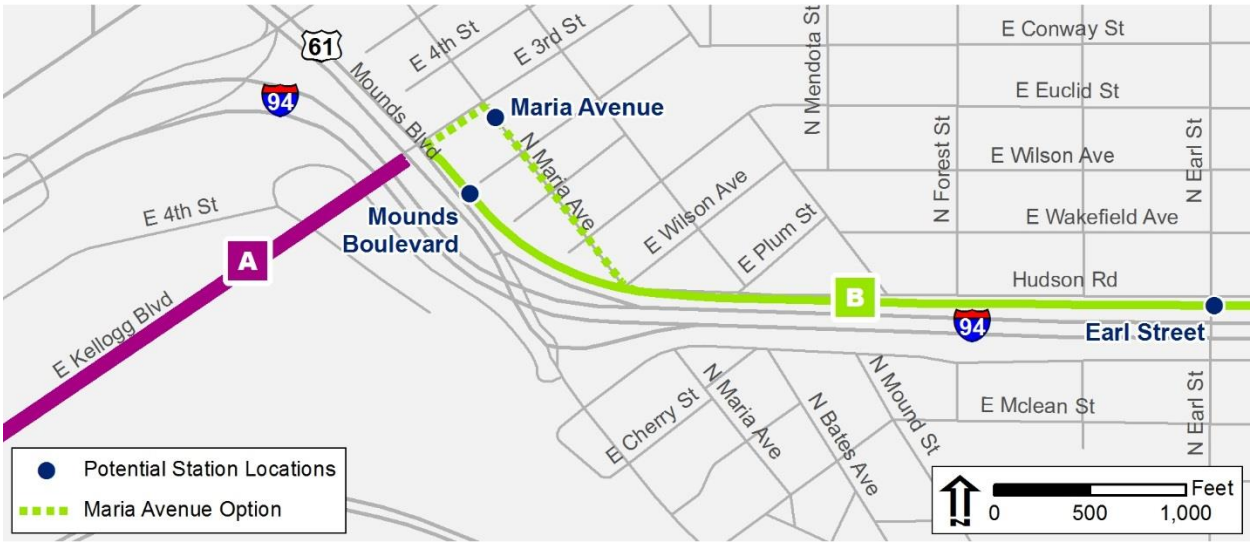


6.3 Maria Avenue Option (Alignment B)

As shown in **Figure 12,** Alignment B includes two options for serving the Dayton's Bluff neighborhood. Two options were developed due to concerns about potential property impacts and a desire to explore an optional alignment more integrated with the Dayton's Bluff neighborhood. In addition to the alignment along Mounds Boulevard/Hudson Road, the GCC and its advisory bodies developed an alignment option on Maria Avenue through community discussions; this option is included with Alignment B evaluation results. The Maria Avenue Option would run in mixed traffic on a residential street. This option serves as an alternative to property impacts that may occur along Mounds Boulevard as well as impacts to both a locally designated historic district and an environmental justice community,[15] and was therefore retained in the Draft EIS analysis for comparative purposes.

[15] Environmental justice communities are defined by Executive Order 12898 as minority and/or low-income populations. For more discussion on this topic, see Chapter 7 Environmental Justice.

Figure 12. Maria Avenue Option



6.4 1276 Wilson Avenue/TH 61 Interchange Area (Alignment B)

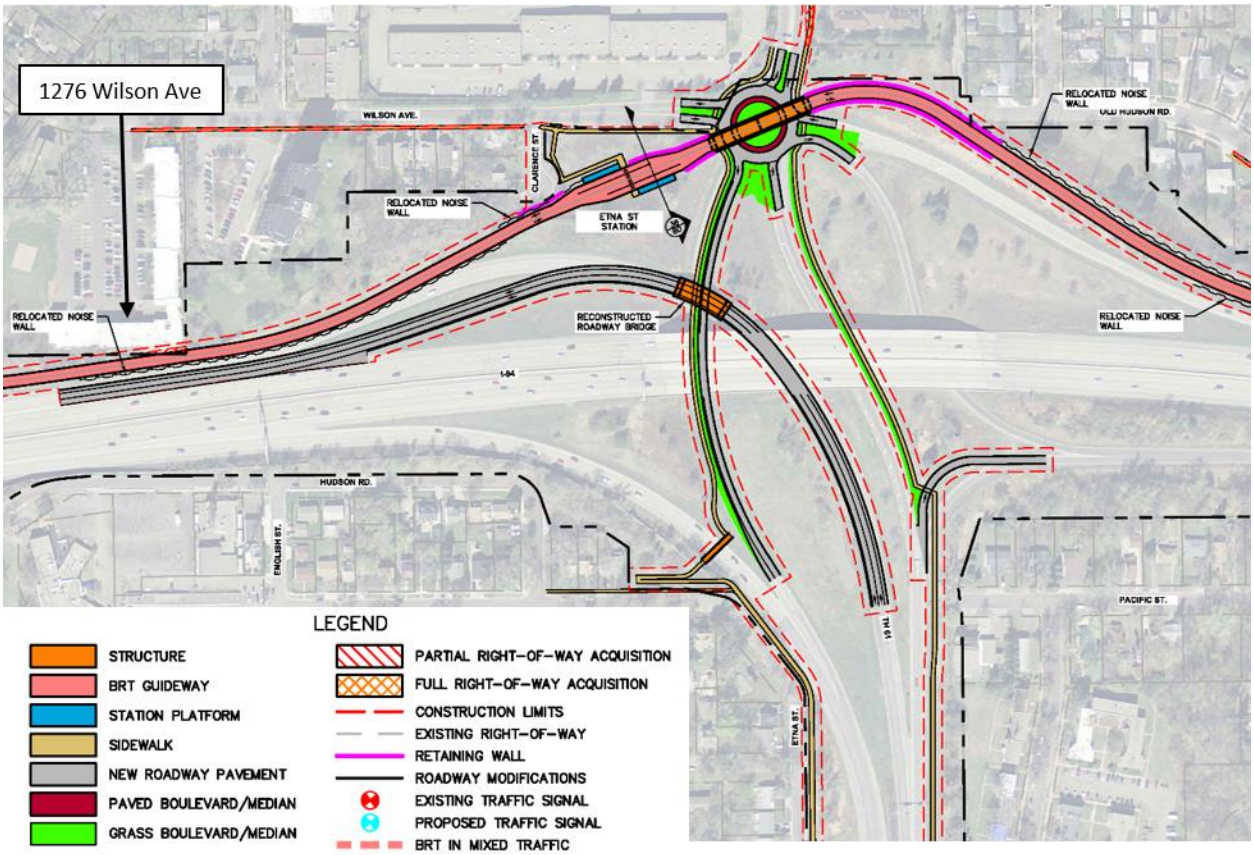
The tightest physical constraint along Alignment B is located just west of the I-94/TH 61 interchange where a multi-family residential property (1276 Wilson Avenue) lies within 30 feet of I-94 ramp right-of-way (see **Figure 13**). Based on planning-level analysis, it appears that there is not enough space between this building and the I-94 on-ramp to construct a two-way dedicated guideway and replace the noise wall currently in place without affecting the building. A number of alternatives were considered to avoid direct impacts to the multi-family apartment building:

- Complete reconstruction of the TH 61 interchange to move the interchange ramp south and east to improve pedestrian connections and provide missing traffic movements to the interchange
- Split the guideway into one-way pair operation. Eastbound BRT service would operate in dedicated guideway located between I-94 and 1276 Wilson Avenue from Johnson Parkway to TH 61, with westbound BRT operating in mixed traffic on Wilson Avenue from TH 61 to Johnson Parkway.
- Narrow the two-lane guideway to a directionally controlled single lane at the "pinch point" and control BRT service with signals, allowing only one direction of service per signal phase

The options that narrowed the guideway to a single lane or split it into one-way pair operations were eliminated from further study because of effects on transit operations or longer travel times. A refined option was identified based on coordination among WCRRA, Ramsey County Regional Railroad Authority (RCRRA), the City of Saint Paul, MnDOT, FHWA, the Metropolitan Council/Metro Transit, and the project advisory bodies (shown in **Figure 13**). The refined option avoids complete reconstruction of the TH 61 interchange and provides for a streamlined interchange design with minimal impacts to existing I-94 ramps. This design takes into account other MnDOT projects and stormwater storage needs along I-94, avoids direct impacts to the multi-family apartment building at 1276 Wilson Avenue, and incorporates improved pedestrian

facilities. The refined design concept also moves the Etna Street Station from the east side of TH 61 to the west side.[16]

Figure 13. Proposed TH 61 Design



6.5 White Bear Avenue Station (Alignment C)

Proximity of the dedicated guideway to I-94 to the south and commercial properties to the north suggested that the BRT guideway was best located at freeway level beneath a new White Bear Avenue overpass to avoid impacts to the commercial properties. Avoidance of impacts to these same properties required that the White Bear Avenue Station be located approximately one to two blocks east of White Bear Avenue (see **Figure 14**).

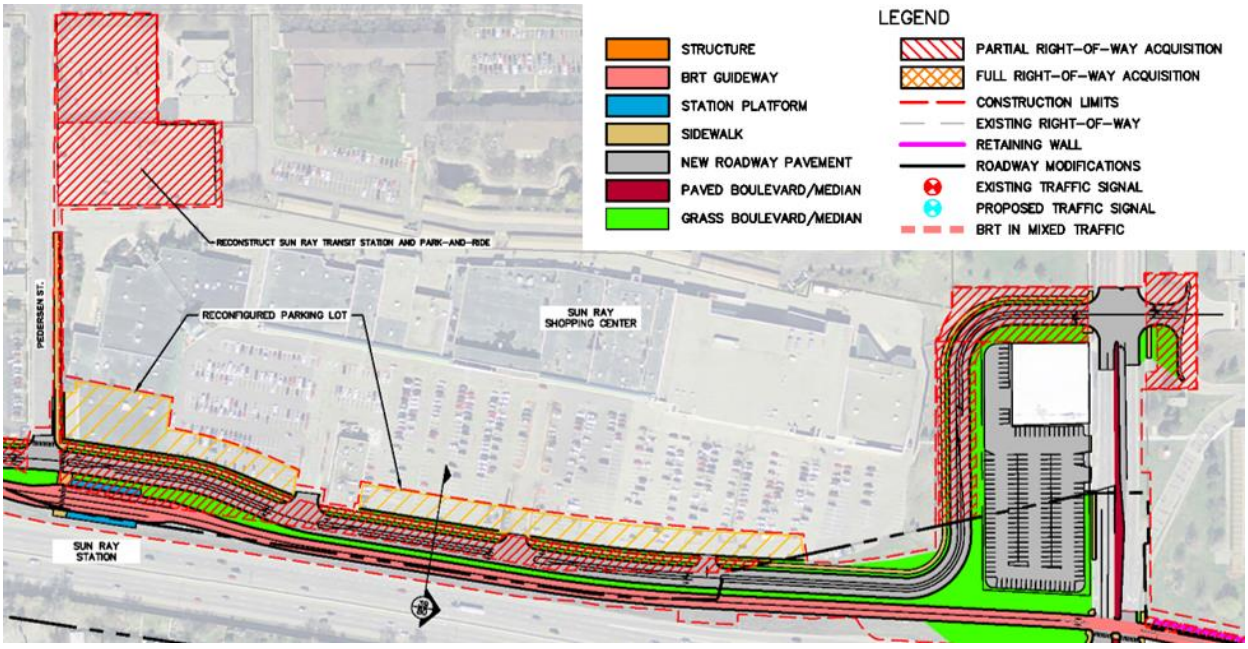
[16] As part of the refinement process, a one-lane guideway concept was evaluated at a screening level. The one-lane concept was screened from further evaluation given operational impacts.

Figure 14. White Bear Avenue Station Location

6.6 Sun Ray Area Alignment and Station Location (Alignment C)

Guideway design and station placement in the Sun Ray Shopping Center area worked to minimize impacts on traffic operations at the Hudson Road/McKnight Road intersection, property impacts, and parking. It also worked to maintain or enhance business sign visibility and to optimize station access for residential areas. The area also needed to provide for continuation of a high volume local bus transfer facility and park-and-ride. Various park-and-ride and platform locations and roadway alignments were evaluated to address these considerations. The proposed design identified in **Figure 15** was developed in consultation with the Cities of Saint Paul and Maplewood, Ramsey County, and the Saint Paul Station Area Planning Task Force.

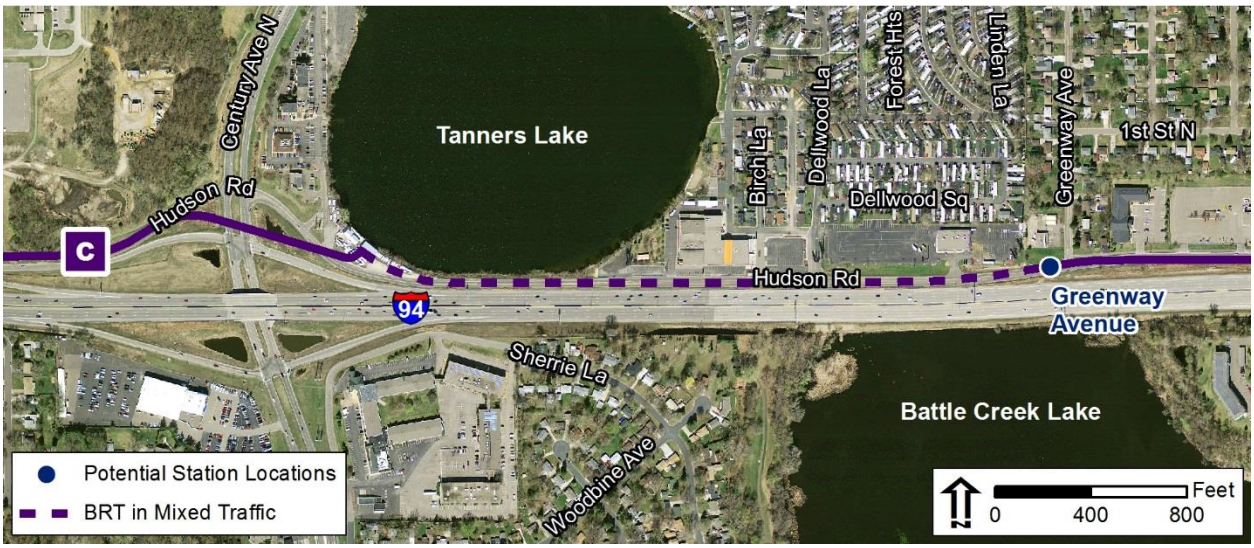
Figure 15. Proposed Sun Ray Area Design



6.7 Landfall/Tanners Lake Area (Alignment C)

Alignment C was refined to assume BRT service would operate in mixed traffic for approximately ½ mile from east of Century Avenue to Greenway Avenue (see **Figure 16**). This refinement was needed because the proximity of Tanners Lake and businesses to the north side of Hudson Road in conjunction with minimal available right-of-way between Hudson Road and I-94 would not allow for construction of a dedicated guideway without significant environmental and community impacts. The segment of Hudson Road between Century Avenue and Greenway Avenue has low traffic volumes (3,500 to 4,000 average vehicles in a day) and the addition of BRT service is not anticipated to be a congestion concern.

Figure 16. Alignment C by Tanners Lake and Landfall



6.8 4th Street in Oakdale (Alignments D1 and D2)

The proposed guideway in the D1 and D2 alignments lies approximately ¼ mile north of I-94. As shown in **Figure 17**, five guideway configuration options were initially considered along 4th Street in this area: curbside BRT lanes, north side guideway, center guideway, south side guideway, and a "split" guideway (single lane, one direction guideway separated from 4th Street by a boulevard on both sides of the street). These options were evaluated based on BRT operations, intersection operations, property access considerations, and rider accessibility. Curbside running (within the roadway curb) was dismissed based on lack of permanence of the traffic facility and potential for compromised reliability. Split guideway was dismissed based on operational challenges, and the north side running guideway was dismissed based on access impacts to the existing residential development on the north side of 4th Street. Both center running and south side running BRT guideway were advanced for evaluation.

Figure 17. Guideway Configurations Considered on 4th Street

6.9 Lake Elmo Area Guideway Placement Options (Eastern Portion of Alignment D2, Alignments E2 and E3)

Similar to 4th Street, various guideway/local roadway options were considered for the eastern portion of Alignment D2 (Hudson Boulevard from Inwood Avenue to Keats Avenue) and Alignments E2 and E3 in Lake Elmo. Concept evaluation determined that to minimize impacts to access and potential future development in the area, the south side running option (except from Inwood Avenue to 3,400 feet east and at Keats Avenue as described in Section 6.10) would be most advantageous and was carried forward in the Draft EIS analysis.

6.10 Hudson Boulevard Alignment at Keats Avenue – Alignment Options and Station Location (Alignments D2, E2, and E3)

6.10.1. ALIGNMENT OPTIONS

Two alignments were considered at the location where the BRT guideway would cross Keats Avenue (see **Figure 18**). The baseline alignment would follow the north edge of the I-94 ramp. An option to this alignment would follow the south edge of Hudson Boulevard as it curves north to accommodate the Keats Avenue intersection. Each of these alignments has differing implications for property access and/or intersection operations.

I-94 Ramp Alignment at Keats Avenue (Baseline Alignment)

With the baseline alignment, Alignment D2 would run in a south side guideway along Hudson Boulevard, and, as it approaches Keats Avenue, would run adjacent to the westbound I-94 on-ramp and cross Keats Avenue at grade (on the same level) (see **Figure 18**). This would avoid access impacts to current and future development on Hudson Boulevard just west of Keats Avenue.

Hudson Boulevard Alignment at Keats Avenue (Keats Avenue Option)

Under this option, as the south side guideway approaches Keats Avenue it would continue to run adjacent to Hudson Boulevard until a new signal approximately ¼ mile west of Keats Avenue. At the signal it would transition to a center running guideway and continue through the Keats Avenue intersection at grade. This option was referred to as the Alignment D2 Keats Avenue Option (see **Figure 18**). BRT service would transition back into a south side running guideway at a new signal approximately ¼ mile to the east of the Keats Avenue intersection.

6.10.2. STATION

Coming out of the Draft EIS Scoping process, the proposed Keats Avenue station was located close to the intersection of Hudson Boulevard and Keats Avenue. Through additional coordination efforts with the City of Lake Elmo and surrounding landowners, along with consideration of station spacing in the corridor, the Keats Avenue Station was shifted approximately ½ mile to the west on Hudson Boulevard (as shown on **Figure 18**).

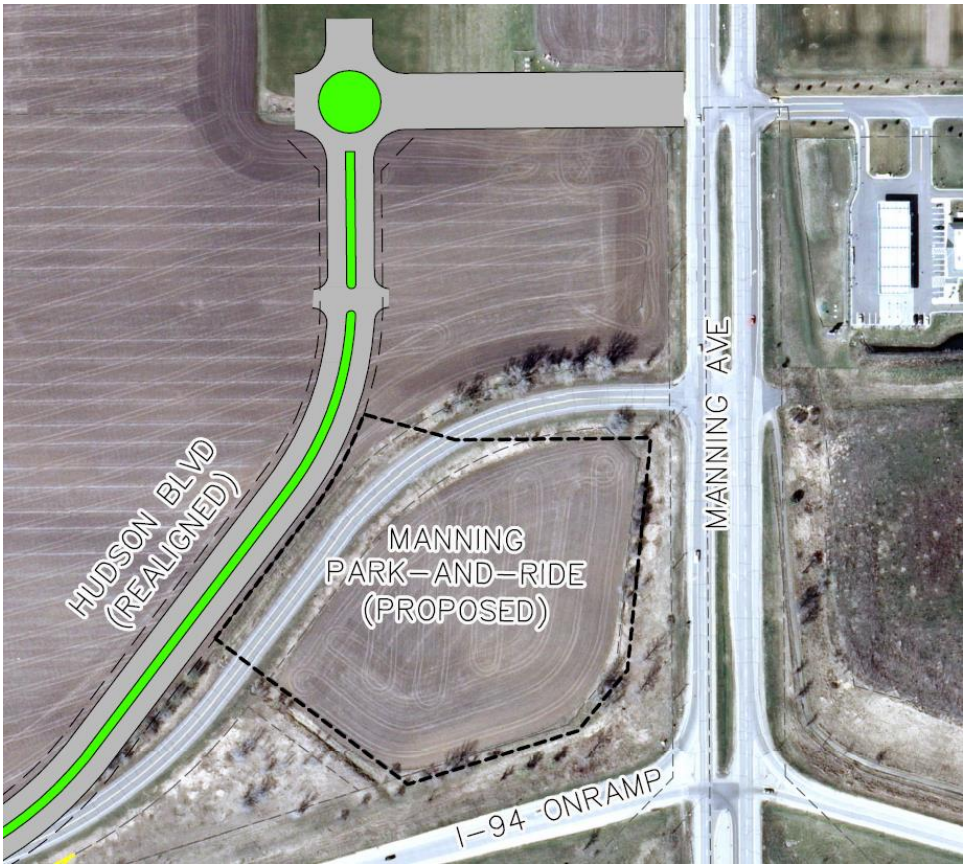
Figure 18. Keats Avenue Alignments

6.11 Alignment E2

The Scoping Decision Document did not identify specifically where the E2 alignment would cross I-94 from the north to the south and stated "exact crossing location to be determined." Subsequently, the project team performed additional analysis and coordination to clarify where Alignment E2 would cross I-94.

The location of a programmed but not yet constructed Metro Transit express bus park-and-ride was an important consideration in the decision for where and how Alignment E2 would cross I-94. The park-and-ride is programmed to be built and open in 2017 and will support new, funded express bus service to Minneapolis. Metro Transit finalized the location of the park-and-ride lot after the Scoping decision, based on input from the Cities of Woodbury and Lake Elmo and other stakeholders. The proposed I-94/Manning Avenue park-and-ride will be in the northwest quadrant of the I-94/Manning Avenue interchange and on the south and east sides of Hudson Boulevard (see **Figure 19**). This park-and-ride is part of the No-Build alternative.

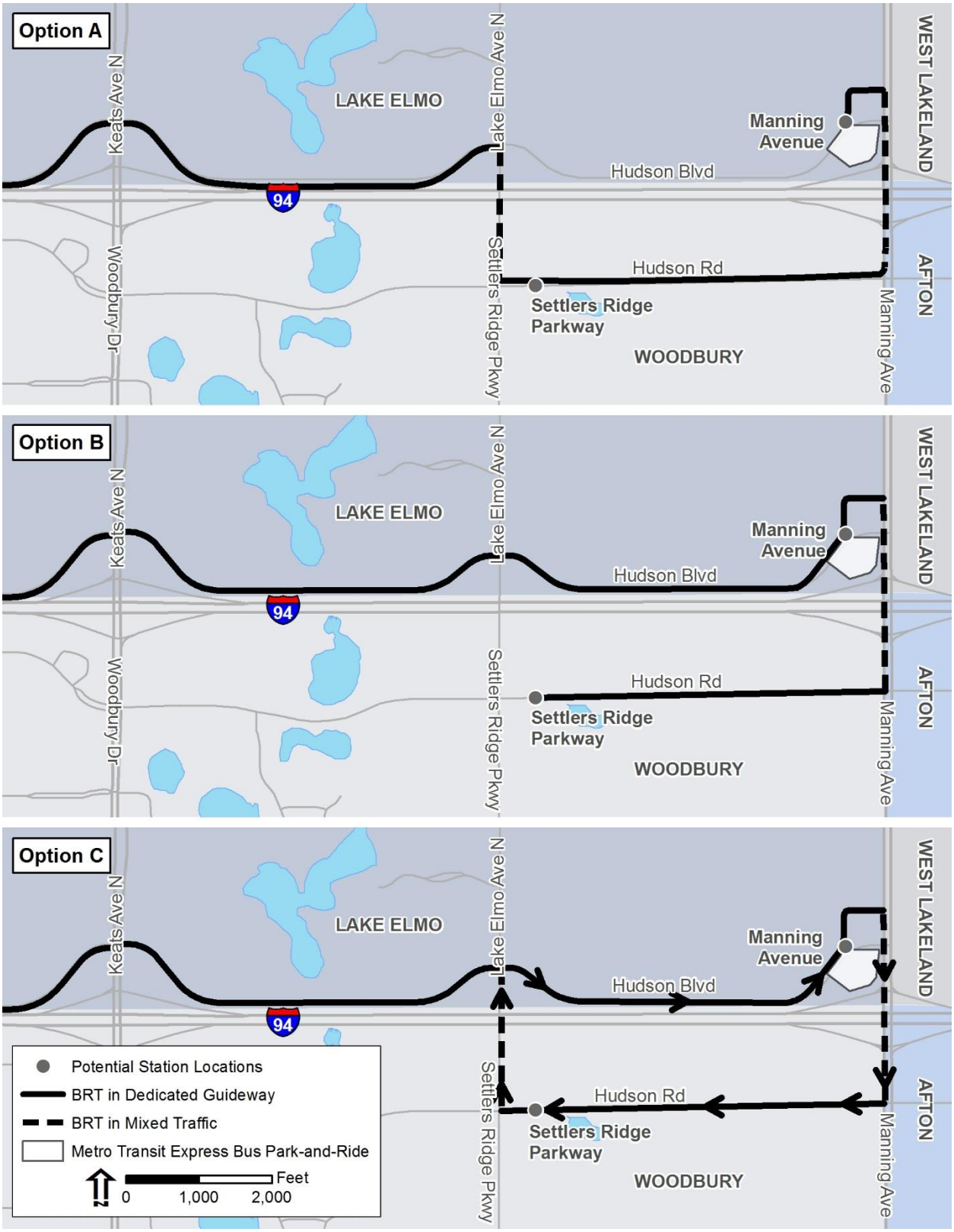
Figure 19. Metro Transit's Proposed Manning Avenue Park-and-Ride



Three configurations were developed for the crossing of I-94 and the connection to the proposed I-94/Manning Avenue park-and-ride, as shown in **Figure 20**:

- Option A would turn south on Lake Elmo Avenue/Settlers Ridge Parkway and cross I-94 on the existing bridge in mixed traffic. It would then transition back into dedicated guideway along Hudson Road in Woodbury, turn north to travel in mixed traffic on Manning Avenue, and terminate at the proposed Metro Transit park-and-ride west of Manning Avenue along Hudson Boulevard in Lake Elmo.
- Option B would continue on Hudson Boulevard north of I-94, serve the proposed Metro Transit park-and-ride near Manning Avenue, and turn south to travel in mixed traffic on Manning Avenue. BRT would then turn west on Hudson Road and terminate at a station near Settlers Ridge Parkway.
- Option C would follow the Option B routing north of I-94, south on Manning Avenue, west on Hudson Road, and then would continue by turning right/north on Settlers Ridge Parkway/Lake Elmo Avenue, traveling in mixed traffic until turning left/east on Hudson Boulevard north of I-94, creating a service "loop"

Figure 20. Alignment E2 Options



The CAC, TAC, and PAC considered five key criteria when evaluating the three options for Alignment E2: capital and operating cost savings, flexibility in station location, BRT ridership, economic development potential, and transit system efficiency and integration. Option C was eliminated first because of higher operating costs, route complexity for the customer, and travel time delay for potential operator breaks. Options A and B were then analyzed relative to travel time, capital cost, and ridership.

Based on the evaluation findings, the GCC and its advisory bodies recommended Option A be incorporated in Alignment E2 for further study in the Draft EIS.

6.12 Eastern Alignments and Station Locations (Alignments E1, E2, and E3)

The eastern alignments and station locations were also refined following Draft EIS Scoping to serve proposed development in Woodbury and the proposed Metro Transit express bus park-and-ride in the northwest quadrant of the I-94/Manning Avenue interchange and to maintain appropriate station spacing. BRT facilities would be added to the park-and-ride as part of the Gateway Corridor project.

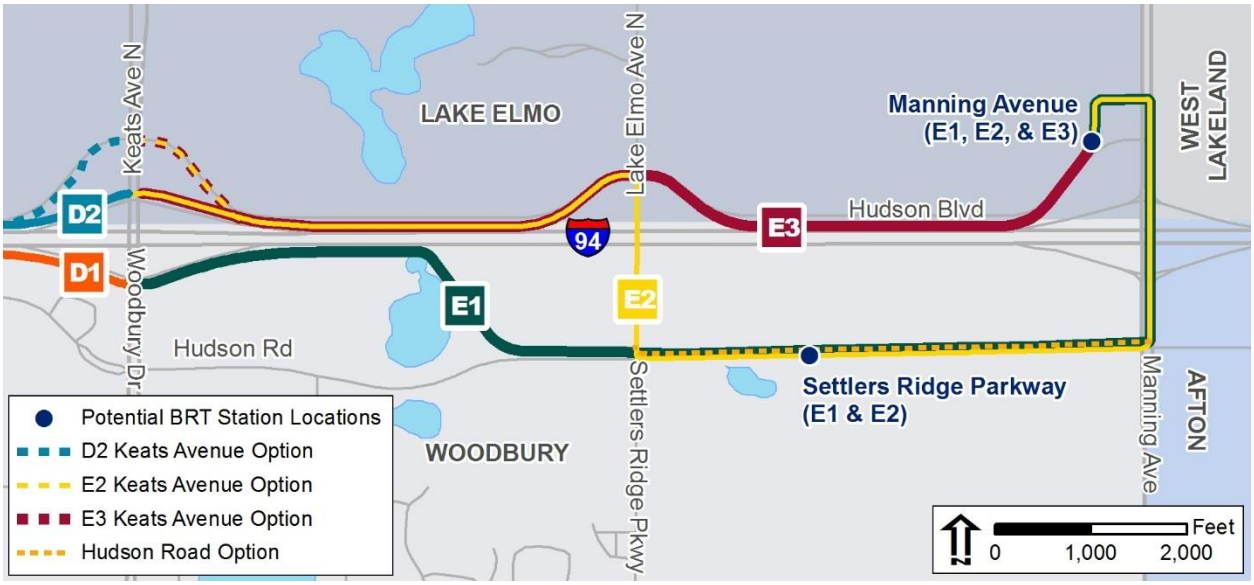
In order to serve the proposed Metro Transit express bus park-and-ride, the E1 and E2 alignments were extended. Instead of terminating at Hudson Road and Manning Avenue south of I-94 in Woodbury, BRT service would continue in mixed traffic on Manning Avenue to the new location of the Manning Avenue Station at the express bus park-and-ride in Lake Elmo.

The Settlers Ridge Parkway Station was also shifted. To accommodate a center-running guideway as part of the baseline E2 alignment, the station must occur at a signalized intersection. Placement of a station at the intersection of Settlers Ridge Parkway/Hudson Road would result in poor traffic operations and travel time delays. To avoid this impact, the station was located approximately 1/3 mile to the east at a new signalized intersection. For consistency between alternatives, this station location was also used for Alignment E1.

The E3 alignment and station location were not refined following Draft EIS Scoping. Alignment E3 would terminate in Lake Elmo at the Manning Avenue Station at the proposed Metro Transit express bus park-and-ride. There would be no other stations along this alignment.

The E alignments and station locations are shown in **Figure 21**.

Figure 21. Proposed Stations in Woodbury and Lake Elmo



7.0 Initial LPA Selection Process (2014-2016)

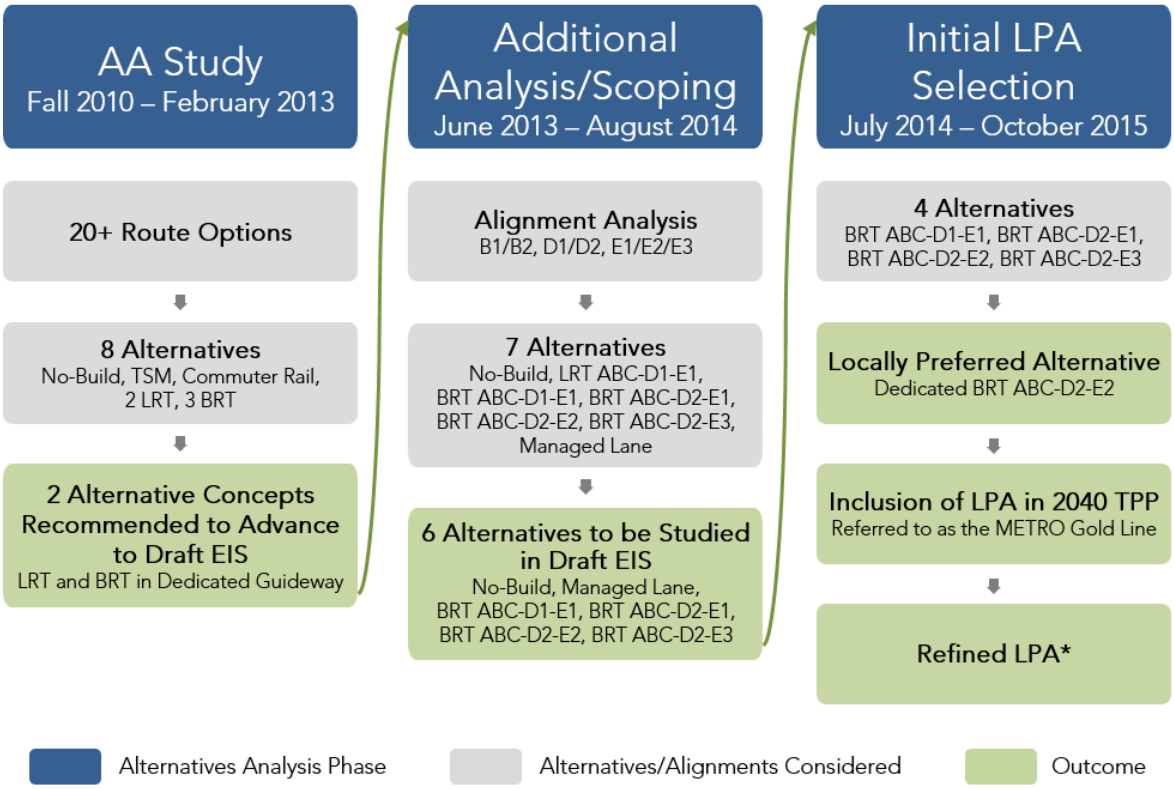
The LPA is the transitway alternative that the corridor cities, Washington County, Ramsey County, and the Metropolitan Council recommend for detailed study. The LPA specifies the type of transit technology that will be used (mode) and the general location of the transit service (alignment). Other elements of the project, including where service will end and exact station locations are established formally during subsequent engineering based on additional information, including travel demand forecasts and environmental and engineering details. The LPA selection process is illustrated in **Figure 22**.

The multi-step process to formally recommend and select an LPA for the Gateway Corridor project began after the Scoping Decision Document was published. Following a public hearing, recommendations from the PAC and GCC, and passage of resolutions of support from the Cities of Saint Paul, Maplewood, Oakdale, Landfall, Woodbury, and Lake Elmo, RCRRA and WCRRA passed resolutions at their September 23, 2014 and October 7, 2014 meetings, respectively, recommending Alternative ABC-D2-E2 as the LPA for the Gateway Corridor project. The LPA was described as BRT generally on the Hudson Road-Hudson Boulevard alignment that crosses to the south side of I-94 between approximately Lake Elmo Avenue and Manning Avenue. The LPA was adopted as part of the 2040 TPP (adopted by the Metropolitan Council in January 2015), the region's fiscally constrained long-range transportation policy and investment plan.

Although adopted into the 2040 TPP, the LPA did not define the route between Lake Elmo Avenue/Settlers Ridge Parkway and Manning Avenue. In order to determine the route in this segment of the alignment, additional analysis and coordination occurred (see Section 6.11). At their August 13, 2015 meetings, the PAC and GCC recommended a refined LPA for public comment. Following the public hearing, at their October 15, 2015 meeting the PAC recommended Alternative ABC-D2-E2 as the LPA, as illustrated in **Figure 23**. Following the PAC's recommendation, resolutions of support were needed from each city and county in which the refined portion of the alignment is located to finalize the LPA selection. One city, Lake Elmo, did not pass a resolution of support for the refined LPA.

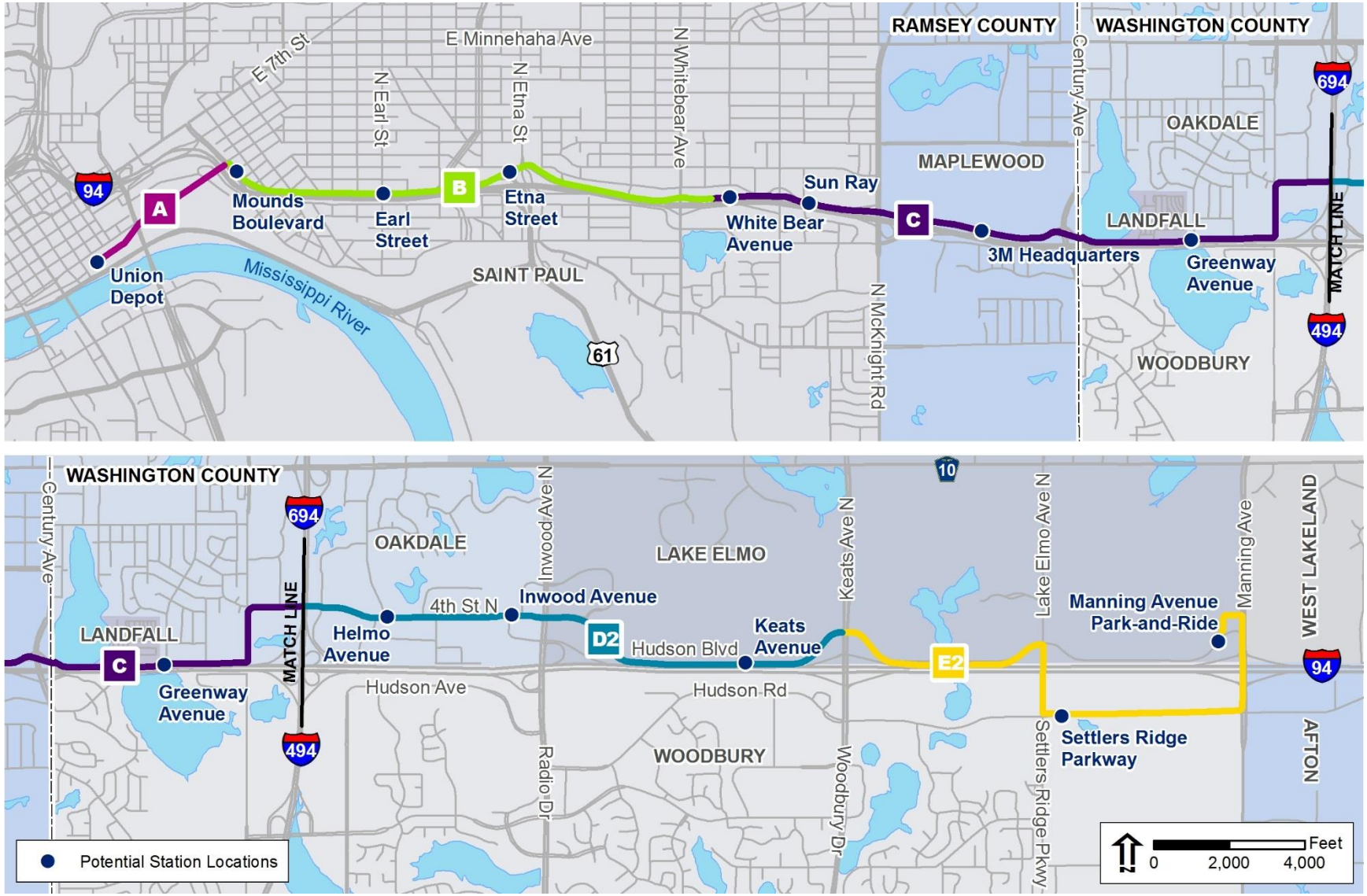
By deciding not to pass a resolution of support for the LPA, the City of Lake Elmo indicated that they did not support the Gateway Corridor project being located in their community. Therefore, the project underwent a process to reevaluate the alignment in the eastern end of the corridor as described in Section 8.0.

Figure 22. Initial LPA Selection Process



* The LPA alignment was refined between Lake Elmo Avenue/Settlers Ridge Parkway and Manning Avenue after publication of the 2040 TPP. This refined LPA was recommended by the PAC in October 2015 but was not advanced further due to lack of support from the City of Lake Elmo.

Figure 23. Initial LPA Recommendation (Alternative ABC-D2-E2)



8.0 LPA Refinements (2016)

8.1 Alignment B

While the process to reevaluate the eastern end of the project was occurring, WCRRA took the opportunity to also refine Alignment B to review and minimize potential impacts in the Dayton's Bluff Neighborhood of Saint Paul. This section summarizes the refinement process for the Dayton's Bluff area that occurred between May and September 2016.

A working group was formed to guide the refinement process that included participants from Ramsey County, Washington County, City of Saint Paul, MnDOT, and Metro Transit. The approach to refinements included incorporating MnDOT design information, tightening the dedicated guideway, and minimizing potential right-of-way impacts.

The working group evaluated a number of refinement options, and the following changes were incorporated into the design:

- Design modifications on Hudson Road to minimize dimensions while still meeting safety and design requirements
- Mounds Boulevard/3rd Street intersection modification to eliminate the dedicated right turn to gain right-of-way
- Mounds Boulevard ramp modifications to gain right-of-way without negatively impacting traffic
- Shifting the station platform location to minimize right-of-way impact and increase accessibility for pedestrians and bicyclists

These design refinements minimized right-of-way impacts, reduced on-street parking impacts, and provided potential improvements to pedestrian accessibility. Eastern Alignments

8.1.1. PROCESS OVERVIEW[17]

To reevaluate the alignment in the eastern end of the corridor, an Eastern End Realignment Working Group was formed. This group included representatives from WCRRA, RCRRA, City of Woodbury, City of Oakdale, MnDOT, and Metro Transit. The working group's responsibilities included:

- Drafting potential new routes and discussing the viability of existing routes
- Reviewing community input on station locations and routes
- Developing a list of viable routes based on project goals and objectives
- Developing a stakeholder engagement and communications plan

The development of alternatives in the eastern end of the project (east of I-694) reflected the direction provided by the Cities of Lake Elmo, Oakdale, and Woodbury, while maintaining the overall project goals and objectives.

8.1.2. ALTERNATIVES PREVIOUSLY APPROVED FOR STUDY IN THE DRAFT EIS

As part of this process, the three Dedicated BRT alternatives previously approved for study in the Draft EIS (Alternatives ABC-D1-E1, ABC-D2-E2, and ABC-D2-E3) were reevaluated.

[17] For a complete description of the eastern end realignment process, refer to the East End Alignment and Stations Technical Memorandum (Kimley-Horn, 2016).

City of Woodbury staff indicated that they did not support Alternative ABC-D1-E1 due to the anticipated traffic impacts on Radio Drive and Woodbury Drive. This was reinforced by the City of Woodbury's resolution of support for the previously identified LPA (Alternative ABC-D2-E2), which stated that their support was predicated on the fact that the alignment would not compromise the movement of traffic at Radio Drive and Woodbury Drive.

By deciding not to pass a resolution of support for the previously identified LPA (Alternative ABC-D2-E2), the City of Lake Elmo indicated that they did not support the Gateway Corridor project being located in their community. This lack of support also extended to Alternative ABC-D2-E3.

Due to the lack of local support for these three alignments, they were screened from detailed study in the Draft EIS.

8.1.3. NEW EAST END ALIGNMENTS EVALUATED

The working group identified and evaluated seven new alignments for the east end of the corridor. Five of these new alignments were screened from further evaluation based on a qualitative assessment of ability to meet the project purpose and need.

Two alignments met the Tier 1 goals (described in Chapter 1 Purpose and Need of the EA) and were advanced for more detailed evaluation. One alignment would continue east on 4th Street after crossing I-694 and terminate at the Inwood Avenue Station near Guardian Angels Church. The other alignment would continue east on 4th Street after crossing I-694, turn south on Helmo Avenue, cross I-94 on a new bridge, and continue south on Bielenberg Drive to the Woodbury Theatre Park-and-Ride.

The more detailed assessment evaluated the two east end alignments based on ridership, cost, cost-effectiveness, and, at the direction of the TAC, CAC, and PAC, access to jobs. Based on the estimated ridership, capital cost, cost-effectiveness, and access to jobs, the working group recommended that only the alignment that terminates at the Woodbury Theatre park-and-ride advance for evaluation in the environmental document. The TAC, PAC, and GCC concurred with this recommendation at their September and October 2016 meetings.

The recommended alignment, referred to as Alternative ABC-D3, is described in Section 9.2.

8.2 Adoption of the Refined LPA

Resolutions of support for Alternative ABC-D3 as the LPA were received from the following corridor cities:

- City of Oakdale – November 22, 2016
- City of Maplewood – November 28, 2016
- City of Woodbury – November 30, 2016

After receiving these resolutions of support, the PAC made their final LPA recommendation to the GCC on December 8, 2016. The GCC passed a resolution of support for the LPA on the same date. RCRRA and WCRRA adopted the LPA on December 13, 2016 and December 20, 2016, respectively.

The 2040 TPP will need to be amended to reflect the refined Gateway Corridor LPA. This amendment process is anticipated to occur in the summer of 2017.

9.0 Alternatives to be Evaluated in the EA/EAW

As noted in Section 1.0, the NEPA class of action changed from an EIS to an EA in October 2016. To comply with MEPA, an EAW will also be prepared.

Based on the analysis and refinement of alternatives as part of the LPA refinement process, two alternatives are fully evaluated in the EA (see the Build alternative on **Figure 24**):

- No-Build alternative
- Alternative ABC-D3

9.1 No-Build Alternative

The No-Build alternative serves as the NEPA baseline. NEPA requires analysis of a No-Build alternatives so that the benefits and impacts of Build alternatives (also called the environmental effects) can be measured against it. "No-Build" is defined as the 2040 transportation network with only those improvements already planned and programmed.[18] The No-Build alternative does not include the Gateway Corridor project. Improvements assumed as part of the No-Build alternative include:

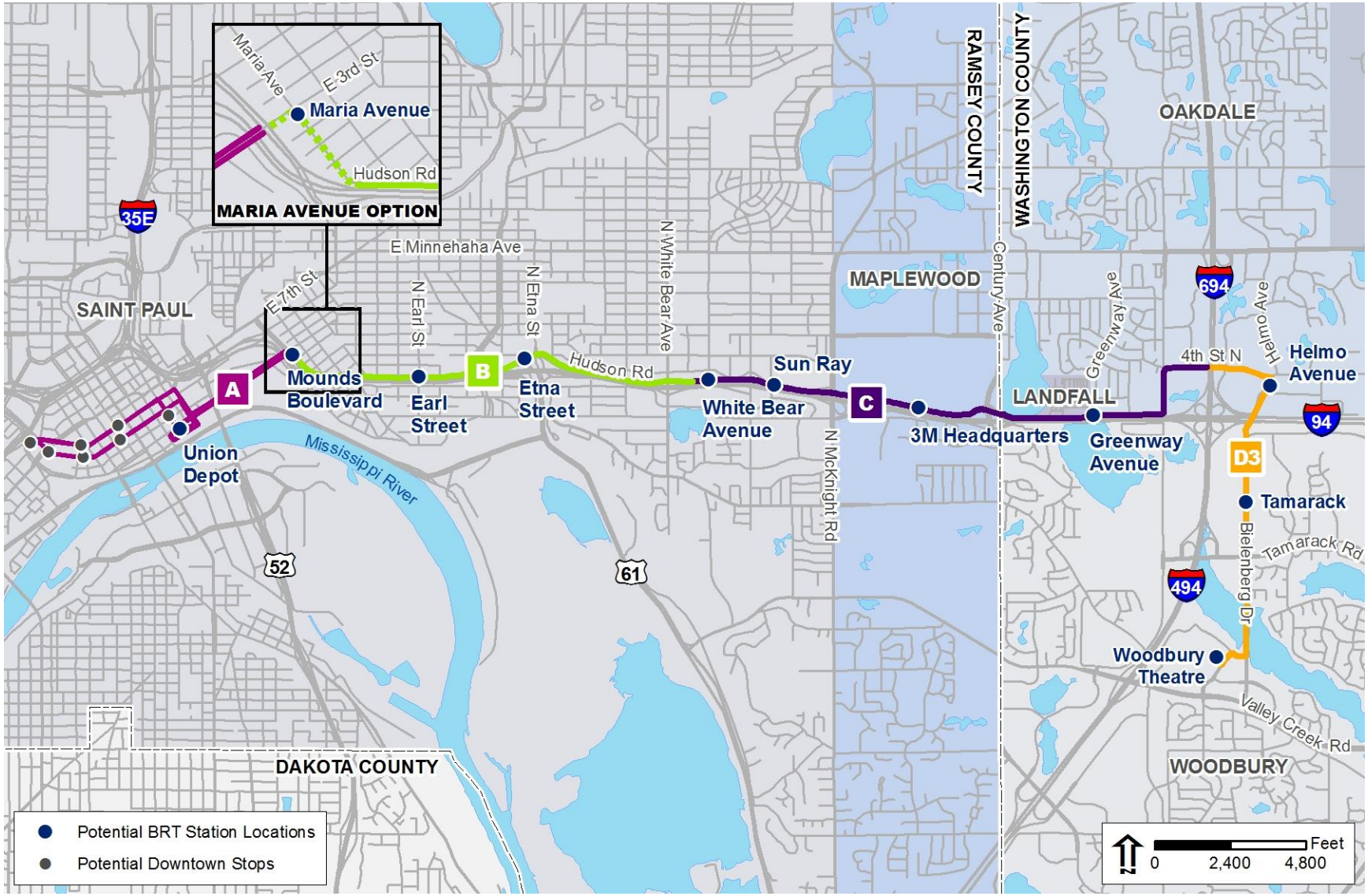
- Reconstruction/replacement of Kellogg Boulevard Bridge (City of Saint Paul)
- White Bear Avenue improvement project north of I-94 (Ramsey County)
- Park-and-ride in the northwest quadrant of the I-94/Manning Avenue interchange with express bus service to Minneapolis (Metro Transit)
- Addition of a managed lane on I-94 between downtown Minneapolis (5th/6th Street S) and Saint Paul (Marion Street) (MnDOT)
- Metro Transit Route 54 extension to Maplewood Mall (Metro Transit)
- Construction of auxiliary lanes on I-94 eastbound between East 7th Street and Mounds Boulevard in Saint Paul (MnDOT)
- Unbonded concrete overlay project on I-94 between Mounds Boulevard and Century Avenue (MnDOT)
- Add a westbound left turn lane and a southbound channelized right turn lane at Bielenberg Drive and Tamarack Road (City of Woodbury)
- Construct extension of Nature Path from the west side of Bielenberg Drive to Tamarack Road (City of Woodbury). The addition of a traffic signal at the intersection of Bielenberg Drive and Nature Path is also assumed.

9.2 Build Alternative

One BRT Build alternative is being evaluated in the EA/EAW (Alternative ABC-D3). This alternative is shown in **Figure 24**. The alignments that make up the alternative are described in Section 9.2.1.

[18] During the Draft EIS Scoping process, 2030 was used as the horizon year. After Draft EIS Scoping was complete, the horizon year was updated to 2040.

Figure 24. Alternative ABC-D3



9.2.1. ALIGNMENTS

Starting at the western end of the corridor in downtown Saint Paul, the alignments can be described as follows.

- **Alignment A** in downtown Saint Paul would vary based on time of day (see **Figure 25**). During non-peak periods, BRT service would run from the Union Depot to the Kellogg Boulevard/Broadway Street intersection, where it would turn northeast and run in mixed traffic on the Kellogg Boulevard Bridge to the Mounds Boulevard intersection. BRT service would not travel through downtown Saint Paul during non-peak periods. Specific transit infrastructure on Kellogg Boulevard will be identified in the final design for a new Kellogg Boulevard bridge, which is being prepared by the City of Saint Paul.

  During peak periods, Alignment A would include BRT service in downtown Saint Paul to support more convenient customer transfers to more existing and planned transit routes. The direction of the BRT service would differ between the morning and evening peak periods, as described in the following paragraphs, but the location of the stops would not change.

  During the morning peak period (6:00 to 9:00 am), inbound buses would travel on Kellogg Boulevard, turning right and making a first downtown stop on Wacouta Street. The morning peak routing would then turn west on 6th Street, stopping at Minnesota Street and Market Street before returning eastbound after a stop at the existing Smith Avenue Transit Center. Heading eastbound through downtown Saint Paul, Alignment A would include BRT service on 5th Street, stopping at 7th Street, Market Street, and Minnesota Street before turning south on Broadway Street with a stop at Union Depot before continuing east on Kellogg Boulevard.

  During the evening peak period (3:00 to 6:00 pm), inbound buses would travel on Kellogg Boulevard, turn south on Broadway Street, and make a first stop at Union Depot. BRT service would then continue north on Broadway Street, turn west on 6th Street, and stop at Minnesota Street, Market Street, and the existing Smith Avenue Transit Center. BRT service would then turn eastbound on 5th Street, stopping at 7th Street, Market Street, and Minnesota Street, turn south and stop on Wacouta Street, then turn east on Kellogg Boulevard.

- **Alignment B** would begin at the intersection of Kellogg Boulevard and Mounds Boulevard and extend to White Bear Avenue. From the Kellogg Boulevard/Mounds Boulevard intersection, Alignment B would extend east on the north side of Mounds Boulevard and along the I-94 off-ramp. Between Wilson Avenue and Griffith Street, the dedicated guideway would be located between a modified Hudson Road and I-94. The guideway would cross over Johnson Parkway on a new bridge, staying on the north side of the TH 61 interchange. The BRT service would operate on a BRT-exclusive bridge over a new, modified roundabout at the Wilson Avenue/Etna Street/TH 61 intersection. The guideway would stay north of I-94 and its interchange ramps; between the westbound

I-94 off-ramp and White Bear Avenue, it would be located between Hudson Road and I-94, and pass under the White Bear Avenue Bridge.

Alignment B includes one design option:

- ***Maria Avenue Option:*** From the Kellogg Boulevard/Mounds Boulevard intersection, Alignment B would continue northeast along Kellogg Boulevard/3rd Street in mixed traffic, then turn right/southeast on Maria Avenue and continue to operate in mixed traffic until Wilson Avenue, where the alignment would connect with the dedicated guideway as described above to White Bear Avenue.

- **Alignment C** would begin at White Bear Avenue and end on the west side of the 4th Street Bridge over I-694. From White Bear Avenue, Alignment C would continue east in a dedicated guideway on the north side of I-94, crossing Ruth Street and McKnight Road at grade. From McKnight Road, the guideway would transition to the north side of Hudson Road, adjacent to the 3M campus, and cross over Century Avenue on a BRT-exclusive bridge. The dedicated guideway would end on the east side of Century Avenue and south of Tanners Lake. Near Tanners Lake, BRT service would operate in mixed traffic until just east of Greenway Avenue where it would enter a split dedicated guideway along Hudson Boulevard. The guideway would turn north and follow Hadley Avenue to 4th Street where BRT service would transition to operate in mixed traffic.
- **Alignment D3** would begin where 4th Street crosses over I-694 and extend to the existing Woodbury Theatre Park-and-Ride. Alignment D3 would cross the bridge in mixed traffic then follow 4th Street east of I-694 in a south side running guideway and turn south on Helmo Avenue. The alignment would then continue south in a west side running guideway and cross I-94 on a new bridge, connecting to Bielenberg Drive on the south side of I-94. The alignment would continue south on Bielenberg Drive in a center running guideway to Nature Path where BRT service would then transition to operate in mixed traffic. The alignment would continue south on Bielenberg Drive, turn west on Guider Drive, then south on Queens Drive to terminate at the existing Woodbury Theatre Park-and-Ride.

  Alignment D3 includes one design option:

  - ***Curbside Running Option:*** On Bielenberg Drive, BRT service would operate in curbside running guideway (northbound service would be adjacent to the east curb and southbound service would be adjacent to the west curb) before transitioning to mixed traffic at Nature Path (see **Figure 26**).

Figure 25. Alignment A Routing in Downtown Saint Paul

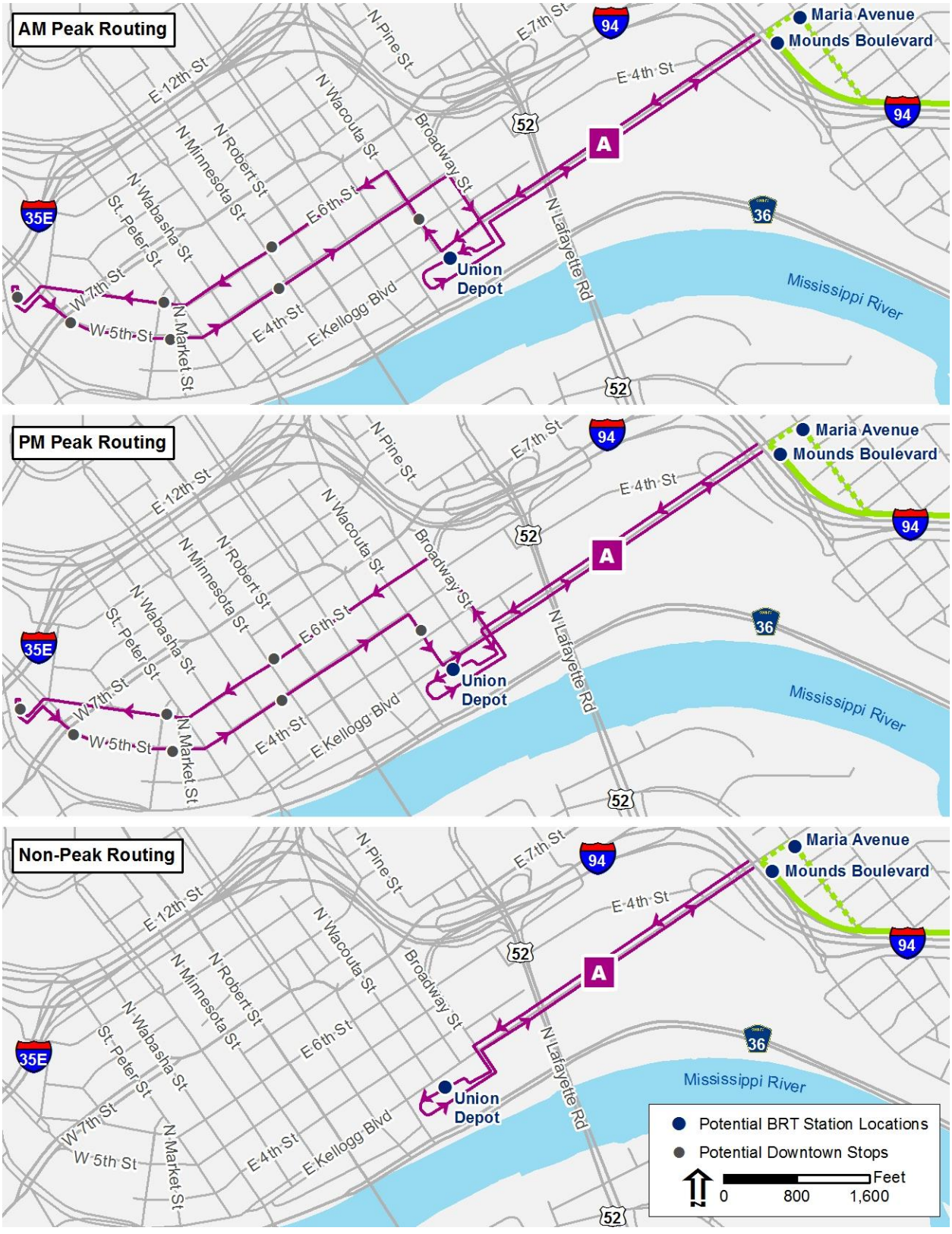
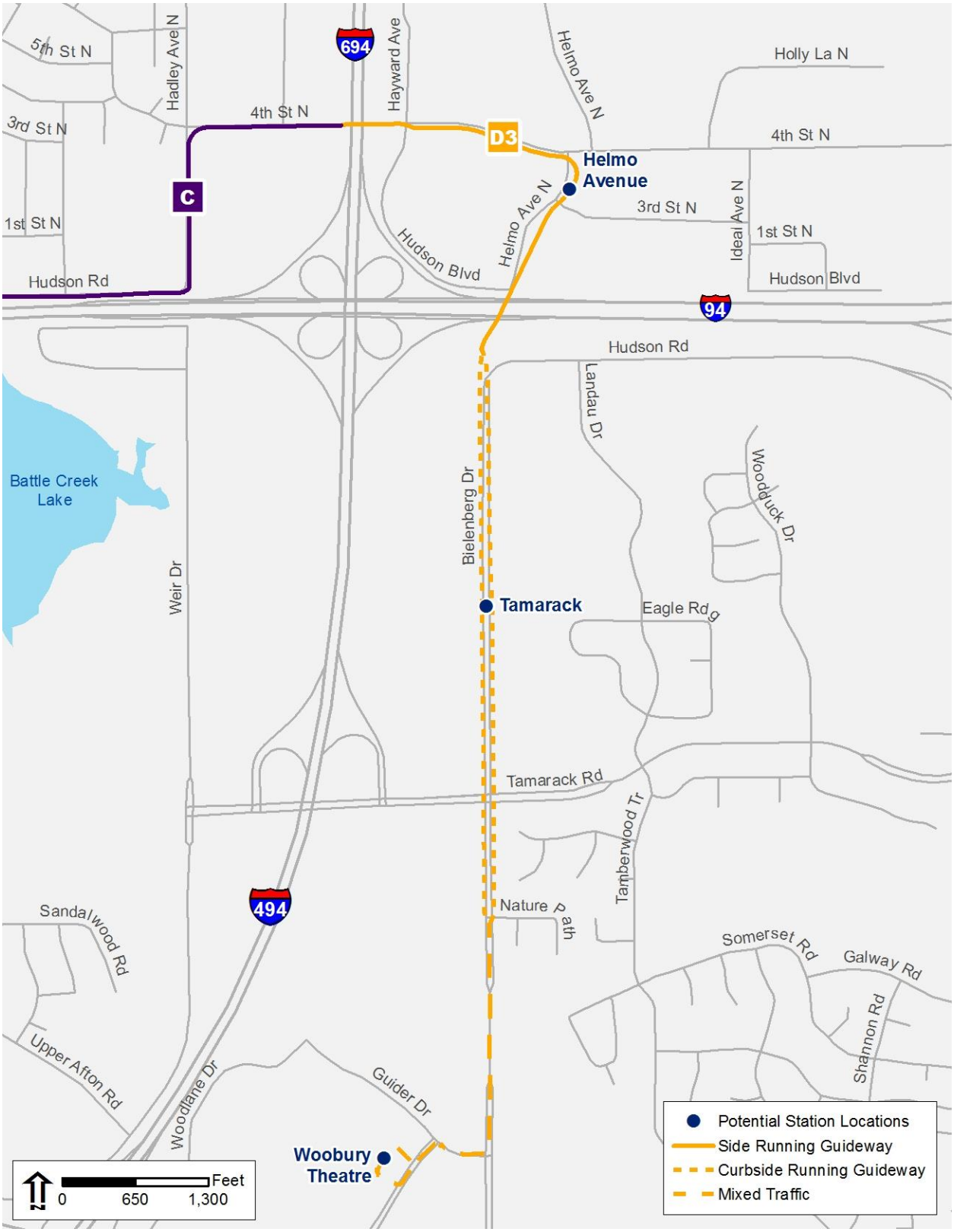


Figure 26. Alignment D3 Curbside Running Option



9.2.2. STATIONS

Station locations are summarized below in **Table 4** and illustrated in **Figures 24 and 25**. At some locations, a park-and-ride lot would be provided. These locations and the approximate number of spaces associated with the park-and-ride lots are noted in the table.

In general, stations would be designed to include the components that are essential for traveler safety and security, as well as amenities for passenger comfort and convenience. Station design would also reflect compliance with Americans with Disabilities Act (ADA) requirements. Primary elements of stations would include the platform(s), off-board fare collection, shelter, wheelchair ramps, and station amenities such as lighting, benches, bike racks, trash receptacles, security systems, and information displays. Stations along the curb would extend approximately 12 feet perpendicular from the curb, be raised 14 inches above pavement at the boarding edge, and be at least 60 feet long. All platforms would be at or slightly lower than the floor level of the BRT buses.

Stations in downtown Saint Paul would be designed as "enhanced stops," meaning they would include a pylon sign, off-board fare collection, and a small shelter. Unlike the stations in the rest of the corridor, the enhanced stops would have smaller shelters, would not have a raised curb for level boarding, and may not have a detectable warning edge or other amenities such as bike racks, benches, and trash receptacles.

Three station types are proposed as part of the Gateway Corridor project:

- Downtown stops: enhanced stops (as described above) located in downtown Saint Paul
- Walk-up stations: stations that do not include designated parking for transit riders
- Park-and-rides: stations that include a parking facility designated for transit riders

The Build alternative would include 15 total stops during the peak periods and 11 stops during non-peak periods.[19] The project would include three park-and-rides.

[19] The routing through downtown Saint Paul includes three stations that are used only for inbound buses (Wacouta Street, Minnesota Street, and St. Peter Street), three stations that are used only for outbound buses (7th Street, North Market Street, and Minnesota Street), and two stations that are used in both directions (Smith Avenue and Union Depot). As such, the total number of stops includes five stations for Alignment A to reflect the number of stops in one direction.

Table 4. Stations by Alignment

Alignment	Station Name	Station Type
Alignment A	Wacouta Street (AM peak – inbound; PM peak – outbound)	Downtown stop
	Minnesota Street (inbound only)	Downtown stop
	Market Street (inbound only)	Downtown stop
	Smith Avenue	Downtown stop
	7th Street (outbound only)	Downtown stop
	Market Street (outbound only)	Downtown stop
	Minnesota Street (outbound only)	Downtown stop
	Union Depot	Walk-up
Alignment B	Mounds Boulevard or Maria Avenue	Walk-up
	Earl Street	Walk-up
	Etna Street	Walk-up
Alignment C	White Bear Avenue	Walk-up
	Sun Ray	Park-and-ride (parking ramp; 500 spaces)[20]
	3M Headquarters	Walk-up
	Greenway Avenue	Walk-up
Alignment D3	Helmo Avenue	Park-and-ride (surface lot; 100 spaces)
	Tamarack	Walk-up
	Woodbury Theatre	Park-and-ride (parking ramp; 200 spaces)

9.2.3. OPERATIONS AND MAINTENANCE FACILITY (OMF)

A new operations and maintenance facility (OMF) would not be constructed as part of this project. Therefore, it is presumed that the Gateway Corridor BRT vehicles would use an existing Metro Transit OMF.

9.2.4. BRT VEHICLE CHARACTERISTICS

General BRT vehicle characteristics are summarized in **Table 5**.

Table 5. BRT Vehicle Characteristics

Characteristic	Description
Dimensions	40 feet long
Fuel Type	Diesel-electric hybrid
Capacity	48 passengers
Door Location	Right side
Fare Collection	None on BRT vehicle; at stations only

[20] 350 spaces are assumed for the park-and-ride, and 150 spaces are needed for adjacent uses or replacement parking.

9.2.5. OPERATING ASSUMPTIONS

BRT in the Gateway Corridor has been assumed to operate from 5:00 am to 12:00 am on weekdays and Saturdays and from 6:00 am to 10:00 pm on Sundays. Operating frequencies are provided in **Table 6**.

Table 6. Summary of Operating Frequencies for the Build Alternative

Day of the Week	Time Period	Operating Frequency
Weekday	Early morning (5:00 am to 6:00 am) and late evening (8:00 pm to 12:00 am)	30 minutes
Weekday	Peak (6:00 am to 9:00 am and 3:00 pm to 6:00 pm)	10 minutes
Weekday	Midday (9:00 am to 3:00 pm) and early evening (6:00 pm to 8:00 pm)	15 minutes
Saturday	Day (5:00 am to 7:00 pm)	15 minutes
Saturday	Evening (7:00 pm to 12:00 am)	30 minutes
Sunday	All day (6:00 am to 10:00 pm)	30 minutes

9.2.6. SUMMARY OF BUILD ALTERNATIVE

A description of the elements of the Build alternative is included in **Table 7**.

Table 7. Build Alternative Description

Project Element	Description
Eastern Terminus	Woodbury
Length	9.1 miles
Downtown Saint Paul Stops	▪ Wacouta Street (AM peak – inbound; PM peak – outbound) ▪ Minnesota Street (inbound only) ▪ Market Street (inbound only) ▪ Smith Avenue ▪ 7th Street (outbound only) ▪ Market Street (outbound only) ▪ Minnesota Street (outbound only)
BRT Stations	▪ Union Depot ▪ Mounds Boulevard or Maria Avenue ▪ Earl Street ▪ Etna Street ▪ White Bear Avenue ▪ Sun Ray ▪ 3M Headquarters ▪ Greenway Avenue ▪ Helmo Avenue ▪ Tamarack ▪ Woodbury Theatre
Capital Cost Estimate	$420,000,000
Operating Cost	$9,752,600
2040 Ridership	8,040

Appendix A

Correspondence

TO:
Gateway Corridor Project Manager - Andy Gitzlaff, Senior Planner
Washington County Public Works Department
11660 Myeron Road North
Stillwater, MN 55082
gatewaycorridor@co.washington.mn.us

From:
Alliance for Metropolitan Stability
2525 E. Franklin Avenue
Minneapolis, MN 55406
Contact: Joan Vanhala, Coalition Organizer
612-332-4471; joan@metrostability.org

Public Comment for the Gateway Corridor Alternatives Analysis report

January 3, 2013

The Alliance for Metropolitan Stability (AMS) is a coalition of grassroots organizations that advances racial, economic and environmental justice in growth and development patterns in the Twin Cities region. Our 30 member groups represent communities of color, low-income communities, housing advocates, faith-based organizations, research and policy organizations, economic developers and environmental, transit and land-use policy advocates.

For the past 6 years AMS has been providing technical and organizing support to Environmental Justice communities along our metropolitan region's planned transitways to ensure that they are included in the decision making and receive community benefits from these major infrastructure investments. One of the Environmental Justice groups we have been working with is Engage Eastside as they organize Eastside St. Paul low income communities and communities of color around the development of the Gateway Corridor.

Comments:

1. The Alliance for Metropolitan Stability supports Engage Eastside's request to include the alignments of Alternative 4 and Alternative 6 into the Draft Environmental Impact Statement for the Gateway Corridor project.
2. The Alliance for Metropolitan Stability supports forming a Community Advisory Committee immediately to ensure the "full and fair participation" of the environmental justice communities of East Side St. Paul.

Engage Eastside is a Corridors of Opportunity Initiative Outreach and Engagement grantee – see http://www.corridorsofopportunity.org/engagement/2012-community-engagement-grant-awards . This coalition of Eastside organizations - Casa de Esperanza, Hmong American Partnership, Cultural Wellness Center (African-American community), American Indian Family Center , and District Councils 4 & 5 - have been working hard at informing Eastside residents, researching and surveying information, and trying to ensure that their voice is represented at the decision making table for the Gateway Corridor project.

The demographic profile that Engage Eastside created with the assistance of a Center for Urban and Regional Affairs graduate student states that the entire East Side includes Districts 1, 2, 4, 5[1] contains a population of 94,793. Clearly an environmental justice community, the demographics are White 41%, Black 16%, Asian 25%, Hispanic 13%, American Indian 1%, and mixed race 4%. 25% of this population lives in poverty.[2] All of these District Councils 1,2,4, and 5 are included in the Gateway Corridor study area "For purposes of the AA, the Gateway Corridor is defined as approximately

[1] See attachment city of St. Paul District Council map retrieved 1/3/13 from http://www.stpaul.gov/DocumentCenter/Home/View/2822
[2] Engage Eastside powerpoint presentation: East Saint Paul Gateway Corridor Analysis June 2012 – see attachment

3-5 miles on either side of Interstate 94 from downtown Minneapolis to downtown Eau Claire."[3] The information from this study was presented to the Gateway Commission on September 13, 2012 by Mikael Carlson, Engage Eastside project coordinator.[4]

From February through April 2012, Engage Eastside conducted a survey of 593 East Side St. Paul residents at 6 locations: bus stops, Cultural Wellness Center, Casa de Esperanza, District 4 office, District 5 office, and the Hmong American Partnership. Used as a tool to gauge community awareness of the Gateway Corridor and community use of public transit, this survey provides invaluable information about the East Side St. Paul community members[5].

On October 11, 2012, the Gateway Corridor Commission approved the Gateway Corridor Policy Advisory Committee's recommendations to eliminate the following two alignments from further study and amended the motion to include a public comment period[6]:

- Alternative 4: Bus-Rapid Transit (BRT) from Minneapolis to Hudson along E. 7th Street, White Bear Avenue and Hudson Road

- Alternative 6: Light Rail Transit (LRT) from St. Paul to Hudson through E. 7th Street, White Bear Avenue and Hudson Road

These are the two alignments that travel through the heart of East Side St. Paul and should be included in the Gateway Corridor Draft Environmental Impact Statement to ensure that there is no reduction of benefits to the environmental justice communities in East Side St. Paul.

As stated in the recently published Federal Transit Administrations EJ Circular "*Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires the U.S. Department of Transportation (DOT) and the Federal Transit Administration (FTA), to make environmental justice (EJ) part of our mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of our programs, policies, and activities on minority p0opulations and/or low-income populations (collectively "EJ populations"). Environmental justice at FTA includes incorporating environmental justice and non-discrimination principles into transportation planning and decision-making processes as well as project specific environmental reviews*."[7]

It is also important to note in this circular that "*The guiding EJ principles followed by DOT and FTA are briefly summarized as follows:*

- *To avoid, minimized, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.*
- *To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.*
- *To present the denial of, reduction in, or significant delay in the receipt of the benefits by minority and low-income populations.*

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[3] Retrived 1/3/13 from Gateway Corridor Transit Study http://thegatewaycorridor.com/html/transit-study-gateway-corridor.php
[4] Gateway Corridor Commission agenda September 13, 2012 retrieved 1/3/13 from http://thegatewaycorridor.com/documents/2012/Gateway%20Agenda%20Packet_09-13-12_Revised.pdf
[5] Engage Eastside powerpoint presentation: East Saint Paul Gateway Corridor Analysis – see attachment
[6] Gateway Corridor Commission October 11th , 2012 Meeting Minutes page 3 Agenda Item #3 retrieved 1/3/13 from http://thegatewaycorridor.com/documents/2012/Meeting%20Minutes_October%202012.pdf
[7] Chapter 1, page 1; *FTA Environmental Justice Policy Guidance for Federal Transit Administration Recipients*, August 15, 2012 retrieved 1/3/13 http://www.fta.dot.gov/legislation_law/12349_14740.html

You should consider these goals of environmental justice throughout transportation planning and project development, and through all public outreach and participation efforts conducted by FTA, its grantees and subgrantees."[8]

The Alliance for Metropolitan Stability also would like to comment that there was limited community involvement in the decision making during the Alternatives Analysis because the Gateway Corridor Commission had decided NOT to form a Community Advisory Committee during that time.

This decision has limited the "full and fair participation" of the environmental justice communities in East Side St. Paul to poorly advertised and poorly attended community meetings. The Gateway Corridor project is overdue in establishing a Community Advisory Committee.

At the Alliance for Metropolitan Stability, we have found in our work that environmental justice communities provide invaluable input during the Alternatives Analysis. Including environmental justice communities early in the planning process is the best approach to mutual problem solving resulting in a better project. It is well worth the time to include environmental justice communities early and can save time later when conflicts arise. Our region has shown that conflicts are inevitable with projects this size. It is better to identify them and address them early in the project planning.

We refer Gateway Corridor project staff to the FTA Circular on Environmental Justice Chapter III as an excellent guide to meaningful public engagement. "*Public engagement is integral to good transportation planning. Without meaningful public participation, you risk making poor decisions, or decisions that have unintended negative consequences. With it, it is possible to make a lasting contribution to an area's quality of life. Public engagement is more than an agency requirement and more than a means of fulfilling a statutory obligation. Meaningful public participation is central to good decision-making on transportation planning."*[9]

Attachments:

1. City of St. Paul District Councils Map
2. Engage Eastside power point presentation: East Saint Paul Gateway Corridor Analysis June 2012

[8]Chapter 1, page 2; *FTA Environmental Justice Policy Guidance for Federal Transit Administration Recipients*, August 15, 2012 retrieved 1/3/13 http://www.fta.dot.gov/legislation_law/12349_14740.html

[9] Chapter 3, page 21; *FTA Environmental Justice Policy Guidance for Federal Transit Administration Recipients*, August 15, 2012 retrieved 1/3/13 http://www.fta.dot.gov/legislation_law/12349_14740.html

-----Original Message-----
From: Mikael Carlson [mikaelc@hmong.org]
Sent: Monday, October 21, 2013 12:00 PM Central Standard Time
To: William.Wheeler@dot.gov
Subject: Gateway Corridor DEIS and EJ Concerns

Hi Bill,

I wanted to follow up with you about some of the concerns I communicated to you in an email last February around Gateway Corridor. In the 8 months that have followed since I first contacted you, there has been a number of changes and new developments that have altered my thinking on the Gateway Corridor. To begin with, at the time of my email, Gateway Corridor was the only regional transit option available to the East Side of St. Paul, so we (the transit engagement group I coordinate—Engage East Side) wanted to be sure that the East Side would benefit from the corridor, namely, that the route which would have gone into the community would be brought into the DEIS phase of the project and not be tossed out based on early opinions of some key leaders, without proper community input. In the interceding months, a number of developments have occurred, including the inclusion of that East Side alternative in the DEIS, which have altered my thinking on that alternative.

Primarily, Gateway Corridor is no longer the only transit development project in the region. The East Side now has two routes included in the second round of a city sponsored streetcar study. In addition, the Rush Line Corridor is now beginning its alternative analysis, and this corridor has much greater potential for connecting East Siders to the regional transit system, without the major negative impacts on properties that the Gateway East Side alternative would create. Through my participation in the Gateway Corridor Community Advisory Committee I have come to agree with others, that the negative impacts created by that route (White Bear Avenue and East 7th Street) would be too much, with the property takes and the parking and traffic disruptions. And now that Gateway isn't the only option for the East Side, it is my belief that it is no longer an option that makes sense for our community.

I do appreciate that the route was brought back into the process so that it could be vetted in greater detail by a larger pool of stakeholders. However, I do now feel that the route would be untenable and too negative for the community. My group will continue to advocate for proper EJ review for the route that will only slightly connect to the East Side and we'll also be working on how to make the best connections to that route for East Sider's, many of whom are transit dependent.

Thank you for your time and please feel free to connect with me or to ask any questions that you might have.

Sincerely,

Mikael Carlson

U.S. Department of Transportation
Federal Highway Administration

Minnesota Division

380 Jackson Street
Cray Plaza, Suite 500
St. Paul, MN 55101-4802
651.291.6100
Fax 651.291.6000
www.fhwa.dot.gov/mndiv

March 10, 2014

Andy Gitzlaff
Senior Planner
11660 Myeron Road North
Stillwater, MN 55082

Re: I-94 and Gateway Corridor Alternatives Analysis / DEIS

Dear Mr. Gitzlaff:

The Federal Highway Administration (FHWA) has been made aware of the Federal Transit Administration (FTA), Washington County Regional Rail Authority (WCRRA), and the Metropolitan Council's **Notice of Intent to Prepare an Environmental Impact Statement for the Gateway Corridor Project from Saint Paul to Woodbury in Ramsey to Washington Counties, MN.**

After reviewing the Notice of Intent, the Scoping Booklet, and the Alternatives Analysis (AA) completed by the Gateway Corridor Commission **the FHWA believes it to be in the public's interest to carry a revised Bus Rapid Transit-Managed Lane (BRT-ML) alternative into the Draft Environmental Impact Statement (DEIS).** This determination stems from the following concerns regarding:

1. The elimination of feasible alternatives that may better achieve the project's purpose and need with fewer adverse impacts,
2. The need to fully inform decisions on the allocation of limited right of way in the corridor; particularly the accommodation of future capacity expansion and the preclusion of achieving full Interstate design standards, and
3. The potential degradation of Interstate ramp terminal operations due to the interaction with the facilities under consideration.

The FHWA understands a BRT-managed lane concept was studied to a degree in the AA alongside the LRT and BRT (Hudson Road) alternatives under consideration:

Alternative 8: BRT Managed Lane within I-94. Alternative 8 would add managed lanes to I-94 between downtown St. Paul and the Highway 95 interchange just west of the St. Croix River. Management would include tolling with dynamic pricing through the most congested segments of the corridor to ensure that transit flows at posted speeds. (2013 Gateway Corridor Alternatives Analysis)

However, the FHWA does not concur with the rationale cited in the preceding study as a sound

basis for elimination of this alternative:

Although Alternative 8, BRT Managed Lane, maintained its "Medium" ranking and compared very favorably in terms of average daily ridership (8,100), capital cost (approximately $520M), and competitive travel time, it did not compare as favorably to Alternatives 3 and 5 for the following reasons:

1. ***Fewer stations (7) and their location within the freeway median, offer less opportunity for economic development around stations for communities in the corridor compared to other alternatives.***
2. ***A managed lane does not qualify for FTA New Starts funding under MAP-21, and there is no equivalent highway funding program for a project of this scale. (2013 Gateway Corridor Alternatives Analysis)***

In reviewing the AA it appears the BRT-Managed Lane alternative ($520M) received the same relative "medium" score as the LRT alternative ($920M). The FHWA believes Alternative 8 should have received a "high" ranking similar to that of the BRT Hudson alignment ($400M) to account for the significantly different orders of magnitudes. It also seems that the Metro region is shifting away from higher cost on-line stations, and doing so without compromising serviceability and opportunities for economic development. As cited in a recently completed I-35W study:

"Ridership forecasts were more sensitive to service frequency than to differences in corridor travel times associated with providing online stations. Minor differences in forecasted ridership totals would not be expected to justify the high capital costs associated with a BRT system using online stations." (2013 I-35W North Managed Lanes Feasibility Study)

For these reasons the FHWA believes a reconsideration that includes strategically located transit access points may provide a more attractive alternative. And while this alternative may not qualify for FTA New Starts funding, it may in fact be competitive for FTA's Small Starts Program. Regardless, the region has shown it is fully adept at leveraging a variety of funding sources and planned investments to deliver projects of similar scope and scale.

The FHWA believes that by revisiting these alternatives the project will emerge with a more thoroughly vetted final product that provides the east-Metro and the traveling public with a flexible, robust, and efficient system now and well into the future.

Sincerely,

Derrell E. Turner

Derrell Turner
Division Administrator

EE/alk

cc: 1 FTA – Marisol Simon, e-copy – Marisol.simon@dot.gov
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DMS – 40910 – I-94 and Gateway Corridor Alternatives Analysis - DEIS

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January 4, 2016

Ms. Marisol R. Simón
Regional Administrator
Federal Transit Administration
200 West Adams Street
Chicago, Illinois 60606

Re: DEIS Alternatives, Washington County, Minnesota, Gateway Corridor – Gold Line BRT

Dear Ms. Simón:

In March 2014, the FHWA requested the Bus Rapid Transit – Managed Lane alternative be refined and carried into the project's Draft Environmental Impact Statement. This request was in direct response to the Alternatives Analysis, Notice of Intent, and Scoping Booklet. FHWA's review and concerns centered on the preclusion of expansion within the I-94 corridor. Other rationale included:

- *The elimination of alternatives that may better achieve the project's purpose and need with fewer adverse impacts*
- *The potential degradation of Interstate ramp terminal operations due to the interaction with the facilities under consideration*

Since then the Gateway - Gold Line team has worked diligently to complete FHWA's requests. The results of these additional studies are documented in the Managed Lane Bus Rapid Transit Alternative Technical Memo (2015), and the I-94 Right of Way Analysis (2015).

As a result of these in-depth investigations, a shared concept has been defined, which demonstrates the Gold Line BRT and future expansion can co-exist. Additionally, the requested concept has been demonstrated to not meet the project's goals and objectives, as envisioned by the project sponsors. FHWA's concerns have been adequately addressed with the understanding that expansion of I-94 is not precluded, and that impacts to Interstate operations are being avoided, minimized, and mitigated. Thanks to you and your staff.

Sincerely,

Arlene Kocher

Arlene Kocher, P.E.
Division Administrator – Minnesota Division

EE/sll

Cc: 1 WCRRA – Lyssa Leitner
1 FTA – Sheila Clements
1 MnDOT – Brian Gage
1 MnDOT – Scott McBride
1 Met Council – Adam Duininck
1 Met Council – Arlene McCarthy

METRO Gold Line

BUS RAPID TRANSIT PROJECT ENVIRONMENTAL ASSESSMENT

Appendix A: Environmental Assessment Technical Reports

Attachment A-2-2:
East End Alignment and Stations Technical Memorandum

September 2019

GATEWAY CORRIDOR
GOLD LINE BRT

East End Alignment and Stations Technical Memorandum

December 2016

Washington County Regional Railroad Authority

RAMSEY COUNTY Regional Railroad Authority

METROPOLITAN COUNCIL

Kimley»Horn

SRF Consulting Group, Inc. | Engineers Planners Designers

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1.0 Introduction and Project Background

The Gateway Corridor project is a planned transitway in Ramsey and Washington Counties. The corridor would connect the east Twin Cities Metropolitan Area to the greater regional transit network via connections at the Union Depot multimodal hub in downtown Saint Paul. The project was previously defined as an approximately 12-mile transitway running generally parallel to I-94, connecting downtown Saint Paul with its East Side neighborhoods and the suburbs of Maplewood, Landfall, Oakdale, Woodbury, and Lake Elmo. As discussed in this report, the project definition has since been refined in the segment through Oakdale, Lake Elmo, and Woodbury.

Alternatives for the Gateway Corridor project have been developed in multiple phases, starting with the Alternatives Analysis (AA) Study in 2010. After the AA Study was published in 2013 and the Draft Environmental Impact Statement (EIS) Scoping process was completed in 2014, a Locally Preferred Alternative (LPA) was selected. The LPA is the transitway alternative that the corridor cities, Washington County, Ramsey County, and the Metropolitan Council recommend for detailed study. The LPA specifies the type of transit technology that will be used (mode) and the general location of the transit service (alignment). The LPA was adopted as part of the *2040 Transportation Policy Plan* (2040 TPP; adopted by the Metropolitan Council in January 2015), the region's fiscally constrained long-range transportation policy and investment plan. In the TPP, the LPA is described as bus rapid transit (BRT) generally on the Hudson Road-Hudson Boulevard alignment that crosses to the south side of I-94 between approximately Lake Elmo Avenue and Manning Avenue.

Although adopted into the 2040 TPP, the LPA did not define the route between Lake Elmo Avenue/Settlers Ridge Parkway and Manning Avenue in the eastern end of the corridor. Additional analysis and coordination occurred to determine the route in this segment of the alignment, and in October 2015 the Policy Advisory Committee (PAC) recommended a refined alternative as the LPA. Following the PAC's recommendation, resolutions of support were needed from each city and county in which the refined portion of the alignment is located to finalize the LPA selection. One city, Lake Elmo, did not pass a resolution of support for the refined LPA.

To reevaluate the alignment in the eastern end of the corridor, an Eastern End Realignment Working Group was formed. This group includes representatives from Washington County, Ramsey County, City of Woodbury, City of Oakdale, Minnesota Department of Transportation (MnDOT), and Metro Transit.

2.0 Purpose of Document

The purpose of this document is to present the decision-making and alternatives development process that has occurred since Lake Elmo's decision to not support the refined LPA. As described in the following sections, the decision-making process has been collaborative, including a robust community engagement process, and the alternatives development process has been grounded in the project's defined purpose and need.

3.0 Decision-Making Process

The eastern end refinement decision-making process was based on the previously developed project purpose and need and advisory committee structure. In addition, a working group was formed and public engagement was conducted specific to the eastern end realignment process. Each element of this decision-making process is described in the following sections.

3.1 Purpose and Need

3.1.1. PURPOSE

The purpose of the Gateway Corridor project is to provide transit service to meet the existing and long-term regional mobility and local accessibility needs for businesses and the traveling public within the project area.

3.1.2. NEED

The following primary factors contribute to the need for the Gateway Corridor project:

- Limited existing transit service throughout the day and demand for more frequent service over a larger portion of the day
- Policy shift toward travel choices and multimodal investments
- Population and employment growth, increasing access needs and travel demand
- Needs of people who depend on transit
- Local and regional objectives for growth and prosperity

3.1.3. GOALS AND OBJECTIVES

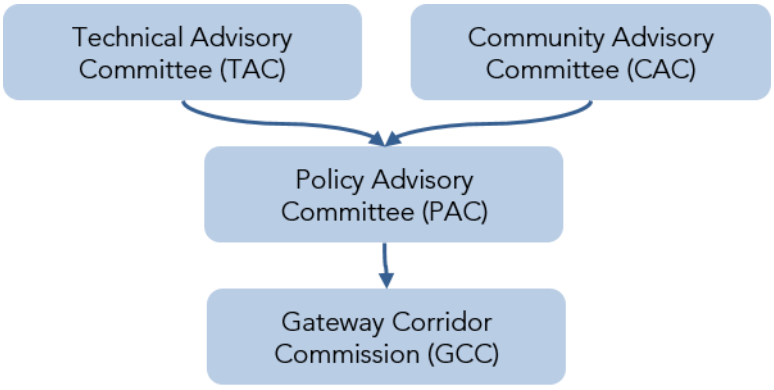
Goals were developed during the AA Study to serve as a framework to evaluate the alternatives under consideration for the Gateway Corridor project. Goals 1 and 2 (Tier 1 goals) identify the minimum requirements that an alternative would be expected to meet in order to continue to be considered. Goals 3-5 (Tier 2) reflect broader community goals and may be helpful in comparing alternatives that meet the Tier 1 goals. These goals, along with the identified project needs, provide the basis for the analysis of alternatives.

- Tier 1 Goals
    - Goal 1: Improve mobility
    - Goal 2: Provide a cost-effective, economically-viable transit option
- Tier 2 Goals
    - Goal 3: Support economic development
    - Goal 4: Protect the natural environmental features of the corridor
    - Goal 5: Preserve and protect individual and community quality of life

3.2 Advisory Committees

The Gateway Corridor advisory bodies include the Technical Advisory Committee (TAC), Community Advisory Committee (CAC), Policy Advisory Committee (PAC), and Gateway Corridor Commission (GCC). The relationship among the project advisory bodies is illustrated in **Figure 1**.

Figure 1. Relationship of Gateway Corridor Advisory Bodies



3.3 Working Group

The Eastern End Realignment Working Group includes representatives from Washington County, Ramsey County, City of Woodbury, City of Oakdale, MnDOT, and Metro Transit. The Working Group's responsibilities include:

- Drafting potential new routes and discussing the viability of existing routes
- Reviewing community input on station locations and routes
- Developing a list of viable routes based on project goals and objectives
- Developing a stakeholder engagement and communications plan

The viable routes that come out of the Working Group discussions are then taken to the TAC for review and input.

3.4 Public Engagement Approach

The public engagement approach for the refinement in the east end of the corridor has two parts. The first relates to which alternatives will be evaluated in the environmental document, and the second relates to identifying the LPA.

The first phase of engagement was intended to solicit input on what station locations and routes should be considered. The intent of this phase of engagement was to provide information to the Working Group before any new routes were developed. Activities for this phase were focused on soliciting input to the following questions:

- What types of activities (jobs, shopping, housing, recreation, education, medical services, etc.) do you want to get to or from by using transit?
- Based on your answer above, what specific locations in Oakdale and Woodbury do you think would be good for transit stations? List as many as you wish.
- Are there particular benefits or impacts that you want decision makers and technical staff to be aware of?
- Do you have any other comments on the Gateway Gold Line BRT project?

The second phase of engagement was to solicit input once alternatives were established. This includes collecting input on:

- All the routes, station locations, and alternatives the Working Group considered
- The alternatives to be studied in the Draft EIS

- The identification of the LPA

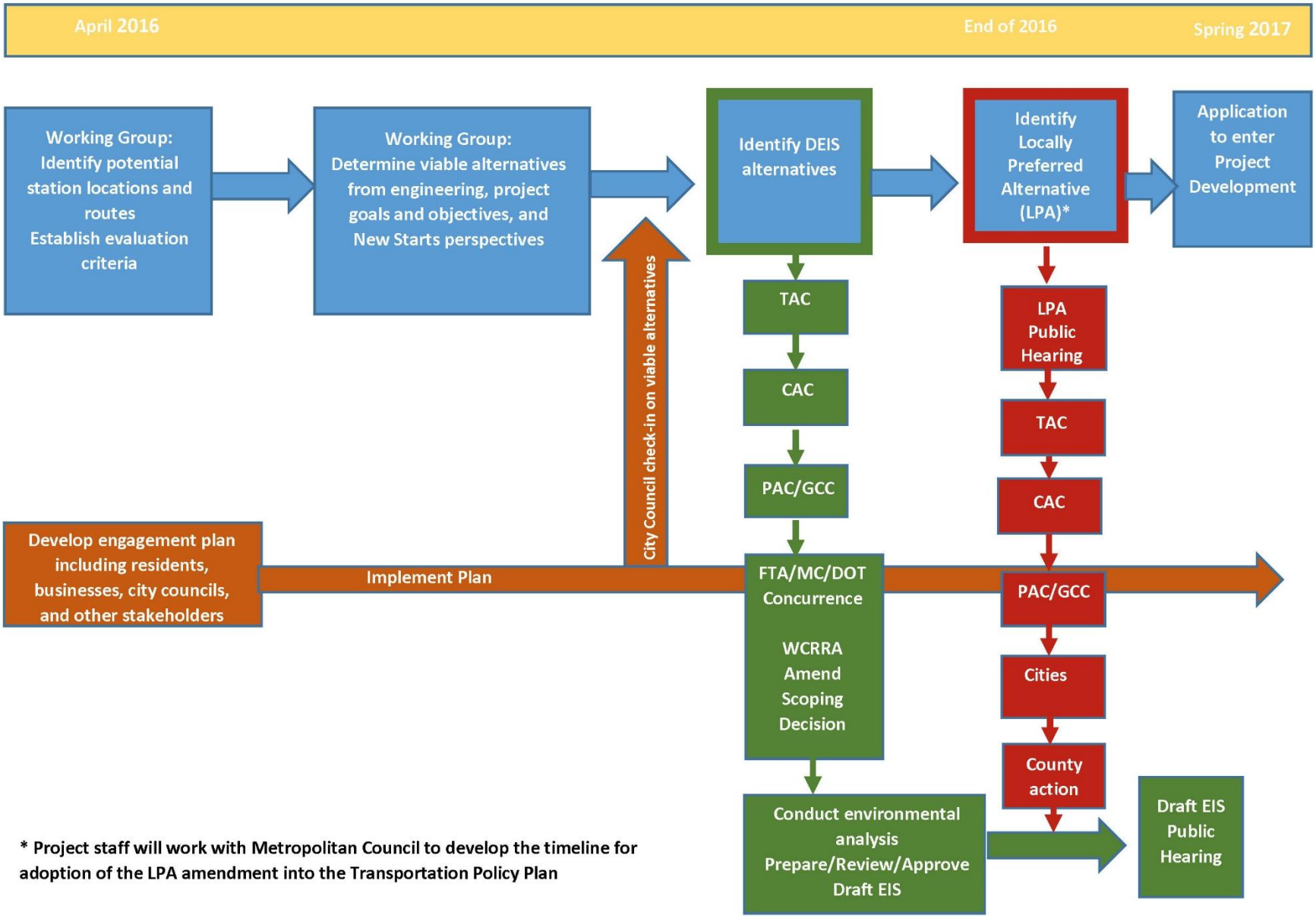
More details on the outreach activities conducted to date are discussed in Section 5.

3.5 Integration with the NEPA and LPA Processes

The results of the eastern end refinement process feed into the overall project process, which includes both the National Environmental Policy Act (NEPA) process and the LPA process. This process is illustrated in **Figure 2**.

As noted in **Figure 2**, alternatives were developed and evaluated based on the project's goals and objectives and the New Starts evaluation criteria. The New Starts criteria include mobility improvements, cost-effectiveness, environmental benefits, congestion relief, economic development, and land use.

Figure 2. Alternative Refinement, NEPA, and LPA Process



4.0 Alternatives Development Process

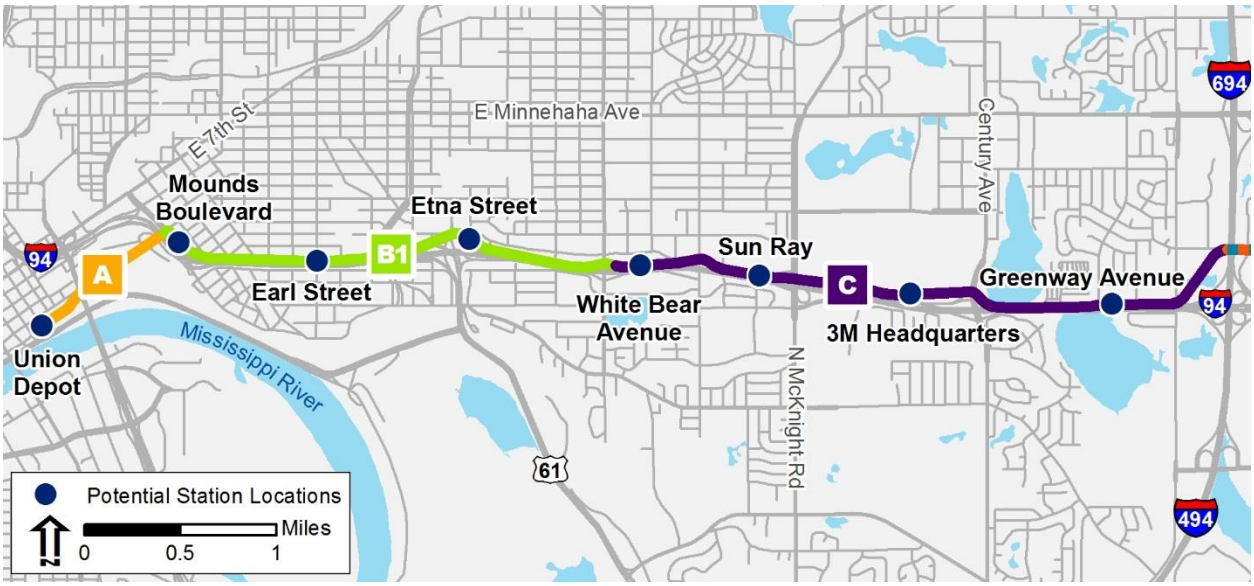
4.1 Alternatives Identified Through Environmental Scoping Process

In Minnesota, the Scoping process is the first step in preparing an EIS (see Minnesota Statutes, Chapter 116D), and it establishes the foundation for the EIS process. Scoping defines the range of alternatives to be studied in the Draft EIS and identifies the potential issues and impacts relating to each of the alternatives. The Draft EIS Scoping process conducted for the Gateway Corridor project took place from February to April 2014.

A No-Build alternative, a BRT alternative, and a light rail transit (LRT) alternative were presented in the Scoping process. The BRT and LRT alternatives presented during Scoping were approximately 12 miles long and included up to 12 stations between Union Depot in downtown Saint Paul and Manning Avenue in Woodbury. Both alternatives generally paralleled the north side of I-94 to just east of I-494/I-694 along Hudson Boulevard and 4th Street and were south of I-94 and adjacent to Hudson Road further east.

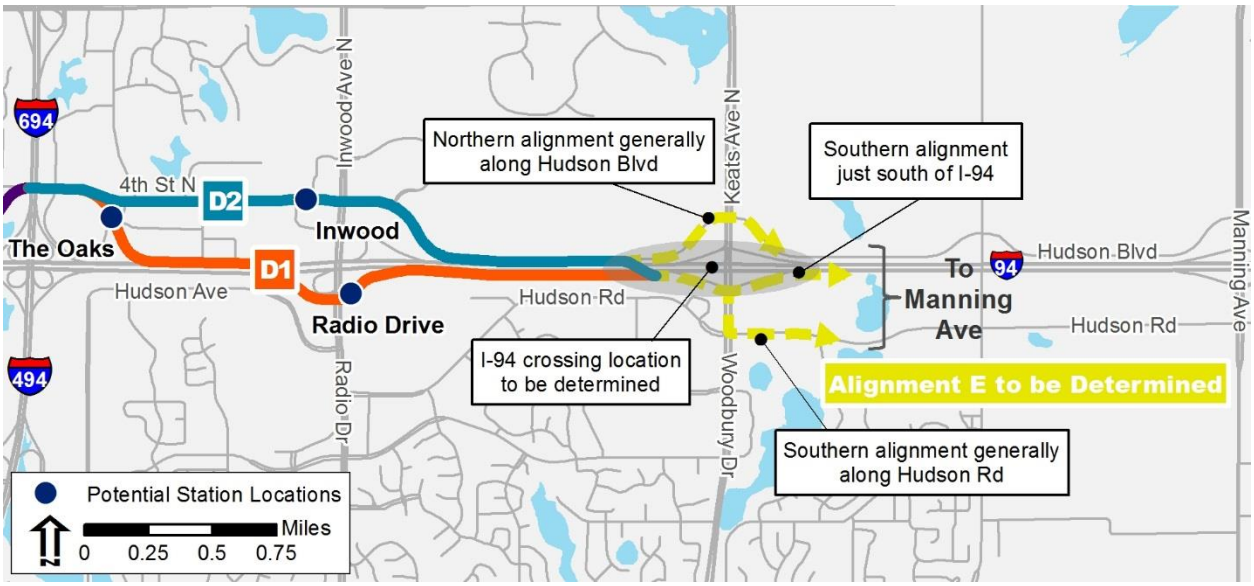
Potential alignment alternatives, for both BRT and LRT, were also included in the Scoping Booklet. In the western half of the corridor, Alignments A, B, and C would serve areas between Union Depot in downtown Saint Paul and the I-94/I-694/I-494 interchange (see **Figure 3**).

Figure 3. BRT and LRT Alignments Proposed for Study in the Western Portion of the Corridor (as defined in the Scoping Booklet)



East of the I-94 interchange with I-494/I-694, Alignments D1 (south of I-94) and D2 (north of I-94) combine with a variety of potential E alignments between I-694 and a point east of Woodbury Drive/Keats Avenue (see **Figure 4**). Depending on the E alignment, the dedicated guideway could cross I-94 from north to south.

Figure 4. BRT and LRT Alignments Proposed for Study in the Eastern Portion of the Corridor (as defined in the Scoping Booklet)



Alignment E was further refined during the Draft EIS Scoping process to include three alignment options: Alignments E1, E2, and E3 (see **Figure 5**). Alignment E1 would follow Hudson Road south of I-94 to Manning Avenue. Alignment E2 would follow Hudson Boulevard north of I-94 to Lake Elmo Avenue/Settlers Ridge Parkway where it would cross to the south and follow Hudson Road south of I-94 to Manning Avenue. Alignment E3 would follow Hudson Boulevard north of I-94 to Manning Avenue.

Figure 5. E Alignments Developed during Draft EIS Scoping (as shown in the Scoping Decision Document)

After publication of the Scoping Booklet, a managed lane alternative was added to the range of alternatives under evaluation.

The GCC recommended and WCRRA approved[1] the elimination of the LRT alternative. The Scoping Decision Document identifies six alternatives for additional study in the Draft EIS:

- No-Build alternative
- Managed Lane BRT alternative
- Dedicated BRT alternatives
  - ABC-D1-E1
  - ABC-D2-E1
  - ABC-D2-E2
  - ABC-D2-E3

The Dedicated BRT alternatives that were advanced from Draft EIS Scoping are illustrated in **Figure 6**.

After publication of the Scoping Decision Document, the TAC and PAC recommended to remove Alternative ABC-D2-E1 from the Draft EIS analysis on September 16, 2015 and October 15, 2015, respectively. At those same meetings, the TAC and PAC also recommended to remove the Alignment E1 option that travels on Woodbury Drive and Hudson Road from further analysis. The Alignment E1 option that runs just to the south of I-94 (shown as a dotted line in **Figure 6**) was recommended to advance.

In a letter dated January 4, 2016, the Federal Highway Administration (FHWA) stated that their concerns driving the study of the Managed Lane alternative had been addressed. After the receipt of this letter, at their January 20, 2016 and April 14, 2016 meetings, respectively, the TAC and PAC recommended to screen the Managed Lane alternative from analysis in the Draft EIS.[2]

The alternatives that were approved to be studied in the Draft EIS, all Dedicated BRT alternatives, are illustrated in **Figure 7**.

[1] WCRRA is the state Responsible Governmental Unit.

[2] Details on the Managed Lane alternative evaluation process can be found in the Managed Lane Bus Rapid Transit Alternative Technical Memo (November 2015).

Figure 6. Dedicated BRT Alternatives Advanced from Draft EIS Scoping

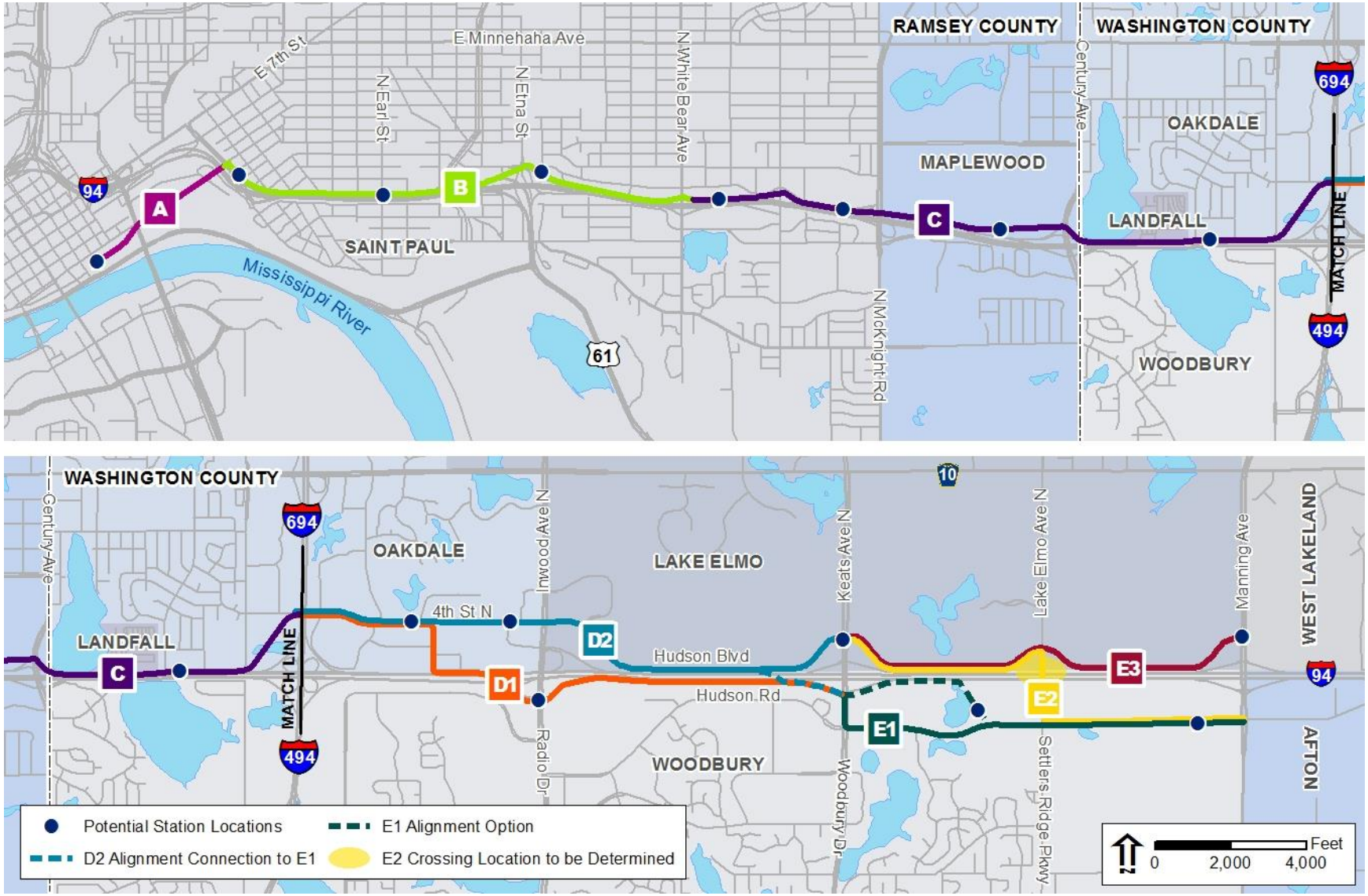
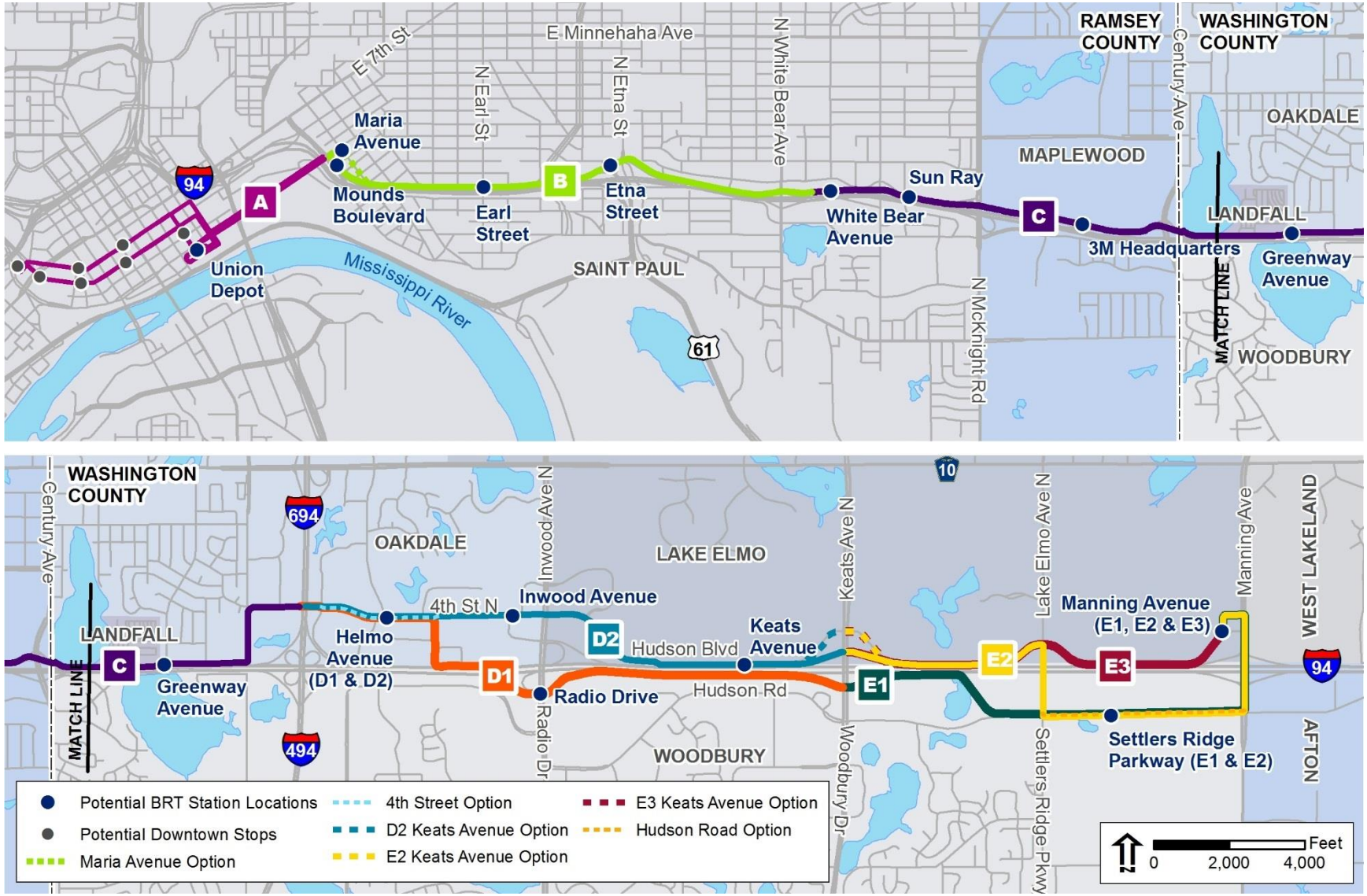


Figure 7. Alternatives Approved for Study in the Draft EIS



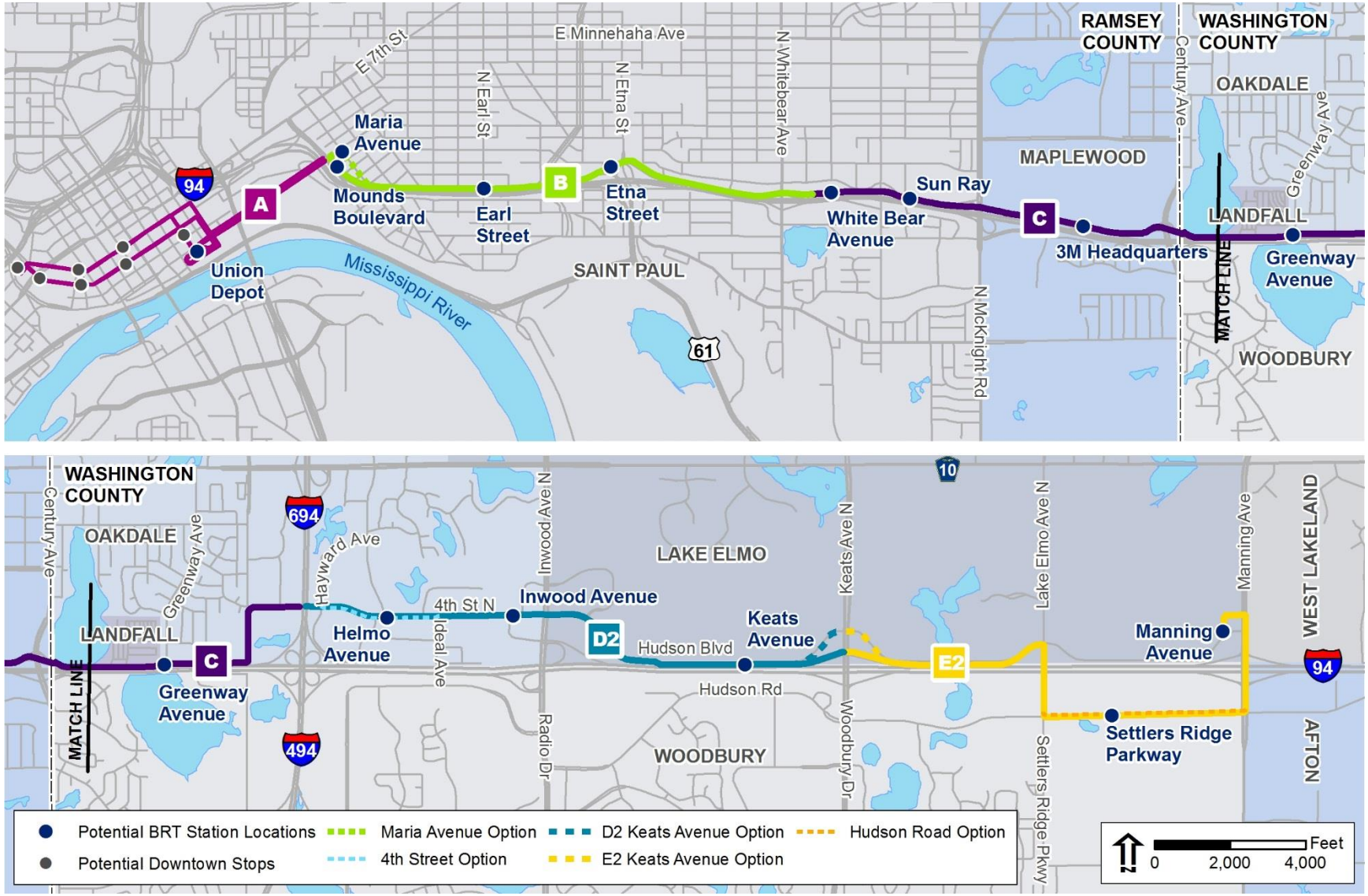
4.2 Previous Locally Preferred Alternative Process

The multi-step process to formally recommend and select a LPA for the Gateway Corridor began after the Scoping Decision Document was published. Following a public hearing, recommendations from the PAC and GCC, and passage of resolutions of support from the Cities of Saint Paul, Maplewood, Oakdale, Landfall, Woodbury, and Lake Elmo, RCRRA and WCRRA passed resolutions at their September 23, 2014 and October 7, 2014 meetings, respectively, recommending Alternative ABC-D2-E2 as the LPA for the Gateway Corridor. The LPA was described as BRT generally on the Hudson Road-Hudson Boulevard alignment that crosses to the south side of I-94 between approximately Lake Elmo Avenue and Manning Avenue. The LPA was adopted as part of the 2040 TPP (adopted by the Metropolitan Council in January 2015), the region's fiscally constrained long-range transportation policy and investment plan.

Although adopted into the 2040 TPP, the LPA did not define the route between Lake Elmo Avenue/Settlers Ridge Parkway and Manning Avenue. In order to determine the route in this segment of the alignment, additional analysis and coordination occurred. At their August 13, 2015 meetings, the PAC and GCC recommended a refined LPA for public comment. Following the public hearing, the PAC recommended Alternative ABC-D2-E2 as the LPA, as illustrated in **Figure 8**.

Following the PAC's recommendation, resolutions of support were needed from each city and county in which the refined portion of the alignment is located to finalize the LPA selection. One city, Lake Elmo, did not pass a resolution of support for the refined LPA.

Figure 8. PAC Recommended LPA in 2015 (Alternative ABC-D2-E2)



4.3 Universe of Alternatives Developed in 2016

4.3.1. APPROACH TO DEVELOPMENT OF ALTERNATIVES

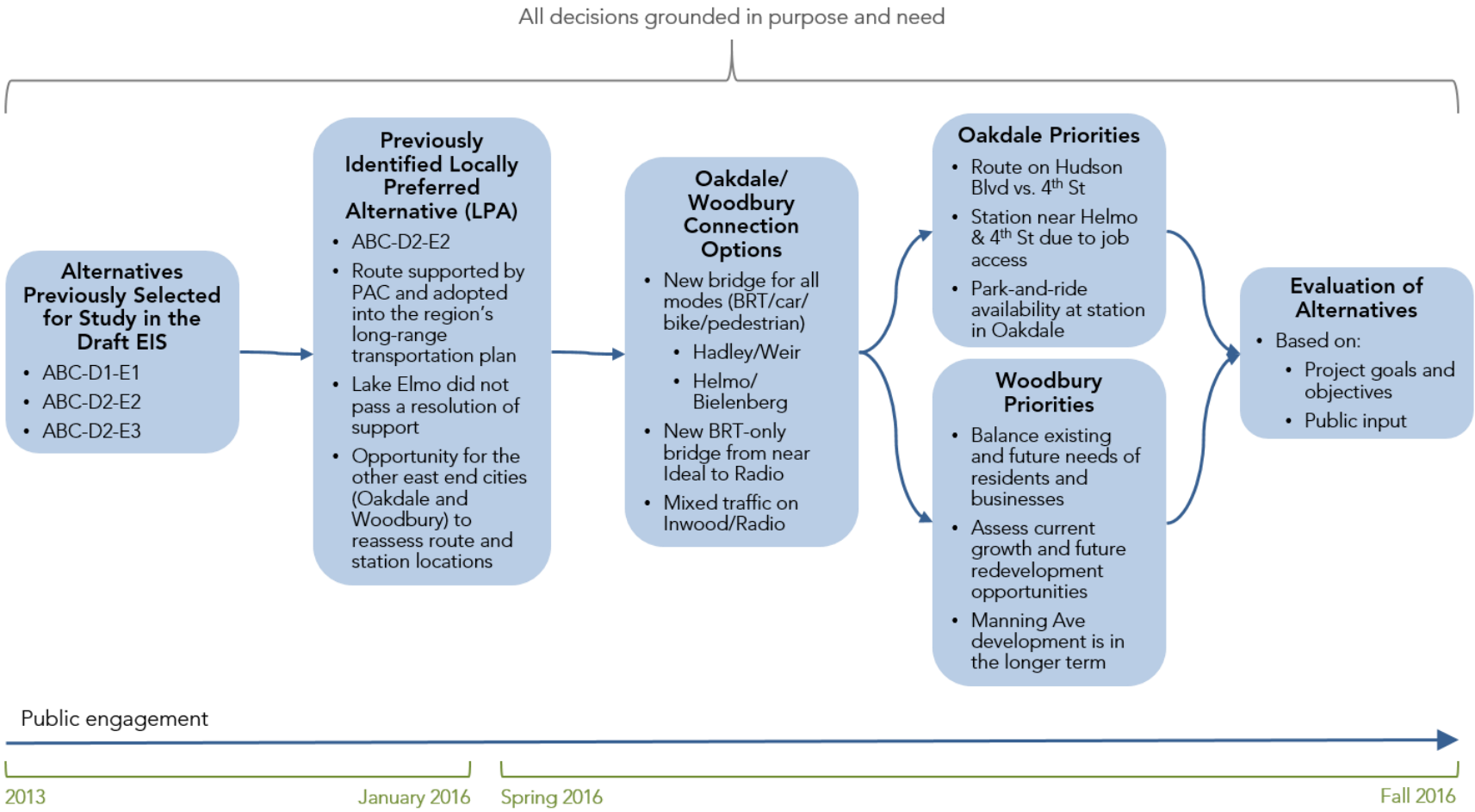
The development of alternatives in the eastern end of the project (east of I-694) reflect the direction provided by the Cities of Lake Elmo, Oakdale, and Woodbury, while maintaining the overall project goals and objectives, as described below.

- The Lake Elmo City Council did not pass a resolution of support for the previously refined LPA, indicating that they did not support the Gateway Corridor project being located in their community. Therefore, the new alignments developed do not enter the city of Lake Elmo.
- To determine the crossing location between Oakdale and Woodbury, a number of factors were considered, including the number of stations in Oakdale that would be served; engineering challenges associated with the crossing of I-94; ease of access to stations for cars and pedestrians; ridership potential; development opportunities; traffic benefits and impacts; and cost.
- The City of Woodbury focused on balancing the existing and future needs of residents and businesses in the development of potential alignments and station locations in Woodbury. The City assessed where growth is happening today and where redevelopment opportunities are in the future. Based on the development analysis and public input, the City found that development at Manning Avenue is in the longer term, but an alignment on Bielenberg Drive is consistent with public input on what areas should be accessible by transit. In addition, the City prioritized ending at an existing express bus park-and-ride to benefit current transit users in Woodbury, and there is an existing express bus park-and-ride at Woodbury Theatre on Bielenberg Drive. Because of these findings, alignment and station locations in Woodbury were focused on Bielenberg Drive.
- The City of Oakdale requested that alignments be considered that would follow Hudson Boulevard instead of 4th Street. The station locations in Oakdale were prioritized based on projected ridership, how riders would access the proposed stations, and development potential. A station near Helmo Avenue and 4th Street was identified as the priority. The City also wanted to explore options for also serving a station at Inwood Avenue.

Based on these factors and input from the Working Group, alternatives were developed and evaluated based on the project's defined goals and objectives, as described in the following sections. If a proposed alternative did not meet the project's Tier 1 goals, it did not advance for further evaluation. If it did meet the Tier 1 goals, it was then evaluated based on the Tier 2 goals. If it did not meet the Tier 2 goals, it did not advance for further evaluation. If it did meet the Tier 1 and Tier 2 goals, it advanced for consideration by the TAC.

The eastern end alternatives development process is illustrated in **Figure 9**.

Figure 9. Eastern End Alternatives Development Process



4.3.2. ALTERNATIVES PREVIOUSLY APPROVED FOR STUDY IN THE DRAFT EIS

As discussed in Section 4.1, three Dedicated BRT alternatives were previously approved to be studied in the Draft EIS: Alternatives ABC-D1-E1, ABC-D2-E2, and ABC-D2-E3 (see **Figure 7**).

City of Woodbury staff indicated that they did not support Alternative ABC-D1-E1 due to the anticipated traffic impacts on Radio Drive and Woodbury Drive. This was reinforced by the City of Woodbury's resolution of support for the previously identified LPA (Alternative ABC-D2-E2), which stated that their support was predicated on the fact that the alignment west of Settlers Ridge Parkway would remain unchanged and would not compromise the movement of traffic at Radio Drive and Woodbury Drive.

By deciding not to pass a resolution of support for the previously identified LPA, the City of Lake Elmo indicated that they did not support the Gateway Corridor project being located in their community. This lack of support would also extend to Alternative ABC-D2-E3.

Due to the lack of local support for these three alignments, they are not recommended to advance for detailed study in the Draft EIS.

4.3.3. OAKDALE/WOODBURY CONNECTION OPTIONS

Four options to connect Oakdale and Woodbury were evaluated as shown in **Figure 10** and discussed in the following sections.

Figure 10. Oakdale/Woodbury Connection Options

4.3.3.1. HADLEY AVENUE/WEIR DRIVE CROSSING

Crossing I-94 via a bridge from Hadley Avenue in Oakdale to Weir Drive in Woodbury was considered. An alignment with this crossing would have one station in Oakdale (at Greenway Avenue). This alignment would avoid the concerns of some residents on 4th Street that have engaged with the project to date, including accessibility impacts, increased traffic, noise, and safety concerns. The new bridge would be open to vehicles, bicycles, and pedestrians, which would help traffic on Inwood Avenue/Radio Drive. However, the existing elevations would create bridge engineering and access challenges.

Due to the limited service in Oakdale and engineering challenges, this crossing option was not recommended for further evaluation.

4.3.3.2. HELMO AVENUE/BIELENBERG DRIVE CROSSING

Crossing I-94 via a bridge from Helmo Avenue in Oakdale to Bielenberg Drive in Woodbury was considered. An alignment with this crossing would have two stations in Oakdale (at Greenway Avenue and Helmo Avenue), and connecting bus service would be provided to the existing park-and-ride at Guardian Angels Church. This alignment would avoid most of the concerns of residents on 4th Street. The new bridge would be open to vehicles, bicycles, and pedestrians, which would help traffic on Inwood Avenue/Radio Drive, and the existing topography is more favorable for bridge construction than at Hadley Avenue and Weir Drive.

This alternative was recommended by the Working Group to advance for further evaluation.

4.3.3.3. NEW DIAGONAL BRIDGE CROSSING

The new diagonal bridge evaluated would cross from a location between Helmo Avenue and Ideal Avenue in Oakdale to Hudson Road in Woodbury. An alignment with this crossing location would have two stations in Oakdale (at Greenway Avenue and Helmo Avenue) to provide access to job centers and residents. Connector buses would provide service to the existing Guardian Angels Church park-and-ride. This bridge would be open to BRT only, so it would not provide benefit to traffic on surrounding roadways, bicycles, or pedestrians. This bridge is the longest of the three bridges considered, which means it would be the most expensive. The location of the bridge would avoid most of the concerns of residents on 4th Street; however, it could create concerns for the residents on Hudson Boulevard.

Due to the lack of traffic benefits, cost, and impacts to residents on Hudson Boulevard, this crossing option was not recommended for further evaluation.

4.3.3.4. INWOOD AVENUE/RADIO DRIVE CROSSING

Crossing I-94 in mixed traffic on Inwood Avenue/Radio Drive was also considered.[3] An alignment with this crossing location would have three stations in Oakdale (at Greenway Avenue, Helmo Avenue, and Inwood Avenue) to provide access to jobs centers and residents, but it would not address the concerns of residents on 4th Street. Traffic volumes on the Inwood Avenue/Radio Drive bridge over I-94 are high, which would slow BRT travel times and decrease the number of riders.

Due to the slow travel times and decreased ridership, paired with the concerns of residents on 4th Street that would not be addressed, this crossing option was not recommended for further evaluation.

4.3.3.5. RECOMMENDATION SUMMARY

Of the four crossings evaluated, three are not recommended for further evaluation:

- Hadley Avenue/Weir Drive crossing
- New diagonal bridge crossing
- Inwood Avenue/Radio Drive Crossing

One crossing, the Helmo Avenue/Bielenberg Drive crossing, was recommended for further evaluation by the Working Group.

4.3.4. OAKDALE AND WOODBURY ALIGNMENT/STATION OPTIONS

As discussed in Section 4.3.1, alignment and station locations in Woodbury were focused on Bielenberg Drive. The alignment would end near Valley Creek Road at the existing Woodbury

[3] Crossing in a dedicated guideway on Inwood Avenue/Radio Drive was ruled out because of the significant traffic volumes on that roadway.

Theatre park-and-ride. There would be one other station in Woodbury located along Bielenberg Drive north of the park-and-ride.

In Oakdale, as discussed in Section 4.3.1, the priority was placed on serving a station at Helmo Avenue. Because the City also wanted to explore serving a station at Inwood Avenue, a number of routes were considered in Oakdale. If the routes continue into Woodbury, they would cross I-94 via a bridge from Helmo Avenue in Oakdale to Bielenberg Drive in Woodbury, as discussed in Section 4.3.3.

The alignments considered are discussed in the following sections.

4.3.4.1. END AT WOODBURY THEATRE PARK-AND-RIDE – OUT AND BACK/LOOP

Two alignments considered would end at Woodbury Theatre Park-and-Ride in Woodbury but would serve the Helmo Avenue and Inwood Avenue Stations via a loop (see **Figure 11**) or out and back route (see **Figure 12**).

Figure 11. Alignment Ending at Woodbury Theatre Park-and-Ride with a Loop to Serve the Helmo Avenue and Inwood Avenue Stations

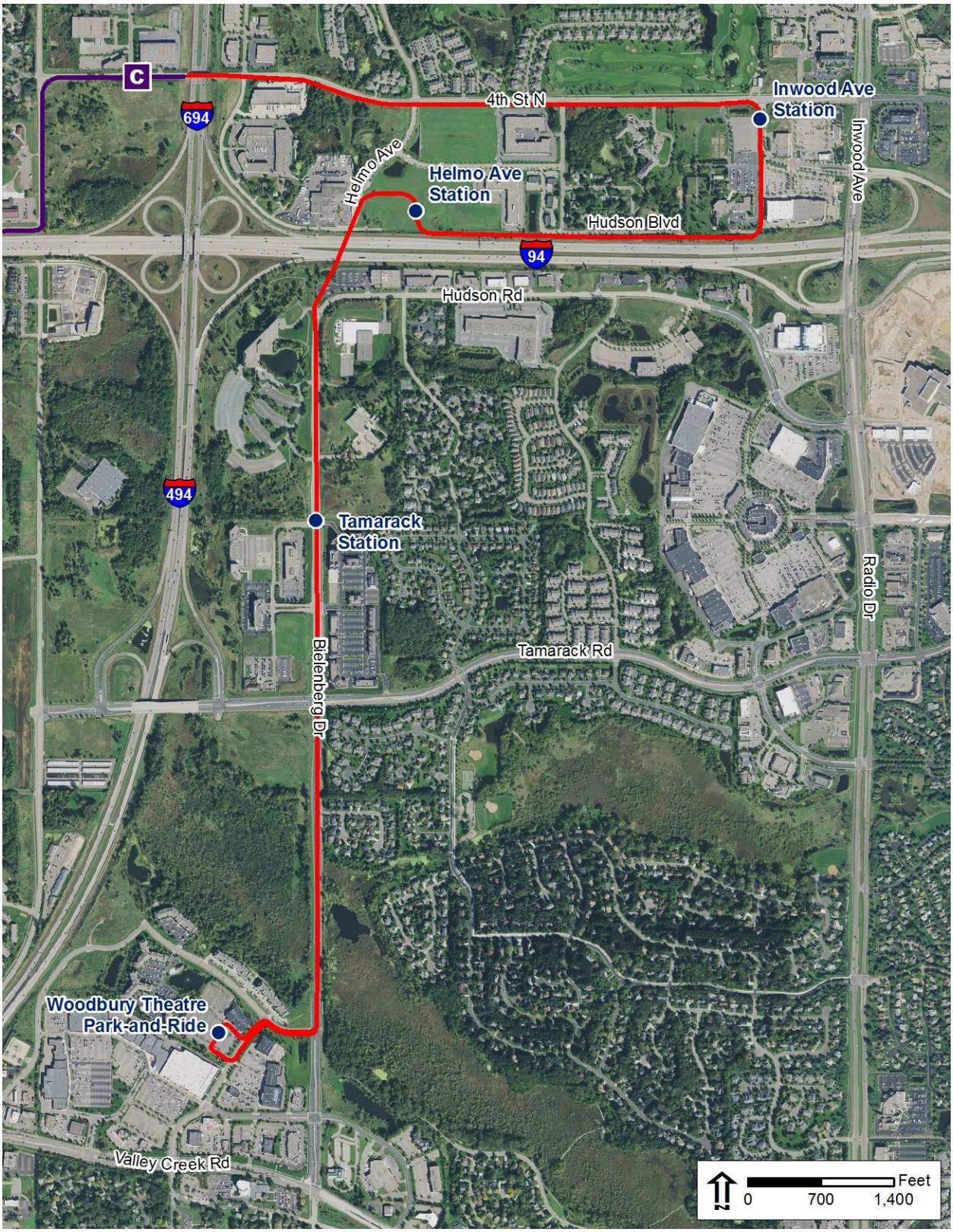
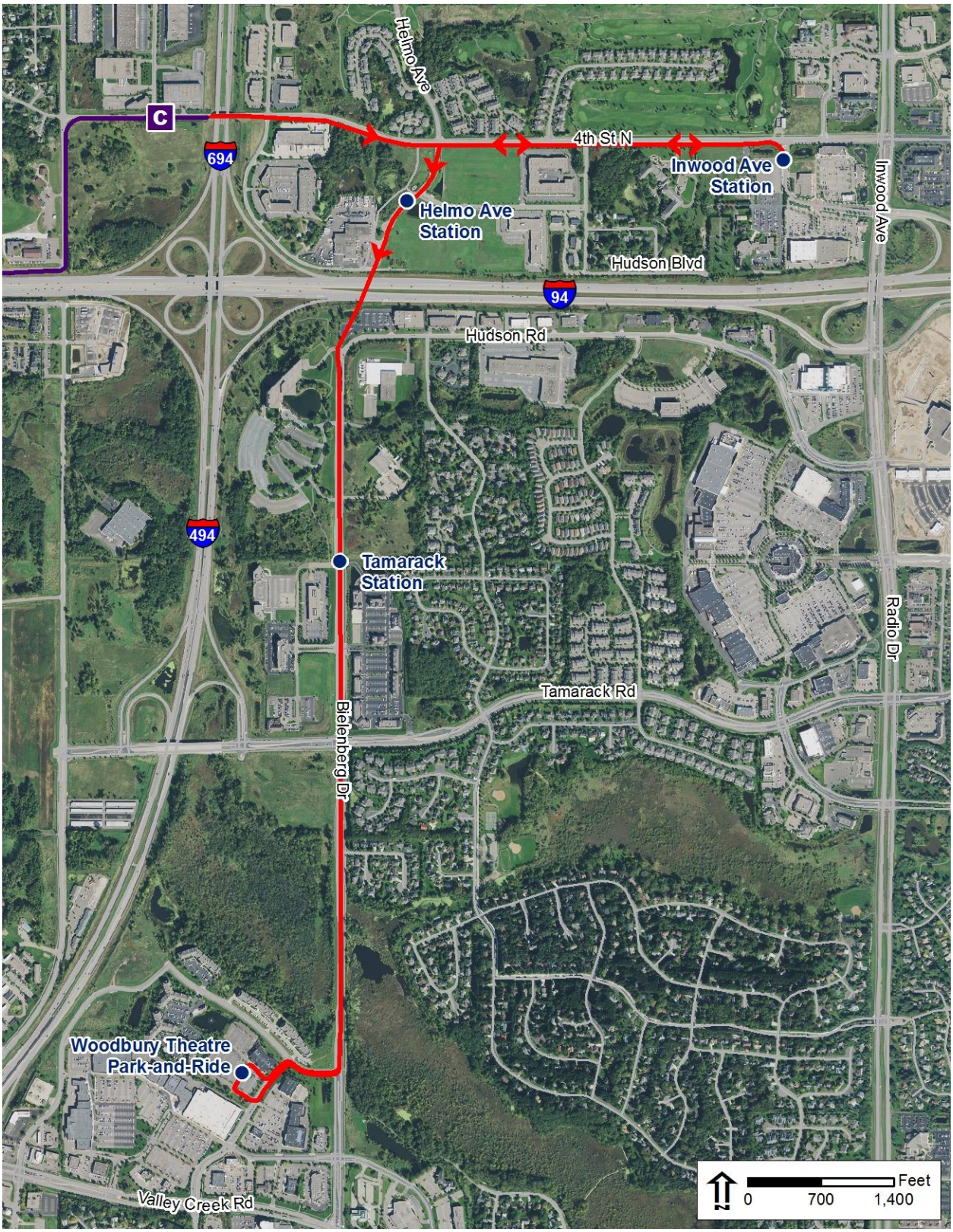


Figure 12. Alignment Ending at Woodbury Theatre Park-and-Ride with an Out and Back Route to Serve the Helmo Avenue and Inwood Avenue Stations



Loop Alignment

The loop alignment would have three stations in Oakdale (at Greenway Avenue, Inwood Avenue, and Helmo Avenue), providing access to job centers and residents. With a loop alignment, travel times would increase and the route could cause rider confusion, resulting in lower ridership. Additionally, capital and operating costs would increase given the additional length of dedicated BRT guideway required for the loop. For these reasons, this alignment would not meet the project's Tier 1 goals and is not recommended for further evaluation.

Out and Back Alignment

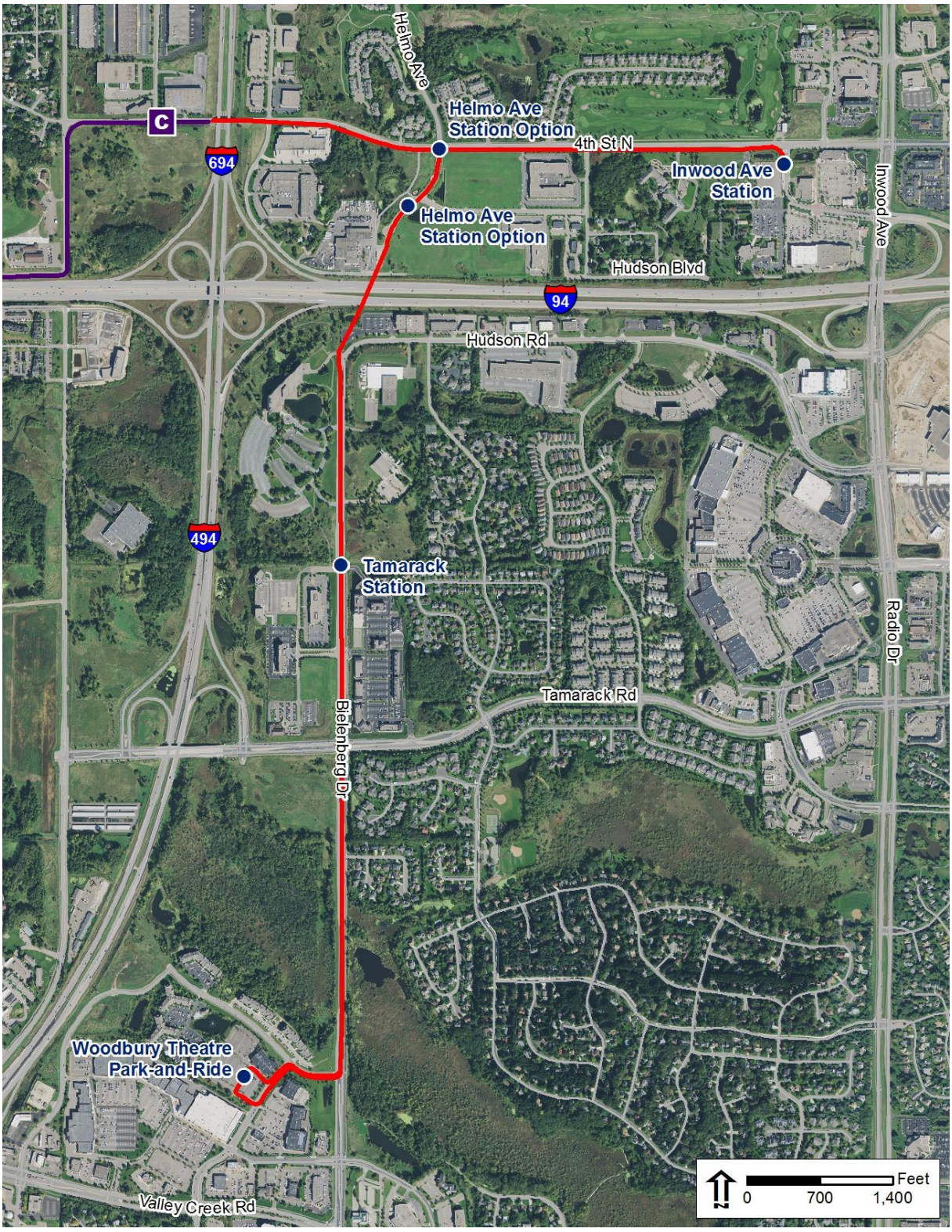
The out and back route would have stations at the same locations in Oakdale as the loop alignment, therefore providing the same benefit of access to job centers and residents. Similar to the loop alignment, it would also have a longer travel time and cause rider confusion, resulting in lower ridership. In addition, there would be double the amount of bus traffic on 4th Street between Helmo Avenue and the Inwood Avenue Station. Because of the longer travel time and poor rider experience, this alignment would not meet the project's Tier 1 goals and is not recommended for further evaluation.

4.3.4.2. END AT INWOOD AVENUE STATION AND WOODBURY THEATRE PARK-AND-RIDE (SPUR)

One alignment considered would have two spurs, one ending at the Inwood Avenue Station in Oakdale and one ending at the Woodbury Theatre Park-and-Ride in Woodbury (see **Figure 13**).

This alignment would have three stations in Oakdale (at Greenway Avenue, Helmo Avenue (see the two location options in **Figure 13**), and at Inwood Avenue), providing access to job centers and residents. With the spurs, there would be lower service frequency, additional capital and operating costs, and terminal station requirements at two locations. Additionally, preliminary ridership estimates reflected lower ridership for the spur option, given the lower service frequency and potential rider confusion. For these reasons, this alignment would not meet the project's Tier 1 goals and is not recommended for further evaluation.

Figure 13. Alignment Ending at Woodbury Theatre Park-and-Ride and Inwood Avenue Station via Spurs



4.3.4.3. END AT INWOOD AVENUE STATION

Two alignments considered would terminate at the Inwood Avenue Station near Guardian Angels Church on 4th Street. One would continue east on 4th Street east of I-694, and the other would follow Hudson Boulevard (see **Figure 14**). Both alignments would have three stations in Oakdale (one at Greenway Avenue, one at Helmo Avenue, and one at Inwood Avenue).

Figure 14. Alignments Ending at Inwood Avenue Station

Under both the 4th Street and Hudson Boulevard alignments, the Inwood Avenue Station would need substantial improvements to function as a terminal station. The existing park-and-ride at Guardian Angels Church near the Inwood Avenue Station would be used for parking, but it is currently at capacity so additional spaces would be needed to serve the BRT park-and-riders. In addition, this park-and-ride currently serves primarily express bus riders, which means that the lot is mostly used during weekday working hours. With BRT service being all day and bi-directional, the lot would be used during evenings and weekends as well, which could conflict with the parking needs of the church.

4th Street Alignment

The alignment on 4th Street would not avoid the concerns of some residents on 4th Street that have engaged with the project to date, which include accessibility impacts, increased traffic, noise, and safety concerns.

Based on the preliminary assessment, this alignment meets the project's Tier 1 goals and was advanced for more detailed evaluation as described in Section 4.3.5.

Hudson Boulevard Alignment

The alignment on Hudson Boulevard would require the Helmo Avenue Station to move to the south closer to I-94, which reduces ridership potential and accessibility from all locations. This alignment would avoid the concerns of residents on 4th Street, but it would also have a number of negative impacts, including:

- Commercial and residential property impacts all along Hudson Boulevard
- Impacts to Guardian Angels Church cemetery and parking
- Wetland impacts near Oak Meadows
- Property impacts to Oak Meadows

Due to the accessibility issues associated with the Helmo Avenue Station location and the issues at or adjacent to the Guardian Angels Church property, this alignment would not meet the project's Tier 1 goals and is not recommended for further evaluation.

4.3.4.4. END AT WOODBURY THEATRE PARK-AND-RIDE VIA HELMO AVENUE STATION

Two alignments considered would end at the Woodbury Theatre Park-and-Ride, serving a station at Helmo Avenue but not at Inwood Avenue (see **Figure 15**).

4th Street Alignment

The route on 4th Street would have two stations in Oakdale (Greenway Avenue and Helmo Avenue) to provide access to job centers and residents. Connector buses would provide service to the existing Guardian Angels Church park-and-ride. This alignment would avoid most of the concerns of the residents on 4th Street, effectively serve the Carlson Business Park development, and provide the route a more efficient I-94 crossing. To accommodate the dedicated BRT alignment and bridge over I-94, some access restrictions to one commercial property on Bielenberg Drive would be required.

Based on the preliminary assessment, this alignment meets the project's Tier 1 goals and was advanced for more detailed evaluation as described in Section 4.3.5.

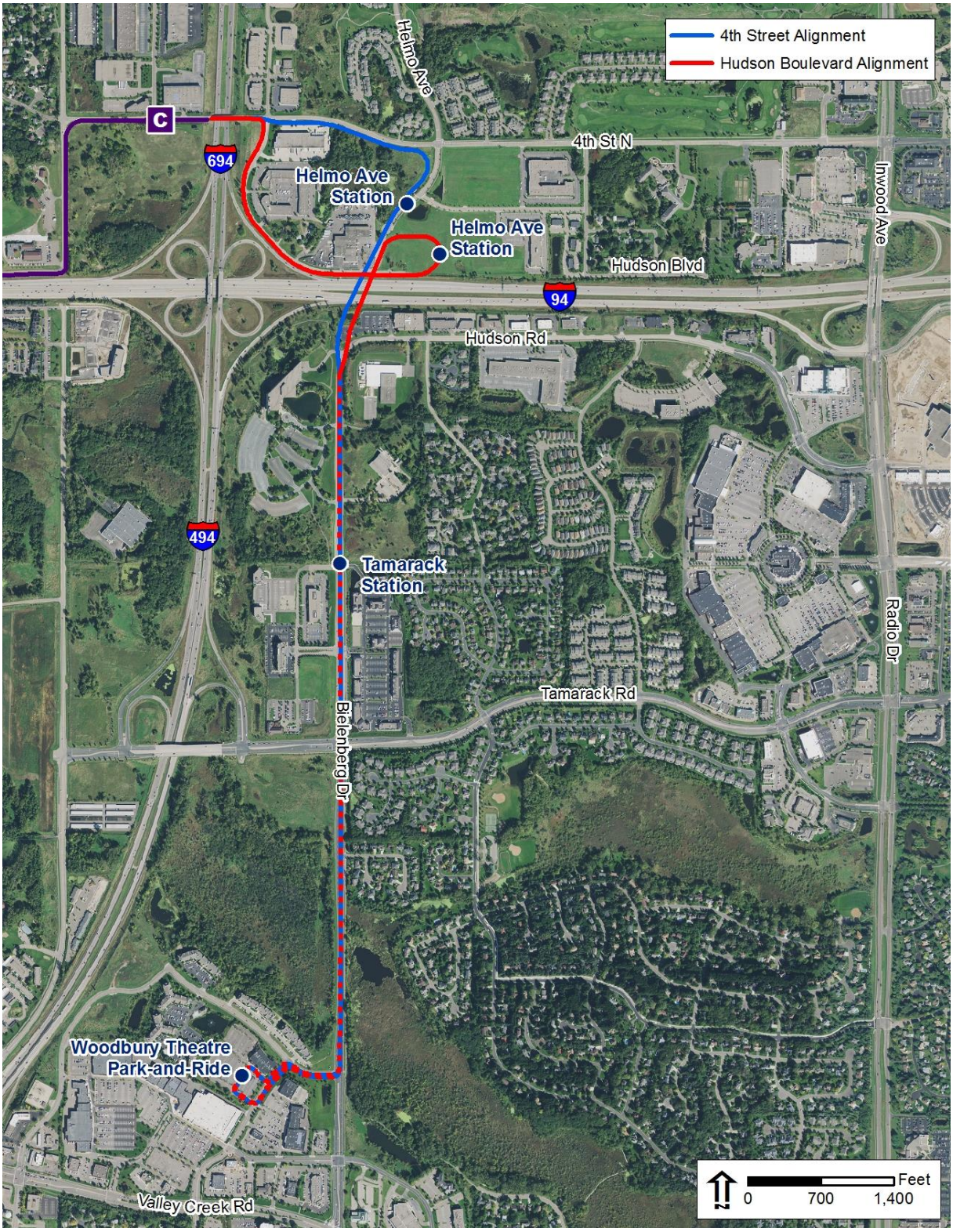
Hudson Boulevard Alignment

The route on Hudson Boulevard would also have two stations in Oakdale (Greenway Avenue and Helmo Avenue). Under this option, the proposed Helmo Avenue Station would be located closer to I-94, which reduces ridership potential and accessibility from all locations. Connector buses would provide service to the Guardian Angels Church park-and-ride. This alignment would avoid the concerns of the residents on 4th Street, but it would have a number of negative impacts including:

- Commercial property and access impacts along Hudson Boulevard
- Large property impact to the Carlson Business Park
- Challenging roadway bridge design due to the elevated loop needed to cross I-94

For these reasons, this alignment would not meet the project's Tier 1 goals and is not recommended for further evaluation.

Figure 15. Alignment Ending at Woodbury Theatre Park-and-Ride via Helmo Avenue Station



4.3.4.5. RECOMMENDATION SUMMARY

Of the seven alignments described in the preceding sections, five were not recommended for further evaluation based on the qualitative assessment described above:

- End at Inwood Avenue Station – Hudson Boulevard alignment
- End at Woodbury Theatre Park-and-Ride – loop alignment
- End at Woodbury Theatre Park-and-Ride – out and back alignment
- End at Inwood Avenue Station and Woodbury Theatre Park-and-Ride (via spurs)
- End at Woodbury Theatre Park-and-Ride via Helmo Avenue Station – Hudson Boulevard alignment

Based on the preliminary assessments, two alignments meet the Tier 1 goals and were advanced for more detailed evaluation (see Section 4.3.5):

- End at Inwood Avenue Station – 4th Street alignment
- End at Woodbury Theatre Park-and-Ride via Helmo Avenue Station – 4th Street alignment

4.3.5. ALTERNATIVES ADVANCED FOR MORE DETAILED EVALUATION

The project's two Tier 1 goals have been the main drivers for decision-making. Goal 1 is to improve mobility, and Goal 2 is to provide a cost-effective, economically viable transit option. To better evaluate how the alternatives that were advanced for more detailed evaluation met these goals, ridership, cost, and cost-effectiveness were assessed for the following two alignments:

- End at Inwood Avenue Station – 4th Street alignment
- End at Woodbury Theatre Park-and-Ride via Helmo Avenue Station – 4th Street alignment

The TAC, CAC, and PAC also wanted the Working Group to consider access to jobs in its recommendation. Information on this topic is provided in Section 4.3.5.4.

4.3.5.1. RIDERSHIP

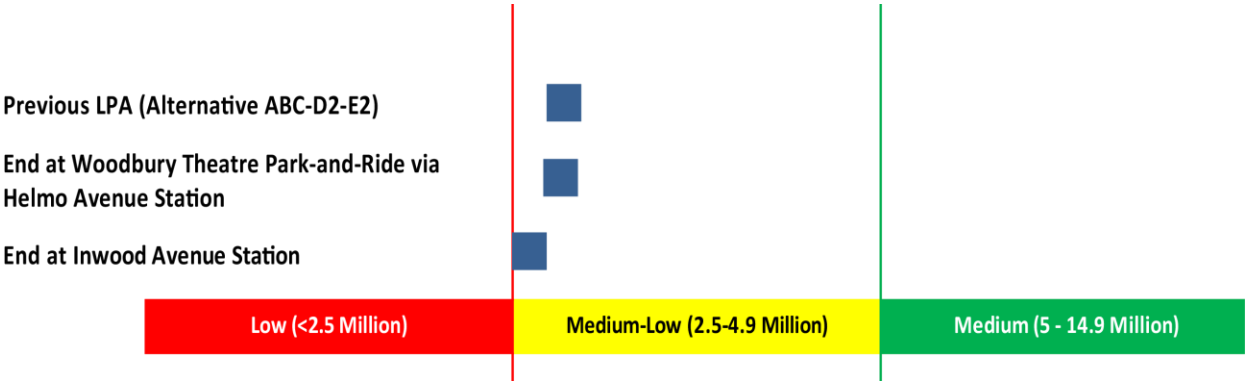
Projected (2040) ridership for the End at Inwood Avenue Station – 4th Street alignment and the End at Woodbury Theatre Park-and-Ride via Helmo Avenue Station – 4th Street alignment is shown in **Table 1**. Ridership for the previously identified LPA (Alternative ABC-D2-E2) is also provided for comparison.

Table 1. 2040 Transit Ridership

	Previous LPA (Alternative ABC-D2-E2)	End at Inwood Ave Station	End at Woodbury Theatre Park-and-Ride via Helmo Ave Station
Station to Station BRT	8,600	7,400	8,000
Guideway Express/Limited Stop (Routes 294, 350)	900	900	900
Total Ridership on the Guideway	9,500	8,300	8,900

Based on preliminary analysis, all three alignments are anticipated to have a medium-low ridership competitiveness rating based on the New Starts criteria, as shown in **Figure 16**.

Figure 16. Preliminary Ridership Competitiveness Ratings (weighted annual riders)



4.3.5.2. CAPITAL COST

Preliminary estimated capital costs have been prepared for the two alignments to advance for more detailed evaluation. Compared to the previously identified LPA (Alternative ABC-D2-E2), the capital cost for the End at Inwood Avenue Station – 4th Street alignment is estimated to be $75 million less, and the capital cost for the End at Woodbury Theatre Park-and-Ride via Helmo Avenue Station – 4th Street alignment is estimated to be $25 million less.

4.3.5.3. PRELIMINARY COST-EFFECTIVENESS

Cost-effectiveness was determined based on the annualized capital plus operating cost per annual rider. The results for the End at Inwood Avenue Station – 4th Street alignment and the End at Woodbury Theatre Park-and-Ride via Helmo Avenue Station – 4th Street alignment are shown in **Figure 17**. The cost-effectiveness assessment for the previously identified LPA (Alternative ABC-D2-E2) is also provided for comparison. The preliminary cost-effectiveness rating is provided as a range based on whether it includes or excludes connecting bus capital and operations and maintenance costs.

Figure 17. Preliminary Cost-Effectiveness Assessment

4.3.5.4. ACCESS TO JOBS

The number jobs available within walking distance of the BRT stations was determined for the two alignments that advanced for more detailed evaluation. Employment information for 2010 and 2040, categorized by job type, is shown in **Table 2**. The number of jobs within walking distance of the previously identified LPA (Alternative ABC-D2-E2) is also provided for comparison.

Table 2. Jobs Available Within Walking Distance of Stations

	Previous LPA (Alternative ABC-D2-E2)	End at Inwood Ave Station	End at Woodbury Theatre Park-and-Ride via Helmo Ave Station
2010			
Retail Jobs	5,400	4,450	6,800
Non-Retail Jobs	60,600	58,950	60,700
Total	**66,000**	**63,400**	**67,500**
2040			
Retail Jobs	5,950	4,600	7,950
Non-Retail Jobs	99,800	95,450	96,250
Total	**105,750**	**100,050**	**104,200**

The End at Woodbury Theatre Park-and-Ride via Helmo Avenue Station – 4th Street alignment had more jobs available within walking distance in 2010 than the End at Inwood Avenue Station – 4th Street alignment, and that difference is expected to be maintained in 2040.

4.3.5.5. RECOMMENDATION SUMMARY

Based on the estimated ridership, capital cost, cost-effectiveness, and access to jobs for the two alignments advanced for more detailed evaluation, the Working Group recommended that the End at Inwood Avenue Station – 4th Street alignment be screened from further evaluation and the End at Woodbury Theatre Park-and-Ride via Helmo Avenue Station – 4th Street alignment advance for evaluation in the environmental document.

5.0 Outreach Activities

This section summarizes the findings of outreach activities conducted to date. For a discussion of the overall public engagement approach, see Section 3.4. For more details on the outreach conducted, see the Gateway Corridor Eastern End Realignment Process: Summary of Public Involvement and Comments Received (November 2016).[4]

5.1 Phase 1

Members of the public could provide input on the refinement of the eastern end alignment and stations via a questionnaire provided on the project website, on social media, in an e-newsletter, and at city halls and libraries in the eastern portion of the corridor. The questionnaire solicited feedback on the following questions:

- What types of activities (jobs, shopping, housing, recreation, education, medical services, etc.) do you want to get to or from by using transit?
- Based on your answer above, what specific locations in Oakdale and Woodbury do you think would be good for transit stations? List as many as you wish.
- Are there particular benefits or impacts that you want decision makers and technical staff to be aware of?

[4] Available at http://thegatewaycorridor.com/wp-content/uploads/2016/11/2016-11-13-Eastern-End-Public-Comment-Summary_FINAL-1.pdf

- Do you have any other comments on the Gateway Gold Line BRT project?

A total of 120 written and emailed comments and questionnaires were received between May 10, 2016 and August 3, 2016. Of these 120 comments, 81 noted benefits of transit and 39 noted concerns. Comments mainly indicated a preference for transit routing to the south of I-94 and named Tamarack Village, Woodbury Lakes, Woodbury Theatre Park-and-Ride, and Woodbury Commons as desirable locations to connect by transit. Access to destinations for work and recreation in downtown Saint Paul were listed, as were jobs and shopping opportunities in Woodbury during off-peak hours.

Comments also included requests for bicycle and pedestrian improvements throughout the corridor, especially around stations and to connect across I-94.

Several comments stated a preference for transit to remain off of 4th Street in Oakdale that were submitted by residents in that area.

All of the comments received and a map of the locations noted in the comments can be found in the Gateway Corridor Eastern End Realignment Process: Summary of Public Involvement and Comments Received (November 2016).[5]

5.2 Phase 2

5.2.1. NEIGHBORHOOD MEETINGS FOR BIELENBERG DRIVE RESIDENTS AND BUSINESSES

During the second phase of outreach, two neighborhood meetings were held on September 12, 2016 for businesses and residents along Bielenberg Drive. These meetings were conducted by the City of Woodbury with assistance from the Gateway Corridor project team. A total of approximately six business representatives and 11 residents attended the two meetings. Comment forms were provided at each meeting, and none were submitted.

5.2.2. PUBLIC EVENTS IN OAKDALE AND WOODBURY

Project staff attended public events in Oakdale (Touch-A-Truck event on September 13, 2016) and Woodbury (Big Truck Day event on September 24, 2016) to engage members of the community, provide project information, and collect feedback on eastern alignment routing options. At the two events, project staff engaged with a total of approximately 75 community members. Comment forms were provided at these events, and none were submitted but all community members that spoke with staff representatives provided supportive oral comments related to expanded transit in Oakdale and Woodbury.

5.2.3. PUBLIC OPEN HOUSE

A public open house was held on October 5, 2016 to share information about the eastern end realignment process, collect public feedback on the refined route, and review the options screened during technical analysis. Approximately 58 individuals attended the open house, and 12 comment forms were submitted.

5.2.4. SUMMARY OF COMMENTS RECEIVED DURING PHASE 2

Members of the public were able to provide input through a comment form on the project website, on social media, in an electronic newsletter, and through local media coverage. Written and oral comments were also received at the events described above.

[5] Available at http://thegatewaycorridor.com/wp-content/uploads/2016/11/2016-11-13-Eastern-End-Public-Comment-Summary_FINAL-1.pdf

The comment form solicited feedback on the following questions, using a fact sheet that explained the decision-making timeline and detailed maps of the eastern end realignment options:

- Using the maps as a guide, please comment on the route options through Oakdale and Woodbury.
- Are there particular benefits or impacts that you want decision-makers and technical staff to be aware of?
- Do you have any other comments on the Gateway Corridor project?

A total of 33 written and emailed comments were received between August 3, 2016 and October 6, 2016. Comments ranged from general support for the project to a desire for the project to stop completely. Several comments expressed a desire to access jobs, retail, and commercial destinations south of I-94 in Woodbury in addition to destinations in downtown Saint Paul. There was largely a positive response to a route along Bielenberg Drive with some commenters expressing a desire to have the route serve both the Inwood and Woodbury Theater Stations.

6.0 Alternatives Recommended to Advance into the Environmental Document

6.1 TAC Recommendation

Based on the estimated ridership, capital cost, cost-effectiveness, and access to jobs for the two alignments advanced for more detailed evaluation, the TAC, at their September 21, 2016 meeting, concurred with the Working Group recommendation to screen the End at Inwood Avenue Station – 4th Street alignment from further evaluation and to advance the End at Woodbury Theatre Park-and-Ride via Helmo Avenue Station – 4th Street alignment for evaluation in the environmental document. With the recommendation on the eastern end alignment, the Build alternative recommended for evaluation in the environmental document is defined as Alternative ABC-D3 (**Figure 18**).

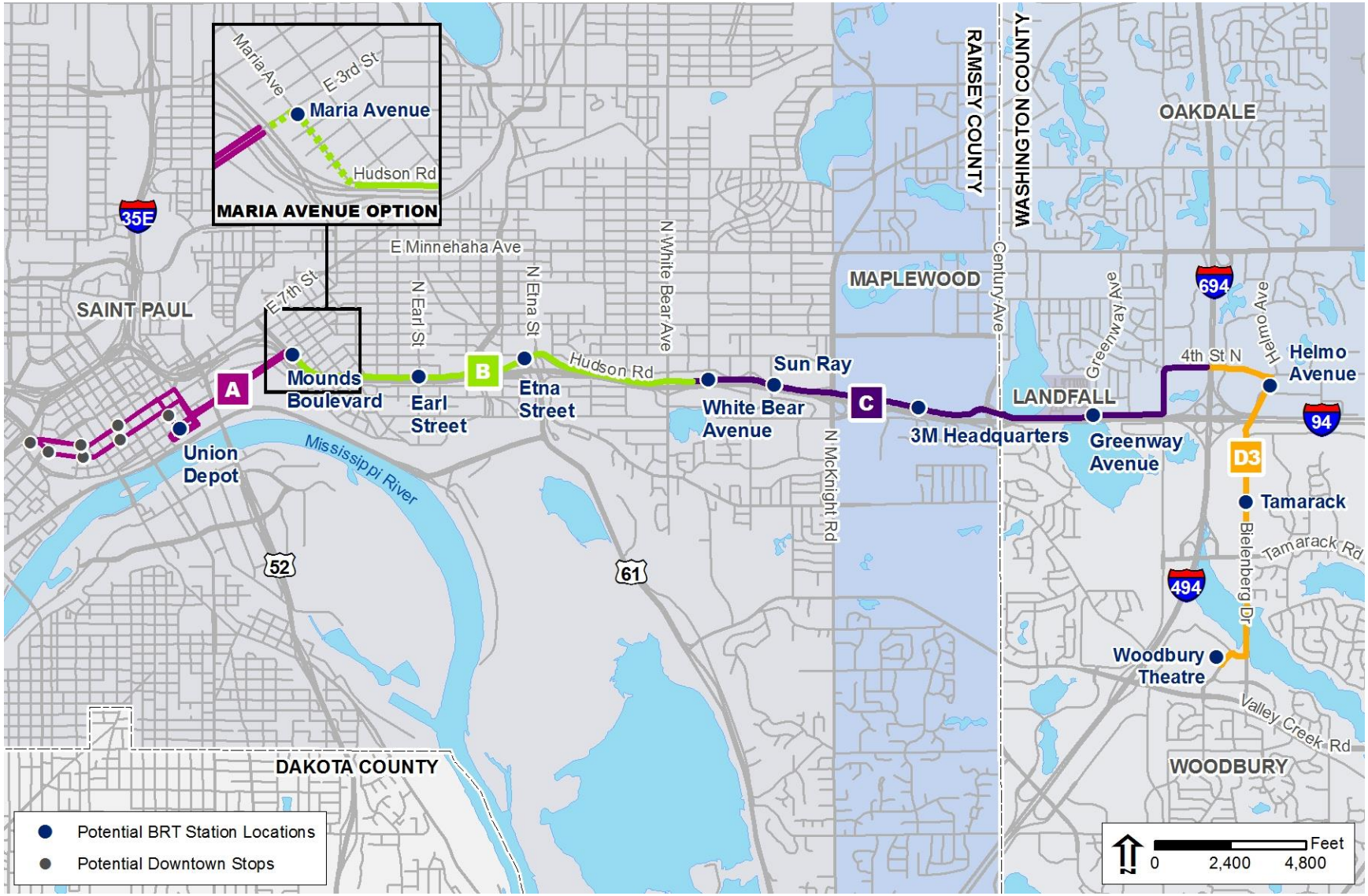
6.2 PAC Recommendation

At their October 13, 2016 meeting, the PAC accepted the TAC's recommendation that Alternative ABC-D3 should be the only route studied in the environmental document.

6.3 GCC Recommendation

At their October 13, 2016 meeting, the GCC accepted the recommendation of the TAC and PACC that Alternative ABC-D3 should be the only route studied in the environmental document.

Figure 18. Alternative ABC-D3



7.0 Alternative Recommended as LPA

7.1 Draft LPA

7.1.1. TAC RECOMMENDATION

For the reasons noted above in Section 6.1, the TAC, on September 21, 2016, recommended that Alternative ABC-D3 advance as the recommended LPA for the Gateway Corridor.

7.1.2. PAC RECOMMENDATION

At their October 13, 2016 meeting, the PAC accepted the TAC's recommendation that Alternative ABC-D3 advance as the draft LPA.

7.1.3. GCC RECOMMENDATION

At their October 13, 2016 meeting, the GCC accepted the recommendation of the TAC and PAC that Alternative ABC-D3 advance as the draft LPA.

7.2 Final LPA

7.2.1. UPDATED INFORMATION

After the draft LPA recommendation, cost and ridership estimates were refined and there was a 30-day public comment period. The refined information and comments received are summarized below. This information was shared with the advisory bodies prior to their final resolutions.

7.2.1.1. PUBLIC COMMENTS

During the 30-day comment period, 56 comments were received. Approximately 40 percent were negative comments related to concerns about safety, increased traffic, noise, property values, and cost. The other 60 percent of comments received were positive and related to increased access to jobs and retail, better bike and pedestrian connections, and economic development opportunities.[6]

7.2.1.2. COST ESTIMATE

The current capital cost estimate for Alternative ABC-D3 is $420 million. The estimated operating and maintenance cost is $9.75 million. This information was presented to the TAC and PAC during the final LPA decision making process.

7.2.1.3. RIDERSHIP

The updated ridership data for Alternative ABC-D3 is presented in **Table 3**. Ridership data for the previous LPA (Alternative ABC-D2-E2) is included for comparison. This information was presented to the TAC and PAC during the final LPA decision making process.

[6] Copies of comments received are available at http://thegatewaycorridor.com/wp-content/uploads/2016/11/2016-11-13-Eastern-End-Public-Comment-Summary_FINAL-1.pdf

Table 3. Updated 2040 Transit Ridership Forecasts

Metric	Previous LPA (Alternative ABC-D2-E2)	Current LPA (Alternative ABC-D3)
Transit-Reliant Rides	**2,350**	**2,300**
% of 2040 Rides	27%	29%
Rush Hour Rides	**5,100**	**4,800**
% of 2040 Rides	60%	60%
New Transit Rides	**7,050**	**6,700**
% of 2040 Rides	82%	84%
Reverse Commute Rides	**3,500**	**3,200**
% of 2040 Rides	41%	40%
"Existing Build" (2010) Rides	**5,050**	**5,400**
% of 2040 Rides	59%	68%
Forecast (2040) Rides	**8,600**	**8,000**

7.2.2. TAC RECOMMENDATION

At their November 16, 2016 meeting, the TAC affirmed their preliminary recommendation to advance Alternative ABC-D3 as the final LPA for the Gateway Corridor project.

7.2.3. CITY RESOLUTIONS OF SUPPORT

Resolutions of support for Alternative ABC-D3 as the LPA were received from the following corridor cities:

- City of Oakdale – November 22, 2016
- City of Maplewood – November 28, 2016
- City of Woodbury – November 30, 2016

7.2.4. PAC RESOLUTION

At their December 8, 2016 meeting, the PAC was presented with a summary of comments received on the draft LPA and updated cost and ridership information. After considering this information and the TAC recommendation, the PAC passed a resolution that identified Alternative ABC-D3 as the LPA. This resolution was forwarded to the GCC, Washington County Regional Railroad Authority, and Metropolitan Council for their consideration.

7.2.5. GCC RESOLUTION

At their meeting on December 8, 2016, the GCC was presented with a summary of comments received on the draft LPA and updated cost and ridership information. They also received the PAC's resolution on the LPA. The GCC passed a resolution that identified Alternative ABC-D3 as the LPA. This resolution will be forwarded to the Metropolitan Council for their consideration.

7.2.6. RCRRA RESOLUTION

At their meeting on December 13, 2016, RCRRA passed a resolution that identified Alternative ABC-D3 as the LPA. This resolution will be forwarded to the Metropolitan Council for their consideration.

7.2.7. WCRRA RESOLUTION

At their meeting on December 20, 2016, WCRRA passed a resolution that identified Alternative ABC-D3 as the LPA. This resolution will be forwarded to the Metropolitan Council for their consideration.