Agenda: Rethinking I-94 Phase 2 Joint TAC and PPC Meeting

Date: 8/20/2024
Time: 8:30 am – 10:00 am

Location: Virtual

Welcome (Melissa)

Updates

- General Project Updates
    - Ongoing technical activities (Mark)
    - Ongoing engagement activities and public events (Renee)
- Freeway Panel (Melissa)
- Agency Updates
    - Minneapolis
    - St Paul
    - Hennepin County
    - Ramsey County
    - Met Council
    - Metro Transit
    - CAAP Board
    - U of M
    - FHWA

Safety Sensitivity (Mark/Jason)

- Evaluation of alternatives – group update following traffic working group meeting

Traffic Sensitivity (Mark/Jason)

- Comments from Traffic Working Group

Alternatives (Austin/Jack)

- Costs

PAC Meeting

- Potential October/November
- Potential winter 2025

Round Robin

- Additional discussion items

Next TAC/PPC Meeting(s)

Next TAC meeting scheduled for September 17
Joint October and November meeting

Agenda: Rethinking I-94 Phase 2 Joint TAC and PPC Meeting

Date: 8/20/2024
Time: 8:30 am – 10:00 am

Location: Virtual

Welcome (Melissa)

Updates

- General Project Updates
  - Ongoing technical activities (Mark)
  - Ongoing engagement activities and public events (Renee)
    - Starting this fall
    - Media briefings this winter
- Freeway Panel (Melissa)
  - 2 speakers about freeway to at-grade projects: Colorado and Syracuse
  - Context of decision-making, improvements they made to surrounding street networks
  - Committees, PAC, community leaders, open to public
  - Webinar on Sept 30th, 8:30-10am – will also put on YouTube for a month after
- Agency Updates
  - Minneapolis
  - St Paul
  - Hennepin County
  - Ramsey County
  - Met Council
  - Metro Transit
  - CAAP Board
  - U of M
  - FHWA

Safety Sensitivity (Mark/Jason)

- Evaluation of alternatives – group update following traffic working group meeting
  - (See presentation)

Traffic Sensitivity (Mark/Jason)

- Looked at impacts on surrounding street grid (see presentation) – significant increase in volumes on adjacent roadways (ex: Lake St, Franklin, etc) – will put findings in graphic (map) format, then will share with larger group
- Comments from Traffic Working Group

Alternatives (Austin/Jack)

- Costs – list of what's included (see screenshot)
- Memo will be sent to group to review in near future

PAC Meeting

- Potential October 24th or November 8th
    - Update on air quality
    - Traffic – how this has changed post-Covid
    - Freeway panel
- Potential winter 2025
    - Alternatives discussion

Round Robin

- Additional discussion items

Next TAC/PPC Meeting(s)

Next TAC meeting scheduled for September 17

Joint October and November meeting

Agenda: Rethinking I-94 Phase 2 Joint TAC and PPC Meeting

Date: 10/15/2024
Time: 8:00 am –10:00 am

Location: Virtual

Welcome (Mark)

Updates

- General Project Updates
  - Ongoing technical activities (Mark)
  - Ongoing engagement activities and public events (Renee)
- Freeway Panel (Mark)
- Agency Updates
  - Minneapolis
  - St Paul
  - Hennepin County
  - Ramsey County
  - Met Council
  - University of Minnesota
  - CAAP Board

Schedule (Mark/Jess)

- Updated project schedule

Traffic Conditions (Mark/Jaimison)

- Traffic “DNA” analysis

PAC Meeting (Mark)

- Agenda items
- Member interests

Bridge Repair Update

- Review of STIP projects

Next Meeting

- In person – joint TAC/PPC updates on alternatives - November 19 at MnDOT Training Center in Arden Hills

Round Robin

- Additional discussion items

Agenda: Rethinking I-94 Phase 2 Joint TAC and PPC Meeting

Date: 7/16/2024
Time: 8:00 am – 10:00 am

Welcome (Melissa)

Updates

- General Project Updates
  - Ongoing technical activities (Mark)
  - Ongoing engagement activities and public events (Renee)
    Schedule (Jess)
- Agency Updates
  - Minneapolis
  - St Paul
  - Hennepin County
  - Ramsey County
  - Met Council

Community Voices (Renee)

- Overview of community voices for I-94

Air Quality (Natalie and Ronald)

- Meeting with National FHWA
- Discussion on approach to air quality

Traffic Sensitivity (Jason)

- Updated information on traffic dispersing to the local/regional network

Safety (Mark/Jason)

- Evaluation of alternatives – group update

Cost Estimates (Jess)

- Approach for construction and maintenance

Alternatives (Austin/Jack)

- Revised Document Overview
  - Comments received
  - Supplemental information provided
  - Walk through of modified document

Next Meeting

- In person – joint TAC/PPC updates on alternatives evaluation – need to find a date/time for discussion. May need more than 2 hours

Upcoming Work Activities

- Alternatives evaluation

Round Robin

- Additional discussion items

Next TAC Meeting(s)

? – Next TAC meeting scheduled for August 20

From: "Sexton, Tim" <tim.sexton@minneapolismn.gov>
To: "Omar, Qannani" <qannani.omar@minneapolismn.gov>
CC: "Swanson, Jennifer (she/her/hers)" <Jennifer.Swanson@Minneapolismn.gov>, "Wonsley, Robin (she/her/hers)" <Robin.Wonsley@minneapolismn.gov>, "Robinson, Celeste" <celeste.robinson@minneapolismn.gov>, "Hager, Jenifer (she/her/hers)" <Jenifer.Hager@minneapolismn.gov>
Subject: RE: Rethinking 94
Date: Wed, 31 Jul 2024 23:39:33 +0000
Attachments: Rethinking_94_Resolution_2024_DRAFT_with_Suggestions_from_Staff.docx

---

Hi Qannani,

I've attached some technical comments for your consideration. We appreciate you working with us to get initial thoughts/feedback.

Jeni Hager worked with her team to develop the comments and is also included here.

Respectfully,
Tim

Timothy Sexton (he/him) | Public Works Director | City of Minneapolis | O: 612-673-3071 | C: 612-219-6679 |
timothy.sexton@minneapolismn.gov

From: Omar, Qannani <qannani.omar@minneapolismn.gov>
Sent: Wednesday, July 31, 2024 1:36 PM
To: Sexton, Tim <tim.sexton@minneapolismn.gov>
Cc: Swanson, Jennifer <Jennifer.Swanson@Minneapolismn.gov>; Wonsley, Robin <Robin.Wonsley@minneapolismn.gov>; Robinson, Celeste <celeste.robinson@minneapolismn.gov>
Subject: RE: Rethinking 94

Hi All,

I wanted to bump this request because I know you shared there was some feedback you would like our office to look over before submitting. We are hoping to submit for the next cycle and would love to incorporate any important changes into the draft.

Thanks so much!

Qannani

Qannani Omar (she/her/hers)
Policy Aide

City of Minneapolis - Ward 2
Office of Council Member Robin Wonsley
350 S. Fifth St.
Minneapolis, MN 55415

Office: 612-673-2202

From: Omar, Qannani
Sent: Thursday, July 11, 2024 3:34 PM
To: Sexton, Tim <tim.sexton@minneapolismn.gov>
Cc: Swanson, Jennifer <Jennifer.Swanson@Minneapolismn.gov>; Wonsley, Robin <Robin.Wonsley@minneapolismn.gov>
Subject: Rethinking 94

Director Sexton,

Thank you again for meeting with our office to discuss the grant. I have already reached out to Will to get us scheduled for the 23rd and look forward to continuing the conversation there.

I also wanted to provide a few updates regarding this topic since we last spoke. First, I reached out to Our Streets and learned they have been meeting with MnDOT to discuss this grant and as of now, MnDOT will not be applying as an agency. They did indicate they were open to writing letters of recommendations for agencies/groups seeking to apply.

Second, our office is also looking to advance a resolution regarding this project. I have attached a copy for your review and would welcome any feedback.

Again, I look forward to connecting in the next couple of weeks and please don't hesitate to reach out with any questions or concerns in the meantime.

Have a great day,
Qannani

Qannani Omar (she/her/hers)
Policy Aide

City of Minneapolis - Ward 2
Office of Council Member Robin Wonsley
350 S. Fifth St.
Minneapolis, MN 55415

Office: 612-673-2202

Expressing the City's priorities for the Minnesota Department of Transportation's Rethinking I-94 Project

Whereas, the Minnesota Department of Transportation is planning for the full reconstruction of I-94 between Hiawatha Avenue and Marion Street as part of its Rethinking I-94 Project, impacting the Minneapolis neighborhoods of Cedar Riverside, Elliott Park, Ventura Village, Seward, and Prospect Park; and

Whereas, the condition of the roadway has deteriorated to the point where reconstruction or removal is required; and

Whereas, the City of Minneapolis passed a previous resolution in 2020 stating the City's high level goals for the Rethinking I-94 project, and this resolution is intended to build on that feedback to state the City's priorities before key upcoming project decisions; and

Whereas, due to racially restrictive housing covenants, Cedar Riverside was one of the few neighborhoods in Minneapolis that Black families could live, work, and socialize; and

Whereas, Cedar Riverside was also a landing spot for Jewish refugees and European immigrants and the neighboring area of Phillips was and is a hub for Indigenous residents; and

Whereas historic non-white and laboring class neighborhoods like Cedar Riverside were targeted by State and City planners for highway construction as a mechanism to remove residents, and the construction of I-94 and I-35W displaced hundreds of homes, businesses, places of worship and community institutions in Minneapolis, including St. James AME, the first Black congregation in Minnesota; the local Pillsbury United Communities, a community cornerstone that supported youth; the Key Club, a Black-owned venue that employed numerous Black residents and hosted cultural events; and Seven Corners Library, the only public library in the neighborhood that served as a community hub and invaluable resource to the immigrant and migrant laborers who moved into the neighborhood and supported Minneapolis' industries and growth; and

Whereas, the area known as Cedar Riverside was contiguous with other neighborhoods which supported each other (now known as Seward and Phillips) with walkable necessities and amenities, and I-94 and its interchanges effectively divided these neighborhoods, permanently reducing local accessibility for all residents but especially the elderly and children and those with limited vehicle access, confining local business prosperity, effectively eliminating the usability of the once-essential Riverside Park, and adding multiple long-term pollution sources; and

Whereas, the proposed project area today is a rich and diverse community wherein 42% of residents are people of color and 32.6% of residents live below the federal poverty threshold;

and

Whereas, the Minneapolis Racial Equity Framework for Transportation notes that “formerly redlined areas comprise 17% of Minneapolis’ land but include 48% of the total miles of freeway.; and

Whereas, The Minneapolis Racial Equity Framework for Transportation also notes that “The residents who remain near these freeways suffer the effects of concentrated emissions, decades of toxic lead and continuing pollutants including particulate matter.” “People who live within a quarter mile of a highway” in neighborhoods like Elliot Park, Cedar Riverside, Seward and Prospect Park, “are more likely to experience "childhood asthma, impaired lung function, premature death and death from cardiovascular diseases and cardiovascular morbidity”; and

Whereas, childhood asthma is a significant cause of school absenteeism and, since I-94 runs through communities of color, contributes to educational disparities; and

Whereas, listed actions in the Racial Equity Framework for Transportation include: “Encourage and support regional efforts to explore options and opportunities to address harms of past transportation decisions.”, “work to understand and communicate as part of project development the non-transportation impacts on residents and businesses of transportation projects (e.g. land use, property values, housing affordability, cultural displacement, etc.)”, and “encourage and support the inclusion of anti-displacement work when major investments occur (e.g. light rail projects) led by partners at the Minnesota Department of Transportation, Hennepin County and/or and Metro Transit”; and

Whereas, the City of Minneapolis has adopted the Transportation Action Plan, a policy framework that prioritizes walking, bicycling, and transit, with goals of increasing equity in our transportation system, reducing carbon emissions, improving human health through improved air quality and increased active travel, and enabling the safe movement of people, goods, and services across the city; and

Whereas, transportation is the largest source of greenhouse gas emissions in Minnesota, and the City of Minneapolis set a goal to reduce greenhouse gas emissions by 80% by 2050; and

Commented [HJ(1]: Text on City webpage (Climate Action Plan): Reach net-zero greenhouse gas (GHG) emissions by 2050.

The TAP will be updated accordingly.

Whereas, the Minneapolis Climate Action Plan has stated goals to rapidly reduce vehicle miles traveled (VMT) in the city and support the Metropolitan Council’s goal of doubling regional transit ridership by 2030; and

Whereas, a growing network of mobility infrastructure including bus rapid transit and protected bike lanes create local travel opportunities that are inexpensive, safe, fast, and convenient, rendering many local trips by interstate highway unnecessary; and

Whereas, remote work has shifted commuting habits~~, reducing peak traffic volumes~~ and has affected travel patterns on I-94, ~~and today the vast majority of the vehicle trips originating in this corridor are short distance local trips~~; and

Whereas, following their construction, high-speed urban highways have since been recognized as injurious to the economic vitality, livability, and safety of the dense communities they were intended to serve; and

Whereas, cities across the country have successfully replaced urban freeways with local streets and new community development and additional projects are being planned; and

Whereas, the Policy Advisory Committee and the public have been presented with differing research, recommendations and conclusions as it relates to urban freeway removal projects across the country which has caused, and continues to cause, confusion; and

Whereas, the City Council requests that MnDOT review the research report conducted by Our Streets and their consultant and provide the Policy Advisory Committee and the public with an explanation for the differences between that report and the one conducted by MnDOT; and

Whereas, data from completed projects has demonstrated that expanding highways induces more car trips and congestion, while reducing lanes and/or converting them into multimodal boulevards incentivizes mode shift ~~and produces traffic evaporation~~; and

Whereas, repurposing highway right-of-way into new housing and businesses has the potential to grow the Minneapolis tax base and add ~~thousands of~~ new affordable housing units and job opportunities; and

Now, Therefore, Be It Resolved by The City Council of The City of Minneapolis:

That the City of Minneapolis continues to strongly oppose the repair or reconstruction of I-94 in its current form and categorically rejects any roadway expansion within its boundaries or any right of way expansion

Be It Further Resolved that the City Council of Minneapolis supports a wide variety of highway removal options in the upcoming Rethinking I-94 scoping decision document, including the addition of a “restored network” alternative with fewer lanes, which would maximize the potential to repurpose highway land for new public housing, affordable commercial space, parks, community gardens, or other uses determined by surrounding communities

Be It Further Resolved that the City Council of Minneapolis supports studying options that repurpose the I-94 trench for new rail transit, creating a high speed connection between downtown Minneapolis to downtown Saint Paul and the broader region

Be It Further Resolved that the City Council is committed to working with other government partners to convene a community workgroup to study and implement proactive anti-

Commented [HJ(2]: As of 2023, daily traffic volumes along I-94 were at about 95% of pre-Covid levels.

The thru vs. local trip has been hard to characterize over the years and even MnDOT itself has released conflicting statistics from one time to another. However, one analysis that MnDOT published states that in rough terms:
* 25% of trips begin and end inside the study area,
* 25% of trips begin and end outside the study area,
* 25% of trips begin inside the study area and end outside the study area
* 25% of trips begin outside the study area and end inside the study area.

The statement "vast majority of the vehicle trips

Commented [HJ(3]: Staff suggestion - There are competing research reports from Our Streets and their consultant and MnDOT and their consultant. Each contains differing opinions regarding national examples and whether they correlate to R94 or not. Each contains different recommendations and conclusions. This is confusing to both the Policy Advisory Committee and the public.

Commented [HJ(4]: Staff who are subject matter experts in traffic operations and modeling suggest the following:

Remove the phrase "and produces traffic evaporation."

Staff agree that freeway capacity reduction increases the potential for mode shift, to an extent. However, we do not agree with the overall

Commented [HJ(5]: Suggest deleting because we are unable to back this number up until additional analysis is completed.

Commented [HJ(6]: Suggest reverting to previous clause from 2020 Resolution (copied below) which is supported by TAP Transit 2.7 and 4.8.

MnDOT looked at LRT options as they were developing alternatives (early 2023) and removed them due to the stated finding that "projected light rail ridership does not warrant this mode of transit within the corridor". If Council wants MnDOT to displacement policies and reparations programs along the project corridor and evaluate opportunities to repurpose highway land for community benefit

Be It Further Resolved that the City Council supports updated traffic models to utilize dynamic traffic assignment (DTA) and incorporate potential future land-use changes, which would improve modeling accuracy for complex changes; and ~~are essential for accurate modeling~~

Be It Further Resolved that the City Council supports all efforts to improve transparency and community engagement, including visualizing, to-scale, what each studied project alternatives would look like in each corridor neighborhood, and disclosing how each project option would impact pollution, health outcomes, greenhouse gas emissions, traffic noise, racial equity, and economic development

Be It Further Resolved that the City Council will center all future decisions about the future of I-94 should be made with robust community engagement and in partnership with surrounding residents and businesses

Be It Further Resolved that the City Council supports amending the Rethinking I-94 project's evaluation criteria to better measure and prioritize the impacts on adjacent neighborhoods, including adding specificity to metrics of air pollution, equity, mobility, sense of place, and connectivity, of which the current measures are vaguely defined and provide little value for evaluating the differences between project alternatives

Be It Further Resolved that the City Council enthusiastically supports cross-collaboration efforts with other agencies, and encourages the City of Minneapolis and its partners to apply for a USDOT Reconnecting Communities & Neighborhoods grant ~~to study a boulevard conversion of the Rethinking I-94 corridor~~

Commented [HJ(7]: Utilizing Dynamic Traffic Assignment would require an overhaul of Met Council's regional travel demand model, which is currently an Activity Based Model (ABM). This is technically feasible, but would require a years-long initiative.

At one time, MnDOT was exploring the ability to incorporate DTA into regional forecasting: https://mdl.mndot.gov/_flysystem/fedora/2023-02/201710ts.pdf

We agree that incorporating future land use changes into the modeling for an at-grade/boulevard concept would increase its accuracy, and there would need to be many assumptions incorporated into those projections.

Commented [HJ(8]: In our staff letter to MnDOT on the alternatives evaluation draft, we provided comments related to a need for improved metrics on air pollution, additional metrics on bike/walk safety and comfort, additional metrics on economic vitality, improved metrics on sense of place, additional metric on EJ urban heat island effect impacts. Some of these comments may be addressed in the latest draft of the alternatives evaluation, which was shared recently and needs review by staff.

Commented [HJ(9]: Suggest deleting the detailed scope of a potential grant application.

This gives staff the flexibility needed to do the cross-collaboration efforts with partner agencies should pursuit of a grant application be authorized.

From: "Barnes, Melissa (She/Her/Hers) (DOT)" <melissa.barnes@state.mn.us>
To: "Hager, Jenifer (she/her/hers)" <Jenifer.Hager@minneapolismn.gov>, "Sheffer, Will (he/him/his)" <william.sheffer@minneapolismn.gov>, "Wilson, Ryan (DOT)" <ryan.wilson@state.mn.us>, "Lindeberg, Mark (DOT)" <mark.lindeberg@state.mn.us>, "Kauppi, Sheila (DOT)" <sheila.kauppi@state.mn.us>
CC: "Dodds, Bryan (he/him/his)" <bryan.dodds@minneapolismn.gov>, "Zlimen, Kimberly (She/Her/Hers) (DOT)" <Kimberly.Zlimen@state.mn.us>, "Swanson, Jennifer (she/her/hers)" <Jennifer.Swanson@Minneapolismn.gov>, "Hyink, Jessica (she/her/hers)" <jessica.hyink@minneapolismn.gov>, "Bockheim, Adrienne (she/her/hers)" <adrienne.bockheim@minneapolismn.gov>, "Brasser, Ben (he/him/his)" <benjamin.brasser@minneapolismn.gov>, "Raduenz, Renee (She/Her/Hers) (DOT)" <renee.raduenz@state.mn.us>
Subject: RE: [EXTERNAL] RE: 5/2 Presentation at Minneapolis Climate & Infrastructure Committee
Date: Fri, 10 May 2024 14:28:52 +0000

Questions that were asked by the Council on 5/2:

Why are the project limits I-35W on the west side? What happens to the connections outside of the limits?

- The project study limits are at I-35W and Hwy 55 due to infrastructure condition and the stark difference in travel patterns at the interchange commons area (I-94 and I-35W) where travel patterns split and change. For a short description of how project limits (aka logical termini) are chosen please see this document: Logical Termini. As we work through alternatives development we may need to extend our analysis outside of the project limits to better understand problems on and near the corridor – and we may extend the limits of the project if necessary to make an alternative work. MnDOT previously committed to studying the area west of the Rethinking I-94 project separately and is actively working with the City of Minneapolis on a high-level study of I-94 from the western Rethinking I-94 limits to North 3rd Street.

How is MnDOT looking at noise pollution and how will it be impacted?

- Rethinking I-94 will evaluate alternatives in scoping, and again as part of the Tier 1 EIS (see schedule here). Because alternatives in scoping are at a high level, the evaluation is at a high level. During scoping we evaluate noise impacts by whether the project moves the roadway closer to homes – either horizontally, vertically, or by adding lanes. During the Tier 1 evaluation we will do a full noise model analysis for each alternative. More information on noise analyses can be found here.

How will this project impact the City's climate and VMT goals?

- The evaluation criteria for each alternative is available here. VMT will be evaluated in the Tier 1 EIS as part of Mobility and environmental impacts are evaluated under "SEE Impacts" (SEE = Social, Environmental, and Economic). Greenhouse Gases will be evaluated as part of the recently passed Greenhouse Gas Legislation. The GHG working group will be releasing guidance on that evaluation early 2025. We will continue to work with City of Minneapolis staff, who participate as part the Rethinking I-94 technical working groups, to understand how different alternatives align with the City's goals.

When will the evaluation of the alternatives be available?

- The schedule is available here and we are currently estimating releasing the Draft Scoping Decision Document for public comment in early 2025.

Let me know if you have any questions or would like to talk further about any of these.

Melissa Barnes, PE
Rethinking I-94 Project Director | MnDOT Metro District
Melissa.barnes@state.mn.us

Phone number 612-499-8729

From: Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>
Sent: Monday, May 6, 2024 10:07 AM
To: Barnes, Melissa (She/Her/Hers) (DOT) <melissa.barnes@state.mn.us>; Sheffer, Will <william.sheffer@minneapolismn.gov>; Wilson, Ryan (DOT) <ryan.wilson@state.mn.us>; Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>; Kauppi, Sheila (DOT) <sheila.kauppi@state.mn.us>
Cc: Dodds, Bryan (he/him/his) <bryan.dodds@minneapolismn.gov>; Zlimen, Kimberly (She/Her/Hers) (DOT) <Kimberly.Zlimen@state.mn.us>; Swanson, Jennifer <Jennifer.Swanson@Minneapolismn.gov>; jessica.hyink <jessica.hyink@minneapolismn.gov>; Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>; Brasser, Ben (he/him/his) <benjamin.brasser@minneapolismn.gov>
Subject: RE: [EXTERNAL] RE: 5/2 Presentation at Minneapolis Climate & Infrastructure Committee

Hi Melissa,

If you would like to put something together, I can work here to see about getting the information to the C&I committee members at a min. I also anticipate that our PAC members may ask some follow-up questions around the OS report and MnDOT's work, so any follow-up to the stated questions or other information you'd like to share we will certainly use in those follow-up discussions.

I will work with Bryan after the NACTO conference to discuss reaching out to our C&I Chair about having MnDOT come and give a project update. We haven't done that given there has been no formal action needed from our Council, however I think the situation might call for an update now given that OS has presented their report, there could be lingering questions and we will be bringing formal city comments through late this year/early next year.

Jeni

Jenifer Hager | Director Transportation Planning & Programming
City of Minneapolis – Public Works | **Public Service Building 505 4th Ave South Room 410 MN 55415**

612-673-3625 | Jenifer.Hager@minneapolismn.gov

From: Barnes, Melissa (She/Her/Hers) (DOT) <melissa.barnes@state.mn.us>
Sent: Sunday, May 5, 2024 9:15 AM
To: Sheffer, Will <william.sheffer@minneapolismn.gov>; Wilson, Ryan (DOT) <ryan.wilson@state.mn.us>; Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>; Kauppi, Sheila (DOT) <sheila.kauppi@state.mn.us>
Cc: Dodds, Bryan (he/him/his) <bryan.dodds@minneapolismn.gov>; Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Zlimen, Kimberly (She/Her/Hers) (DOT) <Kimberly.Zlimen@state.mn.us>
Subject: [EXTERNAL] RE: 5/2 Presentation at Minneapolis Climate & Infrastructure Committee

After watching this it seems like they have a lot of questions about MnDOT's process and timeline (at the end) which Our Streets tried to answer but we weren't there to provide our answers. Let us know if you would like us to provide any follow-up to the council.

Melissa Barnes, PE
Rethinking I-94 Project Director | MnDOT Metro District
Melissa.barnes@state.mn.us
Phone number 612-499-8729

From: Sheffer, Will <william.sheffer@minneapolismn.gov>
Sent: Thursday, May 2, 2024 3:43 PM
To: Wilson, Ryan (DOT) <ryan.wilson@state.mn.us>; Barnes, Melissa (She/Her/Hers) (DOT)

<melissa.barnes@state.mn.us>; Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>; Kauppi, Sheila (DOT) <sheila.kauppi@state.mn.us>
Cc: Dodds, Bryan (he/him/his) <bryan.dodds@minneapolismn.gov>; Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Zlimen, Kimberly (She/Her/Hers) (DOT) <Kimberly.Zlimen@state.mn.us>
Subject: 5/2 Presentation at Minneapolis Climate & Infrastructure Committee

---

Good afternoon,

Bryan Dodds asked me to send a link to the Our Streets' presentation at today's C&I meeting. The following link should take you to the exact spot:

https://youtu.be/_xvhUqbhaFA?t=4520

If it doesn't, the presentation starts at 1:15:20 mark. Please let me know if you run into any trouble.

Sincerely,

Will

Will Sheffer I Aide to the Director I **City of Minneapolis – Public Works** I he/him/his I 612-673-3071 I
William.sheffer@minneapolismn.gov

DEPARTMENT OF TRANSPORTATION

Rethinking I-94 Phase 2 Technical Advisory Committee/Policy and Planning Committee Joint Meeting

Date: 07/16/2024 (8:00 am – 10:00 am)
Location: Zoom Meeting
Participants: See List Below

Meeting Summary

1. Welcome

- Melissa Barnes (MnDOT) opened the meeting and welcomed the group. She noted that the project team was ready to move forward following good discussions with MnDOT senior leadership.
  - The project team would like to continue combined TAC and PPC meetings at least through the scoping process. Melissa welcomed feedback from the group on this approach.
  - Melissa noted several MnDOT staffing changes.
    - Mike Samuelson has accepted a position in the Office of Transportation System Management (OTSM). There will be a new representative for the TAC and Pedestrian-Bicycle Working Group.
    - Kim Zlimen is the new West Area Engineer.
    - Chris Krueger has moved to the Central Office Communications and Engagement team as the Director of that office.
    - Ashley Hansen is the new Safety Engineer.
    - Molly McCartney is now Director of Planning and Program Management at Metro District.

2. Updates

- Mark Lindeberg (MnDOT) provided a general overview of ongoing technical activities.
  - Traffic sensitivity analysis
  - Safety analysis
  - Alternatives analysis memo

- Renee Raduenz (MnDOT) gave an overview of ongoing engagement activities.
  - Community Voices
  - Key stakeholder outreach
    - Coffee with Community Leaders
    - Community presentations

        - Creative process for technical materials
        - Zan Associates working on engagement with schools/youth, small businesses, and underserved communities.
        - Two high school interns hired, will be helping with Community Voices.

- Jess Karls (WSB) gave a high-level overview of the updated project schedule. The schedule is aggressive and accommodates required agency review times.
    - Panel on freeway removal requested by PAC will happen outside of PAC meetings – determined to be a statewide issue/discussion.
    - PAC meetings anticipated in December 2024 and May 2025.
    - Completion of Scoping anticipated September 2025
    - Full schedule to be posted in Sharepoint.

- Agency Updates
    - Minneapolis
        - The Park Board will be kicking off the Grand Rounds missing link project. Includes 27th Ave crossing of I-94.
        - Noted interest from advocacy groups in Reconnecting Communities grants.
    - Saint Paul
        - RAISE planning grant for streets around Rondo community in St. Paul is starting. Will include health and economic impact assessment, racial equity impact assessment. Some streets have never been reconstructed.
        - Reconnect Rondo planning grant – will include traffic analysis in and around Rondo community.
        - The St. Paul Climate Justice Advisory Board has a committee on Rethinking I-94. Will be providing feedback to city leaders on alternatives.
        - Rondo Ave project (frontage road). No action taken at recent council meeting, pushed out four weeks. Still expect to complete project later this year.
        - Development agreement reached for Snelling Midway site. Includes hotel, office building, restaurant.
    - Hennepin County
        - B Line BRT construction is underway.
        - Upcoming Franklin Ave project from Lyndale to Chicago Ave in 2025-2026. Anticipate a 4 to 3 conversion.
        - Jordan Kocak will be representing Hennepin County in place of KC Atkins on the PPC going forward.
    - Ramsey County
        - No projects in pipeline parallel to I-94.
        - Potential for future improvements to University Ave and crossings based on alternatives.
    - Met Council
        - 2050 TPP goes to TAB tomorrow (7/17). Anticipate going out for public comment this fall.

- 2025-2028 TIP has been out for public comment. Final approval in August. Have received comments about asset management projects along I-94 - should they be moving forward given Rethinking I-94 project.
- Melissa noted that MnDOT has also received comments on the TIP and is developing responses.

- Capitol Area Architectural and Planning Board (CAAPB)
  - No infrastructure projects imminent.
  - Noted the Ramsey county Rice Street corridor project.
  - Capitol mall design framework in progress.
  - Sears site – no action at this time.
  - In chat: "SHould have mentioned - CAAPB is working with City, MNDOT other partners to align the designs for John Ireland Bridge in Capitol Area- grateful to MNDOT for the collaboration."
- University of Minnesota
  - No major updates.
  - Future plans for rebuilding/building new hospital on East Bank campus. Interest in local/regional connections, especially from Huron Blvd.
- FHWA
  - Next round of Reconnecting Communities grant has been released.

3. **Community Voices**
   - Renee gave an overview of the Community Voices initiative.
     - Asked for participants via online interest form. Received many responses, selected people for more in-depth interviews.
     - Goal is to share examples of how/if people use the corridor in their daily lives and how it affects them.
     - Working on high school, college student, and small business owner participants.
     - Focus on a diverse range of voices – gender, age, race, travel modes and characteristics.
     - Schedule: August-November 2024 – profile 10 Community Voices narratives.
     - Will be shared via social media and the project website.

   - Comments
     - Russ Stark in chat: "For those that drive on 94, it would be valuable to understand trip length along the corridor segment."

4. **Air Quality**
   - Natalie Ries (MnDOT) and Ronald Ying (HDR) gave an overview of the air quality analysis process that has been established for the project.
     - Air Quality Working Group last met in May 2024. Membership includes FHWA division office and national resource office, MnDOT, consultants, MPCA.
     - Air quality analysis will occur during the Draft Tier 1 EIS for the following:
       - Criteria pollutants
       - Mobile Source Air Toxics (MSAT)

- GHG emissions – construction and operational emissions.
  - Transportation-related emissions are analyzed using a modeling tool called MOVES.
  - MOVES is developed by EPA. Speed and traffic volumes are key differentiators among the various inputs considered by the tool.
  - In general, higher speeds result in lower emissions per vehicle miles traveled (VMT).

- Comments
  - Question raised regarding the relationship between speed and GHG emissions.
    - Slower speeds (congestion) result in higher GHG emissions per VMT.

5. Traffic Sensitivity

- Jason Junge (WSB) provided an overview of the traffic sensitivity analysis conducted to test traffic diversion assumptions in the regional model.
  - Analysis focused on At-Grade Roadway, Local/Regional, Reduced Freeway alternatives because they would result in reduced roadway capacity.
  - Intent is to address concerns about whether the regional model is appropriate for this analysis.
  - The Mississippi River creates a natural screen line for east-west traffic, which allows for analysis of volumes using each crossing location (and trips no longer taken across the river).
  - Analysis along includes segments along University Ave, Lake Street, and Marshall Ave.
  - The analysis tested a scenario where 1/3 less traffic is diverted to the crossings and segments analyzed.
  - The test scenarios would still divert enough traffic to these routes to cause concern. Some routes are already congested during peak periods and in some cases will have lane reductions as part of in-progress or future projects.

- Questions
  - Does the model assume the same number of vehicle trips?
    - Land use inputs are the same.
    - The regional model already reassigns trips to other modes. This analysis tests a scenario where vehicle trips are reduced even more.
    - City of Minneapolis requested updated documentation of the analysis.
  - It was noted that “full capacity hours” in the table is not hours of congestion, it is how many hours per day to serve total volumes.

6. Safety

- Jason gave an overview of the revised safety analysis methodology and results.
  - Key inputs are VMT from the traffic analysis and MnDOT’s compiled average crash rates by roadway type.
  - Originally planned to use CMFs, but there are not applicable CMFs that capture the potential changes with each alternate. The alternatives also have potential major

traffic volume impacts beyond what CMFs are applicable to. We also don't have geometric details at this time.

- Can look at CMFs later in the process. Can also use Surrogate Safety Assessment Model for analysis in later phases once traffic simulations are in progress.
- In general, since freeways have lower average crash rates, alternatives that maintain freeways result in lower crashes per day. Alternatives that shift traffic onto at-grade streets increase crashes/day, including fatal and serious injury crashes, because these roadways have higher average crash rates due to more conflicting traffic movements.

- Questions
  - Are traffic speeds accounted for in the analysis?
    - This is reflected in the average crash rate data.
  - Are crash rates national?
    - Rates are specific to Minnesota.
  - The analysis assumes intersections behave at average crash rates, but this is not always the case.
    - Jason noted that the team could rerun intersection crash rate analysis to reflect actual intersection crash rates for poor locations instead of using averages.
    - Melissa mentioned that MnDOT traffic engineers also noted that signalized intersections that approach capacity don't perform at average rates, they tend to have much worse crash rates. Based on this, the crash analysis is likely conservative.
  - Did the analysis include any intersections in Minneapolis?
    - No, but they can be added.
  - It was noted that a number of the parallel routes to I-94 (and the crossing routes) show up on Saint Paul's High Injury Network.
    - These areas could be analyzed in more detail.
  - It was noted that high injury networks are weighted to reflect fatal and serious injury crashes.

7. Alternatives

- Austin Hauf (WSB) gave an overview of the revised alternatives evaluation memo.
  - ~180 comments received.
  - Commenters noted that the document was too technical and included a high volume of information. Request to streamline.
  - There were several comments on things we cannot analyze now. Responses to these comments have been provided.
  - Clarified use of no build as baseline - we can't show no build as negative impacts.
  - Request for further review of category breakpoints.
  - Key changes include:
    - Streamlined and reorganized where possible. Used more bullets.
    - Added a few definitions of technical terms.

        - Moved alternatives descriptions to eval sections.
        - Added small key takeaways tables to alternatives sections.
        - Moved data tables to appendix.
        - Added additional matrix to appendices with more details on category determinations.
        - More summary narrative/discussion to be added once recommendations are finalized.
    - Revised memo is in Sharepoint.
    - Results will be discussed in more detail at the next meeting.

8. Next Meeting

- Would like to hold in-person meeting on August 20. Would like to have 3 hours with the same start time.
    - Attendees indicated general agreement in the chat with keeping the same start time and extending the meeting for an extra hour.

9. Upcoming Work Activities

- Continue alternatives evaluation.

Next Meeting

Date: 08/20/2024
Time: 8:00 AM
Location: MnDOT Waters Edge - Conference Rooms A and C

Technical Advisory Committee

Present	Last Name	First Name	Organization
X	Varney	Anna	FHWA
X	Vennewitz	Amy	Met Council
X	Heath	Ryan	Metro Transit
X	Barnes	Melissa	MnDOT
X	Bartelt	Nikki	MnDOT
	Goff	Bill	MnDOT
X	Henricksen	Jim	MnDOT
X	Lindeberg	Mark	MnDOT
	Kauppi	Sheila	MnDOT
X	Larsen	Bradley	MnDOT
X	Schreiner	Garrett	MnDOT
	Hansen	Ashley	MnDOT
X	Parent	Matthew	MnDOT
X	Turner Bargen	Mackenzie	MnDOT
	Wilson	Ryan	MnDOT
X	Zlimen	Kimberly	MnDOT
	Olson	Jeffrey	MnDOT
	Lopez	Ricardo	MnDOT
X	Raduenz	Renee	MnDOT
X	Trboyevich	Jessa	Hennepin County
X	Estochen	Brad	Ramsey County
X	Hager	Jenifer	Minneapolis
X	Hyink	Jessica	Minneapolis
	Peterson	Nick	St. Paul
X	Newton	Randy	St. Paul
X	Corkle	Jack	WSB
X	Karls	Jess	WSB

Policy & Planning Committee

Present	Last Name	First Name	Organization
X	Pearson	Joshua	FHWA
X	Varney	Anna	FHWA
	Kocak	Jordan	Hennepin County
X	Ellos	Chad	Hennepin County
X	Hiniker	Cole	Met Council
X	Vennewitz	Amy	Met Council
	Harrington	Adam	Metro Transit
X	Musty	Peter	Capitol Area Architectural and Planning Board (CAAPB)
	Schroeder	Michael	Minneapolis Park and Recreation Board

Present	Last Name	First Name	Organization
X	Mackenzie	Monique	University of Minnesota
X	Austin	Lisa	MnDOT
X	Barnes	Melissa	MnDOT
X	McCartney	Molly	MnDOT
X	Lindeberg	Mark	MnDOT
	Goff	Bill	MnDOT
	Kauppi	Sheila	MnDOT
	Wilson	Ryan	MnDOT
X	Raduenz	Renee	MnDOT
	Collins	Kari	Ramsey County
	Faust	Martha	Ramsey County
	Isaacson	Brian	Ramsey County
X	Bockheim	Adrienne	Minneapolis
	Nix	Noel	St. Paul
X	Stark	Russ	St. Paul
X	Karls	Jess	WSB
X	Corkle	Jack	WSB

FHWA/MnDOT/Agency/Consultant Staff

Last Name	First Name	Organization
Ries	Natalie	MnDOT
Ehrlich	Jonathan	Met Council
Junge	Jason	WSB
Hauf	Austin	WSB
Ying	Ronald	HDR

From: "Hager, Jenifer (she/her/hers)" <Jenifer.Hager@minneapolismn.gov>
To: "Omar, Qannani" <qannani.omar@minneapolismn.gov>, "Sexton, Tim" <tim.sexton@minneapolismn.gov>
CC: "Swanson, Jennifer (she/her/hers)" <Jennifer.Swanson@Minneapolismn.gov>, "Wonsley, Robin (she/her/hers)" <Robin.Wonsley@minneapolismn.gov>, "Robinson, Celeste" <celeste.robinson@minneapolismn.gov>, "Carpio, MJ" <mj.carpio@minneapolismn.gov>, "Baltazar-Chon, Irene (she/her/hers)" <irene.baltazar-chon@minneapolismn.gov>
Subject: RE: Rethinking 94
Date: Thu, 15 Aug 2024 15:31:03 +0000
Attachments: Rethinking_94_Resolution_criteria_edit.docx

Hello Qannani,

Staff were provided an initial updated draft of the alternatives evaluation report, this was shared with project partner staff only at this time as part of a coordinated review. MnDOT will be sharing the final version after it has been finalized. Currently, it is planned for the PAC to receive an update on this work at the December meeting. We have reviewed the "Whereas" statement in question against the current draft of the alternatives evaluation report and offer the attached suggested edits.

Please let us know if you have any further questions.

Jeni

Jenifer Hager I Director Transportation Planning & Programming
City of Minneapolis – Public Works I **Public Service Building 505 4th Ave South Room 410 MN 55415**

612-673-3625 I Jenifer.Hager@minneapolismn.gov

From: Omar, Qannani <qannani.omar@minneapolismn.gov>
Sent: Thursday, August 8, 2024 2:38 PM
To: Sexton, Tim <tim.sexton@minneapolismn.gov>
Cc: Swanson, Jennifer <Jennifer.Swanson@Minneapolismn.gov>; Wonsley, Robin <Robin.Wonsley@minneapolismn.gov>; Robinson, Celeste <celeste.robinson@minneapolismn.gov>; Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Carpio, MJ <mj.carpio@minneapolismn.gov>; Baltazar-Chon, Irene (she/her/hers) <irene.baltazar-chon@minneapolismn.gov>
Subject: RE: Rethinking 94

Hi All,

I have added staff from CM Cashman and Osman's office as they are co-authors on the resolution.

We all met earlier this week to begin reconciling edits and had a follow-up request regarding a comment Jeni made about the latest draft of alternative evaluations MnDOT has shared with staff. Would you be willing to share that with our offices? If there are significant differences or additional information than what was presented in the last PAC meeting, we would love to either incorporate it or cut down some of the requests in the resolution.

Thank you,
Qannani

Qannani Omar (she/her/hers)
Policy Aide

City of Minneapolis - Ward 2
Office of Council Member Robin Wonsley
350 S. Fifth St.
Minneapolis, MN 55415

Office: 612-673-2202

From: Sexton, Tim <tim.sexton@minneapolismn.gov>
Sent: Wednesday, July 31, 2024 6:40 PM
To: Omar, Qannani <qannani.omar@minneapolismn.gov>
Cc: Swanson, Jennifer <Jennifer.Swanson@Minneapolismn.gov>; Wonsley, Robin <Robin.Wonsley@minneapolismn.gov>; Robinson, Celeste <celeste.robinson@minneapolismn.gov>; Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>
Subject: RE: Rethinking 94

Hi Qannani,

I've attached some technical comments for your consideration. We appreciate you working with us to get initial thoughts/feedback.

Jeni Hager worked with her team to develop the comments and is also included here.

Respectfully,
Tim

Timothy Sexton (he/him) | Public Works Director | City of Minneapolis | O: 612-673-3071 | C: 612-219-6679 | timothy.sexton@minneapolismn.gov

From: Omar, Qannani <qannani.omar@minneapolismn.gov>
Sent: Wednesday, July 31, 2024 1:36 PM
To: Sexton, Tim <tim.sexton@minneapolismn.gov>
Cc: Swanson, Jennifer <Jennifer.Swanson@Minneapolismn.gov>; Wonsley, Robin <Robin.Wonsley@minneapolismn.gov>; Robinson, Celeste <celeste.robinson@minneapolismn.gov>
Subject: RE: Rethinking 94

Hi All,

I wanted to bump this request because I know you shared there was some feedback you would like our office to look over before submitting. We are hoping to submit for the next cycle and would love to incorporate any important changes into the draft.

Thanks so much!

Qannani

Qannani Omar (she/her/hers)
Policy Aide

City of Minneapolis - Ward 2
Office of Council Member Robin Wonsley
350 S. Fifth St.
Minneapolis, MN 55415

Office: 612-673-2202

From: Omar, Qannani
Sent: Thursday, July 11, 2024 3:34 PM
To: Sexton, Tim <tim.sexton@minneapolismn.gov>
Cc: Swanson, Jennifer <Jennifer.Swanson@Minneapolismn.gov>; Wonsley, Robin <Robin.Wonsley@minneapolismn.gov>
Subject: Rethinking 94

Director Sexton,

Thank you again for meeting with our office to discuss the grant. I have already reached out to Will to get us scheduled for the 23rd and look forward to continuing the conversation there.

I also wanted to provide a few updates regarding this topic since we last spoke. First, I reached out to Our Streets and learned they have been meeting with MnDOT to discuss this grant and as of now, MnDOT will not be applying as an agency. They did indicate they were open to writing letters of recommendations for agencies/groups seeking to apply.

Second, our office is also looking to advance a resolution regarding this project. I have attached a copy for your review and would welcome any feedback.

Again, I look forward to connecting in the next couple of weeks and please don't hesitate to reach out with any questions or concerns in the meantime.

Have a great day,
Qannani

Qannani Omar (she/her/hers)
Policy Aide

City of Minneapolis - Ward 2
Office of Council Member Robin Wonsley
350 S. Fifth St.
Minneapolis, MN 55415

Office: 612-673-2202

Be It Further Resolved that the City Council supports amending the Rethinking I-94 project's evaluation criteria to better measure and prioritize the impacts on adjacent neighborhoods, including adding specificity to metrics of air ~~pollution~~quality, public health and the environment, equity, ~~mobility~~walkability and bikeability, sense of place, and connectivity, of which the current measures are vaguely defined and provide little value for evaluating the differences between project alternatives.

Document Draft Date	Committee	Agency	Comments Provided (Yes or No)	Reviewer	Date of Comment Received	Page Number	Category	Comment	Response	Notes	Follow-Up Action	Comment Number
03.27.2024	Technical Advisory Committee	MnDOT	Yes	Mike Samuelson	4/22/2024	18	General	*"Distance between crossings"* - For several alternatives there is discussion on conflict points, which does not seem to be consistent with the measurement of distance between crossings. I recommend removing discussion of conflict points under this category.	The project team feels strongly that when stating the assumed distance between crossings for each alternative, it is important to communicate the cases where some of the crossings that do not currently have conflict points with the mainline would have new conflict points.			42
03.27.2024	Technical Advisory Committee	MnDOT	Yes	Mike Samuelson	4/22/2024	18	General	*"Distance between crossings"* - I recommend removing the language that talks about the distance between grade-separated crossings. My understanding is we are not at a point in the EIS process where we are analyzing crossing type, just distance between crossings.	The project team feels strongly that when stating the assumed distance between crossings for each alternative, it is important to communicate the cases where some of the crossings may be at-grade, even if the exact locations of these crossings are not known at this time.			43
03.27.2024	Technical Advisory Committee	MnDOT	Yes	Mike Samuelson	4/22/2024	18	General	*"Distance between crossings"* - The assumption that the at-grade options would have no increase in crossings should be reexamined. Non-freeway trunk highways in Class 1 cities have more frequent crossing than 94 does today, and it is a reasonable to assume at this stage that an at-grade options would look similar to other trunk highways that exist today. I recommend assuming more frequent crossings for the at-grade scenarios.	There is potential to add crossings as part of any of the alternatives. The specific location and number of new crossings will be analyzed later - there is not enough information available to do this in Scoping. For consistency, this measure assumed the same at-grade intersection locations as the traffic modeling.			44
03.27.2024	Technical Advisory Committee	MnDOT	Yes	Mike Samuelson	4/22/2024	18	General	*"Travel time between Origin-Desination Pairs"* If we want to talk about conflict points, I think doing some under this section (and the potential relationship between conflict points and delay) would be appropriate. - Today, the number of conflicts points for someone walking or biking to cross 94 varies along the corridor depending on if an interchange is present and interchange design. In some instances, the at-grade options as shown (six conflict points per crossing, which includes two that are bus only) would reduce the number of conflict points compared to existing, such as at Lexington, Snelling, and Dale, which all have more than six existing conflict points for a person crossing. In some locations, the conflict points would remain the same or increase. Most interchanges today require crossing at least four general vehicle conflict points, the same as the at-grade. I recommend either adding language that notes ped conflict points would be neutral or decrease in some locations, or update language to note that the change in conflict points will vary along the corridor.	Comment noted. This statement has been added to the matrix and memo for the At-Grade alternatives: "The number of conflict points may decrease or stay the same at some locations depending on intersection designs."			45
03.27.2024	Technical Advisory Committee	MnDOT	Yes	Mike Samuelson	4/22/2024	18	General	*"Travel time between Origin-Desination Pairs"* - While the number of conflict points for the local/regional roadway alternative would decrease at some locations, it would likely increase in others. I recommend adding language to state this.	Added clarification that nonmotorized conflict points have potential to increase at some locations for Local/Regional alternative.			46
03.27.2024	Technical Advisory Committee	MnDOT	Yes	Mike Samuelson	4/22/2024	18	General	*"Travel time between Origin-Desination Pairs"* - Changes in vehicles on the mainline (either an increase or decrease) under different alternatives would likely result in changes in ramp/interchange designs, which could increase or decrease the conflict points for people walking/biking. If we are speaking about conflict points in other scenarios, I recommend the project note how vehicle volumes are forecasted to change for each freeway alternatives and that this may lead to more or fewer conflict points at some interchanges.	The evaluation of alternatives in Scoping is based on the mainline. Interchange/intersection designs will be evaluated as part of the Tier 1 EIS. The walkability/bikeability measures proposed for the Tier 1 EIS include an analysis of nonmotorized conflict points for intersection/interchange alternatives.			47
03.27.2024	Technical Advisory Committee	MnDOT	Yes	Mike Samuelson	4/22/2024	16	General	Page 16 notes that scoping is looking at frontage road changes, but the criteria is not including anything on frontage roads as far as I can tell. If the project is looking at changes to frontage roads, that should be more explicit in the evaluation, otherwise I recommend removing reference to frontage roads on page 16.	This reference to frontage roads was meant to allude to alternatives that would require changes to the frontage roads - specifically the Local/Regional Alternative. Agree that it may be confusing and will be removed.			48
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	18	General	"*Table 1 - Rethinking I-94 Evaluation Criteria: Scoping Decision Document and Tier 1 EIS* *For Mainline and Access/Interchange Alternatives"* Not sure the intent of the yellow highlights and outlines.	The yellow highlighting indicates evaluation criteria and/or measures that have been adjusted during the evaluation process as discussed during previous TAC meetings. This will be removed in the final version of the memo.			49
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	21	Question	"*Table 2 – Access & Interchange/Intersection Locations to be Studied in Tier 1 EIS "* What is the basis for something being checked here. What defines a problem. I would imagine most people are experiencing more of an issue that this table suggests	This table summarizes the results of mobility, safety, and infrastructure condition analyses documented in the purpose and need. Language can be added to better clarify the source of this information.			50
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	25	General	*"Table 3: Project Needs"* Suggest tables 3 - 6 be placed in an appendix	Comment noted. Data tables will be moved to an appendix.			51

11003408

Document Draft Date	Committee	Agency	Comments Provided (Yes or No)	Reviewer	Date of Comment Received	Page Number	Category	Comment	Response	Notes	Follow-Up Action	Comment Number
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	25	General	*"Table 3: Project Needs"* There is a ton of data in these spreadsheets. Really too much for almost anyone to truly comprehend. Also, at this stage a lot of the differences between alternatives are either minimal, inclusive, or the alternatives aren't developed enough yet to really know. It seems like it would be beneficial to look at each alternative and focus on what we know is different about each one. This should help narrow the discussion and make a determination about which alternatives to move forward easier.	The summary section and individual alternatives sections will be revised to include key takeaways/conclusions once the evaluation process is completed.			52
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	25	General	"*Intersection Density*" Freeway access density as a measure of connectivity does not consider the main challenge we have heard regarding existing connectivity in the corridor which is north/south across the corridor. This really would be the number of crossings and the expectation is this will be improved with any alternative.	New crossings are not being evaluated during Scoping. The purpose of this measure is to capture differences between alternatives that require changes in access, such as the At-Grade and Local/Regional Alternatives.			53
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	26	General	*"Walkability and Bikeability – comfort, mobility and risks for people walking, bicycling, and rolling"* Walkability/bikeability as concepts should include "comfort" of walking and biking. For example expanded freeway would make walking and biking less comfortable by adding noise and emissions. This needs to considered along with other metrics in determining whether or not walkability/bikeability is being improved.	To our knowledge, there is not an evaluation measure accepted by FHWA that measures the more subjective aspects of comfort for people walking and biking. MMLOS, which will be evaluated in the Tier 1 EIS, is intended to capture safety and comfort based on user perceptions, however the inputs of this analysis do not include air and noise.			54
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	29	General	"*Qualitative Assessment - Is the project considered regionally significant for air quality concerns or will the project have a meaningful impact on traffic volumes or vehicle mix (Yes/No)*" "Likelihood to be regionally significant" seems like the wrong criteria for air pollution impacts. People want to know whether the alternative will increase or decrease air pollution, both locally and regionally, but the degree of impact fails to distinguish between an increase and a reduction.	A more detailed analysis of air quality impacts is not possible at this stage due to the lack of design detail for the alternatives. A process for analyzing air quality impacts as part of the Tier 1 EIS has been established.			55
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	29	General	"*Qualitative Assessment - Will the project cause a material change in horizontal and/or vertical alignment or add travel lanes? (Yes/No)*" Land use changes made possible by retaining walls in the freeway alternatives could reduce noise or air pollution exposure for some by placing structures between the corridor and current structures, so there is the potential for impacts, some of them positive.	In Scoping, it is too early to make any assumptions regarding land use changes or the potential for noise mitigation measures. The selected measures were chosen because they are key determining factors in identifying whether a project is considered a Type 1 project and requires a noise analysis based on FHWA rules.			56
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	39	General	*"5.1 No Build – General Maintenance"* General Comments for these summaries 1) I like the idea of them but they need to be simplified 2) Simplify each summary, use more plain language and avoid to many technical numbers (use the numbers to support a summary statement) 3) Consider using bullets - Here is a takeaways and the bullets provide supporting data 4) Focus on what the key takeaways should be for each alternative. What is different about it from the other alternatives 5) Provide a brief description of the alternative at the beginning of the summary 6) Can the BRT sub-alternatives be evaluated separately? This is provide a substantial amount of complexity to the review	1) Comment noted. 2) Comment noted, we will work to streamline the narrative. 3) Comment noted, we will work to streamline the narrative. 4) Comment noted, we will work to streamline the narrative. 5) Good suggestion, we will reorganize the alternatives descriptions. 6) The project team feels that because many of the SEE impacts of the alternatives are driven by the location and number of BRT stations, it is critical to include it as part of the core descriptions of the alternatives. The information can likely be simplified to ranges in some cases which may help simplify the narratives.			57
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	39	Question	"*5.1.3 Goals & Livability* " Why aren't goals and livability added here. seems like they should be similar to Maint A	Goals & Livability measures for the No Build alternative are discussed in Section 5.1.3. The performance relative to these measures differs from Maintenance - A because the No Build represents the "No Action" alternative, meaning that MnDOT would not pursue the project, which would limit opportunities to advance community goals. Text added to clarify.			58

Document Draft Date	Committee	Agency	Comments Provided (Yes or No)	Reviewer	Date of Comment Received	Page Number	Category	Comment	Response	Notes	Follow-Up Action	Comment Number
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	41	General	"*Maintenance – B has the potential to address the number and severity of crashes for people in motorized vehicles (cars, freight, and transit). While there would be no change compared to the no build based on the expected crash comparison analysis, widening the right shoulder is associated with a reduction in crashes of all types and severities based on applicable Crash Modification Factors (CMFs). These include "Widen shoulder by 1 ft" (CMF ID 8342) and "Increase shoulder width from 10 ft to 12 ft" (CMF ID 5509).* " On the freeway	Correct, text will be updated to clarify.			59
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	44	General	"*5.4 At-Grade – A* " suggest adding the brief alternative description at the beginning of each of these summaries	Good suggestion, we will reorganize the alternatives descriptions.			60
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	44	General	*5.4.1.2 Safety* "*There would be 0.008 expected fatal and serious injury crashes per day, an increase of 1% compared to the no build despite the decrease in corridor VMT.*" This seems like it would be within the margin of error	The project team is in the process of refining the safety results using a threshold of +/-2% for consistency with the approach used in the traffic memo.			61
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	44	General	"*5.4.1.4 Mobility* *With At-Grade – A, systemwide VHT and PHT are anticipated to increase compared to the no build. Mainline speed on the corridor would be reduced to 20-25 mph. Person throughput in the corridor would be reduced to 219,000 people/day. VHT and PHT in the interchange areas would be reduced by*" Simplify and use more plain language here. Very techie. Suggest using bullets to make easier to read.	Discussions of mobility data will be streamlined where possible.			62
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	46	Question	"*Equity: Dedicated bus lanes would provide a transit benefit and would likely be considered more beneficial than bus shoulders. There would also be opportunities for walkability/bikeability improvements.* " Is this true given that travel time is likely slower?	Modeled transit travel time in the corridor for At-Grade A and B is 19 minutes compared to 22 minutes for the No Build. Note that bus shoulders have maximum operates speeds and can only be used under certain traffic conditions.			63
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	46	General	"*Economic Vitality: There would be a decrease in the number of jobs accessible in both AM and PM peak for auto compared to the no build, and a slight increase for transit.* " This statement should be qualified. I assume this is within a certain amount of time (i.e. 30 minutes)	Correct, as noted in the list of evaluation criteria, the measure used for all alternatives is based on jobs that can be reached within 30 minutes. Clarification added to each alternative section.			64
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	49	Question	"*5.5 At-Grade – B* " Is there any real difference at this stage between At-Grade A and B? Could these have the same summary. Anything that simplifies the processing of this information should be considered	While there would be some operational differences between At-Grade A and B, the measures used in Scoping are too high level to make a distinction. These sections can be combined.			65
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	54	General	"*Based on the performance measures identified, Local/Regional Roadways – A would result in similar outcomes for walkability and bikeability as the no build. This analysis assumed that there would be no change in the structure of the walking and biking network (such as the elimination or relocation of a crossing location) compared to the no build, therefore the distance between crossings and origin-destination performance measures remained constant. There is potential to add new crossings as part of this alternative, which would improve performance. In addition, the removal of mainline access points would result in the conversion of existing interchanges to overpasses, which would reduce conflict points for nonmotorized users crossing the corridor at these locations.*" This is a disturbing way to phrase this. We (and the public) would hope and expect that this alternative along with any of the freeway alternative would offer the opportunity for substantially improved walk-ability and bike-ability	The purpose of this section is to explain that based on the high-level measures used in scoping, the performance of the alternative is the same as the no build. This section, and subsequent walkability/bikeability sections, then goes on to outline the ways in which walkability/bikeability may be improved compared to the no build with implementation of the alternative. However, due to the limited design detail available at this stage of the process, these improvements cannot be quantified in detail at this time. As noted previously, MnDOT is committed to walkability and bikeability improvements as part of any build alternative.			66
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	54	Question	"*0.63-0.64 crashes/day,*" a range that is 0.01 apart? We are not this accurate	The range provided represents a slight difference in the crash analysis results between the three and four access point variations of the local/regional alternative.			67
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	54	Question	"*0.004-0.005*" same comment above. Why a range here	The range provided represents a slight difference in the crash analysis results between the three and four access point variations of the local/regional alternative.			68

Document Draft Date	Committee	Agency	Comments Provided (Yes or No)	Reviewer	Date of Comment Received	Page Number	Category	Comment	Response	Notes	Follow-Up Action	Comment Number
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	54	General	"*Four Access Points: On other roadways within one mile of the logical termini, total expected crashes would increase to 3.77 crashes/day compared to 3.65 crashes/day with the no build, which is consistent with the 3% increase in VMT on these roadways. Expected fatal and serious injury crashes on these roadways would also increase to 0.059 crashes/day compared to 0.056 with the no build, an increase of 5%. Total expected fatal and serious injury crashes/day on the mainline and routes within one mile would decrease compared to the no build.* *Three Access Points: On other roadways within one mile of the logical termini, total expected crashes would increase to 3.83 crashes/day compared to 3.65 crashes/day with the no build, a 5% increase which exceeds the 4% expected increase in VMT on these roadways. Expected fatal and serious injury crashes on these roadways would also increase to 0.06 crashes/day compared to 0.056 with the no build, an increase of 7% compared to the 4% expected increase in VMT on these roadways. Total expected fatal and serious injury crashes/day on the mainline and routes within one mile would increase compared to the no build.* " way to technical. Need to simplify. Focus on what the takeaway should be and not all the numbers. Typical comment for all.	Discussions of safety data will be streamlined where possible.			69
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	59	Question	"*Reduced Freeway – A* " Can the BRT sub-alternatives be evaluated separately? Adds a lot of complexity to have these sub alternatives	See response to comment #57.			70
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	59	General	"*5.7.1.1 Walkability and Bikeability* *Based on the performance measures identified, Reduced Freeway – A would result in similar outcomes for walkability and bikeability as the no build. This analysis assumed that there would be no change in the structure of the walking and biking network (such as the elimination or relocation of a crossing location) compared to the no build, therefore the distance between crossings and origin-destination performance measures remained constant. There is potential to add new crossings as part of this alternative, which would improve performance.* " This is a disturbing way to phrase this. We (and the public) would hope and expect that this alternative along with any of the freeway alternative would offer the opportunity for substantially improved walk-ability and bike-ability Understand the issue is that we do not know yet	See response to comment #66.			71
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	64	Question	"*Reconfigured Freeway – A* " Can the BRT sub-alternatives be evaluated separately? Adds a lot of complexity to have these sub alternatives	See response to comment #57.			72
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	64	General	"*5.8.1.1 Walkability and Bikeability* *Based on the performance measures identified, Reconfigured Freeway – A would result in similar outcomes for walkability and bikeability as the no build. This analysis assumed that there would be no change in the structure of the walking and biking network (such as the elimination or relocation of a crossing location) compared to the no build, therefore the distance between crossings and origin-destination performance measures remained constant. There is potential to add new crossings as part of this alternative, which would improve performance.* " This is a disturbing way to phrase this. We (and the public) would hope and expect that this alternative along with any of the freeway alternative would offer the opportunity for substantially improved walk-ability and bike-ability	See response to comment #66.			73
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	68	Question	"*5.9 Expanded Freeway – A* " Can the BRT sub-alternatives be evaluated separately? Adds a lot of complexity to have these sub alternatives	See response to comment #57.			74

11003411

Document Draft Date	Committee	Agency	Comments Provided (Yes or No)	Reviewer	Date of Comment Received	Page Number	Category	Comment	Response	Notes	Follow-Up Action	Comment Number
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	68		"*5.9.1.1 Walkability and Bikeability* *Based on the performance measures identified, Expanded Freeway – A would result in similar outcomes for walkability and bikeability as the no build. This analysis assumed that there would be no change in the structure of the walking and biking network (such as the elimination or relocation of a crossing location) compared to the no build, therefore the distance between crossings and origin-destination performance measures remained constant. There is potential to add new crossings as part of this alternative, which would improve performance.* " This is a disturbing way to phrase this. We (and the public) would hope and expect that this alternative along with any of the freeway alternative would offer the opportunity for substantially improved walk-ability and bike-ability	See response to comment #66.			75
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	69	Question	"*Mean travel time index would decrease to 1.5 for the general purpose lanes and 1.6 for the managed lanes*" what does this mean? Plain language	Comment noted, text will be revised.			76
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	73	General	"*5.10.1.1 Walkability and Bikeability* *Based on the performance measures identified, Expanded Freeway – B would result in similar outcomes for walkability and bikeability as the no build. This analysis assumed that there would be no change in the structure of the walking and biking network (such as the elimination or relocation of a crossing location) compared to the no build, therefore the distance between crossings and origin-destination*" *Text highlighted - assume similar comment as previous walkability/bikeability sections.*	See response to comment #66.			77
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	74	General	"*performance measures remained constant. There is potential to add new crossings as part of this alternative, which would improve performance.* " This is a disturbing way to phrase this. We (and the public) would hope and expect that this alternative along with any of the freeway alternative would offer the opportunity for substantially improved walk-ability and bike-ability	See response to comment #66.			78
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	80	General	"*Economic Vitality*" Understand why these results are shown as is, however using this as the only measure for economic vitality doesn't seem appropriate	While the access to jobs measure only reflects one aspect of economic vitality, it is something that can feasibly be measured in Scoping and shows differentiation between the alternatives that are being evaluated. Additional measures may be feasible during later project phases.			79
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	80	General	"*At-Grade - A / EJ - Exposure to Pollution*" EJ Exposure to air pollution criteria should not be marked as "red" for at-grade, and should not be "green" for no build. No build is having negative impacts. At-grade would mean big changes, but not clear whether those would be negative or positive overall.	(1) This measure discusses noise and water pollution, but is not intended to address air pollution (see evaluation criteria in Section 3). (2) In the NEPA process, the no build is considered the baseline alternative for evaluation. (3) While the exact impacts are uncertain, this measure is intended to measure the potential for increased pollution exposure.			80
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	80	Question	"*Reduced Freeway - A*" For all freeway options there is a retaining wall scenario and a non-retaining wall scenario that would have different results for at least some of these criteria. How is this being addressed? In some ways this is a bigger change than the difference between At-Grade A and At-Grade B	The current freeway alternatives being evaluated do not have retaining wall and non-retaining wall sub-alternatives. Implementing any of these alternatives may involve retaining walls in some portions of the corridor depending on the surrounding context and topography. The exact locations where this is appropriate will be evaluated later in the process.			81
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	80	Question	"*BRT - 1*" Can BRT options be evaluated separately. Seems like this can be a separate decision from the freeway alternatives and would simplify the process	See response to comment #57.			82
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	80	General	"*Improvement compared to no build OR limited potential for impacts* *Mix of impacts and benefits OR greater potential for impacts* *Greatest potential for impacts*" Need to make more clear what these boxes apply to. If I hadn't been told that there were different legends I would not have caught the different meanings for the colors	Modified formatting to call more attention to legend at the bottom of summary table.			83
03.27.2024	Technical Advisory Committee	City of St. Paul	Yes	Randy Newton	4/29/2024	80	Question	"*Does not meet Purpose & Need*" Is a red box in Purpose and Need suggesting that alternative should not move forward	Yes, based on the evaluation process outlined in the document, alternatives that do not address the purpose and need should not advance into the Tier 1 EIS.			84

11003412

Document Draft Date	Committee	Agency	Comments Provided (Yes or No)	Reviewer	Date of Comment Received	Page Number	Category	Comment	Response	Notes	Follow-Up Action	Comment Number
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	4	Question	''*Current interchanges would be removed.* '' Does this assume removal of interchanges with 280 or I-35? Assuming no. Additional clarity on interchanges with these would be helpful.	It is likely that the proposed facility would still connect to TH 280 and I-35, however there would no longer be traditional freeway system to system interchanges at these locations. Intersection/interchange design alternatives will not be evaluated until the Tier 1 EIS.	Note on consistency - alternative descriptions were taken from the traffic/transit alternatives memo.		85
03.27.2024	Policy and Planning Committee	City of Minneapolis	Yes	Adrienne Bockheim	5/3/2024	4	General	*Reply to comment #85* Agreed. Rather than just leaving it at "removed", I'm assuming some of those interchanges would be redesigned as intersections -- it would be helpful if they clarified this.	See response to comment #85.			86
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	4	General	''*At-Grade – B would have bus rapid transit operating in a fixed guideway in an outside lane (Figure 3)*'' Minneapolis Fire Dept stated preference for At-Grade alternative B over A.	Comment noted.			87
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	8	General	'*Access in between will be limited to one or two additional locations*'' City of Minneapolis Fire Department stated concerns with limited access and ability to respond in an emergency. Asked if limited emergency access locations may be incorporated into this alternative.	Comment noted. It may be possible to incorporate additional emergency access locations into the design, however this would not be analyzed/evaluated until later in the process.			88
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	8	General	'*two general purpose lanes in each direction* '' Concern from Minneapolis Fire Department that 2 lanes in each direction may not be sufficient and result in traffic backing up, limiting access by fire trucks.	Comment noted. Emergency vehicles would also be able to drive on the shoulder with this alternative, which would provide some additional space for these operations.			89
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	8	General	'*Expanded Freeway – A This alternative would rebuild I-94 as it is today, with three to four general purpose travel lanes (open to all vehicles) in each direction and would add a managed lane (for buses, carpoolers, and those willing to pay) in each direction (Figure 7). Bus rapid transit would operate in the managed lane. Up to three transit stops could be provided. Expanded Freeway – B*'' The City is opposed to an expanded freeway option, as an expanded freeway option is not consistent with our climate and transportation related goals, but we understand the need to evaluate as an alternative.	Comment noted.			90
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	14	Question	'*transportation project/program of transportation projects* '' This language is duplicative. Do you mean to say "a transportation project/program consisting of smaller corridor projects to be defined in future phases"?	Adjusted language to clarify.			91
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	14	General	'*Evaluation criteria and measures have been developed to evaluate the ability of alternatives to address these needs at a high level. A more detailed analysis will take place in the Tier 1 EIS. For example, the ability of an alternative to address pavement and bridge condition will be evaluated in Scoping, while the condition of retaining walls, noise walls, and drainage infrastructure will be addressed in the Tier 1 EIS once more detailed alternatives have been developed.*'' This paragraph discusses evaluation criteria before explaining the evaluation process. Recommend referencing the evaluation process is found in the following chapter/section.	This language is meant to provide an example of how project needs will be evaluated in both the scoping phase and Tier 1 EIS, not provide detailed information on the evaluation criteria. Added text to clarify.			92
03.27.2024	Policy and Planning Committee	City of Minneapolis	Yes	Adrienne Bockheim	5/3/2024	14	General	'*Support transportation objectives consistent with adopted state and regional (Met Council) plans*'' Not sure what all this includes. Provide a link to something that explains.	As noted earlier on the page, this section provides a brief summary of the full purpose and need document. Comments on each of the alternatives with regard to the four adopted state and regional plans included in the evaluation are included in Table 6.			93
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	15	Question	'*"fatal flaws." Alternatives with fatal flaws may not be technically or economically feasible, or they may result in substantial social, economic, or environmental (SEE) impacts.* '' One of the criticisms from the public has been the lack of a definition or criteria that classify as a fatal flaw. Can you provide more details or criteria on what constitutes as a fatal flaw?	As noted in the memo, "Alternatives with fatal flaws may not be technically or economically feasible, or they may result in substantial social, economic, or environmental (SEE) impacts." The project team does not consider the alternatives presented in this memo to have fatal flaws. Examples of alternatives with fatal flaws that were removed from consideration prior to this evaluation include removing the freeway and not replacing it with any kind of transportation facility, and constructing a new freeway on a new alignment.			94
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	15	General	*Reply to comment #94* A search of the document indicates fatal flaw is not used outside of this paragraph. If a fatal flaw will determine if an alternative moves on to the next step, then it does seem clarity around this language is needed.	See response to Comment #94.			95

Document Draft Date	Committee	Agency	Comments Provided (Yes or No)	Reviewer	Date of Comment Received	Page Number	Category	Comment	Response	Notes	Follow-Up Action	Comment Number
03.27.2024	Policy and Planning Committee	City of Minneapolis	Yes	Adrienne Bockheim	5/3/2024	15	General	*Reply to comment #95* Good call.	Comment noted.			96
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	15	General	*'Additional Considerations''* This is an evaluation category that is not defined and explained until later in the document. Perhaps there is a need to explain these categories sooner, if there is a need to discuss as part of the process.	The categories of evaluation criteria, including additional considerations, are discussed in more detail on the following page. The Evaluation Process section was placed before the evaluation criteria section to provide context for the Scoping and Tier 1 EIS, and Tier 2 processes before outlining the criteria and measures.			97
03.27.2024	Policy and Planning Committee	City of Minneapolis	Yes	Adrienne Bockheim	5/3/2024	15	General	*Reply to comment #97* Agreed.	Comment noted.			98
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	15	Question	*'Alternatives in Scoping that best address the purpose and need evaluation criteria, minimize SEE impacts, and perform favorably in terms of goals/Livability and Additional Considerations will move into the Tier 1 EIS. ''* Is language around fatal flaws needed, if this is how alternatives will move into Tier 1 EIS?	See response to Comment #94.			99
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	15	Question	*Reply to comment #99* In other words, are there fatal flaws criteria established to remove alternatives. If not, then why included it.	See response to Comment #94.			100
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	16	Question	*'For example, while walkability and bikeability is one of the project needs, these users are present on freeway crossings and frontage roads but are legally prohibited from traveling on I-94 itself. Therefore, the criteria that will be used to measure changes in walkability and bikeability in Scoping are focused on how the mainline alternatives will affect access and connectivity for people walking and biking through changes to frontage roads and crossing locations. Bicycle and pedestrian crashes will not be analyzed in Scoping, because these crashes do not occur on I-94 itself. Bicycle and pedestrian crashes that occur on roadways intersecting I-94 are discussed in greater detail in the Purpose and Need Report. In the Tier 1 EIS, there are several measures that will be used to evaluate safety for people walking and biking:''* Why is there a focus on just walkability and bikeability here? Will other measures be outlined and discussed?	The purpose of this text is to explain why walkability and bikeability are only being addressed at a high level in Scoping, but will be analyzed using more detailed measures in the Tier 1 EIS. The purpose of Scoping is to narrow the range of mainline alternatives, so the scoping measures are focused on how the mainline alternatives will affect access and connectivity for people walking and biking through changes to frontage roads and crossing locations.			101
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	17	General	*'Access/interchange alternatives will be evaluated based on the number of conflict points present for users of bicycle and pedestrian facilities in the proposed access modification/interchange design.''* One perception of this may be conflict points, while another perspective may be connectivity. To improve walkability and bikeability, generally this requires the addition of pedestrian and bicycle facilities. This process inherently creates new conflict points in an urban environment, where the majority of pedestrian and bicycle facilities must cross intersectoins.This will be a hard sell to the public to state that new bicycle and pedestrian facilities are inherently less walkable or bikeable due to new conflict points.	While it is true that any new facilities will inherently create conflict points, not all conflict points carry the same level of exposure or safety risk. In addition, conflict points are only one of several measures that will be considered in the evaluation of tradeoffs for improving walkability and bikeability during the Tier 1 EIS.			102
03.27.2024	Policy and Planning Committee	City of Minneapolis	Yes	Adrienne Bockheim	5/3/2024	17	General	*Reply to comment #102* Good point.	Comment noted.			103
03.27.2024	Policy and Planning Committee	City of Minneapolis	Yes	Adrienne Bockheim	5/3/2024	18	Question	*'Scoping ''* I read and understand the disclaimers (essentially) about measurements for walking and biking on the previous page, but it still doesn't feel balanced that there are so many measurements for vehicular safety and mobility during this phase, while bike/walk safety and comfort won't be explored until the next phase. Could the potential for improving bike/walk safety and comfort be assessed during this phase?	The measures used for walkability and bikeability are intended to address safety and comfort to the extent practicable given the limited design detail available in Scoping. MnDOT has committed to improving walkability and bikeability in the corridor as part of any build alternative.			104
03.27.2024	Policy and Planning Committee	City of Minneapolis	Yes	Adrienne Bockheim	5/3/2024	18	General	*'Document ''* Re: Environmental Justice at the bottom of this page, I would recommend editing the qualitative assessments to read "Does the alternative ~~provide~~ increase access to economic opportunities..." and "Does the alternative ~~have the potential~~ maintain the existing levels, have the potential to reduce exposure to water and noise pollution, or have the potential to increase exposure to water and noise pollution...". I think these better get at the goals for the corridor.	The purpose of this measure is to evaluate potential impacts as a result of each alternative. This evaluation is separate from the evaluation of project goals.			105

11003414

Document Draft Date	Committee	Agency	Comments Provided (Yes or No)	Reviewer	Date of Comment Received	Page Number	Category	Comment	Response	Notes	Follow-Up Action	Comment Number
03.27.2024	Policy and Planning Committee	City of Minneapolis	Yes	Adrienne Bockheim	5/3/2024	19	Question	*'Evaluation ''* Re: noise, just a change in horizontal and/or vertical alignment or adding travel lanes doesn't seem like enough of an assessment. Does the alternative have to space to introduce noise walls? Does reduced speed of vehicles mean more noise or less? Is traffic volume higher (assuming this would create more noise)?	The purpose of this measure is to indicate whether an alternative is likely to be considered a Type 1 project under FHWA noise analysis rules, which determines whether a full noise analysis is required. The primary Type 1 definition criteria that apply to the I-94 corridor are the potential for substantial horizontal/vertical alternative or the addition of through traffic lanes.			106
03.27.2024	Policy and Planning Committee	City of Minneapolis	Yes	Adrienne Bockheim	5/3/2024	19	General	'Scoping '' The public likely won't know what "section 4(f)" or "section 6(f)" means...	This document is intended to be a technical memo. Additional materials will be developed to communicate the results of the evaluation to the public.			107
03.27.2024	Policy and Planning Committee	City of Minneapolis	Yes	Adrienne Bockheim	5/3/2024	19	Question	*'Document ''* Why is "Community Cohesion" not being assessed during the scoping phase? Seems very important to me.	Several categories of SEE impacts, including Community Cohesion, are proposed for evaluation in the Tier 1 EIS because more design details will be available at that point in the process to provide a more robust assessment.			108
03.27.2024	Policy and Planning Committee	City of Minneapolis	Yes	Adrienne Bockheim	5/3/2024	19	General	*'Tier ''* Re: "Sense of place": not all green/gathering spaces are created equal. Depending on how they are sited and designed, places located immediately adjacent to a highway may not be comfortable to use due to noise and pollution.	Comment noted. At this point in the process, specific locations for these improvements have not been determined. Only a high level indication of whether they are possible can be provided.			109
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	44	General	*'The performance of At-Grade – A relative to Walkability and Bikeability is mixed. ''* Reiterating that arguing that the at grade crossings are mixed related to walkability and bikeability are likely to receive skepticism from the public, due to anticipated improvements to connectivity.	Comment noted. It is important to communicate to the public that there are tradeoffs involved with each alternative.			110
03.27.2024	Policy and Planning Committee	City of Minneapolis	Yes	Adrienne Bockheim	5/3/2024	44	General	*Reply to comment #110* This also doesn't mention that a new walking and biking route would be created along the entire I-94 corridor itself, which currently does not exist!	Comment noted. There is also the potential for east-west walkability and bikeability improvements as part of freeway alternatives, however these improvements would be constructed along frontage roads or other areas outside the "trench" rather than directly adjacent to the mainline.			111
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	44	Question	*'This analysis assumed that there would be no change in the structure of the walking and biking network ''* If new crossing locations are anticipated by returning to at grade, then why is there an assumption that there is no change to the structure of the walking and biking network?	There is potential for new crossing locations as part of the At-Grade, Local/Regional, and Freeway alternatives, as noted in the respective sections. However the locations of these opportunities are not known at this time. To provide an "apples to apples" comparison, the walkability/bikeability analysis in Scoping assumed no new crossing locations for any alternative.			112
03.27.2024	Policy and Planning Committee	City of Minneapolis	Yes	Adrienne Bockheim	5/3/2024	44	General	*Reply to comment #112* This also doesn't mention that a new walking and biking route would be created along the entire I-94 corridor itself, which currently does not exist!	See response to Comment #111.			113
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	44	General	*'New nonmotorized conflict points would be created at locations where at-grade crossings replace grade-separated crossings. ''* It does not seem consistent to state new conflict points would be created but that there would be no change to the pedestrian and bicycle network as commented upon above.	See response to Comment #112. While the analysis assumed no new crossing locations, it did assume conversion of grade-separated to at-grade crossings at the same locations assumed in the traffic model. In other words, there is an assumption of new at-grade crossing locations, but these are locations where the corridor can already be crossing using grade-separated crossings in the existing conditions.			114
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	44	General	*'There is potential to add new crossings as part of this alternative, which would improve performance''* Comfort and mobility is identified for this criteria in purpose and need. There seems to be a focus on safety with limited discussion on comfort and mobility, particularly as it relates to the addition of new crossings at grade.	Mobility for people walking and biking was analyzed through the origin-destination measure, which used travelsheds to study access to common destinations in the corridor. Discussion of grade-separated and at-grade crossings in the memo addresses aspects of both safety and comfort. Comfort will be studied in greater detail in the Tier 1 EIS using multimodal level of service and nonmotorized conflict point analyses.			115
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	44	Question	*'On the mainline within the logical termini, the expected crash rate for all crashes would be 1.87 crashes/million VMT compared to 0.926 crashes/million VMT for the no build. Total expected crashes would be 0.45 crashes/day compared to 1.08 for the no build. ''* Are these crash rates considering new crossings as part of the evaluation? If so, then walkability and bikeability should also consider the improved network connectivity of these new crossings.	As noted in Table 3, expected crashes per day for each alternative are based on VMT per day and statewide average crash rates by facility type. Specific interchanges/intersections or crossing locations were not analyzed independently as part of this analysis, however the segment crash rates used in the analysis include intersection crashes.			116

11003415

Document Draft Date	Committee	Agency	Comments Provided (Yes or No)	Reviewer	Date of Comment Received	Page Number	Category	Comment	Response	Notes	Follow-Up Action	Comment Number
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	44	General	*'The fatal and serious injury crash rate would be 3.226 crashes/100 million VMT compared to 0.66 crashes/100 million VMT for the no build. There would be 0.008 expected fatal and serious injury crashes per day, an increase of 1% compared to the no build despite the decrease in corridor VMT.''* Fatal and serious injuries typically decrease at lower speeds. For example, this table from the Federal Motor Carrier Safety Administration demonstrates the increase fatal crash rates of large trucks as speed increases: https://www.fmcsa.dot.gov/safety/data-and-statistics/crashes-table-4-fatal-crashes-involving-large-trucks-speed-limit-and-6. Please clarify how fatal and serious injury crashes will increase at lower speeds.	The expected crashes per day for each alternative are based on VMT per day and statewide average crash rates by facility type. Access-controlled facilities generally have lower crash rates than facilities with intersections, driveways, and other access points. The crash rate for an urban 4-lane divided roadway is 1.87/million VMT, compared to 0.926/million VMT for an urban freeway. The fatal and serious injury crash rate for an urban 4-lane divided roadway is 3.226/100 million VMT, compared to 0.66/100 million VMT for an urban freeway. This information is based on 2018-2022 statewide average segment crash rates.			117
03.27.2024	Policy and Planning Committee	City of Minneapolis	Yes	Adrienne Bockheim	5/3/2024	45	Question	*'Interchange area person throughput would be reduced to 757,000 people/day. ''* Does this include people walking/biking and transit riders? Or is this just talking about people in vehicles?	The results for interchange area person throughput are generated from the regional model and include only single and multi-occupant vehicles. The corridor person throughput measure is able to include transit riders based on STOPS model output.			118
03.27.2024	Policy and Planning Committee	City of Minneapolis	Yes	Adrienne Bockheim	5/3/2024	45	Question	*'Freight travel times in the corridor would increase to 18-23 minutes. ''* What is the existing travel time? Does this take into account that freight may find alternative routes that are quicker to their destination?	The mobility measures are compared to the 2045 no build, not the existing travel time. As noted in Table 3, freight travel time in the corridor for the no build is 8-11 minutes. This measure represents travel time between the logical termini (I-35W/TH 55 to Marion St), not travel time for freight to reach its final destination, however the results are from the regional model which does account for changes in travel patterns.			119
03.27.2024	Policy and Planning Committee	City of Minneapolis	Yes	Adrienne Bockheim	5/3/2024	45	Question	*'Mean travel time index would increase to 2.5, indicating a decrease in travel time reliability. ''* Again, just for people in vehicles?	Correct. Travel time index for transit is reported as a separate measure under the Transit Reliability criterion.			120
03.27.2024	Policy and Planning Committee	City of Minneapolis	Yes	Adrienne Bockheim	5/3/2024	45	Question	*'Transit travel times in the corridor would be reduced, however travel time through interchange areas would increase due to the addition of three stops for the proposed BRT service. Travel time index for transit would increase compared to the no build, indicating a decrease in transit travel time reliability.''* I don't understand why the first sentence says travel times would be reduced and the second sentences says there would be a decrease in reliability -- is this because of the potential to be stopped at interchanges?	While the At-Grade alternatives would provide a dedicated lane for buses, which may decrease travel times, the reliability/consistency of those travel times may still be impacted. Signal delay is not accounted for in the analysis, which could further reduce reliability.			121
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	45	General	*'A major change in the vertical alignment of the roadway has potential to increase the size of areas within EJ communities impacted by traffic noise. ''* According to AASHTO's Center for Environmental Excellence, speed, traffic volumes, and freight traffic all impact noise. The decrease of these in the at-grade alternatives are not acknowledged as having reduced impacts on noise. https://environment.transportation.org/education/environmental-topics/traffic-noise/traffic-noise-overview/	The selected measures were chosen because they are key determining factors in identifying whether a project is considered a Type 1 project and requires a noise analysis based on FHWA rules. A more in-depth noise analysis that accounts for more factors will be conducted as part of the Tier 1 EIS.			122
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	45	Question	*'There is limited potential for relocation based on the proposed improvements.''* Do you mean to say there is limited potential for relocation of EJ populations? If so, recommend updating for clarity throughout the document.	Yes - while no relocations in any area are anticipated with this alternative, this statement was intended to refer specifically to EJ populations. Text added to clarify.			123
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	45	Question	*'Regarding noise impacts, a major change in vertical alignment will reduce distances between traffic and noise sensitive receptors and potentially increase the area of traffic noise impacts. ''* Why are there two locations addressing noise? Same comment on noise as above.	The first instance of noise discussion is intended to be specific to EJ populations. The discussions within each alternative section follow the left to right order of the measures as presented in Tables 3-6.			124
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	49	Question	*'At-Grade – B''* This text appears to be duplicative to At-Grade A above. Earlier in the document, it is said that At-Grade A and B are treated as one for evaluation purposes. If this is the case, then does it make sense to have a separate sections for At-Grade A and B, if there is no substantive differences between the two for evaluation purposes?	See response to Comment #65.			125
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	49	General	*'At-Grade – B''* Please see comments in At-Grade A and apply to At-Grade B, if the summary of the evaluation for these two alternatives remains separated.	Comment noted.			126

11003416

Document Draft Date	Committee	Agency	Comments Provided (Yes or No)	Reviewer	Date of Comment Received	Page Number	Category	Comment	Response	Notes	Follow-Up Action	Comment Number
03.27.2024	Policy and Planning Committee	City of Minneapolis	Yes	Adrienne Bockheim	5/3/2024	54	General	*'would result in similar outcomes for walkability and bikeability as the no build. This analysis assumed that there would be no change in the structure of the walking and biking network (such as the elimination or relocation of a crossing location) compared to the no build, therefore the distance between crossings and origin-destination performance measures remained constant.''* This alternative includes a bikeway along the length of the corridor, so it would definitely change (improve) the network!	See response to Comment #111.			127
03.27.2024	Policy and Planning Committee	City of Minneapolis	Yes	Adrienne Bockheim	5/3/2024	55	General	*'Person throughput in the corridor would be reduced to 337,000 people/day in the four access point scenario and 315,000 people/day in the three access point scenario. VHT and PHT in the interchange areas would be reduced. Interchange area person throughput would be reduced in both access point scenarios.''* Again, please specify whether this includes people taking all modes or just vehicles.	See response to Comment #118.			128
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	55	General	*'Distance to access I-94 would increase for some trips''* Noting again, the Minneapolis Fire Department concerns with access under this scenario. Please see earlier comment.	Comment noted.			129
03.27.2024	Policy and Planning Committee	City of Minneapolis	Yes	Adrienne Bockheim	5/3/2024	56	General	*'however the complexity of the freeway and frontage road design may preclude some new or existing crossing locations.''* This is a big deal. Connectivity north-south across the corridor is one of the major issues that this project should address. If current crossings are removed with reduced, new bike and ped crossings are critical. If those can't be replaced, this alternative is not fulfilling this important goal.	MnDOT is committed to improving walkability and bikeability as part of this project. Crossings would not be removed without a replacement. The purpose of this statement is to note that the complexity of the Local/Regional alternative may influence the location of crossings.			130
03.27.2024	Policy and Planning Committee	City of Minneapolis	Yes	Adrienne Bockheim	5/3/2024	61	Question	*Reduced Freeway - A: 'Potential for excess right of way to be used to expand green space in the corridor. A smaller roadway footprint will increase potential excess right of way. ''* Is this alternative narrowing the ROW overall? It appears in the plan drawing not to but instead adds some green space in between mainline lanes. I can't imagine there would be space to add gathering places if the ROW isn't being narrowed?	There is potential to narrow the ROW, however the details are not known at this time. This measure also considers areas currently within MnDOT ROW but outside the "trench."			131
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	68	Question	*Reconfigured Freeway - A: 'There is potential for excess ROW to be used for new features/amenities in select locations and for aesthetic improvements to bridges and structures. ''* Is there excess ROW for new features/amenities? Under existing conditions there are 3 lanes in each direction. This scenario has three lanes in each direction plus HOV.	This measure considers areas currently within MnDOT ROW but outside the "trench," as well as the potential for visual/aesthetic improvements to bridges.			132
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	68	General	*Reply to comment #132* 5.8.2 indicates an increase in impervious pavement.	This measure also considers areas currently within MnDOT ROW but outside the "trench," not just areas adjacent to the existing freeway lanes.			133
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	68	Question	*Reconfigured Freeway - A: 'Potential for excess right of way to be used to expand green space in the corridor. ''* Is there excess ROW for expanded green space? Under existing conditions there are 3 lanes in each direction. This scenario has three lanes in each direction plus HOV.	Because the existing ROW varies substantially along the corridor, there is potential for excess ROW in some locations. This measure considers areas currently within MnDOT ROW but outside the "trench," as well as the potential for visual/aesthetic improvements to bridges.			134
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	68	General	*Reply to comment #134* 5.8.2 indicates an increase in impervious pavement.	This measure also considers areas currently within MnDOT ROW but outside the "trench," not just areas adjacent to the existing freeway lanes.			135
03.27.2024	Policy and Planning Committee	City of Minneapolis	Yes	Adrienne Bockheim	5/3/2024	68	Question	*'along''* Where?	With the freeway alternatives, there is potential for improved bicycle and pedestrian facilities along the frontage roads and other areas outside the "trench."			136
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	69	General	*'Expanded Freeway – A would address the number and severity of crashes for people in motorized vehicles (cars, freight, and transit)''* Stating that the number and severity of crashes is addressed and then stating an increase in expected fatal and serious injury crashes seems to be in conflict. See comment below.	Based on the crash analysis methodology used, an increase in crashes on the corridor is expected if an increase in VMT on the corridor is expected. As the text notes, the increase in crashes on the corridor for this alternative is consistent with the modeled increase in VMT. The project team is in the process of refining the safety results using a threshold of +/-2% for consistency with the approach used in the traffic memo.			137

Document Draft Date	Committee	Agency	Comments Provided (Yes or No)	Reviewer	Date of Comment Received	Page Number	Category	Comment	Response	Notes	Follow-Up Action	Comment Number
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	69	General	*Reply to comment #137* The combined total crash rates for mainline and routes within 1 mile on the no build is 4.73; on the expanded freeway it is 4.84 based on the provided table.	Combined total (mainline + routes within 1 mile) crashes/day for the no build is 4.738, and combined total crashes/day for Expanded Freeway - A is 4.832. Combined total F/A crashes/day for the no build is 0.0639, and combined total F/A crashes/day for Expanded Freeway - A is 0.0638. The key takeaway for this analysis focused on F/A crashes. The project team is in the process of refining the safety results using a threshold of +/-2% for consistency with the approach used in the traffic memo.			138
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	69	Question	*'Total expected fatal and serious injury crashes/day on the mainline and routes within one mile would decrease compared to the no build.''* Understood that the crash rate is the same. However, if there is more traffic on the mainline with the same fatal and serious injury crash rate, then wouldn't the total number of fatal and serious injury crashes increase? Is the slight decrease on other roadways significant enough to decrease the total number of fatal and serious injuries for fewer fatal and serious crashes overall based on increased VMT?	See responses to Comments #137-138. An increase in F/A crashes on the mainline is expected, consistent with increased VMT. However, this is outweighed by the decrease in F/A crashes on routes within one mile. The project team is in the process of refining the safety results using a threshold of +/-2% for consistency with the approach used in the traffic memo.			139
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	69	General	*Reply to comment #139* The combined total crash rates for mainline and routes within 1 mile on the no build is 4.73; on the expanded freeway it is 4.84 based on the provided table.	See response to Comment #138.			140
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	70	General	*'increase noise pollution ''* Speed also impacts roadway noise, as noted in the AASHTO guidance shared in an earlier comment.	See response to Comment #122.			141
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	70	Question	*'impervious surface (an increase of approximately 36 acres compared to the no build)''* Does the decrease in vegetation impact the urban heat island effect? Do the increased number of vehicles also impact the urban heat island effect? Should urban heat island impacts be included as part of the EJ assessment for all alternatives?	Changes in impervious surface in the corridor may have a variety of secondary effects. However, it is not feasible to measure the differing impacts of each potential alternative on these effects. For this reason, the selected measure is focused on quantifiable changes in impervious surface between the alternatives.			142
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	70	Question	*'Regarding noise impacts, the project would increase the total number of travel lanes in the corridor. From a stormwater perspective, the project would result in approximately 149.8-150.3 acres of impervious surface (an increase of approximately 36 acres compared to the no build), with more acreage required for sub-alternatives that include transit stations. ''* Again, why is noise and stormwater runoff mentioned multiple times in this section in the alternatives?	See response to Comment #124.			143
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	73	Question	*Expanded Freeway - A: 'There is potential for excess ROW to be used for new features/amenities in select locations and for aesthetic improvements to bridges and structures''* Is there excess ROW, when the freeway is expanded? The following 2 sentences suggest otherwise.	Because the existing ROW varies substantially along the corridor, there is potential for excess ROW in some locations. This measure considers areas currently within MnDOT ROW but outside the "trench," as well as the potential for visual/aesthetic improvements to bridges.			144
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	73	Question	*Reply to comment #144* Is excess ROW the best phrase? Do you mean there is space on the physical bridges and structures? This text is unclear.	See response to Comment #144.			145
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	73	Question	*Expanded Freeway - A: 'Potential for excess right of way to be used to expand green space in the corridor. ''* How is there potential for expanded green space, when the larger roadway footprint is increasing impervious surfaces significantly?	Because the existing ROW varies substantially along the corridor, there is potential for excess ROW in some locations. This measure also considers areas currently within MnDOT ROW but outside the "trench."			146
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	73	Question	*'Facilitates opportunities for locally planned walkability and bikeability improvements along ''* Are there opportunities for walkability and bikeability improvements along the corridor when the ROW of the freeway is expanded? Seems like the potential for this would be decreased.	With the freeway alternatives, there is potential for improved bicycle and pedestrian facilities along the frontage roads and other areas outside the "trench." Based on the assumed lane widths, the expanded freeway alternatives could be constructed almost entirely within the existing trench, with only sliver ROW acquisition.			147
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	75	General	*'increase noise pollution''* Speed also impacts roadway noise, as noted in the AASHTO guidance shared in an earlier comment.	See response to Comment #122.			148

Document Draft Date	Committee	Agency	Comments Provided (Yes or No)	Reviewer	Date of Comment Received	Page Number	Category	Comment	Response	Notes	Follow-Up Action	Comment Number
03.27.2024	Policy and Planning Committee	City of Minneapolis	Yes	Adrienne Bockheim	5/3/2024	75	Question	*'Regarding noise impacts, the project would increase the total number of travel lanes in the corridor. ''* What does this mean for noise? Assuming increased noise impacts?	All other things being equal, adding travel lanes increases traffic noise in a corridor.			149
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	75	Question	*'excess ROW ''* Is excess ROW the best phrase? Do you mean there is space on bridges and structures? This text is unclear.	See response to Comment #144.			150
03.27.2024	Policy and Planning Committee	City of Minneapolis	Yes	Adrienne Bockheim	5/3/2024	75	Question	*'There would also be opportunities for walkability/bikeability improvements.''* Where? I'm guess no opportunities east-west along the corridor with this alternative.	See response to Comment #147.			151
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	75	Question	*Expanded Freeway - B: 'Potential for excess right of way to be used to expand green space in the corridor. ''* How is there potential for expanded green space, when the larger roadway footprint is increasing impervious surfaces significantly?	Because the existing ROW varies substantially along the corridor, there is potential for excess ROW in some locations. This measure also considers areas currently within MnDOT ROW but outside the "trench."			152
03.27.2024	Policy and Planning Committee	City of Minneapolis	Yes	Adrienne Bockheim	5/3/2024	75	Question	*'along''* Where?	With the freeway alternatives, there is potential for improved bicycle and pedestrian facilities along the frontage roads and other areas outside the "trench." Based on the assumed lane widths, the expanded freeway alternatives could be constructed almost entirely within the existing trench, with only sliver ROW acquisition.			153
03.27.2024	Policy and Planning Committee	City of Minneapolis	Yes	Adrienne Bockheim	5/3/2024	80	Question	*'Summary ''* This will be a helpful chart. Will it indicate results with a yes/no? Check mark? A grade?	The PDF version of the memo includes a version of the matrix with ratings for each alternative and measure.			154
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	Excel cell AI9 in Summary_code_v2	General	*'Major change in vertical alignment has potential to increase size of areas within EJ communities impacted by traffic noise.''* There is no acknowledgement of the decrease in impervious surface in At-Grade A and B alternatives. Continue to question the expectation of increased noise pollution, given the decrease in speeds, number of freight, and traffic volume; all noted by AASHTO and referencing FHWA guidance: https://environment.transportation.org/education/environmental-topics/traffic-noise/traffic-noise-overview/	The likely decrease in impervious surface was discussed, however on balance it was determined that the potential noise impacts were more substantive. Notes added to working spreadsheet.			155
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	Excel cell B2 in Mainline_Sum_v3_Link	General	*"General"* Removed Draft graphic in order to comment in cells	Comment noted.			156
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	Excel cell C8 in Mainline_Sum_v3_Link	General	*"At-Grade - A / Walkability and Bikeability"* With the new connection points to local roadways in At Grade A and B, as well as new dedicated bicycle and walking facilities along the corridor, this seems as though At-Grade A and B would more likely increase walkability and bikeability in comparison to other scenarios that have more limited access.	See responses to Comments #112 and #114. The analysis assumed conversion of overpasses to at-grade intersections, but did not assume new crossing locations.			157
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	Excel cell H8 in Mainline_Sum_v3_Link	General	*"At-Grade - A / EJ - Exposure to Pollution"* There is no acknowledgement of the decrease in impervious surface in At-Grade A and B alternatives. Continue to question the expectation of increased noise pollution, given the decrease in speeds, number of freight, and traffic volume; all noted by AASHTO and referencing FHWA guidance: https://environment.transportation.org/education/environmental-topics/traffic-noise/traffic-noise-overview/	See response to Comment #155.			158
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	Excel cell C10 Mainline_Sum_v3_Lin	Question	*"Local/Regional Roadways / A - Walkability and Bikeability"* This is listed as mixed in the document. Why is it listed as meeting the project purpose here?	See Section 5.6.1.1 on page 54. The Local/Regional alternative is not presented as mixed in terms of walkability/bikeability.			159
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	Excel cell C12 Mainline_Sum_v3_Lin	Question	*"Reduced Freeway - A BRT - 0 / Walkability and Bikeability"* How do the remaining alternatives meet purpose and need when there is no change to walkability and bikeability? Isn't the goal to improve walkability and bikeability? Seems like an additional color coded category is needed for no change compared to no build.	Based on the high-level measures used in scoping, the performance of these alternatives is similar to the no build. After establishing this, the memo goes on to outline the ways in which walkability/bikeability may be improved compared to the no build with implementation of each alternative. However, due to the limited design detail available at this stage of the process, these improvements cannot be quantified in detail at this time. As noted previously, MnDOT is committed to walkability and bikeability improvements as part of any build alternative.			160

Document Draft Date	Committee	Agency	Comments Provided (Yes or No)	Reviewer	Date of Comment Received	Page Number	Category	Comment	Response	Notes	Follow-Up Action	Comment Number
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	Excel cell D20 Mainline_Sum_v3_Lin	General	*"Expanded Freeway - A BRT - 0 / Safety for People in Motorized Vehicles"* This should be orange/red, as there is a miscalculation in the crash data.	See responses to Comments #137-139.			161
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jessica Hyink	5/3/2024	Excel cell C25 Mainline_Sum_v3_Link	Question	*"Meets Purpose & Need"* If there is no change compared to the no build, then why are alternatives getting classified as green in the table? The evaluation would benefit from a 4th category to show no change compared to no build.	The items in the legend are different for each category of evaluation criteria (purpose and need, SEE impacts, etc.). For purpose and need, alternatives must meet the purpose and need to advance to the Tier 1 EIS. For SEE impacts, the no build is the basis for the evaluation of potential impacts which is the standard practice for NEPA. The green category for SEE impacts indicates limited potential for new impacts or an improvement compared to the no build.			162
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	1	General	*I-94 Mainline Priority* The City of Minneapolis continues to prioritize person throughput in the corridor versus vehicle throughput. It is not possible for the region to build its way out of congestion; Minneapolis does not support the construction of additional lane capacity.	Comment noted.			163
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	1	General	*'Overall''* Minneapolis requests to see the revised "Rethinking I-94: Scoping Alternatives Evaluation" with opportunity to review and comment.	Comment noted.			164
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	1	General	*'Overall''* There is a lot of data provided in the spreadsheets. Many of the alternatives have few differences in the metrics evaluated to date. Recommend narrowing in on the differences between the alternatives to have more productive conversations.	Comment noted. The final version of the memo will provide an expanded summary section that identifies key takeaways as part of the recommendations.			165
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	1	General	*'Overall''* Recommend evaluating the BRT sub-alternatives separately.	See response to Comment #57.			166
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	1	General	*'Overall''* The metric for air pollution does not consider the degree of impact locally. Recommend refining metrics for air pollution.	It is not feasible to model localized air pollution impacts of the alternatives at this time. MnDOT air quality technical staff reviewed the evaluation criteria and indicated that a more detailed air pollution measure is not feasible in Scoping due to the high level nature of the alternatives.			167
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	1	General	*'Overall''* There are instances of concepts being introduced before text explaining the concept is included. Example: evaluation criteria are discussed on page 14 before explaining the evaluation process on page 15.	See response to Comment #92.			168
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	1	General	*'Overall''* Please provide text or link to clarify what is included as part of "transportation objectives consistent with adopted state and regional (Met Council) plans".	See response to Comment #93.			169
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	1	General	*'Overall''* "Fatal flaws" is mentioned briefly and is not clearly defined. What constitutes as a fatal flaw should be defined in greater detail, particularly if used as a basis to remove an alternative.	See response to Comment #94.			170
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	1	General	*'Overall''* "Additional Considerations" are mentioned early in the document but not explained until further on.	See response to Comment #97.			171
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	1	Question	*'Overall''* There are so many measurements for vehicular safety and mobility during this phase, while bike/walk safety and comfort won't be explored until the next phase. This does not seem balanced. Could the potential for improving bike/walk safety and comfort be assessed during this phase?	See response to Comment #104.			172
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	1	General	*'Overall''* Environmental Justice (EJ) qualitative assessment: Recommend editing the qualitative assessments to read "Does the alternative ~~provide~~ increase access to economic opportunities..." and "Does the alternative ~~have the potential~~ maintain the existing levels, have the potential to reduce exposure to water and noise pollution, or have the potential to increase exposure to water and noise pollution...".	See response to Comment #105.			173
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	1	General	*'Overall''* Sense of Place evaluation criteria: Not all green/gathering spaces are created equal. Depending on how they are sited and designed, places located immediately adjacent to a highway may not be comfortable to use due to noise and pollution.	See response to Comment #109.			174

11003420

Document Draft Date	Committee	Agency	Comments Provided (Yes or No)	Reviewer	Date of Comment Received	Page Number	Category	Comment	Response	Notes	Follow-Up Action	Comment Number
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	1	General	*'Overall''* According to AASHTO's Center for Environmental Excellence (https://environment.transportation.org/education/environmental-topics/traffic-noise/traffic-noise-overview/), with sources cited to FHWA, speed, traffic volumes, and freight traffic all impact noise. The decrease or increase of these in the alternatives are not acknowledged as having reduced impacts on noise.	See response to Comment #122.			175
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	1	Question	*'Overall''* Does every alternative have an opportunity or space for noise mitigation, such as noise walls?	While the specific amount of space that would be available for noise mitigation is not known at this time, it is likely that all alternatives would have potential for noise mitigation measures in at least some locations.			176
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	1	Question	*'Overall''* Does the decrease in vegetation impact the urban heat island effect? Do the increased number of vehicles also impact the urban heat island effect? Should urban heat island impacts be included as part of the EJ assessment for all alternatives?	See response to Comment #142.			177
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	1	General	*'Overall''* Access to jobs as the sole metric to determine economic vitality is too limited. Recommend expanding metrics to evaluate economic vitality.	While the access to jobs measure only reflects one aspect of economic vitality, it is something that can feasibly be measured in Scoping and shows differentiation between the alternatives that are being evaluated. Additional measures may be feasible during later project phases.			178
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	1	Question	*'Overall''* If there is no change to an alternative compared to the no build, then why are alternatives getting classified as green in the table? The evaluation would benefit from a 4th category to show no change compared to no build. Why is no build classified as green when there is no change to no build?	See response to Comment #162.			179
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	1	General	*'Overall''* In the Mobility section for each alternative, "person throughput" needs to be clarified whether this number includes all modes or just vehicles.	See response to Comment #118.			180
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	1	General	*'Overall''* In Mobility, when numbers (minutes for travel times, acres for impervious surfaces, etc) are stated, please also add how this compares to existing numbers.	Comment noted. Additional no build data has been added to the mobility sections for comparison.			181
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	44	Question	*'At Grade A and B''* What is a comparable existing roadway facility to the proposed At-Grade A and B Alternatives? Recommend providing a comparison in the document for clarity with public understanding of what these alternatives might look like.	Given the differences in roadway context, there is not an ideal example roadway in the metro area, therefore an example has not been provided.			182
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	44	Question	*'At Grade A and B''* Draft states "Current Interchanges would be removed." Does this assume removal of interchanges with 280 or I-35? Also, the public may not understand the difference between "interchange" and "intersection". Please clarify.	See response to Comment #85.			183
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	44	General	*'At Grade A and B''* The Minneapolis Fire Department prefers At-Grade alternative B over A, because the locations of the transit lanes on each side of the roadway may make it easier to access an incident compared to the center running lanes.	Comment noted.			184
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	44	General	*'At Grade A and B''* "Nonmotorized conflict points." One perspective of this may be conflict points, while another perspective may be connectivity. To improve walkability and bikeability, generally this requires the addition of pedestrian and bicycle facilities. This process inherently creates new conflict points in an urban environment, where the majority of pedestrian and bicycle facilities must cross intersections. This will be a hard sell to the public to state that new bicycle and pedestrian facilities are inherently less walkable or bikeable due to new conflict points.	See response to Comment #102.			185
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	44	General	*'At Grade A and B''* The inclusion of new dedicated biking and walking facilities along the project corridor are not included as part of the evaluation, rating the corridor unreasonably low considering these improvements.	See response to Comment #111.			186

11003421

Document Draft Date	Committee	Agency	Comments Provided (Yes or No)	Reviewer	Date of Comment Received	Page Number	Category	Comment	Response	Notes	Follow-Up Action	Comment Number
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	44	Question	*'At Grade A and B''* Are crash rates for At-Grade A and B considering new crossings as part of the evaluation? If so, then walkability and bikeability should also consider the improved network connectivity of these new crossings.	See response to Comment #116.			187
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	44	General	*'At Grade A and B''* The rate of fatal and serious injuries typically decrease at lower speeds. For example, this table from the Federal Motor Carrier Safety Administration demonstrates the increase fatal crash rates of large trucks as speed increases. Please clarify how fatal and serious injury crashes will increase at lower speeds.	See response to Comment #117.			188
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	54	General	*'Local/Regional Roadways''* Minneapolis Fire Department stated concerns with limited access and ability to respond in an emergency. Asked if limited emergency access locations may be incorporated into this alternative.	See response to Comment #88.			189
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	54	General	*'Local/Regional Roadways''* Concern from Minneapolis Fire Department that 2 lanes in each direction may not be sufficient and result in traffic backing up, limiting access by fire trucks.	See response to Comment #89.			190
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	54	General	*'Local/Regional Roadways''* Walkability and Bikeability area listed as mixed in the document but coded as green in the spreadsheet.	See response to Comment #159.			191
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	59	Question	*'Reduced Freeway A''* While it is clear that the roadway footprint is being narrowed, is the ROW also being narrowed? Where would there be space to add green/gathering places if the ROW isn't being narrowed?	There is potential to narrow the ROW, however the details are not known at this time. This measure also considers areas currently within MnDOT ROW but outside the "trench."			192
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	64	General	*'Reconfigured and Expanded Freeway A and B''* The City is opposed to an expanded freeway option, as an expanded freeway option is not consistent with our climate and transportation related goals, but we understand the need to evaluate as an alternative.	Comment noted.			193
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	64	General	*'Reconfigured and Expanded Freeway A and B''* These alternatives state opportunities for amenities/features and green space and then state there is reduced ROW, along with increased impervious pavement. Please clarify.	Because the existing ROW varies substantially along the corridor, there is potential for excess ROW in some locations. This measure also considers areas currently within MnDOT ROW but outside the "trench."			194
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	64	Question	*'Reconfigured and Expanded Freeway A and B''* Are there opportunities for walkability and bikeability improvements along the corridor when the ROW of the freeway is expanded? Seems like the potential for improved walkability and bikeability along the corridor would be decreased.	With the freeway alternatives, there is potential for improved bicycle and pedestrian facilities along the frontage roads and other areas outside the "trench." Based on the assumed lane widths, the expanded freeway alternatives could be constructed almost entirely within the existing trench, with only sliver ROW acquisition.			195
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	64	General	*'Reconfigured and Expanded Freeway A and B''* Expanded Freeway A. The combined total crash rates for mainline and routes within 1 mile on the no build is 4.73; on the expanded freeway it is 4.84 based on the provided table. The document and tables inaccurately reflect a decrease in the total combined crash rate when the data provided indicates an increase.	See responses to Comments #137-139.			196
03.27.2024	Technical Advisory Committee	City of Minneapolis	Yes	Jenifer Hager	5/3/2024	NA	General	*Aging Infrastructure and New Opportunities* As the evaluation of this project is finalized, the City of Minneapolis will be looking to seize opportunities presented by the reconstruction of aging infrastructure that was designed and constructed in a past era and under much different engineering guidance than is currently used. Infrastructure reconstruction is the best opportunity to reconfigure and realign roadways to use less space and move more people in more efficient and sustainable ways. This is also a great time to look for new opportunities related to redeveloping properties along the corridor as infrastructure is improved but also to create new space for development in the form of emerging concepts such as land bridges. We also recommend that MnDOT consider the innovative use of rights of way under existing bridges, flyovers and other structures to better connect areas of the city divided by the freeway system; and look for opportunities to engage in reparative investments in neighborhoods most impacted by the freeway system.	Comment noted. MnDOT intends to explore land bridges, innovative uses of right of way, and other opportunities as part of future project phases.			197

Document Draft Date	Committee	Agency	Comments Provided (Yes or No)	Reviewer	Date of Comment Received	Page Number	Category	Comment	Response	Notes	Follow-Up Action	Comment Number
03.27.2024	Technical Advisory Committee	Hennepin County	Yes	Jessa Trboyevich	5/3/2024	3	Question	*"MnDOT is committed to improving walkability and bikeability in the I-94 corridor and will further develop opportunities for these connections in the Tier 1 EIS and Tier 2 construction documents. Project staff will ensure space is available for these elements and coordinate with existing studies (such as the proposed Midtown Greenway Extension) as part of this project"* Request to clarify further. Does this mean that alternatives will consider a trail in MnDOT ROW that corresponds to the extents of the Midtown Greenway Extension Study? If not, my opinion is that a trail within MnDOT should be considered as utilizing railroad ROW may prove to not be a feasible option for the study.	The project team will coordinate with the Midtown Greenway Extension Study once this effort is underway. Specific bicycle and pedestrian connections will be evaluated in greater detail in the Tier 1 EIS.			198
03.27.2024	Technical Advisory Committee	Hennepin County	Yes	Jessa Trboyevich	5/3/2024	14	Question	*"• Walkability and bikeability – comfort, mobility and risks for people walking, bicycling, and rolling • Safety for people in motorized vehicles – cars, freight, and transit • Infrastructure condition – state of repair • Mobility for people in motorized vehicles – cars, freight, and transit"* Are there priorities or is each of these project needs equal to the others? Consider clarifying.	There is no intended hierarchy of needs for the project. Clarification added.			199
03.27.2024	Technical Advisory Committee	Hennepin County	Yes	Jessa Trboyevich	5/3/2024	18	General	*"-Multimodal Level of Service (Oregon method) -Distance between Crossings -Travel Time between Origin-Destination Pairs -Nonmotorized Conflict Points (Access/Interchange only)"* Consider adding a level of comfort criteria as well. This is different from safety or mobility criteria as it is more focused on how comfortable, desirable, enjoyable it is to walk or bike. When considering a freeway barrier this is a legitimate consideration to peoples' travel choice	Multimodal Level of Service is intended to measure user perceptions of safety, comfort, and mobility for people walking and biking.			200
03.27.2024	Technical Advisory Committee	Hennepin County	Yes	Jessa Trboyevich	5/3/2024	18	General	*"-Nonmotorized Conflict Points (Access/Interchange only)"* Also include actual crash statistics same as for motorized	In the Tier 1 EIS, the evaluation of crashes on intersecting streets will include bicycle and pedestrian crashes.			201
03.27.2024	Technical Advisory Committee	Hennepin County	Yes	Jessa Trboyevich	5/3/2024	18	General	*"-Vehicle Hours Traveled (VHT) -Person Hours Traveled (PHT) -Vehicles Miles Traveled (VMT)"* Consider including induced demand to be factored into the alternatives evaluation	The traffic modeling tools that are proposed for use in the Tier 1 EIS will account for some aspects of induced demand. More information is available in the Rethinking I-94: Preliminary Traffic and Transit Analysis of Alternatives Memo.			202
03.27.2024	Technical Advisory Committee	Hennepin County	Yes	Jessa Trboyevich	5/3/2024	18	Question	*"-Vehicles Miles Traveled (VMT)"* how will MnDOT's VMT reduction goals be considered as part of the criteria?	The project team is not aware of project-specific guidance related to MnDOT's VMT reduction goals.			203
03.27.2024	Technical Advisory Committee	Hennepin County	Yes	Jessa Trboyevich	5/3/2024	19	General	*"Compliance with Clean Air Act national ambient air quality standards"* VMT reduction as well	Potential changes to VMT with each alternative will already be measured in the mobility category as part of the Tier 1 EIS.			204
03.27.2024	Technical Advisory Committee	Hennepin County	Yes	Jessa Trboyevich	5/3/2024	19	General	*"Opportunities for gathering spaces, cultural and historic representation and art, and green spaces"* Consider adding redevelopment opportunities.	The purpose of this measure is to identify the potential for improvements that are likely to enhance sense of place and could be constructed as part of a transportation project. MnDOT would not lead or pursue redevelopment as part of a build alternative. Any development that takes place in response to the project would be led by other entities.			205
03.27.2024	Technical Advisory Committee	Met Council	Yes	Amy Vennewitz	5/3/2024	NA	General	Overall as the process moves into decision-making on the alternatives we think it would be helpful for this complicated information to be presented in a more concise story-telling and visual fashion. A story-telling narrative could be more easily understood by all, and would help to highlight the most important measures and differentiating measures, and explain in a text or visual fashion where and why there are significant differences between the various alternatives.	The purpose of this document is to serve as the technical memo underlying the alternatives analysis. More public-facing versions of these materials will also be produced to communicate the process and key takeaways.			206
03.27.2024	Technical Advisory Committee	Met Council	Yes	Amy Vennewitz	5/3/2024	80	General	*"Table 8: Summary of Mainline Scoping Alternatives Evaluation Results"* At this point, there is a lot of complicated data to sort through and, even for technical transportation staff, it is difficult to determine whether differences in quantifiable measures and qualitative measures are significant or not. The colored matrix is helpful, but there also should be a follow-up discussion and agreement among the project technical participants as to how the measures "break-points" were identified and chosen, i.e., when does a specific measure move from green to yellow to red on the matrix? Particularly for some of the more qualitative measures, this is currently difficult to understand.	Additional supporting information will be added as an appendix.			207

Document Draft Date	Committee	Agency	Comments Provided (Yes or No)	Reviewer	Date of Comment Received	Page Number	Category	Comment	Response	Notes	Follow-Up Action	Comment Number
03.27.2024	Technical Advisory Committee	Met Council	Yes	Amy Vennewitz	5/3/2024	NA	General	In our review of the materials, it seemed that the most important differentiating measures important for us to focus our attention on are the measures for the Project Needs, i.e., Walkability and Bikeability, Safety, Infrastructure Condition and Mobility.	Comment noted. Alternatives must address the purpose and need to be considered for further evaluation in the Tier 1 EIS.			208
03.27.2024	Technical Advisory Committee	Met Council	Yes	Amy Vennewitz	5/3/2024	80	General	While the Social, Economic, and Environmental Impacts measures are very detailed and important technical measures to consider, they do not appear to be differentiating measures that at this point in the process, point to any fatal flaws or show any significant differences that could be used to eliminate consideration of any alternatives.	Comment noted. While the SEE impact results are not a major differentiator, there are several important takeaways from this portion of the evaluation, including: (1) the scale of the potential changes in impervious surface in the corridor; (2) the potential for ROW acquisition and relocation with some transit station locations; (3) the potential for impacts to EJ populations; (4) and identifying the alternatives that are likely to result in the greatest changes to noise impacts (those that add new through lanes or make major vertical or horizontal alignment changes).			209
03.27.2024	Technical Advisory Committee	Met Council	Yes	Amy Vennewitz	5/3/2024	80	General	Similarly, without additional information on how the alternatives will be designed and implemented, we find it difficult to use the Goals and Livibility measures to indicate any significant differences among the alternatives at this point in the process. For instance, measures such as Sense of Place and Equity are highly dependent on the details of how a project proceeds through a design and decision-making process, and how various communities' voices and needs are heard and addressed. We would however agree, that based on the current Goals and Livability measures analysis, a general conclusion can be made that the Expanded Freeway B alternative, which adds a general purpose lane and does not offer any new transit benefit, has the least potential to advance, and likely may hinder advancing the identified Goals and Livability outcomes. The other alternatives appear to us to require additional information before any conclusions can be made.	When the draft evaluation criteria were initially shared with the public and project stakeholders, Goals & Livability measures were not included in Scoping due to the high-level nature of the alternatives at this stage. Based on feedback received, high-level (generally qualitative) measures were identified to provide an early indication for these criteria in Scoping. Additional measures have been identified for use in the Tier 1 EIS once more design details are available, and there is potential for further evaluation as part of the Tier 2 process.			210
03.27.2024	Technical Advisory Committee	Met Council	Yes	Amy Vennewitz	5/3/2024	18	General	*Walkability and Bikeability measures* We are concerned that these measures do not appear to have been reviewed by the I-94 bike and pedestrian working group. Our bicycle and pedestrian staff expert participates on this group and while they have reviewed the analysis at a high level and indicated general agreement with how the measures are being portrayed, we recommend that this expert group be given the opportunity to fully review the analysis and provide additional insight as to how the measures should be discussed and portrayed on an evaluation matrix.	The walkability/bikeability measures for the Scoping phase have been discussed extensively with the Pedestrian-Bicycle Working Group and have not been changed since the initial release of the draft purpose and need and evaluation criteria to the public. At the January 2024 Ped-Bike Working Group meeting, the group discussed the preliminary evaluation results and the lack of differentiation between the alternatives in Scoping. The group also discussed messaging/talking points for articulating the differences between the alternatives to the public despite the lack of differentiation with these high-level measures, and also discussed the proposed measures for the Tier 1 EIS that will provide a more detailed analysis.			211
03.27.2024	Technical Advisory Committee	Met Council	Yes	Amy Vennewitz	5/3/2024	18	General	*Safety measures* The safety related crash measures and analysis methods are very specialized and it is difficult for a non-safety expert to determine where and how safety measures represent significant findings and concerns and how the matrix breakpoints between a green, yellow or red safety rating were established. As far as we are aware, the development and rating of the safety measures were not reviewed in detail by any technical committee with specific safety expertise. Some of the results are concerning, and very well could be used as differentiating measures in determining whether to eliminate consideration of some alternatives. However, we suggest that prior to finalizing and describing any safety conclusions, that the analysis be reviewed and vetted by a technical committee with specific expertise in safety analysis for additional consideration of the results.	In the process of completing the preliminary alternatives evaluation, the project team held a series of meetings with traffic safety specialists from MnDOT and FHWA to review the best available methodologies to understand the potential safety implications of each alternative given the information available during Scoping. A consensus developed around the selected methodology as it was determined to provide a fairer comparison of the range of alternatives than the methodology originally proposed in the draft evaluation criteria memo. The new methodology, rationale, and results were shared with TAC/PPC members at a series of joint meetings.			212
03.27.2024	Technical Advisory Committee	Met Council	Yes	Amy Vennewitz	5/3/2024	18	General	*Safety measures* In addition, because the safety results are closely related to the issue of the level of traffic diversion and volume increases on parallel corridors, we recommend that the safety measures be considered with a similar level of uncertainty as the travel forecasts.	The project team is in the process of refining the safety results using a threshold of +/-2% for consistency with the approach used in the traffic memo.			213

11003424

Document Draft Date	Committee	Agency	Comments Provided (Yes or No)	Reviewer	Date of Comment Received	Page Number	Category	Comment	Response	Notes	Follow-Up Action	Comment Number
03.27.2024	Technical Advisory Committee	Met Council	Yes	Amy Vennewitz	5/3/2024	18	Question	*Infrastructure Condition* The technical analysis has provided a significant amount of valuable data on the current condition of assets within the I94 corridor. However, because the build alternatives all will provide for replacement and improvement of these aging assets, it does not appear to be an analysis that can be used to significantly differentiate among the alternatives. It would be helpful to have additional understanding and clarification regarding the timing needs for asset replacement, as this knowledge can identify any factors that might determine the need for timing of decision-making and implementation of a corridor alternative, ie are there assets that must be replaced prior to a particular date?	The full Purpose and Need technical memo provides additional details on the condition of assets within the program area. Since a program of projects has not been developed at this time, the timing of asset replacement relative to each alternative is not yet known.			214
03.27.2024	Technical Advisory Committee	Met Council	Yes	Amy Vennewitz	5/3/2024	NA	General	*Mobility/Travel Forecasting Measures* Council staff have been involved in reviewing the travel forecasts done by the project team throughout the project, and in our estimation, the project team has run the regional model correctly and consistent with standard practice. The model is adequately calibrated and is producing reasonable results at a regional and corridor level.	Comment noted.			215
03.27.2024	Technical Advisory Committee	Met Council	Yes	Amy Vennewitz	5/3/2024	NA	General	*Mobility/Travel Forecasting Measures* Within the traffic memo, there is an appropriate discussion of the limitations of regional travel models, however, there is no discussion of levels of uncertainty in the modeling results, which is a limitation of any future-year analysis. A discussion and disclosure of sources of uncertainty in modeling and forecasting would be helpful in understanding a range of uncertainty in the modeling results.	Section 3.2 of the Alternatives Review memo discusses the limitations of the traffic modeling tools used during Scoping, notes additional work that will be completed for the Tier 1 EIS, and directs readers to the traffic and transit analysis memo for additional details. Follow up discussions will take place regarding traffic modeling and sensitivity testing.			216
03.27.2024	Technical Advisory Committee	Met Council	Yes	Amy Vennewitz	5/3/2024	NA	General	*Mobility/Travel Forecasting Measures* Static traffic assignments are notoriously unreliable at estimating volumes on low-volume, low-functional class roads, in part because characteristics of their capacity (intersection queueing, frequent access and turning) are poorly represented in static regional assignment models. This is reflected in industry guidance (FHWA TMIP Travel Model Validation and Reasonableness Checking Manual) which suggests 25% as being acceptable aggregate error in base-year calibration for roads of 20,000 AADT. The analysis should note that while the travel forecasting runs demonstrate significant traffic diversion in the at-grade alternatives, the precise magnitude of diversion on any particular road is hard to measure with static assignment models. This was acknowledged in the January 24, 2019 project memo on "Proposed Modeling Approaches" for the study which acknowledged that a weakness of using static traffic assignment models is that the models "have limited accuracy in handling traffic diversions".	Follow up discussions will take place regarding traffic modeling and sensitivity testing.			217
03.27.2024	Technical Advisory Committee	Met Council	Yes	Amy Vennewitz	5/3/2024	NA	General	*Mobility/Travel Forecasting Measures* We would suggest that some level of sensitivity analysis of the local traffic impacts to different levels of traffic diversion and/or travel demand reduction be completed (off-model). Council staff is available to work with MnDOT to develop analysis methods for this sensitivity analysis. Given the unreliability of specific diversion estimates directly from the regional model's static assignment method, establishing reasonable bounds and understanding the range of potential traffic diversion impacts would be helpful. In the absence of these sensitivity tests or calculating diversion with a meso-scopic traffic assignment tool, the results currently lack sufficient confidence in specific traffic diversion forecasts to be used for decision-making at this stage.	Follow up discussions will take place regarding traffic modeling and sensitivity testing.			218
03.27.2024	Technical Advisory Committee	Met Council	Yes	Amy Vennewitz	5/3/2024	18	General	*Other Mobility measures* Vehicle-miles-travelled is a measure included in Table 1 as something that will be calculated for the Scoping Decision Document, and was calculated and documented in the Traffic and Transit Analysis memo, but the results appear to be missing in Table 3 where results are reported.	Table 1 indicates that VMT will be used as a measure in the Tier 1 EIS, but not in Scoping.			219

11003425

Document Draft Date	Committee	Agency	Comments Provided (Yes or No)	Reviewer	Date of Comment Received	Page Number	Category	Comment	Response	Notes	Follow-Up Action	Comment Number
03.27.2024	Technical Advisory Committee	Met Council	Yes	Amy Vennewitz	5/3/2024	18	General	*Other Mobility measures* The Travel Time Reliability measure is listed in Table 1 and reported in Table 3, however the methods for calculation of this measure and the results were not included in the Traffic and Transit Analysis memo, nor ever discussed by the Traffic Working Group. Council staff don't have sufficient information to review and comment on this measure and its use, but the reported results seem very precise compared to other mobility measures.	More details on the methodology for each measure are included in the evaluation criteria memo, which has been distributed previously and will be included as an appendix to the alternatives evaluation memo. The footnotes for Table 3 also provide more details on the travel time index calculation used to measure travel time reliability.			220
03.27.2024	Technical Advisory Committee	Met Council	Yes	Amy Vennewitz	5/3/2024	80	General	*Consistency with Adopted Regional Plans* There are no alternatives under study that are inherently inconsistent with the current 2040 Transportation Policy Plan (TPP). However, the TPP's highway investment principals state that additional highway capacity should only be considered if: traffic management, transit and travel demand management or lower cost spot mobility improvements, or EZ Pass lanes implementation have been analyzed as potential solutions to a highway mobility problem and demonstrably cannot resolve the identified corridor mobility needs. The analysis done for the I-94 corridor indicates that there are a variety of improvements that could be made to address the corridor's mobility issues. All of these solutions should be considered and prioritized for implementation over any alternative that includes general purpose lane additions.	Comment noted.			221
03.27.2024	Technical Advisory Committee	Met Council	Yes	Amy Vennewitz	5/3/2024	80	General	*Consistency with Adopted Regional Plans* As noted previously, the analysis conducted to date indicates potentially concerning safety considerations with some of the alternatives due to significant traffic diversions to parallel routes. Safety is a primary goal of the current and draft 2050 TPP and any alternative that significantly degrades regional safety outcomes could be considered to be inconsistent with regional goals. However, as recommended previously, additional detailed safety and traffic diversion impact analysis should continue to be conducted and results presented within a range of uncertainty before such a conclusion can confidently be made.	Comment noted.			222
03.27.2024	Technical Advisory Committee	Met Council	Yes	Amy Vennewitz	5/3/2024	NA	General	In conclusion, we note that the I-94 corridor represents one the most important highway corridors within the region. It provides significant regional mobility and economic benefits but these benefits must be balanced with its damaging history and impacts on the adjacent communities. Given this history and on-going impacts, it is imperative that as we consider improvements and changes, we adequately engage and listen to the corridor's community residents and representatives, and that we assure ourselves that to the highest degree possible we are carefully considering alternatives that can begin to repair and restore these past and on-going harms and provide needed benefits to the communities along with providing benefits to all of the region. This is a daunting and difficult task. Given this importance, we recommend that the process proceed carefully and with much involvement, deliberation and input by those who will be most impacted by these decisions. The Council understands the significance and difficulties of the work ahead and will continue to be a partner and participant in this important work. Thank you for the work and analysis that has occurred to date, and we look forward to the continuing partnership and involvement in the work ahead.	Comment noted.			223
03.27.2024	Technical Advisory Committee	Ramsey County	No									224
03.27.2024	Environmental Working Group	MnDOT	Yes	Katie Haun Schuring	5/22/2024	75	General	The only thing I noticed was that the text in the Evaluation Memo for the Expanded freeway options don't match the excel file. The text in the document: "The mainline improvements for Expanded Freeway – B have low potential for adverse effect to known historic properties and moderate potential for impacts to known or suspected cemeteries." The text in excel: "Moderate potential for corridor impacts." I'd prefer the text from the memo as it is more accurate and similar to the other alternatives. (E.G: Low potential for corridor impacts, moderate potential for BRT station area impacts.)	The excel will be updated to match the memo.			225

11003426

Document Draft Date	Committee	Agency	Comments Provided (Yes or No)	Reviewer	Date of Comment Received	Page Number	Category	Comment	Response	Notes	Follow-Up Action	Comment Number
03.27.2024	Environmental Working Group	MnDOT	Yes	Katie Haun Schuring	5/24/2024	NA	General	Otherwise, no concerns about the assessment or recommended level of concern for those alternatives.	Comment noted.			226

Agenda: Rethinking I-94 Phase 2 Joint TAC and PPC Meeting

Date: 7/16/2024
Time: 8:00 am – 10:00 am

Welcome (Melissa)

Updates

- General Project Updates
    - Ongoing technical activities (Mark)
    - Ongoing engagement activities and public events (Renee)
      Schedule (Jess)
- Agency Updates
    - Minneapolis
    - St Paul
    - Hennepin County
    - Ramsey County
    - Met Council

Community Voices (Renee)

- Overview of community voices for I-94

Air Quality (Natalie and Ronald)

- Meeting with National FHWA
- Discussion on approach to air quality

Traffic Sensitivity (Jason)

- Updated information on traffic dispersing to the local/regional network

Safety (Mark/Jason)

- Evaluation of alternatives – group update

Alternatives (Austin/Jack)

- Revised Document Overview
  - Comments received
  - Supplemental information provided
  - Walk through of modified document

Next Meeting

- In person – joint TAC/PPC updates on alternatives evaluation – need to find a date/time for discussion. May need more than 2 hours

Upcoming Work Activities

- Alternatives evaluation

Round Robin

- Additional discussion items

Next TAC Meeting(s)

? – Next TAC meeting scheduled for August 20

Public Works
Community Planning and Economic Development
505 4th Avenue South
Minneapolis, MN 55415

Minneapolis
City of Lakes

www.minneapolismn.gov

May 3, 2024

Project Manager/Director
Rethinking 94 Project Office

To Whom it May Concern,

The City of Minneapolis staff from the Departments of Public Works and Community Planning and Economic Development hereby submit the attached comments on the working draft of the "Rethinking I-94: Scoping Alternatives Evaluation" to the project office as we continue to work through the scoping and Tier I EIS process. The statements provided below summarize overall comments on the working draft reviewed. Staff are happy to answer questions on any of these if necessary. We request that the project office appropriately document and respond to comments and feedback provided by City staff to MnDOT so that we understand how our comments and feedback are used.

I-94 MAINLINE PRIORITY

The City of Minneapolis continues to prioritize person throughput in the corridor versus vehicle throughput. It is not possible for the region to build its way out of congestion; Minneapolis does not support the construction of additional lane capacity[1].

SUMMARY OF COMMENTS

The following are summaries of comments provided in the working draft document but are not an exhaustive list of comments provided. The comments noted in the working draft should be utilized to access all provided comments from City staff.

1. Overall:
   a. Minneapolis requests to see the revised "Rethinking I-94: Scoping Alternatives Evaluation" with opportunity to review and comment.
   b. There is a lot of data provided in the spreadsheets. Many of the alternatives have few differences in the metrics evaluated to date. Recommend narrowing in on the differences between the alternatives to have more productive conversations.
   c. Recommend evaluating the BRT sub-alternatives separately.
   d. The metric for air pollution does not consider the degree of impact locally. Recommend refining metrics for air pollution.

[1] Minneapolis 2040 Policy 17 – Complete Streets

e. There are instances of concepts being introduced before text explaining the concept is included. As an example of this, evaluation criteria are discussed on page 14 before explaining the evaluation process on page 15.
f. Please provide text or link to clarify what is included as part of “transportation objectives consistent with adopted state and regional (Met Council) plans”.
g. “Fatal flaws” is mentioned briefly and is not clearly defined. What constitutes as a fatal flaw should be defined in greater detail, particularly if used as a basis to remove an alternative.
h. “Additional Considerations” are mentioned early in the document but not explained until further on.
i. There are so many measurements for vehicular safety and mobility during this phase, while bike/walk safety and comfort won’t be explored until the next phase. This does not seem balanced. Could the potential for improving bike/walk safety and comfort be assessed during this phase?
j. Environmental Justice (EJ) qualitative assessment: Recommend editing the qualitative assessments to read "Does the alternative ~~provide~~ increase access to economic opportunities..." and "Does the alternative ~~have the potential~~ maintain the existing levels, have the potential to reduce exposure to water and noise pollution, or have the potential to increase exposure to water and noise pollution…".
k. Sense of Place evaluation criteria: Not all green/gathering spaces are created equal. Depending on how they are sited and designed, places located immediately adjacent to a highway may not be comfortable to use due to noise and pollution.
l. According to AASHTO's Center for Environmental Excellence, with sources cited to FHWA, speed, traffic volumes, and freight traffic all impact noise. The decrease or increase of these in the alternatives are not acknowledged as having reduced impacts on noise.
m. Does every alternative have an opportunity or space for noise mitigation, such as noise walls?
n. Does the decrease in vegetation impact the urban heat island effect? Do the increased number of vehicles also impact the urban heat island effect? Should urban heat island impacts be included as part of the EJ assessment for all alternatives?
o. Access to jobs as the sole metric to determine economic vitality is too limited. Recommend expanding metrics to evaluate economic vitality.
p. If there is no change to an alternative compared to the no build, then why are alternatives getting classified as green in the table? The evaluation would benefit from a 4th category to show no change compared to no build. Why is no build classified as green when there is no change to no build?
q. In the Mobility section for each alternative, “person throughput” needs to be clarified whether this number includes all modes or just vehicles.
r. In Mobility, when numbers (minutes for travel times, acres for impervious surfaces, etc) are stated, please also add how this compares to existing numbers.

2. At Grade A and B
    a. What is a comparable existing roadway facility to the proposed At-Grade A and B Alternatives? Recommend providing a comparison in the document for clarity with public understanding of what these alternatives might look like.
    b. Draft states “Current Interchanges would be removed.” Does this assume removal of interchanges with 280 or I-35? Also, the public may not understand the difference between “interchange” and “intersection”. Please clarify.

c. The Minneapolis Fire Department prefers At-Grade alternative B over A, because the locations of the transit lanes on each side of the roadway may make it easier to access an incident compared to the center running lanes.
d. "Nonmotorized conflict points." One perspective of this may be conflict points, while another perspective may be connectivity. To improve walkability and bikeability, generally this requires the addition of pedestrian and bicycle facilities. This process inherently creates new conflict points in an urban environment, where the majority of pedestrian and bicycle facilities must cross intersections. This will be a hard sell to the public to state that new bicycle and pedestrian facilities are inherently less walkable or bikeable due to new conflict points.
e. The inclusion of new dedicated biking and walking facilities along the project corridor are not included as part of the evaluation, rating the corridor unreasonably low considering these improvements.
f. Are crash rates for At-Grade A and B considering new crossings as part of the evaluation? If so, then walkability and bikeability should also consider the improved network connectivity of these new crossings.
g. The rate of fatal and serious injuries typically decrease at lower speeds. For example, this table from the Federal Motor Carrier Safety Administration demonstrates the increase fatal crash rates of large trucks as speed increases. Please clarify how fatal and serious injury crashes will increase at lower speeds.

3. Local/Regional Roadways
   a. Minneapolis Fire Department stated concerns with limited access and ability to respond in an emergency. Asked if limited emergency access locations may be incorporated into this alternative.
   b. Concern from Minneapolis Fire Department that 2 lanes in each direction may not be sufficient and result in traffic backing up, limiting access by fire trucks.
   c. Walkability and Bikeability area listed as mixed in the document but coded as green in the spreadsheet.
4. Reduced Freeway A
   a. While it is clear that the roadway footprint is being narrowed, is the ROW also being narrowed? Where would there be space to add green/gathering places if the ROW isn't being narrowed?
5. Reconfigured and Expanded Freeway A and B
   a. The City is opposed to an expanded freeway option, as an expanded freeway option is not consistent with our climate and transportation related goals, but we understand the need to evaluate as an alternative.
   b. These alternatives state opportunities for amenities/features and green space and then state there is reduced ROW, along with increased impervious pavement. Please clarify.
   c. Are there opportunities for walkability and bikeability improvements along the corridor when the ROW of the freeway is expanded? Seems like the potential for improved walkability and bikeability along the corridor would be decreased.
   d. Expanded Freeway A. The combined total crash rates for mainline and routes within 1 mile on the no build is 4.73; on the expanded freeway it is 4.84 based on the provided table. The document and tables inaccurately reflect a decrease in the total combined crash rate when the data provided indicates an increase.

AGING INFRASTRUCTURE AND NEW OPPORTUNITIES

As the evaluation of this project is finalized, the City of Minneapolis will be looking to seize opportunities presented by the reconstruction of aging infrastructure that was designed and constructed in a past era and under much different engineering guidance than is currently used. Infrastructure reconstruction is the best opportunity to reconfigure and realign roadways to use less space and move more people in more efficient and sustainable ways. This is also a great time to look for new opportunities related to redeveloping properties along the corridor as infrastructure is improved but also to create new space for development in the form of emerging concepts such as land bridges. We also recommend that MnDOT consider the innovative use of rights of way under existing bridges, flyovers and other structures to better connect areas of the city divided by the freeway system; and look for opportunities to engage in reparative investments in neighborhoods most impacted by the freeway system.

Sincerely,

Jenifer Hager

Jenifer Hager
Director of Transportation Planning and Programming
Minneapolis Public Works

Meg McMahan

Meg McMahan
Director of Planning
Minneapolis Community Planning and Economic Development

CC:

Toddrick Barnette
Community Safety Commissioner
Office of Community Safety

Jared Jeffries
Chief of Staff
Office of Community Safety

Bryan Tyner
Fire Chief
Minneapolis Fire Department

Wesley VanVickle
Assistant Fire Chief
Minneapolis Fire Department

Sean Olson
Deputy Fire Chief
Minneapolis Fire Department

Rethinking I-94 Phase 2 Technical Advisory Committee/Policy and Planning Committee Joint Meeting

Date: 08/20/2024 (8:30 am – 10:00 am)
Location: Zoom Meeting
Participants: See List Below

Meeting Summary

1. Project Updates

- Melissa Barnes (MnDOT) welcomed the group and Jack Corkle (WSB) provided an overview of the agenda.

- General Project Updates
  - Ongoing technical activities
    - Mark Lindeberg (MnDOT) gave a brief overview of safety and traffic analyses that have been recently completed.
    - Mark noted that Michael Baker International has been hired to complete an outside review of the project traffic analysis. There will be a future presentation to this group.
  - Ongoing engagement activities and public events
    - Renee Raduenz (MnDOT) shared information on public and stakeholder engagement.
    - Started cadence of monthly updates via GovDelivery. Includes general project updates as well as a closer look at each group of evaluation criteria.
    - Starting in early September, will be releasing Community Voices info for one participant per month. In future months, will share travel time information.
    - Continuing to reach out to neighborhood and community organizations.
    - One on one meetings with Community Leaders.
    - Additional outreach to local chambers, universities, and neighborhood development organizations.
    - Developing youth ambassador program. Focusing on 10-12th graders from schools along the corridor. Focus on civic engagement and transportation. Opportunity for students to learn, network, and do research.
    - Various community events in the fall – business organizations and community events.
    - Preparing media briefings.

- Freeway Panel
    - Melissa gave an overview of an upcoming panel on freeway projects organized by MnDOT.
    - PAC members requested information from other states on processes for considering and evaluating freeway changes in urban corridors.
    - Intent is to have a statewide audience and focus, not just this corridor.
    - Two presenters:
        - Colorado DOT I-70 project (Denver) – Conversion to depressed freeway with cap.
        - New York DOT I-80 project (Syracuse) – Conversion of existing viaduct to at-grade boulevard with supporting network improvements.
    - Will invite TAC, PPC, PAC, community leaders.
    - September 30th, 830-10AM, virtual. Will be recorded and shared online for a limited time.

- Agency Updates
    - Minneapolis
        - Coordinating with MnDOT on potential Reconnecting Communities grant.
        - Opportunity for a presentation on the project to climate and infrastructure committee.
        - Noted that MnDOT has upcoming bridge projects programmed, would like to hear more about this.
    - St Paul
        - RAISE planning grant is under contract and getting started.
        - Reconnecting Communities grant conversation.
        - Potential Gold Line extension conversation.
        - Recent cleanup activities on University Ave.
        - Pelham Blvd reconstruction is upcoming, funded by sales tax dollars. Areas leading up to, but not including the bridge.
    - Hennepin County
        - No updates.
    - Ramsey County
        - Reiterated University Ave work and Gold Line extension conversation.
    - Met Council
        - Regional development guide and TPP are out for public comment until October 7th.
    - Metro Transit
        - Driver hiring has improved, service has been expanding.
        - Afternoon LRT service improved to every 12 minutes.
        - Gold Line construction is ongoing.
        - B Line anticipated opening in June 2025
    - CAAP Board
        - Working with MnDOT on John Ireland Bridge project.

- Working on Capitol mall design framework.
  - U of M
    - No updates.
  - FHWA
    - Grant agreement completed with ReConnect Rondo, work can now begin.

Action Item: Information on programmed bridge projects along the corridor will be added to an upcoming agenda.

2. **Safety**
   - Evaluation of alternatives – group update following traffic working group meeting
     - Jason Junge (WSB) gave a recap of the safety analysis completed for the alternatives evaluation.
     - Changes in crashes were generally commensurate with changes in volumes except for the at-grade facility
     - Fatal and average rates would be higher under scenarios that convert the freeway to another facility type
     - Intersection analysis completed on Marshall and University Ave to provide additional context. Did not change existing conclusions.
     - Additional evaluation completed based on observed traffic volumes.
     - Shared results with Traffic Working Group, was well received and consistent with expected results.
     - Safety memo will be shared with this group.

   - Discussion
     - Russ noted a future need to look at safety outcomes for different frontage road designs.

3. **Traffic Sensitivity**
   - Sensitivity analysis completed for alternatives that would reduce capacity to evaluate different scenarios for the amount of traffic that would divert to other routes.
     - Concluded that even with a 30 percent reduction in traffic diverted to other routes, a large increase in volume is still likely on parallel routes and river crossings.
     - Shared results with Traffic Working Group, no major comments or concerns with the analysis.
     - Will be developing maps and graphics to communicate the information as part of the memo.
     - Traffic sensitivity memo will be shared with this group.

4. **Alternatives**
   - Jess Karls (WSB) gave an overview of the cost estimates developed as part of the alternatives analysis.
     - Elements considered in the development of the construction cost estimates:

11003436

    - Lane Miles (Freeway) and Frontage Roads
    - Drainage
    - Urban Infrastructure and Trunkline
    - Utilities – estimated based on length of project
    - Earthwork (Cut and Fill) and Interchanges – based on level of complexity
    - Overpasses and Pedestrian Bridges – based on square footage costs
    - Railroad Bridges
    - Retaining Walls and Noise Walls – based on length and height
    - Signing, Striping, Electrical, ITS, and Traffic Signals
    - Aesthetics & Landscaping
    - Maintenance of Traffic (MOT) and Temporary Construction – very high level, do not yet know project phasing
    - General Conditions – miscellaneous costs such as permitting included
  - Elements not considered:
    - Transit Stations – not included, substantial costs depending on number of stations
    - Mitigation costs not included at this time
    - Right of way costs are not included
  - Costs are based on recent bid prices from other projects. Contingency is included as well as inflation contingency.
  - Construction and maintenance costs are presented as ranges.
  - Includes escalation to 2029.
  - Local/Regional alternative has high construction costs due to retaining walls and major modifications to system.
  - Maintenance costs
    - Based on information provided by MnDOT maintenance staff.
    - At-Grade alts are lower due to reduced bridge maintenance.
  - Memo will be produced and sent to the group for review.

- Discussion
  - MnDOT bridge rep – For pedestrian bridges, were existing touchdown points assumed?
    - Yes, but added a percentage to account for changes. Also included costs for one additional pedestrian bridge.
    - Assumptions for retaining wall locations are based on review of cross sections.
  - Minneapolis rep – Noise wall assumptions?
    - All freeway alts assumed noise walls.
  - MnDOT bridge rep – Do costs include engineering and construction administration?
    - Not included.
  - St. Paul rep – What does maintenance cost mean/what is the time period?
    - Based on 50-year maintenance cycle. Will add clarification.
  - St. Paul rep – What year are dollars presented in?

        - Current dollars.
    - Met Council rep – Are frontage road costs included?
        - Yes
    - St. Paul rep – Do costs assume the same number of interchanges as today?
        - Yes. Also includes additional costs for more complex connections such as at TH 280.
    - Met Council rep – Are EZ-pass operations costs included?
        - No
    - St. Paul rep – Do costs account for project phasing?
        - Assumes some level of construction phasing but not detailed at this stage. Currently assumes five years of construction.

5. PAC Meeting

- Currently discussing whether meeting should be before or after the election.

- Potential October/November topics
    - Update on air quality – anticipate similar information as what was presented to this group.
    - Traffic – review information anticipated to be presented to TAC-PPC in September. Will focus on what is happening with traffic today.
    - Freeway panel – separate meeting, open to other groups.

- Potential winter 2025 topics
    - Alternatives discussion – needs to be presented to TAC-PPC and Cooperating and Participating agencies as well.

6. Round Robin

- Alternatives memo
    - Some information in the memo has been revised, including the summary matrix and an enhanced legend.
    - Working to determine how much of the sensitivity analyses for traffic and safety should be attached to the alternatives memo.

- Discussion
    - Ramsey County rep – Concerned about making sure we communicate the potential impacts of non-freeway alternatives, including impacts on the county system. Some people may not accept the premise of the traffic analysis. Links to land use, travel behavior changes, etc.
        - Melissa noted that the September panel will attempt to answer some of these questions.
        - St. Paul rep – Key question is whether steps to get to a possible future with different land use are actually available. Need to consider inconveniences and impacts during the long period to get there.

- Next meeting will likely be switched to virtual and potentially shortened as the agenda comes together. Members were asked to please continue to hold the existing time slot until this is determined.

Next Meeting

Date: 09/17/2024
Time: 8:00 AM
Location: Zoom Meeting

Technical Advisory Committee

Present	Last Name	First Name	Organization
X	Varney	Anna	FHWA
X	Vennewitz	Amy	Met Council
X	Heath	Ryan	Metro Transit
X	Barnes	Melissa	MnDOT
X	Bartelt	Nikki	MnDOT
X	Jacobson	Ashley	MnDOT
X	Goff	Bill	MnDOT
X	Henricksen	Jim	MnDOT
X	Lindeberg	Mark	MnDOT
	Kauppi	Sheila	MnDOT
X	Larsen	Bradley	MnDOT
	Schreiner	Garrett	MnDOT
	Hansen	Ashley	MnDOT
X	Parent	Matthew	MnDOT
X	Turner Bargen	Mackenzie	MnDOT
	Wilson	Ryan	MnDOT
X	Zlimen	Kimberly	MnDOT
	Olson	Jeffrey	MnDOT
	Lopez	Ricardo	MnDOT
X	Raduenz	Renee	MnDOT
X	Trboyevich	Jessa	Hennepin County
	Estochen	Brad	Ramsey County
	Hager	Jenifer	Minneapolis
X	Hyink	Jessica	Minneapolis
	Peterson	Nick	St. Paul
X	Newton	Randy	St. Paul
X	Corkle	Jack	WSB
X	Karls	Jess	WSB

Policy & Planning Committee

Present	Last Name	First Name	Organization
	Pearson	Joshua	FHWA
X	Varney	Anna	FHWA
	Kocak	Jordan	Hennepin County
X	Ellos	Chad	Hennepin County
X	Hiniker	Cole	Met Council
X	Vennewitz	Amy	Met Council
	Harrington	Adam	Metro Transit
	Musty	Peter	Capitol Area Architectural and Planning Board (CAAPB)

Present	Last Name	First Name	Organization
	Schroeder	Michael	Minneapolis Park and Recreation Board
	Mackenzie	Monique	University of Minnesota
X	Austin	Lisa	MnDOT
X	Barnes	Melissa	MnDOT
	McCartney	Molly	MnDOT
X	Lindeberg	Mark	MnDOT
X	Goff	Bill	MnDOT
	Kauppi	Sheila	MnDOT
	Wilson	Ryan	MnDOT
X	Raduenz	Renee	MnDOT
	Collins	Kari	Ramsey County
	Faust	Martha	Ramsey County
X	Isaacson	Brian	Ramsey County
X	Bockheim	Adrienne	Minneapolis
	Nix	Noel	St. Paul
X	Stark	Russ	St. Paul
X	Karls	Jess	WSB
X	Corkle	Jack	WSB

FHWA/MnDOT/Agency/Consultant Staff

Last Name	First Name	Organization
Dahl	Erik	CAAPB
Hughes	Jessica	CAAPB
Ehrlich	Jonathan	Met Council
Junge	Jason	WSB
Hauf	Austin	WSB

From: "Hager, Jenifer (she/her/hers)" <Jenifer.Hager@minneapolismn.gov>
To: "Sexton, Tim" <tim.sexton@minneapolismn.gov>, "Swanson, Jennifer (she/her/hers)" <Jennifer.Swanson@Minneapolismn.gov>
CC: "Dodds, Bryan (he/him/his)" <bryan.dodds@minneapolismn.gov>
Subject: RE: Rethinking 94
Date: Wed, 14 Aug 2024 00:10:12 +0000
Attachments: Rethinking_94_Resolution_criteria_edit.docx

Attached is a suggested revision to the "Whereas" statement in question. This slightly updates the language to better align with the updated evaluation criteria, which we are not able to share at this point in time (still draft).

Let me know if you want me to share with Qannani directly.

Jeni

Jenifer Hager | Director Transportation Planning & Programming
City of Minneapolis – Public Works | **Public Service Building 505 4th Ave South Room 410 MN 55415**

612-673-3625 | Jenifer.Hager@minneapolismn.gov

From: Hager, Jenifer (she/her/hers)
Sent: Friday, August 9, 2024 10:16 AM
To: Sexton, Tim <tim.sexton@minneapolismn.gov>
Cc: Dodds, Bryan (he/him/his) <bryan.dodds@minneapolismn.gov>
Subject: RE: Rethinking 94

Just to be clear, I've asked Jessica to recommend an updated "Whereas" statement for them so we can be helpful without needing to share the report. However, I have also asked Melissa about the status of the report so we can be clear about that as well. Jessica is working assuming the timeline originally mentioned, i.e. early next week.

Jeni

Jenifer Hager | Director Transportation Planning & Programming
City of Minneapolis – Public Works | **Public Service Building 505 4th Ave South Room 410 MN 55415**

612-673-3625 | Jenifer.Hager@minneapolismn.gov

From: Sexton, Tim <tim.sexton@minneapolismn.gov>
Sent: Thursday, August 8, 2024 9:19 PM
To: Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Swanson, Jennifer <Jennifer.Swanson@Minneapolismn.gov>; Anderson Kelliher, Margaret <margaret.andersonkelliher@minneapolismn.gov>
Cc: Dodds, Bryan (he/him/his) <bryan.dodds@minneapolismn.gov>
Subject: RE: Rethinking 94

Thanks, Jeni. Appreciate your willingness to coordinate but let's check on a couple items (below) before we respond. Can you pls check w MnDOT about sharing since this hasn't been shared with the PAC, yet?

Jen – thoughts about coordination since this involves multiple CMs? We want to be careful about how we provide feedback and not suggest city staff support.

MAK – please see attached and advise if you have add'l thoughts.

Timothy Sexton (he/him) | Public Works Director | City of Minneapolis | O: 612-673-3071 | C: 612-219-6679 |
timothy.sexton@minneapolismn.gov

From: Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>
Sent: Thursday, August 8, 2024 2:58 PM
To: Sexton, Tim <tim.sexton@minneapolismn.gov>
Cc: Dodds, Bryan (he/him/his) <bryan.dodds@minneapolismn.gov>; Swanson, Jennifer <Jennifer.Swanson@Minneapolismn.gov>
Subject: RE: Rethinking 94

Yes – it is clear.

I think I can offer to assist without sharing that full report because it will be quite a bit for them to go through. Additionally, it was shared at the staff level because it wasn't quite ready for prime time, so the PAC hasn't seen it yet.

Ok if I reach out and offer to assist?

Jenifer Hager | Director Transportation Planning & Programming
City of Minneapolis – Public Works | **Public Service Building 505 4th Ave South Room 410 MN 55415**

612-673-3625 | Jenifer.Hager@minneapolismn.gov

From: Sexton, Tim <tim.sexton@minneapolismn.gov>
Sent: Thursday, August 8, 2024 2:55 PM
To: Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>
Cc: Dodds, Bryan (he/him/his) <bryan.dodds@minneapolismn.gov>; Swanson, Jennifer <Jennifer.Swanson@Minneapolismn.gov>
Subject: FW: Rethinking 94

Hi Jeni – is it clear to you what comment she is referring to?

Timothy Sexton (he/him) | Public Works Director | City of Minneapolis | O: 612-673-3071 | C: 612-219-6679 |
timothy.sexton@minneapolismn.gov

From: Sexton, Tim
Sent: Thursday, August 8, 2024 2:45 PM
To: Omar, Qannani <qannani.omar@minneapolismn.gov>
Cc: Swanson, Jennifer <Jennifer.Swanson@Minneapolismn.gov>; Wonsley, Robin <Robin.Wonsley@minneapolismn.gov>; Robinson, Celeste <celeste.robinson@minneapolismn.gov>; Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Carpio, MJ <mj.carpio@minneapolismn.gov>; Baltazar-Chon, Irene (she/her/hers) <irene.baltazar-chon@minneapolismn.gov>
Subject: RE: Rethinking 94

Thanks, Qannani. I'll check-in with Jeni and we'll follow-up early next week (or earlier, if possible).

Timothy Sexton (he/him) | Public Works Director | City of Minneapolis | O: 612-673-3071 | C: 612-219-6679 |
timothy.sexton@minneapolismn.gov

From: Omar, Qannani <qannani.omar@minneapolismn.gov>
Sent: Thursday, August 8, 2024 2:38 PM
To: Sexton, Tim <tim.sexton@minneapolismn.gov>
Cc: Swanson, Jennifer <Jennifer.Swanson@Minneapolismn.gov>; Wonsley, Robin <Robin.Wonsley@minneapolismn.gov>; Robinson, Celeste <celeste.robinson@minneapolismn.gov>; Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Carpio, MJ <mj.carpio@minneapolismn.gov>; Baltazar-Chon, Irene (she/her/hers) <irene.baltazar-chon@minneapolismn.gov>
Subject: RE: Rethinking 94

Hi All,

I have added staff from CM Cashman and Osman's office as they are co-authors on the resolution.

We all met earlier this week to begin reconciling edits and had a follow-up request regarding a comment Jeni made about the latest draft of alternative evaluations MnDOT has shared with staff. Would you be willing to share that with our offices? If there are significant differences or additional information than what was presented in the last PAC meeting, we would love to either incorporate it or cut down some of the requests in the resolution.

Thank you,
Qannani

Qannani Omar (she/her/hers)
Policy Aide

City of Minneapolis - Ward 2
Office of Council Member Robin Wonsley
350 S. Fifth St.
Minneapolis, MN 55415

Office: 612-673-2202

From: Sexton, Tim <tim.sexton@minneapolismn.gov>
Sent: Wednesday, July 31, 2024 6:40 PM
To: Omar, Qannani <qannani.omar@minneapolismn.gov>
Cc: Swanson, Jennifer <Jennifer.Swanson@Minneapolismn.gov>; Wonsley, Robin <Robin.Wonsley@minneapolismn.gov>; Robinson, Celeste <celeste.robinson@minneapolismn.gov>; Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>
Subject: RE: Rethinking 94

Hi Qannani,

I've attached some technical comments for your consideration. We appreciate you working with us to get initial thoughts/feedback.

Jeni Hager worked with her team to develop the comments and is also included here.

Respectfully,
Tim

Timothy Sexton (he/him) | Public Works Director | City of Minneapolis | O: 612-673-3071 | C: 612-219-6679 |
timothy.sexton@minneapolismn.gov

From: Omar, Qannani <qannani.omar@minneapolismn.gov>
Sent: Wednesday, July 31, 2024 1:36 PM
To: Sexton, Tim <tim.sexton@minneapolismn.gov>
Cc: Swanson, Jennifer <Jennifer.Swanson@Minneapolismn.gov>; Wonsley, Robin <Robin.Wonsley@minneapolismn.gov>; Robinson, Celeste <celeste.robinson@minneapolismn.gov>
Subject: RE: Rethinking 94

Hi All,

I wanted to bump this request because I know you shared there was some feedback you would like our office to look over before submitting. We are hoping to submit for the next cycle and would love to incorporate any important changes into the draft.

Thanks so much!

Qannani

Qannani Omar (she/her/hers)
Policy Aide

City of Minneapolis - Ward 2
Office of Council Member Robin Wonsley
350 S. Fifth St.
Minneapolis, MN 55415

Office: 612-673-2202

From: Omar, Qannani
Sent: Thursday, July 11, 2024 3:34 PM
To: Sexton, Tim <tim.sexton@minneapolismn.gov>
Cc: Swanson, Jennifer <Jennifer.Swanson@Minneapolismn.gov>; Wonsley, Robin <Robin.Wonsley@minneapolismn.gov>
Subject: Rethinking 94

Director Sexton,

Thank you again for meeting with our office to discuss the grant. I have already reached out to Will to get us scheduled for 13.43 and look forward to continuing the conversation there.

I also wanted to provide a few updates regarding this topic since we last spoke. First, I reached out to Our Streets and learned they have been meeting with MnDOT to discuss this grant and as of now, MnDOT will not be applying as an agency. They did indicate they were open to writing letters of recommendations for agencies/groups seeking to apply.

Second, our office is also looking to advance a resolution regarding this project. I have attached a copy for your review and would welcome any feedback.

Again, I look forward to connecting in the next couple of weeks and please don't hesitate to reach out with any questions or concerns in the meantime.

Have a great day,

Qannani

Qannani Omar (she/her/hers)
Policy Aide

City of Minneapolis - Ward 2
Office of Council Member Robin Wonsley
350 S. Fifth St.
Minneapolis, MN 55415

Office: 612-673-2202

Be It Further Resolved that the City Council supports amending the Rethinking I-94 project's evaluation criteria to better measure and prioritize the impacts on adjacent neighborhoods, including adding specificity to metrics of air ~~pollution~~quality, public health and the environment, equity, ~~mobility~~walkability and bikeability, sense of place, and connectivity, of which the current measures are vaguely defined and provide little value for evaluating the differences between project alternatives.

Commented [HJ(1]: In our staff letter to MnDOT on the alternatives evaluation draft, we provided comments related to a need for improved metrics on air pollution, additional metrics on bike/walk safety and comfort, additional metrics on economic vitality, improved metrics on sense of place, additional metric on EJ urban heat island effect impacts. Some of these comments may be addressed in the latest draft of the alternatives evaluation, which was shared recently and needs review by staff.

Commented [HJ(2R1]: After completing a preliminary review of the updated scoping alternatives evaluation draft for the identified criteria in the resolution, staff determined there are no substantive change between the previous draft and this draft for these criteria. There are additional metrics for some of these evaluation criteria identified for Tier I EIS, but this evaluation will not take place until after scoping. Edits to this text align with language used in the scoping document to add clarity on which criteria need further specificity in the latest scoping alternatives evaluation draft.

Commented [HJ(3R1]: In summary, staff recommend inclusion of this statement.

Rethinking I-94 Alternative Safety Analysis

This preliminary safety analysis was performed as part of the Scoping Decision Document (SDD) phase of Rethinking I-94. Additional analysis will be performed in the future during the Tier 1 Environmental Impact Statement (EIS) phase. At the EIS phase, more details will be known about the geometric design and traffic operations of the alternatives, and more precise safety analysis will be possible.

There are 10 alternatives under consideration in the SDD phase, listed in **Table 1**. For traffic modeling purposes, Maintenance A and Maintenance B are the same as No Build, and At Grade Roadways A and B are the same.

Table 1. Alternatives considered in the scoping phase.

Alternative	Description
No Build	Current freeway configuration of I-94 with three to four general-purpose lanes in each direction
Maintenance A	Current freeway configuration of I-94
Maintenance B	Current freeway configuration of I-94 with full bus shoulder
At Grade Roadway A	Two low-speed travel lanes in each direction with bus lanes in the median
At Grade Roadway B	Two low-speed travel lanes in each direction with bus lanes on the outside
Local/Regional Roadways	Two parallel facilities: a limited-access facility with two general purpose lanes in each direction, three or four access points, and shoulders for buses, and local at-grade roadways on each side with one lane in each direction
Reduced Freeway	Two general purpose lanes and one managed lane in each direction
Reconfigured Freeway	Three general purpose lanes and one managed lane in each direction
Expanded Freeway A	Three to four general purpose lanes and one managed lane in each direction
Expanded Freeway B	Four to five general purpose lanes with a full shoulder in each direction

These alternatives represent a wide range of changes to vehicle capacity on I-94 and would have a wide range of traffic impacts on the surrounding network. The alternatives that add capacity would shift some traffic from nearby local streets onto the freeway. Alternatives that reduce capacity would shift traffic away from I-94 to other routes up to several miles away. This would lead to potential traffic safety impacts on roadway segments and intersections that are not immediately adjacent to the project location. This analysis considers safety on the surrounding network in addition to I-94 within the logical termini to evaluate the net impact of the alternatives.

Safety evaluation criteria

The safety evaluation criteria that have been developed for the Scoping Decision Document (SDD) and Tier 1 Environmental Impact Statement (EIS) phases of the project are shown in **Table 2**. These criteria were selected with input from MnDOT and Federal Highway Administration traffic safety staff. The evaluation criteria for the SDD and Tier 1 EIS have been developed concurrently for review and general agreement.

Table 2. Evaluation criteria for safety for people in motorized vehicles.

Phase	Measures
Scoping Decision Document	Qualitative Assessment - Alternative addresses the number and severity of crashes along the corridor (Yes/No) Crash comparison to similar facility types
Tier 1 EIS	Crashes and Crash Rate Reduction Crash Cost Reduction Crash comparison to similar facility types

The inputs for calculating network crashes are vehicle miles traveled (VMT) from the Metropolitan Council's regional travel demand model for each alternative and statewide average crash rates by roadway type. Expected crashes vary by alternative because total VMT varies and because the share of VMT that shifts from the existing freeway to roadways with higher typical crash rates also varies.

The travel demand modeling at this stage of the project provides a preliminary look into how each alternative could perform from a high-level operations perspective. The traffic measures in the regional model are based on link capacity and do not have the precision that would be possible with a microsimulation model. Weaving, queuing, lane assignment, traffic control, and geometric details can have a substantial impact on traffic flow that is not reflected in the travel demand model. The model can give a broad, qualitative indication of the traffic diversion that would occur with the alternatives, but its accuracy in estimating link-level volumes is limited, particularly for lower-volume, lower-functional class roadways. To account for this uncertainty, increases or decreases in crashes of less than 2 percent were considered neutral or no change from No Build in the evaluation of alternatives.

The safety evaluation initially proposed using crash modification factors (CMFs) and Highway Safety Manual methods during scoping. Because of the high level of the current phase of analysis and the range of alternatives under consideration, a crash comparison to similar types of roadways was determined to be a better method of analysis. CMFs are available in the Federal Highway Administration Crash Modification Factors Clearinghouse for some elements of some of the alternatives, but not all. Even where CMFs are available, some alternatives would lead to changes in traffic volume that would be outside the range of CMF applicability. Other alternatives would require the inverse of a CMF that is available (e.g., there is a CMF for converting a signalized intersection to an interchange, but not for converting an interchange to a signalized intersection), and applying CMFs in that way is not valid.

The safety criteria for the Tier 1 EIS may be reviewed in the future as alternatives are further refined and more design details become known so better comparisons between alternatives can be made. Traffic simulations will be conducted to evaluate the mobility impacts in a more precise and detailed way than is possible with the regional travel demand model. This may enable use of the Surrogate Safety Assessment Model (SSAM) to analyze crash risk based on conflicting vehicle movements that would occur with each alternative. CMFs may also be used at that stage to calculate crash reduction potential for individual design elements.

The following sections of this document describe the impact of the alternatives on expected crashes based on roadway segment data analysis, intersection data analysis, and a qualitative assessment. This analysis considers the safety of people in motorized vehicles. Walkability and bikeability criteria address safety-related concerns for pedestrians and bicyclists.

Segment crash rate analysis

Statewide average five-year crash rates were provided by MnDOT by roadway type in the 2018-2022 Crash Data Toolkit for segments. These rates are shown in **Table 3**. The analysis considered overall crash rates and fatal/serious injury crash rates. The Crash Data Toolkit contains segment rates including and not including intersections; the rates including intersections were used for this analysis.

Table 3. 2018-2022 statewide average segment crash rates by roadway type (including intersections). Crash rates are per million VMT. Fatal and serious injury crash rates are per 100 million VMT.

Roadway Category	Fatal and Serious Injury Crash Rate	Crash Rate
Rural 2-Lane AADT 1-1499	4.239	0.509
Rural 2-Lane AADT 1500-4999	2.599	0.451
Rural 2-Lane AADT 5000-7999	2.643	0.499
Rural 2-Lane AADT 8000+	2.427	0.560
Rural 4-Lane Undivided	1.176	0.501
Rural 4-Lane Divided	1.764	0.856
Rural Expressway	1.328	0.491
Rural Freeway	0.723	0.527
Urban 2-Lane AADT 1-1499	6.765	0.831
Urban 2-Lane AADT 1500-4999	2.736	0.867
Urban 2-Lane AADT 5000-7999	2.737	1.101
Urban 2-Lane AADT 8000+	2.265	1.220
Urban 4-Lane Undivided	3.756	2.052
Urban 4-Lane Divided	3.226	1.870
Urban Expressway	1.848	0.981
Urban Freeway	0.660	0.926

2045 VMT was estimated for each roadway type for each alternative using the Metropolitan Council's regional travel demand model as described in a separate memo[1]. Each segment in the model network was assigned to one of the roadway categories listed in **Table 3**. VMT was then calculated for each roadway category for each alternative based on the daily volume from the model and the length of the segment.

[1] Rethinking I-94: Preliminary Traffic and Transit Analysis of Alternatives Memo, January 2024

For each alternative, expected crashes were summarized for these four areas:

1. the I-94 corridor within the logical termini (I-35W to Marion Street)
2. Roadways within one mile of the logical termini
3. Roadways within a larger buffer area that includes most of the VMT shift
4. The seven-county Twin Cities metro area

The results are summarized at each of these levels in **Tables 4-7**. More detailed results are presented in the following sections for each alternative. The one-mile buffer around the logical termini is shown in **Figure 1**, and the larger buffer area is shown in **Figure 2**.

Table 4. Expected crashes per day within the I-94 logical termini.

Alternative	2045 VMT	Change	Crash Rate	Total Crashes	Change	Severe Crash Rate	Severe Crashes	Change
No Build	1,170,000	—	0.926	1.08	—	0.660	0.008	—
Expanded Freeway B	1,293,000	11%	0.926	1.20	11%	0.660	0.009	11%
Expanded Freeway A	1,303,000	11%	0.926	1.21	11%	0.660	0.009	11%
Reconfigured Freeway	1,216,000	4%	0.926	1.13	4%	0.660	0.008	4%
Reduced Freeway	925,000	-21%	0.926	0.86	-21%	0.660	0.006	-21%
At-Grade Roadway	242,000	-79%	1.870	0.45	-58%	3.226	0.008	1%
Local Regional 4 Access Points	695,000	-41%	0.926	0.64	-41%	0.660	0.005	-41%
Local Regional 3 Access Points	676,000	-42%	0.926	0.63	-42%	0.660	0.004	-42%

Table 5. Expected crashes per day on other roadways within one mile of the I-94 logical termini.

Alternative	2045 VMT	Change	Total Crashes	Change	Severe Crashes	Change
No Build	2,724,000	—	3.65	—	0.056	—
Expanded Freeway B	2,745,000	1%	3.67	0%	0.056	0%
Expanded Freeway A	2,729,000	0%	3.63	-1%	0.055	-2%
Reconfigured Freeway	2,721,000	0%	3.62	-1%	0.055	-2%
Reduced Freeway	2,682,000	-2%	3.62	-1%	0.056	0%
At-Grade Roadway	2,594,000	-5%	3.67	0%	0.059	5%
Local Regional 4 Access Points	2,813,000	3%	3.77	3%	0.059	5%
Local Regional 3 Access Points	2,841,000	4%	3.83	5%	0.060	7%

Table 6. Expected crashes per day within the larger buffer of the I-94 logical termini (not including I-94; including other roadways within the one-mile buffer).

Alternative	2045 VMT	Change	Total Crashes	Change	Severe Crashes	Change
No Build	9,598,000	—	11.68	—	0.166	—
Expanded Freeway B	9,591,000	0%	11.67	0%	0.166	0%
Expanded Freeway A	9,563,000	0%	11.60	-1%	0.164	-1%
Reconfigured Freeway	9,591,000	0%	11.64	0%	0.165	-1%
Reduced Freeway	9,647,000	1%	11.77	1%	0.168	1%
At-Grade Roadway	9,877,000	3%	12.25	5%	0.177	7%
Local Regional 4 Access Points	9,806,000	2%	11.97	2%	0.172	4%
Local Regional 3 Access Points	9,842,000	3%	12.04	3%	0.173	4%

Table 7. Expected crashes per day in the seven-county metro area (including I-94 and all other roadways).

Alternative	2045 VMT	Change	Total Crashes	Change	Severe Crashes	Change
No Build	79,666,000	—	80.60	—	1.338	—
Expanded Freeway B	79,929,000	0.3%	80.91	0.4%	1.342	0.3%
Expanded Freeway A	79,805,000	0.2%	80.70	0.1%	1.338	0.0%
Reconfigured Freeway	79,840,000	0.2%	80.79	0.2%	1.340	0.2%
Reduced Freeway	79,681,000	0.0%	80.75	0.2%	1.343	0.4%
At-Grade Roadway	79,324,000	-0.4%	80.97	0.4%	1.356	1.4%
Local Regional 4 Access Points	79,493,000	-0.2%	80.63	0.0%	1.344	0.5%
Local Regional 3 Access Points	79,437,000	-0.3%	80.51	-0.1%	1.342	0.3%

On I-94, the expected change in crashes compared to No Build is the same as the expected change in VMT for all alternatives except the At-Grade Roadway. The Expanded Freeway alternatives would add capacity and draw traffic into the corridor, which would lead to a corresponding increase in crashes. The Reconfigured Freeway would see little change in crashes. The Reduced Freeway and the Local/Regional Roadways would decrease capacity and lead to a decrease in VMT and therefore a decrease in crashes. (Results in **Table 4** for the Local/Regional Roadway alternatives are for the regional roadways only.) The expected crash rate for the At-Grade Roadway is about twice as high as a freeway, and the severe crash rate would be nearly five times higher. With the At-Grade Roadway, daily VMT in the corridor would decrease by about 80 percent compared to No Build, but total crashes would only decrease by about 60 percent and severe crashes would not decrease at all.

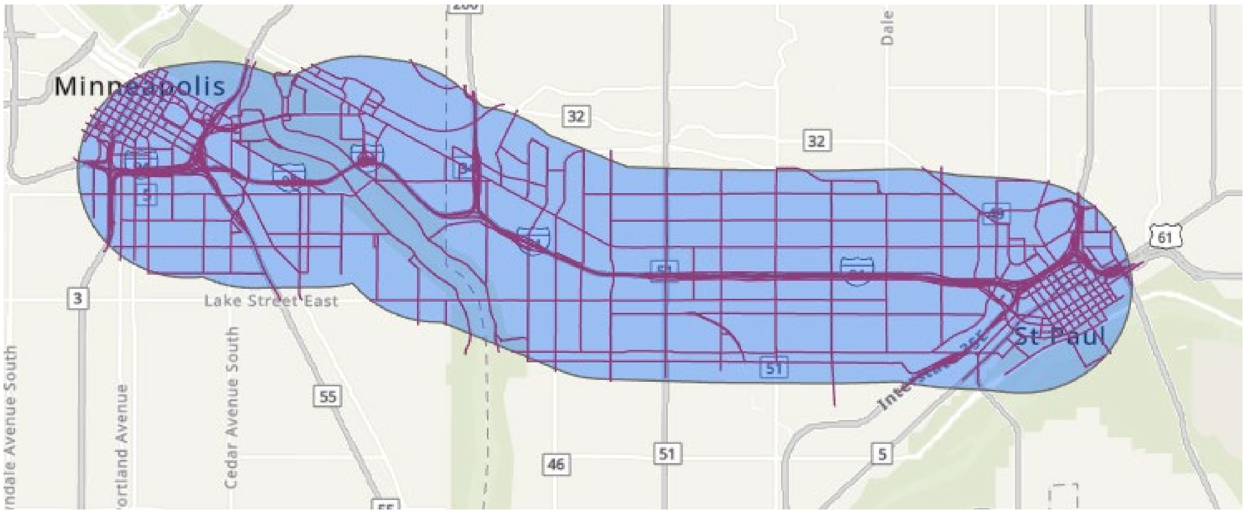


Figure 1. One-mile buffer around the I-94 logical termini.

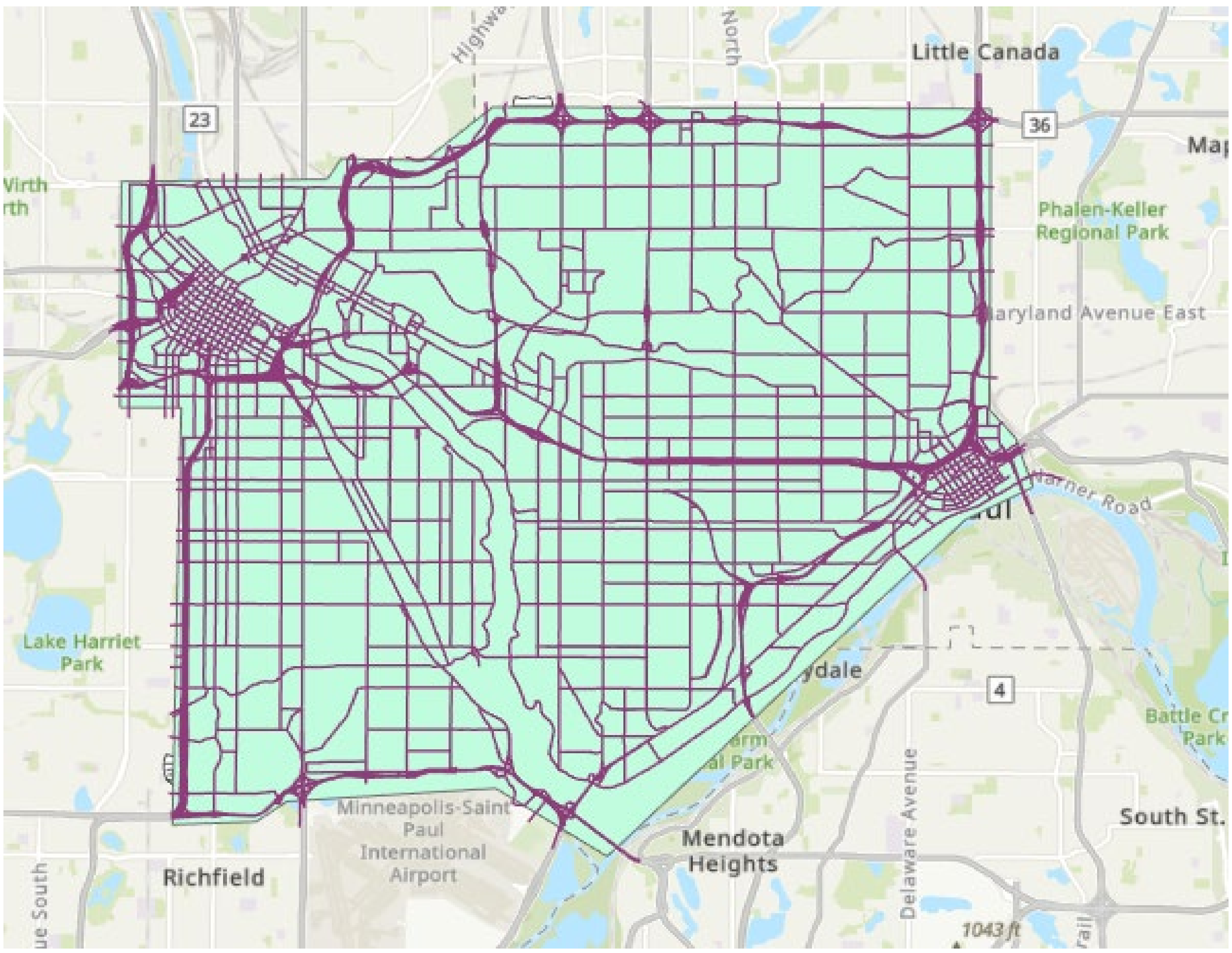


Figure 2. Larger buffer around the I-94 logical termini, determined based on shifts in VMT.

Other roadways within one mile of I-94 would not see much change in VMT or expected crashes with alternatives that increase or preserve capacity on I-94. The Local/Regional Roadway alternatives increase VMT and expected crashes on these roadways by around 5 percent. The At-Grade Roadway would decrease VMT by about 5 percent but increase crashes by about 5 percent.

On routes within the larger buffer, the Local/Regional Roadways and the At-Grade Roadway would lead to small increases in both VMT and expected crashes. Across the seven-county metro area, none of the alternatives would increase or decrease VMT or total crashes by more than 1 percent, but the At-Grade Roadway would increase expected severe crashes by more than 1 percent, as a large volume of traffic would shift away from the I-94 freeway onto alternate routes with higher typical crash rates.

At-Grade Roadway

The At-Grade Roadway alternatives would lead to the greatest changes in VMT throughout the network. Large volumes of traffic would shift away from the I-94 freeway to alternate at-grade routes with higher average crash rates. Within one mile of I-94, overall VMT would decrease by 27 percent, but total crashes would only decrease by 13 percent and severe crashes would increase by 4 percent. Within the larger buffer area, VMT would decrease by 6 percent, but total crashes would not change, and severe crashes would increase by 7 percent. Data for the one-mile buffer area is shown in **Table 8**, and data for the larger buffer area is shown in **Table 9**.

Local/Regional Roadways

The Local/Regional Roadways would also lead to shifts in VMT away from the freeway onto other roadways with at-grade intersections, but not to the same extent as the At-Grade Roadway. Two Local/Regional Roadway alternatives were analyzed, one with four access points that includes an interchange at Snelling Avenue, and one with three access points that does not. Results are similar for both alternatives. Within one mile of I-94, overall VMT would decrease by 10 percent, but total crashes would only decrease by 6-7 percent and severe crashes would be unchanged. Within the larger buffer area, VMT would decrease by 2 percent, but total crashes would not change, and severe crashes would increase by 2 percent. Data for the one-mile buffer area is shown in **Tables 10 and 11**, and data for the larger buffer area is shown in **Tables 12 and 13**.

Reduced Freeway

The Reduced Freeway would have a similar impact on traffic patterns in the surrounding area as the Local/Regional Roadways. Within one mile of I-94, overall VMT would decrease by 7 percent, total crashes would decrease by 6 percent, and severe crashes would decrease by 3 percent. Within the larger buffer area, VMT would decrease by 2 percent, but total crashes and severe crashes would be unchanged. Data for the one-mile buffer area is shown in **Table 14**, and data for the larger buffer area is shown in **Table 15**.

Reconfigured Freeway

The Reconfigured Freeway would have similar capacity to the existing freeway, so it would have little impact on traffic in the surrounding area. Within one mile of I-94, VMT, total crashes, and severe crashes would all change by 1 percent or less. Within the larger buffer area, changes in all three measures would be less than 1 percent. Data for the one-mile buffer area is shown in **Table 16**, and data for the larger buffer area is shown in **Table 17**.

Expanded Freeway A

Expanded Freeway A would increase capacity on I-94, which would attract traffic onto the freeway away from nearby at-grade roadways. This would increase VMT slightly as some drivers would choose to travel additional distance in order to save time, but the increased share of VMT on freeways compared to other roadway types would lead to a lower corresponding increase in crashes. Within one mile of I-94, overall VMT would increase by 4 percent, total crashes would increase by 2 percent, and severe crashes would not change. Within the larger buffer area, VMT would increase by 1 percent, but total crashes and severe crashes would both change by less than 1 percent. Data for the one-mile buffer area is shown in **Table 18**, and data for the larger buffer area is shown in **Table 19**.

Expanded Freeway B

Expanded Freeway B would add similar capacity to Expanded Freeway A and would have similar traffic impacts. Within one mile of I-94, overall VMT would increase by 4 percent, total crashes would increase by 3 percent, and severe crashes would increase by 2 percent. Within the larger buffer area, VMT and total crashes would increase by 1 percent, but severe crashes would not change. Data for the one-mile buffer area is shown in **Table 20**, and data for the larger buffer area is shown in **Table 21**.

Table 8. Expected crashes by roadway category for the At-Grade Roadway compared to No Build for the one-mile buffer area (including I-94).

Roadway Category	No Build			At-Grade Roadway					
	VMT	**K+A Crashes**	**Total Crashes**	**VMT**	**Change**	**K+A Crashes**	**Change**	**Total Crashes**	**Change**
Urban 2-Lane AADT 1-1499	11,079	0.001	0.009	7,974	-28.0%	0.001	-28.0%	0.007	-28.0%
Urban 2-Lane AADT 1500-4999	91,112	0.002	0.079	87,645	-3.8%	0.002	-3.8%	0.076	-3.8%
Urban 2-Lane AADT 5000-7999	78,361	0.002	0.086	93,543	19.4%	0.003	19.4%	0.103	19.4%
Urban 2-Lane AADT 8000+	276,420	0.006	0.337	268,647	-2.8%	0.006	-2.8%	0.328	-2.8%
Urban 4-Lane Undivided	563,466	0.021	1.156	619,473	9.9%	0.023	9.9%	1.271	9.9%
Urban 4-Lane Divided	427,165	0.014	0.799	744,195	74.2%	0.024	74.2%	1.392	74.2%
Urban Expressway	98,103	0.002	0.096	97,314	-0.8%	0.002	-0.8%	0.095	-0.8%
Urban Freeway	2,348,424	0.015	2.175	916,712	-61.0%	0.006	-61.0%	0.849	-61.0%
Sum	3,894,000	0.064	4.738	2,836,000	-27.2%	0.067	4.4%	4.120	-13.0%

Table 9. Expected crashes by roadway category for the At-Grade Roadway compared to No Build for the larger buffer area (including I-94).

Roadway Category	No Build			At-Grade Roadway					
	VMT	**K+A Crashes**	**Total Crashes**	**VMT**	**Change**	**K+A Crashes**	**Change**	**Total Crashes**	**Change**
Urban 2-Lane AADT 1-1499	38,623	0.003	0.032	32,561	-15.7%	0.002	-15.7%	0.027	-15.7%
Urban 2-Lane AADT 1500-4999	300,892	0.008	0.261	287,422	-4.5%	0.008	-4.5%	0.249	-4.5%
Urban 2-Lane AADT 5000-7999	276,973	0.008	0.305	310,440	12.1%	0.008	12.1%	0.342	12.1%
Urban 2-Lane AADT 8000+	790,395	0.018	0.964	869,527	10.0%	0.020	10.0%	1.061	10.0%
Urban 4-Lane Undivided	1,435,696	0.054	2.946	1,594,604	11.1%	0.060	11.1%	3.272	11.1%
Urban 4-Lane Divided	934,107	0.030	1.747	1,288,198	37.9%	0.042	37.9%	2.409	37.9%
Urban Expressway	595,962	0.011	0.585	643,394	8.0%	0.012	8.0%	0.631	8.0%
Urban Freeway	6,395,377	0.042	5.922	5,093,338	-20.4%	0.034	-20.4%	4.716	-20.4%
Sum	10,768,000	0.174	12.762	10,119,000	-6.0%	0.185	6.7%	12.708	-0.4%

Table 10. Expected crashes by roadway category for the Local/Regional Roadways with four access points compared to No Build for the one-mile buffer area (including I-94).

	No Build			Local Regional 4 Access Points					
Roadway Category	**VMT**	**K+A Crashes**	**Total Crashes**	**VMT**	**Change**	**K+A Crashes**	**Change**	**Total Crashes**	**Change**
Urban 2-Lane AADT 1-1499	11,079	0.001	0.009	10,137	-8.5%	0.001	-8.5%	0.008	-8.5%
Urban 2-Lane AADT 1500-4999	91,112	0.002	0.079	94,663	3.9%	0.003	3.9%	0.082	3.9%
Urban 2-Lane AADT 5000-7999	78,361	0.002	0.086	100,969	28.8%	0.003	28.8%	0.111	28.8%
Urban 2-Lane AADT 8000+	276,420	0.006	0.337	405,383	46.7%	0.009	46.7%	0.495	46.7%
Urban 4-Lane Undivided	563,466	0.021	1.156	565,898	0.4%	0.021	0.4%	1.161	0.4%
Urban 4-Lane Divided	427,165	0.014	0.799	419,490	-1.8%	0.014	-1.8%	0.784	-1.8%
Urban Expressway	98,103	0.002	0.096	99,902	1.8%	0.002	1.8%	0.098	1.8%
Urban Freeway	2,348,424	0.015	2.175	1,811,431	-22.9%	0.012	-22.9%	1.677	-22.9%
Sum	3,894,000	0.064	4.738	3,508,000	-9.9%	0.064	-0.1%	4.417	-6.8%

Table 11. Expected crashes by roadway category for the Local/Regional Roadways with three access points compared to No Build for the one-mile buffer area (including I-94).

	No Build			Local Regional 3 Access Points					
Roadway Category	**VMT**	**K+A Crashes**	**Total Crashes**	**VMT**	**Change**	**K+A Crashes**	**Change**	**Total Crashes**	**Change**
Urban 2-Lane AADT 1-1499	11,079	0.001	0.009	11,345	2.4%	0.001	2.4%	0.009	2.4%
Urban 2-Lane AADT 1500-4999	91,112	0.002	0.079	95,120	4.4%	0.003	4.4%	0.082	4.4%
Urban 2-Lane AADT 5000-7999	78,361	0.002	0.086	94,108	20.1%	0.003	20.1%	0.104	20.1%
Urban 2-Lane AADT 8000+	276,420	0.006	0.337	425,750	54.0%	0.010	54.0%	0.519	54.0%
Urban 4-Lane Undivided	563,466	0.021	1.156	573,872	1.8%	0.022	1.8%	1.178	1.8%
Urban 4-Lane Divided	427,165	0.014	0.799	436,192	2.1%	0.014	2.1%	0.816	2.1%
Urban Expressway	98,103	0.002	0.096	100,188	2.1%	0.002	2.1%	0.098	2.1%
Urban Freeway	2,348,424	0.015	2.175	1,780,040	-24.2%	0.012	-24.2%	1.648	-24.2%
Sum	3,894,000	0.064	4.738	3,517,000	-9.7%	0.065	1.4%	4.455	-6.0%

Table 12. Expected crashes by roadway category for the Local/Regional Roadways with four access points compared to No Build for the larger buffer area (including I-94).

	No Build			Local Regional 4 Access Points					
Roadway Category	**VMT**	**K+A Crashes**	**Total Crashes**	**VMT**	**Change**	**K+A Crashes**	**Change**	**Total Crashes**	**Change**
Urban 2-Lane AADT 1-1499	38,623	0.003	0.032	36,710	-5.0%	0.002	-5.0%	0.031	-5.0%
Urban 2-Lane AADT 1500-4999	300,892	0.008	0.261	301,472	0.2%	0.008	0.2%	0.261	0.2%
Urban 2-Lane AADT 5000-7999	276,973	0.008	0.305	311,892	12.6%	0.009	12.6%	0.343	12.6%
Urban 2-Lane AADT 8000+	790,395	0.018	0.964	942,831	19.3%	0.021	19.3%	1.150	19.3%
Urban 4-Lane Undivided	1,435,696	0.054	2.946	1,469,351	2.3%	0.055	2.3%	3.015	2.3%
Urban 4-Lane Divided	934,107	0.030	1.747	938,751	0.5%	0.030	0.5%	1.755	0.5%
Urban Expressway	595,962	0.011	0.585	615,999	3.4%	0.011	3.4%	0.604	3.4%
Urban Freeway	6,395,377	0.042	5.922	5,883,586	-8.0%	0.039	-8.0%	5.448	-8.0%
Sum	10,768,000	0.174	12.762	10,501,000	-2.5%	0.176	1.6%	12.609	-1.2%

Table 13. Expected crashes by roadway category for the Local/Regional Roadways with three access points compared to No Build for the larger buffer area (including I-94).

	No Build			Local Regional 3 Access Points					
Roadway Category	**VMT**	**K+A Crashes**	**Total Crashes**	**VMT**	**Change**	**K+A Crashes**	**Change**	**Total Crashes**	**Change**
Urban 2-Lane AADT 1-1499	38,623	0.003	0.032	36,716	-4.9%	0.002	-4.9%	0.031	-4.9%
Urban 2-Lane AADT 1500-4999	300,892	0.008	0.261	297,946	-1.0%	0.008	-1.0%	0.258	-1.0%
Urban 2-Lane AADT 5000-7999	276,973	0.008	0.305	308,732	11.5%	0.008	11.5%	0.340	11.5%
Urban 2-Lane AADT 8000+	790,395	0.018	0.964	972,530	23.0%	0.022	23.0%	1.186	23.0%
Urban 4-Lane Undivided	1,435,696	0.054	2.946	1,485,752	3.5%	0.056	3.5%	3.049	3.5%
Urban 4-Lane Divided	934,107	0.030	1.747	957,880	2.5%	0.031	2.5%	1.791	2.5%
Urban Expressway	595,962	0.011	0.585	620,138	4.1%	0.011	4.1%	0.608	4.1%
Urban Freeway	6,395,377	0.042	5.922	5,838,078	-8.7%	0.039	-8.7%	5.406	-8.7%
Sum	10,768,000	0.174	12.762	10,518,000	-2.3%	0.178	2.4%	12.670	-0.7%

Table 14. Expected crashes by roadway category for the Reduced Freeway compared to No Build for the one-mile buffer area (including I-94).

Roadway Category	No Build			Reduced Freeway					
	VMT	**K+A Crashes**	**Total Crashes**	**VMT**	**Change**	**K+A Crashes**	**Change**	**Total Crashes**	**Change**
Urban 2-Lane AADT 1-1499	11,079	0.001	0.009	11,585	4.6%	0.001	4.6%	0.010	4.6%
Urban 2-Lane AADT 1500-4999	91,112	0.002	0.079	92,009	1.0%	0.003	1.0%	0.080	1.0%
Urban 2-Lane AADT 5000-7999	78,361	0.002	0.086	85,830	9.5%	0.002	9.5%	0.094	9.5%
Urban 2-Lane AADT 8000+	276,420	0.006	0.337	256,319	-7.3%	0.006	-7.3%	0.313	-7.3%
Urban 4-Lane Undivided	563,466	0.021	1.156	572,276	1.6%	0.021	1.6%	1.174	1.6%
Urban 4-Lane Divided	427,165	0.014	0.799	422,389	-1.1%	0.014	-1.1%	0.790	-1.1%
Urban Expressway	98,103	0.002	0.096	102,501	4.5%	0.002	4.5%	0.101	4.5%
Urban Freeway	2,348,424	0.015	2.175	2,064,328	-12.1%	0.014	-12.1%	1.912	-12.1%
Sum	3,894,000	0.064	4.738	3,607,000	-7.4%	0.062	-2.8%	4.473	-5.6%

Table 15. Expected crashes by roadway category for the Reduced Freeway compared to No Build for the larger buffer area (including I-94).

Roadway Category	No Build			Reduced Freeway					
	VMT	**K+A Crashes**	**Total Crashes**	**VMT**	**Change**	**K+A Crashes**	**Change**	**Total Crashes**	**Change**
Urban 2-Lane AADT 1-1499	38,623	0.003	0.032	37,726	-2.3%	0.003	-2.3%	0.031	-2.3%
Urban 2-Lane AADT 1500-4999	300,892	0.008	0.261	301,097	0.1%	0.008	0.1%	0.261	0.1%
Urban 2-Lane AADT 5000-7999	276,973	0.008	0.305	289,788	4.6%	0.008	4.6%	0.319	4.6%
Urban 2-Lane AADT 8000+	790,395	0.018	0.964	788,931	-0.2%	0.018	-0.2%	0.962	-0.2%
Urban 4-Lane Undivided	1,435,696	0.054	2.946	1,466,240	2.1%	0.055	2.1%	3.009	2.1%
Urban 4-Lane Divided	934,107	0.030	1.747	941,133	0.8%	0.030	0.8%	1.760	0.8%
Urban Expressway	595,962	0.011	0.585	612,079	2.7%	0.011	2.7%	0.600	2.7%
Urban Freeway	6,395,377	0.042	5.922	6,135,208	-4.1%	0.040	-4.1%	5.681	-4.1%
Sum	10,768,000	0.174	12.762	10,572,000	-1.8%	0.174	0.1%	12.624	-1.1%

Table 16. Expected crashes by roadway category for the Reconfigured Freeway compared to No Build for the one-mile buffer area (including I-94).

Roadway Category	No Build			Reconfigured Freeway					
	VMT	**K+A Crashes**	**Total Crashes**	**VMT**	**Change**	**K+A Crashes**	**Change**	**Total Crashes**	**Change**
Urban 2-Lane AADT 1-1499	11,079	0.001	0.009	11,072	-0.1%	0.001	-0.1%	0.009	-0.1%
Urban 2-Lane AADT 1500-4999	91,112	0.002	0.079	94,635	3.9%	0.003	3.9%	0.082	3.9%
Urban 2-Lane AADT 5000-7999	78,361	0.002	0.086	73,256	-6.5%	0.002	-6.5%	0.081	-6.5%
Urban 2-Lane AADT 8000+	276,420	0.006	0.337	260,102	-5.9%	0.006	-5.9%	0.317	-5.9%
Urban 4-Lane Undivided	563,466	0.021	1.156	560,384	-0.5%	0.021	-0.5%	1.150	-0.5%
Urban 4-Lane Divided	427,165	0.014	0.799	407,389	-4.6%	0.013	-4.6%	0.762	-4.6%
Urban Expressway	98,103	0.002	0.096	99,010	0.9%	0.002	0.9%	0.097	0.9%
Urban Freeway	2,348,424	0.015	2.175	2,430,805	3.5%	0.016	3.5%	2.251	3.5%
Sum	3,894,000	0.064	4.738	3,937,000	1.1%	0.063	-0.9%	4.749	0.2%

Table 17. Expected crashes by roadway category for the Reconfigured Freeway compared to No Build for the larger buffer area (including I-94).

Roadway Category	No Build			Reconfigured Freeway					
	VMT	**K+A Crashes**	**Total Crashes**	**VMT**	**Change**	**K+A Crashes**	**Change**	**Total Crashes**	**Change**
Urban 2-Lane AADT 1-1499	38,623	0.003	0.032	37,980	-1.7%	0.003	-1.7%	0.032	-1.7%
Urban 2-Lane AADT 1500-4999	300,892	0.008	0.261	306,246	1.8%	0.008	1.8%	0.266	1.8%
Urban 2-Lane AADT 5000-7999	276,973	0.008	0.305	272,335	-1.7%	0.007	-1.7%	0.300	-1.7%
Urban 2-Lane AADT 8000+	790,395	0.018	0.964	774,995	-1.9%	0.018	-1.9%	0.945	-1.9%
Urban 4-Lane Undivided	1,435,696	0.054	2.946	1,431,579	-0.3%	0.054	-0.3%	2.938	-0.3%
Urban 4-Lane Divided	934,107	0.030	1.747	916,143	-1.9%	0.030	-1.9%	1.713	-1.9%
Urban Expressway	595,962	0.011	0.585	593,519	-0.4%	0.011	-0.4%	0.582	-0.4%
Urban Freeway	6,395,377	0.042	5.922	6,473,807	1.2%	0.043	1.2%	5.995	1.2%
Sum	10,768,000	0.174	12.762	10,807,000	0.4%	0.173	-0.4%	12.770	0.1%

Table 18. Expected crashes by roadway category for the Expanded Freeway A compared to No Build for the one-mile buffer area (including I-94).

Roadway Category	No Build			Expanded Freeway A					
	VMT	**K+A Crashes**	**Total Crashes**	**VMT**	**Change**	**K+A Crashes**	**Change**	**Total Crashes**	**Change**
Urban 2-Lane AADT 1-1499	11,079	0.001	0.009	11,296	2.0%	0.001	2.0%	0.009	2.0%
Urban 2-Lane AADT 1500-4999	91,112	0.002	0.079	96,391	5.8%	0.003	5.8%	0.084	5.8%
Urban 2-Lane AADT 5000-7999	78,361	0.002	0.086	71,489	-8.8%	0.002	-8.8%	0.079	-8.8%
Urban 2-Lane AADT 8000+	276,420	0.006	0.337	258,045	-6.6%	0.006	-6.6%	0.315	-6.6%
Urban 4-Lane Undivided	563,466	0.021	1.156	558,949	-0.8%	0.021	-0.8%	1.147	-0.8%
Urban 4-Lane Divided	427,165	0.014	0.799	405,164	-5.2%	0.013	-5.2%	0.758	-5.2%
Urban Expressway	98,103	0.002	0.096	99,625	1.6%	0.002	1.6%	0.098	1.6%
Urban Freeway	2,348,424	0.015	2.175	2,530,942	7.8%	0.017	7.8%	2.344	7.8%
Sum	3,894,000	0.064	4.738	4,032,000	3.5%	0.064	-0.1%	4.832	2.0%

Table 19. Expected crashes by roadway category for the Expanded Freeway A compared to No Build for the larger buffer area (including I-94).

Roadway Category	No Build			Expanded Freeway A					
	VMT	**K+A Crashes**	**Total Crashes**	**VMT**	**Change**	**K+A Crashes**	**Change**	**Total Crashes**	**Change**
Urban 2-Lane AADT 1-1499	38,623	0.003	0.032	39,986	3.5%	0.003	3.5%	0.033	3.5%
Urban 2-Lane AADT 1500-4999	300,892	0.008	0.261	306,289	1.8%	0.008	1.8%	0.266	1.8%
Urban 2-Lane AADT 5000-7999	276,973	0.008	0.305	264,016	-4.7%	0.007	-4.7%	0.291	-4.7%
Urban 2-Lane AADT 8000+	790,395	0.018	0.964	767,780	-2.9%	0.017	-2.9%	0.937	-2.9%
Urban 4-Lane Undivided	1,435,696	0.054	2.946	1,421,971	-1.0%	0.053	-1.0%	2.918	-1.0%
Urban 4-Lane Divided	934,107	0.030	1.747	909,486	-2.6%	0.029	-2.6%	1.701	-2.6%
Urban Expressway	595,962	0.011	0.585	591,958	-0.7%	0.011	-0.7%	0.581	-0.7%
Urban Freeway	6,395,377	0.042	5.922	6,564,777	2.6%	0.043	2.6%	6.079	2.6%
Sum	10,768,000	0.174	12.762	10,866,000	0.9%	0.173	-0.5%	12.804	0.3%

Table 20. Expected crashes by roadway category for the Expanded Freeway B compared to No Build for the one-mile buffer area (including I-94).

Roadway Category	No Build			Expanded Freeway B					
	VMT	**K+A Crashes**	**Total Crashes**	**VMT**	**Change**	**K+A Crashes**	**Change**	**Total Crashes**	**Change**
Urban 2-Lane AADT 1-1499	11,079	0.001	0.009	11,185	0.9%	0.001	0.9%	0.009	0.9%
Urban 2-Lane AADT 1500-4999	91,112	0.002	0.079	96,788	6.2%	0.003	6.2%	0.084	6.2%
Urban 2-Lane AADT 5000-7999	78,361	0.002	0.086	70,065	-10.6%	0.002	-10.6%	0.077	-10.6%
Urban 2-Lane AADT 8000+	276,420	0.006	0.337	280,393	1.4%	0.006	1.4%	0.342	1.4%
Urban 4-Lane Undivided	563,466	0.021	1.156	565,704	0.4%	0.021	0.4%	1.161	0.4%
Urban 4-Lane Divided	427,165	0.014	0.799	424,133	-0.7%	0.014	-0.7%	0.793	-0.7%
Urban Expressway	98,103	0.002	0.096	97,836	-0.3%	0.002	-0.3%	0.096	-0.3%
Urban Freeway	2,348,424	0.015	2.175	2,491,797	6.1%	0.016	6.1%	2.307	6.1%
Sum	3,894,000	0.064	4.738	4,038,000	3.7%	0.065	1.5%	4.870	2.8%

Table 21. Expected crashes by roadway category for the Expanded Freeway B compared to No Build for the larger buffer area (including I-94).

Roadway Category	No Build			Expanded Freeway B					
	VMT	**K+A Crashes**	**Total Crashes**	**VMT**	**Change**	**K+A Crashes**	**Change**	**Total Crashes**	**Change**
Urban 2-Lane AADT 1-1499	38,623	0.003	0.032	39,312	1.8%	0.003	1.8%	0.033	1.8%
Urban 2-Lane AADT 1500-4999	300,892	0.008	0.261	307,976	2.4%	0.008	2.4%	0.267	2.4%
Urban 2-Lane AADT 5000-7999	276,973	0.008	0.305	264,412	-4.5%	0.007	-4.5%	0.291	-4.5%
Urban 2-Lane AADT 8000+	790,395	0.018	0.964	794,637	0.5%	0.018	0.5%	0.969	0.5%
Urban 4-Lane Undivided	1,435,696	0.054	2.946	1,434,336	-0.1%	0.054	-0.1%	2.943	-0.1%
Urban 4-Lane Divided	934,107	0.030	1.747	930,461	-0.4%	0.030	-0.4%	1.740	-0.4%
Urban Expressway	595,962	0.011	0.585	592,889	-0.5%	0.011	-0.5%	0.582	-0.5%
Urban Freeway	6,395,377	0.042	5.922	6,520,296	2.0%	0.043	2.0%	6.038	2.0%
Sum	10,768,000	0.174	12.762	10,884,000	1.1%	0.174	0.3%	12.863	0.8%

Intersection crash rate analysis

The At-Grade Roadway would create particular safety concerns at intersections along nearby parallel routes because of the volume of traffic that would divert away from I-94 with that alternative. This section analyzes select intersections on these routes in more detail.

The cities of Minneapolis and Saint Paul have both defined street networks that are priorities for traffic safety. Minneapolis has identified High Injury Streets as part of Vision Zero planning efforts, including parallel segments near I-94 on University Avenue, Franklin Avenue, and Lake Street. In Saint Paul, the High Injury Street network includes all of University Avenue, Marshall Avenue west of Dale Street, Selby Avenue east of Dale Street, and most streets that have interchanges on I-94.

Based on these documents and the safety analysis developed to support the purpose and need for the I-94 project, the intersections on University Avenue and Marshall Avenue at Snelling Avenue, Lexington Avenue, and Dale Street were selected for more detailed crash rate analysis. The design and control at these intersections is expected to remain the same with all I-94 alternatives, so changes in expected crashes at these intersections are related only to the expected change in traffic volume entering the intersections.

Statewide average five-year crash rates were provided by MnDOT by intersection type in the 2018-2022 Crash Data Toolkit for intersections. These rates are shown in **Table 22**. The analysis considered overall crash rates and fatal and serious injury crash rates. All six of the intersections in this analysis are signalized.

The results of the intersection crash analysis are shown in **Table 23**. The At-Grade Roadways would significantly increase traffic at the University Avenue intersections. At the intersections along Marshall Avenue, increased east-west traffic would be offset by decreased north-south traffic. The Local/Regional Roadways and the Reduced Freeway would also increase the entering volume at these intersections, but not by as much as the At-Grade Roadway. Reconfiguring or expanding the freeway would have a smaller impact on traffic at these intersections.

Table 22. 2018-2022 statewide average intersection crash rates. Crash rates are per million entering vehicles. Fatal and serious injury crash rates are per 100 million entering vehicles.

Intersection Control Category	Fatal and Serious Injury Crash Rate	Crash Rate
Signal, High Volume (>20,000 AADT)	0.96	0.61
Signal, Low Volume (<=20,000 AADT)	1.02	0.55

Table 23. Expected change in intersection entering volume and intersection crashes compared to No Build for each alternative.

Intersection	No build entering AADT	No build total crashes per year	No build fatal and serious injury crashes per year	At Grade Roadways change	Local/Regional Roadways 4 Access Pts change	Local/Regional Roadways 3 Access Pts change	Reduced Freeway change	Reconfigured Freeway change	Expanded Freeway A change	Expanded Freeway B change
University and Snelling	48,470	10.8	0.17	17%	4%	4%	2%	0%	0%	-2%
University and Lexington	35,821	8.0	0.13	32%	5%	10%	4%	0%	-2%	-2%
University and Dale	31,190	6.9	0.11	45%	13%	20%	11%	2%	0%	0%
Marshall and Snelling	53,422	11.9	0.19	4%	-2%	-5%	1%	-4%	-4%	-2%
Marshall and Lexington	29,172	6.5	0.10	0%	-12%	-13%	-1%	1%	0%	1%
Marshall and Dale	12,783	2.6	0.05	-6%	-21%	-25%	-7%	-1%	3%	6%

From: Jack Corkle <JCorkle@wsbeng.com>
To: "Hyink, Jessica (she/her/hers)" <jessica.hyink@minneapolismn.gov>, "Barnes, Melissa (DOT)" <melissa.barnes@state.mn.us>
CC: "Bockheim, Adrienne (she/her/hers)" <adrienne.bockheim@minneapolismn.gov>, "Brasser, Ben (he/him/his)" <benjamin.brasser@minneapolismn.gov>, "Hager, Jenifer (she/her/hers)" <Jenifer.Hager@minneapolismn.gov>
Subject: RE: [EXTERNAL] Rethinking I-94 - Alternatives Evaluation Memo
Date: Thu, 16 May 2024 19:31:43 +0000
Inline-Images: image001.png; image150185.png

Thank you Jessica. We appreciate you and your team pulling this together.

Jack

Jack Corkle, AICP, PTP
Director, Planning
612.719.4540 (o)
WSB | wsbeng.com

From: Hyink, Jessica (she/her/hers) <jessica.hyink@minneapolismn.gov>
Sent: Thursday, May 16, 2024 2:24 PM
To: Jack Corkle <JCorkle@wsbeng.com>; Barnes, Melissa (DOT) <melissa.barnes@state.mn.us>
Cc: Bockheim, Adrienne b <adrienne.bockheim@minneapolismn.gov>; Brasser, Ben (he/him/his) <benjamin.brasser@minneapolismn.gov>; Hager, Jenifer A <Jenifer.Hager@minneapolismn.gov>
Subject: RE: [EXTERNAL] Rethinking I-94 - Alternatives Evaluation Memo

EXTERNAL EMAIL

Good afternoon,

Please find attached the signed copy of the letter shared earlier this month.

Thank you,
Jessica

From: Hyink, Jessica (she/her/hers)
Sent: Friday, May 3, 2024 5:39 PM
To: Jack Corkle <JCorkle@wsbeng.com>; Barnes, Melissa (DOT) <melissa.barnes@state.mn.us>
Cc: Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>; Brasser, Ben (he/him/his) <benjamin.brasser@minneapolismn.gov>; Mayell, Kathleen K <kathleen.mayell@minneapolismn.gov>; Hager, Jenifer

(she/her/hers) <Jenifer.Hager@minneapolismn.gov>
Subject: RE: [EXTERNAL] Rethinking I-94 - Alternatives Evaluation Memo

Hi Jack and Melissa,

We appreciate the opportunity to review and provide feedback on the working draft of the "Rethinking I-94: Scoping Alternatives Evaluation". Please find attached a letter from the City of Minneapolis with priority comments on the working draft. This letter will be formalized next week with signatures, but we wanted to make sure you had our materials this week as promised. Also attached is the working draft with City of Minneapolis staff comments as well as the draft evaluation matrix with staff comments.

Hope you have a great weekend!

From: Jack Corkle <JCorkle@wsbeng.com>
Sent: Friday, April 26, 2024 10:33 AM
To: Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Hyink, Jessica (she/her/hers) <jessica.hyink@minneapolismn.gov>
Cc: Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>; Brasser, Ben (he/him/his) <benjamin.brasser@minneapolismn.gov>; Mayell, Kathleen K <kathleen.mayell@minneapolismn.gov>
Subject: RE: [EXTERNAL] Rethinking I-94 - Alternatives Evaluation Memo

Sounds good. Thanks guys!

Have a great weekend.

Jack Corkle, AICP, PTP
Director, Planning
612.719.4540 (o)
WSB | wsbeng.com

From: Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>
Sent: Friday, April 26, 2024 9:42 AM
To: Jack Corkle <JCorkle@wsbeng.com>; Hyink, Jessica (she/her/hers) <jessica.hyink@minneapolismn.gov>
Cc: Bockheim, Adrienne b <adrienne.bockheim@minneapolismn.gov>; Brasser, Ben (he/him/his) <benjamin.brasser@minneapolismn.gov>; Mayell, Kathleen K <kathleen.mayell@minneapolismn.gov>
Subject: RE: [EXTERNAL] Rethinking I-94 - Alternatives Evaluation Memo

EXTERNAL EMAIL

Good Morning Jack, could we get 1 additional week?
Much appreciated.

Jeni

Jenifer Hager | Director Transportation Planning & Programming
City of Minneapolis – Public Works | **Public Service Building 505 4th Ave South Room 410 MN 55415**

612-673-3625 | Jenifer.Hager@minneapolismn.gov

From: Jack Corkle <JCorkle@wsbeng.com>
Sent: Friday, April 26, 2024 8:51 AM
To: Hyink, Jessica (she/her/hers) <jessica.hyink@minneapolismn.gov>
Cc: Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>; Brasser, Ben (he/him/his) <benjamin.brasser@minneapolismn.gov>
Subject: RE: [EXTERNAL] Rethinking I-94 - Alternatives Evaluation Memo

Hi Jessica –

Thank you for the notice – do you have thoughts on a possible timeframe?

Thank you - Jack

Jack Corkle, AICP, PTP
Director, Planning
612.719.4540 (o)
WSB | wsbeng.com

From: Hyink, Jessica (she/her/hers) <jessica.hyink@minneapolismn.gov>
Sent: Friday, April 26, 2024 8:48 AM
To: Jack Corkle <JCorkle@wsbeng.com>
Cc: Hager, Jenifer A <Jenifer.Hager@minneapolismn.gov>; Bockheim, Adrienne b <adrienne.bockheim@minneapolismn.gov>; Brasser, Ben (he/him/his) <benjamin.brasser@minneapolismn.gov>
Subject: RE: [EXTERNAL] Rethinking I-94 - Alternatives Evaluation Memo

EXTERNAL EMAIL

Hi Jack,

The City of Minneapolis will need an extension on providing comments.

Thank you,
Jessica

From: Jack Corkle <JCorkle@wsbeng.com>
Sent: Monday, April 15, 2024 12:19 PM
To: Varney, Anna (FHWA) <anna.varney@dot.gov>; Amy Vennewitz <amy.vennewitz@metc.state.mn.us>; Heath, Ryan <ryan.heath@metrotransit.org>; Barnes, Melissa (DOT) <melissa.barnes@state.mn.us>; Bartelt, Nicole (DOT) <nicole.bartelt@state.mn.us>; William Goff <william.goff@state.mn.us>; Henricksen, Jim (DOT) <jim.henricksen@state.mn.us>; Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>; Kauppi, Sheila (DOT) <sheila.kauppi@state.mn.us>; brad.larsen@state.mn.us; Schreiner, Garrett (DOT) <garrett.schreiner@state.mn.us>; Parent, Matthew (DOT) <Matthew.Parent@state.mn.us>; Samuelson, Michael (DOT) <michael.samuelson@state.mn.us>; Wilson, Ryan (DOT) <ryan.wilson@state.mn.us>; Olson, Jeffrey (DOT) <jeffrey.olson@state.mn.us>; molly.mccartney@state.mn.us; Lopez, Ricardo (He/Him/His) (DOT) <ricardo.lopez@state.mn.us>; Raduenz, Renee (She/Her/Hers) (DOT) <renee.raduenz@state.mn.us>; Jessa Trboyevich <jessa.trboyevich@hennepin.us>; Estochen, Bradley M <Bradley.Estochen@CO.RAMSEY.MN.US>; bradley.estochen@ramseycounty.us; Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Newton, Randy (CI-StPaul) <Randy.Newton@ci.stpaul.mn.us>; Jess Karls <JKarls@wsbeng.com>; Austin Hauf <AHauf@wsbeng.com>; Pearson, Joshua (FHWA) <joshua.pearson@dot.gov>; KC Atkins (Hennepin) <KC.Atkins@hennepin.us>; Cole Hiniker <cole.hiniker@metc.state.mn.us>; Harrington, Adam <adam.harrington@metrotransit.org>; Musty, Peter (CAAPB) <peter.musty@state.mn.us>; Schroeder, Michael <MSchroeder@minneapolisparks.org>; Monique MacKenzie <moniquem@umn.edu>; Austin, Lisa (DOT) <lisa.austin@state.mn.us>; Jeff, Gloria (DOT) <gloria.jeff@state.mn.us>; Goldfarb, Isabel (She/Her/Hers) (DOT) <isabel.goldfarb@state.mn.us>; kari.collins@ramseycounty.us; Faust, Martha E <Martha.Faust@CO.RAMSEY.MN.US>; Brian.Isaacson@CO.RAMSEY.MN.US; Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>; Mogush, Paul R <Paul.Mogush@minneapolismn.gov>; Nix, Noel (CI-StPaul) <Noel.Nix@ci.stpaul.mn.us>; Russ Stark <russ.stark@ci.stpaul.mn.us>
Cc: Hyink, Jessica (she/her/hers) <jessica.hyink@minneapolismn.gov>; nick.peterson@ci.stpaul.mn.us; Jon Chiglo <JChiglo@wsbeng.com>; Ehrlich, Jonathan <Jonathan.Ehrlich@metc.state.mn.us>; Jason Junge <jjunge@wsbeng.com>
Subject: [EXTERNAL] Rethinking I-94 - Alternatives Evaluation Memo

Hi all –

We wanted to check in with you. We are still working with leadership on the review of the alternatives, but do not want to impede your review of the first draft of the alternatives evaluation memo.

We sent the draft out in March – in the midst of spring break – and wanted to make sure the draft did not fall to the bottom of your in box.

If you could dust it off and take a look at the draft and provide us comments by April 26th we would appreciate it.

Thank you very much – and if you have any questions, please feel free to reach out to Mark, Melissa or me.

Jack

Jack Corkle, AICP, PTP
Director, Planning
612.719.4540 (o)
WSB | wsbeng.com

wsb

[EXTERNAL] This email originated from outside of the City of Minneapolis. Please exercise caution when opening links or attachments.

From: "Hyink, Jessica (she/her/hers)" <jessica.hyink@minneapolismn.gov>
To: Jack Corkle <JCorkle@wsbeng.com>, "Barnes, Melissa (DOT)" <melissa.barnes@state.mn.us>
CC: "Bockheim, Adrienne (she/her/hers)" <adrienne.bockheim@minneapolismn.gov>, "Brasser, Ben (he/him/his)" <benjamin.brasser@minneapolismn.gov>, "Hager, Jenifer (she/her/hers)" <Jenifer.Hager@minneapolismn.gov>
Subject: RE: [EXTERNAL] Rethinking I-94 - Alternatives Evaluation Memo
Date: Thu, 16 May 2024 19:24:27 +0000
Attachments: Alternatives_Cover_Letter_to_Project_Office_May_2024_JAH_Signed_MEM_Signed.pdf
Inline-Images: image001.png

Good afternoon,

Please find attached the signed copy of the letter shared earlier this month.

Thank you,
Jessica

From: Hyink, Jessica (she/her/hers)
Sent: Friday, May 3, 2024 5:39 PM
To: Jack Corkle <JCorkle@wsbeng.com>; Barnes, Melissa (DOT) <melissa.barnes@state.mn.us>
Cc: Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>; Brasser, Ben (he/him/his) <benjamin.brasser@minneapolismn.gov>; Mayell, Kathleen K <kathleen.mayell@minneapolismn.gov>; Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>
Subject: RE: [EXTERNAL] Rethinking I-94 - Alternatives Evaluation Memo

Hi Jack and Melissa,

We appreciate the opportunity to review and provide feedback on the working draft of the “Rethinking I-94: Scoping Alternatives Evaluation”. Please find attached a letter from the City of Minneapolis with priority comments on the working draft. This letter will be formalized next week with signatures, but we wanted to make sure you had our materials this week as promised. Also attached is the working draft with City of Minneapolis staff comments as well as the draft evaluation matrix with staff comments.

Hope you have a great weekend!

From: Jack Corkle <JCorkle@wsbeng.com>
Sent: Friday, April 26, 2024 10:33 AM
To: Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Hyink, Jessica (she/her/hers) <jessica.hyink@minneapolismn.gov>
Cc: Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>; Brasser, Ben (he/him/his) <benjamin.brasser@minneapolismn.gov>; Mayell, Kathleen K <kathleen.mayell@minneapolismn.gov>
Subject: RE: [EXTERNAL] Rethinking I-94 - Alternatives Evaluation Memo

Sounds good. Thanks guys!

Have a great weekend.

Jack Corkle, AICP, PTP
Director, Planning
612.719.4540 (o)
WSB | wsbeng.com

For a list of WSB employee licenses and certifications visit here.

From: Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>
Sent: Friday, April 26, 2024 9:42 AM
To: Jack Corkle <JCorkle@wsbeng.com>; Hyink, Jessica (she/her/hers) <jessica.hyink@minneapolismn.gov>
Cc: Bockheim, Adrienne b <adrienne.bockheim@minneapolismn.gov>; Brasser, Ben (he/him/his) <benjamin.brasser@minneapolismn.gov>; Mayell, Kathleen K <kathleen.mayell@minneapolismn.gov>
Subject: RE: [EXTERNAL] Rethinking I-94 - Alternatives Evaluation Memo

EXTERNAL EMAIL

Good Morning Jack, could we get 1 additional week?
Much appreciated.

Jeni

Jenifer Hager | Director Transportation Planning & Programming
City of Minneapolis – Public Works | **Public Service Building 505 4th Ave South Room 410 MN 55415**

612-673-3625 | Jenifer.Hager@minneapolismn.gov

From: Jack Corkle <JCorkle@wsbeng.com>
Sent: Friday, April 26, 2024 8:51 AM
To: Hyink, Jessica (she/her/hers) <jessica.hyink@minneapolismn.gov>
Cc: Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>; Brasser, Ben (he/him/his) <benjamin.brasser@minneapolismn.gov>
Subject: RE: [EXTERNAL] Rethinking I-94 - Alternatives Evaluation Memo

Hi Jessica –

Thank you for the notice – do you have thoughts on a possible timeframe?

Thank you - Jack

Jack Corkle, AICP, PTP
Director, Planning
612.719.4540 (o)
WSB | wsbeng.com

From: Hyink, Jessica (she/her/hers) <jessica.hyink@minneapolismn.gov>
Sent: Friday, April 26, 2024 8:48 AM
To: Jack Corkle <JCorkle@wsbeng.com>
Cc: Hager, Jenifer A <Jenifer.Hager@minneapolismn.gov>; Bockheim, Adrienne b <adrienne.bockheim@minneapolismn.gov>; Brasser, Ben (he/him/his) <benjamin.brasser@minneapolismn.gov>
Subject: RE: [EXTERNAL] Rethinking I-94 - Alternatives Evaluation Memo

EXTERNAL EMAIL

Hi Jack,

The City of Minneapolis will need an extension on providing comments.

Thank you,
Jessica

From: Jack Corkle <JCorkle@wsbeng.com>
Sent: Monday, April 15, 2024 12:19 PM
To: Varney, Anna (FHWA) <anna.varney@dot.gov>; Amy Vennewitz <amy.vennewitz@metc.state.mn.us>; Heath, Ryan <ryan.heath@metrotransit.org>; Barnes, Melissa (DOT) <melissa.barnes@state.mn.us>; Bartelt, Nicole (DOT) <nicole.bartelt@state.mn.us>; William Goff <william.goff@state.mn.us>; Henricksen, Jim (DOT) <jim.henricksen@state.mn.us>; Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>; Kauppi, Sheila (DOT) <sheila.kauppi@state.mn.us>; brad.larsen@state.mn.us; Schreiner, Garrett (DOT) <garrett.schreiner@state.mn.us>; Parent, Matthew (DOT) <Matthew.Parent@state.mn.us>; Samuelson, Michael (DOT) <michael.samuelson@state.mn.us>; Wilson, Ryan (DOT) <ryan.wilson@state.mn.us>; Olson, Jeffrey (DOT) <jeffrey.olson@state.mn.us>; molly.mccartney@state.mn.us; Lopez, Ricardo (He/Him/His) (DOT) <ricardo.lopez@state.mn.us>; Raduenz, Renee (She/Her/Hers) (DOT) <renee.raduenz@state.mn.us>; Jessa Trboyevich <jessa.trboyevich@hennepin.us>; Estochen, Bradley M <Bradley.Estochen@CO.RAMSEY.MN.US>; bradley.estochen@ramseycounty.us; Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Newton, Randy (CI-StPaul) <Randy.Newton@ci.stpaul.mn.us>; Jess Karls <JKarls@wsbeng.com>; Austin Hauf <AHauf@wsbeng.com>; Pearson, Joshua (FHWA) <joshua.pearson@dot.gov>; KC Atkins (Hennepin) <KC.Atkins@hennepin.us>; Cole Hiniker <cole.hiniker@metc.state.mn.us>; Harrington, Adam <adam.harrington@metrotransit.org>; Musty, Peter (CAAPB) <peter.musty@state.mn.us>; Schroeder, Michael <MSchroeder@minneapolisparks.org>; Monique MacKenzie <moniquem@umn.edu>; Austin, Lisa (DOT) <lisa.austin@state.mn.us>; Jeff, Gloria (DOT) <gloria.jeff@state.mn.us>; Goldfarb, Isabel (She/Her/Hers) (DOT) <isabel.goldfarb@state.mn.us>; kari.collins@ramseycounty.us; Faust, Martha E <Martha.Faust@CO.RAMSEY.MN.US>; Brian.Isaacson@CO.RAMSEY.MN.US; Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>; Mogush, Paul R <Paul.Mogush@minneapolismn.gov>; Nix, Noel (CI-StPaul) <Noel.Nix@ci.stpaul.mn.us>; Russ Stark <russ.stark@ci.stpaul.mn.us>
Cc: Hyink, Jessica (she/her/hers) <jessica.hyink@minneapolismn.gov>; nick.peterson@ci.stpaul.mn.us; Jon Chiglo <JChiglo@wsbeng.com>; Ehrlich, Jonathan <Jonathan.Ehrlich@metc.state.mn.us>; Jason Junge <jjunge@wsbeng.com>
Subject: [EXTERNAL] Rethinking I-94 - Alternatives Evaluation Memo

Hi all –

We wanted to check in with you. We are still working with leadership on the review of the alternatives, but do not want to impede your review of the first draft of the alternatives evaluation memo.

We sent the draft out in March – in the midst of spring break – and wanted to make sure the draft did not fall to the bottom of your in box.

If you could dust it off and take a look at the draft and provide us comments by April 26th we would appreciate it.

Thank you very much – and if you have any questions, please feel free to reach out to Mark, Melissa or me.

Jack

Jack Corkle, AICP, PTP
Director, Planning
612.719.4540 (o)
WSB | wsbeng.com

Public Works
Community Planning and Economic Development
505 4th Avenue South
Minneapolis, MN 55415

Minneapolis
City of Lakes

www.minneapolismn.gov

May 3, 2024

Project Manager/Director
Rethinking 94 Project Office

To Whom it May Concern,

The City of Minneapolis staff from the Departments of Public Works and Community Planning and Economic Development hereby submit the attached comments on the working draft of the "Rethinking I-94: Scoping Alternatives Evaluation" to the project office as we continue to work through the scoping and Tier I EIS process. The statements provided below summarize overall comments on the working draft reviewed. Staff are happy to answer questions on any of these if necessary. We request that the project office appropriately document and respond to comments and feedback provided by City staff to MnDOT so that we understand how our comments and feedback are used.

I-94 MAINLINE PRIORITY

The City of Minneapolis continues to prioritize person throughput in the corridor versus vehicle throughput. It is not possible for the region to build its way out of congestion; Minneapolis does not support the construction of additional lane capacity[1].

SUMMARY OF COMMENTS

The following are summaries of comments provided in the working draft document but are not an exhaustive list of comments provided. The comments noted in the working draft should be utilized to access all provided comments from City staff.

1. Overall:
    a. Minneapolis requests to see the revised "Rethinking I-94: Scoping Alternatives Evaluation" with opportunity to review and comment.
    b. There is a lot of data provided in the spreadsheets. Many of the alternatives have few differences in the metrics evaluated to date. Recommend narrowing in on the differences between the alternatives to have more productive conversations.
    c. Recommend evaluating the BRT sub-alternatives separately.
    d. The metric for air pollution does not consider the degree of impact locally. Recommend refining metrics for air pollution.

[1] Minneapolis 2040 Policy 17 – Complete Streets

e. There are instances of concepts being introduced before text explaining the concept is included. As an example of this, evaluation criteria are discussed on page 14 before explaining the evaluation process on page 15.
f. Please provide text or link to clarify what is included as part of "transportation objectives consistent with adopted state and regional (Met Council) plans".
g. "Fatal flaws" is mentioned briefly and is not clearly defined. What constitutes as a fatal flaw should be defined in greater detail, particularly if used as a basis to remove an alternative.
h. "Additional Considerations" are mentioned early in the document but not explained until further on.
i. There are so many measurements for vehicular safety and mobility during this phase, while bike/walk safety and comfort won't be explored until the next phase. This does not seem balanced. Could the potential for improving bike/walk safety and comfort be assessed during this phase?
j. Environmental Justice (EJ) qualitative assessment: Recommend editing the qualitative assessments to read "Does the alternative ~~provide~~ increase access to economic opportunities..." and "Does the alternative ~~have the potential~~ maintain the existing levels, have the potential to reduce exposure to water and noise pollution, or have the potential to increase exposure to water and noise pollution…".
k. Sense of Place evaluation criteria: Not all green/gathering spaces are created equal. Depending on how they are sited and designed, places located immediately adjacent to a highway may not be comfortable to use due to noise and pollution.
l. According to AASHTO's Center for Environmental Excellence, with sources cited to FHWA, speed, traffic volumes, and freight traffic all impact noise. The decrease or increase of these in the alternatives are not acknowledged as having reduced impacts on noise.
m. Does every alternative have an opportunity or space for noise mitigation, such as noise walls?
n. Does the decrease in vegetation impact the urban heat island effect? Do the increased number of vehicles also impact the urban heat island effect? Should urban heat island impacts be included as part of the EJ assessment for all alternatives?
o. Access to jobs as the sole metric to determine economic vitality is too limited. Recommend expanding metrics to evaluate economic vitality.
p. If there is no change to an alternative compared to the no build, then why are alternatives getting classified as green in the table? The evaluation would benefit from a 4th category to show no change compared to no build. Why is no build classified as green when there is no change to no build?
q. In the Mobility section for each alternative, "person throughput" needs to be clarified whether this number includes all modes or just vehicles.
r. In Mobility, when numbers (minutes for travel times, acres for impervious surfaces, etc) are stated, please also add how this compares to existing numbers.

2. At Grade A and B
    a. What is a comparable existing roadway facility to the proposed At-Grade A and B Alternatives? Recommend providing a comparison in the document for clarity with public understanding of what these alternatives might look like.
    b. Draft states "Current Interchanges would be removed." Does this assume removal of interchanges with 280 or I-35? Also, the public may not understand the difference between "interchange" and "intersection". Please clarify.

c. The Minneapolis Fire Department prefers At-Grade alternative B over A, because the locations of the transit lanes on each side of the roadway may make it easier to access an incident compared to the center running lanes.
d. "Nonmotorized conflict points." One perspective of this may be conflict points, while another perspective may be connectivity. To improve walkability and bikeability, generally this requires the addition of pedestrian and bicycle facilities. This process inherently creates new conflict points in an urban environment, where the majority of pedestrian and bicycle facilities must cross intersections. This will be a hard sell to the public to state that new bicycle and pedestrian facilities are inherently less walkable or bikeable due to new conflict points.
e. The inclusion of new dedicated biking and walking facilities along the project corridor are not included as part of the evaluation, rating the corridor unreasonably low considering these improvements.
f. Are crash rates for At-Grade A and B considering new crossings as part of the evaluation? If so, then walkability and bikeability should also consider the improved network connectivity of these new crossings.
g. The rate of fatal and serious injuries typically decrease at lower speeds. For example, this table from the Federal Motor Carrier Safety Administration demonstrates the increase fatal crash rates of large trucks as speed increases. Please clarify how fatal and serious injury crashes will increase at lower speeds.

3. Local/Regional Roadways
   a. Minneapolis Fire Department stated concerns with limited access and ability to respond in an emergency. Asked if limited emergency access locations may be incorporated into this alternative.
   b. Concern from Minneapolis Fire Department that 2 lanes in each direction may not be sufficient and result in traffic backing up, limiting access by fire trucks.
   c. Walkability and Bikeability area listed as mixed in the document but coded as green in the spreadsheet.
4. Reduced Freeway A
   a. While it is clear that the roadway footprint is being narrowed, is the ROW also being narrowed? Where would there be space to add green/gathering places if the ROW isn't being narrowed?
5. Reconfigured and Expanded Freeway A and B
   a. The City is opposed to an expanded freeway option, as an expanded freeway option is not consistent with our climate and transportation related goals, but we understand the need to evaluate as an alternative.
   b. These alternatives state opportunities for amenities/features and green space and then state there is reduced ROW, along with increased impervious pavement. Please clarify.
   c. Are there opportunities for walkability and bikeability improvements along the corridor when the ROW of the freeway is expanded? Seems like the potential for improved walkability and bikeability along the corridor would be decreased.
   d. Expanded Freeway A. The combined total crash rates for mainline and routes within 1 mile on the no build is 4.73; on the expanded freeway it is 4.84 based on the provided table. The document and tables inaccurately reflect a decrease in the total combined crash rate when the data provided indicates an increase.

AGING INFRASTRUCTURE AND NEW OPPORTUNITIES

As the evaluation of this project is finalized, the City of Minneapolis will be looking to seize opportunities presented by the reconstruction of aging infrastructure that was designed and constructed in a past era and under much different engineering guidance than is currently used. Infrastructure reconstruction is the best opportunity to reconfigure and realign roadways to use less space and move more people in more efficient and sustainable ways. This is also a great time to look for new opportunities related to redeveloping properties along the corridor as infrastructure is improved but also to create new space for development in the form of emerging concepts such as land bridges. We also recommend that MnDOT consider the innovative use of rights of way under existing bridges, flyovers and other structures to better connect areas of the city divided by the freeway system; and look for opportunities to engage in reparative investments in neighborhoods most impacted by the freeway system.

Sincerely,

Jenifer Hager

Jenifer Hager
Director of Transportation Planning and Programming
Minneapolis Public Works

Meg McMahan

Meg McMahan
Director of Planning
Minneapolis Community Planning and Economic Development

CC:

Toddrick Barnette
Community Safety Commissioner
Office of Community Safety

Jared Jeffries
Chief of Staff
Office of Community Safety

Bryan Tyner
Fire Chief
Minneapolis Fire Department

Wesley VanVickle
Assistant Fire Chief
Minneapolis Fire Department

Sean Olson
Deputy Fire Chief
Minneapolis Fire Department

Rethinking I-94

Technical- Michael Baker under contract for discussion on alternatives

Engagement- highlight community members, add travel info to highlighted community member, scheduling presentations, key stakeholder coffees, meeting with entertainment venues, meeting with small business chambers

- -timing: ongoing

Freeway panel- at grade conversions review, two presenters, CO DOT ended up with cap section, Syracuse NY viaduct conversion (has whitepaper)

- -webinar on September 30th, 8:30 – 10 am, virtual, announcements around 1st of Sept.
- -will be recorded and available for a month online

FHWA has post grant agreement with reconnect rondo for reconnecting communities

Traffic working group

- -safety analysis
- -sensitivity analysis

Alternatives

- -scoping out costs and contingencies
  - -memo anticipated

PAC meeting

- -October/November
  - -update on air quality
  - -traffic -> Michael Baker
  - -Freeway panel
- -Winter 2025
  - -alternatives discussion

Safety analysis and sensitivity analysis did not change anything in the memo

- -other memos give context
- -deciding on whether or not to include as part of the alternatives memo

From: "Hyink, Jessica (she/her/hers)" <jessica.hyink@minneapolismn.gov>
To: "Barnes, Melissa (She/Her/Hers) (DOT)" <melissa.barnes@state.mn.us>
Cc: "Hager, Jenifer (she/her/hers)" <Jenifer.Hager@minneapolismn.gov>, "Bockheim, Adrienne (she/her/hers)" <adrienne.bockheim@minneapolismn.gov>, "Brasser, Ben (he/him/his)" <benjamin.brasser@minneapolismn.gov>
Subject: RE: [EXTERNAL] RE: PAC Meetings
Date: Wed, 06 Nov 2024 19:24:02 +0000
Importance: Normal
Inline-Images: image001.png

Hi Melissa,

Thank you for sharing out the PAC materials to staff in advance of the meeting. We had our PAC briefing yesterday afternoon. A few questions were raised in advance or as a result of that meeting:

1. Does MnDOT have a schedule for topics for future PAC meetings? There is an interest from a Minneapolis PAC member on the general schedule and anticipated items for future PAC meetings. Our PAC member may ask a specific question about this Friday.
2. When will MnDOT convene the Air Quality Working Group? Will this begin in the short-term or not until Tier 1 EIS work commences?
3. How will MnDOT keep the public involved and engaged in the near term?
4. The City views the onboarding of a new traffic consultant and analysis as a positive response to questions arising from the public. Are there other efforts anticipated in response to feedback received from the public that we can expect at future TAC/PPC and PAC meetings?

If you would like to chat about any of these items in person, the prep meeting for the MnDOT presentation to our Climate and Infrastructure meeting is next week. Let me know your thoughts.

Thank you,
Jessica

From: Barnes, Melissa (She/Her/Hers) (DOT) <melissa.barnes@state.mn.us>
Sent: Tuesday, October 29, 2024 2:27 PM
To: Hyink, Jessica (she/her/hers) <jessica.hyink@minneapolismn.gov>
Cc: Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>
Subject: RE: [EXTERNAL] RE: PAC Meetings

Correct! It's on my list to get to you Friday.

Melissa Barnes, PE
Rethinking I-94 Project Director | MnDOT Metro District
Melissa.barnes@state.mn.us
Phone number 612-499-8729

From: Hyink, Jessica (she/her/hers) <jessica.hyink@minneapolismn.gov>
Sent: Tuesday, October 29, 2024 2:22 PM
To: Barnes, Melissa (She/Her/Hers) (DOT) <melissa.barnes@state.mn.us>
Cc: Hager, Jenifer <jenifer.hager@minneapolismn.gov>
Subject: RE: [EXTERNAL] RE: PAC Meetings

Hi Melissa,

Just wanted to check in to make sure Jeni and I can receive an advance copy of the presentation for the PAC meeting. Will you have a draft we can look at in the near term, ideally by the end of the week?

Thank you,
Jessica

From: Hyink, Jessica (she/her/hers)
Sent: Tuesday, October 8, 2024 3:13 PM
To: Barnes, Melissa (She/Her/Hers) (DOT) <melissa.barnes@state.mn.us>
Subject: RE: [EXTERNAL] RE: PAC Meetings

This is helpful. We are meeting on the 4th and 5th internally. Having something by Friday, November 1st, even if it is still in a draft state, would be extremely helpful. Jeni and I definitely understand that you are likely to be fine tuning content leading up to the meeting.

From: Barnes, Melissa (She/Her/Hers) (DOT) <melissa.barnes@state.mn.us>
Sent: Tuesday, October 8, 2024 12:31 PM
To: Hyink, Jessica (she/her/hers) <jessica.hyink@minneapolismn.gov>
Subject: RE: [EXTERNAL] RE: PAC Meetings

Good questions!

- Yes, next week's PAC will serve as the heads up for what will be presented on at the PAC. The agenda includes the Air Quality presentation Natalie gave at the last TAC, and existing traffic information will be presented next week that will be shared with the PAC.
- What kind of lead time do you need for advanced materials? Although we have the best of intentions we are always adjusting the presentation right up to the last minute. This one (fingers crossed!) will hopefully be done sooner but helpful to know how things work on your end.

Thanks!

Melissa Barnes, PE
Rethinking I-94 Project Director | MnDOT Metro District
Melissa.barnes@state.mn.us
Phone number 612-499-8729

From: Hyink, Jessica (she/her/hers) <jessica.hyink@minneapolismn.gov>
Sent: Tuesday, October 8, 2024 12:13 PM
To: Barnes, Melissa (She/Her/Hers) (DOT) <melissa.barnes@state.mn.us>
Subject: RE: [EXTERNAL] RE: PAC Meetings

Thank you, Melissa! I received the invite for the November meeting. As with previous PAC meetings, can Jeni and I receive an advance copy/draft of the presentation materials so that we may brief our PAC members in advance of the meeting? Will there be overlap with materials presented at the TAC/PPC meeting next week?

Thank you,
Jessica

From: Barnes, Melissa (She/Her/Hers) (DOT) <melissa.barnes@state.mn.us>
Sent: Tuesday, October 8, 2024 11:05 AM

To: Hyink, Jessica (she/her/hers) <jessica.hyink@minneapolismn.gov>
Subject: [EXTERNAL] RE: PAC Meetings

Will do!

Melissa Barnes, PE
Rethinking I-94 Project Director | MnDOT Metro District
Melissa.barnes@state.mn.us
Phone number 612-499-8729

From: Hyink, Jessica (she/her/hers) <jessica.hyink@minneapolismn.gov>
Sent: Tuesday, October 8, 2024 9:58 AM
To: Barnes, Melissa (She/Her/Hers) (DOT) <melissa.barnes@state.mn.us>
Subject: PAC Meetings

Hi Melissa,

Can you have me added to the email list for Rethinking I-94 PAC meetings? Jeni would like me to track the content and presentations to our PAC members.

Thank you,
Jessica

Jessica Hyink | Senior Transportation Planner | *she, her, hers*

City of Minneapolis – Public Works | Transportation Planning and Programming Division

Office: 612-673-3594

jessica.hyink@minneapolismn.gov

Minneapolis
City of Lakes

Public Works
Community Planning and Economic Development
505 4th Avenue South
Minneapolis, MN 55415

Minneapolis
City of Lakes

www.minneapolismn.gov

May 3, 2024

Project Manager/Director
Rethinking 94 Project Office

To Whom it May Concern,

The City of Minneapolis staff from the Departments of Public Works and Community Planning and Economic Development hereby submit the attached comments on the working draft of the "Rethinking I-94: Scoping Alternatives Evaluation" to the project office as we continue to work through the scoping and Tier I EIS process. The statements provided below summarize overall comments on the working draft reviewed. Staff are happy to answer questions on any of these if necessary. We request that the project office appropriately document and respond to comments and feedback provided by City staff to MnDOT so that we understand how our comments and feedback are used.

I-94 MAINLINE PRIORITY

The City of Minneapolis continues to prioritize person throughput in the corridor versus vehicle throughput. It is not possible for the region to build its way out of congestion; Minneapolis does not support the construction of additional lane capacity[1].

SUMMARY OF COMMENTS

The following are summaries of comments provided in the working draft document but are not an exhaustive list of comments provided. The comments noted in the working draft should be utilized to access all provided comments from City staff.

1. Overall:
    a. Minneapolis requests to see the revised "Rethinking I-94: Scoping Alternatives Evaluation" with opportunity to review and comment.
    b. There is a lot of data provided in the spreadsheets. Many of the alternatives have few differences in the metrics evaluated to date. Recommend narrowing in on the differences between the alternatives to have more productive conversations.
    c. Recommend evaluating the BRT sub-alternatives separately.
    d. The metric for air pollution does not consider the degree of impact locally. Recommend refining metrics for air pollution.

[1] Minneapolis 2040 Policy 17 – Complete Streets

e. There are instances of concepts being introduced before text explaining the concept is included. As an example of this, evaluation criteria are discussed on page 14 before explaining the evaluation process on page 15.
f. Please provide text or link to clarify what is included as part of "transportation objectives consistent with adopted state and regional (Met Council) plans".
g. "Fatal flaws" is mentioned briefly and is not clearly defined. What constitutes as a fatal flaw should be defined in greater detail, particularly if used as a basis to remove an alternative.
h. "Additional Considerations" are mentioned early in the document but not explained until further on.
i. There are so many measurements for vehicular safety and mobility during this phase, while bike/walk safety and comfort won't be explored until the next phase. This does not seem balanced. Could the potential for improving bike/walk safety and comfort be assessed during this phase?
j. Environmental Justice (EJ) qualitative assessment: Recommend editing the qualitative assessments to read "Does the alternative ~~provide~~ increase access to economic opportunities..." and "Does the alternative ~~have the potential~~ maintain the existing levels, have the potential to reduce exposure to water and noise pollution, or have the potential to increase exposure to water and noise pollution…".
k. Sense of Place evaluation criteria: Not all green/gathering spaces are created equal. Depending on how they are sited and designed, places located immediately adjacent to a highway may not be comfortable to use due to noise and pollution.
l. According to AASHTO's Center for Environmental Excellence, with sources cited to FHWA, speed, traffic volumes, and freight traffic all impact noise. The decrease or increase of these in the alternatives are not acknowledged as having reduced impacts on noise.
m. Does every alternative have an opportunity or space for noise mitigation, such as noise walls?
n. Does the decrease in vegetation impact the urban heat island effect? Do the increased number of vehicles also impact the urban heat island effect? Should urban heat island impacts be included as part of the EJ assessment for all alternatives?
o. Access to jobs as the sole metric to determine economic vitality is too limited. Recommend expanding metrics to evaluate economic vitality.
p. If there is no change to an alternative compared to the no build, then why are alternatives getting classified as green in the table? The evaluation would benefit from a 4th category to show no change compared to no build. Why is no build classified as green when there is no change to no build?
q. In the Mobility section for each alternative, "person throughput" needs to be clarified whether this number includes all modes or just vehicles.
r. In Mobility, when numbers (minutes for travel times, acres for impervious surfaces, etc) are stated, please also add how this compares to existing numbers.

2. At Grade A and B
   a. What is a comparable existing roadway facility to the proposed At-Grade A and B Alternatives? Recommend providing a comparison in the document for clarity with public understanding of what these alternatives might look like.
   b. Draft states "Current Interchanges would be removed." Does this assume removal of interchanges with 280 or I-35? Also, the public may not understand the difference between "interchange" and "intersection". Please clarify.

c. The Minneapolis Fire Department prefers At-Grade alternative B over A, because the locations of the transit lanes on each side of the roadway may make it easier to access an incident compared to the center running lanes.
d. "Nonmotorized conflict points." One perspective of this may be conflict points, while another perspective may be connectivity. To improve walkability and bikeability, generally this requires the addition of pedestrian and bicycle facilities. This process inherently creates new conflict points in an urban environment, where the majority of pedestrian and bicycle facilities must cross intersections. This will be a hard sell to the public to state that new bicycle and pedestrian facilities are inherently less walkable or bikeable due to new conflict points.
e. The inclusion of new dedicated biking and walking facilities along the project corridor are not included as part of the evaluation, rating the corridor unreasonably low considering these improvements.
f. Are crash rates for At-Grade A and B considering new crossings as part of the evaluation? If so, then walkability and bikeability should also consider the improved network connectivity of these new crossings.
g. The rate of fatal and serious injuries typically decrease at lower speeds. For example, this table from the Federal Motor Carrier Safety Administration demonstrates the increase fatal crash rates of large trucks as speed increases. Please clarify how fatal and serious injury crashes will increase at lower speeds.

3. Local/Regional Roadways
   a. Minneapolis Fire Department stated concerns with limited access and ability to respond in an emergency. Asked if limited emergency access locations may be incorporated into this alternative.
   b. Concern from Minneapolis Fire Department that 2 lanes in each direction may not be sufficient and result in traffic backing up, limiting access by fire trucks.
   c. Walkability and Bikeability area listed as mixed in the document but coded as green in the spreadsheet.
4. Reduced Freeway A
   a. While it is clear that the roadway footprint is being narrowed, is the ROW also being narrowed? Where would there be space to add green/gathering places if the ROW isn't being narrowed?
5. Reconfigured and Expanded Freeway A and B
   a. The City is opposed to an expanded freeway option, as an expanded freeway option is not consistent with our climate and transportation related goals, but we understand the need to evaluate as an alternative.
   b. These alternatives state opportunities for amenities/features and green space and then state there is reduced ROW, along with increased impervious pavement. Please clarify.
   c. Are there opportunities for walkability and bikeability improvements along the corridor when the ROW of the freeway is expanded? Seems like the potential for improved walkability and bikeability along the corridor would be decreased.
   d. Expanded Freeway A. The combined total crash rates for mainline and routes within 1 mile on the no build is 4.73; on the expanded freeway it is 4.84 based on the provided table. The document and tables inaccurately reflect a decrease in the total combined crash rate when the data provided indicates an increase.

AGING INFRASTRUCTURE AND NEW OPPORTUNITIES

As the evaluation of this project is finalized, the City of Minneapolis will be looking to seize opportunities presented by the reconstruction of aging infrastructure that was designed and constructed in a past era and under much different engineering guidance than is currently used. Infrastructure reconstruction is the best opportunity to reconfigure and realign roadways to use less space and move more people in more efficient and sustainable ways. This is also a great time to look for new opportunities related to redeveloping properties along the corridor as infrastructure is improved but also to create new space for development in the form of emerging concepts such as land bridges. We also recommend that MnDOT consider the innovative use of rights of way under existing bridges, flyovers and other structures to better connect areas of the city divided by the freeway system; and look for opportunities to engage in reparative investments in neighborhoods most impacted by the freeway system.

Sincerely,

Jenifer Hager
Director of Transportation Planning and Programming
Minneapolis Public Works

Meg McMahan
Director of Planning
Minneapolis Community Planning and Economic Development

CC:

Toddrick Barnette
Community Safety Commissioner
Office of Community Safety

Jared Jeffries
Chief of Staff
Office of Community Safety

Bryan Tyner
Fire Chief
Minneapolis Fire Department

Wesley VanVickle
Assistant Fire Chief
Minneapolis Fire Department

Sean Olson
Deputy Fire Chief
Minneapolis Fire Department

From: "Hager, Jenifer (she/her/hers)" <Jenifer.Hager@minneapolismn.gov>
To: "Dodds, Bryan (he/him/his)" <bryan.dodds@minneapolismn.gov>
Subject: R94 BAC/PAC Resolutions
Date: Tue, 02 Apr 2024 15:12:23 +0000
Attachments: Resolution_2024_03_27_BAC_Rethinking_I94.pdf; Resolution_2024_02_29_PAC_Rethinking_I-94.pdf

---

Jenifer Hager | Director Transportation Planning & Programming
City of Minneapolis – Public Works | **Public Service Building 505 4th Ave South Room 410 MN 55415**

612-673-3625 | Jenifer.Hager@minneapolismn.gov

Bicycle Advisory Committee Resolution

To: Minneapolis City Council, Minneapolis Public Works, Minnesota Department of Transportation

From: Minneapolis Bicycle Advisory Committee

Date: March 27, 2024

Subject: Rethinking I-94: Scoping and Alternatives

The Minneapolis Bicycle Advisory Committee (BAC) appreciates the presentation by the Rethinking I-94 team of the Minnesota Department of Transportation (MnDOT). We are grateful for the care that was taken to explain the progression of the I-94 project and the process it will be following. We hope MnDOT continues to present to the BAC at appropriate project milestones, such as the Environmental Impact Statement (EIS) process and further critical phases.

The BAC recognizes that the Scoping Decision document will narrow down the 10 currently proposed alternatives from consideration, and no new alternatives will be added. While engagement will continue, we recognize that these 10 alternatives, in a real way, represent the end result of Rethinking I-94.

Compact, human-scaled cities are the best to bike in. Compact, human-scaled urban communities were damaged, if not destroyed in the creation of I-94. MnDOT can remediate and work towards repairing this harm by returning as much right-of-way (ROW) as possible to the communities along the route. Going forward with the alternatives, we ask that MnDOT measure or estimate the amount of space that could be returned to human and natural communities. Barring this, we ask for MnDOT to consider returning ROW land as a priority and project value as the project continues.

In this resolution, we call upon the Minnesota Department of Transportation to shift its posture from merely rethinking I-94 to remediation and repair of environmental, social, and economic injuries. In the scoping decision, we ask for MnDOT to reflect on the values of their project and the lessons from their engagement and prioritize returning as much land in the MnDOT ROW as possible. By returning usable land to affected communities, MnDOT can go beyond rethinking vehicle user convenience to protecting people, a core principle of the Minnesota Constitution.

In the alternatives presented, there are ample opportunities for ROW downsizing and conveyance back to communities, principally through both At-grade Alternatives A and B. Reduced Freeway A and Reconfigured Freeway A also have opportunities to return land to communities, especially with the addition of retaining walls or freeway caps. In contrast, Expanded Freeway Alternatives A and B are inconsistent with this objective, and would result in increased mortality rates due to pollution, would further lower quality of life indices due to traffic and community barriers, and therefore, in accordance with the identified Walkability and Bikeability Need in the project’s Purpose and Need statement, the BAC requests that Expanded Alternatives A and B be eliminated during the scoping decision. Furthermore, we implore MnDOT to acknowledge that the well-documented phenomenon of induced demand makes highway expansion a zero-sum strategy, and we suggest that MnDOT inform the public of this well-established economic principle.

We look forward to partnering with MnDOT on this project.

Pedestrian Advisory Committee Resolution

To: Minneapolis City Council, Minneapolis Public Works,

Minnesota Department of Transportation (MnDOT)

From: Minneapolis Pedestrian Advisory Committee

Date: February 29, 2024

Subject: Rethinking I-94: Update on Alternatives and Purpose & Need

As MnDOT engages in the planning process for Re-thinking I94, the Pedestrian Advisory Committee (PAC) has the following feedback to share with the planning team. This feedback is intended to align with the project purpose and intent, and the stated livability and harm repair goals the MnDOT team has shared.

1. As the planning team moves further along in the planning process, selecting alternatives that ensure that pedestrian safety can be prioritized will be crucial. This includes frontage roads, highway crossings, and transit connections. The corridor's current infrastructure is extremely hostile to pedestrians, therefore we would like to see MnDOT think expansively when it comes to non-driver users of this corridor.
2. MnDOT's community engagement data in terms of the profile of most responses represents a large gap in outreach and true engagement. The PAC encourages MnDOT to not finalize concepts until this engagement can be more representative of the project area and Minneapolis and St. Paul users.
3. None of the concepts presented include capping or land bridge options. We would like to see these options included or have the existing concepts specify which ones can accommodate a freeway cap or land bridge.

Expressing the City's priorities for the Minnesota Department of Transportation's Rethinking I-94 Project

Whereas, the Minnesota Department of Transportation is planning for the full reconstruction of I-94 between Hiawatha Avenue and Marion Street as part of its Rethinking I-94 Project, impacting the Minneapolis neighborhoods of Cedar Riverside, Elliott Park, Ventura Village, Seward, and Prospect Park; and

Whereas, the condition of the roadway has deteriorated to the point where reconstruction or removal is required; and

Whereas, the City of Minneapolis passed a previous resolution in 2020 stating the City's high level goals for the Rethinking I-94 project, and this resolution is intended to build on that feedback to state the City's priorities before key upcoming project decisions; and

Whereas, due to racially restrictive housing covenants, Cedar Riverside was one of the few neighborhoods in Minneapolis that Black families could live, work, and socialize; and

Whereas, Cedar Riverside was also a landing spot for Jewish refugees and European immigrants and the neighboring area of Phillips was and is a hub for Indigenous residents; and

Whereas historic non-white and laboring class neighborhoods like Cedar Riverside were targeted by State and City planners for highway construction as a mechanism to remove residents, and the construction of I-94 and I-35W displaced hundreds of homes, businesses, places of worship and community institutions in Minneapolis, including St. James AME, the first Black congregation in Minnesota; the local Pillsbury United Communities, a community cornerstone that supported youth; the Key Club, a Black-owned venue that employed numerous Black residents and hosted cultural events; and Seven Corners Library, the only public library in the neighborhood that served as a community hub and invaluable resource to the immigrant and migrant laborers who moved into the neighborhood and supported Minneapolis' industries and growth; and

Whereas, the area known as Cedar Riverside was contiguous with other neighborhoods which supported each other (now known as Seward and Phillips) with walkable necessities and amenities, and I-94 and its interchanges effectively divided these neighborhoods, permanently reducing local accessibility for all residents but especially the elderly and children and those with limited vehicle access, confining local business prosperity, effectively eliminating the usability of the once-essential Riverside Park, and adding multiple long-term pollution sources; and

Whereas, the proposed project area today is a rich and diverse community wherein 42% of residents are people of color and 32.6% of residents live below the federal poverty threshold;

and

Whereas, the Minneapolis Racial Equity Framework for Transportation notes that "formerly redlined areas comprise 17% of Minneapolis' land but include 48% of the total miles of freeway.; and

Whereas, The Minneapolis Racial Equity Framework for Transportation also notes that "The residents who remain near these freeways suffer the effects of concentrated emissions, decades of toxic lead and continuing pollutants including particulate matter." "People who live within a quarter mile of a highway" in neighborhoods like Elliot Park, Cedar Riverside, Seward and Prospect Park, "are more likely to experience "childhood asthma, impaired lung function, premature death and death from cardiovascular diseases and cardiovascular morbidity"; and

Commented [H(1]: @Hyink, Jessica (she/her/hers) Please confirm these REF references

Commented [HJ(2R1]: The REF references are accurate.

Whereas, childhood asthma is a significant cause of school absenteeism and, since I-94 runs through communities of color, contributes to educational disparities; and

Whereas, listed actions in the Racial Equity Framework for Transportation include: "Encourage and support regional efforts to explore options and opportunities to address harms of past transportation decisions.", "work to understand and communicate as part of project development the non-transportation impacts on residents and businesses of transportation projects (e.g. land use, property values, housing affordability, cultural displacement, etc.)", and "encourage and support the inclusion of anti-displacement work when major investments occur (e.g. light rail projects) led by partners at the Minnesota Department of Transportation, Hennepin County and/or and Metro Transit"; and

Commented [H(3]: @Hyink, Jessica (she/her/hers) please check this REF reference

Commented [HJ(4R3]: These REF references are accurate.

Whereas, the City of Minneapolis has adopted the Transportation Action Plan, a policy framework that prioritizes walking, bicycling, and transit, with goals of increasing equity in our transportation system, reducing carbon emissions, improving human health through improved air quality and increased active travel, and enabling the safe movement of people, goods, and services across the city; and

Whereas, transportation is the largest source of greenhouse gas emissions in Minnesota, and the City of Minneapolis set a goal to reduce greenhouse gas emissions by 80% by 2050; and

Commented [H(5]: Was this updated in the climate action plan?

Commented [HJ(6R5]: The latest goal from the City states net-zero emissions by 2050. The Climate Action Plan has not been updated, but work completed in support of the plan state this goal, which was adopted by the Mayor in 2021.

Commented [HJ(7R5]: Text on City webpage: Reach net-zero greenhouse gas (GHG) emissions by 2050.

Commented [MK8]: Yes - @Hyink, Jessica (she/her/hers) - can you get the new info?

Commented [HJ(9R8]: See reply above to Jeni.

Whereas, the Minneapolis Climate Action Plan has stated goals to rapidly reduce vehicle miles traveled (VMT) in the city and support the Metropolitan Council's goal of doubling regional transit ridership by 2030; and

Whereas, a growing network of mobility infrastructure including bus rapid transit and protected bike lanes create local travel opportunities that are inexpensive, safe, fast, and convenient, rendering many local trips by interstate highway unnecessary; and

Whereas, remote work has shifted commuting habits, reducing peak traffic volumes on I-94, and today the vast majority of the vehicle trips originating in this corridor are short distance local trips; and

Whereas, following their construction, high-speed urban highways have since been recognized as injurious to the economic vitality, livability, and safety of the dense communities they were intended to serve; and

Whereas, cities across the country have successfully replaced urban freeways with local streets and new community development and additional projects are being planned; and

Whereas, data from completed projects has demonstrated that expanding highways induces more car trips and congestion, while reducing lanes and/or converting them into multimodal boulevards incentivizes mode shift and produces traffic evaporation; and

Whereas, repurposing highway right-of-way into new housing and businesses has the potential to grow the Minneapolis tax base and add ~~thousands of~~ new affordable housing units and job opportunities; and

Now, Therefore, Be It Resolved by The City Council of The City of Minneapolis:

That the City of Minneapolis continues to strongly oppose the repair or reconstruction of I-94 in its current form and categorically rejects any roadway expansion within its boundaries or any right of way expansion

Be It Further Resolved that the City Council of Minneapolis supports a wide variety of highway removal options in the upcoming Rethinking I-94 scoping decision document, including the addition of a “restored network” alternative with fewer lanes, which would maximize the potential to repurpose highway land for new public housing, affordable commercial space, parks, community gardens, or other uses determined by surrounding communities

Be It Further Resolved that the City Council of Minneapolis supports studying options that repurpose the I-94 trench for new rail transit, creating a high speed connection between downtown Minneapolis to downtown Saint Paul and the broader region

Be It Further Resolved that the City Council is committed to working with other government partners to convene a community workgroup to study and implement proactive anti-displacement policies and reparations programs along the project corridor and evaluate opportunities to repurpose highway land for community benefit

Be It Further Resolved that the City Council supports updated traffic models to utilize dynamic traffic assignment (DTA) and incorporate potential future land-use changes, which are essential for accurate modeling

Be It Further Resolved that the City Council supports all efforts to improve transparency and

Commented [H(10]: @Brasser, Ben (he/him/his) Can you check this? It feels like I've heard this reported differently over the years in terms of whether the majority of trips in the corridor are short or thru. I also thought I heard that while the peaks aren't as distinct post-covid, the volumes are approaching pre-covid levels once again????

Commented [B(11R10]: As of 2023, daily traffic volumes along I-94 were at about 95% of pre-Covid levels.

Commented [H(12]: My suggestion here - There are conflicting reports done by OS and MnDOT, both with consultants, regarding other

Commented [HJ(13R12]: Agreed.

Commented [B(14R12]: Same.

Commented [H(15]: @Brasser, Ben (he/him/his) Do we agree on this statement based on data?

Commented [B(16R15]: "expanding highways induces more car trips" - generally agree.

Commented [H(17]: @Bockheim, Adrienne (she/her/hers) Not sure how we feel about this statement. I think there is a discrepancy between

Commented [B(18R17]: I would recommend removing the numbers from this statement because there's no way to know until we study

Commented [H(19]: Not sure about this - Our previous resolution calls out our support for BRT in this corridor. The feasibility of BRT is much

Commented [HJ(20R19]: TAP transit action 4.8 calls for the City to advocate for light rail and BRT to provide connections to regional job

Commented [B(21R19]: MnDOT looked at LRT options as they were developing alternatives (early 2023) and removed them due to the stated

Commented [MK22]: TAP Transit Action 2.7 refers to BRT - https://go.minneapolismn.gov/final-

Commented [MK23]: Transit 4.8 talks about rail connections more broadly - https://go.minneapolismn.gov/final-

Commented [H(24]: @Brasser, Ben (he/him/his) ???

Commented [B(25R24]: Utilizing Dynamic Traffic Assignment would require an overhaul of Met Council's regional travel demand model, community engagement, including visualizing, to-scale, what each studied project alternatives would look like in each corridor neighborhood, and disclosing how each project option would impact pollution, health outcomes, greenhouse gas emissions, traffic noise, racial equity, and economic development

Be It Further Resolved that the City Council will center all future decisions about the future of I-94 should be made with robust community engagement and in partnership with surrounding residents and businesses

Be It Further Resolved that the City Council supports amending the Rethinking I-94 project's evaluation criteria to better measure and prioritize the impacts on adjacent neighborhoods, including adding specificity to metrics of air pollution, equity, mobility, sense of place, and connectivity, of which the current measures are vaguely defined and provide little value for evaluating the differences between project alternatives

Be It Further Resolved that the City Council enthusiastically supports cross-collaboration efforts with other agencies, and encourages the City of Minneapolis and its partners to apply for a USDOT Reconnecting Communities & Neighborhoods grant to study a boulevard conversion of the Rethinking I-94 corridor

Commented [H(26]: For the Team - Do we agree with this?

Commented [HJ(27R26]: In our staff letter to MnDOT on the alternatives evaluation draft, we provided comments related to a need for improved metrics on air pollution, additional metrics on bike/walk safety and comfort, additional metrics on economic vitality, improved metrics on sense of place, additional metric on EJ urban heat island effect impacts. Some of these comments may be addressed in the latest draft of the alternatives evaluation, which was shared recently and needs review by staff.

Commented [MK28]: I'm not sure what the current measures are and if they are vague or provide little value, but I don't see how additional metrics would hurt - so we could recommend adjusting to add.

Commented [H(29]: This last part may need to be edited to support a grant application without calling out a boulevard conversion specifically in order to ensure no conflict with the active EIS process

Rethinking I-94 TAC/PPC meeting

7/16/24

Community Voices Survey – Renee MnDOT

- Volunteer sign up
- Survey
- Profiles with stories to humanize experience on corridor

Air Quality – Natalie Ries MnDOT; Ronald Ying consultant

- Working with FHWA and sticking to federal and state regulations
- Have working group, including FHWA and Met Council
- Air quality analysis will occur during Tier 1 EIS
    - Emissions inventory for
        - Criteria pollutants – Clean Air Act
        - MSATs
        - GHGs
    - Using MOVES for air quality modeling and MOVES and MICE for GHG

Regional Traffic Modeling

- At this stage, limitations in modeling that will be worked through in more detail later in the process
- Assuming 30% of trips will find another way

Safety Analysis – Jason Junge MnDOT?

- How to differentiate between alternatives
    - Focus on fatal and severe crashes
- New memo
    - Worked with MnDOT and FHWA staff
    - Using VMT estimates from regional modeling and typical crash rates
        - Crash rates specific to Minnesota
        - Assumes all intersections operate at an average crash rate level
            - Could look into more details on individual intersections
                - Recommending below 20k and above 20k
            - As intersections approach capacity, then crash rate average is higher; MnDOT thinks they are being conservative on crash rate
                - Does not show full range of crashes

Re-thinking I-94 Joint PPC and TAC meeting notes (July – Nov 2024)

7/16/2024 Joint committees

Link to materials

Agenda:

- Updates
    - General Project Updates
        - Ongoing technical activities (Mark)
        - Ongoing engagement activities and public events (Renee)
        - Schedule (Jess)
    - Agency Updates
        - Minneapolis
            - MPRB Grand Rounds Missing Link: Finally have funding to finish the link. Just kicked off Planning/Construction phase this spring. The route will be designed and constructed on an incremental basis over the next decade based on interagency coordination efforts. Could be opportunity to connect bike routes?
            - Reconnecting Communities grant out for proposals – OurStreets interested in applying for that
        - St Paul
            - Reconnect Rondo have contract(?) RAISE?
            - Movement on former Sears site
        - Hennepin County
            - B Line operating starting June 2025
        - Ramsey County
        - Met Council
            - 2040 TPP: public comment this fall, adoption in Feb 2025
            - Transportation Improvement Program
        - U-MN
            - Building new hospital in the future (not sure of timeline yet)
        - Capitol Planning Board
- Community Voices (Renee) – Continued work on community voices for I-94
- Air Quality (Natalie and Ronald)
    - Meeting with National FHWA
    - Discussion on approach to air quality
- Traffic Sensitivity (Jason) -- Updated information on traffic dispersing to the local/regional network
- Safety (Mark/Jason) -- Evaluation of alternatives
- Cost Estimates (Jess) -- Approach for construction and maintenance
- Alternatives (Austin/Jack) -- Revised Document Overview

  - Comments received
  - Supplemental information provided
  - Walk through of modified document
- Next Meeting in August: In person – joint TAC/PPC updates on alternatives evaluation – need to find a date/time for discussion. May need more than 2 hours
- Upcoming Work Activities
  - Alternatives evaluation

Deadlines:

- December 16th: draft background memo for C+I agenda due to City
- December 17th – 20th: internal City staff review
- December 23rd: final background memo for C+I agenda submitted
- December 31st: draft presentation due for City staff review
- January 6th: final presentation due to have loaded in preparation of meeting
- Committee meeting posted 2 or 3 days before committee
- January 9th C+I
- PAC meeting Jan. 15th

MnDOT wants to submit a background memo
OK to attach as background file to RCA
Send to CMs ahead of meeting as well

City RCA: https://lims.minneapolismn.gov/RCA/23537

- City Resolution: https://lims.minneapolismn.gov/Download/RCAV2/46738/Rethinking-I-94-Resolution.pdf

Our Streets RCA: https://lims.minneapolismn.gov/RCA/22819

- Our Streets presentation: https://lims.minneapolismn.gov/Download/RCAV2/45177/Reimagining%2094%20Presentation.pdf

PAC

1. Does MnDOT have a schedule for topics for future PAC meetings? There is an interest from a Minneapolis PAC member on the general schedule and anticipated items for future PAC meetings. Our PAC member may ask a specific question about this Friday.
2. When will MnDOT convene the Air Quality Working Group? Will this begin in the short-term or not until Tier 1 EIS work commences?
3. How will MnDOT keep the public involved and engaged in the near term?
4. The City views the onboarding of a new traffic consultant and analysis as a positive response to questions arising from the public. Are there other efforts anticipated in response to feedback received from the public that we can expect at future TAC/PPC and PAC meetings?

From:	Bockheim, Adrienne (she/her/hers)
To:	Lindeberg, Mark (DOT)
Subject:	RE: [EXTERNAL] Rethinking I-94 Space Exhibits - email 2 of 2
Date:	Friday, May 24, 2024 10:23:00 AM
Attachments:	image001.png image002.png image004.png

Understood, thanks. I'll do the best I can with what you've provided.

From: Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>
Sent: Friday, May 24, 2024 10:10 AM
To: Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>
Subject: RE: [EXTERNAL] Rethinking I-94 Space Exhibits - email 2 of 2

Adrienne
I understand what you are saying, but this is where we get back to what I stated previously, we are still in the Scoping process right now and none of our design work, at this time, is accurate enough to get measurements down to a foot. The Scoping process is intended to look at the project at a higher level. More details are determined as we work through the Tier 1 EIS Phase of the project. At that time, we will be better equipped to provide more design details. Not to mention that we still don't have intersection/interchange locations or design types, easements, utilities, water treatment, etc. which will require space and that space is NOT being shown at this time.

Let me know if you want to discuss this, I am happy to have that conversation.

Thanks
Mark

Mark J. Lindeberg
Mark.lindeberg@state.mn.us
651-775-5485
DEPARTMENT OF TRANSPORTATION

From: Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>
Sent: Thursday, May 23, 2024 3:31 PM
To: Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>
Subject: RE: [EXTERNAL] Rethinking I-94 Space Exhibits - email 2 of 2

Thanks, Mark. Given the scale of the plan drawings (1'=200') and small sheet sizes (11x17"), it's hard to accurately measure the width of smaller elements of the plan, such as boulevard space. That's why I was wondering if it was possible to have dimensions – even rough ones -- put on the sections. Is that something that could be shared?

From: Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>
Sent: Thursday, May 23, 2024 2:48 PM
To: Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>
Subject: RE: [EXTERNAL] Rethinking I-94 Space Exhibits - email 2 of 2

Adrienne
There is not a specific scale to the cross section drawing such that you can measure each component of the alternatives.

Sorry that you had to send this request a second time, I had thought I responded but I had not.

mark

From: Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>
Sent: Thursday, May 23, 2024 1:56 PM
To: Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>
Subject: RE: [EXTERNAL] Rethinking I-94 Space Exhibits - email 2 of 2

Do you know if there is a scale for the section drawings too? I am planning to talk to some CPED management about this work next week and feel that understanding the general design of each alternative is an important element of that conversation.
Thanks,

Adrienne Bockheim | Principal City Planner/Designer
City of Minneapolis – Community Planning & Economic Development

---

From: Bockheim, Adrienne (she/her/hers)
Sent: Tuesday, May 14, 2024 11:18 AM
To: 'Lindeberg, Mark (DOT)' <mark.lindeberg@state.mn.us>; 'Russ Stark' <russ.stark@ci.stpaul.mn.us>; 'Isaacson, Brian' <Brian.Isaacson@CO.RAMSEY.MN.US>; 'Jessa Trboyevich' <jessa.trboyevich@hennepin.us>; Chad Ellos <chad.ellos@hennepin.us>; Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; 'Randy Newton' <Randy.Newton@ci.stpaul.mn.us>
Cc: 'Barnes, Melissa (She/Her/Hers) (DOT)' <melissa.barnes@state.mn.us>; 'Jack Corkle' <jcorkle@wsbeng.com>; 'Jessica Karls' <JKarls@wsbeng.com>
Subject: RE: [EXTERNAL] Rethinking I-94 Space Exhibits - email 2 of 2

Mark, I see that the scale noted is for the plan drawings -- is there a scale for the section drawings too?

From: Bockheim, Adrienne (she/her/hers)
Sent: Friday, May 10, 2024 9:23 AM
To: Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>; Russ Stark <russ.stark@ci.stpaul.mn.us>;

Isaacson, Brian <Brian.Isaacson@CO.RAMSEY.MN.US>; Jessa Trboyevich <jessa.trboyevich@hennepin.us>; Chad Ellos <chad.ellos@hennepin.us>; Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Randy Newton <Randy.Newton@ci.stpaul.mn.us>
Cc: Barnes, Melissa (She/Her/Hers) (DOT) <melissa.barnes@state.mn.us>; Jack Corkle <jcorkle@wsbeng.com>; Jessica Karls <JKarls@wsbeng.com>
Subject: RE: [EXTERNAL] Rethinking I-94 Space Exhibits - email 2 of 2

Thanks for pointing that out, Mark. Not sure how I missed that scale, as it is very large! We'll take a look and get back to you soon.

From: Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>
Sent: Friday, May 10, 2024 7:51 AM
To: Russ Stark <russ.stark@ci.stpaul.mn.us>; Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>; Isaacson, Brian <Brian.Isaacson@CO.RAMSEY.MN.US>; Jessa Trboyevich <jessa.trboyevich@hennepin.us>; Chad Ellos <chad.ellos@hennepin.us>; Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Randy Newton <Randy.Newton@ci.stpaul.mn.us>
Cc: Barnes, Melissa (She/Her/Hers) (DOT) <melissa.barnes@state.mn.us>; Jack Corkle <jcorkle@wsbeng.com>; Jessica Karls <JKarls@wsbeng.com>
Subject: RE: [EXTERNAL] Rethinking I-94 Space Exhibits - email 2 of 2

Adrienne/Russ
Thank you for your emails regarding the Rethinking I-94 Space Exhibits. I would like to note that there is a scale in the upper right corner of each page, so that would be able to help with determining size of space.

Additionally, we are still in the Scoping process right now and none of our design work, at this time, is accurate enough to get measurements down to a foot. The Scoping process is intended to look at the project at a higher level. More details are determined as we work through the Tier 1 EIS Phase of the project. At that time, we will be better equipped to provide more design details. Not to mention that we still don't have intersection/interchange locations or design types, easements, utilities, water treatment, etc. which will require space and that space is NOT being shown at this time.

Please let me know if you would like to talk about this in more detail.

Thanks
Mark

Mark J. Lindeberg
Mark.lindeberg@state.mn.us
651-775-5485
DEPARTMENT OF TRANSPORTATION

From: Russ Stark <russ.stark@ci.stpaul.mn.us>
Sent: Thursday, May 2, 2024 10:43 AM
To: Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>; Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>; Isaacson, Brian <Brian.Isaacson@CO.RAMSEY.MN.US>; Jessa Trboyevich <jessa.trboyevich@hennepin.us>; Chad Ellos <chad.ellos@hennepin.us>; Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Randy Newton <Randy.Newton@ci.stpaul.mn.us>
Cc: Barnes, Melissa (She/Her/Hers) (DOT) <melissa.barnes@state.mn.us>; Jack Corkle <jcorkle@wsbeng.com>; Jessica Karls <JKarls@wsbeng.com>
Subject: RE: [EXTERNAL] Rethinking I-94 Space Exhibits - email 2 of 2

Agree!

Russ Stark
Chief Resilience Officer
(he/him/his) *Why do pronouns matter? Read this.
Mayor's Office
15 W. Kellogg Blvd, Suite 390
Saint Paul, MN 55102
P: 651-266-8511 | M: 651-324-2807
russ.stark@ci.stpaul.mn.us
www.StPaul.gov

SAINT PAUL
MINNESOTA

Please visit the Saint Paul Climate Action Dashboard: https://climateaction.stpaul.gov/

CDP
DISCLOSURE INSIGHT ACTION
A LIST
2021
CITIES

From: Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>
Sent: Wednesday, May 1, 2024 4:55 PM
To: Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>; Isaacson, Brian <Brian.Isaacson@CO.RAMSEY.MN.US>; Jessa Trboyevich <jessa.trboyevich@hennepin.us>; Chad Ellos <chad.ellos@hennepin.us>; Hager, Jenifer (she/her/hers)

<Jenifer.Hager@minneapolismn.gov>; Randy Newton <Randy.Newton@ci.stpaul.mn.us>; Russ Stark <russ.stark@ci.stpaul.mn.us>
Cc: Barnes, Melissa (DOT) <melissa.barnes@state.mn.us>; Jack Corkle <jcorkle@wsbeng.com>; Jessica Karls <JKarls@wsbeng.com>
Subject: RE: [EXTERNAL] Rethinking I-94 Space Exhibits - email 2 of 2

Think Before You Click: This email originated **outside** our organization.

Hi Mark,

Circling back to the space exhibits you shared in early April: In looking at the documents, I noticed that the scale(s) of the drawings are not noted, nor are the widths of various aspects of the design (the depth of the potential land space or the width of lanes and green space, for example). Without knowing these things, it will be challenging for us to understand if the potential land space is developable. Could some of these dimensions be added to the exhibits?

Thanks,

Adrienne Bockheim | Principal City Planner/Designer

Name pronounciation: A-dree-YEN BOCK-hym | *she/her**

City of Minneapolis – Community Planning & Economic Development | 505 Fourth Avenue S, Suite 320, Minneapolis, MN 55415

Office: 612-673-5028

adrienne.bockheim@minneapolismn.gov

-

*Why this matters

Minneapolis
City of Lakes

From: Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>
Sent: Thursday, April 18, 2024 8:56 AM
To: Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>; Brian.Isaacson@CO.RAMSEY.MN.US; Jessa Trboyevich <jessa.trboyevich@hennepin.us>; Chad Ellos <chad.ellos@hennepin.us>; Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Randy.Newton@ci.stpaul.mn.us; russ.stark@ci.stpaul.mn.us
Cc: Barnes, Melissa (She/Her/Hers) (DOT) <melissa.barnes@state.mn.us>; Jack Corkle <jcorkle@wsbeng.com>; Jessica Karls <JKarls@wsbeng.com>
Subject: RE: [EXTERNAL] Rethinking I-94 Space Exhibits - email 2 of 2

You don't often get email from mark.lindeberg@state.mn.us. Learn why this is important

Adrienne
Sorry for such a delayed response to you on this. We are not looking for any comments on this right now. We know that there was interest in having these exhibits, so MnDOT provided the information we were comfortable with based on where we are at in the project.

I do not think the exhibits will be part of any agendas for upcoming committee meetings. If you would like to talk about theses, please feel free to let me know and I will be happy to discuss.

Thanks!
Mark

Mark J. Lindeberg
Mark.lindeberg@state.mn.us
651-775-5485
DEPARTMENT OF TRANSPORTATION

From: Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>
Sent: Monday, April 8, 2024 11:17 AM
To: Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>; Brian.Isaacson@CO.RAMSEY.MN.US; Jessa Trboyevich <jessa.trboyevich@hennepin.us>; Chad Ellos <chad.ellos@hennepin.us>; Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Randy.Newton@ci.stpaul.mn.us; russ.stark@ci.stpaul.mn.us
Cc: Barnes, Melissa (She/Her/Hers) (DOT) <melissa.barnes@state.mn.us>; Jack Corkle <jcorkle@wsbeng.com>; Jessica Karls <JKarls@wsbeng.com>
Subject: RE: [EXTERNAL] Rethinking I-94 Space Exhibits - email 2 of 2

Thanks, Mark. Are you looking for comments right now? Will these be discussed at future committee meetings?

Adrienne Bockheim | Principal City Planner/Designer
City of Minneapolis – Community Planning & Economic Development

---

From: Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>

Sent: Tuesday, April 2, 2024 3:04 PM
To: Brian.Isaacson@CO.RAMSEY.MN.US; Jessa Trboyevich <jessa.trboyevich@hennepin.us>; Chad Ellos <chad.ellos@hennepin.us>; Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>; Randy.Newton@ci.stpaul.mn.us; russ.stark@ci.stpaul.mn.us
Cc: Barnes, Melissa (She/Her/Hers) (DOT) <melissa.barnes@state.mn.us>; Jack Corkle <jcorkle@wsbeng.com>; Jessica Karls <JKarls@wsbeng.com>
Subject: [EXTERNAL] Rethinking I-94 Space Exhibits - email 2 of 2

Hello All –
Attached you will find the PRELIMINARY Space Exhibits that have been developed for four of the alternatives: 1 – At Grade, 2 – Expanded Freeway A, 3 – Local-Regional, and 4 – Reduced Freeway (two exhibits are included in this email and the other two exhibits were sent in another email due to size restrictions at MnDOT). Also, I have included a cover memo that explains a bit about the exhibits in the original email. This memo touches on some of the unknowns based on the fact that we are in Scoping and that we do not have a lot of details on the alternatives.

Please feel free to reach out and discuss this information with me if you have any questions.

I apologize for the very large email size and clogging your inbox!

Thanks
Mark

Mark J. Lindeberg
Mark.lindeberg@state.mn.us
651-775-5485
DEPARTMENT OF TRANSPORTATION

DEPARTMENT OF
TRANSPORTATION

SAINT PAUL
MINNESOTA

Minneapolis
City of Lakes

From: "Bockheim, Adrienne (she/her/hers)" <adrienne.bockheim@minneapolismn.gov>
To: "Hager, Jenifer (she/her/hers)" <Jenifer.Hager@minneapolismn.gov>, "Hyink, Jessica (she/her/hers)" <jessica.hyink@minneapolismn.gov>, "Brasser, Ben (he/him/his)" <benjamin.brasser@minneapolismn.gov>
Subject: FW: [EXTERNAL] Rethinking I-94 Space Exhibits - email 2 of 2
Date: Fri, 24 May 2024 15:48:36 +0000
Attachments: At-Grade_alternative_Cedar-Riverside_area_w_approx_dims.pdf
Inline-Images: image001.png; image002.png; image003.jpg; image004.png

---

Team,

I've been back and forth with Mark at MnDOT trying to understand the dimensions of the sections in these Excess ROW drawings from MnDOT. They did not say this outright, but based on the conversation, they are unwilling to provide dimensions right now (understood). Still, I think it's important to understand the general widths of elements in the at-grade alternative in particular, so I used the 1:200 scale of the plan drawings and was able to measure (very approximately) the widths. See attached drawing. I think it's helpful to see just how wide they are designing this at-grade alternative.

Also, FYI, I've been asked to brief some of our CPED leadership next week to bring them up-to-date on the project – this was in response to the question from Qannani about a possible land use study. Jeni, would you be interested in attending? I've asked Meg if this is intended to be a CPED-only conversation but she's out of the office until Tuesday. Anyway, it's at 13.43 - Personnel Data if you are available.

I'd like to share these dimensions with St. Paul staff as well, as Russ expressed interest. If we feel it's important to give the project office feedback on this work, I think it would be great to see if we can coordinate with St. Paul. Let me know what you think.

- Adrienne

From: Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>
Sent: Friday, May 24, 2024 10:10 AM
To: Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>
Subject: RE: [EXTERNAL] Rethinking I-94 Space Exhibits - email 2 of 2

Adrienne
I understand what you are saying, but this is where we get back to what I stated previously, we are still in the Scoping process right now and none of our design work, at this time, is accurate enough to get measurements down to a foot. The Scoping process is intended to look at the project at a higher level. More details are determined as we work through the Tier 1 EIS Phase of the project. At that time, we will be better equipped to provide more design details. Not to mention that we still don't have intersection/interchange locations or design types, easements, utilities, water treatment, etc. which will require space and that space is NOT being shown at this time.

Let me know if you want to discuss this, I am happy to have that conversation.

Thanks
Mark

Mark J. Lindeberg
Mark.lindeberg@state.mn.us

651-775-5485
DEPARTMENT OF TRANSPORTATION

From: Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>
Sent: Thursday, May 23, 2024 3:31 PM
To: Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>
Subject: RE: [EXTERNAL] Rethinking I-94 Space Exhibits - email 2 of 2

Thanks, Mark. Given the scale of the plan drawings (1'=200') and small sheet sizes (11x17"), it's hard to accurately measure the width of smaller elements of the plan, such as boulevard space. That's why I was wondering if it was possible to have dimensions – even rough ones -- put on the sections. Is that something that could be shared?

From: Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>
Sent: Thursday, May 23, 2024 2:48 PM
To: Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>
Subject: RE: [EXTERNAL] Rethinking I-94 Space Exhibits - email 2 of 2

Adrienne
There is not a specific scale to the cross section drawing such that you can measure each component of the alternatives.

Sorry that you had to send this request a second time, I had thought I responded but I had not.

mark

From: Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>
Sent: Thursday, May 23, 2024 1:56 PM
To: Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>
Subject: RE: [EXTERNAL] Rethinking I-94 Space Exhibits - email 2 of 2

Do you know if there is a scale for the section drawings too? I am planning to talk to some CPED management about this work next week and feel that understanding the general design of each alternative is an important element of that conversation.
Thanks,

Adrienne Bockheim | Principal City Planner/Designer
City of Minneapolis – Community Planning & Economic Development

From: Bockheim, Adrienne (she/her/hers)
Sent: Tuesday, May 14, 2024 11:18 AM
To: 'Lindeberg, Mark (DOT)' <mark.lindeberg@state.mn.us>; 'Russ Stark' <russ.stark@ci.stpaul.mn.us>; 'Isaacson, Brian' <Brian.Isaacson@CO.RAMSEY.MN.US>; 'Jessa Trboyevich' <jessa.trboyevich@hennepin.us>; Chad Ellos <chad.ellos@hennepin.us>; Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; 'Randy Newton' <Randy.Newton@ci.stpaul.mn.us>
Cc: 'Barnes, Melissa (She/Her/Hers) (DOT)' <melissa.barnes@state.mn.us>; 'Jack Corkle' <jcorkle@wsbeng.com>; 'Jessica Karls' <JKarls@wsbeng.com>
Subject: RE: [EXTERNAL] Rethinking I-94 Space Exhibits - email 2 of 2

Mark, I see that the scale noted is for the plan drawings -- is there a scale for the section drawings too?

From: Bockheim, Adrienne (she/her/hers)
Sent: Friday, May 10, 2024 9:23 AM
To: Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>; Russ Stark <russ.stark@ci.stpaul.mn.us>; Isaacson, Brian <Brian.Isaacson@CO.RAMSEY.MN.US>; Jessa Trboyevich <jessa.trboyevich@hennepin.us>; Chad Ellos <chad.ellos@hennepin.us>; Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Randy Newton <Randy.Newton@ci.stpaul.mn.us>
Cc: Barnes, Melissa (She/Her/Hers) (DOT) <melissa.barnes@state.mn.us>; Jack Corkle <jcorkle@wsbeng.com>; Jessica Karls <JKarls@wsbeng.com>
Subject: RE: [EXTERNAL] Rethinking I-94 Space Exhibits - email 2 of 2

Thanks for pointing that out, Mark. Not sure how I missed that scale, as it is very large! 😊 We'll take a look and get back to you soon.

From: Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>
Sent: Friday, May 10, 2024 7:51 AM
To: Russ Stark <russ.stark@ci.stpaul.mn.us>; Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>; Isaacson, Brian <Brian.Isaacson@CO.RAMSEY.MN.US>; Jessa Trboyevich <jessa.trboyevich@hennepin.us>; Chad Ellos <chad.ellos@hennepin.us>; Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Randy Newton <Randy.Newton@ci.stpaul.mn.us>
Cc: Barnes, Melissa (She/Her/Hers) (DOT) <melissa.barnes@state.mn.us>; Jack Corkle <jcorkle@wsbeng.com>; Jessica Karls <JKarls@wsbeng.com>
Subject: RE: [EXTERNAL] Rethinking I-94 Space Exhibits - email 2 of 2

Adrienne/Russ
Thank you for your emails regarding the Rethinking I-94 Space Exhibits. I would like to note that there is a scale in the upper right corner of each page, so that would be able to help with determining size of space.

Additionally, we are still in the Scoping process right now and none of our design work, at this time, is accurate enough to get measurements down to a foot. The Scoping process is intended to look at the project at a higher level. More details are determined as we work through the Tier 1 EIS Phase of the project. At that time, we will be better equipped to provide more design details. Not to mention that we still don't have intersection/interchange locations or design types, easements, utilities, water treatment, etc. which will require space and that space is NOT being shown at this time.

Please let me know if you would like to talk about this in more detail.

Thanks
Mark

Mark J. Lindeberg
Mark.lindeberg@state.mn.us
651-775-5485
DEPARTMENT OF TRANSPORTATION

From: Russ Stark <russ.stark@ci.stpaul.mn.us>
Sent: Thursday, May 2, 2024 10:43 AM
To: Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>; Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>; Isaacson, Brian <Brian.Isaacson@CO.RAMSEY.MN.US>; Jessa Trboyevich

<jessa.trboyevich@hennepin.us>; Chad Ellos <chad.ellos@hennepin.us>; Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Randy Newton <Randy.Newton@ci.stpaul.mn.us>
Cc: Barnes, Melissa (She/Her/Hers) (DOT) <melissa.barnes@state.mn.us>; Jack Corkle <jcorkle@wsbeng.com>; Jessica Karls <JKarls@wsbeng.com>
Subject: RE: [EXTERNAL] Rethinking I-94 Space Exhibits - email 2 of 2

Agree!

Russ Stark
Chief Resilience Officer
(he/him/his) *Why do pronouns matter? Read this.
Mayor's Office
15 W. Kellogg Blvd, Suite 390
Saint Paul, MN 55102
P: 651-266-8511 | M: 651-324-2807
russ.stark@ci.stpaul.mn.us
www.StPaul.gov

Please visit the Saint Paul Climate Action Dashboard: https://climateaction.stpaul.gov/

From: Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>
Sent: Wednesday, May 1, 2024 4:55 PM
To: Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>; Isaacson, Brian <Brian.Isaacson@CO.RAMSEY.MN.US>; Jessa Trboyevich <jessa.trboyevich@hennepin.us>; Chad Ellos <chad.ellos@hennepin.us>; Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Randy Newton <Randy.Newton@ci.stpaul.mn.us>; Russ Stark <russ.stark@ci.stpaul.mn.us>
Cc: Barnes, Melissa (DOT) <melissa.barnes@state.mn.us>; Jack Corkle <jcorkle@wsbeng.com>; Jessica Karls <JKarls@wsbeng.com>
Subject: RE: [EXTERNAL] Rethinking I-94 Space Exhibits - email 2 of 2

Hi Mark,

Circling back to the space exhibits you shared in early April: In looking at the documents, I noticed that the scale(s) of the drawings are not noted, nor are the widths of various aspects of the design (the depth of the potential land space or the width of lanes and green space, for example). Without knowing these things, it will be challenging for us to understand if the potential land space is developable. Could some of these dimensions be added to the exhibits?

Thanks,

Adrienne Bockheim | Principal City Planner/Designer

Name pronounciation: A-dree-YEN BOCK-hym | *she/her**

City of Minneapolis – Community Planning & Economic Development | 505 Fourth Avenue S, Suite 320, Minneapolis, MN 55415

Office: 612-673-5028

adrienne.bockheim@minneapolismn.gov

-

*Why this matters

Minneapolis
City of Lakes

From: Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>
Sent: Thursday, April 18, 2024 8:56 AM
To: Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>; Brian.Isaacson@CO.RAMSEY.MN.US; Jessa Trboyevich <jessa.trboyevich@hennepin.us>; Chad Ellos <chad.ellos@hennepin.us>; Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Randy.Newton@ci.stpaul.mn.us; russ.stark@ci.stpaul.mn.us
Cc: Barnes, Melissa (She/Her/Hers) (DOT) <melissa.barnes@state.mn.us>; Jack Corkle <jcorkle@wsbeng.com>; Jessica Karls <JKarls@wsbeng.com>
Subject: RE: [EXTERNAL] Rethinking I-94 Space Exhibits - email 2 of 2

Adrienne
Sorry for such a delayed response to you on this. We are not looking for any comments on this right now. We know that there was interest in having these exhibits, so MnDOT provided the information we were comfortable with based on where we are at in the project.

I do not think the exhibits will be part of any agendas for upcoming committee meetings. If you would like to talk about theses, please feel free to let me know and I will be happy to discuss.

Thanks!
Mark

Mark J. Lindeberg
Mark.lindeberg@state.mn.us
651-775-5485
DEPARTMENT OF TRANSPORTATION

From: Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>
Sent: Monday, April 8, 2024 11:17 AM
To: Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>; Brian.Isaacson@CO.RAMSEY.MN.US; Jessa Trboyevich <jessa.trboyevich@hennepin.us>; Chad Ellos <chad.ellos@hennepin.us>; Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Randy.Newton@ci.stpaul.mn.us; russ.stark@ci.stpaul.mn.us
Cc: Barnes, Melissa (She/Her/Hers) (DOT) <melissa.barnes@state.mn.us>; Jack Corkle <jcorkle@wsbeng.com>; Jessica Karls <JKarls@wsbeng.com>
Subject: RE: [EXTERNAL] Rethinking I-94 Space Exhibits - email 2 of 2

Thanks, Mark. Are you looking for comments right now? Will these be discussed at future committee meetings?

Adrienne Bockheim | Principal City Planner/Designer
City of Minneapolis – Community Planning & Economic Development

From: Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>
Sent: Tuesday, April 2, 2024 3:04 PM
To: Brian.Isaacson@CO.RAMSEY.MN.US; Jessa Trboyevich <jessa.trboyevich@hennepin.us>; Chad Ellos <chad.ellos@hennepin.us>; Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>; Randy.Newton@ci.stpaul.mn.us; russ.stark@ci.stpaul.mn.us
Cc: Barnes, Melissa (She/Her/Hers) (DOT) <melissa.barnes@state.mn.us>; Jack Corkle <jcorkle@wsbeng.com>; Jessica Karls <JKarls@wsbeng.com>
Subject: [EXTERNAL] Rethinking I-94 Space Exhibits - email 2 of 2

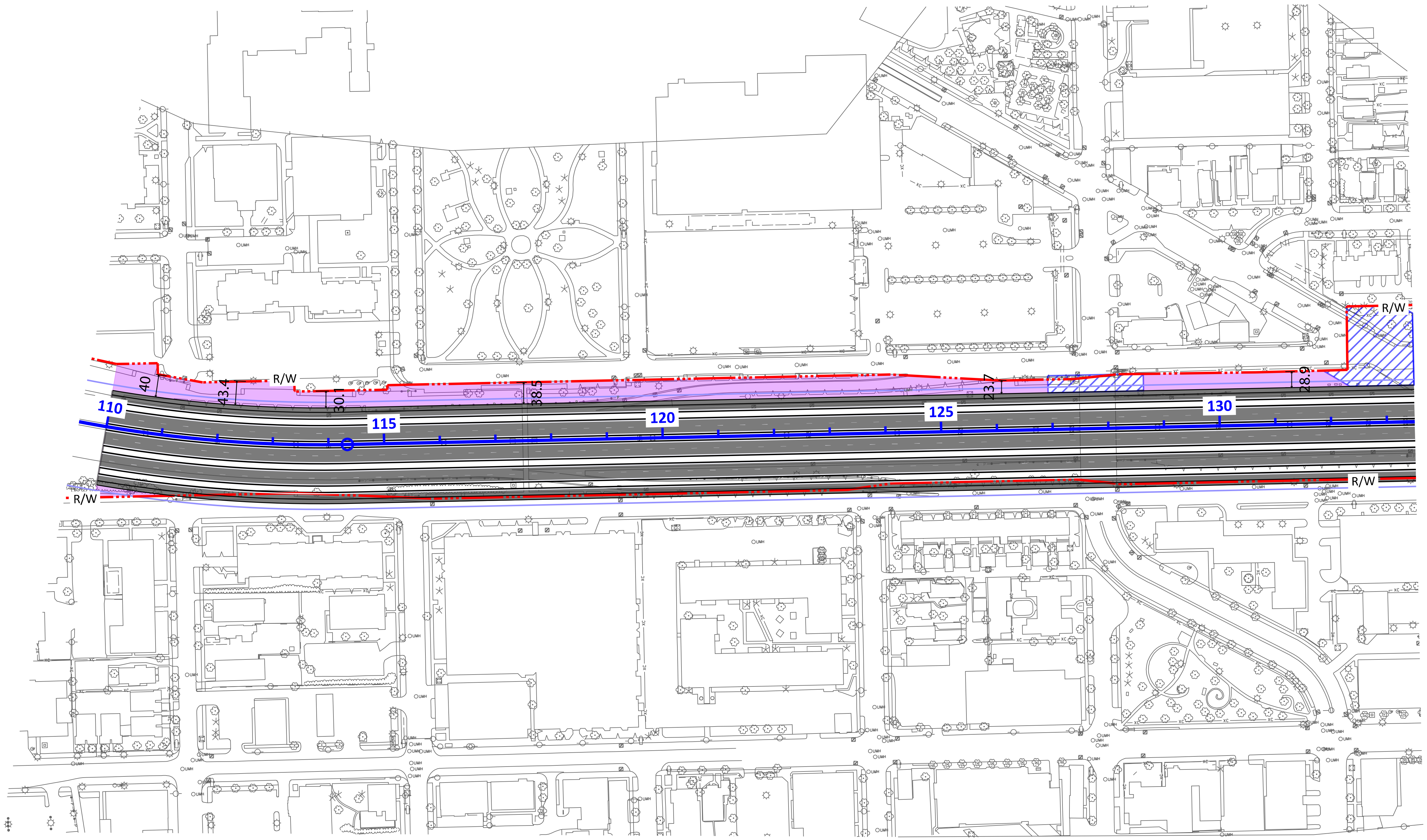
Hello All –
Attached you will find the PRELIMINARY Space Exhibits that have been developed for four of the alternatives: 1 – At Grade, 2 – Expanded Freeway A, 3 – Local-Regional, and 4 – Reduced Freeway (two exhibits are included in this email and the other two exhibits were sent in another email due to size restrictions at MnDOT). Also, I have included a cover memo that explains a bit about the exhibits in the original email. This memo touches on some of the unknowns based on the fact that we are in Scoping and that we do not have a lot of details on the alternatives.

Please feel free to reach out and discuss this information with me if you have any questions.

I apologize for the very large email size and clogging your inbox!

Thanks
Mark

Mark J. Lindeberg
Mark.lindeberg@state.mn.us
651-775-5485
DEPARTMENT OF TRANSPORTATION



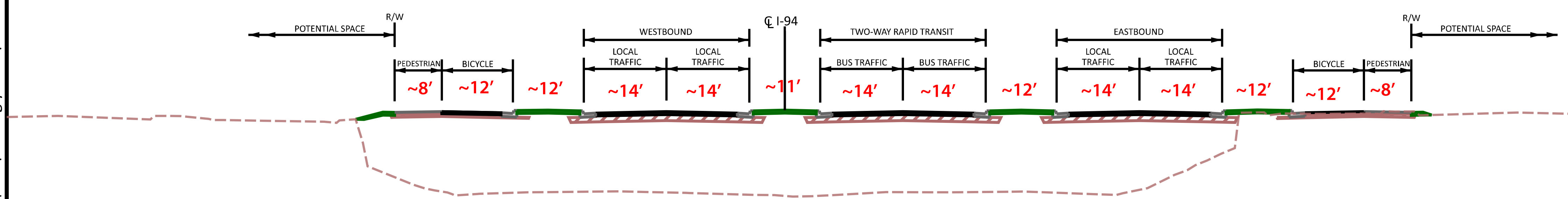
SCALE IN FEET
0 100 200

NOTES:

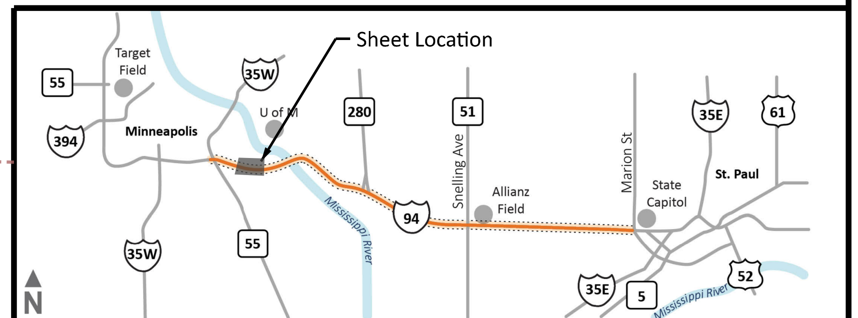
1. Potential space areas are estimates. More detailed designs will be required to determine exact amounts.
2. Potential space area estimates do not account for required easements, maintenance requirements, connections to sites, utilities, drainage, storm storage, etc., that would be considered as part of a development or alternative.
3. Potential space areas do not account for transit stations at 25th/27th Ave in Minneapolis & Snelling and Dale Ave in St Paul.
4. Potential space areas assume the roadway remains generally centered within existing right of way. Shifting the roadway to the north or south could potentially concentrate space, but doing so could have a substantial impact on adjacent land uses and neighborhoods.
5. Intersections/interchanges are not designed. The overall area is an estimate only and will be refined.
6. Freeway alternatives are not included due to the corridor design options. (Noise Walls, Retaining Walls, etc.)

POTENTIAL INTERSECTION OR INTERCHANGE

POTENTIAL LAND SPACE



TYPICAL SECTION



DATE: 3/26/2024 TIME: 4:01:41 PM
FILENAME: c:\bms\wsbeng-pw-01\dms41973\At-Grade Plansheets2.dgn

DRAWN BY: DESIGNED BY: CHECKED BY:	FOR CONCEPT USE ONLY. NOT FOR CONSTRUCTION.	MINNESOTA DEPARTMENT OF TRANSPORTATION RETHINKING I-94 MINNEAPOLIS TO ST PAUL, MINNESOTA	I-94 AT-GRADE OPTION	STATE PROJECT XXXX-XXX (TH 94) Sheet No. 1 of XTOT Sheets

Rethinking I-94: Scoping Alternatives Evaluation (Working Draft)

1 Introduction

The purpose of this document is to share the results of the alternatives evaluation completed during the Scoping phase of Rethinking I-94. Final recommendations regarding alternatives to advance into the Tier 1 Environmental Impact Statement (EIS) will be included in the Rethinking I-94 Scoping Document/Draft Scoping Decision Document (SD/DSDD) that will be released for public review and comment. This document is not intended to be a standalone resource; it builds on information included in the project's Purpose and Need Report[1] and Evaluation Criteria Memo,[2] which are available for review as separate documents. Brief summaries of the most relevant aspects of these documents are provided in the sub-sections that follow. The contents of this document are outlined in the table of contents below.

1 Introduction ... 1
1.1 Range of Alternatives ... 3
1.2 Purpose and Need ... 12
2 Evaluation Process ... 13
3 Scoping and Tier 1 Evaluation Criteria ... 14
3.1 Overview ... 14
3.2 Scoping and Tier 1 EIS Evaluation Tools ... 18
3.3 Topics Not Addressed in the Evaluation Criteria ... 18
4 Access & Interchange/Intersection Modifications ... 19
4.1 Targeted Safety, Infrastructure Condition, and Mainline Operations Locations ... 19
4.2 Access Closures and Modifications ... 20
5 Evaluation of Alternatives ... 22
5.1 No Build – General Maintenance ... 22
5.2 Maintenance – A ... 24
5.3 Maintenance – B ... 27
5.4 At-Grade – A and At-Grade – B ... 31
5.5 Local/Regional Roadways – A ... 40

[1] The Draft Purpose and Need in Conjunction with the Statement of Goals Technical Report (Purpose and Need Report) documents the facts and data supporting each problem or unsatisfactory condition identified for the I-94 program area.

[2] The Evaluation Criteria Memo provides more detailed background information on the evaluation criteria and measures proposed for the SDD and Tier 1 EIS.

5.6 Reduced Freeway – A........47
5.7 Reconfigured Freeway – A........53
5.8 Expanded Freeway – A........60
5.9 Expanded Freeway – B........67
6 Summary of Scoping Evaluation Recommendations........74
7 Appendices........76

1.1 Range of Alternatives

Information from the purpose and need document, feedback from partner agencies, traffic and transit studies, and input from the public have helped to inform potential alternatives for I-94. The alternatives developed in Scoping are focused on the I-94 "mainline," or the actual roadway itself. Access/interchange locations with safety or mobility issues have been identified during Scoping, but no intersection or interchange alternatives have been developed at this time.

In the Tier 1 EIS, the mainline alternatives will be studied in more detail, and multiple alternatives will be developed for interchange/intersection locations that may be modified. In addition, other project elements that could be applied to multiple alternatives will be explored further. These elements will include:

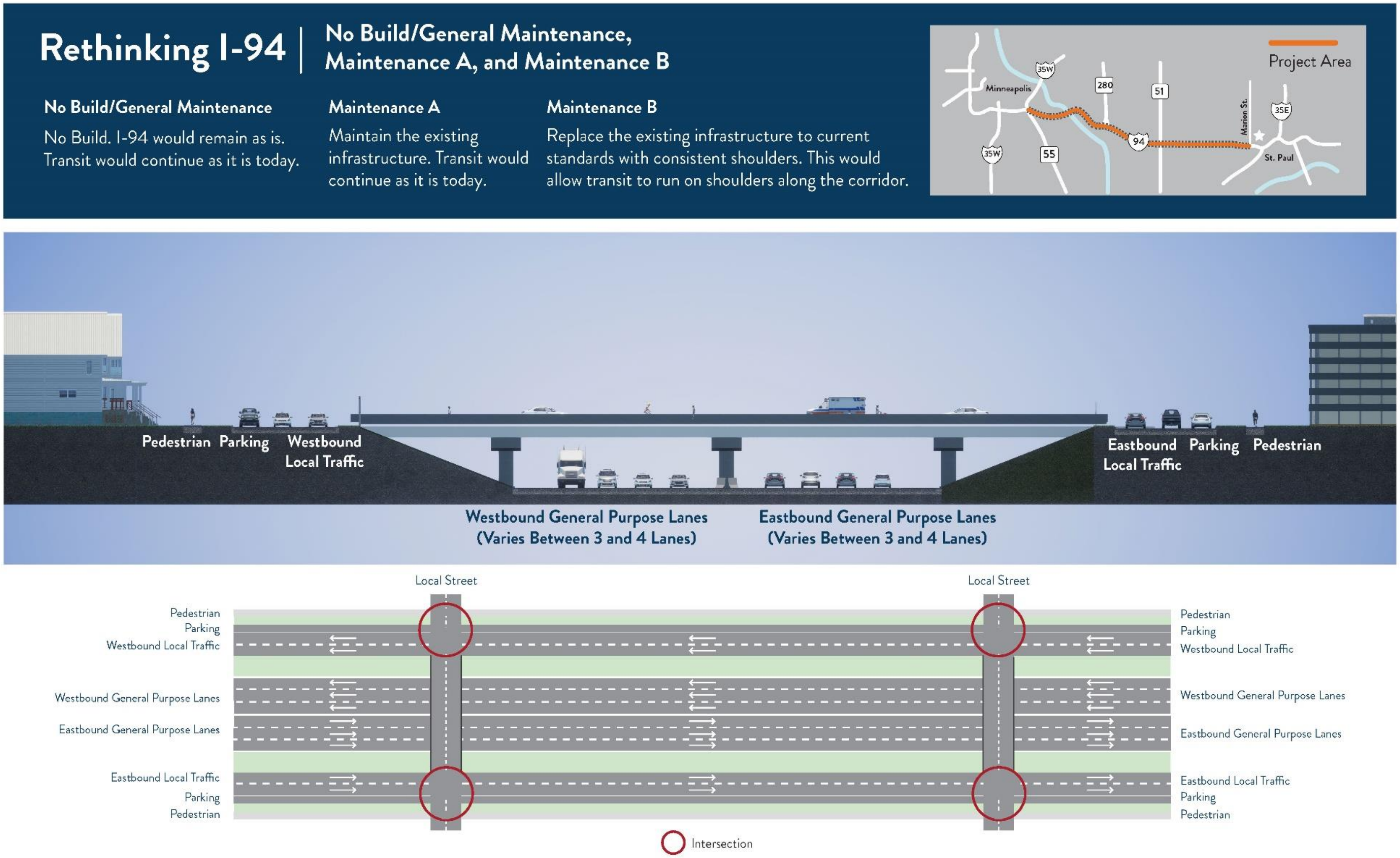
- Improvements to bicycle and pedestrian crossings and parallel facilities.
  - MnDOT is committed to improving walkability and bikeability in the I-94 corridor and will further develop opportunities for these connections in the Tier 1 EIS and Tier 2 construction documents. Project staff will ensure space is available for these elements and coordinate with existing studies (such as the proposed Midtown Greenway Extension) as part of this project.
- Freeway lids, caps, or stitches (wide bridges)
  - The project team will be coordinating with ReConnect Rondo on their efforts for a land bridge and how it relates to all alternatives under consideration.
- Corridor aesthetics
  - This effort will include extensive engagement with the adjacent communities.

The alternatives developed for evaluation during Scoping are discussed in more detail in the Alternatives for Consideration memo and are briefly summarized on the following pages.[3] The alternatives include:

- No Build – General Maintenance (**Figure 1**)
- Maintenance – A (**Figure 1**)
- Maintenance – B (**Figure 1**)
- At-Grade – A (**Figure 2**)
- At-Grade – B (**Figure 3**)
- Local/Regional Roadways – A (**Figure 4**)
- Reduced Freeway – A (**Figure 5**)
- Reconfigured Freeway (**Figure 6**)
- Expanded Freeway – A (**Figure 7**)
- Expanded Freeway – B (**Figure 8**)

[3] *Rethinking I-94 Alternatives for Consideration*. Month 2024

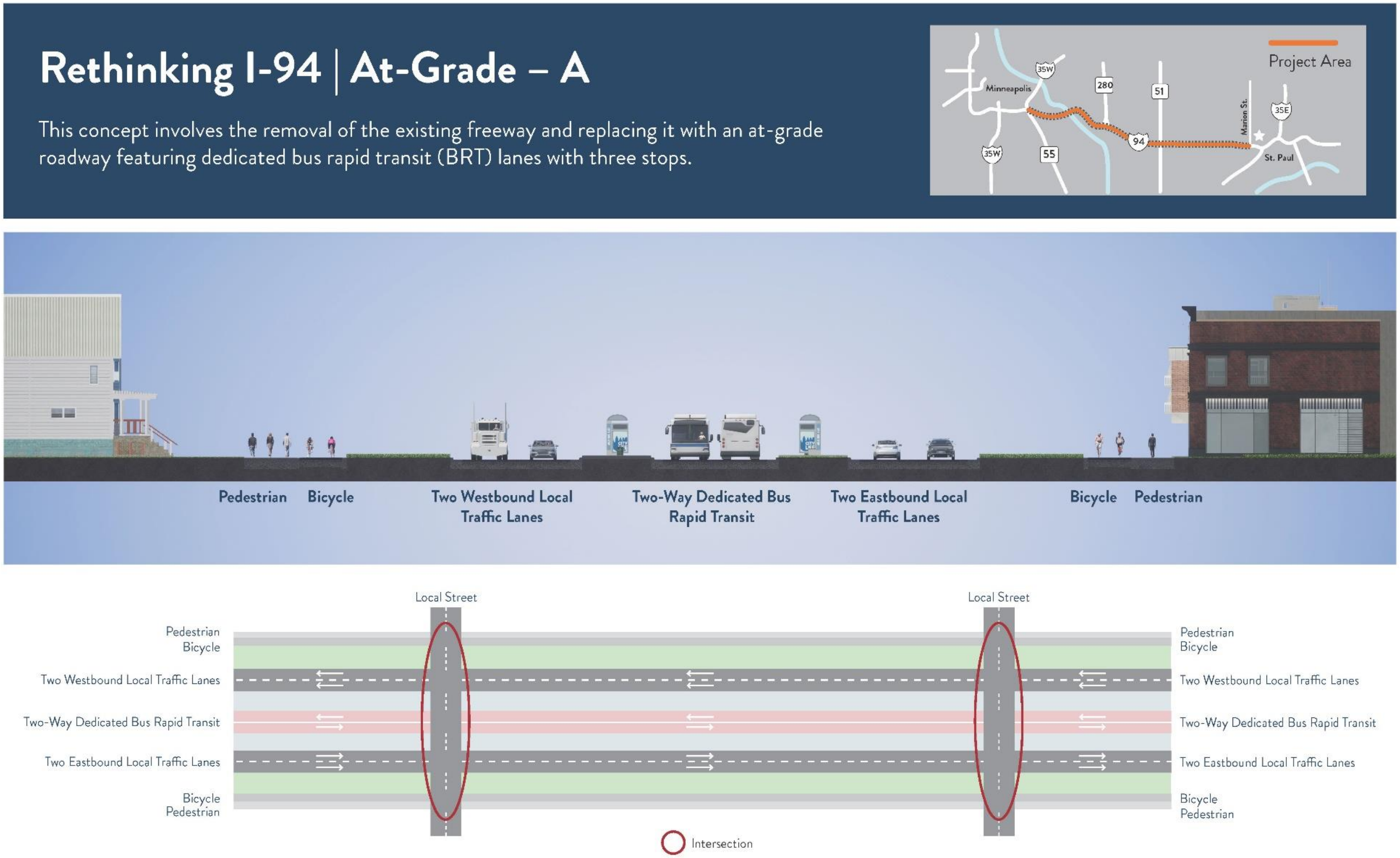
Figure 1 – No Build, Maintenance – A, and Maintenance – B



*Visualizations are intended for conceptual purposes only and are not to be interpreted as showing actual scale or final design for the roadway. They only represent a small section of the corridor. Potential changes to overpasses, interchanges, ramps, frontage roads, and parking have not been determined at this time. Final design will be determined through careful consideration of various factors and may differ from the concepts depicted. MnDOT is committed to walkability and bikeability improvements on all build alternatives. Details on improvements will be identified later in the process.

11003518

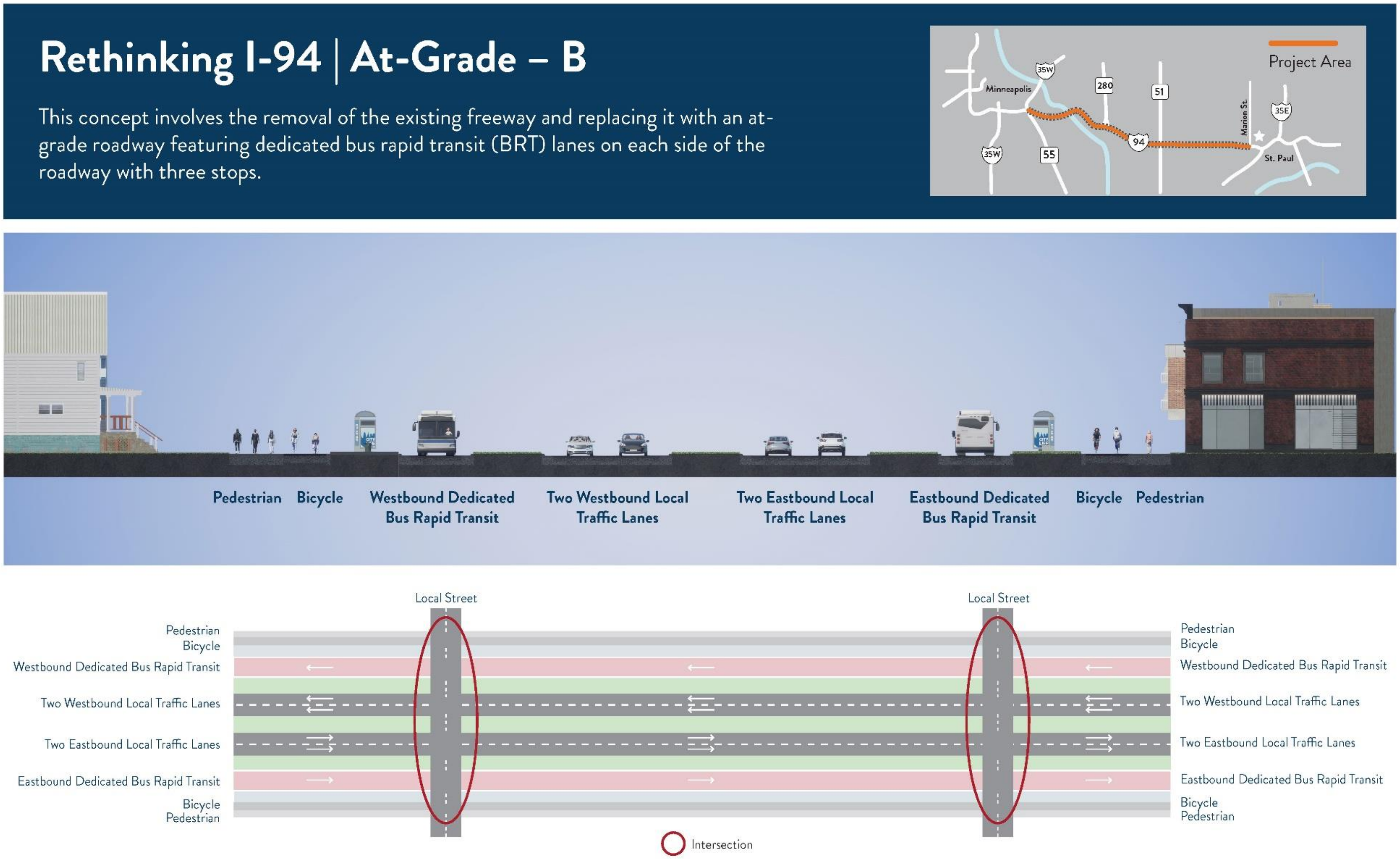
Figure 2 – At-Grade – A



*Visualizations are intended for conceptual purposes only and are not to be interpreted as showing actual scale or final design for the roadway. They only represent a small section of the corridor. Potential changes to overpasses, interchanges, ramps, frontage roads, and parking have not been determined at this time. Final design will be determined through careful consideration of various factors and may differ from the concepts depicted. MnDOT is committed to walkability and bikeability improvements on all build alternatives. Details on improvements will be identified later in the process.

11003519

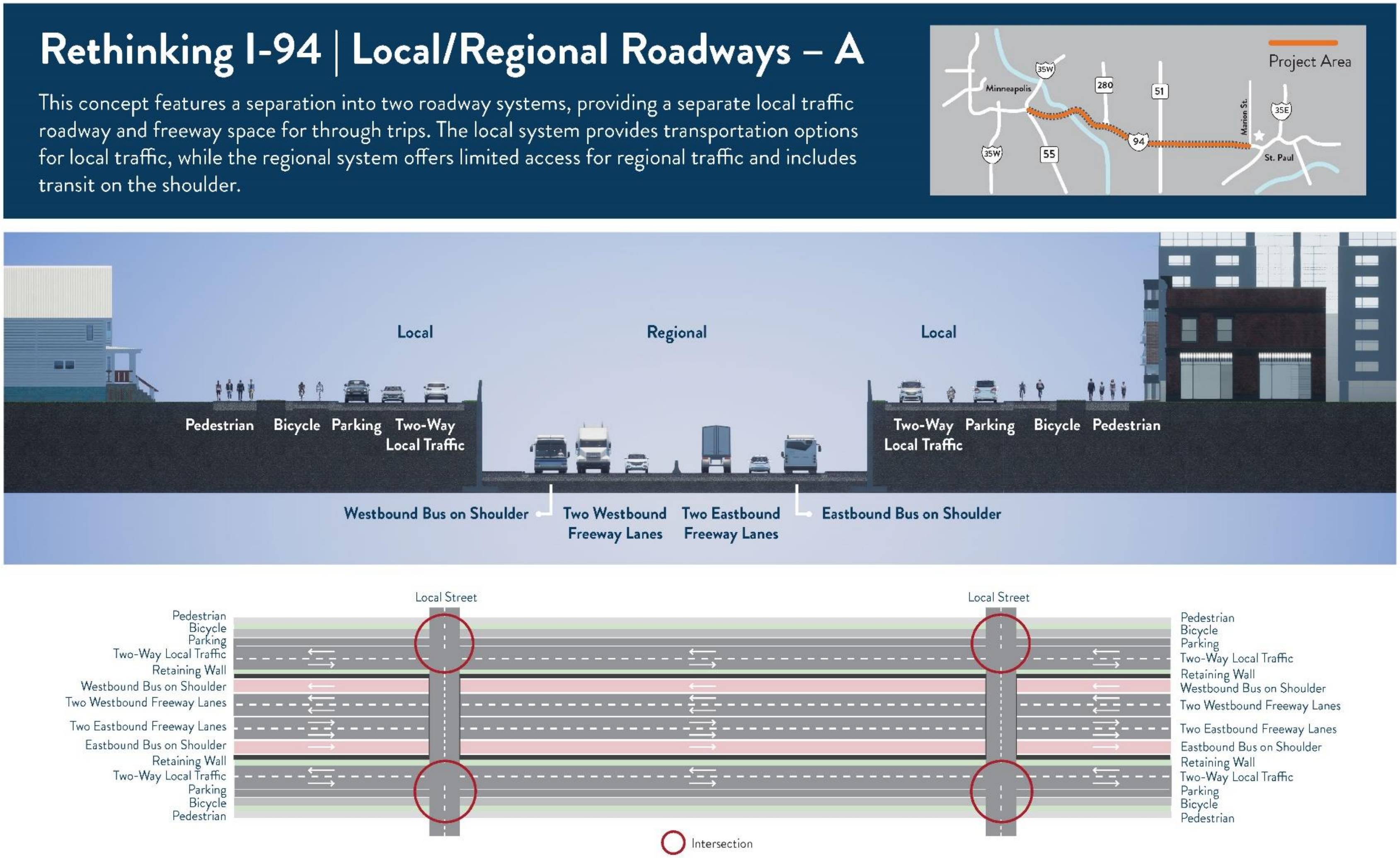
Figure 3 – At-Grade – B



*Visualizations are intended for conceptual purposes only and are not to be interpreted as showing actual scale or final design for the roadway. They only represent a small section of the corridor. Potential changes to overpasses, interchanges, ramps, frontage roads, and parking have not been determined at this time. Final design will be determined through careful consideration of various factors and may differ from the concepts depicted. MnDOT is committed to walkability and bikeability improvements on all build alternatives. Details on improvements will be identified later in the process.

11003520

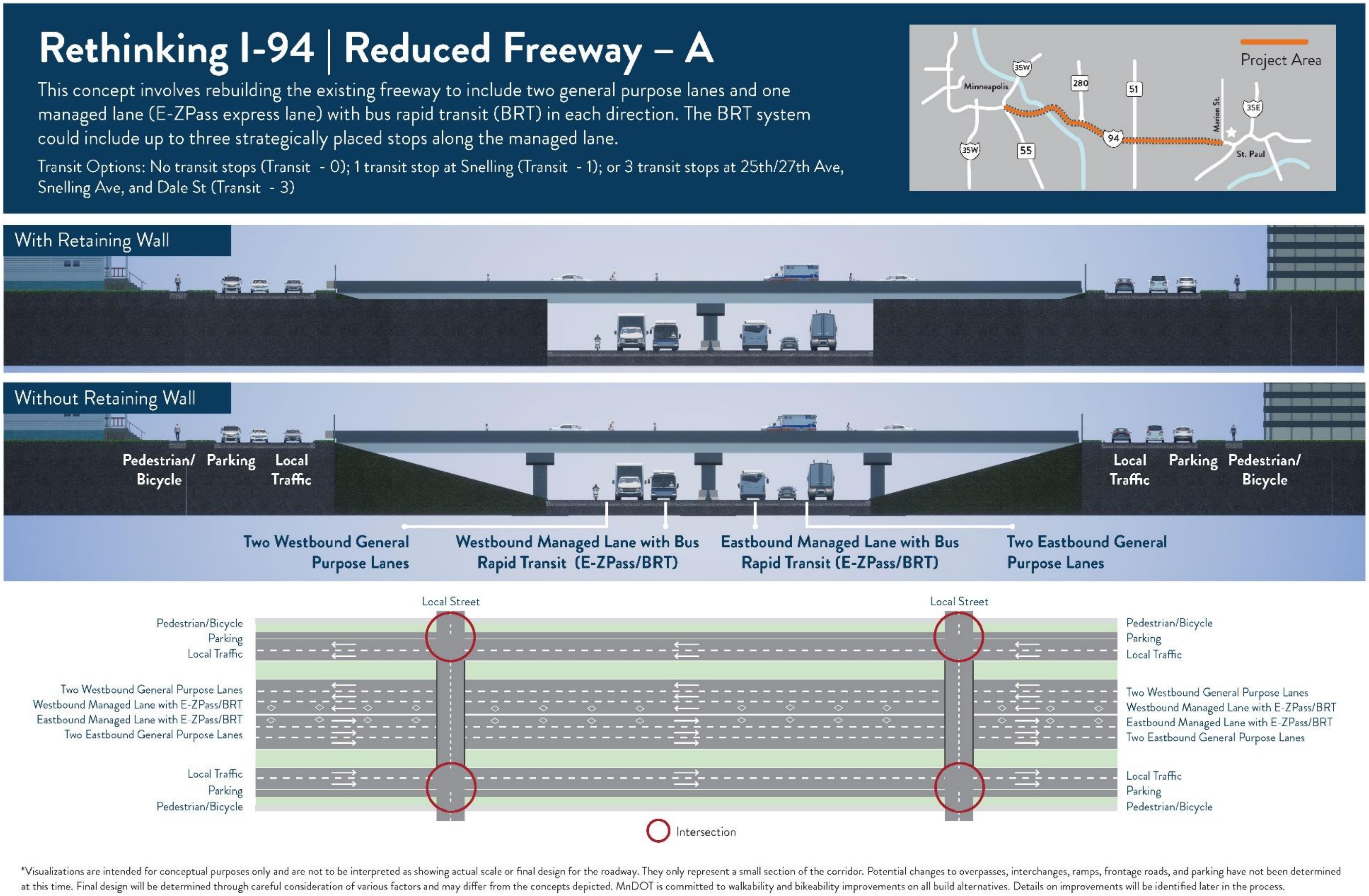
Figure 4 – Local/Regional Roadways – A



*Visualizations are intended for conceptual purposes only and are not to be interpreted as showing actual scale or final design for the roadway. They only represent a small section of the corridor. Potential changes to overpasses, interchanges, ramps, frontage roads, and parking have not been determined at this time. Final design will be determined through careful consideration of various factors and may differ from the concepts depicted. MnDOT is committed to walkability and bikeability improvements on all build alternatives. Details on improvements will be identified later in the process.

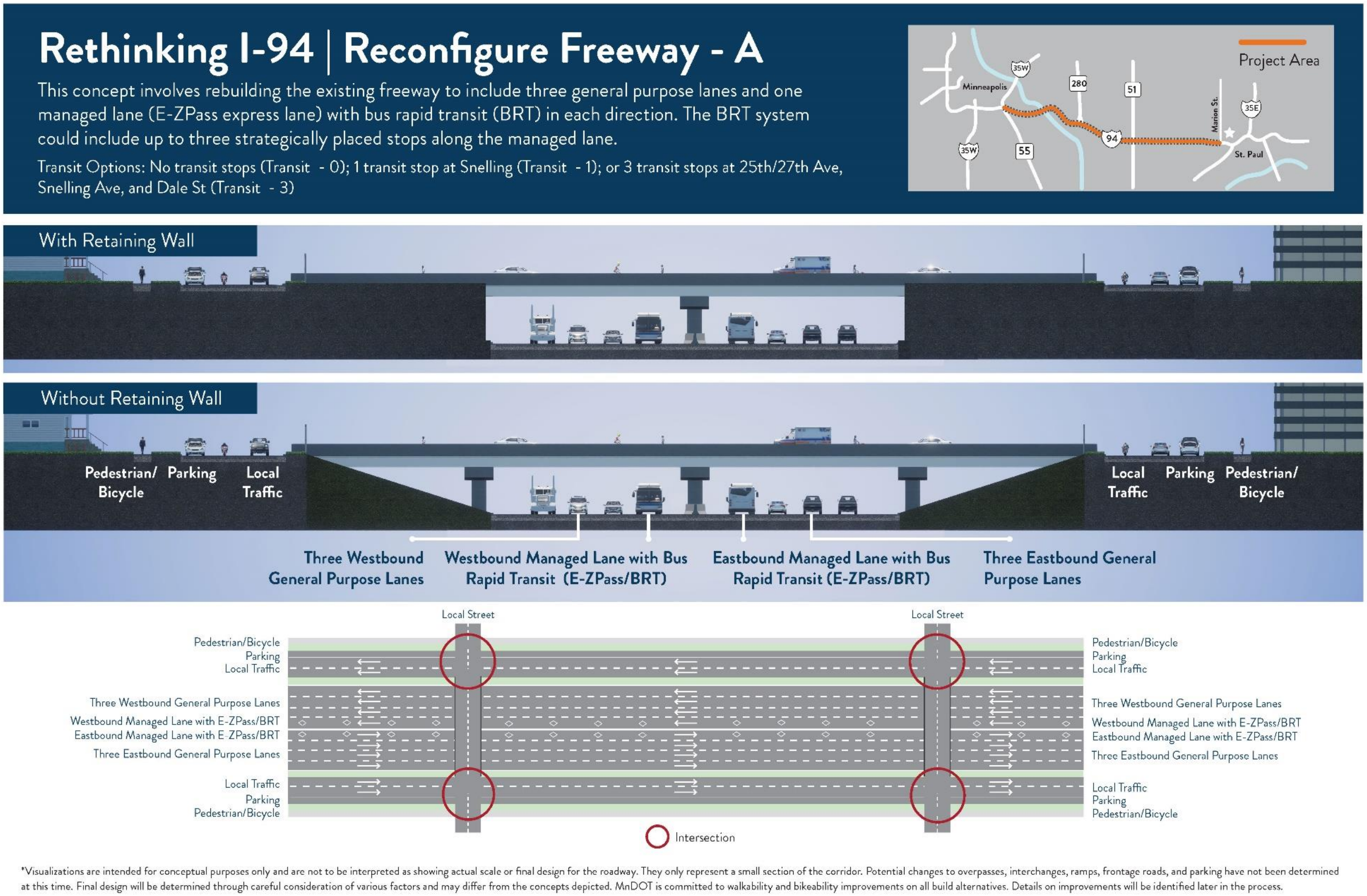
11003521

Figure 5 – Reduced Freeway – A



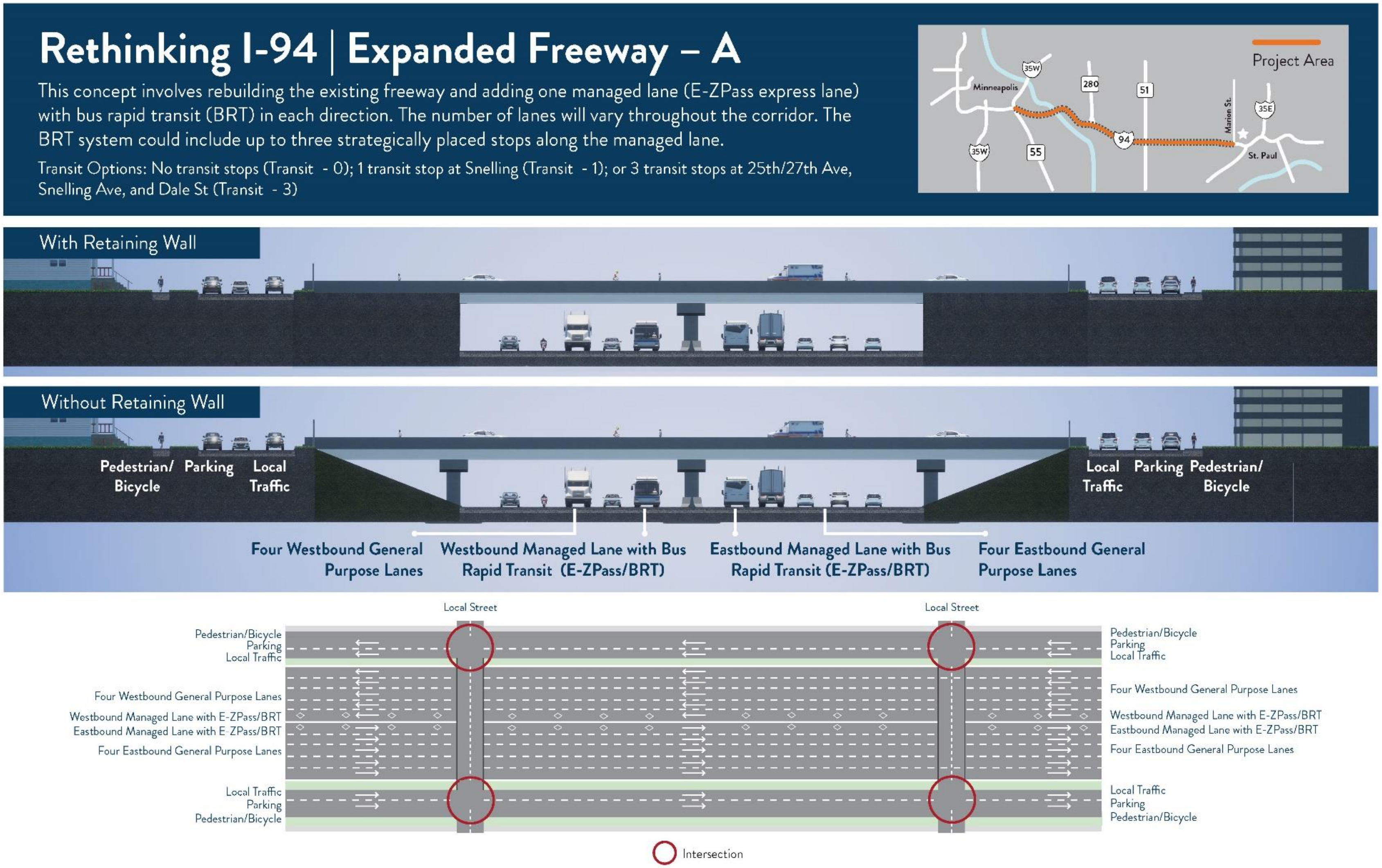
11003522

Figure 6 – Reconfigured Freeway – A



11003523

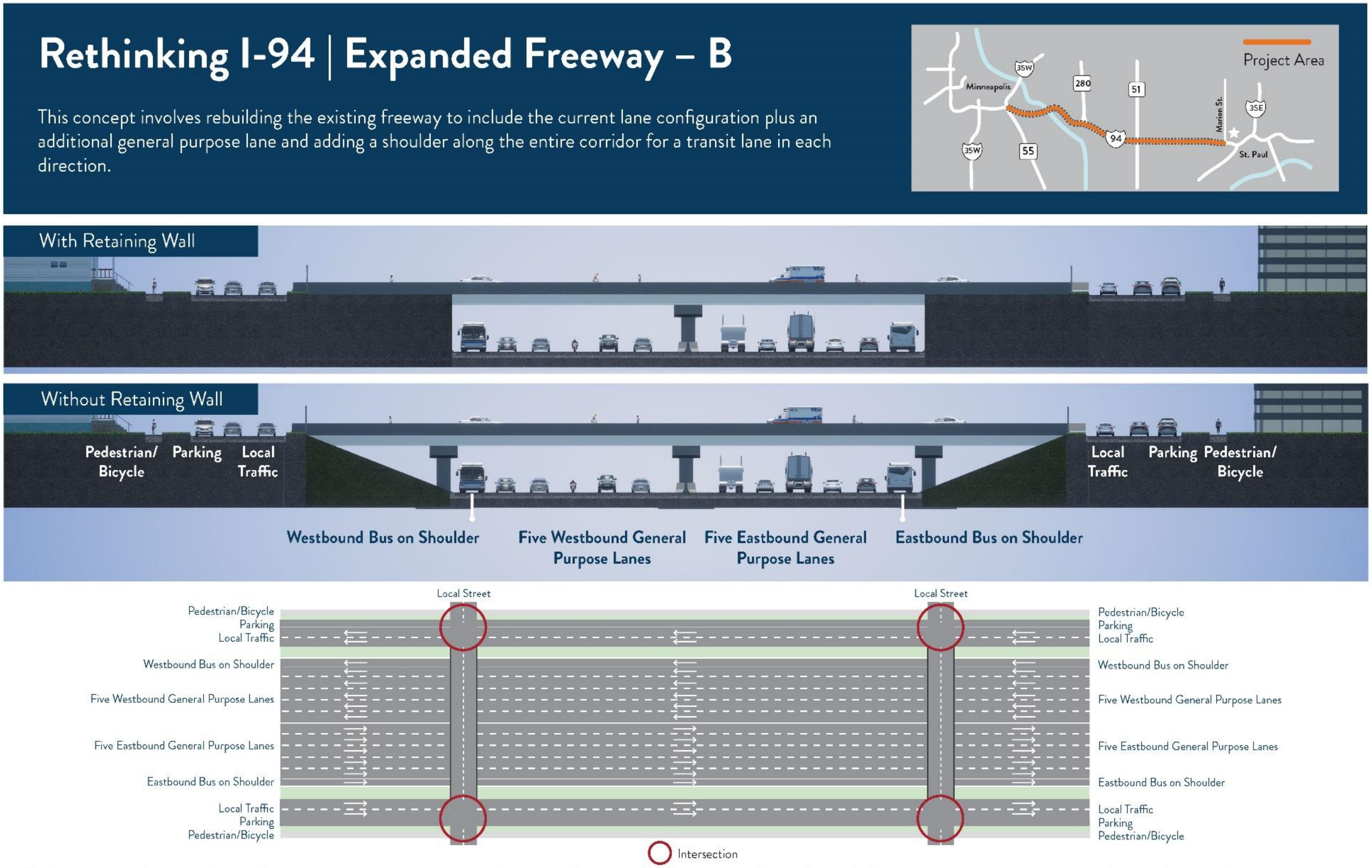
Figure 7 – Expanded Freeway – A



*Visualizations are intended for conceptual purposes only and are not to be interpreted as showing actual scale or final design for the roadway. They only represent a small section of the corridor. Potential changes to overpasses, interchanges, ramps, frontage roads, and parking have not been determined at this time. Final design will be determined through careful consideration of various factors and may differ from the concepts depicted. MnDOT is committed to walkability and bikeability improvements on all build alternatives. Details on improvements will be identified later in the process.

11003524

Figure 8 – Expanded Freeway – B



*Visualizations are intended for conceptual purposes only and are not to be interpreted as showing actual scale or final design for the roadway. They only represent a small section of the corridor. Potential changes to overpasses, interchanges, ramps, frontage roads, and parking have not been determined at this time. Final design will be determined through careful consideration of various factors and may differ from the concepts depicted. MnDOT is committed to walkability and bikeability improvements on all build alternatives. Details on improvements will be identified later in the process.

1.2 Purpose and Need

This section provides an overview of transportation needs in the program area.[4] The purpose and need statement explains why MnDOT is undertaking a transportation project or "program" of multiple individual transportation projects in a corridor and what the objectives are. The "need" identifies the transportation problems or deficiencies. The "purpose" is a broad statement of the primary intended transportation results to be achieved. The purpose and need statement also provides the basis for developing evaluation criteria (measures by which different alternatives will be evaluated), identifying a range of alternatives, and selecting the preferred alternative. It limits the range of alternatives which may be considered reasonable and prudent, consistent with environmental process requirements. Alternatives that do not meet the project purpose and need will not be further studied, as they do not achieve what needs to be done.

1.2.1 Project Needs

Project needs are transportation problems to be addressed by the program of projects that will result from the Tier 1 Environmental Impact Statement (EIS). There are four transportation needs that have been identified for the corridor. They include:

- Walkability and bikeability – comfort, mobility and risks for people walking, bicycling, and rolling
- Safety for people in motorized vehicles – cars, freight, and transit
- Infrastructure condition – state of repair
- Mobility for people in motorized vehicles – cars, freight, and transit

Evaluation criteria and measures have been developed to evaluate the ability of alternatives to address these needs at a high level in Scoping. There is no intended hierarchy or prioritization within this list of corridor needs. A more detailed analysis will take place in the Tier 1 EIS. For example, the ability of an alternative to address pavement and bridge condition will be evaluated in Scoping, while the condition of retaining walls, noise walls, and drainage infrastructure will be addressed in the Tier 1 EIS once more detailed alternatives have been developed. The evaluation process and criteria are discussed in more detail in the sections that follow.

1.2.2 Purpose

Phase 1 of Rethinking I-94 included efforts by MnDOT and its partners to identify issues to the regional freeway infrastructure, supporting local and regional transportation network, and investments supportive of reconnecting neighborhoods and revitalizing communities located along I-94 between downtown Minneapolis and Saint Paul.[5] Building on the outreach efforts previously initiated with more detailed data and additional public input, a clearer purpose emerged.

Projects within the Rethinking I-94 program will accomplish the following:

- Improve mobility for people and goods on, along, and across the corridor in a way that facilitates community connections for all modes
- Enhance safety for people and goods on, along, and across the I-94 corridor for all modes

---

[4] This section provides a summary of the Draft Purpose and Need in Conjunction with the Statement of Goals Technical Report (Purpose and Need Report). The Purpose and Need Report documents the facts and data supporting each problem or unsatisfactory condition identified for the I-94 program area.

[5] For more information, please visit MnDOT's Rethinking I-94 Phase 1 Study webpage at: https://talk.dot.state.mn.us/rethinking-i94/news_feed/phase-1

- Address aging infrastructure condition within the I-94 corridor
- Support transportation objectives consistent with adopted state and regional (Met Council) plans

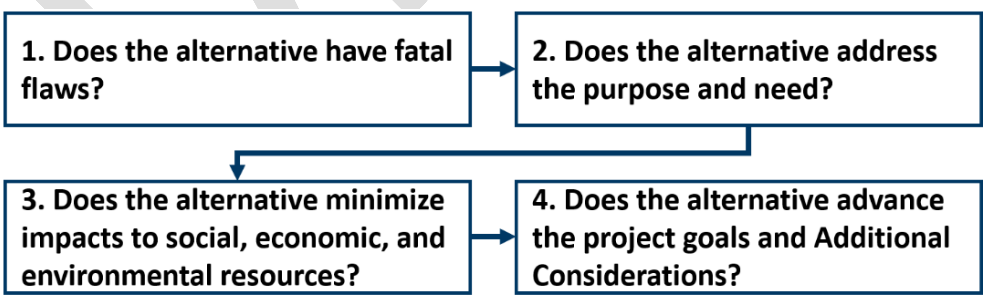
2 Evaluation Process

Alternatives will first be screened during Scoping to determine whether they have “fatal flaws.” Alternatives with fatal flaws may not be technically or economically feasible, or they may result in substantial social, economic, or environmental (SEE) impacts. The alternatives evaluated in this memo are not considered to have fatal flaws. For alternatives that do not have fatal flaws, the evaluation process will begin with evaluating an alternative’s ability to address the purpose and need criteria. Alternatives will be further evaluated to understand the potential for and the magnitude of impacts to SEE resources within the corridor. These impacts will be documented, and alternatives will then be evaluated to determine whether they address the goals/Livability Framework along with several Additional Considerations. If an alternative is determined not to address the purpose and need, it will be eliminated, as it is not considered to be “reasonable.”

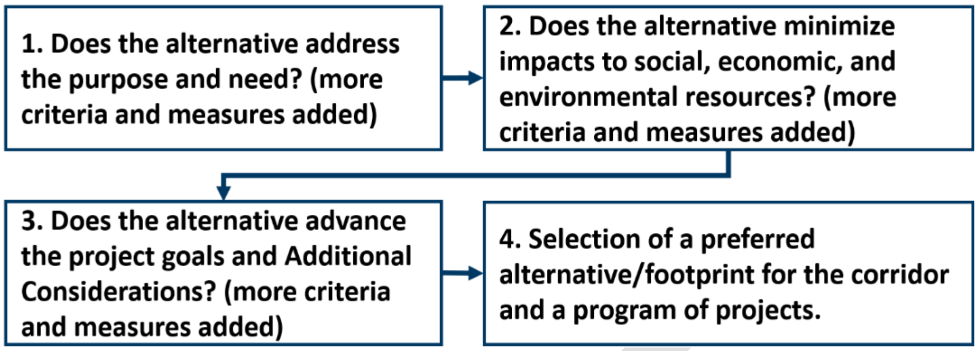
Alternatives in Scoping that best address the purpose and need evaluation criteria, minimize SEE impacts, and perform favorably in terms of goals/Livability and Additional Considerations will move into the Tier 1 EIS. The Tier 1 EIS will use the identified criteria and measures to evaluate the remaining alternatives in greater detail. Because more design information will be available, additional purpose and need, SEE impact, goals/Livability, and Additional Considerations measures will be incorporated to include items that were not expected to have substantial differences between alternatives in the Scoping Phase. Evaluation in the Tier 1 EIS will first be based on addressing purpose and need criteria, followed by minimizing SEE impacts, and then meeting project goals and Additional Considerations. At the end of the Tier 1 process, an alternative that establishes the corridor footprint will be selected and a program of projects will be developed.

Tier 2 documents with more detailed analysis will be required as individual projects move forward. Additional criteria may be developed during this process.

Step 1: Scoping Phase



Step 2: Tier 1 EIS Phase



3 Scoping and Tier 1 Evaluation Criteria

3.1 Overview

Table 1 lists the evaluation criteria and measures used in Scoping and in the Tier 1 EIS. As noted previously, the Tier 1 EIS will include additional measures for some criteria as well as criteria not used in Scoping. Additional details about the evaluation criteria methodologies are provided in the Evaluation Criteria Memo, included as **Appendix B**.

The purpose of the alternatives evaluation in Scoping is to narrow the range of alternatives that will be studied in the Tier 1 EIS. It is important to note that not all aspects of an alternative can be measured during Scoping, since the alternatives have not undergone detailed engineering analysis at this stage in the process.

Four categories of evaluation criteria have been identified for Rethinking I-94:

- **Project Needs**: These criteria measure the ability of an alternative to address the transportation problems documented in the Purpose and Need Report.
- **Social, Economic, and Environmental Impacts**: These criteria measure the ability of an alternative to avoid or minimize impacts to vulnerable people and resources in the project area.
- **Goals & Livability**: These criteria measure the ability of an alternative to advance the goals listed in the Statement of Goals included in the Purpose and Need report.
- **Additional Considerations**: These criteria measure other aspects of an alternative that are important to MnDOT, including construction and maintenance costs and consistency with adopted state and regional plans.

Evaluation criteria for Scoping and Tier 1 EIS were developed concurrently with the Purpose and Need Report. Following the initial release of the Purpose and Need and Evaluation Criteria to the public, numerous changes were made to both documents in response to public comments.

The majority of the evaluation criteria for project needs in Scoping focus on modes that use the freeway today (cars, freight, and transit). While walkability and bikeability is one of the project needs, these users are present on freeway crossings and frontage roads but are legally prohibited from traveling on I-94 itself. Therefore, the criteria that will be used to measure changes in walkability and bikeability in Scoping are focused on how the mainline alternatives will affect access and connectivity for people walking and biking through changes to crossing locations. Bicycle and pedestrian crashes will not be analyzed in Scoping, because these crashes do not occur on I-94 itself. In the Tier 1 EIS, there are several criteria that will be used to evaluate safety and comfort for people walking and biking, including Multimodal Level of Service (MMLOS), a nonmotorized conflict points analysis, and an analysis of crash data on streets that intersect the corridor.

Table 1 - Rethinking I-94 Evaluation Criteria: Scoping Decision Document and Tier 1 EIS

For Mainline and Access/Interchange Alternatives

Bold/Italics = Mainline only criteria/measurement   Fill = Access/Interchange only criteria/measurement

** For access/interchange alternatives, range to be provided since interchange footprint areas, not specific interchange types, will be defined at this stage*

	Category	Evaluation Criteria	Scoping Decision Document Measurement	Tier 1 EIS Measurement
Needs	Walkability and Bikeability – comfort, mobility and risks for people walking, bicycling, and rolling	Non-Motorized Connectivity and Performance	-Distance between Crossings -Travel Time between Origin-Destination Pairs	-Multimodal Level of Service (Oregon method) -Distance between Crossings -Travel Time between Origin-Destination Pairs -Nonmotorized Conflict Points (Access/Interchange only)
	Safety for People in Motorized Vehicles – cars, freight, and transit	Network Crashes	-Qualitative Assessment - Alternative addresses the number and severity of crashes along the corridor (Yes/No) ***-Crash comparison to similar facility types***	-Crashes and Crash Rate Reduction -Crash Cost Reduction ***-Crash comparison to similar facility types***
		Safety on Intersecting Streets - Network Crashes		-Crashes and Crash Rate Reduction -Crash Cost Reduction
	Infrastructure Condition – state of repair	Pavement Condition	Qualitative Assessment - Does the alternative address pavement condition (Yes/No)	Qualitative Assessment - Does the alternative address pavement condition (Yes/No)
		Bridge Condition	Qualitative Assessment - Does the alternative address bridge condition (Yes/No)	Qualitative Assessment - Does the alternative address bridge condition (Yes/No)
		Retaining Wall Condition		Qualitative Assessment - Does the alternative address retaining wall condition (Yes/No)
		Noise Wall Condition		Qualitative Assessment - Does the alternative address noise wall condition (Yes/No)
		Drainage Condition		***Qualitative Assessment - Does the alternative address stormwater and catch basin condition (Yes/No)***
				Qualitative Assessment - Does the alternative address stormwater and catch basin capacity deficiency (Yes/No)
	Mobility for People in Motorized Vehicles – cars, freight, and transit	Systemwide Mobility	-Vehicle Hours Traveled (VHT) -Person Hours Traveled (PHT)	-Vehicle Hours Traveled (VHT) -Person Hours Traveled (PHT) -Vehicles Miles Traveled (VMT)
		Corridor Mobility	***Mainline Speed (average over corridor)***	***Mainline Speed (average over corridor)***
		Corridor Throughput	***Person Throughput (people/day)***	***Person Throughput (people/day)***
		Interchange Area Mobility	-Vehicle Hours Traveled (VHT) in Interchange Area* -Person Hours Traveled (PHT) in Interchange Area*	-Vehicle Hours Traveled (VHT) in Interchange Area* -Person Hours Traveled (PHT) in Interchange Area*
		Interchange Area Throughput	Person Throughput (people/day)	Person Throughput (people/day)
		Freight Mobility	Freight Travel Times*	Freight Travel Times*
		Travel Time Reliability	Variability of Travel Time (HCM Methodology)*	Variability of Travel Time (HCM Methodology)*
		Connectivity	-Intersection density -Qualitative Assessment - Does the alternative increase access to land use?	-Intersection density -Qualitative Assessment - Does the alternative increase access to land use?
		Transit Mobility	***Transit Travel Times in the Corridor***	***Transit Travel Times in the Corridor***
			Transit Travel Times in Interchange Area*	Transit Travel Times in Interchange Area*
		Transit Reliability	Variability in Transit Travel Times*	Variability in Transit Travel Times*
SEE Impacts	Environmental Justice	Potential for disproportionately high and adverse effects on EJ populations	-Qualitative Assessment - Does the alternative provide access to economic opportunities and other daily needs for EJ populations? -Qualitative Assessment - Does the alternative have the potential to increase exposure to water and noise pollution for EJ populations? -Relocation potential for EJ populations	-Qualitative Assessment - Does the alternative provide access to economic opportunities and other daily needs for EJ populations? -Qualitative Assessment - Does the alternative have the potential to increase exposure to water and noise pollution for EJ populations? -Relocation potential for EJ populations

	Category	Evaluation Criteria	Scoping Decision Document Measurement	Tier 1 EIS Measurement
SEE Impacts	Historic/Archaeological/Cemetery	Potential to affect known historic properties	-Qualitative Assessment - Low, Moderate, or High potential for adverse effect to known historic properties	-Number of known historic properties -Qualitative Assessment - Low, Moderate, or High potential for adverse effect to known historic properties
		Potential impact to known or suspected cemeteries	-Qualitative Assessment - Low, Moderate, or High potential for adverse effect to known or suspected cemeteries	-Number of known or suspected cemeteries -Qualitative Assessment - Low, Moderate, or High potential for adverse effect to known or suspected cemeteries
	Section 4(f)	Potential impact to resource	Number of Section 4(f) resources impacted	Number of Section 4(f) resources adversely affected
	Section 6(f)	Potential impact to resource	Number of Section 6(f) resources impacted	Number of Section 6(f) properties adversely affected
	Contaminated Properties	Impact to sites with potential for hazardous materials	Number of known contaminated sites impacted	Number of contaminated sites impacted
	Right of Way	Adjacent property impacts	Acreage of impacts and anticipated number of property relocations	Acreage of impacts and anticipated number of property relocations
	Noise	Potential impact to public health and welfare from traffic related noise pollution	Qualitative Assessment - Will the project cause a material change in horizontal and/or vertical alignment or add travel lanes? (Yes/No)	Representative Traffic Noise Model Analysis
	Water Pollution/Stormwater	Impervious Surface Area	Acreage	Acreage
	Air Quality	Potential impact to resource	Qualitative Assessment - is the project considered regionally significant for air quality concerns or will the project have a meaningful impact on traffic volumes or vehicle mix (Yes/No)	Compliance with Clean Air Act national ambient air quality standards
	T & E Species	Potential impact to threatened and endangered species	Qualitative Assessment - does the project have the potential to impact threatened and endangered species (Yes/No)	Low/Medium/High
	Wetlands	Potential impact to resource	-Qualitative Assessment - does the alternative have the potential to impact wetlands (Yes/No) -Number of wetlands impacted based on National Wetland Inventory mapping	Acreage of resources impacted
	Floodplain	Potential impact to resource	[redacted]	Acreage of resources impacted by encroachment type
	Flooding	Potential to increase flood conditions	[redacted]	Number and acreage of locations with increased flooding potential
	Visual Impacts	Potential impact to existing visual resources and potential viewers	[redacted]	-Degree of impact to visual resources (Beneficial/Neutral/Adverse) -Degree of impact to viewers (Beneficial/Neutral/Adverse)
	Community Cohesion	Potential impact to community cohesion	[redacted]	Qualitative Assessment - does the alternative create physical barriers, increase travel times, disrupt access to care facilities, or decrease access to congregational centers? (Low/Medium/High)
Goals & Livability	Sense of Place	Opportunities for gathering spaces, cultural and historic representation and art, and green spaces	-Qualitative Assessment - does the project have the potential to create features or amenities in partnership with communities to enhance sense of place (Yes/No)	-Qualitative Assessment - facilitates opportunities to create features or amenities in partnership with communities to enhance sense of place (Low/Medium/High) -Qualitative Assessment - (Equity) Are features or amenities available throughout the corridor? (Spatial analysis)
	Equity	Distribution of transportation resources across communities	-Qualitative Assessment - does the alternative have the potential to enhance transportation choices for individuals (Yes/No)	-Qualitative Assessment - facilitates or does not eliminate opportunities to enhance transportation choices for individuals (Low/Medium/High) -Qualitative Assessment - (Equity) Are enhanced transportation choices available throughout the corridor? (Spatial analysis)
	Economic Vitality	Opportunities for job and business accessibility	Employment opportunities (jobs) accessible within 30-minute travel time	Employment opportunities (jobs) accessible within 30-minute travel time (Percent change from No Build)
	Public Health and the Environment	Opportunities to improve quality of life, well-being, and the environment through green spaces and land use	-Qualitative Assessment - does the alternative have the potential to impact green space or land uses that benefit quality of life and the environment (Yes/No)	-Acreage that supports green spaces or land uses that benefit quality of life and the environment (Acres) -Qualitative Assessment - (Equity) Are green spaces or land uses that benefit quality of life and the environment available throughout the corridor? (Spatial analysis)
	Connectivity	Opportunities to use infrastructure to connect communities physically and socially	Qualitative Assessment - facilitates or does not eliminate opportunities to implement planned nonmotorized facilities (Yes/No)	Percent of planned nonmotorized facility-miles that are complete
	Safety	(Measured in Safety, Walkability/Bikeability categories)	(See Safety section for details)	(See Safety section for details)
Additional Considerations	Cost	Estimated Construction Cost	Dollars (cost range)	Dollars (risk-based cost range)
		Estimated Benefit-Cost	[redacted]	-Net Benefits -Benefit/Cost Ratio in Dollars
	Maintenance	Estimated Maintenance Cost	Dollars (cost range)	Dollars (risk-based cost range)
	Consistency with Adopted State and Regional Plans	Consistency with Adopted State and Regional Plans	Qualitative Assessment	Qualitative Assessment

3.2 Scoping and Tier 1 EIS Evaluation Tools

The Metropolitan Council's (Met Council) regional travel demand model was used to calculate the mobility measures for this analysis. Established practices for transit and highway modeling in the Twin Cities region for transportation improvements require the use of the Met Council's Regional Transportation Forecasting Model. Using the regional model is also consistent with federal practices. The model is built upon the land uses determined by cities as part of their adopted comprehensive plans and includes the residents and the employees associated with those land uses.

The Met Council uses an Activity Based Model, which simulates the activities and travel patterns for everyone in a defined geographic area (the Twin Cities region). The model predicts someone's travel behavior, such as when, where, how, the order, and whether a trip is made. The regional travel demand model includes automobile (including trucks, motorcycles, etc.), transit, and non-motorized travel. It is sensitive to relative changes in travel times between the different modes (auto, transit and non-motorized) when assigning trips. The project also used the Federal Transit Administration-approved Simplified Trips on Project Software (STOPS) model. This model is used to understand transit ridership numbers and incorporates information from the regional travel demand model.

A regional travel demand model can be useful for predicting travel time and other basic traffic operations at a certain point in time. It is not intended to be the final modeling exercise. The analysis here is a preliminary look into how each alternative could perform from a high-level operations perspective and impact system-level operations. The traffic measures are based on link capacity and do not have the precision that would be possible with a microsimulation model. Weaving, queuing, lane assignment, and geometric details can have a substantial impact on traffic flow that is not reflected in the travel demand model. The regional model does not have the ability to predict these detailed operations or evaluation criteria that will be considered in the Tier 1 EIS. Microsimulation will be used to better understand differences in alternatives once the project reaches that phase.

More information about traffic and transit modeling tools used in Scoping is available in the *Rethinking I-94: Preliminary Traffic and Transit Analysis of Alternatives Memo*.[6]

3.3 Topics Not Addressed in the Evaluation Criteria

There are several topics important to MnDOT and the public that are not included as part of the evaluation criteria. In some cases, this is because the level of detail in the design at this stage prevents full investigation of the alternative. In other instances, certain interests are addressed by existing MnDOT standard procedures, and will be implemented where feasible regardless of the selected alternative. For example, MnDOT uses various construction techniques to recycle pavement materials and reuse them during construction. In addition, MnDOT includes native plant species in its standard seed mixes, and is working to increase the use of native species for roadside vegetation. Light emitting diode (LED) luminaires are the standard light source for the majority of MnDOT's roadway lighting. Older roadway lighting is being replaced with LEDs and this transition will continue as projects are completed. Good lighting is also important for maintaining personal safety for people crossing the corridor. These detailed aspects of project design are examples of items that will be addressed as part of the implementation of specific projects in the Tier 2 process for Rethinking I-94.

[6] *Rethinking I-94: Preliminary Traffic and Transit Analysis of Alternatives Memo*. December 2023.

4 Access & Interchange/Intersection Modifications

4.1 Targeted Safety, Infrastructure Condition, and Mainline Operations Locations

In Scoping, access/interchange/intersection locations have been identified for further analysis in the Tier 1 EIS based on a range of issues. These locations and the issues identified at each are listed in **Table 2** and shown in **Figure 9**. These findings are based on the results of mobility, safety, and infrastructure condition analyses completed as part of the development of the purpose and need for Rethinking I-94.

Table 2 – Access & Interchange/Intersection Locations to be Studied in Tier 1 EIS

Existing Location	Mainline Safety & Mobility[1]	Interchange Safety[2]	Existing Bridge Need[3]	Future Bridge Need[4]	Intersecting Street Crash Problem[5]	Bike/Ped Intersecting Street Crash Problem[6]
I-35W/TH 55	X	X		X	X	
Cedar Ave	X		X	X	X	X
20th Ave			X	X		
Augsburg Ped Bridge[7]			X			
25th/26th Ave			X	X	X	
Riverside Ave			X	X	X	
Franklin Terr			X	X		
E River Parkway			X			
Huron Blvd					X	X
27th Ave			X	X		
Franklin Ave			X	X		
Seymour Ped Bridge			X			
TH 280	X					
Pelham Blvd			X	X		
Cretin Ave/Vandalia St	X		X	X		
Cleveland Ave			X			
Prior Ave			X			
Fairview Ave			X	X		

11003533

Existing Location	Mainline Safety & Mobility[1]	Interchange Safety[2]	Existing Bridge Need[3]	Future Bridge Need[4]	Intersecting Street Crash Problem[5]	Bike/Ped Intersecting Street Crash Problem[6]
Aldine St Ped Bridge			X			
Snelling Ave (TH 51)	X		X	X	X	X
Pascal St			X			
Hamline Ave			X	X	X	X
Lexington Pkwy	X		X	X	X	
Victoria St			X	X		
Dale St	X				X	X
Western Ave			X			
Marion St/Kellogg Blvd	X		X	X	X	

1. Geometric issues identified at these locations negatively impact safety and/or mobility on I-94 today.
2. Locations where crash rates within the existing interchange areas exceed critical crash rates.
3. Locations where bridge rehab work (at a minimum) is programmed within five years from baseline data year.
4. Locations where bridge rehab work (at a minimum) is expected over the next 20 years based on Project Selection Policy (PSP) scores and Bridge Replacement and Improvement Management (BRIM) data.
5. Locations where crash rates on intersecting streets exceed critical crash rates.
6. Locations where crash rates on intersecting streets exceed critical crash rates and bicycle/pedestrian crashes account for more than 10% of crashes.
7. Note: A temporary structure is currently in place. Replacement of this bridge is moving forward independent of the Rethinking I-94 process.

4.2 Access Closures and Modifications

Access spacing on the I-94 corridor is not ideal. There are more access points than is typically recommended (less than one mile spacing) and it results in weaving, slow-downs and crashes on the mainline. Interchanges and exit and entrance ramps that negatively impact mainline operations and/or safety have been discussed to determine if modifications can be made (including eliminating access) to improve safety and mobility. While no specific designs have been developed in Scoping, several potential changes have been discussed with city and county partners including removing the existing westbound off-ramp at Hamline Ave. For the purposes of the evaluation in Scoping, the connectivity measures represent the same access changes assumed for the traffic modeling used to calculate other mobility measures. Alternatives that would require changes in corridor access are discussed in more detail in Section 5.

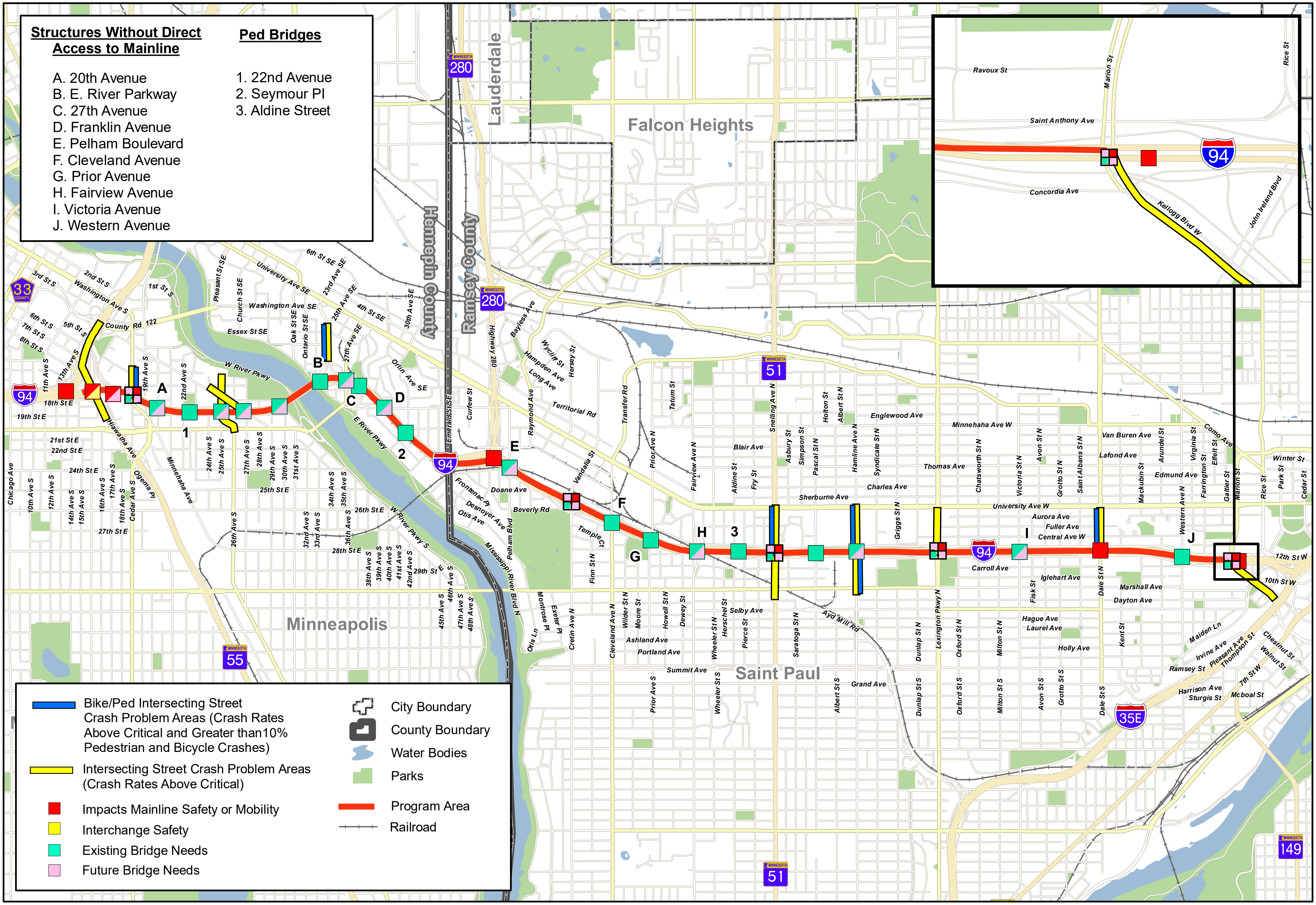


Figure 9 - Access & Interchange/Intersection Locations to be Studied in Tier 1 EIS

Rethinking I-94

N

0 4,000 Feet

11003535

5 Evaluation of Alternatives

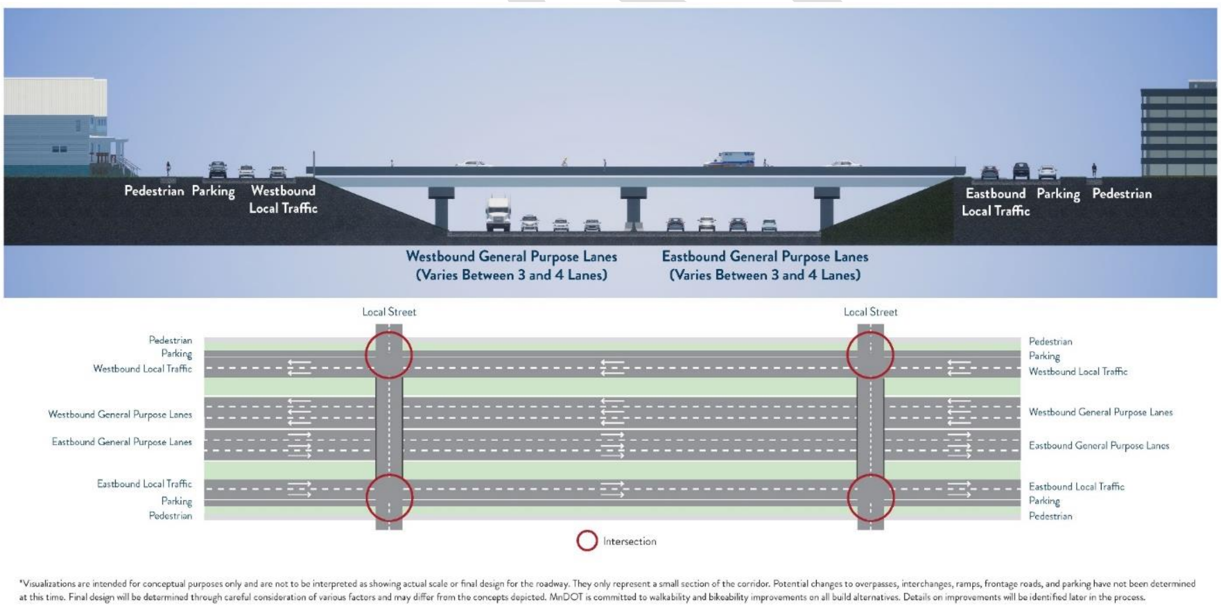
The sub-sections that follow document the results of the evaluation of alternatives developed as part of the Scoping process. **Table 1** in **Appendix A** lists the results of the evaluation for Project Needs criteria. **Table 2** in **Appendix A** lists the results for Social, Economic, and Environmental impact criteria. **Table 3** in **Appendix A** lists the results for Goals and Livability criteria. Finally, **Table 4** in **Appendix A** lists the results for the Additional Considerations criteria. Additional details on the safety analysis are provided in Appendix C, and additional details on the construction cost estimates are provided in Appendix D. This section will be updated as alternatives are refined and preliminary evaluations are conducted.

5.1 No Build – General Maintenance

5.1.1 Overview

The no build scenario maintains the existing alignment as of 2015. I-94 would remain as it is and have 3-4 general purpose lanes (depending on the segment) along with express bus service (**Figure 10**). Express bus service operates in the general purpose lanes and can use the corridor's shoulders during AM and PM peak periods when the general purpose lanes drop below 35 miles per hour. The shoulder exists for only a portion of I-94. In the no-build scenario, there is no eastbound stop for the express bus and there is one on-demand westbound stop at Huron. The no build condition represents the baseline for comparing all the other alternatives.

Figure 10 – No Build, Maintenance – A, and Maintenance – B



5.1.2 Project Needs

The results of the project needs evaluation for the no build alternative are shown in **Table 3**.

Table 3 – No Build – Project Needs

Alternative	Project Needs			
	Walkability and Bikeability	**Safety for People in Motorized Vehicles**	**Infrastructure Condition**	**Mobility for People in Motorized Vehicles**
No Build - General Maintenance				

Meets Purpose & Need

Concerns with ability to meet Purpose & Need

Does not meet Purpose & Need

5.1.2.1 Walkability and Bikeability

Walkability and bikeability would not be improved compared to existing conditions.

5.1.2.2 Safety

This alternative would not make any geometric or operational changes, so no change in the number or severity of crashes would be expected. Safety for people in motorized vehicles (cars, freight, and transit) would not be improved.

5.1.2.3 Infrastructure Condition

Pavement and bridge condition issues would not be addressed (aside from programmed maintenance activities).

5.1.2.4 Mobility

Mobility for people in motorized vehicles (cars, freight, and transit) would not be improved compared to existing conditions.

5.1.3 Social, Economic, and Environmental (SEE) Impacts

The no build alternative would not result in any new SEE impacts based on the measures included in this evaluation (**Table 4**).

Table 4 – No Build – SEE Impacts

Alternative	Social, Economic, and Environmental (SEE) Impacts						
	EJ - Access to Opportunity	**EJ - Exposure to Pollution**	**EJ - Relocation Potential**	**Historic/ Arch./ Cemetery**	**Section 4(f)**	**Section 6(f)**	**Contaminated Properties**
No Build - General Maintenance							
	Right of Way	**Noise**	**Water Pollution/ Stormwater**	**Air Quality**	**T & E Species**	**Wetlands**	

Improvement compared to no build OR limited potential for impacts

Mix of impacts and benefits OR greater potential for impacts

Greatest potential for impacts

5.1.4 Goals & Livability

The no build alternative would not provide opportunities to advance sense of place, equity, economic vitality, or public health and the environment based on the measures identified because MnDOT would no longer advance the Rethinking I-94 project (**Table 5**). While these goals would not be advanced by the Rethinking I-94 project, they could still be advanced through other MnDOT actions or actions by local partners. The no build would not eliminate opportunities for local agencies to implement planned nonmotorized facilities.

Table 5 – No Build – Goals & Livability

Alternative	Goals & Livability				
	Sense of Place	Equity	Economic Vitality	Public Health and the Environment	Connectivity
No Build - General Maintenance					

	High potential to advance project goals
	Moderate potential to advance project goals
	Limited potential to advance project goals

5.1.5 Additional Considerations

The no build alternative would not require any new funding for construction, apart from costs associated with programmed maintenance activities (**Table 6**). The current maintenance schedule for I-94 results in annual estimated maintenance costs of $XX to $XX. The no build would not include construction of a managed lane, which is the improvement identified for this corridor in the 2040 Transportation Policy Plan. There are no other major concerns with regard to the adopted state and regional plans included in the evaluation criteria.

Table 6 – No Build – Additional Considerations

Alternative	Additional Considerations		
	Construction Cost	Maintenance Cost	Consistency with Adopted State and Regional Plans
No Build - General Maintenance	$0	No data	Potential to advance goals.

5.1.6 Summary and Conclusion

Retain the no build for evaluation in the Tier 1 EIS. While the no build alternative does not meet the purpose and need, it is required under NEPA to be evaluated in the Tier 1 EIS and will be used as a baseline for comparison of build alternatives. For this reason, the no build Alternative will be retained for analysis in the Tier 1 EIS.

5.2 Maintenance – A

5.2.1 Overview

Since March 1, 2020, transit service along I-94 has changed. Maintenance – A reflects the current alignment of I-94 with 3-4 general purpose lanes and express bus service that operates partially on the shoulder during times of congestion (**Figure 10**). The express bus service currently has one stop east and westbound at Snelling Avenue. For the purposes of traffic modeling, Maintenance – A and the no build scenarios operate alike and were analyzed as one scenario.

5.2.2 Project Needs

The results of the project needs evaluation for the Maintenance - A alternative are shown in **Table 7**.

Table 7 – Maintenance – A – Project Needs

Alternative	Project Needs			
	Walkability and Bikeability	Safety for People in Motorized Vehicles	Infrastructure Condition	Mobility for People in Motorized Vehicles
Maintenance - A				

Meets Purpose & Need

Concerns with ability to meet Purpose & Need

Does not meet Purpose & Need

5.2.2.1 Walkability and Bikeability

Walkability and bikeability improvements would be limited. While Maintenance - A could include bridge work that would improve existing crossing locations, there is limited potential for new crossings or parallel improvements.

5.2.2.2 Safety

This alternative would not make any geometric or operational changes, so no change in the number or severity of crashes would be expected. Safety for people in motorized vehicles (cars, freight, and transit) would not be improved.

5.2.2.3 Infrastructure Condition

There would be opportunities for more in-depth infrastructure fixes compared to the no build. However, pavement and bridge condition issues would not be fully addressed due to the extent of the issues observed in the corridor.

5.2.2.4 Mobility

Mobility for people in motorized vehicles (cars, freight, and transit) would not be improved compared to existing conditions.

5.2.3 Social, Economic, and Environmental (SEE) Impacts

Maintenance – A would not result in any new SEE impacts based on the measures included in this evaluation (**Table 8**).

Table 8 – Maintenance – A – SEE Impacts

Alternative	Social, Economic, and Environmental (SEE) Impacts						
	EJ - Access to Opportunity	**EJ - Exposure to Pollution**	**EJ - Relocation Potential**	**Historic/ Arch./ Cemetery**	**Section 4(f)**	**Section 6(f)**	**Contaminated Properties**
Maintenance - A							
	Right of Way	**Noise**	**Water Pollution/ Stormwater**	**Air Quality**	**T & E Species**	**Wetlands**	

Improvement compared to no build OR limited potential for impacts
Mix of impacts and benefits OR greater potential for impacts
Greatest potential for impacts

5.2.4 Goals & Livability

Table 9 shows Goals & Livability results for the Maintenance – A alternative.

Table 9 – Maintenance – A – Goals & Livability

Alternative	Goals & Livability				
	Sense of Place	**Equity**	**Economic Vitality**	**Public Health and the Environment**	**Connectivity**
Maintenance - A					

High potential to advance project goals
Moderate potential to advance project goals
Limited potential to advance project goals

Sense of Place: There is potential for excess ROW to be used for new features/amenities in select locations in conjunction with maintenance work.

Equity: No changes in transportation choices are anticipated compared to the no build.

Economic Vitality: No improvement compared to no build for auto or transit.

Public Health and the Environment: There is potential for excess right of way to be used to expand green space in the corridor in conjunction with maintenance work.

Connectivity: Would not eliminate opportunities for local agencies to implement planned nonmotorized facilities.

5.2.5 Additional Considerations

Maintenance – A would require $330 M–$396 M in funding for construction (**Table 10**). Annual maintenance costs following construction are estimated to range from $XX to $XX. Maintenance – A would not include construction of a managed lane, which is the improvement identified for this corridor in the 2040 Transportation Policy Plan. There are no other major concerns with regard to the adopted state and regional plans included in the evaluation criteria.

Table 10 – Maintenance – A – Additional Considerations

Alternative	Additional Considerations		
	Construction Cost	Maintenance Cost	Consistency with Adopted State and Regional Plans
Maintenance - A	$330 M–$396 M	No data	Potential to advance goals.

5.2.6 Summary and Conclusion

Eliminate Maintenance – A from consideration. This alternative would not fully address any of the project needs. It would also not advance the project goals. For these reasons, it should not be studied further in the Tier 1 EIS.

5.3 Maintenance – B

5.3.1 Overview

Maintenance – B keeps the current alignment – keeping the existing 3-4 general purpose lanes – but would add a shoulder where one does not exist today to support express bus service along the entire corridor. This would restore the bus shoulder west of TH 280 that was converted to a travel lane after the I-35W Mississippi River bridge collapse. For graphic illustration purposes, Maintenance – B resembles the no-build option (**Figure 10**).

5.3.2 Project Needs

The results of the project needs evaluation for the Maintenance – B alternative are shown in **Table 11**.

Table 11 – Maintenance – B – Project Needs

Alternative	Project Needs			
	Walkability and Bikeability	Safety for People in Motorized Vehicles	Infrastructure Condition	Mobility for People in Motorized Vehicles
Maintenance - B				

Meets Purpose & Need

Concerns with ability to meet Purpose & Need

Does not meet Purpose & Need

5.3.2.1 Walkability and Bikeability

Walkability and bikeability improvements would be limited.

5.3.2.2 Safety

Maintenance – B has the potential to address the number and severity of crashes for people in motorized vehicles (cars, freight, and transit) on the freeway. While there would be no change compared to the no build based on the expected crash comparison analysis, widening the right shoulder is associated with a reduction in crashes of all types and severities based on applicable Crash Modification Factors (CMFs). These include “Widen shoulder by 1 ft” (CMF ID 8342) and “Increase shoulder width from 10 ft to 12 ft” (CMF ID 5509).

5.3.2.3 Infrastructure Condition

Pavement condition issues would be addressed in areas where shoulders are widened or other existing infrastructure is replaced, and bridge condition issues would be addressed according to programmed improvements.

5.3.2.4 Mobility

In terms of mobility, Maintenance – B would provide a transit advantage while measures associated with other motorized vehicles would be unaffected. Maintenance – B results in faster peak period transit travel times as buses are allowed to use the shoulders when there is congestion during the peak travel time. Transit travel time would be reduced from 22 minutes under the no build to 17 minutes with Maintenance – B. However, person throughput associated with transit is expected to be reduced. Faster transit travel time is generally associated with increased ridership. However, the STOPS model includes an extra penalty for stops in addition to the impact on travel time to account for qualitative rider preference for fewer stops. The decrease in ridership is mostly seen at downtown stops, indicating that more commuters may be choosing auto over express bus in Maintenance – B.

> **Person Throughput**
> How many people (including those in cars and buses) could be transported through the project corridor in a day.

5.3.3 Social, Economic, and Environmental (SEE) Impacts

The results of the SEE impacts evaluation for Maintenance – B are listed in **Table 12**. Maintenance – B has limited potential for impacts to Environmental Justice (EJ) populations:

- No change in access to land use would be required.
- Effects on noise pollution would be limited, and there is limited potential for relocation.
- An increase in impervious surface has the potential to increase stormwater runoff within EJ communities.

Table 12 – Maintenance – B – SEE Impacts

Alternative	Social, Economic, and Environmental (SEE) Impacts						
	EJ - Access to Opportunity	EJ - Exposure to Pollution	EJ - Relocation Potential	Historic/ Arch./ Cemetery	Section 4(f)	Section 6(f)	Contaminated Properties
Maintenance - B							
	Right of Way	Noise	Water Pollution/ Stormwater	Air Quality	T & E Species	Wetlands	

Improvement compared to no build OR limited potential for impacts
Mix of impacts and benefits OR greater potential for impacts
Greatest potential for impacts

Maintenance – B has low potential for adverse effects to known historic properties and known or suspected cemeteries. Mainline improvements have the potential to impact up to 11 Section 4(f) resources (**Figure 11**). No impacts to Section 6(f) resources are anticipated. There is potential for up to two known contaminated sites within the corridor to be impacted (**Figure 12**). Mainline improvements are unlikely to require relocations or right of way impacts.

Regarding noise impacts, the project would not cause a material change in horizontal and/or vertical alignment or add travel lanes. From a stormwater perspective, the project would result in approximately 126 acres of impervious surface (an increase of 12 acres compared to the no build). In terms of air quality, the project is not likely to be considered regionally significant. Maintenance – B has the potential to impact threatened and endangered species. The conversion of roadside vegetation to new impervious surface (if required) has the potential to impact habitat for species such as the Rusty Patched Bumble Bee (*Bombus affinis*). The project corridor is located within a High Potential Zone for this species. Based on NWI mapping, no impacts to wetlands are anticipated.

5.3.4 Goals & Livability

Table 13 shows Goals & Livability results for the Maintenance – B alternative.

Table 13 – Maintenance – B – Goals & Livability

Alternative	Goals & Livability				
	Sense of Place	Equity	Economic Vitality	Public Health and the Environment	Connectivity
Maintenance - B					

	High potential to advance project goals
	Moderate potential to advance project goals
	Limited potential to advance project goals

Sense of Place: There is potential for excess ROW to be used for new features/amenities in select locations; potential for aesthetic improvements to bridges and structures.

Equity: Bus shoulders between downtowns would be restored, providing a transit benefit. Opportunities for walkability/bikeability improvements.

Economic Vitality: No improvement compared to no build for auto, slight increase in number of jobs accessible by transit within 30 minutes.

Public Health and the Environment: There is potential for excess right of way to be used to expand green space in the corridor.

Connectivity: Would not eliminate opportunities for local agencies to implement planned nonmotorized facilities.

Figure 11 – Potential Section 4(f) Impacts: Maintenance – B

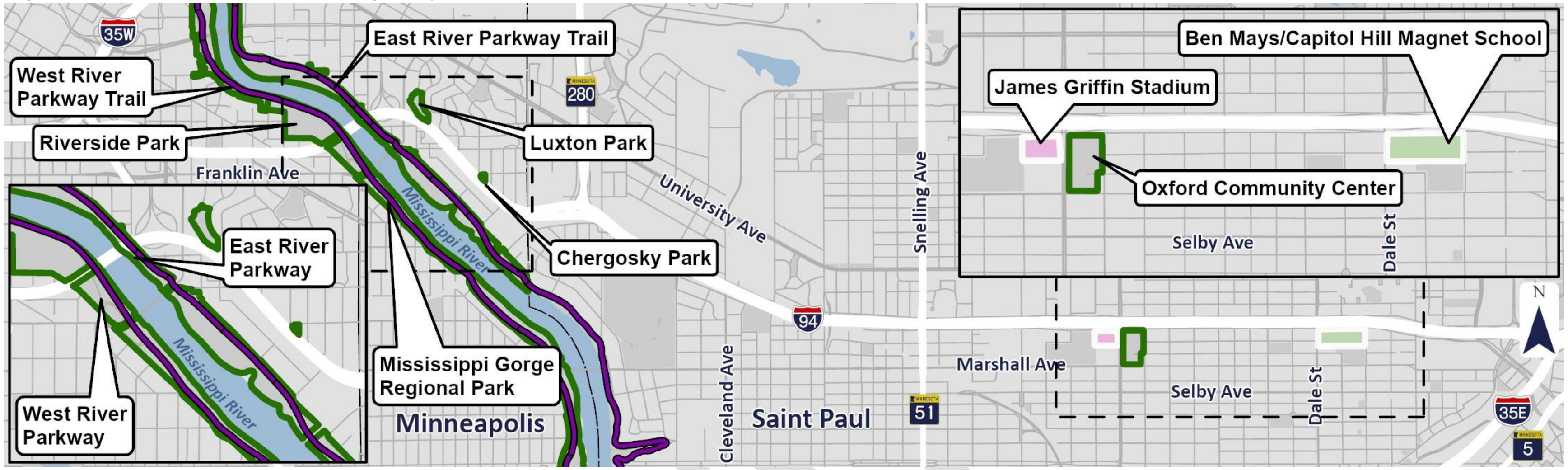


Figure 12 – Contaminated Properties: Maintenance – B

11003544

5.3.5 Additional Considerations

Maintenance – B would result in costs associated with replacing the existing infrastructure to current standards with consistent shoulders, including a widened shoulder between the west project terminus and just east of TH 280, where the current bus shoulders end (estimated at $1.58 B–$1.9 B) (**Table 14**). Annual maintenance costs following construction are estimated to range from $XX to $XX. Maintenance – B would not include construction of a managed lane, which is the improvement identified for this corridor in the 2040 Transportation Policy Plan. There are no other major concerns with regard to the adopted state and regional plans included in the evaluation criteria.

Table 14 – Maintenance – B – Additional Considerations

Alternative	Additional Considerations		
	Construction Cost	Maintenance Cost	Consistency with Adopted State and Regional Plans
Maintenance - B	$1.58 B–$1.9 B	No data	Potential to advance goals.

5.3.6 Summary and Conclusion

To be added

5.4 At-Grade – A and At-Grade – B

5.4.1 Overview

For the at-grade alternatives, I-94 would be demolished, filled in, and replaced with an at-grade roadway. It is expected that most current interchanges would be removed. The necessary intersection control, railroad crossings, and bicycle and pedestrian crossing infrastructure would be determined during a later phase. The new roadway would have two travel lanes in each direction with bus rapid transit operating in a fixed guideway. The proposed speed limit for both alternatives is 35 mph. At-Grade – A would have the bus rapid transit in the middle of the travel lanes for cars/trucks (**Figure 13**). At-Grade – B would have bus rapid transit operating in a fixed guideway in an outside lane (**Figure 14**). Three transit stops would be provided. For the purposes of this modeling analysis, the two at-grade roadways have the same operating characteristics and thus were analyzed as one.

Figure 13 – At-Grade – A

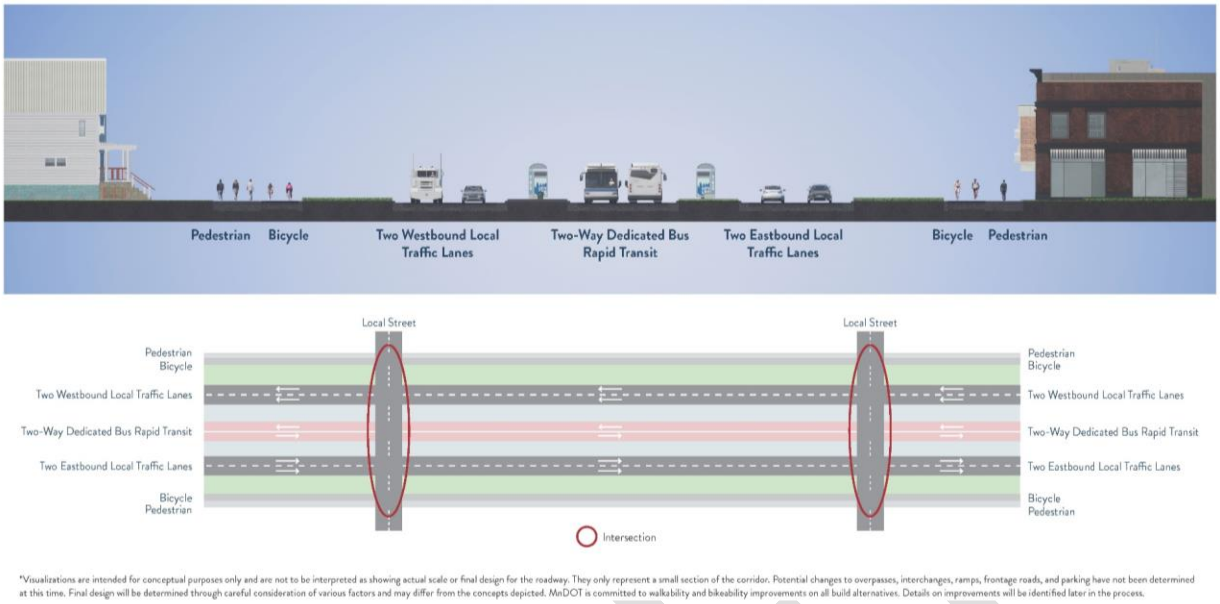
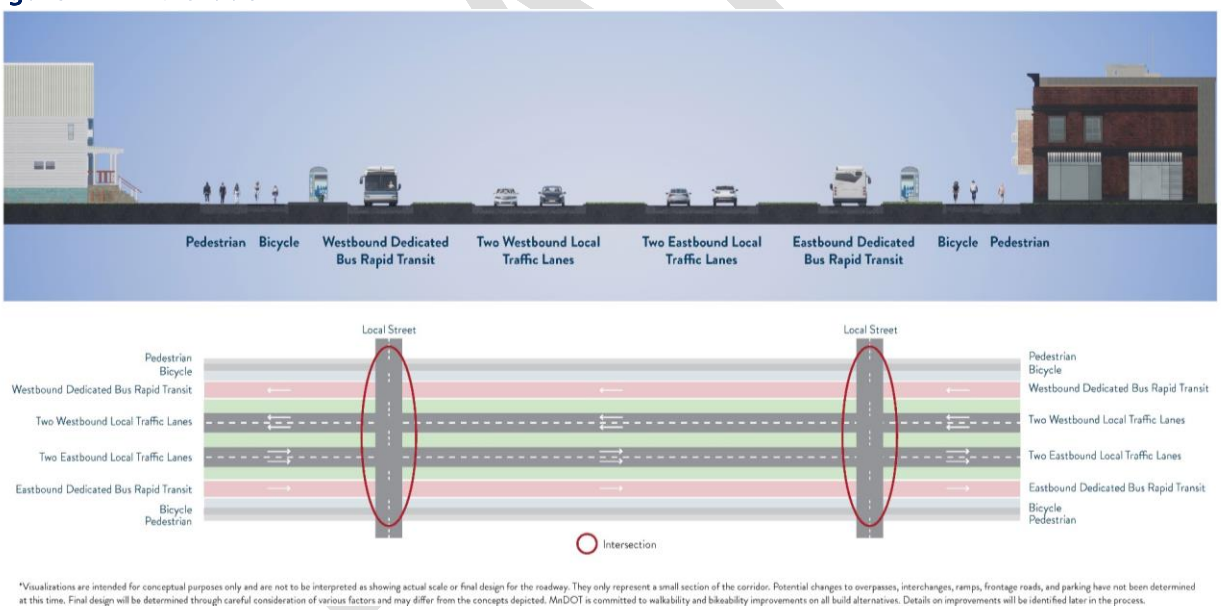


Figure 14 – At-Grade – B



5.4.2 Project Needs

The results of the project needs evaluation for At-Grade – A and At-Grade – B alternatives are shown in **Table 15**.

Table 15 – At-Grade – A and At-Grade – B – Project Needs

Alternative	Project Needs			
	Walkability and Bikeability	**Safety for People in Motorized Vehicles**	**Infrastructure Condition**	**Mobility for People in Motorized Vehicles**
At-Grade - A				
At-Grade - B				

Meets Purpose & Need

Concerns with ability to meet Purpose & Need

Does not meet Purpose & Need

5.4.2.1 Walkability and Bikeability

The performance of the At-Grade alternatives relative to Walkability and Bikeability is mixed. This analysis assumed that there would be no change in the structure of the walking and biking network (such as the elimination or relocation of a crossing location) compared to the no build, therefore the distance between crossings and origin-destination performance measures remained constant. However, distances between grade-separated crossings would increase due to conversion of some overpasses and underpasses to at-grade intersections. New nonmotorized conflict points would be created at locations where at-grade crossings replace grade-separated crossings. The number of conflict points may decrease or stay the same at some locations depending on intersection designs. The conversion of some grade-separated to at-grade crossings would also increase crossing delay but reduce travelshed distances. There is potential to add new crossings, which would improve performance.

5.4.2.2 Safety

Based on the expected crash comparison analysis, the At-Grade alternatives would not address the number and severity of crashes for people in motorized vehicles (cars, freight, and transit) due to an expected increase in fatal and serious injury crashes/day. On the mainline within the logical termini, the expected crash rate for all crashes would be 1.87 crashes/million vehicle miles traveled (VMT) compared to 0.926 crashes/million VMT for the no build, and the fatal and serious injury crash rate would be 3.226 crashes/100 million VMT compared to 0.66 crashes/100 million VMT for the no build. The increase in expected crash rates is due to the conversion from a freeway, which has limited access points, to an at-grade roadway, which has many access points.

While the amount of mainline traffic would be reduced, additional traffic would be pushed to surrounding roadways, which also generally have higher crash rates than the existing freeway. Between the mainline and routes within one mile, a combined 4.12 crashes/day and 0.067 fatal and serious injury crashes/day are expected. This is a 13% decrease in total crashes/day (which can be partially attributed to a decrease in mainline traffic volumes), but a 4% increase in fatal and serious injury crashes/day compared to the no build. While MnDOT works to decrease all types of crashes in Minnesota, fatal and serious injury crashes are the highest priority.

5.4.2.3 Infrastructure Condition

The At-Grade alternatives would address pavement and bridge condition by removing or replacing the existing infrastructure.

5.4.2.4 Mobility

The anticipated effects of the At-Grade alternatives on mobility include:

- Systemwide vehicle hours traveled (VHT) and person hours traveled (PHT) are anticipated to increase compared to the no build.
- Mainline speed on the corridor would be reduced to 20-25 mph, compared to 40-55 mph with the no build.
- Person throughput in the corridor would be reduced to 219,000 people/day, compared to 426,000 people/day with the no build.
- VHT and PHT in the interchange areas would be reduced by half.
- Interchange area person throughput would be reduced to 757,000 people/day, compared to 2,588,000 people/day with the no build.
- Freight travel times in the corridor would increase to 18-23 minutes, compared to 8-11 minutes with the no build.
- Mean travel time index would increase to 2.5, compared to 2.0 with the no build, indicating a decrease in travel time reliability.
- 13 new at-grade access locations are likely to be added to the new roadway, resulting in an intersection density of 3.1 access points/mile. Assumed access locations are shown in **Figure 15.**
- Peak period transit travel times in the corridor would be reduced to 19 minutes compared to 22 minutes with the no build, however travel time through interchange areas would increase due to the addition of three stops for the proposed BRT service.
- Mean travel time index for transit would increase to 2.5 compared to 2.0 with the no build, indicating a decrease in transit travel time reliability.

VHT and PHT

VHT: The number of hours spent by all vehicles traveling on the regional roadway system each day.
PHT: The number of hours spent by all people traveling on the regional roadway system each day.

Travel Time Index

Travel Time Index (TTI) measures the reliability/variability of travel times. It is the ratio of corridor travel time in the peak period to travel time at free-flow speeds or uncongested conditions.

Figure 15 – Access Locations: At-Grade – A and At-Grade – B

5.4.3 Social, Economic, and Environmental (SEE) Impacts

The results of the SEE impacts evaluation for the At-Grade alternatives are listed in **Table 16**. The At-Grade alternatives have some potential for net negative impacts to EJ populations:

- New at-grade access locations would be added to the new roadway, including within EJ communities (**Figure 16**). Direct access to key destinations in the corridor would increase, however travel times in the corridor will also increase due to the addition of new access points.
- New BRT service would improve access to transit within EJ communities.
- A major change in the vertical alignment of the roadway has potential to increase the size of areas within EJ communities impacted by traffic noise.
- Due to reduced roadway capacity, traffic volumes and associated noise pollution on adjacent parallel arterials in EJ communities will increase.
- There is limited potential for relocation of EJ populations based on the proposed improvements.

Table 16 – At-Grade – A and At-Grade – B – SEE Impacts

Alternative	Social, Economic, and Environmental (SEE) Impacts						
	EJ - Access to Opportunity	EJ - Exposure to Pollution	EJ - Relocation Potential	Historic/ Arch./ Cemetery	Section 4(f)	Section 6(f)	Contaminated Properties
At-Grade - A							
At-Grade - B							
	Right of Way	Noise	Water Pollution/ Stormwater	Air Quality	T & E Species	Wetlands	
At-Grade - A							
At-Grade - B							

Improvement compared to no build OR limited potential for impacts

Mix of impacts and benefits OR greater potential for impacts

Greatest potential for impacts

The mainline improvements for the At-Grade alternatives have moderate potential for adverse effect to known historic properties, and low to moderate potential for adverse effect to known or suspected cemeteries. The alternative has the potential to impact up to 13 Section 4(f) resources (**Figure 17**). No impacts to Section 6(f) resources are anticipated. There is potential for up to two known contaminated sites within the corridor to be impacted, with 71 total sites located within 500 feet of the corridor (**Figure 18**). The alternative is unlikely to have right of way impacts or require relocations.

Regarding noise impacts, a major change in vertical alignment will reduce distances between traffic and noise sensitive receptors and potentially increase the area of traffic noise impacts. From a stormwater perspective, the project would result in approximately 110 acres of impervious surface (a decrease of four acres compared to the no build). In terms of air quality, the project meets the definition of a regionally significant project and would not be classified as exempt. The At-Grade alternatives have the potential to impact threatened and endangered species through impacts to vegetation along the corridor. Based on NWI mapping, up to two wetlands may be impacted (**Figure 19**).

Figure 16 – Access Locations and Environmental Justice: At-Grade – A and At-Grade – B

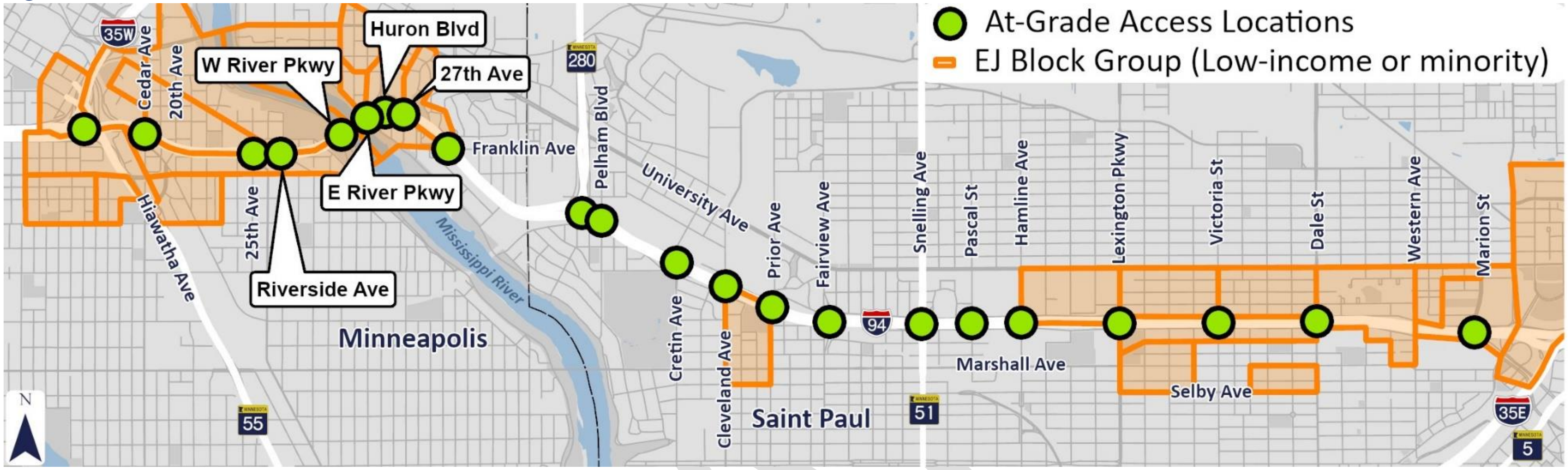
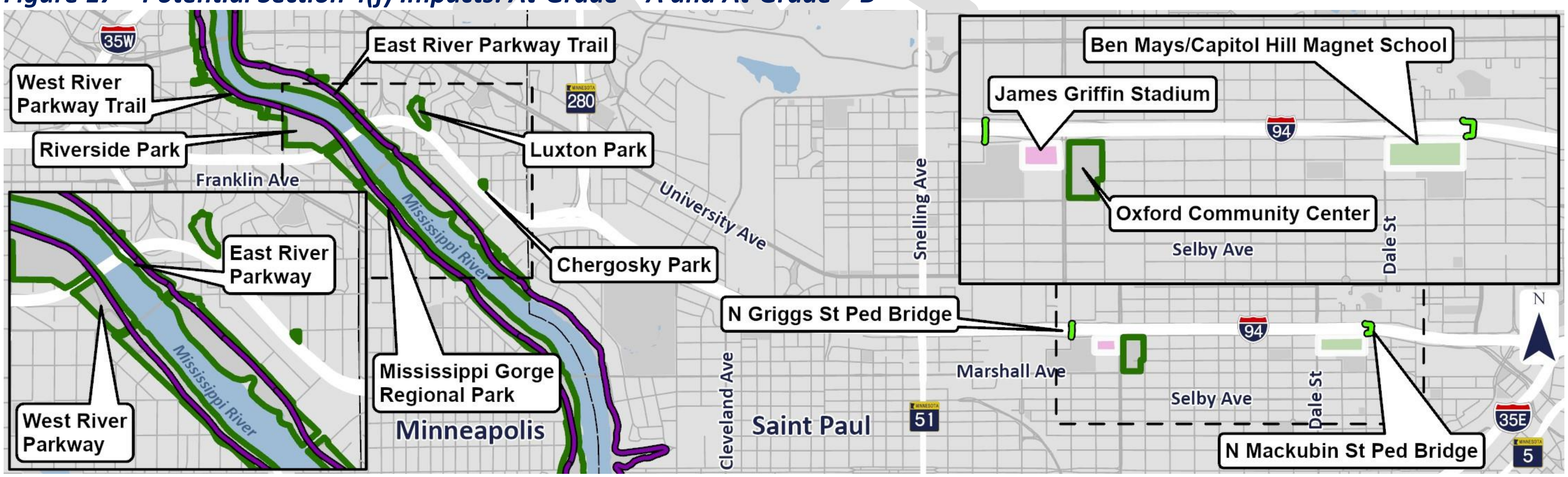


Figure 17 – Potential Section 4(f) Impacts: At-Grade – A and At-Grade – B



11003551

Figure 18 – Contaminated Properties: At-Grade – A and At-Grade – B

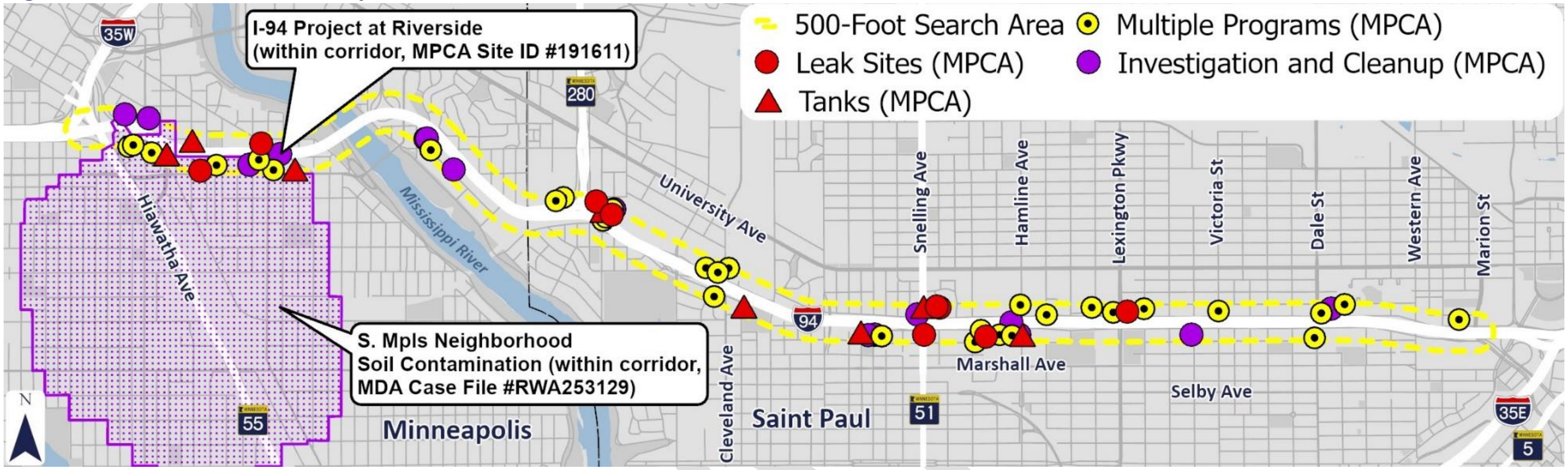
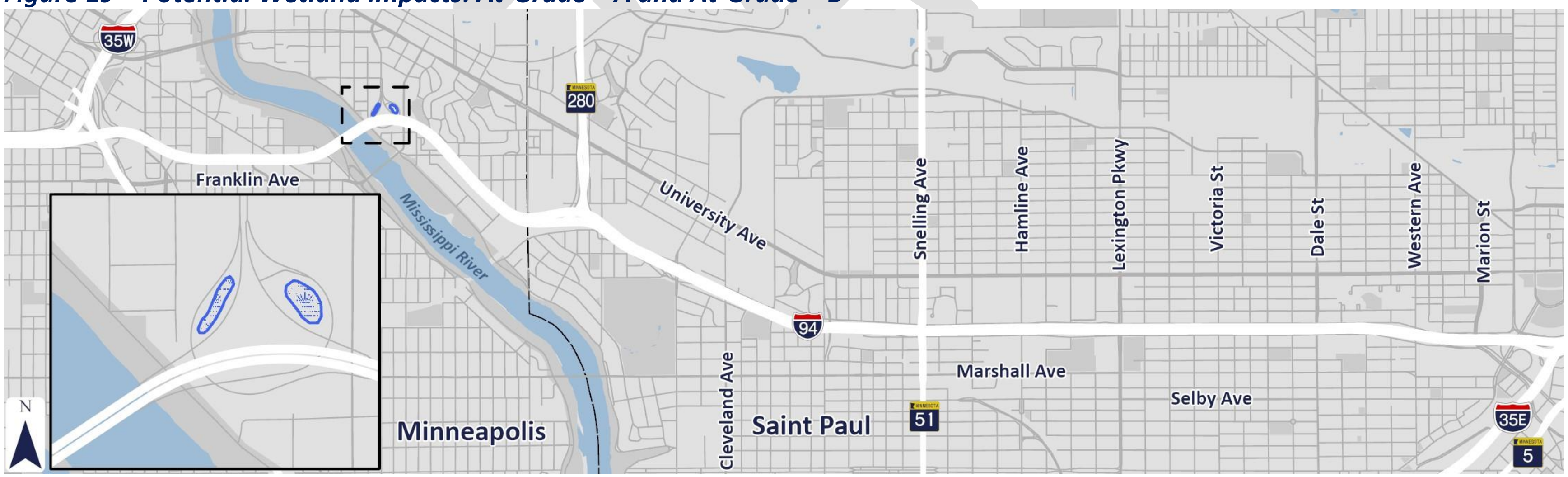


Figure 19 – Potential Wetland Impacts: At-Grade – A and At-Grade – B



11003552

5.4.4 Goals & Livability

Table 17 shows Goals & Livability results for At-Grade – A and At-Grade – B alternatives.

Table 17 – At-Grade – A and At-Grade – B – Goals & Livability

Alternative	Goals & Livability				
	Sense of Place	Equity	Economic Vitality	Public Health and the Environment	Connectivity
At-Grade - A					
At-Grade - B					

High potential to advance project goals
Moderate potential to advance project goals
Limited potential to advance project goals

Sense of Place: There is potential for excess ROW to be used for new features/amenities in select locations, including additional amenities that may not be compatible with freeway alternatives.

Equity: Dedicated bus lanes would provide a transit benefit and would likely be considered more beneficial than bus shoulders. There would also be opportunities for walkability/bikeability improvements.

Economic Vitality: There would be a decrease in the number of jobs accessible within 30 minutes in both AM and PM peak for auto compared to the no build, and a slight increase for transit.

Public Health and the Environment: Potential for excess right of way to be used to expand green space in the corridor. Potential for additional amenities that may not be compatible with freeway alternatives.

Connectivity: Facilitates opportunities for locally planned walkability and bikeability improvements along the corridor, however proposed improvements at existing grade-separated crossings may be in conflict with conversion to at-grade intersections.

5.4.5 Additional Considerations

The At-Grade alternatives would result in new construction costs estimated at $1.83 B–$2.19 B. Annual maintenance costs following construction are estimated to range from $XX to $XX. (**Table 18**).

Table 18 – At-Grade – A and At-Grade – B – Additional Considerations

Alternative	Additional Considerations		
	Construction Cost	Maintenance Cost	Consistency with Adopted State and Regional Plans
At-Grade - A	$1.83 B–$2.19 B	No data	Potential to advance goals.
At-Grade - B	$1.83 B–$2.19 B	No data	Potential to advance goals.

5.4.6 Summary and Conclusion

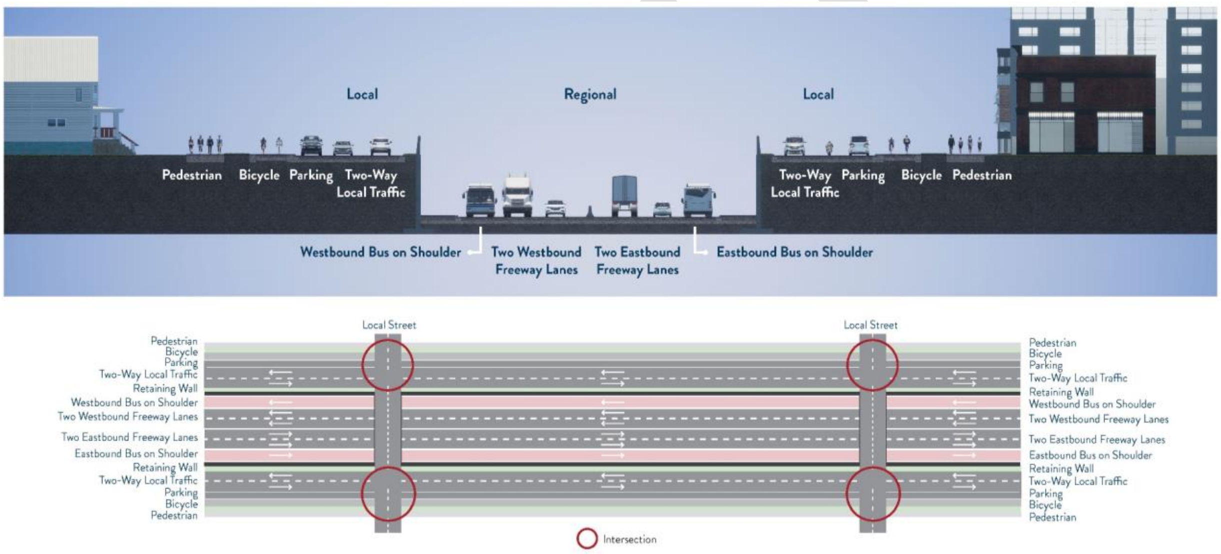
To be added

5.5 Local/Regional Roadways – A

5.5.1 Overview

This alternative replaces the existing interstate with two parallel facilities – one focused on regional travel and the other on local trips (**Figure 20**). The regional facility would be limited access with interchanges at locations to be determined. It is anticipated that there would be an access at the beginning of the project area near TH 55 and I-35 and one at the end of the project area near Marion Street/Kellogg Boulevard. Access in between will be limited to one or two additional locations. Key features include two general purpose lanes in each direction and express bus service that can operate on the shoulder throughout the full 7.5-mile segment. The local roadway is at-grade with separate facilities on the north and south sides of the interstate. Each local road would have a travel lane in each direction, street parking, bike lanes, and sidewalks to serve existing land use.

Figure 20 – Local/Regional Roadways – A



*Visualizations are intended for conceptual purposes only and are not to be interpreted as showing actual scale or final design for the roadway. They only represent a small section of the corridor. Potential changes to overpasses, interchanges, ramps, frontage roads, and parking have not been determined at this time. Final design will be determined through careful consideration of various factors and may differ from the concepts depicted. MnDOT is committed to walkability and bikeability improvements on all build alternatives. Details on improvements will be identified later in the process.

5.5.2 Project Needs

The results of the project needs evaluation for the Local/Regional Roadways – A alternative are shown in **Table 19**.

Table 19 – Local/Regional Roadways – A– Project Needs

Alternative	Project Needs			
	Walkability and Bikeability	Safety for People in Motorized Vehicles	Infrastructure Condition	Mobility for People in Motorized Vehicles
Local/Regional Roadways - A				

	Meets Purpose & Need
	Concerns with ability to meet Purpose & Need
	Does not meet Purpose & Need

11003554

5.5.2.1 Walkability and Bikeability

Based on the performance measures identified, Local/Regional Roadways – A would result in similar outcomes for walkability and bikeability as the no build. This analysis assumed that there would be no change in the structure of the walking and biking network (such as the elimination or relocation of a crossing location) compared to the no build, therefore the distance between crossings and origin-destination performance measures remained constant. There is potential to add new crossings as part of this alternative, which would improve performance. In addition, the removal of mainline access points would result in the conversion of existing interchanges to overpasses, which would reduce conflict points for nonmotorized users crossing the corridor at these locations.

5.5.2.2 Safety

Based on the expected crash comparison analysis, Local/Regional Roadways – A would address the number and severity of crashes for people in motorized vehicles (cars, freight, and transit) by reducing the total expected crashes/day. On the mainline within the logical termini, the expected crash rates for all crashes and for fatal and serious injury crashes would be unchanged from the no build. Between the mainline and routes within one mile, a combined 4.42-4.45 total crashes/day and 0.064-0.065 fatal and serious injury crashes/day are expected, depending on whether three or four access points are provided. This is a 6-7% decrease in total crashes/day compared to the no build. The expected fatal and serious injury crashes/day would not change substantially.[7]

5.5.2.3 Infrastructure Condition

Local/Regional Roadways – A would address pavement and bridge condition by removing or replacing the existing infrastructure.

5.5.2.4 Mobility

The anticipated effects of Local/Regional Roadways – A on mobility include:

- Systemwide VHT and PHT are anticipated to increase compared to the no build.
- Mainline speed on the corridor would be reduced to 30-45 mph on the regional facility and 25-30 mph on the local facilities, compared to 40-55 mph with the no build.
- Person throughput in the corridor would be reduced to 337,000 people/day in the four access point scenario and 315,000 people/day in the three access point scenario, compared to 426,000 people/day with the no build.
- VHT and PHT in the interchange areas would be reduced.
- Interchange area person throughput would be reduced to 1,923,000 people/day in the four access point scenario and 1,886,000 people/day in the three access point scenario, compared to 2,588,000 people/day with the no build.
- Freight travel times in the corridor would increase slightly to 10-15 minutes on the regional facility in the four access point scenario and 16-19 minutes in the three access points scenario, compared to 8-11 minutes with the no build.
- Mean travel time index would increase to 3.0-3.2 on the regional facility, compared to 2.0 with the no build, indicating a decrease in travel time reliability.
- Five or six access locations would be removed, however overpasses would generally remain. Distance to access I-94 would increase for some trips, however connectivity across I-94 would

[7] Increases or decreases in crashes/day of less than 2% were considered neutral/no change.

increase in areas where ramps are removed but overpasses are maintained. Proposed access locations remaining under Local/Regional Roadways – A are shown in **Figure 21**. The three access point scenario would include I-35W/TH 55, TH 280, and Marion St, with the four access point scenario adding TH 51/Snelling Ave.

- Peak period transit travel times in the corridor would be reduced to 17 minutes compared to 22 minutes with the no build. Transit travel time through interchange areas would increase in the four access point scenario because of the stop at TH 51/Snelling Ave, but would be lower than the no build with three access points.
- Mean travel time index for transit would increase to 3.2 on the regional roadway in the four access point scenario and 2.8 in the three access point scenario compared to 2.0 with the no build, indicating a decrease in transit travel time reliability.

Figure 21 – Access Locations: Local/Regional Roadways – A

5.5.3 Social, Economic, and Environmental (SEE) Impacts

The results of the SEE impacts evaluation for Local/Regional Roadways – A are listed in **Table 20**. Local/Regional Roadways – A has some potential for net negative impacts to EJ populations:

- Multiple existing freeway access points within EJ communities would be removed (**Figure 22**). Direct access to key destinations in the corridor would decrease, however travel times in the corridor may also decrease due to the removal of access points.
- A major change in freeway configuration has the potential to shift traffic volumes closer to or further away from noise sensitive receptors within EJ communities depending on the final design.
- Due to reduced freeway capacity, traffic volumes and associated noise pollution on adjacent parallel arterials in EJ communities will increase.
- There is limited potential for relocation of EJ populations based on the mainline improvements.

The mainline improvements for Local/Regional Roadways – A have low to moderate potential for adverse effect to known historic properties, and moderate potential for adverse effect to known or suspected cemeteries. The alternative has the potential to impact up to 12 Section 4(f) resources (**Figure 23**). No impacts to Section 6(f) resources are anticipated. There is potential for up to two known contaminated sites within the corridor to be impacted, with 71 total sites located within 500 feet of the corridor (**Figure 24**). The alternative is unlikely to have right of way impacts or require relocations.

Table 20 – Local/Regional Roadways – A – SEE Impacts

Alternative	Social, Economic, and Environmental (SEE) Impacts						
	EJ - Access to Opportunity	EJ - Exposure to Pollution	EJ - Relocation Potential	Historic/ Arch./ Cemetery	Section 4(f)	Section 6(f)	Contaminated Properties
Local/Regional Roadways - A							
	Right of Way	Noise	Water Pollution/ Stormwater	Air Quality	T & E Species	Wetlands	

Improvement compared to no build OR limited potential for impacts

Mix of impacts and benefits OR greater potential for impacts

Greatest potential for impacts

Regarding noise impacts, the project has the potential to increase traffic volumes on the local system adjacent to existing at-grade land uses. From a stormwater perspective, the project would result in approximately 93 acres of impervious surface within the proposed retaining walls (a decrease of 21 acres compared to the no build). In terms of air quality, the project meets the definition of a regionally significant project and would not be classified as exempt. Local/Regional Roadways – A has the potential to impact threatened and endangered species through impacts to vegetation along the corridor. Based on NWI mapping, up to two wetlands may be impacted (**Figure 25**).

Figure 22 – Access Locations and Environmental Justice: Local/Regional Roadways – A

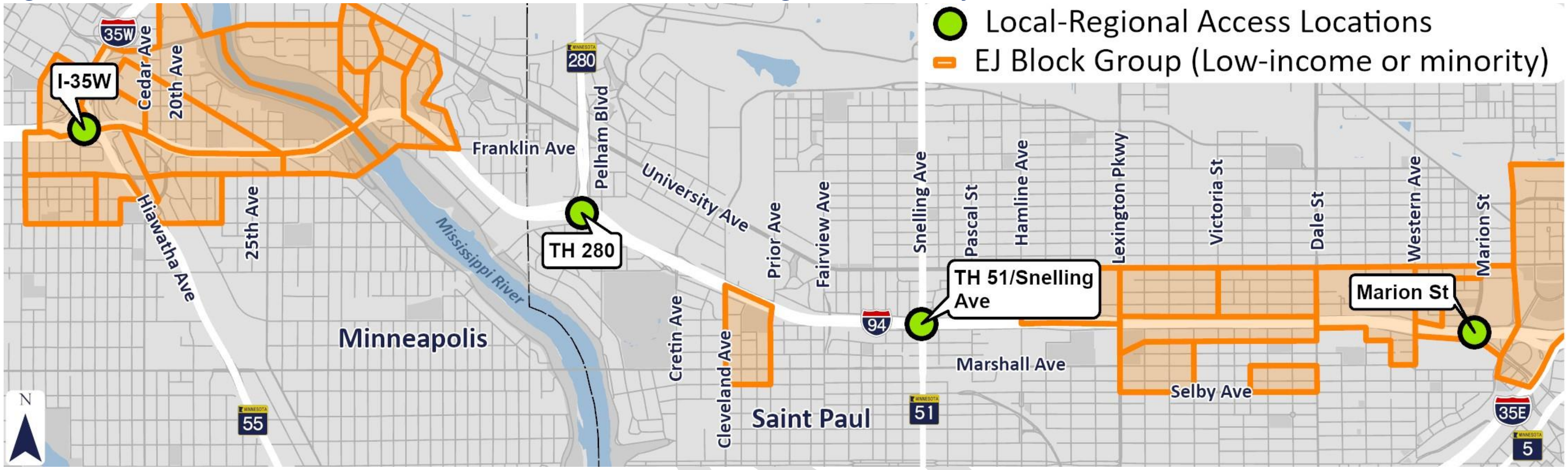
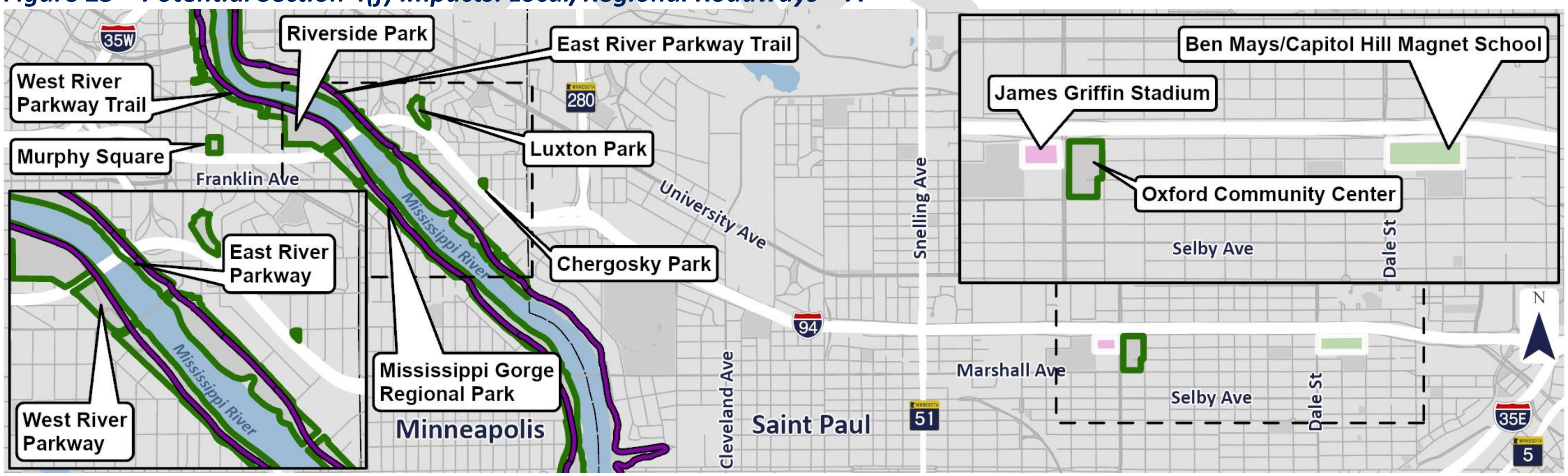


Figure 23 – Potential Section 4(f) Impacts: Local/Regional Roadways – A



11003558

Figure 24 – Contaminated Properties: Local/Regional Roadways – A

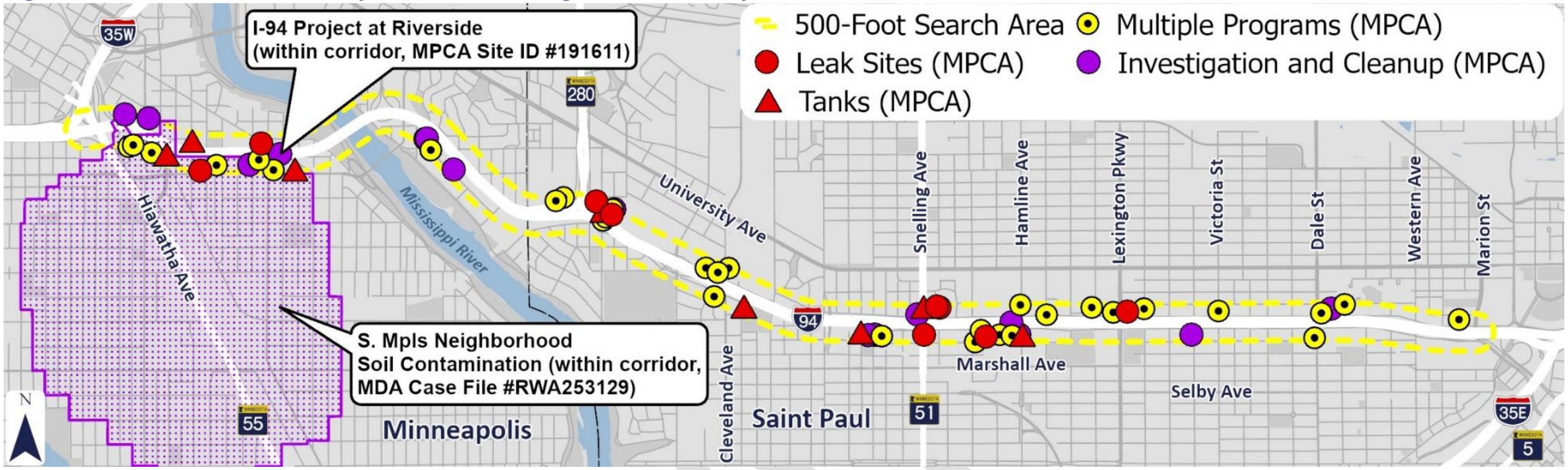
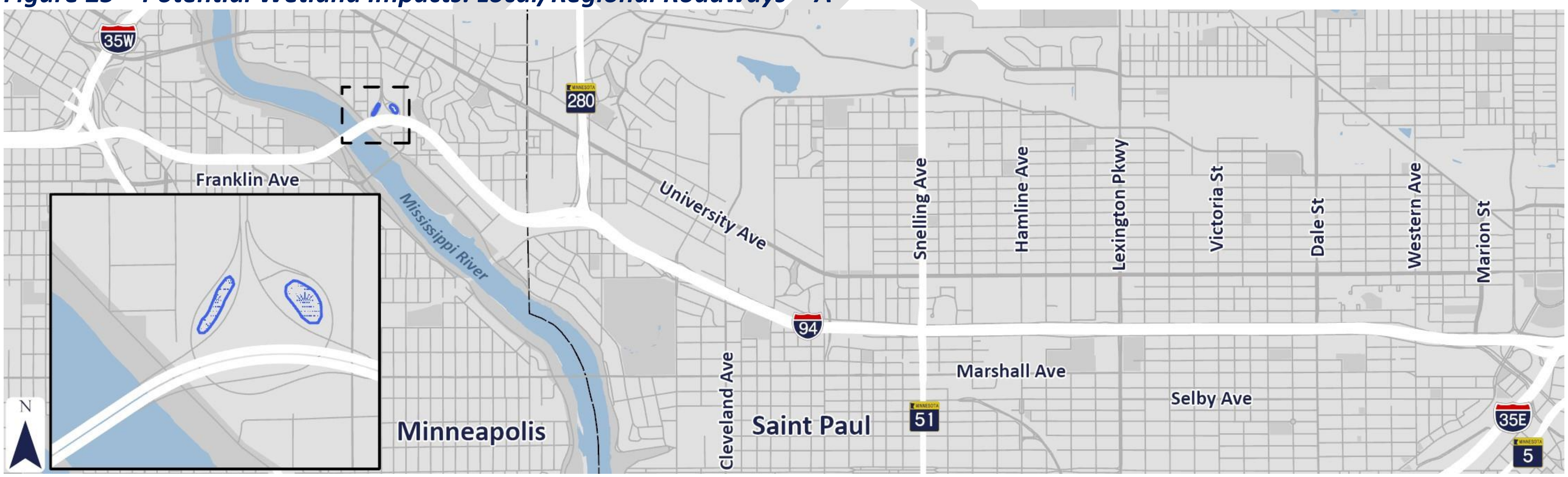


Figure 25 – Potential Wetland Impacts: Local/Regional Roadways – A



11003559

5.5.4 Goals & Livability

Table 21 shows Goals & Livability results for the Local/Regional Roadways – A alternative.

Table 21 – Local/Regional Roadways – A – Goals & Livability

Alternative	Goals & Livability				
	Sense of Place	Equity	Economic Vitality	Public Health and the Environment	Connectivity
Local/Regional Roadways - A					

High potential to advance project goals
Moderate potential to advance project goals
Limited potential to advance project goals

Sense of Place: There is potential for excess ROW to be used for new features/amenities in select locations, as well as potential for aesthetic improvements to bridges and structures.

Equity: Bus shoulders between the downtowns would be restored, providing a transit benefit. There would also be opportunities for walkability/bikeability improvements.

Economic Vitality: There would be a decrease in the number of jobs accessible within 30 minutes in both the AM and PM peak for auto in the three access point scenario and in the AM peak with the four access point scenario. There would be a slight increase in the PM peak with four access points for auto. There would be a slight increase for transit as well.

Public Health and the Environment: Potential for excess right of way to be used to expand green space in the corridor.

Connectivity: Facilitates opportunities for locally planned walkability and bikeability improvements along and across the corridor, however the complexity of the freeway and frontage road design may preclude some new or existing crossing locations.

5.5.5 Additional Considerations

Local/Regional Roadways – A would result in new construction costs estimated at $2.29 B–$2.75 B. Annual maintenance costs following construction are estimated to range from $XX to $XX (**Table 18**).

Table 22 – Local/Regional Roadways – A – Additional Considerations

Alternative	Additional Considerations		
	Construction Cost	Maintenance Cost	Consistency with Adopted State and Regional Plans
Local/Regional Roadways - A	$2.29 B–$2.75 B	No data	Potential to advance goals.

5.5.6 Summary and Conclusion

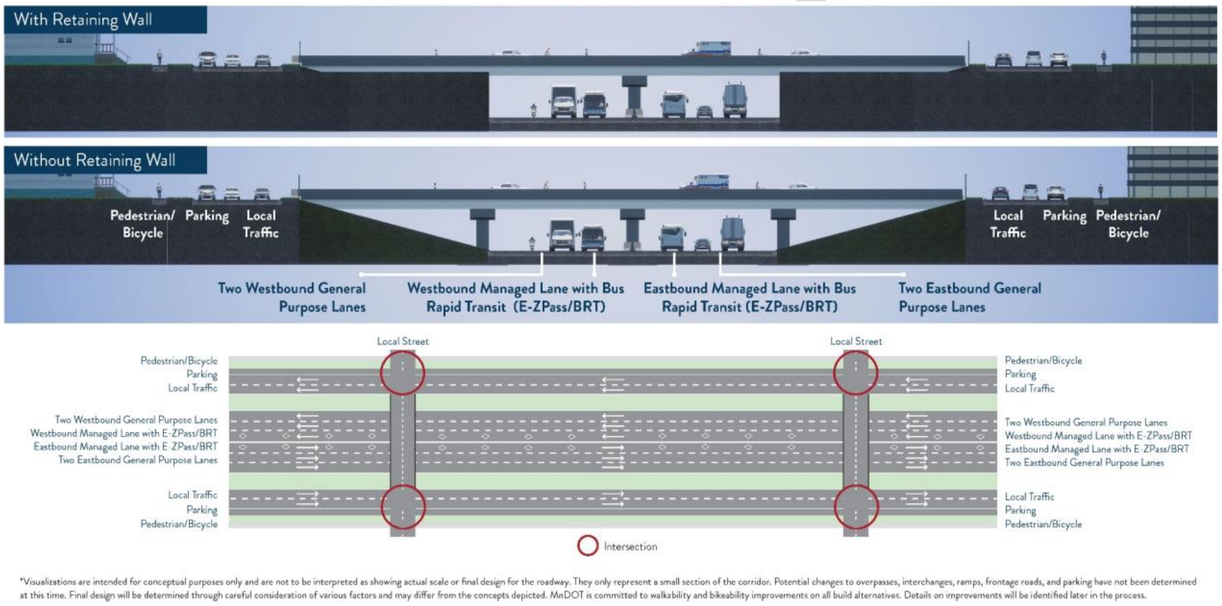
To be added

5.6 Reduced Freeway – A

5.6.1 Overview

This alternative would rebuild I-94 with fewer travel lanes compared to existing conditions. In this alternative there would be two general purpose lanes (open to all vehicles) and one managed lane (for buses and carpoolers and those willing to pay) in each direction. Bus rapid transit would operate in the managed lanes. Up to three transit stops could be provided. The reduced freeway option could be constructed with or without a retaining wall (**Figure 26**).

Figure 26 – Reduced Freeway – A



5.6.2 Project Needs

The results of the project needs evaluation for the Local/Regional Roadways – A alternative are shown in **Table 23**.

Table 23 – Reduced Freeway – A – Project Needs

Alternative	Project Needs			
	Walkability and Bikeability	**Safety for People in Motorized Vehicles**	**Infrastructure Condition**	**Mobility for People in Motorized Vehicles**
Reduced Freeway - A				
BRT - 0				
BRT - 1				
BRT - 3				

Meets Purpose & Need

Concerns with ability to meet Purpose & Need

Does not meet Purpose & Need

5.6.2.1 Walkability and Bikeability

Based on the performance measures identified, Reduced Freeway – A would result in similar outcomes for walkability and bikeability as the no build. This analysis assumed that there would be no change in the structure of the walking and biking network (such as the elimination or relocation of a crossing location) compared to the no build, therefore the distance between crossings and origin-destination performance measures remained constant. There is potential to add new crossings as part of this alternative, which would improve performance.

5.6.2.2 Safety

Based on the expected crash comparison analysis, Reduced Freeway – A would address the number and severity of crashes for people in motorized vehicles (cars, freight, and transit) by reducing the total expected crashes/day and expected fatal and serious injury crashes/day. On the mainline within the logical termini, the expected crash rates for all crashes and for fatal and serious injury crashes would be unchanged from the no build. Between the mainline and routes within one mile, a combined 4.47 total crashes/day and 0.062 fatal and serious injury crashes/day are expected. This is a 6% decrease in total crashes/day and a 3% decrease in fatal and serious injury crashes/day compared to the no build.

5.6.2.3 Infrastructure Condition

Reduced Freeway – A would address pavement and bridge condition by removing or replacing the existing infrastructure.

5.6.2.4 Mobility

The anticipated effects of Reduced Freeway – A on mobility include:

- Systemwide VHT and PHT are anticipated to increase compared to the no build.
- Mainline speed on the corridor would be reduced to 30-45 mph in the general purpose lanes and may increase to 40-60 mph in the managed lanes, compared to 40-55 mph with the no build.
- Person throughput in the corridor would be reduced to 376,000 people/day, compared to 426,000 people/day with the no build.
- VHT and PHT in the interchange areas would be reduced.
- Interchange area person throughput would be reduced to 2,169,000 people/day, compared to 2,588,000 people/day with the no build.
- Freight travel times in the corridor would increase to 10-15 minutes in the general purpose lanes compared to 8-11 minutes with the no build, but would be similar to the no build in the managed lanes.
- Mean travel time index would increase to 3.2 for the general purpose lanes, compared to 2.0 with the no build, indicating a decrease in travel time reliability. A smaller increase to 2.5 would be expected for the managed lanes.
- The alternative would not require addition or removal of any access points to the mainline, however access changes to improve safety or mobility could still be incorporated into the project later in the process.
- Peak period transit travel times in the corridor would be reduced, ranging from 12-15 minutes depending on the number of BRT stops included, compared to 22 minutes with the no build.

- Transit travel time through interchange areas may increase or decrease slightly due to the addition of up to three stops for the proposed BRT service.
- Mean travel time index for transit would increase to 2.5 compared to 2.0 with the no build, indicating a decrease in transit travel time reliability.

5.6.3 Social, Economic, and Environmental (SEE) Impacts

The results of the SEE impacts evaluation for Reduced Freeway – A are listed in **Table 24**. Reduced Freeway – A has some potential for net negative impacts to EJ populations:

- No change in access to land use would be required, and a potential transit station at 25th/27th Ave (BRT – 3) would improve access to transit for EJ populations.
- However, due to reduced freeway capacity, traffic volumes and associated noise pollution on adjacent parallel arterials in EJ communities will increase.
- While there is limited potential for relocation based on the mainline improvements, construction of a transit station at 25th/27th Ave may require residential and/or commercial EJ relocation.

Table 24 – Reduced Freeway – A – SEE Impacts

Alternative	Social, Economic, and Environmental (SEE) Impacts						
	EJ - Access to Opportunity	**EJ - Exposure to Pollution**	**EJ - Relocation Potential**	**Historic/ Arch./ Cemetery**	**Section 4(f)**	**Section 6(f)**	**Contaminated Properties**
Reduced Freeway - A							
BRT - 0							
BRT - 1							
BRT - 3							
	Right of Way	**Noise**	**Water Pollution/ Stormwater**	**Air Quality**	**T & E Species**	**Wetlands**	
BRT - 0							
BRT - 1							
BRT - 3							

Improvement compared to no build OR limited potential for impacts
Mix of impacts and benefits OR greater potential for impacts
Greatest potential for impacts

The mainline improvements for Reduced Freeway – A have low potential for adverse effect to known historic properties and cemeteries, as does the BRT – 1 sub-alternative. There is moderate potential for adverse effect to known or suspected cemeteries in the vicinity of Dale St with BRT – 3. Mainline improvements and BRT – 1 have the potential to impact up to 11 Section 4(f) resources, or up to 12 resources with BRT – 3 (**Figure 27**). No impacts to Section 6(f) resources are anticipated. There is potential for up to two known contaminated sites within the corridor to be impacted, with 71 total sites located within 500 feet of the corridor (**Figure 28**). Mainline improvements and BRT – 1 are unlikely to have right of way impacts or require relocations, however BRT – 3 may result in 0.55 acres of impacts and five or more building relocations.

Regarding noise impacts, the project would not cause a material change in horizontal and/or vertical alignment or add travel lanes. From a stormwater perspective, the project would result in approximately 108.9-109.3 acres of impervious surface (a decrease of approximately five acres compared to the no build), with more acreage required for sub-alternatives that include transit stations. In terms of air quality, the project meets the definition of a regionally significant project and would not be classified as exempt. Reduced Freeway – A has the potential to impact threatened and endangered species through impacts to vegetation along the corridor. Based on NWI mapping, up to two wetlands may be impacted (**Figure 29**).

5.6.4 Goals & Livability

Table 25 shows Goals & Livability results for the Reduced Freeway – A alternative.

Table 25 – Reduced Freeway – A – Goals & Livability

Alternative	Goals & Livability				
	Sense of Place	Equity	Economic Vitality	Public Health and the Environment	Connectivity
Reduced Freeway - A					
BRT - 0					
BRT - 1					
BRT - 3					

High potential to advance project goals

Moderate potential to advance project goals

Limited potential to advance project goals

Figure 27 – Potential Section 4(f) Impacts: Reduced Freeway – A

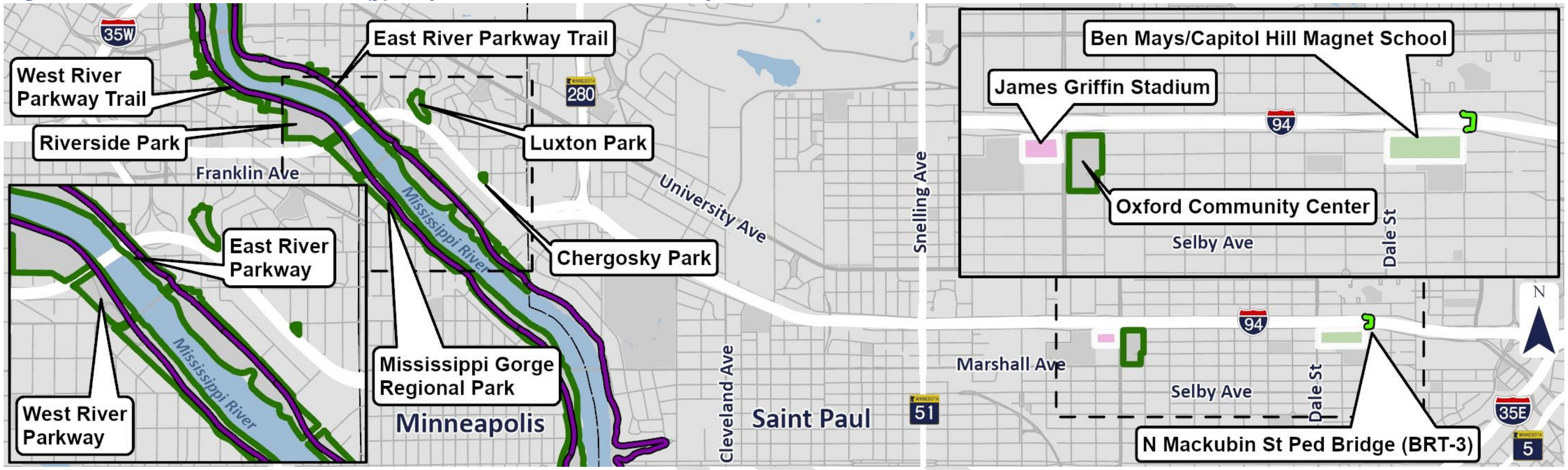
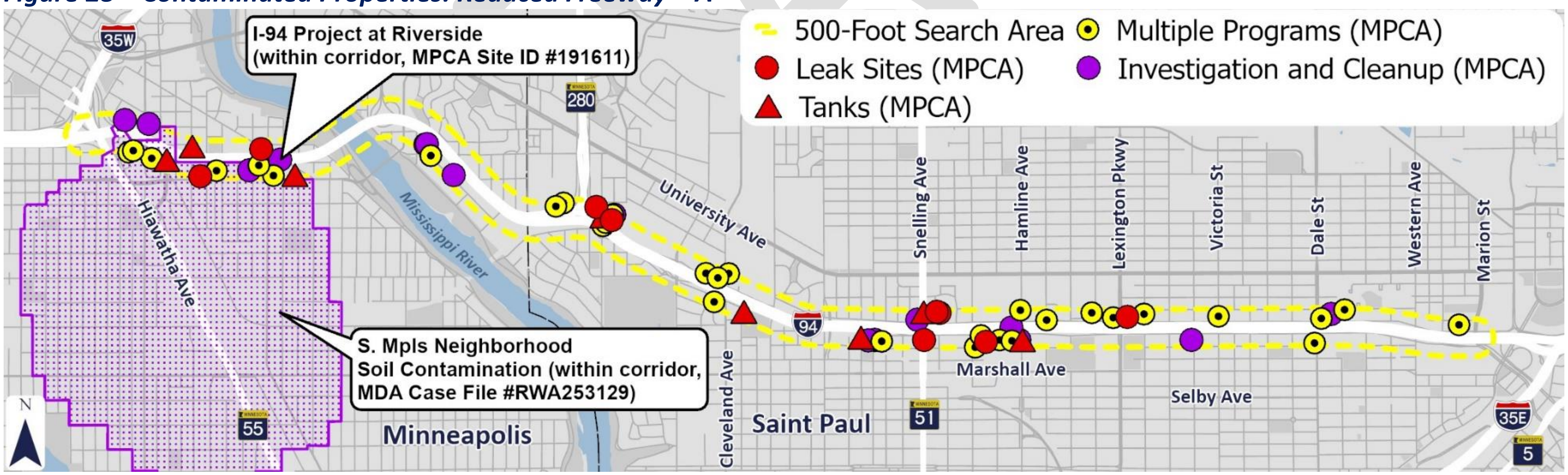
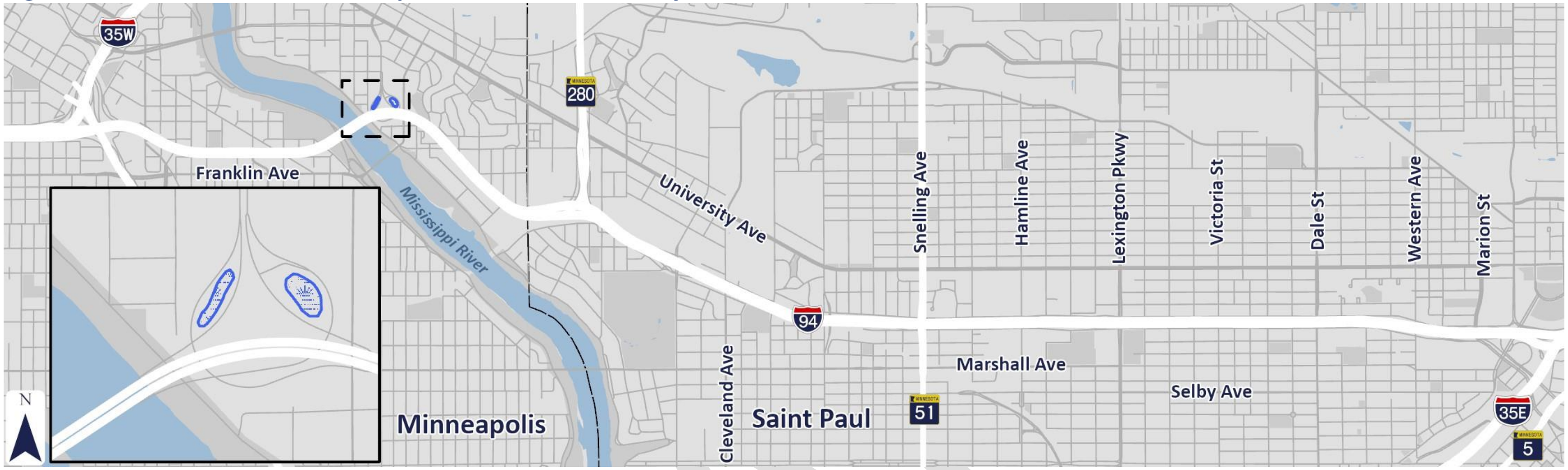


Figure 28 – Contaminated Properties: Reduced Freeway – A



11003565

Figure 29 – Potential Wetland Impacts: Reduced Freeway – A



Sense of Place: There is potential for excess ROW to be used for new features/amenities in select locations and for aesthetic improvements to bridges and structures. A smaller roadway footprint will increase space available for potential features/amenities. Potential BRT stations would decrease excess ROW. Three stations would result in more substantial impacts compared to one station.

Equity: The managed lane and BRT would provide HOV and transit benefits and would likely be considered more beneficial than bus shoulders. The number of potential BRT stations presents a tradeoff between transit access and travel time. There would also be opportunities for walkability/bikeability improvements.

Economic Vitality: There would be a slight decrease in the number of jobs accessible within 30 minutes in the AM and PM peak for auto, and a slight increase for transit.

Public Health and the Environment: Potential for excess right of way to be used to expand green space in the corridor. A smaller roadway footprint will increase potential excess right of way. Potential BRT stations would decrease excess ROW. Three stations would result in more substantial impacts compared to one station.

Connectivity: Facilitates opportunities for locally planned walkability and bikeability improvements along and across the corridor.

5.6.5 Additional Considerations

Reduced Freeway – A would result in new construction costs estimated at $1.71 B–$2.05 B for the baseline BRT – 0 alternative. The estimated range for BRT – 1 increases to $XX-XX and the estimated range for BRT – 3 increases to $XX-XX. Annual maintenance costs following construction are estimated to range from $XX to $XX (**Table 26**Error! Reference source not found.).

Table 26 – Reduced Freeway – A – Additional Considerations

Alternative	Additional Considerations		
	Construction Cost	Maintenance Cost	Consistency with Adopted State and Regional Plans
Reduced Freeway - A			
BRT - 0	$1.71 B–$2.05 B	No data	Potential to advance goals.
BRT - 1	No data	No data	Potential to advance goals.
BRT - 3	No data	No data	Potential to advance goals.

5.6.6 Summary and Conclusion

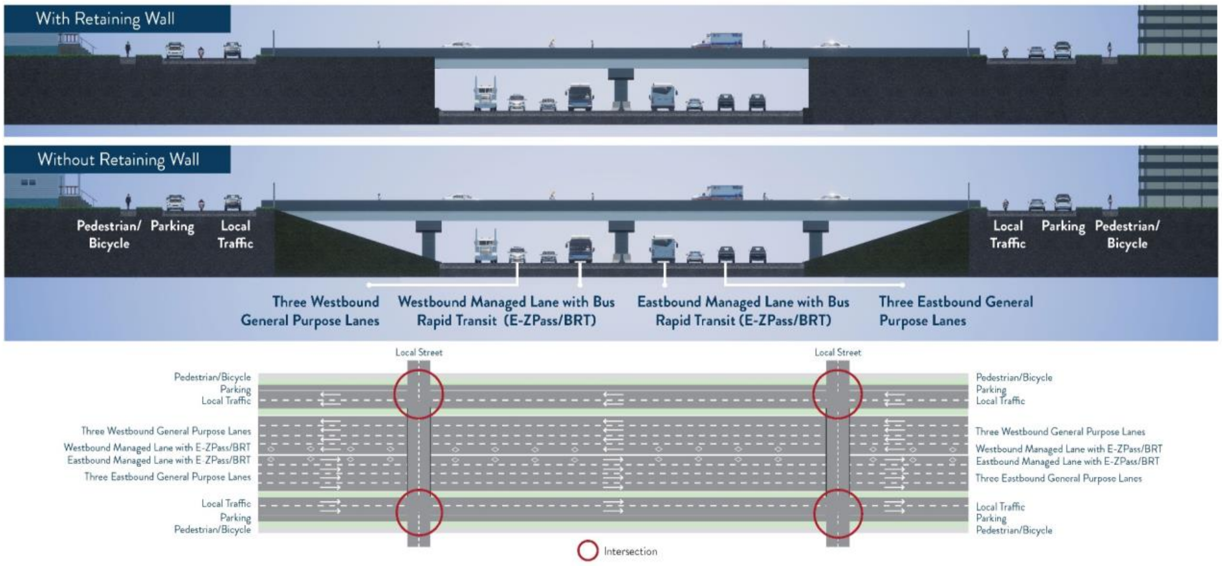
To be added

5.7 Reconfigured Freeway – A

5.7.1 Overview

This alternative would rebuild I-94 with consistent travel lanes (**Figure 30**). The present corridor varies between three and four lanes – with most of the corridor being four travel lanes in each direction, with short-lane drops. The Reconfigured Freeway alternative would have three general purpose lanes (open to all vehicles) and one managed lane (for buses, carpoolers, and those willing to pay) in each direction. Bus rapid transit would operate in the managed lane. Up to three transit stops could be provided.

Figure 30 – Reconfigured Freeway – A



*Visualizations are intended for conceptual purposes only and are not to be interpreted as showing actual scale or final design for the roadway. They only represent a small section of the corridor. Potential changes to overpasses, interchanges, ramps, frontage roads, and parking have not been determined at this time. Final design will be determined through careful consideration of various factors and may differ from the concepts depicted. MnDOT is committed to walkability and bikeability improvements on all build alternatives. Details on improvements will be identified later in the process.

5.7.2 Project Needs

The results of the project needs evaluation for the Local/Regional Roadways – A alternative are shown in **Table 27**.

Table 27 – Reconfigured Freeway – A – Project Needs

Alternative	Project Needs			
	Walkability and Bikeability	Safety for People in Motorized Vehicles	Infrastructure Condition	Mobility for People in Motorized Vehicles
Reconfigured Freeway - A				
BRT - 0				
BRT - 1				
BRT - 3				

	Meets Purpose & Need
	Concerns with ability to meet Purpose & Need
	Does not meet Purpose & Need

5.7.2.1 Walkability and Bikeability

Based on the performance measures identified, Reconfigured Freeway – A would result in similar outcomes for walkability and bikeability as the no build. This analysis assumed that there would be no change in the structure of the walking and biking network (such as the elimination or relocation of a crossing location) compared to the no build, therefore the distance between crossings and origin-destination performance measures remained constant. There is potential to add new crossings as part of this alternative, which would improve performance.

11003568

5.7.2.2 Safety

Based on the expected crash comparison analysis, Reconfigured Freeway – A would address the number and severity of crashes for people in motorized vehicles (cars, freight, and transit) because crashes are expected to increase less than the expected increase in traffic on the corridor. On the mainline within the logical termini, the expected crash rates for all crashes and fatal and serious injury crashes would be unchanged from the no build. Between the mainline and routes within one mile, a combined 4.75 total crashes/day and 0.063 fatal and serious injury crashes/day are expected. There would be no change in total crashes/day and a 1% decrease in fatal and serious injury crashes/day compared to the no build, which is considered no change for the purposes of this analysis.[8] At the same time, a 4% increase in VMT on the corridor is expected.

5.7.2.3 Infrastructure Condition

Reconfigured Freeway – A would address pavement and bridge condition by removing or replacing the existing infrastructure.

5.7.2.4 Mobility

The anticipated effects of Reconfigured Freeway – A on mobility include:

- Systemwide VHT and PHT are anticipated to increase compared to the no build.
- Mainline speed on the corridor would be similar to the no build (40-55 mph) in the general purpose lanes and may increase to 45-60 mph in the managed lanes.
- Person throughput in the corridor would increase to 447,000 people/day, compared to 426,000 people/day with the no build.
- VHT and PHT in the interchange areas would be reduced.
- Interchange area person throughput would increase to 2,728,000 people/day, compared to 2,588,000 people/day with the no build.
- Freight travel times in the corridor in the general purpose and managed lanes would be similar to the no build (8-11 minutes).
- Mean travel time index would increase to 2.1 for the general purpose and managed lanes, compared to 2.0 with the no build, indicating a marginal decrease in travel time reliability.
- The alternative would not require addition or removal of any access points to the mainline, however access changes to improve safety or mobility could still be incorporated into the project later in the process.
- Peak period transit travel times in the corridor would be reduced, ranging from 12-15 minutes depending on the number of BRT stops included, compared to 22 minutes with the no build.
- Transit travel time through interchange areas may increase or decrease slightly due to the addition of up to three stops for the proposed BRT service.
- Mean travel time index for transit would increase marginally to 2.1 compared to 2.0 with the no build, indicating a decrease in transit travel time reliability.

5.7.3 Social, Economic, and Environmental (SEE) Impacts

The results of the SEE impacts evaluation for Reconfigured Freeway – A are listed in **Table 28**. Reconfigured Freeway – A has some potential for net negative impacts to EJ populations:

---

[8] Increases or decreases in crashes/day of less than 2% were considered neutral/no change.

- No change in access to land use would be required, and a potential transit station at 25th/27th Ave (BRT – 3) would improve access to transit for EJ populations.
- However, the increase in roadway capacity has the potential to increase noise pollution in EJ communities adjacent to the freeway.
- An increase in impervious surface has the potential to increase stormwater runoff within EJ communities.
- While there is limited potential for relocation based on the mainline improvements, construction of a transit station at 25th/27th Ave may require residential and/or commercial EJ relocation.

Table 28 – Reconfigured Freeway – A – SEE Impacts

Alternative	Social, Economic, and Environmental (SEE) Impacts						
	EJ - Access to Opportunity	**EJ - Exposure to Pollution**	**EJ - Relocation Potential**	**Historic/ Arch./ Cemetery**	**Section 4(f)**	**Section 6(f)**	**Contaminated Properties**
Reconfigured Freeway - A							
BRT - 0							
BRT - 1							
BRT - 3							
	Right of Way	**Noise**	**Water Pollution/ Stormwater**	**Air Quality**	**T & E Species**	**Wetlands**	
BRT - 0							
BRT - 1							
BRT - 3							

Improvement compared to no build OR limited potential for impacts

Mix of impacts and benefits OR greater potential for impacts

Greatest potential for impacts

The mainline improvements for Reconfigured Freeway – A have low potential for adverse effect to known historic properties and cemeteries, as does the BRT – 1 sub-alternative. There is moderate potential for adverse effect to known or suspected cemeteries in the vicinity of Dale St with BRT – 3. Mainline improvements and BRT – 1 have the potential to impact up to 11 Section 4(f) resources, or up to 12 resources with BRT – 3 (**Figure 31**). No impacts to Section 6(f) resources are anticipated. There is potential for up to two known contaminated sites within the corridor to be impacted, with 71 total sites located within 500 feet of the corridor (**Figure 32**). Mainline improvements and BRT – 1 are unlikely to have right of way impacts or require relocations, however BRT – 3 may result in 1.83 acres of impacts and 10 or more building relocations.

Regarding noise impacts, the project would add additional travel lanes for short segments that currently have three travel lanes. From a stormwater perspective, the project would result in approximately 129.4-129.8 acres of impervious surface (an increase of approximately 15 acres compared to the no build), with more acreage required for sub-alternatives that include transit stations. In terms of air quality, the project meets the definition of a regionally significant project and would not be classified as exempt. Reconfigured Freeway – A has the potential to impact threatened and endangered species through impacts to vegetation along the corridor. Based on NWI mapping, up to two wetlands may be impacted (**Figure 33**).

5.7.4 Goals & Livability

Table 29 shows Goals & Livability results for the Reduced Freeway – A alternative.

Table 29 – Reconfigured Freeway – A – Goals & Livability

Alternative	Goals & Livability				
	Sense of Place	Equity	Economic Vitality	Public Health and the Environment	Connectivity
Reconfigured Freeway - A					
BRT - 0					
BRT - 1					
BRT - 3					

High potential to advance project goals

Moderate potential to advance project goals

Limited potential to advance project goals

Sense of Place: There is potential for excess ROW to be used for new features/amenities in select locations and for aesthetic improvements to bridges and structures. Potential BRT stations would decrease excess ROW. Three stations would result in more substantial impacts compared to one station.

Equity: The managed lane and BRT would provide HOV and transit benefits and would likely be considered more beneficial than bus shoulders. The number of potential BRT stations presents a tradeoff between transit access and travel time. There would also be opportunities for walkability/bikeability improvements.

Economic Vitality: The number of jobs accessible within 30 minutes in the AM and PM peak for auto would be similar to the no build, and there would be a slight increase for transit.

Public Health and the Environment: Potential for excess right of way to be used to expand green space in the corridor. Potential BRT stations would decrease excess ROW. Three stations would result in more substantial impacts compared to one station.

Connectivity: Facilitates opportunities for locally planned walkability and bikeability improvements along and across the corridor.

Figure 31 – Potential Section 4(f) Impacts: Reconfigured Freeway – A

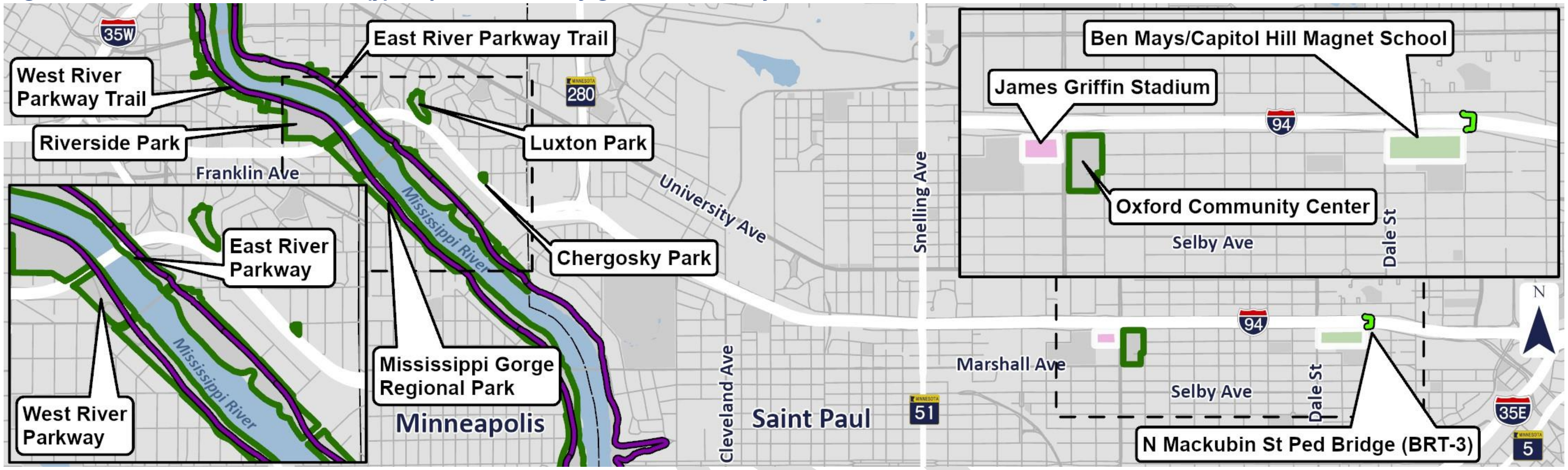


Figure 32 – Contaminated Properties: Reconfigured Freeway – A

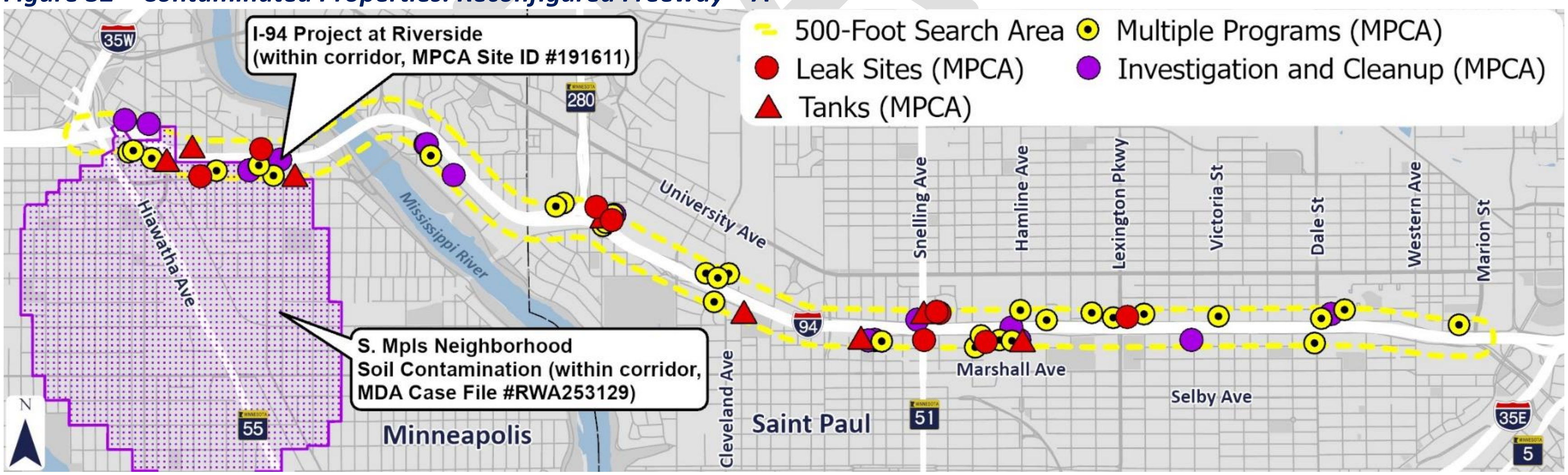
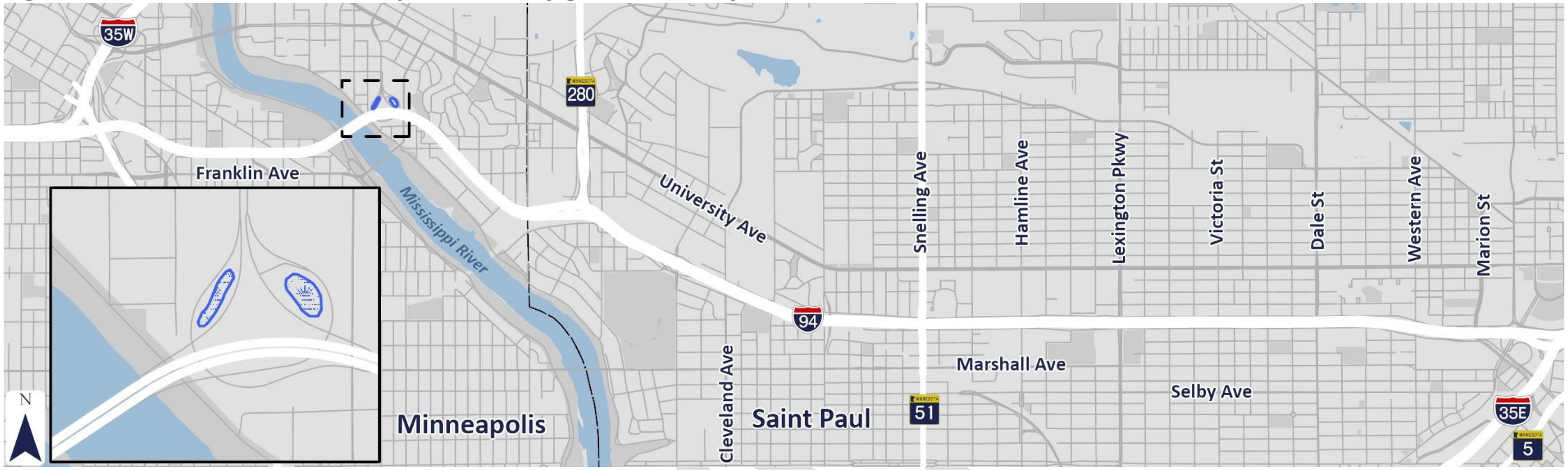


Figure 33 – Potential Wetland Impacts: Reconfigured Freeway – A



5.7.5 Additional Considerations

Reconfigured Freeway – A would result in new construction costs estimated at $1.92 B–$2.3 B for the baseline BRT – 0 alternative. The estimated range for BRT – 1 increases to $XX-XX and the estimated range for BRT – 3 increases to $XX-XX. Annual maintenance costs following construction are estimated to range from $XX to $XX (**Table 30**).

Table 30 – Reconfigured Freeway – A – Additional Considerations

Alternative	Additional Considerations		
	Construction Cost	**Maintenance Cost**	**Consistency with Adopted State and Regional Plans**
Reconfigured Freeway - A			
BRT - 0	$1.92 B–$2.3 B	No data	Potential to advance goals.
BRT - 1	No data	No data	Potential to advance goals.
BRT - 3	No data	No data	Potential to advance goals.

5.7.6 Summary and Conclusion

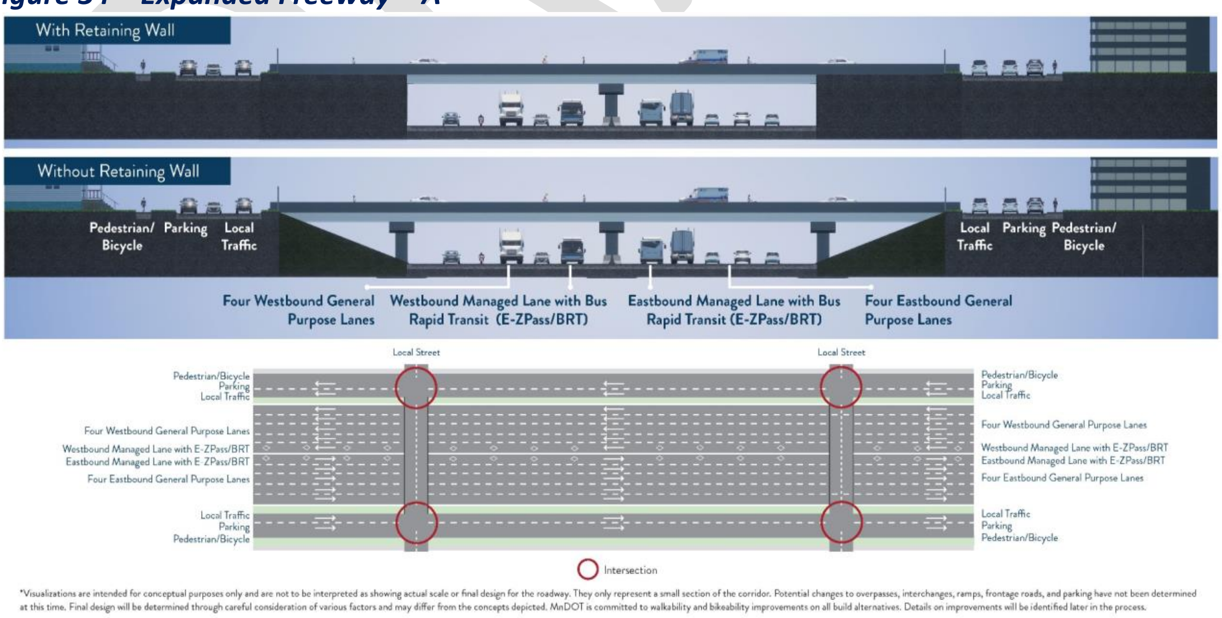
To be added

5.8 Expanded Freeway – A

5.8.1 Overview

This alternative would rebuild I-94 as it is today, with three to four general purpose travel lanes (open to all vehicles) in each direction and would add a managed lane (for buses, carpoolers, and those willing to pay) in each direction (**Figure 34**). Bus rapid transit would operate in the managed lane. Up to three transit stops could be provided.

Figure 34 – Expanded Freeway – A



5.8.2 Project Needs

The results of the project needs evaluation for the Expanded Freeway – A alternative are shown in **Table 31**.

Table 31 – Expanded Freeway – A – Project Needs

Alternative	Project Needs			
	Walkability and Bikeability	Safety for People in Motorized Vehicles	Infrastructure Condition	Mobility for People in Motorized Vehicles
Expanded Freeway - A				
BRT - 0				
BRT - 1				
BRT - 3				

Meets Purpose & Need

Concerns with ability to meet Purpose & Need

Does not meet Purpose & Need

5.8.2.1 Walkability and Bikeability

Based on the performance measures identified, Expanded Freeway – A would result in similar outcomes for walkability and bikeability as the no build. This analysis assumed that there would be no change in the structure of the walking and biking network (such as the elimination or relocation of a crossing location) compared to the no build, therefore the distance between crossings and origin-destination performance measures remained constant. There is potential to add new crossings as part of this alternative, which would improve performance.

5.8.2.2 Safety

Based on the expected crash comparison analysis, Expanded Freeway – A would address the number and severity of crashes for people in motorized vehicles (cars, freight, and transit) because crashes are expected to increase less than the expected increase in traffic on the corridor. On the mainline within the logical termini, the expected crash rates for all crashes and fatal and serious injury crashes would be unchanged from the no build. Between the mainline and routes within one mile, a combined 4.83 total crashes/day and 0.064 fatal and serious injury crashes/day are expected. This is a 2% increase in total crashes/day compared to the no build, which is much lower than the 11% expected increase in corridor VMT (VMT on roadways within one mile is not expected to change significantly). The percentage change in fatal and serious injury crashes/day is considered no change for the purposes of this analysis.[9]

5.8.2.3 Infrastructure Condition

Expanded Freeway – A would address pavement and bridge condition by removing or replacing the existing infrastructure.

5.8.2.4 Mobility

The anticipated effects of Expanded Freeway – A on mobility include:

[9] Increases or decreases in crashes/day of less than 2% were considered neutral/no change.

- Systemwide VHT and PHT are anticipated to decrease compared to the no build.
- Mainline speed on the corridor would be similar to the no build (45-55 mph) in the general purpose lanes and may increase to 45-60 mph in the managed lanes.
- Person throughput in the corridor would increase to 458,000 people/day, compared to 426,000 people/day with the no build.
- VHT and PHT in the interchange areas would increase.
- Interchange area person throughput would increase to 2,845,000 people/day, compared to 2,588,000 people/day with the no build.
- Freight travel times in the corridor in the general purpose and managed lanes would be similar to the no build (8-10 minutes).
- Mean travel time index would decrease to 1.5 for the general purpose lanes and 1.6 for the managed lanes, compared to 2.0 with the no build, indicating an improvement in travel time reliability.
- The alternative would not require addition or removal of any access points to the mainline, however access changes to improve safety or mobility could still be incorporated into the project later in the process.
- Peak period transit travel times in the corridor would be reduced, ranging from 12-15 minutes depending on the number of BRT stops included, compared to 22 minutes with the no build.
- Transit travel time through interchange areas may increase or decrease slightly due to the addition of up to three stops for the proposed BRT service.
- Mean travel time index for transit would decrease to 1.6, compared to 2.0 with the no build, indicating an improvement in transit travel time reliability.

5.8.3 Social, Economic, and Environmental (SEE) Impacts

The results of the SEE impacts evaluation for Expanded Freeway – A are listed in **Table 32**. Expanded Freeway – A has some potential for net negative impacts to EJ populations:

- No change in access to land use would be required, and a potential transit station at 25th/27th Ave (BRT – 3) would improve access to transit for EJ populations.
- However, the increase in roadway capacity has the potential to increase noise pollution in EJ communities adjacent to the freeway.
- An increase in impervious surface has the potential to increase stormwater runoff within EJ communities.
- While there is limited potential for relocation based on the mainline improvements, construction of a transit station at 25th/27th Ave may require residential and/or commercial EJ relocation.

Table 32 – Expanded Freeway – A – SEE Impacts

Alternative	Social, Economic, and Environmental (SEE) Impacts						
	EJ - Access to Opportunity	EJ - Exposure to Pollution	EJ - Relocation Potential	Historic/ Arch./ Cemetery	Section 4(f)	Section 6(f)	Contaminated Properties
Expanded Freeway - A							
BRT - 0							
BRT - 1							
BRT - 3							
	Right of Way	Noise	Water Pollution/ Stormwater	Air Quality	T & E Species	Wetlands	
BRT - 0							
BRT - 1							
BRT - 3							

	Improvement compared to no build OR limited potential for impacts
	Mix of impacts and benefits OR greater potential for impacts
	Greatest potential for impacts

The mainline improvements for Expanded Freeway – A have low potential for adverse effect to known historic properties and moderate potential for impacts to known or suspected cemeteries. There is moderate potential for adverse effect to known or suspected cemeteries in transit station areas with BRT – 1 and BRT – 3. Mainline improvements and BRT – 1 have the potential to impact up to 11 Section 4(f) resources, or up to 12 resources with BRT – 3 (**Figure 35**). No impacts to Section 6(f) resources are anticipated. There is potential for up to two known contaminated sites within the corridor to be impacted, with 71 total sites located within 500 feet of the corridor (**Figure 36**). Mainline improvements and BRT – 1 are unlikely to require relocations, however they may require 2.84 or 2.85 acres of right of way impacts, respectively. BRT – 3 may result in 6.06 acres of impacts and 20 or more building relocations.

Regarding noise impacts, the project would increase the total number of travel lanes in the corridor. From a stormwater perspective, the project would result in approximately 149.8-150.3 acres of impervious surface (an increase of approximately 36 acres compared to the no build), with more acreage required for sub-alternatives that include transit stations. In terms of air quality, the project meets the definition of a regionally significant project and would not be classified as exempt. Expanded Freeway – A has the potential to impact threatened and endangered species through impacts to vegetation along the corridor. Based on NWI mapping, up to two wetlands may be impacted (**Figure 37**).

Figure 35 – Potential Section 4(f) Impacts: Expanded Freeway – A

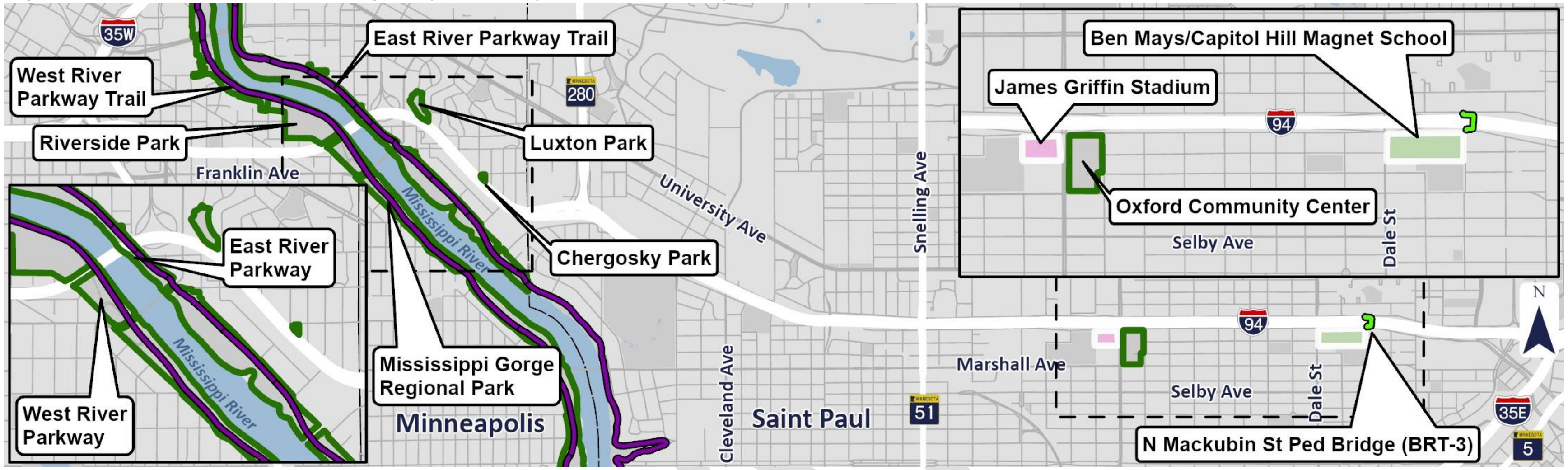
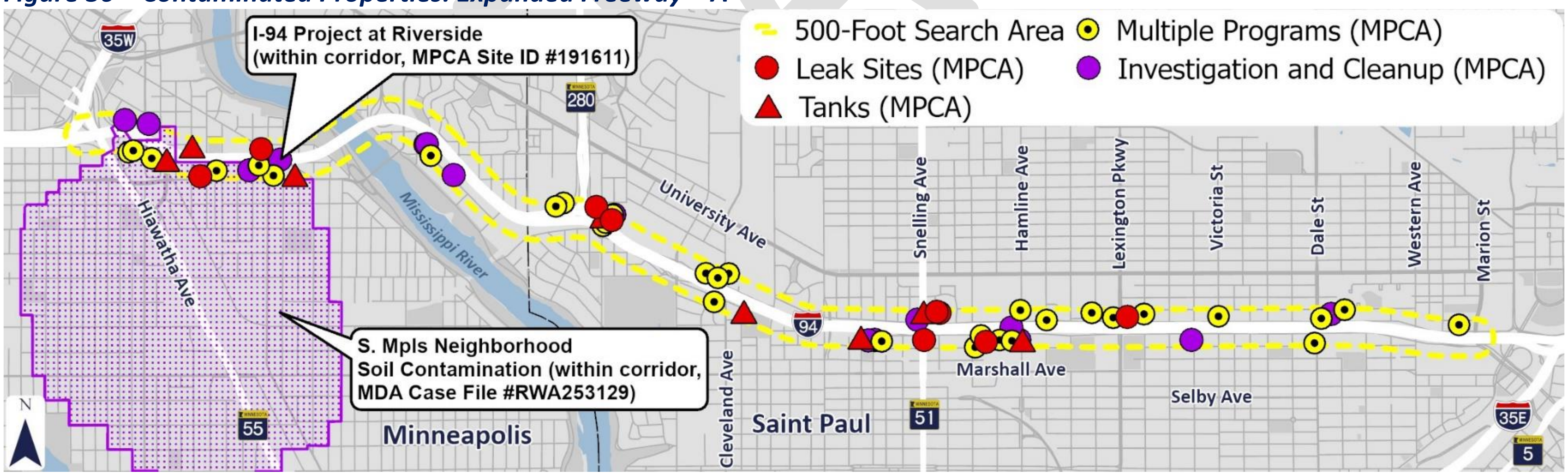
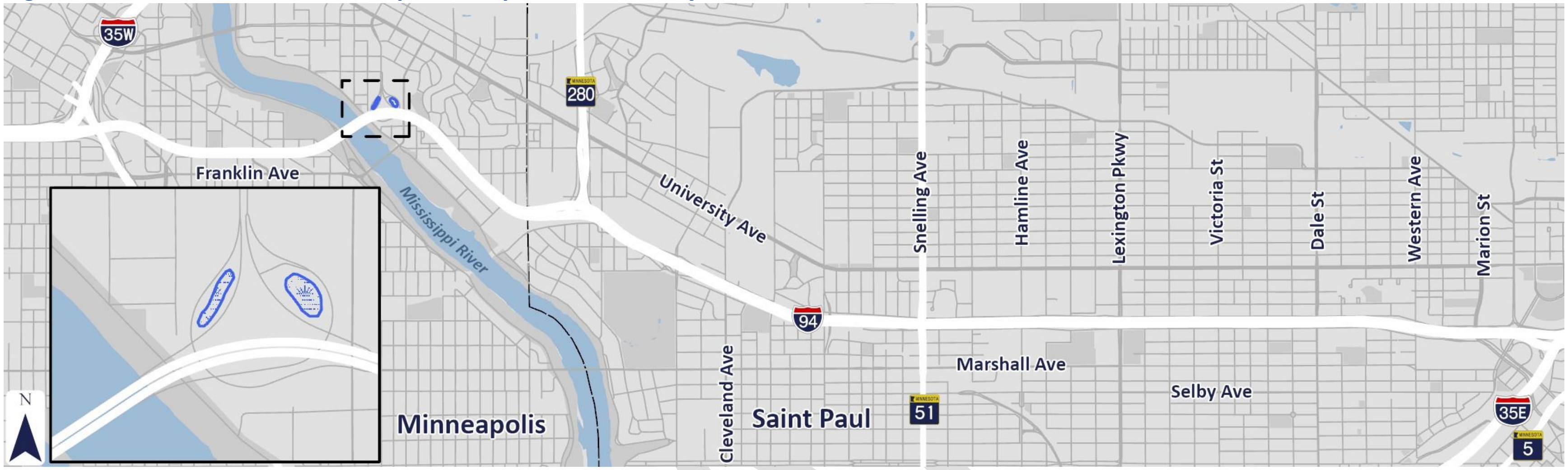


Figure 36 – Contaminated Properties: Expanded Freeway – A



11003578

Figure 37 – Potential Wetland Impacts: Expanded Freeway – A



5.8.4 Goals & Livability

Table 33 shows Goals & Livability results for the Expanded Freeway – A alternative.

Table 33 – Expanded Freeway – A – Goals & Livability

Alternative	Goals & Livability				
	Sense of Place	Equity	Economic Vitality	Public Health and the Environment	Connectivity
Expanded Freeway - A					
BRT - 0					
BRT - 1					
BRT - 3					

High potential to advance project goals

Moderate potential to advance project goals

Limited potential to advance project goals

Sense of Place: There is potential for excess ROW to be used for new features/amenities in select locations and for aesthetic improvements to bridges and structures. A larger roadway footprint will reduce space available for potential features/amenities. Potential BRT stations would decrease excess ROW. Three stations would result in more substantial impacts compared to one station.

Equity: The managed lane and BRT would provide HOV and transit benefits and would likely be considered more beneficial than bus shoulders. The number of potential BRT stations presents a tradeoff between transit access and travel time. There would also be opportunities for walkability/bikeability improvements.

Economic Vitality: There would be an increase in the number of jobs accessible within 30 minutes in the AM peak for auto, as well as a slight increase in the PM peak. There would also be a slight increase for transit.

Public Health and the Environment: Potential for excess right of way to be used to expand green space in the corridor. A larger roadway footprint will reduce potential excess right of way. Potential BRT stations would decrease excess ROW. Three stations would result in more substantial impacts compared to one station.

Connectivity: Facilitates opportunities for locally planned walkability and bikeability improvements along and across the corridor.

5.8.5 Additional Considerations

Expanded Freeway – A would result in new construction costs estimated at $1.96 B–$2.36 B for the baseline BRT – 0 alternative. The estimated range for BRT – 1 increases to $XX-XX and the estimated range for BRT – 3 increases to $XX-XX. Annual maintenance costs following construction are estimated to range from $XX to $XX (**Table 34**).

Table 34 – Expanded Freeway – A – Additional Considerations

Alternative	**Additional Considerations**		
	Construction Cost	**Maintenance Cost**	**Consistency with Adopted State and Regional Plans**
Expanded Freeway - A			
BRT - 0	$1.96 B–$2.36 B	No data	Potential to advance goals.
BRT - 1	No data	No data	Potential to advance goals.
BRT - 3	No data	No data	Potential to advance goals.

5.8.6 Summary and Conclusion

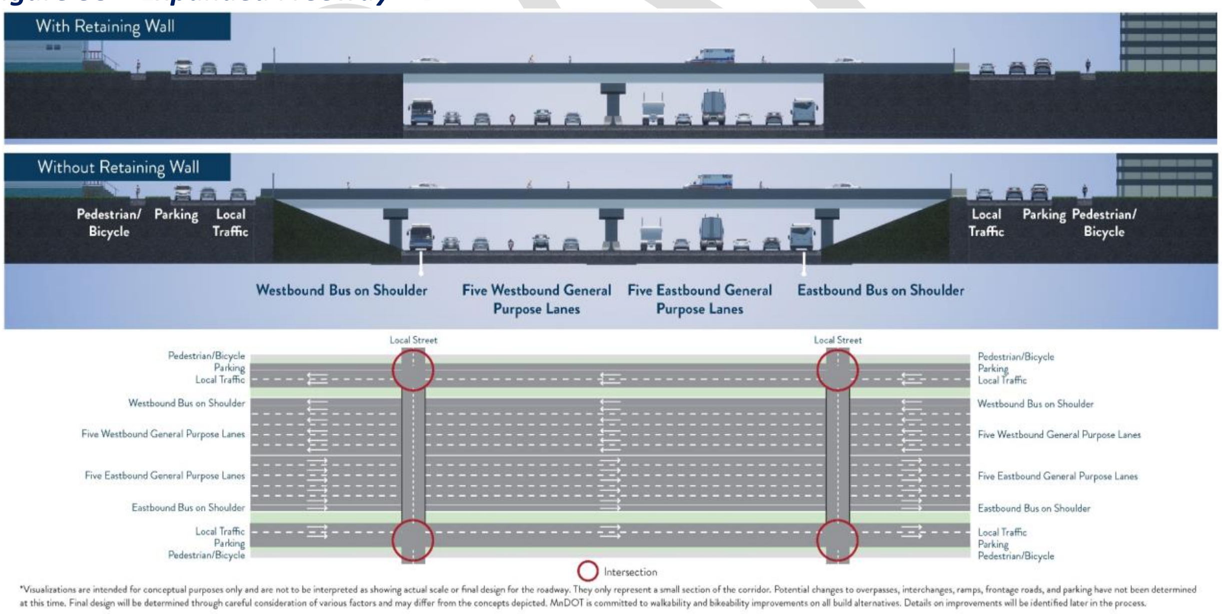
To be added

5.9 Expanded Freeway – B

5.9.1 Overview

This alternative would rebuild I-94 with an additional general purpose travel lane in each direction – making the corridor four to five lanes wide (**Figure 38**). It would also include shoulders that could accommodate buses. Buses would operate in mixed traffic and would use the shoulder if needed during congested periods. Express bus service would be provided.

Figure 38 – Expanded Freeway – B



5.9.2 Project Needs

The results of the project needs evaluation for the Expanded Freeway – B alternative are shown **in Table 35**.

Table 35 – Expanded Freeway – B – Project Needs

Alternative	Project Needs			
	Walkability and Bikeability	Safety for People in Motorized Vehicles	Infrastructure Condition	Mobility for People in Motorized Vehicles
Expanded Freeway - B				

	Meets Purpose & Need
	Concerns with ability to meet Purpose & Need
	Does not meet Purpose & Need

5.9.2.1 Walkability and Bikeability

Based on the performance measures identified, Expanded Freeway – B would result in similar outcomes for walkability and bikeability as the no build. This analysis assumed that there would be no change in the structure of the walking and biking network (such as the elimination or relocation of a crossing location) compared to the no build, therefore the distance between crossings and origin-destination performance measures remained constant. There is potential to add new crossings as part of this alternative, which would improve performance.

5.9.2.2 Safety

Based on the expected crash comparison analysis, Expanded Freeway – B would address the number and severity of crashes for people in motorized vehicles (cars, freight, and transit) because crashes are expected to increase less than the expected increase in traffic on the corridor. On the mainline within the logical termini, the expected crash rates for all crashes and fatal and serious injury crashes would be unchanged from the no build. Between the mainline and routes within one mile, a combined 4.87 total crashes/day and 0.065 fatal and serious injury crashes/day are expected. This is a 3% increase in total crashes/day compared to the no build, which is much lower than the 11% expected increase in corridor VMT (VMT on roadways within one mile is not expected to change significantly). The change in fatal and serious injury crashes/day is a 2% increase compared to the no build, which is considered no change for the purposes of this analysis.[10]

5.9.2.3 Infrastructure Condition

Expanded Freeway – B would address pavement and bridge condition by removing or replacing the existing infrastructure.

5.9.2.4 Mobility

The anticipated effects of Expanded Freeway – B on mobility include:

- Systemwide VHT and PHT are anticipated to increase compared to the no build.
- Mainline speed on the corridor would be similar to the no build (45-55 mph).
- Person throughput in the corridor would increase to 452,000 people/day, compared to 426,000 people/day with the no build.
- VHT and PHT in the interchange areas would decrease.

[10] Increases or decreases in crashes/day of less than 2% were considered neutral/no change.

- Interchange area person throughput would increase to 2,806,000 people/day, compared to 2,588,000 people/day with the no build.
- Freight travel times in the corridor would be similar to the no build (8-10 minutes).
- Mean travel time index would decrease to 1.5, compared to 2.0 with the no build, indicating an improvement in travel time reliability.
- The alternative would not require addition or removal of any access points to the mainline, however access changes to improve safety or mobility could still be incorporated into the project later in the process.
- Peak period transit travel times in the corridor would be reduced to 17 minutes compared to 22 minutes with the no build.
- Transit travel time through interchange areas would be similar to the no build (6 minutes).
- Mean travel time index for transit would decrease to 1.5, compared to 2.0 with the no build, indicating an improvement in transit travel time reliability.

5.9.3 Social, Economic, and Environmental (SEE) Impacts

The results of the SEE impacts evaluation for Expanded Freeway – B are listed in **Table 36**. Expanded Freeway – B has some potential for net negative impacts to EJ populations:

- No change in access to land use would be required. However, the increase in roadway capacity has the potential to increase noise pollution in EJ communities adjacent to the freeway.
- An increase in impervious surface has the potential to increase stormwater runoff within EJ communities.
- There is limited potential for relocation of EJ populations based on the mainline improvements.

Table 36 – Expanded Freeway – B – SEE Impacts

Alternative	Social, Economic, and Environmental (SEE) Impacts						
	EJ - Access to Opportunity	**EJ - Exposure to Pollution**	**EJ - Relocation Potential**	**Historic/ Arch./ Cemetery**	**Section 4(f)**	**Section 6(f)**	**Contaminated Properties**
Expanded Freeway - B							
	Right of Way	**Noise**	**Water Pollution/ Stormwater**	**Air Quality**	**T & E Species**	**Wetlands**	

(green)	Improvement compared to no build OR limited potential for impacts
(yellow)	Mix of impacts and benefits OR greater potential for impacts
(orange)	Greatest potential for impacts

The mainline improvements for Expanded Freeway – B have low potential for adverse effect to known historic properties and moderate potential for impacts to known or suspected cemeteries. Mainline improvements have the potential to impact up to 11 Section 4(f) resources (**Figure 39**). No impacts to Section 6(f) resources are anticipated. There is potential for up to two known contaminated sites within the corridor to be impacted, with 71 total sites located within 500 feet of the corridor (**Figure 40**).

Mainline improvements are unlikely to require relocations, however they may require 2.84 acres of right of way impacts.

Regarding noise impacts, the project would increase the total number of travel lanes in the corridor. From a stormwater perspective, the project would result in approximately 146 acres of impervious surface (an increase of 32 acres compared to the no build). In terms of air quality, the project meets the definition of a regionally significant project and would not be classified as exempt. Expanded Freeway – B has the potential to impact threatened and endangered species through impacts to vegetation along the corridor. Based on NWI mapping, up to two wetlands may be impacted (**Figure 41**).

5.9.4 Goals & Livability

Table 37 shows Goals & Livability results for the Expanded Freeway – B alternative.

Table 37 – Expanded Freeway – B – Goals & Livability

Alternative	Goals & Livability				
	Sense of Place	Equity	Economic Vitality	Public Health and the Environment	Connectivity
Expanded Freeway - B					

- High potential to advance project goals
- Moderate potential to advance project goals
- Limited potential to advance project goals

Sense of Place: There is potential for excess ROW to be used for new features/amenities in select locations and for aesthetic improvements to bridges and structures. A larger roadway footprint will reduce space available for potential features/amenities.

Equity: Bus shoulders between the downtowns would be restored, providing a transit benefit. There would also be opportunities for walkability/bikeability improvements.

Economic Vitality: There would be an increase in the number of jobs accessible within 30 minutes in the AM and PM peak for auto, as well as a slight increase for transit.

Public Health and the Environment: Potential for excess right of way to be used to expand green space in the corridor. A larger roadway footprint will reduce potential excess right of way.

Connectivity: Facilitates opportunities for locally planned walkability and bikeability improvements along and across the corridor.

5.9.5 Additional Considerations

Expanded Freeway – B would result in new construction costs estimated at $1.96 B–$2.36 B. Annual maintenance costs following construction are estimated to range from $XX to $XX (**Table 38**).

Table 38 – Expanded Freeway – B – Additional Considerations

Alternative	Additional Considerations		
	Construction Cost	Maintenance Cost	Consistency with Adopted State and Regional Plans
Expanded Freeway - B	$1.96 B–$2.36 B	No data	Potential to advance goals.

5.9.6 Summary and Conclusion

To be added

Figure 39 – Potential Section 4(f) Impacts: Expanded Freeway – B

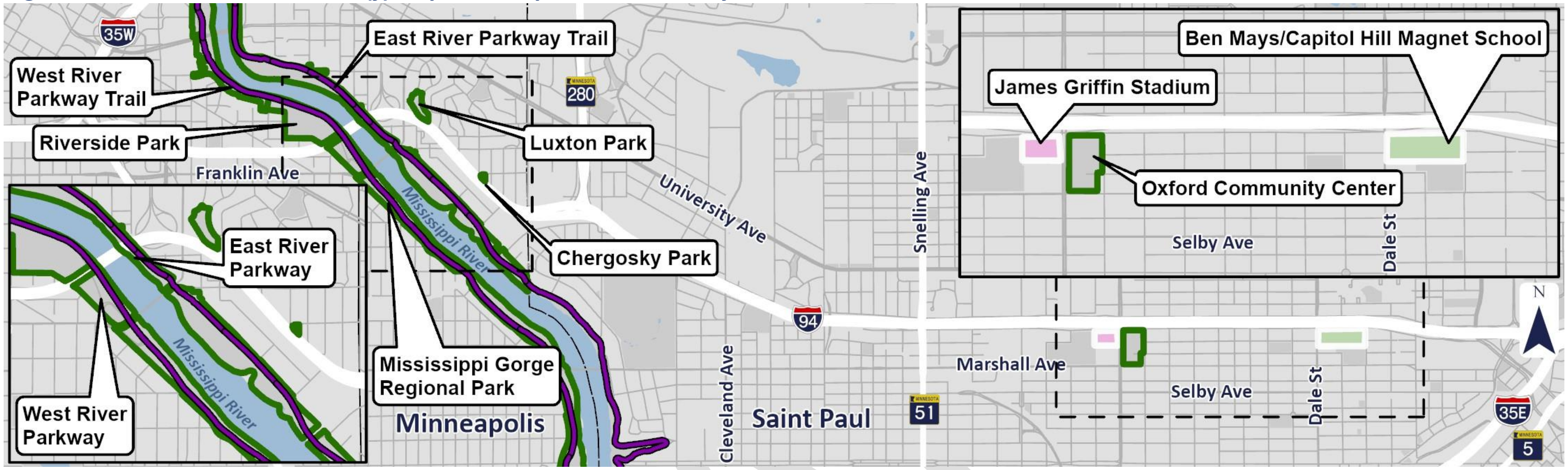
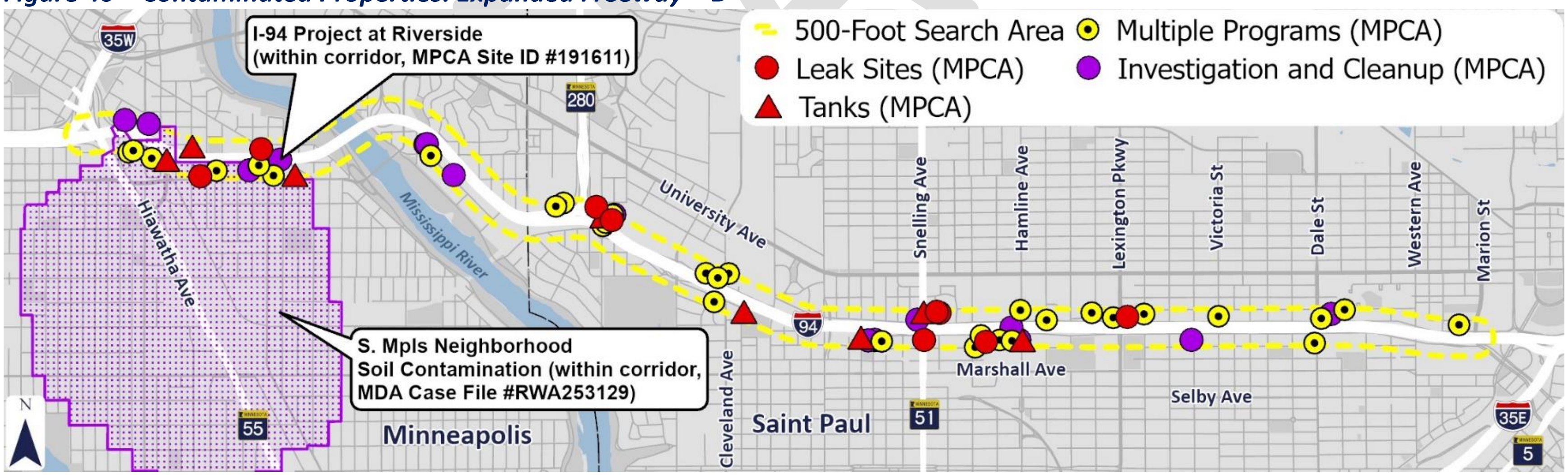
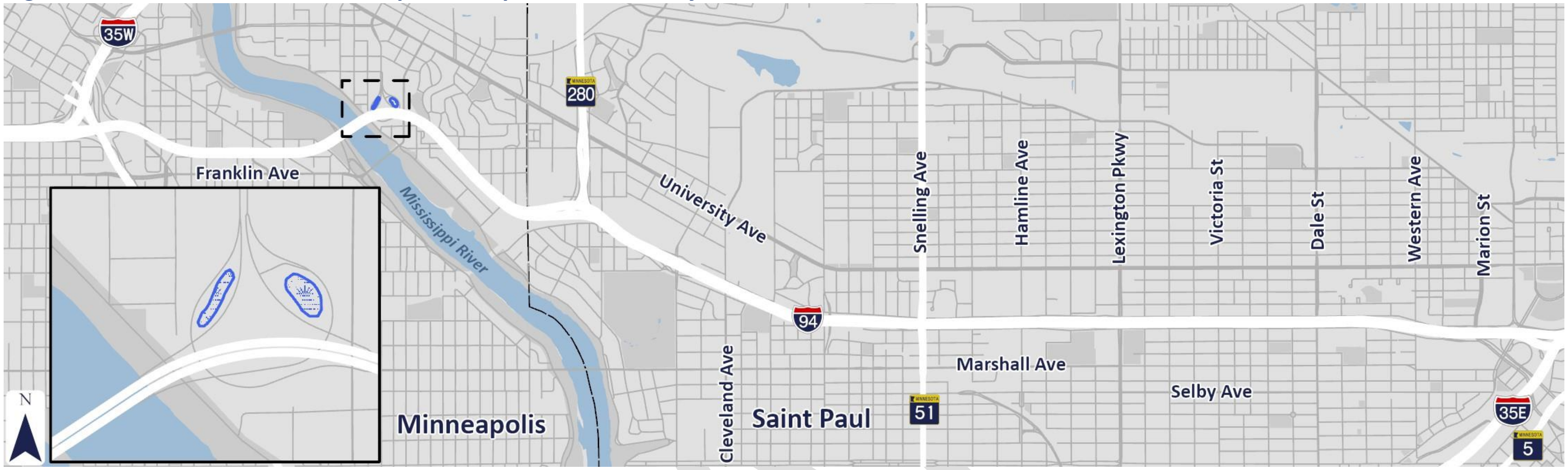


Figure 40 – Contaminated Properties: Expanded Freeway – B



11003586

Figure 41 – Potential Wetland Impacts: Expanded Freeway – B



11003587

6 Summary of Scoping Evaluation Recommendations

Recommendations regarding alternative advancement to the Tier 1 EIS are listed in **Table 39** along with a brief summary of the rationale for their retention or dismissal. **Table 40** summarizes key outcomes from the alternatives evaluation that informed these findings. This section will be updated as alternatives are refined and preliminary evaluations are conducted. Additional details are provided in **Appendix E**.

[Additional narrative and discussion to be added]

Table 39 – Mainline Alternatives to be Studied in Tier 1 EIS

Alternative	Tier 1 EIS Recommendation	Rationale
No Build – General Maintenance	Retain for study	Baseline alternative – required for analysis.
Maintenance – A	Do not study - eliminate	Does not meet purpose and need.
Maintenance – B		
At-Grade – A		
At-Grade – B		
Local/Regional Roadways – A		
Reduced Freeway – A		
Reconfigured Freeway – A		
Expanded Freeway – A		
Expanded Freeway – B		

Alternative	Project Needs				Social, Economic, and Environmental (SEE) Impacts													Goals & Livability					Additional Considerations			Tier 1 DEIS Recommendation	Rationale
	Walkability and Bikeability	Safety for People in Motorized Vehicles	Infrastructure Condition	Mobility for People in Motorized Vehicles	EJ - Access to Opportunity	EJ - Exposure to Pollution	EJ - Relocation Potential	Historic/ Arch./ Cemetery	Section 4(f)	Section 6(f)	Contam. Properties	Right of Way	Noise	Water Pollution/ Stormwater	Air Quality	T & E Species	Wetlands	Sense of Place	Equity	Economic Vitality	Public Health and the Environment	Connectivity	Construction Cost	Maint. Cost	Consistency with Adopted State and Regional Plans		
	Does the alternative address project needs?				Does the alternative avoid or minimize impacts to social, economic, and environmental resources?													Does the alternative advance project goals?									
No Build - General Maint.																							$0	No data		Retain	Required for comparison to build alternatives.
Maintenance - A																							$330 M–$396 M	No data		Dismiss	Does not meet purpose and need.
Maintenance - B																							$1.58 B–$1.9 B	No data			
At-Grade - A																							$1.83 B–$2.19 B	No data			
At-Grade - B																							$1.83 B–$2.19 B	No data			
Local/Regional Roadways - A																							$2.29 B–$2.75 B	No data			
Reduced Freeway - A																											
BRT - 0																							$1.71 B–$2.05 B	No data			
BRT - 1																							No data	No data			
BRT - 3																							No data	No data			
Reconfigured Freeway - A																											
BRT - 0																							$1.92 B–$2.3 B	No data			
BRT - 1																							No data	No data			
BRT - 3																							No data	No data			
Expanded Freeway - A																											
BRT - 0																							$1.96 B–$2.36 B	No data			
BRT - 1																							No data	No data			
BRT - 3																							No data	No data			
Expanded Freeway - B																							$1.96 B–$2.36 B	No data			

LEGEND:

Project Needs:
- Meets Purpose & Need
- Concerns with ability to meet Purpose & Need
- Does not meet Purpose & Need

SEE Impacts:
- Improvement compared to no build OR limited potential for impacts
- Mix of impacts and benefits OR greater potential for impacts
- Greatest potential for impacts

Goals & Livability:
- High potential to advance project goals
- Moderate potential to advance project goals
- Limited potential to advance project goals

Additional Considerations:
- Potential to advance plan goals

7 Appendices

Appendix A – Evaluation Matrices

Appendix B – Evaluation Criteria Memo – To be added

Appendix C – Alternative Safety Analysis Memo – To be added

Appendix D – Cost Estimates Memo – To be added

Appendix E – Evaluation Summary Matrix

Appendix A – Evaluation Matrices

Alternative	Walkability and Bikeability – comfort, mobility and risks for people walking, bicycling, and rolling			Safety for People in Motorized Vehicles – cars, freight, and transit		Infrastructure Condition – state of repair		Mobility for People in Motorized Vehicles – cars, freight, and transit													
	CRITERIA																				
	Non-Motorized Connectivity and Performance			Network Crashes		Pavement Condition	Bridge Condition	Systemwide Mobility		Corridor Mobility	Corridor Throughput	Interchange Area Mobility		Interchange Area Throughput	Freight Mobility	Travel Time Reliability	Connectivity		Transit Mobility		Transit Reliability
	MEASURES																				
	Distance between Crossings[1]	Travel Time between Origin-Destination Pairs (Destinations within identified travelsheds) Pedestrian[2]	Bicycle[3]	Qualitative Assessment - Alternative addresses the number and severity of crashes along the corridor (Yes/No)[4]	Crash comparison to similar facility types[5]	Qualitative Assessment - Does the alternative address pavement condition (Yes/No)[6]	Qualitative Assessment - Does the alternative address bridge condition (Yes/No)[7]	Vehicle Hours Traveled (VHT) [Daily][8]	Person Hours Traveled (PHT) [Daily][9]	Mainline Speed (average over corridor) [Peak Period][10]	Person Throughput (people/day)[11]	Vehicle Hours Traveled (VHT) in Interchange Area [Daily][12]	Person Hours Traveled (PHT) in Interchange Area [Daily][13]	Person Throughput (people/day)[14]	Freight Travel Times (minutes)[15]	Variability of Travel Time (Travel Time Index)[16]	Intersection density[17]	Qualitative Assessment - Does the alternative increase access to land use?[18]	Transit Travel Times in the Corridor (minutes) [Peak Period][19]	Transit Travel Times in Interchange Area (minutes)[20]	Variability in Transit Travel Times (Travel Time Index)[21]
No Build - General Maintenance	Most crossings spaced 1/8-1/4 mile apart. One location with >1/2 mile spacing.	**Transit Stations:** 18 **Schools:** 29 **Libraries:** 3 **Parks:** 37 **Other Regional:** 1 *(No change in network from existing conditions)*	**Transit Stations:** 37 **Schools:** 96 **Libraries:** 8 **Parks:** 76 **Other Regional:** 2 *(No change in network from existing conditions)*	No - This alternative would not make any geometric or operational changes, so no change in the number or severity of crashes would be expected.	Mainline **Crash Rate:** 0.926 **Total Crashes/day:** 1.08 **F/A Crash Rate:** 0.66 **F/A Crashes/day:** 0.008 Routes within 1-Mile **Total Crashes/day:** 3.65 **F/A Crashes/day:** 0.056 Total **All Crashes/day:** 4.74 **F/A Crashes/day:** 0.064	No	No	2,570,000	3,281,000	40-55 mph	**Total:** 426,000 **Auto:** 418,000 **Transit:** 8,480 **Auto Occupancy:** 1.27	21,609	27,530	2,588,000	8-11	2.0 (Mean) 3.6 (95th Percentile)	1.3 access points/mile *(No access points added or removed)*	Existing access locations would be maintained. No change in access to land use.	22	6	2.0 (Mean) 3.6 (95th Percentile)
Maintenance - A	Most crossings spaced 1/8-1/4 mile apart. One location with >1/2 mile spacing.	**Transit Stations:** 18 **Schools:** 29 **Libraries:** 3 **Parks:** 37 **Other Regional:** 1 *(No change in network from existing conditions)*	**Transit Stations:** 37 **Schools:** 96 **Libraries:** 8 **Parks:** 76 **Other Regional:** 2 *(No change in network from existing conditions)*	No - This alternative would not make any geometric or operational changes, so no change in the number or severity of crashes would be expected.	Mainline **Crash Rate:** 0.926 **Total Crashes/day:** 1.08 **F/A Crash Rate:** 0.66 **F/A Crashes/day:** 0.008 Routes within 1-Mile **Total Crashes/day:** 3.65 **F/A Crashes/day:** 0.056 Total **All Crashes/day:** 4.74 **F/A Crashes/day:** 0.064	No	No	2,570,000	3,281,000	40-55 mph	**Total:** 426,000 **Auto:** 418,000 **Transit:** 8,480 **Auto Occupancy:** 1.27	21,609	27,530	2,588,000	8-11	2.0 (Mean) 3.6 (95th Percentile)	1.3 access points/mile *(No access points added or removed)*	Existing access locations would be maintained. No change in access to land use.	22	6 (One stop; Route 94)	2.0 (Mean) 3.6 (95th Percentile)
Maintenance - B	Most crossings spaced 1/8-1/4 mile apart. One location with >1/2 mile spacing.	**Transit Stations:** 18 **Schools:** 29 **Libraries:** 3 **Parks:** 37 **Other Regional:** 1 *(No change in network from existing conditions)*	**Transit Stations:** 37 **Schools:** 96 **Libraries:** 8 **Parks:** 76 **Other Regional:** 2 *(No change in network from existing conditions)*	Yes - Widening the right shoulder is associated with a reduction in crashes of all types and severities. -Widen shoulder by 1 ft (CMF ID 8342) -Increase shoulder width from 10 ft to 12 ft (CMF ID 5509)	Mainline **Crash Rate:** 0.926 **Total Crashes/day:** 1.08 **F/A Crash Rate:** 0.66 **F/A Crashes/day:** 0.008 Routes within 1-Mile **Total Crashes/day:** 3.65 **F/A Crashes/day:** 0.056 Total **All Crashes/day:** 4.74 **F/A Crashes/day:** 0.064	Yes	Yes	2,570,000	3,281,000	40-55 mph	**Total:** 425,000 **Auto:** 418,000 **Transit:** 7,150 **Auto Occupancy:** 1.27	21,609	27,530	2,588,000	8-11	2.0 (Mean) 3.6 (95th Percentile)	1.3 access points/mile *(No access points added or removed)*	Existing access locations would be maintained. No change in access to land use.	17	6 (One stop; Route 94)	2.0 (Mean) 3.6 (95th Percentile)
At-Grade - A	Most crossings spaced 1/8-1/4 mile apart. One location with >1/2 mile spacing. *-Potential to add new crossings.* *-Distance between grade-separated crossings would increase due to conversion of some overpasses and underpasses to at-grade intersections.* *-New nonmotorized conflict points would be created at locations where at-grade crossings replace grade-separated crossings.* *-The number of conflict points may decrease or stay the same at some locations depending on intersection designs.*	**Transit Stations:** 18 **Schools:** 29 **Libraries:** 3 **Parks:** 37 **Other Regional:** 1 *-No change in network from existing conditions* *-Conversion of some grade-separated to at-grade crossings would increase crossing delay and reduce travelshed distances.* *-Potential new crossings would improve performance*	**Transit Stations:** 37 **Schools:** 96 **Libraries:** 8 **Parks:** 76 **Other Regional:** 2 *-No change in network from existing conditions* *-Conversion of some grade-separated to at-grade crossings would increase crossing delay but reduce travelshed distances.* *-Potential new crossings would improve performance*	No - The expected fatal and serious injury crashes/day on the mainline and routes within one mile combined would increase 4.4% compared to the no build. Change from No Build **All Crashes/day:** -13% **F/A Crashes/day:** +4.4%	Mainline **Crash Rate:** 1.87 **Total Crashes/day:** 0.45 **F/A Crash Rate:** 3.226 **F/A Crashes/day:** 0.008 Routes within 1-Mile **Total Crashes/day:** 3.67 **F/A Crashes/day:** 0.059 Total **All Crashes/day:** 4.12 **F/A Crashes/day:** 0.067	Yes	Yes	2,600,200	3,317,100	20-25 mph	**Total:** 219,000 **Auto:** 211,000 **Transit:** 7,640 **Auto Occupancy:** 1.28	9,704	12,441	757,000	18-23	2.5 (Mean) 4.3 (95th Percentile)	2.9 access points/mile	12 new at-grade access locations would be added to the new roadway.	19	9 (Three stops; BRT)	2.5 (Mean) 4.3 (95th Percentile)

Alternative	Walkability and Bikeability – comfort, mobility and risks for people walking, bicycling, and rolling			Safety for People in Motorized Vehicles – cars, freight, and transit		Infrastructure Condition – state of repair		Mobility for People in Motorized Vehicles – cars, freight, and transit													
	CRITERIA																				
	Non-Motorized Connectivity and Performance			Network Crashes		Pavement Condition	Bridge Condition	Systemwide Mobility		Corridor Mobility	Corridor Throughput	Interchange Area Mobility		Interchange Area Throughput	Freight Mobility	Travel Time Reliability	Connectivity		Transit Mobility		Transit Reliability
	MEASURES																				
	Distance between Crossings[1]	Travel Time between Origin-Destination Pairs (Destinations within identified travelsheds) Pedestrian[2]	Travel Time between Origin-Destination Pairs (Destinations within identified travelsheds) Bicycle[3]	Qualitative Assessment - Alternative addresses the number and severity of crashes along the corridor (Yes/No)[4]	Crash comparison to similar facility types[5]	Qualitative Assessment - Does the alternative address pavement condition (Yes/No)[6]	Qualitative Assessment - Does the alternative address bridge condition (Yes/No)[7]	Vehicle Hours Traveled (VHT) [Daily][8]	Person Hours Traveled (PHT) [Daily][9]	Mainline Speed (average over corridor) [Peak Period][10]	Person Throughput (people/day)[11]	Vehicle Hours Traveled (VHT) in Interchange Area [Daily][12]	Person Hours Traveled (PHT) in Interchange Area [Daily][13]	Person Throughput (people/day)[14]	Freight Travel Times (minutes)[15]	Variability of Travel Time (Travel Time Index)[16]	Intersection density[17]	Qualitative Assessment - Does the alternative increase access to land use?[18]	Transit Travel Times in the Corridor (minutes) [Peak Period][19]	Transit Travel Times in Interchange Area (minutes)[20]	Variability in Transit Travel Times (Travel Time Index)[21]
At-Grade - B	Most crossings spaced 1/8-1/4 mile apart. One location with >1/2 mile spacing. *-Potential to add new crossings.* *-Distance between grade-separated crossings would increase due to conversion of some overpasses and underpasses to at-grade intersections.* *-New nonmotorized conflict points would be created at locations where at-grade crossings replace grade-separated crossings.* *-The number of conflict points may decrease or stay the same at some locations depending on intersection designs.*	**Transit Stations:** 18 **Schools:** 29 **Libraries:** 3 **Parks:** 37 **Other Regional:** 1 *-No change in network from existing conditions* *-Conversion of some grade-separated to at-grade crossings would increase crossing delay and reduce travelshed distances.* *-Potential new crossings would improve performance*	**Transit Stations:** 37 **Schools:** 96 **Libraries:** 8 **Parks:** 76 **Other Regional:** 2 *-No change in network from existing conditions* *-Conversion of some grade-separated to at-grade crossings would increase crossing delay but reduce travelshed distances.* *-Potential new crossings would improve performance*	No - The expected fatal and serious injury crashes/day on the mainline and routes within one mile combined would increase 4.4% compared to the no build. <u>Change from No Build</u> **All Crashes/day:** -13% **F/A Crashes/day:** +4.4%	<u>Mainline</u> **Crash Rate:** 1.87 **Total Crashes/day:** 0.45 **F/A Crash Rate:** 3.226 **F/A Crashes/day:** 0.008 <u>Routes within 1-Mile</u> **Total Crashes/day:** 3.67 **F/A Crashes/day:** 0.059 <u>Total</u> **All Crashes/day:** 4.12 **F/A Crashes/day:** 0.067	Yes	Yes	2,600,200	3,317,100	20-25 mph	**Total:** 219,000 **Auto:** 211,000 **Transit:** 7,640 **Auto Occupancy:** 1.28	9,704	12,441	757,000	18-23	2.5 (Mean) 4.3 (95th Percentile)	2.9 access points/mile	12 new at-grade access locations would be added to the new roadway.	19	9 (Three stops; BRT)	2.5 (Mean) 4.3 (95th Percentile)
Local/Regional Roadways - A	Most crossings spaced 1/8-1/4 mile apart. One location with >1/2 mile spacing. *-Potential to add new crossings.* *-Potential for reduced nonmotorized conflict points at many crossing locations due to reduction in mainline access points. Conflict points may increase at other locations based on interchange designs.*	**Transit Stations:** 18 **Schools:** 29 **Libraries:** 3 **Parks:** 37 **Other Regional:** 1 *-No change in network from existing conditions* *-Potential new crossings would improve performance*	**Transit Stations:** 37 **Schools:** 96 **Libraries:** 8 **Parks:** 76 **Other Regional:** 2 *-No change in network from existing conditions* *-Potential new crossings would improve performance*	Yes - The expected fatal and serious injury crashes/day on the mainline and routes within one mile combined would not change substantially compared to the no build. Total crashes/day would also decrease. <u>Change from No Build</u> **All Crashes (4 AP):** -6.8% **All Crashes (3 AP):** -6% **F/A Crashes (4 AP):** -0.1% **F/A Crashes (3 AP):** 1.4%	<u>Mainline</u> **Crash Rate:** 0.926 **Total Crashes/day (4 AP):** 0.64 **Total Crashes/day (3 AP):** 0.63 **F/A Crash Rate:** 0.66 **F/A Crashes/day (4 AP):** 0.005 **F/A Crashes/day (3 AP):** 0.004 <u>Routes within 1-Mile</u> **Total Crashes/day (4 AP):** 3.77 **Total Crashes/day (3 AP):** 3.83 **F/A Crashes/day (4 AP):** 0.059 **F/A Crashes/day (3 AP):** 0.06 <u>Total</u> **All Crashes (4 AP):** 4.42 **All Crashes (3 AP):** 4.45 **F/A Crashes (4 AP):** 0.064 **F/A Crashes (3 AP):** 0.065	Yes	Yes	2,574,500 (4 AP) 2,577,600 (3 AP)	3,287,200 (4 AP) 3,290,900 (3 AP)	**Regional:** 30-45 mph **Local:** 25-30 mph	**Total:** 337,000 **Auto:** 330,000 **Transit:** 7,150 (4 AP) **Total:** 315,000 **Auto:** 308,000 **Transit:** 7,150 (3 AP) **Auto Occupancy:** 1.28 (3-4 AP)	20,285 (4 AP) 19,869 (3 AP)	25,924 (4 AP) 25,393 (3 AP)	1,923,000 (4 AP) 1,886,000 (3 AP)	**Regional:** 10-15 **Local:** 15-18 (4 AP) 16-19 (3 AP)	**Regional:** 3.0-3.2 (Mean) 5.1-5.3 (95th Percentile) **Local:** 1.4-1.5 (Mean) 2.1-2.4 (95th Percentile) (3-4 AP)	0.4 access points/mile (I-35W, TH 280 OR Snelling Ave, and Marion St) OR 0.5 access points/mile (I-35W, TH 280, Snelling Ave, and Marion St)	5 or 6 access locations would be removed, however overpasses would generally remain. Distance to access I-94 would increase for some trips, however connectivity across I-94 would increase in areas where ramps are removed but overpasses are maintained.	17	7 (One stop; express bus) (4 AP) 3 (No stops; express bus) (3 AP)	**Regional (4 AP):** 3.2 (Mean) 5.3 (95th Percentile) **Local (4 AP):** 1.4 (Mean) 2.1 (95th Percentile) **Regional (3 AP):** 2.8 (Mean) 4.8 (95th Percentile) **Local (3 AP):** 1.1 (Mean) 1.4 (95th
Reduced Freeway - A	Most crossings spaced 1/8-1/4 mile apart. One location with >1/2 mile spacing. *-Potential to add new crossings.*	**Transit Stations:** 18 **Schools:** 29 **Libraries:** 3 **Parks:** 37 **Other Regional:** 1 *-No change in network from existing conditions* *-Potential new crossings would improve performance*	**Transit Stations:** 37 **Schools:** 96 **Libraries:** 8 **Parks:** 76 **Other Regional:** 2 *-No change in network from existing conditions* *-Potential new crossings would improve performance*	Yes - The expected fatal and serious injury crashes/day on the mainline and routes within one mile combined would decrease 2.8% compared to the no build. Total crashes/day would also decrease. <u>Change from No Build</u> **All Crashes/day:** -5.6% **F/A Crashes/day:** -2.8%	<u>Mainline</u> **Crash Rate:** 0.926 **Total Crashes/day:** 0.86 **F/A Crash Rate:** 0.66 **F/A Crashes/day:** 0.006 <u>Routes within 1-Mile</u> **Total Crashes/day:** 3.62 **F/A Crashes/day:** 0.056 <u>Total</u> **All Crashes/day:** 4.47 **F/A Crashes/day:** 0.062	Yes	Yes	2,584,600	3,299,700	**General Purpose Lanes:** 30-45 mph **Managed Lanes:** 40-60 mph	**Total:** 376,000 **Auto:** 367,000 **Transit:** 8,980-9,050 **Auto Occupancy:** 1.31	17,773	23,201	2,169,000	**General Purpose Lanes:** 10-15 **Managed Lanes:** 8-11	**General Purpose Lanes:** 3.2 (Mean) 5.3 (95th Percentile) **Managed Lanes:** 2.5 (Mean) 4.4 (95th Percentile)	1.3 access points/mile *(No access points added or removed)*	Existing access locations would be maintained. No change in access to land use.	12-15 **BRT - 0:** 12 **BRT - 1:** 13 **BRT - 3:** 15	4-7 **BRT - 0:** 4 **BRT - 1:** 5 **BRT - 3:** 7 (Up to 3 stops; highway BRT)	**Managed Lanes:** 2.5 (Mean) 4.4 (95th Percentile)
Reconfigured Freeway - A	Most crossings spaced 1/8-1/4 mile apart. One location with >1/2 mile spacing. *-Potential to add new crossings.*	**Transit Stations:** 18 **Schools:** 29 **Libraries:** 3 **Parks:** 37 **Other Regional:** 1 *-No change in network from existing conditions* *-Potential new crossings would improve performance*	**Transit Stations:** 37 **Schools:** 96 **Libraries:** 8 **Parks:** 76 **Other Regional:** 2 *-No change in network from existing conditions* *-Potential new crossings would improve performance*	Yes - The expected fatal and serious injury crashes/day on the mainline and routes within one mile combined would not change substantially compared to the no build, despite an expected increase in traffic on the mainline. Total crashes/day would also not change substantially. <u>Change from No Build</u> **All Crashes/day:** 0.2% **F/A Crashes/day:** -0.9%	<u>Mainline</u> **Crash Rate:** 0.926 **Total Crashes/day:** 1.13 **F/A Crash Rate:** 0.66 **F/A Crashes/day:** 0.008 <u>Routes within 1-Mile</u> **Total Crashes/day:** 3.62 **F/A Crashes/day:** 0.055 <u>Total</u> **All Crashes/day:** 4.75 **F/A Crashes/day:** 0.063	Yes	Yes	2,575,900	3,289,300	**General Purpose Lanes:** 40-55 mph **Managed Lanes:** 45-60 mph	**Total:** 447,000 **Auto:** 438,000 **Transit:** 8,800-8,860 **Auto Occupancy:** 1.31	20,596	26,981	2,728,000	**General Purpose Lanes:** 8-11 **Managed Lanes:** 8-10	**General Purpose Lanes:** 2.1 (Mean) 3.8 (95th Percentile) **Managed Lanes:** 2.1 (Mean) 3.7 (95th Percentile)	1.3 access points/mile *(No access points added or removed)*	Existing access locations would be maintained. No change in access to land use.	12-15 **BRT - 0:** 12 **BRT - 1:** 13 **BRT - 3:** 15	4-7 **BRT - 0:** 4 **BRT - 1:** 5 **BRT - 3:** 7 (Up to 3 stops; highway BRT)	**Managed Lanes:** 2.1 (Mean) 3.7 (95th Percentile)

Alternative	Walkability and Bikeability – comfort, mobility and risks for people walking, bicycling, and rolling			Safety for People in Motorized Vehicles – cars, freight, and transit		Infrastructure Condition – state of repair		Mobility for People in Motorized Vehicles – cars, freight, and transit													
	CRITERIA																				
	Non-Motorized Connectivity and Performance			Network Crashes		Pavement Condition	Bridge Condition	Systemwide Mobility		Corridor Mobility	Corridor Throughput	Interchange Area Mobility		Interchange Area Throughput	Freight Mobility	Travel Time Reliability	Connectivity		Transit Mobility		Transit Reliability
	MEASURES																				
	Distance between Crossings[1]	Travel Time between Origin-Destination Pairs (Destinations within identified travelsheds) Pedestrian[2]	Travel Time between Origin-Destination Pairs (Destinations within identified travelsheds) Bicycle[3]	Qualitative Assessment - Alternative addresses the number and severity of crashes along the corridor (Yes/No)[4]	Crash comparison to similar facility types[5]	Qualitative Assessment - Does the alternative address pavement condition (Yes/No)[6]	Qualitative Assessment - Does the alternative address bridge condition (Yes/No)[7]	Vehicle Hours Traveled (VHT) [Daily][8]	Person Hours Traveled (PHT) [Daily][9]	Mainline Speed (average over corridor) [Peak Period][10]	Person Throughput (people/day)[11]	Vehicle Hours Traveled (VHT) in Interchange Area [Daily][12]	Person Hours Traveled (PHT) in Interchange Area [Daily][13]	Person Throughput (people/day)[14]	Freight Travel Times (minutes)[15]	Variability of Travel Time (Travel Time Index)[16]	Intersection density[17]	Qualitative Assessment - Does the alternative increase access to land use?[18]	Transit Travel Times in the Corridor (minutes) [Peak Period][19]	Transit Travel Times in Interchange Area (minutes)[20]	Variability in Transit Travel Times (Travel Time Index)[21]
Expanded Freeway - A	Most crossings spaced 1/8-1/4 mile apart. One location with >1/2 mile spacing. *-Potential to add new crossings.*	**Transit Stations:** 18 **Schools:** 29 **Libraries:** 3 **Parks:** 37 **Other Regional:** 1 *-No change in network from existing conditions* *-Potential new crossings would improve performance*	**Transit Stations:** 37 **Schools:** 96 **Libraries:** 8 **Parks:** 76 **Other Regional:** 2 *-No change in network from existing conditions* *-Potential new crossings would improve performance*	Yes - The expected fatal and serious injury crashes/day on the mainline and routes within one mile combined would not change substantially compared to the no build, despite an expected increase in traffic on the mainline. Total crashes/day would increase, consistent with increased traffic. Change from No Build **All Crashes/day:** 2% **F/A Crashes/day:** -0.1%	Mainline **Crash Rate:** 0.926 **Total Crashes/day:** 1.21 **F/A Crash Rate:** 0.66 **F/A Crashes/day:** 0.009 Routes within 1-Mile **Total Crashes/day:** 3.63 **F/A Crashes/day:** 0.055 Total **All Crashes/day:** 4.83 **F/A Crashes/day:** 0.064	Yes	Yes	2,569,000	3,280,200	**General Purpose Lanes:** 45-55 mph **Managed Lanes:** 45-60 mph	**Total:** 458,000 **Auto:** 449,000 **Transit:** 8,800-8,860 **Auto Occupancy:** 1.29	21,790	28,174	2,845,000	**General Purpose Lanes:** 8-10 **Managed Lanes:** 8-10	**General Purpose Lanes:** 1.5 (Mean) 2.5 (95th Percentile) **Managed Lanes:** 1.6 (Mean) 2.8 (95th Percentile)	1.3 access points/mile *(No access points added or removed)*	Existing access locations would be maintained. No change in access to land use.	12-15 **BRT - 0:** 12 **BRT - 1:** 13 **BRT - 3:** 15	4-7 **BRT - 0:** 4 **BRT - 1:** 5 **BRT - 3:** 7 (Up to 3 stops; highway BRT)	**Managed Lanes:** 1.6 (Mean) 2.8 (95th Percentile)
Expanded Freeway - B	Most crossings spaced 1/8-1/4 mile apart. One location with >1/2 mile spacing. *-Potential to add new crossings.*	**Transit Stations:** 18 **Schools:** 29 **Libraries:** 3 **Parks:** 37 **Other Regional:** 1 *-No change in network from existing conditions* *-Potential new crossings would improve performance*	**Transit Stations:** 37 **Schools:** 96 **Libraries:** 8 **Parks:** 76 **Other Regional:** 2 *-No change in network from existing conditions* *-Potential new crossings would improve performance*	Yes - The expected fatal and serious injury crashes/day on the mainline and routes within one mile combined would not change substantially compared to the no build, despite an expected increase in traffic on the mainline. Total crashes/day would increase, consistent with increased traffic. Change from No Build **All Crashes/day:** 2.8% **F/A Crashes/day:** 1.5%	Mainline **Crash Rate:** 0.926 **Total Crashes/day:** 1.20 **F/A Crash Rate:** 0.66 **F/A Crashes/day:** 0.009 Routes within 1-Mile **Total Crashes/day:** 3.67 **F/A Crashes/day:** 0.056 Total **All Crashes/day:** 4.87 **F/A Crashes/day:** 0.065	Yes	Yes	2,577,100	3,289,600	45-55 mph	**Total:** 452,000 **Auto:** 445,000 **Transit:** 7,020 **Auto Occupancy:** 1.27	21,544	27,404	2,806,000	8-10	1.5 (Mean) 2.4 (95th Percentile)	1.3 access points/mile *(No access points added or removed)*	Existing access locations would be maintained. No change in access to land use.	17	6 (One stop; express bus)	1.5 (Mean) 2.4 (95th Percentile)

1 Includes all corridor crossings available for nonmotorized use, including underpasses, multimodal bridges, and pedestrian-only bridges.
2 Pedestrian travelshed assumed to be 0.5 mi/10 minutes. At-Grade alternatives assume existing pedestrian bridges would remain or be converted to mid-block crossings. At-grade pedestrian crossings would increase travel times to cross the corridor.
3 Bicycle travelshed assumed to be 3 mi/20 minutes. At-Grade alternatives assume existing pedestrian bridges would remain or be converted to mid-block crossings. At-grade bicycle crossings would increase travel times to cross the corridor.
4 Increases or decreases in crashes/day of less than 2% were considered neutral/no change. Listed CMFs are for roadway segments, not interchanges/intersections.
5 Expected crashes per day are based on VMT per day and statewide average crash rates by facility type. Crash rates are per million VMT. F/A (fatal and serious injury) crash rates are per 100 million VMT. Routes within 1-mile do not include mainline crashes. Regionwide results were calculated but are not shown since no variation between the alternatives was observed.
6 This is a high-level qualitative assessment. Specific improvements to be determined.
7 This is a high-level qualitative assessment. Specific improvements to be determined.
8 VHT results are based on output from the regional model.
9 PHT results are based on output from the regional model.
10 Results are based on output from the regional model. The AM peak period is from 6:00 – 10:00 and the PM peak is from 3:00 – 7:00.
11 Auto results are based on output from the regional model, transit results are based on output from the STOPS model.
12 Results reflect the impacts of each mainline alternative, and do not represent final interchange configurations. Interchange alternatives will be studied in greater detail in the Tier 1 EIS. Results are the total of the following interchange areas: I-35/TH 55, Cedar Ave, Riverside/25th Ave, Huron Blvd, TH 280, Cretin Ave, Snelling Ave, Lexington Ave, Dale St, and Marion St.
13 Results reflect the impacts of each mainline alternative, and do not represent final interchange configurations. Interchange alternatives will be studied in greater detail in the Tier 1 EIS. Results are the total of the following interchange areas: I-35/TH 55, Cedar Ave, Riverside/25th Ave, Huron Blvd, TH 280, Cretin Ave, Snelling Ave, Lexington Ave, Dale St, and Marion St.
14 Results reflect the impacts of each mainline alternative, and do not represent final interchange configurations. Interchange alternatives will be studied in greater detail in the Tier 1 EIS. Results are the total of the following interchange areas: I-35/TH 55, Cedar Ave, Riverside/25th Ave, Huron Blvd, TH 280, Cretin Ave, Snelling Ave, Lexington Ave, Dale St, and Marion St.
15 Results represent corridor travel time for all vehicles (including freight) based on regional model output. Travel time is measured between the logical termini (I-35W/TH 55 to Marion St).
16 Calculated using weighted average peak hour volume to capacity ratio using regional model outputs. Travel Time Index (TTI) measures the reliability/variability of travel times. It is the ratio of corridor travel time in the peak period to travel time at free-flow speeds or uncongested conditions.
17 The final access configuration has not been determined at this time. This measure is intended to capture the addition or removal of access points for each mainline alternative based on assumed changes in the regional model. There are 10 existing access points within the existing 7.5-mile corridor.
18 The final access configuration has not been determined at this time. This measure is intended to capture the addition or removal of access points for each mainline alternative based on assumed changes in the regional model.
19 Results are based on STOPS model output. Travel time is measured between the logical termini (I-35W/TH 55 to Marion St).
20 Results are an average of hour 2 of AM and PM peak periods and include only mainline east-west route (not routes using cross streets).
21 Assumptions: (1) Low floor boarding on all buses and platforms, (2) off-board ticketing, and (3) multiple door boarding. Signal delay is not accounted for in this analysis. TTI measures the reliability/variability of travel times. It is the ratio of corridor travel time in the peak period to travel time at free-flow speeds or uncongested conditions.

Alternative	Environmental Justice (EJ)			Historic/Archaeological/Cemetery		Section 4(f)	Section 6(f)	Contaminated Properties	Right of Way	Noise	Water Pollution/ Stormwater	Air Quality	T & E Species	Wetlands	
	CRITERIA														
	Potential for disproportionately high and adverse effects on EJ populations			Potential to affect known historic properties	Potential impact to known or suspected cemeteries	Potential impact to resource	Potential impact to resource	Impact to sites with potential for hazardous materials	Adjacent property impacts	Potential impact to public health and welfare from traffic related noise pollution	Impervious Surface Area	Potential impact to resource	Potential impact to threatened and endangered species	Potential impact to resource	
	MEASURES														
	Qualitative Assessment - Does the alternative provide access to economic opportunities and other daily needs for EJ populations?[1]	Qualitative Assessment - Does the alternative have the potential to increase exposure to water and noise pollution for EJ populations?[2]	Qualitative Assessment - Relocation potential for EJ populations[3]	Qualitative Assessment - Low, Moderate, or High potential for adverse effect to known historic properties[4]	Qualitative Assessment - Low, Moderate, or High potential for adverse effect to known or suspected cemeteries[5]	Number of Section 4(f) resources impacted[6]	Number of Section 6(f) resources impacted[7]	Number of known contaminated sites impacted[8]	Acreage of impacts and anticipated number of property relocations[9]	Qualitative Assessment - Will the project cause a material change in horizontal and/or vertical alignment or add travel lanes? (Yes/No)[10]	Acreage[11]	Qualitative Assessment - Is the project considered regionally significant for air quality concerns or will the project have a meaningful impact on traffic volumes or vehicle mix (Yes/No)[12]	Qualitative Assessment - Does the project have the potential to impact threatened and endangered species (Yes/No)[13]	Qualitative Assessment - Does the alternative have the potential to impact wetlands (Yes/No)[14]	Number of wetlands impacted based on National Wetland Inventory mapping[15]
No Build - General Maintenance	Existing access locations would be maintained. No change in access to land use.	No	Limited relocation potential within EJ communities.	Low	Low	0	0	0	0 acres 0 relocations	No	114 acres *(No change from existing conditions)*	No	No	No	0
Maintenance - A	Existing access locations would be maintained. No change in access to land use.	No	Limited relocation potential within EJ communities.	Low	Low	0	0	0	0 acres 0 relocations	No	114 acres *(No change from existing conditions)*	No	No	No	0
Maintenance - B	Existing access locations would be maintained. No change in access to land use.	Yes - Increase in impervious surface has potential to increase stormwater runoff within EJ communities.	Limited relocation potential within EJ communities.	Low	Low	11	0	2 (within corridor)	0 acres 0 relocations	No	126 acres *(Increase of 12 acres)*	No	Yes	No	0
At-Grade - A	New at-grade access locations would be added to the new roadway, including within EJ communities. Direct access to key destinations in the corridor would increase, however travel times in the corridor may increase due to the addition of new access points. New BRT service would improve access to transit within EJ communities.	Yes - Major change in vertical alignment has potential to increase size of areas within EJ communities impacted by traffic noise.	Limited relocation potential within EJ communities.	Moderate	Low/Moderate	13	0	2 (within corridor) 71 (within 500-foot search area)	0 acres 0 relocations	Yes - Major change in vertical alignment will reduce distance between traffic and noise sensitive receptors and potentially increase area of traffic noise impacts.	110 acres *(Decrease of 4 acres)*	Yes - Project meets the definition of a regionally significant project and would not be classified as exempt.	Yes	Yes	2
At-Grade - B	New at-grade access locations would be added to the new roadway, including within EJ communities. Direct access to key destinations in the corridor would increase, however travel times in the corridor may increase due to the addition of new access points. New BRT service would improve access to transit within EJ communities.	Yes - Major change in vertical alignment has potential to increase size of areas within EJ communities impacted by traffic noise.	Limited relocation potential within EJ communities.	Moderate	Low/Moderate	13	0	2 (within corridor) 71 (within 500-foot search area)	0 acres 0 relocations	Yes - Major change in vertical alignment will reduce distance between traffic and noise sensitive receptors and potentially increase area of traffic noise impacts.	110 acres *(Decrease of 4 acres)*	Yes - Project meets the definition of a regionally significant project and would not be classified as exempt.	Yes	Yes	2
Local/Regional Roadways - A	Multiple existing freeway access points within EJ communities would be removed. Direct access to key destinations in the corridor would decrease, however travel times in the corridor may decrease due to the removal of access points.	Yes - Major change in freeway configuration has the potential to shift traffic volumes closer to or further away from noise sensitive receptors within EJ communities.	Limited relocation potential within EJ communities.	Low/Moderate	Moderate	12	0	2 (within corridor) 71 (within 500-foot search area)	0 acres 0 relocations	Yes - Potential to increase traffic volumes on local system adjacent to existing at-grade land uses.	93 acres *(Decrease of 21 acres)* *Note: Does not include areas outside retaining walls.*	Yes - Project meets the definition of a regionally significant project and would not be classified as exempt.	Yes	Yes	2

Alternative	Environmental Justice (EJ)			Historic/Archaeological/Cemetery		Section 4(f)	Section 6(f)	Contaminated Properties	Right of Way	Noise	Water Pollution/ Stormwater	Air Quality	T & E Species	Wetlands	
	CRITERIA														
	Potential for disproportionately high and adverse effects on EJ populations			Potential to affect known historic properties	Potential impact to known or suspected cemeteries	Potential impact to resource	Potential impact to resource	Impact to sites with potential for hazardous materials	Adjacent property impacts	Potential impact to public health and welfare from traffic related noise pollution	Impervious Surface Area	Potential impact to resource	Potential impact to threatened and endangered species	Potential impact to resource	
	MEASURES														
	Qualitative Assessment - Does the alternative provide access to economic opportunities and other daily needs for EJ populations?[1]	Qualitative Assessment - Does the alternative have the potential to increase exposure to water and noise pollution for EJ populations?[2]	Qualitative Assessment - Relocation potential for EJ populations[3]	Qualitative Assessment - Low, Moderate, or High potential for adverse effect to known historic properties[4]	Qualitative Assessment - Low, Moderate, or High potential for adverse effect to known or suspected cemeteries[5]	Number of Section 4(f) resources impacted[6]	Number of Section 6(f) resources impacted[7]	Number of known contaminated sites impacted[8]	Acreage of impacts and anticipated number of property relocations[9]	Qualitative Assessment - Will the project cause a material change in horizontal and/or vertical alignment or add travel lanes? (Yes/No)[10]	Acreage[11]	Qualitative Assessment - Is the project considered regionally significant for air quality concerns or will the project have a meaningful impact on traffic volumes or vehicle mix (Yes/No)[12]	Qualitative Assessment - Does the project have the potential to impact threatened and endangered species (Yes/No)[13]	Qualitative Assessment - Does the alternative have the potential to impact wetlands (Yes/No)[14]	Number of wetlands impacted based on National Wetland Inventory mapping[15]
Reduced Freeway - A	Existing access locations would be maintained. No change in access to land use.	Yes - Due to reduced freeway capacity, traffic volumes and associated noise pollution on adjacent parallel arterials in EJ communities may increase.	Limited relocation potential within EJ communities based on mainline footprint; potential for residential and/or commercial relocation in the vicinity of 25th/27th Ave station.	**Corridor:** Low **BRT Station Areas:** Low	**Corridor:** Low **BRT Station Areas:** Low to Moderate	11-12	0	2 (within corridor) 71 (within 500-foot search area)	0-0.55 acres 0-5 relocations	No - Total number of travel lanes would decrease.	108.9-109.3 acres *(Decrease of 4.7-5.1 acres)*	Yes - Project meets the definition of a regionally significant project and would not be classified as exempt.	Yes	Yes	2
BRT - 0			Limited relocation potential within EJ communities.	**BRT Station Area:** NA	**BRT Station Area:** NA	11	0		0 acres 0 buildings impacted		108.9 acres *(Decrease of 5.1 acres)*			Yes	2
BRT - 1			Limited relocation potential within EJ communities.	**BRT Station Area:** Low	**BRT Station Area:** Low	11	0		0 acres 0 buildings impacted		109.0 acres *(Decrease of 5.0 acres)*			Yes	2
BRT - 3	25th/27th Ave and Dale St stations would improve access to transit within EJ communities.		Potential for residential and/or commercial relocation in the vicinity of 25th/27th Ave station.	**BRT Station Areas:** Low	**BRT Station Areas:** Moderate	12	0		0.55 acres ~5 buildings impacted (~5 parcels)		109.3 acres *(Decrease of 4.7 acres)*			Yes	2
Reconfigured Freeway - A	Existing access locations would be maintained. No change in access to land use.	Yes - Anticipated increase in roadway capacity has the potential to increase noise pollution in EJ communities. Increase in impervious surface has potential to increase stormwater runoff within EJ communities.	Limited relocation potential within EJ communities based on mainline footprint; potential for residential and/or commercial relocation in the vicinity of 25th/27th Ave station.	**Corridor:** Low **BRT Station Areas:** Low	**Corridor:** Low **BRT Station Areas:** Low to Moderate	11-12	0	2 (within corridor) 71 (within 500-foot search area)	0-1.83 acres 0-10 relocations	Yes - One travel lane would be added for short segments that currently have 3 travel lanes.	129.4-129.8 acres *(Increase of 15.4-15.8 acres)*	Yes - Project meets the definition of a regionally significant project and would not be classified as exempt.	Yes	Yes	2
BRT - 0			Limited relocation potential within EJ communities.	**BRT Station Area:** NA	**BRT Station Area:** NA	11	0		0 acres 0 buildings impacted		129.4 acres *(Increase of 15.4 acres)*			Yes	2
BRT - 1			Limited relocation potential within EJ communities.	**BRT Station Area:** Low	**BRT Station Area:** Low	11	0		0 acres 0 buildings impacted		129.5 acres *(Increase of 15.5 acres)*			Yes	2
BRT - 3	25th/27th Ave and Dale St stations would improve access to transit within EJ communities.		Potential for residential and/or commercial relocation in the vicinity of 25th/27th Ave station.	**BRT Station Areas:** Low	**BRT Station Areas:** Moderate	12	0		1.83 acres ~10 buildings impacted (~30 parcels)		129.8 acres *(Increase of 15.8 acres)*			Yes	2
Expanded Freeway - A	Existing access locations would be maintained. No change in access to land use.	Yes - Increase in roadway capacity has the potential to increase noise pollution in EJ communities. Increase in impervious surface has potential to increase stormwater runoff within EJ communities.	Limited relocation potential within EJ communities based on mainline footprint; potential for residential and/or commercial relocation in the vicinity of 25th/27th Ave station.	**Corridor:** Low **BRT Station Areas:** Low	**Corridor:** Moderate **BRT Station Areas:** Moderate	11-12	0	2 (within corridor) 71 (within 500-foot search area)	2.84-6.06 acres 0-20 relocations	Yes - Total number of travel lanes would increase.	149.8-150.3 acres *(Increase of 35.8-36.3 acres)*	Yes - Project meets the definition of a regionally significant project and would not be classified as exempt. Would add travel lanes for over one mile and potentially increase traffic volumes on I-94.	Yes	Yes	2

Alternative	Environmental Justice (EJ)			Historic/Archaeological/Cemetery		Section 4(f)	Section 6(f)	Contaminated Properties	Right of Way	Noise	Water Pollution/ Stormwater	Air Quality	T & E Species	Wetlands	
	CRITERIA														
	Potential for disproportionately high and adverse effects on EJ populations			Potential to affect known historic properties	Potential impact to known or suspected cemeteries	Potential impact to resource	Potential impact to resource	Impact to sites with potential for hazardous materials	Adjacent property impacts	Potential impact to public health and welfare from traffic related noise pollution	Impervious Surface Area	Potential impact to resource	Potential impact to threatened and endangered species	Potential impact to resource	
	MEASURES														
	Qualitative Assessment - Does the alternative provide access to economic opportunities and other daily needs for EJ populations?[1]	Qualitative Assessment - Does the alternative have the potential to increase exposure to water and noise pollution for EJ populations?[2]	Qualitative Assessment - Relocation potential for EJ populations[3]	Qualitative Assessment - Low, Moderate, or High potential for adverse effect to known historic properties[4]	Qualitative Assessment - Low, Moderate, or High potential for adverse effect to known or suspected cemeteries[5]	Number of Section 4(f) resources impacted[6]	Number of Section 6(f) resources impacted[7]	Number of known contaminated sites impacted[8]	Acreage of impacts and anticipated number of property relocations[9]	Qualitative Assessment - Will the project cause a material change in horizontal and/or vertical alignment or add travel lanes? (Yes/No)[10]	Acreage[11]	Qualitative Assessment - Is the project considered regionally significant for air quality concerns or will the project have a meaningful impact on traffic volumes or vehicle mix (Yes/No)[12]	Qualitative Assessment - Does the project have the potential to impact threatened and endangered species (Yes/No)[13]	Qualitative Assessment - Does the alternative have the potential to impact wetlands (Yes/No)[14]	Number of wetlands impacted based on National Wetland Inventory mapping[15]
BRT - 0			Limited relocation potential within EJ communities.	**BRT Station Area:** NA	**BRT Station Area:** NA	11	0		2.84 acres 0 buildings impacted		149.8 acres *(Increase of 35.8 acres)*			Yes	2
BRT - 1			Limited relocation potential within EJ communities.	**BRT Station Area:** Low	**BRT Station Area:** Moderate	11	0		2.85 acres 0 buildings impacted		150.0 acres *(Increase of 36 acres)*			Yes	2
BRT - 3	25th/27th Ave and Dale St stations would improve access to transit within EJ communities.		Potential for residential and/or commercial relocation in the vicinity of 25th/27th Ave station.	**BRT Station Areas:** Low	**BRT Station Areas:** Moderate	12	0		6.06 acres ~20 buildings impacted (~35 parcels)		150.3 acres *(Increase of 36.3 acres)*			Yes	2
Expanded Freeway - B	Existing access locations would be maintained. No change in access to land use.	Yes - Increase in roadway capacity has the potential to increase noise pollution in EJ communities. Increase in impervious surface has potential to increase stormwater runoff within EJ communities.	Limited relocation potential within EJ communities.	Low	Moderate	11	0	2 (within corridor) 71 (within 500-foot search area)	2.84 acres 0 relocations	Yes - Total number of travel lanes would increase.	146 acres *(Increase of 32 acres)*	Yes - Project meets the definition of a regionally significant project and would not be classified as exempt. Would add travel lanes for over one mile and potentially increase traffic volumes on I-94.	Yes	Yes	2

1 The final access configuration has not been determined at this time. This measure is intended to capture the addition or removal of access points required by each mainline alternative.
2 Further analysis will be required in the Tier 1 EIS once potential interchange modifications have been identified.
3 Further analysis will be required in the Tier 1 EIS once potential interchange modifications have been identified.
4 Assessment provided by MnDOT Cultural Resources Unit (CRU).
5 Assessment provided by MnDOT Cultural Resources Unit (CRU).
6 Range of impacts shown is due to potential BRT station sub-alternatives. This measure only considers Section 4(f) recreational resources. Potential Section 4(f) impacts to historic properties are addressed under the Historic/Archaeological/Cemetery criterion.
Further analysis will be required in the Tier 1 EIS once potential interchange modifications have been identified.
7 Further analysis will be required in the Tier 1 EIS once potential interchange modifications have been identified.
8 Results are based on MPCA and MDA WIMN databases. 500-foot search area is measured from centerline; project limits are not available at this time. Further analysis will be required in the Tier 1 EIS once potential interchange modifications have been identified.
9 Estimated impacts are based on anticipated mainline footprint and do not account for potential interchange modifications. Further analysis will be required in the Tier 1 EIS. Range of impacts shown is due to potential BRT station sub-alternatives. In-line BRT stations are expected to add 80 ft. in width to cross section.
10 [placeholder]
11 Acreages shown are estimates of mainline roadway impervious surface and do not account for potential modifications to interchanges/intersections. Frontage roads are not included in the estimate. Range of impacts shown is due to potential BRT station sub-alternatives. Further analysis will be required in the Tier 1 EIS.
12 [placeholder]
13 [placeholder]
14 Excludes potential impacts to the Mississippi River, which is included in National Wetland Inventory data as a Riverine wetland.
15 Excludes potential impacts to the Mississippi River, which is included in National Wetland Inventory data as a Riverine wetland.

Alternative	Sense of Place	Equity	Economic Vitality		Public Health and the Environment	Connectivity
	CRITERIA					
	Opportunities for gathering spaces, cultural and historic representation and art, and green spaces	**Distribution of transportation resources across communities**	**Opportunities for job and business accessibility**		**Opportunities to improve quality of life, well-being, and the environment through green spaces and land use**	**Opportunities to use infrastructure to connect communities physically and socially**
	MEASURES					
	Qualitative Assessment - Does the project have the potential to create features or amenities in partnership with communities to enhance sense of place? (Yes/No)	**Qualitative Assessment - Does the alternative have the potential to enhance transportation choices for individuals? (Yes/No)**	**Employment opportunities (jobs) accessible within 30-minute travel time**		**Qualitative Assessment - Does the alternative have the potential to impact green space or land uses that benefit quality of life and the environment? (Yes/No)**	**Qualitative Assessment - Facilitates or does not eliminate opportunities to implement planned nonmotorized facilities? (Yes/No)**
			Auto (Build Year)[1]	**Transit (Existing)[2]**		
No Build - General Maintenance	No	No	**AM Peak:** 1,682,013 (+0%) **PM Peak:** 1,455,296 (+0%)	76,550 (+0%)	No	Yes - Does not eliminate opportunities for local agencies to implement planned nonmotorized facilities.
Maintenance - A	Yes - Potential for excess ROW to be used for new features/amenities in select locations.	No	**AM Peak:** 1,682,013 (+0%) **PM Peak:** 1,455,296 (+0%)	76,550 (+0%)	Yes - Potential for excess right of way to be used to expand green space in the corridor.	Yes - Does not eliminate opportunities for local agencies to implement planned nonmotorized facilities.
Maintenance - B	Yes - Potential for excess ROW to be used for new features/amenities in select locations.	Yes - Bus shoulder between downtowns would be restored. Opportunities for walkability/bikeabillity improvements.	**AM Peak:** 1,682,013 (+0%) **PM Peak:** 1,455,296 (+0%)	81,300 (+6.2%)	Yes - Potential for excess right of way to be used to expand green space in the corridor.	Yes - Facilitates opportunities for locally planned walkability and bikeability improvements along and across the corridor.
At-Grade - A	Yes - Potential for excess ROW to be used for new features/amenities in select locations. Potential for additional amenities that would not be compatible with freeway alternatives.	Yes - Dedicated bus lanes would provide a transit benefit. Opportunities for walkability/bikeabillity improvements.	**AM Peak:** 1,613,242 (-4.1%) **PM Peak:** 1,356,985 (-6.8%)	82,000 (+7.1%)	Yes - Potential for excess right of way to be used to expand green space in the corridor.	Yes - Facilitates opportunities for locally planned walkability and bikeability improvements along the corridor, however proposed improvements at existing grade-separated crossings may be in conflict with conversion to at-grade intersections.
At-Grade - B	Yes - Potential for excess ROW to be used for new features/amenities in select locations. Potential for additional amenities that would not be compatible with freeway alternatives.	Yes - Dedicated bus lanes would provide a transit benefit. Opportunities for walkability/bikeabillity improvements.	**AM Peak:** 1,613,242 (-4.1%) **PM Peak:** 1,356,985 (-6.8%)	82,000 (+7.1%)	Yes - Potential for excess right of way to be used to expand green space in the corridor.	Yes - Facilitates opportunities for locally planned walkability and bikeability improvements along the corridor, however proposed improvements at existing grade-separated crossings may be in conflict with conversion to at-grade intersections.
Local/Regional Roadways - A	Yes - Potential for excess ROW to be used for new features/amenities in select locations; potential for aesthetic improvements to bridges and structures.	Yes - Extended bus shoulders would provide transit benefit. Opportunities for walkability/bikeabillity improvements.	**3 Access Pts** **AM Peak:** 1,638,514 (-2.6%) **PM Peak:** 1,422,668 (-2.2%) **4 Access Pts** **AM Peak:** 1,639,876 (-2.5%) **PM Peak:** 1,463,511 (+0.6%)	81,300 (+6.2%)	Yes - Potential for excess right of way to be used to expand green space in the corridor.	Yes - Facilitates opportunities for locally planned walkability and bikeability improvements along and across the corridor, however the complexity of the freeway and frontage road design may create challenges for new or existing crossing locations.

11003598

Alternative	Sense of Place	Equity	Economic Vitality		Public Health and the Environment	Connectivity
	CRITERIA					
	Opportunities for gathering spaces, cultural and historic representation and art, and green spaces	**Distribution of transportation resources across communities**	**Opportunities for job and business accessibility**		**Opportunities to improve quality of life, well-being, and the environment through green spaces and land use**	**Opportunities to use infrastructure to connect communities physically and socially**
	MEASURES					
	Qualitative Assessment - Does the project have the potential to create features or amenities in partnership with communities to enhance sense of place? (Yes/No)	**Qualitative Assessment - Does the alternative have the potential to enhance transportation choices for individuals? (Yes/No)**	**Employment opportunities (jobs) accessible within 30-minute travel time**		**Qualitative Assessment - Does the alternative have the potential to impact green space or land uses that benefit quality of life and the environment? (Yes/No)**	**Qualitative Assessment - Facilitates or does not eliminate opportunities to implement planned nonmotorized facilities? (Yes/No)**
			Auto (Build Year)[1]	**Transit (Existing)[2]**		
Reduced Freeway - A	Yes - Potential for excess ROW to be used for new features/amenities in select locations; potential for aesthetic improvements to bridges and structures. Smaller roadway footprint will increase space available for potential features/amenities. Potential BRT stations would decrease excess ROW.	Yes - Managed lane and BRT would provide HOV and transit benefit. Potential BRT stations would increase transit access but also increase transit travel times. Opportunities for walkability/bikeabillity improvements.	**AM Peak:** 1,650,318 (-1.9%) **PM Peak:** 1,452,791 (-0.2%)	**BRT - 0:** 81,700 (+6.7%) **BRT - 1:** 82,300 (+7.5%) **BRT - 3:** 83,100 (+8.6%)	Yes - Potential for excess right of way to be used to expand green space in the corridor. Smaller roadway footprint will increase potential excess right of way. Potential BRT stations would decrease excess ROW.	Yes - Facilitates opportunities for locally planned walkability and bikeability improvements along and across the corridor.
Reconfigured Freeway - A	Yes - Potential for excess ROW to be used for new features/amenities in select locations; potential for aesthetic improvements to bridges and structures. Potential BRT stations would decrease excess ROW.	Yes - Managed lane and BRT would provide HOV and transit benefit. Potential BRT stations would increase transit access but also increase transit travel times. Opportunities for walkability/bikeabillity improvements.	**AM Peak:** 1,680,396 (-0.1%) **PM Peak:** 1,451,027 (-0.3%)	**BRT - 0:** 81,700 (+6.7%) **BRT - 1:** 82,300 (+7.5%) **BRT - 3:** 83,100 (+8.6%)	Yes - Potential for excess right of way to be used to expand green space in the corridor. Potential BRT stations would decrease excess ROW.	Yes - Facilitates opportunities for locally planned walkability and bikeability improvements along and across the corridor.
Expanded Freeway - A	Yes - Potential for excess ROW to be used for new features/amenities in select locations; potential for aesthetic improvements to bridges and structures. Larger roadway footprint will reduce space available for potential features/amenities. Potential BRT stations would decrease excess ROW.	Yes - Managed lane and BRT would provide HOV and transit benefit. Potential BRT stations would increase transit access but also increase transit travel times. Opportunities for walkability/bikeabillity improvements.	**AM Peak:** 1,746,908 (+3.9%) **PM Peak:** 1,463,195 (+0.5%)	**BRT - 0:** 81,700 (+6.7%) **BRT - 1:** 82,300 (+7.5%) **BRT - 3:** 83,100 (+8.6%)	Yes - Potential for excess right of way to be used to expand green space in the corridor. Larger roadway footprint will reduce potential excess right of way. Potential BRT stations would decrease excess ROW.	Yes - Facilitates opportunities for locally planned walkability and bikeability improvements along and across the corridor.
Expanded Freeway - B	Yes - Potential for excess ROW to be used for new features/amenities in select locations; potential for aesthetic improvements to bridges and structures. Larger roadway footprint will reduce space available for potential features/amenities.	Yes - Bus shoulder between downtowns would be restored. Opportunities for walkability/bikeabillity improvements.	**AM Peak:** 1,725,568 (+2.6%) **PM Peak:** 1,476,268 (+1.4%)	81,300 (+6.2%)	Yes - Potential for excess right of way to be used to expand green space in the corridor. Larger roadway footprint will reduce potential excess right of way.	Yes - Facilitates opportunities for locally planned walkability and bikeability improvements along and across the corridor.

1 Auto results are a simple average of all TAZs within a 2-mile buffer of the I-94 corridor and reflect 2040 job projections. 2040 data are considered 2045 forecasts for this project. This is consistent with the traffic volume approach, as described in the Approach to Developing the 2045 Design Year Traffic Forecasts (Pre-Decisional Draft, April 2022) technical memo.

2 Transit results calculated using 2020 census block groups. Assumed service frequency for all alternatives except no build is 10-minute peak headway, 15-minute off-peak headway. Due to data limitations, build year information is not available for transit at this time.

Alternative	Cost	Maintenance	Consistency with Adopted State and Regional Plans
	CRITERIA		
	Estimated Construction Cost	Estimated Maintenance Cost	Consistency with Adopted State and Regional Plans
	MEASURES		
	Dollars (cost range)[1]	Dollars (cost range)[2]	Qualitative Assessment
No Build - General Maintenance	$0	$XX-XX (To be discussed)	**MnSHIP (2023-2042)** Would not advance identified Investment Categories and Objective Areas. **Metro District Bicycle Plan** No bikeability improvements. **Statewide Pedestrian System Plan** No walkability improvements. **2040 TPP** TPP identifies managed lane for project corridor.
Maintenance - A	$330,300,000–$396,360,000	$XX-XX (To be discussed)	**MnSHIP (2023-2042)** *System Stewardship:* Would improve pavement and bridge condition, but would not address underlying infrastructure issues. *Critical Connections:* Limited benefit. *Climate Action:* Limited benefit. *Transportation Safety:* Limited benefit. *Healthy Equitable Communities:* Limited benefit. **Metro District Bicycle Plan** No MnDOT-led bikeability improvements. **Statewide Pedestrian System Plan** No MnDOT-led walkability improvements. Potential to advance Goal 4 through improvements to Sense of Place. **2040 TPP** TPP identifies managed lane for project corridor.
Maintenance - B	$1,579,400,000–$1,895,280,000	$XX-XX (To be discussed)	**MnSHIP (2023-2042)** *System Stewardship:* Pavement and bridge condition would be addressed. *Critical Connections:* Extended bus shoulders would improve transit mobility. Potential for bicycle and pedestrian improvements on reconstructed bridges. *Climate Action:* New infrastructure would be designed to improve climate resilience including flood mitigation. Potential for opportunities to incorporate improved stormwater management, native plantings, or other strategies. *Transportation Safety:* Safety for people in motorized vehicles would be improved compared to the no build. *Healthy Equitable Communities:* Potential to advance local priorities through cooperative agreements, enhanced landscaping, or other opportunities. **Metro District Bicycle Plan** Potential for improvements on reconstructed bridges (Strategies 1 &2), but unlikely to include new crossing locations. **Statewide Pedestrian System Plan** Potential for improvements on reconstructed bridges (Goals 2 & 3), but unlikely to include new crossing locations. Potential to advance Goal 4 through improvements to Sense of Place. **2040 TPP** TPP identifies managed lane for project corridor.

Alternative	Cost	Maintenance	Consistency with Adopted State and Regional Plans
	CRITERIA		
	Estimated Construction Cost	Estimated Maintenance Cost	Consistency with Adopted State and Regional Plans
	MEASURES		
	Dollars (cost range)[1]	Dollars (cost range)[2]	Qualitative Assessment
At-Grade - A	$1,829,100,000–$2,194,920,000	$XX-XX (To be discussed)	**MnSHIP (2023-2042)** *System Stewardship:* Pavement and bridge condition would be addressed. *Critical Connections:* Highway Mobility (including freight) would be impacted by the reduction in roadway capacity resulting from conversion to at-grade roadway. Potential to enhance Critical Connections through creation of opportunities for improving bicycle infrastructure and accessible pedestrian infrastructure. *Climate Action:* New infrastructure would be designed to improve climate resilience including flood mitigation. Potential for opportunities to incoporate improved stormwater management, native plantings, or other strategies. *Transportation Safety:* There are concerns with the ability of this alternative to improve safety for people in motorized vehicles compared to the no build. *Healthy Equitable Communities:* Potential to advance local priorities through cooperative agreements, enhanced landscaping, or other opportunities. **Metro District Bicycle Plan** While the alternative would include major investments in bicycle facilities along the corridor (Strategies 1 &2), new nonmotorized conflict points would be created at locations where at-grade crossings replace grade-separated crossings. Tier 1 EIS and Tier 2 environmental documents must identify specific improvements to improve bikeability. **Statewide Pedestrian System Plan** While the alternative would include major investments in pedestrian facilities along the corridor (Goals 2 & 3), new nonmotorized conflict points would be created at locations where at-grade crossings replace grade-separated crossings. Tier 1 EIS and Tier 2 environmental documents must identify specific improvements to improve walkability. Potential to advance Goal 4 through improvements to Sense of Place. **2040 TPP** TPP identifies managed lane for project corridor.
At-Grade - B	$1,829,100,000–$2,194,920,000	$XX-XX (To be discussed)	**MnSHIP (2023-2042)** *System Stewardship:* Pavement and bridge condition would be addressed. *Critical Connections:* Highway Mobility (including freight) would be impacted by the reduction in roadway capacity resulting from conversion to at-grade roadway. Potential to enhance Critical Connections through creation of opportunities for improving bicycle infrastructure and accessible pedestrian infrastructure. *Climate Action:* New infrastructure would be designed to improve climate resilience including flood mitigation. Potential for opportunities to incoporate improved stormwater management, native plantings, or other strategies. *Transportation Safety:* There are concerns with the ability of this alternative to improve safety for people in motorized vehicles compared to the no build. *Healthy Equitable Communities:* Potential to advance local priorities through cooperative agreements, enhanced landscaping, or other opportunities. **Metro District Bicycle Plan** While the alternative would include major investments in bicycle facilities along the corridor (Strategies 1 &2), new nonmotorized conflict points would be created at locations where at-grade crossings replace grade-separated crossings. Tier 1 EIS and Tier 2 environmental documents must identify specific improvements to improve bikeability. **Statewide Pedestrian System Plan** While the alternative would include major investments in pedestrian facilities along the corridor (Goals 2 & 3), new nonmotorized conflict points would be created at locations where at-grade crossings replace grade-separated crossings. Tier 1 EIS and Tier 2 environmental documents must identify specific improvements to improve walkability. Potential to advance Goal 4 through improvements to Sense of Place. **2040 TPP** TPP identifies managed lane for project corridor.

Alternative	Cost	Maintenance	Consistency with Adopted State and Regional Plans
	CRITERIA		
	Estimated Construction Cost	Estimated Maintenance Cost	Consistency with Adopted State and Regional Plans
	MEASURES		
	Dollars (cost range)[1]	Dollars (cost range)[2]	Qualitative Assessment
Local/Regional Roadways - A	$2,290,900,000–$2,749,080,000	$XX-XX (To be discussed)	**MnSHIP (2023-2042)** *System Stewardship:* Pavement and bridge condition would be addressed. *Critical Connections:* There are concerns with the ability of this alternative to address the mobility need (including freight) due to the reduction in mainline capacity. Potential to enhance Critical Connections through creation of opportunities for improving bicycle infrastructure and accessible pedestrian infrastructure. *Climate Action:* New infrastructure would be designed to improve climate resilience including flood mitigation. Potential for opportunities to incoporate improved stormwater management, native plantings, or other strategies. *Transportation Safety:* There are concerns with the ability of this alternative to improve safety for people in motorized vehicles compared to the no build. *Healthy Equitable Communities:* Potential to advance local priorities through cooperative agreements, enhanced landscaping, or other opportunities. **Metro District Bicycle Plan** Alternative provides opportunities to improve bikeability along and across I-94, a Tier 1/Tier 2 bicycle investment priority route (Strategies 1 &2). Tier 1 EIS and Tier 2 environmental documents must identify specific improvements to improve bikeability. **Statewide Pedestrian System Plan** Alternative provides opportunities to improve walkability along and across I-94, a Tier 1/Tier 2/Tier 3 priority area for walking (Goals 2 & 3). Tier 1 EIS and Tier 2 environmental documents must identify specific improvements to improve walkability. Potential to advance Goal 4 through improvements to Sense of Place. **2040 TPP** TPP identifies managed lane for project corridor.
Reduced Freeway - A		$XX-XX (To be discussed)	**MnSHIP (2023-2042)** *System Stewardship:* Pavement and bridge condition would be addressed. *Critical Connections:* There are concerns with the ability of this alternative to address the mobility need (including freight) due to the reduction in mainline capacity. Construction of managed lane is consistent with Highway Mobility investment category. Potential to enhance Critical Connections through creation of opportunities for improving bicycle infrastructure and accessible pedestrian infrastructure. *Climate Action:* New infrastructure would be designed to improve climate resilience including flood mitigation. Potential for opportunities to incoporate improved stormwater management, native plantings, or other strategies. *Transportation Safety:* Safety for people in motorized vehicles would be improved compared to the no build. *Healthy Equitable Communities:* Potential to advance local priorities through cooperative agreements, enhanced landscaping, or other opportunities. **Metro District Bicycle Plan** Alternative provides opportunities to improve bikeability along and across I-94, a Tier 1/Tier 2 bicycle investment priority route (Strategies 1 &2). Tier 1 EIS and Tier 2 environmental documents must identify specific improvements to improve bikeability. **Statewide Pedestrian System Plan** Alternative provides opportunities to improve walkability along and across I-94, a Tier 1/Tier 2/Tier 3 priority area for walking (Goals 2 & 3). Tier 1 EIS and Tier 2 environmental documents must identify specific improvements to improve walkability. Potential to advance Goal 4 through improvements to Sense of Place. **2040 TPP** Construction of managed lane is consistent with improvement identified for this corridor in TPP.
BRT - 0	$1,710,900,000–$2,053,080,000	$XX-XX (To be discussed)	
BRT - 1	$XX-XX (To be discussed)	$XX-XX (To be discussed)	
BRT - 3	$XX-XX (To be discussed)	$XX-XX (To be discussed)	

11003602

Alternative	Cost	Maintenance	Consistency with Adopted State and Regional Plans
	CRITERIA		
	Estimated Construction Cost	Estimated Maintenance Cost	Consistency with Adopted State and Regional Plans
	MEASURES		
	Dollars (cost range)[1]	Dollars (cost range)[2]	Qualitative Assessment
Reconfigured Freeway - A		$XX-XX (To be discussed)	**MnSHIP (2023-2042)** *System Stewardship:* Pavement and bridge condition would be addressed. *Critical Connections:* Construction of managed lane is consistent with Highway Mobility investment category. Potential to enhance Critical Connections through creation of opportunities for improving bicycle infrastructure and accessible pedestrian infrastructure. *Climate Action:* New infrastructure would be designed to improve climate resilience including flood mitigation. Potential for opportunities to incoporate improved stormwater management, native plantings, or other strategies. *Transportation Safety:* Safety for people in motorized vehicles would be improved compared to the no build. *Healthy Equitable Communities:* Potential to advance local priorities through cooperative agreements, enhanced landscaping, or other opportunities. **Metro District Bicycle Plan** Alternative provides opportunities to improve bikeability along and across I-94, a Tier 1/Tier 2 bicycle investment priority route (Strategies 1 &2). Tier 1 EIS and Tier 2 environmental documents must identify specific improvements to improve bikeability. **Statewide Pedestrian System Plan** Alternative provides opportunities to improve walkability along and across I-94, a Tier 1/Tier 2/Tier 3 priority area for walking (Goals 2 & 3). Tier 1 EIS and Tier2 environmental documents must identify specific improvements to improve walkability. Potential to advance Goal 4 through improvements to Sense of Place. **2040 TPP** Construction of managed lane is consistent with improvement identified for this corridor in TPP.
BRT - 0	$1,916,300,000–$2,299,560,000	$XX-XX (To be discussed)	
BRT - 1	$XX-XX (To be discussed)	$XX-XX (To be discussed)	
BRT - 3	$XX-XX (To be discussed)	$XX-XX (To be discussed)	
Expanded Freeway - A		$XX-XX (To be discussed)	**MnSHIP (2023-2042)** *System Stewardship:* Pavement and bridge condition would be addressed. *Critical Connections:* Construction of managed lane is consistent with Highway Mobility investment category. Potential to enhance Critical Connections through creation of opportunities for improving bicycle infrastructure and accessible pedestrian infrastructure. *Climate Action:* New infrastructure would be designed to improve climate resilience including flood mitigation. Potential for opportunities to incoporate improved stormwater management, native plantings, or other strategies. *Transportation Safety:* Safety for people in motorized vehicles would be improved compared to the no build. *Healthy Equitable Communities:* Potential to advance local priorities through cooperative agreements, enhanced landscaping, or other opportunities. **Metro District Bicycle Plan** Alternative provides opportunities to improve bikeability along and across I-94, a Tier 1/Tier 2 bicycle investment priority route (Strategies 1 &2). Tier 1 EIS and Tier 2 environmental documents must identify specific improvements to improve bikeability. **Statewide Pedestrian System Plan** Alternative provides opportunities to improve walkability along and across I-94, a Tier 1/Tier 2/Tier 3 priority area for walking (Goals 2 & 3). Tier 1 EIS and Tier2 environmental documents must identify specific improvements to improve walkability. Potential to advance Goal 4 through improvements to Sense of Place. **2040 TPP** Construction of managed lane is consistent with improvement identified for this corridor in TPP.
BRT - 0	$1,963,700,000–$2,356,440,000	$XX-XX (To be discussed)	
BRT - 1	$XX-XX (To be discussed)	$XX-XX (To be discussed)	
BRT - 3	$XX-XX (To be discussed)	$XX-XX (To be discussed)	

Alternative	Cost	Maintenance	Consistency with Adopted State and Regional Plans
	CRITERIA		
	Estimated Construction Cost	Estimated Maintenance Cost	Consistency with Adopted State and Regional Plans
	MEASURES		
	Dollars (cost range)[1]	Dollars (cost range)[2]	Qualitative Assessment
Expanded Freeway - B	$1,963,700,000–$2,356,440,000	$XX-XX (To be discussed)	**MnSHIP (2023-2042)** *System Stewardship:* Pavement and bridge condition would be addressed. *Critical Connections:* Increase in general purpose lane capacity is discouraged unless a managed lane is found to be infeasible or where the project is correcting lane continuity. Potential to enhance Critical Connections through creation of opportunities for improving bicycle infrastructure and accessible pedestrian infrastructure. *Climate Action:* New infrastructure would be designed to improve climate resilience including flood mitigation. Potential for opportunities to incoporate improved stomwater management, native plantings, or other strategies. *Transportation Safety:* There are concerns with the ability of this alternative to improve safety for people in motorized vehicles compared to the no build. *Healthy Equitable Communities:* Potential to advance local priorities through cooperative agreements, enhanced landscaping, or other opportunities. **Metro District Bicycle Plan** Alternative provides opportunities to improve bikeability along and across I-94, a Tier 1/Tier 2 bicycle investment priority route (Strategies 1 &2). Tier 1 EIS and Tier 2 environmental documents must identify specific improvements to improve bikeability. **Statewide Pedestrian System Plan** Alternative provides opportunities to improve walkability along and across I-94, a Tier 1/Tier 2/Tier 3 priority area for walking (Goals 2 & 3). Tier 1 EIS and Tier 2 environmental documents must identify specific improvements to improve walkability. Potential to advance Goal 4 through improvements to Sense of Place. **2040 TPP** TPP identifies managed lane for project corridor.

1 (to be added)
2 (to be added)

Appendix B – Evaluation Criteria Memo

Appendix C – Alternative Safety Analysis Memo

Appendix D – Cost Estimates Memo

Appendix E – Evaluation Summary Matrix

Alternative	Walkability and Bikeability	Safety for People in Motorized Vehicles	Infrastructure Condition	Mobility Summary
No Build - General Maint.	No walkability/bikeability improvements.	This alternative would not make any geometric or operational changes, so no change in the number or severity of crashes would be expected.	Pavement and bridge condition would NOT be addressed.	No improvement compared to no build.
Maintenance - A	Potential for improvements on reconstructed bridges, unlikely to include new crossings.	This alternative would not make any geometric or operational changes, so no change in the number or severity of crashes would be expected.	Pavement and bridge condition would NOT be addressed.	No improvement compared to no build.
Maintenance - B	Potential for improvements on reconstructed bridges, unlikely to include new crossings.	Widening the right shoulder is associated with a reduction in crashes of all types and severities.	Pavement and bridge condition would be addressed.	Bus shoulder provides transit benefit, no other improvements to mobility.
At-Grade - A	Potential for improvements to parallel and crossing facilities. Potential for new nonmotorized conflict points.	The expected fatal and serious injury crashes/day on the mainline and routes within one mile combined would increase 4.4% compared to the no build.	Pavement and bridge condition would be addressed.	Does not address mobility need, see mobility measures sub-table.
At-Grade - B	Potential for improvements to parallel and crossing facilities. Potential for new nonmotorized conflict points.	The expected fatal and serious injury crashes/day on the mainline and routes within one mile combined would increase 4.4% compared to the no build.	Pavement and bridge condition would be addressed.	Does not address mobility need, see mobility measures sub-table.
Local/Regional Roadways - A	Potential for improvements to parallel and crossing facilities.	The expected fatal and serious injury crashes/day on the mainline and routes within one mile combined would not change substantially compared to the no build. Total crashes/day would also decrease.	Pavement and bridge condition would be addressed.	Concerns with ability to address mobility need, see mobility measures sub-table.
Reduced Freeway - A				
BRT - 0	Potential for improvements to parallel and crossing facilities.	The expected fatal and serious injury crashes/day on the mainline and routes within one mile combined would decrease 2.8% compared to the no build. Total crashes/day would also decrease.	Pavement and bridge condition would be addressed.	Concerns with ability to address mobility need, see mobility measures sub-table.
BRT - 1	Potential for improvements to parallel and crossing facilities.	The expected fatal and serious injury crashes/day on the mainline and routes within one mile combined would decrease 2.8% compared to the no build. Total crashes/day would also decrease.	Pavement and bridge condition would be addressed.	Concerns with ability to address mobility need, see mobility measures sub-table.
BRT - 3	Potential for improvements to parallel and crossing facilities.	The expected fatal and serious injury crashes/day on the mainline and routes within one mile combined would decrease 2.8% compared to the no build. Total crashes/day would also decrease.	Pavement and bridge condition would be addressed.	Concerns with ability to address mobility need, see mobility measures sub-table.
Reconfigured Freeway - A				
BRT - 0	Potential for improvements to parallel and crossing facilities.	The expected fatal and serious injury crashes/day on the mainline and routes within one mile combined would not change substantially compared to the no build, despite an expected increase in traffic on the mainline. Total crashes/day would also not change substantially.	Pavement and bridge condition would be addressed.	Addresses mobility need, see mobility measures sub-table.
BRT - 1	Potential for improvements to parallel and crossing facilities.	The expected fatal and serious injury crashes/day on the mainline and routes within one mile combined would not change substantially compared to the no build, despite an expected increase in traffic on the mainline. Total crashes/day would also not change substantially.	Pavement and bridge condition would be addressed.	Addresses mobility need, see mobility measures sub-table.
BRT - 3	Potential for improvements to parallel and crossing facilities.	The expected fatal and serious injury crashes/day on the mainline and routes within one mile combined would not change substantially compared to the no build, despite an expected increase in traffic on the mainline. Total crashes/day would also not change substantially.	Pavement and bridge condition would be addressed.	Addresses mobility need, see mobility measures sub-table.
Expanded Freeway - A				
BRT - 0	Potential for improvements to parallel and crossing facilities.	The expected fatal and serious injury crashes/day on the mainline and routes within one mile combined would not change substantially compared to the no build, despite an expected increase in traffic on the mainline. Total crashes/day would increase, consistent with increased traffic.	Pavement and bridge condition would be addressed.	Addresses mobility need, see mobility measures sub-table.
BRT - 1	Potential for improvements to parallel and crossing facilities.	The expected fatal and serious injury crashes/day on the mainline and routes within one mile combined would not change substantially compared to the no build, despite an expected increase in traffic on the mainline. Total crashes/day would increase, consistent with increased traffic.	Pavement and bridge condition would be addressed.	Addresses mobility need, see mobility measures sub-table.
BRT - 3	Potential for improvements to parallel and crossing facilities.	The expected fatal and serious injury crashes/day on the mainline and routes within one mile combined would not change substantially compared to the no build, despite an expected increase in traffic on the mainline. Total crashes/day would increase, consistent with increased traffic.	Pavement and bridge condition would be addressed.	Addresses mobility need, see mobility measures sub-table.
Expanded Freeway - B	Potential for improvements to parallel and crossing facilities.	The expected fatal and serious injury crashes/day on the mainline and routes within one mile combined would not change substantially compared to the no build, despite an expected increase in traffic on the mainline. Total crashes/day would increase, consistent with increased traffic.	Pavement and bridge condition would be addressed.	Addresses mobility need, see mobility measures sub-table.

Legend:

- Meets Purpose & Need
- Concerns with ability to meet Purpose & Need
- Does not meet Purpose & Need

11003609

Alternative	Project Needs: Mobility for People in Motorized Vehicles									
	Systemwide Mobility	Corridor Mobility	Corridor Throughput	Interchange Area Mobility	Interchange Area Throughput	Freight Mobility	Travel Time Reliability	Connectivity	Transit Mobility	Transit Reliability
No Build - General Maint.	◑	●	●	◑	●	●	◑	◑	○	◑
Maintenance - A	◑	●	●	◑	●	●	◑	◑	○	◑
Maintenance - B	◑	●	●	◑	●	●	◑	◑	◑	◑
At-Grade - A	○	○	○	○	○	○	○	○	◑	○
At-Grade - B	○	○	○	○	○	○	○	○	◑	○
Local/Regional Roadways - A	○	◑	◑	○	◑	◑	○	●	◑	○
Reduced Freeway - A										
BRT - 0	○	◑	◑	○	◑	◑	○	◑	●	○
BRT - 1	○	◑	◑	○	◑	◑	○	◑	●	○
BRT - 3	○	◑	◑	○	◑	◑	○	◑	●	○
Reconfigured Freeway - A										
BRT - 0	○	●	●	○	●	●	◑	◑	●	◑
BRT - 1	○	●	●	○	●	●	◑	◑	●	◑
BRT - 3	○	●	●	○	●	●	◑	◑	●	◑
Expanded Freeway - A										
BRT - 0	●	●	●	●	●	●	●	◑	●	●
BRT - 1	●	●	●	●	●	●	●	◑	●	●
BRT - 3	●	●	●	●	●	●	●	◑	●	●
Expanded Freeway - B	○	●	●	○	●	●	●	◑	◑	●
Legend:	○ Increase in systemwide VHT and PHT compared to no build	○ 20-25 mph (Decreased peak period mainline speed compared to no build)	○ <300,000	○ Decrease in interchange area PHT and VHT compared to no build.	○ <1 million	○ Major increase in max travel time	○ Mean TTI increase compared to no build	○ Increase in number of access points compared to no build.	○ >20 minutes (corridor travel time)	○ Mean TTI increase compared to no build
	◑ Increase in systemwide VHT and PHT compared to no build	◑ 30-45 mph (Decreased peak period mainline speed compared to no build)	◑ 300,000-400,000	◑ No change in interchange area PHT and VHT compared to no build.	◑ 1-2.5 million	◑ Slight increase in max travel time	◑ Mean TTI similar to no build	◑ No change in number of access points compared to no build.	◑ 15-20 minutes (corridor travel time)	◑ Mean TTI similar to no build
	● Decrease in systemwide VHT and PHT compared to no build	● 40-60 mph (Peak period mainline speed comparable to no build)	● >400,000	● Increase in interchange area PHT and VHT compared to no build.	● >2.5 million	● Travel times consistent with no build	● Mean TTI decrease compared to no build	● Decrease in number of access points compared to no build.	● <15 minutes (corridor travel time)	● Mean TTI decrease compared to no build

Alternative	Social, Economic, and Environmental (SEE) Impacts							
	EJ - Access to Opportunity	EJ - Exposure to Pollution	EJ - Relocation Potential	Historic/Arch./Cemetery	Section 4(f)	Section 6(f)	Contaminated Properties	Right of Way
No Build - General Maint.	Existing access locations would be maintained. No change in access to land use.	NA	Limited relocation potential within EJ communities.	No impacts anticipated.	No impacts anticipated.	No impacts anticipated.	No impacts anticipated.	No impacts anticipated.
Maintenance - A	Existing access locations would be maintained. No change in access to land use.	NA	Limited relocation potential within EJ communities.	No impacts anticipated.	No impacts anticipated.	No impacts anticipated.	No impacts anticipated.	No impacts anticipated.
Maintenance - B	Existing access locations would be maintained. No change in access to land use.	Increase in impervious surface has potential to increase stormwater runoff within EJ communities.	Limited relocation potential within EJ communities.	Maintenance – B has low potential for adverse effects to known historic properties and known or suspected cemeteries.	Potential impacts identified; no concerns with ability to minimize or mitigate.	No impacts anticipated.	Potential impacts identified; no concerns with ability to minimize or mitigate.	No impacts anticipated.
At-Grade - A	New at-grade access locations would be added to the new roadway, including within EJ communities. Direct access to key destinations in the corridor would increase, however travel times in the corridor will increase due to the addition of new access points. New BRT service would improve access to transit within EJ communities.	Major change in vertical alignment has potential to increase size of areas within EJ communities impacted by traffic noise. Due to reduced roadway capacity, traffic volumes and associated noise pollution on adjacent parallel arterials in EJ communities will increase. Decrease in impervious surface has potential to decrease stormwater runoff within EJ communities.	Limited relocation potential within EJ communities.	The mainline improvements for the At-Grade alternatives have moderate potential for adverse effect to known historic properties, and low to moderate potential for adverse effect to known or suspected cemeteries.	Potential impacts identified; no concerns with ability to minimize or mitigate.	No impacts anticipated.	Potential impacts identified; no concerns with ability to minimize or mitigate.	No impacts anticipated.
At-Grade - B	New at-grade access locations would be added to the new roadway, including within EJ communities. Direct access to key destinations in the corridor would increase, however travel times in the corridor will increase due to the addition of new access points. New BRT service would improve access to transit within EJ communities.	Major change in vertical alignment has potential to increase size of areas within EJ communities impacted by traffic noise. Due to reduced roadway capacity, traffic volumes and associated noise pollution on adjacent parallel arterials in EJ communities will increase. Decrease in impervious surface has potential to decrease stormwater runoff within EJ communities.	Limited relocation potential within EJ communities.	The mainline improvements for the At-Grade alternatives have moderate potential for adverse effect to known historic properties, and low to moderate potential for adverse effect to known or suspected cemeteries.	Potential impacts identified; no concerns with ability to minimize or mitigate.	No impacts anticipated.	Potential impacts identified; no concerns with ability to minimize or mitigate.	No impacts anticipated.
Local/Regional Roadways - A	Multiple existing freeway access points within EJ communities would be removed. Direct access to key destinations in the corridor would decrease, however travel times in the corridor may decrease due to the removal of access points.	Major change in freeway configuration has the potential to shift traffic volumes closer to or further away from noise sensitive receptors within EJ communities. Due to reduced freeway capacity, traffic volumes and associated noise pollution on adjacent parallel arterials in EJ communities will increase. Decrease in impervious surface has potential to decrease stormwater runoff within EJ communities.	Limited relocation potential within EJ communities.	The mainline improvements for Local/Regional Roadways – A have low to moderate potential for adverse effect to known historic properties, and moderate potential for adverse effect to known or suspected cemeteries.	Potential impacts identified; no concerns with ability to minimize or mitigate.	No impacts anticipated.	Potential impacts identified; no concerns with ability to minimize or mitigate.	No impacts anticipated.
Reduced Freeway - A	Existing access locations would be maintained. No change in access to land use.	Due to reduced freeway capacity, traffic volumes and associated noise pollution on adjacent parallel arterials in EJ communities will increase. Decrease in impervious surface has potential to decrease stormwater runoff within EJ communities.	Limited relocation potential within EJ communities based on mainline footprint; potential for residential and/or commercial relocation in the vicinity of 25th/27th Ave station.					
BRT - 0	No transit stations provided in corridor.		Limited relocation potential within EJ communities.	The mainline improvements for Reduced Freeway – A have low potential for adverse effect to known historic properties and cemeteries, as does the BRT – 1 sub-alternative.	Potential impacts identified; no concerns with ability to minimize or mitigate.	No impacts anticipated.	Potential impacts identified; no concerns with ability to minimize or mitigate.	No impacts anticipated.
BRT - 1			Limited relocation potential within EJ communities.	The mainline improvements for Reduced Freeway – A have low potential for adverse effect to known historic properties and cemeteries, as does the BRT – 1 sub-alternative.	Potential impacts identified; no concerns with ability to minimize or mitigate.	No impacts anticipated.	Potential impacts identified; no concerns with ability to minimize or mitigate.	No impacts anticipated.
BRT - 3	25th/27th Ave and Dale St stations would improve access to transit within EJ communities.		Potential for residential and/or commercial relocation in the vicinity of 25th/27th Ave station.	There is moderate potential for adverse effect to known or suspected cemeteries in the vicinity of Dale St with BRT – 3.	Potential impacts identified; no concerns with ability to minimize or mitigate.	No impacts anticipated.	Potential impacts identified; no concerns with ability to minimize or mitigate.	ROW acquisition and relocations anticipated.
Reconfigured Freeway - A	Existing access locations would be maintained. No change in access to land use.	Anticipated increase in roadway capacity has the potential to increase noise pollution in EJ communities. Increase in impervious surface has potential to increase stormwater runoff within EJ communities.	Limited relocation potential within EJ communities based on mainline footprint; potential for residential and/or commercial relocation in the vicinity of 25th/27th Ave station.					
BRT - 0	No transit stations provided in corridor.		Limited relocation potential within EJ communities.	The mainline improvements for Reconfigured Freeway – A have low potential for adverse effect to known historic properties and cemeteries, as does the BRT – 1 sub-alternative.	Potential impacts identified; no concerns with ability to minimize or mitigate.	No impacts anticipated.	Potential impacts identified; no concerns with ability to minimize or mitigate.	No impacts anticipated.
BRT - 1			Limited relocation potential within EJ communities.	The mainline improvements for Reconfigured Freeway – A have low potential for adverse effect to known historic properties and cemeteries, as does the BRT – 1 sub-alternative.	Potential impacts identified; no concerns with ability to minimize or mitigate.	No impacts anticipated.	Potential impacts identified; no concerns with ability to minimize or mitigate.	No impacts anticipated.
BRT - 3	25th/27th Ave and Dale St stations would improve access to transit within EJ communities.		Potential for residential and/or commercial relocation in the vicinity of 25th/27th Ave station.	There is moderate potential for adverse effect to known or suspected cemeteries in the vicinity of Dale St with BRT – 3.	Potential impacts identified; no concerns with ability to minimize or mitigate.	No impacts anticipated.	Potential impacts identified; no concerns with ability to minimize or mitigate.	ROW acquisition and relocations anticipated.
Expanded Freeway - A	Existing access locations would be maintained. No change in access to land use.	Increase in roadway capacity has the potential to increase noise pollution in EJ communities. Increase in impervious surface has potential to increase stormwater runoff within EJ communities.	Limited relocation potential within EJ communities based on mainline footprint; potential for residential and/or commercial relocation in the vicinity of 25th/27th Ave station.					
BRT - 0	No transit stations provided in corridor.		Limited relocation potential within EJ communities.	The mainline improvements for Expanded Freeway – A have low potential for adverse effect to known historic properties and moderate potential for impacts to known or suspected cemeteries.	Potential impacts identified; no concerns with ability to minimize or mitigate.	No impacts anticipated.	Potential impacts identified; no concerns with ability to minimize or mitigate.	ROW acquisition anticipated.
BRT - 1			Limited relocation potential within EJ communities.	There is moderate potential for adverse effect to known or suspected cemeteries in transit station areas with BRT – 1.	Potential impacts identified; no concerns with ability to minimize or mitigate.	No impacts anticipated.	Potential impacts identified; no concerns with ability to minimize or mitigate.	ROW acquisition anticipated.
BRT - 3	25th/27th Ave and Dale St stations would improve access to transit within EJ communities.		Potential for residential and/or commercial relocation in the vicinity of 25th/27th Ave station.	There is moderate potential for adverse effect to known or suspected cemeteries in transit station areas with BRT – 3.	Potential impacts identified; no concerns with ability to minimize or mitigate.	No impacts anticipated.	Potential impacts identified; no concerns with ability to minimize or mitigate.	ROW acquisition and relocations anticipated.
Expanded Freeway - B	Existing access locations would be maintained. No change in access to land use.	Increase in roadway capacity has the potential to increase noise pollution in EJ communities. Increase in impervious surface has potential to increase stormwater runoff within EJ communities.	Limited relocation potential within EJ communities.	The mainline improvements for Expanded Freeway – B have low potential for adverse effect to known historic properties and moderate potential for impacts to known or suspected cemeteries.	Potential impacts identified; no concerns with ability to minimize or mitigate.	No impacts anticipated.	Potential impacts identified; no concerns with ability to minimize or mitigate.	ROW acquisition anticipated.

Legend:

- Improvement compared to no build OR limited potential for impacts
- Mix of impacts and benefits OR greater potential for impacts
- Greatest potential for impacts

Alternative	Noise	Water Pollution/Stormwater	Air Quality	T & E Species	Wetlands
No Build - General Maint.	No change compared to no build.	No change compared to no build.	Project not likely to be considered regionally significant.	No impacts anticipated.	No impacts anticipated.
Maintenance - A	No change compared to no build.	No change compared to no build.	Project not likely to be considered regionally significant.	No impacts anticipated.	No impacts anticipated.
Maintenance - B	No change compared to no build.	Impervious surface increase compared to no build (<15 acres).	Project not likely to be considered regionally significant.	Potential impacts to Rusty Patched Bumble Bee (RPBB) habitat.	No impacts anticipated.
At-Grade - A	Major change in vertical alignment will reduce distance between traffic and noise sensitive receptors and potentially increase area of traffic noise impacts.	Impervious surface decrease compared to no build.	Project likely to be considered regionally significant.	Potential impacts to Rusty Patched Bumble Bee (RPBB) habitat.	Potential impacts identified; no concerns with ability to minimize or mitigate.
At-Grade - B	Major change in vertical alignment will reduce distance between traffic and noise sensitive receptors and potentially increase area of traffic noise impacts.	Impervious surface decrease compared to no build.	Project likely to be considered regionally significant.	Potential impacts to Rusty Patched Bumble Bee (RPBB) habitat.	Potential impacts identified; no concerns with ability to minimize or mitigate.
Local/Regional Roadways - A	Yes - Potential to increase traffic volumes on local system adjacent to existing at-grade land uses.	Impervious surface decrease compared to no build.	Project likely to be considered regionally significant.	Potential impacts to Rusty Patched Bumble Bee (RPBB) habitat.	Potential impacts identified; no concerns with ability to minimize or mitigate.
Reduced Freeway - A	Total number of travel lanes would decrease.				
BRT - 0		Impervious surface decrease compared to no build.	Project likely to be considered regionally significant.	Potential impacts to Rusty Patched Bumble Bee (RPBB) habitat.	Potential impacts identified; no concerns with ability to minimize or mitigate.
BRT - 1		Impervious surface decrease compared to no build.	Project likely to be considered regionally significant.	Potential impacts to Rusty Patched Bumble Bee (RPBB) habitat.	Potential impacts identified; no concerns with ability to minimize or mitigate.
BRT - 3		Impervious surface decrease compared to no build.	Project likely to be considered regionally significant.	Potential impacts to Rusty Patched Bumble Bee (RPBB) habitat.	Potential impacts identified; no concerns with ability to minimize or mitigate.
Reconfigured Freeway - A	One travel lane would be added for short segments that currently have 3 travel lanes.				
BRT - 0		Impervious surface increase compared to no build (15-30 acres).	Project likely to be considered regionally significant.	Potential impacts to Rusty Patched Bumble Bee (RPBB) habitat.	Potential impacts identified; no concerns with ability to minimize or mitigate.
BRT - 1		Impervious surface increase compared to no build (15-30 acres).	Project likely to be considered regionally significant.	Potential impacts to Rusty Patched Bumble Bee (RPBB) habitat.	Potential impacts identified; no concerns with ability to minimize or mitigate.
BRT - 3		Impervious surface increase compared to no build (15-30 acres).	Project likely to be considered regionally significant.	Potential impacts to Rusty Patched Bumble Bee (RPBB) habitat.	Potential impacts identified; no concerns with ability to minimize or mitigate.
Expanded Freeway - A	Total number of travel lanes would increase.				
BRT - 0		Impervious surface increase compared to no build (>30 acres).	Project likely to be considered regionally significant.	Potential impacts to Rusty Patched Bumble Bee (RPBB) habitat.	Potential impacts identified; no concerns with ability to minimize or mitigate.
BRT - 1		Impervious surface increase compared to no build (>30 acres).	Project likely to be considered regionally significant.	Potential impacts to Rusty Patched Bumble Bee (RPBB) habitat.	Potential impacts identified; no concerns with ability to minimize or mitigate.
BRT - 3		Impervious surface increase compared to no build (>30 acres).	Project likely to be considered regionally significant.	Potential impacts to Rusty Patched Bumble Bee (RPBB) habitat.	Potential impacts identified; no concerns with ability to minimize or mitigate.
Expanded Freeway - B	Total number of travel lanes would increase.	Impervious surface increase compared to no build (>30 acres).	Project likely to be considered regionally significant.	Potential impacts to Rusty Patched Bumble Bee (RPBB) habitat.	Potential impacts identified; no concerns with ability to minimize or mitigate.

Legend:

Alternative	Goals & Livability: Sense of Place	Goals & Livability: Equity	Goals & Livability: Economic Vitality	Goals & Livability: Public Health and the Environment	Goals & Livability: Connectivity
No Build - General Maint.	No build	No build	No build	No build	No build - Does not eliminate opportunities for local agencies to implement planned nonmotorized facilities.
Maintenance - A	Potential for excess ROW to be used for new features/amenities in select locations.	No improvement compared to no build.	No improvement compared to no build for auto or transit.	Potential for excess right of way to be used to expand green space in the corridor.	Does not eliminate opportunities for local agencies to implement planned nonmotorized facilities.
Maintenance - B	Potential for excess ROW to be used for new features/amenities in select locations; potential for aesthetic improvements to bridges and structures.	Bus shoulder between downtowns would be restored, providing a transit benefit. Opportunities for walkability/bikeability improvements.	No improvement compared to no build for auto, slight increase for transit.	Potential for excess right of way to be used to expand green space in the corridor.	Does not eliminate opportunities for local agencies to implement planned nonmotorized facilities.
At-Grade - A	Potential for excess ROW to be used for new features/amenities in select locations. Potential for additional amenities that would not be compatible with freeway alternatives.	Dedicated bus lanes would provide a transit benefit (more beneficial than bus shoulders). Opportunities for walkability/bikeability improvements.	Decrease in number of jobs accessible in both AM and PM peak for auto, slight increase for transit.	Potential for excess right of way to be used to expand green space in the corridor. Potential for additional amenities that would not be compatible with freeway alternatives.	Facilitates opportunities for locally planned walkability and bikeability improvements along the corridor, however proposed improvements at existing grade-separated crossings may be in conflict with conversion to at-grade intersections.
At-Grade - B	Potential for excess ROW to be used for new features/amenities in select locations. Potential for additional amenities that would not be compatible with freeway alternatives.	Dedicated bus lanes would provide a transit benefit (more beneficial than bus shoulders). Opportunities for walkability/bikeability improvements.	Decrease in number of jobs accessible in both AM and PM peak for auto, slight increase for transit.	Potential for excess right of way to be used to expand green space in the corridor. Potential for additional amenities that would not be compatible with freeway alternatives.	Facilitates opportunities for locally planned walkability and bikeability improvements along the corridor, however proposed improvements at existing grade-separated crossings may be in conflict with conversion to at-grade intersections.
Local/Regional Roadways - A	Potential for excess ROW to be used for new features/amenities in select locations; potential for aesthetic improvements to bridges and structures.	Bus shoulder between downtowns would be restored, providing a transit benefit. Opportunities for walkability/bikeability improvements.	Decrease in number of jobs accessible in both AM and PM peak for auto with 3 access points and AM peak with 4 access points. Slight increase in PM peak with 4 access points. Slight increase for transit.	Potential for excess right of way to be used to expand green space in the corridor.	Facilitates opportunities for locally planned walkability and bikeability improvements along and across the corridor, however the complexity of the freeway and frontage road design may preclude some new or existing crossing locations.
Reduced Freeway - A	Potential for excess ROW to be used for new features/amenities in select locations; potential for aesthetic improvements to bridges and structures. Smaller roadway footprint will increase space available for potential features/amenities. Potential BRT stations would decrease excess ROW.	Managed lane and BRT would provide HOV and transit benefit (more beneficial than bus shoulders). Number of BRT stations presents a tradeoff between transit access and travel time. Opportunities for walkability/bikeability improvements.	Slight decrease in number of jobs accessible in AM and PM peak for auto. Slight increase for transit.	Potential for excess right of way to be used to expand green space in the corridor. Smaller roadway footprint will increase potential excess right of way. Potential BRT stations would decrease excess ROW.	Facilitates opportunities for locally planned walkability and bikeability improvements along and across the corridor.
BRT - 0			(See Goals & Livability data table)		
BRT - 1	Potential BRT station would decrease excess ROW. One station would be a small impact in the context of the whole corridor.		(See Goals & Livability data table)	Potential BRT station would decrease excess ROW. One station would be a small impact in the context of the whole corridor.	
BRT - 3	Potential BRT stations would decrease excess ROW. Three stations would result in more substantial impacts compared to one station.		(See Goals & Livability data table)	Potential BRT stations would decrease excess ROW. Three stations would result in more substantial impacts compared to one station.	
Reconfigured Freeway - A	Potential for excess ROW to be used for new features/amenities in select locations; potential for aesthetic improvements to bridges and structures. Potential BRT stations would decrease excess ROW.	Managed lane and BRT would provide HOV and transit benefit (more beneficial than bus shoulders). Number of BRT stations presents a tradeoff between transit access and travel time. Opportunities for walkability/bikeability improvements.	Number of jobs accessible in both AM and PM peak for auto similar to no build, slight increase for transit.	Potential for excess right of way to be used to expand green space in the corridor. Potential BRT stations would decrease excess ROW.	Facilitates opportunities for locally planned walkability and bikeability improvements along and across the corridor.
BRT - 0			(See Goals & Livability data table)		
BRT - 1	Potential BRT station would decrease excess ROW. One station would be a small impact in the context of the whole corridor.		(See Goals & Livability data table)	Potential BRT station would decrease excess ROW. One station would be a small impact in the context of the whole corridor.	
BRT - 3	Potential BRT stations would decrease excess ROW. Three stations would result in more substantial impacts compared to one station.		(See Goals & Livability data table)	Potential BRT stations would decrease excess ROW. Three stations would result in more substantial impacts compared to one station.	
Expanded Freeway - A	Potential for excess ROW to be used for new features/amenities in select locations; potential for aesthetic improvements to bridges and structures. Larger roadway footprint will reduce space available for potential features/amenities. Potential BRT stations would decrease excess ROW.	Managed lane and BRT would provide HOV and transit benefit (more beneficial than bus shoulders). Number of BRT stations presents a tradeoff between transit access and travel time. Opportunities for walkability/bikeability improvements.	Increase in number of jobs accessible in AM peak for auto, slight increase in PM peak. Slight increase for transit.	Potential for excess right of way to be used to expand green space in the corridor. Larger roadway footprint will reduce potential excess right of way. Potential BRT stations would decrease excess ROW.	Facilitates opportunities for locally planned walkability and bikeability improvements along and across the corridor.
BRT - 0			(See Goals & Livability data table)		
BRT - 1	Potential BRT station would decrease excess ROW. One station would be a small impact in the context of the whole corridor.		(See Goals & Livability data table)	Potential BRT station would decrease excess ROW. One station would be a small impact in the context of the whole corridor.	
BRT - 3	Potential BRT stations would decrease excess ROW. Three stations would result in more substantial impacts compared to one station.		(See Goals & Livability data table)	Potential BRT stations would decrease excess ROW. Three stations would result in more substantial impacts compared to one station.	
Expanded Freeway - B	Potential for excess ROW to be used for new features/amenities in select locations; potential for aesthetic improvements to bridges and structures. Larger roadway footprint will reduce space available for potential features/amenities.	Bus shoulder between downtowns would be restored, providing a transit benefit. Opportunities for walkability/bikeability improvements.	Increase in number of jobs accessible in both AM and PM peak for auto, slight increase for transit.	Potential for excess right of way to be used to expand green space in the corridor. Larger roadway footprint will reduce potential excess right of way.	Facilitates opportunities for locally planned walkability and bikeability improvements along and across the corridor.

Legend:

- High potential to advance project goals
- Moderate potential to advance project goals
- Limited potential to advance project goals

Alternative	Additional Considerations: Construction Cost	Maint. Cost	Consistency with Adopted State and Regional Plans			Tier 1 DEIS Recommendation	Rationale
No Build - General Maint.	$0	No data		Potential to advance plan goals.		Retain	Required for comparison to build alternatives.
Maintenance - A	$330 M–$396 M	No data		Potential to advance plan goals.		Dismiss	Does not meet purpose and need.
Maintenance - B	$1.58 B–$1.9 B	No data		Potential to advance plan goals.			
At-Grade - A	$1.83 B–$2.19 B	No data		Potential to advance plan goals.			
At-Grade - B	$1.83 B–$2.19 B	No data		Potential to advance plan goals.			
Local/Regional Roadways - A	$2.29 B–$2.75 B	No data		Potential to advance plan goals.			
Reduced Freeway - A							
BRT - 0	$1.71 B–$2.05 B	No data		Potential to advance plan goals.			
BRT - 1	No data	No data		Potential to advance plan goals.			
BRT - 3	No data	No data		Potential to advance plan goals.			
Reconfigured Freeway - A							
BRT - 0	$1.92 B–$2.3 B	No data		Potential to advance plan goals.			
BRT - 1	No data	No data		Potential to advance plan goals.			
BRT - 3	No data	No data		Potential to advance plan goals.			
Expanded Freeway - A							
BRT - 0	$1.96 B–$2.36 B	No data		Potential to advance plan goals.			
BRT - 1	No data	No data		Potential to advance plan goals.			
BRT - 3	No data	No data		Potential to advance plan goals.			
Expanded Freeway - B	$1.96 B–$2.36 B	No data		Potential to advance plan goals.			

Legend:

(yellow)	Potential to advance plan goals.

2024

Rethinking I-94: Preliminary Traffic and Transit Analysis of Alternatives Memo

January 2024

Table of Contents

Table of Tables ii
Table of Figures iii
Executive Summary 1
Introduction 7
How This Memo Informs What's Next 8
Safety 9
Traffic and Transit Modeling Tools 10
Regional Travel Demand Model Benefits and Limitations 10
Rethinking I-94 Transit Scoping Idea Exploration and Modeling 11
Transit Evaluation Criteria 11
Ridership Sensitivity Analysis (Light Rail) 12
Project Area 13
Adjacent Road Network 15
Lowry Hill Tunnel 15
Rethinking I-94 Alternatives 17
No Build, Maintenance A, and Maintenance B 17
At-Grade Roadway A and At-Grade Roadway B 19
Local/Regional Roadways 19
Reduced Freeway 19
Reconfigured Freeway 24
Expanded Freeway A 24
Expanded Freeway B 24
Planning Level Measures of Effectiveness and Other Notable Travel Trends and Patterns 28
Measures of Effectiveness 28
Other Notable Travel Trends and Patterns 29
Modeling Results 31
No Build/Maintenance A 32
Maintenance B 43
At Grade Roadways (A and B) 44
Local/Regional Roadways 54

Reduced Freeway 60
Reconfigured Freeway 67
Expanded Freeway A 73
Expanded Freeway B 79
Other Notable Travel Trends and Patterns 85
Summary Tables 93
Conclusion 93
Appendix A – Transit Study Executive Summary 97
Executive Summary for Technical Memorandum Rethinking I-94 Transit Scoping and Idea Exploration 97

Table of Tables

Table 1: Alternatives Considered in the Scoping Phase 2
Table 2: Measures of Effectiveness Considered in the Preliminary Traffic Analysis 3
Table 3: Summary of Comparative Evaluation of Alternatives Compared to 2045 No Build 4
Table 4: Summary of Preliminary Traffic/Transit Analysis of 2045 Alternatives – Detailed Numbers 5
Table 5: Summary of Preliminary Traffic/Transit Analysis of Alternatives – Percent Change Compared to 2045 No Build 6
Table 6: Rethinking I-94 Purpose and Need and Statement of Goals 8
Table 7: 2045 No Build Summary 32
Table 8: Results for Maintenance B Alternative 43
Table 9: Results for At Grade Roadway Alternatives 44
Table 10: Results for Local/Regional Roadway Alternative 54
Table 11: Results for Reduced Freeway Alternative 60
Table 12: Results for Reconfigured Freeway Alternative 67
Table 13: Results for Expanded Freeway A Alternative 73
Table 14: Results for Expanded Freeway B Alternative 79
Table 15: Congestion on Segments Approaching the Lowry Hill Tunnel 92
Table 16: Summary of Comparative Evaluation of Alternatives Compared to 2045 No Build 94
Table 17: Summary of Preliminary Traffic/Transit Analysis of 2045 Alternatives – Detailed Numbers 95
Table 18: Summary of Preliminary Traffic/Transit Analysis of Alternatives – Percent Change Compared to 2045 No Build 96

Table of Figures

Figure 1: Rethinking I-94 Project Schedule 7
Figure 2: Project Area Location 13
Figure 3: Communities Adjacent to and Near the I-94 Project Corridor........ 14
Figure 4: Adjacent Road Network Near the I-94 Project Corridor 16
Figure 5: No Build, Maintenance A, and Maintenance B 18
Figure 6: At-Grade Roadway A 20
Figure 7: At-Grade Roadway B........ 21
Figure 8: Local/Regional Roadways........ 22
Figure 9: Reduced Freeway 23
Figure 10: Reconfigured Freeway........ 25
Figure 11: Expanded Freeway A 26
Figure 12: Expanded Freeway B 27
Figure 13: Roadway Capacity / Comparison to No Build 31
Figure 14: 2045 Annual Average Daily Traffic (AADT) 33
Figure 15: 2045 Mainline Congested Segments for No Build 34
Figure 16: 2045 No Build Traffic Volumes 35
Figure 17: 2045 No Build Volume to Capacity Ratios 37
Figure 18: 2045 Peak Period Vehicle Speeds 38
Figure 19: 2045 Average Peak Period Transit Travel Time 39
Figure 20: 2045 Vehicle Throughput........ 40
Figure 21: 2045 Person Throughput........ 41
Figure 22: 2045 VMT on I-94 and Supporting Roadway Network........ 42
Figure 23: 2045 Mainline Congested Segments for At-Grade Roadway 45
Figure 24: Change in 2045 Daily Traffic Volumes between At Grade Roadway and No Build........ 46
Figure 25: Percent Change in 2045 Daily Traffic Volumes between At Grade Roadway and No Build 47
Figure 26: 2045 At-Grade Volume to Capacity (v/c) Ratio 48
Figure 27: Percent Change in 2045 VMT on Parallel Roadways........ 50
Figure 28: Percent Change in 2045 AADT on Roadways Crossing I-94........ 51
Figure 29: Percent Change in 2045 daily traffic volumes on Local Intersections Connected to I-94 52
Figure 30: 2045 Twin Cities Metropolitan Area VMT........ 53
Figure 31: 2045 Mainline Congested Segments for Regional Roadway of Local/Regional Roadways........ 55
Figure 32: Change in 2045 Daily Traffic Volumes between Local/Regional Roadway and No Build 57
Figure 33: Percent Change in 2045 Daily Traffic Volumes between Local/Regional Roadway and No Build 58
Figure 34: 2045 Local/Regional Roadway Volume to Capacity (v/c) Ratio........ 59
Figure 35: 2045 Mainline Congested Segments for Reduced Freeway........ 61
Figure 36: Change in 2045 Daily Traffic Volumes between Reduced Freeway and No Build 63
Figure 37: Percent Change in 2045 Daily Traffic Volumes between Reduced Freeway and No Build........ 64
Figure 38: 2045 Reduced Freeway Volume to Capacity (v/c) Ratio 65
Figure 39: 2045 Mainline Congested Segments for Reconfigured Freeway 68
Figure 40: Change in 2045 Daily Traffic Volumes between Reconfigured Freeway and No Build........ 69

Figure 41: Percent Change in 2045 Daily Traffic Volumes between Reconfigured Freeway and No Build . 70
Figure 42: 2045 Reconfigured Freeway Volume to Capacity (v/c) Ratio 71
Figure 43: 2045 Mainline Congested Segments for Expanded Freeway A.. 74
Figure 44: Change in 2045 Daily Traffic Volumes between Expanded Freeway A and No Build 75
Figure 45: Percent Change in 2045 Daily Traffic Volumes between Expanded Freeway A and No Build ... 76
Figure 46: 2045 Expanded Freeway A Volume to Capacity (v/c) Ratio 77
Figure 47: 2045 Mainline Congested Segments for Expanded Freeway B... 79
Figure 48: Change in 2045 Daily Traffic Volumes between Expanded Freeway B and No Build 82
Figure 49: Percent Change in 2045 Daily Traffic Volumes between Expanded Freeway B and No Build.... 83
Figure 50: 2045 Expanded Freeway B Volume to Capacity (v/c) Ratio 84
Figure 51: 2045 River Crossing Traffic for At Grade Roadways Compared to No Build 87
Figure 52: 2045 Traffic Volumes on River Crossing Routes – No Build and At-Grade Roadway 88
Figure 53: 2045 River Crossing Traffic on Local River Crossing Routes – No Build and At-Grade Roadway 89
Figure 54: 2045 River Crossing Traffic for Reduced Freeway Compared to No Build 90
Figure 55: 2045 Traffic Volumes on River Crossing Routes – No Build, At-Grade Roadway, and Reduced Freeway 91

Executive Summary

Rethinking I-94 is identifying and understanding potential alternatives for a 7.5-mile segment between downtown Minneapolis and downtown St. Paul. Currently, the project is in Phase 2 – Environmental Process. This memo presents traffic and transit modeling information for the 10 alternatives. Analysis in this memo is intended to provide study partners with contextual information about potential impacts on I-94, on the surrounding transportation network within and near the project area, and on the broader regional transportation network. This memo will help inform decisions on potential modifications to the alternatives and provide insight into the potential effect of the alternatives on travel patterns.

The results presented here are a high-level overview of how traffic and transit operations could perform in 2045 for each alternative. The preliminary traffic analysis during this phase of the project was performed using Metropolitan Council's regional travel demand model, which provides approximate operational information but is not capable of precisely analyzing how specific alternatives would operate. Detailed operational analysis using microsimulation will be performed during the Tier 1 Environmental Impact Statement phases of the project.

Table 1 summarizes the 10 alternatives along with I-94 capacity and transit service. Based on I-94 capacity, these alternatives can be categorized as follows:

- No change: No Build, Maintenance A, and Maintenance B
- Additional capacity: Expanded Freeway A, Expanded Freeway B, and Reconfigured Freeway
- Reduced capacity: At-Grade Roadway A, At-Grade Roadway B, Reduced Freeway, and Local/Regional Roadway

Table 2 presents measures of effectiveness considered in the preliminary traffic and transit analysis. These seven measures of effectiveness are used to describe traffic comparisons between alternatives. **Table 3** provides an overall summary of traffic and transit measures for I-94 as compared to No Build. The seven measures are also used for presenting traffic impacts due to diverted traffic from I-94. The symbols represent an increase or decrease in the measures and do not necessarily represent an outcome that is better or worse than No Build. The colors show the degree of the changes. **Tables 4** and **5** provide more detailed numbers for each alternative.

Traffic modeling indicates that if no changes are made to I-94, daily traffic on the project corridor would be about 173,000 vehicles in 2045, traveling at 40-50 miles per hour during the morning and afternoon peak periods. About 328,000 vehicles or 426,480 persons using auto and transit would use the I-94 project corridor every day. For the Maintenance alternatives, minor changes for each measure of effectiveness are expected. An At Grade Roadway reduces roadway capacity, speed, throughput, transit travel time, and VMT on I-94. However, the VMT on parallel arterials will more than double. The Reduced Freeway option has a similar effect, but to a lesser degree. The Reconfigured Freeway results in a mix of changes from No Build, while the two expanded freeway alternatives may create induced demand. This can improve traffic operations but does increase VMT on parallel arterials. For every alternative, transit travel time is improved, varying from a few minutes to nearly 50 percent faster.

Table 1: Alternatives Considered in the Scoping Phase

Alternatives	I-94 Capacity (veh/hr)	Transit
No Build: Current freeway configuration of I-94 with three to four general-purpose lanes in each direction	11,700 - 15,600	Express bus on partial bus shoulder with one stop at Huron Avenue (what was modeled based on transit service at start of project
Maintenance A: Current alignment of I-94	11,700 - 15,600	Express bus service with stop at Snelling Avenue
Maintenance B: Current alignment of I-94	11,700 - 15,600	Express bus service on full shoulders along the corridor with stop at Snelling Avenue
At Grade Roadway A: Two low-speed travel lanes in each direction	3,000	Bus rapid transit operating in a median fixed guideway with three transit stops
At Grade Roadway B: Two low-speed travel lanes in each direction	3,000	with bus rapid transit operating in an outside lane fixed guideway with three transit stops
Local/Regional Roadways: Two parallel facilities – a limited access facility with two general purpose lanes in each direction and shoulders for buses, and local at grade roadways with a travel lane each direction, street parking, bike lanes, and sidewalks	10,800	Express bus service on full shoulders along the corridor with stop at Snelling Avenue
Reduced Freeway: Two general purpose lanes and one managed lane in each direction	11,700	Bus rapid transit operating in the managed lanes; zero to three transit stops could be accommodated
Reconfigured Freeway: Three general purpose lanes and one managed lane in each direction	15,600	Bus rapid transit operating in the managed lanes; zero to three transit stops could be accommodated
Expanded Freeway A: Three to four general purpose lanes and one managed lane in each direction	15,600 - 19,500	Bus rapid transit operating in the managed lanes; zero to three transit stops could be accommodated
Expanded Freeway B: Four to five general purpose lanes with a full shoulder	15,600 - 19,500	allowing express bus service to operate in mixed traffic lanes and on the shoulder during congested periods

Note: The preliminary traffic analysis during the scoping phase of the Rethinking I-94 project was performed using Metropolitan Council's regional travel demand model. For modeling purposes, I-94 was assumed to have a lane capacity of 1,950 vehicles per hour, and local/at-grade roadways were assumed to have a lane capacity of 750 vehicles per hour. Transit was analyzed separately using the Federal Transit Administration-approved Simplified Trips on Project Software (STOPS) model.

Table 2: Measures of Effectiveness Considered in the Preliminary Traffic Analysis

Measures of Effectiveness	Description	Unit
Annual Average Daily Traffic (AADT)	Measure of traffic load on a segment of roadway, showing how busy the road is	Vehicles/day
Vehicle Throughput	Measure of corridor productivity, which is defined as the total number of vehicles entering and leaving any part of the corridor being analyzed	Vehicles/day
Person Throughput • Auto • Transit	Measure of corridor productivity in terms of persons, which is defined as the total number of persons entering any part of the corridor being analyzed	Persons/day
Transit Travel Time	Total travel time including dwelling time at transit stops	Minutes
Average Mainline Speed • General-purpose lane • Managed lane (where applicable)	Measure of operational conditions of a roadway during a given period of time	Miles/hour
Volume to Capacity (v/c) Ratio	Measure of congestion in transportation planning. It is defined as the ratio of hourly volumes of traffic to capacity for a roadway. A corridor with higher v/c ratio would indicate severe congestion often characterized by stop-and-go traffic, slow travel times, poor travel time reliability, and a higher risk of crashes	—
Vehicle Miles Traveled (VMT) • I-94 within the project limits • Routes parallel to I-94 • Twin Cities Metropolitan Area	VMT measures the amount of travel of all vehicles on a corridor or in a geographical area	Vehicle Miles/day

Table 3: Summary of Comparative Evaluation of Alternatives Compared to 2045 No Build

Measure	No Build	Maintenance A	Maintenance B	At-Grade Roadway A/B	Local / Regional Roadways	Reduced Freeway	Reconfigured Freeway	Expanded Freeway A	Expanded Freeway B
I-94 within the project limits									
I-94 capacity	11,700 to 15,600 vehicles per hour	Neutral	Neutral	Substantial Decrease	Some Decrease	Some Decrease	Neutral	Some Increase	Some Increase
Annual Average Daily Traffic	173,000 vehicles per day	Neutral	Neutral	Substantial Decrease	Some Decrease	Some Decrease	Neutral	Some Increase	Some Increase
Vehicle throughput	328,000 vehicles per day	Neutral	Neutral	Substantial Decrease	Some Decrease	Some Decrease	Neutral	Some Increase	Some Increase
Person throughput	426,480 people per day	Neutral	Neutral	Substantial Decrease	Some Decrease	Some Decrease	Some Increase	Some Increase	Some Increase
Transit travel time	20+ min during peak periods	Neutral	Some Decrease	Some Decrease	Some Decrease	Substantial Decrease	Substantial Decrease	Substantial Decrease	Some Decrease
Average mainline speed	40 to 55 miles per hour during peak periods	Neutral	Neutral	Substantial Decrease	Some Decrease	Some Decrease	Neutral	Some Increase	Some Increase
Level of congestion	20 to 25 percent of corridor with v/c > 1.0	Neutral	Neutral	Substantial Increase	Substantial Increase	Substantial Increase	Neutral	Some Decrease	Some Decrease
Traffic impacts due to diverted traffic from I-94									
Local bridges on other routes	Varies by bridge	Neutral	Neutral	Substantial Increase	Some Increase	Some Increase	Neutral	Some Decrease	Some Decrease
Routes parallel to I-94	Varies by route	Neutral	Neutral	Substantial Increase	Some Increase	Some Increase	Neutral	Some Decrease	Some Decrease
Local streets crossing I-94	Varies by route	Neutral	Neutral	Some Decrease	Neutral	Neutral	Neutral	Neutral	Neutral
Lowry Hill tunnel	Heavily congested segments over 1 mile	Neutral	Neutral	Some Decrease	Neutral	Neutral	Neutral	Neutral	Neutral
Twin Cities Metropolitan Area	106 million vehicle miles traveled per day	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral

Legend: Substantial Decrease, Some Decrease, Neutral, Some Increase, Substantial Increase

Table 4: Summary of Preliminary Traffic/Transit Analysis of 2045 Alternatives – Detailed Numbers

Measure	No Build	Maintenance B	At Grade Roadway	Local /Regional Roadways	Reduced Freeway	Reconfigured Freeway	Expanded Freeway A	Expanded Freeway B
Roadway Capacity (vehicles per hour)	11,700 -15,600	11,700 -15,600	3,000	10,800	11,700	15,600	15,600 - 19,500	15,600 - 19,500
Annual Average Daily Traffic	173,000	173,000	36,000	126,000	136,000	178,000	191,000	191,000
Vehicle Throughput (daily)	328,000	328,000	165,000	258,000	281,000	334,000	347,000	349,000
Person Throughput (daily)	426,480	425,150	218,640	337,150	376,050	446,860	457,860	452,020
• Auto	418,000	418,000	211,000	330,000	367,000	438,000	449,000	445,000
• Transit	8,480	7,150	7,640	7,150	8,980 - 9,050	8,800 - 8,860	8,800 - 8,860	7,020
Average Peak Period Transit Travel Time (minutes)	~22	~17	~19	~17	~12-15	~12-15	~12-15	~17
Average Peak Period Speed (mph)								
• General-Purpose lane	40 - 55	40 - 55	N/A	30 - 45	30 - 45	40 - 55	45 - 55	45 - 55
• Managed lane	N/A	N/A	N/A	N/A	40 - 60	45 - 60	45 - 60	N/A
• Local lane	N/A	N/A	20 - 25	25 - 30	N/A	N/A	N/A	N/A
Peak Hour Congestion (corridor miles with v/c > 1.0)	20% - 25%	20% - 25%	27% - 32%	37% - 42%	30%	20% - 25%	5% - 18%	4% - 16%
Vehicle Miles Traveled (daily)								
• I-94 within the project limits	1,170,000	1,170,000	240,000	695,000	925,000	1,216,000	1,303,000	1,293,000
• Routes parallel to I-94	194,000	194,000	333,000	241,000	222,000	189,000	179,000	181,000
• Region	105,900,000	105,900,000	105,600,000	105,700,000	106,000,000	106,100,000	106,100,000	106,200,000

Table 5: Summary of Preliminary Traffic/Transit Analysis of Alternatives – Percent Change Compared to 2045 No Build

Measure	No Build	Maintenance B	At Grade Roadway	Local /Regional Roadways	Reduced Freeway	Reconfigured Freeway	Expanded Freeway A	Expanded Freeway B
Roadway Capacity (vehicles per hour)	11,700 -15,600	0	-80	-30	-25	0	25	25
Annual Average Daily Traffic	173,000	0	-79	-27	-21	3	10	10
Vehicle Throughput (daily)	328,000	0	-50	-21	-14	2	6	6
Person Throughput (daily)	426,480	0	-49	-21	-12	5	7	6
• Auto	418,000	0	-50	-21	-12	5	7	6
• Transit	8,480	-16	-10	-16	7	5	5	-17
Average Peak Period Transit Travel Time (minutes)	22	-23	-14	-23	-32 to -46	-32 to -46	-32 to -46	-23
Average Peak Period Mainline Speed (mph)								
• General Purpose Lane	40 - 55	0	N/A	-27	-26	0	10	11
• Managed Lane	N/A	N/A	N/A	N/A	-1	5	12	N/A
• Local	N/A	N/A	-56	-42	N/A	N/A	N/A	N/A
Peak Hour Congestion (corridor miles with v/c > 1.0)	1.5	0	40	130	50	0	-60	-75
Vehicle Miles Traveled (daily)								
• I-94 within the project limits	1,170,000	0	-79	-41	-21	4	11	11
• Routes parallel to I-94	194,000	0	72	24	14	-3	-8	-7
• Region	105,900,000	0	-0.3	-0.2	0.1	0.2	0.2	0.3

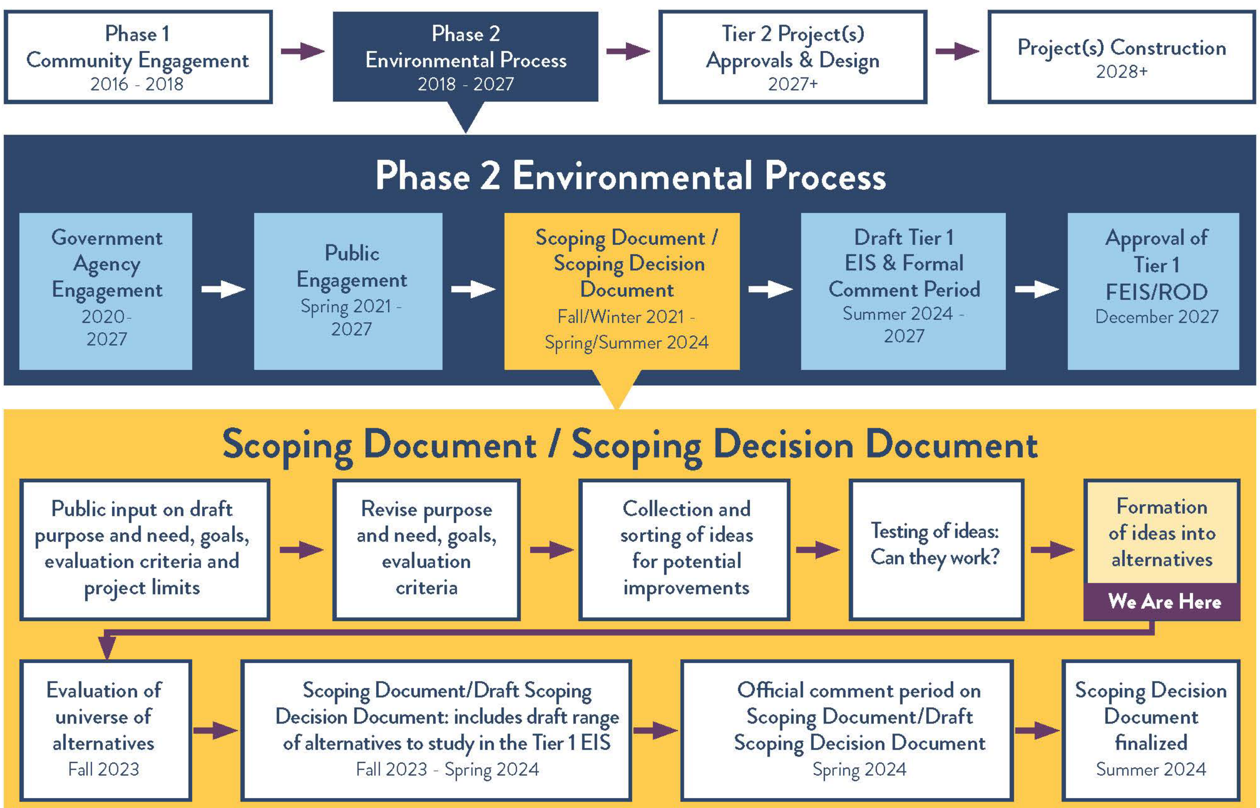
11003625

Introduction

Rethinking I-94 is a multi-year process to comprehensively review I-94, an interstate connecting Minneapolis and Saint Paul. The project is being jointly conducted by the Minnesota Department of Transportation (MnDOT) and the Federal Highway Administration (FHWA). MnDOT began its efforts in 2016 with a two-year community engagement program, and today the project has advanced into Phase 2 – Environmental Process (**Figure 1**). Phase 2 includes multiple steps with agency and public engagement underpinning it all. Currently, the project is in the Scoping Document/Scoping Decision step (**Figure 1**). Work completed in this step will be compiled into the Rethinking I-94 Scoping Document / Draft Scoping Decision Document. This document will identify a set of alternatives for further study in the Tier 1 Environmental Impact Statement (EIS).

The information in this memo provides context on how the identified alternatives will impact transit service and traffic flow on I-94, the area surrounding the corridor, and the region. This memo summarizes work completed to date, identifies potential alternatives for Rethinking I-94, and presents preliminary traffic and transit modeling information. The results presented here are meant to assist agency and community stakeholders in understanding the context for each alternative two decades into the future. This information will inform alternative refinement and additional analysis.

Figure 1: Rethinking I-94 Project Schedule



Schedule subject to change (updated 6-28-2023)

How This Memo Informs What's Next

Scoping for Rethinking I-94 requires a series of successive efforts. Informed through community and public agency engagement, the project team drafted a purpose and need statement that frames decisions for I-94's future moving forward. The purpose and need (**Table 6**) identifies issues that must be addressed by the project and the project goals highlight elements important to the community that should be incorporated into the alternative if possible. Some goals will require assistance from other agencies to be fully realized. This work is summarized in the report *Rethinking I-94 Phase 2 Draft Purpose and Need Statement Summary* (available on the project's website[1]). Along with the purpose and need statement, evaluation criteria were developed for evaluating alternatives in Scoping and the Tier 1 EIS.

Table 6: Rethinking I-94 Purpose and Need and Statement of Goals

<table>
<tr><th colspan="2">Draft Rethinking I-94 Purpose and Need Summary</th></tr>
<tr><th>Purpose</th><th>Need</th></tr>
<tr><td>• Improve mobility for people and goods on, along, and across the corridor in a way that facilitates community connections for all modes
• Enhance safety for people and goods on, along, and across the I-94 corridor for all modes
• Address aging infrastructure condition within the I-94 corridor
• Support transportation objectives consistent with adopted state and regional (Met Council) plans</td><td>• Walkability and bikeability – comfort, mobility and risks for people walking, bicycling, and rolling
• Safety for people in motorized vehicles – cars, freight, and transit
• Infrastructure condition – state of repair
• Mobility for people in motorized vehicles – cars, freight, and transit</td></tr>
<tr><th colspan="2">Rethinking I-94 Goals</th></tr>
<tr><td colspan="2">• Incorporate the Livability Framework through the process to identify opportunities for establishing the following for the communities that live, work, gather, and play around the corridor:
○ a sense of place,
○ connectivity,
○ economic vitality,
○ equity,
○ safety/security, and
○ public health and the environment</td></tr>
<tr><td colspan="2">• Develop and execute a community-based approach focused on reconnecting neighborhoods, revitalizing communities, and ensuring residents have a meaningful voice in transportation decisions that affect their lives.</td></tr>
</table>

The project team has identified 10 potential alternatives for I-94. Each alternative was analyzed through traffic and transit modeling to provide a bigger picture of the traffic operations and transit service that could occur in 2045. The information in this memo provides context on how the identified alternatives will impact transit service and traffic flow on I-94, the area surrounding the corridor, and the region.

This memo identifies alternatives for Rethinking I-94 and presents preliminary traffic and transit modeling information. Results are meant to assist agency and community stakeholders in understanding the context for each alternative two decades into the future. The project team and stakeholders can use this memo to

[1] *talk.dot.state.mn.us/rethinking-i94*

facilitate further dialogue of the alternatives to identify potential modifications that could better address the project's purpose and identified needs. This high-level look at traffic operations will also inform agency partners of impacts outside the immediate corridor that could occur and inform future analyses. A more detailed evaluation of the alternatives will occur in the Tier 1 EIS. What is presented in this memo does not necessarily reflect or predict what will occur in the in-depth evaluation.

Safety

Safety is a primary concern for any roadway owner and the Rethinking I-94 project will evaluate safety for the build alternatives. The analysis included in this memo does not address safety, as traffic models are not used for this purpose. Future evaluations will take a closer review of safety for the various build alternatives. In general, however, studies show that urban freeway facilities are substantially safer than non-freeway facilities. Non-freeway facilities statistically have higher vehicle, bicycle, and pedestrian crash rates. This is due to increased exposure and conflict risks. An at grade roadway design with countermeasures could address some of the potential safety issues associated with at-grade roadway alternatives but would still have a higher crash rate because of the higher number of conflicts and increased exposure.

Traffic and Transit Modeling Tools

The Rethinking I-94 project used the Metropolitan Council's (Met Council) regional travel demand model for this analysis. Established practices for transit and highway modeling in the Twin Cities region for transportation improvements require the use of the Met Council's Regional Transportation Forecasting Model. Using the regional model is also consistent with federal practices. The model is built upon the land uses determined by cities as part of their adopted comprehensive plans and includes the residents and the employees associated with those land uses.

The Met Council uses an Activity Based Model, which simulates the activities and travel patterns for everyone in a defined geographic area (the Twin Cities region). The model predicts someone's travel behavior, such as when, where, how, the order, and whether a trip is made. The regional travel demand model includes automobile (including trucks, motorcycles, etc.), transit, and non-motorized travel. It is sensitive to relative changes in travel times between the different modes (auto, transit and non-motorized) when assigning trips.

The project also used the Federal Transit Administration-approved Simplified Trips on Project Software (STOPS) model. This model is used to understand transit ridership numbers and incorporates information from the regional travel demand model.

Regional Travel Demand Model Benefits and Limitations

A regional travel demand model can be useful for predicting travel time and other basic traffic operations at a certain point in time. It is not intended to be the final modeling exercise. The analysis here is a preliminary look into how each alternative could perform from a high-level operations perspective and impact system-level operations. The traffic measures are based on link capacity and do not have the precision that would be possible with a microsimulation model. Weaving, queuing, lane assignment, and geometric details can have a substantial impact on traffic flow that is not reflected in the travel demand model. The regional model does not have the ability to predict these detailed operations or evaluation criteria that will be considered in the Tier 1 EIS, when microsimulation will be used to better understand differences in alternatives.

In the regional model, land use and socioeconomic data are inputs, and the travel demand effects of the alternatives that make small changes to the capacity of I-94 may be largely apparent in route choice. However, ideas such as converting the freeway to an at-grade roadway or removing it entirely would have much larger impacts on travel demand. In this scenario, residence and business location decisions would likely be affected, and there would be an impact on trip generation that this modeling approach is not able to fully capture.

This memo presents results from the traffic modeling through the lens of a basic set of metrics. As described in a previous memo, results from the 2040 travel demand model are considered 2045 traffic forecasts for this project, with no adjustments or modifications.[2] It is not expected that all the alternatives described in the **Rethinking I-94 Alternatives** section will advance to the Tier 1 EIS. The numbers presented in this memo look ahead into the year 2045, holding everything else constant. The model does not consider safety, land use changes, etc. that could happen with each alternative.

Transportation infrastructure is a critical element on both a neighborhood and regional economic scale. The streets people access and the infrastructure on these streets dictate how we move around – to our house, family, school, work, critical services, etc. Transportation connects and divides. The externalities – positive and negative – are difficult to model objectively. The analysis in this memo does not try to assign definitive predictions for how each alternative will impact safety, air quality, land use, community health, etc. Other tools and processes will be used to evaluate those issues/criteria in scoping with more detailed analyses coming in the Tier 1 EIS.

Rethinking I-94 Transit Scoping Idea Exploration and Modeling

The project team conducted a robust examination of potential transit improvements that could be incorporated into the I-94 alternatives. A detailed discussion of the proposed transit elements, along with transit modeling analysis is presented in the report *Technical Memorandum Rethinking I-94 Transit Scoping and Idea Exploration.* For transit service options, the Federal Transit Administration-approved Simplified Trips on Project Software (STOPS) model was applied along with information from the regional travel demand model. This memo incorporates the average transit travel time as a measure of effectiveness. Average transit travel time is a function of performance, one of the six evaluation criteria applied to the transit ideas.

The earliest transit ideas in the study process originated in the report *Draft Rethinking I-94 Purpose and Need Document* and community, regional, and local goals related to transit. Feedback during public engagement further refined the suite of transit ideas. A systematic comparison of each transit idea to a No Build Scenario (No Build) revealed the strengths and weaknesses of each option. The evaluation criteria tested the merit of the various transit ideas to determine which should be integrated with highway ideas and eventual alternatives for further environmental study. Discussions about transit modes, stop locations, and types of running ways for transit vehicles and technical analysis of multimodal connections, travel patterns, socioeconomic factors, equity, and environmental justice further developed the transit ideas.

Transit Evaluation Criteria

The evaluation criteria for the transit ideas included:

- **Performance**: Which transit ideas provide fast, reliable travel transit travel times and attract more new riders against the No Build scenario? This criterion examines ridership, transit travel time, average speed, and corridor origin/destination transit travel time.

[2] *Technical Memorandum Rethinking I-94 Approach to Developing the 2045 Design Year Traffic Forecasts (Pre-Decisional Draft), April 2022*

- **Accessibility via Transit**: Which transit ideas most improve access to destinations via transit? This criterion provides data about access to and from a variety of destinations important to transit riders.

- **Proximity to Transit Stations/Stops within Project Corridor**: Which transit ideas serve more people and jobs with improved transit service and facilities? This criterion considers total population, minority populations, low-income populations, population forecast, and location of jobs.

- **Connectivity to Transit Stations/Stops within Project Corridor**: Which transit ideas support a well-connected transit network? This criterion examines the number of bike lanes and local and high-frequency transit routes connecting to online and/or inline stations/stops on the project corridor.

- **Environmental**: Which transit ideas most help to manage the environmental impact of vehicle miles traveled in private automobiles? This criterion examines the network change in vehicle miles traveled for private automobile use.

- **Complexity and Cost**: Which transit ideas balance reasonable cost and implementation complexity? This criterion explores implications about cost and implementation ease.[3]

Ridership Sensitivity Analysis (Light Rail)

Throughout the public engagement process for this study, many individuals requested examination of light rail as a potential transit mode. Decisions on which transit mode and subsequent vehicle size to use to serve a specific corridor are primarily driven by the number of existing and future transit users. Other key factors can include but are not limited to land uses, right of way, revenue, and system connections. However, in the case of light rail, there is modal bias that is used when projecting the rail ridership; given the same corridor characteristics, rail will generate more riders than bus. In this case, rail would generate about 6,800 riders per day, while bus would generate about 3,550 riders per day. Comparing this to the Green Line, which is intended to serve 50,000 riders per day, ridership demand along the project corridor does not warrant light rail. Additionally, the Green Line, running along University Avenue is approximately a quarter of a mile to the north, serving the light rail market. Additionally, as part of Network NEXT, the B Line (bus rapid transit) will operate about a quarter of a mile south of the corridor. This area is well served by local light rail and bus rapid transit.

[3] *Technical Memorandum Rethinking I-94 Transit Scoping and Idea Exploration, May 2023*

Project Area

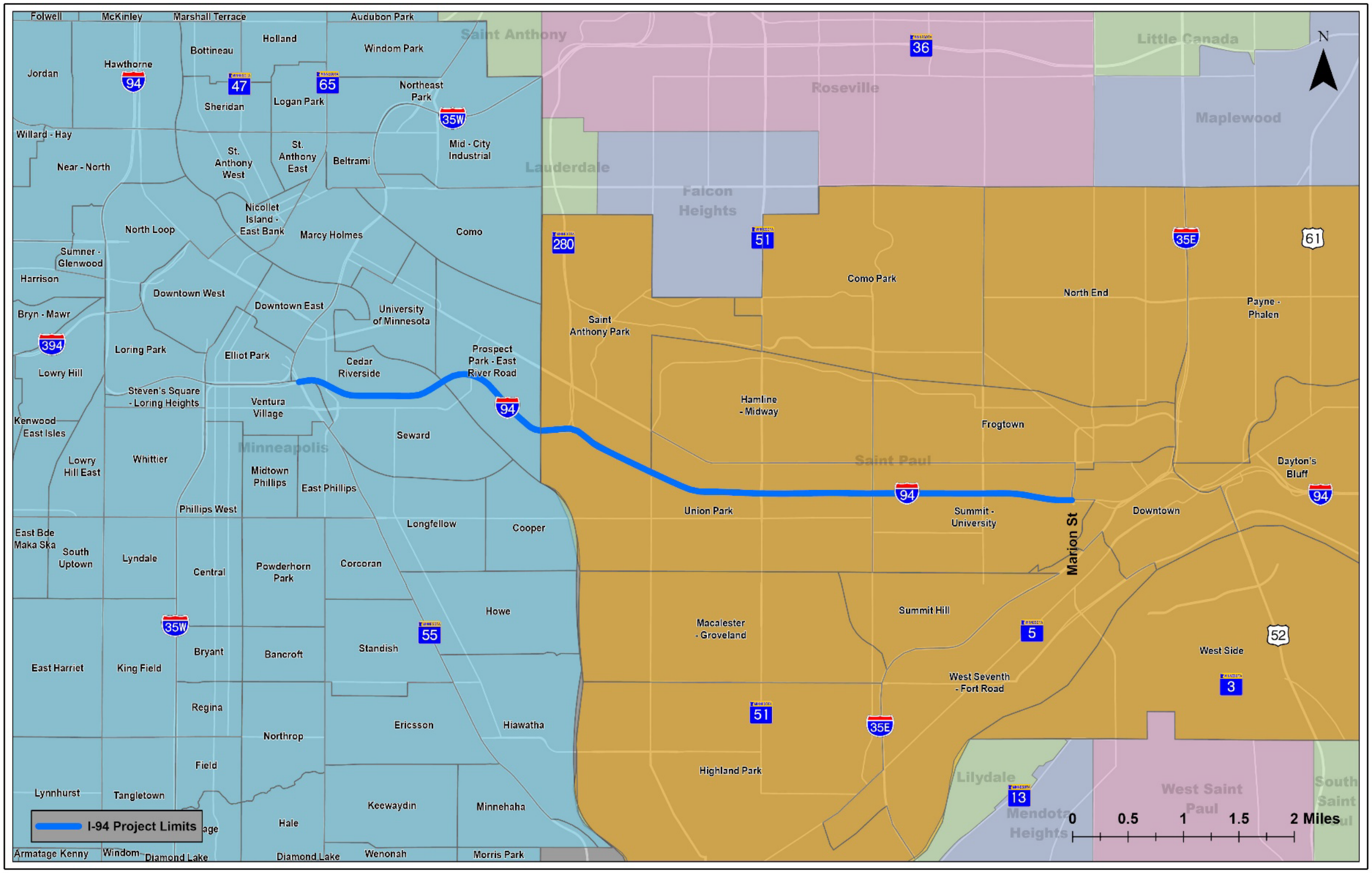
Interstate 94 is a major transportation connection between Minneapolis and St. Paul. For the Rethinking I-94 effort, the project area is a 7.5-mile segment between I-35W/TH 55 interchange in Minneapolis and Marion Street in St Paul. A quarter-mile buffer around this segment of I-94 encompasses the project area (**Figure 2**). Several destinations are within the project area – the state capitol, Allianz Field (home to the Minnesota United MLS team), and the University of Minnesota – all major destinations.

While the project area is limited to a quarter mile from I-94, as a major interstate, I-94 impacts a much bigger area. Several neighborhoods in Minneapolis and St. Paul will be affected by decisions made for the Rethinking I-94 project. **Figure 3** identifies neighborhoods along and near I-94. These neighborhoods are home to several arterial roadways that parallel I-94 and intersect it at key points.

Figure 2: Project Area Location

11003632

Figure 3: Communities Adjacent to and Near the I-94 Project Corridor



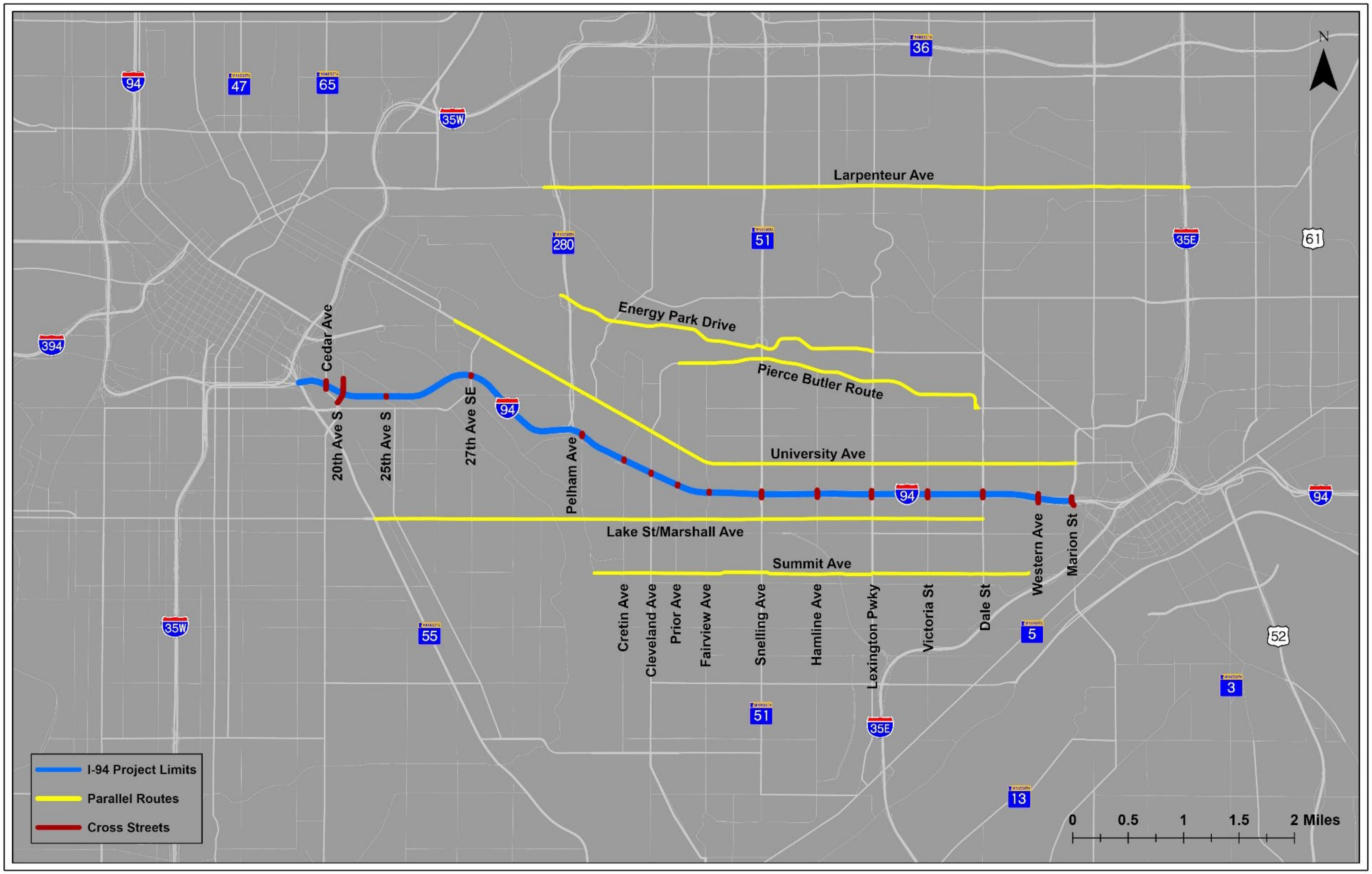
Adjacent Road Network

Transportation professionals often analyze connecting or parallel roads when assessing improvements to a specific corridor. Changes to one route can affect traffic operations of another street, particularly for streets parallel to the corridor under study. At least a dozen roads intersect or parallel I-94 (**Figure 4**). The areas around these roads can be considered part of the broader study area. Key parallel routes include Lake Street, Marshall Avenue, University Avenue, Pierce Butler Route, Energy Park Drive and Larpenteur Avenue. Key connecting routes include Snelling Avenue (TH 51), TH 280, 25th Avenue, 27th Avenue, Cretin Avenue, Hamline Avenue, Lexington Parkway, Dale Street, and Marion Street.

Lowry Hill Tunnel

The Lowry Hill Tunnel is located west of the project area. The six-lane (three in each direction) tunnel carries I-94 traffic through the historic and culturally significant Lowry Hill neighborhood in Minneapolis. Changing the capacity of I-94 may improve or diminish the operations of the tunnel, and the geometric restrictions of the tunnel may also impact the projected operations of each alternative. The relationship between the tunnel and possible alternatives will be explored in more detail in the Tier 1 EIS using microsimulation to better understand alternative impacts related to the tunnel. This memo provides a high-level overview of traffic flow using the region’s activity based model

Figure 4: Adjacent Road Network Near the I-94 Project Corridor



11003635

Rethinking I-94 Alternatives

Information from the purpose and need document, feedback from partner agencies, traffic and transit studies, and input from the public have helped to inform potential alternatives for I-94. Each alternative is described on the following pages. Graphic illustrations are also provided. The alternatives include:

- No Build (General Maintenance)
- Maintenance A
- Maintenance B
- At Grade Roadway A
- At Grade Roadway B
- Local/Regional Roadways
- Reduced Freeway
- Reconfigured Freeway
- Expanded Freeway A
- Expanded Freeway B

No Build, Maintenance A, and Maintenance B

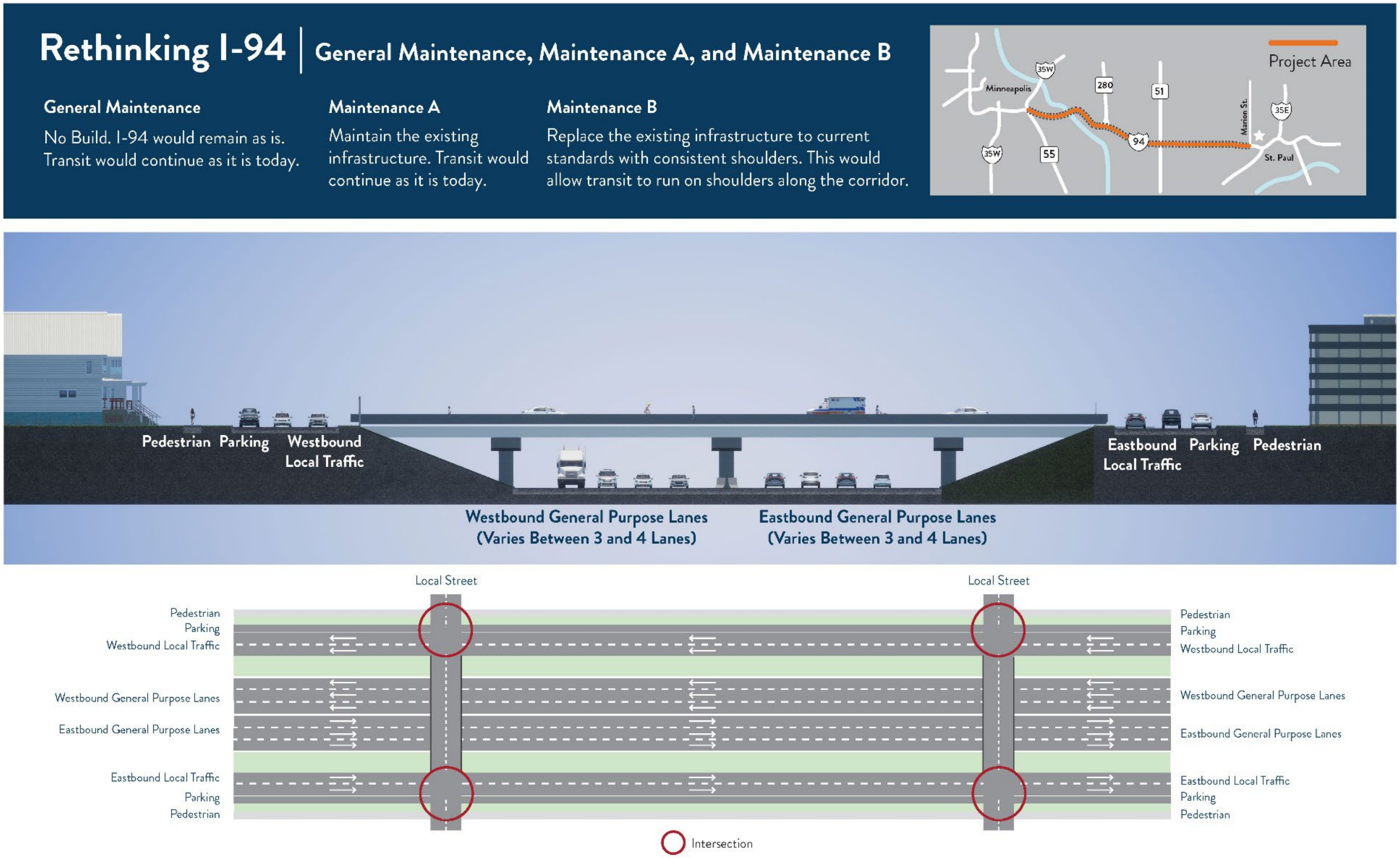
Figure 5 showcases the No Build, Maintenance A and Maintenance B alternatives.

***No Build**:* The no-build scenario maintains the existing alignment as of 2015. I-94 would remain as it is and have 3-4 general purpose lanes (depending on the segment) along with express bus service. Express bus service operates in the general purpose lanes and can use the corridor's shoulders during AM and PM peak periods when the general purpose lanes drop below 35 miles per hour. The shoulder exists for only a portion of I-94. In the no-build scenario, there is no eastbound stop for the express bus and there is one on-demand westbound stop at Huron. The no-build condition represents the baseline for comparing all the other alternatives.

***Maintenance A**:* Since March 1, 2020, transit service along I-94 has changed. Maintenance A reflects the current alignment of I-94 with 3-4 general purpose lanes and express bus service that operates partially on the shoulder during times of congestion. The express bus service currently has one stop east and west bound at Snelling Avenue. For the purposes of traffic modeling, Maintenance A and the No-Build scenarios operate alike and were analyzed as one scenario. **Figure 5** illustrates the Maintenance A idea (same graphic as the No-Build).

***Maintenance B**:* Maintenance B keeps the current alignment – keeping the existing 3-4 general purpose lanes – but would add a shoulder where one does not exist today to support express bus service along the entire corridor. This would restore the bus shoulder west of TH 280 that was converted to a travel lane after the I-35W Mississippi River bridge collapse. For graphic illustration purposes, Maintenance B resembles the no-build option (**Figure 5**).

Figure 5: No Build, Maintenance A, and Maintenance B



*Visualizations are intended for conceptual purposes only and are not to be interpreted as showing actual scale or final design for the roadway. They only represent a small section of the corridor. Potential changes to overpasses, interchanges, ramps, frontage roads, and parking have not been determined at this time. Final design will be determined through careful consideration of various factors and may differ from the concepts depicted. MnDOT is committed to walkability and bikeability improvements on all build alternatives. Details on improvements will be identified later in the process.

11003637

At-Grade Roadway A and At-Grade Roadway B

There are two configurations for the At-Grade Roadway alternative. **Figure 6** presents the At-Grade Roadway A alternative, and **Figure 7** presents the At-Grade Roadway B alternative.

For the at-grade alternatives, I-94 would be demolished, filled in, and replaced with an at-grade roadway. Current interchanges would be removed. The necessary intersection control, railroad crossings, and bicycle and pedestrian crossing infrastructure would be determined during a later phase. The new roadway would have two travel lanes in each direction with bus rapid transit operating in a fixed guideway. The proposed speed limit for both alternatives is 35 mph.

At Grade Roadway A would have the bus rapid transit in the middle of the travel lanes for cars/trucks. At Grade Roadway B would have bus rapid transit operating in a fixed guideway in an outside lane. Three transit stops would be provided. For the purposes of this modeling analysis, the two at-grade roadways have the same operating characteristics and thus were analyzed as one.

Local/Regional Roadways

Figure 8 presents the Local/Regional Roadways alternative.

This alternative replaces the existing interstate with two parallel facilities – one focused on regional travel and the other on local trips. The regional facility would be limited access with interchanges at locations to be determined. It is anticipated that there would be an access at the beginning of the project area near TH 55 and I-35 and one at the end of the project area near Marion Street/Kellogg Boulevard. Access in between will be limited to one or two additional locations. Key features include two general purpose lanes in each direction and express bus service that can operate on the shoulder throughout the full 7.5-mile segment. The local roadway is at-grade with separate facilities on the north and south sides of the interstate. Each local road would have a travel lane in each direction, street parking, bike lanes, and sidewalks to serve existing land use.

Reduced Freeway

Figure 9 shows the Reduced Freeway alternative.

This alternative would rebuild I-94 with fewer travel lanes compared to existing conditions. In this alternative there would be two general purpose lanes (open to all vehicles) and one managed lane (for buses and carpoolers and those willing to pay) in each direction. Bus rapid transit would operate in the managed lanes. Up to three transit stops could be provided. As **Figure 9** shows, the reduced freeway option could be constructed with or without a retaining wall.

Figure 6: At-Grade Roadway A

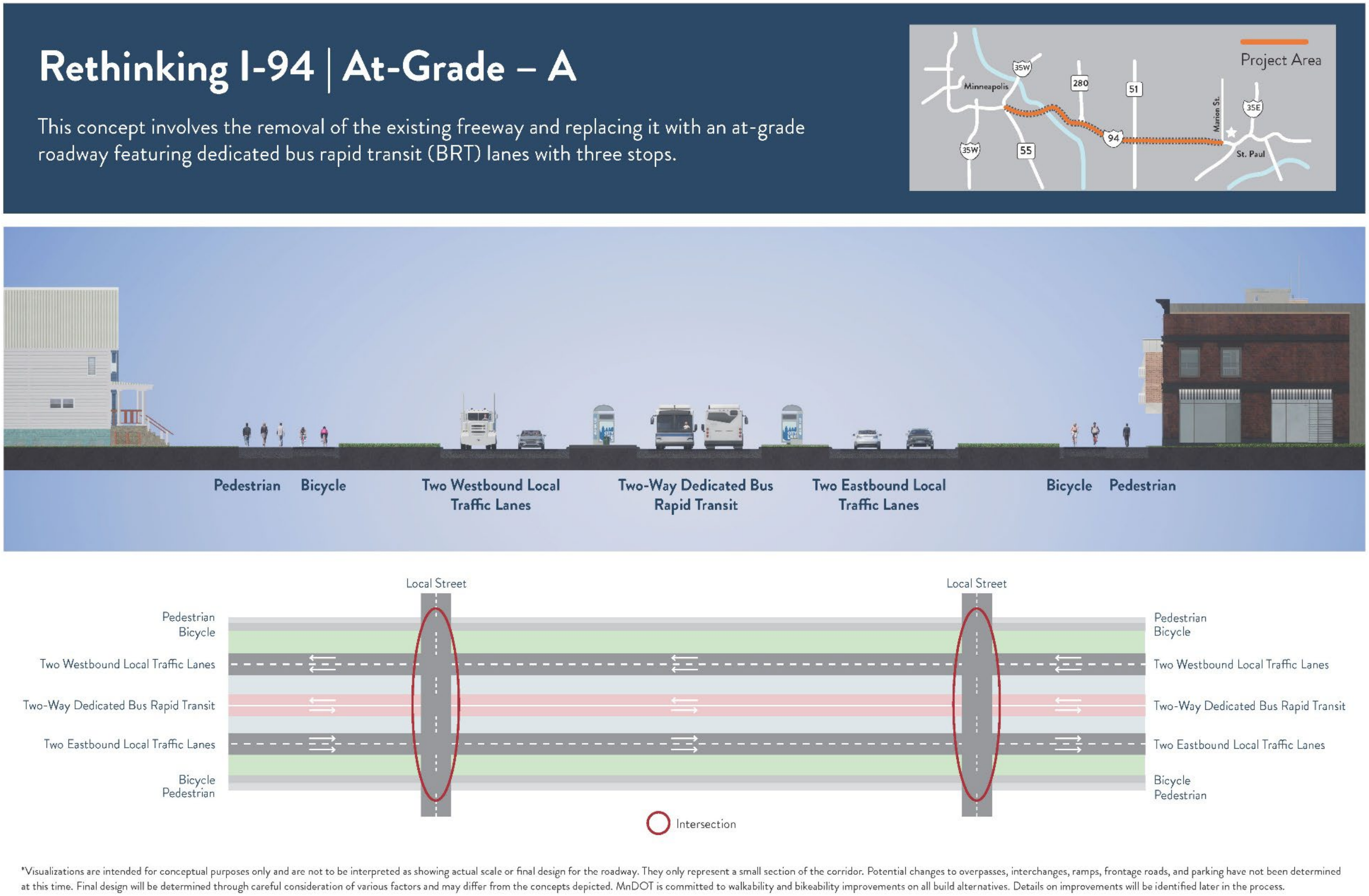


Figure 7: At-Grade Roadway B

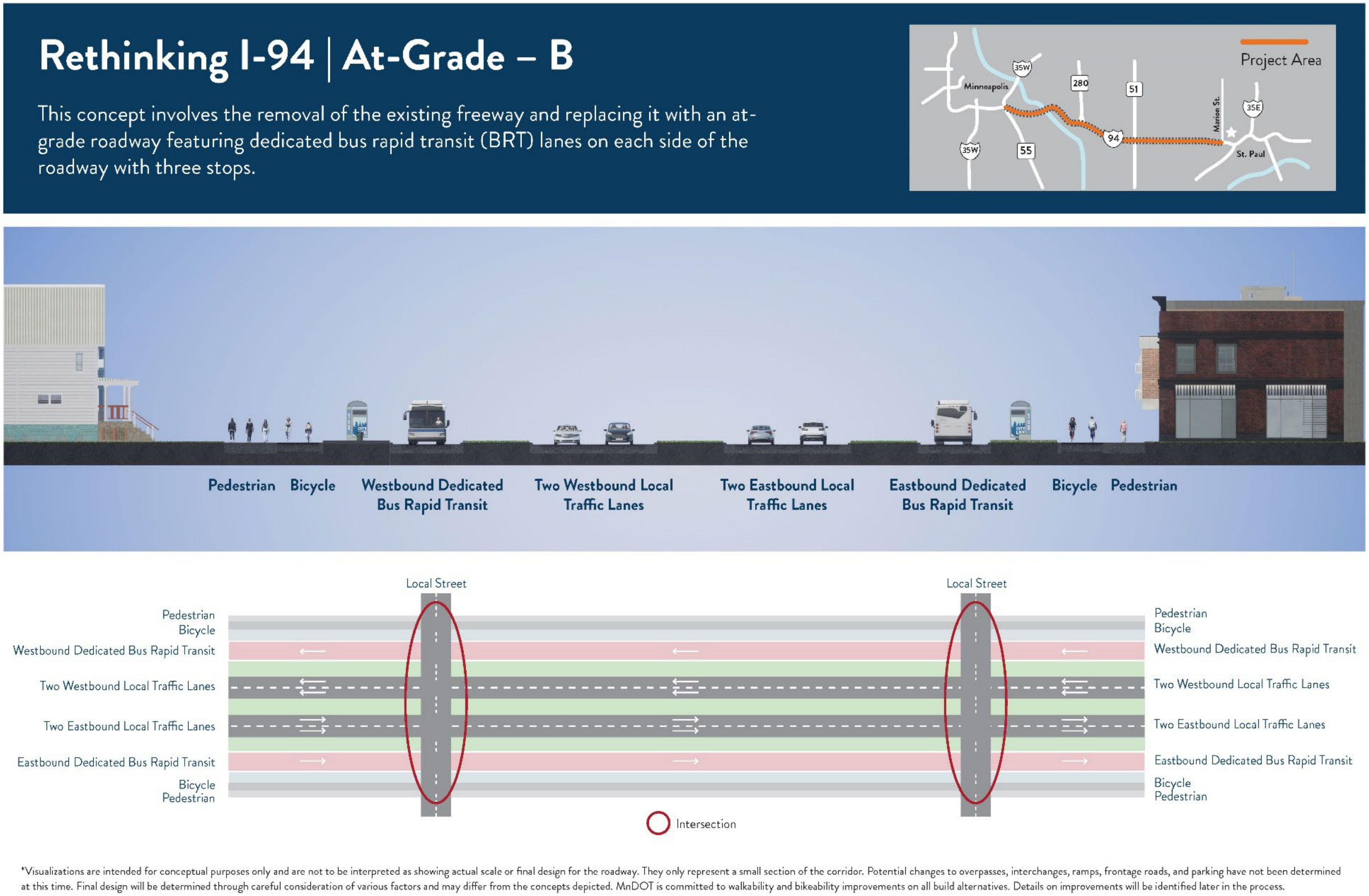


Figure 8: Local/Regional Roadways

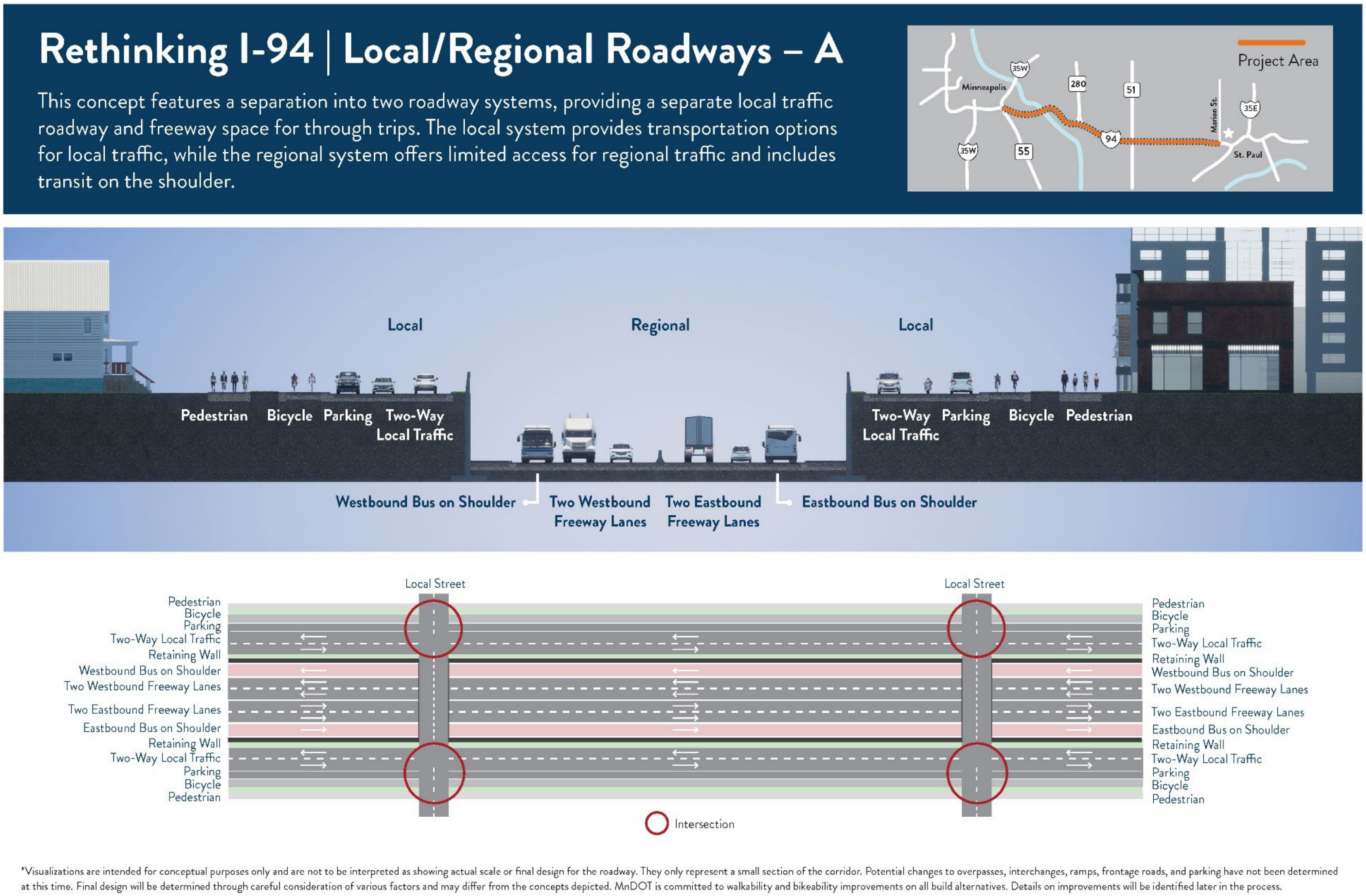
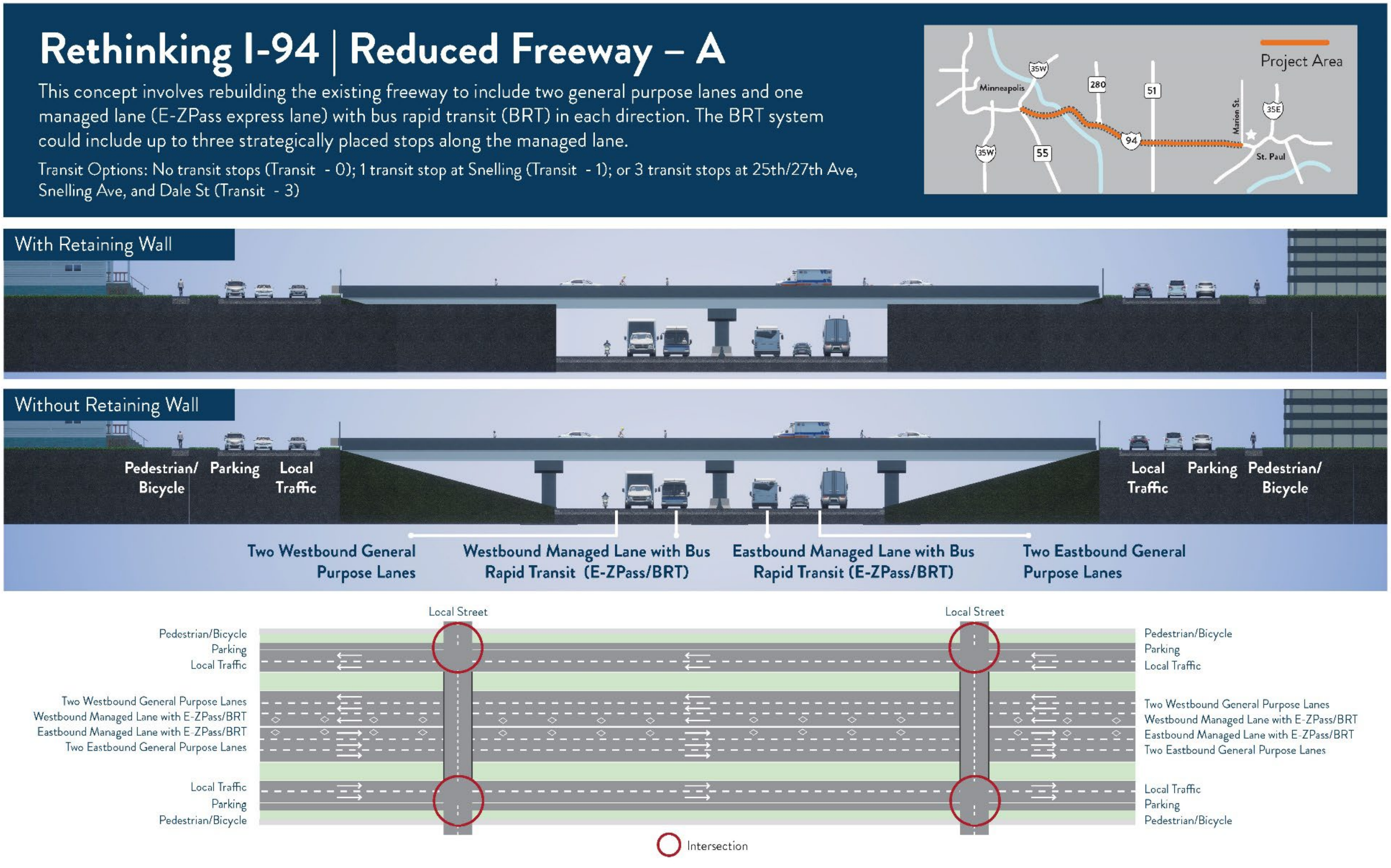


Figure 9: Reduced Freeway



*Visualizations are intended for conceptual purposes only and are not to be interpreted as showing actual scale or final design for the roadway. They only represent a small section of the corridor. Potential changes to overpasses, interchanges, ramps, frontage roads, and parking have not been determined at this time. Final design will be determined through careful consideration of various factors and may differ from the concepts depicted. MnDOT is committed to walkability and bikeability improvements on all build alternatives. Details on improvements will be identified later in the process.

Reconfigured Freeway

Figure 10 shows the Reconfigured Freeway alternative.

This alternative would rebuild I-94 with consistent travel lanes. The present corridor varies between three and four lanes – with most of the corridor being four travel lanes in each direction, with short-lane drops. The Reconfigured Freeway alternative would have three general purpose lanes (open to all vehicles) and one managed lane (for buses, carpoolers, and those willing to pay) in each direction. Bus rapid transit would operate in the managed lane. Up to three transit stops could be provided.

Expanded Freeway A

Figure 11 shows Expanded Freeway A.

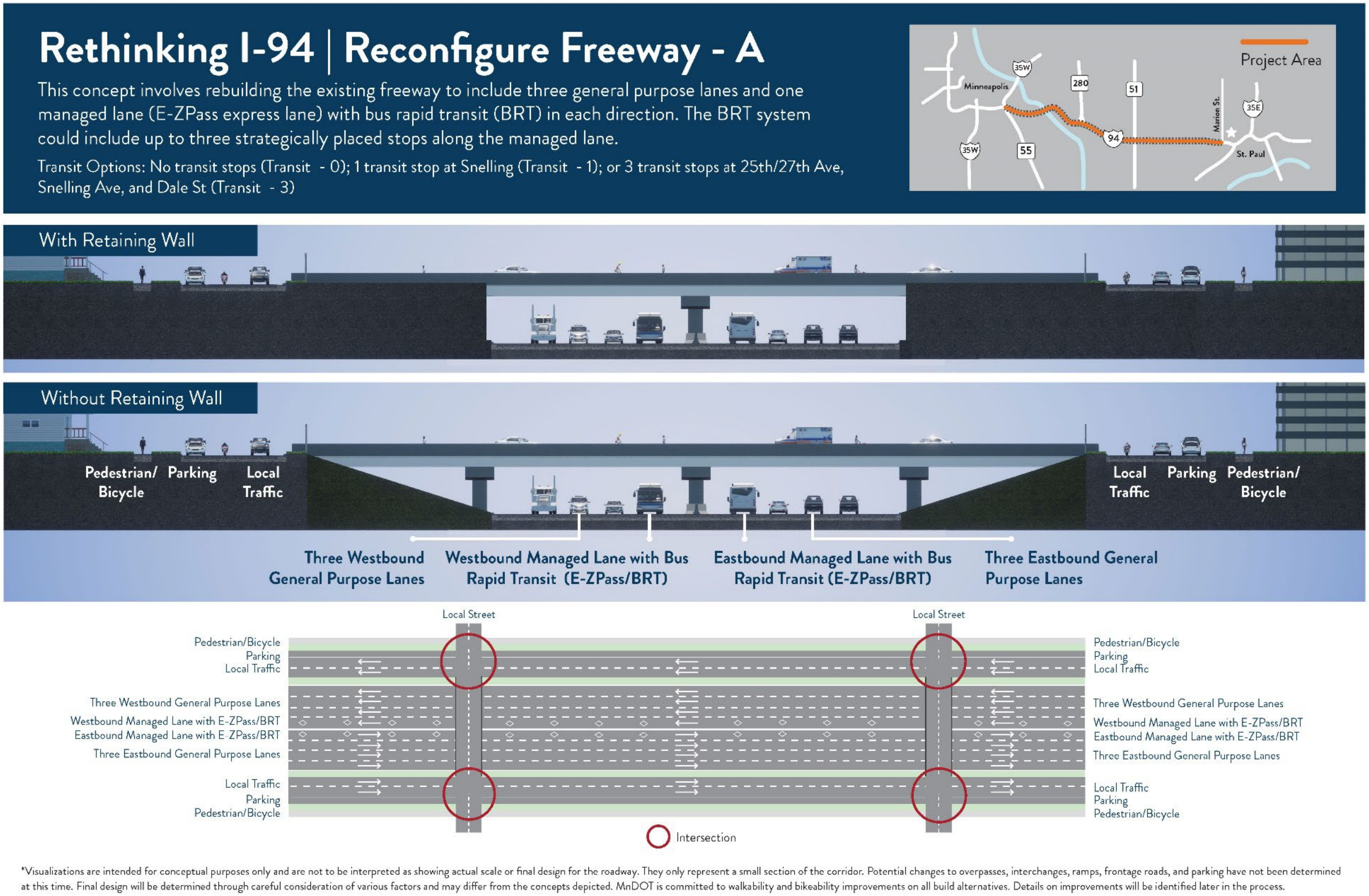
This alternative would rebuild I-94 as it is today, with three to four general purpose travel lanes (open to all vehicles) in each direction and would add a managed lane (for buses, carpoolers, and those willing to pay) in each direction. Bus rapid transit would operate in the managed lane. Up to three transit stops could be provided.

Expanded Freeway B

Figure 12 shows Expanded Freeway B.

This alternative would rebuild I-94 with an additional general purpose travel lane in each direction – making the corridor four to five lanes wide. It would also include shoulders that could accommodate buses. Buses would operate in mixed traffic and would use the shoulder if needed during congested periods. Express bus service would be provided.

Figure 10: Reconfigured Freeway



11003644

Figure 11: Expanded Freeway A

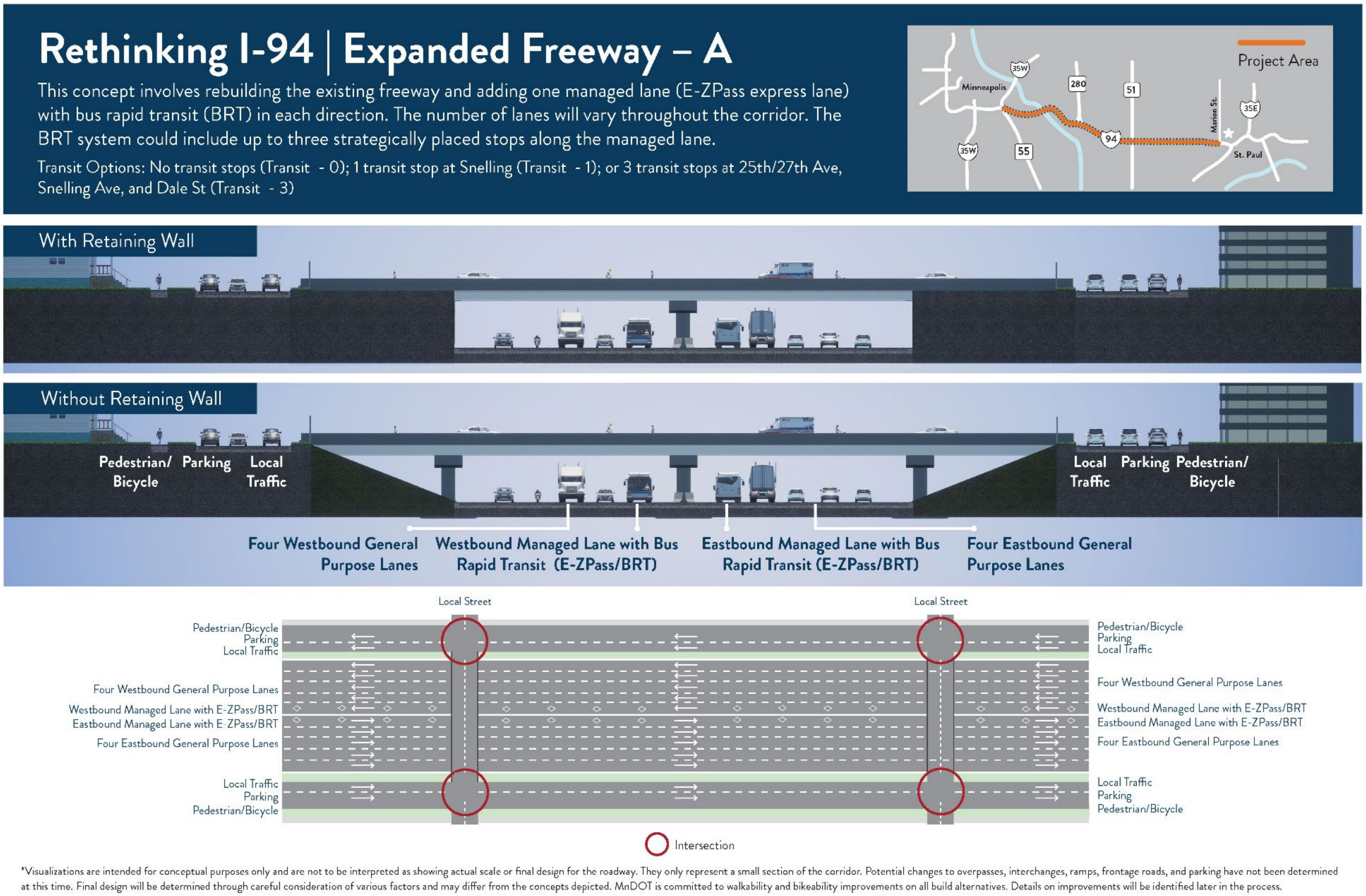
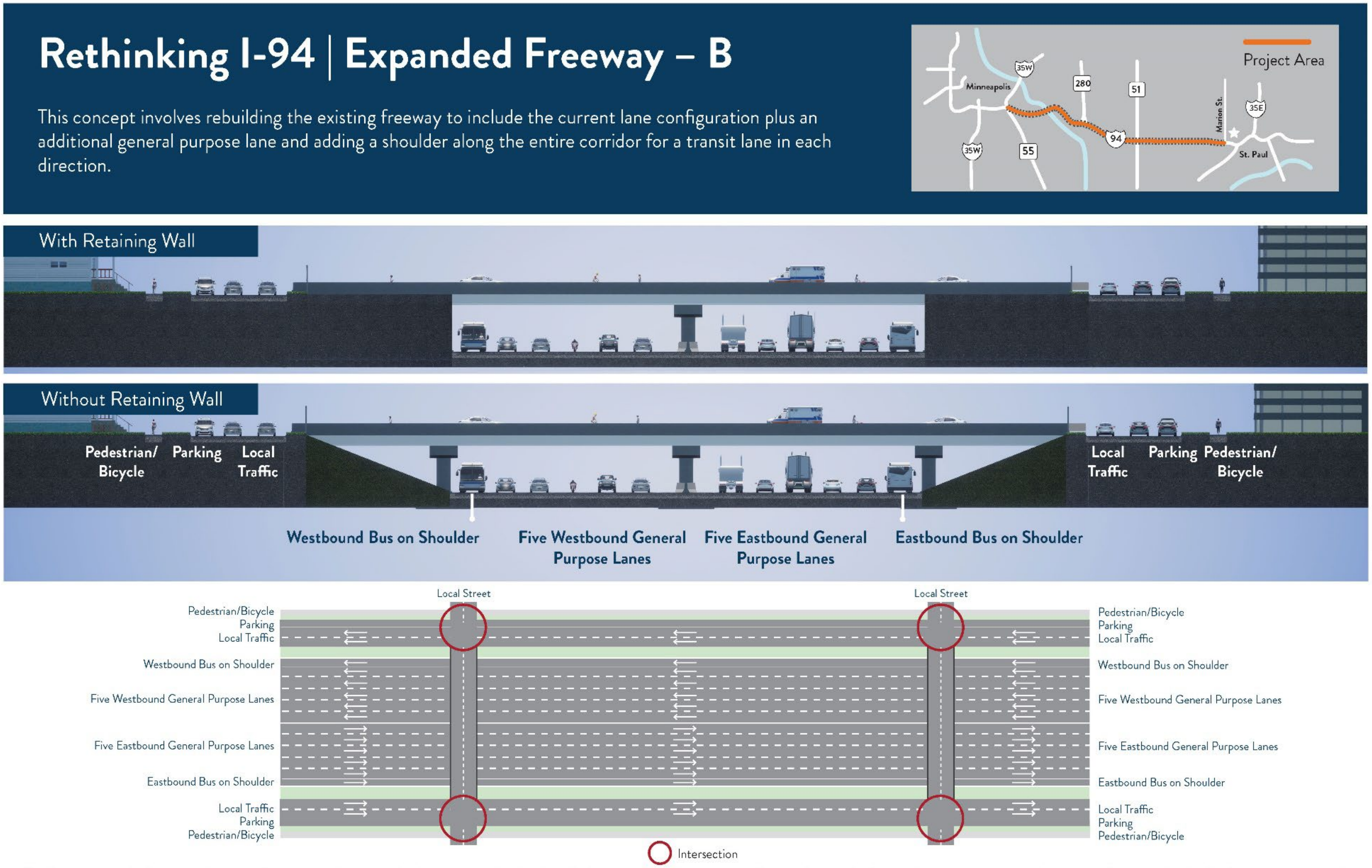


Figure 12: Expanded Freeway B



*Visualizations are intended for conceptual purposes only and are not to be interpreted as showing actual scale or final design for the roadway. They only represent a small section of the corridor. Potential changes to overpasses, interchanges, ramps, frontage roads, and parking have not been determined at this time. Final design will be determined through careful consideration of various factors and may differ from the concepts depicted. MnDOT is committed to walkability and bikeability improvements on all build alternatives. Details on improvements will be identified later in the process.

11003646

Planning Level Measures of Effectiveness and Other Notable Travel Trends and Patterns

To provide a broader understanding of traffic comparisons between alternatives and to understand the context and impacts of the various alternatives to the corridor, the surrounding communities, and the region, seven measures of effectiveness were identified along with four other notable travel trends and patterns.

Measures of Effectiveness

The seven measures of effectiveness provide insight on transit and traffic mobility primarily on I-94 and provide an opportunity to compare alternatives in terms of how they perform compared to No Build conditions and other alternatives.

1) **Annual Average Daily Traffic: Projected daily traffic in 2045**

   Annual Average Daily Traffic (AADT) is the standard measure of traffic load on a segment of roadway. The 2045 AADT indicates how busy the I-94 project corridor would be for each alternative.

2) **Vehicle Throughput: Vehicles traveling through portions of the I-94 project corridor daily**

   Vehicle throughput is different than average annual daily traffic (AADT). Vehicle throughput is a measure of corridor productivity, which is defined as the total number of vehicles (passenger and freight) entering any part of the corridor daily. It is presented as a whole number and correlates with person throughout. For short segments, AADT and vehicle throughput defined in this way would be the same. For longer corridors with many entrances and exits such as I-94, vehicle throughput is greater than AADT.

3) **Person Throughput: People that travel through the corridor daily**

   The model provides the projected number of people that are expected to travel through the I-94 corridor on any given day. This accounts for all types of vehicles – from a single occupancy personal or freight vehicles to a bus carrying the maximum number of passengers. The person throughput measure includes two components: the drivers and passengers in vehicles entering the corridor, and transit ridership on routes using the corridor.

4) **Average Transit Travel Time: Projected travel times for transit during the peak hours in 2045**

   Average transit travel time is one of the measures of effectiveness included in the *Technical Memorandum Rethinking I-94 Transit Scoping and Idea Exploration* report. Transit travel time and average speed were evaluated along the project corridor using PTV VISSIM and STOPS models.

General Transit Feed Specification (GTFS) data of each route was input into PTV VISSIM models. For each build Transit Idea, changes are made to the base file to create the new transit idea. To account for the transfers along the paths, walk links are added to this network. The walk links are calculated from the Metropolitan Council STOPS model data and checked with OpenStreetMap data.

Public transit network and its characteristics (including departures and travel times) are read by the STOPS software from the GTFS files of transit operator agencies in the project area. STOPS automatically combines the GTFS files of all operators. It only makes an AM Peak GTFS and an off-peak (midday) GTFS file.

5) **Average Mainline Speed: Projected travel speed for the mainline roadway during the peak periods in 2045**

   Average mainline speed is the projected travel speed along the corridor during the AM and PM peak periods in 2045. This measure is broken up into general purpose lanes and managed lanes for the Reduced Freeway, Reconfigured Freeway, Expanded Freeway A, and Expanded Freeway B alternatives. The AM peak period is from (6:00 – 10:00) and the PM peak is from (3:00 – 7:00).

6) **Mainline Roadway Congestion: Projected volume to capacity (v/c) ratio during peak hours for each alternative.**

   Along with identifying the amount of traffic on the I-94 corridor, the analysis provides a planning-level of congestion for the corridor. The v/c ratio is a measure of capacity sufficiency, the amount of traffic on a given roadway relative to the amount of traffic the roadway is designed to accommodate. A corridor with a high v/c ratio would indicate severe congestion often characterized by stop-and-go traffic, slow travel times, poor travel time reliability, and a higher risk of crashes. A chart showing the percentage of eastbound and westbound segments with v/c ratio greater than 1.0 is provided for each alternative.

7) **Vehicle Miles Traveled: Daily vehicle miles of travel on I-94, supporting parallel routes, and in the region**

   Vehicle miles traveled (VMT) is a standard measure in traffic modeling. This measure calculates the number of vehicle miles traveled within a defined area. For this analysis, three areas are examined – the project corridor (I-94), parallel arterials in the surrounding communities, and the Twin Cities region. The Twin Cities region is defined as the seven-county metropolitan area.

Other Notable Travel Trends and Patterns

While not noted as measures of effectiveness, there are some notable changes in travel and travel patterns that impact the supporting transportation network that are important for the project team and stakeholders to understand when considering the alternatives. These include:

1) **Changes in Traffic Volumes: Absolute and percent change in daily traffic volumes on the supporting roadway network**

   The regional model was used to identify changes in traffic volumes on routes other than I-94 for the build alternatives. Information is provided for changes in daily volumes and percent change in daily volumes compared to No Build conditions for alternatives where there are substantive changes from the No Build. Maps and a short summary are provided for each alternative.

2) **Roadway Congestion: Congestion on the supporting roadway network**

   The regional model was used to identify supporting roadways experiencing congestion based on v/c ratios under the different build alternatives. The v/c ratio is a measure of capacity sufficiency, the amount of traffic on a given roadway relative to the amount of traffic the roadway is designed to accommodate. A segment with v/c greater than 1.0 is assumed to be characterized by heavily congested stop-and-go traffic, slow travel times, poor travel time reliability, and a higher risk of crashes. Maps and a short summary are provided for each alternative.

3) **River Crossings: River crossing trip changes**

   The regional model was used to understand how trips crossing the Mississippi River may change with the At-Grade Roadway and the Reduced Freeway, which would reduce river crossing capacity compared to No Build. River bridges are limited in the area, and the project team was interested in how other routes would be impacted by a substantial reduction in capacity on I-94. Some charts and a short summary are provided for alternatives where there are substantial changes from No Build.

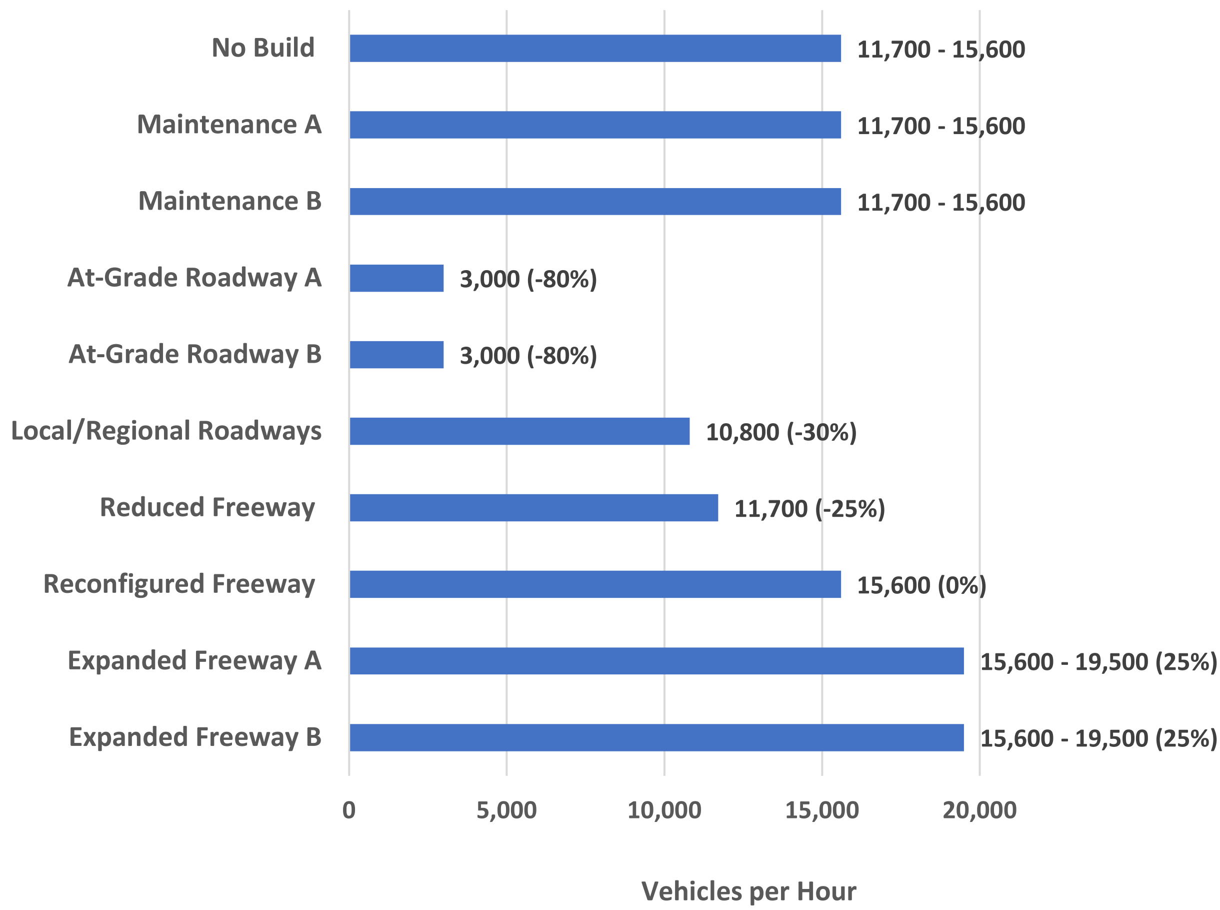
4) **Traffic Flow at the Lowry Tunnel: Travel flow through the tunnel**

   The Lowry Tunnel is just west of the project limits, and there is interest in understanding how the alternatives impact traffic flow to and from the tunnel. Because alternatives are tested using the region's activity based model, only high-level impacts are noted in comparison to the No Build alternative. More detailed traffic modeling in the Tier 1 EIS will provide a better understanding of impacts to upstream and downstream traffic flow near the tunnel.

Modeling Results

The regional travel demand model includes roadway capacity values that vary by roadway type. In the model, one freeway travel lane can accommodate 1,950 vehicles per hour. This does not distinguish between the general purpose lanes or managed lanes within a limited access freeway. A local/at-grade road is assumed to have a capacity of 750 vehicles per hour per travel lane. **Figure 13** shows I-94 capacity per hour for the No Build and the build alternatives based on numbers from the regional model. Numbers are per hour for all travel lanes. No Build assumes four lanes of travel in each direction. Numbers in the parenthesis indicate percent difference compared to the No Build.

Figure 13: Roadway Capacity / Comparison to No Build



Note: For modeling purposes, I-94 is assumed to have a lane capacity of 1,950 vehicles per hour, and local/at-grade roadway is assumed to have a lane capacity of 750 vehicles per hour in the regional planning model. This graph shows I-94 capacity by alternative.

11003650

The preliminary results from traffic and transit modeling for the measures of effectiveness are presented in this section for each alternative. A summary explains the results for the measures listed in the table for each alternative and provides additional context for the impacts of each alternative against the no-build (i.e., the impact of the alternative on measures compared to doing nothing to I-94). Additional maps and charts highlighting key measures related to the alternative are also provided. Information is for 2045 for all alternatives.

No Build/Maintenance A

These two alternatives are considered one alternative for modeling purposes. The no build/maintenance A scenario is how the existing I-94 would operate in 2045 if no changes are made. This alternative serves as the comparison for all other alternatives. **Table 7** summarizes measures for the No Build alternative.

Table 7: 2045 No Build Summary

Measure	Results
Mainline Roadway Capacity	11,700 to 15,600 vehicles per hour – this translates to three to four lanes in each direction of travel
Annual Average Daily Traffic	173,000 vehicles
Mainline Congestion	25-55 percent of I-94 is considered congested with v/c > 1.0 during peak hours
Average Peak Period Mainline Speed	40 – 55 mph
Average Peak Period Transit Travel Time	22 minutes
Annual Average Daily Traffic	173,000 vehicles
Vehicle Throughput (daily)	328,000 vehicles
Person Throughput (daily) • Auto • Transit	426,480 418,000 8,480
Vehicle Miles Traveled (daily) • I-94 in project area • Parallel Arterials • Region	 1,170,000 194,000 105,900,000

Mainline Roadway Capacity and Congestion

Traffic volumes on I-94 in 2045 would average 173,000 vehicles per day under the No Build Alternative. Traffic volume on I-94 would vary widely for the build alternatives, from 36,000 vehicles per day with the At-Grade Roadway to 191,000 vehicles per day for the Expanded Freeway A and B. **Figure 14** shows 2045 Annual Average Daily Traffic (AADT) for each alternative.

Figure 14: 2045 Annual Average Daily Traffic (AADT) on I-94

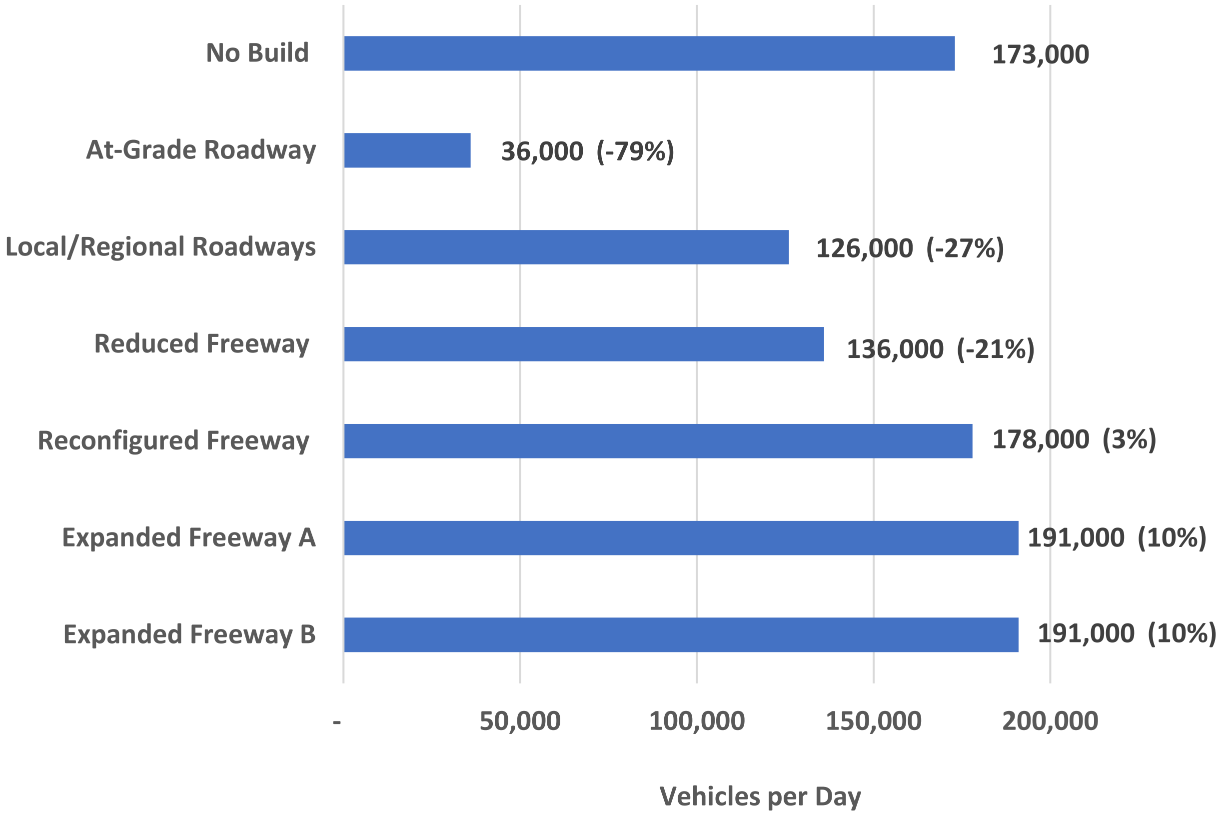


Figure 15 shows the percentage of the corridor that would be congested with the 2045 No Build, based on 2045 v/c ratios for each direction. Many segments along the corridor would have a v/c ratio greater than 1.0 for peak-hour, peak-direction traffic. The corridor would not be congested during off-times in the middle of the day and overnight.

Figure 15: 2045 Mainline Congested Segments for No Build

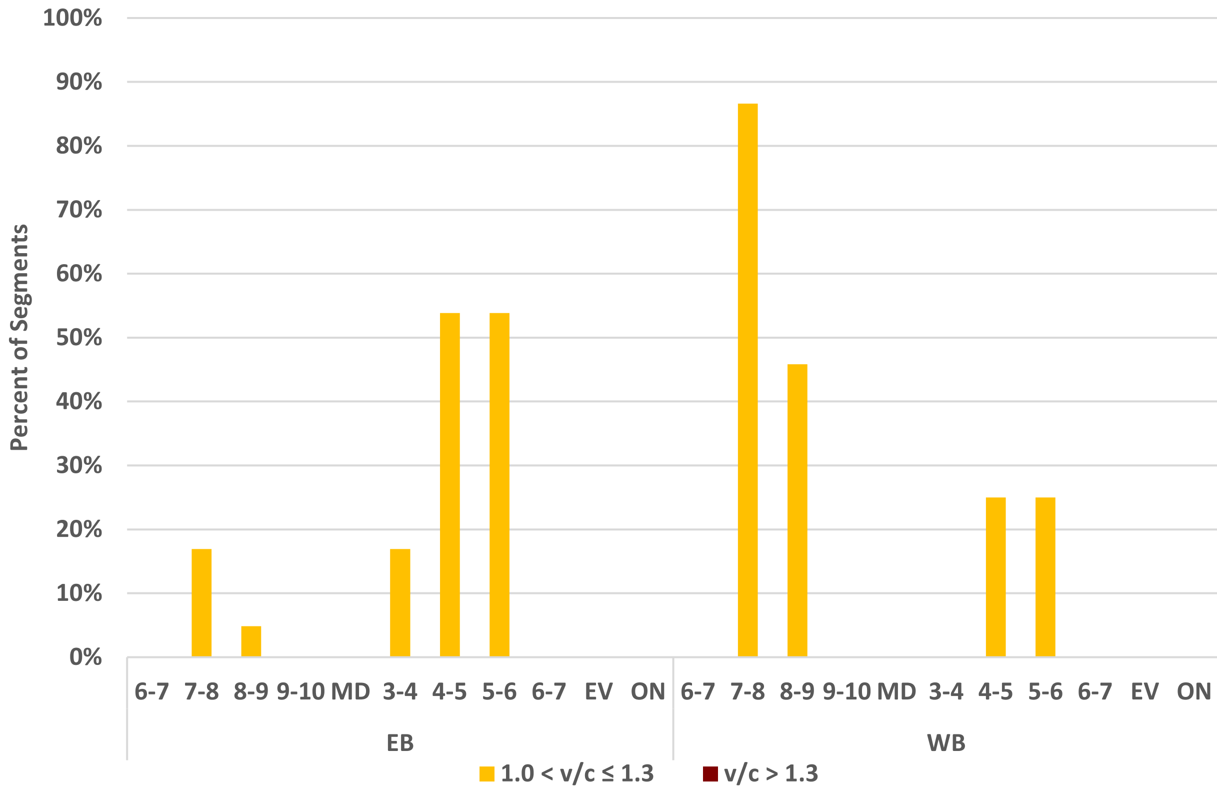
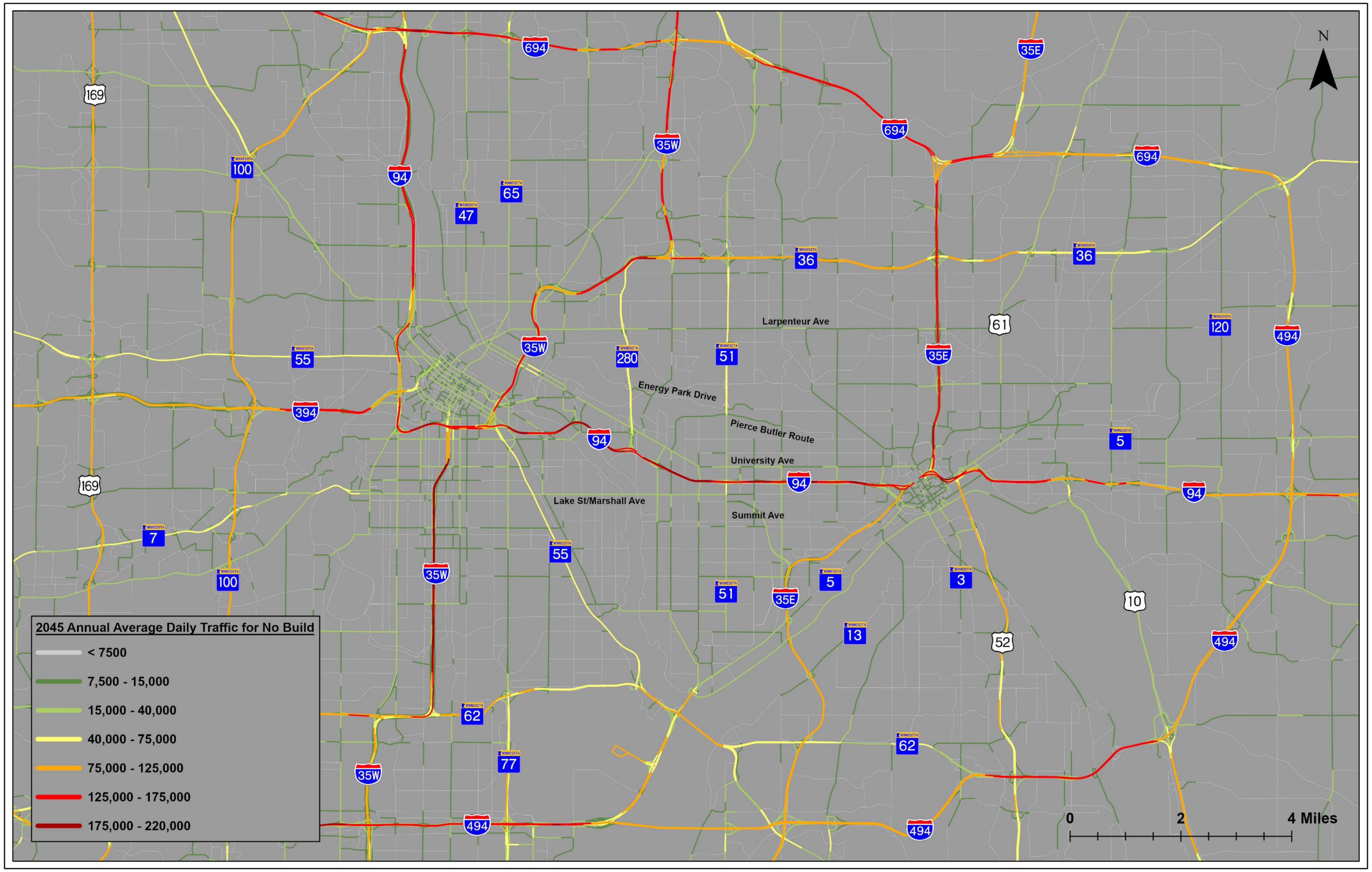


Figure 16 shows 2045 No Build traffic volumes on I-94 and the surrounding transportation network. It should be noted that several routes in Minneapolis near the project area are anticipated to undergo capacity reductions, from four-lane roadways to either three-lane or two-lane facilities. Because studies have not been completed, future capacity and traffic volumes are not yet known, but are likely to be less than they are today.

Roadways with potential capacity reductions include:

- Lake Street between Dupont Avenue and the Mississippi River
- Hennepin Avenue and First Avenue between Main Street and 8th Street NE
- Franklin Avenue between Lyndale Avenue and Chicago Avenue
- University Avenue and 4th Street SE between I-35W and Oak Street
- Lyndale Avenue S between Franklin Avenue and 31st Street
- Lowry Avenue between Marshall Street and Johnson Street NE
- Marshall St NE between Lowry Avenue and 37th Street
- Hennepin Avenue between I-35W and TH 280

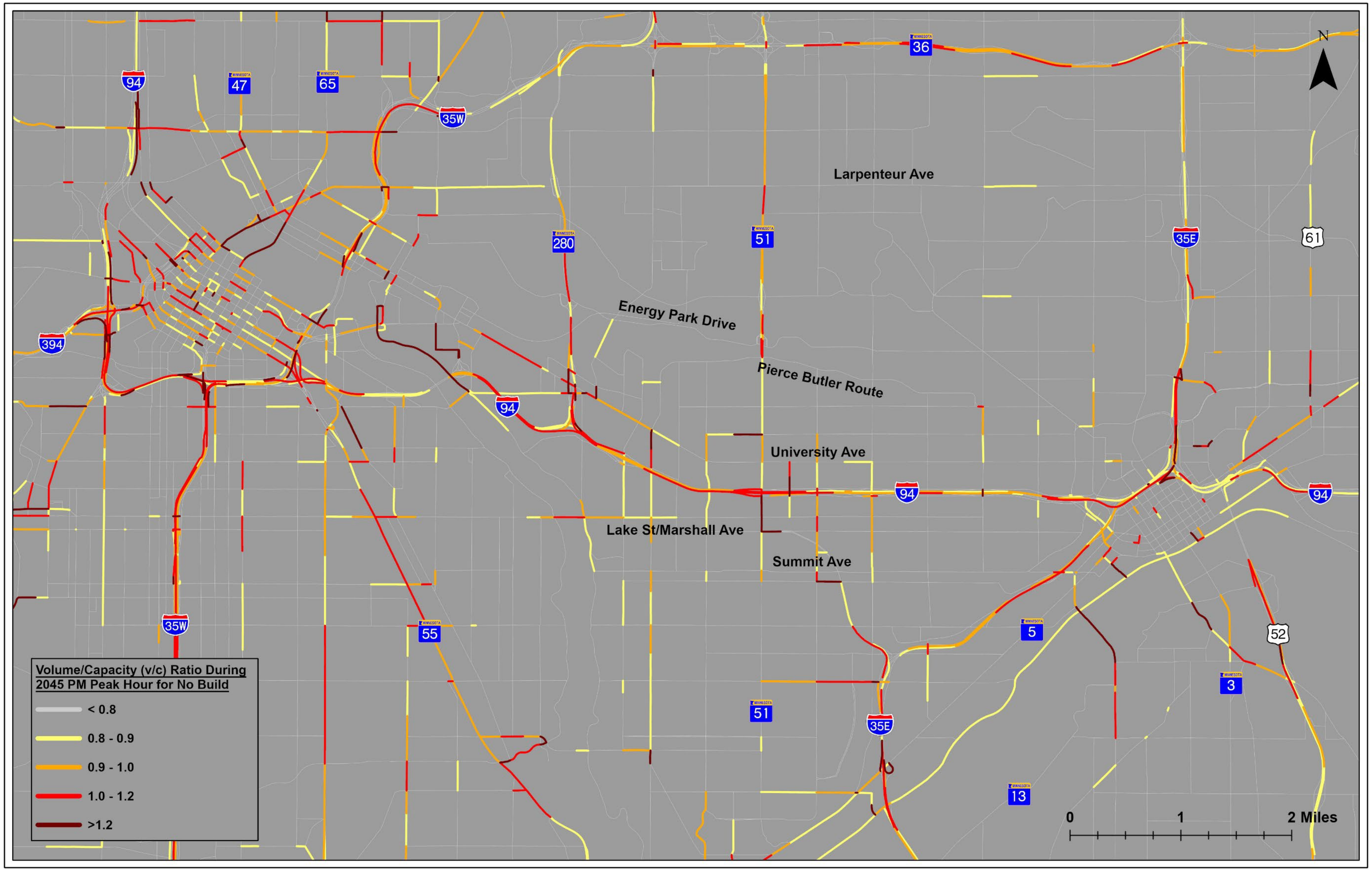
Figure 16: 2045 No Build Traffic Volumes



11003654

Figure 17 shows v/c ratios for I-94 and the surrounding roadway network. In general, roadways with v/c ratios less than 0.9 operate better than those with higher ratios. A v/c ratio of 0.9 indicates that 90 percent of the roadway's capacity is being used during a particular period. When roadways reach a v/c ratio of 0.9, traffic flow is not as stable and becomes characterized with stop-and-go conditions. I-94 under the No Build alternative in 2045 has multiple segments with v/c ratios at or over 0.9. This figure also shows anticipated v/c ratios on the supporting roadway network. Many of the parallel arterial routes to I-94 have a limited number of segments experiencing higher v/c ratios. Other major freeway facilities parallel to and connecting into I-94 have segments experiencing congestion (higher v/c ratios).

Figure 17: 2045 No Build Volume to Capacity Ratios

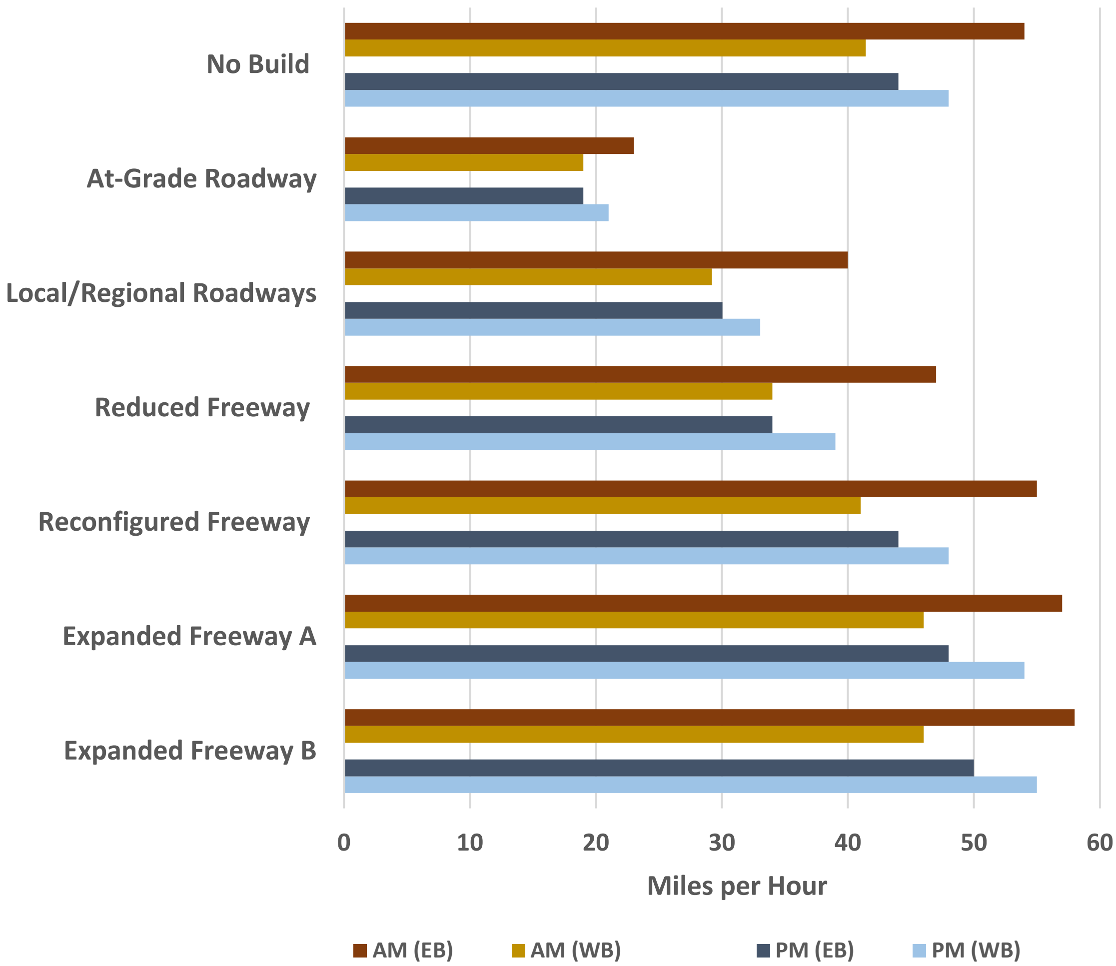


Average Mainline Peak Period Speed

As noted in **Table 7**, travel speeds on I-94 for the No Build are anticipated to average 40 to 55 miles per hour during peak periods. The speed for the No Build is similar to that of the Reconfigured Freeway. Alternatives that add travel lanes (Expanded Freeway A and B) have faster travel speeds during peak periods than the No Build alternative. Alternatives that reduce the number of travel lanes have lower travel speeds.

Figure 18 shows travel speeds on I-94 for each of the alternatives. It is important to note that the at grade alternatives (travel speeds of approximately 20 miles per hour) are intended to be lower-speed facilities, so travel speeds would be anticipated to be lower than other alternatives. However, they are well below the proposed roadway speed of 35 miles per hour. The speed shown for the Local/Regional Roadways is for the regional roadways only.

Figure 18: 2045 Peak Period Vehicle Speeds



Note: In the regional model, maximum speed for I-94 mainline and local/at-grade roadway are assumed to be 64 mph and 35 mph, respectively.

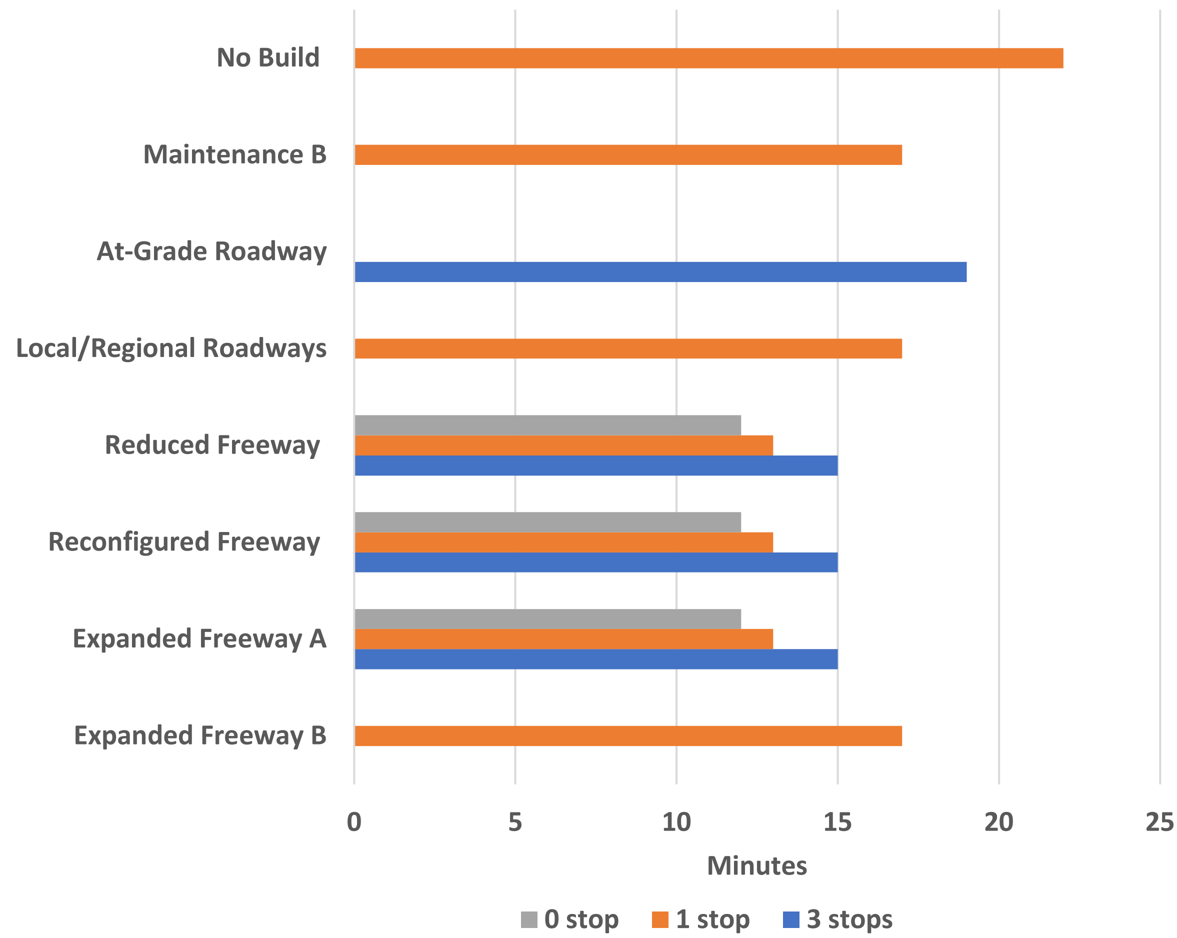
Average Peak Period Transit Travel Time

Under the No Build alternative, express bus transit would continue to operate in the general purpose lanes and would have the opportunity to use shoulders (where they exist) during congested conditions in the peak periods when the speed of traffic drops below 35 mph. Because transit facilities are limited, transit travel times are highest for the No Build alternative, with traversing the corridor taking 22 minutes.

The Reduced Freeway, Reconfigured Freeway, and Expanded Freeway A provide the fastest travel times, approximately 15 minutes with three transit stops and approximately 12 minutes with no stops. Maintenance B, which includes completing the bus shoulders along I-94, reduces transit travel time to 17 minutes. Transit travel time on the At-Grade Roadway would be faster than No Build at 19 minutes. Buses would face some signal delay at intersections, but with dedicated bus lanes they would not be delayed by traffic congestion.

Figure 19 shows peak period transit travel times. The alternatives that include BRT on managed lanes have options for the number of transit stops.

Figure 19: 2045 Average Peak Period Transit Travel Time



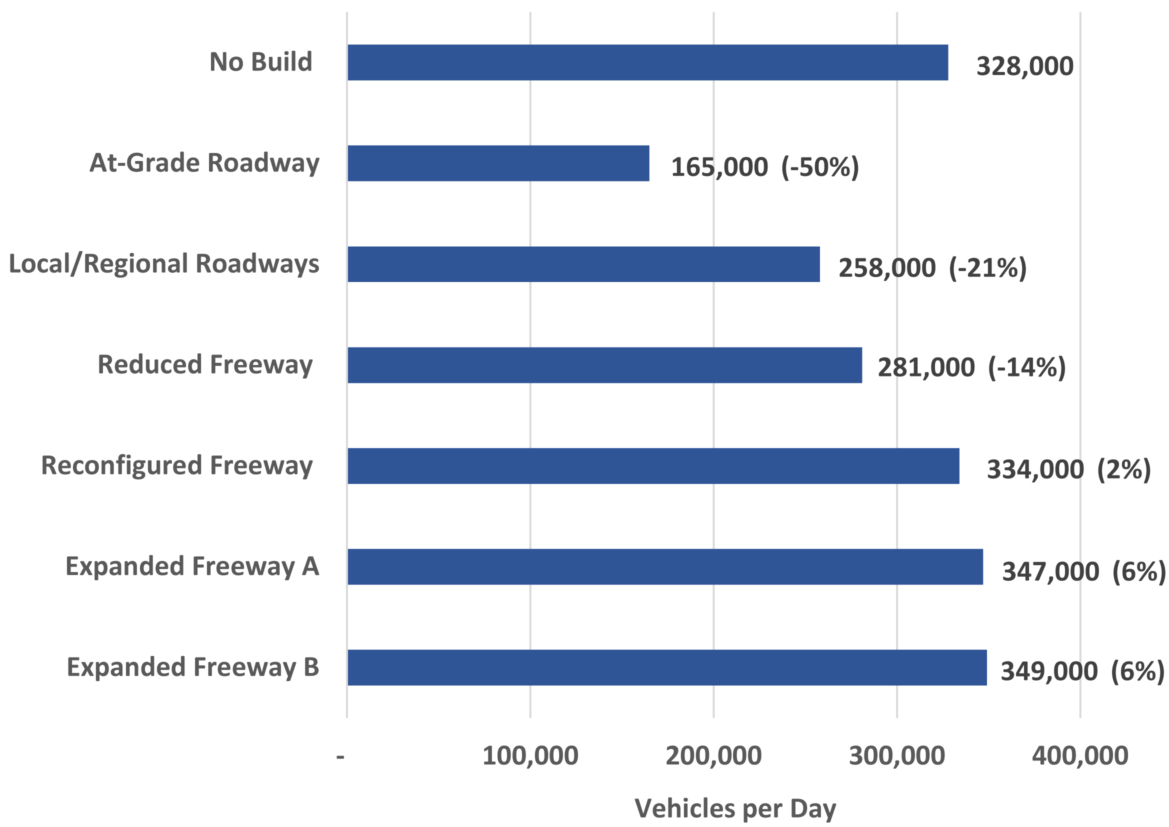
Vehicle Throughput

Vehicle and person throughput on the No Build is less than that for alternatives that add travel lanes (Expanded Freeway A and B) or reconfigure the highway (Reconfigured Freeway). Approximately 427,000 people travel through the corridor under the No Build compared to approximately 458,000 people that would travel through the corridor under Expanded Freeway A, which has the highest person throughput.

The at grade alternatives (At Grade A and At Grade B) have about half the daily vehicle throughput as the No Build alternative. Daily throughput for the at-grade roadway would decrease less than the hourly capacity decrease compared to No Build shown in **Figure 13**. The reduced hourly capacity would limit throughput during peak periods, but during off-peak periods the No Build would have spare capacity, so the reduced capacity of the At Grade roadway would not have the same limiting effect on off-peak period throughput.

Figure 20 shows vehicle throughput on I-94.

Figure 20: 2045 Vehicle Throughput



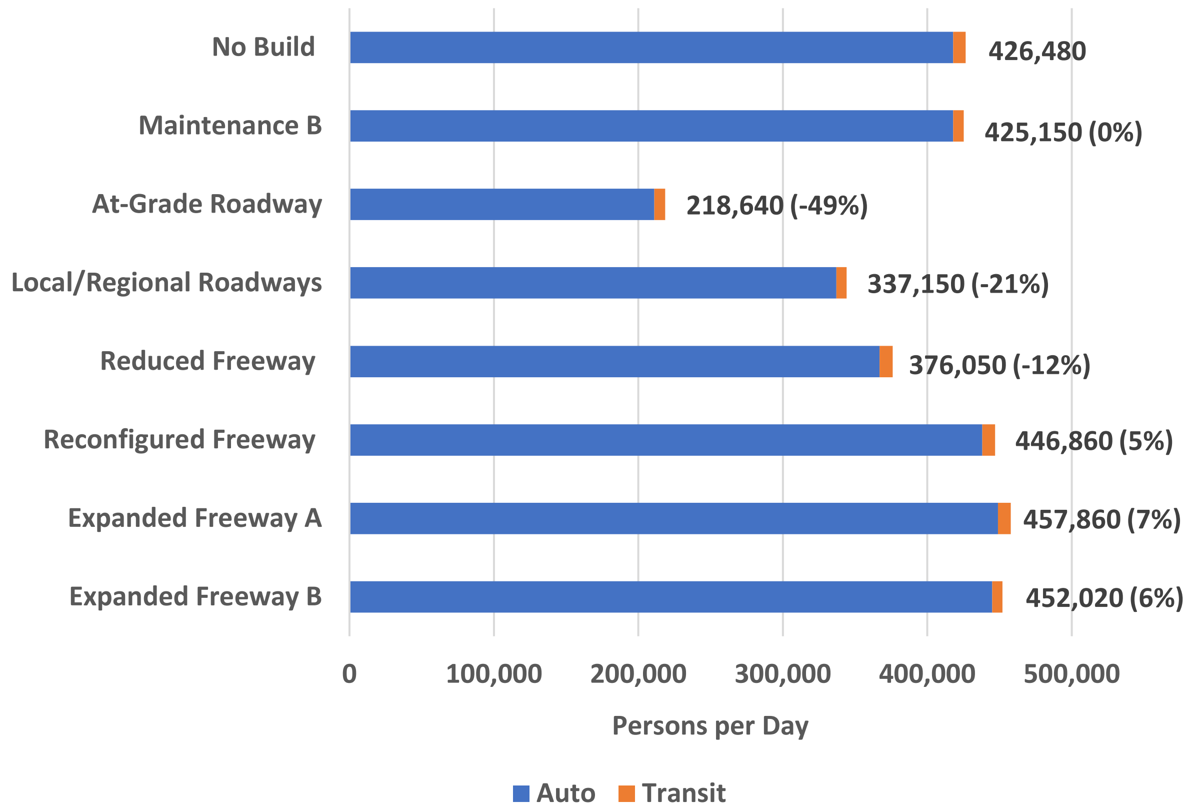
Note: Vehicle throughput is a measure of corridor productivity, which is defined as the total number of vehicles entering any part of the corridor being analyzed.

11003659

Person Throughput

Most of the person throughput is via automobile travel versus transit travel. The at grade alternatives would lead to a systemwide transit ridership increase of about 7,000 riders per day, but this increase would not occur on transit routes using I-94. **Figure 21** shows person throughput on I-94.

Figure 21: 2045 Person Throughput

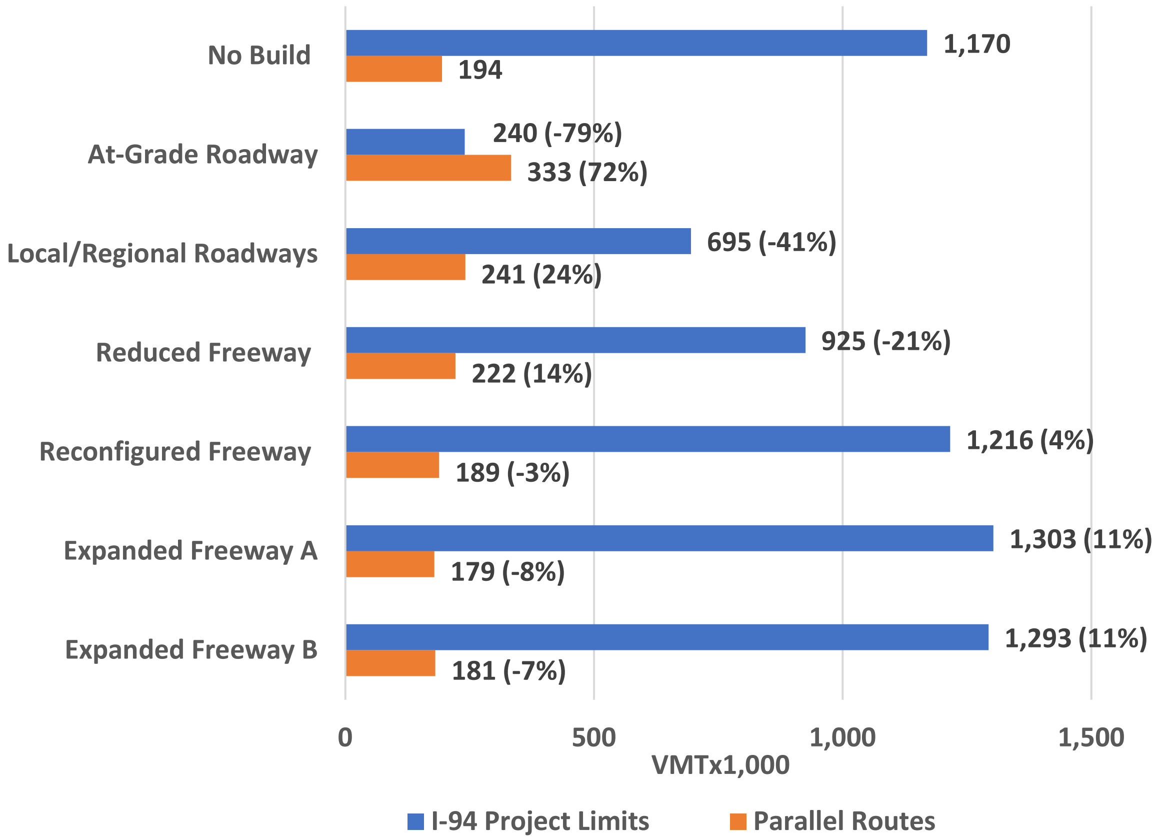


Vehicle Miles Traveled (VMT)

Daily VMT for the No Build is approximately 1.2 million on I-94. This is substantially higher than the At Grade A and B alternatives and higher than the Reduced Freeway alternative. It is about 10 percent lower than alternatives that add capacity (Expanded Freeway A and B) and is very similar to the Reconfigured Freeway alternative. VMT on the supporting roadway network for the No Build is lower than At Grade and Reduced Freeway alternatives and is similar to that of the Reconfigured Freeway alternative. Roadways that provide additional capacity on I-94 slightly reduce VMT on the supporting roadway network as compared to the No Build.

Figure 22 shows VMT on I-94 for each alternative as well as the supporting roadway network. The numbers in the parentheses show the percent change compared to No Build. The At Grade A and B alternatives reduce VMT on I-94 by almost 80 percent but result in a 72 percent increase in VMT on the supporting roadway network. Under the Expanded Freeway B alternative, VMT on I-94 would increase approximately 11 percent, and there would be a 7 percent reduction in VMT on the supporting roadway network. As a reminder, the supporting roadway network for the purposes of this analysis includes University Avenue, Energy Park Drive, Larpenteur Avenue, and Pierce Butler Route to the north of I-94, and Lake Street/Marshall Avenue and Summit Avenue to the south of I-94. Other roadways in the area are also likely to experience changes in VMT.

Figure 22: 2045 VMT on I-94 and Supporting Roadway Network



Note: Vehicle Miles Traveled (VMT) measures the amount of travel of all vehicles on a corridor or in a geographical area. The At-Grade Roadway alternative would result in the largest changes of VMT of the alternatives. I-94 would have a reduction of 79 percent yet adjacent parallel arterials would have an increase of 72 percent due to traffic diverting from the I-94 corridor onto the local roads. The Reduced Freeway would reduce VMT on I-94 by 21 percent and increase VMT on adjacent parallel routes by 14 percent. The Expanded Freeway A and B and Reconfigured Freeway alternatives would result in reduced VMT on adjacent parallel routes.

There are negligible differences in regionwide VMT between the alternatives. Expanded Freeway B results in the highest daily regional VMT of 106,187,000, and the At Grade Roadways A and B, which remove the most VMT on I-94 result in a daily regional VMT of 105,588,000.

Maintenance B

Maintenance B keeps the existing 3-4 general purpose lanes and includes bus shoulders throughout the 7.5 mile project area to support express bus service. The modeling results are the same for the roadway measures for the No Build. The measures that change are transit. As such, most of the graphics included in this memo do not include Maintenance B apart from **Figure 19**.

The proposed transit service in Maintenance B has one stop at Snelling Avenue, which is different from No Build. The No Build condition included transit service just before COVID-19. At that time, there was no Snelling Avenue stop. There was a stop at Huron Blvd only in the westbound direction, and it was an on-demand stop – that is, riders needed to inform the driver they intended to exit for the bus to stop. To be consistent with what was used in the transit modeling, the No Build includes a stop at Huron Blvd, and Maintenance B, which provides bus shoulders along the corridor, would change the stop from Huron to Snelling, consistent with transit service operating in 2023. Maintenance B results in faster peak period transit travel times, as buses are allowed to use the shoulders when there is congestion. Transit travel time goes from 22 minutes under the No Build to 17 minutes in Maintenance B, a reduction of about 23 percent. **Table 8** summarizes measures of effectiveness for Maintenance B.

Faster transit travel time is generally associated with increased ridership. However, the STOPS model includes an extra penalty for stops in addition to the impact on travel time to account for qualitative rider preference for fewer stops. The decrease in ridership is mostly seen at downtown stops, indicating that more commuters may be choosing auto over express bus in Maintenance B. STOPS is also a high-level modeling tool and may not be detailed enough to accurately estimate changes in route-level ridership that are relatively small compared to a total regional daily ridership of around 430,000.

Table 8: Results for Maintenance B Alternative

Measure	No Build	Maintenance B	% Change
Mainline Roadway Capacity	11,700 - 15,600	11,700 - 15,600	0
Annual Average Daily Traffic (AADT)	173,000	173,000	0
Peak Hour Mainline Congestion	25-55 percent	25-55 percent	0
Average Peak Period Mainline Speed (mph)	40 – 55	40 – 55	0
Average Peak Period Transit Travel Time (minutes)	22	17	-23
Annual Average Daily Traffic	173,000	173,000	0
Vehicle Throughput (daily)	328,000	328,000	0
Person Throughput (daily)	426,480	425,150	0
• Auto	418,000	418,000	0
• Transit	8,480	7,150	-16
Vehicle Miles Traveled (daily)			
• I-94 in Project Area	1,170,000	1,170,000	0
• Parallel Arterials	194,000	194,000	0
• Region	105,900,000	105,900,000	0

At Grade Roadways (A and B)

At Grade Roadways A and B convert I-94 from a freeway to an at grade roadway with intersections. Three transit stops are provided. At Grade Roadway A and At Grade Roadway B are shown as a single alternative for this memo as the alternatives are not in detailed traffic and transit operations modeling. The location of the fixed guideway – median or outside lane – does not change the traffic and transit simulated in the regional travel demand or STOPS models.

Table 9 summarizes results for the At-Grade Roadway alternative. Substantial changes in many measures are observed.

Table 9: Results for At Grade Roadway Alternatives

Measure	No Build	At-Grade Roadway	% Change
Mainline Roadway Capacity	11,700 - 15,600	3,000	-80
Annual Average Daily Traffic (AADT)	173,000	36,000	-79
Peak Hour Mainline Congestion	25-55 percent	30-75 percent	36
Average Peak Period Mainline Speed (mph)	40 – 55	20 – 25	-50
Average Peak Period Transit Travel Time (minutes)	22	19	-14
Annual Average Daily Traffic	173,000	36,000	-79
Vehicle Throughput (daily)	328,000	165,000	-50
Person Throughput (daily)	426,480	218,640	-49
• Auto	418,000	211,000	-50
• Transit	8,480	7,640	-10
Vehicle Miles Traveled (daily)			
• I-94 in Project Area	1,170,000	240,000	-80
• Parallel Arterials	194,000	333,000	72
• Region	105,900,000	105,600,000	-0.3

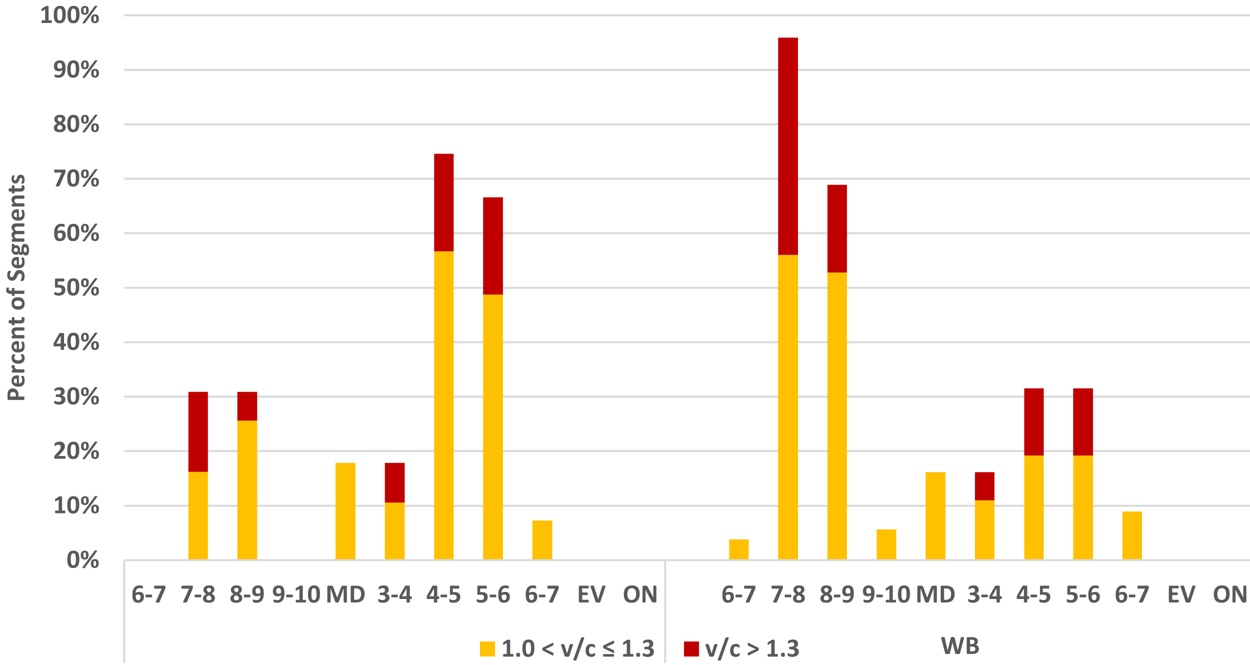
Mainline Roadway Capacity and Congestion

Traffic volumes on I-94 in 2045 would average 36,000 vehicles per day under the At Grade Roadways A and B alternatives. This is an 80 percent reduction compared to the No Build alternative. The reduced capacity under this alternative results in congestion on the mainline that is higher than the No Build alternative. Under the No Build alternative, approximately 55 percent of the corridor is considered congested, for the At Grade Roadways, this increases to 75 percent, with an additional 18 percent considered near capacity.

Travel demand modeling assumed a lane capacity of 750 vehicles per hour for the At Grade Roadways. Further analysis of signal operations will be needed to determine whether this capacity is achievable with the large, congested signalized intersections that this alternative would include.

Figure 23 shows the percentage of the corridor that would be congested with the At Grade Roadways, based on 2045 v/c ratios for each direction. Most of the corridor would have a v/c ratio greater than 1.0 for peak hour peak direction traffic.

Figure 23: 2045 Mainline Congested Segments for At-Grade Roadway



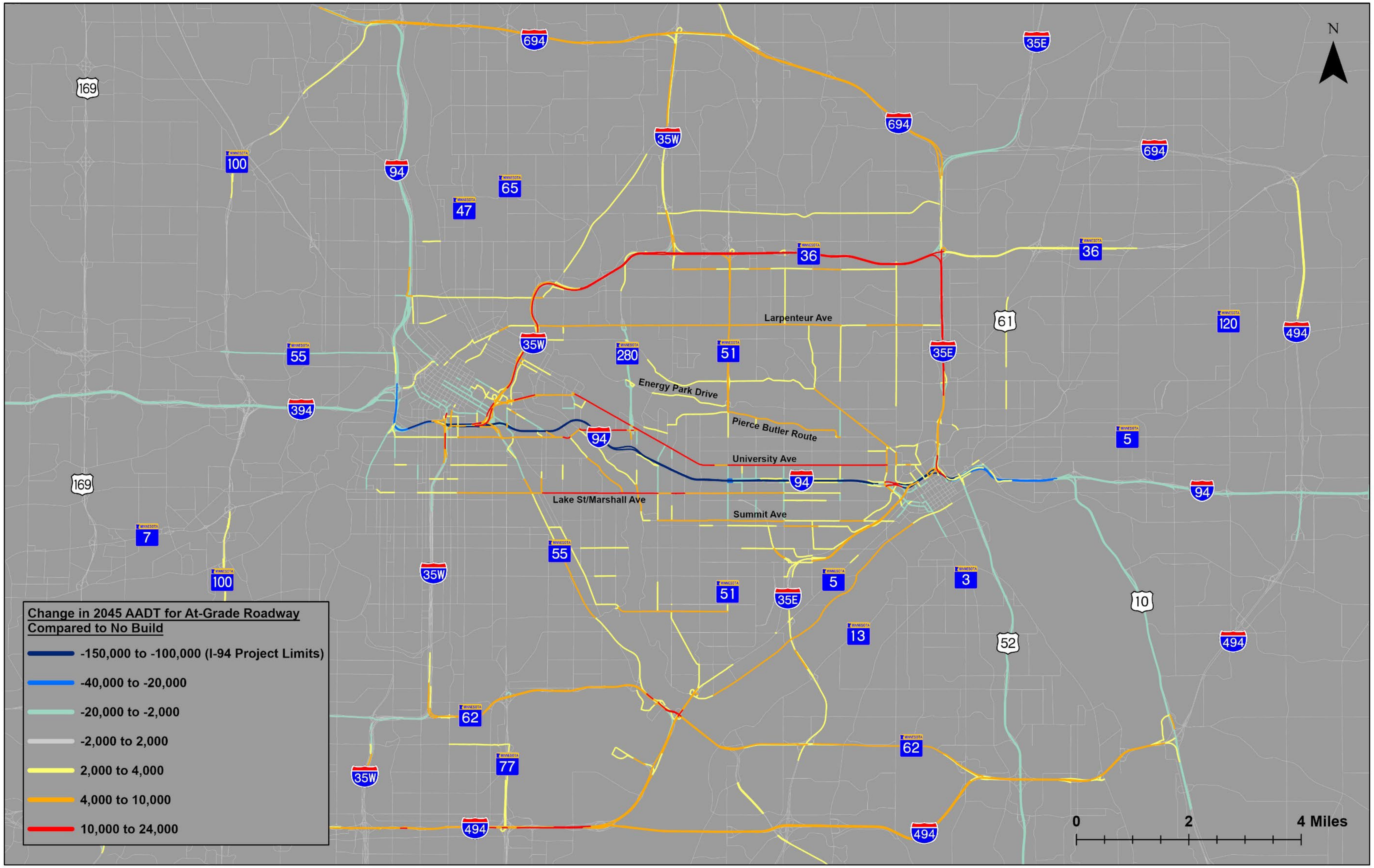
Note: Volume to capacity (v/c) ratio is a measure of capacity sufficiency, the amount of traffic on a given roadway relative to the amount of traffic the roadway is designed to accommodate. A corridor with higher v/c ratio would indicate severe congestion often characterized by stop-and-go traffic, slow travel times, poor travel time reliability, and a higher risk of crashes.

Figure 24 shows the changes in projected 2045 traffic volumes for I-94, the supporting parallel arterial network and other key routes compared to the No Build alternative.

Figure 25 shows the percent change to provide context of how big of an increase can be expected compared to the No Build. As shown in the figures, traffic volumes on I-94 decrease substantially, and volumes on parallel roadways experience an increase in traffic, as trips are diverted to other routes. As a reminder, identified parallel arterial routes near the project area are Lake Street, Marshall Avenue, University Avenue, Pierce Butler Route, Energy Park Drive, and Larpenteur Avenue. Other non-arterial roadways in the area are also likely to experience changes in volumes.

Figure 26 shows v/c ratios for I-94 and the surrounding roadway network.

Figure 24: Change in 2045 Daily Traffic Volumes between At Grade Roadway and No Build



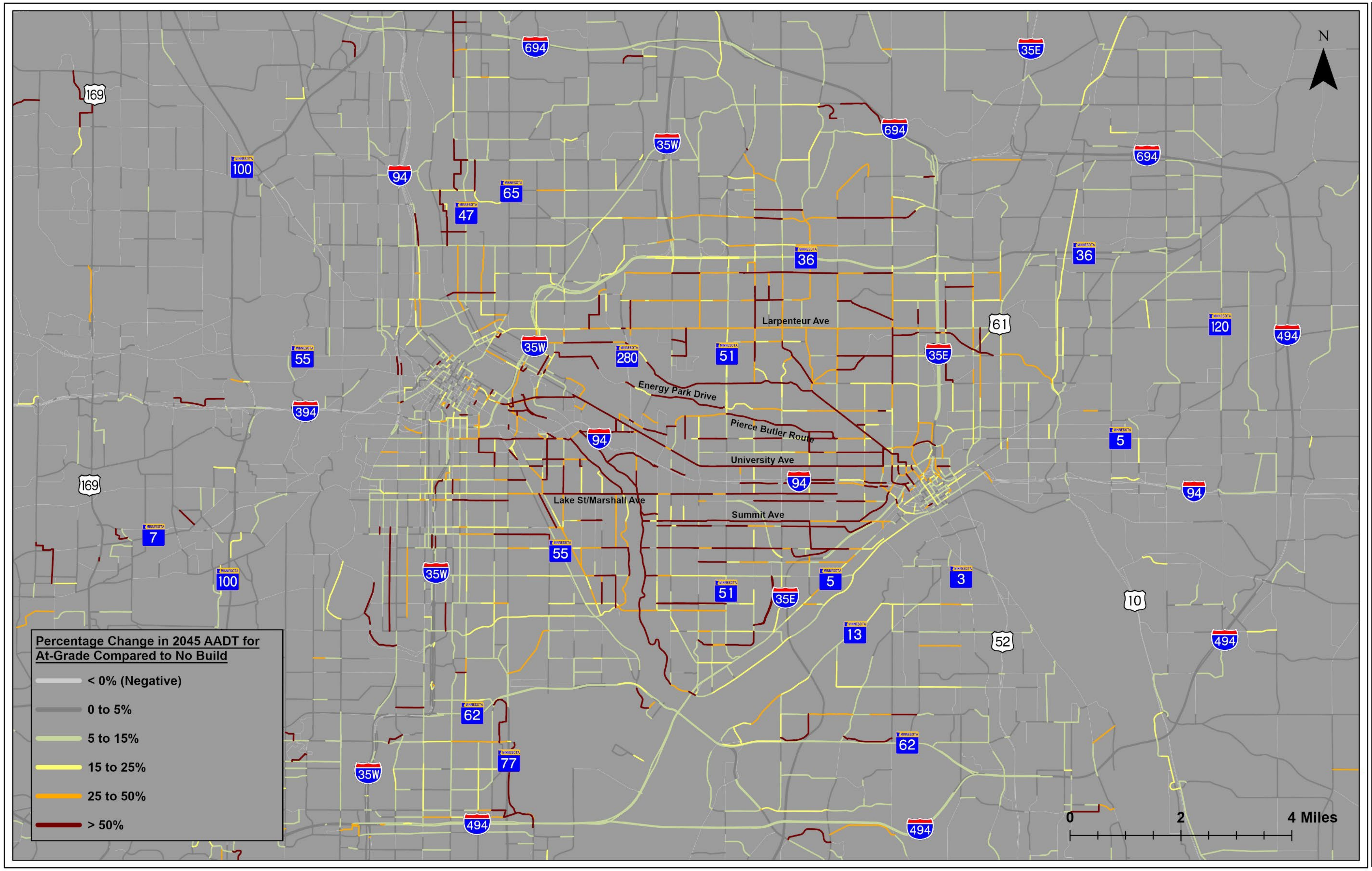
At-Grade Roadway Alternative

Change in 2045 AADT Compared to No Build

Observations

- AADT on I-94 would be reduced by 128,000.
- University Ave, Lake Street, TH 36 and I-35E would see the largest traffic increase.
- Marshall Avenue, Summit Avenue, Snelling Avenue and I-35E would see 6,000 to 7,500 more vehicles per day.
- AADT on the Lake Street and Washington Avenue bridges would increase by 17,800 and 9,700 vehicles per day, respectively.
- The Lowry Hill Tunnel and I-35E Commons Area would have less traffic.

Figure 25: Percent Change in 2045 Daily Traffic Volumes between At Grade Roadway and No Build



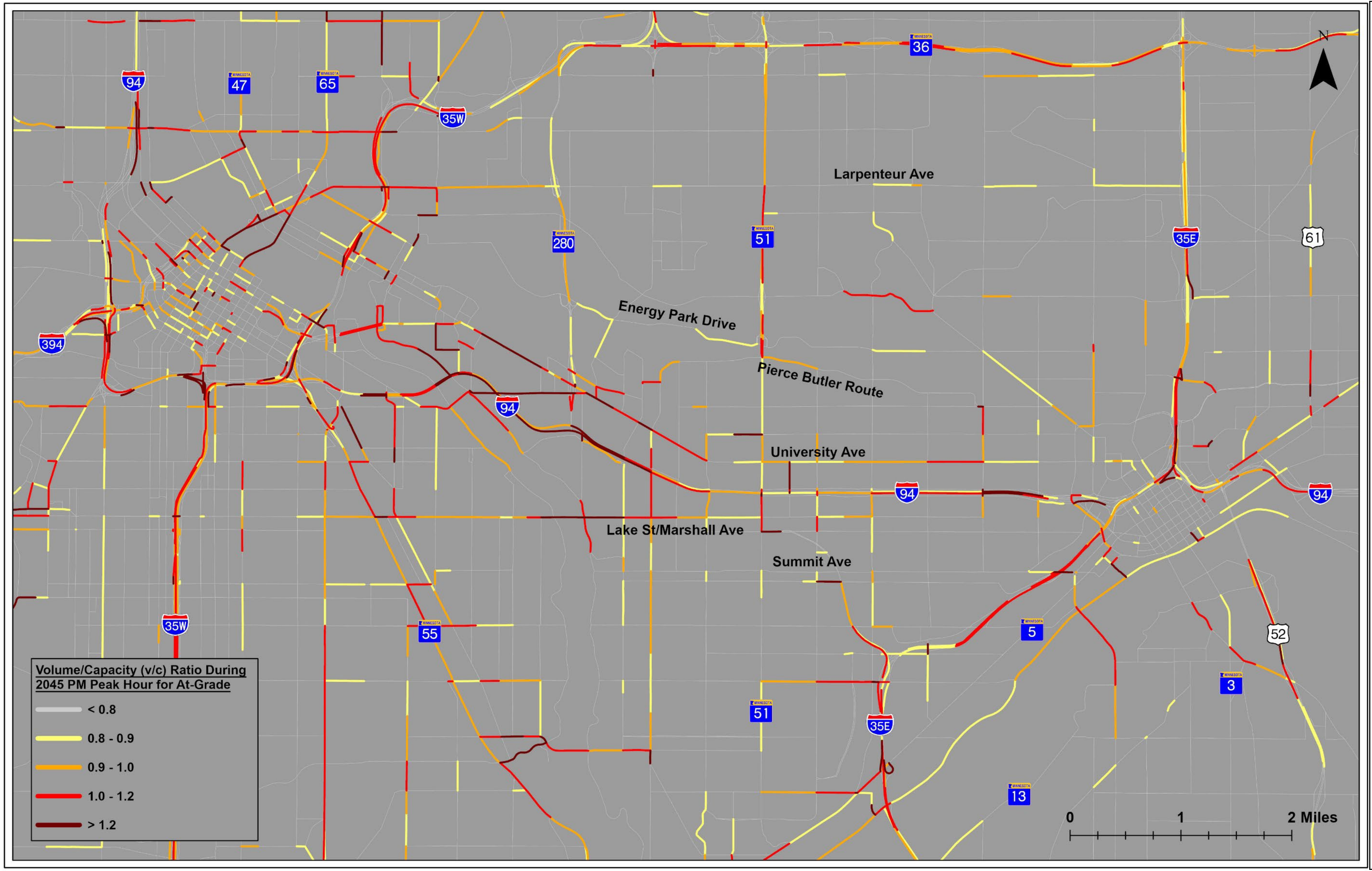
At-Grade Roadway Alternative

Percentage Change in 2045 AADT Compared to No Build

Observations

- Traffic diverting from I-94 would result in substantial impacts on local streets several miles away.
- Traffic volume on many routes parallel to I-94 would increase by more than 50 percent compared to No Build.
- The impact on north-south streets is more varied. Some would see a large increase in traffic, and others would have little change.
- Trunk highways parallel to I-94 would carry some increased traffic, but the increase would not be large in percentage terms.
- North-south trunk highways would have little change in traffic volumes.

Figure 26: 2045 At-Grade Volume to Capacity (v/c) Ratio



At-Grade Roadway Alternative

Volume to Capacity (v/c) Ratio during 2045 PM Peak Hour

Observations

- Many locations on I-94 would have v/c > 1.0. Some would have v/c ratio exceeding 1.2 during peak hours.
- Many local parallel streets would operate over capacity. Capacity reductions are planned for some of these routes.
- The Lake Street bridge would be very congested. The v/c ratio would exceed 1.5 during peak hours.
- The Washington Avenue bridge would also be very congested. Any traffic diverting to this bridge would pass through the University of Minnesota campus.
- The Lowry Hill tunnel would continue to be a major bottleneck.
- TH 55, I-35W, TH 36, I-35E and TH 51 would have more segments where traffic exceeds capacity.

Average Mainline Peak Period Speed

As noted in **Table 9**, travel speeds on I-94 for the At Grade Roadways A and B would be approximately 20 miles per hour (**Figure 18**). No Build is anticipated to average 42 miles per hour. As noted previously, the At Grade Roadway A and B alternatives are intended to be lower speed facilities, so travel speeds would be anticipated to be lower than other alternatives. However, they are also well below the proposed roadway speed of 35 miles per hour. This reflects the congestion and capacity constraints shown on **Figure 26**.

Average Peak Period Transit Travel Time

Compared to the No Build alternative, the fixed guideway in the At Grade Roadways A and B alternatives would allow for faster transit service. Buses would encounter delays at signalized intersections where grade-separated crossings and interchanges are located in the No Build alternative, but buses would be separated from the general travel lanes and may have the opportunity to preempt traffic signals. Peak period transit time for the At Grade Roadways A and B would be 19 minutes, which is approximately 14 percent faster than the No Build (22 minutes), but slower than alternatives that would provide freeway bus rapid transit (Reduced Freeway, Reconfigured Freeway, Expanded Freeway) or would add mainline general purpose lanes (Expanded Freeway B) to I-94. **Figure 19** shows average peak period transit travel times.

Vehicle and Person Throughput

Daily vehicle throughput on the At Grade Roadways A and B alternatives is approximately 165,000. These alternatives have the lowest vehicle throughput. The at grade alternatives have about half the vehicle throughput as the No Build alternative, which is 328,000 vehicles. The next lowest (in terms of vehicle throughput) alternative is the Reduced Freeway alternative, which allows approximately 281,000 vehicles through the corridor. Daily throughput for the at-grade roadways would decrease less than the hourly capacity decrease compared to No Build shown in **Figure 13**. The reduced hourly capacity would limit throughput during peak periods, but during off-peak periods the No Build would have spare capacity, so the reduced capacity of the At Grade roadway would not have the same limiting effect on off-peak period throughput. The at grade alternatives would lead to a systemwide transit ridership increase of about 7,000 riders per day, but this increase would not occur on transit routes using I-94. The lower vehicle throughput and the expected transit ridership on the corridor result in lower person throughput for At Grade Roadway A and At Grade Roadway B. At Grade Roadways A and B result in approximately 219,000 people traveling through the corridor, a reduction of slightly less than 50 percent compared to the No Build. **Figures 20** and **21** show vehicle and person throughput on I-94.

Vehicle Miles Traveled

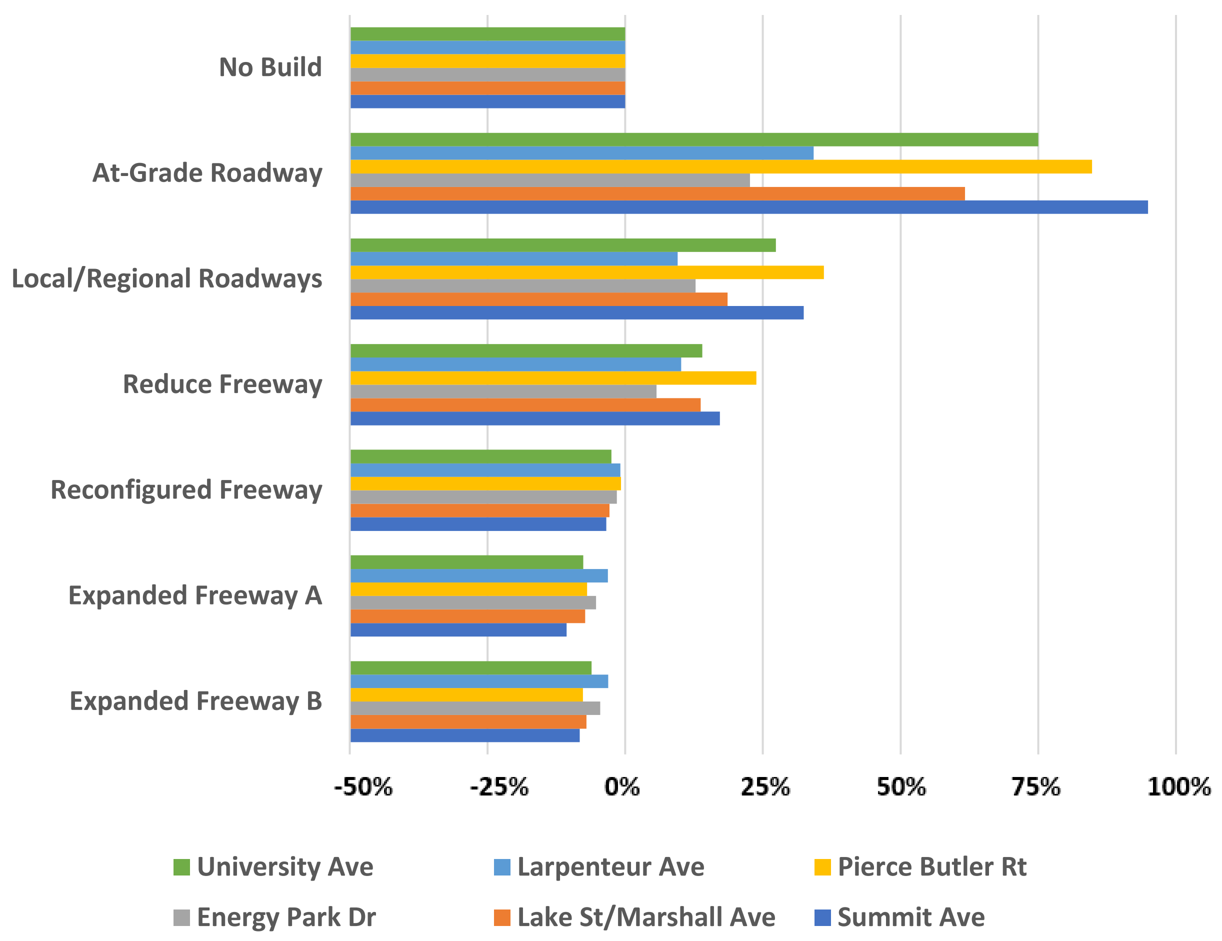
Daily VMT on I-94 for At Grade Roadway A and At Grade Roadway B is substantially lower than all other alternatives identified. Daily VMT on at grade alternatives is approximately 240,000. This is approximately 80 percent lower than the No Build alternative. It is about 74 percent lower than the Reduced Freeway alternative which has the second lowest VMT (925,000).

Lower VMT on I-94 means that trips go elsewhere in the transportation network. Some trips will change modes, for example shift to transit. Other trips will find new routes and some people may move or change employers, so trips leave the project area. Some trips that find new routes will use routes in and near the project corridor – both neighborhood streets and parallel arterials, and some will divert to roadways outside the immediate area. In the case of I-94, this could mean that trips go to routes such as TH 36, I-494, or I-694.

As a reminder, identified parallel arterial routes near the project area are Lake Street, Marshall Avenue, University Avenue, Pierce Butler Route, Energy Park Drive, and Larpenteur Avenue. Other non-arterial roadways in the area are also likely to experience changes in VMT.

Figure 27 shows the percent change in VMT on the parallel arterial routes. Summit Avenue and Pierce Butler Route experience the greatest increases in VMT under the At Grade Roadway A and B Alternatives. As shown in **Figures 24** and **25**, average daily traffic on many segments along these routes would increase by more than 50 percent, and they would be expected to carry several thousand additional vehicles per day.

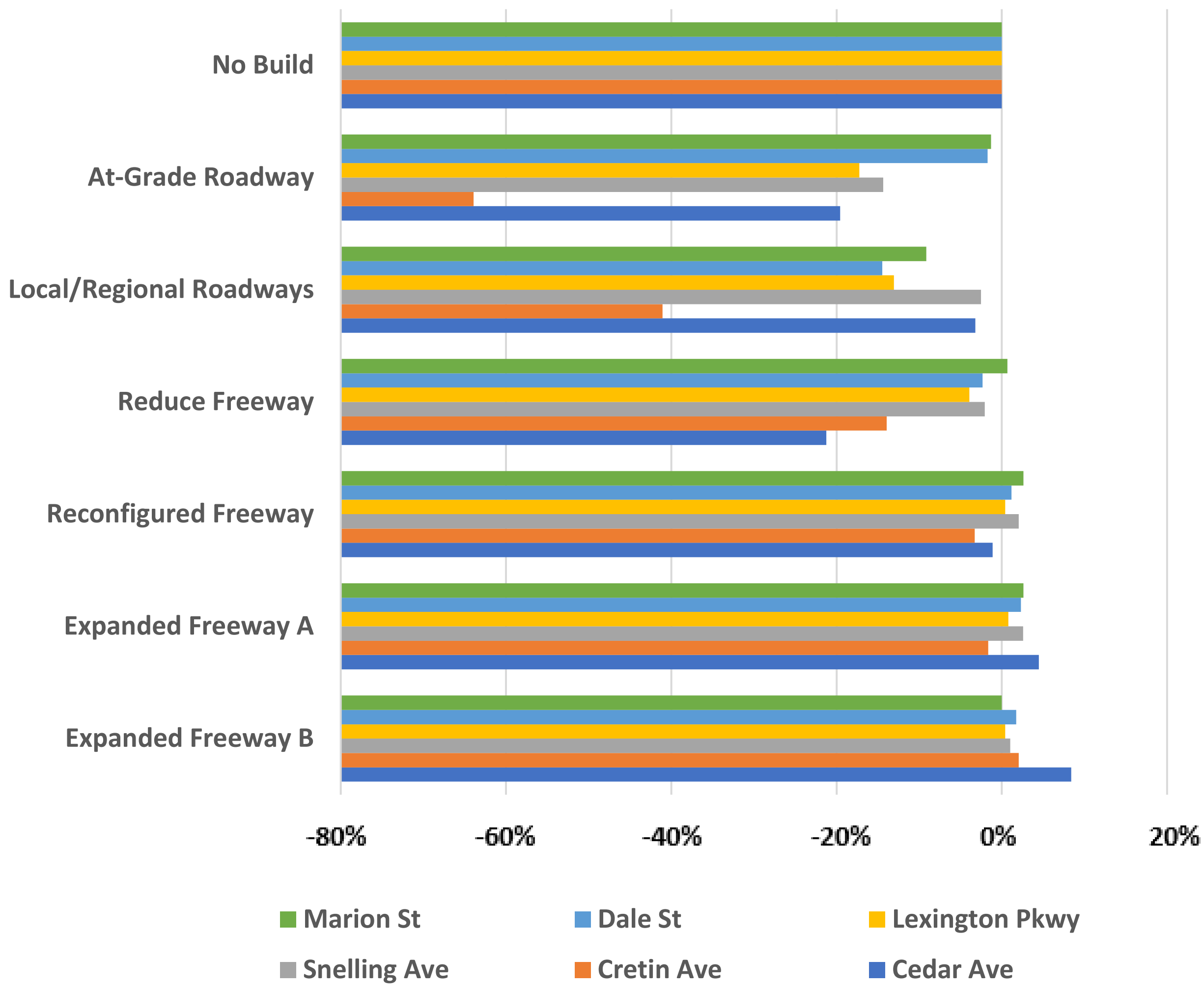
Figure 27: Percent Change in 2045 VMT on Parallel Roadways



Note: The At-Grade Roadway alternative would result in the largest change in VMT of the alternatives due to traffic diverting from the I-94 corridor onto the local roads.

VMT on streets crossing I-94 would decrease with the At Grade Roadways, as the lower capacity of the corridor would reduce the demand for traffic to use these streets for access. **Figure 28** summarizes the percent change in VMT on the busiest streets crossing I-94 for each alternative compared to No Build. **Figure 4** shows the locations of the segments included.

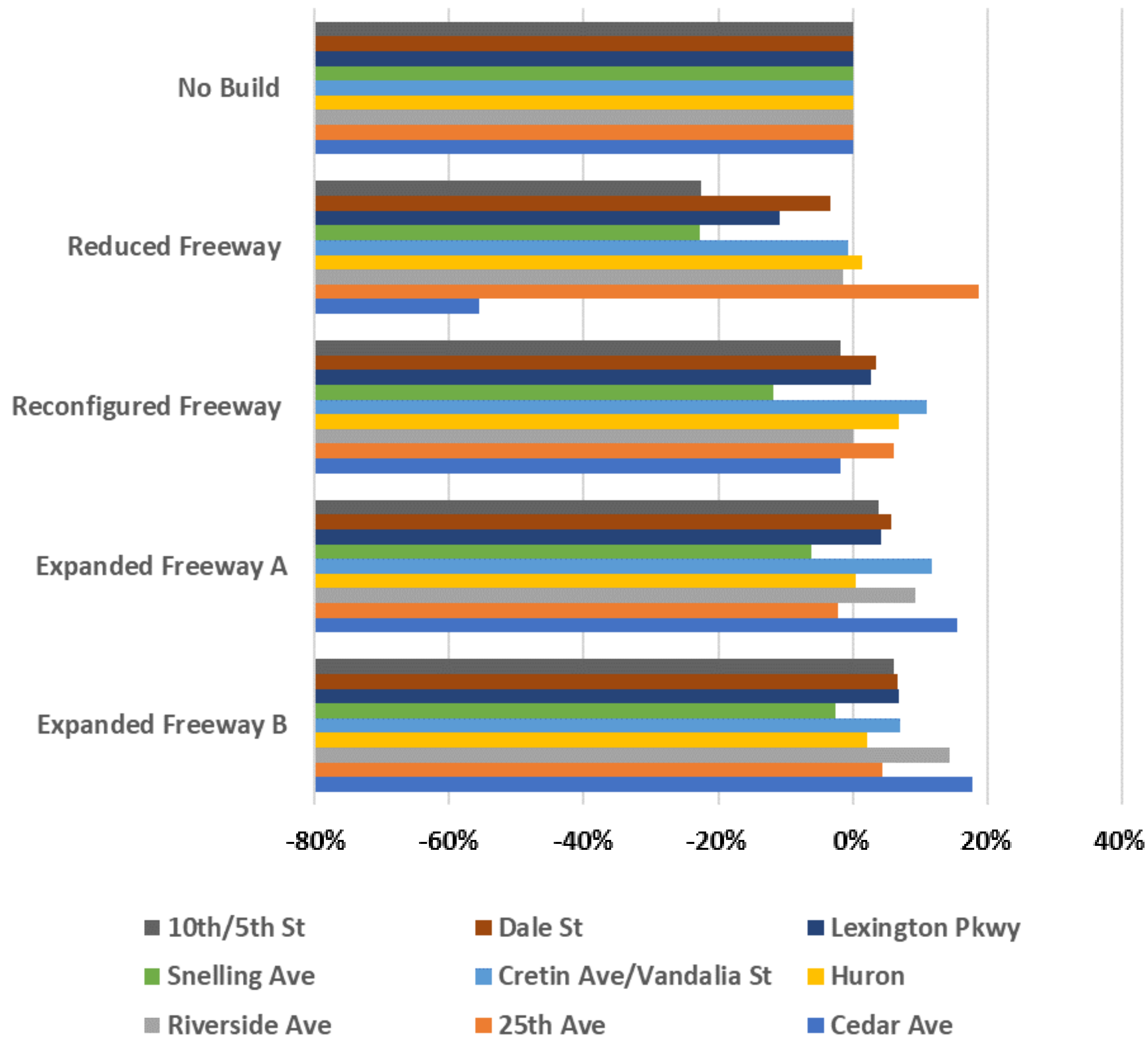
Figure 28: Percent Change in 2045 AADT on Roadways Crossing I-94



> Note: No substantial changes in daily volumes on local streets crossing I-94 would be expected, while parallel roadways would experience a substantial traffic increase of more than 75 percent due to diverted traffic.

Figure 29 shows the percent change in daily traffic volumes on local intersection connected to I-94 for each alternative.

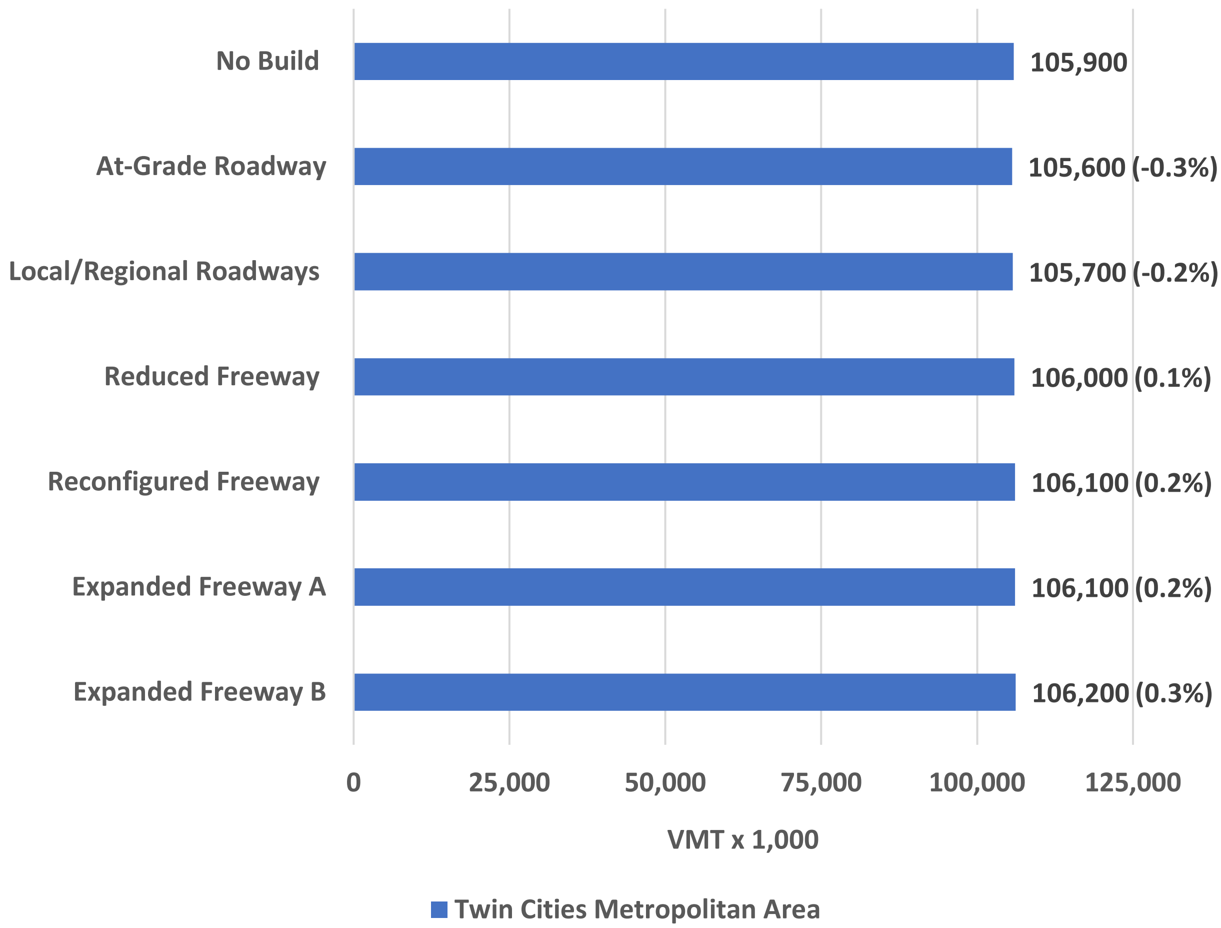
Figure 29: Percent Change in 2045 daily traffic volumes on Local Intersections Connected to I-94



Note: No substantial changes in daily volumes on local intersections connected to I-94 would be expected, which is similar to local streets crossing I-94.

Figure 30 shows the regionwide VMT for each alternative. There are negligible differences in regionwide VMT between the alternatives. Expanded Freeway B results in the highest daily regional VMT of 106,200,000, and the At Grade Roadways A and B, which remove the most VMT on I-94 result in a daily regional VMT of 105,600,000.

Figure 30: 2045 Twin Cities Metropolitan Area VMT



Note: There are negligible differences in regionwide VMT between the alternatives. The At-Grade Roadway alternative would experience some reduction due to substantial change in river crossing traffic volumes. More discussion is provided in Section – Other Notable Travel Trends and Patterns.

Local/Regional Roadway

The Local/Regional Roadway alternative combines a freeway system and a local roadway system. The Regional portion of this alternative includes two freeway lanes in each direction with shoulders that can be used by buses during times of congestion in the peak periods. The Local portion of this alternative includes a frontage road on both sides of the freeway with two-way traffic.

The partial conversion of I-94 to local roadways does reduce vehicle capacity on I-94 but provides some capacity via the local roadway. Regional roadway capacity would be 7,800 vehicles per hour, and local roadway capacity would be 3,000 vehicles per hour. The total capacity of the Local/Regional Roadway is similar to the capacity of the Reduced Freeway. **Table 10** summarizes the measures of effectiveness for the Local/Regional Roadway. These results are based on a design with access between the regional and local roadways at four locations: I-35W, TH 280, Snelling Avenue, and Marion Street.

Table 10: Results for Local/Regional Roadway Alternative

Measure	No Build	Local/Regional Roadway	% Change
Mainline Roadway Capacity	11,700 - 15,600	10,800	-31
Annual Average Daily Traffic (AADT)	173,000	126,000	-27
Peak Hour Mainline Congestion	25-55 percent	37-42 percent*	130
Average Peak Period Mainline Speed (mph)	40 – 55	30 – 45*	-27
Average Peak Period Transit Travel Time (minutes)	22	17	-23
Annual Average Daily Traffic	173,000	126,000	-27
Vehicle Throughput (daily)	328,000	258,000	-21
Person Throughput (daily)			
• Auto	418,000	330,000	-21
• Transit	8,480	7,150	-16
Vehicle Miles Traveled (daily)			
• I-94 in Project Area	1,170,000	695,000	-41
• Parallel Arterials	194,000	241,000	24
• Region	105,900,000	105,700,000	-0.2

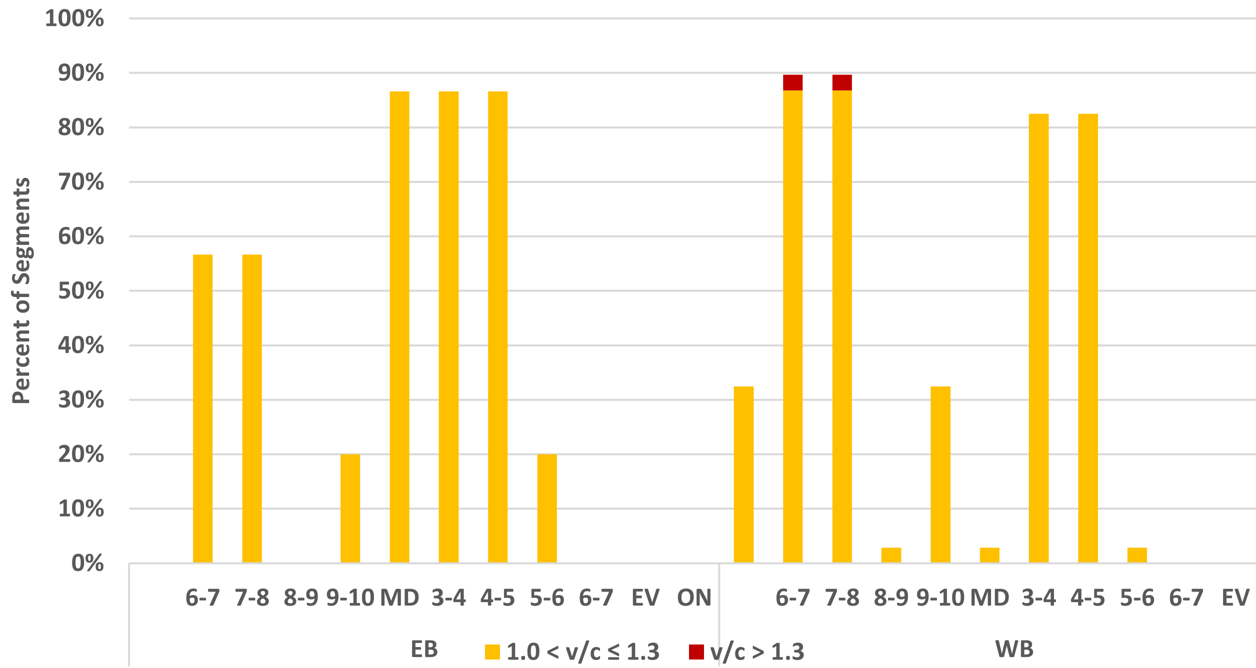
*Regional roadways only

Mainline Roadway Capacity and Congestion

Traffic volumes on I-94 in 2045 would average 126,000 vehicles per day on the Local/Regional Roadway. The regional roadway would carry an average of 106,000 vehicles per day, and the local portion of the corridor would carry an average of 20,000 vehicles per day. The reduced capacity under this alternative results in congestion on the mainline that is higher than No Build. Under the No Build alternative, 20-25 percent of the corridor is considered congested. For the Local/Regional Roadway, this increases to 37-42 percent.

Figure 31 shows the percent of the corridor that would be congested with the Regional Roadway, based on 2045 v/c ratios for each direction. Most of the corridor would have a v/c ratio greater than 1.0 for peak hour peak direction traffic.

Figure 31: 2045 Mainline Congested Segments for Regional Roadway of Local/Regional Roadways



> Note: Volume to capacity (v/c) ratio is a measure of capacity sufficiency, the amount of traffic on a given roadway relative to the amount of traffic the roadway is designed to accommodate. A corridor with higher v/c ratio would indicate severe congestion often characterized by stop-and-go traffic, slow travel times, poor travel time reliability, and a higher risk of crashes.

Figure 32 shows the changes in projected 2045 traffic volumes for I-94, the supporting parallel arterial network and other key routes compared to No Build. **Figure 33** shows the percent change to provide context of how big of an increase can be expected compared to the No Build. As shown in the figures, traffic volumes on I-94 decrease substantially, and parallel routes experience an increase in traffic. As a reminder, identified parallel arterial routes near the project area are Lake Street, Marshall Avenue, University Avenue, Pierce Butler Route, Energy Park Drive and Larpenteur Avenue. Other non-arterial roadways in the area are also likely to experience changes in volume. **Figure 34** shows v/c ratios for I-94 and the surrounding roadway network.

11003674

Average Mainline Peak Period Speed

As shown in **Table 10**, peak period travel speeds on the regional roadways for this alternative vary between 30 and 45 miles per hour. Eastbound and westbound AM and PM peak hour average speeds are compared to No Build and the other alternatives in **Figure 18**. No Build is anticipated to average 42 miles per hour.

Average Peak Period Transit Travel Time

With the Local/Regional alternative, bus transit would operate on the regional portion of the roadway. Buses would operate with mixed traffic but could use the shoulders during the peak period under congested conditions. The express bus service in this alternative would be the same as in Expanded Freeway B. Average transit travel time would be 17 minutes, which is faster than the No Build (22 minutes), but slower than the bus rapid transit alternatives (12 to 15 minutes). **Figure 19** shows average peak period transit travel times.

Vehicle and Person Throughput

Daily vehicle throughput the Local/Regional alternative is 258,000. This is lower than all other alternatives except the At-Grade Roadway. The Local/Regional alternative has about a 21 percent reduction in vehicle throughput compared to the No Build alternative.

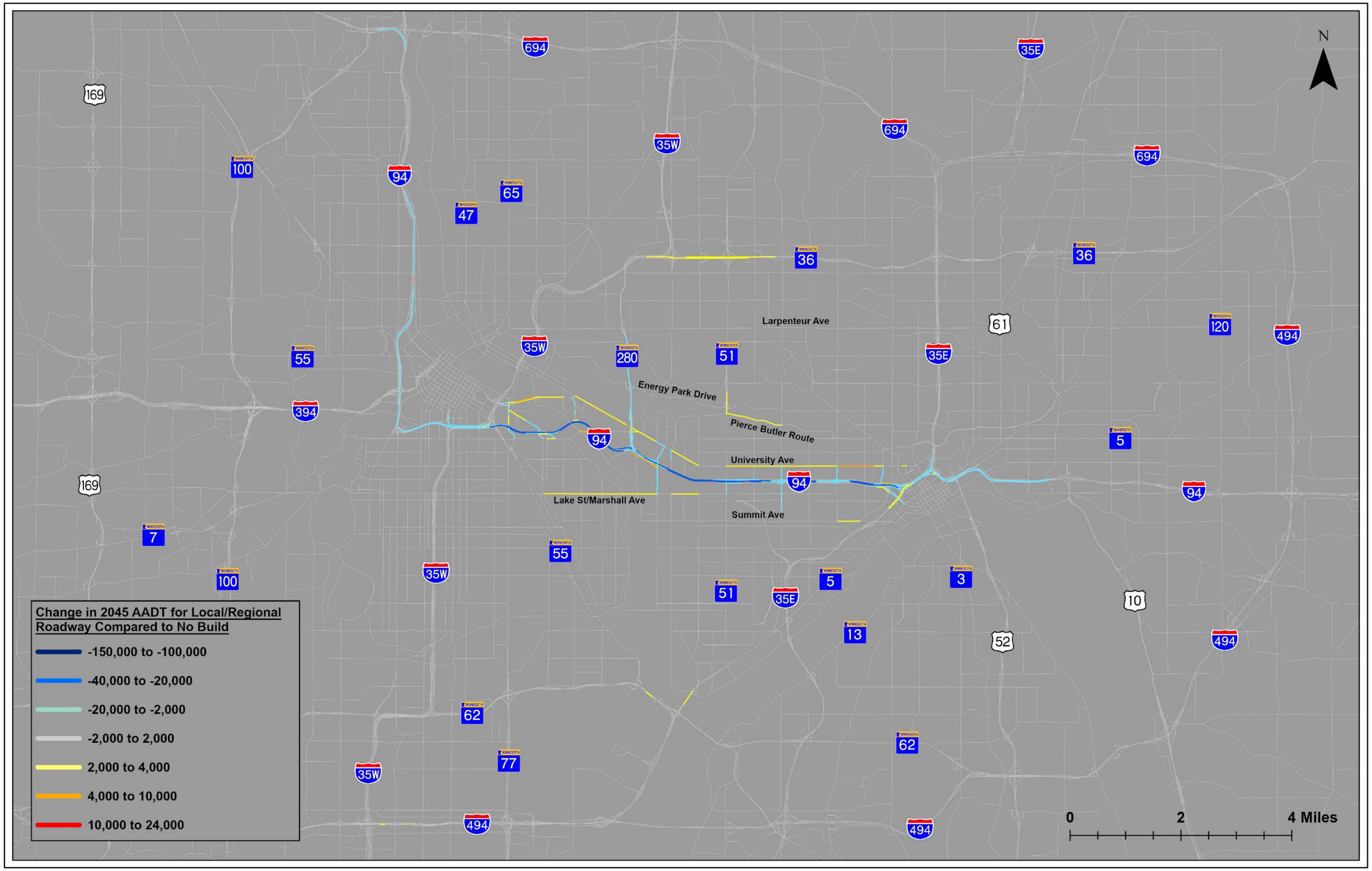
The Local/Regional alternative results in approximately 337,000 people traveling through the corridor per day. About 330,000 would be in automobiles and 7,000 would be transit riders. Person throughput with this alternative is about 21 percent lower than No Build. **Figures 20** and **21** show vehicle and person throughput on I-94.

Vehicle Miles Traveled

Daily VMT on I-94 for the Local/Regional Roadway is 695,000, which is 41 percent less than No Build. Lower VMT on I-94 means that trips go elsewhere in the transportation network. Some trips will change modes, for example shift to transit. Other trips will find new routes and some people may move or change employers, so trips leave the project area and find new routes as described above.

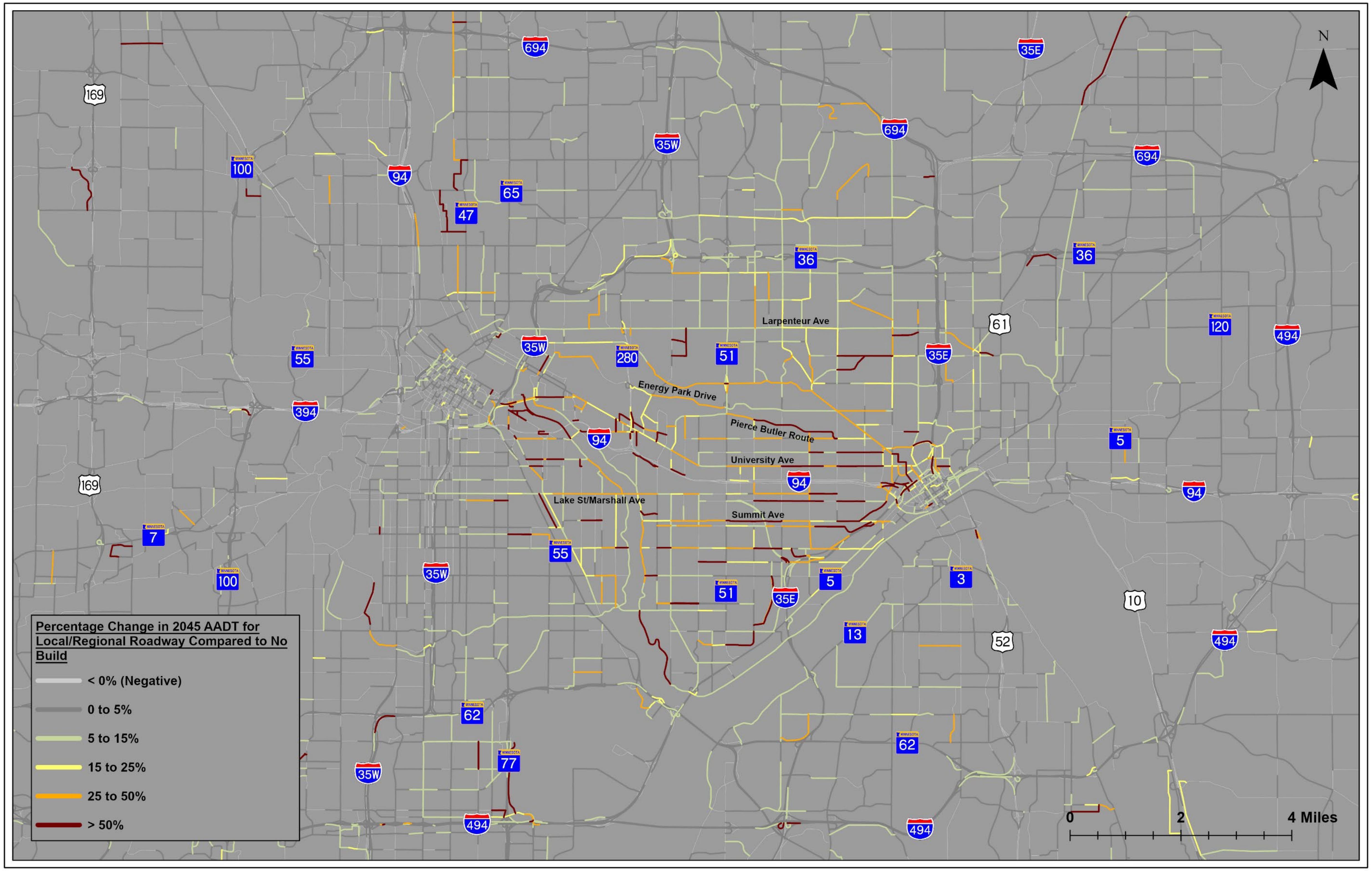
There are negligible differences in regionwide VMT between the alternatives. Expanded Freeway B results in the highest daily regional VMT of 106,200,000, and the At Grade Roadways A and B, which remove the most VMT on I-94, result in a daily regional VMT of 105,600,000. Daily regional VMT with the Local/Regional Roadways is 105,700,000.

Figure 32: Change in 2045 Daily Traffic Volumes between Local/Regional Roadway and No Build



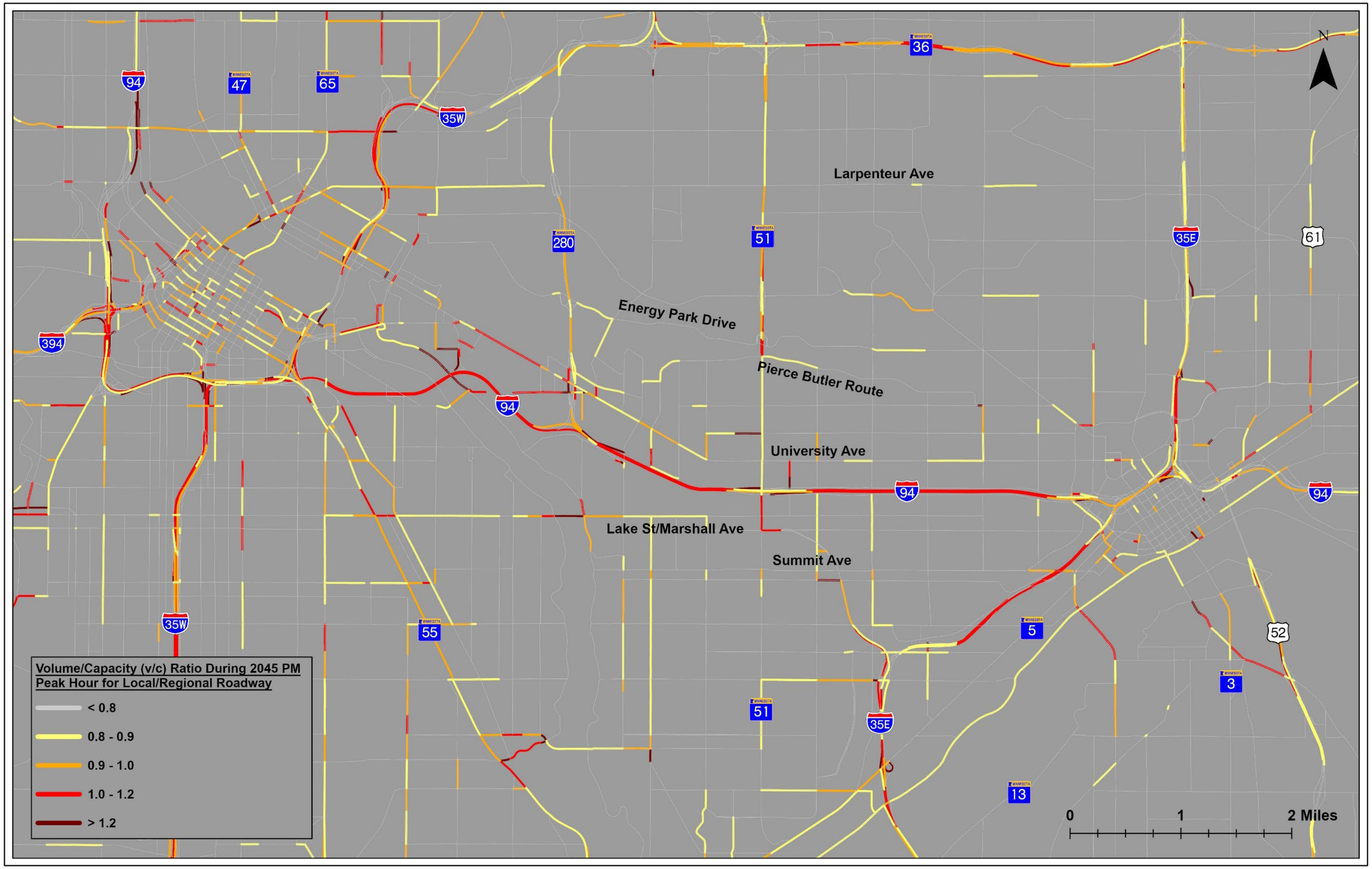
11003676

Figure 33: Percent Change in 2045 Daily Traffic Volumes between Local/Regional Roadway and No Build



11003677

Figure 34: 2045 Local/Regional Roadway Volume to Capacity (v/c) Ratio



11003678

Reduced Freeway

The Reduced Freeway alternative provides two general purpose travel lanes and a managed lane in each direction. Up to three transit stops are provided. **Table 11** summarizes the measures of effectiveness.

Table 11: Results for Reduced Freeway Alternative

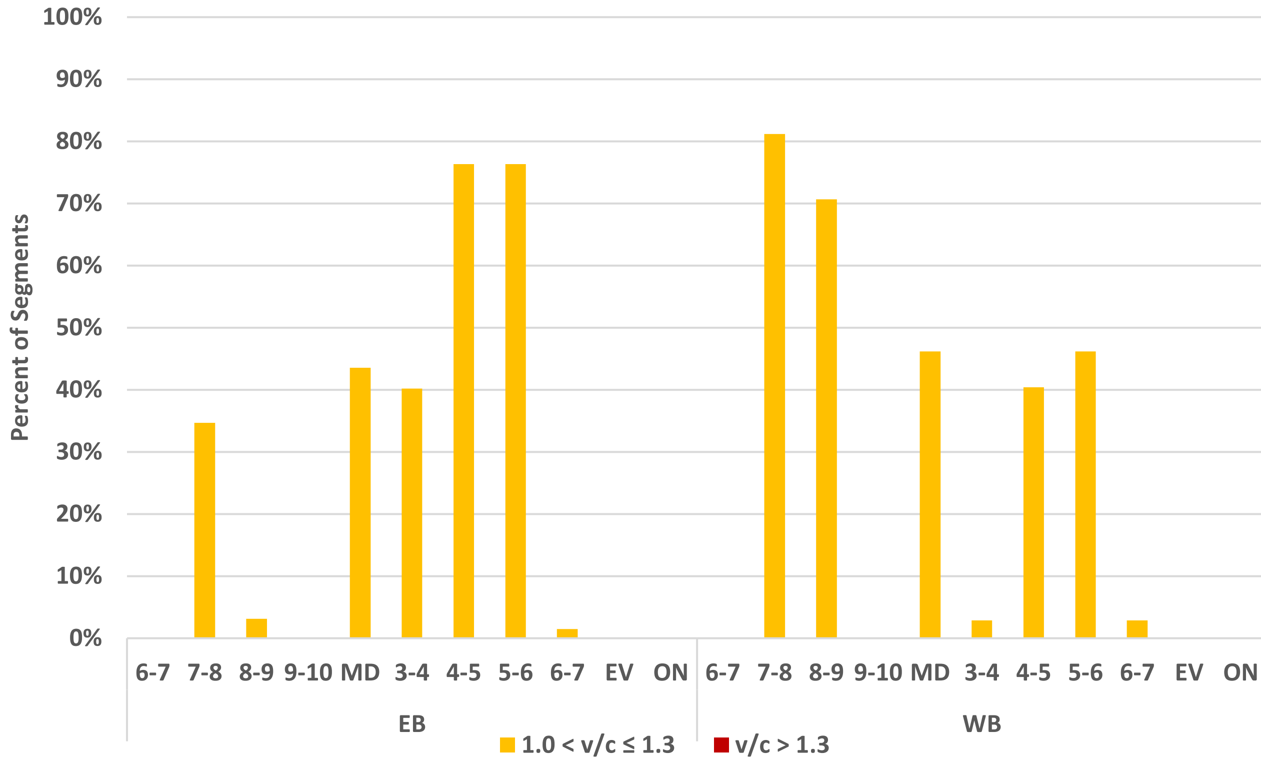
Measure	No Build	Reduced Freeway	% Change
Mainline Roadway Capacity	11,700 - 15,600	11,700	-25
Annual Average Daily Traffic (AADT)	173,000	136,000	-21
Peak Hour Mainline Congestion	25-55 percent	40-75 percent	36
Average Peak Period Mainline Speed (mph)	40 – 55	30 – 60	-20
Average Peak Period Transit Travel Time (minutes)	22	~12 to ~15	-32 to -46
Annual Average Daily Traffic	173,000	136,000	-21
Vehicle Throughput (daily)	328,000	281,000	-14
Person Throughput (daily)	426,480	376,050	-12
• Auto	418,000	367,000	-12
• Transit	8,480	8,980 – 9,050	7
Vehicle Miles Traveled (daily)			
• I-94 in Project Area	1,170,000	925,000	-21
• Parallel Arterials	194,000	222,000	14
• Region	105,900,000	106,000,000	0.1

Mainline Roadway Capacity and Congestion

Traffic volumes on I-94 in 2045 would average 136,000 vehicles per day under the Reduced Freeway. This is a 21 percent reduction from No Build. The reduced capacity under this alternative results in congestion that is higher than No Build. Under the No Build alternative, approximately 55 percent of the corridor is considered congested, for the Reduced Freeway alternative it increases to 75 percent, with the remainder of the corridor (25 percent) considered near capacity. **Figure 21** (in At Grade Roadways A and B section) shows 2045 v/c ratios for the mainline. Operations under this scenario suggest the peak periods will have unstable traffic flow.

Figure 35 shows the percentage of the corridor that would be congested with Reduced Freeway based on 2045 v/c ratios for each direction. Many of the corridor would have a v/c ratio greater than 1.0 for peak hour peak direction traffic.

Figure 35: 2045 Mainline Congested Segments for Reduced Freeway



Due to the limited capacity and poor operations, some traffic is likely to divert to the surrounding parallel roadway network. **Figure 36** shows the changes in projected 2045 traffic volumes for I-94, the supporting parallel arterial network and other routes compared to No Build. **Figure 37** shows the percent change to provide context for the change. As traffic volumes on I-94 decrease, volumes on parallel routes experience an increase as trips are diverted. Most parallel arterials experience a 15 to 25 percent increase in traffic. Identified parallel arterial routes near the project area are Lake Street, Marshall Avenue, University Avenue, Pierce Butler Route, Energy Park Drive, and Larpenteur Avenue. Other non-arterial roadways in the area are also likely to experience changes in traffic volumes. **Figure 38** shows v/c ratios for I-94 and the surrounding roadway network.

Average Mainline Peak Period Speed

As noted in **Table 11**, travel speeds on I-94 for the Reduced Freeway alternative are approximately 31 miles per hour for the general purpose lanes. Managed lanes have an average speed of 45 miles per hour. Travel speeds on the mainline general purpose lanes are lower for this alternative than they are for the No Build (42 miles per hour), as there are fewer travel lanes to accommodate trucks and single occupancy vehicles. The Reduced Freeway alternative has the second lowest speeds for the mainline, with only the At Grade Roadways A and B being slower at approximately 20 miles per hour. This alternative provides a benefit with the managed lane achieving speeds of 45 miles per hour.

Average Peak Period Transit Travel Time

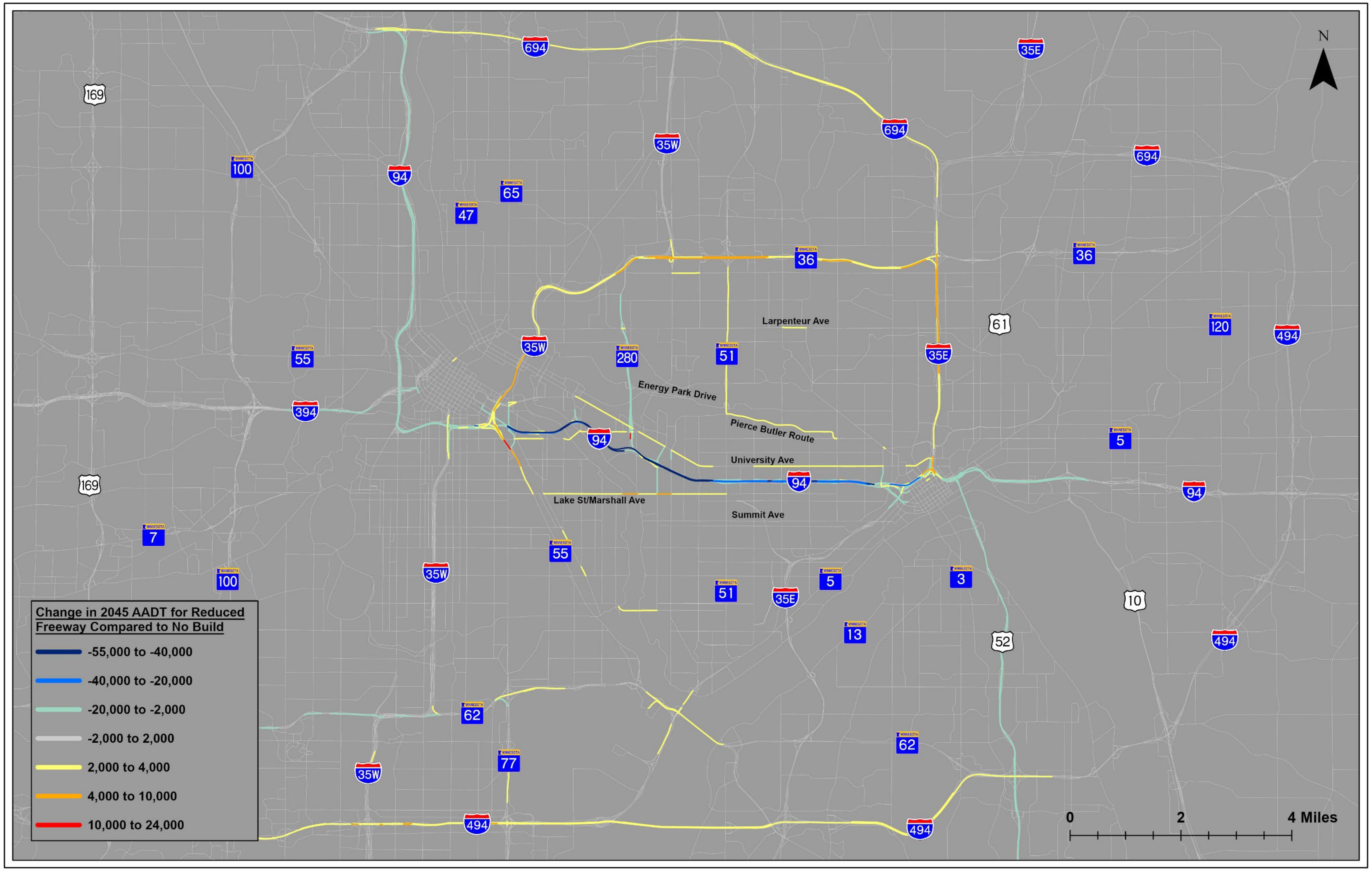
Compared to the No Build alternative, the Reduced Freeway would allow for faster transit service as the buses would be separated from the general travel lanes. Peak period transit time for the Reduced Freeway alternative would be 12 to 15 minutes depending upon the number of BRT stops included (travel time would be 12 minutes with no stops and 15 minutes with three stops). Compared to the No Build, transit travel times could be up to 10 minutes faster or approximately 32 to 46 percent faster. Transit travel time for the Reduced Freeway alternative is the same as the transit travel time for Reconfigured Freeway and Expanded Freeway A. These alternatives have the fastest peak period transit travel times. See **Figure 19** in the No Build discussion for peak period transit travel times.

Vehicle and Person Throughput

Vehicle throughput on the Reduced Freeway is 281,000. This alternative has the second lowest vehicle throughput. The Reduced Freeway has about a 14 percent reduction in vehicle throughput compared to the No Build alternative. The At Grade A Roadway and At Grade Roadway B have the lowest vehicle throughput.

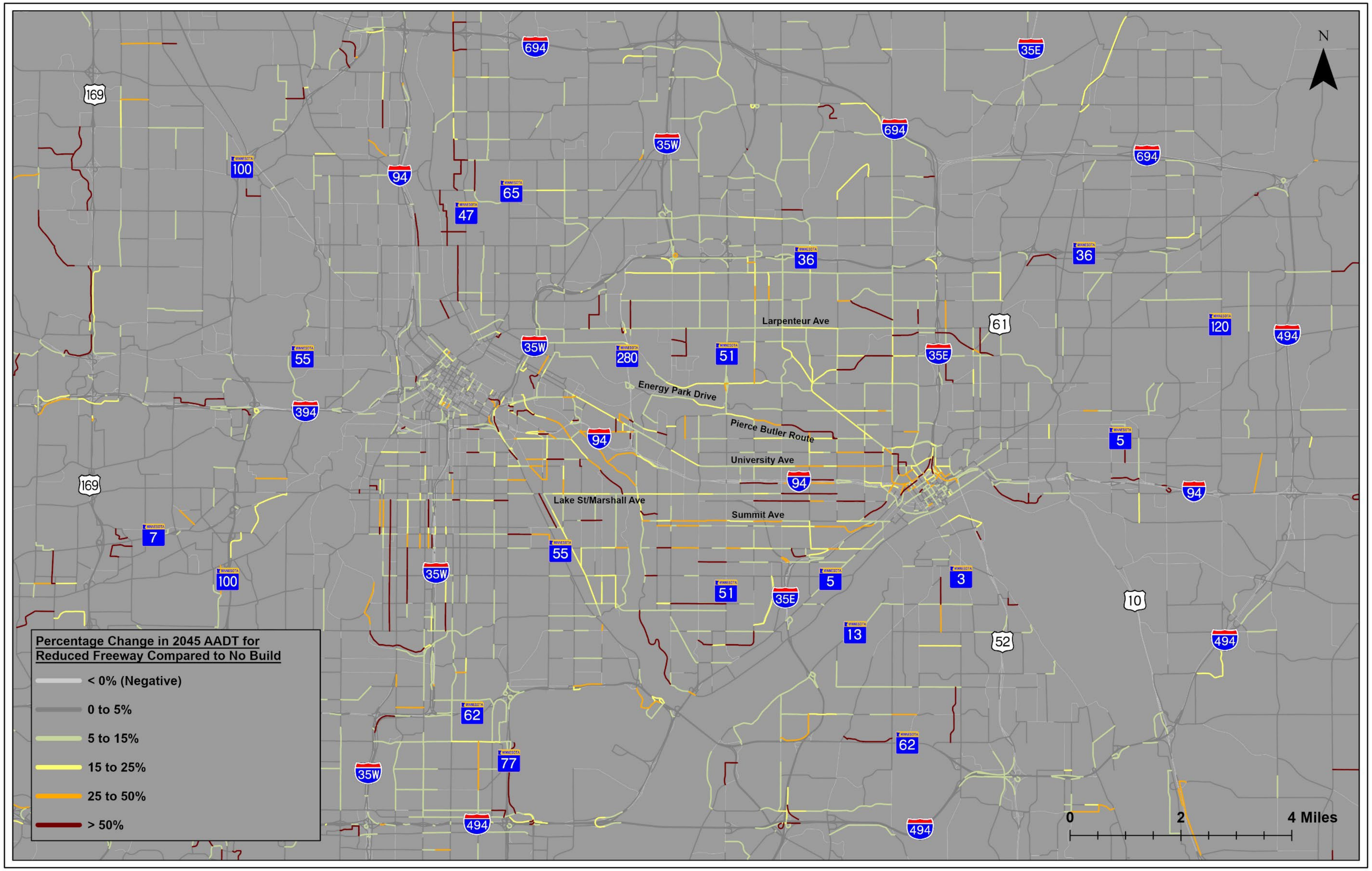
The lower vehicle throughput and expected transit ridership result in lower person throughput for the Reduced Freeway alternative. Person throughput is approximately 12 percent lower under this alternative. It is interesting to note that person throughput from automobiles experiences a reduction of slightly more than 12 percent and that transit person throughput experiences an approximate gain of 7 percent over the No Build. For other freeway alternatives that include bus rapid transit, the increase in person throughput is less, approximately 5 percent. The Reduced Freeway alternative expects approximately 9,000 transit users daily. The ability for buses to use the managed lane leads to much faster transit travel times compared to the No Build.

Figure 36: Change in 2045 Daily Traffic Volumes between Reduced Freeway and No Build



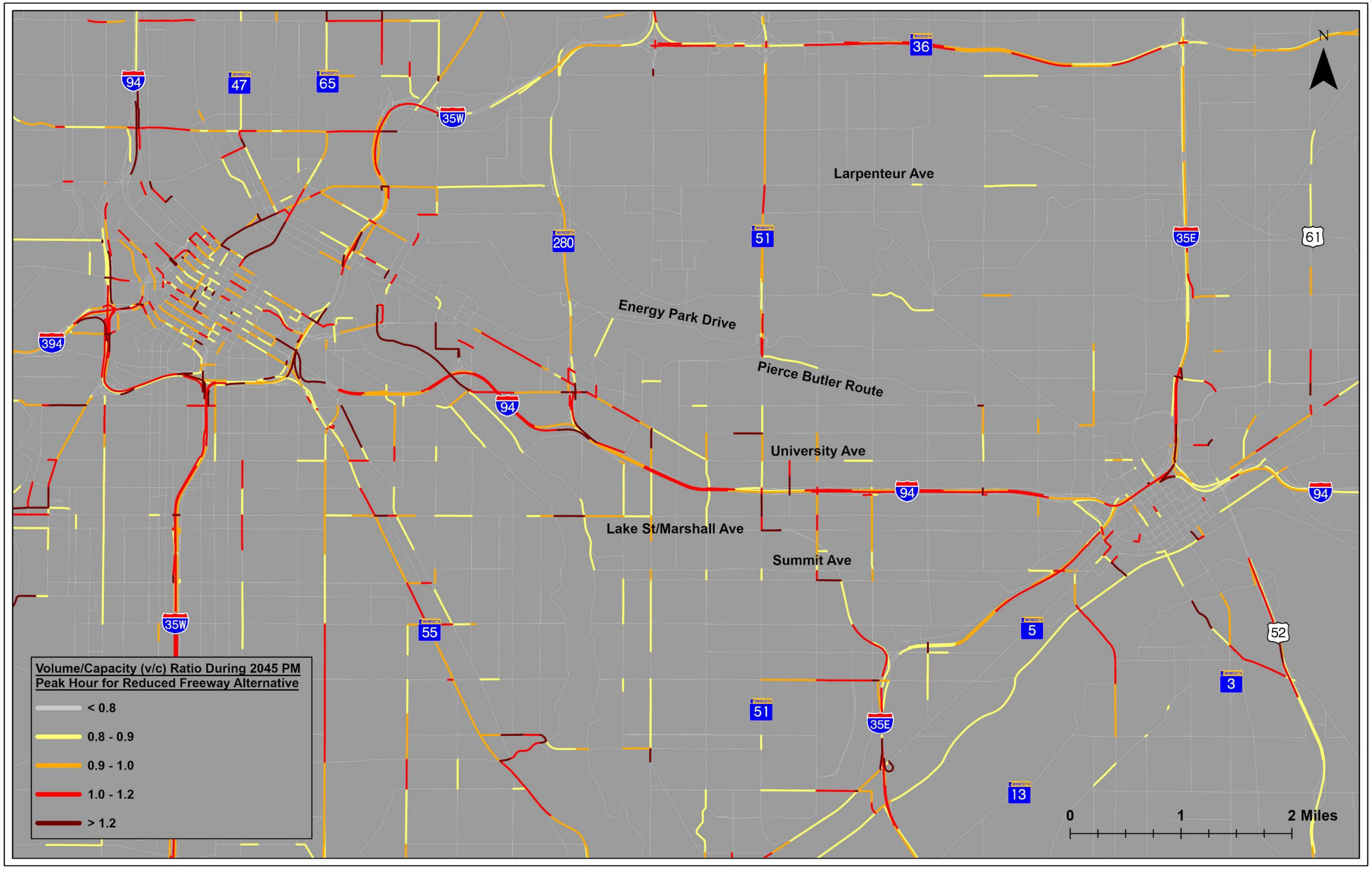
11003682

Figure 37: Percent Change in 2045 Daily Traffic Volumes between Reduced Freeway and No Build



11003683

Figure 38: 2045 Reduced Freeway Volume to Capacity (v/c) Ratio



11003684

Vehicle Miles Traveled

Daily VMT on I-94 for the Reduced Freeway alternative is approximately 21 percent lower (925,000) than the No Build (1,170,000). This alternative has the second largest reduction in VMT behind At Grade Roadways A and B (240,000) which have approximately an 80 percent reduction compared to the No Build. Daily VMT on I-94 for the Reduced Freeway alternative is about 28 percent lower than Expanded Freeway B, which has the most VMT at 1,293,000.

Lower VMT on I-94 means that some trips go elsewhere in the transportation network. Some trips will change modes, for example shift to transit. Other trips will find new routes and some people may move or change employers, so trips leave the project area. Some trips that find new routes will use routes in and near the project corridor – both neighborhood streets or parallel arterials, and some will divert to roadways outside the immediate area. In the case of I-94, this could mean that trips go to routes such as TH 36, I-494, I-694.

Figure 27 (At Grade Roadways A and B section) shows the percent change in VMT on the parallel arterial routes. Pierce Butler Route (24 percent) and Summit Avenue (17 percent) experience the greatest increases in VMT with the Reduced Freeway. VMT on these parallel routes increases by 6 to 24 percent over the No Build.

There are negligible differences in regionwide VMT between the alternatives. Expanded Freeway B results in the highest daily regional VMT of 106,187,000, and the At Grade Roadways A and B, which remove the most VMT on I-94, result in a daily regional VMT of 105,588,000. VMT for the region is slightly higher for this alternative (105,955,000) compared to the No Build.

Reconfigured Freeway

The Reconfigured Freeway would have a consistent three general purpose lanes and one managed lane in each direction. Up to three transit stops are provided, with bus rapid transit included in the managed lane. Under the No Build the number of general purpose lanes varies from three to four, and the lane drops and additions reduce operating efficiencies on the corridor and create safety problems. This alternative addresses those deficiencies by providing a consistent cross section. **Table 12** summarizes the measures of effectiveness for this alternative.

Table 12: Results for Reconfigured Freeway Alternative

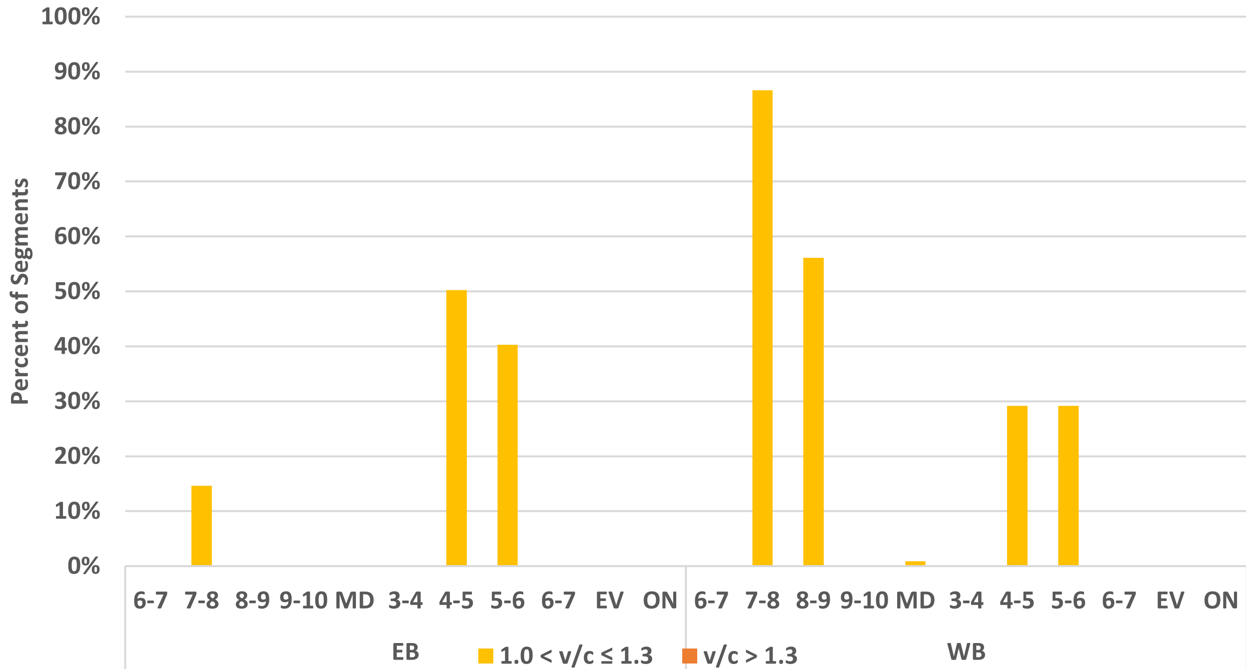
Measure	No Build	Reconfigured Freeway	Change
Mainline Roadway Capacity	11,700 - 15,600	15,600	0
Annual Average Daily Traffic (AADT)	173,000	178,000	3
Peak Hour Mainline Congestion	25-55 percent	30-50 percent	-5
Average Peak Period Mainline Speed (mph)	40 – 55	30 – 60	0
Average Peak Period Transit Travel Time (minutes)	22	~12 to ~15	-32 to -46
Annual Average Daily Traffic	173,000	178,000	3
Vehicle Throughput (daily)	328,000	334,000	2
Person Throughput (daily)	426,480	446,860	5
• Auto	418,000	438,000	5
• Transit	8,480	8,800 – 8,860	5
Vehicle Miles Traveled (daily)			
• I-94 in Project Area	1,170,000	1,216,000	4
• Parallel Arterials	194,000	189,000	-3
• Region	105,900,000	106,100,000	0.2

Mainline Roadway Capacity and Congestion

Traffic volumes on I-94 in 2045 would average 178,000 vehicles per day under the Reconfigured Freeway alternative. This is very similar to No Build. Although traffic volumes are similar, congestion under the Reconfigured Freeway is slightly lower (50 percent versus 55 percent), as the managed lane helps to reduce congestion and problems associated with lane drops are removed. The amount of the corridor that is near capacity is the same (32 percent) as the No Build. The Reconfigured Freeway alternative has more segments experiencing v/c ratios less than 0.8.

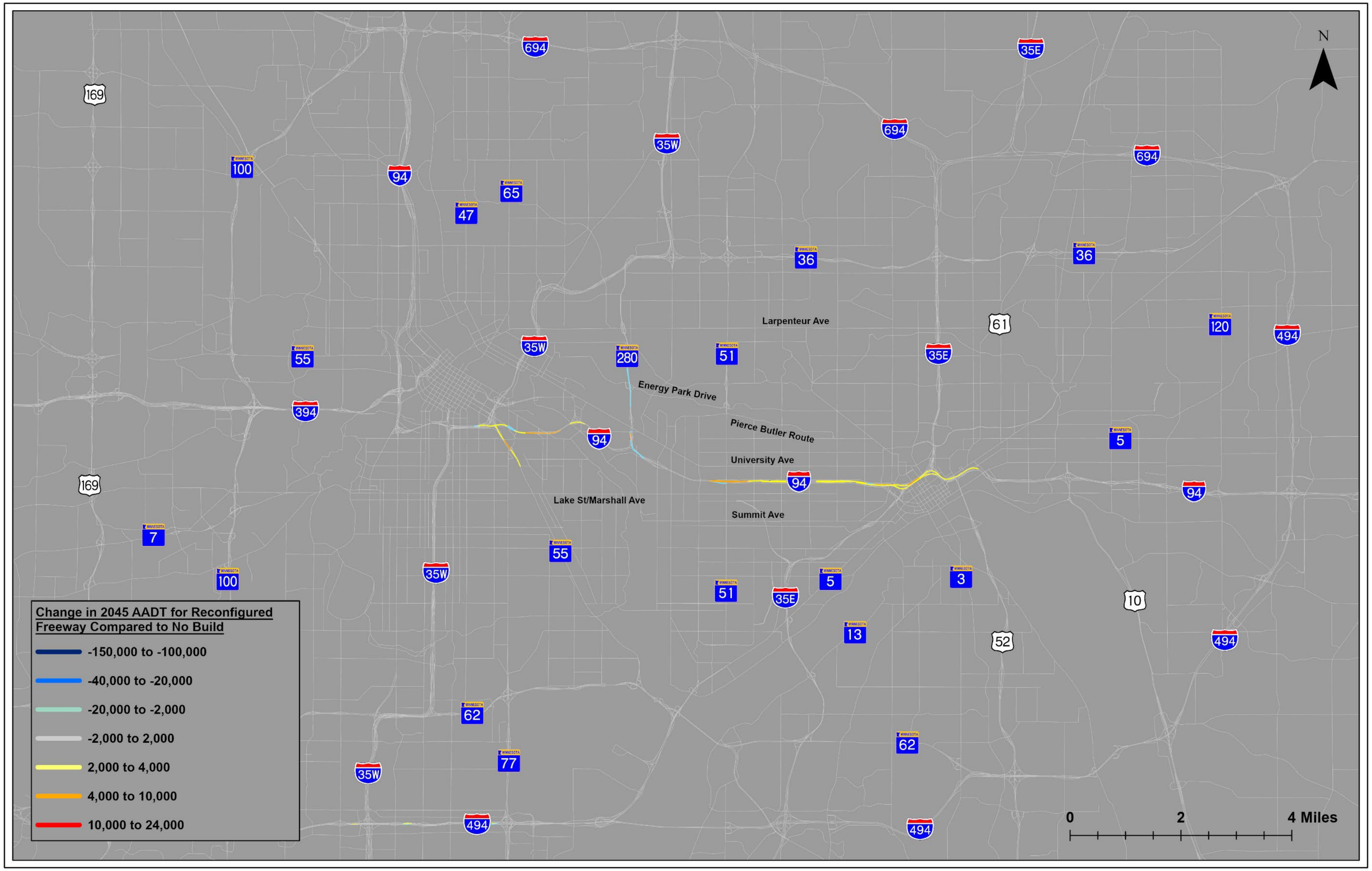
Figure 39 shows the percentage of the corridor that would be congested with Reconfigured Freeway based on 2045 v/c ratios for each direction. Many of the corridor would have a v/c ratio greater than 1.0 for peak hour peak direction traffic.

Figure 39: 2045 Mainline Congested Segments for Reconfigured Freeway



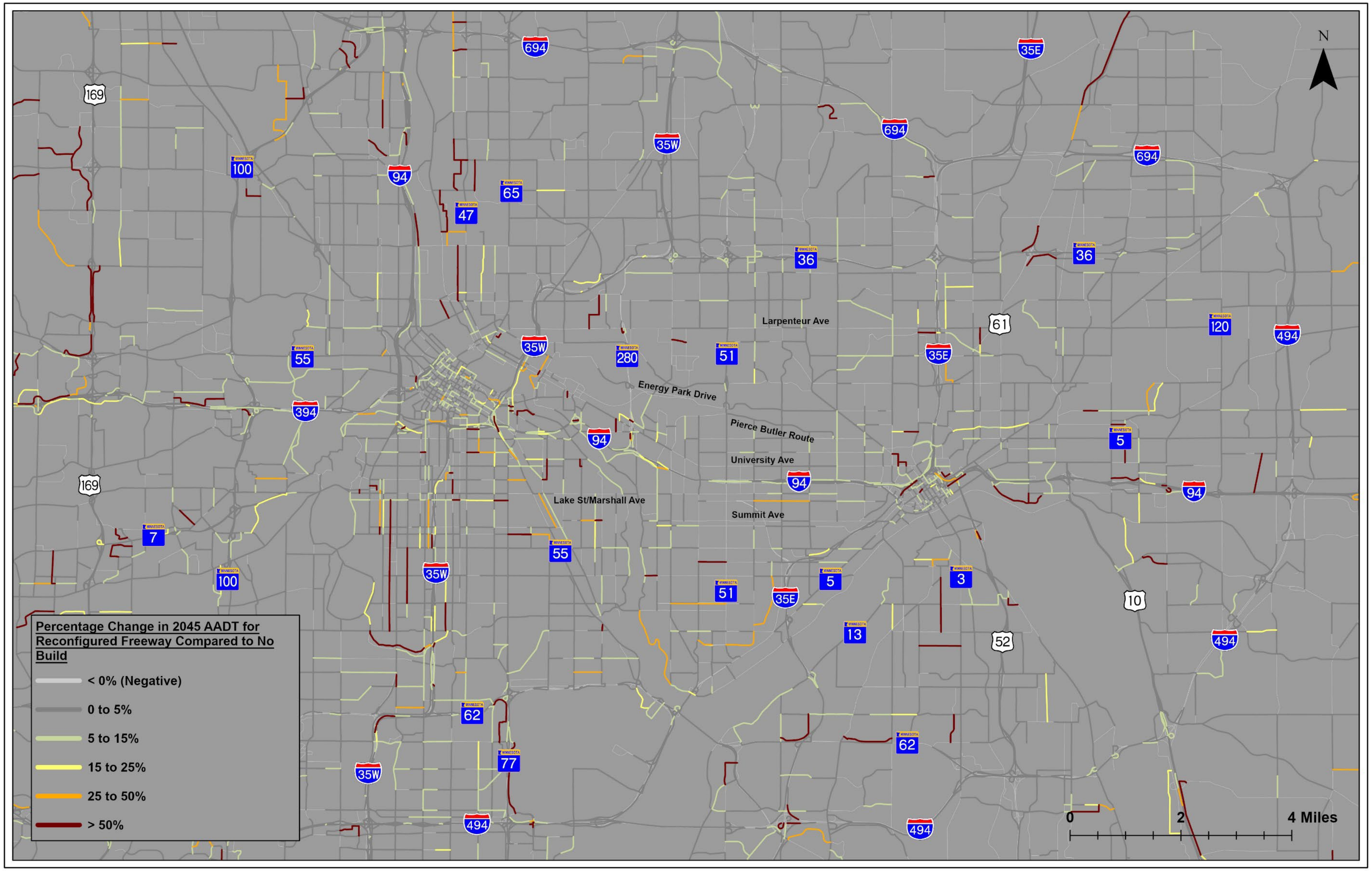
Because congestion is reduced compared to No Build, there is limited diversion to other routes. Traffic volumes on the surrounding parallel routes are similar to those for the No Build in 2045. **Figure 40** shows the changes in projected 2045 traffic volumes for I-94, the supporting parallel arterial network and other routes compared to No Build. **Figure 41** shows the percent change to provide context for the change. **Figure 42** shows v/c ratios for I-94 and the surrounding roadway network.

Figure 40: Change in 2045 Daily Traffic Volumes between Reconfigured Freeway and No Build



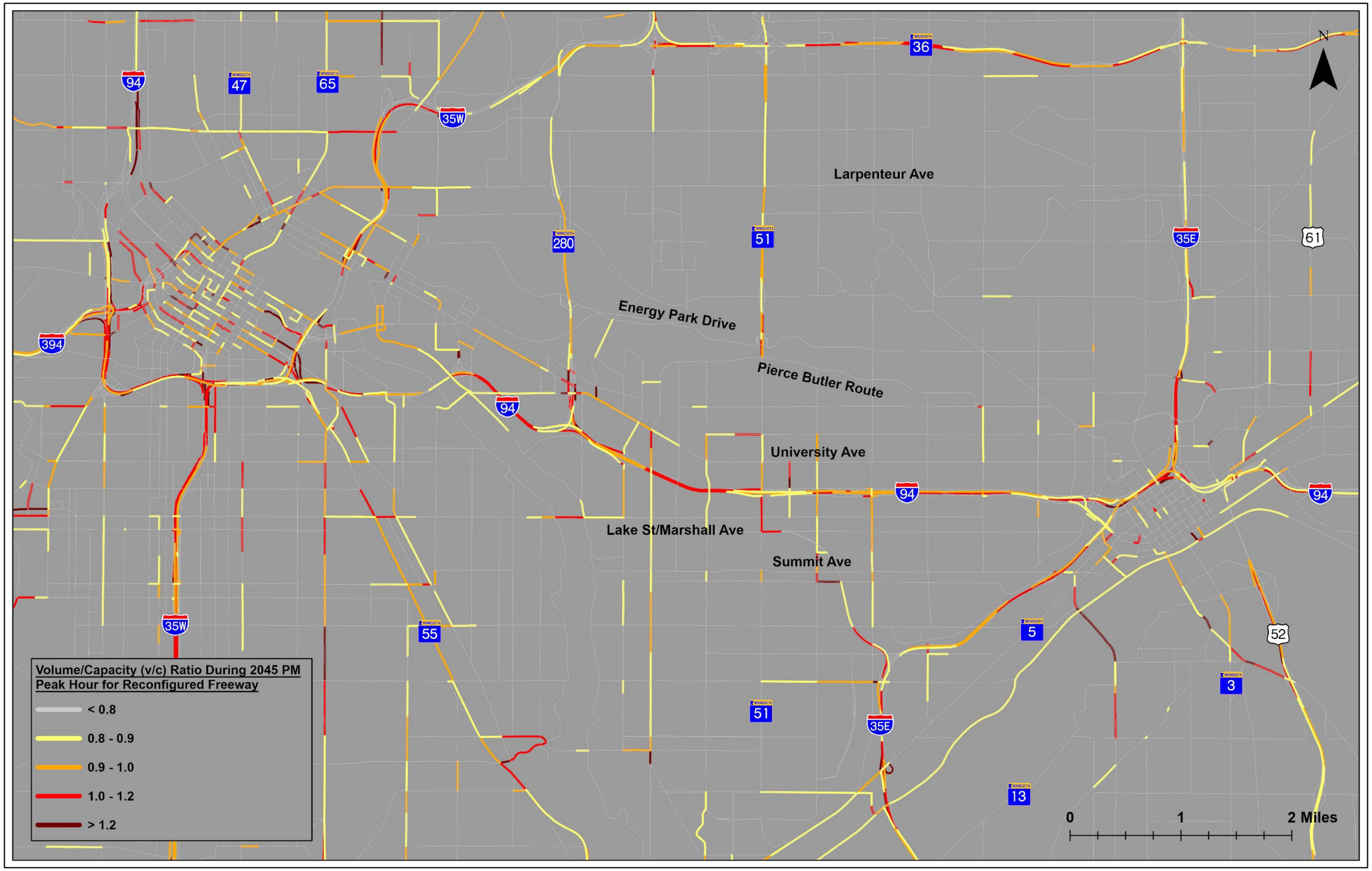
11003688

Figure 41: Percent Change in 2045 Daily Traffic Volumes between Reconfigured Freeway and No Build



11003689

Figure 42: 2045 Reconfigured Freeway Volume to Capacity (v/c) Ratio



11003690

Average Mainline Peak Period Speed

As identified in **Table 12** travel speeds on I-94 for the Reconfigured Freeway alternative are 42 miles per hour. This is the same as the No Build alternative. On the Reconfigured Freeway alternative, the general purpose lanes have travel speeds of 41 miles per hour and the managed lane has a speed of 45 miles per hour. Only the Expanded Freeway A and Expanded Freeway B alternatives have faster average peak period speeds, with speeds of 48 and 49 miles per hour respectively.

Travel speeds on the mainline general purpose lanes are slightly lower for this alternative than they are for the No Build, as there are fewer travel lanes to accommodate trucks and single occupant vehicles. This alternative provides a benefit with the managed lane achieving speeds of 45 miles per hour (see below).

Average Peak Period Transit Travel Time

Compared to the No Build alternative, the Reconfigured Freeway would allow for faster transit service as the buses would be separated from the general travel lanes. Peak period transit time for the Reduced Freeway alternative would be 12 to 15 minutes depending upon the number of BRT stops included (travel time would be 12 minutes with no stops and 15 minutes with three stops). Compared to the No Build, transit travel times could be up to 10 minutes faster or approximately 32 to 46 percent faster. Transit travel time for the Reconfigured Freeway alternative is the same as the transit travel time for Reduced Freeway and Expanded Freeway A. These alternatives have the fastest peak period transit travel times. See **Figure 19** in the No Build discussion for peak period transit travel times.

Vehicle and Person Throughput

Vehicle throughput on the Reconfigured Freeway is approximately 334,000. This alternative has the third highest vehicle throughput, only behind the Expanded Freeway A and Expanded Freeway B alternatives. Vehicle throughput on the Reconfigured Freeway is about 2 percent higher than the No Build.

As expected, the increase in vehicle throughput results in a corresponding increase in person throughput. Person throughput on the Reconfigured Freeway is approximately 5 percent higher than the No Build, with approximately 446,500 people traveling through the corridor. Transit riders account for approximately 8,900 of the people through the corridor. Persons travelling by auto account for approximately 437,600 of the person throughput. Transit ridership for this alternative is between the Reduced Freeway alternative, which has the most ridership, and the No Build. It is the same as Expanded Freeway A.

Vehicle Miles Traveled

Daily VMT on I-94 for the Reconfigured Freeway alternative is approximately 4 percent higher (1,216,000) than the No Build (1,170,000). Trips are less likely to divert to other roadways under the Reconfigured Freeway alternative and VMT is expected to decrease on the parallel arterial routes. As a reminder, identified parallel arterial routes near the project area are Lake Street, Marshall Avenue, University Avenue, Pierce Butler Route, Energy Park Drive, and Larpenteur Avenue. Other non-arterial roadways in the area are also likely to experience changes in VMT. **Figure 27** (At Grade Roadways A and B section) shows the percent change in VMT on the parallel arterial routes. As shown in **Figure 27**, all the routes experience a slight reduction (average of 3 percent) in VMT.

There are negligible differences in regionwide VMT between the alternatives. Expanded Freeway B results in the highest daily regional VMT of 106,187,000, and the At Grade Roadways A and B, which remove the most VMT on I-94 result in a daily regional VMT of 105,588,000. VMT for the region is slightly higher for this alternative (106,112,000) compared to the No Build (105,931,000).

Expanded Freeway A

This alternative would add a managed lane to the existing configuration, so there would be four to five travel lanes in each direction, with one of them being a managed lane and the rest being general purpose lanes. Bus rapid transit would be provided as part of the managed lane and zero to three stops would be included. **Table 13** summarizes the measures of effectiveness for this alternative.

Table 13: Results for Expanded Freeway A Alternative

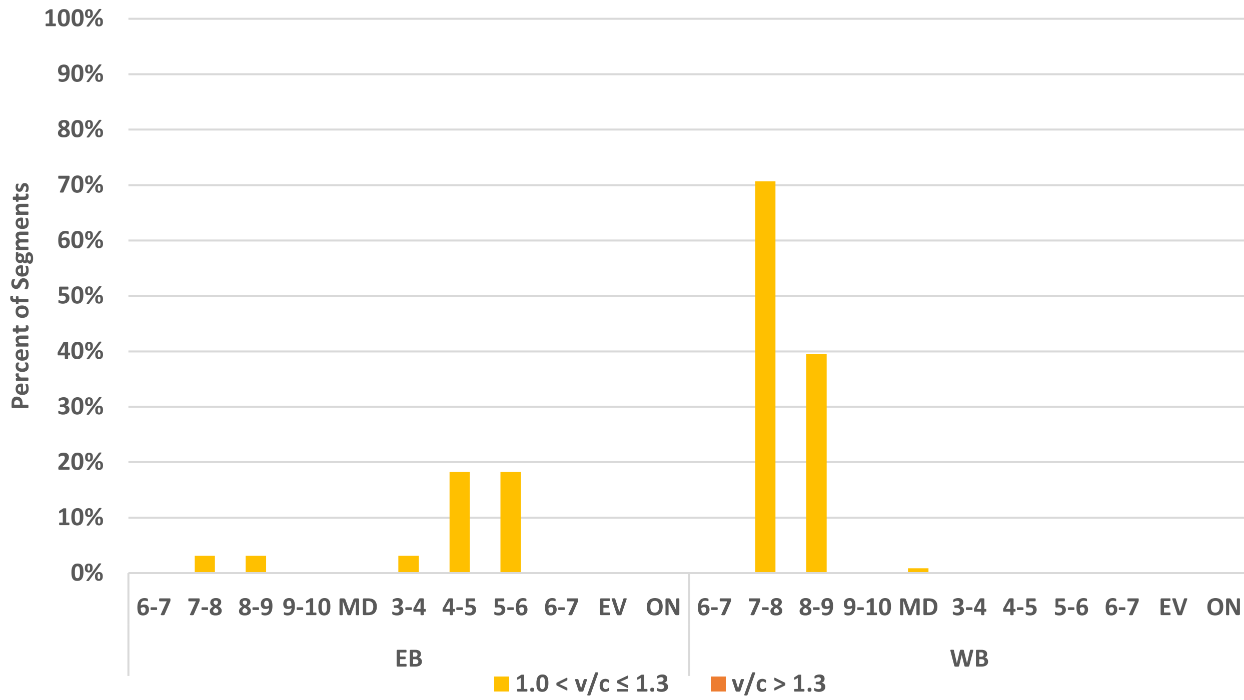
Measure	No Build	Expanded Freeway A	% Change
Mainline Roadway Capacity	11,700 - 15,600	15,600 – 19,500	25
Annual Average Daily Traffic (AADT)	173,000	191,000	10
Peak Hour Mainline Congestion	25-55 percent	0-25 percent	-37
Average Peak Period Mainline Speed (mph)	40 – 55	45 – 60	14
Average Peak Period Transit Travel Time (minutes)	22	~12 to ~15	-32 to - 46
Annual Average Daily Traffic	173,000	191,000	10
Vehicle Throughput (daily)	328,000	347,000	6
Person Throughput (daily)	426,480	457,860	7
• Auto	418,000	449,000	7
• Transit	8,480	8,800 – 8,860	5
Vehicle Miles Traveled (daily)			
• I-94 in Project Area	1,170,000	1,303,000	11
• Parallel Arterials	194,000	179,000	-8
• Region	105,900,000	106,100,000	0.2

Mainline Roadway Capacity and Congestion

Traffic volumes on I-94 in 2045 would average 191,000 vehicles per day under the Expanded Freeway A alternative. This is higher than the No Build, as this alternative provides an additional 25 percent capacity over the No Build. Congestion under Expanded Freeway A is substantially lower (18 percent versus 55 percent) than the No Build. The amount of the corridor that is near capacity is higher (40 percent), but that is part of the tradeoff on the amount of the corridor that is congested. The Expanded Freeway A alternative has more segments that have a v/c ratio of less than 0.9 than the other alternatives (**Figure 21** in At Grade A and At Grade B section).

Figure 43 shows the percentage of the corridor that would be congested with Expanded Freeway A based on 2045 v/c ratios for each direction. Much of the corridor would have a v/c ratio greater than 1.0 for peak hour peak direction traffic.

Figure 43: 2045 Mainline Congested Segments for Expanded Freeway A

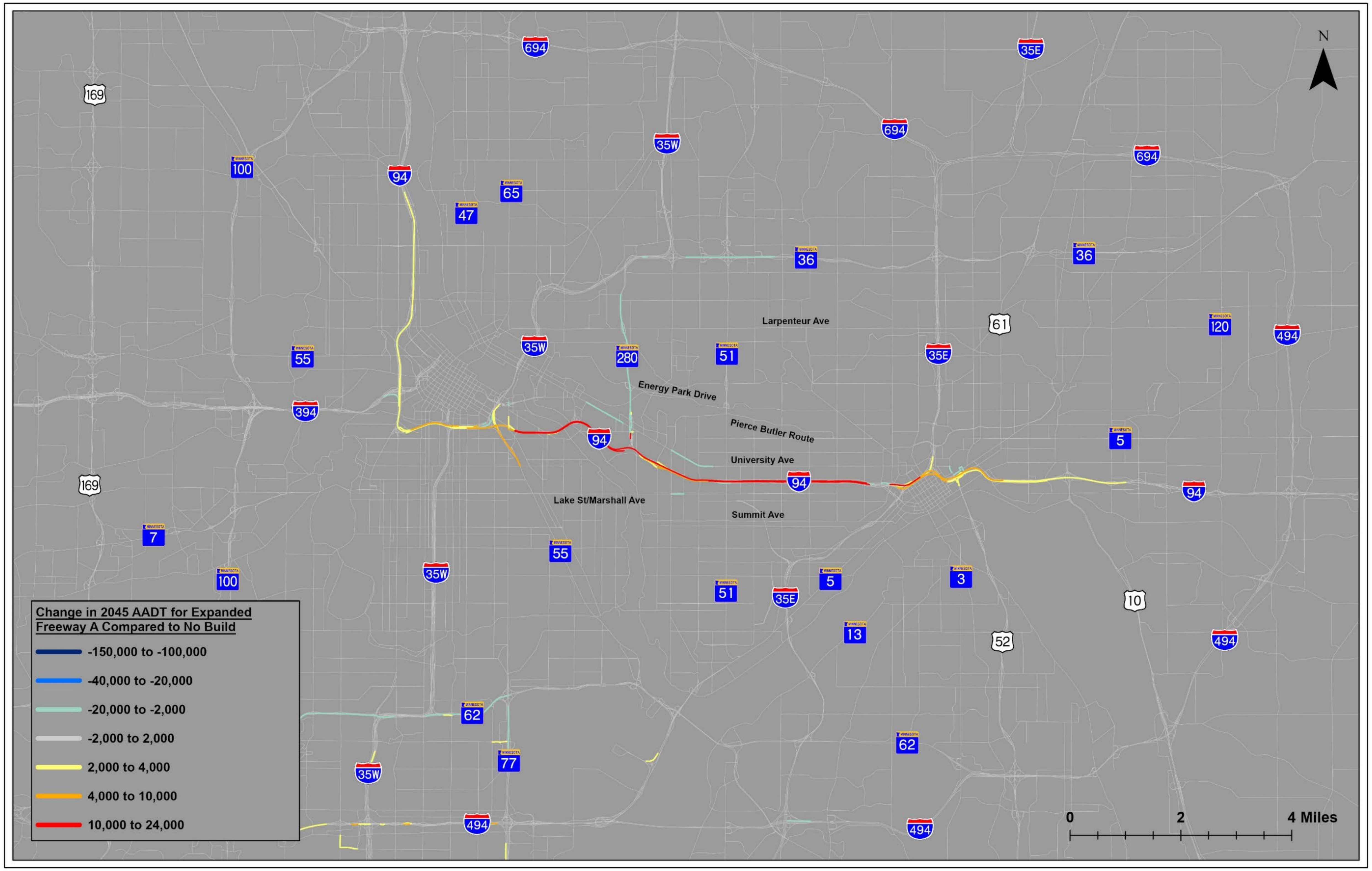


Because congestion is reduced compared to the No Build, there is limited diversion to other routes. Traffic volumes on the surrounding parallel routes are similar to those for the No Build in 2045. **Figure 44** shows changes in traffic volumes compared to 2045 No Build and **Figure 45** shows the percent change to provide some context for the numerical changes. In general, traffic volumes remain similar to the No Build, with some routes experiencing a decrease in volumes as traffic diverts to I-94. **Figure 46** shows v/c ratios for I-94 and the surrounding roadway network.

Average Mainline Peak Period Speed

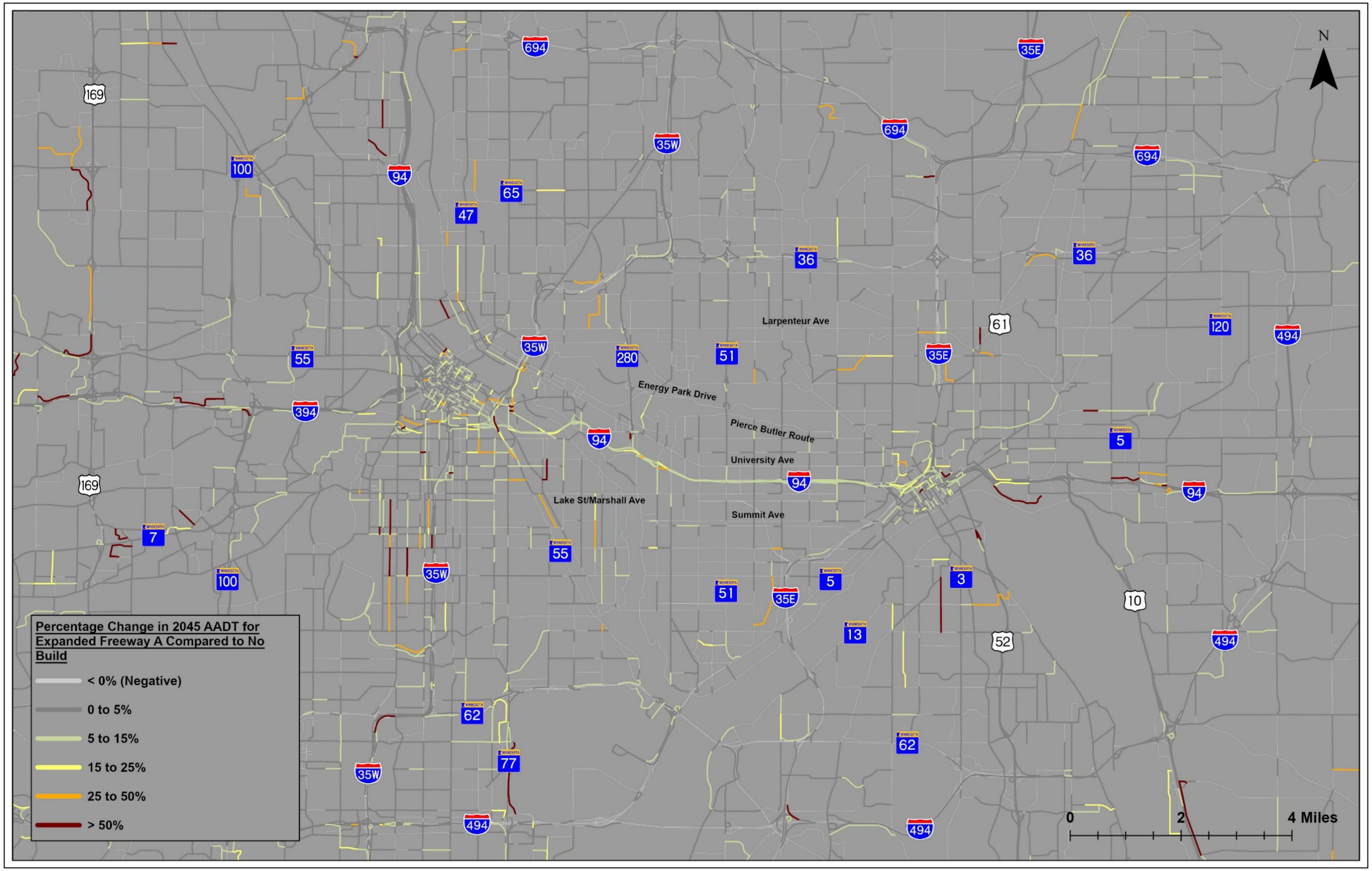
Travel speeds on I-94 for the Expanded Freeway A alternative are 48 miles per hour. This is higher than the No Build, with the only alternative having faster peak period speeds being the Expanded Freeway B alternative which adds a general purpose lane. On the Expanded Freeway A alternative, the general purpose lanes have travel speeds of 48 miles per hour and the managed lane has a speed of 50 miles per hour. The increase in travel speed compared to the No Build is approximately 14 percent. This alternative provides the best transit benefit with the managed lane achieving the highest average travel speed (50 miles per hour) of all the alternatives. This has the effect of increasing vehicle and person throughput along with VMT on I-94, likely an example of induced demand due to the addition of a travel lane.

Figure 44: Change in 2045 Daily Traffic Volumes between Expanded Freeway A and No Build



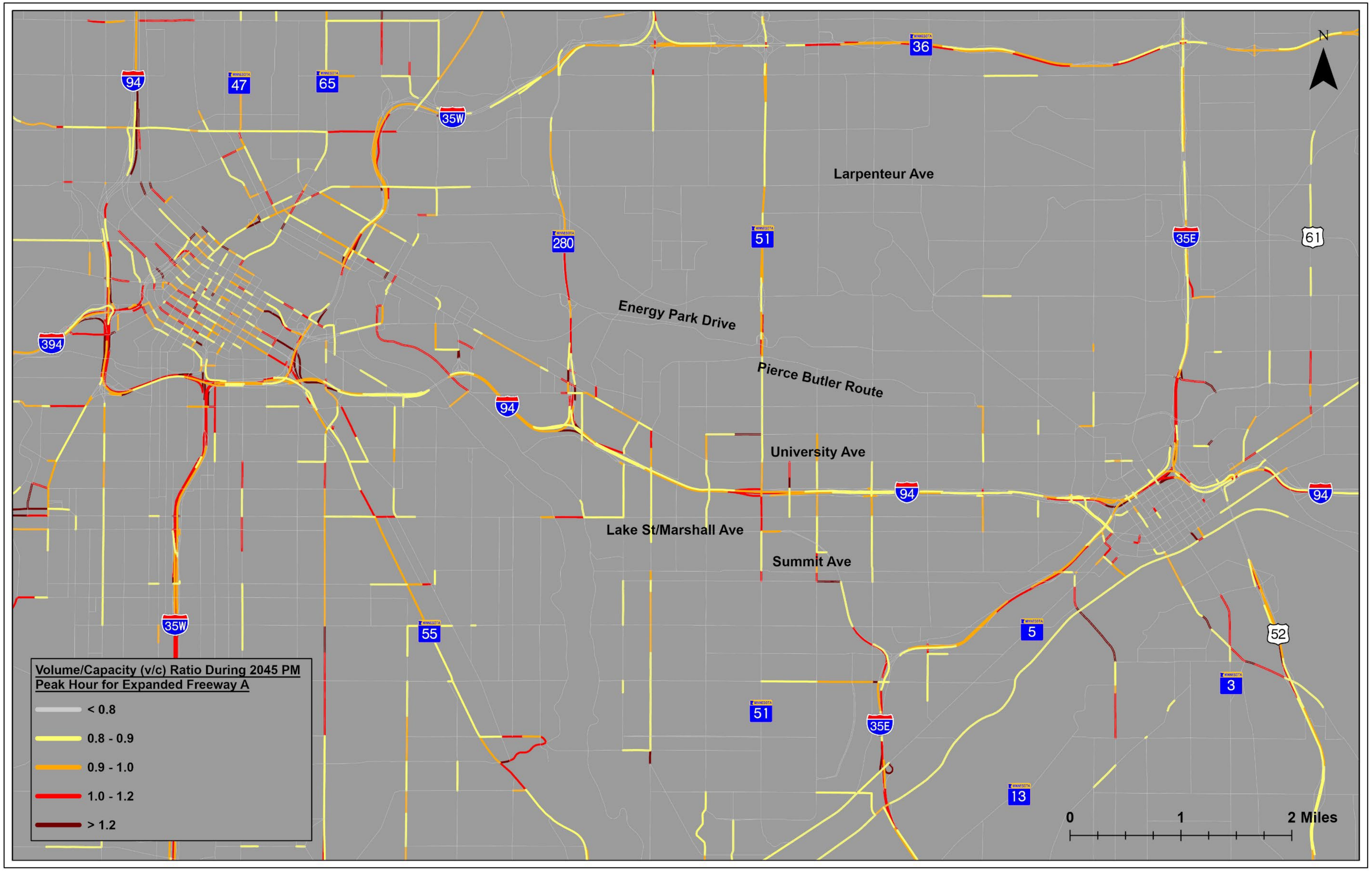
11003694

Figure 45: Percent Change in 2045 Daily Traffic Volumes between Expanded Freeway A and No Build



11003695

Figure 46: 2045 Expanded Freeway A Volume to Capacity (v/c) Ratio



11003696

Average Peak Period Transit Travel Time

As noted above, the Expanded Freeway A alternative provides fast transit service. Compared to the No Build alternative, the Expanded Freeway A separates buses from the general travel lanes. Peak period transit time for the Expanded Freeway A alternative would be 12 to 15 minutes depending upon the number of BRT stops included (travel time would be 12 minutes with no stops and 15 minutes with three stops). Compared to the No Build, transit travel times could be up to 10 minutes faster or approximately 32 to 46 percent faster. See **Figure 19** in the No Build discussion for peak period transit travel times.

Vehicle and Person Throughput

Vehicle throughput on the Expanded Freeway A is approximately 347,000. This alternative has the second highest vehicle throughput, only behind the Expanded Freeway B alternative. Vehicle throughput on the Expanded Freeway A is about 6 percent higher than the No Build.

As expected, the increase in vehicle throughput results in a corresponding increase in person throughput. Person throughput on the Expanded Freeway A is approximately 7 percent higher than the No Build, with approximately 458,000 people traveling through the corridor. Transit riders account for approximately 8,900 of the person throughput (the same as the Reconfigured Freeway). Persons travelling by auto account for approximately 449,100 of the person throughput.

Vehicle Miles Traveled

Daily VMT on I-94 for the Expanded Freeway A alternative is approximately 11 percent higher (1,303,000) than the No Build (1,170,000). Trips are less likely to divert to other roadways under the Expanded Freeway A alternative and VMT is expected to decrease (8 percent) on the parallel arterial routes. Identified parallel arterial routes near the project area are Lake Street, Marshall Avenue, University Avenue, Pierce Butler Route, Energy Park Drive, and Larpenteur Avenue. Other non-arterial roadways in the area are also likely to experience changes in VMT. **Figure 27** (At Grade Roadways A and B section) shows the percent change in VMT on the parallel arterial routes. As shown in **Figure 27**, all of these routes experience a slight reduction in VMT compared to the No Build.

There are negligible differences in regionwide VMT between the alternatives. Expanded Freeway B results in the highest daily regional VMT of 106,187,000, and the At Grade Roadways A and B, which remove the most VMT on I-94 result in a daily regional VMT of 105,588,000. VMT for the region is higher for Expanded Freeway A (106,076,000) compared to the No Build (105,931,000).

Expanded Freeway B

This alternative would add a general purpose lane to the existing configuration, so there would be four to five travel lanes in each direction. Transit would travel with mixed traffic in the general purpose lanes and would be allowed to use the shoulders if the mainline experiences congestion (speeds 45 miles per hour or less) during the peak periods.

Table 14 summarizes the measures of effectiveness for this alternative. Increased roadway capacity can result in induced demand, exemplified here through the projected VMT increase in the project area and surrounding community. Faster mainline speed also leads to increased vehicle and person throughput.

Table 14: Results for Expanded Freeway B Alternative

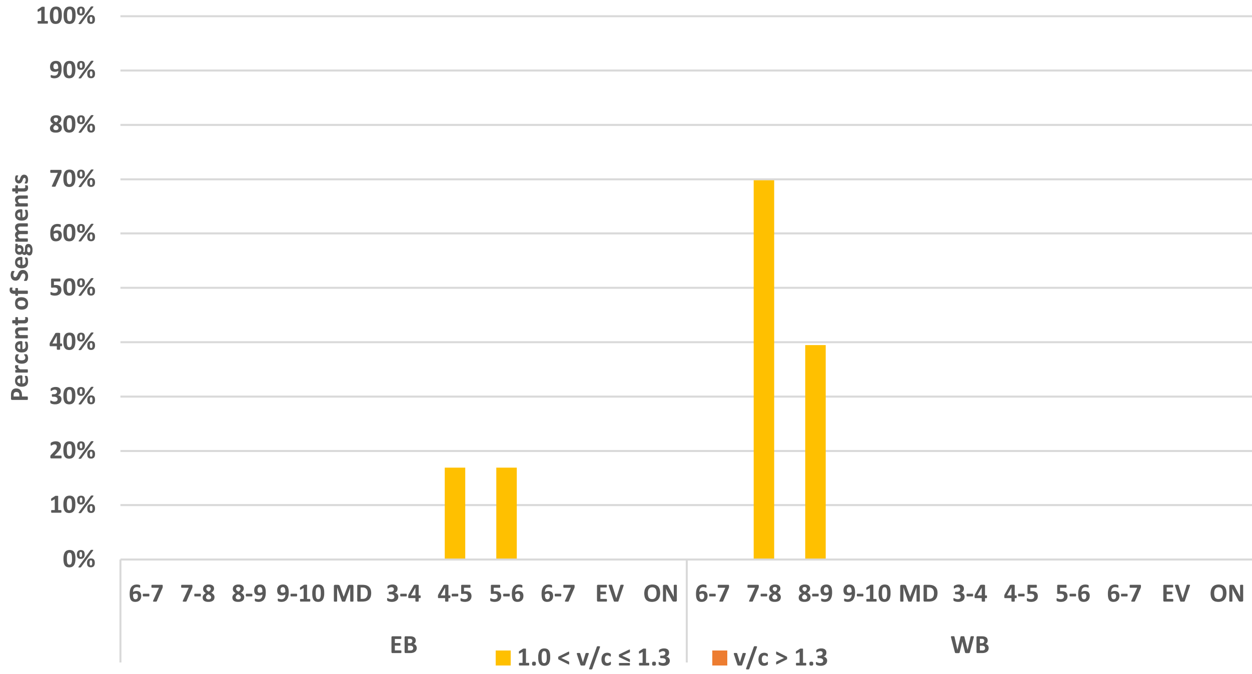
Measure	No Build	Expanded Freeway B	% Change
Mainline Roadway Capacity	11,700 - 15,600	15,600 – 19,500	25
Annual Average Daily Traffic (AADT)	173,000	191,000	10
Peak Hour Mainline Congestion	25-55 percent	0-25 percent	-37
Average Peak Period Mainline Speed (mph)	40 – 55	45 – 55	17
Average Peak Period Transit Travel Time (minutes)	22	17	-23
Annual Average Daily Traffic	173,000	191,000	10
Vehicle Throughput (daily)	328,000	349,000	6
Person Throughput (daily)	426,480	452,020	6
• Auto	418,000	445,000	6
• Transit	8,480	7,020	-17
Vehicle Miles Traveled (daily)			
• I-94 in Project Area	1,170,000	1,293,000	11
• Parallel Arterials	194,000	181,000	-7
• Region	105,900,000	106,200,000	0.3

Mainline Roadway Capacity and Congestion

Traffic volumes on I-94 in 2045 would average 191,000 vehicles per day under the Expanded Freeway B alternative. This is higher than the No Build, as this alternative provides an additional 25 percent capacity over the No Build. Volumes are very similar to Expanded Freeway A alternative. Congestion under Expanded Freeway B is substantially lower (17 percent versus 55 percent) than the No Build. The amount of the corridor that is near capacity is higher (59 percent vs 32 percent), but that is part of the tradeoff on the amount of the corridor that is congested. Approximately 24 percent of the Expanded Freeway B alternative has a v/c ratio of less than 0.9 (**Figure 21** in At Grade Roadways A and B section).

Figure 47 shows the percentage of the corridor that would be congested with Expanded Freeway B based on 2045 v/c ratios for each direction. Many of the corridor would have a v/c ratio greater than 1.0 for peak hour peak direction traffic.

Figure 47: 2045 Mainline Congested Segments for Expanded Freeway B



Because congestion is reduced compared to the No Build, there is limited diversion to other routes. **Figure 48** shows changes in traffic volumes compared to 2045 No Build and **Figure 49** shows the percent change to provide some context for the numerical changes. **Figure 50** shows v/c ratios for I-94 and the surrounding roadway network.

Average Mainline Peak Period Speed

As identified in **Table 14,** travel speeds on I-94 for the Expanded Freeway B alternative are 49 miles per hour. This alternative has the highest travel speed. The increase in travel speed compared to the No Build is approximately 17 percent.

Average Peak Period Transit Travel Time

The Expanded Freeway B alternative provides slower transit service than alternatives that provide dedicated bus rapid transit in a managed lane. Under the Expanded Freeway B alternative, buses are mixed in with other traffic unless the roadway is operating at congested speeds (45 miles per hour or slower). As such, there are limited transit advantages under this alternative. Transit travel time for this alternative is 17 minutes, which is faster than the No Build (22 minutes), but slower than the bus rapid transit (12 to 15 minutes). See **Figure 19** in the No Build discussion for peak period transit travel times.

Vehicle and Person Throughput

Daily vehicle throughput on the Expanded Freeway B is approximately 349,000. This alternative has the highest vehicle throughput. Vehicle throughput on the Expanded Freeway B is about 7 percent higher than the No Build.

As expected, the increase in vehicle throughput results in a corresponding increase in person throughput. Person throughput on the Expanded Freeway B is approximately 6 percent higher than the No Build, with approximately 451,600 people traveling through the corridor. Transit riders account for approximately 7,000 of the person throughput. Persons travelling by auto account for approximately 444,550 of the person throughput. Because there is more capacity and the roadway has faster travel times, fewer people use transit. Expanded Freeway B has the lowest transit ridership.

Vehicle Miles Traveled

Daily VMT on I-94 for the Expanded Freeway B alternative is approximately 11 percent higher (1,293,000) than the No Build (1,170,000). Trips are less likely to divert to other roadways under the Expanded Freeway B alternative and VMT is expected to decrease on the parallel arterial routes. Identified parallel arterial routes near the project area are Lake Street, Marshall Avenue, University Avenue, Pierce Butler Route, Energy Park Drive, and Larpenteur Avenue. Other non-arterial roadways in the area are also likely to experience changes in VMT. **Figure 27** (At Grade Roadways A and B section) shows the percent change in VMT on the parallel arterial routes. As shown in **Figure 27**, all of these routes experience a reduction in VMT compared to No Build.

There are negligible differences in regionwide VMT between the alternatives. Expanded Freeway B results in the highest daily regional VMT of 106,200,000, and the At Grade Roadways A and B, which remove the most VMT on I-94, result in a daily regional VMT of 105,600,000. The No Build has a regional VMT of approximately 105,900,000.

Figure 48: Change in 2045 Daily Traffic Volumes between Expanded Freeway B and No Build

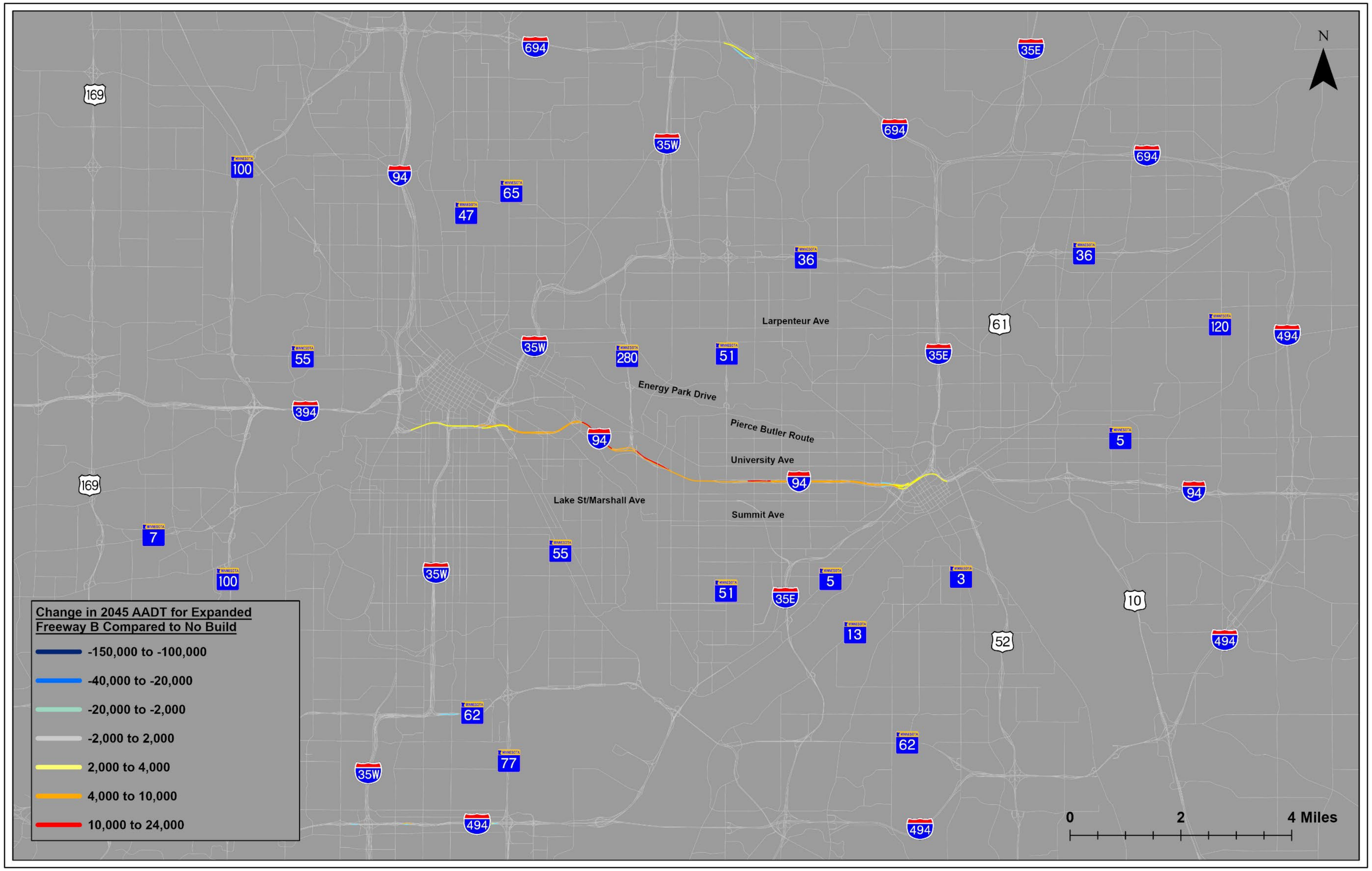
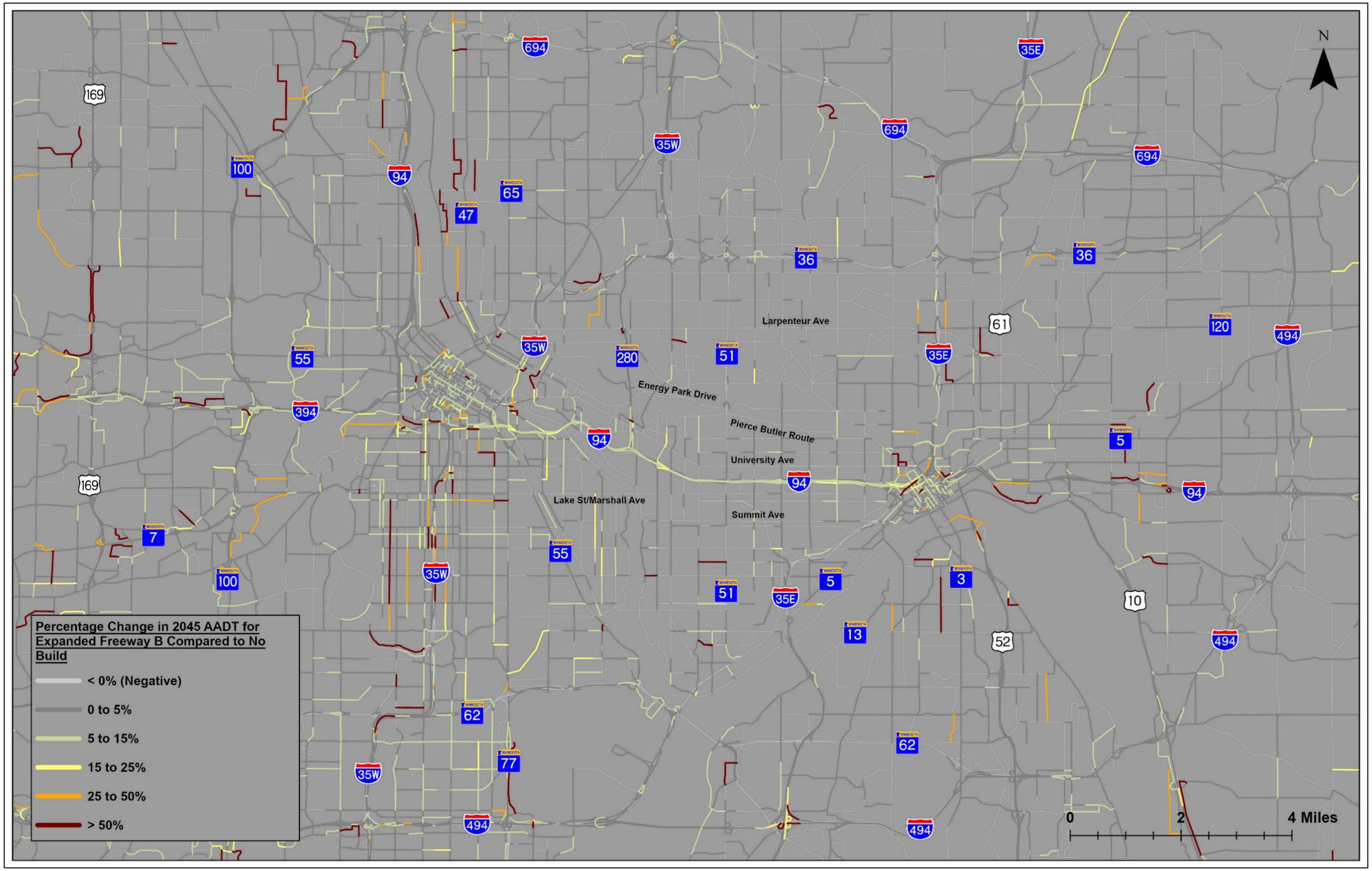
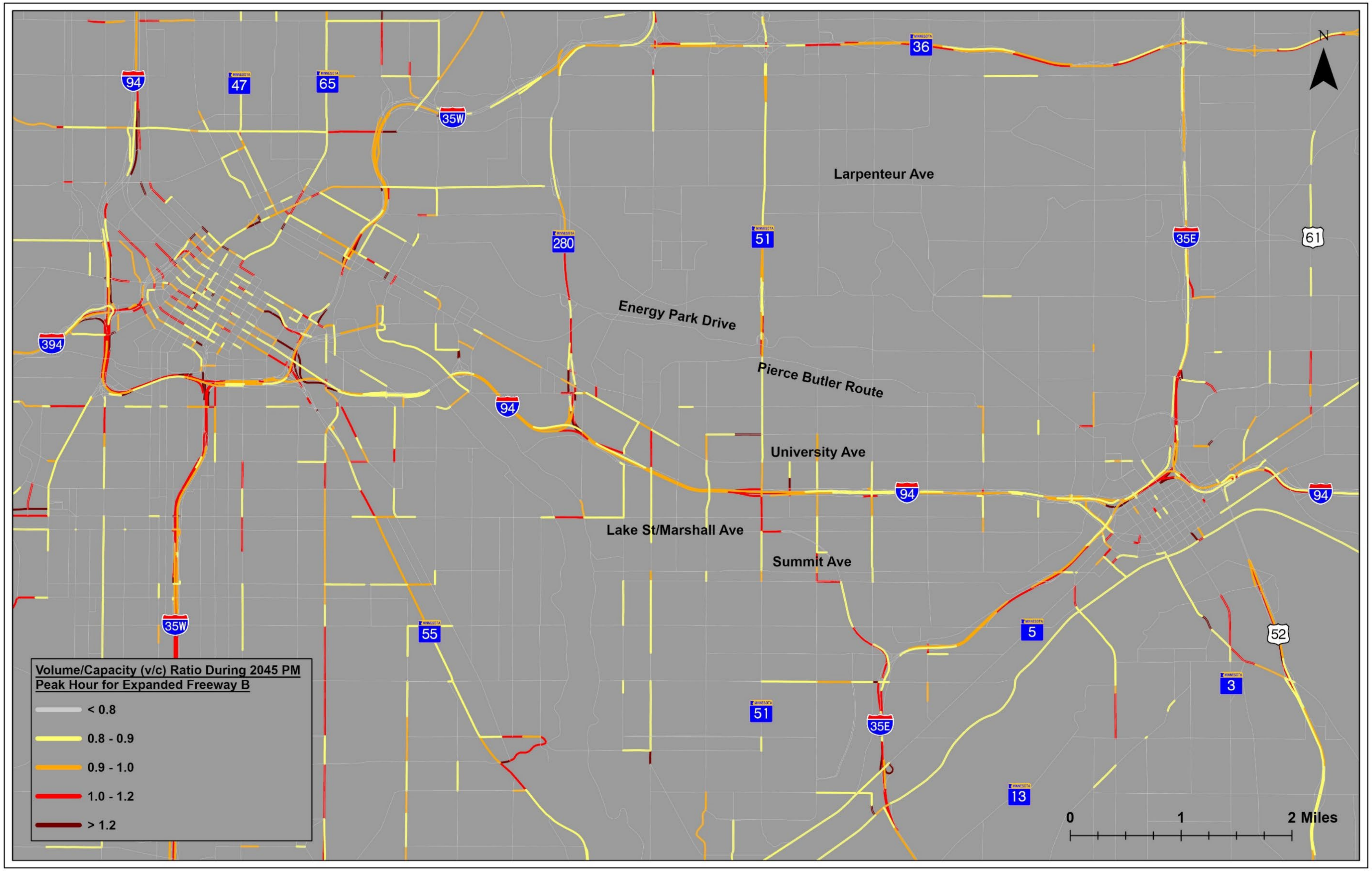


Figure 49: Percent Change in 2045 Daily Traffic Volumes between Expanded Freeway B and No Build



11003702

Figure 50: 2045 Expanded Freeway B Volume to Capacity (v/c) Ratio



Other Notable Travel Trends and Patterns

As previously described, there are some notable changes in travel patterns that impact the supporting transportation network depending upon the alternative. This section highlights important information related to:

- Changes in traffic volumes on the supporting roadway network
- Congestion on the supporting roadway network
- Mississippi River crossing trips on the supporting roadway network
- Travel flow at the Lowry Hill tunnel

The trends and patterns are discussed for alternatives (At Grade Roadways A and B, Local/Regional Roadways, and Reduced Freeway) that have the largest change from the No Build on the supporting roadway network for the first three items. Information on the tunnel follows. As noted previously, more detailed modeling will be needed during the Tier 1 phase to better understand upstream and downstream effects on I-94 near the tunnel.

Changes in Traffic Volumes on the Supporting Roadway Network

The At Grade Roadway A and B alternatives result in a substantial amount of traffic diverting from I-94 to other roadways in the transportation network. The Local/Regional Roadways and the Reduced Freeway would also impact the supporting transportation network, although not as much as the At Grade Roadways.

Figure 23 presents the percentage of the corridor that would be congested with At Grade Roadways A and B, based on 2045 v/c ratios for each direction. **Figures 24** and **25** show the change in annual average daily traffic (AADT) between the No Build and At Grade Roadways A and B. Key things to note with the At Grade Roadways A and B are as follows:

- Many of the surrounding roadways in the transportation network would experience an increase in traffic volumes
- Traffic increases in absolute numbers up to 24,000 vehicles a day
- University Avenue, Lake Street, TH 36, and I-35E would see the largest increases in traffic volumes
- I-35W and Pierce Butler Route would see an increase of 8,000 to 10,000 vehicles a day
- Marshall Avenue, Summit Avenue, Snelling Avenue, and I-35E would see traffic volume increases in the range of 6,000 to 7,500 vehicles a day
- North-south roadways experience a variety of changes – some routes that feed into other east-west arterials experience a large increase in traffic volumes, while others have little change
- Many local east-west streets would experience an increase in traffic of up to 50 percent compared to No Build
- Trunk highways parallel to I-94 would experience some increases in traffic volumes. The percentage increase is low, as these routes generally accommodate higher traffic volumes, but the absolute numbers can be large in some areas

- Traffic volumes on I-94 outside the project area would decrease

Figures 32 and **33** show the change in annual average daily traffic (AADT) between the No Build and the Local/Regional Roadways alternative. **Figures 36** and **37** show the change in annual average daily traffic (AADT) between the No Build and the Reduced Freeway alternative. Key things to note with Local/Regional Roadways and Reduced Freeway are as follows:

- Traffic shifts are less substantial under these alternatives, but a few routes do experience traffic volume increases
- University Avenue, Lake Street, Franklin Avenue, and Pierce Butler Route would see increases in daily traffic volumes of more than 2,000 compared to No Build
- Traffic on I-694, TH 36, TH 62, and I-494 would increase by a few thousand vehicles per day
- Traffic volumes on I-94 would decrease outside the project area, but by less than the At-Grade Roadways A and B
- Trunk highways parallel to I-94 would experience some increases in traffic volumes. The percent increase is low, as these routes generally accommodate higher traffic volumes, but the absolute numbers are higher in some areas

As noted in the measures of effectiveness, the alternatives that provide additional capacity on I-94 do not substantially change traffic volumes on the supporting roadway network in absolute or percentage terms. Some routes do experience reductions, but not to the extent that reducing capacity on I-94 would divert additional traffic onto those routes.

Congestion on the Supporting Roadway Network

Figures 24 and **25** identified shifts in traffic volumes for the At Grade Roadways A and B alternative. **Figure 26** shows what that change in traffic means to the supporting roadway network in terms of congestion for the At Grade Roadways.

Key things to note in terms of capacity constraints and congestion on the supporting roadway network for At Grade Roadways are as follows:

- Traffic on parallel routes would increase up to 100 percent due to diverted traffic from I-94. Many locations on these routes would have v/c ratios of 1 or higher with all three alternatives that reduce capacity on I-94, but more so with the At Grade Roadways.
- The v/c ratio on the Lake Street bridge would exceed 1.5 during peak periods with the At Grade Roadways.
- With all three alternatives, there would be locations on parallel and north-south trunk highways well beyond the project limits where traffic volumes exceed capacity.
- Changes in traffic volumes on the local roadway network for the Local/Regional Roadways and the Reduced Freeway are less than the At Grade Roadways. As a result, v/c ratios are lower. Volumes do exceed capacity for some segments, but they are closer to No Build than they are with the At Grade Roadways.
- River crossings (discussed in the next section) would be congested with all three alternatives.

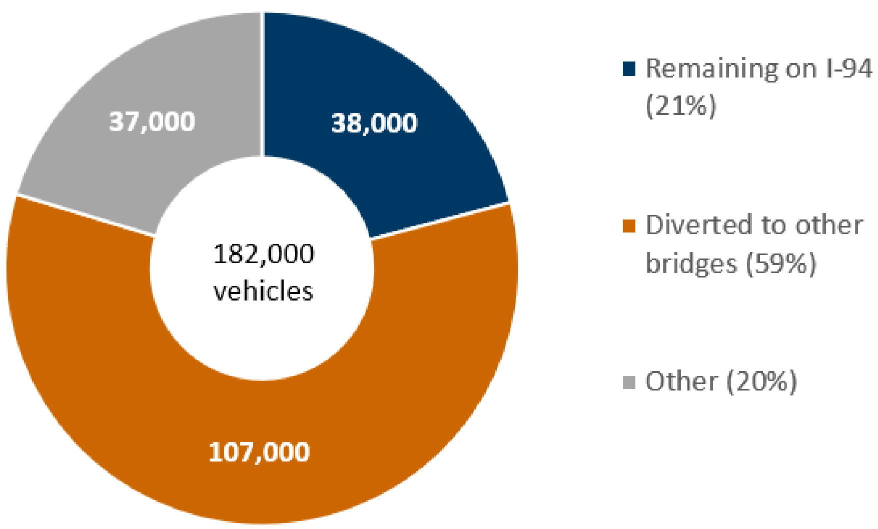
Some parallel and perpendicular routes in the study area are currently being studied for potential capacity reduction (e.g., Lake Street). If those roadways go on a “road diet”, v/c ratios would be worse than what is shown, and additional traffic would likely divert to other roadways in the area.

Mississippi River Crossing Trips on the Supporting Roadway Network

The Twin Cities have a limited number of Mississippi River crossings between the two downtowns and the region. Alternatives that reduce the capacity of the I-94 bridge over the river (also known as the Dartmouth Bridge) would push traffic onto other roadways with river crossings. The expected traffic volume diversion from I-94 to other river crossings is summarized here.

As shown in **Figure 51**, the Dartmouth Bridge in 2045 would average 182,000 vehicles a day with No Build. This accounts for approximately 14 percent of the east-west river crossing traffic in the Twin Cities. Under At Grade Roadways A and B, traffic on the Dartmouth bridge would be reduced by approximately 144,000 vehicles per day. Out of 144,000 trips, 107,000 trips would divert to other roadways and 37,000 vehicles would decide not to cross the Mississippi River any longer. Some trips would likely change their destinations to not require a river crossing and some trips would shift to a different mode.

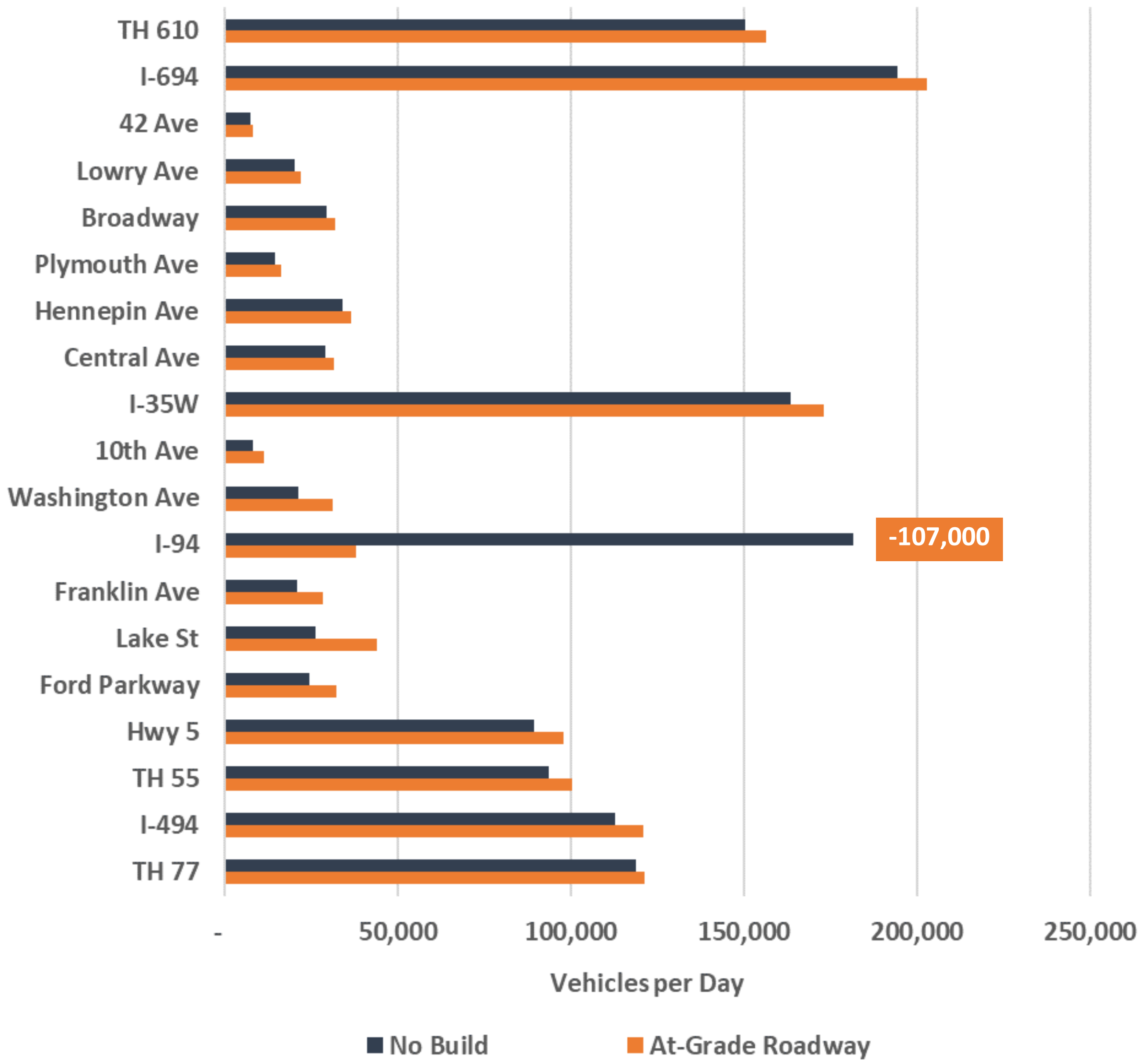
Figure 51: 2045 River Crossing Traffic for At Grade Roadways Compared to No Build



Note: The Dartmouth Bridge in 2045 under the No Build condition would average 182,000 vehicles a day. This accounts for approximately 14 percent of the east-west river crossing traffic in the Twin Cities. Under At Grade Roadways A and B, traffic on the Dartmouth bridge would be reduced by approximately 144,000 vehicles per day. Out of 144,000 trips, 107,000 trips would divert to other bridges and 37,000 vehicles would decide not to cross the Mississippi River any longer. The I-35W Mississippi River bridge had daily traffic 140,000 in 2007.

Figure 52 shows traffic volumes on Mississippi River crossing routes for the At-Grade Roadway compared to the No Build. There are 19 other routes that are expected to accommodate traffic shifting away from I-94.

Figure 52: 2045 Traffic Volumes on River Crossing Routes – No Build and At-Grade Roadway

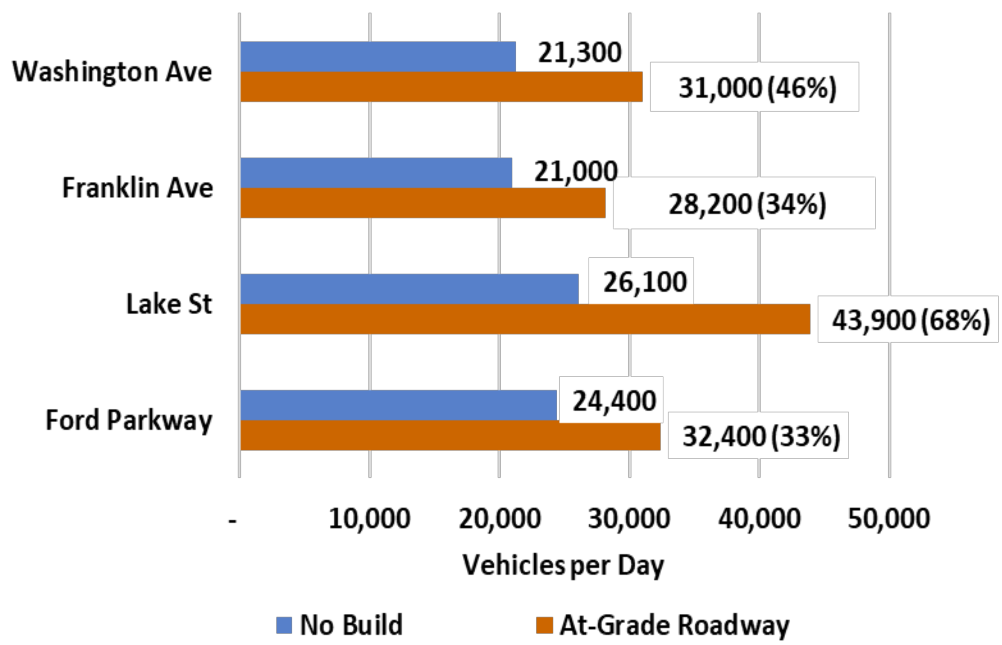


11003707

Figure 53 shows traffic volumes on local river crossing routes for the At-Grade Roadway compared to the No Build. These local routes experiencing the greatest traffic increase as follows:

- Lake Street – Approximately 18,000 vehicles per day (17 percent of diverting traffic) would divert to this route. This would cause severe congestion in both directions, with v/c ratios greater than 1.5 during peak periods
- Washington Avenue – Approximately 9,700 vehicles per day (9 percent of diverting traffic) would divert to this route. The bridge would operate at or near capacity. Traffic using Washington Avenue would pass through the University of Minnesota campus. (The model may be overestimating the capacity of this area to accept additional diverting traffic.)
- I-35W – Approximately 9,300 vehicles per day (9 percent of diverting traffic) would divert to this route. Operations would not be as negatively impacted on this route compared to other routes, as I-35W has some available capacity
- I-494, I-694, and TH 5 would each carry approximately 8 percent of the traffic diverted from the Dartmouth bridge

Figure 53: 2045 River Crossing Traffic on Local River Crossing Routes – No Build and At-Grade Roadway

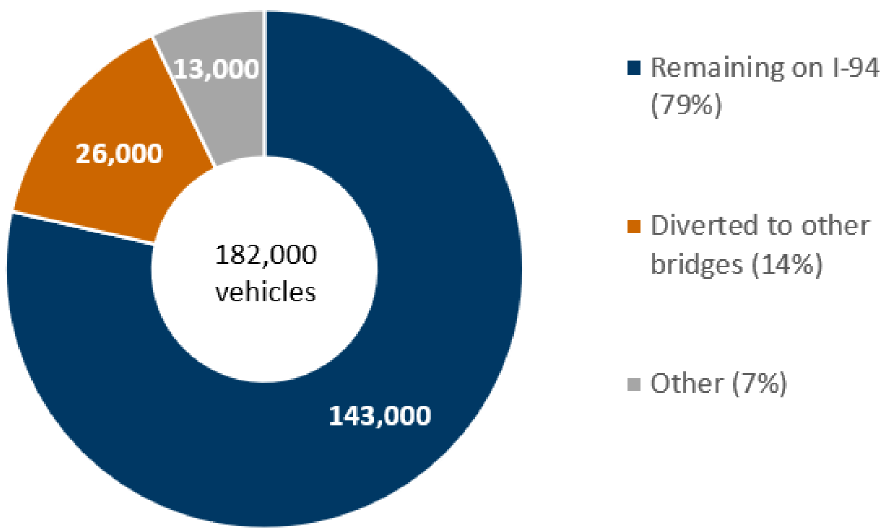


Note: The Lake Street bridge would experience the highest traffic increase of 17,800 daily vehicles or 17 percent of the 107,000 vehicles that would divert from the I-94 bridge. The Washington Avenue bridge would be the second highest at 9,700 additional vehicles per day or 9 percent of the 107,000 vehicles. Lake Street is expected to undergo road diets and any traffic diverting to this bridge would pass through the University of Minnesota campus.

Figures 54 and **55** show traffic volumes on Mississippi River crossing routes for the Reduced Freeway compared to the No Build. Traffic on alternate river crossings would not increase greatly with the Reduced Freeway.

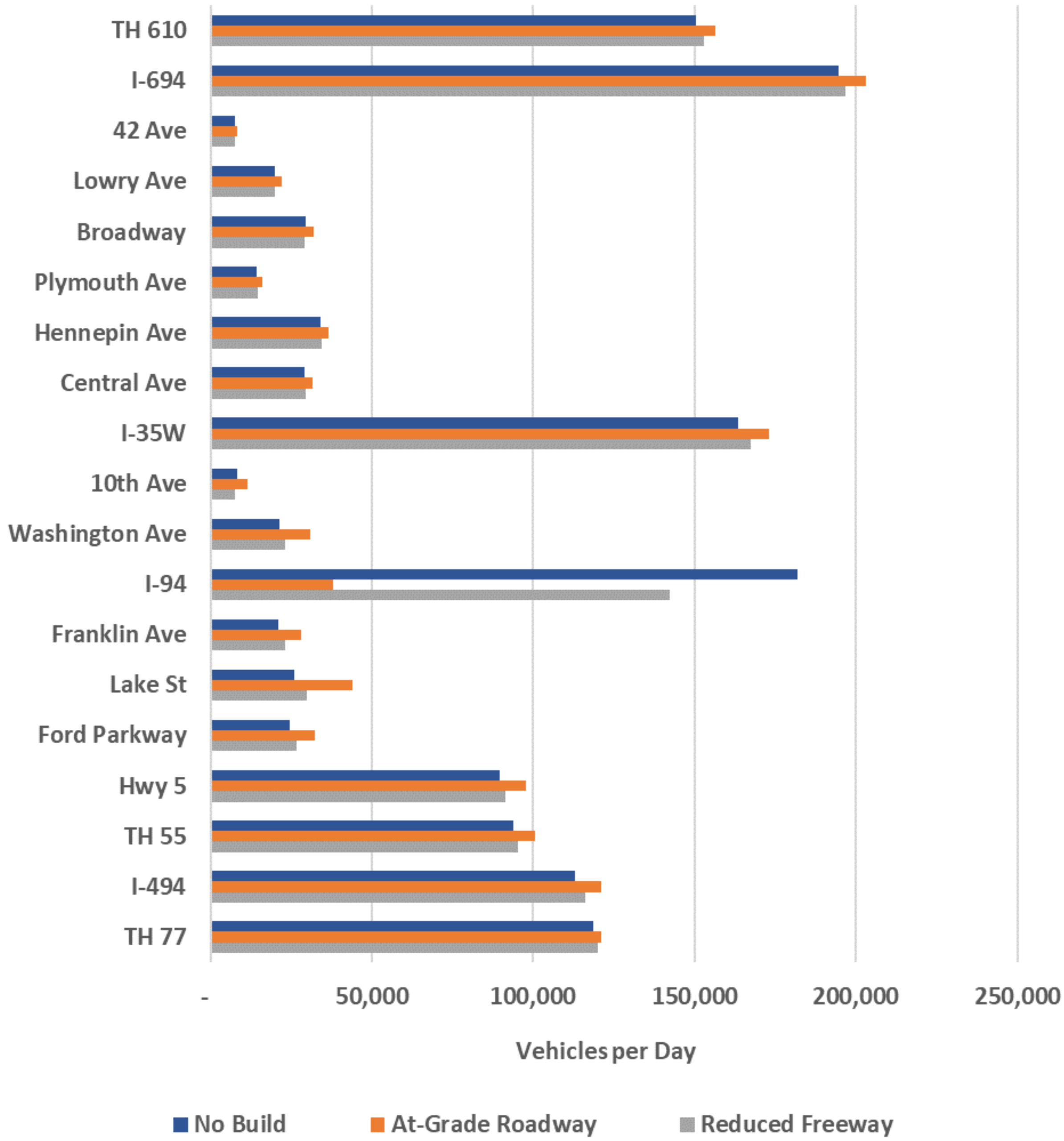
With the Reduced Freeway, traffic on the Dartmouth Bridge would be reduced by approximately 39,000 vehicles per day. Out of 39,000 trips, 26,000 trips would divert to other roadways and 13,000 would decide not to cross the Mississippi River any longer. Similar to the At-Grade Roadway, some trips would likely change their destinations to not require a river crossing and some trips would shift to a different mode.

Figure 54: 2045 River Crossing Traffic for Reduced Freeway Compared to No Build



Note: With the Reduced Freeway, traffic on the Dartmouth Bridge would be reduced by approximately 39,000 vehicles per day. Out of 39,000 trips, 26,000 trips would divert to other roadways and 13,000 would decide not to cross the Mississippi River any longer.

Figure 55: 2045 Traffic Volumes on River Crossing Routes – No Build, At-Grade Roadway, and Reduced Freeway



Traffic Flow at the Lowry Hill Tunnel

As previously explained, the region's activity based model has limited information that can be provided to understand traffic flow in and around the Lowry Hill Tunnel, which is a major bottleneck on the I-94 corridor just outside the western project limits. More detailed traffic analysis will be conducted as the alternatives analysis progresses in Tier 1. In that phase of the project, microsimulation models will account for upstream and downstream traffic impacts of the alternatives, weaving and queuing traffic, specific operational strategies, and geometric design elements that the travel demand models do not capture. This will provide a more complete understanding of the traffic impacts at the tunnel and on other roadways connecting to downtown Minneapolis and downtown St. Paul at each end of the project limits. This will also provide a more complete understanding of any constraint that the tunnel will have on the effectiveness of the I-94 alternatives.

Table 15 summarizes heavily congested segments with v/c ratio exceeding 1.0. What we can understand from the activity based model:

- The tunnel is a major bottleneck in both the AM and PM peak periods. The tunnel creates backups upstream and downstream on I-94 and I-394. The No Build would have segments approaching the tunnel with v/c ratios above 1.0 eastbound AM up to 1.5 miles upstream (near the Hennepin Avenue/Lyndale Avenue exit) and westbound PM up to 1 mile upstream (near the exit to 11th Street).
- The tunnel experiences congestion outside the AM and PM peak periods, which contributes to backups upstream on I-94 and I-394
- Alternatives that reduce capacity on I-94 may benefit traffic traveling through the tunnel, as less traffic would flow into the area. Westbound PM volume on segments approaching the tunnel would be less than capacity with the At Grade Roadways, but AM v/c ratios on eastbound segments would be similar to No Build.
- Alternatives that increase capacity on I-94 would likely result in longer backups upstream and downstream from the tunnel for longer periods of the day. Some traffic could divert through downtown depending on trip origins and destinations.

Table 15: Congestion on Segments Approaching the Lowry Hill Tunnel

Alternative	Heavily Congested Segment with v/c>1.0	
	I-94 EB during AM Peak Hour	I-94 WB during PM Peak Hour
No Build	Up to 1.5 mile near Hennepin/Lyndale Exit	Up to 1 mile near 11th Street Exit
At-Grade Roadway	Same as No Build	None
Reduced Freeway	Same as No Build	Up to 0.5 mile near I-35W ramp
Local/Regional Roadways	Same as No Build	Up to 0.5 mile near I-35W ramp
Reconfigured Freeway	Same as No Build	Same as No Build
Expanded Freeway A	Same as No Build	Same as No Build
Expanded Freeway B	Same as No Build	Same as No Build

Summary Tables

Tables 16-18 on the following pages summarize the measures of effectiveness for the alternatives. **Table 16** is a graphic representation of changes compared to No Build. The arrow symbols represent an increase or decrease in the measures, and brightness of color shows the magnitude of change in measures. The arrows do not necessarily represent an outcome that is better or worse than No Build. **Table 17** provides absolute numbers, and **Table 18** shows changes in percentage terms for each alternative.

Conclusion

The Rethinking I-94 project requires a long-term planning process with multiple phases and steps. The preliminary traffic and transit analysis of each alternative enables MnDOT, FHWA, and project stakeholders to continue community engagement, gather feedback, and refine the alternatives. The project team can use this interim look at the traffic and transit operations analysis to address issues with each alternative, refine alignments, and identify additional analyses that need to be done.

Table 16: Summary of Comparative Evaluation of Alternatives Compared to 2045 No Build

Measure	No Build	Maintenance A	Maintenance B	At-Grade Roadway A/B	Local / Regional Roadways	Reduced Freeway	Reconfigured Freeway	Expanded Freeway A	Expanded Freeway B
I-94 within the project limits									
I-94 capacity	11,700 to 15,600 vehicles per hour	Neutral	Neutral	Substantial Decrease	Some Decrease	Some Decrease	Neutral	Some Increase	Some Increase
Annual Average Daily Traffic	173,000 vehicles per day	Neutral	Neutral	Substantial Decrease	Some Decrease	Some Decrease	Neutral	Some Increase	Some Increase
Vehicle throughput	328,000 vehicles per day	Neutral	Neutral	Substantial Decrease	Some Decrease	Some Decrease	Neutral	Some Increase	Some Increase
Person throughput	426,480 people per day	Neutral	Neutral	Substantial Decrease	Some Decrease	Some Decrease	Some Increase	Some Increase	Some Increase
Transit travel time	20+ min during peak periods	Neutral	Some Decrease	Some Decrease	Some Decrease	Substantial Decrease	Substantial Decrease	Substantial Decrease	Some Decrease
Average mainline speed	40 to 55 miles per hour during peak periods	Neutral	Neutral	Substantial Decrease	Some Decrease	Some Decrease	Neutral	Some Increase	Some Increase
Level of congestion	20 to 25 percent of corridor with v/c > 1.0	Neutral	Neutral	Substantial Increase	Substantial Increase	Substantial Increase	Neutral	Some Decrease	Some Decrease
Traffic impacts due to diverted traffic from I-94									
Local bridges on other routes	Varies by bridge	Neutral	Neutral	Substantial Increase	Some Increase	Some Increase	Neutral	Some Decrease	Some Decrease
Routes parallel to I-94	Varies by route	Neutral	Neutral	Substantial Increase	Some Increase	Some Increase	Neutral	Some Decrease	Some Decrease
Local streets crossing I-94	Varies by route	Neutral	Neutral	Some Decrease	Neutral	Neutral	Neutral	Neutral	Neutral
Lowry Hill tunnel	Heavily congested segments over 1 mile	Neutral	Neutral	Some Decrease	Neutral	Neutral	Neutral	Neutral	Neutral
Twin Cities Metropolitan Area	106 million vehicle miles traveled per day	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral

Legend: Substantial Decrease; Some Decrease; Neutral; Some Increase; Substantial Increase

Table 17: Summary of Preliminary Traffic/Transit Analysis of 2045 Alternatives – Detailed Numbers

Measure	No Build	Maintenance B	At Grade Roadway	Local /Regional Roadways	Reduced Freeway	Reconfigured Freeway	Expanded Freeway A	Expanded Freeway B
Roadway Capacity (vehicles per hour)	11,700 -15,600	11,700 -15,600	3,000	10,800	11,700	15,600	15,600 - 19,500	15,600 - 19,500
Annual Average Daily Traffic	173,000	173,000	36,000	126,000	136,000	178,000	191,000	191,000
Vehicle Throughput (daily)	328,000	328,000	165,000	258,000	281,000	334,000	347,000	349,000
Person Throughput (daily)	426,480	425,150	218,640	337,150	376,050	446,860	457,860	452,020
• Auto	418,000	418,000	211,000	330,000	367,000	438,000	449,000	445,000
• Transit	8,480	7,150	7,640	7,150	8,980 - 9,050	8,800 - 8,860	8,800 - 8,860	7,020
Average Peak Period Transit Travel Time (minutes)	~22	~17	~19	~17	~12-15	~12-15	~12-15	~17
Average Peak Period Speed (mph)								
• General-Purpose lane	40 - 55	40 - 55	N/A	30 - 45	30 - 45	40 - 55	45 - 55	45 - 55
• Managed lane	N/A	N/A	N/A	N/A	40 - 60	45 - 60	45 - 60	N/A
• Local lane	N/A	N/A	20 - 25	25 - 30	N/A	N/A	N/A	N/A
Peak Hour Congestion (corridor miles with v/c > 1.0)	20% - 25%	20% - 25%	27% - 32%	37% - 42%	30%	20% - 25%	5% - 18%	4% - 16%
Vehicle Miles Traveled (daily)								
• I-94 within the project limits	1,170,000	1,170,000	240,000	695,000	925,000	1,216,000	1,303,000	1,293,000
• Routes parallel to I-94	194,000	194,000	333,000	241,000	222,000	189,000	179,000	181,000
• Region	105,900,000	105,900,000	105,600,000	105,700,000	106,000,000	106,100,000	106,100,000	106,200,000

Table 18: Summary of Preliminary Traffic/Transit Analysis of Alternatives – Percent Change Compared to 2045 No Build

Measure	No Build	Maintenance B	At Grade Roadway	Local /Regional Roadways	Reduced Freeway	Reconfigured Freeway	Expanded Freeway A	Expanded Freeway B
Roadway Capacity (vehicles per hour)	11,700 -15,600	0	-80	-30	-25	0	25	25
Annual Average Daily Traffic	173,000	0	-79	-27	-21	3	10	10
Vehicle Throughput (daily)	328,000	0	-50	-21	-14	2	6	6
Person Throughput (daily)	426,480	0	-49	-21	-12	5	7	6
• Auto	418,000	0	-50	-21	-12	5	7	6
• Transit	8,480	-16	-10	-16	7	5	5	-17
Average Peak Period Transit Travel Time (minutes)	22	-23	-14	-23	-32 to -46	-32 to -46	-32 to -46	-23
Average Peak Period Mainline Speed (mph)								
• General Purpose Lane	40 - 55	0	N/A	-27	-26	0	10	11
• Managed Lane	N/A	N/A	N/A	N/A	-1	5	12	N/A
• Local	N/A	N/A	-56	-42	N/A	N/A	N/A	N/A
Peak Hour Congestion (corridor miles with v/c > 1.0)	1.5	0	40	130	50	0	-60	-75
Vehicle Miles Traveled (daily)								
• I-94 within the project limits	1,170,000	0	-79	-41	-21	4	11	11
• Routes parallel to I-94	194,000	0	72	24	14	-3	-8	-7
• Region	105,900,000	0	-0.3	-0.2	0.1	0.2	0.2	0.3

11003715

Appendix A – Transit Study Executive Summary

Executive Summary for Technical Memorandum Rethinking I-94 Transit Scoping and Idea Exploration

From: "Hyink, Jessica (she/her/hers)" <jessica.hyink@minneapolismn.gov>
To: Jack Corkle <JCorkle@wsbeng.com>, "Barnes, Melissa (DOT)" <melissa.barnes@state.mn.us>
CC: "Bockheim, Adrienne (she/her/hers)" <adrienne.bockheim@minneapolismn.gov>, "Brasser, Ben (he/him/his)" <benjamin.brasser@minneapolismn.gov>, "Mayell, Kathleen K" <kathleen.mayell@minneapolismn.gov>, "Hager, Jenifer (she/her/hers)" <Jenifer.Hager@minneapolismn.gov>
Subject: RE: [EXTERNAL] Rethinking I-94 - Alternatives Evaluation Memo
Date: Fri, 03 May 2024 22:39:03 +0000
Attachments: I94_ScopingAltsEval_Matrix_DRAFT_240327_Minneapolis.xlsx; I94_ScopingAltsEval_Working_240327_Minneapolis.docx; Minneapolis_Alternatives_Cover_Letter_to_Project_Office_May_2024.docx
Inline-Images: image001.png

Hi Jack and Melissa,

We appreciate the opportunity to review and provide feedback on the working draft of the "Rethinking I-94: Scoping Alternatives Evaluation". Please find attached a letter from the City of Minneapolis with priority comments on the working draft. This letter will be formalized next week with signatures, but we wanted to make sure you had our materials this week as promised. Also attached is the working draft with City of Minneapolis staff comments as well as the draft evaluation matrix with staff comments.

Hope you have a great weekend!

From: Jack Corkle <JCorkle@wsbeng.com>
Sent: Friday, April 26, 2024 10:33 AM
To: Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Hyink, Jessica (she/her/hers) <jessica.hyink@minneapolismn.gov>
Cc: Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>; Brasser, Ben (he/him/his) <benjamin.brasser@minneapolismn.gov>; Mayell, Kathleen K <kathleen.mayell@minneapolismn.gov>
Subject: RE: [EXTERNAL] Rethinking I-94 - Alternatives Evaluation Memo

Sounds good. Thanks guys!

Have a great weekend.

Jack Corkle, AICP, PTP
Director, Planning
612.719.4540 (o)
WSB | wsbeng.com

From: Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>
Sent: Friday, April 26, 2024 9:42 AM
To: Jack Corkle <JCorkle@wsbeng.com>; Hyink, Jessica (she/her/hers) <jessica.hyink@minneapolismn.gov>
Cc: Bockheim, Adrienne b <adrienne.bockheim@minneapolismn.gov>; Brasser, Ben (he/him/his) <benjamin.brasser@minneapolismn.gov>; Mayell, Kathleen K <kathleen.mayell@minneapolismn.gov>
Subject: RE: [EXTERNAL] Rethinking I-94 - Alternatives Evaluation Memo

EXTERNAL EMAIL

Good Morning Jack, could we get 1 additional week?
Much appreciated.

Jeni

Jenifer Hager | Director Transportation Planning & Programming
City of Minneapolis – Public Works | **Public Service Building 505 4th Ave South Room 410 MN 55415**

612-673-3625 | Jenifer.Hager@minneapolismn.gov

From: Jack Corkle <JCorkle@wsbeng.com>
Sent: Friday, April 26, 2024 8:51 AM
To: Hyink, Jessica (she/her/hers) <jessica.hyink@minneapolismn.gov>
Cc: Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>; Brasser, Ben (he/him/his) <benjamin.brasser@minneapolismn.gov>
Subject: RE: [EXTERNAL] Rethinking I-94 - Alternatives Evaluation Memo

Hi Jessica –

Thank you for the notice – do you have thoughts on a possible timeframe?

Thank you - Jack

Jack Corkle, AICP, PTP
Director, Planning
612.719.4540 (o)
WSB | wsbeng.com

From: Hyink, Jessica (she/her/hers) <jessica.hyink@minneapolismn.gov>
Sent: Friday, April 26, 2024 8:48 AM
To: Jack Corkle <JCorkle@wsbeng.com>

Cc: Hager, Jenifer A <Jenifer.Hager@minneapolismn.gov>; Bockheim, Adrienne b <adrienne.bockheim@minneapolismn.gov>; Brasser, Ben (he/him/his) <benjamin.brasser@minneapolismn.gov>
Subject: RE: [EXTERNAL] Rethinking I-94 - Alternatives Evaluation Memo

EXTERNAL EMAIL

Hi Jack,

The City of Minneapolis will need an extension on providing comments.

Thank you,
Jessica

From: Jack Corkle <JCorkle@wsbeng.com>
Sent: Monday, April 15, 2024 12:19 PM
To: Varney, Anna (FHWA) <anna.varney@dot.gov>; Amy Vennewitz <amy.vennewitz@metc.state.mn.us>; Heath, Ryan <ryan.heath@metrotransit.org>; Barnes, Melissa (DOT) <melissa.barnes@state.mn.us>; Bartelt, Nicole (DOT) <nicole.bartelt@state.mn.us>; William Goff <william.goff@state.mn.us>; Henricksen, Jim (DOT) <jim.henricksen@state.mn.us>; Lindeberg, Mark (DOT) <mark.lindeberg@state.mn.us>; Kauppi, Sheila (DOT) <sheila.kauppi@state.mn.us>; brad.larsen@state.mn.us; Schreiner, Garrett (DOT) <garrett.schreiner@state.mn.us>; Parent, Matthew (DOT) <Matthew.Parent@state.mn.us>; Samuelson, Michael (DOT) <michael.samuelson@state.mn.us>; Wilson, Ryan (DOT) <ryan.wilson@state.mn.us>; Olson, Jeffrey (DOT) <jeffrey.olson@state.mn.us>; molly.mccartney@state.mn.us; Lopez, Ricardo (He/Him/His) (DOT) <ricardo.lopez@state.mn.us>; Raduenz, Renee (She/Her/Hers) (DOT) <renee.raduenz@state.mn.us>; Jessa Trboyevich <jessa.trboyevich@hennepin.us>; Estochen, Bradley M <Bradley.Estochen@CO.RAMSEY.MN.US>; bradley.estochen@ramseycounty.us; Hager, Jenifer (she/her/hers) <Jenifer.Hager@minneapolismn.gov>; Newton, Randy (CI-StPaul) <Randy.Newton@ci.stpaul.mn.us>; Jess Karls <JKarls@wsbeng.com>; Austin Hauf <AHauf@wsbeng.com>; Pearson, Joshua (FHWA) <joshua.pearson@dot.gov>; KC Atkins (Hennepin) <KC.Atkins@hennepin.us>; Cole Hiniker <cole.hiniker@metc.state.mn.us>; Harrington, Adam <adam.harrington@metrotransit.org>; Musty, Peter (CAAPB) <peter.musty@state.mn.us>; Schroeder, Michael <MSchroeder@minneapolisparks.org>; Monique MacKenzie <moniquem@umn.edu>; Austin, Lisa (DOT) <lisa.austin@state.mn.us>; Jeff, Gloria (DOT) <gloria.jeff@state.mn.us>; Goldfarb, Isabel (She/Her/Hers) (DOT) <isabel.goldfarb@state.mn.us>; kari.collins@ramseycounty.us; Faust, Martha E <Martha.Faust@CO.RAMSEY.MN.US>; Brian.Isaacson@CO.RAMSEY.MN.US; Bockheim, Adrienne (she/her/hers) <adrienne.bockheim@minneapolismn.gov>; Mogush, Paul R <Paul.Mogush@minneapolismn.gov>; Nix, Noel (CI-StPaul) <Noel.Nix@ci.stpaul.mn.us>; Russ Stark <russ.stark@ci.stpaul.mn.us>
Cc: Hyink, Jessica (she/her/hers) <jessica.hyink@minneapolismn.gov>; nick.peterson@ci.stpaul.mn.us; Jon Chiglo <JChiglo@wsbeng.com>; Ehrlich, Jonathan <Jonathan.Ehrlich@metc.state.mn.us>; Jason Junge <jjunge@wsbeng.com>
Subject: [EXTERNAL] Rethinking I-94 - Alternatives Evaluation Memo

Hi all –

We wanted to check in with you. We are still working with leadership on the review of the alternatives, but do not want to impede your review of the first draft of the alternatives evaluation memo.

We sent the draft out in March – in the midst of spring break – and wanted to make sure the draft did not fall to the bottom of your in box.

If you could dust it off and take a look at the draft and provide us comments by April 26th we would appreciate it.

Thank you very much – and if you have any questions, please feel free to reach out to Mark, Melissa or me.

Jack

Jack Corkle, AICP, PTP
Director, Planning
612.719.4540 (o)
WSB | wsbeng.com

For a list of WSB employee licenses and certifications visit here.

Document Produced in Native Format

Rethinking I-94: Scoping Alternatives Evaluation (Working Draft)

1 Introduction

The purpose of this document is to share the results of the alternatives evaluation completed during the Scoping phase of Rethinking I-94. Final recommendations regarding alternatives to advance into the Tier 1 Environmental Impact Statement (EIS) will be included in the Rethinking I-94 Scoping Document/Draft Scoping Decision Document (SD/DSDD) that will be released for public review and comment. This document is not intended to be a standalone resource; it builds on information included in the project's Purpose and Need Report[1] and Evaluation Criteria Memo,[2] which are available for review as separate documents. Brief summaries of the most relevant aspects of these documents are provided in the sub-sections that follow. The contents of this document are outlined in the table of contents below.

1 Introduction 1

1.1 Range of Alternatives 3

1.2 Purpose and Need 14

2 Evaluation Process 15

3 Scoping and Tier 1 Evaluation Criteria 16

3.1 Overview 16

3.2 Scoping and Tier 1 EIS Evaluation Tools 20

3.3 Topics Not Addressed in the Evaluation Criteria 20

4 Access & Interchange/Intersection Modifications 21

4.1 Targeted Safety, Infrastructure Condition, and Mainline Operations Locations 21

4.2 Access Closures and Modifications 22

5 Evaluation of Alternatives 24

5.1 No Build – General Maintenance 39

5.2 Maintenance – A 40

5.3 Maintenance – B 41

5.4 At-Grade – A 44

5.5 At-Grade – B 49

[1] The Draft Purpose and Need in Conjunction with the Statement of Goals Technical Report (Purpose and Need Report) documents the facts and data supporting each problem or unsatisfactory condition identified for the I-94 program area.

[2] The Evaluation Criteria Memo provides more detailed background information on the evaluation criteria and measures proposed for the SDD and Tier 1 EIS.

5.6 Local/Regional Roadways – A 54
5.7 Reduced Freeway – A 59
5.8 Reconfigured Freeway – A 64
5.9 Expanded Freeway – A....68
5.10 Expanded Freeway – B....73
6 Summary of Scoping Evaluation Recommendations 79
7 Appendices 81

1.1 Range of Alternatives

Information from the purpose and need document, feedback from partner agencies, traffic and transit studies, and input from the public have helped to inform potential alternatives for I-94. The alternatives developed in Scoping are focused on the I-94 "mainline," or the actual roadway itself. Access/interchange locations with safety or mobility issues have been identified during Scoping, but no interchange alternatives have been developed at this time.

In the Tier 1 EIS, the mainline alternatives will be studied in more detail, and multiple alternatives will be developed for interchange/intersection locations that may be modified. In addition, other project elements such as improvements to bicycle and pedestrian crossings and parallel facilities and freeway lids, caps, or stitches (wide bridges) will be explored further.

MnDOT is committed to improving walkability and bikeability in the I-94 corridor and will further develop opportunities for these connections in the Tier 1 EIS and Tier 2 construction documents. Project staff will ensure space is available for these elements and coordinate with existing studies (such as the proposed Midtown Greenway Extension) as part of this project.

Opportunities to incorporate freeway lids, caps, or stitches into the project alternatives will also be studied in more detail in the Tier 1 EIS. The project team will be coordinating with ReConnect Rondo on their efforts for a land bridge and how it relates to all alternatives under consideration. The Tier 1 Environmental Impact Statement will take a deeper look into corridor aesthetics. This effort will include extensive engagement with the adjacent communities.

The alternatives developed for evaluation during Scoping are discussed in more detail in the Alternatives for Consideration memo and are briefly summarized on the following pages.[3] The alternatives include:

- No Build – General Maintenance
- Maintenance – A
- Maintenance – B
- At-Grade – A
- At-Grade – B
- Local/Regional Roadways – A
- Reduced Freeway – A
- Reconfigured Freeway
- Expanded Freeway – A
- Expanded Freeway – B

1.1.1 No Build – General Maintenance, Maintenance – A, and Maintenance – B

No Build – General Maintenance: The no-build scenario maintains the existing alignment as of 2015. I-94 would remain as it is and have 3-4 general purpose lanes (depending on the segment) along with express bus service (**Figure 1**). Express bus service operates in the general purpose lanes and can use the corridor's shoulders during AM and PM peak periods when the general purpose lanes drop below 35 miles per hour. The shoulder exists for only a portion of I-94. In the no-build scenario, there is no

[3] *Rethinking I-94 Alternatives for Consideration*. Month 2024

eastbound stop for the express bus and there is one on-demand westbound stop at Huron. The no build condition represents the baseline for comparing all the other alternatives.

Maintenance – A: Since March 1, 2020, transit service along I-94 has changed. Maintenance – A reflects the current alignment of I-94 with 3-4 general purpose lanes and express bus service that operates partially on the shoulder during times of congestion (**Figure 1**). The express bus service currently has one stop east and west bound at Snelling Avenue. For the purposes of traffic modeling, Maintenance – A and the No Build scenarios operate alike and were analyzed as one scenario.

Maintenance – B: Maintenance – B keeps the current alignment – keeping the existing 3-4 general purpose lanes – but would add a shoulder where one does not exist today to support express bus service along the entire corridor. This would restore the bus shoulder west of TH 280 that was converted to a travel lane after the I-35W Mississippi River bridge collapse. For graphic illustration purposes, Maintenance – B resembles the no-build option (**Figure 1**).

1.1.2 At-Grade – A and At-Grade – B

For the at-grade alternatives, I-94 would be demolished, filled in, and replaced with an at-grade roadway. Current interchanges would be removed. The necessary intersection control, railroad crossings, and bicycle and pedestrian crossing infrastructure would be determined during a later phase. The new roadway would have two travel lanes in each direction with bus rapid transit operating in a fixed guideway. The proposed speed limit for both alternatives is 35 mph. At-Grade – A would have the bus rapid transit in the middle of the travel lanes for cars/trucks (**Figure 2**). At-Grade – B would have bus rapid transit operating in a fixed guideway in an outside lane (**Figure 3**). Three transit stops would be provided. For the purposes of this modeling analysis, the two at-grade roadways have the same operating characteristics and thus were analyzed as one.

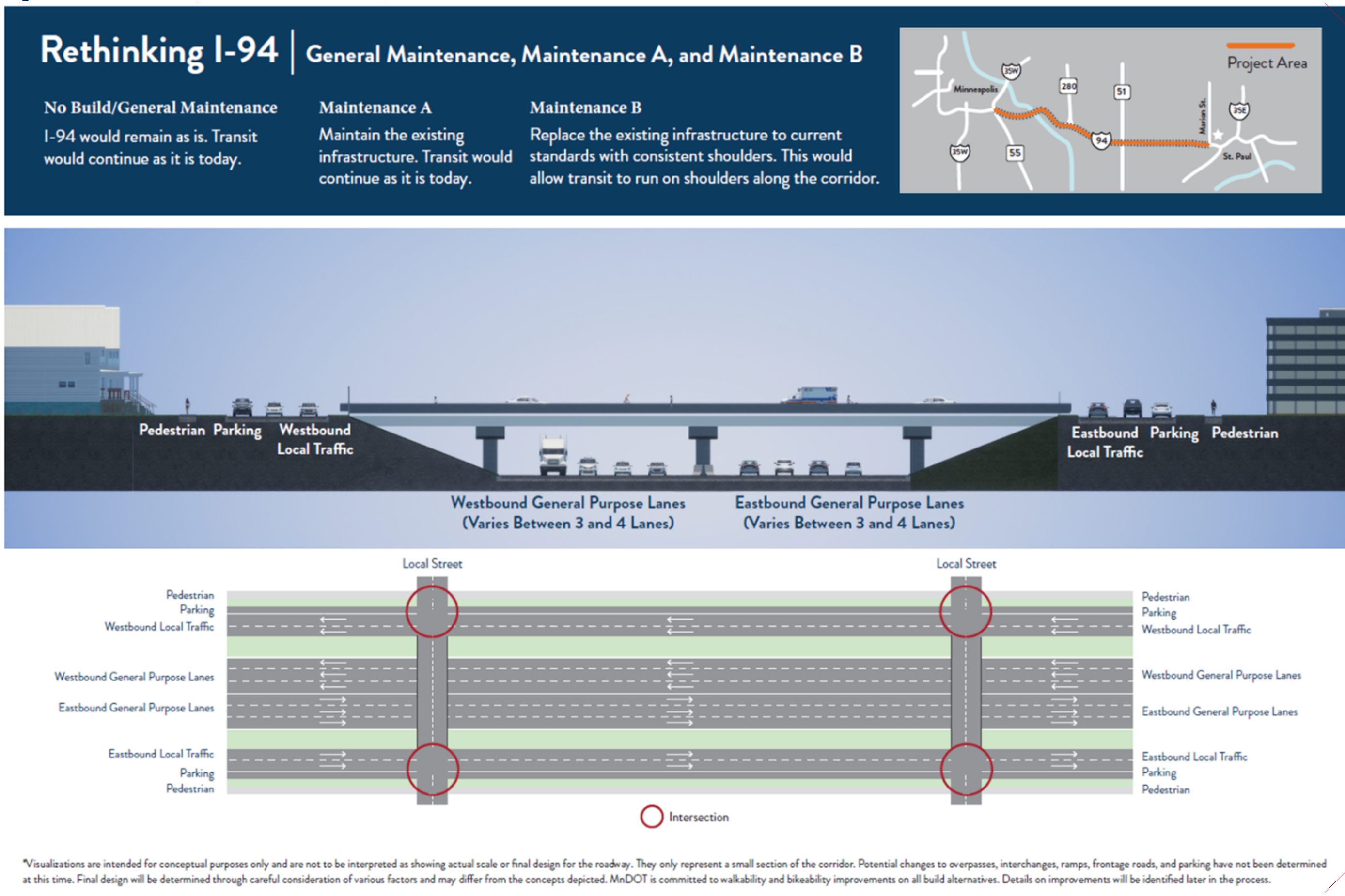
Commented [AH1]: This was the language from the traffic alts memo. Anna's comment: "There may still be some interchanges? Or is this the assumption for now?"

Commented [HJ(2]: Does this assume removal of interchanges with 280 or I-35? Assuming no. Additional clarity on interchanges with these would be helpful.

Commented [BA(3R2]: Agreed. Rather than just leaving it at "removed", I'm assuming some of those interchanges would be redesigned as intersections -- it would be helpful if they clarified this.

Commented [HJ(4]: Minneapolis Fire Dept stated preference for At-Grade alternative B over A.

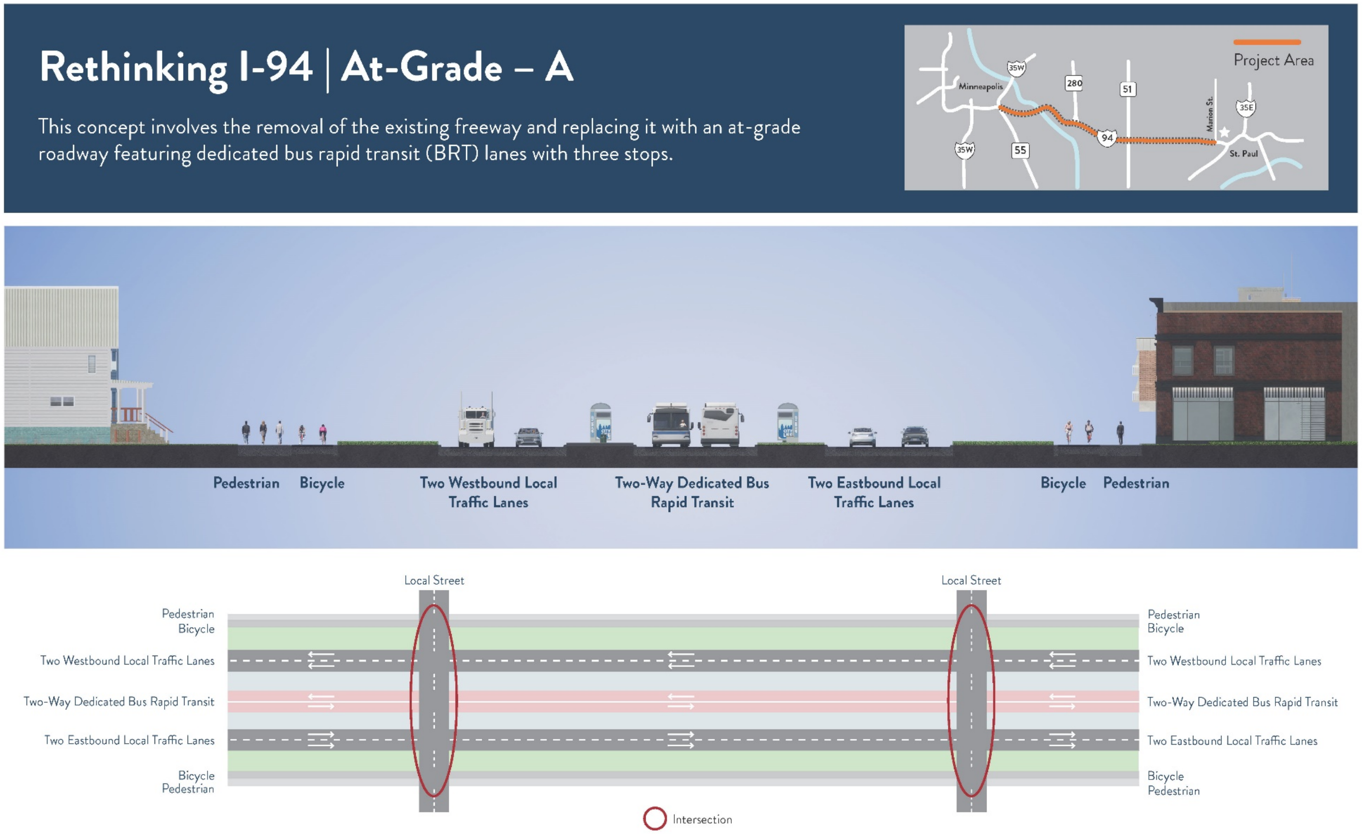
Figure 1 – No Build, Maintenance – A, and Maintenance – B



Commented [AH5]: Figure to be updated with "no build" language.

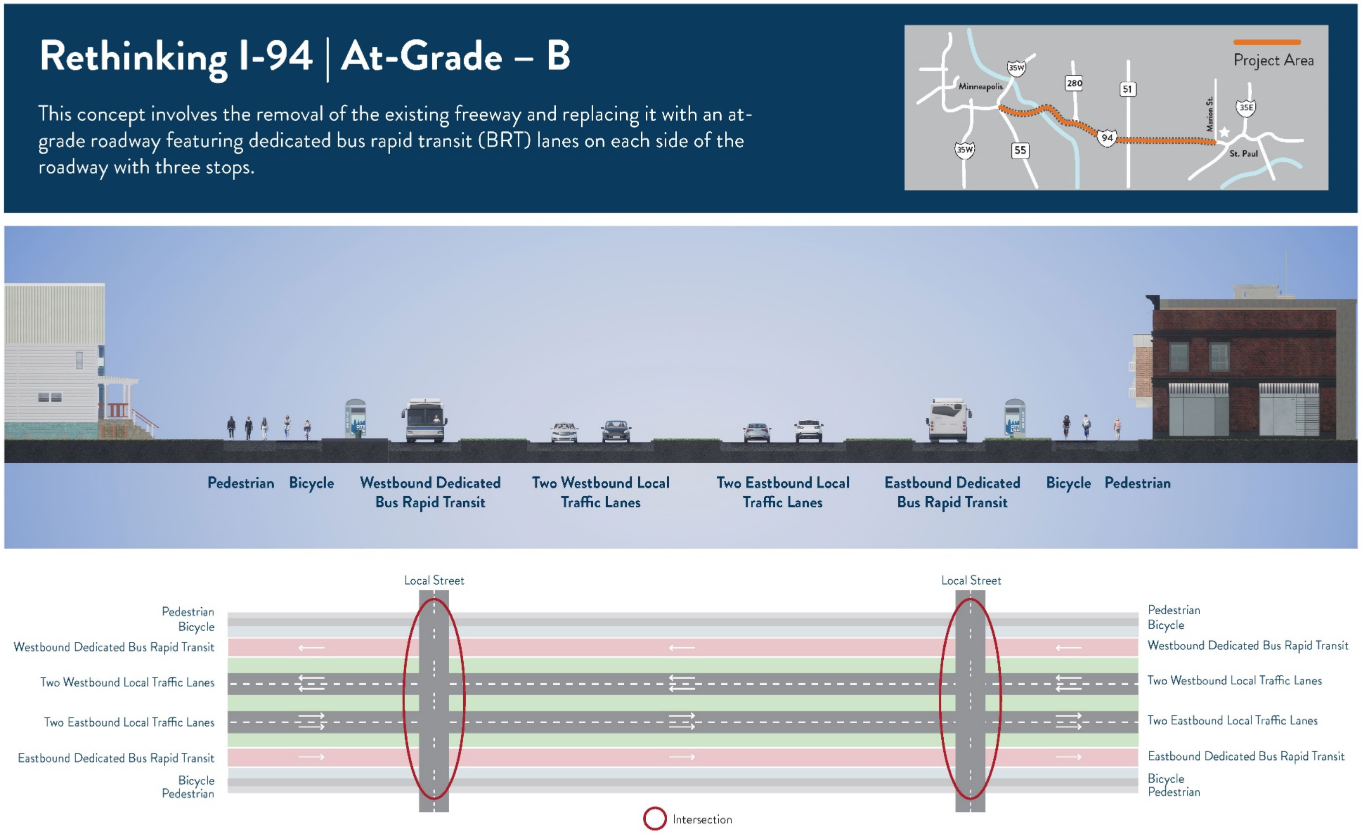
11003726

Figure 2 – At-Grade – A



*Visualizations are intended for conceptual purposes only and are not to be interpreted as showing actual scale or final design for the roadway. They only represent a small section of the corridor. Potential changes to overpasses, interchanges, ramps, frontage roads, and parking have not been determined at this time. Final design will be determined through careful consideration of various factors and may differ from the concepts depicted. MnDOT is committed to walkability and bikeability improvements on all build alternatives. Details on improvements will be identified later in the process.

Figure 3 – At-Grade – B



*Visualizations are intended for conceptual purposes only and are not to be interpreted as showing actual scale or final design for the roadway. They only represent a small section of the corridor. Potential changes to overpasses, interchanges, ramps, frontage roads, and parking have not been determined at this time. Final design will be determined through careful consideration of various factors and may differ from the concepts depicted. MnDOT is committed to walkability and bikeability improvements on all build alternatives. Details on improvements will be identified later in the process.

11003728

1.1.3 Local/Regional Roadways

This alternative replaces the existing interstate with two parallel facilities – one focused on regional travel and the other on local trips (**Figure 4**). The regional facility would be limited access with interchanges at locations to be determined. It is anticipated that there would be an access at the beginning of the project area near TH 55 and I-35 and one at the end of the project area near Marion Street/Kellogg Boulevard. Access in between will be limited to one or two additional locations. Key features include two general purpose lanes in each direction and express bus service that can operate on the shoulder throughout the full 7.5-mile segment. The local roadway is at-grade with separate facilities on the north and south sides of the interstate. Each local road would have a travel lane in each direction, street parking, bike lanes, and sidewalks to serve existing land use.

Commented [HJ(6]: City of Minneapolis Fire Department stated concerns with limited access and ability to respond in an emergency. Asked if limited emergency access locations may be incorporated into this alternative.

Commented [HJ(7]: Concern from Minneapolis Fire Department that 2 lanes in each direction may not be sufficient and result in traffic backing up, limiting access by fire trucks.

1.1.4 Reduced Freeway

This alternative would rebuild I-94 with fewer travel lanes compared to existing conditions. In this alternative there would be two general purpose lanes (open to all vehicles) and one managed lane (for buses and carpoolers and those willing to pay) in each direction. Bus rapid transit would operate in the managed lanes. Up to three transit stops could be provided. The reduced freeway option could be constructed with or without a retaining wall (**Figure 5**).

1.1.5 Reconfigured Freeway

This alternative would rebuild I-94 with consistent travel lanes (**Figure 6**). The present corridor varies between three and four lanes – with most of the corridor being four travel lanes in each direction, with short-lane drops. The Reconfigured Freeway alternative would have three general purpose lanes (open to all vehicles) and one managed lane (for buses, carpoolers, and those willing to pay) in each direction. Bus rapid transit would operate in the managed lane. Up to three transit stops could be provided.

1.1.6 Expanded Freeway – A

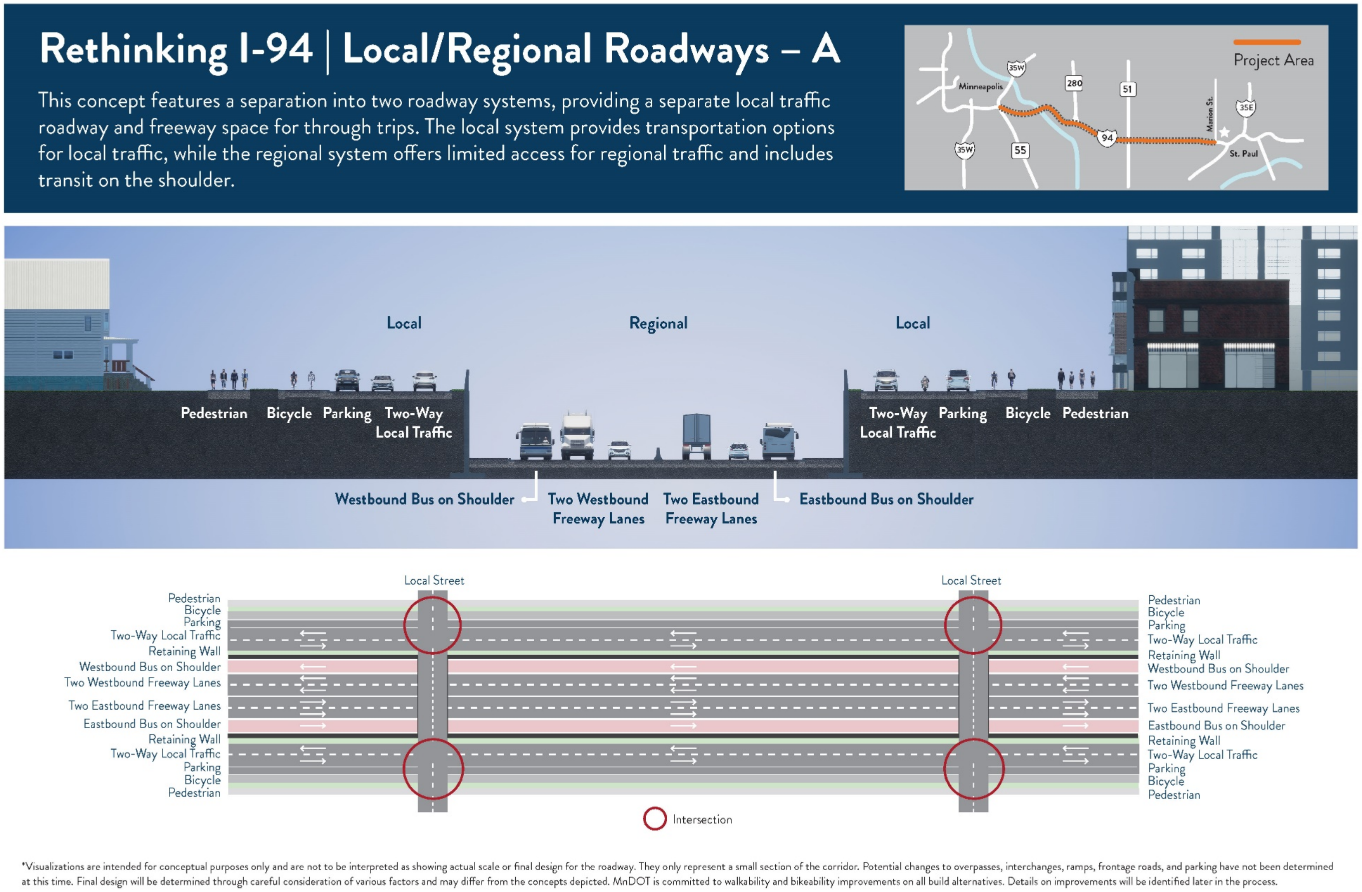
This alternative would rebuild I-94 as it is today, with three to four general purpose travel lanes (open to all vehicles) in each direction and would add a managed lane (for buses, carpoolers, and those willing to pay) in each direction (**Figure 7**). Bus rapid transit would operate in the managed lane. Up to three transit stops could be provided.

1.1.7 Expanded Freeway – B

This alternative would rebuild I-94 with an additional general purpose travel lane in each direction – making the corridor four to five lanes wide (**Figure 8**). It would also include shoulders that could accommodate buses. Buses would operate in mixed traffic and would use the shoulder if needed during congested periods. Express bus service would be provided.

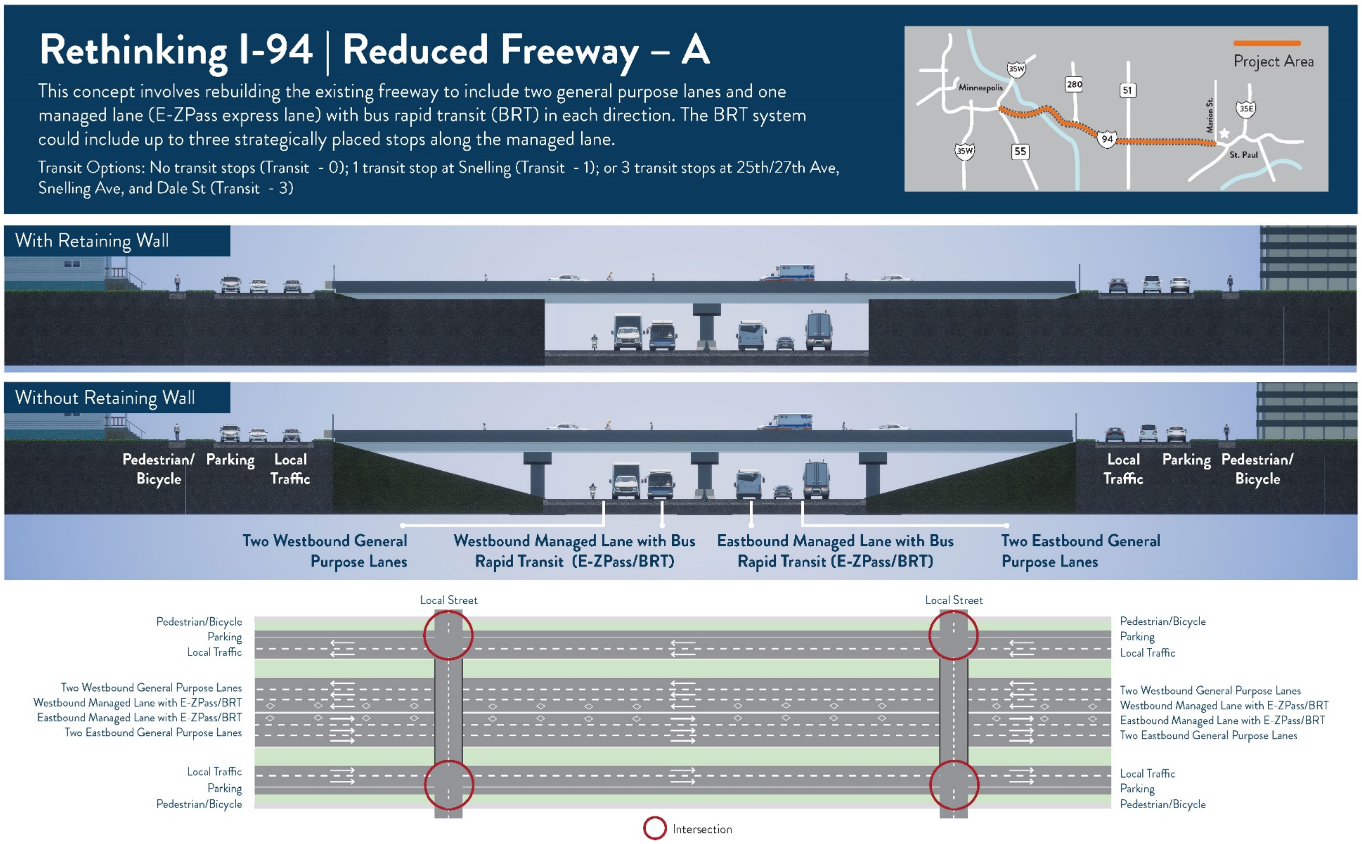
Commented [HJ(8]: The City is opposed to an expanded freeway option, as an expanded freeway option is not consistent with our climate and transportation related goals, but we understand the need to evaluate as an alternative.

Figure 4 – Local/Regional Roadways – A



11003730

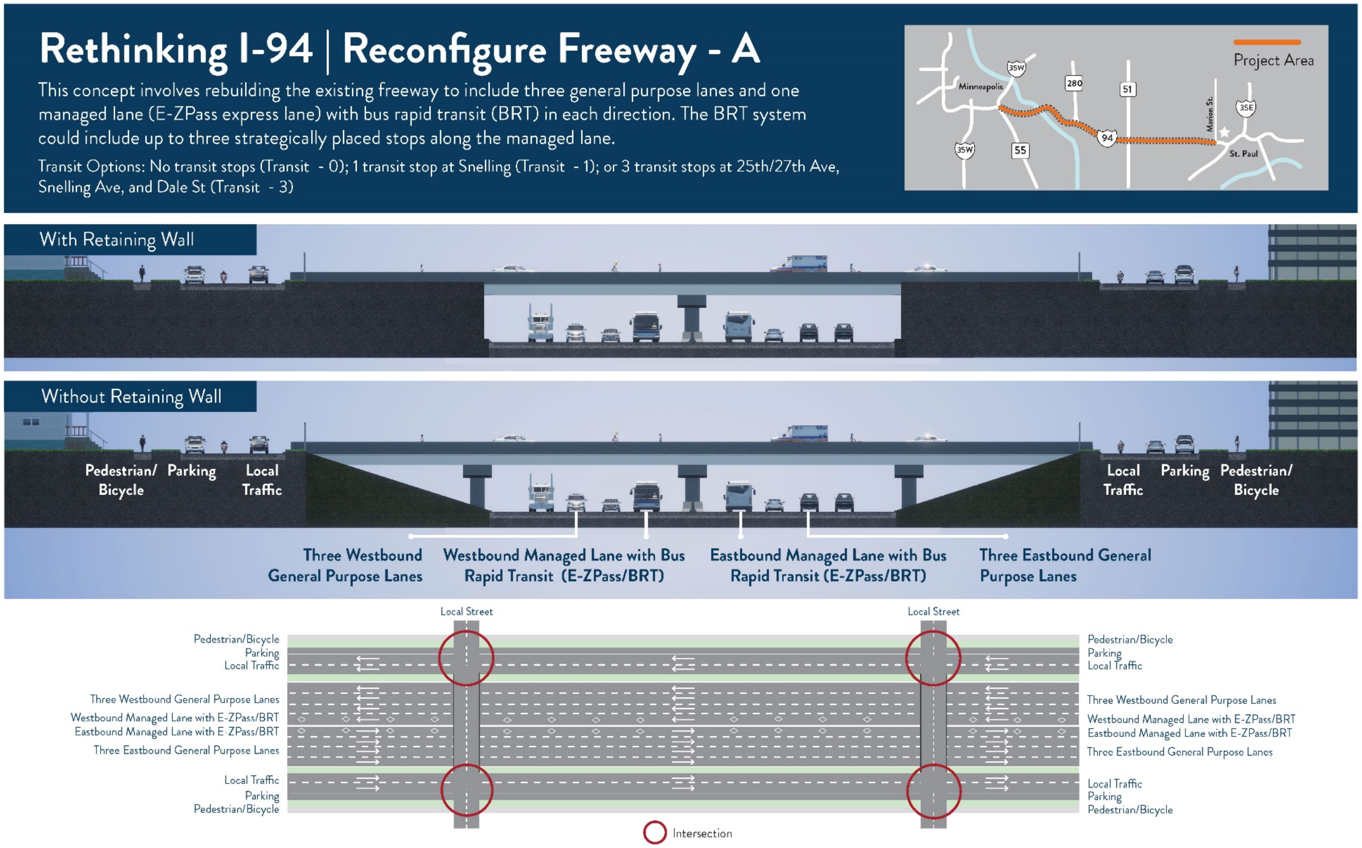
Figure 5 – Reduced Freeway – A



*Visualizations are intended for conceptual purposes only and are not to be interpreted as showing actual scale or final design for the roadway. They only represent a small section of the corridor. Potential changes to overpasses, interchanges, ramps, frontage roads, and parking have not been determined at this time. Final design will be determined through careful consideration of various factors and may differ from the concepts depicted. MnDOT is committed to walkability and bikeability improvements on all build alternatives. Details on improvements will be identified later in the process.

11003731

Figure 6 – Reconfigured Freeway – A



*Visualizations are intended for conceptual purposes only and are not to be interpreted as showing actual scale or final design for the roadway. They only represent a small section of the corridor. Potential changes to overpasses, interchanges, ramps, frontage roads, and parking have not been determined at this time. Final design will be determined through careful consideration of various factors and may differ from the concepts depicted. MnDOT is committed to walkability and bikeability improvements on all build alternatives. Details on improvements will be identified later in the process.

Figure 7 – Expanded Freeway – A

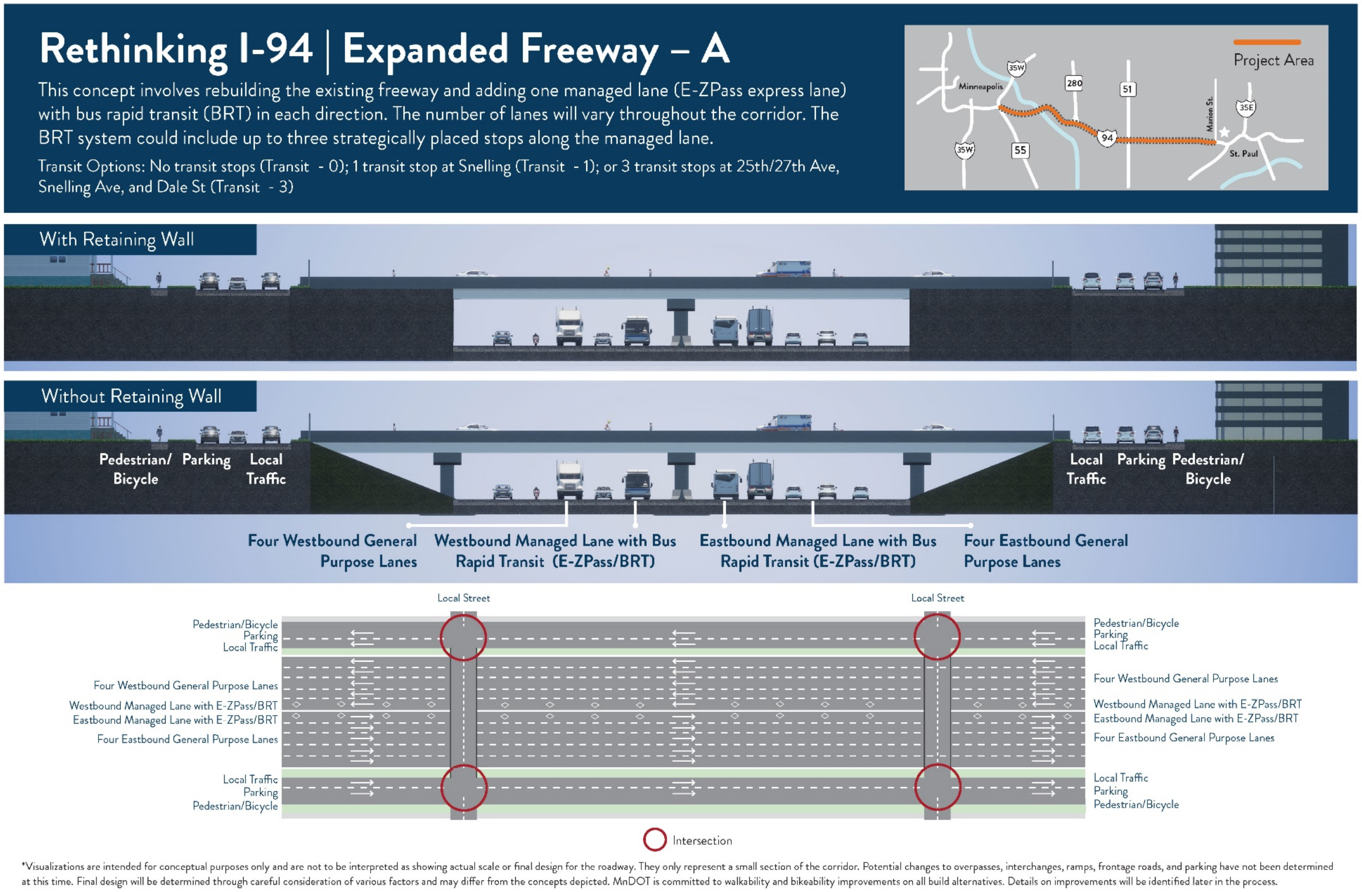
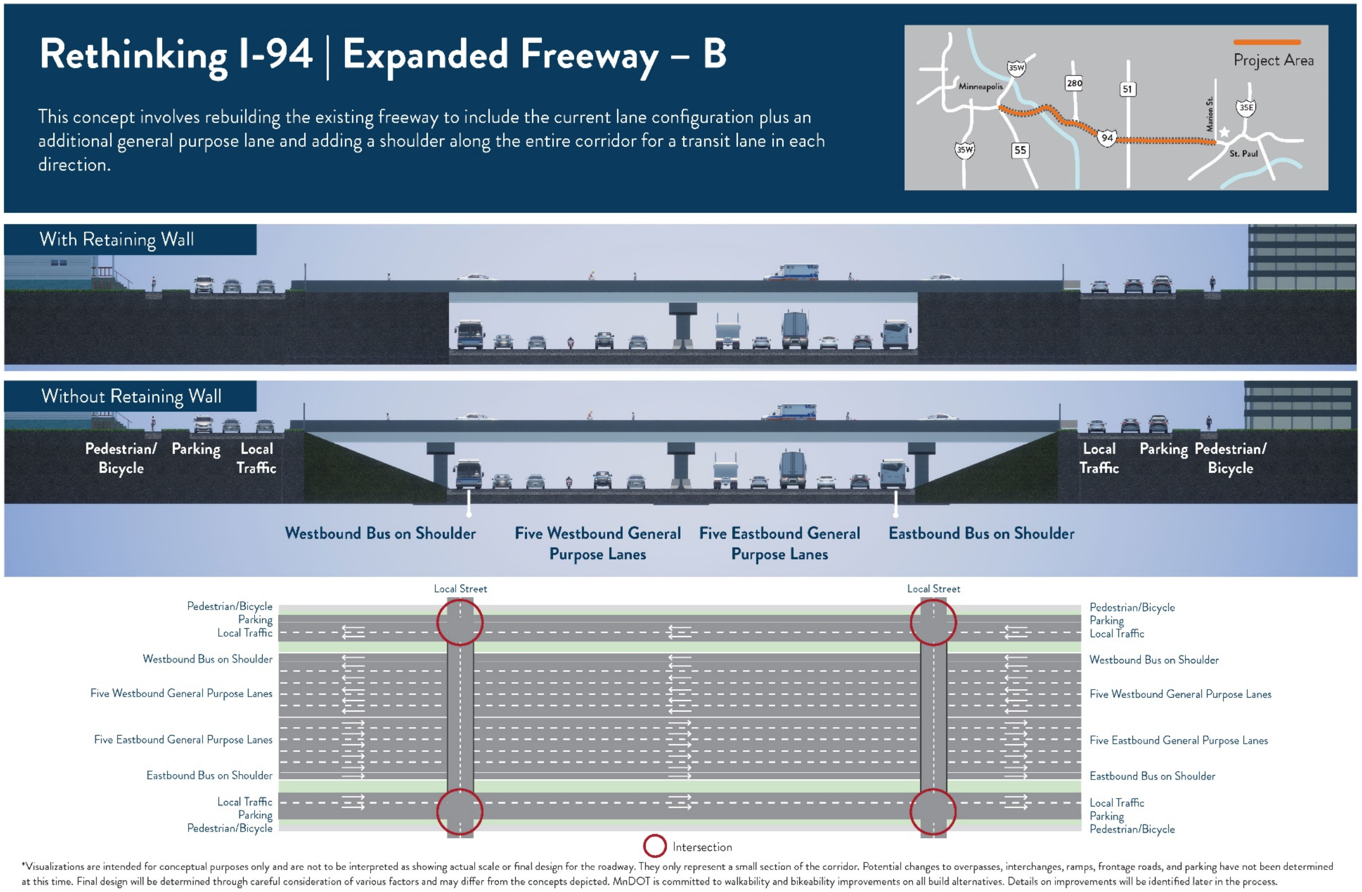


Figure 8 – Expanded Freeway – B



11003734

1.2 Purpose and Need

This section provides an overview of transportation needs in the program area.[4] The purpose and need statement explains why MnDOT is undertaking a transportation project/program of transportation projects and what its objectives are. The "need" identifies the transportation problems or deficiencies. The "purpose" is a broad statement of the primary intended transportation results to be achieved. The purpose and need statement also provides the basis for developing evaluation criteria (measures by which different alternatives will be evaluated), identifying a range of alternatives, and selecting the preferred alternative. It limits the range of alternatives which may be considered reasonable and prudent, consistent with environmental process requirements. Alternatives that do not meet the project purpose and need should not be further studied, as they do not achieve what needs to be done.

Commented [HJ(9]: This language is duplicative. Do you mean to say "a transportation project/program consisting of smaller corridor projects to be defined in future phases"?

1.2.1 Project Needs

Project needs are transportation problems to be addressed by the program of projects that will result from the Tier 1 Environmental Impact Statement (EIS). There are four transportation needs that have been identified for the corridor. They include:

- Walkability and bikeability – comfort, mobility and risks for people walking, bicycling, and rolling
- Safety for people in motorized vehicles – cars, freight, and transit
- Infrastructure condition – state of repair
- Mobility for people in motorized vehicles – cars, freight, and transit

Evaluation criteria and measures have been developed to evaluate the ability of alternatives to address these needs at a high level. A more detailed analysis will take place in the Tier 1 EIS. For example, the ability of an alternative to address pavement and bridge condition will be evaluated in Scoping, while the condition of retaining walls, noise walls, and drainage infrastructure will be addressed in the Tier 1 EIS once more detailed alternatives have been developed.

Commented [HJ(10]: This paragraph discusses evaluation criteria before explaining the evaluation process. Recommend referencing the evaluation process is found in the following chapter/section.

1.2.2 Purpose

Phase 1 of Rethinking I-94 included efforts by MnDOT and its partners to identify issues to the regional freeway infrastructure, supporting local and regional transportation network, and investments supportive of reconnecting neighborhoods and revitalizing communities located along I-94 between downtown Minneapolis and Saint Paul.[5] Building on the outreach efforts previously initiated with more detailed data and additional public input, a clearer purpose emerged.

Projects within the Rethinking I-94 program will accomplish the following:

- Improve mobility for people and goods on, along, and across the corridor in a way that facilitates community connections for all modes
- Enhance safety for people and goods on, along, and across the I-94 corridor for all modes
- Address aging infrastructure condition within the I-94 corridor
- Support transportation objectives consistent with adopted state and regional (Met Council) plans

Commented [BA(11]: Not sure what all this includes. Provide a link to something that explains.

[4] This section provides a summary of the Draft Purpose and Need in Conjunction with the Statement of Goals Technical Report (Purpose and Need Report). The Purpose and Need Report documents the facts and data supporting each problem or unsatisfactory condition identified for the I-94 program area.
[5] For more information, please visit MnDOT's Rethinking I-94 Phase 1 Study webpage at: https://talk.dot.state.mn.us/rethinking-i94/news_feed/phase-1

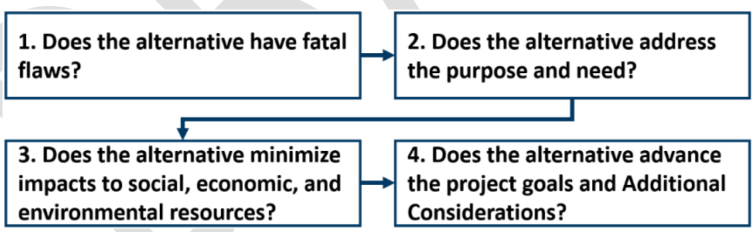
2 Evaluation Process

Alternatives will first be screened during Scoping to determine whether they have "fatal flaws." Alternatives with fatal flaws may not be technically or economically feasible, or they may result in substantial social, economic, or environmental (SEE) impacts. For alternatives that do not have fatal flaws, the evaluation process will begin with evaluating an alternative's ability to address the purpose and need criteria. Alternatives will be further evaluated to understand the potential for and the magnitude of impacts to SEE resources within the corridor. These impacts will be documented, and alternatives will then be evaluated to determine whether they address the goals/Livability Framework along with several Additional Considerations. If an alternative is determined not to address the purpose and need, it will be eliminated, as it is not considered to be "reasonable".

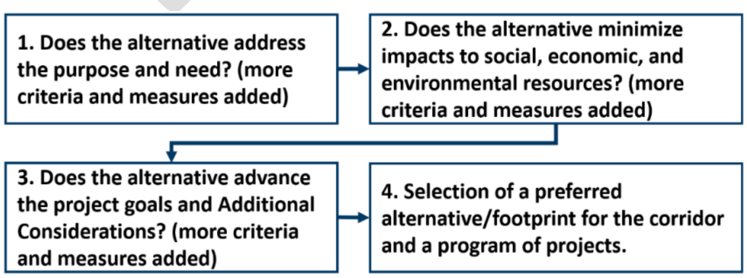
Alternatives in Scoping that best address the purpose and need evaluation criteria, minimize SEE impacts, and perform favorably in terms of goals/Livability and Additional Considerations will move into the Tier 1 EIS. The Tier 1 EIS will use the identified criteria and measures to evaluate the remaining alternatives in greater detail. Because more design information will be available, additional purpose and need, SEE impact, goals/Livability, and Additional Considerations measures will be incorporated to include items that were not expected to have substantial differences between alternatives in the Scoping Phase. Evaluation in the Tier 1 EIS will first be based on addressing purpose and need criteria, followed by minimizing SEE impacts, and then meeting project goals and Additional Considerations. At the end of the Tier 1 process, an alternative that establishes the corridor footprint will be selected and a program of projects will be developed.

Tier 2 documents with more detailed analysis will be required as individual projects move forward. Additional criteria may be developed during this process.

Step 1: Scoping Phase



Step 2: Tier 1 EIS Phase



Commented [HJ(12]: One of the criticisms from the public has been the lack of a definition or criteria that classify as a fatal flaw. Can you provide more details or criteria on what constitutes as a fatal flaw?

Commented [HJ(13R12]: A search of the document indicates fatal flaw is not used outside of this paragraph. If a fatal flaw will determine if an alternative moves on to the next step, then it does seem clarity around this language is needed.

Commented [BA(14R12]: Good call.

Commented [HJ(15]: This is an evaluation category that is not defined and explained until later in the document. Perhaps there is a need to explain these categories sooner, if there is a need to discuss as part of the process.

Commented [BA(16R15]: Agreed.

Commented [HJ(17]: Is language around fatal flaws needed, if this is how alternatives will move into Tier 1 EIS?

Commented [HJ(18R17]: In other words, are there fatal flaws criteria established to remove alternatives. If not, then why included it.

11003736

3 Scoping and Tier 1 Evaluation Criteria

3.1 Overview

Table 1 lists the evaluation criteria and measures used in Scoping and in the Tier 1 EIS. As noted previously, the Tier 1 EIS will include additional measures for some criteria as well as criteria not used in Scoping. Additional details about the evaluation criteria methodologies are provided in the Evaluation Criteria Memo, included as **Appendix XX**.

The purpose of the alternatives evaluation in Scoping is to narrow the range of alternatives that will be studied in the Tier 1 EIS. It is important to note that not all aspects of an alternative can be measured during Scoping, since the alternatives have not undergone detailed engineering analysis at this stage in the process.

Four categories of evaluation criteria have been identified for Rethinking I-94:

- **Project Needs**: These criteria measure the ability of an alternative to address the transportation problems documented in the Purpose and Need Report.
- **Social, Economic, and Environmental Impacts**: These criteria measure the ability of an alternative to avoid or minimize impacts to vulnerable people and resources in the project area.
- **Goals & Livability**: These criteria measure the ability of an alternative to advance the goals listed in the Statement of Goals included in the Purpose and Need report.
- **Additional Considerations**: These criteria measure other aspects of an alternative that are important to MnDOT, including construction and maintenance costs and consistency with adopted state and regional plans.

Evaluation criteria for Scoping and Tier 1 EIS were developed concurrently with the Purpose and Need Report. Following the initial release of the Purpose and Need and Evaluation Criteria to the public, numerous changes were made to both documents in response to public comments.

The evaluation criteria in Scoping are generally focused on modes that use the freeway today (cars, freight, and transit). For example, while walkability and bikeability is one of the project needs, these users are present on freeway crossings and frontage roads but are legally prohibited from traveling on I-94 itself. Therefore, the criteria that will be used to measure changes in walkability and bikeability in Scoping are focused on how the mainline alternatives will affect access and connectivity for people walking and biking through changes to frontage roads and crossing locations. Bicycle and pedestrian crashes will not be analyzed in Scoping, because these crashes do not occur on I-94 itself. Bicycle and pedestrian crashes that occur on roadways intersecting I-94 are discussed in greater detail in the Purpose and Need Report.

In the Tier 1 EIS, there are several measures that will be used to evaluate safety for people walking and biking:

Commented [HJ(19]: Why is there a focus on just walkability and bikeability here? Will other measures be outlined and discussed?

- **Multimodal Level of Service (MMLOS):** MMLOS results reflect the quality of service based on user perceptions generally related to safety, comfort, and convenience. Results are reported on a scale from best (A) to worst (F). MMLOS will be evaluated for both pedestrians and bicyclists. Results will be provided for roadway segments and signalized intersections. Inputs include roadway features that affect safety for these users, including the presence of separated facilities on segments and crossing distance at signalized intersections. This measure will be applied at the Tier 1 EIS Phase.

- **Nonmotorized Conflict Points Analysis:** A conflict point is any location where the paths of road users coincide. They are the locations on the roadway where traffic conflicts are most likely to occur based upon the typical travel paths of road users. A nonmotorized conflict point is a location where a vehicle path crosses the path of a person walking or biking. Access/interchange alternatives will be evaluated based on the number of conflict points present for users of bicycle and pedestrian facilities in the proposed access modification/interchange design. Locations evaluated will include any new potential access locations created through mainline reconfiguration, modifications to frontage roads, or other changes associated with the alternatives. This measure will be applied at the Tier 1 EIS Phase.

- ~~**Safety on Intersecting Streets:**~~

Commented [HJ(20]: One perception of this may be conflict points, while another perspective may be connectivity. To improve walkability and bikeability, generally this requires the addition of pedestrian and bicycle facilities. This process inherently creates new conflict points in an urban environment, where the majority of pedestrian and bicycle facilities must cross intersectoins.This will be a hard sell to the public to state that new bicycle and pedestrian facilities are inherently less walkable or bikeable due to new conflict points.

Commented [BA(21R20]: Good point.

Table 1 – Rethinking I-94 Evaluation Criteria: Scoping Decision Document and Tier 1 EIS
(1 of 2) [Insert PDF]

Rethinking I-94 Evaluation Criteria: Scoping Decision Document and Tier 1 EIS

For Mainline and Access/Interchange Alternatives

Bold/Italics = Mainline only criteria/measurement   Fill = Access/Interchange only criteria/measurement

** For access/interchange alternatives, range to be provided since interchange footprint areas, not specific interchange types, will be defined at this stage*

	Category	Evaluation Criteria	Scoping Decision Document Measurement	Tier 1 EIS Measurement
Needs	Walkability and Bikeability – comfort, mobility and risks for people walking, bicycling, and rolling	Non-Motorized Connectivity and Performance	-Distance between Crossings -Travel Time between Origin-Destination Pairs	-Multimodal Level of Service (Oregon method) -Distance between Crossings -Travel Time between Origin-Destination Pairs -Nonmotorized Conflict Points (Access/Interchange only)
	Safety for People in Motorized Vehicles – cars, freight, and transit	Network Crashes	-Qualitative Assessment - Alternative addresses the number and severity of crashes along the corridor (Yes/No) ***-Crash comparison to similar facility types***	-Crashes and Crash Rate Reduction -Crash Cost Reduction ***-Crash comparison to similar facility types***
		Safety on Intersecting Streets - Network Crashes		-Crashes and Crash Rate Reduction -Crash Cost Reduction
	Infrastructure Condition – state of repair	Pavement Condition	Qualitative Assessment - Does the alternative address pavement condition (Yes/No)	Qualitative Assessment - Does the alternative address pavement condition (Yes/No)
		Bridge Condition	Qualitative Assessment - Does the alternative address bridge condition (Yes/No)	Qualitative Assessment - Does the alternative address bridge condition (Yes/No)
		Retaining Wall Condition		Qualitative Assessment - Does the alternative address retaining wall condition (Yes/No)
		Noise Wall Condition		Qualitative Assessment - Does the alternative address noise wall condition (Yes/No)
		Drainage Condition		***Qualitative Assessment - Does the alternative address stormwater and catch basin condition (Yes/No)*** ***Qualitative Assessment - Does the alternative address stormwater and catch basin capacity deficiency (Yes/No)***
	Mobility for People in Motorized Vehicles – cars, freight, and transit	Systemwide Mobility	-Vehicle Hours Traveled (VHT) -Person Hours Traveled (PHT)	-Vehicle Hours Traveled (VHT) -Person Hours Traveled (PHT) -Vehicles Miles Traveled (VMT)
		Corridor Mobility	***Mainline Speed (average over corridor)***	***Mainline Speed (average over corridor)***
		Corridor Throughput	***Person Throughput (people/day)***	***Person Throughput (people/day)***
		Interchange Area Mobility	-Vehicle Hours Traveled (VHT) in Interchange Area* -Person Hours Traveled (PHT) in Interchange Area*	-Vehicle Hours Traveled (VHT) in Interchange Area* -Person Hours Traveled (PHT) in Interchange Area*
		Interchange Area Throughput	Person Throughput (people/day)	Person Throughput (people/day)
		Freight Mobility	Freight Travel Times*	Freight Travel Times*
		Travel Time Reliability	Variability of Travel Time (HCM Methodology)*	Variability of Travel Time (HCM Methodology)*
		Connectivity	-Intersection density -Qualitative Assessment - Does the alternative increase access to land use?	-Intersection density -Qualitative Assessment - Does the alternative increase access to land use?
		Transit Mobility	***Transit Travel Times in the Corridor*** Transit Travel Times in Interchange Area*	***Transit Travel Times in the Corridor*** Transit Travel Times in Interchange Area*
		Transit Reliability	Variability in Transit Travel Times*	Variability in Transit Travel Times*
SEE Impacts	Environmental Justice	Potential for disproportionately high and adverse effects on EJ populations	-Qualitative Assessment - Does the alternative provide access to economic opportunities and other daily needs for EJ populations? -Qualitative Assessment - Does the alternative have the potential to increase exposure to water and noise pollution for EJ populations? -Relocation potential for EJ populations	-Qualitative Assessment - Does the alternative provide access to economic opportunities and other daily needs for EJ populations? -Qualitative Assessment - Does the alternative have the potential to increase exposure to water and noise pollution for EJ populations? -Relocation potential for EJ populations

Page 1 of 2

Commented [BA(22]: I read and understand the disclaimers (essentially) about measurements for walking and biking on the previous page, but it still doesn't feel balanced that there are so many measurements for vehicular safety and mobility during this phase, while bike/walk safety and comfort won't be explored until the next phase. Could the potential for improving bike/walk safety and comfort be assessed during this phase?

Commented [BA(23]: Re: Environmental Justice at the bottom of this page, I would recommend editing the qualitative assessments to read "Does the alternative ~~provide~~ increase access to economic opportunities..." and "Does the alternative ~~have the potential~~ maintain the existing levels, have the potential to reduce exposure to water and noise pollution, or have the potential to increase exposure to water and noise pollution...". I think these better get at the goals for the corridor.

Rethinking I-94 Evaluation Criteria: Scoping Decision Document and Tier 1 EIS
(2 of 2) [Insert PDF]

	Category	Evaluation Criteria	Scoping Decision Document Measurement	Tier 1 EIS Measurement
SEE Impacts	Historic/Archaeological/Cemetery	Potential to affect known historic properties	-Qualitative Assessment - Low, Moderate, or High potential for adverse effect to known historic properties	-Number of known historic properties -Qualitative Assessment - Low, Moderate, or High potential for adverse effect to known historic properties
		Potential impact to known or suspected cemeteries	-Qualitative Assessment - Low, Moderate, or High potential for adverse effect to known or suspected cemeteries	-Number of known or suspected cemeteries -Qualitative Assessment - Low, Moderate, or High potential for adverse effect to known or suspected cemeteries
	Section 4(f)	Potential impact to resource	Number of Section 4(f) resources impacted	Number of Section 4(f) resources adversely affected
	Section 6(f)	Potential impact to resource	Number of Section 6(f) resources impacted	Number of Section 6(f) properties adversely affected
	Contaminated Properties	Impact to sites with potential for hazardous materials	Number of known contaminated sites impacted	Number of contaminated sites impacted
	Right of Way	Adjacent property impacts	Acreage of impacts and anticipated number of property relocations	Acreage of impacts and anticipated number of property relocations
	Noise	Potential impact to public health and welfare from traffic related noise pollution	Qualitative Assessment - Will the project cause a material change in horizontal and/or vertical alignment or add travel lanes? (Yes/No)	Representative Traffic Noise Model Analysis
	Water Pollution/Stormwater	Impervious Surface Area	Acreage	Acreage
	Air Quality	Potential impact to resource	Qualitative Assessment - is the project considered regionally significant for air quality concerns or will the project have a meaningful impact on traffic volumes or vehicle mix (Yes/No)	Compliance with Clean Air Act national ambient air quality standards
	T & E Species	Potential impact to threatened and endangered species	Qualitative Assessment - does the project have the potential to impact threatened and endangered species (Yes/No)	Low/Medium/High
	Wetlands	Potential impact to resource	-Qualitative Assessment - does the alternative have the potential to impact wetlands (Yes/No) -Number of wetlands impacted based on National Wetland Inventory mapping	Acreage of resources impacted
	Floodplain	Potential impact to resource	[redacted]	Acreage of resources impacted by encroachment type
	Flooding	Potential to increase flood conditions	[redacted]	Number and acreage of locations with increased flooding potential
	Visual Impacts	Potential impact to existing visual resources and potential viewers	[redacted]	-Degree of impact to visual resources (Beneficial/Neutral/Adverse) -Degree of impact to viewers (Beneficial/Neutral/Adverse)
	Community Cohesion	Potential impact to community cohesion	[redacted]	Qualitative Assessment - does the alternative create physical barriers, increase travel times, disrupt access to care facilities, or decrease access to congregational centers? (Low/Medium/High)
Goals & Livability	Sense of Place	Opportunities for gathering spaces, cultural and historic representation and art, and green spaces	-Qualitative Assessment - does the project have the potential to create features or amenities in partnership with communities to enhance sense of place (Yes/No)	-Qualitative Assessment - facilitates opportunities to create features or amenities in partnership with communities to enhance sense of place (Low/Medium/High) -Qualitative Assessment - (Equity) Are features or amenities available throughout the corridor? (Spatial analysis)
	Equity	Distribution of transportation resources across communities	-Qualitative Assessment - does the alternative have the potential to enhance transportation choices for individuals (Yes/No)	-Qualitative Assessment - facilitates or does not eliminate opportunities to enhance transportation choices for individuals (Low/Medium/High) -Qualitative Assessment - (Equity) Are enhanced transportation choices available throughout the corridor? (Spatial analysis)
	Economic Vitality	Opportunities for job and business accessibility	Employment opportunities (jobs) accessible within 30-minute travel time	Employment opportunities (jobs) accessible within 30-minute travel time (Percent change from No Build)
	Public Health and the Environment	Opportunities to improve quality of life, well-being, and the environment through green spaces and land use	-Qualitative Assessment - does the alternative have the potential to impact green space or land uses that benefit quality of life and the environment (Yes/No)	-Acreage that supports green spaces or land uses that benefit quality of life and the environment (Acres) -Qualitative Assessment - (Equity) Are green spaces or land uses that benefit quality of life and the environment available throughout the corridor? (Spatial analysis)
	Connectivity	Opportunities to use infrastructure to connect communities physically and socially	Qualitative Assessment - facilitates or does not eliminate opportunities to implement planned nonmotorized facilities (Yes/No)	Percent of planned nonmotorized facility-miles that are complete
	Safety	(Measured in Safety, Walkability/Bikeability categories)	(See Safety section for details)	(See Safety section for details)
Additional Considerations	Cost	Estimated Construction Cost	Dollars (cost range)	Dollars (risk-based cost range)
		Estimated Benefit-Cost	[redacted]	-Net Benefits -Benefit/Cost Ratio in Dollars
	Maintenance	Estimated Maintenance Cost	Dollars (cost range)	Dollars (risk-based cost range)
	Consistency with Adopted State and Regional Plans	Consistency with Adopted State and Regional Plans	Qualitative Assessment	Qualitative Assessment

Page 2 of 2

Commented [B(24]: Re: noise, just a change in horizontal and/or vertical alignment or adding travel lanes doesn't seem like enough of an assessment. Does the alternative have to space to introduce noise walls? Does reduced speed of vehicles mean more noise or less? Is traffic volume higher (assuming this would create more noise)?

Commented [BA(25]: The public likely won't know what "section 4(f)" or "section 6(f)" means...

Commented [BA(26]: Why is "Community Cohesion" not being assessed during the scoping phase? Seems very important to me.

Commented [BA(27]: Re: "Sense of place": not all green/gathering spaces are created equal. Depending on how they are sited and designed, places located immediately adjacent to a highway may not be comfortable to use due to noise and pollution.

3.2 Scoping and Tier 1 EIS Evaluation Tools

The Metropolitan Council's (Met Council) regional travel demand model was used to calculate the mobility measures for this analysis. Established practices for transit and highway modeling in the Twin Cities region for transportation improvements require the use of the Met Council's Regional Transportation Forecasting Model. Using the regional model is also consistent with federal practices. The model is built upon the land uses determined by cities as part of their adopted comprehensive plans and includes the residents and the employees associated with those land uses.

The Met Council uses an Activity Based Model, which simulates the activities and travel patterns for everyone in a defined geographic area (the Twin Cities region). The model predicts someone's travel behavior, such as when, where, how, the order, and whether a trip is made. The regional travel demand model includes automobile (including trucks, motorcycles, etc.), transit, and non-motorized travel. It is sensitive to relative changes in travel times between the different modes (auto, transit and non-motorized) when assigning trips. The project also used the Federal Transit Administration-approved Simplified Trips on Project Software (STOPS) model. This model is used to understand transit ridership numbers and incorporates information from the regional travel demand model.

A regional travel demand model can be useful for predicting travel time and other basic traffic operations at a certain point in time. It is not intended to be the final modeling exercise. The analysis here is a preliminary look into how each alternative could perform from a high-level operations perspective and impact system-level operations. The traffic measures are based on link capacity and do not have the precision that would be possible with a microsimulation model. Weaving, queuing, lane assignment, and geometric details can have a substantial impact on traffic flow that is not reflected in the travel demand model. The regional model does not have the ability to predict these detailed operations or evaluation criteria that will be considered in the Tier 1 EIS, when microsimulation will be used to better understand differences in alternatives.

More information about traffic and transit modeling tools used in Scoping is available in the *Rethinking I-94: Preliminary Traffic and Transit Analysis of Alternatives Memo*.[6]

3.3 Topics Not Addressed in the Evaluation Criteria

There are several topics important to MnDOT and the public that are not included as part of the evaluation criteria. In some cases, this is because the level of detail in the design at this stage prevents full investigation of the alternative. In other instances, certain interests are addressed by existing MnDOT standard procedures, and will be implemented where feasible regardless of the selected alternative. For example, MnDOT uses various construction techniques to recycle pavement materials and reuse them during construction. In addition, MnDOT includes native plant species in its standard seed mixes, and is working to increase the use of native species for roadside vegetation. Light emitting diode (LED) luminaires are the standard light source for the majority of MnDOT's roadway lighting. Older roadway lighting is being replaced with LEDs and this transition will continue as projects are completed. Good lighting is also important for maintaining personal safety for people crossing the corridor. These detailed aspects of project design are examples of items that will be addressed as part of the implementation of specific projects in the Tier 2 process for Rethinking I-94.

[6] *Rethinking I-94: Preliminary Traffic and Transit Analysis of Alternatives Memo*. December 2023.

4 Access & Interchange/Intersection Modifications

4.1 Targeted Safety, Infrastructure Condition, and Mainline Operations Locations

In Scoping, access/interchange/intersection locations have been identified for further analysis in the Tier 1 EIS based on a range of issues. These locations and the issues identified at each are listed in **Table 2** and shown in **Figure 9**.

Table 2 – Access & Interchange/Intersection Locations to be Studied in Tier 1 EIS

Existing Location	Mainline Safety & Mobility	Interchange Safety	Existing Bridge Need	Future Bridge Need	Intersecting Street Crash Problem	Bike/Ped Intersecting Street Crash Problem
I-35W/TH 55	X	X		X	X	
Cedar Ave	X		X	X	X	X
20th Ave			X	X		
Augsburg Ped Bridge[1]			X			
25th/26th Ave			X	X	X	
Riverside Ave			X	X	X	
Franklin Terr			X	X		
E River Parkway			X			
Huron Blvd					X	X
27th Ave			X	X		
Franklin Ave			X	X		
Seymour Ped Bridge			X			
TH 280	X					
Pelham Blvd			X	X		
Cretin Ave/Vandalia St	X		X	X		
Cleveland Ave			X			
Prior Ave			X			
Fairview Ave			X	X		

Existing Location	Mainline Safety & Mobility	Interchange Safety	Existing Bridge Need	Future Bridge Need	Intersecting Street Crash Problem	Bike/Ped Intersecting Street Crash Problem
Aldine St Ped Bridge			X			
Snelling Ave (TH 51)	X		X	X	X	X
Pascal St			X			
Hamline Ave			X	X	X	X
Lexington Pkwy	X		X	X	X	
Victoria St			X	X		
Dale St	X				X	X
Western Ave			X			
Marion St/Kellogg Blvd	X		X	X	X	

1. Note: A temporary structure is currently in place.

4.2 Access Closures and Modifications

Access spacing on the I-94 corridor is not ideal. There are more access points than is typically recommended (less than one mile spacing) and it results in weaving, slow-downs and crashes on the mainline. Interchanges and exit and entrance ramps that negatively impact mainline operations and/or safety have been discussed to determine if modifications can be made (including eliminating access) to improve safety and mobility. While no specific designs have been developed in Scoping, the following potential changes have been discussed with city and county partners:

- Hamline Ave: Remove existing westbound off-ramp.
- Others?

For the purposes of the evaluation in Scoping, the connectivity measures represent the same access changes assumed in the regional model for the other mobility measures.

Commented [AH28]: Will we get to any agreement on this in scoping? Our evaluation currently assumes no changes.

Commented [AH29]: Outline potential benefits/rationale of these changes?

11003743

Figure 9 – Access & Interchange/Intersection Locations to be Studied in Tier 1 EIS

[Insert PDF]

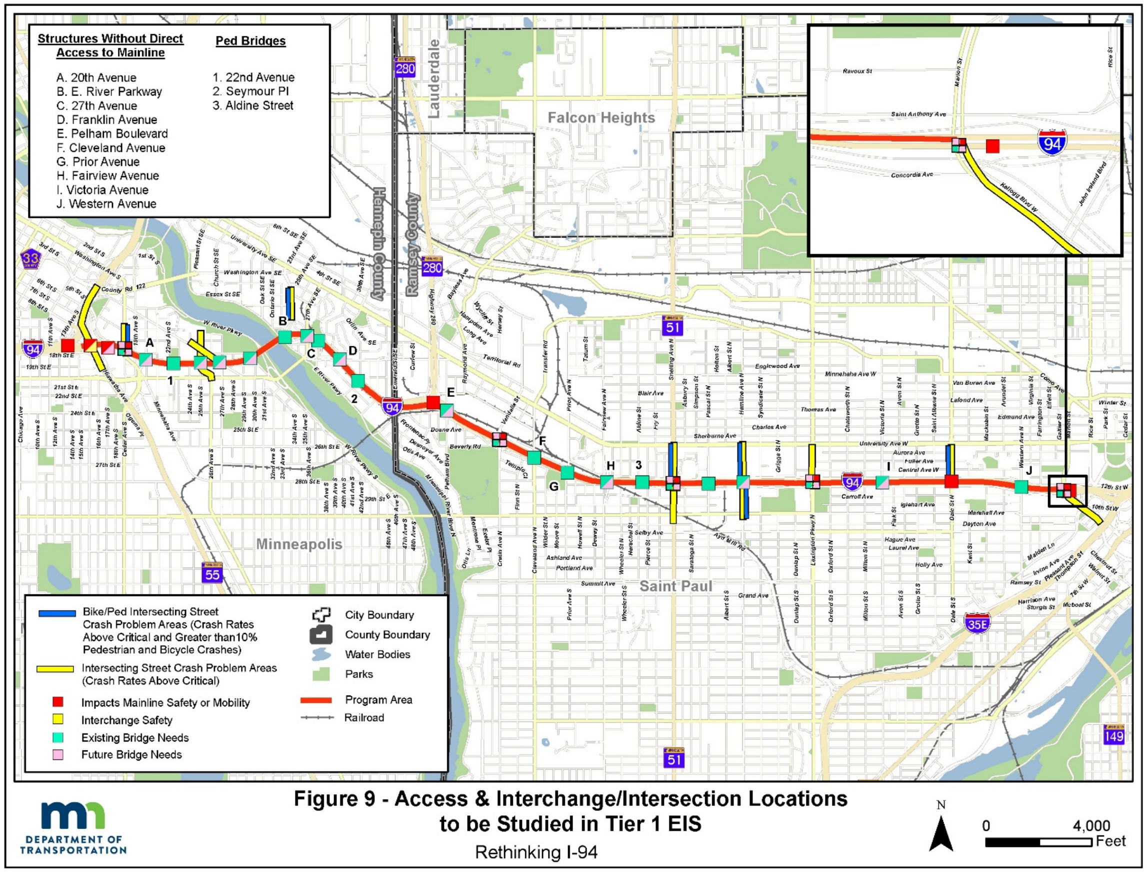


Figure 9 - Access & Interchange/Intersection Locations to be Studied in Tier 1 EIS

Rethinking I-94

5 Evaluation of Alternatives

The sub-sections that follow document the results of the evaluation of alternatives developed as part of the Scoping process. **Table 3** summarizes the results of the evaluation for Project Needs criteria. **Table 4** summarizes the results for Social, Economic, and Environmental impact criteria. **Table 5** summarizes the results for Goals and Livability criteria. Finally, **Table 6** summarizes the results for the Additional Considerations criteria. This section will be updated as alternatives are refined, and preliminary evaluations are conducted.

Table 3 – Mainline Scoping Alternatives Evaluation Results: Project Needs
(1 of 3) [Insert PDF]

Project Needs

(2 of 3) [Insert PDF]

Project Needs

(3 of 3) [Insert PDF]

Table 4 – Mainline Scoping Alternatives Evaluation Results: SEE Impacts
(1 of 3) [Insert PDF]

SEE Impacts

(2 of 3) [Insert PDF]

SEE Impacts

(3 of 3) [Insert PDF]

Table 5 – Mainline Scoping Alternatives Evaluation Results: Goals & Livability
(1 of 3) [Insert PDF]

Goals & Livability

(2 of 3) [Insert PDF]

Goals & Livability

(3 of 3) [Insert PDF]

Table 6 – Mainline Scoping Alternatives Evaluation Results: Additional Considerations
(1 of 5) [Insert PDF]

Additional Considerations

(2 of 5) [Insert PDF]

Additional Considerations

(3 of 5) [Insert PDF]

Additional Considerations

(4 of 5) [Insert PDF]

Additional Considerations

(5 of 5) [Insert PDF]

5.1 No Build – General Maintenance

5.1.1 Project Needs

5.1.1.1 Walkability and Bikeability

Walkability and bikeability would not be improved compared to existing conditions.

5.1.1.2 Safety

Safety for people in motorized vehicles (cars, freight, and transit) would not be improved.

5.1.1.3 Infrastructure Condition

Pavement and bridge condition issues would not be addressed (aside from programmed maintenance activities).

5.1.1.4 Mobility

Mobility for people in motorized vehicles (cars, freight, and transit) would not be improved compared to existing conditions.

5.1.2 Social, Economic, and Environmental (SEE) Impacts

The No Build alternative would not result in any new SEE impacts based on the measures included in this evaluation.

5.1.3 Goals & Livability

The No Build alternative would not provide opportunities to advance sense of place, equity, economic vitality, public health and the environment, or connectivity based on the measures identified. It would not eliminate opportunities for local agencies to implement planned nonmotorized facilities.

5.1.4 Additional Considerations

The No Build alternative would not require any new funding for construction, apart from costs associated with programmed maintenance activities. The current maintenance schedule for I-94 results in annual estimated maintenance costs of $XX to $XX.

[Address adopted state and regional plans]

5.1.5 Summary and Conclusion

Retain the No Build for evaluation in the Tier 1 EIS. While the No Build alternative does not meet the purpose and need, it is required under NEPA to be evaluated in the Tier 1 EIS and will be used as a baseline for comparison of build alternatives. For this reason, the No Build Alternative will be retained for analysis in the Tier 1 EIS.

Project Needs	Walkability and Bikeability
	Safety for People in Motorized Vehicles
	Infrastructure Condition
	Mobility for People in Motorized Vehicles
Social, Economic, and Environmental Impacts	Environmental Justice
	Historic/ Archaeological /Cemetery
	Section 4(f)
	Section 6(f)
	Contaminated Properties
	Right of Way
	Noise
	Water Pollution/ Stormwater
	Air Quality
	Threatened & Endangered Species
	Wetlands
Goals & Livability	Sense of Place
	Equity
	Economic Vitality
	Public Health and the Environment
	Connectivity
Addl. Consid.	Cost
	Maintenance
	Consistency with Adopted State and Regional Plans

5.2 Maintenance – A

5.2.1 Project Needs

5.2.1.1 Walkability and Bikeability

Walkability and bikeability would not be improved compared to existing conditions.

5.2.1.2 Safety

Safety for people in motorized vehicles (cars, freight, and transit) would not be improved.

5.2.1.3 Infrastructure Condition

There would be opportunities for more in-depth infrastructure fixes compared to the No Build. However, pavement and bridge condition issues would not be fully addressed due to the extent of the issues observed in the corridor.

5.2.1.4 Mobility

Mobility for people in motorized vehicles (cars, freight, and transit) would not be improved compared to existing conditions.

5.2.2 Social, Economic, and Environmental (SEE) Impacts

Maintenance – A would not result in any new SEE impacts based on the measures included in this evaluation.

5.2.3 Goals & Livability

Sense of Place: There is Potential for excess ROW to be used for new features/amenities in select locations.

Equity: No changes in transportation choices are anticipated compared to the no build.

Economic Vitality: No improvement compared to no build for auto or transit.

Public Health and the Environment: There is potential for excess right of way to be used to expand green space in the corridor.

Connectivity: Would not eliminate opportunities for local agencies to implement planned nonmotorized facilities.

5.2.4 Additional Considerations

Maintenance – A would require $XX to $XX in funding for construction. Annual maintenance costs following construction are estimated to range from $XX to $XX.

[Address adopted state and regional plans]

Project Needs	Walkability and Bikeability
	Safety for People in Motorized Vehicles
	Infrastructure Condition
	Mobility for People in Motorized Vehicles
Social, Economic, and Environmental Impacts	Environmental Justice
	Historic/ Archaeological /Cemetery
	Section 4(f)
	Section 6(f)
	Contaminated Properties
	Right of Way
	Noise
	Water Pollution/ Stormwater
	Air Quality
	Threatened & Endangered Species
	Wetlands
Goals & Livability	Sense of Place
	Equity
	Economic Vitality
	Public Health and the Environment
	Connectivity
Addl. Consid.	Cost
	Maintenance
	Consistency with Adopted State and Regional Plans

5.2.5 Summary and Conclusion

Eliminate Maintenance – A from consideration. This alternative would not fully address any of the project needs. It would also not advance the project goals. For these reasons, it should not be studied further in the Tier 1 EIS.

Project Needs	Walkability and Bikeability
	Safety for People in Motorized Vehicles
	Infrastructure Condition
	Mobility for People in Motorized Vehicles
Social, Economic, and Environmental Impacts	Environmental Justice
	Historic/ Archaeological /Cemetery
	Section 4(f)
	Section 6(f)
	Contaminated Properties
	Right of Way
	Noise
	Water Pollution/ Stormwater
	Air Quality
	Threatened & Endangered Species
	Wetlands
Goals & Livability	Sense of Place
	Equity
	Economic Vitality
	Public Health and the Environment
	Connectivity
Addl. Consid.	Cost
	Maintenance
	Consistency with Adopted State and Regional Plans

5.3 Maintenance – B

5.3.1 Project Needs

5.3.1.1 Walkability and Bikeability

Walkability and bikeability would not be improved compared to the existing conditions.

5.3.1.2 Safety

Maintenance – B has the potential to address the number and severity of crashes for people in motorized vehicles (cars, freight, and transit). While there would be no change compared to the no build based on the expected crash comparison analysis, widening the right shoulder is associated with a reduction in crashes of all types and severities based on applicable Crash Modification Factors (CMFs). These include “Widen shoulder by 1 ft” (CMF ID 8342) and “Increase shoulder width from 10 ft to 12 ft” (CMF ID 5509).

5.3.1.3 Infrastructure Condition

Pavement condition issues would be addressed in areas where shoulders are widened or other existing infrastructure is replaced, and bridge condition issues would be addressed according to programmed improvements.

5.3.1.4 Mobility

In terms of mobility, Maintenance – B would provide a transit advantage while measures associated with other motorized vehicles would be unaffected. Maintenance – B results in faster peak period transit travel times as buses are allowed to use the shoulders when there is congestion during the peak travel time. Transit travel time would be reduced from 22 minutes under the No Build to 17 minutes with Maintenance – B. However, person throughput associated with transit is expected to be reduced. Faster transit travel time is generally associated with increased ridership. However, the STOPS model includes an extra penalty for stops in addition to the impact on travel time to account for qualitative rider preference for fewer stops. The decrease in ridership is mostly seen at downtown stops, indicating that more commuters may be choosing auto over express bus in Maintenance – B.

5.3.2 Social, Economic, and Environmental (SEE) Impacts

Maintenance – B has limited potential for impacts to EJ populations. No change in access to land use would be required. Effects on noise pollution would be limited, and there is limited potential for relocation. An increase in impervious surface has the potential to increase stormwater runoff within EJ communities.

Maintenance – B has low potential for adverse effects to known historic properties and known or suspected cemeteries. Mainline improvements have the potential to impact up to 11 Section 4(f) resources (**Figure 10**). No impacts to Section 6(f) resources are anticipated. There is potential for up to two known contaminated sites within the corridor to be impacted (**Figure 11**). Mainline improvements are unlikely to require relocations or right of way impacts.

Regarding noise impacts, the project would not cause a material change in horizontal and/or vertical alignment or add travel lanes. From a stormwater perspective, the project would result in approximately 126 acres of impervious surface (an increase of 12 acres compared to the no build). In terms of air quality, the project is not likely to be considered regionally significant. Maintenance – B has the potential to impact threatened and endangered species. The conversion of roadside vegetation to new impervious surface (if required) has the potential to impact habitat for species such as the Rusty Patched Bumble Bee (*Bombus affinis*). The project corridor is located within a High Potential Zone for this species. Based on NWI mapping, no impacts to wetlands are anticipated.

Project Needs	Walkability and Bikeability
	Safety for People in Motorized Vehicles
	Infrastructure Condition
	Mobility for People in Motorized Vehicles
Social, Economic, and Environmental Impacts	Environmental Justice
	Historic/ Archaeological /Cemetery
	Section 4(f)
	Section 6(f)
	Contaminated Properties
	Right of Way
	Noise
	Water Pollution/ Stormwater
	Air Quality
	Threatened & Endangered Species
	Wetlands
Goals & Livability	Sense of Place
	Equity
	Economic Vitality
	Public Health and the Environment
	Connectivity
Addl. Consid.	Cost
	Maintenance
	Consistency with Adopted State and Regional Plans

5.3.3 Goals & Livability

Sense of Place: There is potential for excess ROW to be used for new features/amenities in select locations; potential for aesthetic improvements to bridges and structures.

Equity: Bus shoulders between downtowns would be restored, providing a transit benefit. Opportunities for walkability/bikeability improvements.

Economic Vitality: No improvement compared to no build for auto, slight increase in number of jobs accessible by transit.

Public Health and the Environment: There is potential for excess right of way to be used to expand green space in the corridor.

Connectivity: Facilitates opportunities for locally planned walkability and bikeability improvements along and across the corridor.

5.3.4 Additional Considerations

Maintenance – B would result in costs associated with replacing the existing infrastructure to current standards with consistent shoulders, including a widened shoulder between the west project terminus and just east of TH 280, where the current bus shoulders end (estimated at $XX-XX). Annual maintenance costs following construction are estimated to range from $XX to $XX.

[Address adopted state and regional plans]

5.3.5 Summary and Conclusion

To be added

Figure 10 – Potential Section 4(f) Impacts: Maintenance B

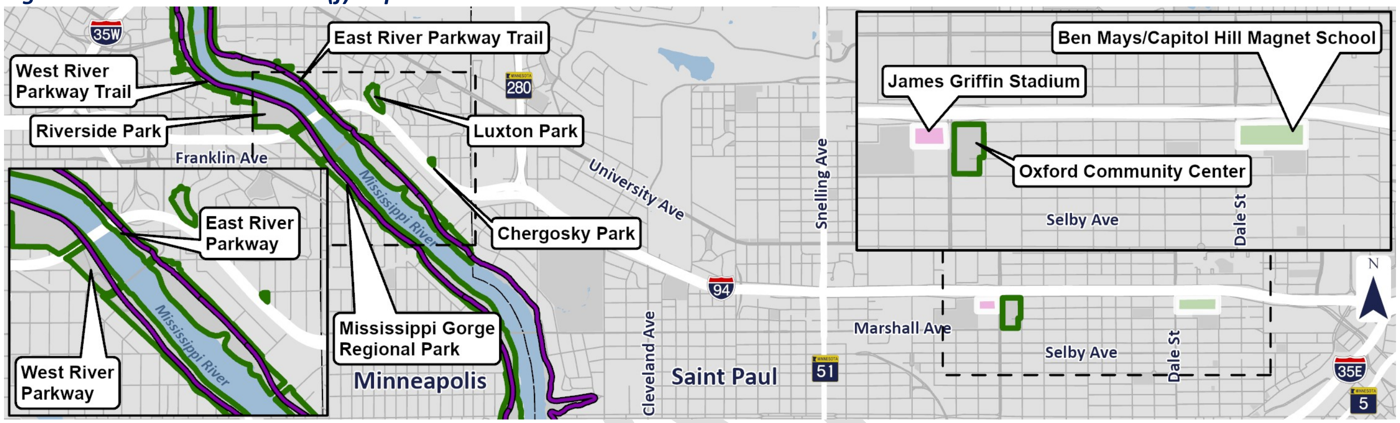


Figure 11 – Contaminated Properties: Maintenance B

11003764

5.4 At-Grade – A

5.4.1 Project Needs

5.4.1.1 Walkability and Bikeability

The performance of At-Grade – A relative to Walkability and Bikeability is mixed. This analysis assumed that there would be no change in the structure of the walking and biking network (such as the elimination or relocation of a crossing location) compared to the no build, therefore the distance between crossings and origin-destination performance measures remained constant. However, distances between grade-separated crossings would increase due to conversion of some overpasses and underpasses to at-grade intersections. New nonmotorized conflict points would be created at locations where at-grade crossings replace grade-separated crossings. The conversion of some grade-separated to at-grade crossings would also increase crossing delay and reduce travelshed distances. There is potential to add new crossings as part of this alternative, which would improve performance.

Project Needs	Walkability and Bikeability
	Safety for People in Motorized Vehicles
	Infrastructure Condition
	Mobility for People in Motorized Vehicles
Social, Economic, and Environmental Impacts	Environmental Justice
	Historic/ Archaeological /Cemetery
	Section 4(f)
	Section 6(f)
	Contaminated Properties
	Right of Way
	Noise
	Water Pollution/ Stormwater
	Air Quality
	Threatened & Endangered Species
	Wetlands
Goals & Livability	Sense of Place
	Equity
	Economic Vitality
	Public Health and the Environment
	Connectivity
Addl. Consid.	Cost
	Maintenance
	Consistency with Adopted State and Regional Plans

5.4.1.2 Safety

Based on the expected crash comparison analysis, At-Grade – A would not address the number and severity of crashes for people in motorized vehicles (cars, freight, and transit). On the mainline within the logical termini, the expected crash rate for all crashes would be 1.87 crashes/million VMT compared to 0.926 crashes/million VMT for the no build. Total expected crashes would be 0.45 crashes/day compared to 1.08 for the no build. While VMT would be reduced by 79%, crashes would only be reduced by 58%. The fatal and serious injury crash rate would be 3.226 crashes/100 million VMT compared to 0.66 crashes/100 million VMT for the no build. There would be 0.008 expected fatal and serious injury crashes per day, an increase of 1% compared to the no build despite the decrease in corridor VMT.

On other roadways within one mile of the logical termini, total expected crashes would increase slightly to 3.67 crashes/day compared to 3.65 crashes/day with the no build, despite an expected decrease in VMT. Expected fatal and serious injury crashes on these roadways would also increase to 0.059 crashes/day compared to 0.056 with the no build, an increase of 5%. Total expected fatal and serious injury crashes/day on the mainline and routes within one mile would increase compared to the no build.

5.4.1.3 Infrastructure Condition

At-Grade – A would address pavement and bridge condition by removing or replacing the existing infrastructure.

5.4.1.4 Mobility

With At-Grade – A, systemwide VHT and PHT are anticipated to increase compared to the no build. Mainline speed on the corridor would be reduced to 20-25 mph. Person throughput in the corridor would be reduced to 219,000 people/day. VHT and PHT in the interchange areas would be reduced by

Commented [HJ(30]: Reiterating that arguing that the at grade crossings are mixed related to walkability and bikeability are likely to receive skepticism from the public, due to anticipated improvements to connectivity.

Commented [BA(31R30]: This also doesn't mention that a new walking and biking route would be created along the entire I-94 corridor itself, which currently does not exist!

Commented [HJ(32]: If new crossing locations are anticipated by returning to at grade, then why is there an assumption that there is no change to the structure of the walking and biking network?

Commented [BA(33R32]: This also doesn't mention that a new walking and biking route would be created along the entire I-94 corridor itself, which currently does not exist!

Commented [HJ(34]: It does not seem consistent to state new conflict points would be created but that there would be no change to the pedestrian and bicycle network as commented upon above.

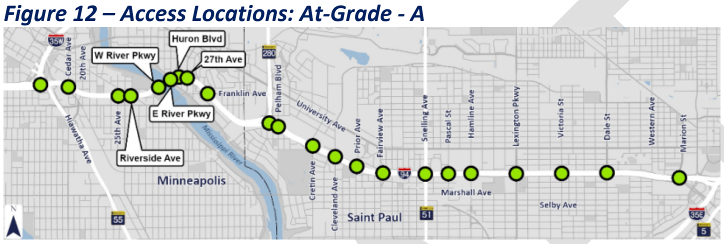
Commented [HJ(35]: Comfort and mobility is identified for this criteria in purpose and need. There seems to be a focus on safety with limited discussion on comfort and mobility, particularly as it relates to the addition of new crossings at grade.

Commented [HJ(36]: Are these crash rates considering new crossings as part of the evaluation? If so, then walkability and bikeability should also consider the improved network connectivity of these new crossings.

Commented [HJ(37]: Fatal and serious injuries typically decrease at lower speeds. For example, this table from the Federal Motor Carrier Safety Administration demonstrates the increase fatal crash rates of large trucks as speed increases: https://www.fmcsa.dot.gov/safety/data-and-statistics/crashes-table-4-fatal-crashes-involving-large-trucks-speed-limit-and-6.
Please clarify how fatal and serious injury crashes will increase at lower speeds.

half. Interchange area person throughput would be reduced to 757,000 people/day. Freight travel times in the corridor would increase to 18-23 minutes. Mean travel time index would increase to 2.5, indicating a decrease in travel time reliability. Regarding connectivity, 13 new at-grade access locations are likely to be added to the new roadway, resulting in an intersection density of 3.1 access points/mile. Assumed access locations are shown in **Figure 12.** Transit travel times in the corridor would be reduced, however travel time through interchange areas would increase due to the addition of three stops for the proposed BRT service. Travel time index for transit would increase compared to the no build, indicating a decrease in transit travel time reliability.

Figure 12 – Access Locations: At-Grade - A



5.4.2 Social, Economic, and Environmental (SEE) Impacts

At-Grade – A has some potential for net negative impacts to EJ populations. New at-grade access locations would be added to the new roadway, including within EJ communities (**Figure 13**). Direct access to key destinations in the corridor would increase, however travel times in the corridor may also increase due to the addition of new access points. New BRT service would improve access to transit within EJ communities. A major change in the vertical alignment of the roadway has potential to increase the size of areas within EJ communities impacted by traffic noise. There is limited potential for relocation based on the proposed improvements.

The mainline improvements for At-Grade – A have moderate potential for adverse effect to known historic properties, and low to moderate potential for adverse effect to known or suspected cemeteries. The alternative has the potential to impact up to 13 Section 4(f) resources (**Figure 14**). No impacts to Section 6(f) resources are anticipated. There is potential for up to two known contaminated sites within the corridor to be impacted, with 71 total sites located within 500 feet of the corridor (**Figure 15**). The alternative is unlikely to have right of way impacts or require relocations.

Project Needs	Walkability and Bikeability
	Safety for People in Motorized Vehicles
	Infrastructure Condition
	Mobility for People in Motorized Vehicles
Social, Economic, and Environmental Impacts	Environmental Justice
	Historic/ Archaeological /Cemetery
	Section 4(f)
	Section 6(f)
	Contaminated Properties
	Right of Way
	Noise
	Water Pollution/ Stormwater
	Air Quality
	Threatened & Endangered Species
	Wetlands
Goals & Livability	Sense of Place
	Equity
	Economic Vitality
	Public Health and the Environment
	Connectivity
Addl. Consid.	Cost
	Maintenance
	Consistency with Adopted State and Regional Plans

Regarding noise impacts, a major change in vertical alignment will reduce distances between traffic and noise sensitive receptors and potentially increase the area of traffic noise impacts. From a stormwater perspective, the project would result in approximately 110 acres of impervious surface (a decrease of four acres compared to the no build). In terms of air quality, the project meets the definition of a regionally significant project and would not be classified as exempt. At-

Commented [BA(38]: Does this include people walking/biking and transit riders? Or is this just talking about people in vehicles?

Commented [BA(39]: What is the existing travel time? Does this take into account that freight may find alternative routes that are quicker to their destination?

Commented [BA(40]: Again, just for people in vehicles?

Commented [BA(41]: I don't understand why the first sentence says travel times would be reduced and the second sentences says there would be a decrease in reliability -- is this because of the potential to be stopped at interchanges?

Commented [HJ(42]: According to AASHTO's Center for Environmental Excellence, speed, traffic volumes, and freight traffic all impact noise. The decrease of these in the at-grade alternatives are not acknowledged as having reduced impacts on noise. https://environment.transportation.org/education/environmental-topics/traffic-noise/traffic-noise-overview/

Commented [HJ(43]: Do you mean to say there is limited potential for relocation of EJ populations? If so, recommend updating for clarity throughout the document.

Commented [HJ(44]: Why are there two locations addressing noise? Same comment on noise as above.

Grade – A has the potential to impact threatened and endangered species through impacts to vegetation along the corridor. Based on NWI mapping, up to two wetlands may be impacted (**Figure 16**).

5.4.3 Goals & Livability

Sense of Place: There is potential for excess ROW to be used for new features/amenities in select locations, including additional amenities that may not be compatible with freeway alternatives.

Equity: Dedicated bus lanes would provide a transit benefit and would likely be considered more beneficial than bus shoulders. There would also be opportunities for walkability/bikeability improvements.

Economic Vitality: There would be a decrease in the number of jobs accessible in both AM and PM peak for auto compared to the no build, and a slight increase for transit.

Public Health and the Environment: Potential for excess right of way to be used to expand green space in the corridor. Potential for additional amenities that may not be compatible with freeway alternatives.

Connectivity: Facilitates opportunities for locally planned walkability and bikeability improvements along the corridor, however proposed improvements at existing grade-separated crossings may be in conflict with conversion to at-grade intersections.

5.4.4 Additional Considerations

At-Grade – A would result in new construction costs estimated at $XX-XX. Annual maintenance costs following construction are estimated to range from $XX to $XX.

[Address adopted state and regional plans]

5.4.5 Summary and Conclusion

To be added

Project Needs	Walkability and Bikeability
	Safety for People in Motorized Vehicles
	Infrastructure Condition
	Mobility for People in Motorized Vehicles
Social, Economic, and Environmental Impacts	Environmental Justice
	Historic/ Archaeological /Cemetery
	Section 4(f)
	Section 6(f)
	Contaminated Properties
	Right of Way
	Noise
	Water Pollution/ Stormwater
	Air Quality
	Threatened & Endangered Species
	Wetlands
Goals & Livability	Sense of Place
	Equity
	Economic Vitality
	Public Health and the Environment
	Connectivity
Addl. Consid.	Cost
	Maintenance
	Consistency with Adopted State and Regional Plans

Figure 13 – Access Locations and Environmental Justice: At-Grade – A

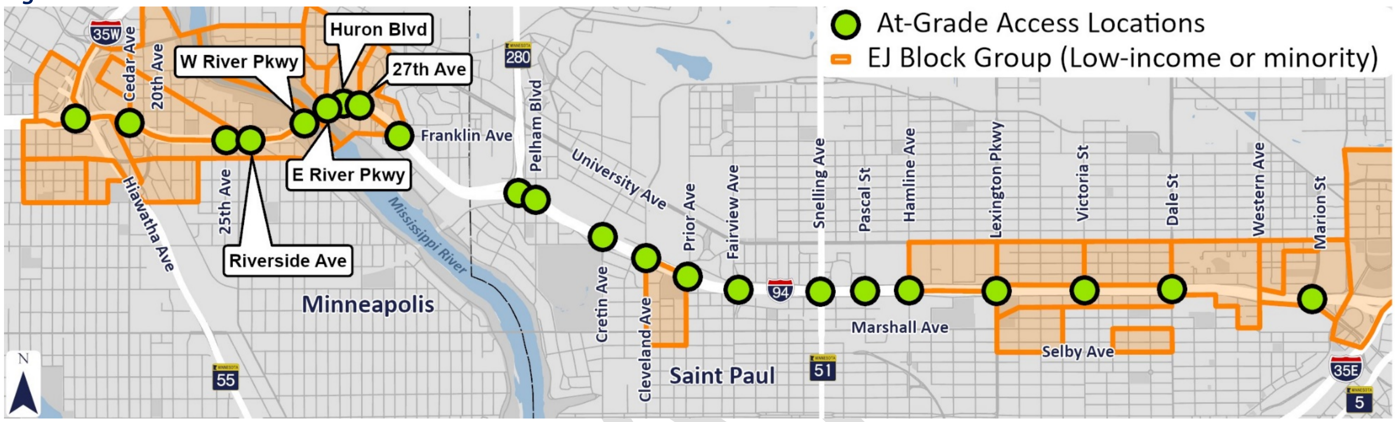


Figure 14 – Potential Section 4(f) Impacts: At-Grade – A

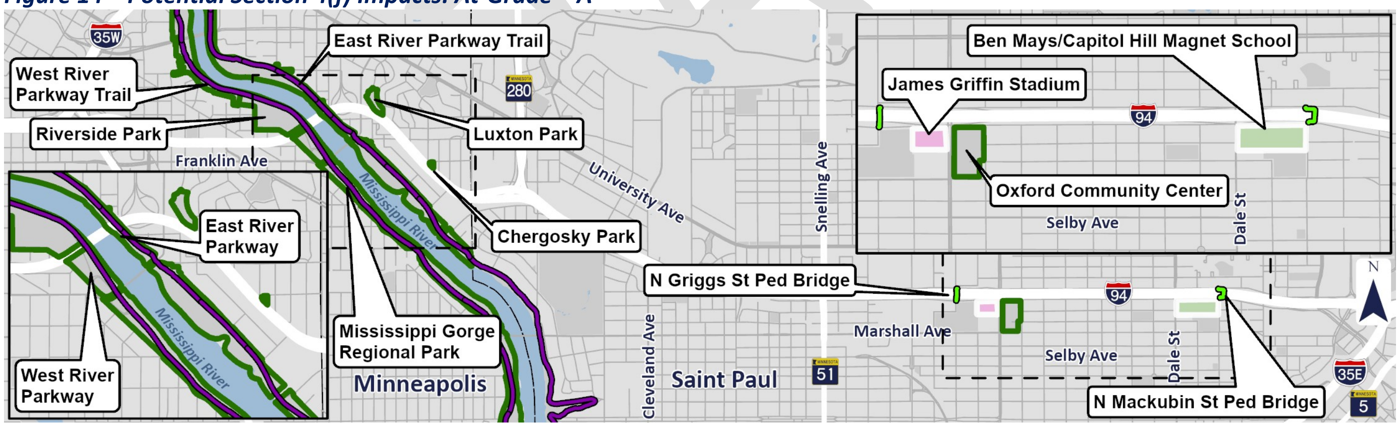


Figure 15 – Contaminated Properties: At-Grade – A

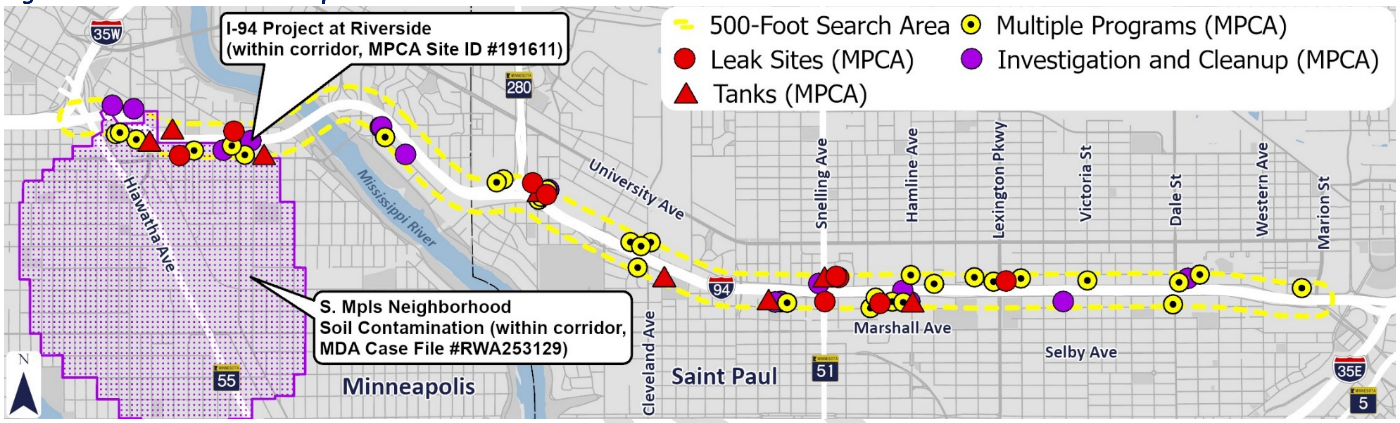
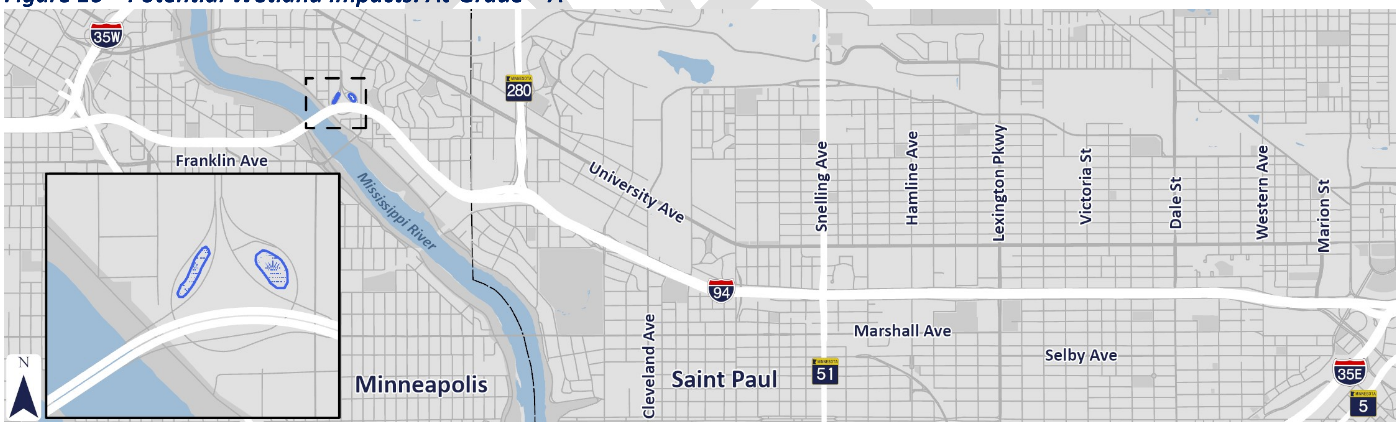


Figure 16 – Potential Wetland Impacts: At-Grade – A



11003769

5.5 At-Grade – B

5.5.1 Project Needs

5.5.1.1 Walkability and Bikeability

The performance of At-Grade – B relative to Walkability and Bikeability is mixed. This analysis assumed that there would be no change in the structure of the walking and biking network (such as the elimination or relocation of a crossing location) compared to the no build, therefore the distance between crossings and origin-destination performance measures remained constant. However, distances between grade-separated crossings would increase due to conversion of some overpasses and underpasses to at-grade intersections. New nonmotorized conflict points would be created at locations where at-grade crossings replace grade-separated crossings. The conversion of some grade-separated to at-grade crossings would also increase crossing delay and reduce travelshed distances. There is potential to add new crossings as part of this alternative, which would improve performance.

Project Needs	Walkability and Bikeability
	Safety for People in Motorized Vehicles
	Infrastructure Condition
	Mobility for People in Motorized Vehicles
Social, Economic, and Environmental Impacts	Environmental Justice
	Historic/ Archaeological /Cemetery
	Section 4(f)
	Section 6(f)
	Contaminated Properties
	Right of Way
	Noise
	Water Pollution/ Stormwater
	Air Quality
	Threatened & Endangered Species
	Wetlands
Goals & Livability	Sense of Place
	Equity
	Economic Vitality
	Public Health and the Environment
	Connectivity
Addl. Consid.	Cost
	Maintenance
	Consistency with Adopted State and Regional Plans

Commented [HJ(45]: This text appears to be duplicative to At-Grade A above. Earlier in the document, it is said that At-Grade A and B are treated as one for evaluation purposes. If this is the case, then does it make sense to have a separate sections for At-Grade A and B, if there is no substantive differences between the two for evaluation purposes?

Commented [HJ(46]: Please see comments in At-Grade A and apply to At-Grade B, if the summary of the evaluation for these two alternatives remains separated.

5.5.1.2 Safety

Based on the expected crash comparison analysis, At-Grade – B would not address the number and severity of crashes for people in motorized vehicles (cars, freight, and transit). On the mainline within the logical termini, the expected crash rate for all crashes would be 1.87 crashes/million VMT compared to 0.926 crashes/million VMT for the no build. Total expected crashes would be 0.45 crashes/day compared to 1.08 for the no build. While VMT would be reduced by 79%, crashes would only be reduced by 58%. The fatal and serious injury crash rate would be 3.226 crashes/100 million VMT compared to 0.66 crashes/100 million VMT for the no build. There would be 0.008 expected fatal and serious injury crashes per day, an increase of 1% compared to the no build despite the decrease in corridor VMT.

On other roadways within one mile of the logical termini, total expected crashes would increase slightly to 3.67 crashes/day compared to 3.65 crashes/day with the no build, despite an expected decrease in VMT. Expected fatal and serious injury crashes on these roadways would also increase to 0.059 crashes/day compared to 0.056 with the no build, an increase of 5%. Total expected fatal and serious injury crashes/day on the mainline and routes within one mile would increase compared to the no build.

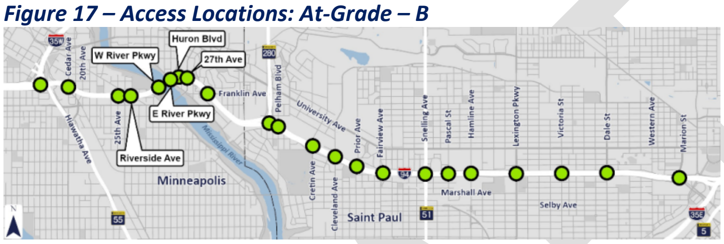
5.5.1.3 Infrastructure Condition

At-Grade – B would address pavement and bridge condition by removing or replacing the existing infrastructure.

5.5.1.4 Mobility

With At-Grade – A, systemwide VHT and PHT are anticipated to increase compared to the no build. Mainline speed on the corridor would be reduced to 20-25 mph. Person throughput in the corridor would be reduced to 219,000 people/day. VHT and PHT in the interchange areas would be reduced by half. Interchange area person throughput would be reduced to 757,000 people/day. Freight travel times in the corridor would increase to 18-23 minutes. Mean travel time index would increase to 2.5, indicating a decrease in travel time reliability. Regarding connectivity, 13 new at-grade access locations are likely to be added to the new roadway, resulting in an intersection density of 3.1 access points/mile. Assumed access locations are shown in **Figure 17**. Transit travel times in the corridor would be reduced, however travel time through interchange areas would increase due to the addition of three stops for the proposed BRT service. Travel time index for transit would increase compared to the no build, indicating a decrease in transit travel time reliability.

Figure 17 – Access Locations: At-Grade – B



5.5.2 Social, Economic, and Environmental (SEE) Impacts

At-Grade – B has some potential for net negative impacts to EJ populations. New at-grade access locations would be added to the new roadway, including within EJ communities (**Figure 18**). Direct access to key destinations in the corridor would increase, however travel times in the corridor may also increase due to the addition of new access points. New BRT service would improve access to transit within EJ communities. A major change in the vertical alignment of the roadway has potential to increase the size of areas within EJ communities impacted by traffic noise. There is limited potential for relocation based on the proposed improvements.

The mainline improvements for At-Grade – B have moderate potential for adverse effect to known historic properties, and low to moderate potential for adverse effect to known or suspected cemeteries. The alternative has the potential to impact up to 13 Section 4(f) resources (**Figure 19**). No impacts to Section 6(f) resources are anticipated. There is potential for up to two known contaminated sites within the corridor to be impacted, with 71 total sites located within 500 feet of the corridor (**Figure 20**). The alternative is unlikely to have right of way impacts or require relocations.

Project Needs	Walkability and Bikeability
	Safety for People in Motorized Vehicles
	Infrastructure Condition
	Mobility for People in Motorized Vehicles
Social, Economic, and Environmental Impacts	Environmental Justice
	Historic/ Archaeological /Cemetery
	Section 4(f)
	Section 6(f)
	Contaminated Properties
	Right of Way
	Noise
	Water Pollution/ Stormwater
	Air Quality
	Threatened & Endangered Species
	Wetlands
Goals & Livability	Sense of Place
	Equity
	Economic Vitality
	Public Health and the Environment
	Connectivity
Addl. Consid.	Cost
	Maintenance
	Consistency with Adopted State and Regional Plans

Regarding noise impacts, a major change in vertical alignment will reduce distances between traffic and noise sensitive receptors and potentially increase the area of traffic noise impacts. From a stormwater perspective, the project would result in approximately 110 acres of impervious surface (a decrease of four acres compared to the no build). In terms of air quality, the project meets the definition of a regionally significant project and would not be classified as exempt. At-

Grade – B has the potential to impact threatened and endangered species through impacts to vegetation along the corridor. Based on NWI mapping, up to two wetlands may be impacted (**Figure 21**).

5.5.3 Goals & Livability

Sense of Place: There is potential for excess ROW to be used for new features/amenities in select locations, including additional amenities that may not be compatible with freeway alternatives.

Equity: Dedicated bus lanes would provide a transit benefit and would likely be considered more beneficial than bus shoulders. There would also be opportunities for walkability/bikeability improvements.

Economic Vitality: There would be a decrease in the number of jobs accessible in both AM and PM peak for auto compared to the no build, and a slight increase for transit.

Public Health and the Environment: Potential for excess right of way to be used to expand green space in the corridor. Potential for additional amenities that may not be compatible with freeway alternatives.

Connectivity: Facilitates opportunities for locally planned walkability and bikeability improvements along the corridor, however proposed improvements at existing grade-separated crossings may be in conflict with conversion to at-grade intersections.

5.5.4 Additional Considerations

At-Grade – B would result in new construction costs estimated at $XX-XX. Annual maintenance costs following construction are estimated to range from $XX to $XX.

[Address adopted state and regional plans]

5.5.5 Summary and Conclusion

To be added

Project Needs	Walkability and Bikeability
	Safety for People in Motorized Vehicles
	Infrastructure Condition
	Mobility for People in Motorized Vehicles
Social, Economic, and Environmental Impacts	Environmental Justice
	Historic/ Archaeological /Cemetery
	Section 4(f)
	Section 6(f)
	Contaminated Properties
	Right of Way
	Noise
	Water Pollution/ Stormwater
	Air Quality
	Threatened & Endangered Species
	Wetlands
Goals & Livability	Sense of Place
	Equity
	Economic Vitality
	Public Health and the Environment
	Connectivity
Addl. Consid.	Cost
	Maintenance
	Consistency with Adopted State and Regional Plans

Figure 18 – Access Locations and Environmental Justice: At-Grade – B

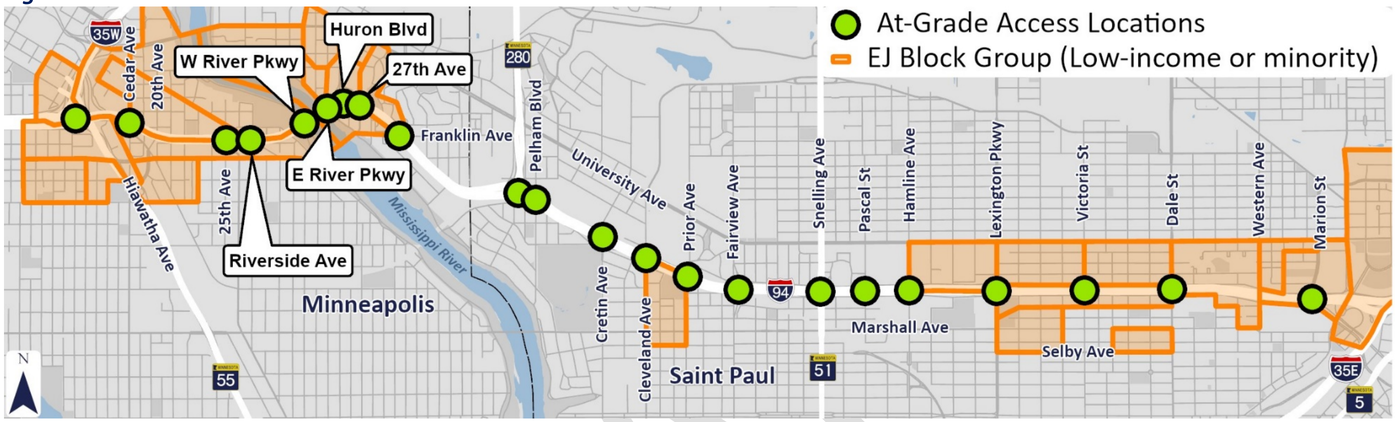
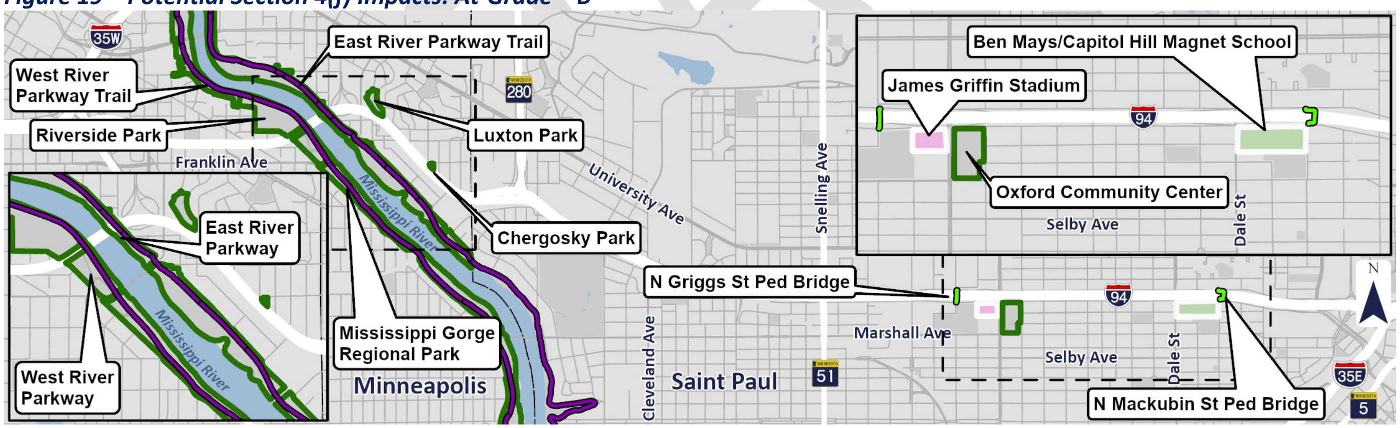


Figure 19 – Potential Section 4(f) Impacts: At-Grade – B



11003773

Figure 20 – Contaminated Properties: At-Grade – B

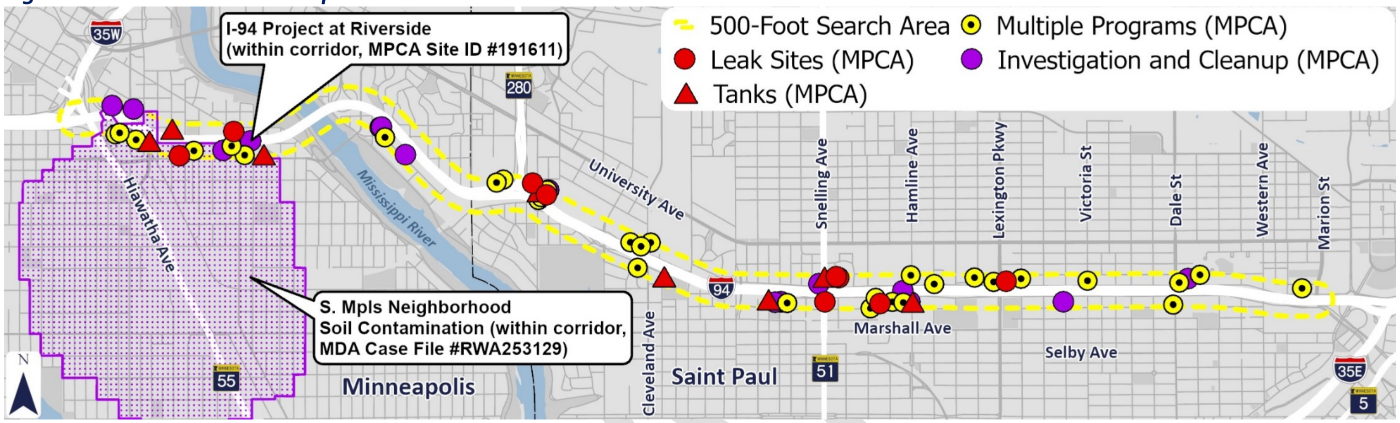
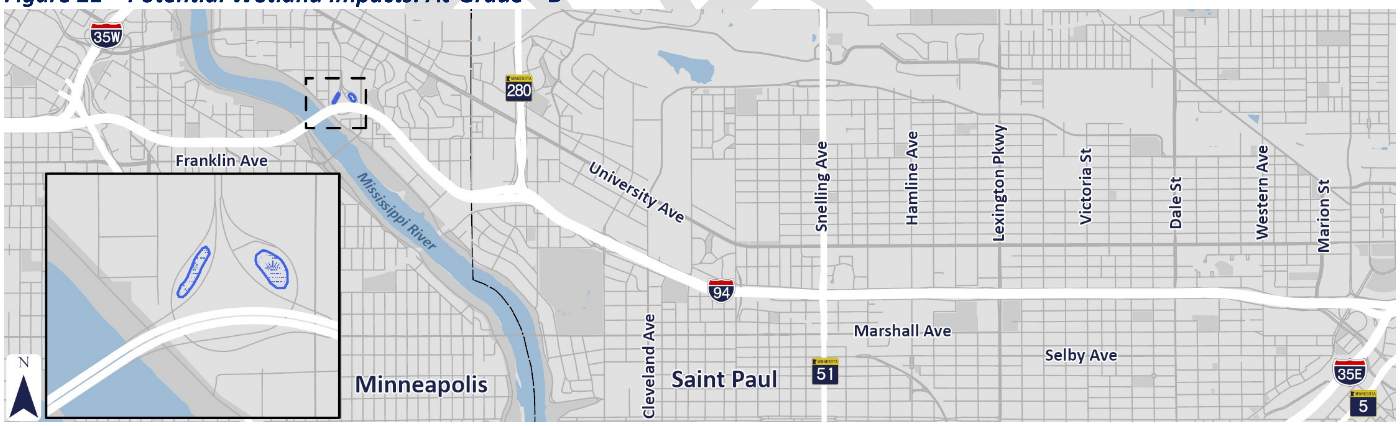


Figure 21 – Potential Wetland Impacts: At-Grade – B



11003774

5.6 Local/Regional Roadways – A

5.6.1 Project Needs

5.6.1.1 Walkability and Bikeability

Based on the performance measures identified, Local/Regional Roadways – A would result in similar outcomes for walkability and bikeability as the no build. This analysis assumed that there would be no change in the structure of the walking and biking network (such as the elimination or relocation of a crossing location) compared to the no build, therefore the distance between crossings and origin-destination performance measures remained constant. There is potential to add new crossings as part of this alternative, which would improve performance. In addition, the removal of mainline access points would result in the conversion of existing interchanges to overpasses, which would reduce conflict points for nonmotorized users crossing the corridor at these locations.

Commented [B(47]: This alternative includes a bikeway along the length of the corridor, so it would definitely change (improve) the network!

Project Needs	Walkability and Bikeability
	Safety for People in Motorized Vehicles
	Infrastructure Condition
	Mobility for People in Motorized Vehicles
Social, Economic, and Environmental Impacts	Environmental Justice
	Historic/ Archaeological /Cemetery
	Section 4(f)
	Section 6(f)
	Contaminated Properties
	Right of Way
	Noise
	Water Pollution/ Stormwater
	Air Quality
	Threatened & Endangered Species
	Wetlands
Goals & Livability	Sense of Place
	Equity
	Economic Vitality
	Public Health and the Environment
	Connectivity
Addl. Consid.	Cost
	Maintenance
	Consistency with Adopted State and Regional Plans

5.6.1.2 Safety

Based on the expected crash comparison analysis, Local/Regional Roadways – A has the potential to address the number and severity of crashes for people in motorized vehicles (cars, freight, and transit) depending on the number of access points provided. On the mainline within the logical termini, the expected crash rate for all crashes would be unchanged from the no build. Total expected crashes would be 0.63-0.64 crashes/day, with more crashes expected in the four access point scenario, compared to 1.08 for the no build. The percentage reductions in crashes/day would be consistent with reduced VMT in the corridor. The fatal and serious injury crash rate would also be unchanged from the no build. There would be 0.004-0.005 expected fatal and serious injury crashes per day, with more crashes expected in the four access point scenario, a decrease consistent with the expected reduction in corridor VMT.

Four Access Points: On other roadways within one mile of the logical termini, total expected crashes would increase to 3.77 crashes/day compared to 3.65 crashes/day with the no build, which is consistent with the 3% increase in VMT on these roadways. Expected fatal and serious injury crashes on these roadways would also increase to 0.059 crashes/day compared to 0.056 with the no build, an increase of 5%. Total expected fatal and serious injury crashes/day on the mainline and routes within one mile would decrease compared to the no build.

Three Access Points: On other roadways within one mile of the logical termini, total expected crashes would increase to 3.83 crashes/day compared to 3.65 crashes/day with the no build, a 5% increase which exceeds the 4% expected increase in VMT on these roadways. Expected fatal and serious injury crashes on these roadways would also increase to 0.06 crashes/day compared to 0.056 with the no build, an increase of 7% compared to the 4% expected increase in VMT on these roadways. Total expected fatal and serious injury crashes/day on the mainline and routes within one mile would increase compared to the no build.

Project Needs	Walkability and Bikeability
	Safety for People in Motorized Vehicles
	Infrastructure Condition
	Mobility for People in Motorized Vehicles
Social, Economic, and Environmental Impacts	Environmental Justice
	Historic/ Archaeological /Cemetery
	Section 4(f)
	Section 6(f)
	Contaminated Properties
	Right of Way
	Noise
	Water Pollution/ Stormwater
	Air Quality
	Threatened & Endangered Species
	Wetlands
Goals & Livability	Sense of Place
	Equity
	Economic Vitality
	Public Health and the Environment
	Connectivity
Addl. Consid.	Cost
	Maintenance
	Consistency with Adopted State and Regional Plans

5.6.1.3 Infrastructure Condition

Local/Regional Roadways – A would address pavement and bridge condition by removing or replacing the existing infrastructure.

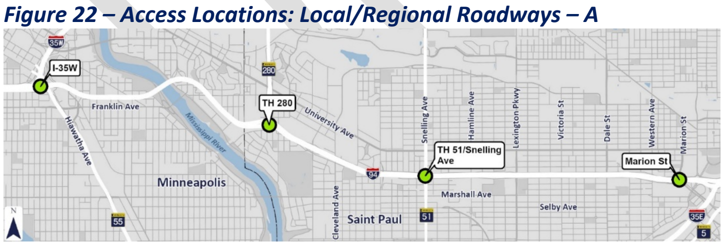
5.6.1.4 Mobility

With Local/Regional Roadways – A, systemwide VHT and PHT are anticipated to increase compared to the no build. Mainline speed on the corridor would be reduced to 30-45 mph on the regional facility and 25-30 mph on the local facilities. Person throughput in the corridor would be reduced to 337,000 people/day in the four access point scenario and 315,000 people/day in the three access point scenario. VHT and PHT in the interchange areas would be reduced. Interchange area person throughput would be reduced in both access point scenarios. Freight travel times in the corridor would increase slightly to 10-15 minutes on the regional facility in the four access point scenario and 16-19 minutes in the three access points scenario. Mean travel time index would increase to 3.0-3.2 on the regional facility, indicating a decrease in travel time reliability. Regarding connectivity, 5 or 6 access locations would be removed, however overpasses would generally remain. Distance to access I-94 would increase for some trips, however connectivity across I-94 would increase in areas where ramps are removed but overpasses are maintained. Proposed access locations remaining under Local/Regional Roadways – A are shown in **Figure 22**. The three access point scenario would include I-35W/TH 55, TH 280, and Marion St, with the four access point scenario adding TH 51/Snelling Ave. Transit travel times in the corridor would be reduced. Transit travel time through interchange areas would increase in the four access point scenario because of the stop at TH 51/Snelling Ave, but would be lower than the no build with three access points. Travel time index for transit would increase on the regional roadway compared to the no build for both access point scenarios, indicating a decrease in transit travel time reliability.

> **Commented [B(48]:** Again, please specify whether this includes people taking all modes or just vehicles.

> **Commented [HJ(49]:** Noting again, the Minneapolis Fire Department concerns with access under this scenario. Please see earlier comment.

Figure 22 – Access Locations: Local/Regional Roadways – A



5.6.2 Social, Economic, and Environmental (SEE) Impacts

Local/Regional Roadways – A has some potential for net negative impacts to EJ populations. Multiple existing freeway access points within EJ communities would be removed (**Figure 23**). Direct access to key destinations in the corridor would decrease, however travel times in the corridor may also decrease due to the removal of access points. A major change in freeway configuration has the potential to shift traffic volumes closer to or further away from noise sensitive receptors within EJ communities depending on the final design. There is limited potential for relocation based on the mainline improvements.

The mainline improvements for Local/Regional Roadways – A have low to moderate potential for adverse effect to known historic properties, and moderate potential for adverse effect to known or suspected cemeteries. The alternative has the potential to impact up to 12 Section 4(f) resources (**Figure 24**). No impacts to Section 6(f) resources are anticipated. There is potential for up to two known contaminated sites within the corridor to be impacted, with 71 total sites located within 500 feet of the corridor (**Figure 25**). The alternative is unlikely to have right of way impacts or require relocations.

Regarding noise impacts, the project has the potential to increase traffic volumes on the local system adjacent to existing at-grade land uses. From a stormwater perspective, the project would result in approximately 93 acres of impervious surface within the proposed retaining walls (a decrease of 21 acres compared to the no build). In terms of air quality, the project meets the definition of a regionally significant project and would not be classified as exempt. Local/Regional Roadways – A has the potential to impact threatened and endangered species through impacts to vegetation along the corridor. Based on NWI mapping, up to two wetlands may be impacted (**Figure 26**).

5.6.3 Goals & Livability

Sense of Place: There is potential for excess ROW to be used for new features/amenities in select locations, as well as potential for aesthetic improvements to bridges and structures.

Equity: Bus shoulders between the downtowns would be restored, providing a transit benefit. There would also be opportunities for walkability/bikeability improvements.

Economic Vitality: There would be a decrease in the number of jobs accessible in both the AM and PM peak for auto in the three access point scenario and in the AM peak with the four access point scenario. There would be a slight increase in the PM peak with four access points for auto. There would be a slight increase for transit as well.

Public Health and the Environment: Potential for excess right of way to be used to expand green space in the corridor.

Connectivity: Facilitates opportunities for locally planned walkability and bikeability improvements along and across the corridor, however the complexity of the freeway and frontage road design may preclude some new or existing crossing locations.

Project Needs	Walkability and Bikeability
	Safety for People in Motorized Vehicles
	Infrastructure Condition
	Mobility for People in Motorized Vehicles
Social, Economic, and Environmental Impacts	Environmental Justice
	Historic/ Archaeological /Cemetery
	Section 4(f)
	Section 6(f)
	Contaminated Properties
	Right of Way
	Noise
	Water Pollution/ Stormwater
	Air Quality
	Threatened & Endangered Species
	Wetlands
Goals & Livability	Sense of Place
	Equity
	Economic Vitality
	Public Health and the Environment
	Connectivity
Addl. Consid.	Cost
	Maintenance
	Consistency with Adopted State and Regional Plans

Commented [B(50]: This is a big deal. Connectivity north-south across the corridor is one of the major issues that this project should address. If current crossings are removed with reduced, new bike and ped crossings are critical. If those can't be replaced, this alternative is not fulfilling this important goal.

Figure 23 – Access Locations and Environmental Justice: Local/Regional Roadways – A

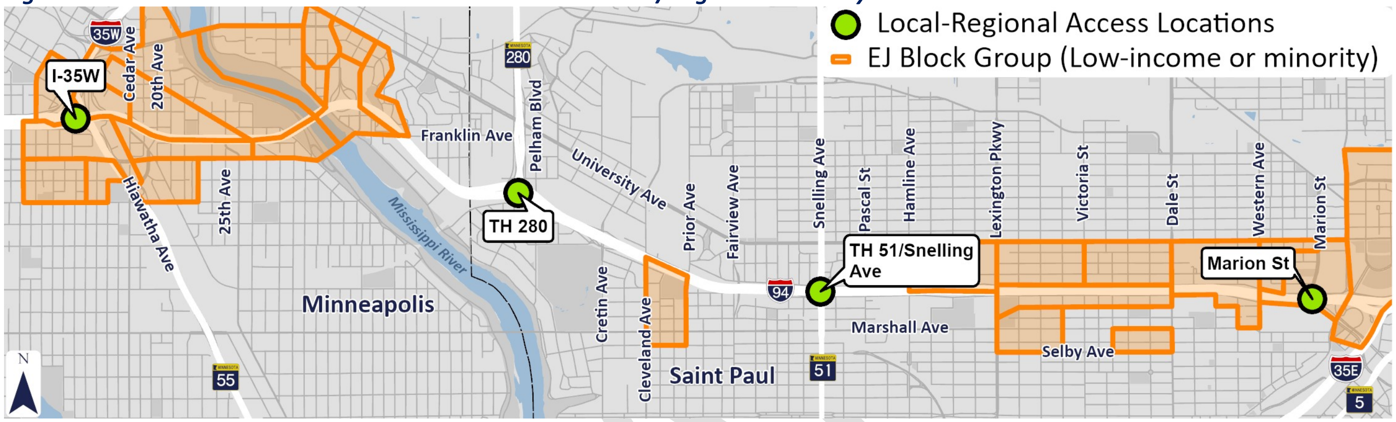
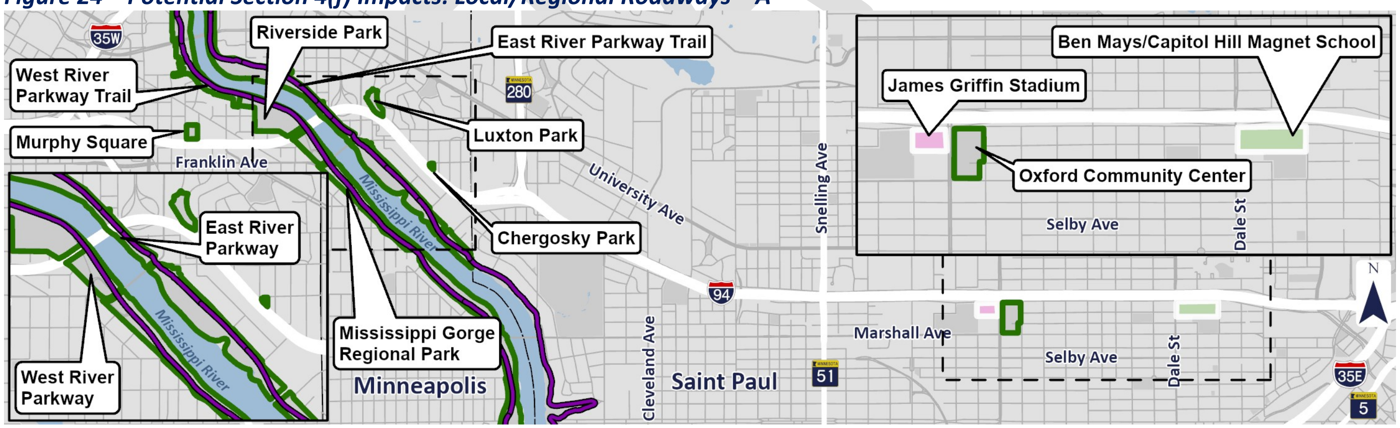


Figure 24 – Potential Section 4(f) Impacts: Local/Regional Roadways – A



11003778

Figure 25 – Contaminated Properties: Local/Regional Roadways – A

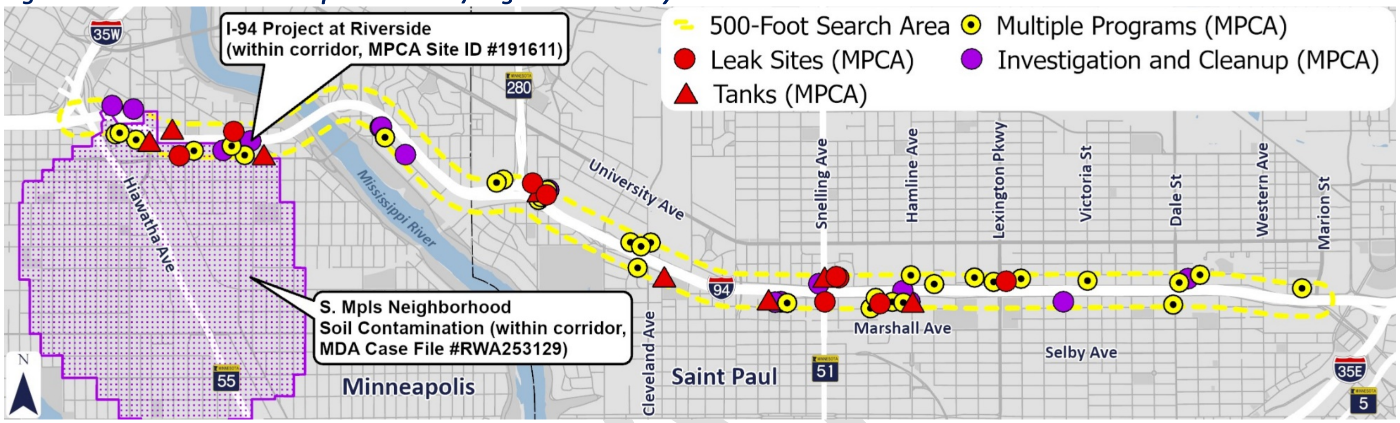
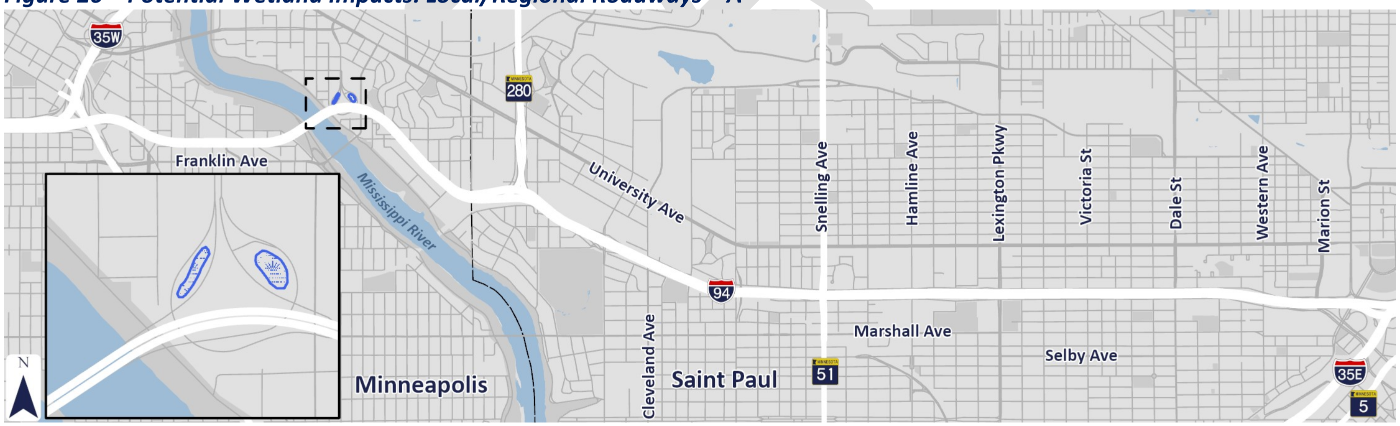


Figure 26 – Potential Wetland Impacts: Local/Regional Roadways – A



~~5.6.3~~5.6.4 Additional Considerations

Local/Regional Roadways – A would result in new construction costs estimated at $XX-XX. Annual maintenance costs following construction are estimated to range from $XX to $XX.

[Address adopted state and regional plans]

~~5.6.4~~5.6.5 Summary and Conclusion

To be added

5.7 Reduced Freeway – A

5.7.1 Project Needs

Project Needs	Walkability and Bikeability
	Safety for People in Motorized Vehicles
	Infrastructure Condition
	Mobility for People in Motorized Vehicles
Social, Economic, and Environmental Impacts	Environmental Justice
	Historic/ Archaeological /Cemetery
	Section 4(f)
	Section 6(f)
	Contaminated Properties
	Right of Way
	Noise
	Water Pollution/ Stormwater
	Air Quality
	Threatened & Endangered Species
	Wetlands
Goals & Livability	Sense of Place
	Equity
	Economic Vitality
	Public Health and the Environment
	Connectivity
Addl. Consid.	Cost
	Maintenance
	Consistency with Adopted State and Regional Plans

5.7.1.1 Walkability and Bikeability

Based on the performance measures identified, Reduced Freeway – A would result in similar outcomes for walkability and bikeability as the no build. This analysis assumed that there would be no change in the structure of the walking and biking network (such as the elimination or relocation of a crossing location) compared to the no build, therefore the distance between crossings and origin-destination performance measures remained constant. There is potential to add new crossings as part of this alternative, which would improve performance.

5.7.1.2 Safety

Based on the expected crash comparison analysis, Reduced Freeway – A would address the number and severity of crashes for people in motorized vehicles (cars, freight, and transit). On the mainline within the logical termini, the expected crash rate for all crashes would be unchanged from the no build. Total expected crashes would be 0.86 crashes/day compared to 1.08 for the no build. This reduction in crashes is consistent with the 21% expected reduction in VMT on the corridor. The fatal and serious injury crash rate would also be unchanged from the no build. There would be 0.006 expected fatal and serious injury crashes per day, a decrease consistent with the 21% expected reduction in corridor VMT.

On other roadways within one mile of the logical termini, total expected crashes would decrease slightly to 3.62 crashes/day compared to 3.65 crashes/day with the no build, consistent with the slight decrease in VMT. Expected fatal and serious injury crashes on these roadways would remain constant at 0.056 crashes/day. Total expected fatal and serious injury crashes/day on the mainline and routes within one mile would decrease compared to the no build.

5.7.1.3 Infrastructure Condition

Reduced Freeway – A would address pavement and bridge condition by removing or replacing the existing infrastructure.

5.7.1.4 Mobility

With Reduced Freeway – A, systemwide VHT and PHT are anticipated to increase compared to the no build. Mainline speed on the corridor would be reduced to 30-45 mph in the general purpose lanes and may increase to 40-60 mph in the managed lanes. Person throughput in the corridor would be reduced to 376,000 people/day. VHT and PHT in the interchange areas would be reduced. Interchange area person throughput would be reduced to 2,169,000 people/day. Freight travel times in the corridor would increase to 10-15 minutes in the general purpose lanes, but would be similar to the no build in the managed lanes. Mean travel time index would increase to 3.2 for the general purpose lanes, indicating a decrease in travel time reliability. A smaller increase to 2.5 would be expected for the managed lanes. Regarding connectivity, the alternative would not require addition or removal of any access points to the mainline, however access changes to improve safety or mobility could still be incorporated into the project later in the process. Transit travel times in the corridor would be reduced, ranging from 12-15 minutes depending on the number of BRT stops included. Transit travel time through interchange areas may increase or decrease slightly due to the addition of up to three stops for the proposed BRT service. Mean travel time index for transit would increase compared to the no build, indicating a decrease in transit travel time reliability.

Project Needs	Walkability and Bikeability
	Safety for People in Motorized Vehicles
	Infrastructure Condition
	Mobility for People in Motorized Vehicles
Social, Economic, and Environmental Impacts	Environmental Justice
	Historic/ Archaeological /Cemetery
	Section 4(f)
	Section 6(f)
	Contaminated Properties
	Right of Way
	Noise
	Water Pollution/ Stormwater
	Air Quality
	Threatened & Endangered Species
	Wetlands
Goals & Livability	Sense of Place
	Equity
	Economic Vitality
	Public Health and the Environment
	Connectivity
Addl. Consid.	Cost
	Maintenance
	Consistency with Adopted State and Regional Plans

5.7.2 Social, Economic, and Environmental (SEE) Impacts

Reduced Freeway – A has some potential for net negative impacts to EJ populations. No change in access to land use would be required, and a potential transit station at 25th/27th Ave would improve access to transit for EJ populations. However, due to reduced freeway capacity, traffic volumes and associated noise pollution on adjacent parallel arterials in EJ communities may increase. While there is limited potential for relocation based on the mainline improvements, construction of a transit station at 25th/27th Ave may require residential and/or commercial relocation.

The mainline improvements for Reduced Freeway – A have low potential for adverse effect to known historic properties and cemeteries, as does the BRT – 1 sub-alternative. There is moderate potential for adverse effect to known or suspected cemeteries in the vicinity of Dale St with BRT – 3. Mainline improvements and BRT – 1 have the potential to impact up to 11 Section 4(f) resources, or up to 12 resources with BRT – 3 (**Figure 27**). No impacts to Section 6(f) resources are anticipated. There is potential for up to two known contaminated sites within the corridor to be impacted, with 71 total sites located within 500 feet of the corridor (**Figure 28**). Mainline improvements and BRT – 1 are unlikely to have right of way impacts or require relocations, however BRT – 3 may result in 0.55 acres of impacts and five or more building relocations.

Regarding noise impacts, the project would not cause a material change in horizontal and/or vertical alignment or add travel lanes. From a stormwater perspective, the project would result in approximately 108.9-109.3 acres of impervious surface (a decrease of approximately five acres compared to the no build), with more acreage required for sub-alternatives that include transit stations. In terms of air quality, the project meets the definition of a regionally significant project and would not be classified as exempt. Reduced Freeway – A has the potential to impact threatened and endangered species through impacts to vegetation along the corridor. Based on NWI mapping, up to two wetlands may be impacted (**Figure 29**).

Project Needs	Walkability and Bikeability
	Safety for People in Motorized Vehicles
	Infrastructure Condition
	Mobility for People in Motorized Vehicles
Social, Economic, and Environmental Impacts	Environmental Justice
	Historic/ Archaeological /Cemetery
	Section 4(f)
	Section 6(f)
	Contaminated Properties
	Right of Way
	Noise
	Water Pollution/ Stormwater
	Air Quality
	Threatened & Endangered Species
	Wetlands
Goals & Livability	Sense of Place
	Equity
	Economic Vitality
	Public Health and the Environment
	Connectivity
Addl. Consid.	Cost
	Maintenance
	Consistency with Adopted State and Regional Plans

5.7.3 Goals & Livability

Sense of Place: There is potential for excess ROW to be used for new features/amenities in select locations and for aesthetic improvements to bridges and structures. A smaller roadway footprint will increase space available for potential features/amenities. Potential BRT stations would decrease excess ROW. Three stations would result in more substantial impacts compared to one station.

Equity: The managed lane and BRT would provide HOV and transit benefits and would likely be considered more beneficial than bus shoulders. The number of potential BRT stations presents a tradeoff between transit access and travel time. There would also be opportunities for walkability/bikeability improvements.

Economic Vitality: There would be a slight decrease in the number of jobs accessible in the AM and PM peak for auto, and a slight increase for transit.

Public Health and the Environment: Potential for excess right of way to be used to expand green space in the corridor. A smaller roadway footprint will increase potential excess right of way. Potential BRT stations would decrease excess ROW. Three stations would result in more substantial impacts compared to one station.

Connectivity: Facilitates opportunities for locally planned walkability and bikeability improvements along and across the corridor.

5.7.4 Additional Considerations

Reduced Freeway – A would result in new construction costs estimated at $XX-XX for the baseline BRT – 0 alternative. The estimated range for BRT – 1 increases to $XX-XX and the estimated range for BRT – 3 increases to $XX-XX. Annual maintenance costs following construction are estimated to range from $XX to $XX.

[Address adopted state and regional plans]

5.7.5 Summary and Conclusion

To be added

Commented [BA(51]: Is this alternative narrowing the ROW overall? It appears in the plan drawing not to but instead adds some green space in between mainline lanes. I can't imagine there would be space to add gathering places if the ROW isn't being narrowed?

Figure 27 – Potential Section 4(f) Impacts: Reduced Freeway – A

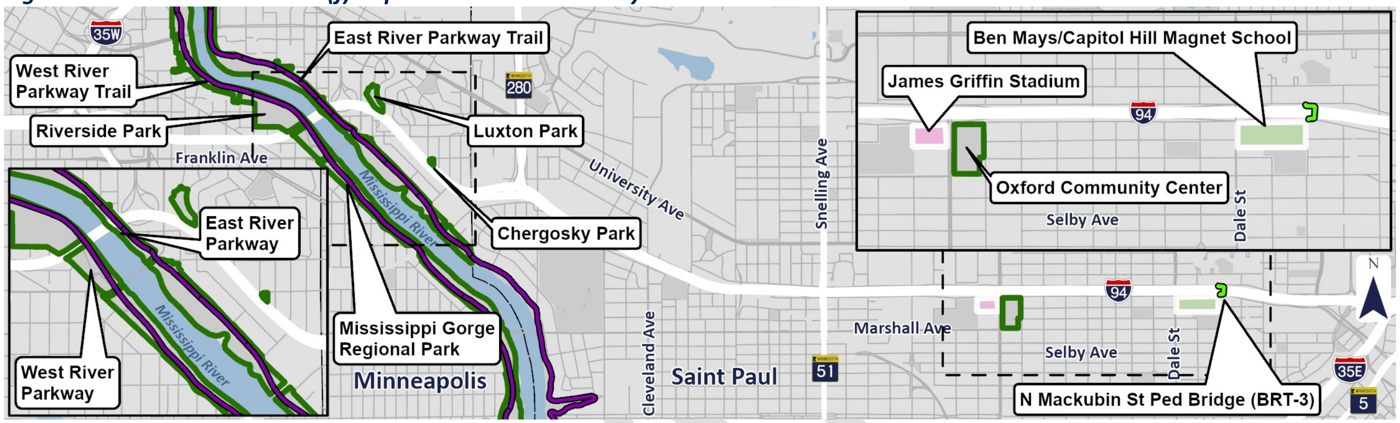
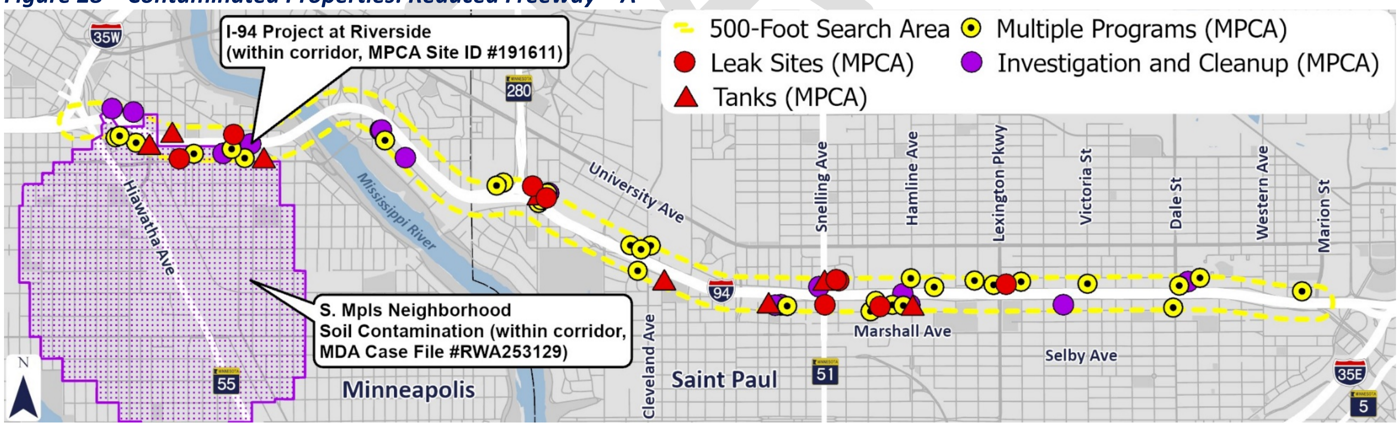
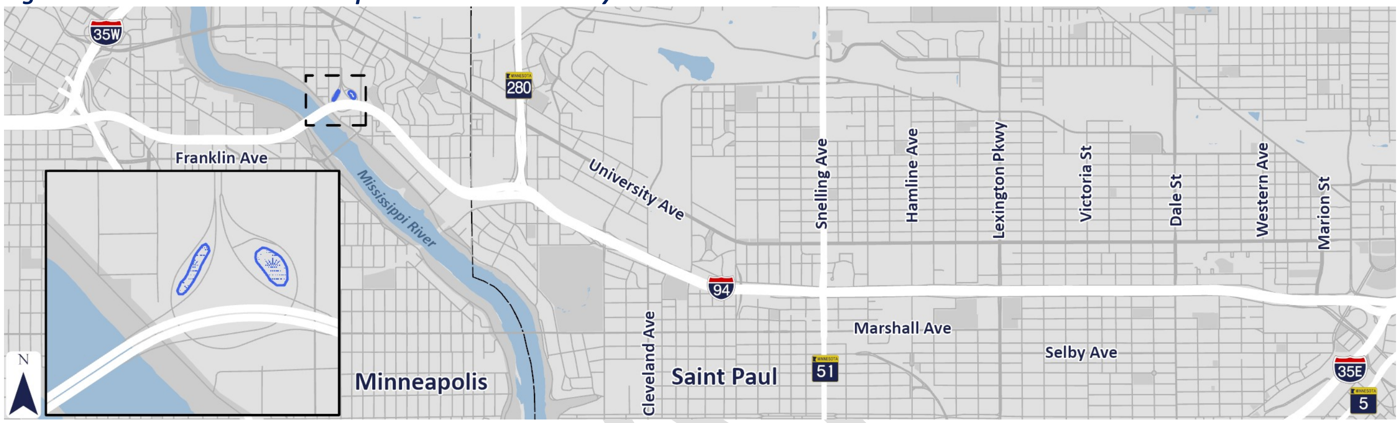


Figure 28 – Contaminated Properties: Reduced Freeway – A



11003783

Figure 29 – Potential Wetland Impacts: Reduced Freeway – A



5.8 Reconfigured Freeway – A

Project Needs	Walkability and Bikeability
	Safety for People in Motorized Vehicles
	Infrastructure Condition
	Mobility for People in Motorized Vehicles
Social, Economic, and Environmental Impacts	Environmental Justice
	Historic/ Archaeological /Cemetery
	Section 4(f)
	Section 6(f)
	Contaminated Properties
	Right of Way
	Noise
	Water Pollution/ Stormwater
	Air Quality
	Threatened & Endangered Species
	Wetlands
Goals & Livability	Sense of Place
	Equity
	Economic Vitality
	Public Health and the Environment
	Connectivity
Addl. Consid.	Cost
	Maintenance
	Consistency with Adopted State and Regional Plans

5.8.1 Project Needs

5.8.1.1 Walkability and Bikeability

Based on the performance measures identified, Reconfigured Freeway – A would result in similar outcomes for walkability and bikeability as the no build. This analysis assumed that there would be no change in the structure of the walking and biking network (such as the elimination or relocation of a crossing location) compared to the no build, therefore the distance between crossings and origin-destination performance measures remained constant. There is potential to add new crossings as part of this alternative, which would improve performance.

5.8.1.2 Safety

Based on the expected crash comparison analysis, Reconfigured Freeway – A would address the number and severity of crashes for people in motorized vehicles (cars, freight, and transit). On the mainline within the logical termini, the expected crash rate for all crashes would be unchanged from the no build. Total expected crashes would be 1.13 crashes/day compared to 1.08 for the no build. This increase in crashes is consistent with the 4% expected increase in VMT on the corridor. The fatal and serious injury crash rate would also be unchanged from the no build. There would be 0.008 expected fatal and serious injury crashes per day, an increase consistent with the 4% expected increase in corridor VMT.

On other roadways within one mile of the logical termini, total expected crashes would decrease slightly to 3.62 crashes/day compared to 3.65 crashes/day with the no build, consistent with the slight decrease in VMT. Expected fatal and serious injury crashes on these roadways would be reduced slightly to 0.055 compared to 0.056 crashes/day with the no build. Total expected fatal and serious injury crashes/day on the mainline and routes within one mile would decrease compared to the no build.

5.8.1.3 Infrastructure Condition

Reconfigured Freeway – A would address pavement and bridge condition by removing or replacing the existing infrastructure.

5.8.1.4 Mobility

With Reconfigured Freeway – A, systemwide VHT and PHT are anticipated to increase compared to the no build. Mainline speed on the corridor would be similar to the no build (40-55 mph) in the general purpose lanes and may increase to 45-60 mph in the managed lanes. Person throughput in the corridor would increase to 447,000 people/day. VHT and PHT in the interchange areas would be reduced. Interchange area person throughput would increase to 2,728,000 people/day. Freight travel times in the corridor in the general purpose and managed lanes would be similar to the no build (8-11 minutes). Mean travel time index would increase to 2.1 for the general purpose and managed lanes, indicating a marginal decrease in

Project Needs	Walkability and Bikeability
	Safety for People in Motorized Vehicles
	Infrastructure Condition
	Mobility for People in Motorized Vehicles
Social, Economic, and Environmental Impacts	Environmental Justice
	Historic/ Archaeological /Cemetery
	Section 4(f)
	Section 6(f)
	Contaminated Properties
	Right of Way
	Noise
	Water Pollution/ Stormwater
	Air Quality
	Threatened & Endangered Species
	Wetlands
Goals & Livability	Sense of Place
	Equity
	Economic Vitality
	Public Health and the Environment
	Connectivity
Addl. Consid.	Cost
	Maintenance
	Consistency with Adopted State and Regional Plans

travel time reliability. Regarding connectivity, the alternative would not require addition or removal of any access points to the mainline, however access changes to improve safety or mobility could still be incorporated into the project later in the process. Transit travel times in the corridor would be reduced, ranging from 12-15 minutes depending on the number of BRT stops included. Transit travel time through interchange areas may increase or decrease slightly due to the addition of up to three stops for the proposed BRT service. Mean travel time index for transit would increase marginally compared to the no build, indicating a decrease in transit travel time reliability.

5.8.2 Social, Economic, and Environmental (SEE) Impacts

Reconfigured Freeway – A has some potential for net negative impacts to EJ populations. No change in access to land use would be required, and a potential transit station at 25th/27th Ave would improve access to transit for EJ populations. However, the increase in roadway capacity has the potential to increase noise pollution in EJ communities adjacent to the freeway. An increase in impervious surface has the potential to increase stormwater runoff within EJ communities. While there is limited potential for relocation based on the mainline improvements, construction of a transit station at 25th/27th Ave may require residential and/or commercial relocation.

The mainline improvements for Reconfigured Freeway – A have low potential for adverse effect to known historic properties and cemeteries, as does the BRT – 1 sub-alternative. There is moderate potential for adverse effect to known or suspected cemeteries in the vicinity of Dale St with BRT – 3. Mainline improvements and BRT – 1 have the potential to impact up to 11 Section 4(f) resources, or up to 12 resources with BRT – 3 (**Figure 30**). No impacts to Section 6(f) resources are anticipated. There is potential for up to two known contaminated sites within the corridor to be impacted, with 71 total sites located within 500 feet of the corridor (**Figure 31**). Mainline improvements and BRT – 1 are unlikely to have right of way impacts or require relocations, however BRT – 3 may result in 1.83 acres of impacts and 10 or more building relocations.

Regarding noise impacts, the project would add additional travel lanes for short segments that currently have three travel lanes. From a stormwater perspective, the project would result in approximately 129.4-129.8 acres of impervious surface (an increase of approximately 15 acres compared to the no build), with more acreage required for sub-alternatives that include transit stations. In terms of air quality, the project meets the definition of a regionally significant project and would not be classified as exempt. Reconfigured Freeway – A has the potential to impact threatened and endangered species through impacts to vegetation along the corridor. Based on NWI mapping, up to two wetlands may be impacted (**Figure 32**).

Figure 30 – Potential Section 4(f) Impacts: Reconfigured Freeway – A

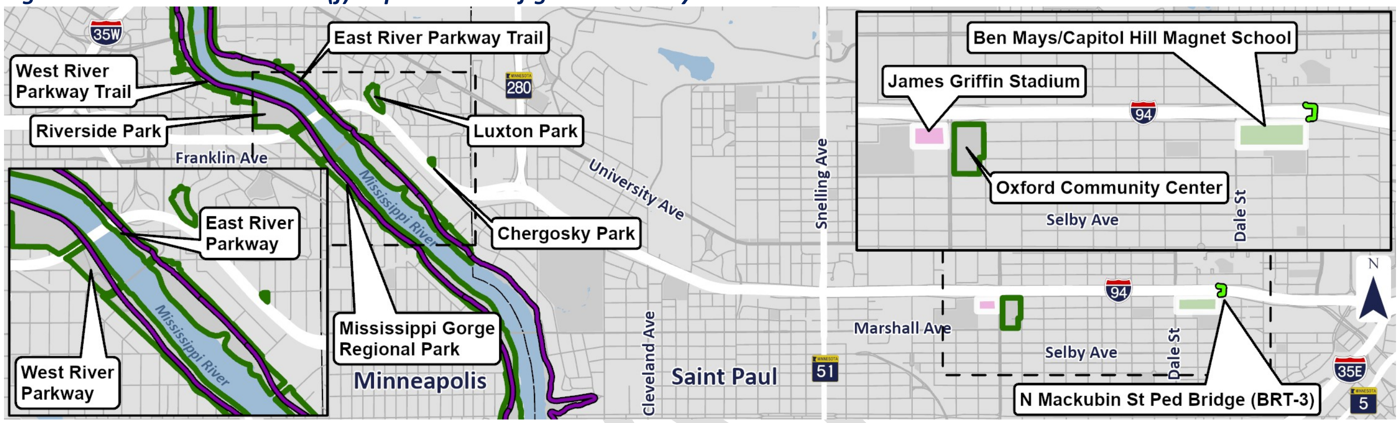
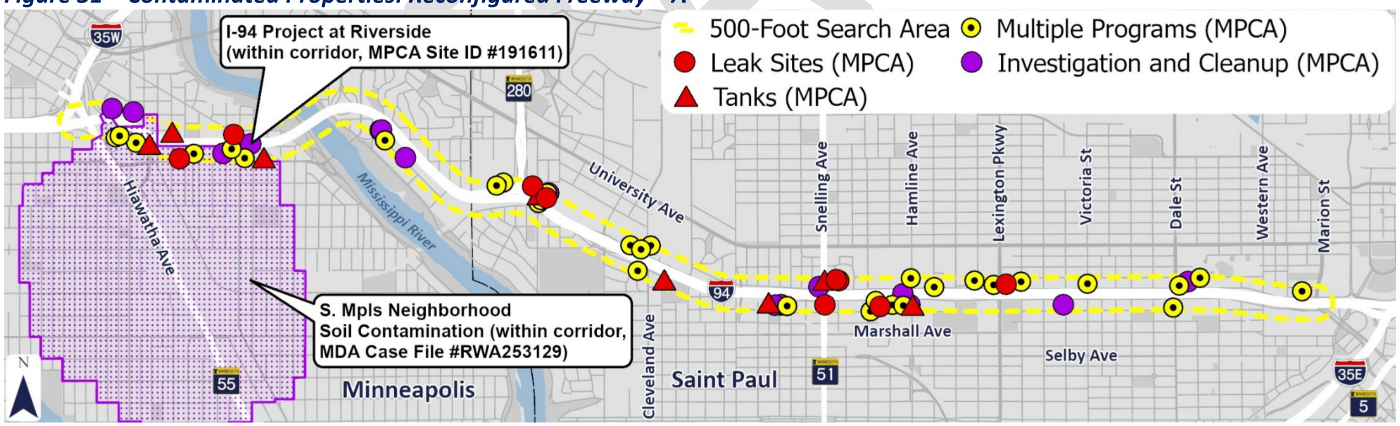
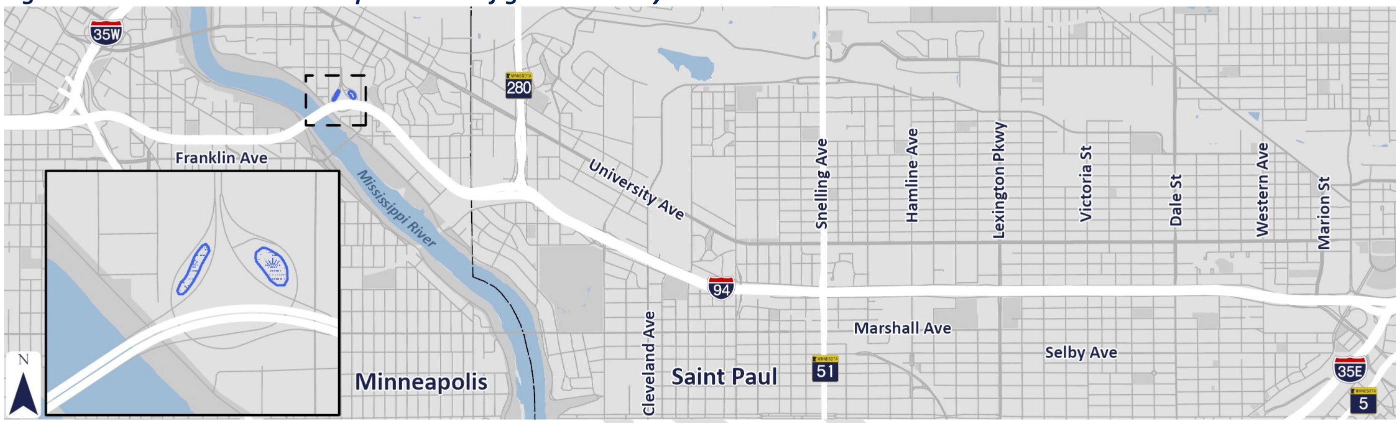


Figure 31 – Contaminated Properties: Reconfigured Freeway – A



11003787

Figure 32 – Potential Wetland Impacts: Reconfigured Freeway – A



5.8.3 Goals & Livability

Sense of Place: There is potential for excess ROW to be used for new features/amenities in select locations and for aesthetic improvements to bridges and structures. Potential BRT stations would decrease excess ROW. Three stations would result in more substantial impacts compared to one station.

Equity: The managed lane and BRT would provide HOV and transit benefits and would likely be considered more beneficial than bus shoulders. The number of potential BRT stations presents a tradeoff between transit access and travel time. There would also be opportunities for walkability/bikeability improvements.

Economic Vitality: The number of jobs accessible in the AM and PM peak for auto would be similar to the no build, and there would be a slight increase for transit.

Public Health and the Environment: Potential for excess right of way to be used to expand green space in the corridor. Potential BRT stations would decrease excess ROW. Three stations would result in more substantial impacts compared to one station.

Connectivity: Facilitates opportunities for locally planned walkability and bikeability improvements along and across the corridor.

5.8.4 Additional Considerations

Reconfigured Freeway – A would result in new construction costs estimated at $XX-XX for the baseline BRT – 0 alternative. The estimated range for BRT – 1 increases to $XX-XX and the estimated range for BRT – 3 increases to $XX-XX. Annual maintenance costs following construction are estimated to range from $XX to $XX.

[Address adopted state and regional plans]

5.8.5 Summary and Conclusion

To be added

5.9 Expanded Freeway – A

5.9.1 Project Needs

5.9.1.1 Walkability and Bikeability

Based on the performance measures identified, Expanded Freeway – A would result in similar outcomes for walkability and bikeability as the no build. This analysis assumed that there would be no change in the structure of the walking and biking network (such as the elimination or relocation of a crossing location) compared to the no build, therefore the distance between crossings and origin-destination performance measures remained constant. There is potential to add new crossings as part of this alternative, which would improve performance.

Project Needs	Walkability and Bikeability
	Safety for People in Motorized Vehicles
	Infrastructure Condition
	Mobility for People in Motorized Vehicles
Social, Economic, and Environmental Impacts	Environmental Justice
	Historic/ Archaeological /Cemetery
	Section 4(f)
	Section 6(f)
	Contaminated Properties
	Right of Way
	Noise
	Water Pollution/ Stormwater
	Air Quality
	Threatened & Endangered Species
	Wetlands
Goals & Livability	Sense of Place
	Equity
	Economic Vitality
	Public Health and the Environment
	Connectivity
Addl. Consid.	Cost
	Maintenance
	Consistency with Adopted State and Regional Plans

Commented [HJ(52]: Is there excess ROW for new features/amenities? Under existing conditions there are 3 lanes in each direction. This scenario has three lanes in each direction plus HOV.

Commented [HJ(53R52]: 5.8.2 indicates an increase in impervious pavement.

Commented [HJ(54]: Is there excess ROW for expanded green space? Under existing conditions there are 3 lanes in each direction. This scenario has three lanes in each direction plus HOV.

Commented [HJ(55R54]: 5.8.2 indicates an increase in impervious pavement.

Commented [BA(56]: Where?

Project Needs	Walkability and Bikeability
	Safety for People in Motorized Vehicles
	Infrastructure Condition
	Mobility for People in Motorized Vehicles
Social, Economic, and Environmental Impacts	Environmental Justice
	Historic/ Archaeological /Cemetery
	Section 4(f)
	Section 6(f)
	Contaminated Properties
	Right of Way
	Noise
	Water Pollution/ Stormwater
	Air Quality
	Threatened & Endangered Species
	Wetlands
Goals & Livability	Sense of Place
	Equity
	Economic Vitality
	Public Health and the Environment
	Connectivity
Addl. Consid.	Cost
	Maintenance
	Consistency with Adopted State and Regional Plans

5.9.1.2 Safety

Based on the expected crash comparison analysis, Expanded Freeway – A would address the number and severity of crashes for people in motorized vehicles (cars, freight, and transit). On the mainline within the logical termini, the expected crash rate for all crashes would be unchanged from the no build. Total expected crashes would be 1.21 crashes/day compared to 1.08 for the no build. This increase in crashes is consistent with the 11% expected increase in VMT on the corridor. The fatal and serious injury crash rate would also be unchanged from the no build. There would be 0.009 expected fatal and serious injury crashes per day, an increase consistent with the 11% expected increase in corridor VMT.

On other roadways within one mile of the logical termini, total expected crashes would decrease slightly to 3.63 crashes/day compared to 3.65 crashes/day with the no build, despite a slight increase in VMT. Expected fatal and serious injury crashes on these roadways would also be reduced slightly to 0.055 compared to 0.056 crashes/day with the no build. Total expected fatal and serious injury crashes/day on the mainline and routes within one mile would decrease compared to the no build.

5.9.1.3 Infrastructure Condition

Expanded Freeway – A would address pavement and bridge condition by removing or replacing the existing infrastructure.

5.9.1.4 Mobility

With Expanded Freeway – A, systemwide VHT and PHT are anticipated to decrease compared to the no build. Mainline speed on the corridor would be similar to the no build (45-55 mph) in the general purpose lanes and may increase to 45-60 mph in the managed lanes. Person throughput in the corridor would increase to 458,000 people/day. VHT and PHT in the interchange areas would increase. Interchange area person throughput would increase to 2,845,000 people/day. Freight travel times in the corridor in the general purpose and managed lanes would be similar to the no build (8-10 minutes). Mean travel time index would decrease to 1.5 for the general purpose lanes and 1.6 for the managed lanes, indicating an improvement in travel time reliability. Regarding connectivity, the alternative would not require addition or removal of any access points to the mainline, however access changes to improve safety or mobility could still be incorporated into the project later in the process. Transit travel times in the corridor would be reduced, ranging from 12-15 minutes depending on the number of BRT stops included. Transit travel time through interchange areas may increase or decrease slightly due to the addition of up to three stops for the proposed BRT service. Mean travel time index for transit would decrease to 1.6, indicating an improvement in transit travel time reliability.

Commented [HJ(57]: Stating that the number and severity of crashes is addressed and then stating an increase in expected fatal and serious injury crashes seems to be in conflict. See comment below.

Commented [HJ(58R57]: The combined total crash rates for mainline and routes within 1 mile on the no build is 4.73; on the expanded freeway it is 4.84 based on the provided table.

Commented [HJ(59]: Understood that the crash rate is the same. However, if there is more traffic on the mainline with the same fatal and serious injury crash rate, then wouldn't the total number of fatal and serious injury crashes increase? Is the slight decrease on other roadways significant enough to decrease the total number of fatal and serious injuries for fewer fatal and serious crashes overall based on increased VMT?

Commented [HJ(60R59]: The combined total crash rates for mainline and routes within 1 mile on the no build is 4.73; on the expanded freeway it is 4.84 based on the provided table.

5.9.2 Social, Economic, and Environmental (SEE) Impacts

Expanded Freeway – A has some potential for net negative impacts to EJ populations. No change in access to land use would be required, and a potential transit station at 25th/27th Ave would improve access to transit for EJ populations. However, the increase in roadway capacity has the potential to increase noise pollution in EJ communities adjacent to the freeway. An increase in impervious surface has the potential to increase stormwater runoff within EJ communities. While there is limited potential for relocation based on the mainline improvements, construction of a transit station at 25th/27th Ave may require residential and/or commercial relocation.

The mainline improvements for Expanded Freeway – A have low potential for adverse effect to known historic properties and moderate potential for impacts to known or suspected cemeteries. There is moderate potential for adverse effect to known or suspected cemeteries in transit station areas with BRT – 1 and BRT – 3. Mainline improvements and BRT – 1 have the potential to impact up to 11 Section 4(f) resources, or up to 12 resources with BRT – 3 (**Figure 33**). No impacts to Section 6(f) resources are anticipated. There is potential for up to two known contaminated sites within the corridor to be impacted, with 71 total sites located within 500 feet of the corridor (**Figure 34**). Mainline improvements and BRT – 1 are unlikely to require relocations, however they may require 2.84 or 2.85 acres of right of way impacts, respectively. BRT – 3 may result in 6.06 acres of impacts and 20 or more building relocations.

Regarding noise impacts, the project would increase the total number of travel lanes in the corridor. From a stormwater perspective, the project would result in approximately 149.8-150.3 acres of impervious surface (an increase of approximately 36 acres compared to the no build), with more acreage required for sub-alternatives that include transit stations. In terms of air quality, the project meets the definition of a regionally significant project and would not be classified as exempt. Expanded Freeway – A has the potential to impact threatened and endangered species through impacts to vegetation along the corridor. Based on NWI mapping, up to two wetlands may be impacted (**Figure 35**).

Project Needs	Walkability and Bikeability
	Safety for People in Motorized Vehicles
	Infrastructure Condition
	Mobility for People in Motorized Vehicles
Social, Economic, and Environmental Impacts	Environmental Justice
	Historic/ Archaeological /Cemetery
	Section 4(f)
	Section 6(f)
	Contaminated Properties
	Right of Way
	Noise
	Water Pollution/ Stormwater
	Air Quality
	Threatened & Endangered Species
	Wetlands
Goals & Livability	Sense of Place
	Equity
	Economic Vitality
	Public Health and the Environment
	Connectivity
Addl. Consid.	Cost
	Maintenance
	Consistency with Adopted State and Regional Plans

Commented [HJ(61]: Speed also impacts roadway noise, as noted in the AASHTO guidance shared in an earlier comment.

Commented [HJ(62]: Does the decrease in vegetation impact the urban heat island effect? Do the increased number of vehicles also impact the urban heat island effect? Should urban heat island impacts be included as part of the EJ assessment for all alternatives?

Commented [HJ(63]: Again, why is noise and stormwater runoff mentioned multiple times in this section in the alternatives?

Figure 33 – Potential Section 4(f) Impacts: Expanded Freeway – A

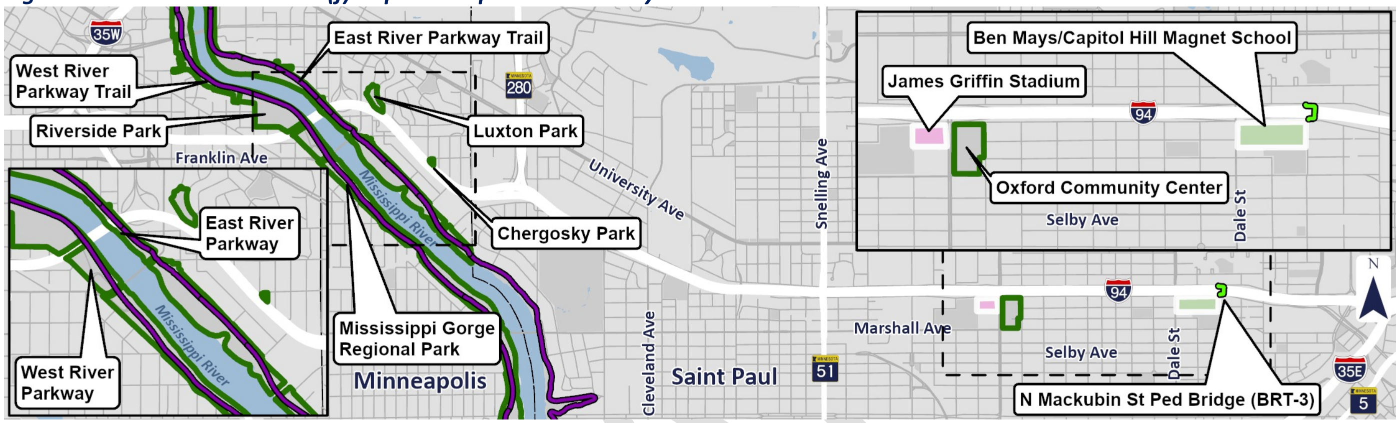


Figure 34 – Contaminated Properties: Expanded Freeway – A

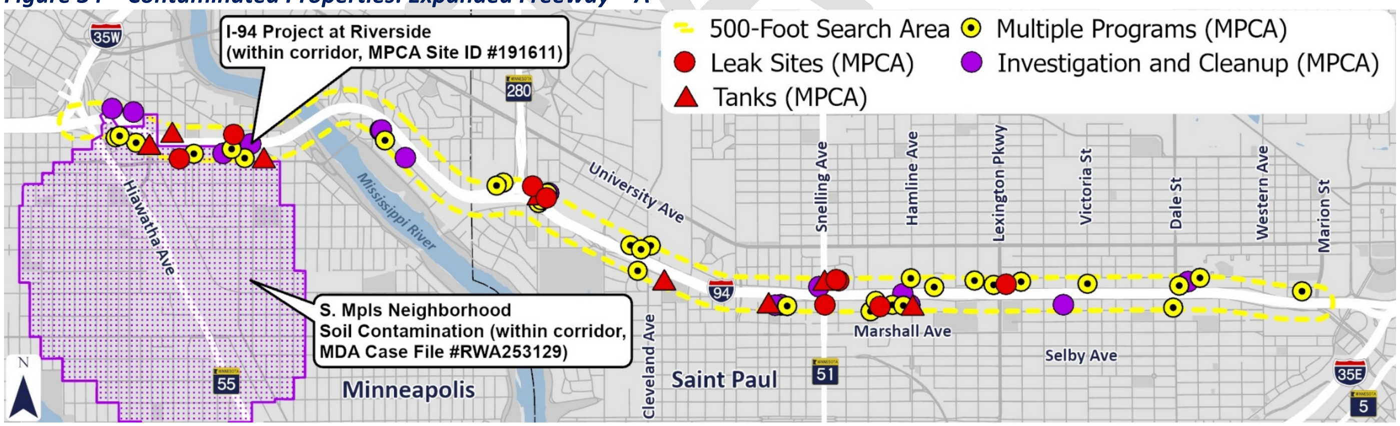
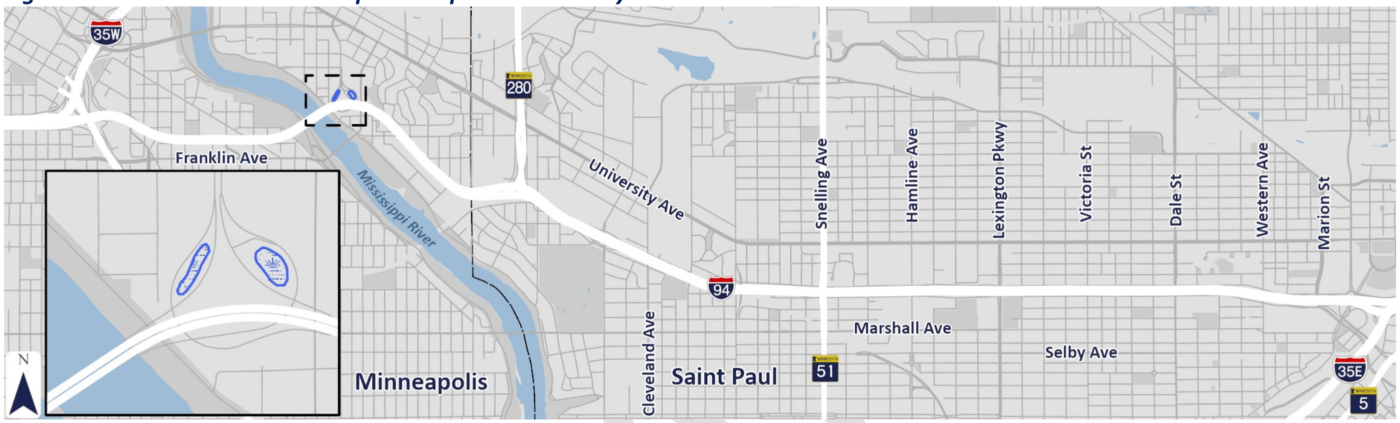


Figure 35 – Potential Wetland Impacts: Expanded Freeway – A



5.9.3 Goals & Livability

Sense of Place: There is potential for excess ROW to be used for new features/amenities in select locations and for aesthetic improvements to bridges and structures. A larger roadway footprint will reduce space available for potential features/amenities. Potential BRT stations would decrease excess ROW. Three stations would result in more substantial impacts compared to one station.

Equity: The managed lane and BRT would provide HOV and transit benefits and would likely be considered more beneficial than bus shoulders. The number of potential BRT stations presents a tradeoff between transit access and travel time. There would also be opportunities for walkability/bikeability improvements.

Economic Vitality: There would be an increase in the number of jobs accessible in the AM peak for auto, as well as a slight increase in the PM peak. There would also be a slight increase for transit.

Public Health and the Environment: Potential for excess right of way to be used to expand green space in the corridor. A larger roadway footprint will reduce potential excess right of way. Potential BRT stations would decrease excess ROW. Three stations would result in more substantial impacts compared to one station.

Connectivity: Facilitates opportunities for locally planned walkability and bikeability improvements along and across the corridor.

5.9.4 Additional Considerations

Expanded Freeway – A would result in new construction costs estimated at $XX-XX for the baseline BRT – 0 alternative. The estimated range for BRT – 1 increases to $XX-XX and the estimated range for BRT – 3 increases to $XX-XX. Annual maintenance costs following construction are estimated to range from $XX to $XX.

[Address adopted state and regional plans]

5.9.5 Summary and Conclusion

To be added

Project Needs	Walkability and Bikeability
	Safety for People in Motorized Vehicles
	Infrastructure Condition
	Mobility for People in Motorized Vehicles
Social, Economic, and Environmental Impacts	Environmental Justice
	Historic/ Archaeological /Cemetery
	Section 4(f)
	Section 6(f)
	Contaminated Properties
	Right of Way
	Noise
	Water Pollution/ Stormwater
	Air Quality
	Threatened & Endangered Species
	Wetlands
Goals & Livability	Sense of Place
	Equity
	Economic Vitality
	Public Health and the Environment
	Connectivity
Addl. Consid.	Cost
	Maintenance
	Consistency with Adopted State and Regional Plans

5.10 Expanded Freeway – B

5.10.1 Project Needs

5.10.1.1 Walkability and Bikeability

Based on the performance measures identified, Expanded Freeway – B would result in similar outcomes for walkability and bikeability as the no build. This analysis assumed that there would be no change in the structure of the walking and biking network (such as the elimination or relocation of a crossing location) compared to the no build, therefore the distance between crossings and origin-destination

Commented [HJ(64]: Is there excess ROW, when the freeway is expanded? The following 2 sentences suggest otherwise.

Commented [HJ(65R64]: Is excess ROW the best phrase? Do you mean there is space on the physical bridges and structures? This text is unclear.

Commented [HJ(66]: How is there potential for expanded green space, when the larger roadway footprint is increasing impervious surfaces significantly?

Commented [HJ(67]: Are there opportunities for walkability and bikeability improvements along the corridor when the ROW of the freeway is expanded? Seems like the potential for this would be decreased.

performance measures remained constant. There is potential to add new crossings as part of this alternative, which would improve performance.

Project Needs	Walkability and Bikeability
	Safety for People in Motorized Vehicles
	Infrastructure Condition
	Mobility for People in Motorized Vehicles
Social, Economic, and Environmental Impacts	Environmental Justice
	Historic/ Archaeological /Cemetery
	Section 4(f)
	Section 6(f)
	Contaminated Properties
	Right of Way
	Noise
	Water Pollution/ Stormwater
	Air Quality
	Threatened & Endangered Species
	Wetlands
Goals & Livability	Sense of Place
	Equity
	Economic Vitality
	Public Health and the Environment
	Connectivity
Addl. Consid.	Cost
	Maintenance
	Consistency with Adopted State and Regional Plans

5.10.1.2 Safety

Based on the expected crash comparison analysis, Expanded Freeway – B would not address the number and severity of crashes for people in motorized vehicles (cars, freight, and transit). On the mainline within the logical termini, the expected crash rate for all crashes would be unchanged from the no build. Total expected crashes would be 1.2 crashes/day compared to 1.08 for the no build. This increase in crashes is consistent with the 11% expected increase in VMT on the corridor. The fatal and serious injury crash rate would also be unchanged from the no build. There would be 0.009 expected fatal and serious injury crashes per day, an increase consistent with the 11% expected increase in corridor VMT.

On other roadways within one mile of the logical termini, total expected crashes would increase slightly to 3.67 crashes/day compared to 3.65 crashes/day with the no build. Expected fatal and serious injury crashes on these roadways would remain similar to the no build at 0.056 crashes/day. Total expected fatal and serious injury crashes/day on the mainline and routes within one mile would increase compared to the no build.

5.10.1.3 Infrastructure Condition

Expanded Freeway – B would address pavement and bridge condition by removing or replacing the existing infrastructure.

5.10.1.4 Mobility

With Expanded Freeway – B, systemwide VHT and PHT are anticipated to increase compared to the no build. Mainline speed on the corridor would be similar to the no build (45-55 mph). Person throughput in the corridor would increase to 452,000 people/day. VHT and PHT in the interchange areas would decrease. Interchange area person throughput would increase to 2,806,000 people/day. Freight travel times in the corridor would be similar to the no build (8-10 minutes). Mean travel time index would decrease to 1.5, indicating an improvement in travel time reliability. Regarding connectivity, the alternative would not require addition or removal of any access points to the mainline, however access changes to improve safety or mobility could still be incorporated into the project later in the process. Transit travel times in the corridor would be reduced to 17 minutes. Transit travel time through interchange areas would be similar to the no build (6 minutes). Mean travel time index for transit would decrease to 1.5, indicating an improvement in transit travel time reliability.

5.10.2 Social, Economic, and Environmental (SEE) Impacts

Expanded Freeway – B has some potential for net negative impacts to EJ populations. No change in access to land use would be required. However, the increase in roadway capacity has the potential to increase noise pollution in EJ communities adjacent to the freeway. An increase in impervious surface has the potential to increase stormwater runoff within EJ communities. There is limited potential for relocation based on the mainline improvements.

The mainline improvements for Expanded Freeway – B have low potential for adverse effect to known historic properties and moderate potential for impacts to known or suspected cemeteries. Mainline improvements have the potential to impact up to 11 Section 4(f) resources (**Figure 36**). No impacts to Section 6(f) resources are anticipated. There is potential for up to two known contaminated sites within the corridor to be impacted, with 71 total sites located within 500 feet of the corridor (**Figure 37**). Mainline improvements are unlikely to require relocations, however they may require 2.84 acres of right of way impacts.

Regarding noise impacts, the project would increase the total number of travel lanes in the corridor. From a stormwater perspective, the project would result in approximately 146 acres of impervious surface (an increase of 32 acres compared to the no build). In terms of air quality, the project meets the definition of a regionally significant project and would not be classified as exempt. Expanded Freeway – B has the potential to impact threatened and endangered species through impacts to vegetation along the corridor. Based on NWI mapping, up to two wetlands may be impacted (**Figure 38**).

5.10.3 Goals & Livability

Sense of Place: There is potential for excess ROW to be used for new features/amenities in select locations and for aesthetic improvements to bridges and structures. A larger roadway footprint will reduce space available for potential features/amenities.

Equity: Bus shoulders between the downtowns would be restored, providing a transit benefit. There would also be opportunities for walkability/bikeability improvements.

Economic Vitality: There would be an increase in the number of jobs accessible in the AM and PM peak for auto, as well as a slight increase for transit.

Public Health and the Environment: Potential for excess right of way to be used to expand green space in the corridor. A larger roadway footprint will reduce potential excess right of way.

Connectivity: Facilitates opportunities for locally planned walkability and bikeability improvements along and across the corridor.

Project Needs	Walkability and Bikeability
	Safety for People in Motorized Vehicles
	Infrastructure Condition
	Mobility for People in Motorized Vehicles
Social, Economic, and Environmental Impacts	Environmental Justice
	Historic/ Archaeological /Cemetery
	Section 4(f)
	Section 6(f)
	Contaminated Properties
	Right of Way
	Noise
	Water Pollution/ Stormwater
	Air Quality
	Threatened & Endangered Species
	Wetlands
Goals & Livability	Sense of Place
	Equity
	Economic Vitality
	Public Health and the Environment
	Connectivity
Addl. Consid.	Cost
	Maintenance
	Consistency with Adopted State and Regional Plans

5.10.4 Additional Considerations

Expanded Freeway – B would result in new construction costs estimated at $XX-XX. Annual maintenance costs following construction are estimated to range from $XX to $XX.

[Address adopted state and regional plans]

Commented [HJ(68]: Speed also impacts roadway noise, as noted in the AASHTO guidance shared in an earlier comment.

Commented [BA(69]: What does this mean for noise? Assuming increased noise impacts?

Commented [HJ(70]: Is excess ROW the best phrase? Do you mean there is space on bridges and structures? This text is unclear.

Commented [BA(71]: Where? I'm guess no opportunities east-west along the corridor with this alternative.

Commented [HJ(72]: How is there potential for expanded green space, when the larger roadway footprint is increasing impervious surfaces significantly?

Commented [BA(73]: Where?

5.10.5 Summary and Conclusion

To be added

Project Needs	Walkability and Bikeability
	Safety for People in Motorized Vehicles
	Infrastructure Condition
	Mobility for People in Motorized Vehicles
Social, Economic, and Environmental Impacts	Environmental Justice
	Historic/ Archaeological /Cemetery
	Section 4(f)
	Section 6(f)
	Contaminated Properties
	Right of Way
	Noise
	Water Pollution/ Stormwater
	Air Quality
	Threatened & Endangered Species
	Wetlands
Goals & Livability	Sense of Place
	Equity
	Economic Vitality
	Public Health and the Environment
	Connectivity
Addl. Consid.	Cost
	Maintenance
	Consistency with Adopted State and Regional Plans

Figure 36 – Potential Section 4(f) Impacts: Expanded Freeway – B

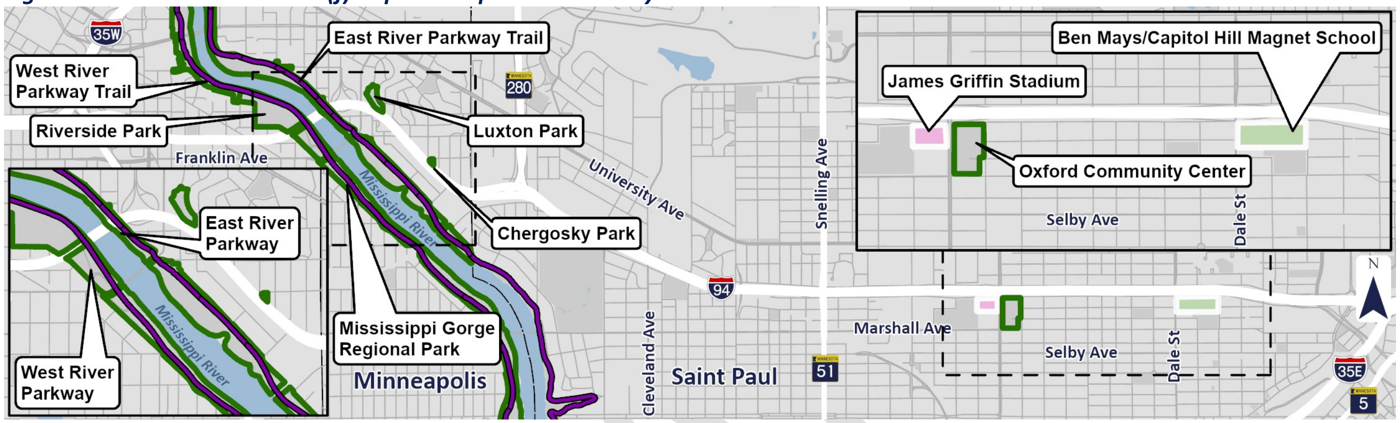
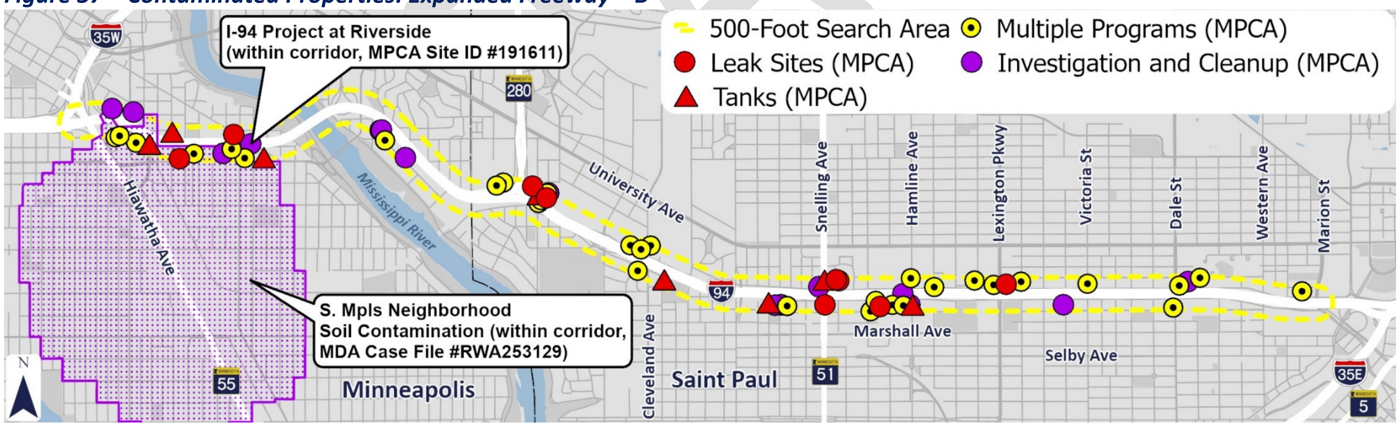
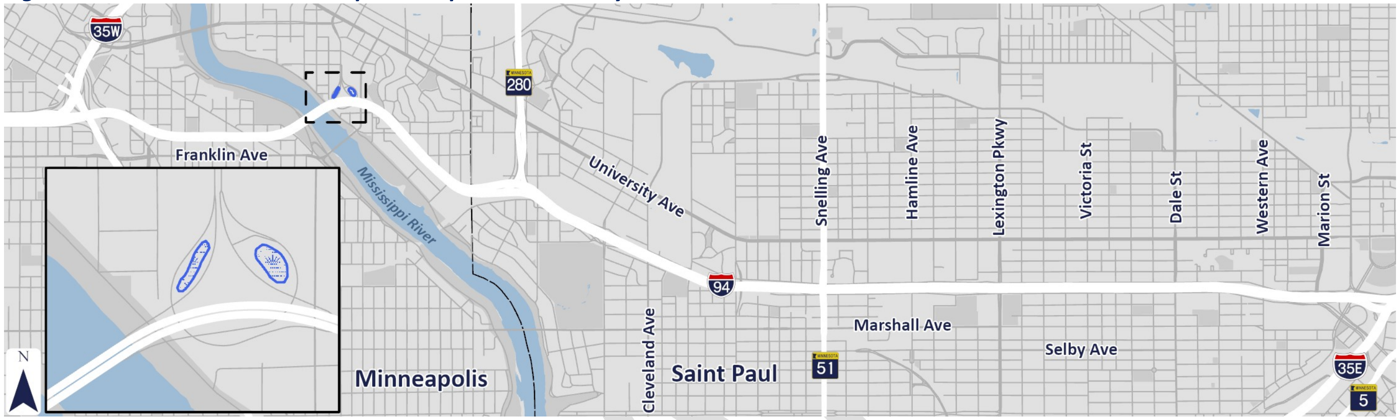


Figure 37 – Contaminated Properties: Expanded Freeway – B



11003798

Figure 38 – Potential Wetland Impacts: Expanded Freeway – B



6 Summary of Scoping Evaluation Recommendations

Recommendations regarding alternative advancement to the Tier 1 EIS are listed in **Table 7** along with a brief summary of the rationale for their retention or dismissal. **Table 8** outlines key outcomes from the alternatives evaluation that informed these findings. This section will be updated as alternatives are refined and preliminary evaluations are conducted.

Table 7 – Mainline Alternatives to be Studied in Tier 1 EIS

Alternative	Tier 1 EIS Recommendation	Rationale
General Maintenance (No Build)	Retain for study	Baseline alternative – required for analysis.
Maintenance – A	Do not study - eliminate	Does not meet purpose and need.
Maintenance – B		
At-Grade – A		
At-Grade – B		
Local/Regional Roadways – A		
Reduced Freeway – A		
Reconfigured Freeway – A		
Expanded Freeway – A		
Expanded Freeway – B		

Table 8 – Summary of Mainline Scoping Alternatives Evaluation Results
[Insert PDF]

Commented [BA(74]: This will be a helpful chart. Will it indicate results with a yes/no? Check mark? A grade?

DRAFT | Pre-Decisional | 2/13/2024

Alternative	Project Needs				Social, Economic, and Environmental (SEE) Impacts											Goals & Livability					Additional Considerations			Tier 1 EIS Recommendation	Rationale
	Walkability and Bikeability	Safety for People in Motorized Vehicles	Infrastructure Condition	Mobility for People in Motorized Vehicles	EJ	Historic/ Arch./ Cemetery	Section 4(f)	Section 6(f)	Contam. Properties	Right of Way	Noise	Water Pollution/ Stormwater	Air Quality	T & E Species	Wetlands	Sense of Place	Equity	Economic Vitality	Public Health and the Environment	Connectivity	Cost	Maint.	Consistency with Adopted State and Regional Plans		
	Does the alternative address the project needs?				Does the alternative avoid or minimize impacts to social, economic, and environmental resources?											Does the alternative advance project goals?									
General Maintenance (No Build)																									
Maintenance - A																									
Maintenance - B																									
At-Grade - A																									
At-Grade - B																									
Local/Regional Roadways - A																									
Reduced Freeway - A																									
BRT - 0																									
BRT - 1																									
BRT - 3																									
Reconfigured Freeway - A																									
BRT - 0																									
BRT - 1																									
BRT - 3																									
Expanded Freeway - A																									
BRT - 0																									
BRT - 1																									
BRT - 3																									
Expanded Freeway - B																									

7 Appendices

Appendix XX – Evaluation Criteria Memo

Appendix XX – Alternative Safety Analysis Memo

Public Works
Community Planning and Economic Development
505 4th Avenue South
Minneapolis, MN 55415

www.minneapolismn.gov

May 3, 2024

Project Manager/Director
Rethinking 94 Project Office

To Whom it May Concern,

The City of Minneapolis staff from the Departments of Public Works and Community Planning and Economic Development hereby submit the attached comments on the working draft of the "Rethinking I-94: Scoping Alternatives Evaluation" to the project office as we continue to work through the scoping and Tier I EIS process. The statements provided below summarize overall comments on the working draft reviewed. Staff are happy to answer questions on any of these if necessary. We request that the project office appropriately document and respond to comments and feedback provided by City staff to MnDOT so that we understand how our comments and feedback are used.

I-94 MAINLINE PRIORITY

The City of Minneapolis continues to prioritize person throughput in the corridor versus vehicle throughput. It is not possible for the region to build its way out of congestion; Minneapolis does not support the construction of additional lane capacity[1].

SUMMARY OF COMMENTS

The following are summaries of comments provided in the working draft document but are not an exhaustive list of comments provided. The comments noted in the working draft should be utilized to access all provided comments from City staff.

1. Overall:
    a. Minneapolis requests to see the revised "Rethinking I-94: Scoping Alternatives Evaluation" with opportunity to review and comment.
    b. There is a lot of data provided in the spreadsheets. Many of the alternatives have few differences in the metrics evaluated to date. Recommend narrowing in on the differences between the alternatives to have more productive conversations.
    c. Recommend evaluating the BRT sub-alternatives separately.
    d. The metric for air pollution does not consider the degree of impact locally. Recommend refining metrics for air pollution.

[1] Minneapolis 2040 Policy 17 – Complete Streets

e. There are instances of concepts being introduced before text explaining the concept is included. As an example of this, evaluation criteria are discussed on page 14 before explaining the evaluation process on page 15.
f. Please provide text or link to clarify what is included as part of "transportation objectives consistent with adopted state and regional (Met Council) plans".
g. "Fatal flaws" is mentioned briefly and is not clearly defined. What constitutes as a fatal flaw should be defined in greater detail, particularly if used as a basis to remove an alternative.
h. "Additional Considerations" are mentioned early in the document but not explained until further on.
i. There are so many measurements for vehicular safety and mobility during this phase, while bike/walk safety and comfort won't be explored until the next phase. This does not seem balanced. Could the potential for improving bike/walk safety and comfort be assessed during this phase?
j. Environmental Justice (EJ) qualitative assessment: Recommend editing the qualitative assessments to read "Does the alternative ~~provide~~ increase access to economic opportunities..." and "Does the alternative ~~have the potential~~ maintain the existing levels, have the potential to reduce exposure to water and noise pollution, or have the potential to increase exposure to water and noise pollution…".
k. Sense of Place evaluation criteria: Not all green/gathering spaces are created equal. Depending on how they are sited and designed, places located immediately adjacent to a highway may not be comfortable to use due to noise and pollution.
l. According to AASHTO's Center for Environmental Excellence, with sources cited to FHWA, speed, traffic volumes, and freight traffic all impact noise. The decrease or increase of these in the alternatives are not acknowledged as having reduced impacts on noise.
m. Does every alternative have an opportunity or space for noise mitigation, such as noise walls?
n. Does the decrease in vegetation impact the urban heat island effect? Do the increased number of vehicles also impact the urban heat island effect? Should urban heat island impacts be included as part of the EJ assessment for all alternatives?
o. Access to jobs as the sole metric to determine economic vitality is too limited. Recommend expanding metrics to evaluate economic vitality.
p. If there is no change to an alternative compared to the no build, then why are alternatives getting classified as green in the table? The evaluation would benefit from a 4th category to show no change compared to no build. Why is no build classified as green when there is no change to no build?
q. In the Mobility section for each alternative, "person throughput" needs to be clarified whether this number includes all modes or just vehicles.
r. In Mobility, when numbers (minutes for travel times, acres for impervious surfaces, etc) are stated, please also add how this compares to existing numbers.

2. At Grade A and B
   a. What is a comparable existing roadway facility to the proposed At-Grade A and B Alternatives? Recommend providing a comparison in the document for clarity with public understanding of what these alternatives might look like.
   b. Draft states "Current Interchanges would be removed." Does this assume removal of interchanges with 280 or I-35? Also, the public may not understand the difference between "interchange" and "intersection". Please clarify.

c. The Minneapolis Fire Department prefers At-Grade alternative B over A, because the locations of the transit lanes on each side of the roadway may make it easier to access an incident compared to the center running lanes.
d. "Nonmotorized conflict points." One perspective of this may be conflict points, while another perspective may be connectivity. To improve walkability and bikeability, generally this requires the addition of pedestrian and bicycle facilities. This process inherently creates new conflict points in an urban environment, where the majority of pedestrian and bicycle facilities must cross intersections. This will be a hard sell to the public to state that new bicycle and pedestrian facilities are inherently less walkable or bikeable due to new conflict points.
e. The inclusion of new dedicated biking and walking facilities along the project corridor are not included as part of the evaluation, rating the corridor unreasonably low considering these improvements.
f. Are crash rates for At-Grade A and B considering new crossings as part of the evaluation? If so, then walkability and bikeability should also consider the improved network connectivity of these new crossings.
g. The rate of fatal and serious injuries typically decrease at lower speeds. For example, this table from the Federal Motor Carrier Safety Administration demonstrates the increase fatal crash rates of large trucks as speed increases. Please clarify how fatal and serious injury crashes will increase at lower speeds.

3. Local/Regional Roadways
   a. Minneapolis Fire Department stated concerns with limited access and ability to respond in an emergency. Asked if limited emergency access locations may be incorporated into this alternative.
   b. Concern from Minneapolis Fire Department that 2 lanes in each direction may not be sufficient and result in traffic backing up, limiting access by fire trucks.
   c. Walkability and Bikeability area listed as mixed in the document but coded as green in the spreadsheet.
4. Reduced Freeway A
   a. While it is clear that the roadway footprint is being narrowed, is the ROW also being narrowed? Where would there be space to add green/gathering places if the ROW isn't being narrowed?
5. Reconfigured and Expanded Freeway A and B
   a. The City is opposed to an expanded freeway option, as an expanded freeway option is not consistent with our climate and transportation related goals, but we understand the need to evaluate as an alternative.
   b. These alternatives state opportunities for amenities/features and green space and then state there is reduced ROW, along with increased impervious pavement. Please clarify.
   c. Are there opportunities for walkability and bikeability improvements along the corridor when the ROW of the freeway is expanded? Seems like the potential for improved walkability and bikeability along the corridor would be decreased.
   d. Expanded Freeway A. The combined total crash rates for mainline and routes within 1 mile on the no build is 4.73; on the expanded freeway it is 4.84 based on the provided table. The document and tables inaccurately reflect a decrease in the total combined crash rate when the data provided indicates an increase.

AGING INFRASTRUCTURE AND NEW OPPORTUNITIES

As the evaluation of this project is finalized, the City of Minneapolis will be looking to seize opportunities presented by the reconstruction of aging infrastructure that was designed and constructed in a past era and under much different engineering guidance than is currently used. Infrastructure reconstruction is the best opportunity to reconfigure and realign roadways to use less space and move more people in more efficient and sustainable ways. This is also a great time to look for new opportunities related to redeveloping properties along the corridor as infrastructure is improved but also to create new space for development in the form of emerging concepts such as land bridges. We also recommend that MnDOT consider the innovative use of rights of way under existing bridges, flyovers and other structures to better connect areas of the city divided by the freeway system; and look for opportunities to engage in reparative investments in neighborhoods most impacted by the freeway system.

Sincerely,

Jenifer Hager
Director of Transportation Planning and Programming
Minneapolis Public Works

Meg McMahan
Director of Planning
Minneapolis Community Planning and Economic Development

CC:

Toddrick Barnette
Community Safety Commissioner
Office of Community Safety

Jared Jeffries
Chief of Staff
Office of Community Safety

Bryan Tyner
Fire Chief
Minneapolis Fire Department

Wesley VanVickle
Assistant Fire Chief
Minneapolis Fire Department

Sean Olson
Deputy Fire Chief
Minneapolis Fire Department