Appendix A-3: Traffic Operations Technical Memorandum and Interstate Access Modification Request Process Summary

Appendix A-3: Traffic Operations Technical Memorandum and Interstate Access Modification Request Process Summary are companion documents to the Supplemental Final Environmental Impact Statement containing Chapter 3 (Transportation). Metropolitan Council and the United States Department of Transportation - Federal Transit Administration are committed to ensuring that information is available in appropriate alternative formats to meet the requirements of persons who have a disability. If you require an alternative version of this file, please contact FTAWebAccessibility@dot.gov.

To request special accommodations, contact Kaja Vang, Community Outreach Coordinator, by phone at 612-373-3918 or by email at Kaja.Vang@metrotransit.org.

Documents include:

- Traffic Operations Technical Memorandum March 2025
- Interstate Access Modification Request Process Summary

The following documents were published with the Supplemental Draft Environmental Impact Statement and are available online at https://metrocouncil.org/Transportation/Projects/Light-Rail-Projects/METRO-Blue-Line-Extension/Publications-And-Resources/Environmental/SDEIS/BLE_SDEIS_Appendix-A-3-Traffic-and-Aviation-Docume.aspx:

- Crystal Airport Runway Protection Zone Technical Memorandum
- Crystal Airport Runway Protection Zone Exhibits
- Crystal Airport (MIC) Runway Protection Zone FAA Correspondence
- Crystal Airport MnDOT Safety Zones and Clear Zones Exhibit

Appendix A-3: Interstate Access Modification Request Process Summary

This IAMR summary provides additional details about the process for the Supplemental Final EIS. Attachments in this document include exhibits to indicate the sphere of influence of the interchange/areas that FHWA would be adopting in the Supplemental Final EIS.

Introduction

An Interstate System access change request needs to address the appropriate issues and provide the information necessary to allow FHWA to make an informed decision considering the potential consequences of a change in access. The requirements have been recently updated through the rulemaking process and can be found in 23 USC §§ 109(a) and (b) and 111. These rules were effective as of December 9, 2024.

FHWA is responsible for the Interstate System. The Interstate System is a critical element of the surface transportation system, providing a network of controlled access freeways that facilitate the distribution of virtually all goods and services across the United States. The Interstate System influences the mobility and safety of people and goods by providing access to local highways and networks of public streets. As a result, it is in the national interest to preserve and enhance the Interstate System to meet the needs of the surface transportation system of the United States for the 21st Century.[1]

FHWA's Policy on Access to the Interstate System provides the requirements for the justification, modification, and documentation necessary to make proposed changes in access to the Interstate System. This policy also facilitates decision-making regarding proposed changes in access to the Interstate System in a manner that considers and is consistent with the vision, goals, and long-range transportation plans of a metropolitan area, region, and state. All new or modified points of access must be approved by FHWA and developed in accordance with federal laws and regulations (as specified in 23 USC §§ 109 and 111, and 49 USC § 322).[2]

Level of IAR/IAMR

Level 1: Some access requests require review and approval from FHWA Headquarters in Washington, D.C. These include new freeway-to-freeway interchanges, major modifications of a freeway-to-freeway interchange, and new partial interchanges or new ramps to/from continuous frontage roads that create a partial interchange. Because both the FHWA Minnesota Division Office and Headquarters review the document, this is a longer process.

Level 2: These access requests are approved in the FHWA Minnesota Division Office and do not require FHWA Headquarters approval. These include new freeway-to-crossroad interchanges, modifications of existing freeway-to-crossroad interchanges, completion of basic movements at a partial interchange, abandonment of ramps or interchanges (unless creating a partial interchange), capacity improvements on the Interstate or at an interchange, and safety projects that may impact operations of the Interstate or an interchange.

Level 3: In some cases, a project makes minor modifications to the Interstate or interchange (including ramp terminals or crossroad) that do not negatively affect operations of the Interstate. These types of modifications do not require a full Interstate Access Request (IAR)/IAMR, as outlined in Step 23 below.

Project Levels

The Project includes:

- Level 2 Request for I-94 at N 21st Ave/W Broadway Ave (Exit 230) and 17th Ave N/Washington Ave N (Exit 229) in the City of Minneapolis
    - The existing interchange between I-94 and W Broadway Ave would be modified as part of the Project to create one new ramp terminal with N 21st Ave for the eastbound off-ramp. N 21st Ave

would be extended over I-94, intersecting with Washington Ave N with this interchange modification. The extension of N 21st Ave would facilitate the light rail connection over I-94 without burdening the operations of W Broadway Ave at Washington Ave N and the eastbound ramp terminal with W Broadway Ave.

- The existing ramp operations for the westbound off-ramp south of W Broadway Ave and the westbound on-ramp north of W Broadway Ave would not be modified or impacted with this interchange modification. The eastbound off-ramp length would not be decreased with this modification either.
- The interchange modification would introduce a signal-controlled ramp terminal between the eastbound I-94 off-ramp and N 21st Ave. The signal would be coordinated with the eastbound ramp terminal signal at W Broadway Ave. This coordination would control the operations of the LRT movements as well as any queuing on the segment of the ramp between the W Broadway Ave and N 21st Ave terminals. Furthermore, this intersection would be designed in a way that prohibits wrong way entry movements from N 21st Ave onto the eastbound off-ramp terminal.
- Eastbound and westbound merge and diverge points with I-94 would not be modified with the Project.

- Level 3 Request for I-94/Interstate 694 (I-694) at Bottineau Boulevard (CSAH 81 referred to as CR 81 in the Supplemental Final EIS) (Exit 31) in the City of Crystal
  - The existing interchange between I-94/I-694 at Bottineau Boulevard (CSAH 81) would be modified with the installation of the Project through this interchange. Improvements to the existing eastbound and westbound ramp terminals include reconstruction to accommodate the light rail track alignment and supportive signal operations for LRT preemption. No lane reductions at the ramp terminals are planned at either of the ramp terminal signals, nor would there be a reduction in the operational performance of the intersections.
  - The existing eastbound and westbound merge and diverge points with I-94/I-694 would not be modified with the Project. No major operational or capacity changes are envisioned at this interchange.

The IAR Process includes satisfying seven policy points, two for interstate access and five for the NEPA evaluation[3] Each policy point is summarized below along with its applicability to the Project. This project proposes to modify the existing interstate system and so is developing an IAMR, which will be developed and coordinated with FHWA to summarize the review and analysis of the interstate access policy points for the Project.

Interstate Access Policy Points

1. *An operational and safety analysis has concluded that the proposed change in access does not have a significant adverse impact on the safety and operation of the Interstate facility (which includes mainline lanes, existing, new, or modified ramps, and ramp intersections with crossroad) or on the local street network based on both the current and the planned future traffic projections. The analysis should, particularly in urbanized areas, include at least the first adjacent existing or proposed interchange on either side of the proposed change in access…. The crossroads and the local street network, to at least the first major intersection on either side of the proposed change in access, should be included in this analysis to the extent necessary to fully evaluate the safety and operational impacts that the proposed change in access and other transportation improvements may have on the local street network…. Requests for a proposed change in access should include a description and assessment of the impacts and ability of the proposed changes to safely and efficiently collect, distribute, and accommodate traffic on the Interstate facility, ramps, intersection of ramps with crossroad, and local street network…. Each request should also include a conceptual plan of the type and location of the signs proposed to support each design alternative….*

To address policy point 1, an operation and safety analysis has been performed for the proposed modifications to the existing interchanges. The analysis, which was developed using methodologies and practices contained in the 7th edition of the Transportation Research Board's *Highway Capacity Manual*, indicates that the alternative proposed either provides improved safety and operations or maintains existing safety and operations at the ramp terminal intersections and on the arterial system. The addition of a new crossing over I-94 at N 21st Ave, parallel to W Broadway Ave, would improve mobility for transit, bike, and pedestrian modes enhancing the mobility spectrum. The Project is not expected to create major queueing, operational, or safety issues on the interstate, as described below.

I-94 at N 21st Ave/W Broadway Ave and Washington Ave N/17th Ave N

While the Project proposes the creation of a new eastbound off-ramp terminal with N 21st Ave, the Project would not modify or change the existing eastbound and westbound merge and diverge points with I-94 for Exit 230 or 229. Operational impacts to I-94 are not projected to occur with this Project because there are no modifications to the merge/diverge points, the length of the ramps, or the taper lengths, nor are there major changes to any of the ramp terminal operations. It is likely that operational benefits would be realized, particularly along W Broadway Ave at Washington Ave N and the eastbound on/off-ramp terminal, with the improved coordination from the updated signal timing and extension of N 21st Ave. The extension would allow local trips to move to Washington Ave N without using W Broadway Ave. This adjustment of volume would allow for better traffic responsive timing along the W Broadway Ave corridor, thus benefiting interchange operations. The addition of the eastbound off-ramp terminal and modification at Exit 229 are not projected to increase queues that would impact mainline I-94 operations.

I-94/I-694 at Bottineau Boulevard (CSAH 81)

The Project would modify the alignment of geometry at the existing Exit 31 eastbound and westbound ramp terminals but would not reduce capacity at these locations. Furthermore, the Project would not modify or adjust the eastbound and westbound ramp merge and diverge points, gore points, taper lengths, or ramp lengths. Signal preemption of the LRT operations would be coordinated with vehicular movements and show no major operational or capacity impacts to the ramp terminals. As such, queues from the ramp terminals are not projected to increase significantly or impact the mainline operations of I-94. The Level 3 modification at this interchange with I-94 is not projected to significantly impact mainline operations.

2. *The proposed access connects to a public road only and will provide for all traffic movements. Less than "full interchanges" may be considered on a case-by-case basis for applications requiring special access, such as managed lanes (e.g., transit or high occupancy vehicle and high occupancy toll lanes) or park and ride lots. The proposed access will be designed to meet or exceed current standards…. In rare instances where all basic movements are not provided by the proposed design, the report should include a full-interchange option with a comparison of the operational and safety analyses to the partial-interchange option. The report should also include the mitigation proposed to compensate for the missing movements, including wayfinding signage, impacts on local intersections, mitigation of driver expectation leading to wrong-way movements on ramps, etc. The report should describe whether future provision of a full interchange is precluded by the proposed design.*

   The proposed Project improvements are located along publicly owned infrastructure and connect to publicly owned infrastructure. Bottineau Blvd (CR 81) is listed as an A-Minor Augmentor/A-Minor Expander and W Broadway Ave (CR 81) is listed as an A-Minor Augmentor in the Council's Functional Classification System map. A copy of the Functional Classification System map can be found online at https://giswebsite.metc.state.mn.us/mapgallery/pdfs/large_reference_fun_class.pdf. All existing and proposed traffic movements on and off of I-94/I-694 and I-94 would be accommodated and would be designed to meet or exceed current standards. Refer to Appendix A-3 in this Supplemental Final EIS for a traffic analysis summary.

NEPA Policy Points

1. *The need being addressed by the request cannot be adequately satisfied by existing interchanges to the Interstate, and/or local roads and streets in the corridor can neither provide the desired access, nor can they be reasonably improved (such as access control along the surface streets, improving traffic control, modifying ramp terminals and intersections, adding turn bays or lengthening storage) to satisfactorily accommodate the design-year traffic demands….*

   The proposed exit ramp modifications do not fundamentally change the function or operation of the Interstate or the affected ramps. The proposed changes are minor reconfigurations of the existing elements. At W Broadway Ave, the addition of a new N 21st Ave bridge crossing of I-94 would be a functional enhancement of the existing ramps by supplementing the existing congested W Broadway Ave bridge crossing over I-94. The N 21st Ave bridge would provide LRT access over I-94, and the modifications to the length of the westbound off-ramp would not impede the integrity of the primary function of the Interstate System. The Interstate facility I-94 westbound off-ramp would terminate at the intersection with N 21st Ave and would not become part of the local circulation system. The Interstate is to be maintained as the main regional and inter-state highway it was intended to be. All reasonable measures must be taken to provide local access and mobility by means of the non-Interstate network. No additional or possible future roads or streets are proposed as part of the Project in the vicinity of the Interstate facility (I-94) for connections to the existing adjacent interchange ramps. The engineering design team evaluated alternatives to the proposed modification in coordination with FHWA over the course of 2024 to address this policy point.

2. *The need being addressed by the request cannot be adequately satisfied by reasonable transportation system management (TSM) (such as ramp metering, mass transit, and High Occupancy Vehicle facilities), geometric design, and alternative improvements to the Interstate without the proposed change(s) in access….*

   The proposed modifications would not fundamentally change the function or operation of the Interstate or the affected ramps. The proposed changes are associated with a planned high-capacity transit line intended to help manage regional travel demand.

3. *The proposal considers and is consistent with local and regional land use and transportation plans. Prior to receiving final approval, all requests for new or revised access must be included in an adopted Metropolitan Transportation Plan, in the adopted Statewide or Metropolitan Transportation Improvement Program (STIP or TIP), and the Congestion Management Process within transportation management areas, as appropriate, and as specified in [23 USC § 134], and transportation conformity requirements of [23 USC § 101] and [42 USC §§ 7401-7671q].*

   The proposed changes are associated with a planned high-capacity transit line intended to help manage regional travel demand. The transit line is the fourth leg and final build out of the regional transit plan for LRT. See Chapter 3, Section 3.1 in this Supplemental Final EIS for additional information about the regional transit system. The Council's Transportation Policy Plan will be updated to include the Project for its *Imagine 2050* plan.

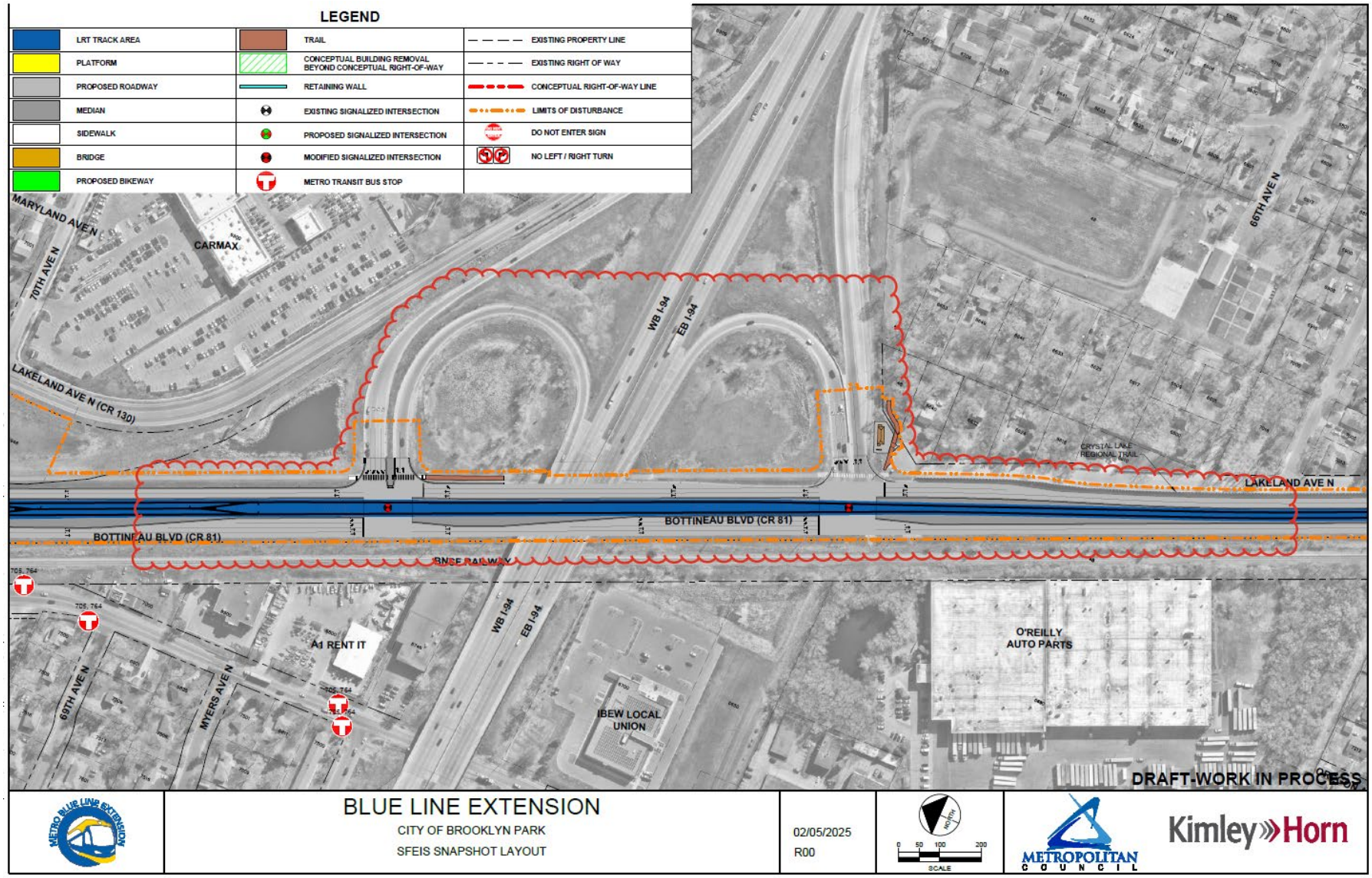
4. *In corridors where the potential exists for future multiple interchange additions, a comprehensive corridor or network study must accompany all requests for new or revised access with recommendations that address all the proposed and desired access changes within the context of a longer-range system or network plan….*

   MnDOT does not have any new interchanges planned in the vicinity of the Project that have been evaluated in this IAMR.

5. *When a new or revised access point is due to a new, expanded, or substantial change in current or planned future development or land use, requests must demonstrate appropriate coordination has occurred between the development and any proposed transportation system improvements…. The request must describe the commitments agreed upon to assure adequate collection and dispersion of the traffic resulting from the development with the adjoining local street network and Interstate access point….*

   The proposed changes are associated with a planned high-capacity transit line intended to help manage regional travel demand. Land use compatibility is presented in Chapter 4, Section 4.1.2.4 in this Supplemental Final EIS for the City of Minneapolis. Chapter 3, Section 3.1 in this Supplemental Final EIS presents the ridership demand for the Project. The Interstate System is preserved with the westbound off-ramp length reduction and continues to serve the public and maintain the essential function of this important highway network.

Attachments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WB I-94
EB I-94
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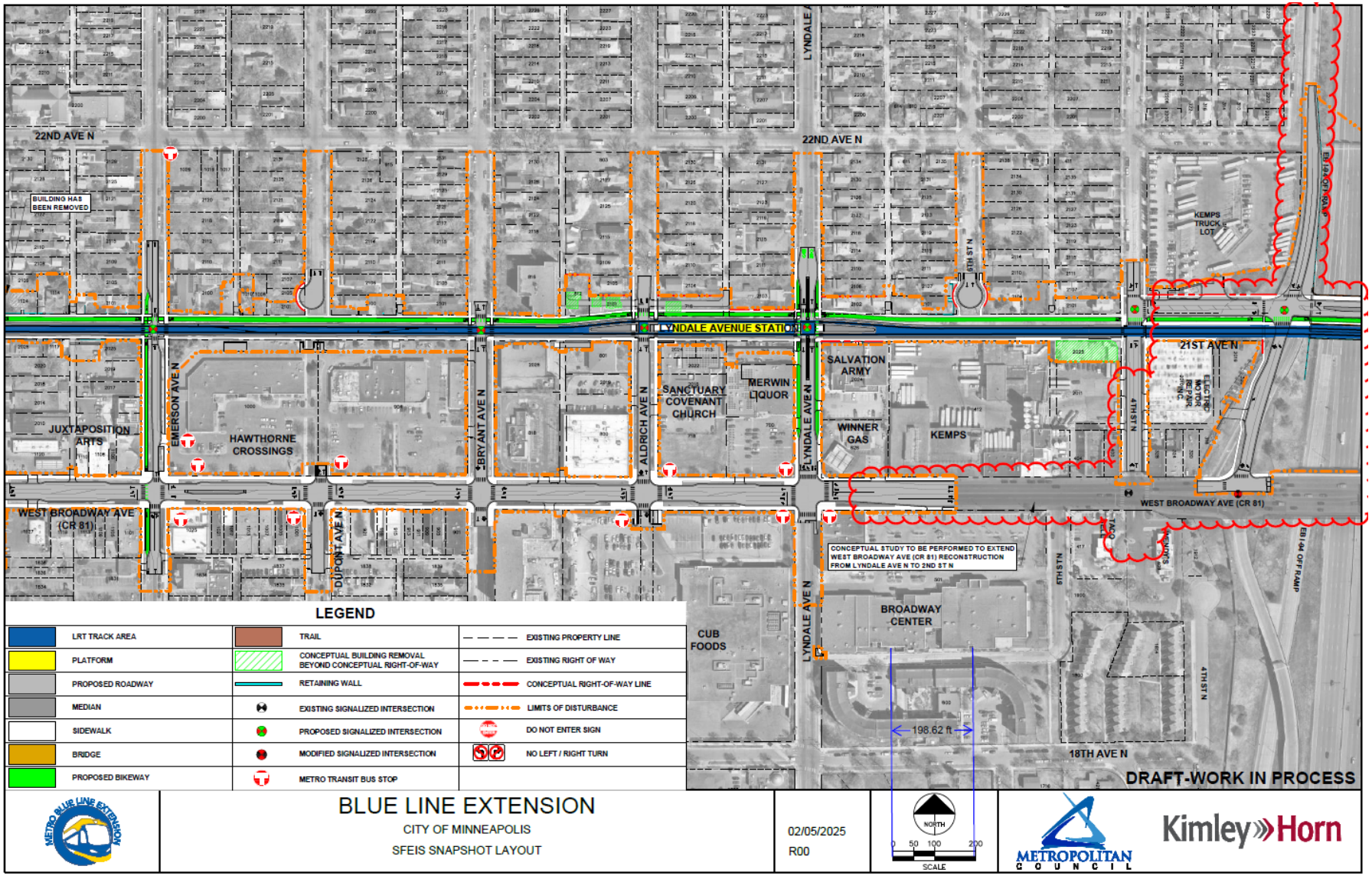
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MERWIN LIQUOR
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WINNER GAS
KEMPS
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6TH ST N
21ST AVE N
4TH ST N
WEST BROADWAY AVE (CR 81)
DUPONT AVE N
CONCEPTUAL STUDY TO BE PERFORMED TO EXTEND WEST BROADWAY AVE (CR 81) RECONSTRUCTION FROM LYNDALE AVE N TO 2ND ST N
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BROADWAY CENTER
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PLATFORM
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MEDIAN
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BRIDGE
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[1] FHWA, Interstate Access Policy (FHWA 2023), https://www.fhwa.dot.gov/programadmin/fraccess.cfm.
[2] FHWA, Interstate Access Policy (FHWA 2023), https://www.fhwa.dot.gov/programadmin/fraccess.cfm.
[3] https://www.dot.state.mn.us/project-development/subject-guidance/interstate-access-requests/process.html.