



E. Medical Center Drive Bridge Rehabilitation and Widening Project

February 7, 2022

Bridge Condition

- Existing bridge is classified as in “Poor Condition”.
- Current design project offers opportunity to address future needs.



Photo 1: Typical Beam End with Pack Rust



Photo 2: Typical View of Underside of Deck



Photo 3: Spalled Pier Cap with Exposed Rebar



Photo 4: Typical Beam End with Paint System Failure and Section Loss

Collaboration

City

Goals: Zero Deaths, Zero Emissions

Studying Fuller/Maiden/EMCD Intersection since 2006 to optimize balance between non-motorized and vehicular traffic operations and safety

UM

Regional Destination for Clinical Patients – Forecasted Future Increase

Emergency Vehicle Access

Transit Access and Circulation

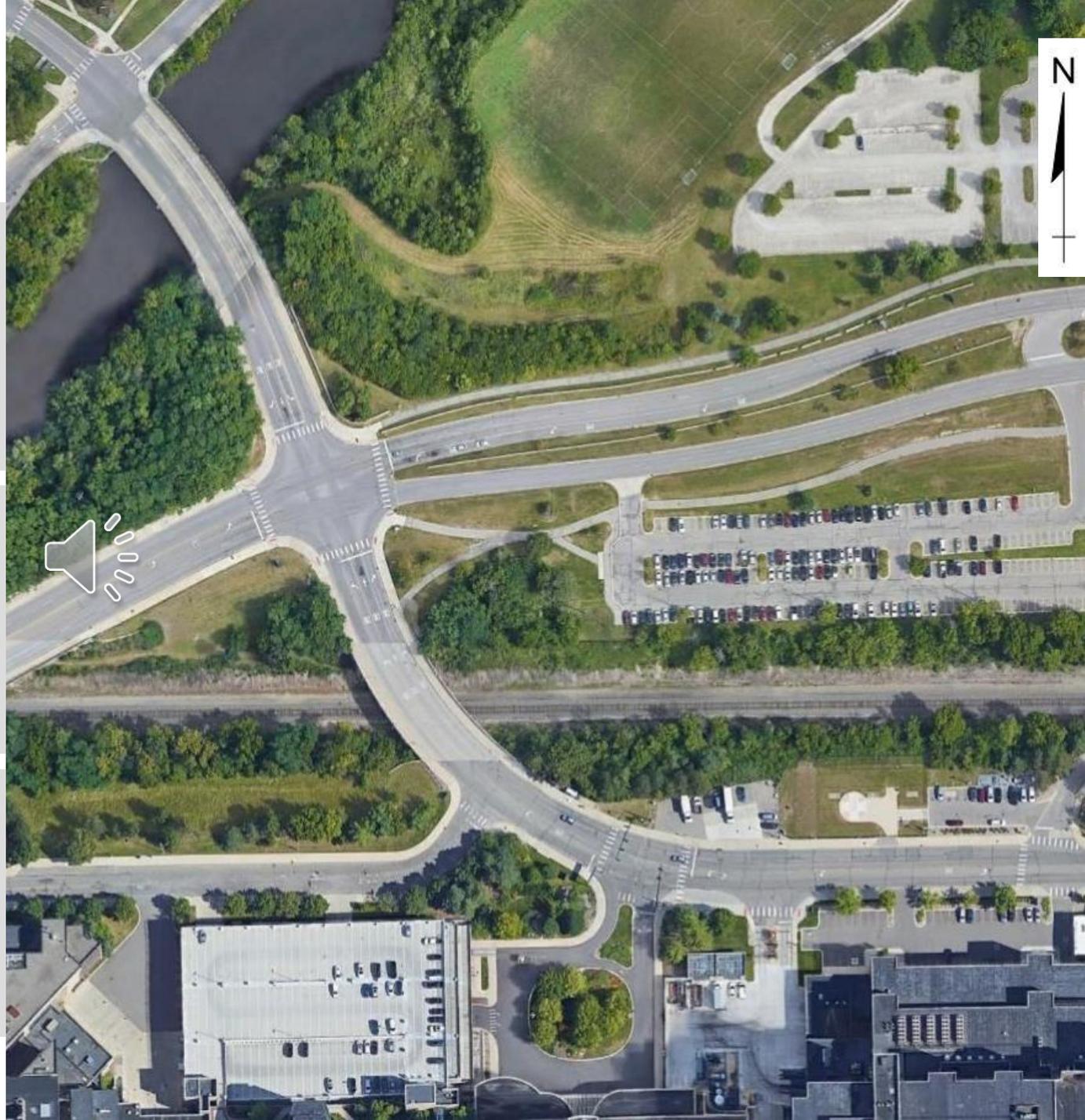
Travel Demand Management strategies - Shifting Employee Parking Off Campus

DLZ

Bridge Inspection, Intersection, Trail involvement since 2010.

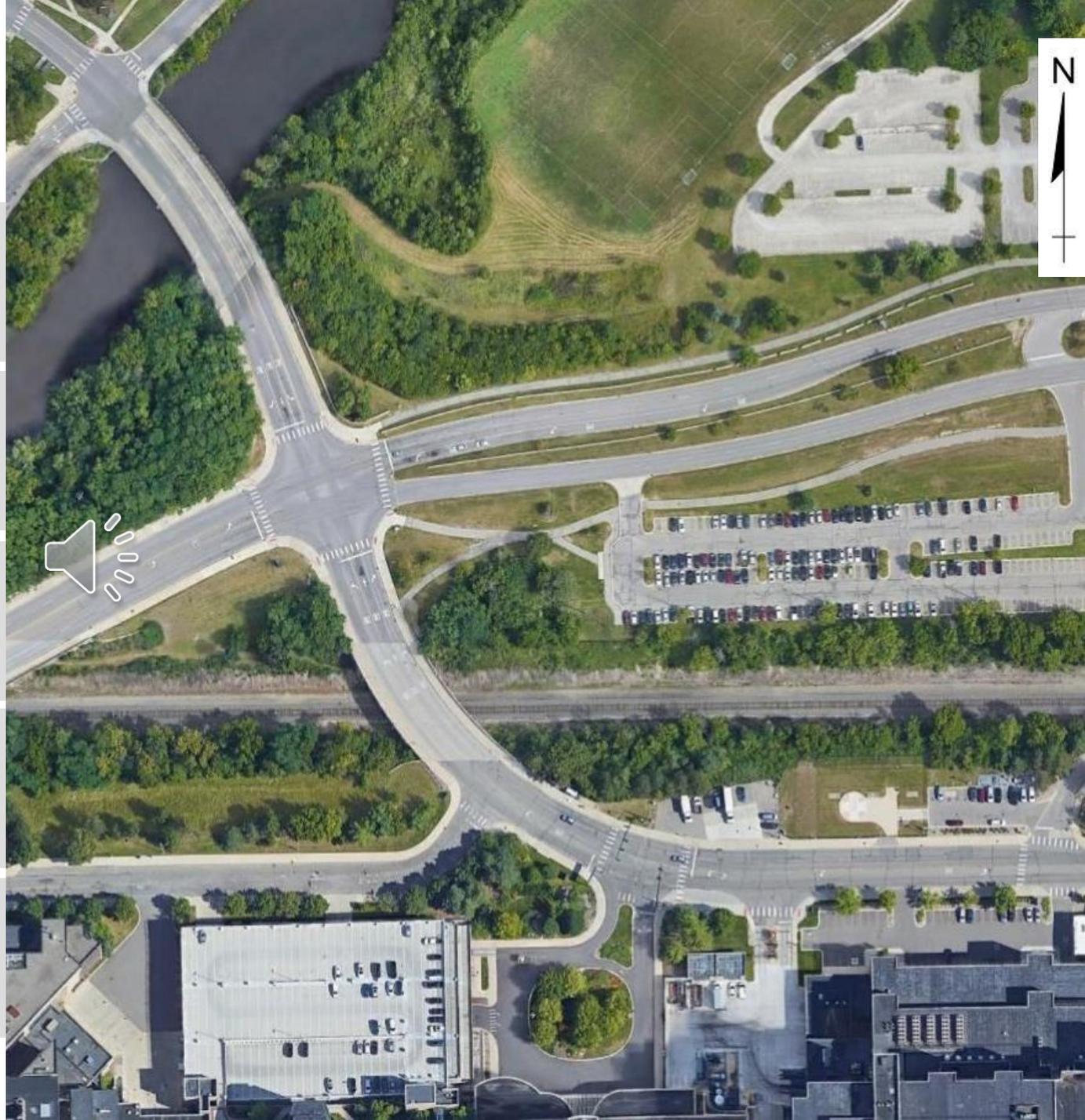
Focused on maintaining City-UM relationship

Address both parties' long-term goals to ensure successful outcome of the project



Decision Drivers

Mobility	Improve access to UM Medical Center Campus for all users.
Safety	Non-motorized, Vehicular, Bus, Ambulance
Flexibility	Provide additional options for future Fuller Rd. intersection and UM EMCD improvements.
Future Driven	Accommodate future forecasted patient/visitor vehicle volumes due to planned UM Medical Center Campus developments.
Unique Location	Regional destination, patients/visitors primarily arrive by vehicle.



Traffic Analysis

Existing Congestion

Pre-Covid congestion at intersection and on EMCD
Pre-Covid traffic volumes expected to return
Southbound queuing on EMCD backs up and impacts Fuller Road intersection

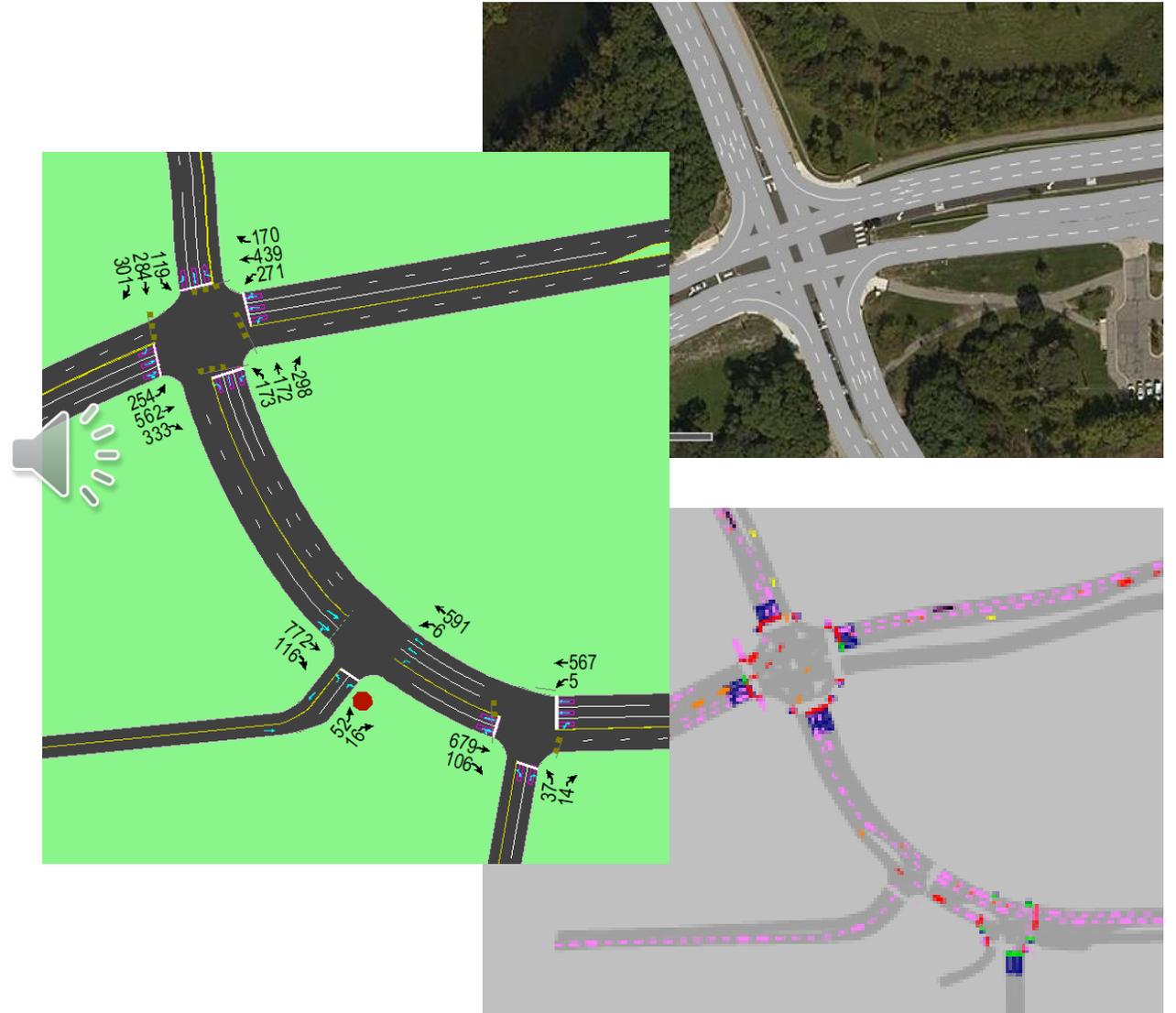
Traffic Forecasts

Traffic Forecasted to Increase per City, U of M and WATS

- 10% by 2024
- 18% by 2035

Consensus of Traffic Studies

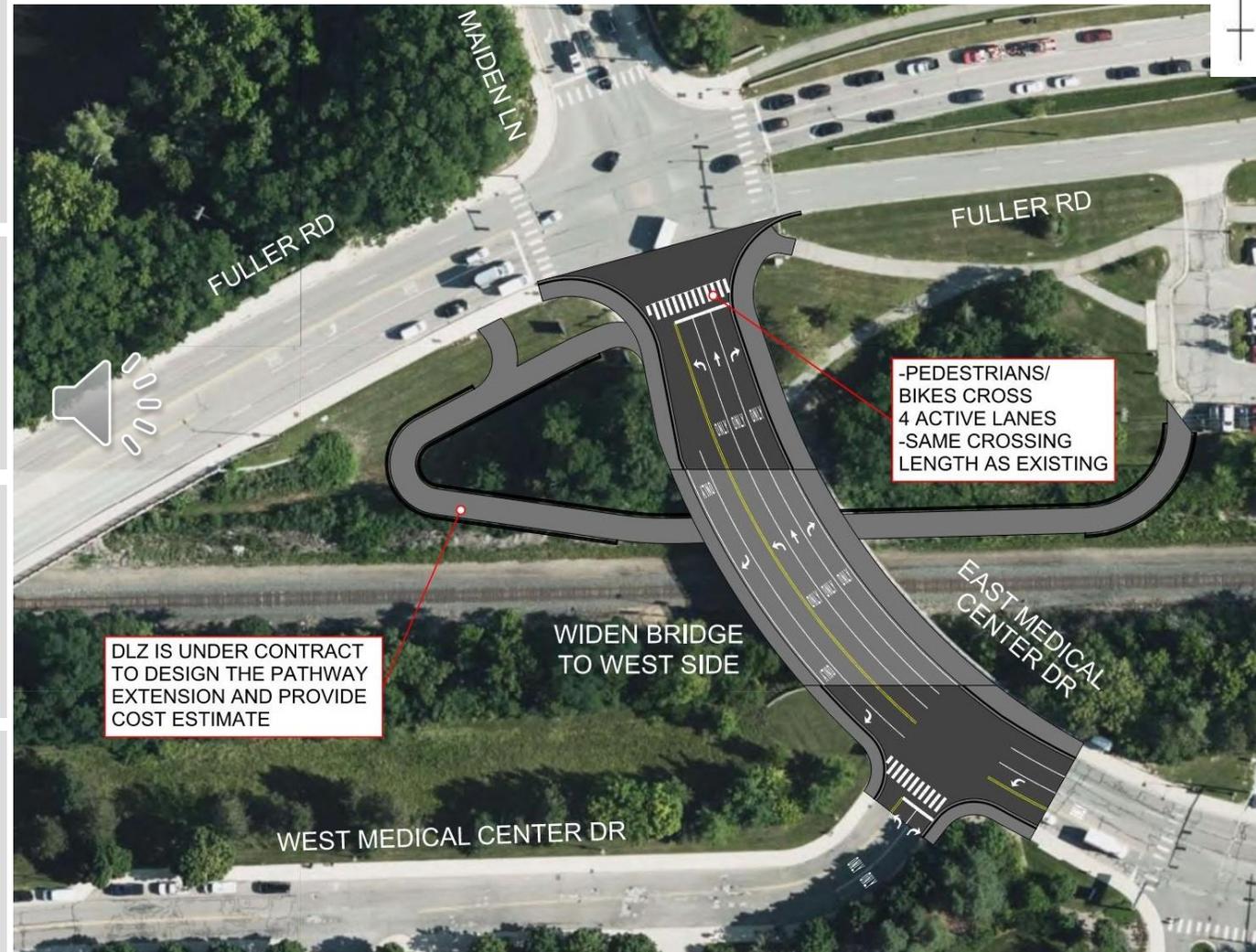
Recent studies completed in 2014, 2018 & 2019 by the City and U of M
All recommend an additional eastbound lane on EMCD



Conceptual Layout

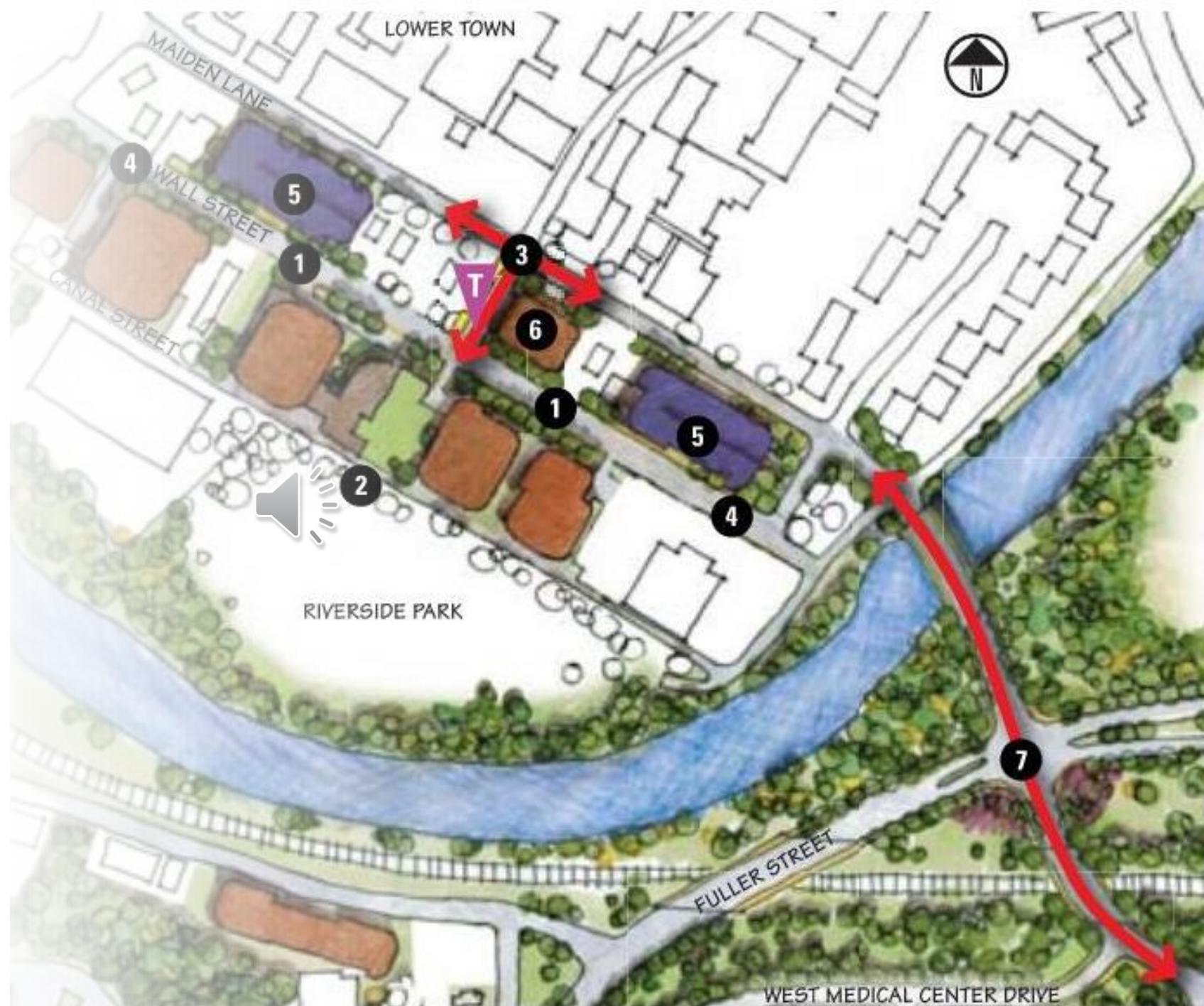


Widen	Concept widens the substructure and superstructure to accommodate an additional lane.
Right Turn Lane	Reduces stacking of vehicles on EMCD. Reduces conflict point at WMCD.
Non-Motorized Traffic	Maintains distance non-motorized traffic needs to cross EMCD at Fuller Rd. Plan includes multi-use pathway to accommodate non-motorized traffic according to current non-motorized traffic patterns on East side of bridge.
Flexibility	Provides additional options for future Fuller Rd. intersection and UM EMCD improvements



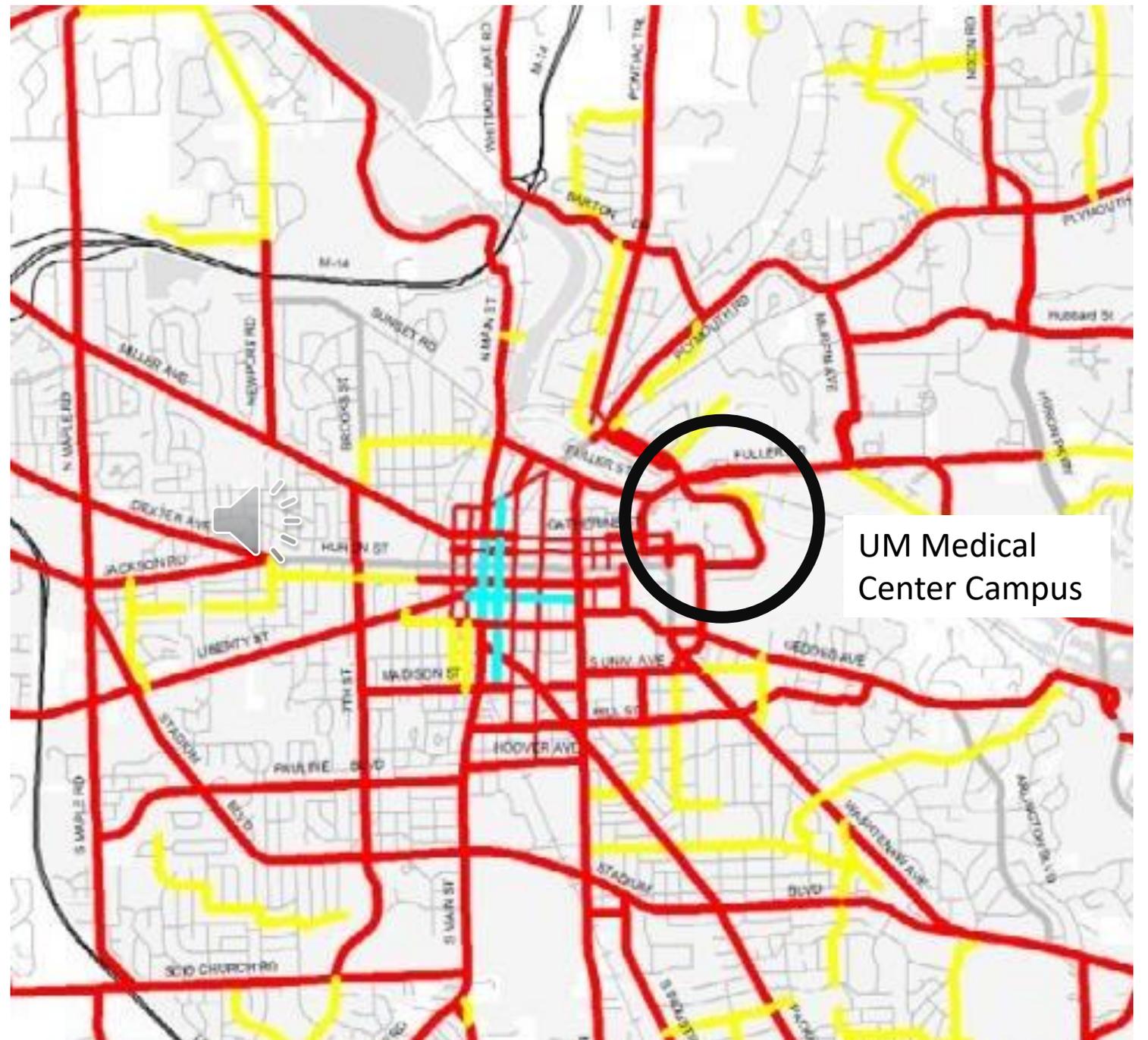
City / University Planning History

- Early 1990's
- 2002 Proposed Widening
- 2005 UM Master Plan Update



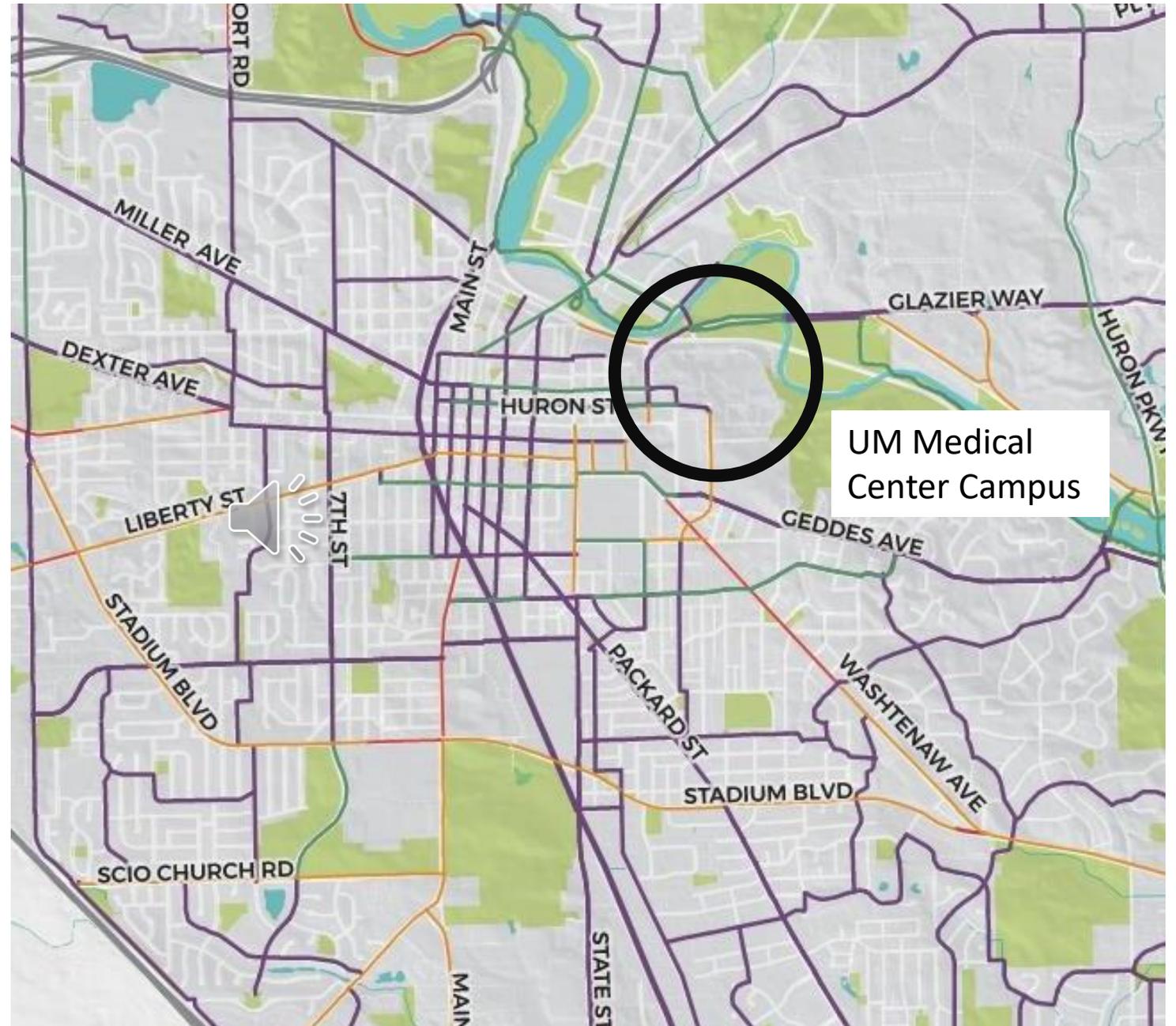
City / University Non-Motorized Planning History

- 2013 City Non-Motorized Transportation Plan



City / University Non-Motorized Planning History

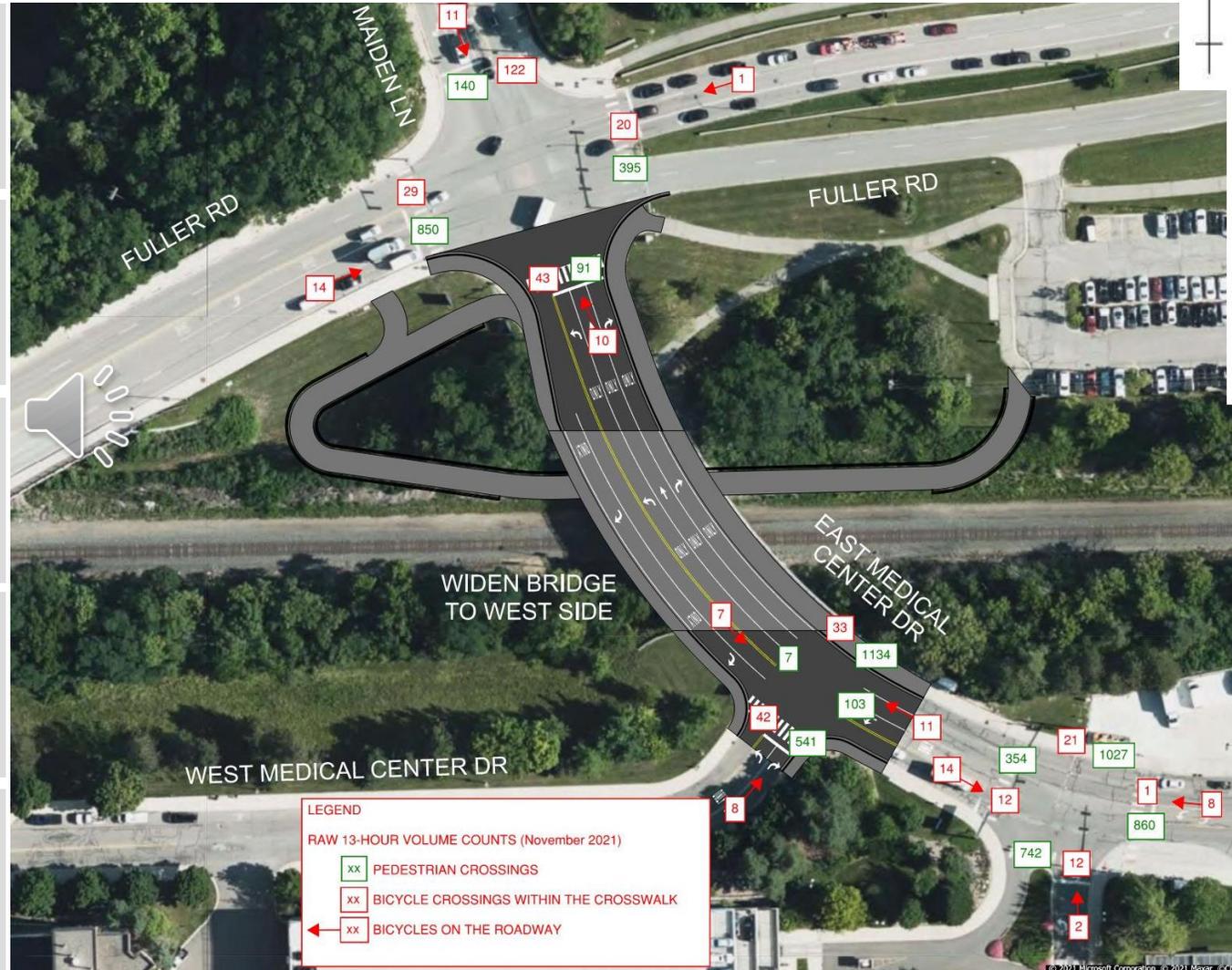
- 2021 City Transportation Plan



Shared-Use Pathway on East Side

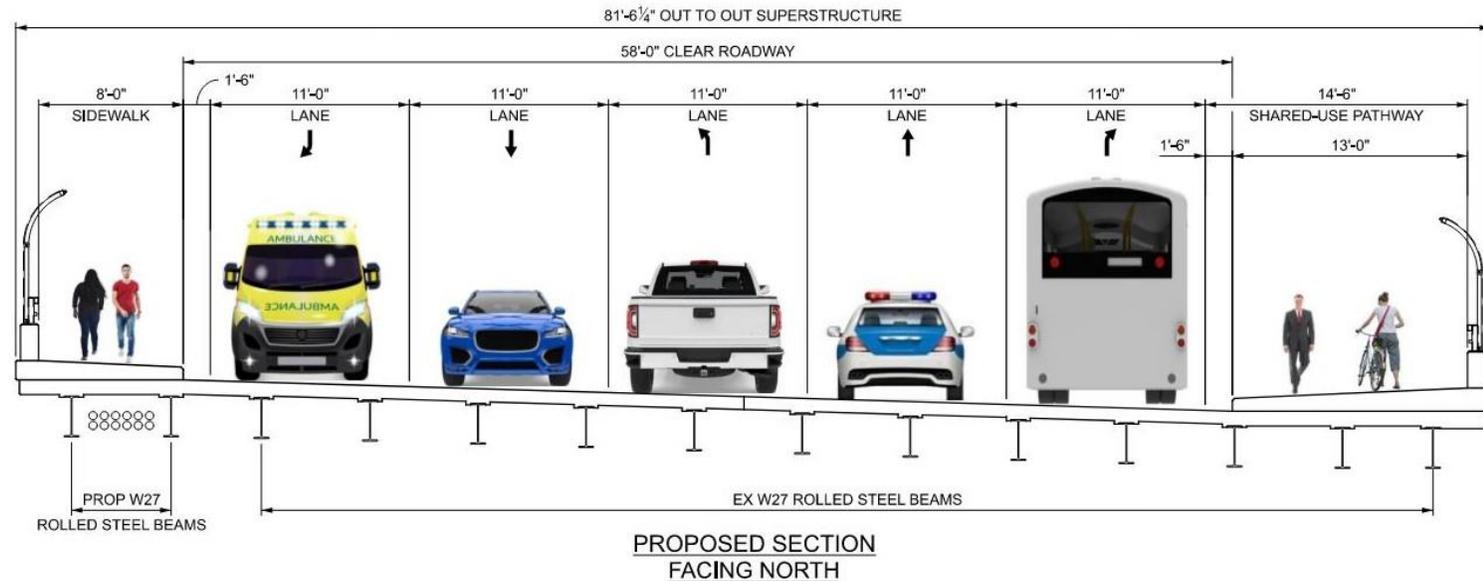
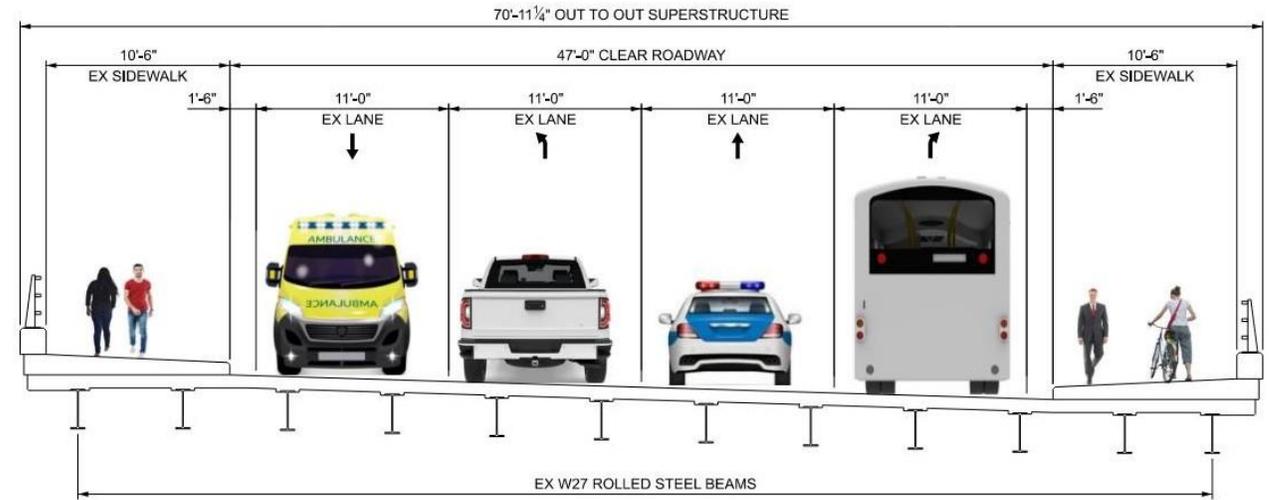


<p>Traffic Counts</p>	<p>Twice as much non-motorized traffic on East Side Total Pedestrians: 1,134 (East), 541 (West) Total Bicycles: 92</p>
<p>Driveway Conflicts</p>	<p>Far Fewer Driveway Conflicts on east side of EMCD (6) vs. west side (14)</p>
<p>Safer Crossings</p>	<p>Safer for non-motorized traffic to cross EMCD at Cancer Center than Fuller Rd.</p>
<p>W. Medical Center Drive</p>	<p>Providing pathway on west creates conflict at WMCD with right turning traffic.</p>
<p>Future Development</p>	<p>U of M to evaluate including a shared-use path on outside of campus loop with potential future EMCD widening</p>



Cross Sections

- Maintain 11' Lanes
- 14'-6" wide Shared-Use Pathway on the East side
- 8'-0" wide Sidewalk on the West side
- Provide an additional 11'-0" inbound right-turn lane
- Bridge widened by approximately 10.5 feet.



East-West Connection Prep Work

Under Bridge

Contract includes design work to modify the existing level area adjacent to the North pier crashwall to provide enough width to accommodate the future East-West connection.

Additional Trail Design

DLZ is under contract through an additional resolution to provide a design and cost estimate for an additional portion of non-motorized pathway.

