

# Mn 220 N Corridor Study

Public Meeting 1 – Issues and Needs | December 18, 2018

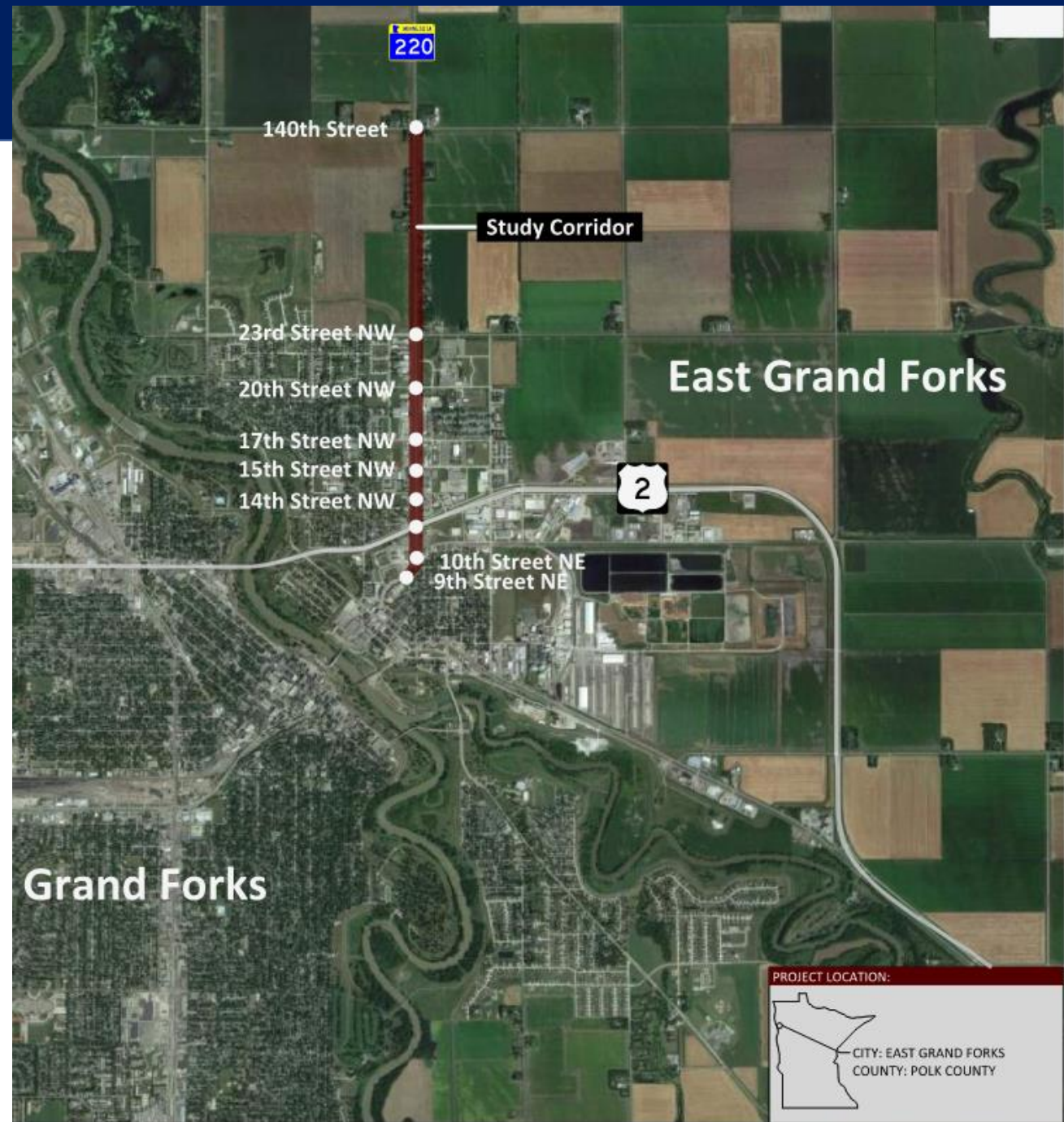


# AGENDA

- Study Background and Objectives
- Project Approach / Schedule
- Website
- Existing and Future Conditions Assessment
- Safety
- Mobility
- Transportation System Needs

# Study Background

- Mn 220 - 9<sup>th</sup> St NE to 140<sup>th</sup> St SW
- 9 Key Study Intersections



# Study Goals



Examine traffic operations at key intersections and develop potential options to improve mobility, access, and safety



Improve pedestrian crossing opportunities and safety at key locations along the corridor



Develop a document that provides recommendations for future transportation facility needs along Mn220 N and its crossroads

# SCHEDULE

## Three Study Phases

- 1 - Issues and Needs
- 2 - Improvement Alternatives
- 3 - Final Plan

## Key Dates

- Phase 1 – Oct – December
- Phase 2 – January to April
- Phase 3 – May to June
- Draft Report: May 22, 2019
- Final Report: June 30, 2019

## Public Input

- 1 – Issues & Need: December 18, 2018
- 2 – Alternatives: April 2019
- 3 – Recommendations: May 2019 (EGF Council Work Session)

October - December



January - April

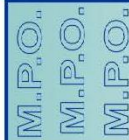
May - June



# PROJECT WEBSITE



2040 LONG RANGE  
DOCUMENTS



## PROJECTS/PLANS/REPORTS



### NEW DRAFT CITY OF EAST GRAND FORKS ADA TRANSITION PLAN

- A-1: Facility Inventory Report
- C-1: Public Input Meeting Presentation
- F-1: City of East Grand Forks Transition Plan and Self-Evaluation
- F-2: Polk County Transition Plan
- F-3: Public Rights-of-Way Accessibility Guidelines (PROWAG)
- F-4: Minnesota Accessibility Code
- F-5: City of East Grand Forks ADA Transition Plan Inventory Manual
- F-6: Applicable forms, checklists, maps, etc.

### NEW REGIONAL ITS ARCHITECTURE PLAN UPDATE

### NEW Mn220 NORTH CORRIDOR STUDY

- Mn220 North Public Open House – December 18, 2018 from 5:30 to 7:30 p.m.



2040 LONG RANGE TR  
DOCUMENTS



Grand F  
Metropolit



<https://theforksmppo.com/>

# EXISTING AND FUTURE CONDITIONS ASSESSMENT

## ISSUES AND NEEDS

Review Existing Information

Existing and Future Conditions

- **Land Use**
- **Roadway Characteristics**
- **Infrastructure Assessment**
- **Roadway Access**
- **Multi-modal Assessment**
- **Environmental Assessment**
- **Existing and Forecasted Traffic Demand**

Traffic and Safety Analysis (No Build)

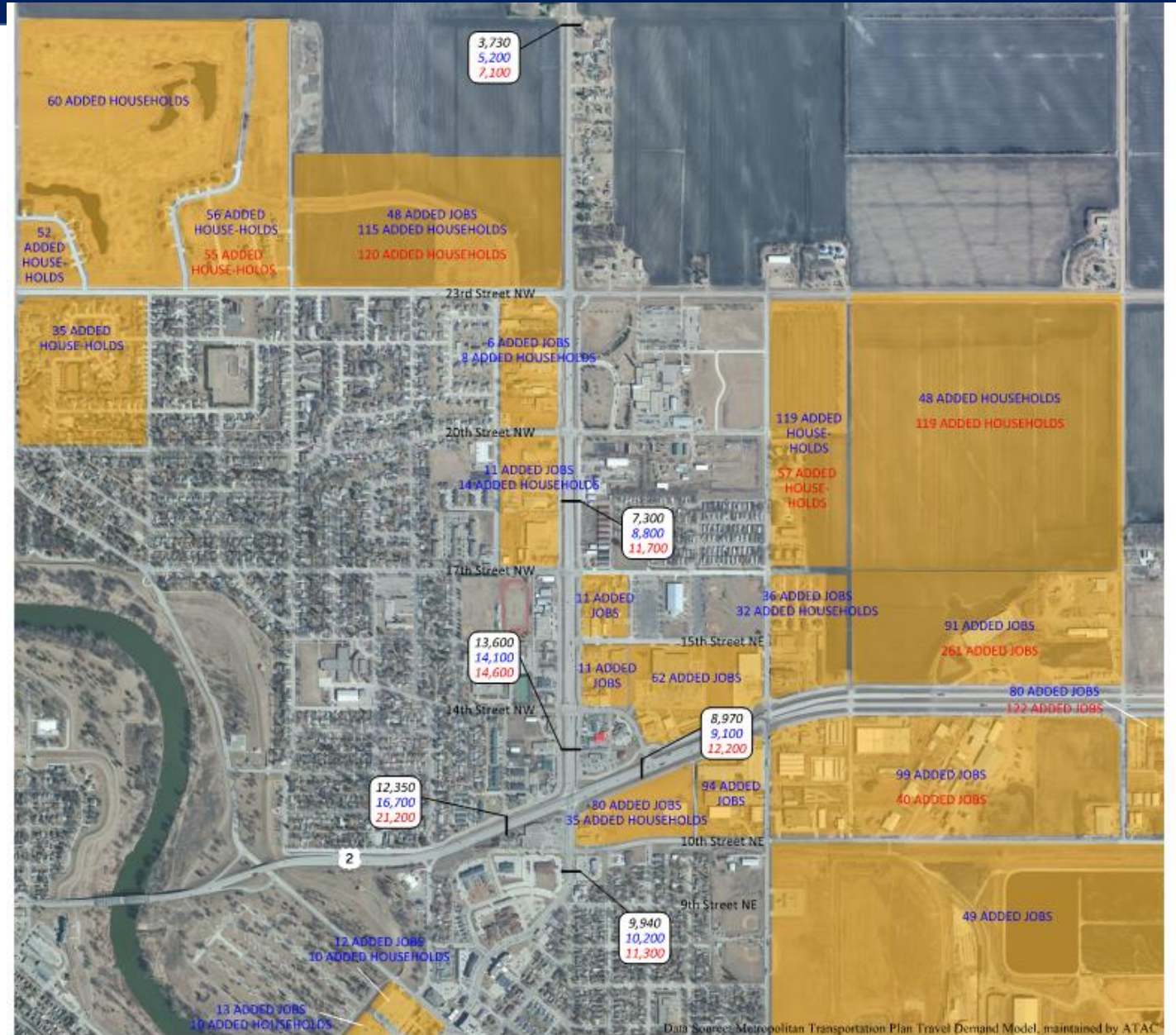
- **Safety Analysis**
- **Traffic Operation Analysis**

Purpose and Need

# EXISTING AND FUTURE CONDITIONS ASSESSMENT

## LAND USE

- 2045 EGF Land Use Map
- Residential and Commercial Growth Areas
- Influence Transportation System Needs





# EXISTING AND FUTURE CONDITIONS ASSESSMENT

## INFRASTRUCTURE ASSESSMENT

- Pavement Conditions
- Traffic Signal Systems
- Concrete Rehab needed in 2033
- Concrete Reconstruction in 2058

### Pavement Condition

Location	Length	Width	Pavement	Last Reconstruction	Last Rehab	Ride Quality Index (RQI)	Ride Quality Index Rating
	(miles)	(feet)	Type	Year	Year		
US 2 to 23rd Street	0.91	34/32	Concrete	1991	2013	2.8	Fair
23rd Street to Northern Limits	4.97	28	Bituminous over Concrete	1951	2010	2.8	Fair

Source: MnDOT

### Traffic Signal Systems

Intersection Location	Original Traffic Signal Installation	Last Rebuild	Typical Service Life Cycle
		Year	
US 2 at Mn 220	1953	2003	25 years
Mn 220 at 14th Street	1992	2003	25 years

Source: MnDOT

# EXISTING AND FUTURE CONDITIONS ASSESSMENT

## PLANNED IMPROVEMENTS

- 2019-2022 TIP
  - No Projects
- 2045 MTP
  - Mill/Overlay – 10<sup>th</sup> St NE, US2 and 14<sup>th</sup> St NW
  - US 2/Mn 220 – Geometrics
  - US 2/5<sup>th</sup> Ave NW – Signal
  - Mn 220 – Trail, Signal at 23<sup>rd</sup>, 4-lane to 23<sup>rd</sup> St
  - Reconstruction – 17<sup>th</sup> St NE, 10<sup>th</sup> St NE and DeMers (South of US 2)

Improvement Number	Future Improvements	Status
--	No Programmed Projects	--

Improvement Number	Future Improvements	Program Details
1	10th Street NE (Mill and Overlay - Central Avenue to 5th Avenue NE)	REP-195 Illustrative
2	DeMers Avenue (Reconstruction - 4th St to Gateway Dr)	REP-204 Illustrative
3	US 2 at Mn 220 (Right turn/merge geometric modifications and signal timing)	PSO-014 & DIS-001 Short Range
4	US 2 at 5th Avenue NW (Construct full access intersection with traffic signal installation)	PSO-015 Short Range
5	Mn 220 (Multi-use trail, sidewalks, traffic signal installation at 23rd Street and 4-lane to 2-lane transition north of 23rd Street)	DIS-015 Illustrative Project Plan
6	US 2 Resurfacing - 0.5 miles west of Mn 220 to 0.3 miles east of CSAH 15)	REP-219 State of Good Repair
7	10th Street NE (Reconstruction - Central Avenue to 5th Avenue)	REP-202 Mid Range
8	17th Street NE (Reconstruction - Mn 220 to 12th Avenue)	REP-198 Illustrative
9	14th St NW (Mill and Overlay - 6th Ave NW to Mn 220)	REP-199 State of Good Repair

Improvement Number	Future Improvements	Program Year	Notes
10	Options: 1. Reduce frontage roads by 14-16 feet on the sides closest to the businesses 2. Backage Road	Partially Implemented	A sidewalk has been placed on the median.
11	Mn 220 Corridor (Multiuse trail north of 23rd Street (west side), Sidewalk north of 23rd Street (east side))	Not Funded	
12	Mn 220 at 14th, 15th, 17th, 20th and 23rd. (Intersection control evaluation and potential traffic control changes)	Not Funded	ICE studies are needed to evaluate appropriate improvements and access control for each of the key intersections that have congestion or safety issues.
13	Mn 220 at 14th, 17th and 23rd Street (metallic transit shelter)	Not Funded	
14	Mn 220 at 14th, 17th and 23rd Street (improve pedestrian crosswalks)	Not Funded	
15	US 2 at Mn 220 (Confirmation lights and countdown timers per D2 Safety Plan)	Not Funded	Improvements identified to address right angle and pedestrian crossing concerns
16	Mn 220 at 15th, 17, 20th, 23rd St. (improve intersection lighting)	Not Funded	
17	Mn 220 Corridor (Add pedestrian-scale lighting)	Not Funded	Along multiuse trail



# EXISTING AND FUTURE CONDITIONS ASSESSMENT

## ROADWAY ACCESS

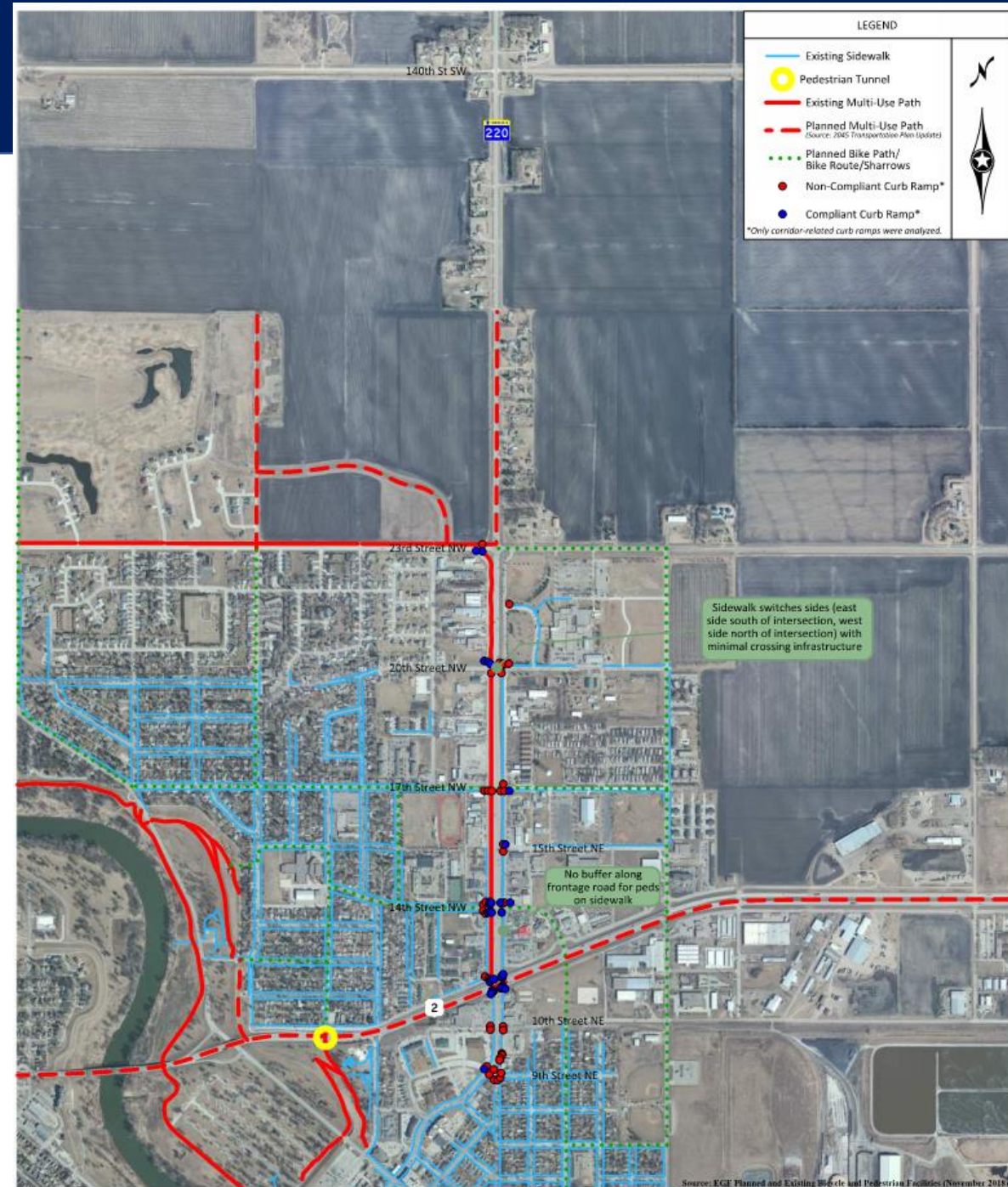
- Category 5B Access Classification (Urban/Urbanizing)
- Does Not Meet MnDOT Spacing Guidelines
- Direct Residential Access North of 23<sup>rd</sup> St NW
- Access is Related to Mobility and Safety – Find Correct Balance
- **Goal: Improve Quality of Access Maybe Not Quantity of Access**



# EXISTING AND FUTURE CONDITIONS ASSESSMENT

## MULTIMODAL CHARACTERISTICS

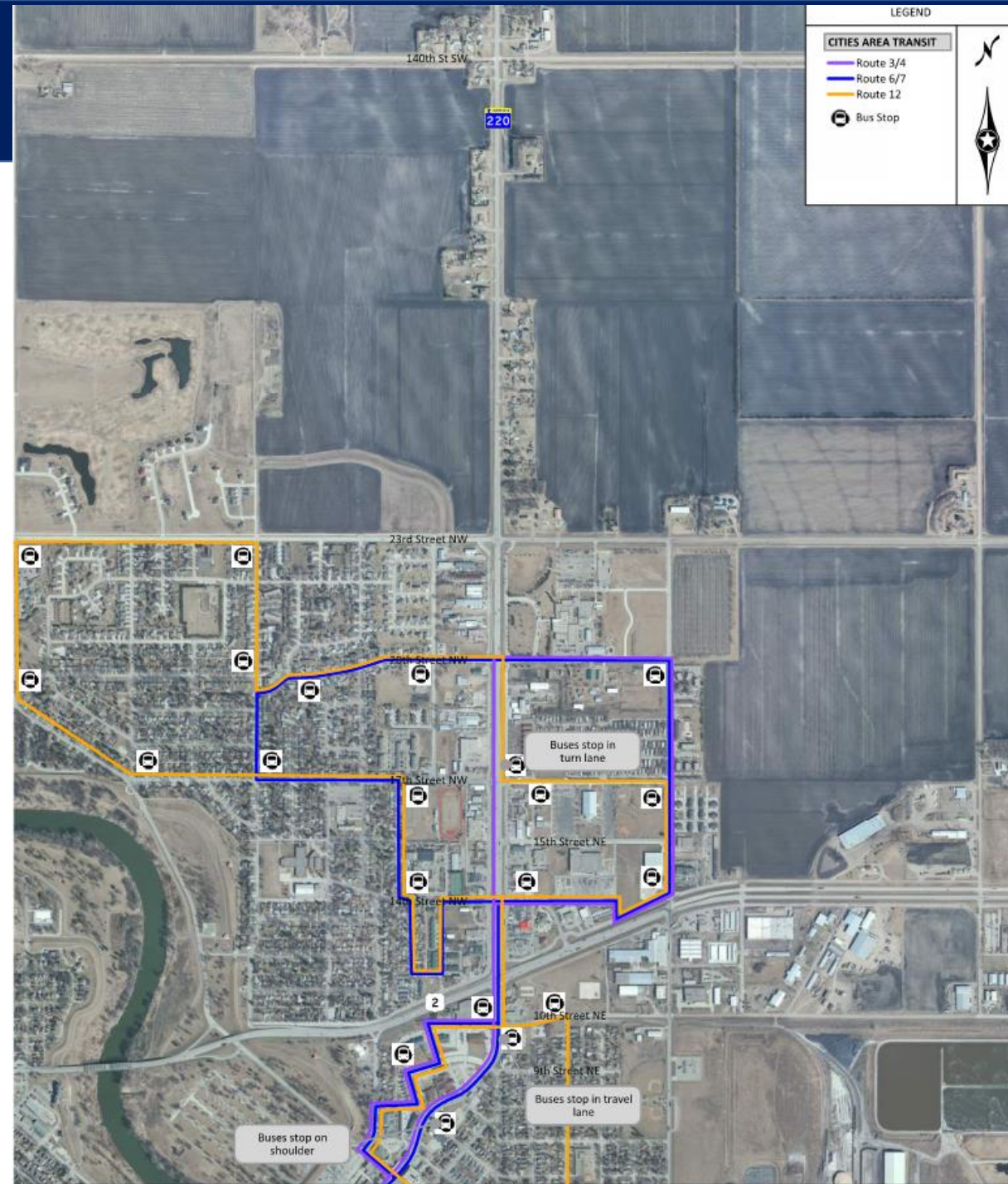
- Planned Multimodal Trail for ½ Mile North of 23<sup>rd</sup> St NW
- Planned Multimodal Trail along US 2
- Planned Bikeway Along 23<sup>rd</sup> St, 17<sup>th</sup> St, and 14<sup>th</sup> St
- Sidewalk Connection to Mn 220 Gaps on 20<sup>th</sup> St NW, 17<sup>th</sup> St, 15<sup>th</sup> St NE, and 10<sup>th</sup> St
- ADA Accessibility – MPO Completed Recent ADA Study – 36 Corners are Non-Compliant. **Opportunity for Pedestrian Improvement**



# EXISTING AND FUTURE CONDITIONS ASSESSMENT

## MULTIMODAL CHARACTERISTICS

- Routes 3/4, 6/7 and 12 Serve the Area
- No Planned Changes



# EXISTING AND FUTURE CONDITIONS ASSESSMENT

## ENVIRONMENTAL ASSESSMENT

### Data sources evaluated include:

- National Wetland Inventory
- Public Waters Inventory
- National Hydrography Dataset
- Calcareous Fens
- Polk County Soil Survey
- Wellhead Protection Areas
- FEMA Floodplain Mapping
- DNR Native Plant Communities
- Minnesota County Biological Survey
- National Heritage Information System
- Information for Planning and Consultation (IPaC) - USFWS
- DNR Management Units
- Minnesota Pollution Control Agency (MPCA) Agency Interests
- Environmental Justice Program Manual (GF-EFG MPO)
- Aerial Imagery:
  - MnGeo WMS Service
  - Google Earth (aerial imagery and street view)

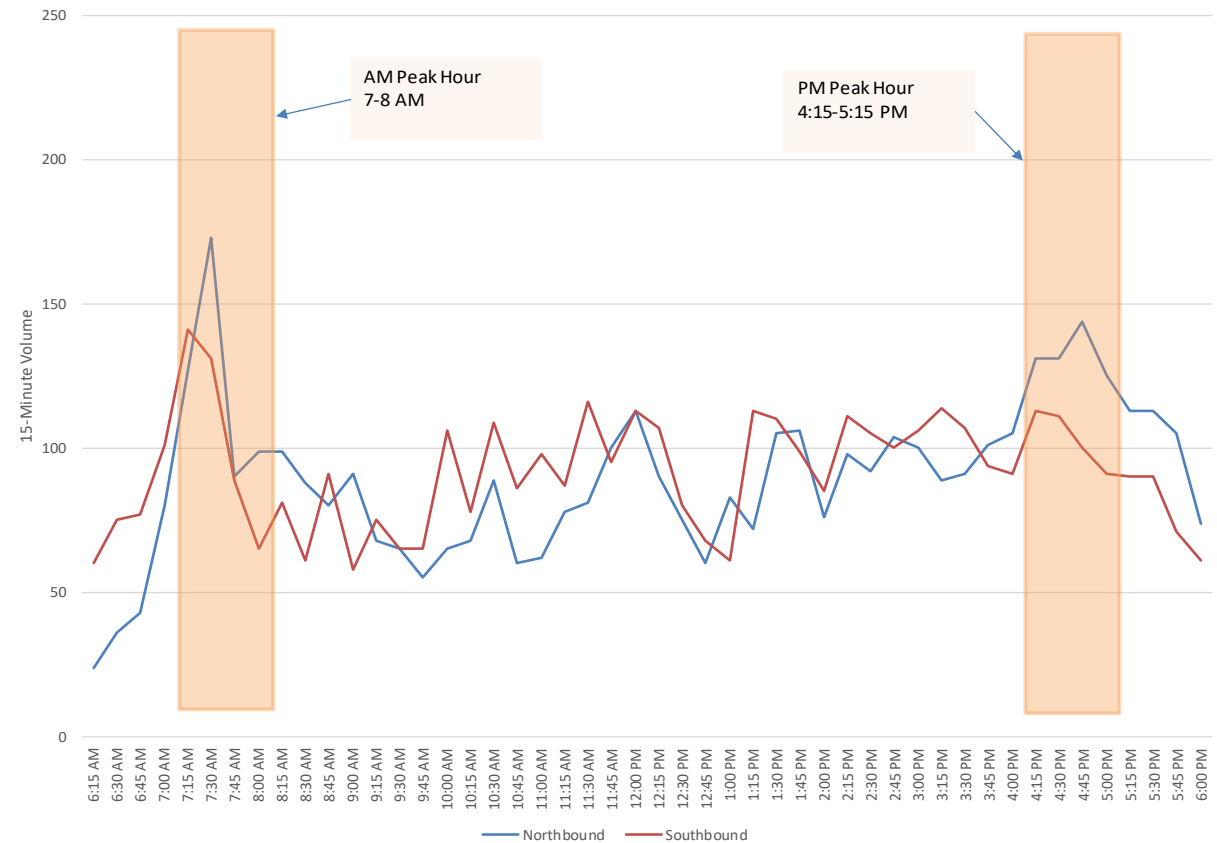
### Key Takeaways:

- No “Fatal Flaws” identified
- Floodplain – Outside 100 year floodplain
- T/E Species – None present
- Trees – Boulevard trees planted below overhead transmission line
- Wetlands – Roadside ditches north of 23<sup>rd</sup> St, Stormwater pond at 9<sup>th</sup> St NE
- Contaminated Sites – 13 sites within MN 220 Corridor Area. May Need Phase 1 Environmental Site Assessment in Future

# EXISTING AND FUTURE CONDITIONS ASSESSMENT

## EXISTING AND FUTURE TRAFFIC VOLUMES

- EGF High School and Northland Community & Technical College Accounted for
- Beat Harvest Season – Average 5% Trucks During Peaks.
- Pedestrian Volumes – Range 0 to 25.
- Historical Traffic Growth has Been about 0.5 to 1% Per Year
- Future Based on Region Model



Segment	Corridor	ADT (2018)	AADT (2030)	AADT (2045)	Growth Rate (2018-2030)	Growth Rate (2018-2045)
9th Street NE to 10th Street NE	Mn 220	9,940	10,200	11,300	0.22%	0.48%
US 2 to 14th Street NW	Mn 220	13,600	14,100	14,600	0.25%	0.25%
17th Street NW to 20th Street NW	Mn 220	7,300	8,800	11,700	1.47%	1.75%
23rd Street NW to 140th Street SW	Mn 220	3,730	5,200	7,100	2.81%	2.41%
West of Mn 220	US 2	12,350	16,700	21,200	2.55%	2.02%
East of Mn 220	US 2	8,970	9,100	12,200	0.12%	1.15%





# Intersection and Corridor Safety

Two Intersections Exceed Critical Crash Rate

- US 2
- 17<sup>th</sup> Street

Three Intersections Exceed Critical Severity Rate

- US 2
- 17<sup>th</sup> Street
- 23<sup>rd</sup> Street

Corridor Performance Measurements

- Zero Fatalities
- 2 Type A (0.4 per year)
- 3 Non-motorized Crashes (None were Serious)

Intersection	Traffic Control	Total Crashes <sup>1</sup>	Total Entering Volume <sup>2</sup>	Crash Rate per MEV	State Average Crash Rate <sup>3</sup>	Crash Critical Rate <sup>4,5</sup>	Crash Severity Rate <sup>6</sup>	State Average Severity Rate <sup>3</sup>	Crash Severity Critical Rate <sup>4,5</sup>	K/A Crashes	K/A Rate	State Average K/A Rate	K/A Critical Rate <sup>4,5</sup>
Mn 220 at 9th Street	Urban Through-Stop	2	16,005,250	0.12	0.18	0.48	0.19	0.26	0.45	0	0.00	0.33	5.29
Mn 220 at 10th Street	Urban Through-Stop	7	20,412,625	0.34	0.18	0.45	0.34	0.26	0.43	0	0.00	0.33	4.41
Mn 220 at US 2	Low Volume, Low Speed	49	38,446,667	1.27	0.52	0.83	1.90	0.71	0.90	1	2.60	0.42	3.06
Mn 220 at 14th Street	Low Volume, Low Speed	18	25,565,208	0.70	0.52	0.91	0.94	0.71	0.94	1	3.91	0.42	4.02
Mn 220 at 15th Street	Urban Through-Stop	2	18,645,417	0.11	0.18	0.46	0.11	0.26	0.44	0	0.00	0.33	4.72
Mn 220 at 17th Street	Urban Through-Stop	13	18,417,292	0.71	0.18	0.46	0.81	0.26	0.44	0	0.00	0.33	4.76
Mn 220 at 20th Street	Urban Through-Stop	2	13,206,917	0.15	0.18	0.52	0.15	0.26	0.48	0	0.00	0.33	6.14
Mn 220 at 23rd Street	Urban Through-Stop	6	11,193,333	0.54	0.18	0.55	0.80	0.26	0.50	0	0.00	0.33	7.00
Mn 220 at 140th Street	Rural Through-Stop	0	6,588,250	0.00	0.25	0.83	0.00	0.41	0.81	0	0.00	1.05	13.76

<sup>1</sup> Crash Data obtained from MnCMAT and detailed police crash reports.

<sup>2</sup> AADT obtained from MnDOT Traffic Data Map

<sup>3</sup> MnDOT's 2015 Green Sheets were used to determine the State average crash rate.

<sup>4</sup> The critical rate is a statistically adjusted crash rate to account for random nature of crashes

<sup>5</sup> A 99.5% confidence level was assumed for critical crash rate and an 80% confidence level was assumed for critical severity and K/A rate.

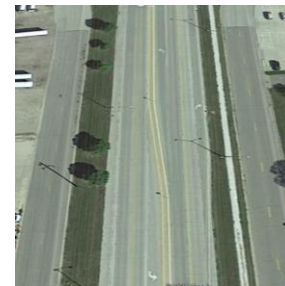
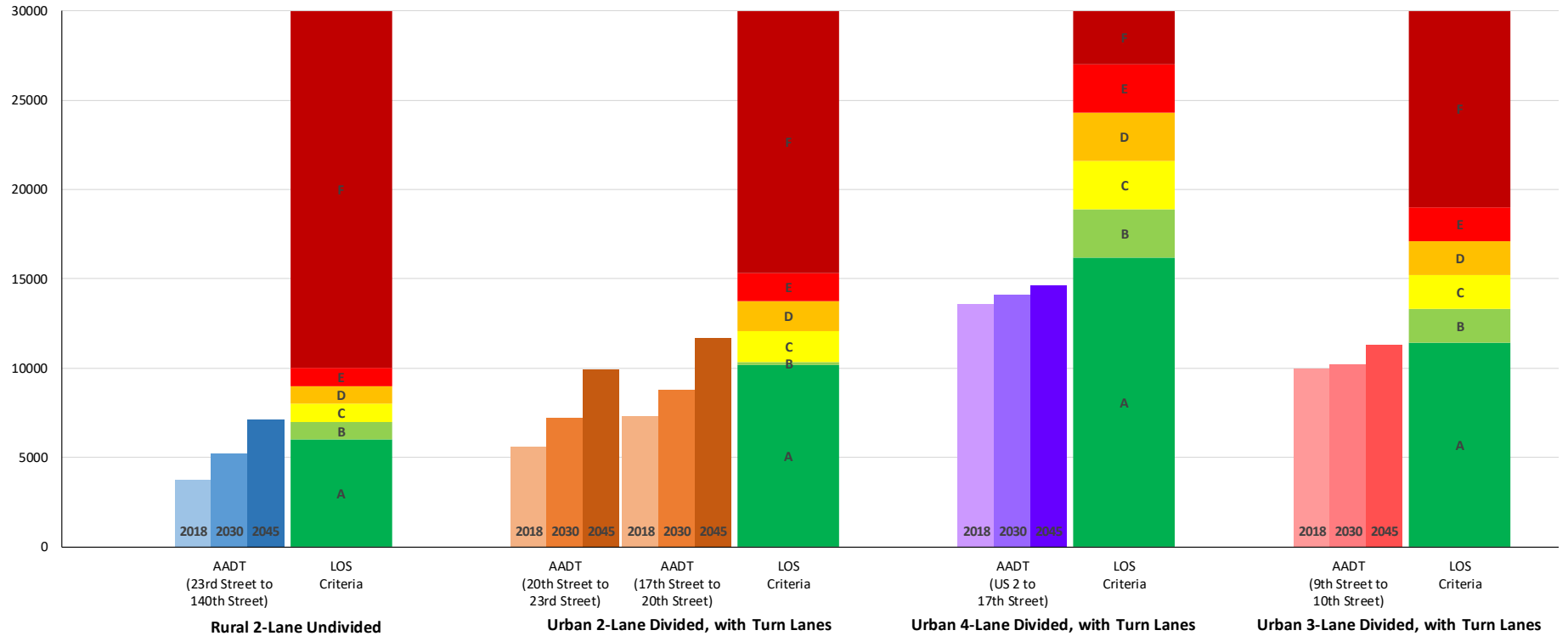
<sup>6</sup> Severity rate factors: 5 for Fatal Crashes, 4 for A type, 3 for B type, 2 for C type, and 1 for Property Damage Crashes

# Traffic Operations / Mobility

## Corridor Capacity Assessment

- 2045 LOS B or Better
- 2045 LOC C north of 17<sup>th</sup> Street
- Existing Roadway Lanes Sufficient
- Intersection Concerns – 17<sup>th</sup> Street and US 2

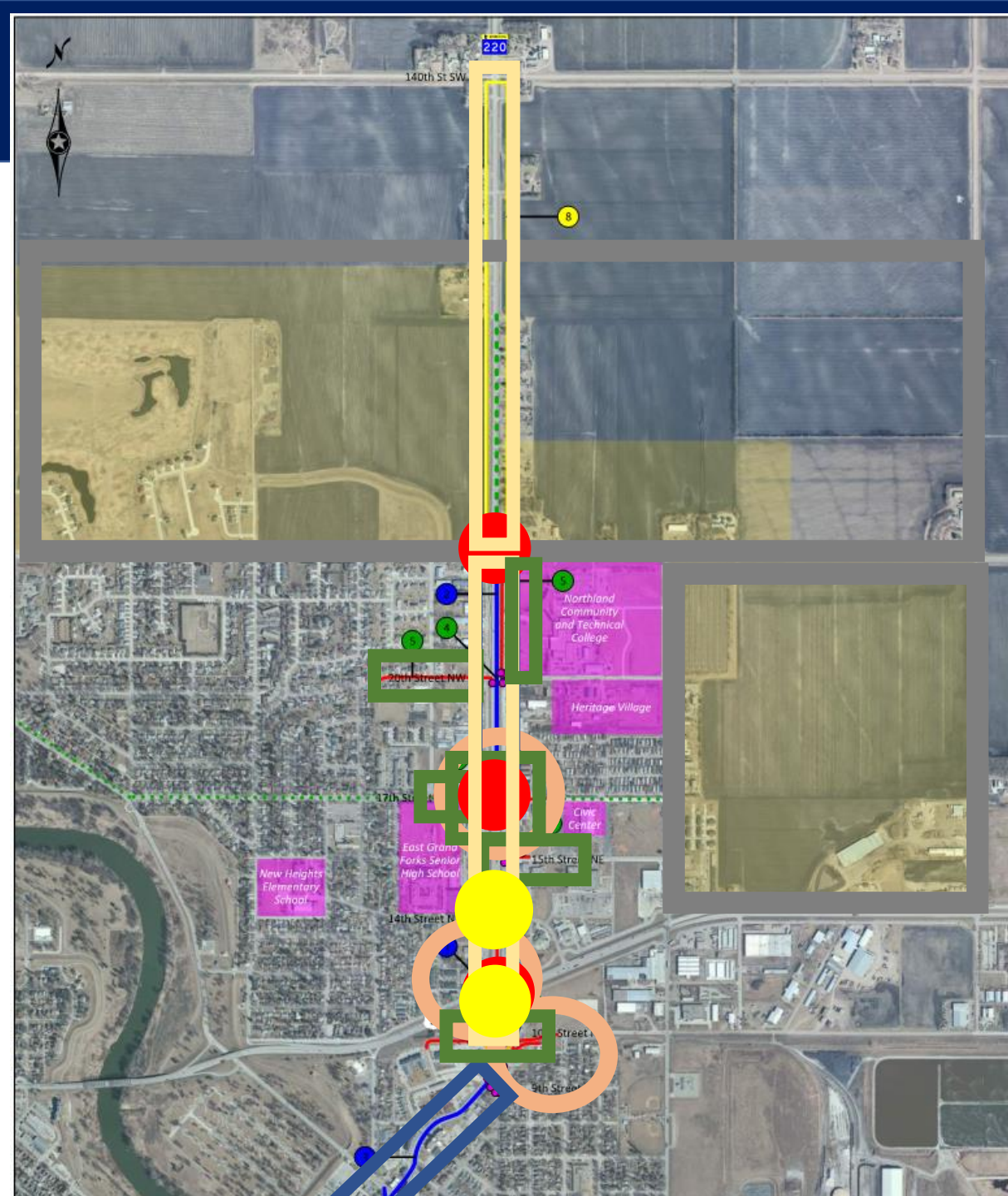
Mn 220 N Corridor AADT  
vs.  
Planning-Level Roadway Capacity<sup>1,2,3</sup>



# Issues and Needs

## • Transportation System Needs

- Capacity –
  - Increased Delay by 2045 – Key Locations
- Transportation Demand – Planned Projects
- Social/Economic – Future Land Use Changes
- Modal Interrelationships
  - ADA Pedestrian Ramps (36)
  - Sidewalk Gaps
  - Intersection Crossings (17<sup>th</sup> Street)
- Safety – Critical Crash Rates
- Roadway Deficiencies
  - Traffic Signal Rebuilds
  - Roadway Rehab/Reconstruct (2033/2058)
  - Access Management
  - Turn Lanes



Question?

**Thank You For Coming!**