Overview

On February 8, 2019, Metro COG held a public open house to gather input on potential improvement strategies (vehicular, bike and pedestrian, and transit) to address transportation needs for corridors and intersections in the Metro COG region. Attendees provided specific input on where they would like to see transportation strategies implemented. The public open house was held at the Stone Building, in downtown Fargo at 613 1st Ave N. The open house was held between 11:00 am – 7:00 pm.

It was estimated that approximately 100 - 120 residents attended the open house over the course of the day.

Open House Activities

The open house format provided the following elements:

Technical Analysis Boards

The technical analysis work, some from the October work shop and some newly-developed, was displayed to inform attendees about the technical analyses that had been completed to date. The following maps of transportation conditions were provided:

- **Existing Conditions Boards**: maps of existing bicycle and pedestrian system, transit routes, and traffic operations and safety were provided to orient users to the technical analysis that had been completed to date.
- **Future Conditions Boards**: maps of projected housing growth and employment growth (2015-2045) and future traffic congestion estimates.

Activities

Two different activity stations were developed for the open house to get feedback from those in attendance. Metro COG and HDR staff facilitated the activities with the public.

Interactive Strategy Stations

The first station was designed to get open house attendees thinking about the types of transportation improvement strategies they'd like to see implemented in their community. The station was split into three parts: **vehicular strategies**, **bike and pedestrian strategies**, and **transit strategies**. Plan staff talked with attendees about various strategies that could be considered, to give a high level overview of the types of strategies, the effectiveness, benefits, and potential drawbacks of each strategy, and illustrations and case studies of locations each strategy has been implemented.

After attendees had a good understanding of the strategies, attendees had the option of filling out voting sheets to say whether they liked / supported, were neutral / unsure, or disliked / did not support each strategy. A tabulation of the voting sheets is shown in **Table 1**.

Map Your Strategies Station

A large plot of the metro area was provided at the "Map Your Strategies" Station. Attendees were encouraged to pick a few strategies from the Interactive Strategy stations and use color coded tape / stickers to identify a corridor or intersection they would like to see an improvement made in the future. **Figure 1** and **Figure 2** show the resulting strategy ideas that were identified at the open house. The goal was to educate attendees on the technical analyses and strategy options for the region, and then provide attendees the opportunity to talk about strategies / projects that they believe should be included in the LRTP. This also provided the study team the options to see potential critical projects that may have been missed by the technical analysis.

Table 1. Strategy Voting Tabulation from Open House

Vehicular Strategy Voting		Like / Support	Neutral / Unsure	Dislike / Do Not Support
Active Traffic Management		11	1	0
New Signals and / or Improved Coordination		11	1	1
Grade Separation		9	3	0
Multi-way Boulevard Roadways		9	4	0
Ramp Metering		7	4	1
Innovative Intersection Types		7	5	2
Expressways		6	1	4
Travel Demand Management		6	2	0
More Travel Lanes		5	3	6
Hard Shoulder Running / Bus on Shoulder		3	5	0
Transit Strategy Voting				
Local Bus Transit	Increased Hours of Service	10	1	0
	Extend Existing Routes or Add More Routes	9	2	0
	Increased Frequency of Service	7	3	0
Express Bus Transit		9	2	0
Bus Rapid Transit		8	2	2
Streetcar		6	2	4
Light Rail		5	4	3

Bike and Pedestrian Voting	Like / Support	Neutral / Unsure	Dislike / Do Not Support
Grade Separation	15	2	0
Raised Crosswalks and Intersections	14	5	2
Recreational Trail	14	1	0
Leading Pedestrian Interval	14	5	0
Sidepath	13	2	0
Curb Extensions / Bump Outs	12	3	2
Median / Pedestrian Refuge Islands	11	4	1
Bike Lanes	10	3	3
Actuated Pedestrian Signals at Mid-Block	10	6	0
Protected "Dutch Intersection"	7	7	2
Bike Boulevard	7	6	3
On-Street Shared Lane Markings or Sharrows	7	6	5
Cycle Tracks	5	1	1

Figure 1. Public-Identified Strategies from Open House (Wider Scale)

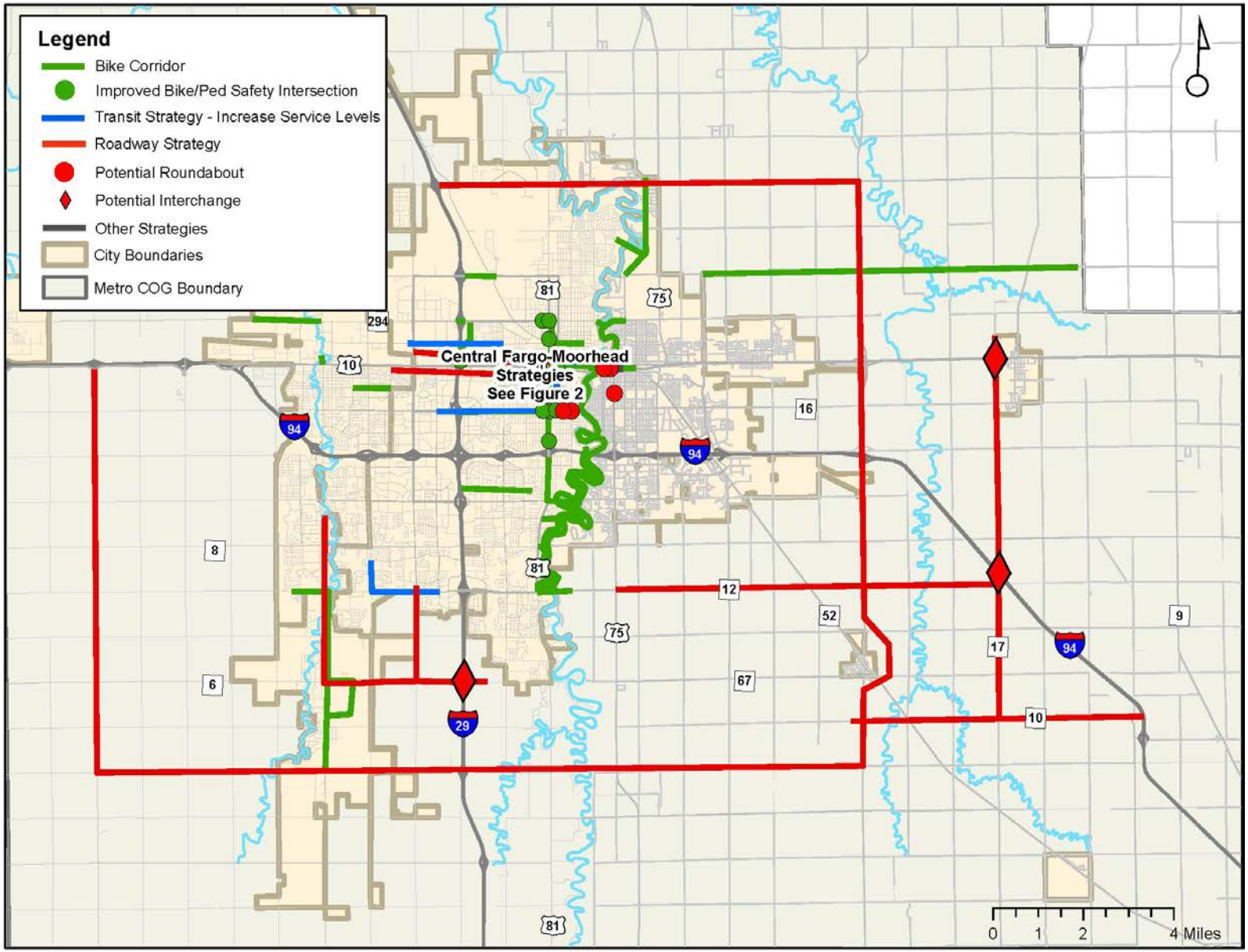
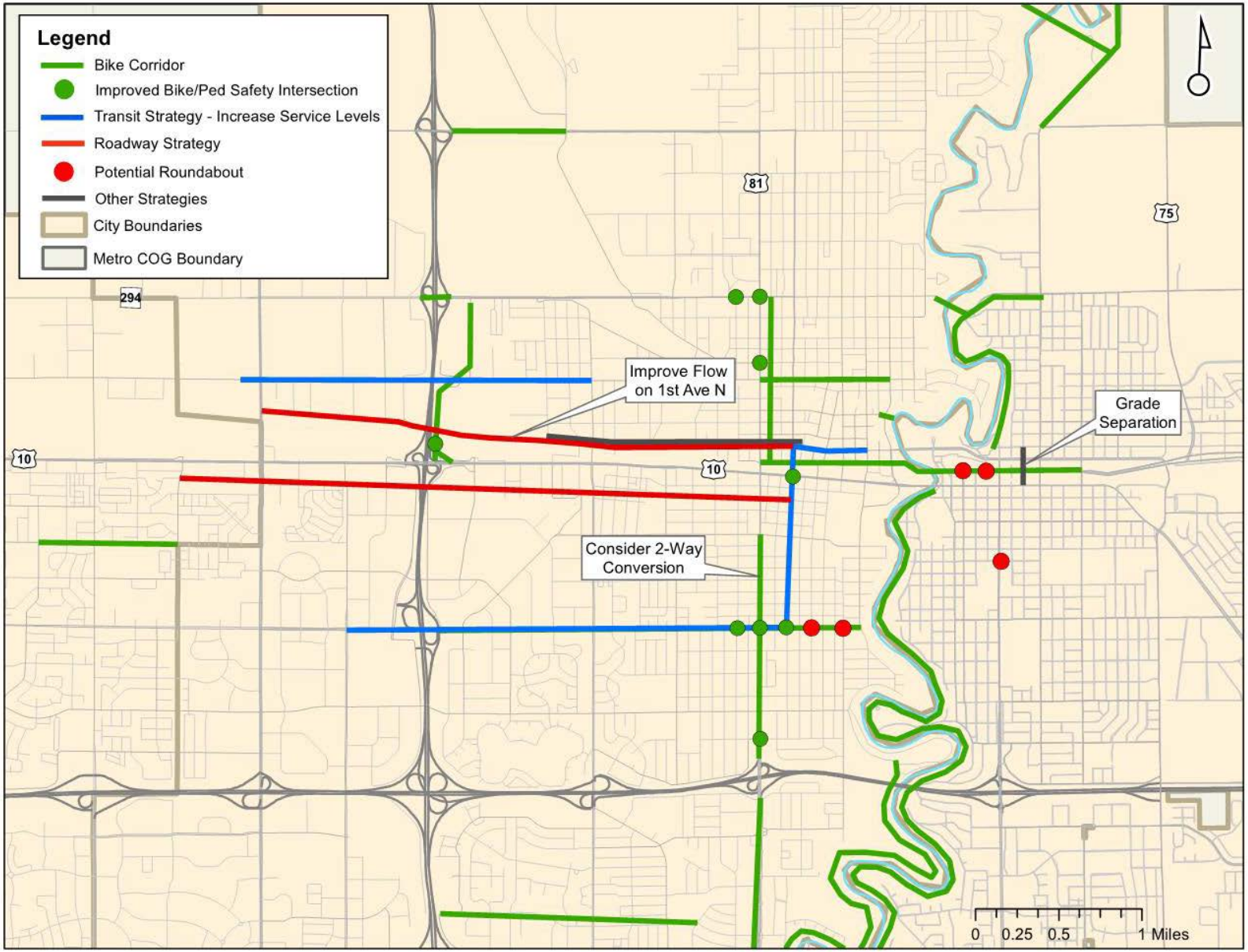


Figure 2. Public-Identified Strategies from Open House (Central Fargo - Moorhead)



Comment Box

Comment cards were provided to attendees so that they could provide any additional comments they might not have provided via the activities.

Meeting Promotion

Several different channels were used for meeting promotion leading up to the meeting:

- Social Media posts via the Metro COG Facebook page
- Targeted Facebook ads for regional residents.
- Email to residents who had signed up for our mailing list at summer events and via the online survey.
- Email sent by MATBUS to its mail list ("rider alert") and to public relations contacts at partner agencies.
- Promotion at the Metro COG website.
- Fliers and poster signs were distributed to civic buildings across the region, and provided at stakeholder meetings such as Metro COG's Traffic Operations Committee and the Bicycle and Pedestrian Committee members.
- News release sent to local media outlets, which yielded interviews of the Metro COG project manager on TV news stations and a live interview on one radio show.

Figure 3 shows one of the social media advertisements that was utilized. **Figure 4** includes pictures from the open house.

The strategy education materials shared with open house attendees at the Interactive Strategy Stations are shown in the **Materials Appendix.**

Figure 3. Example Social Media Advertisement

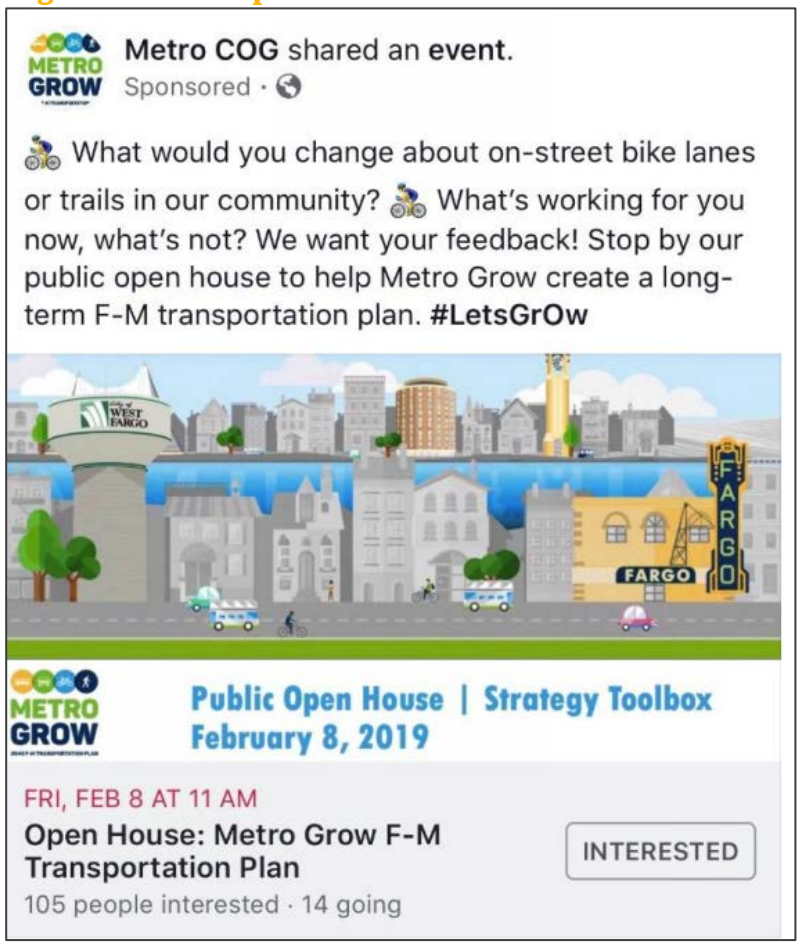


Figure 4. Pictures from Open House

Materials Appendix

PEDESTRIAN STRATEGIES AT INTERSECTIONS

Strategy: Curb Extensions / Bump Outs

STRATEGY PURPOSE:

Extending the sidewalk at intersections to reduce pedestrian crossing distance and make pedestrians more visible to drivers, typically in mixed use and commercial corridors.

PROS:

- Creates a more pedestrian-friendly and safer environment.
- Can be incorporated into improved streetscape aesthetics.

CONS:

- Curb extension requires either the removal of a travel lane or some on-street parking.

PEDESTRIAN STRATEGIES AT INTERSECTIONS

Strategy: Median / Pedestrian Refuge Islands

STRATEGY PURPOSE:

Raised median islands placed at intersections between the two directions of travel to help protect crossing pedestrians from motor vehicles.

PROS:

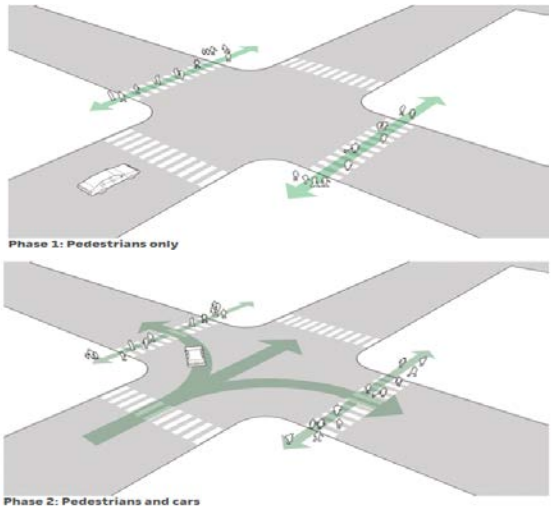
- Allows pedestrians to cross one direction of travel, pause, and then concentrate on crossing the other direction of travel.
- Can provide additional crossing time for pedestrians at wider signalized intersections.

CONS:

- Not all streets have sufficient width to add a median for a refuge island.

PEDESTRIAN STRATEGIES AT INTERSECTIONS

Strategy: Leading Pedestrian Interval



STRATEGY PURPOSE:

A traffic signal configuration that gives pedestrians a 3 to 7 second head start to enter an intersection, prior to vehicles being given the green traffic signal in the same direction of travel.

PROS:

- Provides enhanced pedestrian visibility in the intersection, often reducing pedestrian-vehicle collisions.
- Communicates to vehicles that pedestrians has the right-of-way.

CONS:

- Increases the “all red” phase of the traffic signal providing less “green time” to vehicles.

PEDESTRIAN STRATEGIES

Strategy: Raised Crosswalks and Intersections


Strategy Purpose:

These are raised speed tables placed at an intersection or mid-block location as a traffic calming measure, aimed at reducing traffic speeds and enhancing the pedestrian crossing environment.

Pros:

- Reduces vehicle speeds.
- Often increases the rate of vehicles yielding to pedestrians.

Cons:

- Should only be used where they can be easily seen by drivers (not implemented near driveways.
- Should be designed to accommodate traffic using corridor such as trucks, emergency vehicles.

PEDESTRIAN STRATEGIES AT MID-BLOCK

Strategy: Actuated Pedestrian Signals

STRATEGY PURPOSE:
A traffic control device that provides active flashing lights when triggered by a pedestrian. Increases motorist awareness of crossing pedestrians at designated mid-block locations.

PROS:

- Significantly increases vehicles yielding to crossing pedestrians.
- Often decreases pedestrian-involved crashes.

CONS:

- Should only be used where they can be easily seen by drivers (not near driveways and cross-street entrances)

ON-STREET BICYCLE STRATEGIES

Strategy: On-Street Shared Lane Markings or Sharrows

STRATEGY PURPOSE:
Street markings used to indicate a shared lane environment for bicycles and automobiles. These markings can supplement directional and wayfinding guidance, and are typically designated on lower-volume, lower-speed streets.

PROS:

- Reinforce legitimacy of bicycle traffic on the street.
- Can provide indication to bicyclists recommended alignment and routes.
- Requires no additional street space.

CONS:

- Not a substitute for dedicated bike lanes or separated facilities.

ON-STREET BICYCLE STRATEGIES

Strategy: Bike Lanes

STRATEGY PURPOSE:

At a minimum, bike lanes are designated by pavement markings for the preferential or exclusive use of bicyclists. Buffered bike lanes include pavement markings to add additional protective space between vehicles and bikes.

PROS:

- Increases cyclist comfort and clearly identifies bicyclists' space on streets.
- Creates separation between bicyclists and automobiles.

CONS:

- Dedicated bike lanes require additional street space, competing with travel lanes and on-street parking.

ON-STREET BICYCLE STRATEGIES

Strategy: Cycle Tracks

STRATEGY PURPOSE:
Cycle tracks are separated bicycle facilities designated by pavement markings and physical barriers for the exclusive use of bicyclists. Cycle tracks are typically used for two-way bicycle traffic, but can be one-way facilities.

PROS:

- Increases cyclist comfort and clearly identifies bicyclists' space.
- Creates separation between bicyclists and automobiles.

CONS:

- Cycle tracks require additional street space, competing with travel lanes and on-street parking.

ON-STREET BICYCLE STRATEGIES

Strategy: Bike Boulevard

STRATEGY PURPOSE:
Bicycle boulevards are low volume, minor streets modified to limit “through” traffic using the corridor and giving bicycle travel priority through a range of signage, pavement markings, and traffic calming devices.

PROS:

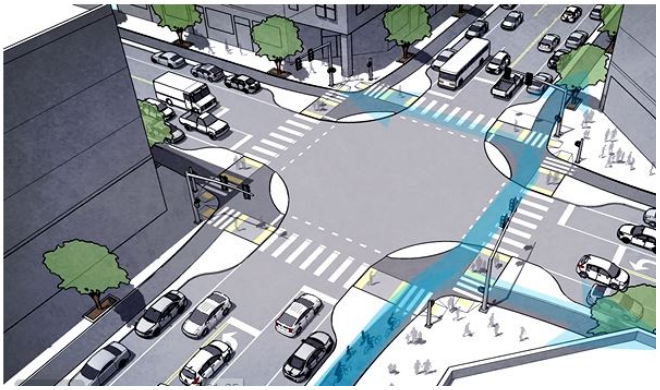
- Create bicycle priority corridors in locations that are not intended to emphasize vehicular through movements.
- Provides traffic calming to neighborhood streets.

CONS:

- Calming features can be more expensive than just traditional bike lanes.

ON-STREET BICYCLE STRATEGIES

Strategy: Protected ("Dutch") Intersection



Strategy Purpose:

A treatment at a major intersection that includes physical barriers and markings for bikeways that increase bicyclist visibility. Can include many potential elements such as pavement markings, curb to delineate dedicated bike paths, and bicycle phases on traffic signals.

Pros:

- Increases the separation and visibility of bicyclists at intersections.
- Reduces bicycle and vehicular conflicts

Cons:

- Can be relatively higher cost than other bicycle facilities.
- Some applications can reduce vehicular throughput at an intersection.

OFF-STREET BICYCLE STRATEGIES

Strategy: Multiuse Paths – Sidepath

Strategy Purpose:

Provides a dedicated facility for bicyclists and pedestrians that is physically separated from vehicular traffic.

Pros:

- Separation from vehicular traffic can improve the experience for some users.
- A boulevard section can be landscaped to add to aesthetics and user comfort.
- In corridors with limited street right-of-way width, Sidepaths can be constructed at the curb without a boulevard.

Cons:

- Sidepaths add to width requirements for the street.
- Sidepaths along streets with a high number of driveways and side streets can be hazardous.

OFF-STREET BICYCLE STRATEGIES

Strategy: Multiuse Paths – Recreational Trail

Strategy Purpose:

Provides a dedicated facility for bicyclists and pedestrians that typically does not follow the roadway network like a sidepath. Recreational trails typically follow rivers, cross parks, or are located along other public right-of-way corridors.

Pros:

- Separation from vehicular traffic can improve the experience for users.
- Trails can be landscaped or in natural surroundings to add to aesthetics and user comfort.

Cons:

- Recreational trails often do not provide direct connections for many bike commute trips.

OFF-STREET BICYCLE STRATEGIES

Strategy: Grade Separation

STRATEGY PURPOSE:
A grade separation provides bicyclists and pedestrians a dedicated facility that is used to cross walking and biking barriers, including high-volume roadways, water features, and railroads.

PROS:

- Separation from vehicular traffic can provide a more direct and safer connection between two points.
- Provides connections across barriers that cannot otherwise be crossed.

CONS:

- Grade Separations are expensive.

VEHICULAR CONGESTION STRATEGIES

Strategy: More Travel Lanes

Strategy Purpose:

Additional travel lanes through road and street widening can provide increased vehicle throughput and reduced travel delays in arterial corridors.

Pros:

- Provides significantly more through capacity and reduced travel delays for vehicles.
- In some locations, can reduce vehicle crashes.

Cons:

- Wider streets are typically less safe for pedestrians and bicyclists.
- Can impact livability of adjacent neighborhoods.

VEHICULAR CONGESTION STRATEGIES

Strategy: New Signals and / or Improved Coordination

STRATEGY PURPOSE:

Move traffic, pedestrians, bicyclists, and transit vehicles more efficiently on existing streets by enhancing existing traffic signals, or adding traffic signals to intersections.

PROS:

- More efficient use of existing street and roads with relatively low cost.
- Limited impacts to neighborhoods and does not require more road right-of-way.

CONS:

- Often has less traffic capacity increases than major widening.
- Signalized intersections on higher-speed facilities can experience more severe crashes.

VEHICULAR CONGESTION STRATEGIES

Strategy: Innovative Intersection Types

STRATEGY PURPOSE:
A range of non-traditional intersection designs such as roundabouts, displaced left-turn intersections, and median u-turn intersections that aim to improve corridor traffic flow and safety by removing left-turning traffic from the intersection of major roads.

PROS:

- Shifts high-conflict left-turning traffic away from the major intersection, increasing vehicle throughput and reducing delays.
- Improves safety by eliminating the dangerous left-turn maneuver from the major intersection.

CONS:

- Can require additional street right-of-way width compared to traditional intersections.
- In some situations can be difficult for pedestrians to cross, depending on design.

VEHICULAR CONGESTION STRATEGIES

Strategy: New Roadway Type – Multi-way Boulevard

Strategy Purpose:

A multi-way boulevard includes central through lanes separated by a treed boulevard from parallel frontage lanes – typically with lower speeds and a pedestrian-friendly environment.

Pros:

- Central through lanes provide capacity to vehicular traffic.
- Frontage lanes provide direct access to adjacent land uses in a streetscape that is aesthetically-pleasing and accommodates all users.

Cons:

- Can require more street right-of-way width than traditional street cross-sections.
- Can cost more than traditional street cross-sections.

VEHICULAR CONGESTION STRATEGIES

Strategy: New Roadway Type – Expressway

Strategy Purpose:

An expressway is a high-speed limited-access roadway that provides regional connections between major roadways. These roadways are typically found outside or on the fringes of urban areas and can serve as a beltway or ring-route around the metro area.

Pros:

- Provides a high-speed connection for regional traffic and trucks.
- Can divert regional trips from congested urban corridors.

Cons:

- Requires a significant amount of road right-of-way.
- Pedestrian and bicycle crossings are limited due to high speeds of vehicular traffic.
- Can have impacts to adjacent developed due to limited access points and traffic noise.

VEHICULAR CONGESTION STRATEGIES

Strategy: Grade Separations

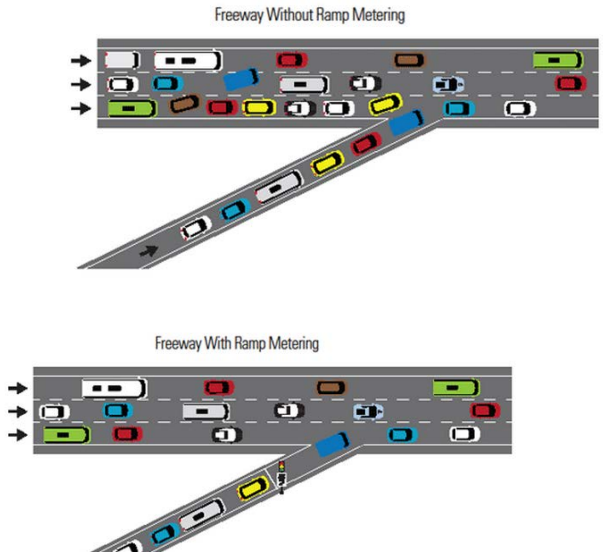
STRATEGY PURPOSE:
Grade separations aim to improve safety, improve network connectivity, and potentially improve travel efficiency by going over or under a barrier such as the Interstate or Railroad.

PROS:
- Improves vehicular safety and reliability.
- Increases network connections and reduces out-of-direction travel.

CONS:
- Grade separations are expensive.

INTERSTATE MANAGEMENT

Strategy: Ramp Metering



Strategy Purpose:

This strategy limits or meters the amount of traffic that can enter the Interstate system at on-ramps, so that conditions do not reach oversaturated conditions, limiting travel delays on the Interstate system.

Pros:

- Can reduce congestion and improve reliability and safety during peak travel periods.
- Relatively cost effective approach to improving Interstate travel flows.

Cons:

- Traffic can sometimes back up on surface streets / cross-streets leading to the Interstate.

ACTIVE TRAFFIC MANAGEMENT

Strategy: Variable Speed Limits, Queue Warnings and Dynamic Junction Control, Traveler Information

STRATEGY PURPOSE:
Utilizing technology to collect, analyze, and dynamically provide travel information to drivers to increase peak capacity and smooth traffic flows on busy Interstates. Messaging can relate to incidents, travel time references, alternate routes, and traffic stoppages ahead.

PROS:

- Increases traffic flow, reliability, and safety through relatively cost effective means.

CONS:

- Some strategies have limited stand-alone benefits to vehicle throughput.

ACTIVE TRAFFIC MANAGEMENT

Strategy: Hard Shoulder Running – Bus on Shoulder

Strategy Purpose:

Using highway shoulders to carry either buses or all vehicles during peak periods to improve throughput. Bus on shoulder programs can provide advantageous bus travel times in congested corridors.

Pros:

- Does not require adding additional through lanes to Interstate.
- Relatively cost effective manner of getting additional capacity on the transportation system during peak periods.

Cons:

- Shoulders must meet certain design requirements for width and pavement depth.
- Safety and operational issues need to be addressed at off-ramps and on-ramps.

TRAVEL DEMAND MANAGEMENT

Strategy: Travel Demand Management Strategies

STRATEGY PURPOSE:

Travel demand management strategies aim to reduce travel demand during the peak period and to redistribute this demand to other modes and times. Strategies include coordinated / flexible work schedules, parking policies that encourage ridesharing and transit, guaranteed ride home, employer associations, and targeting investments in transit, bicycle and pedestrian infrastructure.

PROS:

- Can move more people across the metro area efficiently with limited investment.
- Can reduce the negative impacts of congestion like air quality and safety issues.

CONS:

- Can be difficult to implement effective TDM strategies when overall regional congestion is limited and parking is lower cost.

TRANSIT STRATEGIES

Strategy: Local Bus (MATBUS) Transit

Strategy Purpose:

Public transit services such a local bus service provide low-cost access to services and jobs for the public, and can reduce traffic congestion and air pollution. Local bus service is designed to operate on city streets in mixed flow lanes with other vehicles and users. Potential local bus strategies include:

- Increased hours of service, whether extending more morning, night, or weekend hours.
- Increased frequency of service (for instance, buses arrive every 15 minutes instead of every 30 minutes).
- Extend existing routes or add more routes throughout Fargo / Moorhead.

Pros:

- Flexible transit option that requires limited capital investment beyond the buses themselves.
- Can change routes to respond to market changes or new development.

Cons:

- Due to frequent stops and mixing with other traffic, local bus travel times are typically lower than personal vehicle travel and other transit modes.
- Local bus service does not typically spur the economic development that is sometimes associated with dedicated transit-way modes like bus rapid transit and light rail.

TRANSIT STRATEGIES

Strategy: Express Bus Transit

Strategy Purpose:

Bus service that is intended to provide commuter-oriented service with faster travel times between major origins and destinations. Express service is typically associated with routes that have limited stops and connect major residential areas and major employment areas.

Pros:

- Typically has faster travel times than local bus.
- Can be combined with a park and ride lot to improve bus access in car-oriented suburban areas.

Cons:

- Limited stops means not all locations along the route can be accessed.
- Express services are often only run during the peak period.

TRANSIT STRATEGIES

Strategy: Rapid Bus Transit (BRT)

Strategy Purpose:

Typically associated with a high-quality bus service that offers faster travel times, higher reliability, dedicated branding, frequent service and dedicated infrastructure including: bus stops, level boarding, and often its own bus lanes. BRT is typically applied in high transit-usage corridors.

Pros:

- Can provide more efficient service levels than local bus.
- Is sometimes associated with spurring economic development.

Cons:

- Dedicated transitways can sometimes require repurposing vehicle travel lanes into bus lanes, which can lead to reduced travel times in congested corridors.
- Capital costs are higher than local bus service.

TRANSIT STRATEGIES

Strategy: Streetcar

STRATEGY PURPOSE:
Streetcar is a train-based transit on rail service that operates in mixed traffic with other vehicles and users. Streetcars typically operate in relatively dense areas that require frequent stops.

PROS:

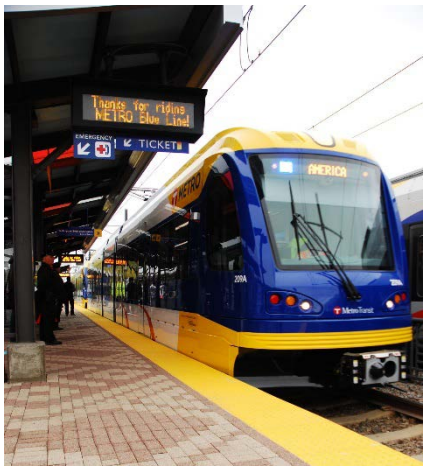
- Can carry more ridership than a typical local bus.
- Often associated with spurring economic development.

CONS:

- Significantly more expensive than local bus for similar travel times.

TRANSIT STRATEGIES

Strategy: Light Rail



Strategy Purpose:

Light rail transit (LRT) is a higher-capacity train-based transit on rail service, typically in its own travelway so trains do not mix with other vehicles. LRT services tend to be in very high transit-usage corridors.

Pros:

- Higher capacity and travel times than bus, and can be faster than personal vehicles in more congested corridors.
- Often associated with spurring economic development around stations.
- Boarded at ground level for improved accessibility.

Cons:

- Costs are very high compared to bus systems.
- High ridership levels are required to support the service.