



Metropolitan Council Meeting May 21, 2014

Agenda for Today

- Catalytic development discussion
- Highway Investment Direction and Plan
- Freight Investment Direction
- Key Updates from 2030 TPP
- New to the 2040 TPP
- Key tensions discussed throughout the presentation

Transitways Catalytic Development

- How do we determine if a corridor can be catalytic?
- What factors besides transit investment influence catalytic development?
- What does it take to deliver on the expectation and promise of catalytic development?
- What are the risks?
- Moving the market: asking it to go further than it would without public support.

WHAT DEFINES A CATALYTIC CORRIDOR?



Mariia Zimmerman, MZ Strategies, LLC mariia@mzstrategies.com

MZ

Discussion
before the
Metropolitan
Council
Committee of
the Whole,
May 21, 2014

CATALYTIC REGIONAL SYSTEM

- Coverage and Scale Dallas-Fort Worth, Denver
- Multi-modal Salt Lake City, Portland, Seattle
- Connected Washington, DC, Bay Area

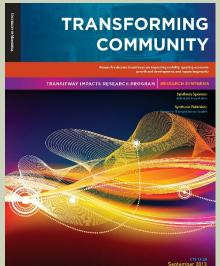
These are systems that move the market, and shift travel behavior. The impacts are felt on the economy, in shaping development, and in mode splits for all trips.

University of Minnesota's Transits Impact Research Program: Regional Effects to access, economic development and land use, equity and ridership







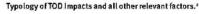




What Catalyzes **Development?**

- Government support - policies, zoning, funding, streamlining, "All In"
- Strength of surrounding land market
- 3. Quality of the transit investment

All come together for catalytic investments!



CORRIDOR	BRT STANDARD	LAND POTENTIAL	GOVERNMENT TOD SUPPORT	TOD INVESTMENT (MILLIONS)	TOD INVESTMENT PER DOLLAR OF TRANSIT INVESTMENT (MILLIONS)
STRONG TOD IMPACTS					
Cleveland HealthLine BRT	4	Emerging	Strong	\$5.800	\$114.54
Kansas City Main Street Metro Area Express (MAX) bus	Below Basic	Strong	Strong	\$5,200	\$101.96
Seattle South Lake Union (SLU) Streetcar	Below Basic	Strong	Strong	\$3,000	\$53.57
Portland Streetcar	Below Basic	Strong	Strong	\$4,500	\$41.48
Portland MAX Blue Line LRT	0	Emerging	Strong	\$6,600	\$3.74
MODERATE TOD IMPACTS					
Las Vegas Strip & Downtown Express (SDX) BRT	3	Strong	Moderate	\$2,000	\$42.28
Boston Washington Street Silver Line bus	Below Basic	Emerging	Moderate	\$650	\$20.97
Denver Central Corridor LRT	6	Strong	Moderate	\$2,550	\$14.88
Eugene Emerald Express Green Line (EmX) BRT	6	Emerging	Moderate	\$100	\$3.96
Pittsburgh Martin Luther King, Ir. East Busway BRT	6	Emerging	Moderate	\$903	\$3.59
Phoenix Metro LRT	60	Emerging	Moderate	\$2,820	\$1.99
Ottawa Transitway BRT	60	Emerging	Moderate	\$1,000	\$1.71
Charlotte Lynx LRT	3	Emerging	Moderate	\$810.20	\$1.66
Boston Waterfront Silver Line bus	Below Basic	Strong	Moderate	\$1,000	\$1.39
Los Angeles Orange Line BRT	4	Emerging	Moderate	\$300	\$0.83
Denver Southwest Corridor LRT	6	Limited	Moderate	\$160	\$0.71
WEAK TOD IMPACTS					
Ottawa O-Train LRT	6	Limited	Weak	nominal	nominal
Pittsburgh "The T" LRT	a	Limited	Weak	nominal	nominal
as Vegas Metropolitan Area Express (MAX) bus	Below Basic	Limited	Weak	nominal	nominal
Pittsburgh West Busway BRT	Basic BRT	Limited	Weak	nominal	nominal
Pittsburgh South Busway BRT	Basic BRT	Limited	Weak	nominal	nominal

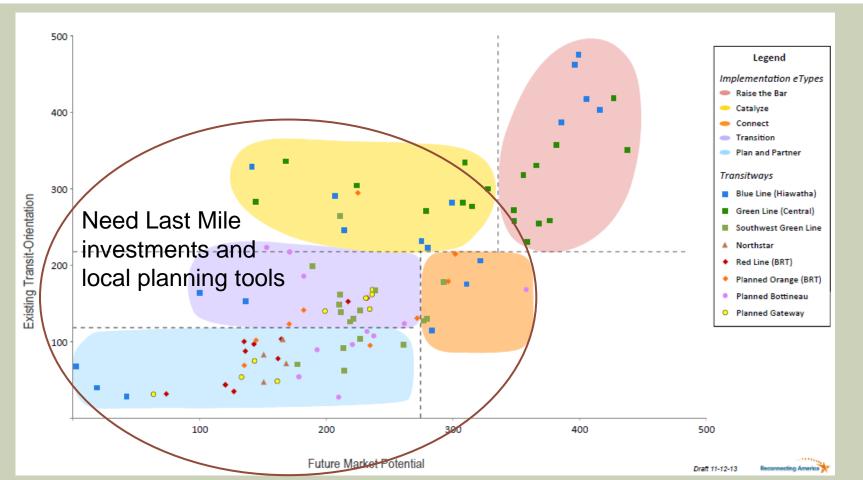








TWIN CITIES TOD CLASSIFICATION TOOL



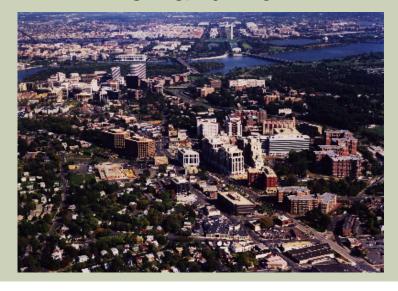


ARLINGTON'S CATALYTIC ORANGE LINE

- 81% increase in land value around station since 1995
- 38% of residents take transit to work, 73% walk to stations
- 12% of Arlington County households don't own cars, versus 4% regionally
- 8% of county land generates 33% of revenues, allowing Arlington to have the lowest property tax of any major jurisdiction in Northern Virginia
- Rail investment used as a catalyst for development
- Local government went ALL IN!



Then and Now





BAY AREA METROPOLITAN TRANSPORTATION COMMISSION

- Identified Regional Transit Expansion Priorities
- Established TOD Housing Thresholds for all Rail Extensions
- Station Area Planning Grant Program created to develop neighborhood plans at Rail Stations
- Livable Communities program to fund local planning and projects
- Transit Oriented Affordable Housing Acquisition Fund (\$10 million by MTC)
- One Bay Area Grant Program (2013) Target PDAs, Flexible funds, Secure Housing Element and Complete Streets commitments









Development/Redevelopment Potential of TOD Corridors

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Economic Competitiveness, Economic Development & Transit

"Growing the economic pie"

- Regional competitiveness reduce congestion, enhance quality of life, attract millennial generation
- Regional economic drivers facilitate efficient access to employment locations; strengthen capacity to attract talent

"Shifts within the economic pie"

- Access to jobs for people without a reliable vehicle
- Building wealth of residents reduced dependence on auto
 - American Public Transit Association \$893/month for MSP market
- Concentrates location of some development investment

Robert Street – Evaluation of BRT/Streetcar development potential



- Context urban to suburban corridor
- Streetcar mode likely to stimulate more investment than BRT
- Best case development scenario wouldn't justify additional investment required for streetcar

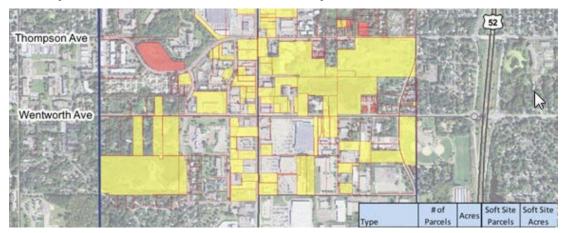
Robert Street Findings

Where transit service enhances development, it captures it from other locations

- Robert St. transitway must compete with other corridors in the region for TOD investment
- Number of new transit corridors and stations in the region limit extent to which new service can stimulate investment in Robert Street transitway
- Transit investment can concentrate development in the corridor. It does not create substantial numbers of new households, long-term jobs or businesses.
- New investment potential influenced by existing demographics, sites, access, government support

Robert Street Findings

- Cities must take the lead in stimulating TOD; county & regional tools important
- Identify station areas with potential to be catalytic
 - South End
 - Thompson/Wentworth
 - Signal Hills
 - Westside Flats



- Market & economic viability assessment should inform station area planning & deployment of financing tools
- Context is critical: respect opportunities & constraints of suburban & urban environments

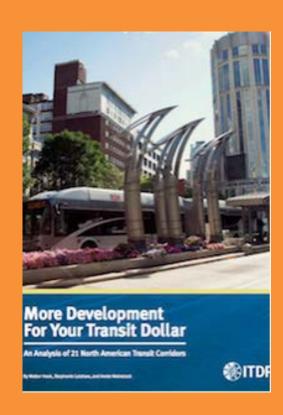
What can make a difference?

ITDP Report Lessons

- Government support for TOD planning, policies, zoning, funding & streamlining development process
- Market characteristics
- Transit characteristics (tertiary)

Robert Street Lessons

- Available sites/redevelopment sites
 - Topography, lot depth, sufficient size to be catalytic, access
 - Ownership, site assembly, land cost, redevelopment cost, time to market
- Increasing density & transit orientation in market context



Thank You!

Janna King

jking@econdevelop.com 612 925 2013



2040 TPP Outline

- Part I: Introduction: Transportation for a Thriving Region
- Part II: Implementing the Transportation Vision for the MSP Region
 - A. Existing System
 - B. Transportation Policy Plan Strategies (grouped by goal)
 - C. Land Use and Local Planning
 - D. Transportation Finance
 - E. Highway Investment Direction and Plan
 - F. Transit Investment Direction and Plan
 - G. Bicycle and Pedestrian Investment Direction
 - H. Freight Investment Direction
 - I. Aviation Plan and Investments
- Part III: Federal Requirements and Work Program
- Appendices





Highway Investment Direction and Plan

Highway Investment

Investment direction
Current Revenue Scenario investments
Increased Revenue Scenario investments
Investment summary
Work program studies before next TPP update

Highway Investment Direction

- Incorporates Thrive MSP 2040 outcomes, principles, and MN State Highway Investment Plan (MnSHIP) (New)
- Mature, well-managed freeway system
 - Will not eliminate congestion, but can ease congestion and provide options like MnPASS
 - Limited highway funding
 - Highest priority on operating, maintaining, and rebuilding
 - Priority in system-wide, lower cost/high return on investment approach to existing problems
- Travel demand management (TDM); transit, bicycle and pedestrian investments; and land use changes important for congestion management

Highway Investment Direction

Regional Highway System Investment Prioritization Factors (New)

Requirements:

- Safety and security
- Operate, maintain, and rebuild

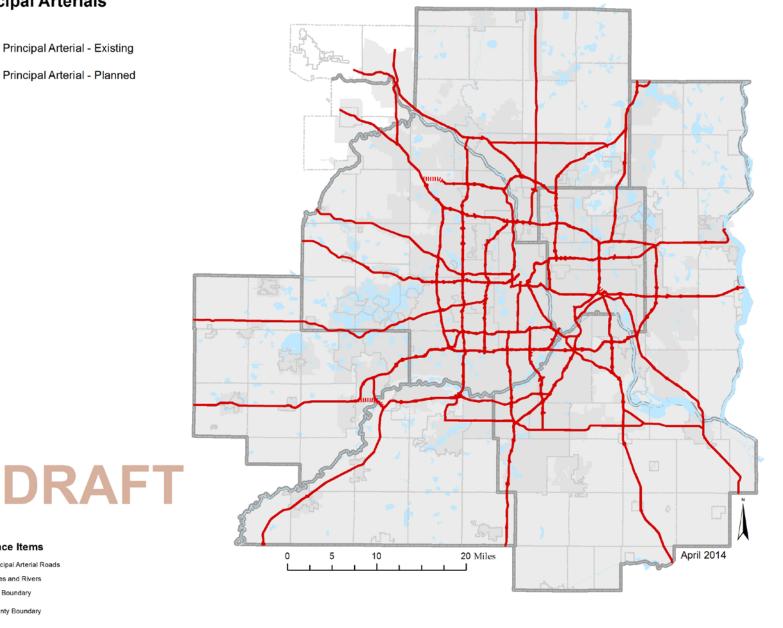
Prioritization Factors

- Improves economic vitality
- Improves critical regional highway system connectivity
- Increases regional highway system travel time reliability
- Supports job and population growth forecasts and local comprehensive plans
- Regional balance of investments

Principal Arterials

Principal Arterial - Existing

Principal Arterial - Planned



Reference Items

Principal Arterial Roads Lakes and Rivers City Boundary



MUSA 2040 MPO Area

Identifies MnDOT state highway investments and provides direction on local roadway investments through Regional Solicitation

- State highways investment primarily replace and rebuild
- Must identify investments in urbanized parts of Wright and Sherburne counties, and Houlton, WI (New)

Current Revenue Scenario allocates \$11 billion 2015-2040 (New)

- Region's highest state highway priorities
- Does not identify projects for \$1.5 billion federal Regional Solicitation funding for A-minors
- Reported in "year of expenditure" dollars

Identified Projects* in Highway Current Revenue Scenario

- ♦ 2015-2018 TIP Bridges
- 2019 2024 Bridges

Strategic Capacity

Roadside Infrastructure

Roadside Infrastructure / Safety

2015-2018 TIP Pavement

2019 - 2024 Pavement Projects

2015 - 2018 Pavement / MnPass

2015 - 2018 Pavement / Safety

Tier 1 MnPASS Expansion

*Not intended to represent all projects until 2040. Includes only those projects identified by May 2014. Subject to change and amendment.

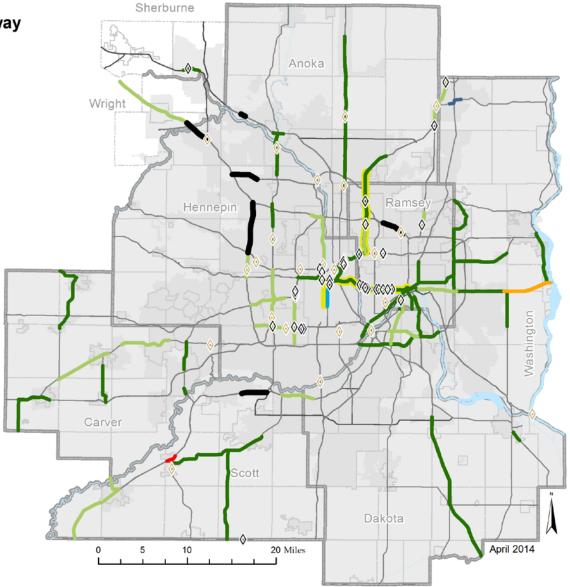
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Reference Items



County Boundary

2040 Urban Service Area MPO Area



Highway Investment Categories

- 1. Operate and maintain highway assets
- 2. Program support
- 3. Rebuild and replace highway assets
- 4. Safety improvements
- 5. Bicycle and accessible pedestrian improvements

Regional Mobility Improvements

- 6. Traffic management technologies
- 7. Spot mobility improvements
- 8. MnPASS
- 9. Strategic capacity enhancements
- 10. Highway access improvements



- 1. Operate and maintain state highway assets (New)
 - Investment program, no specific projects listed
 - \$2 billion 2015-2040
 - Examples
 - Freeway and arterial traffic management
 - Freeway incident response
 - Pavement patching, restriping
 - Lighting and traffic signal, sign, and management system maintenance
 - Guardrail and cable median barrier repair
 - Snow and debris removal, roadway salting
 - Drainage system maintenance (culverts, inlets, and pipes)
 - Bridge inspection and maintenance
 - Maintenance vehicle fleet management

2. Program support (New)

- Investment program, no specific projects listed
- \$0.9 billion 2015-2040
- Does not include internal MnDOT program delivery
- Examples
 - Right-of-way
 - Consultant services for design/engineering
 - Supplemental agreements
 - Construction incentives

3. Rebuild and replace highway assets

- Projects identified for first eight years only and subject to change
- Often called preservation, asset management, or modernization investments
- \$6.9 billion 2015-2040
- Rebuild or replace
 - Pavement
 - Bridges
 - Roadside infrastructure drainage systems, signs, lighting, traffic signals, other traffic management technologies
- Create opportunities to cost-effectively implement system-wide safety and congestion mitigation improvements

Identified Pavement, Bridge, and Roadside Infrastructure Projects* 2015 - 2024 (Projects 2025 - 2040 TBD)

- ♦ 2015-2018 TIP Bridges
- 2019 2024 Bridges

Roadside Infrastructure

Roadside Infrastructure / Safety

2015-2018 TIP Pavement

2019 - 2024 Pavement Projects

2015 - 2018 Pavement / MnPass

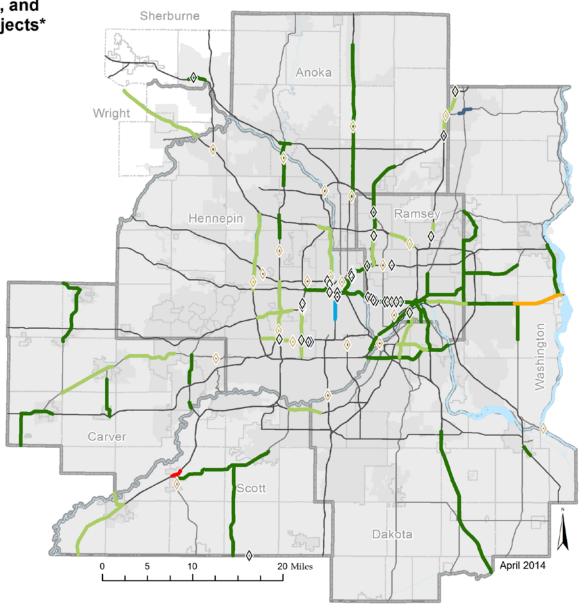
2015 - 2018 Pavement / Safety

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Reference Items





Limited Resources/Priorities Tension

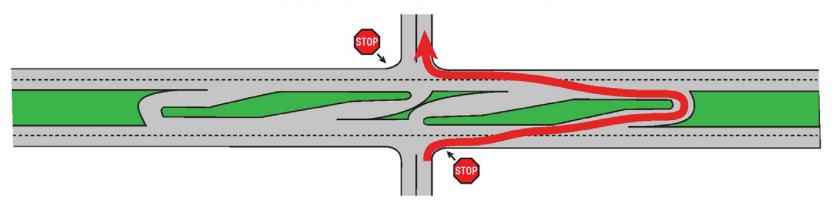
Growing gap for MnDOT to responsibly operate, maintain, and rebuild the state highway system

- Operations and maintenance often are overlooked as an unfunded need
- Replacing and rebuilding existing not as "attractive" to politicians, citizens as new construction
- MnDOT's investments in A-minor arterials are significantly lower than counties'

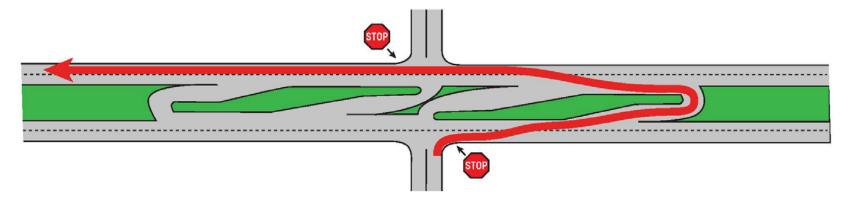
- 4. Highway safety improvements (Updated)
 - Investment program, no specific projects listed
 - \$0.4 billion 2015-2040 (stand-alone projects)
 - Safety investments also included in all other investment categories
 - Examples proactive and reactive investments
 - Adding and lengthening turn lanes
 - Intersection improvements on non-freeways
 - Installing rumble strips or cable median barriers



Crossing a rural divided highway using a Reduced Conflict Intersection



Left hand turn onto a divided highway using a Reduced Conflict Intersection



Limited Resources/Priorities Tension

MnDOT has limited funding available for specific highway safety projects, approach to all projects must be to improve safety

- Safety is a required investment
- Safety frequently not visible in the project purpose/description
- Including bike and pedestrian elements is strong safety component

- 5. Highway bicycle and accessible pedestrian investments (New)
 - Investment program, no specific projects listed
 - Include investments when rebuilding pavement and bridges
 - \$0.3 billion 2015-2040
 - Examples
 - Trails and sidewalks on bridges or adjacent to roadways
 - Accessible pedestrian signals
 - Sidewalk curb ramps
 - All federal-aid highway projects must evaluate the need for these investments







6. Traffic management technologies

- Investment program, no specific projects listed
- Also called active traffic management, intelligent transportation systems, or roadway system management
- Purpose is to smooth congestion, increase person throughput, improve air quality, reduce crashes, improve travel time reliability
- \$50 M 2015-2023; \$5 M per year until 2024
- Examples
 - Traveler information systems
 - Changeable signing
 - Speed harmonization
 - Ramp meters with bus/carpool bypass lanes
 - Traffic signals including coordination, advanced walk signals, countdown timers, and queue warning
 - Technology part of MnPASS

MnDOT Traffic Managment Technology System

Coordinated Signals

Coordinated, ATMS, in place or funded

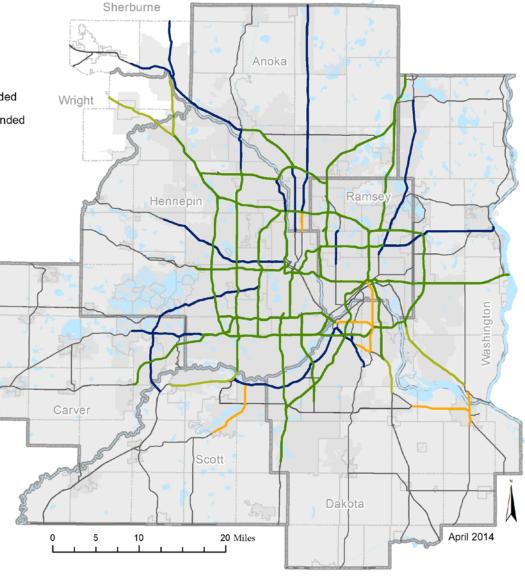
Coordinated, ATMS Planned, not funded

Freeway Management System, in place or funded

Freeway Management System Planned, not funded

MnDOT Trunk Highway

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Reference Items

Principal Arterial Highways

Lakes and Rivers
City Boundary

County Boundary

2040 Urban Service Area MPO Area

Current Revenue Scenario

7. Spot mobility improvements

- Investment program, no specific projects listed
- Identified through MnDOT Congestion Management and Safety Plan (CMSP)
- Provide bottleneck relief, improve geometry, address safety hazards
- Lower cost/high return on investment projects
- May require flexible design approach
- \$200 M 2015-2023; \$20 M per year until 2024

Current Revenue Scenario

- 7. Spot mobility improvements cont. Examples
 - I -35W from 106th to TH 13: Add southbound auxiliary lane (completed with Urban Partnership Agreement)
 - <u>I- 494 at TH 55</u>: Lengthen northbound exit ramp turn lanes and triple left turn lanes; add third lane eastbound on TH 55 to Fernbrook or Plymouth Blvd
 - I- 494 from I-35W to France Avenue: Add westbound auxiliary lane between northbound I-35W and France Avenue
 - <u>I- 94 at TH 101</u>: Add half-mile westbound auxiliary lane and two lane exit at TH101 (American Recovery and Reinvestment Act project)
 - I- 94 from TH 61 to White Bear Avenue: Add eastbound auxiliary lane

Spot Mobility Improvement Opportunity Areas

Opportunity Node

Opportunity Link

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Anoka Wright Rams Hennepin Washington Carver Scott Dakota April 2014 20 Miles 5 10

Sherburne

Reference Items

Principal Arterial Highways

Other Trunk Highways

Lakes and Rivers

City Boundary



County Boundary



Current Revenue Scenario

8. MnPASS System

- Identified through Council's Metropolitan System Highway Investment Study and MnDOT MnPASS 2 Study
- Provide reliable, congestion-free travel option during rush hours for people who ride transit or in carpools, and other motorists who are willing to pay
- May require flexible design approach to maximize use of available pavement and right-of-way
- \$200 M 2015-2023, see map on next slide
- Other investments in MnPASS corridors will not preclude and will lead toward future implementation of MnPASS

MnPass System Vision

- Direct Connection
- Through Movement

MnPASS

Existing / Under Construction

Tier 1 MnPASS Expansion

Tier 2 MnPASS Expansion

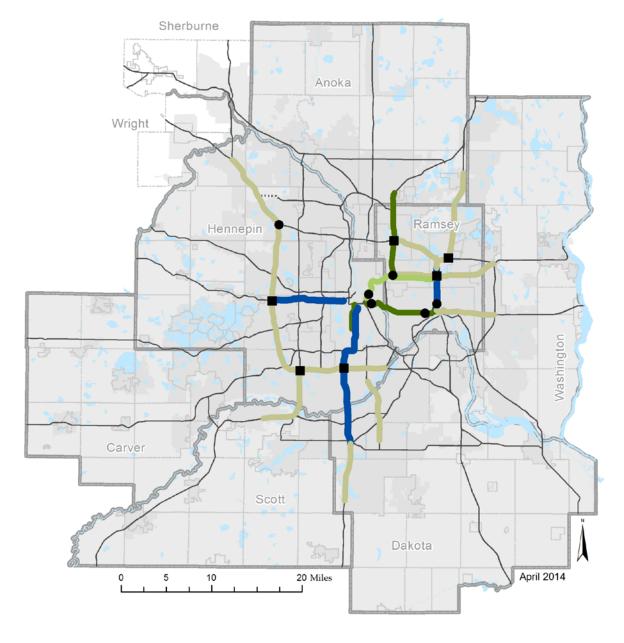
Tier 3 MnPASS Expansion





County Boundary

2040 Urban Service Area MPO Area



Current Revenue Scenario

- 9. Strategic Capacity Enhancements (Updated)
 - Collaborative work with MnDOT to identify projects
 - Lower cost/high return on investment approach
 - Capacity enhancements must not preclude future MnPASS
 - \$255 M 2015-2023, see map on next slide
 - Other potential projects include
 - Intersection conversions, including TH 36, TH 10, and TH 169
 - Auxiliary lanes
 - Bus only shoulders

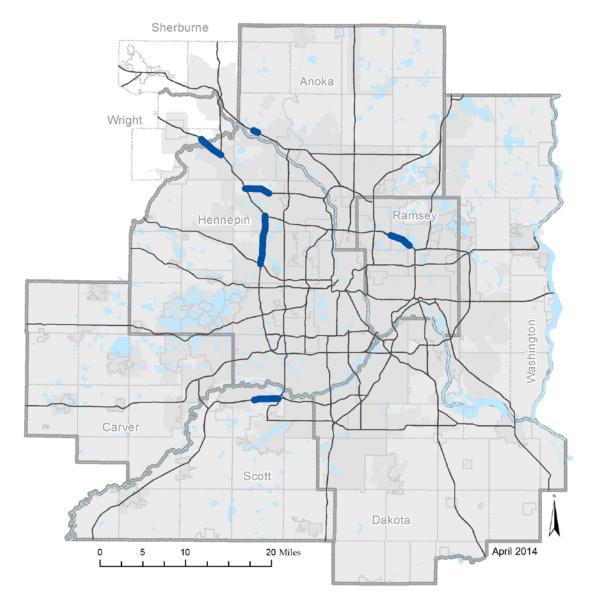
Highway Strategic Capacity Enhancements

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Reference Items







Limited Resources/Priorities Tension

MnDOT has limited funding for mobility projects (MnPASS and strategic capacity enhancements) versus high public expectations

- Capacity improvements must be prioritized
- MnPASS provides long term congestion free option but is not well understood by public
- Funding through competitive programs requires "shelf ready" projects, it is hard to get projects ready with no committed funding
- Public perception of transit expansion and no highway expansion

Land Use Tension

Public expectation that highway capacity investments will occur with growth

- Congestion is a reality/expectation for all areas of the region
- Investments focus on providing options, easing congestion
- Development of an adequate local road system, especially Aminor arterials, important to provide local connectivity, serve regional trips

Current Revenue Scenario

10. Regional Access Improvements (New)

- Collaborative work with MnDOT and locals to identify projects, and FHWA if on Interstate
- Should be consistent with regional development plans, local comprehensive plans
- Should promote region's economic competitiveness
- \$14 M 2015-2023

Approved Interchanges - New Interchanges or Movements

Interchange by Type

- Access Improvements
- Capacity Enhancement

Access Improvements

1	494 at Bush Lake
2	94 at Brockton
3	212 at Shady Oak
4	I-94 at 610 including Maple Grove Pkw y / CSAH 610
5	TH 212 at Cty Hw y 140
6	494 at Argenta Trl
7	I-94 at 5th / 7th
8	Hw y 100 at 36th
9	Hw y 100 at TH 7
10	Hw y 100 at CR 5

Capacity Enhancements

ı		
	11	52 at CR42
	12	169 at 101st

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Reference Items

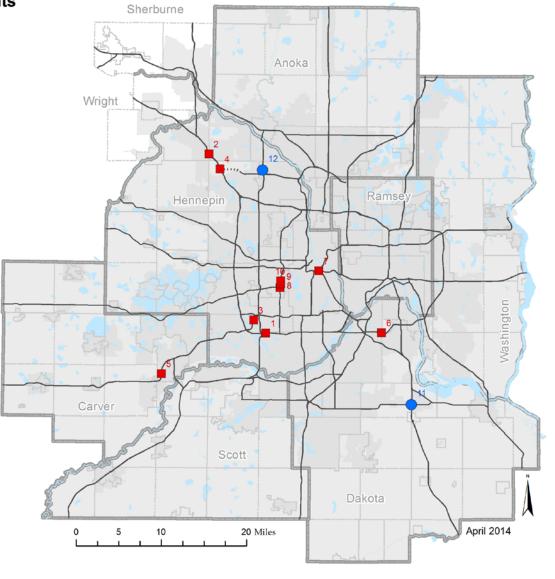
Principal Arterial Highways

Lakes and Rivers

City Boundary

County Boundary

2040 Urban Service Area MPO Area



Increased Revenue Scenario

Continue to identify MnDOT state highway investments and provide direction on local roadway investments through Regional Solicitation (Updated)

Increased Revenue Scenario allocates \$8 to \$10 billion

- Next set of priorities
- Funding amount based on Governor Dayton's Transportation
 Finance Advisory Committee (TFAC) plus operations and
 maintenance information from MnDOT
- Equivalent to more than a 40 cent increase in gas tax, with 25 cents to keep up with inflation

Increased Revenue Scenario

Investment Category Funding Gaps (New)

- Operations and maintenance should increase 50 percent (+\$1 billion)
- Rebuild and replace should increase 35 percent (+\$2 to \$2.5 billion)
- Highway safety, bicycle and accessible pedestrian should increase 75 to 100 percent (+\$0.4 billion, +\$0.3 billion)
- Regional mobility should increase \$4 to \$5 billion
 - Complete the MnPASS System
 - Intersection conversions, including TH 36, TH 10, and TH 169
 - Regional access improvements, e.g., see map on slide 34

Beyond Increased Revenue Scenario

Additional Highway Needs

- May study if not listed in plan
- Use adopted population, household, and employment forecasts and plans
- Be affordable, innovative, realistic, and responsible when studying
- Potential future river bridges
 - Trunk Highway 41 (Carver-Scott counties, right-of-way only before 2040)
 - Future Dayton-Ramsey local A-minor arterial (Hennepin-Anoka counties)
- Future principal arterials in Anoka, Dakota, Washington and Scott counties

Highway Investment Summary 2015 to 2040, MnDOT Spending Only*

Investment Category	Current Revenue Scenario**	Increased Revenue Scenario
Operate and Maintain	\$2.0 B	+\$1 B
Program Support	\$0.9 B	+\$0.7 B
Rebuild and Replace	\$6.9 B	+\$2 to 2.5 B
Safety	\$0.4 B	+\$0.3 B
Bicycle and Accessible Pedestrian	\$0.3 B	+\$0.3 B
Regional Mobility***	\$0.7 B	+\$4 to 5 B
TOTAL	\$11 B	+\$8 to 10 B

^{*}Local investments identified in local capital improvement programs and comprehensive plans **Does not include \$1.5 B from TAB's Regional Solicitation allocated to local roads

^{***}Includes Traffic Management Technologies, Spot Mobility Improvements, MnPASS System, Strategic Capacity Enhancements, and Regional Access Improvements

Identified Projects* in Highway Current Revenue Scenario

- ♦ 2015-2018 TIP Bridges
- 2019 2024 Bridges

Strategic Capacity

Roadside Infrastructure

Roadside Infrastructure / Safety

2015-2018 TIP Pavement

2019 - 2024 Pavement Projects

2015 - 2018 Pavement / MnPass

2015 - 2018 Pavement / Safety

Tier 1 MnPASS Expansion

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Principal Arterial Highways

Other Trunk Highways

River

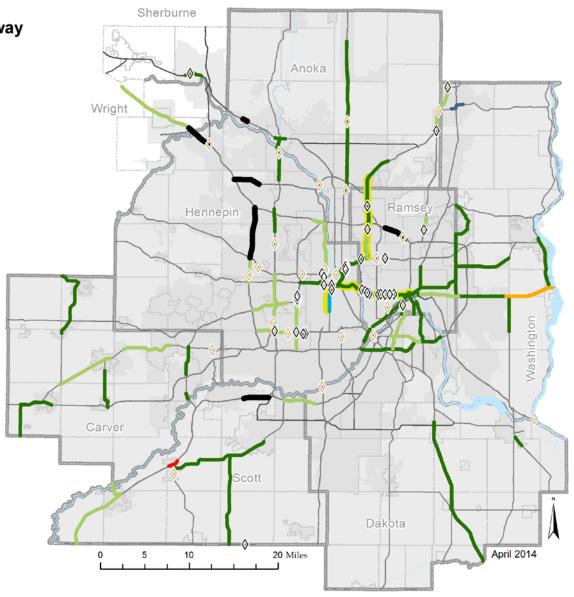
City Boundary



County Boundary



2040 Urban Service Area MPO Area







Freight Investment Direction

Modes

- Trucks on Roadways
- Freight Railroads
- Barges on River
- Air

Challenges and Opportunities

- Capacity and Congestion
- High Fuel Costs
- Connectivity- the "Last Mile"
- Freight Safety
- Freight Security
- Freight Terminals and Adjacent Land Uses

Investment Considerations by Mode

- TPP includes highway and aviation investment plans
- Region has minimal involvement in planning other modes
- Freight rail is planned by individual railroads
- River system- Army Corps, port authorities, private terminal operators

TPP Highway Plan

- Preservation of bridges and pavement
- Active traffic management
- Lower-cost/high-benefit mobility improvements
- MnPASS lanes directly benefit shipments by single-unit commercial vehicles, vans, pickups and courier cars
- MnPASS lanes free up capacity in adjacent general purpose lanes, so less corridor congestion for larger trucks
- Strategic capacity enhancement

Air Freight - TPP Aviation Plan

- Freight terminal area of MSP relocated and rebuilt
- I-494 and 34th Avenue interchange rebuilt in 2013
- No major air freight upgrades currently planned
- Airfield, passenger improvements may also benefit freight

Rail and Intermodal

- Surge in rail traffic on BNSF, CP due to Bakken oil
- Railroads investing to reduce delays
- Safety of Bakken crude-by-rail flow is concern
- Container-based shipping increased, region's two primary rail-truck intermodal terminals near capacity
- State Rail plan identified many rail bottlenecks in region
- Joint public/private role where these impact passenger rail

River Barges

- Current port terminals in Saint Paul, Minneapolis, Savage
- Minneapolis has low volume, likely to close
- St Paul is largest generator on river system above St Louis
- Diversification in commodities, balancing inbound and outbound cargo

Other Freight Planning Affecting Region

- Minnesota Statewide Freight Plan (MnDOT, 2005)
- Statewide Freight and Passenger Rail Plan (MnDOT, 2010)
- Statewide Multimodal Transportation Plan (MnDOT, 2012)
- Statewide Ports and Waterways Plan (MnDOT, 2013)
- Twin Cities Regional Freight Study (MnDOT and Metro Council, 2013

Limited Resources/Priorities Tension

Limited Control /Influence over Freight Modes/Investments

Coordination needed to utilize active freight railroad ROW for passenger rail use

Land Use Tensions

As industry changes and evolves, industrial land redevelops, conflicts of new land uses with remaining industry

River, rail adjacent land is limited, potential shortage if land converts to parks or housing

Mixed use development must manage retail, restaurant freight needs with residential expectations

