Dallas-Fort Worth Region Planning for Transportation Systems Management and Operations (TSM&O)

May 30, 2014

TexITE Spring Meeting – Austin, Texas

NCTCOG Planning Activities

- Mobility 2035 – 2013 Update (Long-Term 30 years)
- Congestion Management Process (Mid-term 5 to 10 years)
- Transportation Improvement Program (Short-Term 1 to 4 years)

How does Operations fit into these?

Mobility 2035 – 2013 Update Goals

Mobility

- Improve the availability of transportation options for people and goods.
- Support travel efficiency measures and system enhancements targeted at congestion reduction and management.
- Assure all communities are provided access to the regional transportation system and planning process.

Quality of Life

- Preserve and enhance the natural environment, improve air quality, and promote active lifestyles.
- Encourage livable communities that support sustainability and economic vitality.

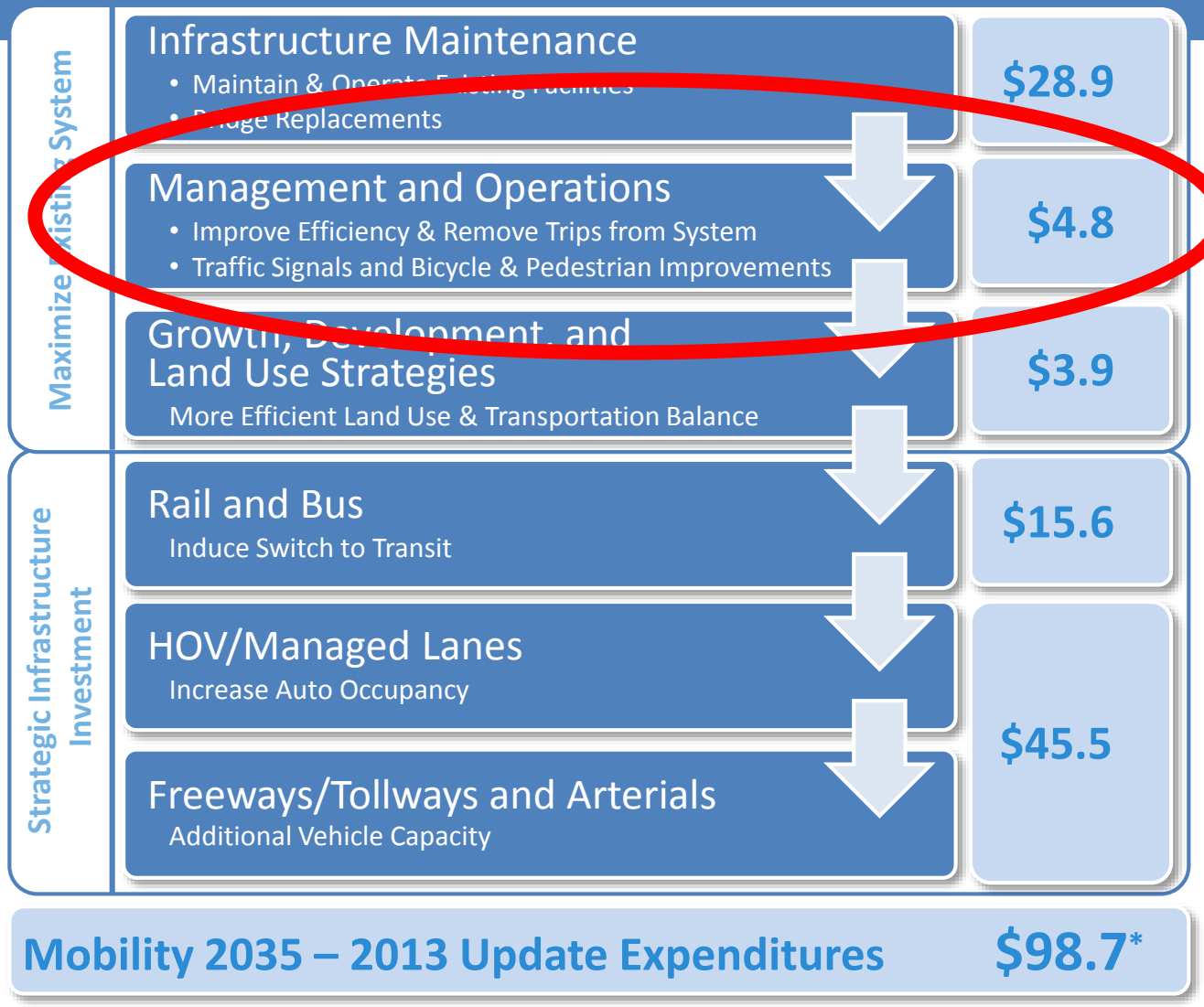
System Sustainability

- Ensure adequate maintenance and enhance the safety and reliability of the existing transportation system.
- Pursue long-term, sustainable revenue sources to address regional transportation system needs.

Implementation

- Provide for timely project planning and implementation.
- Develop cost-effective projects and programs aimed at reducing the costs associated with constructing, operating, and maintaining the regional transportation system.

Mobility 2035 – 2013 Update Prioritization and Expenditures



*Actual dollars, in billions

Mobility 2035 – 2013 Update
TSM&O Related Policies

TDM3-001 Support Congestion Management Process which includes explicit consideration and appropriate implementation of travel demand management, transportation system management, and intelligent transportation system strategies during all stages of corridor development and operations.

TDM3-002 Support an integrated planning process that maximizes existing transportation system capacity before considering major capital infrastructure investment in the multimodal system.

TSM3-001 Installation of pedestrian facilities by local agencies as part of intersection and traffic signal improvements shall provide access to usable walkways and sidewalks.

ITS2-001 Priority funding consideration will be given to projects that meet the regional ITS deployment initiatives as outlined in the Dallas-Fort Worth Regional ITS Architecture.

ITS2-002 ITS projects must be consistent with the architecture and standards described in the Dallas-Fort Worth Regional ITS Architecture.

Mobility 2035 – 2013 Update
TSM&O Related Programs

TDM2-100 Employer Trip Reduction Program
TDM2-200 Regional Vanpool Program
TDM2-300 Park-and-Ride Facilities
TSM2-001 Intersection Improvement Program
TSM2-002 Signal Improvement Program
TSM2-003 Bottleneck Improvement Program
TSM2-004 Special Events Management Program
TSM2-005 Bottleneck Program for Corridors
ITS2-001 ITS Implementation Program
ITS2-002 Regional ITS Architecture Program
ITS2-003 Advanced Traveler Information System Implementation Program
ITS2-005 Advanced Public Transportation System Implementation Program
ITS2-006 ITS Interoperability Program
TSSF2-001 Freeway Incident Management Program
TSSF2-002 – Regional Mobility Assistance Patrol Program

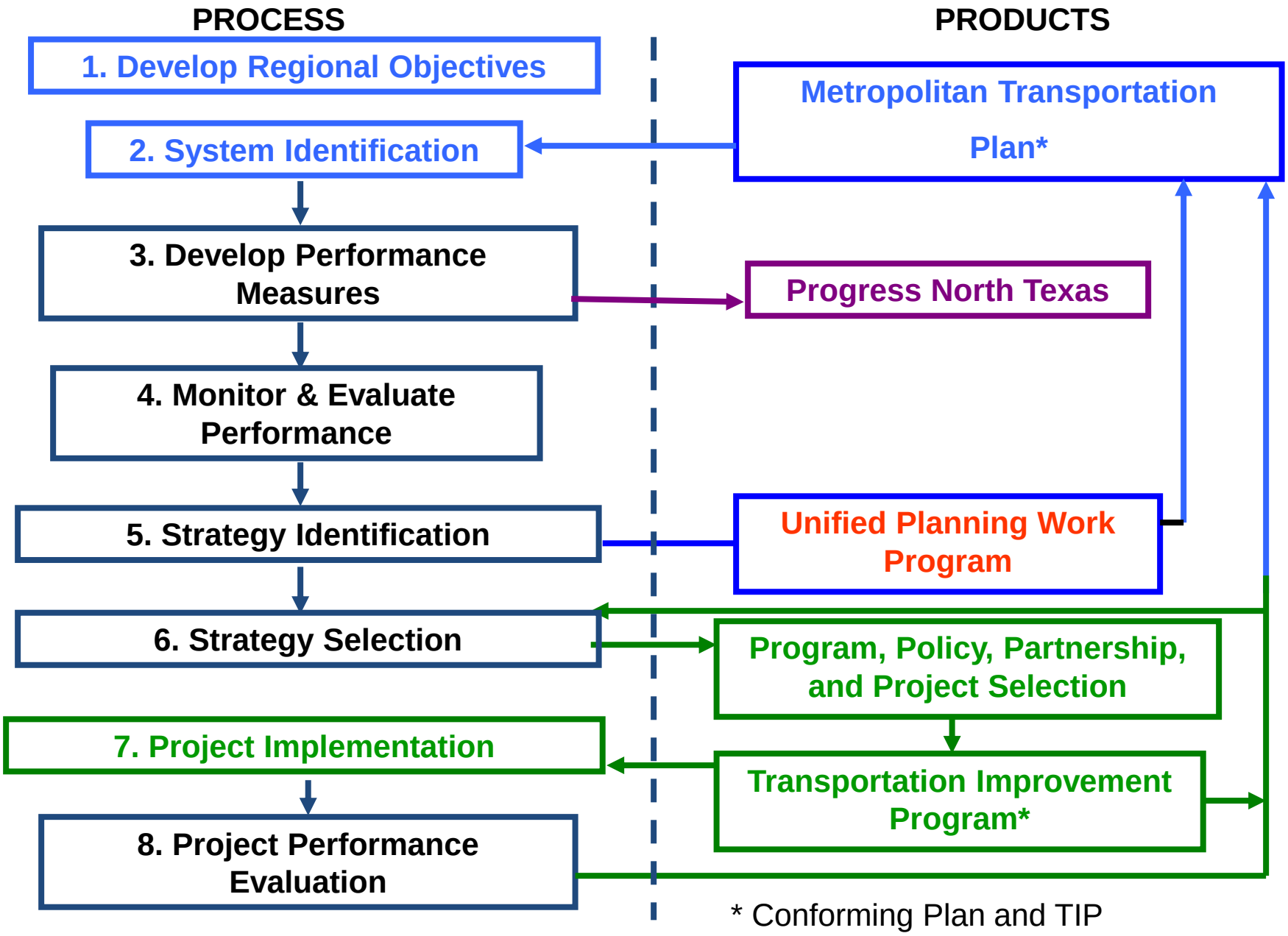
Congestion Management Process (CMP) Goals

Goal One: Identify quick-to-implement low-cost strategies and solutions to better operate the transportation system.

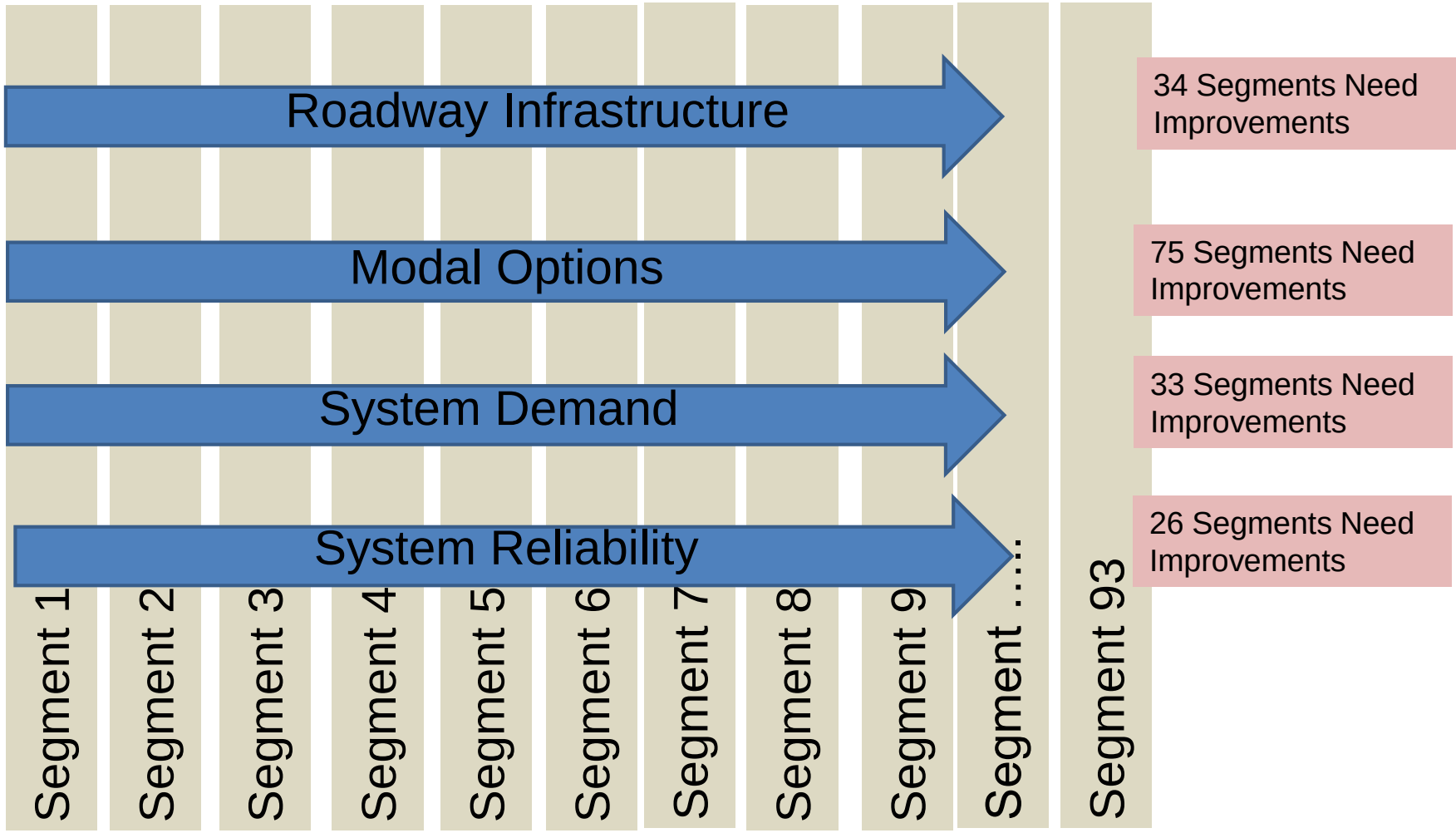
Goal Two: More evenly distribute congestion across the entire transportation corridor.

Goal Three: Ensure corridors have options and available alternate routes/modes to relieve congestion during incidents and accidents.

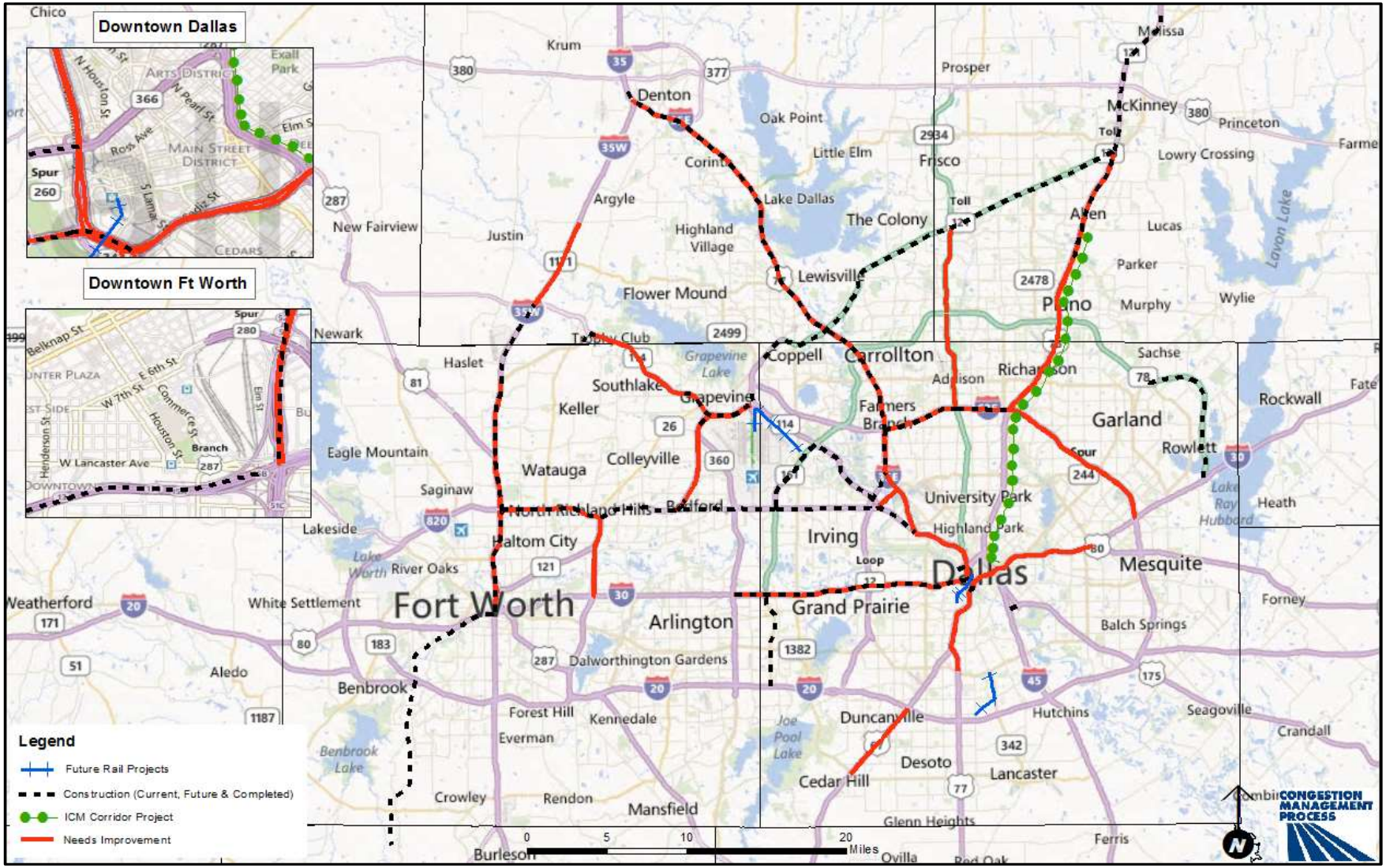
CMP and Planning Products



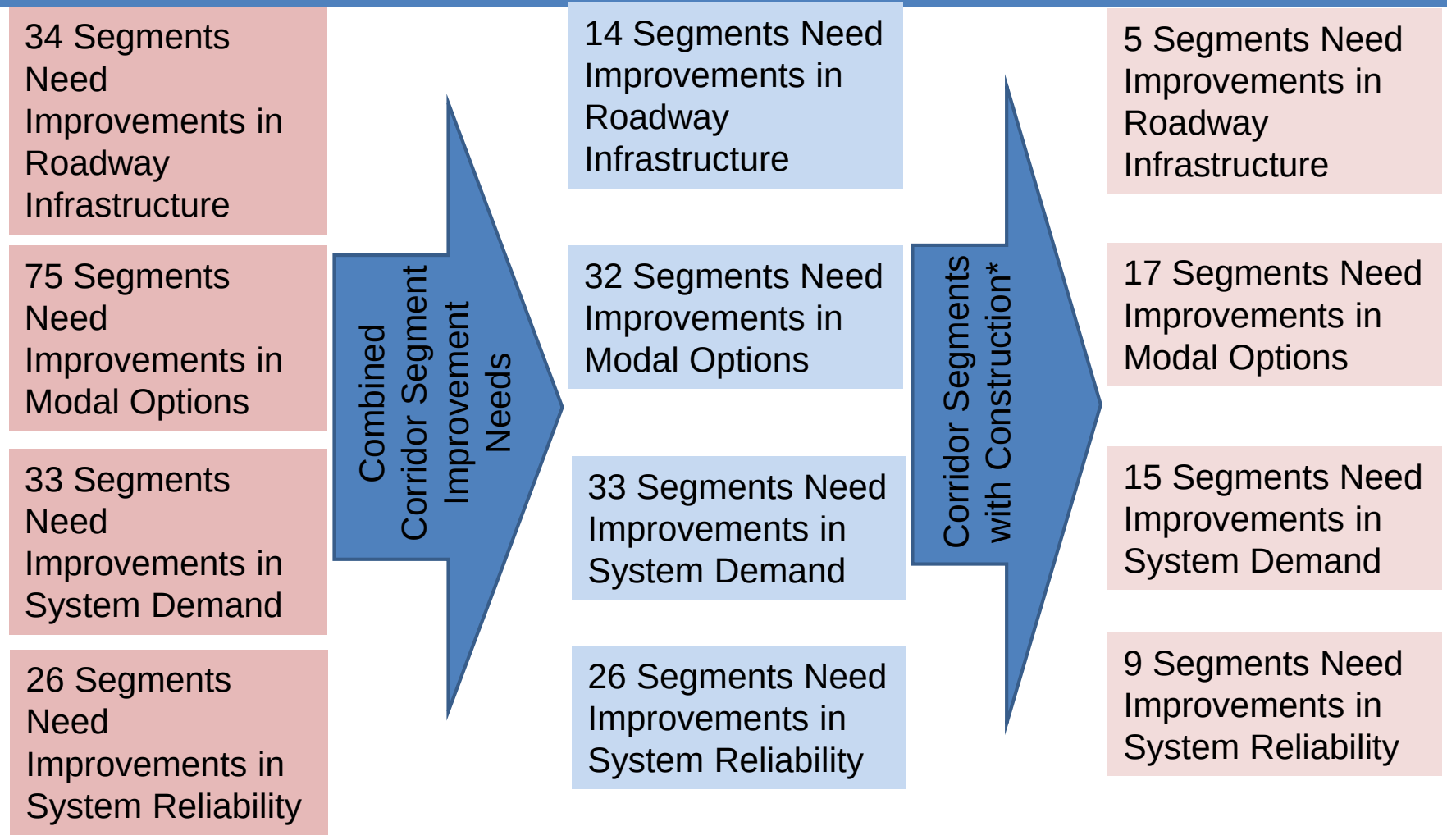
CMP Step 1: Evaluate Corridor Segments by Category



CMP System Reliability Map

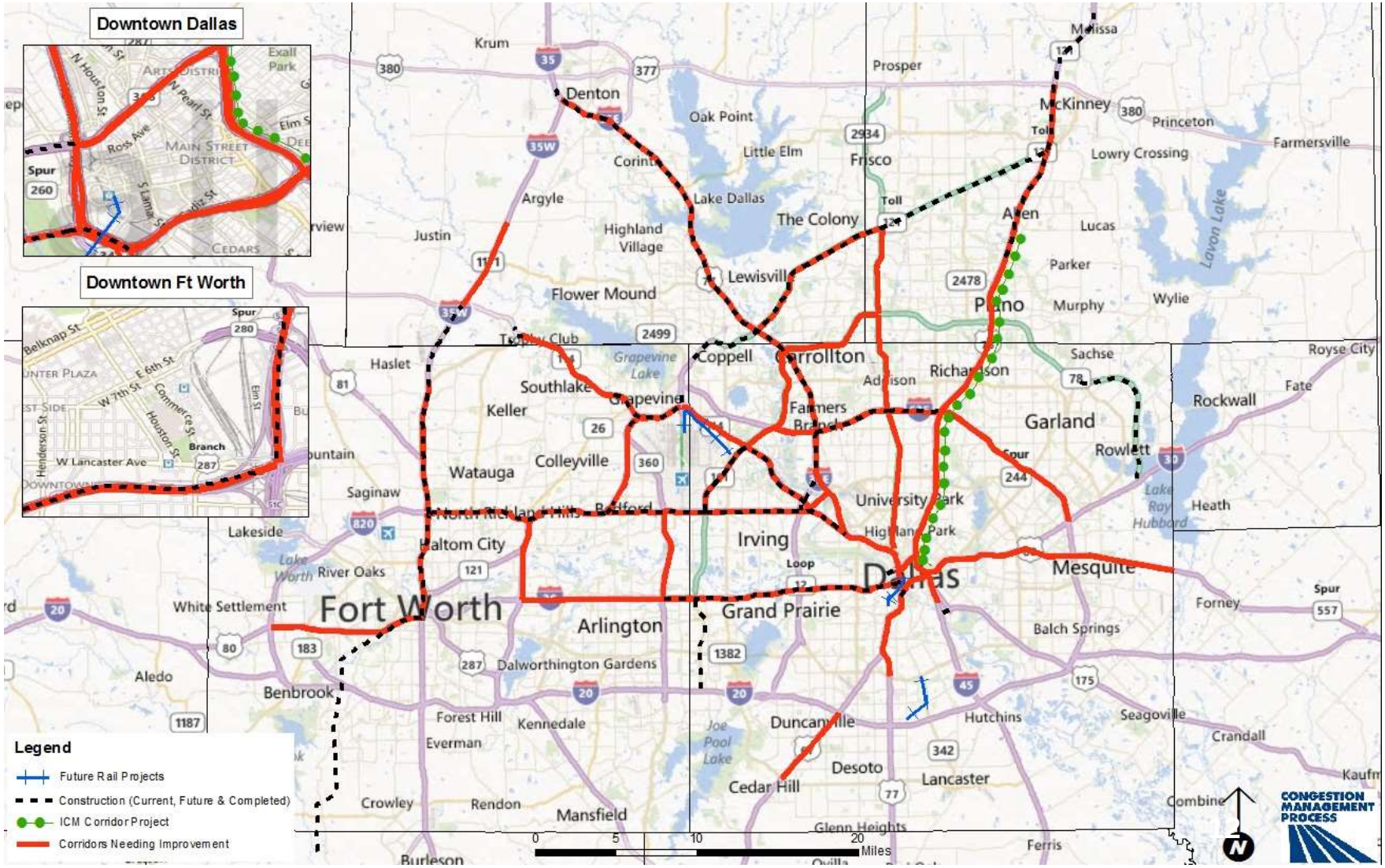


CMP Step 2: Filter Corridor Segments with Combined Category Need and Construction

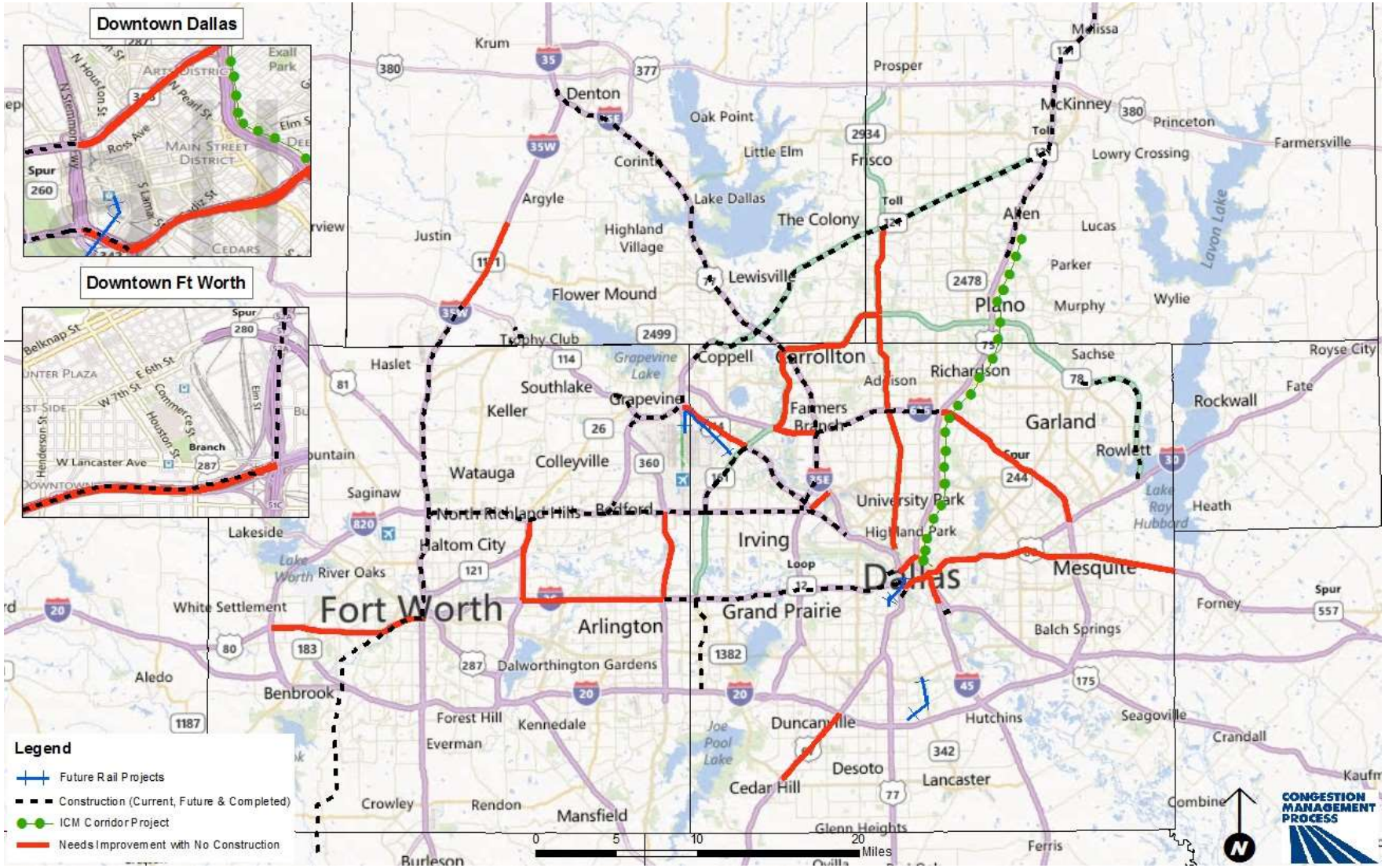


*Current, Funded and Recently Completed Construction

CMP Corridors - Need Improvements



CMP Corridors - Need Improvements with No Construction



CMP Step 3: Identify Strategies to Address Corridor Segment Deficiencies

		Example Strategies
Segments Need Improvements in Roadway Infrastructure	→	Traffic Signal Improvements Continuous Frontage Roads
Segments Need Improvements in Modal Options	→	Transit Service with Park-and-Ride Bike and Pedestrian Improvements
Segments Need Improvements in System Demand	→	Bottleneck Improvements Employer Trip Reduction Programs
Segments Need Improvements in System Reliability	→	Staging Tow Trucks Quick Clearance Policies Improvements at Crash Hot Spots

CMP Result

- Requires the review and application of congestion mitigation strategies to correct corridor deficiencies identified in the Congestion Management Process (CMP) when performing corridor and environmental studies and report findings back to NCTCOG.

TSM&O in the Transportation Improvement Program

- Identify Funding Sources
- Project Selection
- Programming into TIP

Funding Sources for TSM&O

- Local Dollars
  - Local Agency Dollars
  - Regional Transportation Council (RTC)
- State Dollars
- Congestion Mitigation and Air Quality (CMAQ)
- Surface Transportation Program – Metropolitan
- Mobility (STP-MM)
- Regional Toll Revenue

Selection of TSM&O Projects

- Call for Projects
  - Competitive Project Rankings
  - Technical Evaluation and Selection
- Strategic Selection
  - Local Agency Priorities
  - Committee Selection
- Combination
  - Competitive Project Ranking and Local Agency Priorities
- Incorporate into Larger Scale Project
- Balance Projects Across Region

Programming of TSM&O into TIP

- Submit Project Modification to NCTCOG
- Approved by Technical Board
- Approved by Policy Board
- Provide Modifications to TxDOT
- Final Federal Approval

Process Takes 4 to 5 Months

Life After Planning for TSM&O

- Agreements with Funding Agency
- Implementation of the Project
- Collecting Data
- Measuring Benefits
- Sharing Lessons Learned
- Developing Better Tools for Planning

Thank you! Contact Information

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