

**Dallas-Fort Worth Region  
Transportation System Management Strategies and Projects**

<b>Transportation System Management Strategies</b>	<b>Transportation System Management Projects</b>
Traffic Signalization and Control	<ul style="list-style-type: none"> <li>• New Signal Installation</li> <li>• Modifying Signal Phase Sequences</li> <li>• Signal Re-Timing</li> <li>• Signal Hardware Upgrades</li> <li>• Signal Interconnection</li> <li>• Demand-responsive Signal Systems</li> <li>• Eliminate Unnecessary Traffic Control Signs</li> </ul>
Intersection and Street Improvements	<ul style="list-style-type: none"> <li>• Intersection/Street Widening</li> <li>• Lane Assignment Changes/Re-striping</li> <li>• Installation of Turn Lanes</li> <li>• Turning Movement and Lane Use Restrictions</li> <li>• Bus Loading Bays</li> </ul>
Bottleneck Removal	<ul style="list-style-type: none"> <li>• Re-striping</li> <li>• Installation of Signage</li> <li>• Adding Lanes</li> <li>• Reduce Merging and Weaving</li> </ul>
Special Events	<ul style="list-style-type: none"> <li>• Traffic Management Plans</li> <li>• Signal Re-Timing Plans</li> <li>• Dynamic Lane Assignments</li> </ul>
Access Management	<ul style="list-style-type: none"> <li>• Turn Lanes</li> <li>• Close Driveways</li> </ul>

**Dallas-Fort Worth Region  
Travel Demand Management Strategies and Projects**

<b>Travel Demand Management (TDM) Strategies</b>	<b>Travel Demand Management (TDM) Projects</b>
<b>Improve Transportation Options</b>	Alternative Work Schedules/Flex Time
	Commute Trip Reduction Programs (Employers, Colleges and Universities, Schools, and Airports)
	Carpooling
	Telework/Telecommute
	Vanpooling
	HOV Priority/Managed Lanes
	Park & Ride
	Shuttle Services
	Bicycle and Pedestrian Improvements
	Transit Improvements
	Carsharing/Ride Leasing/Station Car
	Taxi Service Improvements
<b>Incentives to Use Alternative Modes</b>	Commuter Financial Incentives
	Parking Management/Shared Parking
	Congestion Pricing/Road Pricing
	Distance-Based Pricing/Pay-As-You-Drive Vehicle Insurance
	Guaranteed Ride Home
	Parking - Time of Day Pricing

**Dallas-Fort Worth Region  
Travel Demand Management Strategies and Projects**

Travel Demand Management (TDM) Strategies	Travel Demand Management (TDM) Program Examples
<p><b>Sustainable Development</b></p>	Transit Oriented Development (TOD)
	Land Use Density and Clustering
	Location Efficient Development
	Bike/Transit System Integration
	Pedestrianized Streets
	Bicycle Parking Facilities
<p><b>Policy and Institutions Reform</b></p>	Asset Management
	Car-Free Planning
	Context Sensitive Design
	Road Space Reallocation
	Speed Reduction
	Street Reclaiming
<p><b>TDM Marketing and Education</b></p>	TDM Education Marketing to Schools (K-12)
	Walking and Cycling Encouragement
	Transit and Alternative Mode Encouragement
	TDM Marketing / Ride matching services
	Transportation Management Associations (TMA)

Dallas-Fort Worth Region  
 Travel Demand Management Strategies and Projects

Travel Demand Management (TDM) Strategies	Travel Demand Management (TDM) Program Examples
<p><b>TDM Planning and Evaluation</b></p>	Auto Dependency
	Land Use Evaluation
	Parking Evaluation
	Evaluating Pricing Strategies
	Evaluating Effectiveness of TDM Programs

Dallas-Fort Worth Region  
Intelligent Transportation System Strategies and Projects

Intelligent Transportation System Strategies	Intelligent Transportation System Projects
Archived Data Management	<ul style="list-style-type: none"> <li>• ITS Data Mart</li> <li>• ITS Data Warehouse</li> <li>• ITS Virtual Data Warehouse</li> </ul>
Public Transportation	<ul style="list-style-type: none"> <li>• Transit Vehicle Tracking</li> <li>• Transit Fixed-Route Operations</li> <li>• Demand Response Transit Operations</li> <li>• Transit Passenger and Fare Management</li> <li>• Transit Security</li> <li>• Transit Maintenance</li> <li>• Multi-modal Coordination</li> <li>• Transit Traveler Information</li> </ul>
Traveler Information	<ul style="list-style-type: none"> <li>• Broadcast Traveler Information</li> <li>• Interactive Traveler Information</li> <li>• Autonomous Route Guidance</li> <li>• Dynamic Route Guidance</li> <li>• ISP Based Trip Planning and Route Guidance</li> <li>• Integrated Transportation Management/Route Guidance</li> <li>• Yellow Pages and Reservations</li> <li>• Dynamic Ridesharing</li> <li>• In Vehicle Signing</li> </ul>
Traffic Management	<ul style="list-style-type: none"> <li>• Network Surveillance</li> <li>• Probe Surveillance</li> <li>• Surface Street Control</li> <li>• Freeway Control</li> <li>• HOV/Managed Lane Management</li> <li>• Traffic Information Dissemination</li> <li>• Regional Traffic Control</li> <li>• Traffic Incident Management System</li> <li>• Traffic Forecast and Demand Management</li> <li>• Electronic Toll Collection</li> <li>• Emissions Monitoring and Management</li> <li>• Virtual TMC and Smart Probe Data</li> <li>• Standard Railroad Grade Crossing</li> <li>• Advanced Railroad Grade Crossing</li> <li>• Parking Facility Management</li> <li>• Regional Parking Management</li> <li>• Reversible Lane Management</li> <li>• Speed Monitoring</li> <li>• Drawbridge Management</li> <li>• Roadway Closure Management</li> <li>• Vehicle Safety Monitoring</li> </ul>

Dallas-Fort Worth Region  
Intelligent Transportation System Strategies and Projects

Intelligent Transportation System Strategies	Intelligent Transportation System Projects
Traffic Management (cont.)	<ul style="list-style-type: none"> <li>• Driver Safety Monitoring</li> <li>• Longitudinal Safety Warning</li> <li>• Lateral Safety Warning</li> <li>• Intersection Safety Warning</li> <li>• Pre-Crash Restraint Deployment</li> <li>• Driver Visibility Improvement</li> <li>• Advanced Vehicle Longitudinal Control</li> <li>• Advanced Vehicle Lateral Control</li> <li>• Intersection Collision Avoidance</li> <li>• Automated Highway System</li> </ul>
Commercial Vehicle Operations	<ul style="list-style-type: none"> <li>• Fleet Administration</li> <li>• Freight Administration</li> <li>• Electronic Clearance</li> <li>• CV Administrative Processes</li> <li>• International Border Electronic Clearance</li> <li>• Weigh-In-Motion</li> <li>• Roadside CVO Safety</li> <li>• On-board CVO and Freight Safety &amp; Security</li> <li>• CVO Fleet Maintenance</li> <li>• HAZMAT Management</li> <li>• Roadside HAZMAT Security Detection and Mitigation</li> <li>• CV Driver Security Authentication</li> <li>• Freight Assignment Tracking</li> </ul>
Emergency Management	<ul style="list-style-type: none"> <li>• Emergency Call-Taking and Dispatch</li> <li>• Emergency Routing</li> <li>• Mayday and Alarms Support</li> <li>• Roadway Service Patrols</li> <li>• Transportation Infrastructure Protection</li> <li>• Wide-Area Alert</li> <li>• Early Warning System</li> <li>• Disaster Response and Recovery</li> <li>• Evacuation and Reentry Management</li> <li>• Disaster Traveler Information</li> </ul>
Maintenance & Construction Management	<ul style="list-style-type: none"> <li>• Maintenance and Construction Vehicle and Equipment Tracking</li> <li>• Maintenance and Construction Vehicle Maintenance</li> <li>• Road Weather Data Collection</li> <li>• Weather Information Processing and Distribution</li> <li>• Roadway Automated Treatment</li> <li>• Winter Maintenance</li> <li>• Roadway Maintenance and Construction</li> </ul>

**Dallas-Fort Worth Region  
Intelligent Transportation System Strategies and Projects**

<b>Intelligent Transportation System Strategies</b>	<b>Intelligent Transportation System Projects</b>
Maintenance & Construction Management (cont.)	<ul style="list-style-type: none"><li>• Work Zone Management</li><li>• Work Zone Safety</li><li>• Maintenance and Construction Activity Coordination</li></ul>

**RESOLUTION SUPPORTING THE DEVELOPMENT  
OF TRAVEL DEMAND MANAGEMENT STRATEGIES  
IN MAJOR INVESTMENT AND ENVIRONMENTAL STUDIES  
(R98-01)**

**WHEREAS**, the North Central Texas Council of Governments (NCTCOG) has been designated as the Metropolitan Planning Organization (MPO) for the Dallas-Fort Worth Metropolitan Area by the Governor of Texas in accordance with federal law; and,

**WHEREAS**, the Regional Transportation Council, comprised primarily of local elected officials, is the regional transportation policy body associated with the North Central Texas Council of Governments, and has been and continues to be a forum for cooperative decisions on transportation; and,

**WHEREAS**, the Dallas-Fort Worth region is a federally designated nonattainment area for the pollutant ozone; and,

**WHEREAS**, over 30 percent of the region's roadways are congested during the peak hour, resulting in unacceptable levels of vehicle emissions and an annual cost of \$2.8 billion in traffic congestion delay to motorists; and,

**WHEREAS**, Mobility 2020: The Metropolitan Transportation Plan recommends congestion mitigation strategies aimed at reducing drive-alone and peak-period vehicle travel, including rail and bus transit systems, high occupancy vehicle systems, bicycle and pedestrian facilities, and toll roads; and,

**WHEREAS**, reducing traffic congestion and its related impacts on air quality, energy, safety, and the quality of life are primary goals of Mobility 2020; and,

**WHEREAS**, federal regulations directing metropolitan transportation planning activities require that major investment studies be performed for all corridors where major transportation investments are anticipated and have regional impact; and,

**WHEREAS**, the North Central Texas Council of Governments, through the Regional Transportation Council, provides general guidance and technical support to regional transportation providers as major investment studies are performed;

**NOW, THEREFORE, BE IT HEREBY RESOLVED THAT:**

**Section 1.** The Regional Transportation Council supports the development of reasonable travel demand management strategies in major investment studies (MIS).

**Section 2.** In major investment studies, consideration should be given to transit, bicycle/pedestrian strategies, public/private partnership initiatives, and employer-based strategies. Examples of strategies are listed in Attachment 1.

**Section 3.** Major investment studies will include the examination of travel behavior and system performance in the corridor, and evaluate the feasibility of

public/private Transportation Management Association (TMA) partnerships operating in the corridor.

**Section 4.** Major investment studies include the development of a thorough inventory of large employers in each major investment study, and that these studies involve major employers in the study process, soliciting their involvement in the identification of corridor transportation deficiencies, and in the development of employee trip reduction solutions, in particular.

**Section 5.** Major investment studies should include the evaluation of alternatives, using performance measures consistent with the regional Congestion Management System goals of reducing drive-alone travel and peak-period vehicle travel.

**Section 6.** The MPO will inventory all travel demand management projects committed to in the environmental process and monitor them for timely inclusion in the Transportation Improvement Program. The development of travel demand management projects and programs will be coordinated with transportation control measures developed for the State Implementation Plan (SIP) and used to obtain air quality SIP credits, where feasible.

**Section 7.** That this resolution shall be in effect immediately upon its adoption.



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Jack Miller, Chairman  
Regional Transportation Council  
Mayor, City of Denton

I hereby certify that this resolution was adopted by the Regional Transportation Council of the North Central Texas Council of Governments for the Dallas-Fort Worth Metropolitan Area on February 12, 1998.



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Ron Harmon, Vice Chairman  
Regional Transportation Council  
Commissioner, Johnson County

# CANDIDATE CONGESTION MITIGATION STRATEGIES IN MIS STUDIES

## OPTIONS FOR STRATEGY DEVELOPMENT – TRANSIT INITIATIVES

Modify bus routes and service modifications:

- Add new routes
- Extend bus and feeder bus routes
- Change fare structure
- Increase bus frequency
- Limit stop or express bus routes

Implement incentive transit pricing:

- Eliminate tolls for buses
- Provide merchant transit rebates
- Reduce peak-hour bus fares
- Subscription or charter bus service
- Transit pass subsidies (employees, families, groups)

Design buses for tasks:

- Large buses for express routes
- Small buses for local or shuttle routes

Provide exclusive bus lanes:

- With-flow at curb
- With-flow in median
- Contra-flow in curb lanes
- Contra-flow in median

Locate terminals and stops off major streets

Locate on-street bus stops either mid-block or on far side of intersection

Construct bus shelters

Provide security for buses, shelters, and terminals

Provide ramp meter by-passes for high occupancy vehicles

Add bicycle access to transit

Construct multimodal transit stations

Establish timed transfers

Add paratransit services

Institute land-use policies to improve transit access

Establish site design criteria to enhance transit use

Establish transit-amenable parking strategies

Implement fixed guideway transit system:

- Monorail or "people mover"
- Light rail
- Commuter rail

# CANDIDATE CONGESTION MITIGATION STRATEGIES

## OPTIONS FOR STRATEGY DEVELOPMENT – PUBLIC/PRIVATE PARTNERSHIP INITIATIVES

- Establish ridesharing incentives and programs
- Construct park-and-ride facilities
- Construct "kiss-and-ride" facilities
- Enact Employee Trip Reduction (ETR) ordinances
- Negotiate Demand Management agreements
- Implement pricing policies which enhance transit usage:
  - Area pricing
  - Auto restricted zones
  - Parking fees
  - Higher tolls for single occupant vehicles
  - Toll roads
  - Vehicle use restrictions
- Implement parking management:
  - Bicycle parking facilities
  - CBD fringe parking
  - Enforcement and adjudication
  - Established parking fees for ETR programs
  - Reduced off-peak parking rates
  - Increased peak parking rates
  - Limitations in parking supply
  - Loading zone regulations
  - Management of on-off street parking supply
  - Peripheral parking - shuttle bus system to core area
  - Preferential parking for carpools/vanpools
- Reduce off-peak/increase peak tolls
- Vehicle recycling program

# CANDIDATE CONGESTION MITIGATION STRATEGIES

## OPTIONS FOR STRATEGY DEVELOPMENT – BICYCLE/PEDESTRIAN INITIATIVES

- Construct wide outside lanes to accommodate motorized vehicles and bicyclists on thoroughfares/collector streets
- Construct separate bike ways
- Construct bicycle storage/parking facilities at bus stops and park-n-ride lots
- Construct bicycle parking facilities
- Recruit merchants to provide bicycle racks and/or lockers
- Construct/widen sidewalks and crosswalks
- Construct pedestrian facilities, including sidewalks
- Provide pedestrian-actuated signals
- Install pedestrian signs
- Construct pedestrian/bicycle overpasses and grade separations
- Construct underground pedestrian passageways between buildings with retail shops or "malls"
- Install covered walkways and pedestrian waiting areas
- Relocate bus stops
- Install exterior bike racks on buses

## OPTIONS FOR STRATEGY DEVELOPMENT – EMPLOYER-BASED STRATEGIES

- Initiate company-sponsored vanpool programs
- Provide preferential parking for carpools/vanpools
- Purchase employer-supplied bicycles
- Implement telecommuting
- Offer employees flextime (variable work hours)
- Provide guaranteed ride home program
- Offer shortened work weeks (e.g., four-day, ten-hour work week)
- Implement staggered work hours