Integration of Travel Demand Management for Highway Projects

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Applied Research in Transportation (ART) Program

- Launched as pilot program by CTS and the MnDOT focused on sustainability in 2024.
- Met Council joined in 2025.
- Partners all contribute funding to projects. By the end of the pilot phase, CTS will have contributed 250k, MnDOT 100k, and Met Council 100k.
- ART projects must directly address a current agency process, document, or policy need.
- ART program supplements existing longer-term research projects (typically 2-4 year timelines) that continue to be funded by MnDOT, the Minnesota Local Road Research Board, and others.
- ART projects must be led by University of Minnesota researchers.

ART Projects

Project	Researcher(s)	Year
Distribution of the E-Bike Rebate and Data Collection for the Analysis of Travel Behavior Impact • Article: Minnesotans geared up for e-bike rebates. Now data reveals more about them (October 14, 2025)	Frank Douma, Camila Fonseca-Sarmiento, Kaitlyn Denten	2025
Modeling Household VMT from Accessibility	Eric Lind, Tiansheng Tan, Andrew Owen, Shirley Liu	2025

1st Met Council Funded project was in 2025: **Integration of Transportation Demand Management for Highway Projects** Presented today.

Additional project on induced demand modeling in rural areas is underway.

Selection of FY27 projects is underway.

https://z.umn.edu/b2lx

Introduction

- This study was identified through the Metropolitan Council's Regional Travel Demand Management Study Action Plan (October 2023)
- Travel Demand Management (TDM), or transportation demand management, refers to the use of strategies that maximize the efficiency of our transportation systems
- *The Integration of Travel Demand Management for Highway Projects* provides a roadmap for how TDM can be used specifically in the context of highway projects.
- Supporting upcoming *Integrating TDM into Highway Planning* project.

Methodology

- Nationwide scan:
  - Projects from 2000 to October 2025
  - Limited to the United States
  - A review of academic literature and scan of roadway projects with a TDM component
- Best practices: summary of practices found across multiple projects in the scan

Findings from Nationwide Scan

- Policies for the incorporation of TDM strategies in roadway projects
- Incorporation of TDM during the planning or construction phase
- Transportation projects that enhance mode choice and incorporate TDM
- Incorporation of TDM plans to manage travel demand in highway corridors

Policies for the incorporation of TDM strategies in roadway projects

- Require the incorporation of TDM strategies into roadway projects
  - Colorado – Policy Directive 1601 (2021)
  - Minnesota – Transportation Greenhouse Gas Emissions Impact Assessment (2023)
- Require the incorporation of TDM strategies into traffic management plans (TMPs)
  - California – Deputy Directive DD-60-R2 (2015)
  - New Jersey – Traffic Mitigation Guidelines (2007, 2014)

Incorporation of TDM during the planning or construction phase

- TDM strategies are incorporated as part of the National Environmental Policy Act (NEPA) during the planning phase of the project, or as a traffic mitigation strategy during construction

NEPA Example

I-405 corridor program, Washington:

- Environmental Impact Statement included TDM as a major element of proposed alternatives

Traffic Mitigation Example

Reconstruction of Highway 101, Central California:

- City of San Luis Obispo developed TDM strategies to enhance mobility during and after the reconstruction period

Transportation projects that enhance mode choice and incorporate TDM

- Roadway projects can construct elements that enhance mode choice and thus support demand management. This is seen with multimodal enhancements built in addition or as part of the roadway project.

Multimodal Enhancements Example

Transportation Expansion (T-REX) project, Denver, Colorado:

- Built 17 miles of light rail transit

Managed Lanes Example

Transform 66 Outside the Beltway Project in Virginia and Maryland:

- Managed lanes offer free access for transit and HOV3+

Incorporation of TDM plans to manage travel demand in highway corridors

- Transportation partners have adopted TDM plans to manage travel demand in highway corridors

TDM plan examples

North Coast TDM Plan, California:

- Captures current and future TDM needs and will inform future roadway projects

I-70 East Corridor Multimodal TDM plan, Colorado:

- Considers corridor wide TDM strategy implementation as per Policy Directive 1601

Common factors identified in the incorporation of TDM strategies on roadway projects

- Knowing the community and understanding their travel patterns
- Coordination between the involved transportation agencies
- High level of involvement of TMOs or TMAs in the implementation of TDM strategies
- Offering different TDM strategies to travelers
- Establishing a definition of success regarding TDM approaches
- Identifying TDM target measures

Best practices for incorporating TDM strategies in roadway projects

- Know your community and their travel patterns and needs to help inform TDM strategies
- Incorporate TDM into the policies and practices of highway project development
- Set SMART (Specific, Measurable, Achievable, Relevant, and Time-bound) goals for TDM Strategies
- Select TDM strategies that work in conjunction with each other
- Establish flexible TDM Strategies from planning to post-construction
- Ensure sufficient and sustained funding for TDM strategies
- Monitor and document progress

Conclusion

- TDM integration in highway projects should increase as states respond to sustainability goals, increasingly expensive highway expansion projects, and unreliable travel
    - Effective TDM implementation may even reduce the need for or delay highway infrastructure projects
- Foundation for future work to utilize TDM strategies to reduce capital highway expansion needs

Thank you

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