



Engineering Guide

13 Travel Demand Management Strategies

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For many traffic engineering studies, the end result of the work is mitigation in the form of an added turn lane, a new roundabout, or other types of geometric and traffic control improvements. Basically, the infrastructure is improved to accommodate the existing or/and forecasted traffic.

While capacity improvements are often necessary, it's important to also consider ways to reduce the traffic from a development. This is often thought of as the supply (infrastructure) and demand (traffic or trip generation). While a Traffic Impact Study (TIS) generally examines the supply, a Travel Demand Management Plan (TDMP) will develop strategies to reduce the demand. More specifically, the TDMP seeks to encourage a reduction of single-occupancy vehicle use during the peak hours. Spack Solution's most recent examination of TDMP effectiveness reviewed nine office buildings in the Minneapolis and St. Paul, Minnesota area where TDMPs were developed and implemented. Property managers and transportation managers at each site were contacted to provide key characteristics regarding the building,

parking provided, and employee counts among other details. Traffic to and from each site's parking was then counted to determine the trip and parking generation rates.

The findings were as follows:

ITE* Averages versus Spack Consulting Office with TDMP Average**

Category for Comparison	ITE*		Spack Consulting**	
	AM Pk Hr	PM Pk Hr	AM Pk Hr	PM Pk Hr
Trip Generation/ 1,000 SF Building	1.56	1.49	1.02	0.98
Trip Generation/ Employee	0.48	0.46	0.31	0.29
Peak Parking/ 4,000 SF Building***	2.84		2.28	
Peak Parking/ Employee***	0.83		0.74	

* Institute of Transportation Engineers' Trip Generation Report, 9th Edition.

** Spack Consulting study of nine office buildings with implemented TDMPs.

*** Maximum parking occupied over the course of a typical day.

Overall, implementing TDM strategies has a positive impact of reducing traffic demand and parking needs compared to ITE published standards.

TDM Strategies were found to reduce trip generation 34-37% and parking needs by 17-24% in the Twin Cities.

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What are the tactics to achieve a reduction in the trip generation and parking needs?

Consider the following 13 strategies typically documented in our TDMPs to help reduce vehicle numbers:

1. Designate a Transportation Coordinator

- Monitor/maintain TDMP activities and progress toward the goal through surveys and status reports
- Implement changes to the TDMP based on its effectiveness, which could result in the expansion, maintenance, or elimination of specific strategies
- Liaison with commuter services and local transit agency/office/administration

2. Create an information packet

Information packets highlight alternative transportation options, programs, and incentives.

3. Maintain awareness

Create awareness of alternative transportation options and changes through a dedicated web site, emails, flyers, posters in frequented locations, etc.

4. Allow flexible work hours

5. Establish a fee for parking

6. Promote carpooling/carpooling services

- Preferred front-door parking spaces.
- Free or reduced charges for parking.

7. Promote transit via

- Real-time transit displays in lobbies, break, or common rooms
- Electronic devices, such as iPads, in lobbies or break rooms that allow access to map multi-modal routes
- Discounted or free transit passes, or other incentive programs (Go-To Cars, U-Pass, etc.), to residents or employees
- New or expanded van-pool services
- “Guaranteed Ride Home” programs for emergency situations
- Appropriate signage to direct users to transit stops
- Sidewalk or trail connections to nearby transit stops

8. Promote walking via

- Connections to the trail or sidewalk network
- Vision-impaired allowances per ADA requirements
- Well-lit sidewalks
- Minimizing conflicts with vehicles, including shorter crossing distance where feasible

9. Promote biking via

- Convenient and safe long-term storage/ parking that should include covered spaces to avoid weather concerns
- Convenient and safe short-term parking for guests/visitors, ideally located near the front doors
- Connections to nearby trails
- Appropriate signage to direct users to and from major trail corridors



- On-site locker rooms or agreements with nearby health clubs
- Repair stations and/or other types of free maintenance activities, ideally located near the long-term parking
- Partnership with short-term bicycle rental facilities, such as Nice Ride, which could include incentives for use or locating a station on site
- Partnering with local bike shops to provide discounts and incentives

10. Minimize the impact of trucks via

- Changing deliveries away from peak hours (7-9am and 4-6pm)
- Accommodate truck movements, including loading areas, on-site rather than on the street

11. Provide shared car or shared bicycle programs

12. For residential developments,

Provide high-speed internet access allowing for telecommuting

13. Host Bike, Walk, or Transit Days

Provide a fun and supportive atmosphere to try an alternative mode, which could include 'pit-stops' with free refreshments, music, and giveaways.