

PENNS NECK AREA EIS WHITE PAPER ON TRAVEL DEMAND MANAGEMENT (TDM)

Travel Demand Management (TDM) is an approach that seeks to influence travel behavior in order to reduce the number of trips made by people driving alone. TDM involves the use of any number of programs and strategies to reduce the number of single-occupant vehicles on the roads, particularly during the commuting hours.

The New Jersey Statewide Long-Range Transportation Plan Update, *Transportation Choices 2025*, published in March 2001, identifies TDM as a policy that should continue to be implemented. The plan stresses that the state's Transportation Management Association (TMAs) are critical facilitators of travel demand management programs, this includes the Greater Mercer TMA.

Below is a listing of a number of TDM programs and strategies that can help to reduce the number of single-occupant vehicles and alleviate roadway congestion in the Penns Neck region. This paper focuses on TDM programs and strategies as they can be applied to the commuter work trip.

Alternatives to Driving Alone

These strategies are alternative ways to travel that do not require driving alone.

- *Transit*
Amtrak, NJ TRANSIT and SEPTA provide rail service on the Northeast Corridor, serving numerous points from New York City through northern and central New Jersey to Philadelphia. Local and regional bus service is also available through regular routes provided by NJ TRANSIT and Suburban Bus Company (Coach USA). Public and private bus shuttles can be taken to the Princeton Junction train station. Para-transit bus service is available on an on-call basis. NJ TRANSIT provides funding to the Transportation Management Associations (TMAs) to provide information on available transit services to all commuters.
- *Carpool*
Individuals living and working at mutually convenient locations can join together in a carpool. The Greater Mercer Transportation Management Association provides carpool matching services in the area. Outside the greater Mercer County area, other TMAs, like Keep Middlesex Moving, provide this service. Generally, carpools are recommended when the minimum one way commute is 10 miles.
- *Vanpool*
This is similar to carpooling, but it typically involves six or more individuals. There are a variety of vanpool arrangements. In some cases, employers sponsor the vanpool for their employees by contracting with a third party provider. Other employers provide their own vehicles. More frequently however, vanpools are formed by groups of employees which contract with a business in the private sector to provide the vehicle and its maintenance. The vanpool group selects from among itself the individual(s) who serve as the driver(s). A vanpool subsidy program is provided by NJ TRANSIT. Generally, vanpools are most cost effective when the one way commute distance is at least 20 miles.

- *Bicycling*
Bicycling can be used to reach a place of employment or a destination like the train station. Support facilities like bicycle-compatible roadways, bike lockers at train stations and workplaces, and showers available at work enhance the use of bicycling as a viable alternative to driving alone. Bicycling is most likely to be of interest to employees who live within 5 miles of the worksite.
- *Walking*
A person can walk to a bus stop, train station, or to his workplace. Sidewalks and bus shelters help enhance the use of this mode. Walking to work is most likely when the employee lives within 1 mile of the worksite. The threshold for walking to transit is generally no more than ½ mile.

Alternative Work Arrangements

These strategies are alternatives to the normal 9 to 5 work day. They enable commuters to avoid traveling during the peak morning and evening travel times.

- *Telecommuting*
This strategy allows employees to work at home on one or more days during the week. In addition to permitting employees to telecommute, employers can support this strategy by providing any necessary computer equipment, fax machines, and additional telephone services. This strategy can work well for individuals who can work independently and for a variety of jobs.
- *Flexible Work Hours*
Spreading the demand for travel over a wider band of time through alternative work hour programs is a demand management technique. Staggered work hours, where different groups of employees are assigned to different starting times, or shifts, is one technique. Staggered work hours can work well for back office and assembly line operations. Flex-time is another technique where individual employees can choose a flexible start time, usually between 7:00 AM and 9:30 AM, to which they then adhere. Like telecommuting, flex-time works well for office workers who work independently and can exercise discretion over the scheduling of their work. Flexible work hours can make carpooling more difficult.
- *Alternative (Compressed) Work Weeks*
This strategy provides employees the opportunity to work longer days in exchange for a day off; for example four ten-hour days and have the fifth day off, or a 9/80 schedule, whereby an employee works 80 hours in nine days and has the tenth off. This strategy has a double impact on commuter travel in that one day of commuting is eliminated and the longer day moves the commuter trip out of the peak hours of travel.

Financial Incentives

The following strategies can be used to induce individuals to use an alternative mode of travel rather than driving alone:

- *Commute Alternative Subsidies*
To encourage employees to vanpool or use public transportation to get to and from work, employers can offer a federal tax-free fringe benefit of up to \$65 per month. This direct subsidy allows employees to not only save money by not driving, but also to reduce the cost of their monthly commute. New Jersey Transit offsets the costs of qualifying

vanpools by \$150 a month. In addition, Greater Mercer TMA provides an empty seat subsidy to qualifying vanpools.

- *Parking Cash Out*
Employers using this strategy offer employees the option to choose cash in lieu of non-taxable parking subsidies. Since employers can provide tax-free parking (up to \$170/month) to employees, employees are likely to take advantage of it. But if employers provide cash in lieu of parking, employees are motivated to seek an alternative to driving alone.
- *Tax Incentives*
Tax incentives for the employer to implement commute alternative subsidies or parking cash out are available at the federal level. New Jersey also offers employer tax incentives and challenge grants; however they require substantial record keeping.
- *Value Pricing*
When higher rates are charged for peak periods at highway toll facilities, drivers are encouraged to travel during non-peak periods. The New Jersey Turnpike Authority currently uses value pricing.

Parking Management Programs

The following strategies relate to methods for either encouraging or discouraging use of a single-occupant automobile:

- *Preferential HOV (High-Occupancy Vehicle) Parking*
Employers can provide parking spaces closer to the building entrances for employees who carpool or vanpool.
- *Parking Fees*
Charging for parking at employment sites will provide a disincentive to employees who drive alone.
- *Parking Supply Reduction*
When employers reduce the number of parking spaces available at workplaces, employees are encouraged to find alternatives to driving alone.

The greatest inducement to driving alone is free parking.

Land Use Initiatives

These strategies encourage the use of transit, bicycling, or walking, or mandate or negotiate a reduction in the use of single-occupant vehicles.

- *Site Design*
New facility design should encourage transit, bicycling, and walking trips by locating buildings close to roadways so that walking and bicycling distances are minimized. Locating buildings close together in office parks supports carpooling, vanpooling, and transit use makes picking up passengers convenient.
- *Trip Reduction Ordinances*
Municipalities can use their regulatory authority to limit the use of cars in new developments. Developers and/or employers can be required to show a reduction in the number of auto trips to a specific site. With such ordinances in place, developers and/or employers need to implement travel demand strategies.

- *Negotiated Demand Management Agreements*
Municipalities can enter into traffic mitigation agreements with developers and/or employers. These negotiated agreements set traffic reductions goals. The agreements can be non-prescriptive (for example, they can specify the number of vehicle trips to be eliminated but not identify the strategies to reach the number) or they can be prescriptive in that they identify specific actions required to carry out the intent of the agreement.

Supporting Programs

The following programs increase the effectiveness of the travel demand reduction strategies identified previously:

- *Guaranteed Ride Home*
This program provides a safety net for employees who use transit, carpool, or vanpool. The program provides a ride home for employees using one of these modes who have an emergency during the day or are required to work late. The ride home can be a taxi, a company vehicle, etc. Many TMAs administer such a program, including the Greater Mercer TMA.
- *Ride Matching*
The New Jersey Department of Transportation (NJDOT) provides funding to the TMAs to offer ride matching for persons looking to carpool or vanpool. The TMAs supply lists of persons, including their home areas, work locations, and similar work hours, so that matching can occur.
- *On-Site Facilities at Work Location*
Concierge services like on-site dry cleaning pick up and delivery, postage stamp purchases, etc., can support people who use alternatives to driving alone by eliminating some of the trips for which they would need their cars. Employers can also facilitate on site programs by designating a transportation coordinator at the worksite. Another, less labor intensive option, is to set up a commute information center with transit schedules, rideshare applications, etc. on site. TMAs can help with this.
- *Park & Ride Facilities*
Parking at rail and bus stations, including drop-off areas, provides opportunities to reach transit facilities and not make the total commute by auto. TMAs have information on the park and rides in their service areas.
- *Shuttle Services*
Shuttle bus service from residential areas to train stations provides an opportunity to not have to use an automobile to get to the train station. NJ TRANSIT operates one Wheels shuttle bus route to serve the Princeton Junction train station. Plainsboro and East Windsor Townships also provide residential shuttle service. In addition, several corporations in the area provide shuttle service for their employees between the worksite and the PJ station. Greater Mercer TMA administers several of these shuttles.
- *Station Cars*
Vehicles, usually electric, are provided at train stations to be used by groups of employees to reach their work destinations. Currently 3 such vehicles are used at the Princeton Junction train station. Greater Mercer TMA administers this program on behalf of NJDOT and NJTRANSIT.

- *Bicycle & Pedestrian Amenities*
Bicycle lockers and showers at workplaces are amenities that can encourage bicycle use. Bicycle lockers at train stations also support bicycling. Bicycle-compatible roadways and bike paths add to the ability to use bicycling as a viable commute alternative. Sidewalks and bus shelters support walking.
- *Advance Traveler Information System*
This support program provides real-time information about road and transit service conditions. A person can alter his trip time based on information indicating that a roadway is congested because of an accident or there are rail transit delays. For a commuting driver this can mean moving the trip out of the peak period and thus reducing congestion.

To implement the above strategies and support programs, the private sector, the public sector, or both need to take responsibility. The matrix on the following page indicates the responsible group for each of the strategies and support programs, as well as the support group, where applicable.

STRATEGIES OR SUPPORT PROGRAMS	RESPONSIBILITY
Transit	NJ TRANSIT, SEPTA Amtrak and Private Bus Companies
Carpool	Employee and/or Employer with Support from TMA
Vanpool	Employee and/or Employer with Support from TMA
Bicycle	Employee with Support from Employer
Walk	Employee with Support from Employer
Telecommuting	Employer with Support from TMA
Flexible Work Hours	Employer with Support from TMA
Alternative (Compressed Work Week)	Employer with Support from TMA
Commute Alternative Subsidies	Employer, TMA, NJ Transit
Cash Out Parking	Employer
Tax Incentive	Federal & State Governments
Value Pricing	Toll Authorities
Preferential HOV Parking	Employer, Parking Authorities (at rail stations)
Parking Fees	Developer
Parking Supply Reduction	Developer and Municipality
Site Design	Municipality
Trip Reduction Ordinances	Municipality
Negotiated Demand Management Agreements	Developer and Municipality
Guaranteed Ride Home	Employer & Support from TMA
Ride Matching	Employee and Employer with Support from TMA
On-Site Facilities at Work Location	Developer and Employer
Park & Ride Facilities	NJDOT & NJ TRANSIT
Shuttle Services	Employer & Support from TMA
Station Cars	Employer (TMA Administers Program)
Bicycle & Pedestrian Amenities	Employer, NJ TRANSIT, NJDOT, & Municipalities
Advance Traveler Information System	Private Sector/Government Agencies