

Transportation Management Program



Handbook
2014

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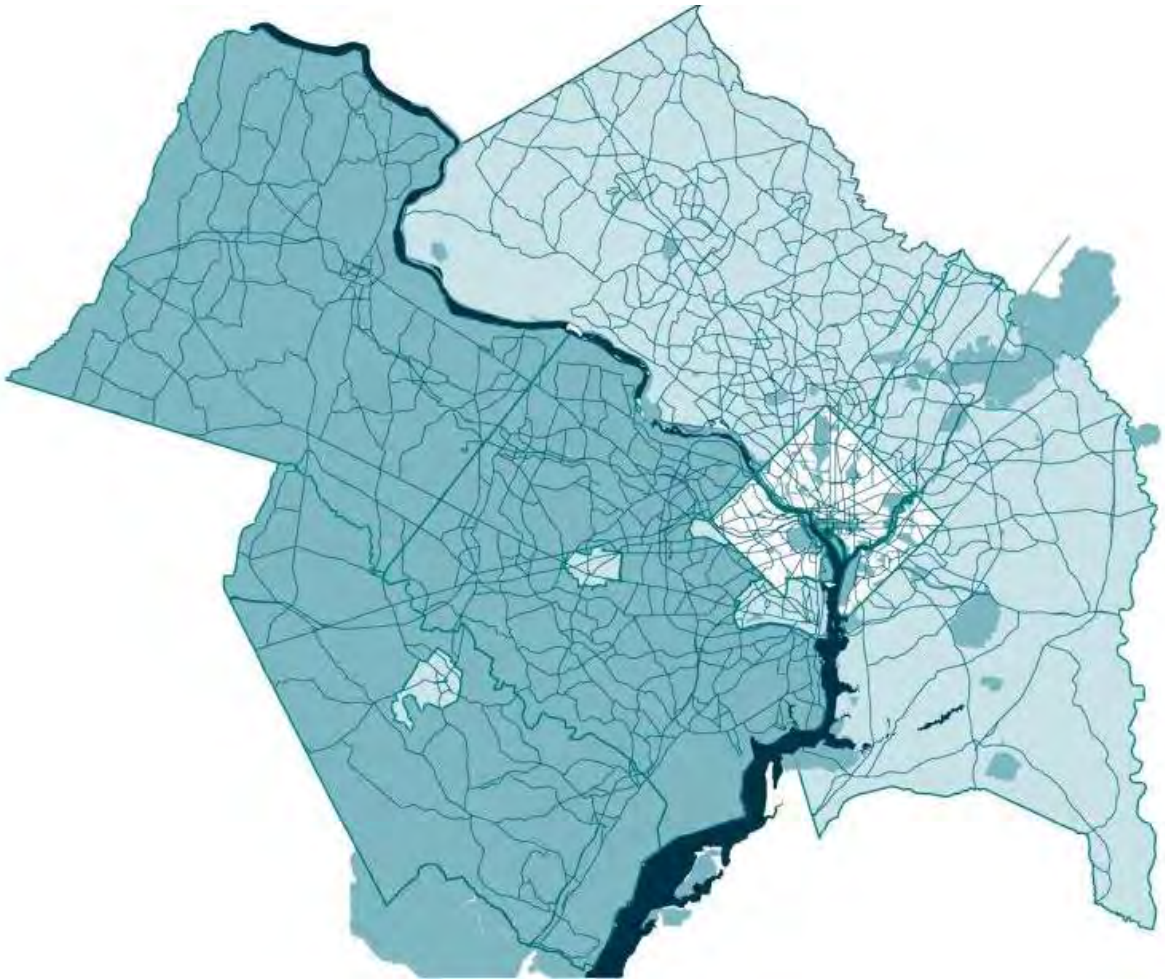
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1.1 INTRODUCTION

A. Purpose

This handbook provides federal agencies within the National Capital Region (NCR)* with procedures and guidelines for preparing a Transportation Management Program or Plan (TMP). A TMP documents an employer's active program to foster more efficient employee commuting patterns by minimizing single occupant vehicle (SOV) trips related to federal agency worksites. This is mandated by federal air quality regulations, local trip reduction ordinances, and National Capital Planning Commission planning requirements.



Jurisdictions within the NCR include: Arlington, Loudoun, Prince William and Fairfax Counties, and the cities of Alexandria, Falls Church, Fairfax, and Manassas in Virginia; Prince George's and Montgomery Counties in Maryland; and the District of Columbia. A TMP documents how Travel Demand Management (TDM) strategies and policies that influence travel behavior can be best applied. Both TMPs and TDM seek to optimize existing and future transportation facilities and preserve our natural environment by reducing single occupant automobile travel.

This handbook will:

- Define TDM and explain why it is important in the National Capital Region;
- Describe specific TDM strategies and programs available in local jurisdictions;
- Describe specific TDM strategies available to federal agencies;
- Demonstrate how an aggressive TMP can benefit a federal agency;
- Provide a step-by-step process for designing and implementing a TMP; and
- Identify resources and contacts available to aid TMP efforts.

The need for a handbook evolved from initiatives sponsored by the [General Services Administration \(GSA\)](#), the [Metropolitan Washington Council of Governments \(MWCOCG\)](#), and the [National Capital Planning Commission \(NCPC\)](#). First developed in 1998, this handbook has been periodically updated to respond to changing interests and requirements at the federal, regional and local level, as well as new services and information.

This handbook is designed to be used by the following types of professionals, who are likely to have TMP planning, administration, and/or implementation roles and responsibilities:

- Employee Transportation Coordinators (ETCs)
- Facility Managers
- Human Resources Directors
- Labor Relations Directors
- Transportation Planners
- Union Representatives.

B. Handbook Organization

This handbook is designed to be easy-to-use with key information readily available. The handbook is published electronically and is available online, with links provided from the [NCPC](#) and www.federaletc.org webpages.

The Appendix lists additional information sources related to specific municipalities, provides sample TMPs, and identifies outside resources that may be used in the preparation and implementation of a TMP.

This handbook is organized into five sections:

- **Section 1** provides an introduction and serves as an overview of the transportation management planning process for facility managers and ETCs.
- **Section 2** provides a discussion of the roles and responsibilities of parties involved in the TMP process.
- **Section 3** provides a description of the different strategies and tools available in the development and implementation of a TMP.
- **Section 4** provides step-by-step guidance to the ETC or manager in the preparation of a TMP.
- **Section 5 (Appendix)** contains reference material, including local ordinances, sample worksheets, a glossary, a bibliography, and a listing of TMP resources and contacts in the NCR.

Federal agencies are encouraged to supplement this handbook and agency resources by contacting local and regional officials who are responsible for TMP development, implementation, and monitoring. Additionally, there are a wide range of resources available to employers, including federal agencies, within the NCR. These resources, along with a genuine desire of local and federal governments to work together, will help federal agencies meet the requirements of federal TMP guidelines.

C. Background

Congress created NCPC to serve as the central planning agency for federal activities and interests in the National Capital Region. One of NCPC's principal responsibilities is to coordinate federal development activity within the region. In 2004, NCPC adopted the most recent version of the [Comprehensive Plan for the National Capital: Federal Elements](#). This document's Transportation Element contains guidelines that require a TMP for all projects that will increase a federal facilities' work site employment to 100 or more employees (existing and proposed employees).

NCPC guidelines recommend that a TMP include the following information:

- Stated goals for SOV trip reduction, transportation mode split, and vehicle occupancy;
- Strategies to minimize SOV work trips and discourage SOV travel during peak and off-peak commuting hours;
- Measures to monitor goal achievement and to adjust SOV trip reduction strategies, as needed;
- A description of existing and projected peak hour traffic by transportation mode;
- A summary of existing and proposed parking by type of assignment (official cars, vanpools, carpools, single-occupant vehicles, handicapped persons, visitors, etc.);
- An evaluation of projected transportation impacts and a description of proposed mitigation measures;
- A summary of the relationship of TMP provisions to local, state, and regional agency transportation management requirements, including provisions for working cooperatively with affected agencies to address these requirements.

The Comprehensive Plan also offers the following additional TMP-related guidance:

- Develop TMPs that explore methods and strategies to meet prescribed parking ratios (as described in the Comprehensive Plan), and include a thorough rationale and technical analysis in support of all TMP findings;
- Analyze scenarios that incorporate data on employee home zip codes, nearby bus routes, Metrorail, MARC, and VRE lines and schedules, and that identify existing and planned High Occupancy Vehicle (HOV) or High Occupancy Toll (HOT) lanes;
- Include implementation plans with timetables that outline the agency's commitment to reaching TMP goals;

- Reflect planned regional transportation infrastructure or service improvements within five miles of the federal facilities; and
- Update TMPs at least every two years to reflect the most current employee information.

NCPC is not alone in identifying the need for addressing TMP requirements and responsibilities. In 1980, [*Executive Order 12191*](#), “Federal Facility Ridesharing”, delegated the primary responsibility for program development, implementation, and administration of the Federal Facility Ridesharing Program to GSA, which includes a nation-wide system of federal facility ETCs.

As part of GSA’s continuing role in supporting the network of federal agency ETCs, GSA and MWCOG established a Memorandum of Understanding (MOU). The MOU calls for GSA and MWCOG to cooperate in training federal ETCs in the National Capital Region (NCR), to provide various marketing materials and assistance to these ETCs, and to link federal ETCs to regional services on an as-needed basis. MWCOG took a lead role through the publication, distribution, and coordination of several TDM activities.

D. Challenges: Traffic Congestion and Air Pollution

Single occupancy vehicle travel, particularly during the morning and evening rush hour periods, is discouraged because of its significant contribution to area traffic congestion and poor air quality.



The following facts describe projected regional growth and the resulting impacts on vehicle trips, traffic, delays, and air pollution:

- By 2040, the region's population is expected to increase by 24 percent while the workforce is expected to increase by 36 percent.
- The majority of growth will occur in the outer jurisdictions, but the inner jurisdictions will retain the majority of the region's population by 2040.
- The number of daily trips made by area residents is expected to grow by more than 25 percent between 2013 and 2040, and the number of miles driven will increase by about 25 percent. The increase in demand on the region's roads by
- 2040 is expected to outpace increases in supply, leading to a significant increase in congestion. Funding constraints will limit the increase in new roadway capacity.

In the regional core, 58 percent of work trips are made by bus or rail, and 13 percent by walking or biking. In the inner suburbs single driver trips account for the largest share of work trips (63 percent) and nearly a quarter of work trips are taken by transit. Though the transit share is lower in the regional core, the number of transit work trips generated in the inner suburban counties is greater than that of the regional core. In the outer suburbs, more than 75 percent of work trips are made by single drivers.

By 2040, slight changes in mode share are expected in all three areas. In the regional core, the share of transit trips is expected to drop in favor of more walking and bike trips. In the inner suburbs, single driver trips are expected to drop slightly, while both transit and non-motorized trips will increase. And in the outer suburbs single driver trips are expected to drop, while carpool and transit trips are expected to increase significantly. Projects like the Silver Line to Dulles Airport, which will bring Metrorail to Loudoun County, and the HOT lanes in northern Virginia, will contribute to this shift.

According to the [2014 Transportation Priorities Plan](#) adopted by the Transportation Planning Board (TPB) additional transportation impacts in the NCR by 2040 include the following:

- Severe stop-and-go congestion is expected throughout the entire region. However, the HOT lane projects included in the 2012 *Constrained Long-Range Plan* (CLRP) are projected to relieve some of the congestion along I-495 in Virginia. Outer suburban jurisdictions will experience the greatest increase in congestion, while the already congested inner suburban jurisdictions will experience the worst overall congestion. Making matters worse, congestion will increasingly extend beyond rush-hour periods and affect off-peak weekday periods and weekends.
- The average number of jobs accessible within a 45-minute automobile commute is expected to decrease slightly over the next 30 years, with the greatest reduction in job accessibility expected to be on the region's eastern side. This is due to a combination of projected increases in automobile congestion and anticipated greater job growth in the western portion of during this period. Average accessibility by transit is forecast to increase, although overall accessibility to jobs by transit will remain significantly less than by automobile.
- Increases in traffic volumes, distances, and delays contribute to other problems, including air pollution. This is because ground-level ozone, the prime ingredient in smog, is formed when gases in motor vehicle exhaust react with oxygen. As the number of trips increase in quantity and length, the resulting higher emission levels cause an increase in ozone and smog.

- Over the past decade, concerns have emerged about global climate change and greenhouse gases like carbon dioxide (CO₂). Based on climate science and consideration of policies of jurisdictions in the region, the [November 2008 MWCOG Climate Change Report](#) set a goal of reducing the region's CO₂ output to 80 percent below 2005 levels by 2050. Applying this goal to transportation would require reducing by 2040 the region's transportation-related CO₂ emissions by 60 percent compared to 2005 levels, the CLRP's horizon year. While some moderation in CO₂ emissions by 2040 is currently forecast, the regional target is far from being met, and CO₂ emissions are projected to increase between 2030 and 2040.
- Traffic congestion and air pollution problems pose continued, significant challenges for the nation and the NCR, in particular. Eliminating population and workforce growth is an impossible and undesirable goal. However, the development of policies that help reduce traffic congestion by focusing on more efficient methods is a desired and achievable goal. One fundamental strategy requires employees and employers to share responsibilities and work together to help make alternative travel modes available and more convenient.

E. TMP as Part of the Solution

The Federal Highway Administration (FHWA), in an evaluation of Travel Demand Management (TDM) notes that techniques developed by TDM professionals are valuable tools for alleviating traffic congestion and regional air pollution problems. In the 1995 FHWA presentation to the Institute of Transportation Engineers it was offered that:

“The accomplishment of a [transportation management] program depends entirely on the actions that are applied. If travelers are presented with no alternative that realistically competes with the private auto, they will not stop driving. And if driving continues to be subsidized in the form of free (or heavily subsidized) on-site parking, alternative modes will represent bad economic choices for travelers. If these factors are confronted by a [transportation management] program, **trip reductions in the range of 20 percent to 40 percent can be the norm, rather than the exception.**”

1.2 OVERVIEW

A. What is a Transportation Management Program?

A Transportation Management Program or Plan (TMP) documents an employer's active efforts to foster more efficient employee commuting patterns. The program includes specific strategies to encourage changes in travel modes, trip-timing, frequency and length, and travel routes in an effort to reduce traffic congestion and improve regional air quality.



B. What Are The Benefits of a Transportation Management Program?

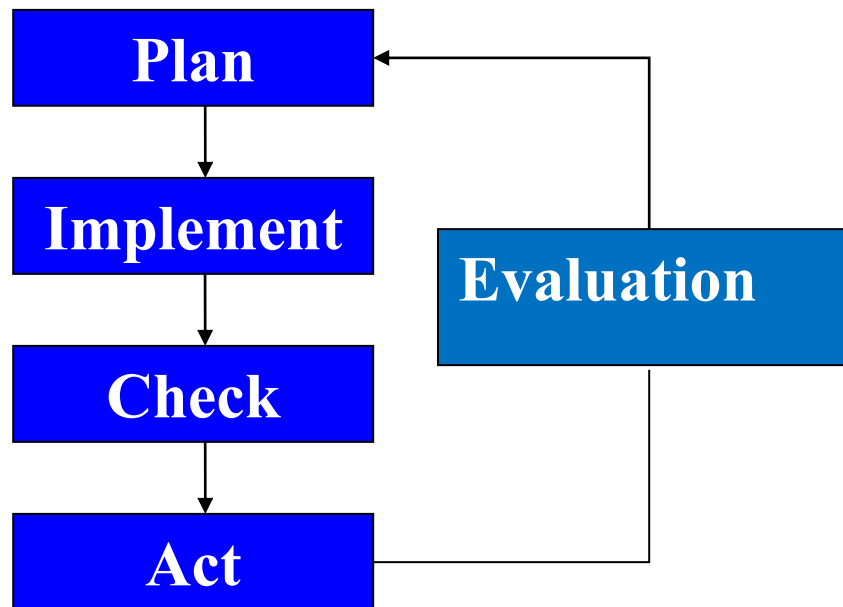
TMPs offer the following potential benefits to a federal agency:

- Assist federal agencies in meeting various requirements and guidance related to sustainability, energy efficiency, and environmental protection.
- Demonstrates federal agency concern about reducing traffic and parking impacts to local communities.
- Reduces traffic congestion in the vicinity of federal facilities.
- Improves local/regional air quality and overall quality of life for a region's workers, residents, and visitors.
- Conserves energy, which contributes to a more sustainable society and reduces national dependence upon foreign energy sources.
- Reduces tardiness and absenteeism;
- Expands the regional area from which to draw qualified candidates.
- Meets local government trip reduction ordinances, as required under the Clean Air Act, where such ordinances are in force.
- Offers low preparation and implementation costs because most activities focus on low-cost marketing efforts and training.
- Provides a low-cost method of reducing employee turnover due to relocation from an area with high levels of transit service, to an area with low levels of transit service.
- Provides alternatives and assists employees who must make longer commutes or switch travel modes, when relocating to a new or existing work site.
- Reduces on-site and off-site parking demand.

C. What is Included in a TMP?

The TMP process follows a four-step cycle: **plan**, **implement**, **check**, and **act**. The federal agency:

1. **Plans** a change to its employee transportation policies and programs to comply with particular regulations or agency needs.
2. **Implements** the program.
3. **Checks** the program's results.
4. **Acts** to either adopt changes or to begin the cycle again, based on information from the evaluation.



(1) Program Initiation

To begin the preparation of a TMP, the federal agency must define the mobility problem. The definition should include a summary of the work location's existing transportation facilities, programs, and resources. The problem definition is necessary in order to develop initial program goals.

Next, specific performance objectives, like increasing the average number of people per vehicle, reducing the agency's contribution to the regional Vehicle Miles Traveled (VMT), or reducing the number of trips during rush hour must be established. The objectives may be set by local or regional ordinances. Setting realistic objectives often requires a federal agency to conduct a baseline survey of its employees and/or visitors to determine travel patterns and establish a realistic starting point. This information can then be used to evaluate the effectiveness of various programs.

(2) Selecting TMP Strategies

There are numerous strategies, tactics, and services that a federal agency can utilize in the preparation and implementation of a TMP.

The following list contains the potential components of an agency's TMP, which are described in more detail in Section 3:

- Bicycling/walking
- Carpooling
- Commuter work centers
- Guaranteed ride home
- Parking management
- Ridematching
- Subsidies
- Telecommuting
- Transit services
- Travel allowance
- Vanpooling
- Variable work hours

Regional and local efforts often augment these employer-initiated strategies. Examples include the provision of ridematching services and planning/construction of HOV/HOT lanes. Agencies can also make use of MWCOG's [Commuter Connections Program](#), which includes the Ridematching and the Guaranteed Ride Home programs, among other services.

By providing a menu of TMP options to employers, local governments allow for flexibility and foster creativity in complying with objectives. The diverse nature of each

worksite's operating environment and business requirements supports flexible approaches rather than prescribing specific actions.

Influenced by personal preferences and attitudes, site specific conditions and other factors, it is difficult to predict a TMP's outcome with a high degree of certainty, unless specific market research is conducted for a particular location. Mixes of strategies and pricing levels can have dramatically different results in different combinations and locations, which reinforces the need for an iterative and responsive TMP process.

(3) Implementing a TMP

To assist in implementing selected tasks, a work plan for each service/product should be prepared with the following elements:

- Task description/objectives
- Identification of transportation mode(s) impacted by task
- Description of current and forecasted levels of participation
- Marketing plan
- Performance measure and monitoring procedures
- Budget
- Timetable
- Responsibilities and staff time allocations
- Priorities

(4) Monitoring a TMP

Monitoring a TMP's progress is crucial to improving performance and productivity while controlling program costs. A successful plan evaluation will use procedures that determine one or more of the following:

- The extent to which the program has achieved its stated goals and objectives (e.g., increases in average number of persons per vehicle).
- The extent to which the accomplishment of the goals and objectives may be attributed to the TMP (direct and indirect effects).
- Degree of consistency in program and plan implementation (relationship of planned activities to actual activities).
- The relative effectiveness of different tasks (which ones worked, which did not, how well, etc.).

Listed below are several of the key web resources for ETCs and others interested in TMPs.

Agency	Program Information	website
MWCOG	Commuter Connections	http://www.commuterconnections.org/
NCPC	Comprehensive Plan	www.ncpc.gov Transportation Element contains policies, including parking ratios.
	TMP Guidelines	www.ncpc.gov (Under Master Plans in the Submission Guidelines)
GSA	ETC Coordinator	http://www.gsa.gov
WMATA	SmartBenefits	www.wmata.com
OMB	Telework Policies	http://www.telework.gov/guidance_and_legislation/OMB_Memorandums/index.aspx
WABA		www.waba.org

2.1 THE FEDERAL GOVERNMENT ROLE

A Transportation Management Program or Plan (TMP) assists a federal agency to make more efficient use of the regional transportation system by changing worker and visitor travel behavior at specific worksites. There are numerous entities that contribute to the success of a TMP. The federal agency needs two key ingredients to design and implement an effective TMP: strong management support and a motivated, enthusiastic Employee Transportation Coordinator (ETC).

A. The Roles and Responsibilities of the Federal Agency

Many factors influence employees' and visitors' choices for mode of travel, including out-of-pocket costs, convenience, travel time, reliability, and safety. Employers can also influence employee and visitor travel behavior with certain policies, which are described below. Adjustments to these policies can contribute to minimizing work and visitor-related single-occupant travel during peak hours.

Federal Agency Policies Affect Mode Choice Decisions

Parking Policies

Federal agency parking policies may either be used as an incentive or disincentive. "Free" or heavily subsidized parking promotes driving alone. However, market-rate pricing can have a dramatic impact on travel mode choice. Another parking policy example is the assignment of limited parking spaces. Assignment of spaces close to the entrance of a worksite for carpools and vanpools can serve as a low-cost incentive to using these travel modes.

Work Hours Policies

Another type of policy that could affect employee travel behavior is the agency's work hour policy and practices. Allowing the scheduling of last-minute or late-day meetings places a burden on employees who must meet a bus or carpool. While a common perception is that ridesharers are "clock watchers," employers have found that increased carpool activity helps reduce tardiness and absenteeism.

Alternative work hour programs such as flex-time, staggered work hours, compressed work weeks, and telecommuting all increase the flexibility of individuals in meeting commuting schedules including transit schedules and carpools.

Unscheduled overtime requirements can also place a burden on ridesharers. However, more TMPs now include Guaranteed Ride Home (GRH) programs as low cost safety nets for these situations. GRH programs are described in more detail in Sections 3 and 4.

What is Required of the Federal Agency?

Federal agencies are encouraged to use existing roles and responsibilities to help influence employee and visitor travel behavior. The National Capital Planning Commission (NCPC) requires TMP submissions with all Master Plan updates and for all projects that will increase employment by 100 or more workers. Agencies are encouraged to do the following:

- Meet at an early date with NCPC staff about applicable NCPC policies and guidelines at a [consultation meeting](#) during a project's early planning phase. Master Plans and projects, along with their associated TMP's, will likely require multiple consultations due to their comprehensive scale and relative complexity. Applicable NCPC policies and guidelines are available at www.ncpc.gov, both on the Submission Guidelines page and in the Comprehensive Plan's [Transportation Element](#). Early consultation with NCPC is mandated by the National Capital Planning Act, NCPC's enabling legislation, which requires federal agencies to "advise and consult with NCPC in the preparation of agency plans prior to preparation of construction plans."
- Consult with local jurisdiction planning and transportation officials, either separately or jointly with NCPC staff, to identify current plans and programs, congestion mitigation/travel management techniques, and requisite TMP-related implementation commitments. The Comprehensive Plan encourages federal agencies to coordinate projects, Master Plans, and TMPs with local jurisdictions in its Federal Workplace Element through the following policy: "Develop sites and buildings consistent with local agencies' zoning and land use policies and development, redevelopment, or conservation objectives, to the maximum extent feasible."
- Prepare a TMP for all Master Plan updates and relatively large projects, as previously noted. The TMP should be fully integrated with Master Plans for campuses and installations and subsequent projects, directly influencing land use patterns, project orientation, and provision of on-site amenities (i.e. bike racks). If a federal agency (typically the General Services Administration (GSA)) is serving as an agent on behalf of another federal applicant by managing project planning and/or construction, the agent should manage the TMP preparation.
- Submit the TMP as part of the required Master Plan update or project submission for NCPC review and potential referral to appropriate local, regional and state agencies. The applicant should be prepared to consider all comments made by the Commission and local/state agencies as part of the region's federal planning process, and to incorporate new strategies and programs as funding availability, federal requirements, and off-site infrastructure permits. The mandatory federal referral process is described in more detail in NCPC's [submission guidelines](#), under Master Plans

What are “Necessary Commitments?”

The federal agencies’ “necessary commitments” to TMP implementation (referred to above in section 2.1 A 2) may include some or all of the following:

- Develop a written policy statement that demonstrates the federal agency’s commitment to reducing Single Occupant Vehicle (SOV) travel and to show consistency between the TMP and agency mission.
- Provide substantive decision-making authority and strong support to the Employee Transportation Coordinator (ETC) from agency management. Authority can be influenced by agency size, mission, management support, and organizational structure.
- Allocate adequate funding to enable the ETC to conduct regular employee commuter surveys; hold informational meetings/fairs for employees; design and distribute marketing materials; coordinate programs with other nearby federal campus installations, and actively participate in local, regional and national continuing education and training efforts to foster professional development in Transportation Demand Management (TDM) efforts. These activities are only some of a successful ETC’s duties, which are described in detail in Section B.
- Adopt policies that:
 - Encourage employees and visitors to use alternatives to driving alone when traveling between home and the work-site, and on work-related business during the day.
 - Encourage and participate in joint public-private initiatives for managing traffic concerns, such as Transportation Management Associations (TMAs), business improvement districts, and regional or local trip reduction programs.
 - Allow greater flexibility in using agency funding to permit investment in infrastructure, facilities, and services related to non-SOV travel that offers the most cost-effective solutions. An example of this would be the reinvestment of parking revenues into traffic mitigation projects and programs.
 - Explore incentives for cost-effective use of the agency’s transportation assets, such as parking pricing differentials for carpools and vanpools.
 - Encourage effective management and use of transportation assets by requiring the evaluation of alternative options and management techniques that enhance performance and capacity of parking and impacted roadways. A usable and effective TMP will enable a federal agency to fully implement this policy.

Taking the First Steps

The common element in all successful TMPs is a motivated, enthusiastic ETC. The first step in the preparation and implementation of a successful TMP is to designate the best person to carry out the program and then to provide them with adequate agency support.

B. Employee Transportation Coordinator Roles and Responsibilities

The role of an Employee Transportation Coordinator (ETC) is multi-faceted. An effective ETC must be part insightful planner, part effective communicator, part consummate customer service representative, and part proficient transportation analyst. The ETC will find that many of these skills will be called upon as the federal agency develops and implements their TMP.

Other highly desirable qualities in an effective ETC include the desire for variety in their work, the ability to adapt quickly to change, and an ability to think strategically in order to promote, market, and gain organizational support for a plan.

The role of an ETC will change while developing a new TMP or expanding an existing one. To assist during this process, federal agencies and ETCs have sources of outside support that include the GSA, NCPC, Metropolitan Washington Council of Governments (MWCOC), Washington Metropolitan Area Transit Authority (WMATA), Washington Area Bicyclist Association (WABA), and local transit and ridesharing agencies. A sample job description for an ETC is included in the Appendix.

The ETC's specific responsibilities are defined by community, agency, and employee needs. Because the needs of the community and agency require changing worksite-related travel behavior, the ETC must first succeed in satisfying individual employee needs.

Actions of a typical ETC could include:

- Investigate the existing transportation-related conditions of the campus/installation, develop a database, and determine the potential for change. For example, detailed information on parking lot use rates should be compiled, analyzed, and maintained to identify shared parking opportunities, and to help influence future project location decisions.
- Select reasonable goals and objectives, plan appropriate strategies and tasks for carrying them out, develop a timetable, and establish a budget. The goals should be designed to attain applicable federal regulations as well as the [NCPC employee parking ratio goals](#), as specified in the Comprehensive Plan's Transportation Element, that applies to the campus/installation.
- Actively solicit internal support from agency management, other departments, and key individuals within the federal agency, as well as relevant external agencies like the local city/county planning and transportation departments, local transit agency, and transportation advocacy groups (if appropriate).

- Advertise and market the program to employees and visitors in order to create awareness and interest in participating in alternative travel modes. Many successful TMPs are based on a robust, usable, informative, agency website that provides a “one stop shop” for employee and visitor travel-related information.
- Coordinate TMP programs and strategies with other nearby federal campuses/ installations to maximize their effectiveness and efficiency as appropriate.
- Establish conditions through information, incentives, and disincentives that will encourage employees and visitors to change their travel behavior, and personally facilitate overall campus/installation-wide change.
- Administer a regular on-line employee commuter survey to collect travel-related data, and use that information to update and maintain the TMP as needed.
- Report changes in site-related travel behavior to agency leadership, employees (as appropriate), and NCPC on a regular basis.
- Rely on NCPC, GSA, and MWCOG for TMP development and support. MWCOG’s has a Commuter Connections program hosts a dedicated ETC resource website at www.federaletc.org.

C. The Roles & Responsibilities of GSA, NCPC, & MWCOG

GSA, NCPC, and MWCOG continue to play integral roles in assisting ETCs and their federal agencies with developing and implementing effective TMPs.

GSA

The [General Service Administration](#) assists federal agencies in the development, implementation, and administration of TMPs. GSA will directly assist in developing a TMP if an agency's construction project is being managed, designed, and/or funded through GSA. In addition to providing TMP support, GSA also performs the following functions:



- Coordinates ridesharing efforts with MWCOG on behalf of federal agencies. The coordination includes publishing a newsletter for federal ETCs; distributing ridesharing promotional information for federal employees; providing links to on-line marketing materials; establishing links to MWCOG's [Commuter Connections ridematching system](#) when required; and coordinating transportation fairs with MWCOG and local TMP personnel.
- GSA, in cooperation with MWCOG and NCPC, sponsors training sessions for federal ETCs. In addition to learning new marketing techniques and keeping abreast of changes, the sessions offer the opportunity to meet and exchange ideas with ETCs from other federal agencies.
- GSA has the authority to regulate and police parking facilities or may delegate the authority. GSA's current policy is to delegate the responsibility to the individual agencies.

GSA's parking space assignment policy is provided in the [Federal Management Regulation \(FMR\)](#). Agencies are directed to assign spaces in the following order of priority:

1. Official needs
2. Handicapped
3. Executive personnel and persons who work unusual hours
4. Vanpools and carpools
5. Persons who use their private vehicle regularly for government business
6. Other employees.

In addition to the assignment of parking spaces, federal regulations address the issue of pricing. Currently, [Title 40 U.S.C., Section 490\(k\)](#) requires that parking revenues in excess of the actual operating and maintenance costs be returned to the Treasury Department as miscellaneous receipts. Unfortunately, this effectively prohibits the use of parking revenues to offset other TMP programs such as transit subsidies.

NCPC

The responsibilities of the [National Capital Planning Commission](#) include:

- Review of all federal development projects in the National Capital Region (NCR);
- Review of District of Columbia public projects, proposed street and alley closings, and Zoning Commission actions, as well as private development in the Pennsylvania Avenue Historic District;
- Preparation of *the Comprehensive Plan for the Nation's Capital* and other long-term plans for the capital city and the region; and
- Review and maintenance of a six-year capital improvements program for the federal government, which helps set the federal government's development priorities.



NCPC strongly encourages TMPs for all Master Plans and projects that will increase work-site population by 100 or more employees. More information on NCPC's legislative authorities, submission guidelines, and resources is available at www.ncpc.gov.

MWCOG/TPB

The [Metropolitan Washington Council of Governments'](#) National Capital Region Transportation Planning Board (TPB) is the federally-designated regional metropolitan planning organization responsible for coordinating transportation planning and air quality planning within the NCR. MWCOG/TPB accomplishes this by compiling the transportation planning actions of each of the incorporated cities, counties, and states within the NCR into one comprehensive and cohesive regional strategy.

MWCOG/TPB operates a commute alternatives program called [Commuter Connections](#), key components of which include:

Overall administration and employer outreach assistance through the [Employer Outreach Program](#) which includes employer outreach for bicycling.

- Providing commuter assistance through the Commuter Operations Center.
- Assistance for the establishment and expansion of employer telecommuting programs.
- Enhanced transit, telework centers, park-and-ride information, bicycling and full-service travel information through the Commuter Connections state-of-the-art Ridematching software and website.
- Overall implementation of the regional Guaranteed Ride Home (GRH) program.
- Coordination and implementation on the regional Bike to Work Day and Car Free Day events.
- Implementation of the Pool Rewards ridesharing incentive program.
- Assistance on voluntary commuting actions that can be taken by employers and the general public to reduce mobile source emissions, particularly on Air Quality Action Days.



Metropolitan Washington
Council of Governments

NCPC and GSA are committed to working with MWCOG/TPB to minimize traffic congestion in the region and to meet all applicable transportation management goals. This handbook is a key step in assisting federal agencies in this regard and serves as a guide in keeping agency transportation managers informed of new requirements. MWCOG/TPB's resources are significant and extensive.

MWCOG should always be the first place an ETC checks to find information and resources for the development and implementation of a TMP. MWCOG/TPB currently maintains a [clearinghouse website for ETCs](#).

D. Federal Requirements, Policies, & Resources

1. *Clean Air Act Requirements*

The Clean Air Act (CAA), enacted in 1970 and amended in 1990, was developed to protect the health and general welfare of the public from air pollution. The CAA requires that areas designated as in non-attainment of federal health standards must attain the standards as quickly as possible, and no later than certain prescribed deadlines (3-5 years after final designation, or more, depending on classification status).



The National Capital Region's (NCR) most serious summertime air pollution problem is ozone. Ozone exists naturally in the earth's upper atmosphere, the stratosphere, where it shields the earth from the sun's ultraviolet rays. However, ground-level ozone, ozone found close to the earth's surface, is considered to be an air pollutant. This harmful ozone is formed when volatile organic compounds (VOCs) and nitrogen oxides (NOx) react with sunlight.

Fine particle pollution from cars, trucks, industry, and power plant combustion. is also a serious health concern and a year-round problem. Fine particulate matter may penetrate deep into the lungs and even into the bloodstream, causing asthma and other respiratory effects, and potentially serious cardiovascular problems.

In May 2007, MWCOG's Metropolitan Washington Air Quality Committee (MWAQC) approved an ozone plan to demonstrate the region's ability to meet the 1997 fine particle standard by a 2009 deadline. In March 2008, MWAQC approved a plan to reduce fine particles in the region to acceptable levels by 2009. In 2013, the MWAQC submitted to the U.S. Environmental Protection Agency (EPA) a re-designation request for the region

regarding the 1997 fine particle standard because monitored air quality levels were currently well below the federal standards.

The NCR is currently designated as a non-attainment area for both the 2008 ozone standard and the 1997 fine particle pollution daily standard. For ozone, the EPA requires that the region meet the 2008 ozone standard by 2015 (classification as marginal nonattainment).

The EPA reviews health standards for air pollutants every five years and as a result, the standards are revised continually. In 2014, it is possible that the EPA will tighten the ozone standard to a range of between 60 and 70 ppb to be more protective of public health.

2. Transportation Planning & the Clean Air Act

The CAA links transportation planning and clean air planning in several ways. The region must show that its transportation plans and programs comply with the region's clean air plans. Regional clean air plans include transportation emission reduction measures (TERMs), which are intended to reduce emissions from mobile sources and are given a special, priority status for federal-aid funding in the region's annual Transportation Improvement Program (TIP). Failure to meet CAA requirements may result in federal highway funding aid being withheld.

The regional air quality plan is the mechanism through which metropolitan areas strive to control their transportation-related emissions. This plan establishes maximum emission levels for motor vehicles on a regional basis. As a result, local and regional roadway improvements must not result in projected emission levels that are greater than the regional limit. This limit is established by the MWAQC for the NCR. All city, county, and state transportation plans within the region are reviewed by the MWCOG TPB to ensure compliance with the region's air quality plan.

The existing regional air quality plan recommends the preparation of TMPs and the implementation of TDM measures since motor vehicle use and the resulting emissions are expected to increase significantly in the future. Although vehicle emissions are declining as a result of cleaner cars and cleaner gasoline, emissions are predicted to increase as the number of vehicle miles traveled is also projected to increase.

3. **Clean Air Partners**

Clean Air Partners is a public-private program that encourages employers and other organizations, including governments, to implement more aggressive travel demand measures on days when unhealthy ozone levels (referred to as Code Orange and Red) are predicted. The program's goal is to minimize the anticipated high level of ozone on these days. Meteorologists are able to predict when ozone spikes will likely occur since ground-level ozone forms under known weather conditions such as hot sunny days with little or no wind. On these Code Orange and Red Days individuals and organizations should take additional measures to modify their travel-related activities. The current regional air quality forecast and alerts may be accessed through the [Clean Air Partners website](#).



4. **Commuter Choice Program**

[Commuter Choice](#) is a tax-free benefits program offered jointly by EPA/FHWA that employers are permitted to offer employees to encourage them to commute to work other than alone in a car. Under IRS rules, these benefits are also referred to as “qualified transportation fringes.”

The [Transportation Equity Act for the 21st Century \(TEA-21\)](#) amended the Internal Revenue Code to permit employees to receive tax-free, transit or vanpool benefits in lieu of compensation, as was done for parking under the Taxpayer Relief Act of 1997. TEA-21 also raised the monthly tax-free limit from \$65 to \$130 for transit and vanpool benefits in 2002.

Federal agencies may provide these benefits in any of three ways:

1. Agencies can give their employees up to \$130 per month in benefits to commute to work by transit or eligible vanpools. The benefit may be paid by using existing appropriated funds, usually taken from administrative accounts such as salaries, benefits, travel, etc. Employees receive the benefit completely free of all payroll (Social Security and Medicare) taxes, federal income taxes, and the District of Columbia or state income taxes.
2. Agencies may permit their employees to swap some of their pre-tax income for transit or eligible vanpool benefits. Employees benefit because they save on federal payroll and income taxes since the benefit amount is no longer considered to be taxable salary. Agencies benefit because their payroll costs are reduced and their payroll taxes do not apply to the funds used for the benefit. The benefit is

also exempt from the District of Columbia, Maryland, or Virginia state income taxes.

3. Agencies can share the cost of commuting with their employees, and may give them part of the commuting expense, tax-free, in addition to their salary, using appropriated funds. Employees can then exchange part of their gross income (in lieu of salary) to pay the remaining amount, up to the maximum total monthly limit.

These benefits are subject to legislative changes as enacted by Congress. ETCs should coordinate with MWCOG, GSA, and their agency's legal and regulatory contacts to determine current benefit limits.

The [Washington Metropolitan Area Transit Authority \(WMATA\)](#) administers the [SmartBenefits Program](#) in the NCR. SmartBenefits is a web-based program that allows employers to load the dollar value of an employee's Metrochek benefit directly to a SmarTrip® card. SmarTrip® is accepted by Metrorail and Metrobus in addition to commuter and local bus services.

5. Federal Teleworking Program

Today, the federal government, and GSA in particular, is rethinking the federal workplace to reflect changing technologies, employee preferences, and increased interest in efficient space utilization. This is reflected in reconfigured and smaller per-employee workspaces, office "hotelling" (where employees share spaces), and increased emphasis on teleworking and flexible work schedules. The [Telework Enhancement Act of 2010](#) put in place the means to have an effective telework environment for all federal agencies, and established goals for federal agency teleworking.

Congress appropriated funds in 1992, to establish telecommuting centers in the greater Washington area and to promote and implement telecommuting within the federal government. The centers that are currently in operation are run by the private sector.

6. Congestion Mitigation & Air Quality (CMAQ)

The [Congestion Mitigation & Air Quality \(CMAQ\) Improvement Program](#) is part of current federal transportation legislation, under the Moving Ahead for Progress in the 21st Century Act (MAP-21) continuing from the previous funding bill [Safe, Accountable, Efficient Transportation Equity Act: A Legacy for Users \(SAFETEA-LU\)](#). The authorized annual funding is \$2.21 billion for FY 2013 and \$2.23 billion for FY 2014. The CMAQ Program is designed to provide a flexible funding source to state and local governments for transportation projects and programs to help meet the requirements of the Clean Air Act. Funding is available to reduce congestion and improve air quality for areas that do not meet the NAAQ Standards for ozone, carbon monoxide, or particulate matter (non-attainment areas) and for former non-attainment areas that are now in compliance (maintenance areas).

MAP-21 has a new approach to core formula program funding, authorizing a lump sum total instead of individual authorizations for each program. Once each state's combined total allotment is calculated, an amount is set aside for the CMAQ program via a calculation based on the relative size of the states; FY 2009 CMAQ apportionment. For more information, visit the [Federal Highway Administration website](#).

7. Emergency Commute Preparedness Plan

An organization's ability to cope with a natural or man-made emergency is largely dependent on creating an [Emergency Commute Preparedness Plan](#) for emergency situations. It is the ETC's responsibility to help develop and implement an Emergency Commute Preparedness Plan for their organization.

It is essential for all federal agencies to plan, develop, and test Emergency Commute Preparedness Plans. This future planning effort will enable the agency to continue functioning as following a disaster.



Most agencies rely heavily on technology and automated systems. A disruption, for even a couple of days, could cause major disruptions to the productivity of a federal agency. An organization's continued operations will depend on management's awareness of potential disasters, their ability to develop a plan to minimize disruptions of critical functions, and the capability to recovery operations expediently and successfully.

A business continuity plan for emergency preparedness requires:

- Developing procedures and actions that enable an organization to continue critical business functions during a crisis or a disrupting event.
- Assisting employees in commuting in the event of a man-made, natural disaster, or regional emergency.

An Emergency Commute Plan goals are to:

- Maintain critical operations;
- Protect the image and reputation of the agency.
- Provide solutions that eliminate trips to work, shifts work hours, or use alternative transportation.

To develop a plan the ETC will need to work with other key staff members to oversee the planning process and arrange for the plan's testing and implementation.

Specific TDM and TMP strategies that need to be considered in an Emergency Commute Preparedness Plan should include the following:

Carpool Formation

- An employee commute survey can be used to help prepare in advance for emergency transportation needs. The survey should ask about employees' commute patterns. The results of this can be used to provide employees with a free Commuter Matchlist of all available alternative commute options. Commuter Matchlists contain the names of co-workers, as well as employees from other neighboring companies, with whom they could carpool.
- A geographic density plot report to identify emergency carpools and vanpools should be developed and analyzed. These could be groups of two (or more) employees who would commute together in an emergency situation. A key person who would be the primary contact for the other partner(s) should be designated, as well as an alternate, in case the key contact is unavailable. Density plots are also very useful during emergencies in identifying which employees might be impacted by a local crisis like a power outage, road construction, or even earthquake damage.
- If the agency has fleet vehicles, they should consider allowing employees who carpool to use them. This is a great incentive to promote carpooling in the aftermath of a disaster since employees' cars may be disabled, and transit could be disrupted.
- Agencies should designate an emergency carpool meeting point for employees near their worksite in the event they are able to do so at the direction of the agency based on regional announcements.

- Perhaps the most effective way to promote ridesharing is by using zip codes to actively match employees with one another to assist in carpool formations.

Public Transit

- Under emergency conditions, there may be barriers to travel such as road damage, gas shortages, and long lines at gas stations. Prior to these situations employees should determine which transit routes they could use to use to travel between work and home to avoid such obstacles. To assist them, agencies should keep current transit schedules on hand and posted on employee bulletin board(s) and/or the agency website.
- Employees can also request regional and local transit service information from their employer's Commuter Center, local public transit, or TDM/rideshare office.
- If agencies are already distributing transit passes or a transit benefit voucher on site, they should be ready to do so in an emergency as well. Agencies should obtain clearance and finance approval from management prior to a disaster in order to be ready in a crisis. Agencies may even consider providing free passes or passes at a discount to encourage transit ridership under emergency circumstances.
- If there is no direct transit service to a company's worksite, an emergency shuttle service between transit stations and the worksite should be established. If the agency has access to fleet vehicles, they can be used as shuttles. It is strongly suggested that these operational arrangements be made in advance of an emergency. Tasks include establishing routes, schedules, drivers, and back-up drivers, and determining any applicable costs and legal/risk issues.
- In many regions, during actual or potential transit strikes, many TMP strategies such a carpooling and teleworking helped alleviate commuters' stress and by providing alternative work options.

Bicycling and Walking

- Agencies should encourage employees to walk or bike to work if it is safe to do so. Those employees who live within walking or biking distance have the advantage of being able to avoid highways and major arterials in the aftermath of a disaster.
- Agencies should identify those who live within two miles of the worksite for walking, and those within 10 miles for biking. Agency management should also arrange a meeting to discuss the possibility of these options in the event of an emergency, as well as issues such as bike storage, clothing lockers, and shower facilities.

- Agencies should also obtain advance approval for casual dress to make it easier for employees to bike or walk, especially if clothing storage is not available at the worksite
- If available, agencies should also arrange for cyclists and walkers to have access to showers and/or clothing storage.

Emergency Work Schedules

- Agencies should allow flexibility in allowing employees to select their own start/end times. Doing so increases an employee's chance of finding a carpool partner, riding transit, and avoiding peak congestion. Agencies can provide more information on alternative work schedules options.
- If flexible schedules are not an option, agencies may want to alter start times on an organization-wide basis, or by department. Start times should be established that enable workers to avoid rush hour traffic (6:00–9:00 a.m.). Or identify employees who are able to arrive to work earlier or later than peak hours.
- Another option is to schedule employees for longer hours and fewer days per week. In these compressed work schedules, employees work four ten-hour days (or three 12-hour days) instead of the typical five eight-hour day work schedule. Modified work schedules allow employees to avoid commuting altogether once or twice each week, and may help them avoid peak traffic hours.

Telecommuting

- Before disaster strikes, agencies should identify and list employees who have tasks that can be accomplished while working at home, or at alternative sites such as local Telework Centers. If the organization has multiple sites, the additional location(s) may serve as alternate worksites. If employees telecommute from home, it must be determined whether the necessary equipment (e.g., computer, high speed internet access, touch-tone phone for retrieving voicemail messages, etc.) is available at home. Although some jobs may not appear to be appropriate for teleworking initially, in an emergency, all employees may need to work from home or another worksite location.
- Have employees keep other work accessible at home or in their car, so that they can continue to work and be productive in the event of a disaster. However, it is important to understand each agency's security protocols and requirements for handling information outside of the workplace, which may limit how and what employees can work on from out-of-the-office locations.

- Management's support, especially from immediate supervisors, is essential to ensure that telework is effective and will positively impact productivity. One way of gaining support for this strategy is to provide information and training about telecommuting to managers so they are comfortable with managing distributed work.
- Alternative facilities where employees could work should be identified in case the organization's building becomes inaccessible. Remote offices can also support employees who work from home. For a period of time immediately after a catastrophe, employees working from home may need a place to gather for meetings and to coordinate efforts with their co-workers. Having up-to-date density maps readily available will help in designating alternate work locations and in identifying impacted employees. This information should be revised periodically to reflect staffing or address changes.
- The agency will need to determine equipment needs and resources for each employee or work unit and at a minimum, the types of equipment necessary for employees to accomplish their work. An inventory of available equipment for telework should be compiled, with such items as laptops, tablets and cell phones..
- Most federal agencies have remote access capabilities to their office computer networks. As more and more job functions become technology-based, accessibility requires interfacing via high speed internet. Many companies have back up files stored at off-site locations which can be accessed in the event of an emergency. Having a Virtual Private Network solution in place can greatly increase employees' ability to remotely simulate the office while providing computer network security and firewalls. As noted above, it is important to understand each agency's guidance for appropriately handling materials outside of the office, and meeting security protocols and requirements.
- Employees and managers should be trained on telecommuting procedures. Agencies with experience in implementing emergency response programs have found that employees with prior teleworking training and existing policies were able to respond quicker and more effectively to unexpected circumstances. Training employees and managers in telework methods will increase an agency's ability to successfully implement the emergency plan.
- Agencies may also consider establishing and monitoring a teleworking pilot program. A pilot program for a select number of employees will help to refine and polish emergency teleworking procedures.

8. Federal Sustainability Related Laws and Policies

Transportation legislation, the Clean Air Act, and other sustainability-related legislation, guidance and requirements most directly influence future national transportation funding and relate to travel behavior; however, there are several recent federal laws, directives and policy guidance related to energy efficiency, sustainability, and climate adaptation. One recent U.S. Environmental Protection Agency (EPA) study estimates that approximately 30 percent of the nation's GHG emissions are generated by the transportation sector, with over half (59 percent) generated by passenger cars, SUVs, pick-ups, and minivans. Influencing employee choices regarding frequency, length, and mode choice is recognized as an important factor in addressing GHG emission requirements, current federal energy consumption reduction, air and water quality improvements, storm water management, and livability planning goals. The following federal policies support the transportation management efforts promoted through this handbook.

A. Executive Order 13514 – Federal Leadership in Environmental, Energy, and Economic Performance

[Executive Order \(EO\) 13514](#), signed into law on October 5, 2009, established sustainability goals for federal agencies by requiring increased energy efficiency; reduced fleet petroleum consumption; and improved water quality, with annual reporting to the White House Council on Environmental Quality (CEQ). The law enhances 2007's EO 13423 which remains in effect, related to federal energy reduction, water usage, and other sustainability goals.

In particular, agencies are required to establish GHG reduction targets for various types of emission sources (categorized as Scope 1, Scope 2, and Scope 3 sources) to be achieved by Fiscal Year (FY) 2020, relative to FY 2008 baseline values. Employee travel is included in the Scope 3 category, defined as: "Indirect GHG emissions from sources not owned or directly controlled by the reporting agency but related to the agency's activities such as vendor supply chains, delivery services, outsourced activities, and employee travel and commuting." As such, commuter travel counts against an agency's overall annual GHG emissions budget, which is measured and reported to CEQ.

EO 13514 also reinforces non-SOV commuting by providing planning guidance for sustainable federal building locations consistent with "Livability Principles," developed jointly by the U.S. Department of Housing and Urban Development, U.S. Department of Transportation, and U.S. Environmental Protection Agency. The joint interagency initiative, *Partnership for Sustainable Communities*, may be accessed online at www.sustainablecommunities.gov/.

B. Energy Independence and Security Act (EISA) – Section 438

The [2007 EISA's Section 438](#) is intended to help improve water quality through stricter storm water management requirements for federal development by discouraging new impervious (paved or compacted) surface areas, a large portion of which is often used for parking and roadway infrastructure. This guidance will encourage minimizing parking as part of future building projects, as well as gradually removing existing parking by using previously-developed sites for future projects. Future parking reduction will put increasing pressure on changing employee travel from SOVs to alternative modes.

C. National Capital Planning Act

The [National Capital Planning Act](#) provides for NCPC's essential functions, including development of the Federal Elements of the regional [Comprehensive Plan](#), which establishes employee parking ratio goals that vary according to a project's proximity to the Central Employment Area (CEA) and transit services. According to the Comprehensive Plan, "federal TMPs should be developed around attaining these goals, although each federal facility's parking ratio will be evaluated independently and final determination will be based upon the circumstances specific to that facility's operational characteristics and location, including local area impacts. Detailed TMPs will be required to justify all proposed parking ratios." Parking ratio goals become more stringent as projects are located closer to the CEA and/or transit services, as locations in downtown Washington and other urbanizing, transit-served areas provide greater access to a variety of transportation options. These goals are designed to encourage greater transit usage in the denser areas of the NCR by limiting the supply of employee SOV parking. The parking ratio goals are listed in the Comprehensive Plan's [Transportation Element](#).

In addition, the Comprehensive Plan's [Federal Workplace Element](#) encourages federal agencies to "develop sites and buildings consistent with local agencies' zoning and land use policies and development, redevelopment, or conservation objectives, to the maximum extent feasible." In particular, local planning requirements frequently impact projects related to parking, storm water management, and environmental conservation. Please refer to Section 2.2 to find out more about specific requirements from the various local jurisdictions within the NCR. Local governments are also emphasizing minimizing parking to address transportation, land use, environmental and stormwater management issues.

This section of the handbook describes different Travel Demand Management (TDM) strategies that can be included in a Transportation Management Program or Plan (TMP). TDM strategies may be classified based on their characteristics and their ability to reduce single occupant vehicle (SOV) trips (as applied alone) as follows:

Alternative Modes of Travel (reduce SOV trips)

- Carpool programs
- Vanpool programs
- Transit service/shuttle service
- Bicycle/pedestrian facilities & site improvements

Incentives & Disincentives (do not reduce SOV trips by themselves)

- Economic incentives
- Subsidies
- Travel allowance
- Parking management
- Employer complementary support measurements
- Guaranteed Ride Home
- Commuter center

Alternative Work Arrangements (May or may not reduce SOV trips)

- Variable work hours
- Flex-time
- Compressed work week
- Staggered work hours
- Telecommuting

Each strategy is described in detail, including benefits, applicability, factors for success, complementary measures, effectiveness, and cautions. Strategies should be selected based on program objectives, work site analysis, and employee needs/preferences.

Studies show that TMPs are more effective when they include TDM strategies from each category. Section 4 presents a detailed process on how to select the appropriate TDM strategies for a specific worksite.

3.1 ALTERNATIVE MODES OF TRAVEL

A. Carpool Programs

Carpool programs use match potential ridesharers. Most people are hesitant to rely solely on a match list and need help when approaching their potential rideshare matches. Through personalized assistance to employees, the employer can develop a high profile transportation program, which will increase ridesharing at a worksite and serve as an excellent marketing tool for the program. Employees will feel more comfortable when approaching rideshare partners if someone has taken the first step to introduce them to one another. Personalized assistance takes the social reluctance out of ridesharing, and in the case of ridematching, the ETC can bring the appropriate people together.



To increase ridesharing, the ETC can:

- Personalize the employee's introduction to ridematching by marketing the program and meeting the potential ridesharers in person;
- Personalize the matching formation process, and reduce the anxiety involved in meeting and finding people who are potential carpoolers; and
- Assist in the maintenance of existing and new arrangements through on-going follow-up on the status of carpools and vanpools.

Personalized assistance is essential to a ridesharing program in medium to large size federal agencies where employees may not know colleagues who appear on the match list. In smaller agencies, the ETC may not have to dedicate as much time to personalized

assistance because most of the employees may know each other and do not need the ETC for the initial introduction.

Complementary measures include the [Commuter Connections rideshare matching program](#), preferential parking for carpools and vanpools, guaranteed ride home program, and marketing efforts. [goDCgo.com](#), a clearing house for alternative travel modes including ridesharing in Washington, DC, is an invaluable resource when planning alternative commute options.

The following factors should be considered when implementing a personalized assistance and ridematching program:

- Commuters with less than 10 mile and/or 20 minute commutes are less likely to carpool. The regional average distance traveled for carpools/vanpools is 20.9 miles one way.
- Carpools require riders to commit to a regular, agreed upon schedule. This can cause difficulties for workers whose hours are not consistent from one day to the next. A staggered work hour program can make it more difficult to form carpools because employee work hours are not compatible throughout a worksite. However, the effect that flex-time has on ridesharing is less clear. Flex-time may create a similar effect as a staggered work hour program in some cases, or may allow employees to shift their arrival times to accommodate carpool schedules.
- Conditions which foster ridesharing include not having an available car, a long commute, tight parking supply, availability of nearby (or in-route) HOV/HOT lanes, limited transit service, high concentrations of employees in a general work area and/or residential concentrations of employees.
- Cooperation with nearby employers, such as through a Transportation Management Association (TMA), will significantly increase the likelihood for successful placement of employees into carpools.
- Even though the ETC can play an active role in bringing potential ridesharers together, the ETC should communicate to the employees that they are responsible for making the final selection. Employees need to be prepared to screen potential matches for many issues such as a preference for smoking, type of music, flexibility of schedule, etc
- ETCs can communicate carpool and vanpool incentive programs such as the [Pool Rewards program](#) operated through Commuter Connections.
- Assume that those who request and receive a list will act on the list.
- Provision of follow-up assistance to start and maintain a carpool is strongly recommended.

B. Vanpool Programs

Vanpooling is an arrangement where several people (7-15) share a ride between home and work in a van. For the purpose of employer subsidies, a vanpool should have a seating capacity of at least six adults (not including the driver). At least 80 percent of the van mileage should be for transporting employees between their residences and place of employment. It is also required that vans use at least half of its passenger capacity (the van driver does not count towards this requirement).



Vanpooling is ideal for employees who live at least 15 miles from the work place. The regional average trip length of vanpools is 29 miles.

There are three basic types of vanpooling, as follows:

1. Third Party Vans: A group of employees lease a van from a vanpool vendor and fares are paid to the vendor by the employees.
2. Owner-Operated Vans: An individual employee independently buys a van and administers all aspects of the program.
3. Employer-Purchased or Leased Vans: An employer buys or leases a van and administers the program, recovering the cost through fares. However, this option is not legally available to federal agencies.

A federal agency and its employees can benefit from vanpooling as follows:

- Employee productivity is enhanced as a result of reduced commuting stress.
- Tardiness is minimized because the driver and riders must maintain a reliable schedule to maintain a successful vanpool, which will in turn allow them to consistently meet an agency's start schedule.
- Morale and general work satisfaction increases.
- Employer/federal agency savings are achieved because of reduced parking expenditures;
- Savings in commute time result when used with High Occupancy Vehicle (HOV) or High Occupancy Toll (HOT) lanes.
- Employees benefit from savings in commuting costs.
- Employees gain increased "down" time on the van/bus to read, sleep, or work.
- Congestion is reduced, since each van can remove as many as fourteen other vehicles from the road.
- Air quality is improved, since one van pool reduces up to 275 pounds of pollution every day.

Vanpools can be formed only if an adequate number of employees with similar work schedules live near each other, and is only cost effective for long distance commuters who live at least 15 miles away from the office. An employee spatial distribution study that shows the location of where employees live in relation to the work place is one way to determine the vanpooling potential at a worksite.

Complementary measures to vanpools include preferential parking for carpools, the [Guaranteed Ride Home Program](#) (administered by the MWCOG), the regional Commuter Connections [Rideshare Matching Program](#) (administered by the MWCOG and its network members), driver training programs, and flextime. goDCgo.com, a clearing house for alternative travel modes including ridesharing in Washington, DC, is an invaluable resource when planning alternative commute options.

The following factors should be considered when implementing a vanpool strategy:

- The highest potential for successful implementation of a vanpool is among employees who live 20 or more miles from work and who have travel times of 30 minutes or greater.

- It is best to cluster 15 to 30 people for a 12 or 15 passenger vanpool. The cluster area should generally be no greater than two to three miles in size, but with commuting distances of greater than 30 miles, larger cluster areas may become viable. Clusters oriented to the vanpool route can be set up; these are composed of smaller groups picked up along the route to work.
- Caution should be utilized in driver selection due to the multiple responsibilities a driver would have in operating and managing a vanpool. The driver is usually permitted to take the van home on weekends and overnight.
- Most vanpools start with less than a full complement of riders. Subsidies and incentives (e.g. personal property tax relief, seat subsidies, and monthly rate buy-down incentives), including local government support, should be sought to help increase ridership and continue the vanpool's operation.
- Erosion of interest in vanpools should be expected - some potential riders will change their minds.
- Adequate insurance for the vanpool is necessary. Adding to a driver's own automobile coverage is generally insufficient.
- Maintenance and upkeep of vehicles is an issue. Access to an alternate van in the case of a breakdown is necessary.

C. Transit Service/Shuttle Improvements

Although transit usage varies greatly between metropolitan areas, only about five percent of American commuters use mass transit on average. However, when compared with other metropolitan areas, the Washington area enjoys a relatively high rate of transit usage. Approximately 17 percent of commuters report that they utilize transit on a regular basis according to the 2013 MWCOG [State of the Commute](#) Survey.

Although traditional transit services may not be able to meet all transportation needs in a cost-effective manner, the ETC can help market transit along with other transportation alternatives. Regional transit service is available in many different forms including Metrorail, Metrobus, commuter bus service, various express bus services, commuter train service, and future water shuttle service along the Potomac River. Additionally, more local county and city transit service providers such as [Ride-On](#) (Montgomery County, MD), the [CUE Bus](#) (City of Fairfax, VA), the [Fairfax Connector](#) (Fairfax County, VA), [DC Circulator](#) (Washington, DC) and others help to extend regional transit service coverage.



Photo: District Department of Transportation

Federal agencies benefit when their employees use mass transit because employee productivity may increase as a result of reduced commuting stress. Employees like to use mass transit because in many cases it reduces their commuting costs. It also may eliminate the need for an extra automobile for commuting purposes. Commuters perceive the cost of using transit in two contexts: first, how the transit fare compares with the cost of driving (mainly fuel and tolls) and parking; and second, ease of fare payment.

Mass transit is an excellent choice for commuting where services are readily available and accessible. The NCR has one of the best regional transit networks in the country, and organizations are increasingly discovering the importance of selecting worksite locations with good transit accessibility and nearby community amenities such as retail, restaurants, and other support activities (e.g., day care, banks, etc.). Though not all locations enjoy immediate transit access, organizations may be able to overcome this with short-distance, high-frequency shuttle service between the worksite and closest transit station.



Photo: Washington Metropolitan Area Transit Authority

Transit service improvements provided by the agency might include:

- Shuttle buses from nearby transit stations or residential areas to the worksite.
- Express buses from park-and-ride lots to the worksite.
- Shuttle buses between multiple company sites or between the worksite and nearby retail areas (generally mid-day trips). For more information, review the [current legislation on shuttles](#).

Complementary measures include transit subsidies, travel allowances, a Guaranteed Ride Home program, transit system marketing efforts, convenient payment (Commuter Center), flextime, and parking management programs.

The following factors should be considered to encourage transit use by agency employees:

- Consider transit availability at the worksite and employee's residences.
- Look for concentrated residential locations of employees.
- Be aware of the current level of transit use at the site. It is important to remember that not all employees will be able to use transit due to limited availability. The level of transit usage at the site could be economically infeasible to attract more employees from SOV trips.
- Transit programs can be very expensive to operate; therefore, it is very important to identify the market potential for the service, and weigh the cost and trip reduction benefits of the new transit service against those for other TDM strategies.
- Employees should always be aware of transit crime both on the system, and while waiting for the service.
- Make transit route brochures available in convenient locations or on-line.
- Assist employees in determining the best transit route from home to work.

D. Bicycle/Pedestrian Facilities and Site Improvements

Biking and walking are important components in commuting within the NCR. With growing interest in health and exercise, both are becoming increasingly popular modes of commuting.

Benefits include:

- Reduced need for parking;
- Improved employee health and well-being;
- Reduced stress in the work place;
- Overall attitude and morale improvement; and
- Low commuting cost.



Photo: National Institutes of Health

In many areas weather conditions, the unavailability of safe travel routes, work site showers and lockers, and the remoteness of the work site make conditions difficult for walking and biking. An ETC should use good judgment when promoting these options. The ETC should also realize that walking and biking might only provide seasonal alternatives to driving alone and might not be year round options. Additionally, both are usually feasible alternatives only for employees who live relatively close to work. In Europe, the percentage of employees who use either option ranges from two to 25 percent. In comparison, less than three percent of American commuters bike or walk to work.

There are three important ways in which bicycle and pedestrian facility improvements may be implemented by a TMP:

- As a primary mode of access to the worksite,
- As a feeder mode to connect with transit or ridesharing modes for longer trips, and
- For circulation within a worksite and/or to nearby facilities that provide access to local community amenities such as retail, restaurants and other support activities (e.g., day care, bank, etc.)

Bicycle and pedestrian facility improvements should not be disregarded even if worksite characteristics are not suitable for their implementation as a primary mode to access the site. Improvements to these facilities for use as a feeder mode and for circulation will provide an incentive to the employees to use transit.

Consider the following factors when promoting biking and walking as a TDM strategy:

- Provide special attention to bicycle facilities when overnight storage is required or bicycles need to be left at transit stations.
- Currently, certain buses and [Metrorail trains are equipped to transport bicycles](#). Collect and disseminate specific information on availability. Also, WMATA does not currently allow bicycles to be transported on trains during rush periods from 6:00-9:00 a.m. and from 3:00-7:00 p.m. Monday-Friday (except holidays).
- [goDCgo.com](#), a clearing house for alternative travel modes including bicycling information for Washington, DC, is an invaluable resource when planning alternative commute options.
- Contact local bike/walking clubs to help educate bicyclists and pedestrians on safety precautions such as always riding with traffic, wearing a helmet, watching out for car doors, wearing reflective clothing when it is dark outside, etc.
- On days of poor air quality, encourage employees who are bicyclists and walkers to use another commute alternative. The current regional air quality forecast and ozone alerts may be accessed through [Clean Air Partners](#).
- If the work site is located in a remote or unsafe area, encourage walkers to walk in groups and during daylight hours.
- Participating in the Washington area's annual [Bike-to-Work Day](#) event is a good way to introduce employees who are not regular bicyclists and/or do not usually bicycle to work, to this form of travel. Bike-to-Work Day is held annually in May.

- Promote bikesharing through the [Capital Bikeshare](#) program. Capital Bikeshare has over 2,500 bicycles at over 300 stations across Washington, D.C., Arlington, Alexandria, and Montgomery County. Check out a bike for your trip to work, Metro, run errands, go shopping, or visit friends and family and return it to any station near your destination. Join for a day, 3 days, a month, a year or daily key option; bikes are available 24 hours a day, 365 days a year.



Photo: District Department of Transportation

- Provide adequate bicycle storage and shower and locker facilities at the worksite.
 - Bicycle Lockers are the most secure and weatherproof bicycle storage devices. Lockers are not usually recommended for indoor or garage use.
 - A rack in a covered, locked compound or storage room can provide excellent security. Some racks allow you to store bikes vertically to save space. Racks in an unsecured area should be highly visible. Covering racks with a simple shelter or locating them under an existing covered area can increase the number of days employees will bike to work.
 - Bike rooms and cages are typically located in the basement or on the ground floor, a bike cage is a fenced off area in a parking garage. By installing a key or combination lock to access the cage or room, only those who bike to work will have access.

- More employees will consider biking to work knowing they can shower upon arrival. Showers also allow employees to exercise at lunch.
 - Ideally, there should be one secure gym locker available to store work clothes for every long-term bicycle parking space provided. In addition to providing a locker to each regular bicycle commuter, other lockers should be available to encourage potential new bike commuters.
- Provide adequate information regarding regional and local bicycle paths and travel routes on the agency website and/or through brochures and maps. There are bicycle-specific maps available at most map and book stores, and the [Washington Area Bicyclist Association \(WABA\)](#) provides facility information, maps, tips, and support. A list of bicycle maps and trails can be found in the Commuter Connections Resource Directory (Appendix A.5). [Commuter Connections](#) will offer a regional bicycling route-finding service. Encourage bicyclists to use this tool to help find a safe and dependable route to work.
- First/last mile access to a transit stop is also important in terms of the quality, security, access, and safety of an employee's trip. Web information, such as WMATA's Trip Planner, or mobile apps such as NextBus can be promoted to provide information to employees to identify multimodal trip alternatives and provide information on transit routes and service frequency.

3.2 INCENTIVES & DISINCENTIVES

A. Economic Incentives

1. *Subsidies*

Transportation costs play an important role in determining how employees choose to travel to work. Financial incentives for ridesharing can cause a shift from solo commuting to ridesharing.

Most employers offer subsidies in one or more of the following:

- Vanpool subsidy: The federal agency provides a financial incentive on a limited or continuing basis to ridesharers. If this is not a feasible option, consideration can be given to promoting the Commuter Connections [Pool Rewards Vanpool Incentive](#).
- Empty seat subsidy: Employers or Transportation Management Associations may subsidize the empty seats on a vanpool for a limited amount of time to keep the ridesharing arrangement in place without causing the remaining riders to pay extra.
- Transit subsidy: The federal agency can pay part or the full cost of a transit pass or voucher to encourage use of public transportation. These subsidies are described in Section 2.1 – D.

The agency can offer these subsidies by either providing direct payment to the employees by check or voucher, or through a payroll deduction process where the federal agency itself handles the program's administration, including payments to transit operators. It is important to note that contractors and interns would not be eligible for these subsidies.



Subsidies are beneficial because they make driving in a single occupant vehicle less attractive and more costly than other transportation modes. Subsidies can significantly increase the APO and reduce trips especially in conjunction with increases in parking prices. Subsidies work best when solo drivers have to pay to park and ridesharers are given a price reduction, which results in an economic incentive for the ridesharers.

Complementary measures include parking management programs, a guaranteed ride home program, a regional rideshare matching program, and transit marketing efforts.

The ETC should be aware that employees may be resistant to the program at first since most subsidy programs are introduced along with a pay-for-parking scheme.

2. *Travel Allowance*

A travel allowance program is based on providing every employee with an equal amount of money to spend on transportation. The program is considered to be a “cafeteria-style” benefit plan for transportation because employees can decide how to spend the benefit themselves and can use the allowance to pay for parking or for carpool, vanpool, or transit expenses. The program rationale is that employees will try to generate and maximize a profit by spending only part of the allowance on transportation costs, which makes driving alone a poor economic choice. The Internal Revenue Service considers any travel allowance taxable; however, if a federal employee opts for a transit pass or voucher, the \$130 per month is considered non-taxable.

Selecting the appropriate amount for a travel allowance can be difficult. One way is to set an amount that it is equal to the cost of parking in the building. If the allowance is less than the parking cost, then employees would be responsible for providing the balance of the parking cost.

The most important benefit of a travel allowance is that it is equitable. Every employee receives the same amount of money regardless of rank, tenure, or mode choice. Additionally, the program is a constant reminder to employees that parking is not free, and at the same time, compensates employees for losing their free parking. A travel allowance program also rewards bicyclists and walkers by allowing them to save the allowance. The solo driver will have to spend most of their allowance on commuting, while ridesharers should be able to at least partially save their money. Individual employer experiences with allowances found an SOV reduction of 20 percent or more as a result of providing travel allowances.

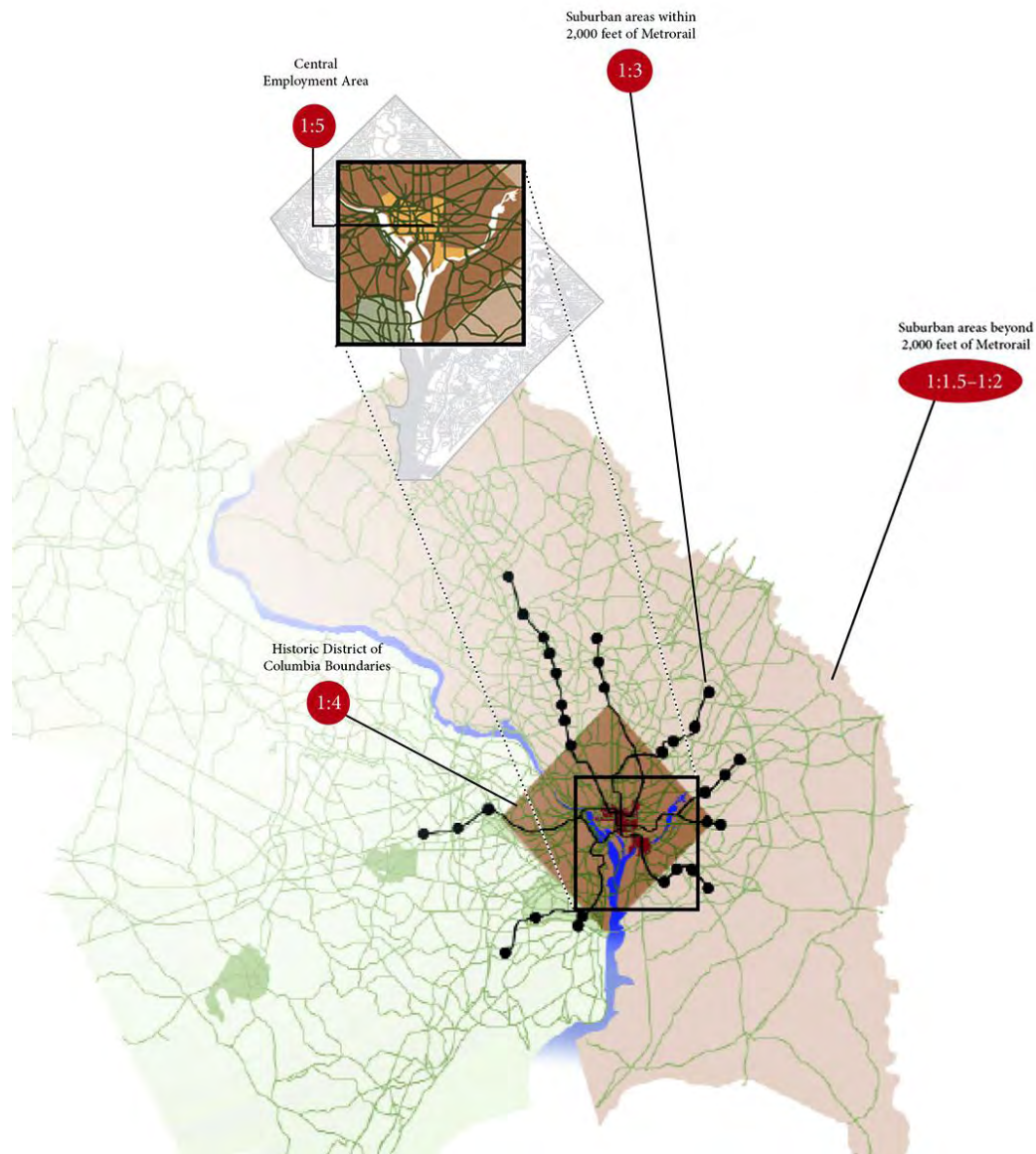
A travel allowance program is applicable in all settings where employees are required to pay for parking and where parking may be scarce. If ample free parking is available, then a travel allowance program will not be as successful.

Complementary measures include preferential parking for carpools, a guaranteed ride home program, a regional rideshare matching program, and marketing efforts.

The ETC should be aware that, like a parking pricing program, some employees will likely contest the idea of covering a partial cost of parking or paying taxes on the allowance. Program marketing literature can mitigate these potential criticisms by highlighting ways that employees can reduce commuting costs and save the travel allowance for other needs.

B. Parking Management

Parking management is a set of strategies used to balance the supply and demand for parking. Parking management is one of the most powerful tools that can be used for modifying mode choice. The decision of commuters to drive alone, carpool, vanpool, or use mass transit depends a great deal on the cost, availability, and the location of parking.



Graphic provided by NCP, Comprehensive Plan for the National Capital

Parking in most urban areas costs a minimum of \$5,000 per space to construct a surface parking space, \$18,000 per space for an above ground parking deck spot, and up to \$25,000 per space for below ground parking. In addition, there are on-going costs for maintaining and operating parking lots. A parking management program can result in major cost savings for a federal agency.

There are three parking management strategies that are commonly used to reduce the number of solo commuters to a work site.

- The pricing of parking: Most commuters (more than 90 percent nationwide) park for free at work. Most employees consider parking to be a right rather than a privilege. Research has shown that employees who are charged for parking tend to alter their travel behavior. One option for implementing a parking pricing program is to offer differential rates for solo drivers versus ridesharers. It should be noted that the federal government currently considers any transit subsidy above \$130 as taxable income to the employee, and that parking subsidies are tax free up to \$250 per month per employee.
- Preferential parking: By offering preferential parking to ridesharers, employees will be encouraged to drive together instead of alone. Usually, preferential parking is located close to parking lot elevators or main building entrances, and is usually marked with a monitoring system put into place.
- Parking supply reduction: The best way to ensure trip reduction through parking management or any other TDM strategy is to limit the amount of parking available to employees. If employees are not all guaranteed parking spaces for their single occupant vehicles, then some employees will look for other commuting options.

Other strategies include providing peripheral parking areas with shuttles, separating parking charges from the building lease, and sharing parking facilities with neighboring offices or worksites.

The benefit of a parking management program for an employer is that it can substantially reduce the need for parking and will modify employee travel behavior toward non-SOV travel. Some employees like parking management programs because non-solo drivers are rewarded for making the choice to use an “alternative” means of travel. Additionally, parking management programs can reduce overall congestion and fuel consumption while improving air quality.

From an application viewpoint, parking pricing and travel allowance strategies are ideal for a setting in which on street and/or off street parking supply is limited and expensive. Initially most pricing programs are faced with antagonism from employees. Preferential parking can still be applied in areas where parking is cheap and abundant. Preferential parking is not appropriate where most parking is convenient and near entrances.

Complementary measures to a parking management program include a regional rideshare matching program, transit subsidies, travel allowances, and marketing efforts.

The following factors should be considered when implementing a parking management program:

- A pricing strategy may be controversial. Make sure the employees understand how the choice was made and what the impact will be.
- The federal government currently considers free parking as a non-taxable benefit up to \$250 per month. A subsidy and travel program may impact employee income taxes. Let employees know which subsidies are considered taxable income.
- If the agency's work force is organized into labor unions or other associations with bargaining power, check the agreements to circumvent potential problems.
- Do not allow a pricing strategy to result in parking spillover into neighborhoods or residential communities that are adjacent to the worksite. Spillover parking can result in strained relations with the community.
- Consider the availability of off-site, local parking facilities. The projected reduction of SOV trips may not be achieved if drivers are able to locate "inexpensive" parking within walking distance to a worksite.

C. Employer Complementary Support Measurements

1. Guaranteed Ride Home

A Guaranteed Ride Home (GRH) program is a very useful element in a successful TMP. Some commuters are reluctant to rideshare because of a fear that they will not be able to get home in case of an emergency or if they have to work overtime. A GRH program guarantees these commuters a ride home in an emergency situation (e.g., sick child at school). While this is not generally the primary motivating factor for traveling to work other than driving alone, the program does remove this one potential barrier to using alternative forms of commute travel.



A GRH program is based on offering the riders a convenient and reliable mode of transportation. The most common transportation options for GRH programs include:

- Taxi service: This is a subsidized service; most taxi companies bill the employer directly.
- Short term auto rental: This is most appropriate for employees who need to travel more than 40 miles from the work site.
- Shuttle services: Some airport shuttles serve the GRH market. Dial-a-Rides are also an option.

- Back up vans: If there is a backup van, the ETC may choose to make it available for the GRH program.
- Public transit: An accessible bus or rail service may also present a viable option.

MWCOG offers a comprehensive [GRH service](#) under the [Commuter Connections Program](#). This program is used by many employers, and federal agencies can use the program.

For employers, a GRH program can improve the ridesharing program and reduce the need for parking spaces. Additionally, this type of program encourages employees to rideshare without worrying about working overtime or attending to personal emergencies. Employees are generally receptive to GRH programs.

The existence of the program can increase interest in the other elements of the TMP by encouraging commuters with an initial interest in GRH program to explore various alternative commute options.

A GRH program is applicable at any agency. The federal agency will need to pick the combination of transportation options that works best for each location and employee needs.

The following factors should be considered when implementing a GRH program:

- Typically, about seven percent of eligible employees use a GRH program in a year, thus the cost of operating the program is lower than generally expected.
- Establish procedures to prevent employees from abusing the program. One option is to limit usage of the program to a few times a year per employee.
- Address use of the program during snow emergencies by permitting employees to share rides with employees from neighboring agencies or companies that may have differing snow emergency or leave policies.

2. Commuter Centers

A Commuter Center at the federal agency provides personalized service to commuters from a prime location. The Commuter Center should not be defined as being in the ticket selling business—the Center is in the people business. In other words, the Center’s focus should be customer service. Just as the GRH program eliminates the fear and anxiety of ridesharing, a well implemented Commuter Center should eliminate the inconvenience of finding accurate and timely information and services needed by ridesharers.

This concept has the following benefits:

- Provides multi-modal marketing of regional transportation alternatives for commuters and employers.
- Centralizes transit information and fare purchase operation for employers, commuters, and visitors.
- Operates from a prominent location.
- May use a for-profit small business to manage the center.
- Allows employees to purchase transit fare by check or credit card.
- Provides a mechanism to distribute and exchange transit benefit vouchers.

Commuter Centers can serve large numbers of transit and ridesharing employees, perhaps for multiple agencies. The degree that Commuter Centers offer personal service and convenience is thought to increase frequency of use and increased awareness.

Complementary measures include transit subsidies, travel allowances, transit services, guaranteed ride home, regional rideshare matching program, and marketing efforts.

Factors to be considered when implementing this strategy are as follows:

- The employer-provided commute fringe benefit amount is currently set at \$130 per month for 2013, and this benefit may be used for vanpools.
- Selling commuter-related retail products may meet with opposition from nearby businesses.
- Time-sensitive tickets or passes may require additional staffing to meet demand as the new time period approaches.

3. Sales Outlets

Sales outlets provide convenient, one-stop shopping for schedules, fares, and information about the many transportation options available in the region. Sales outlets are a valuable resource for smaller federal agencies in particular because they are a cost-efficient way for federal agencies to provide commuter services. Sales outlets are located in the District of Columbia, Montgomery County, the City of Alexandria, Arlington County, and Fairfax County. A complete list of sales outlets throughout the region can be found at the [Commuter Connections website](#).



Photo: Arlington County

3.3 ALTERNATIVE WORK ARRANGEMENTS

A. Work Schedules Alternatives

These strategies allow the scheduling of work hours outside of the traditional 9 to 5, five-day a work-week pattern. Given that 40 percent of all families report scheduling conflicts with the traditional work day, variable work hour programs are an attractive alternative.

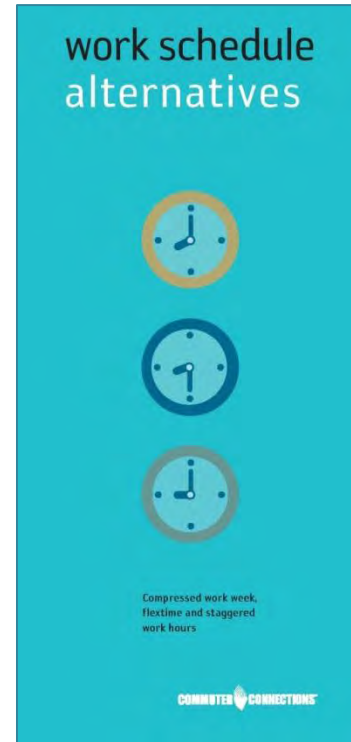
Several demographic and economic changes have made variable work hours programs more practical. These changes include the increase in multiple worker families with multiple demands, the growing number of single parents, and the need for flexibility on part of a large aging population.

The three most popular strategies include:

- Flextime: Employees can select their arrival and departure times and length of their lunch period. They work eight hours (not including lunch break) and have to be in the office during a core period.
- Compressed Work Week: Employees can complete the number of weekly hours in fewer days per week. Common deviations include a four-day work week, or working 80 hours in nine days and taking the tenth day off.
- Staggered Work Hours: The employer staggers the arrival and departure time of groups of employees so that employees do not all arrive and leave work at the same time.

For the federal agency and its employees, variable work hour programs provide the following benefits:

- Reduced traffic congestion during peak hours
- Reduced peak hour bus overcrowding by spreading peak trips
- Increased productivity
- Reduced operating costs (for the day off)
- Reduced staff turnover and improved recruiting
- Extended customer service hours
- More flexibility for employee personal needs



- Reduced commuting time by shifting trips to off-peak hours
- Increased job satisfaction
- Occasional three-day weekends
- Improved air quality by eliminating some commute trips
- Increased transit use as a result of permitted schedule changes for employees
- Facilitated child care and ridesharing (flextime)
- Better communication across time zones

In addition to reducing peak period vehicle trips (i.e., shifting these trips to other off-peak times), flextime and compressed work week strategies may reduce the total number of vehicular trips. Flextime suits most government operations and is highly successful in the NCR. Flextime schedules are particularly useful for agencies that need to communicate with other time zones or need extended hours of operation.

Staggered hours, if well planned, are a good tool for decreasing traffic congestion in the vicinity of the work site by metering commute trips throughout the day, as well as reducing the number of total trips. Staggered hour schedules are appropriate in organizations where units can work independently of each other. This strategy may create some difficulty to people trying to participate on a ridesharing program.

Flexible work hours permit employees to adjust work schedules to accommodate transit or carpool arrangements and as a result, may result in a shift to HOV or HOT lane facilities (for example, transit to carpool). Staggered and compressed schedules appear to decrease VMT and to increase travel time savings, though the extent varies widely.

The following factors should be considered when implementing these strategies:

- Make sure that these strategies are in line with the goals or requirements of each specific worksite and each specific job description. Give special attention to the relationship between a program's changes and the measures of its effectiveness.
- Try to be flexible; these programs may not suit the needs of all employees and may conflict with existing arrangements for ridesharing, child care, taking kids to school, or other personal programs. Do not force employees to be on a schedule if it does not fit their needs.
- Make sure that the agency's legal counsel reviews labor laws and that specific state and federal laws do not prohibit agency's employees from participating in a specific program. Dedicate enough time to trouble-shooting once the program has started. The agency will need to monitor the program very closely.
- Compressed work weeks may be tiring for some employees, so it is important to watch for employee fatigue and/or decreases in productivity.

B. Telecommuting

Telecommuting is becoming increasingly popular in corporate America. According to a 2013 survey by World at Work, 88 percent of U.S. companies allow telecommuting. Commuter Connections' *2013 State of the Commute Report* found that 38 percent of federal government workers in the NCR telework. Telecommuting refers to the option of working at home or at an office close to home on a full or part-time basis. Computers and telephone access are the basic tools to facilitate telecommuting, and an increasing array of new technologies make working at an alternative location easy and effective.



The Telecommuting Enhancements Act of 2010 is a key factor in the federal government's ability to achieve greater flexibility in managing its workforce through the use of telework. Well-established and implemented telework programs provide agencies a valuable tool to meet mission objectives while helping employees enhance work/life effectiveness. Specifically, telework: 1) is a useful strategy to improve continuity of operations to help ensure that essential federal functions continue during emergency situations; 2) promotes management effectiveness when telework is used to target reductions in management costs and environmental impact and transit costs; and 3) enhances work-life balance, i.e., telework allows employees to better manage their work and family obligations, retaining a more resilient federal workforce able to better meet agency goals.

There are currently three popular forms of telecommuting.

- Work from home: This is the most common and the least expensive form of telecommuting.
- Satellite Work Center: This form of telecommuting refers to an arrangement whereby an employer provides some of its employees with the option of working at an alternative office located closer to home. Satellite work centers are usually housed within the existing company infrastructure. Often, when an employee works at a satellite work center, their supervisor and co-workers are still reporting to the normal work site. A complete list of Telework Centers can be found at the [Commuter Connections website](#).
- Neighborhood Work Center or Co-working Centers: The neighborhood work center leases or sells space to a number of different companies. The neighborhood co-working center provides an opportunity for employees to work closer to home. Tenants in a neighborhood work center usually share support services such as clerical help, telecommunications equipment, photocopying machines, and office supplies.

Many experts believe that satellite and neighborhood co-working centers will replace the work-at-home option in the near future. Although co-working centers are more expensive to set up, they are easier to sell in concept to management because they more closely resemble the traditional office.

Telecommuting is very popular with employees. There are many factors accounting for the growth in telecommuting, with increasing technological support and decreasing computer prices being the two most important reasons.

The following lists some of the benefits of telecommuting to employers, employees, and the community:

- Increased productivity as a result of fewer distractions and more continuous work time;
- Improved morale and employee satisfaction;
- Decreased absenteeism based on the ability of employees to work in spite of emergencies, such as car trouble or weather conditions;
- Improved recruitment and ability to retain skilled workers;
- Opportunity to expand hiring to include the handicapped and others unable to meet traditional working hour requirements;

- Decreased overhead in times of office expansion;
- Reduced employee commuting time, stress and cost;
- Reduced trips to the central work site resulting in reduced VMT (i.e., less traffic congestion, air pollution, and highway cost); and
- Increased ability for business continuity in the event of a natural or man-made disaster.

Telecommuting is applicable for jobs that can be performed at least part time away from the office. Telecommuting requires jobs to be portable. It is being widely used in many sectors of the economy as an alternative work arrangement. Telecommuting is ideal for employees who have strong time management skills, who are above average performers, and who can work with little direction.

The following factors should be considered when implementing telecommuting as a TMP strategy:

- Telecommuting is NOT a substitute for childcare or eldercare arrangements.
- Job performance has to be measured by results under clearly defined tasks and deliverables.
- Telecommuting may not work for all employees, so make sure it is a voluntary program. Employees can come back to the office if working at home does not work for them. Additionally, supervisors have the right to ask the employees to come back to the office if the employees' productivity is decreasing, or other problems arise.
- The agency's labor unions should be involved in designing the program. Some unions may initially have problems with decentralizing the work force or may not fully understand telecommuting.
- Spell out all arrangements in a Telecommuting Agreement. Any violation of the rules may result in termination of the telecommuting arrangement. Gain agreement between the employer and telecommuter on ownership and use of equipment.
- Do not expect the program to be perfect; adjustments will be necessary. Make sure that communication channels within an organization are open for discussing potential problems.
- This strategy may require the agency to address "cottage industry" inspection laws, liability for injuries occurring while working at home, and the application of

OSHA regulations. The employer, with reasonable notice, may make on-site visit to determine the site is safe.

- Help employees understand tax implications relating to the home work space.
- Federal ETCs should coordinate communications with their designated agency telework coordinator on COOP plans as well as information security policies associated with an agency-wide telecommuting program.

The next section serves as a guidance tool for the Employee Transportation Coordinator (ETC) or the person in charge of creating a Transportation Management Program or Plan (TMP) for a worksite. The TMP process may have started because of the agency's need to respond to a trip reduction regulation, a larger facility planning and development process, solve a transportation-related problem, expand employee benefits, or reduce commuting-related expenses. Regardless of what initiated the program, there are four key steps to the TMP process:

- 4.1 Initiating the program
- 4.2 Selecting the trip reduction strategies
- 4.3 Implementing the program
- 4.4 Monitoring progress

4.1 INITIATING THE PROGRAM

There are four components to initiating the program: establish goals and objectives, select bases for measurement, evaluate the work setting, and evaluate employee behavior. Please note that these items are listed as components rather than steps since they should not be implemented in a linear sequential order (i.e., one after the other), and the components complement and influence each other. For example, goals and objectives could be redefined or made more specific as the work setting and employee behavior are evaluated. Similarly, if the goals and bases for measurement are established by a trip reduction regulation, the work setting and employee behavior evaluation should be focused to address the regulation. Depending on the complexity and scope of the agency's TMP, preparing and implementing the TMP may be done with internal resources, or may require outside consulting services.

A. Establish Goals and Objectives

1. Set Management Goals

Goals are broad statements derived from the mission of the program. They should include what a federal agency wants or needs to accomplish. Sample goal statements might include:

- To reduce traffic congestion, conserve energy, and improve air quality by seeking to reduce the number of employee single occupancy vehicle trips in the workday commute.
- To make the best use of limited on-site parking facilities and travel ways.
- To comply with NCPC master planning requirements and other government mandates.

- To support mass transit as a resource for the agency, as well as other governmental bodies, businesses, and the community at large.
- To reduce the impact of trips generated by the agency on the local and regional road network.

2. Set Program Objectives

Objectives differ from goals in that they describe problem solving-related outcomes of the TMP, not the tasks. Measurable program objectives are preferable. Program objectives that are measurable become the criteria by which the program's effectiveness can be assessed. Each objective should assign responsibilities with target completion dates. Objectives should also define criteria that may be used as a “roadmap” to successfully accomplishing each objective and that detail measurable outcomes.



The ETC could decide how to reach the stated objectives in several different ways. For example, an agency may determine an objective to be to increase the Average Passenger Occupancy (APO) employee ratio from 1.22 to 1.52 persons per vehicle within a certain

period of time. The agency could set several contributing objectives as stated in the following examples to reach this primary objective:

- Increase the percentage of employees using transit to 28 percent by the end of the first year as measured by a pre- and post -program employee survey.
- Increase the percentage of employees in carpools from 12 percent of the workforce to 44 percent by end of the first year.

In all likelihood, the objectives will include a mix of strategies to achieve the desired end result based on employee needs and desires.

B. Select Bases for Measurement

There are currently several metrics that are commonly used for measuring the success of TDM strategies which include: Average Passenger Occupancy, Number of Vehicle Trips, Mode Split, Vehicle Miles of Travel, and Level of Service. Changes in these measures over time will provide indicators of a TMP's effectiveness. The advantages and disadvantages of each are discussed below.

Three measures of effectiveness more widely used by regulating agencies are:

- the number of vehicle trips during the peak periods of the daily total;
- the level of service along adjacent roadways; and
- the average vehicle occupancy.

1. Average Vehicle Occupancy

Average Vehicle Occupancy (AVO) represents the ratio of employees to vehicles. Typical numbers can range from 1.05 to 1.50 persons per vehicle. Average Vehicle Occupancy (also referred to as Average Passenger Occupancy or Average Vehicle Ridership) is calculated as follows:

$$\text{AVO} = \frac{\text{\# of employees reporting to the worksite}}{\text{\# of vehicles in which employees report}}$$

AVO is increased by reducing the number of vehicles. Taxis and other "small" vehicles dropping passengers count as drive alone or carpool depending on the number of passengers being dropped off. Vehicles that count as "zero" include vanpools with seating for nine or more, buses, and bicycles. Employees who work from home all day or who work compressed work weeks have zero vehicles on days they do not report to the worksite. Vehicles left at transit terminals, park & ride lots, etc. more than two miles from the worksite are not counted. Carpools are counted as a fraction of a vehicle (i.e., 1/4 vehicle per person for a four-person carpool).

The inverse of AVO is the Vehicle per Employee Ratio (VER).

EXAMPLE: (assumes 200 employees)	Persons	Vehicles
Drive Alone	150	150
2 person carpool	24	12
3 person carpool	6	2
4 person carpool	0	0
Vanpool	2	0
Bus	10	0
Commuter Rail	4	0
Bike	2	0
Walk	2	0
Total	200	164

In this example, the AVO equals 1.22 and the VER = 0.82.

This measure of effectiveness can be assessed through cordon counts or surveys. Cordon counts should allow for employees who walk, bike, park off-site, or ride transit.

The **advantages** of using AVO as a basis for measurement include:

- Reflects the number of vehicles per 100 employees and can be used to estimate impact of part-time ridesharers.
- Easily understood by the transportation community.

The **disadvantages** of using AVO as the measure of effectiveness include:

- Not easily understood by the public and non-transportation management personnel. Seemingly small increases (e.g., 25 percent increases in APO from 1.10 to 1.37) could require significant changes in behavior.
- Difficult to measure through multi-tenant site cordon counts as changes in usage may be the result of normal daily traffic fluctuations, weather, observer error, an unusually high number of visitors, or other employers.

A deviation of this measure (useful to assess your carpool program) will be calculated as:

$$\text{AVO} = \frac{\# \text{ of employees reporting to the worksite by/in private vehicles.}}{\# \text{ of private vehicles in which employees report}}$$

2. **Vehicle Trip Reduction**

Vehicle Trip (VT) reduction measures the number of trips rather than the number of persons per trip or miles reduced. VT reduction could be measured as a daily total, peak period, or peak hour reduction depending on goals and objectives.

This measure of effectiveness can be assessed through surveys or vehicle counts.

An **advantage** of using VT is the close relation with most of the desired objectives (e.g., reduce vehicles on the road).

The **disadvantages** of using VT as the measure of effectiveness include:

- Increases of VT could be experienced if the vehicle left at home is used by other family members in the peak period though VMT may be reduced.
- Increases in VT can occur if the vehicle is driven to a site, such as a park and ride lot. Since much of the pollution occurs with the cold start condition, pollution may not be reduced at the same rate.
- It may account for part-time trip reductions (such as those produced by compressed work schedule or telecommuting).

3. **Mode Split**

Mode split is the percentage of people using each mode (i.e. transit, biking, walking, etc.) of travel. By analyzing the current travel modes and commuting characteristics of those using each mode, the appropriate target group of employees can be identified. The following is an example of a mode split table:

Drive Alone	75%
2 person carpool	12%
3 person carpool	3%
4 person carpool	0%
Vanpool	1%
Bus	5%
Commuter Rail	2%
Bike	1%
<u>Walk</u>	<u>1%</u>
Total	100%

Even if other measures of effectiveness are required; it would be useful to collect this information to assist you in selecting your TDM strategies. This measure of effectiveness can be assessed by drawing an imaginary line around the site (i.e., “cordon”) and counting in the field the traffic by type that crosses the cordon. Cordon counts should allow for employees who walk, bike, park offsite, or ride transit. Employee surveys can also be used to collect the information.

The **advantages** of determining mode split include:

- Reflects actual behavior, not simply commute trip lengths.
- Easy to understand by public and others.

The **disadvantages** of using mode split as the measure of effectiveness include:

- Benefits such as reduction in air pollutants, traffic congestion, and parking needs are not readily quantifiable from mode split.
- Changes in mode share in High Occupancy Vehicle (HOV) modes such as carpooling may come from other HOV modes (bus to carpool) that effectively may increase the number of trips.
- Changes in mode split also may be due to a relocation of home or work location where transit service is different from the previous location.
- Neglects the part-time use of other modes.

4. *Vehicle Miles of Travel*

Vehicle Miles of Travel (VMT) is a measure of the number of trips multiplied by the distance of those trips. For instance, five single occupant vehicles traveling 20 miles to work each day would equal 100 vehicle miles of travel. If two of those five people formed a carpool, VMT would decrease to 80.

This measure of effectiveness can be assessed through surveys.

The **advantage** of using VMT is that it relates closely with most of the desired objectives (e.g., to reduce traffic and air pollution).

The **disadvantages** of using VMT as the measure of effectiveness include:

- Benefits, such as the reduction in air pollutants, traffic congestion, and parking needs, are related to commute characteristics of workforce. One long distance commuter that reduces their VMT by 40 miles per day is equivalent to four employees reducing their VMT by 10 miles per day each. However, given the fact that much of pollution is related to the initial starting of an engine (i.e., “cold start”), the removing of four cold starts versus one is significantly better.
- VMT tends to yield better benefits for programs in remote sites that are best served by carpools and vanpools. Therefore, similar organizations in different settings could have significantly different VMT benefits for similar mode splits.

5. Level of Service

Level of Service (LOS) is a standard measure of traffic flow through average travel delay. LOS designations are determined for intersections and specific road segments. These intersections and roadway segments are usually selected based on their proximity to the site, traffic access patterns, and whether they are currently perceived as problem locations.

This measure of effectiveness requires computation of data collected during a traffic survey and counts at the specific location.

The **advantages** of using LOS includes:

- Relates closely with most of the desired objectives (improved traffic flow, expanded passenger capacity of roadways).
- This measurement is frequently used by area transportation and planning professionals.

The **disadvantages** of using LOS as the measure of effectiveness include:

- LOS is more applicable to broad, region-wide or corridor TMP programs because of the wide range of variables and environmental conditions affecting the LOS.
- Imprecise measurements of average travel speed, etc., can result in mislabeling LOS for a particular road segment or intersection.
- It is extremely difficult to discriminate between commuter and non-commuter traffic impacts.
- Requires some technical background to perform the computations.

C. Evaluate the Work Setting

Before a federal agency can select the TMP strategies that will be most effective, it must understand the existing situation. This includes analyzing the work site's infrastructure and services, current levels of usage, and current management policies.

1. Conduct Work Site Analysis

This component provides a description of the work site's transportation-related infrastructure, services, and amenities. The analysis should include:

- The number, price, location, and assignment of parking by type;
- Identification and evaluation of existing mass transit services to the area;
- Transportation programs of nearby worksites;
- Bicycle and pedestrian facilities;
- Highway access (including HOV/HOT lanes);
- Traffic conditions in the nearby area (e.g., congested intersections);
- Approved improvements for transportation facilities; and
- Availability of on-site nearby services (e.g., restaurants, child care, banks, supermarkets, laundry services, etc.).

2. Identify Existing Transportation Programs

This section should describe the federal agency's existing programs and policies for reducing travel by single-occupant vehicle. It would include the name of the ETC, current level of resources, services offered, alternative work hours policy, transit subsidy program and its participation level, parking assignment and pricing policies. MWCOG and other sources may be able to provide the agency with information about the existing levels of participation in the various TMP services offered in an area.

D. Evaluate Employee Behavior

As one of the initial steps, it is important to collect information on current commuting behavior, percentages of employees using each mode of travel, the number of vehicles being used to transport employees to the site, arrival and departure times, and employee perceptions and attitudes about their decision to use or not use a particular commute mode. There are four methods of collecting data about employee behavior: surveys, vehicle counts, focus groups, and internal personnel records. The method selected will depend on the program objectives and budget. Each of these methods is described below.

1. Surveys

There are requirements, including but not limited to privacy, for agencies regarding conducting surveys and collecting and storing personal information. ETCs should contact the appropriate legal and human resource representative within their organizations before initiating a survey.

Purpose of surveys:

- Determine current travel behavior (mode split, average vehicle ridership, vehicles per employee).
- Identify clusters of common employee characteristics (similar residential location and similar hours).
- Find out employees' awareness of commute alternatives.
- Discover attitudes about commuting; interest in ridesharing (why people do/do not currently rideshare).
- Determine which incentives or disincentives would cause drive-alone commuters to change their mode of travel.

Tips on surveying:

- Focus very precisely. Every item should directly address one specific issue or topic.
- Keep each item brief. The longer the question, the greater the burden on the respondent, which leads to more error and bias.
- Strive for clarity.
- Use common words.

Commuter Survey

>>>>>>>>>>

Part I

1. What is the name of the company or organization you work for and what is the address?

2. What were your work site arrival and departure times yesterday? (or what is your usual time)
 Arrival time: _____ AM or _____ PM
 Departure time: _____ AM or _____ PM
3. How do you typically get TO work each day?
For each day you worked at your regular work location, check the box in Section A, "How I traveled to work" for the type of transportation you used that day. If you used more than one type on any day, e.g., you walked to a bus stop then rode the bus, check ONLY the box for the type you used for the longest distance part of your trip. For each day you did not work or did not work at this location, check one box in Section B, "Why I was not at my regular work location." For any day you are not scheduled to work (e.g., Sunday), check "Regular day off."

Section A	Days regularly worked						
How I travel TO work	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Drove Alone in car, truck, or SUV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drove myself and others (car/vanpool/slug)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rode with others (car/vanpool/slug)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Metrolbus or other bus (nonrail)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Metrorail, MARC, Amtrak, VRE train (nonrail)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walked or bicycled (see the top)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section B	Days NOT at work						
Why I was NOT at work	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Compressed schedule (e.g. 9/80 schedule)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Regular day off	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Teleworked, worked at home or telework center all day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Meeting out of office, sick, vacation, or holiday all day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Complete Question 4 only if you are in a car/vanpool or slug.

4. Including yourself, how many persons were in the carpool/vanpool?

 Were you:
 driver
 passenger
 dropped off

- Use simple sentences. Two simple sentences are better than one compound sentence.
- Avoid specific sources of bias. Do not ask leading questions.
- Use structured questions.
- Classify multiple-choice answers carefully by ensuring that the list of answers is all inclusive, mutually exclusive, and there is more variance in the meaning between categories than within them.
- Choose appropriate categories.
- Use scaling effectively to position the answer within some category or along some spectrum.
- Select appropriate sample size.
- Place sensitive questions at the end.
- Supply complete information.
- Make questions applicable to all respondents.
- Ask additional questions if one will not result in complete information.
- Test the survey on objective volunteers.
- Try to repeat the same questions over time for comparison.
- For a conservative approach, treat each non-respondent as a drive-alone for existing and future conditions.
- Do not disregard the probability of conducting a two-part survey instead of one long survey.

Types of survey questions:

- Open-ended or unstructured questions. Only the question is expressed and not alternative answers are listed for the respondent.
- Multiple choice or structured questions. Ask a question and list the alternative answers for the respondent to choose.

2. **Vehicle Counts**

Purposes of vehicle counts:

- Determine current travel demand (average daily traffic, peak hour/period traffic, level of service).
- Identify traffic congestion “hot spots.”
- Determine baseline conditions from which to measure success in reducing trips including time of day.

Tips on vehicles counts:

- Count vehicles entering and exiting all driveways to the site simultaneously.
- Count during peak periods from 6:30 to 9:30 a.m. and from 3:30 to 6:30 p.m.
- Autumn is the optimal time of year to conduct a count.
- Count on Tuesdays, Wednesdays, or Thursdays, not around holidays; avoid counting between Thanksgiving through New Year’s Day, between Memorial Day

through Labor Day, around the Spring Break/Easter season, and during the Jewish High Holy Day season.

- Count vehicle trips only (not person trips).
- Count all traffic entering and exiting the facility.
- Qualified transportation consultants should be contracted to do vehicle counts and/or to collect other data as needed.

3. Focus Groups

A focus group is a small group of persons (8 to 12) that is selected to represent a cross-section of a large group and assembled to discuss a particular problem, issue, or idea. While surveys focus more on determining quantitative measures of employee behavior, focus groups can better reveal **qualitative** factors in employee commuting decisions.

Focus groups are developed as a survey technique by companies testing new products before they are released to the market place. Be aware that you can expect to get a slightly higher approval/participation rate from the focus group testing than you will when the idea is actually implemented. The focus group is excellent for testing out new ideas (i.e. get employees reaction), such as a new shuttle bus program or guaranteed ride home program.

Focus group interviews are used as a way of facilitating an understanding of employee needs and feelings towards the commute to work and alternatives to the single occupant vehicle. Focus groups can reinforce the importance of talking with employees in a one-on-one or small group manner to aid project design. As a direct outcome of these sessions, the commute alternatives can be better delineated, the reasonableness of the values of each alternative's attributes confirmed, and the clarity of the survey instruments improved.

The purposes of the focus group sessions could include:

- Identify employee perceptions of the future commute.
- Identify important factors determining mode choice and mode captivity, describe ideal systems, and note tradeoffs.
- Identify groups within target population with access to similar transportation resources.
- Evaluate performance of components of current transportation systems and identify problems currently faced by employees.
- Identify the range of policies the federal agency should consider implementing.
- Test survey instruments or promotional ideas for clarity, length, and reasonableness.

Tips on focus groups:

- Determine needed level of sophistication.

- Make participants feel comfortable so you can get their true opinion (e.g., there are not right or wrong answers, their answers will not affect their jobs, do not lead them to an answer, etc.)
- Prepare a Focus Group Plan.
- Do not generalize based on focus group findings.
- Make participants aware that the meeting is for planning purposes and some of the ideas may not be implemented, (i.e., do not create false expectations).

4. *Internal Personnel Records*

Personnel records offer an opportunity to roughly estimate the potential for various types of TDM strategies. Depending on the number of employees, home addresses or home zip codes could be plotted on a map and referenced. By clustering similar groups of employees by home location or route to work corridor, the potential demand for services, such as the extension of transit service or a new vanpool, can be assessed.

Access to position titles or grade levels could examine the need for different levels of service and marketing strategies. It is important to first check with agency human resources and legal departments regarding current policies for protecting employee's personal information.

5. *Other Sources*

Other possible secondary sources of data to evaluate trends and effectiveness of particular measures include the following:

- Management interviews
- Data collected for other purposes (parking permits).
- [Metropolitan Washington Council of Governments](#)
- Trade associations such as [the Association for Commuter Transportation](#), [American Public Transit Association](#), and [Institute of Transportation Engineers](#)
- Local planning agencies
- Local [transit](#) and [ridesharing](#) agencies
- [Transportation Management Associations](#)
- [Washington Metropolitan Area Transit Authority](#)

4.2 SELECTING THE TMP STRATEGIES

Step 1: Identify Baseline Traffic Conditions

- **Division by Mode**
 - Arrival time vs. # of trips
 - Departure time vs. # of trips
 - Calculate AVR day and AVR peak

- **Miles of Travel**
 - Miles vs. # of trips
 - Total miles
 - Average miles per trip
 - Mean

- **Time of Travel**
 - Minutes vs. # of trips
 - Total time
 - Average time per trip
 - Mean

- **Number of Parking Spaces**

- **Parking Fees**

- **Levels of Parking Usage; Supply vs. Demand**

- **Calculate (if applicable) LOS of Adjacent Roadways**
 - AVR – Average Vehicle Ridership (AVR)
 - AVO – Average Vehicle Occupancy (AVO)
 - Deviations - to include telecommuting, compressed work week and focus improvements during peak hour

Step 2: Define Your Modal “Bias”

- Transit favorable (most non-SOV employees arrive by transit)
- Rideshare favorable (most non-SOV employees arrive by rideshare)
- Neutral (transit and rideshare use are more evenly split)

Step 3: Set TDM Goal

- Set by regulation
- Target to satisfy an internal goal
- Converted to simple measures

**Step 4: Develop Modal Shift Reduction Factors
(11 factors of importance)**

<i>Least Important</i>	<i>More Important</i>	<i>Most Important</i>
Employer Size	Legal Requirement	Support of Carpooling
Location Density	Support of Transit	Financial Incentives
General Marketing and Support	Support of Vanpooling	Restricted Parking
Alternative Work Arrangements		Parking Charges

Step 5: Develop Different Alternatives

Step 6: Compare Different TDM Strategies

Step 7: Select the TMP

4.3 IMPLEMENTATION TASKS

The Federal agency should have analyzed the work site, identified existing transportation programs, set goals and objectives, evaluated employee needs and concerns, and selected TMP strategies prior to proceeding with implementation. The next step of the process brings these items together in the form of an implementation plan. This section provides an overview of the implementation process and lists many of the tasks that could be considered for inclusion. The ETC is encouraged to contact [GSA](#), [Commuter Connections/MWCOG](#), or [NCPC](#) for assistance in implementing some of these tasks.

The sample work statements (provided in the appendix) can be selected as appropriate or edited by the federal agency to direct the level of effort in preparing, implementing and monitoring a TMP. The listed statements are not inclusive of all possible applications, and the Federal agency may need to supplement this section as needed. Conversely, some sample work statements may not be appropriate for some projects, particularly if information is readily available from secondary sources.

The following provides an outline of the components for inclusion in the implementation plan. A brief summary of each service or product to be offered should be prepared. The plan summary should include:

- Task description/objective
- Identification of transportation mode(s) impacted by task
- Description of current and forecasted levels of participation
- Marketing plan
- Performance measure and monitoring procedures
- Budget
- Timetable
- Responsibilities and staff time allocations

A. Beginning the Implementation

The following tasks are suggested as initial steps in implementing a TMP:

- Designate the agency's ETC and obtain on-going training for them.
- Determine time and resources available for TMP preparation. Assess the need for outside expertise.
- Contact GSA regarding support for the ETC and preparation of the TMP.
- Contact MWCOG for information about available resources at the regional and local levels.
- Contact NCPC regarding TMP requirements, including parking guidance, for the agency's planning efforts.
- Contact the locality's Planning and Transportation Departments regarding TMP requirements at the local level.
- From management interviews, determine current policies and programs regarding parking, alternative work hours, and transit subsidies.
- From agency interviews, determine existing and projected parking needs and the official parking requirements. Develop a table that shows the number of spaces needed by type (handicapped, visitor, carpool/vanpool, etc.) and square footage, and the annualized cost per space to build and maintain.
- From zoning/code documents, determine the minimum and maximum amount of site parking space required or permitted.
- List all applicable agencies that provide transit, vanpooling, ridesharing, and other types of transportation services for employees as a resource. Through interviews with those agencies, verify the services provided, level of service (e.g., frequency and distance from transit stop to site), and costs.
- Identify the facilities available to support walking and/or biking to the work site (number of racks, bike lockers, Bikeshare stations, clothes lockers, showers, lighting, and paths).
- Identify the type and quality of roadway, transit, bicycle, and walking access to the worksite, including location of nearest freeways, transit stops, operating conditions, and proximity to high occupancy vehicle facilities.

- Identify factors that make alternatives to driving alone particularly convenient and attractive (e.g., high occupancy vehicle lanes, tight parking supply, Carshare/Bikeshare access, expensive parking)
- Identify the locations of the following local community amenities: cafeterias, restaurants, banks, ATM machines, day care facilities, post office and dry cleaners.
- Formulate program goals.
- Develop and administer the employee survey. The survey results should be compared to previous period results if available, in order to identify any trends or changes in the use of modes. From the survey, the following relevant factors should be identified which could influence existing employer commute patterns:
 - How employees choose to commute by mode (drive alone, 2-person carpool, 3-person carpool, 4+ person carpool, vanpool, transit, commuter rail, walk, bike, telecommute) and how frequently they use each mode to commute each week;
 - Where employees live;
 - Employee frequency distribution by travel time and distance. Produce a histogram of each and calculate descriptive statistics;
 - Interest and acceptability of various alternatives through surveys or focus groups;
 - Arrival and departure time in 15 or 30 minute increments;
 - Occupations of employees;
 - Car availability to individuals (i.e., cars per household, and workers with drivers licenses per household);
 - Employees' predisposition towards each of the modes;
 - Advantages, disadvantages, and willingness to try each of the modes; and
 - The potential for each mode as compared to the existing mode share.
- Determine the proportion of employees who are qualified to use each of the various alternatives (i.e., market potential) under current and proposed conditions.
- Determine the duration of use for each method of commuting (e.g., how long have they been a member of a carpool?)
- Identify the benefits, challenges, and features of options that compete with the agency's programs.
- Catalog the operating and regulatory constraints faced by those competitive options.
- Perform necessary field measurements of traffic levels.
- Calculate current effectiveness measures (e.g., mode split, APO, etc.).
- Establish program objectives.

B. Selection of TMP Strategies

The following tasks are involved in selecting the appropriate TDM strategies as commuting alternative components of the TMP:

- Prioritize the needs and challenges facing the agency.
- Summarize current strategies including the program, pricing level, promotional effort, and methods of reaching or providing the program to employees.
- Adopt general guidelines for selecting TDM strategies; for example, maximize participation in the programs to reduce cost per employee served and cost per employee placed into a commute alternative other than driving alone.
- Propose new strategies or changes to existing strategies.
- Determine whether the TDM strategies under consideration directly contribute to fulfilling the agency's TMP objectives.
- Determine whether selected TDM strategies match the needs of the target employee group.
- Estimate the costs of each TDM strategy selected.
- Evaluate the marketing effort necessary for each strategy and seek ways to improve acceptance or expand the strategy to new groups of employees.
- Determine internal and external channels of providing commuting information to employees on a periodic or continuous basis.
- Develop the program to incorporate commuter information dissemination as part of the new employee orientation program. Consider using the program as a marketing tool to attract potential candidates.
- Create a branding image for the program among employees that is preeminent, distinctive, and employee-oriented. It is advisable to include a program logo and slogan on all marketing materials.

C. Implementing Selected Strategies

Activities used to implement and market these strategies should be determined based on the strategies selected. A work plan including responsibilities, timeline, and budget should be developed as a guide for implementing the TMP. The following tasks are suggested as steps in this implementation process, depending on the specific strategies chosen:

1. *Personalized Assistance and Ridematching*

- Offer “Meet Your Match Parties,” small gatherings are usually arranged by the ETC to bring together and introduce people from the same neighborhood or zip code. These meetings are informal and can be scheduled during breaks or as a “brown bag” lunch.
- Meet all the new employees and introduce them to the ridesharing program. New employees are usually more receptive to changing their mode of transportation.
- Introduce potential carpoolers to each other. Provide incentive program information such as ‘Pool Rewards.



- Schedule presentations for different departments. Let the employees know who the ETC is and how the ETC can help them.
- Refer potential ridesharers to existing carpools. Track the existing carpools so that in case a carpool or vanpool needs a rider, the ETC can refer a potential carpooler.
- Be available. Let the employees know that the ETC is available to assist them and that they have an “open door” policy.

2. ***Vanpooling***

- Decide on the vanpooling arrangement that will suit the needs of the federal agency.
- Identify potential vanpoolers based on a plot of employee residences (i.e., density map), an employee survey, or review of employee records.
- Develop employee interest by announcing potential routes. Provide subsidy and/or incentive program information for vanpools.
- Determine potential demand by meeting with identified potential candidates. Combine with “Meet Your Match” parties/gatherings.
- Identify possible drivers among the potential vanpoolers.
- Arrange a gathering for potential vanpoolers if there is enough interest.
- Describe the program components such as cost, insurance, maintenance, etc.
- Select drivers and back-ups.
- Conduct a driving record check on the drivers and the back-ups. Obtain a medical certificate from them.
- Discuss and establish procedures for collecting fares for the first month.
- Order vans and set up a van delivery date in accordance with agency vehicle pool policies. Make arrangements for the bus by working with any of the following: a commuter company, an independent operator, or a charter company.
- Make sure the ETC keeps the vanpoolers interested if there is a delay period.
- Provide on-going assistance once the program is operational and track the ridership.

3. *Transit*

- Evaluate the potential for transit usage by assessing access and system availability between employee homes and the work site. Valuable questions include: What is the distance from the transit station to the worksite? Is the scheduling of service compatible with the federal agency needs? Are the areas where the employees live easily served by transit?
- Negotiate with local or regional operators for changes in routes or stops to improve service.



- Provide shuttles to and from transit stops/stations if needed.
- Provide transit information on routes, schedules, fares, both in hardcopy form and on the agency website. Try to customize this to the worksite by setting up a map showing appropriate routes and schedules.
- Provide SmartBenefits to all employees or set up a Commuter Center to sell transit and vanpool fare media.
- Assist in initial trip planning by identifying routes and schedules for employees.
- Promote the transit program by distributing marketing materials and by featuring articles on transit riders in the employee newspaper or other federal agency publications.
- Address employee safety concerns by improved patrols (especially in winter months), enhanced lighting and "buddy system" for transit riders who must walk any significant distance to a transit stop.

4. **Bicycling/Walking**

- Provide maps identifying bike routes and walking paths both in hardcopy form and on the agency website.
- Provide bicycle parking that will protect the bikes from the weather and from theft and vandalism. Bike racks, enclosed bicycle lockers, and provision of indoor parking are all popular options. Inform employees of any Capital Bikeshare stations near the work site.



Photo: Co-Star Group

- Showers and lockers are a necessity for most bicyclists and some of the walkers. If you can't offer such facilities, you may choose to make arrangements with a local health club or with a nearby building.
- Offer your bicyclists and walkers an incentive for not driving to work. If you subsidize carpoolers and vanpoolers, you may choose to also give those who walk/bike a travel allowance or provide a Capital Bikeshare memberships through their [Corporate Partners](#) program.
- Make literature on bicycling safety available.

5. Subsidies

- Determine the feasibility of charging for parking and/or offering subsidies. Conduct a small survey by calling at least 5-10 other nearby employers and asking them about their parking operations.
- Charge market value for those who opt to drive alone.
- Select appropriate subsidy level (e.g., 25 percent for two person carpool, 50 percent for three person carpool, 100 percent for four plus carpools and vans).

6. Travel Allowances

- Decide on the appropriate amount for a travel allowance. (This may already be determined through an existing agency or federal government policy.)
- Obtain management support for the program. If the federal agency currently pays for employee parking, the ETC may be able to demonstrate some cost savings.
- Introduce the program to employees.
- Ask employees who wish to participate to fill out a form on a monthly basis that identifies how they wish to spend their allowance. If employees opt for driving alone and reserving a parking space, the agency may purchase parking passes to maintain the employee tax benefit. If the employee gets cash, it is taxable. For transit passes or vouchers, the amount of the pass or voucher is taxed, unless it is subsidized for \$130 or less.

7. **Parking Management**

- Form an internal committee to evaluate existing parking conditions, to research and inventory parking in the surrounding area, and to develop an appropriate strategy.
- Develop scenarios based on different pricing strategies (if using pricing or travel allowance).



Photo: National Institutes of Health

- Make a presentation to management on the different strategies.
- Check labor union agreement (if necessary).
- Introduce the strategy to the employees, while allowing them to offer feedback.
- Implement the strategy by making subsidies/travel allowance available or by adding appropriate signs for preferential parking. For preferential parking, one needs to identify conditions under which employees can participate. This includes: carpool size, how the spaces will be marked, and how the system will be enforced.

8. ***Guaranteed Ride Home***

- Define program objectives and target market.
- Estimate the number of trips to and from the worksite over a period of time. The federal agency should survey the employees to develop some baseline estimates. Typically, one percent to 20 percent of eligible employees use GRH resources each year.
- Identify the transportation options that the federal agency will offer in the GRH program.
- Present the program to management to gain their support.
- Establish criteria for eligibility. This includes who may use the program and how often.

We'll get you home. Guaranteed.

- Develop a budget based on the number of anticipated trips, administrative and marketing costs.
- Select vendors for the options that the agency intends to offer.
- Determine fees; GRH service should be free or offered at a nominal cost.
- Write the policies and procedures for the program.
- Determine marketing strategies (e.g., branding, website design, brochures, articles, flyers, etc.).
- Tie-in [MWCOG's Commuter Connections GRH program](#) if possible.

9. *Commuter Center*



- Identify location, office space, and functional requirements for the center.
- Identify staffing and contracting requirements, and start-up costs.
- Identify available services and any additional service needs for the site; the center could provide information and sell fare media for local and regional transit agencies.
- Estimate agency demand for farecards, SmarTrip cards, tickets and tokens. Include estimate for number of senior and disabled users.
- Establish approved payment forms and related internal controls (cash, check or credit card on site, or by telephone or mail with check or credit card).
- Develop vendor consignment agreements with service providers.
- Assess need to collect a nominal transaction fee on some items to help cover costs.
- Connect the Commuter Center with the [regional ridesharing program](#), [Virginia Railway Express](#), [MARC](#), [Metrorail/Metrobus](#), [Capital Bike Share](#), [car sharing](#), and other potential transportation services and amenities for employees.
- Utilize MWCOG resources and displays if possible.

10. *Variable Work Hours*

- Determine employee interest by surveying employees or meeting with representatives from different departments.
- Select the appropriate program that has the most realistic chance of success within the Federal agency.
- Solicit management support for the program of choice.
- Appoint a project coordinator. This can be the ETC.

- Involve labor unions and legal counsel in the design of the program. Labor union response to these programs varies. Additionally, legal counsel needs to review labor laws that affect the worksite.
- Develop formal policies for the program through a proposal that describes the rules. Rules are necessary for all logistical issues such as: banking of hours, work day start and end period, core hours, core days, coverage, supervision, etc. Involve federal agency accountants in the policy definition. This will help the processing of payroll, holiday pay, vacation, overtime, etc.
- Review the operational needs of the agency's work units. This includes phone operations, inter-office mail, computer support, etc.
- Identify eligible employees. Some employees may be excluded because they perform vital functions that require their presence during regular business hours.
- Hold informational sessions for supervisors and employees to explain the policies and procedures.
- Address individual concerns and hardships for those who may not be able to participate.
- Start the program by posting employee schedules and by setting a kick-off date.

11. *Telecommuting*

- Gather support from key members of upper and middle management. Look for easy successes, and initially persuade managers who are most favorable towards alternative work arrangements.
- Select a telecommuting “champion.” The ETC needs to identify someone within the federal agency who will coordinate the various components of the telecommuting program and who would serve as a good spokesperson for telecommuting.



- Form a steering committee from the main departments to be involved in the pilot program. This may include human resources, accounting, representatives from participating departments, information systems, legal counsel, etc. The steering committee is usually chaired by the telecommuting champion or coordinator.
- Develop policies regarding the objectives of the program, frequency of telecommuting, workman's compensation, resources, technology, selection criteria, scheduling, etc., with help from the steering committee.
- Hold sessions to inform the potential participants and their supervisors about the basics of the program, the policies, the selection criteria, and explain why the federal agency is experimenting with the concept of telecommuting.

- Select telecommuters either by surveying the potential telecommuters and telemanagers, or by letting employees participate who have their supervisor's approval and who are willing to work at home.
- Develop a training program to provide telecommuters and telemanagers with guidelines for completing and supervising remote work.
- Evaluate the program at interim periods to document benefits and issues. Conduct focus groups with the telecommuters and the telemanagers to troubleshoot.
- If the program is successful, develop plans for expansion to other departments.
- Use the program as part of the agency's Emergency Commute Preparedness Plan and COOP plan for business continuity in the event of a natural or man-made disaster

D. Marketing Strategies

After determining appropriate TMP strategies for the federal agency, an effective ETC will analyze the information collected to determine where efforts to modify employee commute patterns are most likely to be successful. A strategic marketing and branding approach is required to maximize the effectiveness of the program by providing services, pricing levels, promotional strategies at the right time and place to targeted segments of the workforce.

The American Marketing Association defines the process of strategic marketing as “The planning process that yields decisions in how a business unit can best compete in the markets it elects to serve. Strategic market decisions are based on assessments of product market and pertain to the basis for advantage in the market. The plan that is the output of the process serves as a blueprint for the development of the skills and resources of a business unit and specifies the results to be expected. In many companies these are called strategic business plans.



Photo: District Department of Transportation

To grow or to adapt to changes in the marketplace, an organization can offer new services and/or enter new markets. Marketing strategies must reflect the federal agency’s overall strategic direction.

Depending on attitudes or current commuting conditions, or both, some employees are predisposed to try ridesharing, while others may be more resistant to change. By knowing which employees to target, the ETC can focus their efforts in places that are more likely generate the desired results.

The target population may be viewed in two ways when preparing to market alternative commute modes. The first way concerns employee attitudes such as the willingness to rideshare. The second way concerns characteristics that shape the individual commute of each employee. These include parameters such as travel distance between home and work, work schedules, and proximity of other nearby employees which taken together, may qualify prospective candidates for one form of ridesharing or another.

1. Commuter Decision-Making Process

Attitudes determine whether those who qualify to rideshare may be willing to actually participate in the program or not. When preparing to undertake the campaigning process, one must not only consider the commute characteristics that qualify individual employees for particular alternate modes and their attitudes about ridesharing, but also how these two aspects interrelate. It is equally important to understand the five-step dynamic nature of the employee's decision-making process and how the TMP needs to address each of the steps:

- **Awareness:** Although employees may be aware of the agency's various commuter programs and services, they still may not possess detailed knowledge regarding their specific benefits and costs. These employees can be labeled as *Inform Me*. To move to the next step, these employees will require personalized information pertinent to their own specific needs.
- **Interest:** Employees are provided with more information about the TMP's services and discover that it may meet their needs. To move to the next step of inquiry requires a means for facilitating an action by these employees. These employees are asking to *Encourage Me*. They are employees with a strong interest in ridesharing or other commute alternatives, but who need encouragement to actually change their commute behavior.
- **Inquiry:** At this point, employees are actively seeking additional information and/or assistance. The ETC must be prepared to respond to questions about specific features and real and perceived impediments among these *Convince Me* employees.
- **Trial Use:** The decision to try an alternative on a part-time or trial basis can allow employees to try new commuting options without committing to a long-term change in behavior. These employees are placing the option *On Trial*. Positive experiences can lead to the final step — regular use.
- **Regular Use of Mode:** Employees are convinced that the program or service meets their needs. They may require ongoing attention however, to be sure that they do not revert to their old habits. These individuals can serve as valuable testimonials for convincing co-workers to modify their travel behavior as well. These commuters are the program's *Champions*. They perceive it to be in their self-interest.

2. Components of a Marketing Plan

To implement the various selected TDM strategies, the ETC must determine how to utilize one or more of the marketing components of Product, Price, Promotion, and Place. This is a brief overview of marketing. The ETC is encouraged to obtain additional information on the subject and seek specialized training in TMP marketing from [MWCOG](#), [GSA](#), the federal agency's communications or public affairs office, and others. Several examples are provided simply to illustrate the various components of the marketing strategy.

Product

A federal agency's TMP includes information on the various features of the different potential commute modes and usable transportation facilities, as well as the services provided. The ETC has several options to affect changes to the product including making improvements, opening new markets, backing away from other markets, or eliminating the product altogether.

Changes to the product include the following:

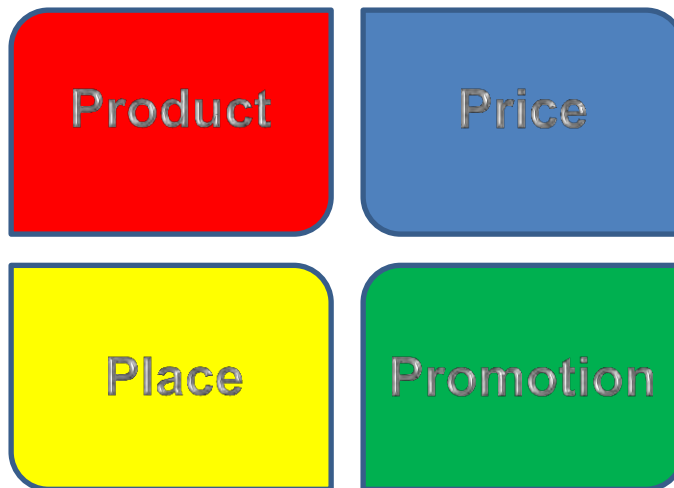
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|-------------------------|---|
| <i>Quality</i> | Improvements in the quality of the information could include maintaining the accuracy of the ridematching database, keeping literature racks filled with the latest transit schedules, or making the information available on the agency website. |
| <i>Features</i> | Locating providers of van conversions to add "captain chairs" in a vanpool could be an example of changing the product's feature. |
| <i>Packaging</i> | Match lists could include "Helpful Hints for Forming Carpools" or "Sample Vanpool Driver/Rider Agreements" |
| <i>Support Services</i> | Special arrangements for van repair and maintenance services could be made so that repairs could be done on site. |

Price

Pricing decisions, like subsidizing a program, cross-subsidizing one program from another, or changing market price, are an integral part of the TMP's strategy. Pricing is readily adaptable and generally clear to employees.

Pricing strategies could come in several forms:

- | | |
|--------------------------|---|
| <i>Subsidies</i> | SmartBenefits could be offered to employees |
| <i>Discounts</i> | A Commuter Club could be formed using nearby merchants who provide extra discounts to ridesharers. |
| <i>Payment Period</i> | Bi-weekly payments might be arranged to cover vanpool expenses. |
| <i>Payroll Deduction</i> | SmartBenefits could be purchased either using agency-appropriated funds or on a pre-tax basis or through payroll deduction and delivered on a set schedule. |



Promotion

The promotion or communication strategy is aimed at providing the right message through the right channels to influence employees to take one of the steps in the five-step decision process discussed above.

Promotional strategies include:

- | | |
|--------------------|---|
| <i>Advertising</i> | The agency website, posters, cafeteria table top displays, and rewards provided in exchange for taking some action such as completing a survey or visiting the Commuter Center are examples of advertising tools that could be used. Extolling the benefits to employees in terms of cost |
|--------------------|---|

savings, etc., are the most effective. Check to see if there are limitations on size and frequency of materials for display. Examine the potential of jointly developing materials with another agency. Leave room for the ETC name and number for more information.

Personal Selling Carpool formation meetings are effective in addressing specific concerns and bridging the anxiety factor of people facing changes.

Promotions Transportation fairs and vanpool demonstrations in conjunction with special events such as National Transportation Week (in May), Washington, DC area Bike to Work Day, Car Free Day, Earth Day, Blood Drives, etc. can increase visibility of the program and the ETC. Public agencies often will lend a hand in planning the event.

Publicity Internal newsletters highlighting people who ride the bus or carpool can foster word-of-mouth advertising (one of the leading sources of referrals for TMP's). An attractive webpage with multiple links to various service providers and relevant information is currently one of the best ways to publicize the different programs.

Place

“Being at the right place at the right time” is the fourth component of the marketing strategy.

Place considerations include:

Location A central, highly visible location for the ETC will foster increased foot traffic, questions, and ultimately sales. A successful operation would have a “store” appearance to foster face-to-face assistance. Acceptance of payment in the form of checks and credit cards will supplement cash and debit card machines. Also, a highly visible location on the agency website will also make it more convenient for employees to use the available on-line services and locate pertinent information. Alternatively, much of the information employees need to access to find out more about their transportation options can be placed in a centralized agency intranet location.

Inventory Maintaining adequate consignments of transit passes, tokens, and farecards, as well as schedules, will facilitate increased use.

Coverage Peak demand for services generally falls in three areas: early morning (before work begins), midday, and late afternoon. Scheduling meetings and breaks around these periods can maintain adequate coverage.

3. Retaining Commuters through Complaint Handling

Marketing TMP services differs from selling products, such as new cars, in the following ways:

- The end result is intangible. The commuter often cannot easily touch and feel the end result of their decision.
- The commute trip is inseparable from the provider; in other words, transit options are limited to the transit services available in the NCR.
- Lost opportunities are not recoverable:
 - Studies have shown that a typical business hears from 25-30 percent of its dissatisfied customers. 40-60 percent of customers who did take the time to complain about their service experience reported being dissatisfied with the outcome of their complaint. 69-80 percent of customers who reported being completely satisfied with the outcome of their complaint planned to re-purchase the service.
 - Studies have also shown that a typical dissatisfied customer will tell eight to ten people about the problem. One in five will tell twenty. It takes twelve positive service contacts to make up for one negative incident.
 - The average business spends six times more money to attract new customers compared to the amount spent keeping current customers. Yet customer loyalty is in most cases is worth ten times the price of single purchase.

For the reasons listed above, it is essential that customers have a mechanism through which to complain so that any service failures may be corrected. Typical reasons why customers decide not to complain include the following: not worth the time and effort, no one would be concerned about the problem (or resolving it), did not know where to report complaints.

It is recommended that TMP administrators maintain a service complaint log so that all service failures can be documented. A complaint log will allow administrators to see what, if any, problems are being reported repeatedly. With this knowledge, administrators are able to more easily identify the points of failure, and to more effectively find solutions to customer complaints.

4. Summary

The challenge is to select the most appropriate TMP services and then tailor the marketing strategy to the federal agency's situation. Under each TMP strategy, there are numerous packaging, pricing, promotion and place decisions to be made. The information collected and analyzed to this point will help the ETC implement the most appropriate strategies selected for their agency.

4.4 MONITORING & EVALUATION

A. What Is Evaluation?

A successful evaluation methodology will use procedures that determine one or more of the following:

- The extent to which the program has achieved its stated objectives (e.g., increases in AVO).
- The extent to which the accomplishment of the objectives can be attributed to the program (direct and indirect effects).
- Degree of consistency between program implementation and the plan (relationship of planned activities to actual activities).
- The relationship of different tasks to the effectiveness of the program (productivity).

B. Why Evaluate?

There are many reasons for developing a monitoring system, including:

- Requires the federal agency to examine the clarity of its objectives, the ease with which the objectives are measurable, and the possibility of the goals being achieved.
- Helps determine the best way to redirect efforts when it is determined that elements of the program have or have not achieved their desired results.
- Provides staff with data to reinforce their efforts or to recommend new directions in which to move the program.
- Provides management with a tool to direct the organization's TMP into productive channels.
- Shows evidence to other agencies and the public of the diligence and sincerity of the agency.
- Supplies factual information for public relations campaigns.
- Helps other federal agencies anticipate problems in implementing similar programs and provides a measuring stick against which others may measure their success.

C. Methods of Evaluation

There are several different methods for collecting the data for evaluation purposes. Some of the most commonly used methods involve:

- Employee surveys.
- Program participation documentation (e.g., registrations for preferential parking, applications for subsidies).
- Vehicle counts.
- Time sheets/activity logs.
- The evaluation method and data collection requirements will depend on the measures of effectiveness being used.

D. Measures of Performance

Measuring the extent to which the program has achieved its stated objectives (e.g., increases in APO) will include methods to determine:

- What was the change in Mode Split or Average Passenger Occupancy over the year?
- How many people were placed into a carpool per year or per 100 employees?
- How many new vanpools were formed?
- How many people were placed as riders into new and existing vanpools per year?
- How many customers were served?
- How many requests for assistance were filled?
- How many SmartBenefits were provided to employees? What was their sales value?

Measuring the extent to which the accomplishment of the objectives are attributable to the program (direct and indirect effects) may require designing an evaluation along the lines of the effort used by MWCOG, as follows:

- What is the estimated change in Vehicle Miles Traveled (VMT)?
- What is the estimated change in Vehicle Trips?

- How has demand for parking been affected?
- What reduction in pollutants is estimated?
- How much money did our employees save as a result of the program?
- To what degree did employees try an alternate mode as a result of marketing efforts rather than through existing programs or services of the agency (e.g., employees who form a vanpool on their own)?

Some research indicates that the indirect effects of a program may equal or exceed the direct effects.

Evaluating the degree of consistency between program implementation and the plan (relationship of planned to actual activities) may determine whether for example, the number of matchlists produced were sufficient to form new carpools. Other evaluation techniques include:

- Which implementation tactics were the most effective?
- Were all planned activities carried out on-time and within budget?
- Was the number of carpool formation meetings adequate?
- Was customer response time within the pre-established performance goal (e.g., requests received by 10:00 a.m. will be filled the same day for 95 percent of the employees)?
- What level of staffing did it take to form and maintain a carpool?

The federal agency and taxpayers will want to see that the investment in the program is being used efficiently and effectively. Benefit/cost ratios or productivity matrices can be produced to provide this measure.

E. Evaluation Implementation Considerations

There are three basic methods of conducting an evaluation: by mail, phone, or e-mail. The following provides some guidance in achieving high response rates. Please consult with agency human resources and legal department to ensure consistency with agency privacy policies and other related requirements before initiating the evaluation process.

The key goal of any commuter survey plan should be to obtain the cooperation of the management of each division and to make them feel involved with the data collection, while retaining control of the survey administration. It is inevitable that inefficiencies will occur due to communication problems, ineffective distribution methods, or for other reasons. The federal agency's ETC must

find ways to develop constructive relationships with each division, while maintaining as much hands-on control as possible.

Survey methodologies generally seek to achieve the highest possible rate of response at a reasonable cost. Data derived from surveys with high response rates should be more accurate than data derived from low-response surveys for at least two reasons: 1) a higher response yields a larger data set, which reduces the sampling error for the data; and 2) more importantly, the chance for bias or non-coverage error to skew the survey results decreases as the response rate gets higher.

Independent of the distribution method, the ETC should give close attention to questionnaire design. A good questionnaire should be easily formatted to be distributed by mail, telephone or e-mail/internet. The “menu” below presents the basic elements of a survey. Each survey effort is unique; this list is just a guide.

- **Selecting the Sample**

- Respondents are usually selected from some kind of master list that either approximates or actually is the group under study. Typically, a systematic random sampling design is used: the master list is sorted on any of several characteristics that are assumed to be important to how respondents will answer the survey questions. Next, every nth employee is selected for the survey. The sampling interval is determined by the ratio of total cases on the master list to the desired number of sample cases.

- **Sample Size**

- An estimate of the survey response rate can be used to determine what sample size is desired, given the number of completed responses the federal agency wants to obtain. For example, if the federal agency wants to obtain 300 completed surveys, and the federal agency estimates a response rate of 60 percent, the federal agency would need to start with a sample size of 500 cases.
- After the records are selected, they need to be tagged with an identification number. This number allows for confidentiality (NOT anonymity) of response while also allowing the federal agency to mark off responses as completed, so that the follow-up calls are only made to non-respondents.

- **Pre-notification of Potential Respondents**

- Whatever the distribution method chosen, the ETC should take every opportunity to notify employees of the survey in advance. Survey goals should be explained, as well as the consequences of low response. The ETC should be designated as the contact for questions. This information should be circulated by newsletter, bulletin board, or on-line.

- **Quality of Packet Materials**

There are numerous books available on questionnaire design and formatting. The following points are suggested in questionnaire preparation:

- Generally, the questionnaire should have generous amounts of white space.
- The questionnaire should be as brief as possible while still allowing the federal agency to obtain the desired information. Questionnaires that are too long and/or contain repetitive questions will be met with low response rates.
- There should be no typographical or grammar errors.
- Each question should be clear and have a single purpose.
- Answer categories (if provided) should be unambiguous, exhaustive, and mutually exclusive.
- Questions should be numbered consecutively for ease of data entry; do not divide the questionnaire into numbered sections where question numbers begin at one again, for example.
- Pages should be numbered if the survey is distributed or summarized in more than one page.
- There should always be a question soliciting input, comments, etc.
- Instructions and definitions should be provided in the body of the questionnaire.
- Questionnaires should be reviewed by “fresh eyes” after every significant draft. Where budget and time allow, questionnaires should be pre-tested with actual potential respondents. They will almost always find problems that the person preparing the draft did not see.
- The packet should always have a cover letter or some sort of introduction, even if it is generic, and even if it is made to be a part of the questionnaire itself. The introduction should reinforce the importance and benefits of participation, highlight any instructions for completing the questionnaire, and explain any methodological techniques such as identification numbers for mailing control.
- Official letterhead recognizable to the respondent should be used, with a suitably impressive signature. Sometimes the best signature is that of a mid-level person, but often the highest-level signature is the best.

- **Degree of Personalization**

Recent research shows that, given controlled follow-up attempts, the degree of personalization is the single most important predictor of response rate differences. Generally, the highest effective level of personalization should be used. Personalization becomes ineffective or counter-productive when the information is inaccurate or the subject matter of the survey is extremely sensitive.

- **Degree of Follow-Up**

This is very important to achieving high response rates. To allow for effective follow-up, survey participants must be assigned identification numbers. Survey materials must be marked with this identification number to allow for tracking of response, to avoid unnecessary follow-up mailings and duplication of response.

Other specific considerations are:

- **Mail Surveys**

- Full contact information should be a part of the questionnaire, should the questionnaire be separated from the rest of the packet materials.
- Questionnaires should be reproduced to quality standards.
- Effective methods of distribution:
 - Stamped, first-class U.S. mail to home address
 - Metered, first-class U.S. mail to home address
 - Bulk rate or other U.S. mail to home address
 - Company or internal mail to work location
 - Paycheck envelope insert
 - Other self-delivered method

Methods that rely on the respondent to pick up the questionnaire will not be effective.

The survey may be personalized with elements such as actual ink signatures on cover letters, instead of copied or machine-generated signatures; actual stamps on envelopes; hand-addressed envelopes; etc.

This identification number should be applied with a stamping device, if possible, because this is a piece of information where personalization is to be avoided. One initial mailing, one post card reminder/thank you, and one follow-up mailing to all non-responders are recommended.

About eight to ten weeks after the first mailing, the project usually winds down, the dataset is considered to be final, and data analysis and reporting can begin.

- **Telephone Surveys**

Telephone survey guides are used. Due the difficulty of reaching some individuals, several (up to four) calls should be made to each person in the sample. The decision to call at work or at home may be a function of the agency or the employee's position.

In cases of low response to interview requests, the federal agency may wish to conduct a brief mail follow-up survey of the non-respondents, in order to estimate whether the rate of non-response is a source of bias, and if so, to what degree.

The mail follow-up should confirm any basic demographic information, as well as collect answers to a few of the fundamental substantive questions on the phone survey. The answers of the non-respondents can be compared to those of the respondents; any large differences would allow the federal agency to estimate the potential effects on the mail survey data of non-response bias.

- **E-mail/On-Line Surveys**

E-mail messages for on-line surveys are simple and cost-effective. The formatting of an on-line survey is critical to its success. One of the benefits of on-line surveys is that employees of a worksite are typically on the same system, resulting in consistency of responses. Turnaround time for response is also good.

One of the pitfalls of on-line surveys is that employees might perceive the e-mail notification as simply more “junk” e-mail and be less likely to respond. It is important to check with agency human resource and legal representatives to ensure that any survey is consistent with agency guidance.

LOCAL JURISDICTIONAL REQUIREMENTS

A. Arlington County

[Arlington County](#) has a [TMP](#) ordinance that is used as a guide for new development. It prescribes strategies that should be included in the TMP based on one of four land-use categories. Which category is applicable will depend on the proposed project's consistency with planned land-uses and/or density levels as stated in the General Land-Use Plan, as well as forecasted traffic congestion problems.



Performance measures include:

- Reduction of peak hour work travel by achieving a reduction in single occupant vehicle trips.
- Peak hour level of service at major intersections at or better than LOS D.

Transportation Management Associations, [Commuter Stores](#), commuter information displays, telework, flexible work schedules, parking preferences for vanpools, carpools, car sharing vehicles, and bicycles, are identified as key elements of the workplace-related traffic demand management process.

B. City Of Alexandria

The [City of Alexandria's Transportation Demand Management \(TDM\)](#) program is a component of the City's Office of Transit Services and Programs. The program is geared toward encouraging residents, businesses, commuters, and visitors to use a non-drive-alone mode of transportation when possible. The following is a list of transportation options, programs, and services available.



Transportation Options

Bus

- [DASH](#) – local bus system; peak-period service to Pentagon
- [Fairfax Connector](#) – Fairfax County bus system that serves some sections of Alexandria
- [Metrobus](#) – regional bus service with many routes in Alexandria

Rail

- [Metrorail](#) – Four Metrorail stations (yellow and blue lines) serve Alexandria
- [VRE \(Virginia Railway Express\)](#) – Commuter rail line that stops at Alexandria's Union Station (adjacent to the King Street-Old Town Metrorail station)

- [Amtrak](#) – stops at Alexandria’s Union Station (adjacent to the King Street-Old Town Metrorail station)

Rideshare – carpool/vanpool HOV/HOT lanes

- I-395
- Washington Street
- Patrick Street/Rt. 1
- Henry Street/Rt. 1

Bicycle/pedestrian

- The City offers numerous on-street and off-street bikeways designed specifically for bicycle travel or with key elements that support safe bicycle travel.

Support Programs and Services

[Commuter Connections](#) – The City of Alexandria is a member of the regional Commuter Connections network, which provides carpool and vanpool matching and a guaranteed ride home in cases of emergency and unexpected overtime.

[Carshare Alexandria!](#) – The City supports carsharing as a way to reduce vehicle ownership, which encourages the use of alternative modes of transportation and decreases parking demand. Through the Carshare Alexandria! program, city residents can receive reimbursement of fees for a first-time membership in Zipcar or Flexcar.

www.alexride.org –The city’s Transportation Demand Management website, to link to maps and schedules; learn more about transportation options and programs; get real-time traffic information; and to sign up for eNews – Transportation Alternatives, the City’s e-mail service providing information on transportation initiatives, programs, and updates. Phone number: 703-838-3800.

[Employer Services](#) – The city supports the efforts of employers to encourage non-drive-alone commuting and telework by assisting with transportation benefits program development, implementation, marketing, and ongoing support.

Transportation Management Plans (TMPs) — Special Use Permit

[The Transportation Management Plans](#) (TMPs) are now part of the City of Alexandria Zoning Ordinance, Article XI, Division B, Development Approvals, and Section 11-700 – Transportation Management Special Use Permits. This ordinance was enacted by City Council on May 16, 1987 to offset the traffic impact of new developments.

The ordinance requires that projects of the sizes indicated below, submit a special use permit application which must include a traffic impact analysis and a transportation management plan:

Office	50,000 or more square feet of usable space.
Retail	40,000 or more square feet of usable retail sales space.
Industrial	150,000 or more square feet of usable industrial space.
Residential	250 or more dwelling units.
Mixed-use	Any combination of space including one or more of the foregoing uses, at the threshold size applicable to that use. If the threshold is satisfied in any of the uses, the TMP must be prepared for all uses present in the project.

- A TMP fund is established to finance the transportation strategies to induce people to use public transportation. Some of these strategies are discounted fare media, shuttle bus service, registration fees for car sharing, bus shelter maintenance, bicycle lockers and parking facilities, and some administrative costs of the plan. The fund stays in an account belonging to the TMP holder but the city can claim this money if no approved transportation activities are conducted.
- As of June 30, 2012, 67 transportation management plans were prepared. Among these 62 are active; five were prepared but the projects developed in a manner that did not require a TMP or were not developed.
- In the Transportation and Environmental Services Department (T&ES), the Office of Transit Services & Projects (OTS&P) administers the TMPs. City staff verifies compliance with the conditions of TMPs through the following documents:
 - **Semi-Annual Fund Report** — This form is used to record the TMP financial contributions made by a TMP holder to support the transportation activities. It also records the expenses incurred and gives a summary of the contribution, the expenses and the balance to carry-over, if any. Deficits are shown as additional contributions by the TMP holder to avoid carrying negative balances.
 - **Residential and Commercial Surveys** — Their objective is to find out the modes of transportation used by residents and employees of developments holding a TMP. The survey measures the effectiveness of the transportation strategies carried out by TMP holders; these strategies are intended to stimulate single occupant vehicle (SOV) drivers to switch to transit, join a carpool, ride a bike, and use any other means of transportation.
 - **TMP Annual Report** — A narrative of the activities carried out during a year, providing a summary of the survey, and indicates what activities are planned for the coming year.

- The TMPs are conveyed in perpetuity with the land.
- Permanence of the TMP Ordinance — Prior to the signing of any lease/purchase agreements, the applicant/developer shall prepare appropriate language to inform tenants/owners of the transportation management plan special use permit and conditions therein. The city attorney's office reviews and approves such language.
- The Director of T&ES may approve modifications to agreed TMP activities, if the changes are consistent with the goals of the TMP.
- For additional information you can contact the TMP Coordinator in the Office of Transit Services & Programs (OTS&P), at 703-838-3800, or visit www.AlexRide.org.

C. Prince George's County

[Princes George's County](#) enacted a [Transportation Demand Management District](#) (TDMD) Ordinance in 1993 to provide the county and its communities with a formal and legally recognized procedure for orchestrating and monitoring trip reduction in areas of the county which cannot meet the General Plan level of service standards solely through roadway improvements.



TDMDs may be created by a petition to the County Council or formally instituted by the Council within the boundaries of a master plan, including Transit District Development Plans (TDDPs). In areas that have approved TDDPs, such as West Hyattsville, New Carrollton and Prince George's Plaza, TDMDs have been enabled in the Council's approval of the TDDPs.

A TDMD could be established by petition or through adoption of an Area Master Plan. A TDMD could be triggered when 20 percent of the intersections or interchanges in a given area begin to operate at LOS E or 10 percent at LOS F. The proposed thresholds that would trigger trip reduction requirements may differ in each TDMD.

Currently, the Prince George's County Council has enabled but not authorized any TDMDs. Trip reduction goals are determined in each area by existing capacity, comparable trip generation rates for proposed land use, and planned improvements.

Performance measures may include:

- Reduction of peak hour work travel from trip generation levels calculated using the Guidelines for the Analysis of the Traffic Impact of Development.
- Peak hour level of service at major intersections at or better than the General Plan LOS standard for the area.

Monitoring and compliance measures in the TDMD Ordinance include monitoring reports and annual reports by the Transportation Management Association or other responsible entity to the

Planning Board. Violations for unsuccessful compliance, non-compliance resulting from deceitful actions, and non-compliance resulting from non-cooperation include varying levels of penalties.

Transportation Management Associations, parking policies, and bicycle programs are identified as key elements of the workplace-related traffic demand management process once the TDMD is authorized and the TMA is created.

Greater detail on the boundaries and status of TDMDs within the County can be obtained from Mr. Faramarz Mokhtari of the Transportation Planning Section of the Prince George's County Planning Department at 301-952-3867.

D. Montgomery County

[Montgomery County](#), under its adequate public facility ordinance, requires proposed developments in traffic congested areas to offset the impact of new peak-hour trips generated by the new development. A traffic impact area is defined, and baseline traffic counts collected from this area prior to construction to establish the existing setting which must be maintained. Activities to reduce trips are prescribed on a case-by-case basis through the development approval process. These requirements are made part of the conditions of approval of the development and culminate in negotiation of a Traffic Mitigation Agreement (TMA) with the developer.



Montgomery County's most urbanized areas have been designated as [Transportation Management Districts \(TMDs\)](#). Existing TMDs are located in Bethesda, Friendship Heights, North Bethesda Silver Spring, and Greater Shady Grove. All new developments generating more than a minimal number of peak hour trips which are located within the County's Transportation Management Districts are required to undertake some type of traffic mitigation measures. Those generating larger numbers of trips are required to have TMA's.

The performance measure used for Montgomery County's program is no increase in peak hour traffic volumes in the defined area as a result of the proposed development, or in some cases no increase beyond a defined level. Under the county's recently-adopted Growth Policy, measures of impact are evaluated for both local intersections and on a broader "policy area" basis.

Monitoring and compliance measures for developments with TMA's may include driveway counts, periodic progress reports, and annual reports by the developer or other responsible entity.

To assist in obtaining traffic mitigation objectives, public parking in TMDs and many other urbanized areas of the county is carefully managed. A policy of constrained supply applies to most of these areas. New developments within Parking Lot Districts (PLDs) may forgo provision of on-site parking if payments are made to the PLD. Office developments within TMDs and certain other areas of the county may opt to reduce traffic impacts by reducing parking provided on-site. Under the zoning ordinance, two sets of reductions, of 15 percent each may be obtained in

return for certain actions, including annual payments in support of TMD activities. To implement these provisions, developers must enter into a Parking Reduction Agreement with the county.

In addition to development-based traffic mitigation, Montgomery County has an active program of employer-based traffic mitigation efforts. In November 2002, Montgomery County enacted County Council Bill 32-02, amending County law regarding the County's four TMDs. Effective March 2003, the purpose of the law [*Montgomery County Code, Part II, Chapter 42A Ridesharing and Transportation Management*] was to implement uniform requirements for employers in all TMDs in order to increase progress toward reducing traffic congestion and reaching commuting mode share goals.

Under Chapter 42A, all employers with 25 or more employees in the TMDs must implement the following transportation demand management (TDM) strategies:

- File a traffic mitigation plan (TMP)
- Submit an annual report of the employer's TDM activities
- Participate in the Annual Commuter Survey

Employers must file a traffic mitigation plan (TMP) within 90 days of notification. County guidelines require the employer's TMP to include the following elements:

- Designate an Employee Transportation Coordinator (ETC) a/k/a Transportation Benefits Coordinator (TBC)
- Post and/or distribute transportation information to employees
- Facilitate TMD presentations to employees/HR staff
- Promote MWCOG's [Guaranteed Ride Home program](#)
- Participate in the County's Annual Commuter Survey
- Provide American with Disabilities Act (ADA) transit information
- Provide a permanent display for bus/rail schedules and other information about commuting alternatives and "better ways to work."

Employers are encouraged and assisted by TMD staff to implement other TDM strategies, such as:

- Car/vanpool incentives
- Alternative work schedules
- Subsidized transit passes
- Pre-tax payroll deduction
- Enhanced Guaranteed Ride Home program
- Car sharing parking and/or incentive programs
- [Air Quality Action Day](#) participation
- Preferential parking for carpools/vanpools
- Formal telework (telecommuting) policy
- Bicycling/walking amenities (bicycle racks, changing rooms and showers)

The above-mentioned TDM activities are implemented by employers with assistance from Montgomery County's Commuter Services staff and their contractors. Activities are documented by employers with the submission of annual reports.

[Commuter Services](#) also operates a rideshare matching program in concert with the region-wide MWCOG [Commuter Connections](#) program. Prospective rideshare participants are matched with carpool, vanpool, or transit arrangements upon request. A program of personalized follow-up to ensure satisfaction with the commuting information and/or arrangements provided is an essential part of the County's rideshare program. Carpool and vanpool vehicles are also eligible for parking discounts in the county's public parking garages.

The Annual Commuter Survey developed by Commuter Services and administered through employers is used to create a database of employee commuting patterns in the TMDs and throughout the county. The survey helps monitor progress toward achieving mode share and other commuting goals. The survey also helps the Department of Public Works and Transportation determine what changes to programs and services are necessary.

Transportation Management Districts, developer Traffic Mitigation Agreements, parking management and reduction policies, personalized ride-matching assistance programs, and employer-based programs—including filing of Traffic Mitigation Plans, and undertaking strategies such as transit subsidies and telework programs—are key elements of the workplace-related TDM process in Montgomery County. Together these efforts are encapsulated in the slogan used by Montgomery County Commuter Services: “**Better Ways to Work.**”

Note: Montgomery County's employer TMPs (Traffic Mitigation Plans) are not required for federal government employers. However, Montgomery County will happily work with all federal agencies within Montgomery County and endeavor to have them voluntarily undertake the same types of strategies we promote with private sector employers.

E. Loudoun County

1. [Loudoun County](#) will require Transportation Demand Management strategies for both residential and non-residential development. Staff will develop transportation demand management (TDM) standards that will be used by applicants to create TDM plans.

These TDM standards will encourage new and existing development to implement strategies that will ultimately reduce vehicle trips and vehicle miles traveled. Examples of such strategies include providing employment opportunities suitable to local residents and housing suitable to local workers, and connectivity of neighborhoods and retail/commercial areas. In 2010, the county issued a long range TDM plan outlining specifics on an organization's development plans and how their TMP will adapt to the requirements asked for by the county.



2. The county will encourage existing and new employment and business uses to support alternative travel modes by offering ridesharing and car/vanpooling, minimizing the availability of parking beyond current county requirements, and providing site amenities (e.g., transit shelters and bicycle lockers) as appropriate. Employers should also investigate other incentives (e.g., parking cash out programs and telework policies).

F. Prince William County

[Prince William County](#) uses a proffer system to encourage Transportation Demand Management measures with respect to new public and private sector developments within the County. It has a formal proffer policy that sets proffer amounts for housing units sized to explicitly account for unfunded road improvements, parkland, schools, etc., but the policy does not currently account for needed and unfunded transit improvements. The county updated its comprehensive transportation plan.



Some of the requirements are as follows:

- Address safety (including pedestrian safety)
- Minimize conflicts with environmental and cultural resources
- Maximize cost effectiveness
- Increase accessibility of all travel modes
- Ensure consistency with land use plans to minimize projected trip demand
- Provide sufficient capacity to meet demand

G. Fairfax County

From the [Fairfax County Comprehensive Plan](#), 2007 Edition.
Policy Plan - Transportation, Amended through 2-12-20013



Objective 5: Promote Transportation Demand Management (TDM) to support efficient use of the county's transportation system.

Policy a. Promote and market public transit, ridesharing, use of HOV/HOT lanes, bicycling and walking with all potential users.

Policy b. Promote TDM strategies including teleworking, teleconferencing, tele-education, alternative work schedules, flexible work hours and/or variable pricing.

Policy c. Implement parking management programs and parking controls in activity centers to encourage use of mass transit, HOVs, and non-motorized transportation.

Policy d. Encourage and support employers and landowners to establish transportation management associations (TMAs).

Policy e. Work with private and public employers by establishing alternative commute programs to reduce SOV use.

Policy f. Work with the county residents, developers, homeowner associations and property management companies through residential based programs to promote use of public transportation, HOVs, non-motorized travel, and other alternatives.

Policy g. Work with Fairfax County Public Schools, private schools, and area colleges to establish programs that encourage the use of bicycling, walking, carpooling and transit.

Policy h. Require that applicants for rezoning and special exceptions show evidence that they have analyzed and evaluated potential TDM strategies. Encourage proffers of TDMs and develop enforcement mechanisms and proffers in support of the county's transit system.

Policy i. Develop TDM strategies and programs in cooperation with MWCOG and other local jurisdictions.

In 2008 the Fairfax County Department of Transportation will complete a study on integrating TDM into the land-use and approval process. The results of this study may lead to changes in the existing policies.

H. District of Columbia

Though the [District of Columbia](#) has no TMP ordinance, MWCOG provides TMP services to the District.

In 2010, the District Department of Transportation issued a report on the inclusion of TDM practices in the development review process. At this time there is still no TMP Ordinance.



Examples of Federal Agency Transportation Management Plans

Provided below are examples of recently prepared or updated TMPs for federal facilities. Each TMP is developed in response to agency mission and needs, as well as its location and context. The examples below represent campuses in locations with varying access to road, transit, and bike/pedestrian infrastructure. Several sites are experiencing substantial growth, while others are planning for a stable workforce population.

St. Elizabeths - West Campus (Southeast Washington, DC)

The Saint Elizabeths - West Campus is situated in a Washington, DC neighborhood to the east of the Anacostia River, approximately a half mile from the nearest Metrorail station. The West Campus is bordered by Martin Luther King, Jr. Avenue, Interstate 295 (I-295), and the Barry Farm and Congress Height neighborhoods, with approximately 176 acres and 4,000 employees (forecasted to increase to 14,000 by 2026) from a single tenant organization. The Department of Homeland Security selected the West Campus site to accommodate its headquarter facilities and other major agencies, consolidating many of its existing regional facilities to this new location. The current TMP for Saint Elizabeths - West Campus may be accessed at: www.federaletc.org

Notable TMP Characteristics:

- Very thorough and organized in a logical, easy-to-follow manner.
- Regular annual TMP reporting to upper management.
- Ambitious continual 1:4 employee parking ratio goal.
- Future travel mode split goals.
- Extensive survey of other federal, state, county agencies' Travel Demand Management strategies as basis for St. Elizabeths West Campus Transportation Management Plan.
- Unique future TMP programs such as: mortgage incentives near transit, government vehicle/flex-car programs, shared shuttle route with nearby Joint Base Anacostia - Bolling, and remote parking leasing.
- Analysis of "future condition" scenario to assess potential traffic impacts and mitigation measures.

Joint Base Anacostia-Bolling (Southeast Washington, DC)

JBAB is situated along the eastern shore of the Potomac/Anacostia Rivers, bordered by the Naval Research Laboratory, South Capitol Street/Frederick Douglass Memorial Bridge, and Overlook Avenue/I-295. The installation has approximately 13,800 employees (with no forecasted increase) on 905-acres of land, from 60-70 tenant organizations. JBAB's Main Gate is located approximately 0.5 miles from the closest Metrorail station. The current TMP for JBAB may be accessed at: www.federaletc.org

Notable TMP Characteristics:

- Strict installation-wide parking management/enforcement program to control Single Occupant Vehicle (SOV) parking.
 - Parking prioritized as follows: employees with disabilities, vanpools, carpools, executive officials, alternative fuel vehicles, and SOVs.
 - Identification of underutilized lots for use as shared parking near prioritized future development sites.
- Ambitious short-term (5-year) employee parking reduction goal of 10% and long-term (20-year) goal of 1:4 (from existing 1:1.67 parking ratio).
- Unique future TMP programs such as: water taxi/ferry service, Capital Bikeshare, shared shuttle route with DHS/St. Elizabeths West Campus, and on-site Metrobus/DC Circulator service.
- Short-term (5-year) and long-term (6-20 year) transportation mode share goals.
- Identified future “transit hub” locations.

Naval Support Activity – Bethesda (Bethesda, Maryland)

NSA-Bethesda is located just north of the Bethesda Central Business District, bordered by Rockville Pike (Maryland Route 355), I-495 and Jones Bridge Road. The installation employs approximately 11,700 employees (forecasted to grow to 12,600 by 2022), situated on 243-acres of land, with approximately 20 tenant organizations. NSAB has excellent local and regional accessibility with its location near downtown Bethesda, I-495, and the Bethesda Metrorail Station. The current TMP for NSA-Bethesda may be accessed at: www.federaletc.org

Notable TMP Characteristics:

- Maintains NCPC Comprehensive Plan-recommended parking ratio goal of 1:3.
- Robust parking management program.
- Identifies recommended future TDM programs/strategies based on commuter survey results.
- Extensive bicycle parking system with 17 locations and 630 spaces.

SAMPLE TRAFFIC MITIGATION PLAN

Company/Organization Global Solutions, Inc.			
Address 5530 Wisconsin Ave, Suite 320	City Friendship Heights	State MD	Zip 20815
Number of Full-time Employees 300		Part-time Employees 0	
Submitted by Tom A. Jones		Title President	
Signature		Date March 31, 2011	

Here's our plan to reduce gridlock in Montgomery County by offering the selected transportation benefits to our employees. In the first column, we've placed an *E* next to the strategies that we already have in place, and *N* next to the strategies that we will implement with this year's Traffic Mitigation Plan. In the last column, we've described our current or planned efforts.

E= Existing Strategy N= New Strategy * Required Strategy

	<u>Traffic Mitigation Strategy</u>	<u>Employer Description</u>
*	Contact person designated to receive and distribute information	Ellen Davis, Human Resources Director, 301-555-5555; edavis@globalsolutions.com. We will notify the TMD in writing of any changes in this information
E	Information on transit/pooling/other commute alternatives distributed/posted regularly (furnished by TMD)	Information on transportation services is posted in the employee break room.
*	Facilitate TMD staff presentations to employees and HR/Administrative staff on commute information/alternatives on periodic basis	We hold an annual benefits seminar in the fall. We would like TMD Staff to attend to display information and answer employee questions
N	Guaranteed Ride Home Promotion (free regional program offering emergency rides)	We promote the Guaranteed Ride Home program to our employees. We provide brochures to employees with their monthly transit benefit.
*	Annual Commuter Survey distributed to employees (short survey of transportation—supplied by TMD)	<i>[Please describe your approach to gaining 80 percent participation from your employees]</i> We will distribute survey to our employees via e-mail from our company president. We will also send an e-mail reminder.
N	ADA information provided (transportation services for people with disabilities)	We will provide disabled employees with information on the regional Metro Access program and Montgomery County's Same Day Access program.
*	Permanent display area for TMD-provided bus schedules and other transportation information	We plan to install a transit map and brochure racks in our employee break room.
N	Compile information on yearly TMP activities and submit Annual Report	We will maintain a file on the promotion and implementation of the strategies selected above and include in our Annual Report to DOT.
*	Attendance at free CSS-sponsored meetings/workshops permitted for designated contact person	Ms. Davis will be permitted to attend four such meetings per year.
E	Information on commuting alternatives provided to new employees (TMD can provide materials and/or attend orientations)	We inform new employees of our transit subsidy program and provide Metro pocket guide and Ride On route maps to assist them in transit planning.
	Free or reduced rate parking for car/vanpools offered to employees	
	Preferred location and/or reserved parking for car/vanpools offered to employees	

SAMPLE TRAFFIC MITIGATION PLAN

N	Provision of car sharing space in highly visible location within on-site parking facility.	We provide two car sharing spaces within our surface parking area near the building entrance.
N	Provision of car sharing incentives, including paying part or all of membership costs, rental costs, or similar incentives.	We provide paid car sharing membership for all our employees and provide reduced-cost rental fees through an arrangement with the provider. We encourage use of car sharing vehicles when use of transit is not feasible for business or personal appointments.
N	Bike amenities at worksite, such as racks, lockers, and showers (TMD may be able to supply)	We will arrange to have bike racks installed in our garage.
	Transit/pedestrian amenities at worksite, e.g. sidewalks, benches, etc.	
	Carpool matching for employees (as part of free region-wide matching program, or can be on-site only)	
N	Alternative work schedules: <input type="checkbox"/> Flex Time <input type="checkbox"/> Jobsharing <input type="checkbox"/> Compressed Work Week <input checked="" type="checkbox"/> Telecommute/Teleworking	We have an informal telework program that allows some employees to telework in special circumstances. We have a formal telework program that started on MM/DD/YYYY and N employees currently participate in this program.
E	Tax-free monthly transit subsidies provided to employees, including Super Fare Share, Fare Share and Metrocheck.	Our company participates in the County's subsidy program. We started our program on MM/DD/YYYY and N of our employees are currently participating in this program. The amount of the subsidy is \$NN.NN including the County portion.
N	Maryland State Commuter Tax Credit for employers	TMD Staff explained that we qualify for the State's 50 percent tax credit on our contributions to employees' commuting costs. This is worth up to \$50/month per participant in tax credits. We will apply for the tax credit this tax year.
	Pre-tax payroll deduction for transit costs offered to employees (Saves employer & employee money)	
	Transit passes/tokens offered for purchase at worksite (at full or reduced price)	
	Subsidize employee parking and transit equally (if employee parking is currently subsidized, offer equal subsidy for transit costs)	
	Ozone Action Days participation (regional program to alert people to dangerous air quality days)	
	Other: Please Indicate	

Please attach to cover letter and submit to:

Mr. Arthur Holmes, Jr., Director
 Montgomery County DOT
 c/o Commuter Services
 101 Monroe Street, 10th Floor
 Rockville, MD 20850
 240-777-8391 (fax)

