

Chapter 4

Transit and Commuter Services

Transit and Commuter Services

The Transit and Commuter Services division of the Office of Transportation Services supports the use of commuting alternatives and promotes these options to the citizens, employees and visitors of Loudoun County. Transit, also known as public transportation, can take many forms. It includes regional rail transit, such as Washington, DC's Metrorail service, as well as various types of bus service.

In Loudoun currently three types of bus service provide transit options for the citizens. The first option is the County managed commuter bus system called Loudoun County Transit, or LC Transit. This bus service operates commuter coaches that pick up at park and ride lots within Loudoun and take passengers to various destinations in the Washington Metropolitan region. Destinations include West Falls Church Metro Station, Rosslyn, VA, the Pentagon and numerous stops in the District of Columbia.

The second transit option for citizens is a network of local fixed route buses that traverse roadways within Loudoun County. There are currently nine fixed bus routes, three of which run exclusively within the Town of Leesburg. Residents can board a bus in the western end of the County in Purcellville, transfer at various hub locations and end up at the Fairfax/Loudoun County line. This service is managed by the Virginia Regional Transportation Association (VRTA).

Residents can also use the on-demand or curb to curb service provided by the not-for-profit transit provider in Loudoun County. This service requires that residents request their trip at least 24 hours in advance so the equipment can be scheduled accordingly for each day.

Other transportation options include carpooling, also called ridesharing, vanpooling, bicycling or walking. These options are discussed later in this chapter.

A. Transit and Land Use

A number of land use attributes that enhance quality of life and support transit use include:

- A compact urban form,
- An increase in the number of residents and employees within a ¼ to ½ mile radius of a transit stop,
- A richness of the land use mix in transit corridors,
- The pleasantness of the environment for pedestrians and bicyclists, and,
- A comparable or lower cost of transit versus driving, including parking costs.

Of these attributes, compact residential and employment densities are the single most important factor

associated with transit use.⁴ The greater the number of people near a transit system, the greater the potential ridership on that system (see Table 4-1, pg. 4-2). While ridership is dependent on a variety of different conditions, a review of national and international research sponsored by the Federal Transit Administration (FTA) suggests minimum levels of transit service appropriate for various residential land use densities.

Typically, five to eight million square feet of commercial/office space can support minimum bus service (1 bus/hour) while 35–50 million square feet of commercial/office space would be needed to support light rail or feeder bus service.⁵ Higher concentrations of employees would be necessary for viable rapid rail service (i.e., Metrorail).

**Table 4-1
Relationship Between Residential Densities And Different Types of Transit Services⁶**

Boris Pushkarev and Jeffrey Zupan (1982) recommend the following densities			
Service Levels			Density Thresholds
Bus: minimum service	½ mile between routes	20 buses/day	4 du/acre
Bus: intermediate service	½ mile between routes	40 buses/day	7 du/acre
Bus: frequent service	½ mile between routes	120 buses/day	15 du/acre
Light Rail:	25-100 sq-mile corridor	5-minute peak headways	9 du/acre
Rapid rail (Metrorail):	100-150 sq-mile corridor	5-minute peak headways	12 du/acre
Commuter rail (VRE):	Existing track	20 trains/day	1-2 du/acre

Pedestrian-friendly, mixed-use development that combines residential, retail, and office uses helps to provide a continuous two-way flow of riders throughout the day. Mixed-use development has been shown to reduce the need for the car by 18 to 25 percent when some trips, such as lunchtime errands, can be accomplished on foot or by bicycle. The need for parking construction can be reduced by creating shared parking opportunities.⁷

Because of the strong linkage between land use and transit and the life span of residential and commercial development, the County will seek transit-supportive development in the transit corridors. Currently, these corridors are the Dulles Greenway, Routes 7, 28 and US 50 in the Suburban Policy Area. Interim uses that do not provide densities sufficient for transit service will be discouraged. Attention will be given to a coordinated land use and transportation strategy during the Community Plan process to more fully establish the density, use mix, and urban design characteristics of each of these transit corridors. Corridor designations may be revised based on the results of the Countywide Public Transportation Study underway in 2007.

Residential and nonresidential densities in transit nodes are dependent on the transit service available and may reach density levels as high as 50 dwelling units per acre and a floor area ratio (FAR) of 2.0 when rapid rail transit service is in place. Outside the Dulles Greenway corridor, high density residential neighborhoods may be built at densities of up to 16 dwelling units per acre. Higher density residential

⁴ Transportation Research Board, National Research Council, Transit and Urban Form, Transit Cooperative Research Program Report 16, Volume 1, 1996.

⁵ Ibid

⁶ Ibid

⁷ Ibid

development is also encouraged as part of a mixed-use community in areas planned for Business uses and the designated Urban Center. The *Revised General Plan* also outlines design parameters to help the Suburban Policy Area succeed in becoming a walkable, mixed-use community.

B. Dulles Corridor Metrorail Project

The Dulles Corridor Metrorail Project, currently in the preliminary engineering phases, is one of the County's and Region's priority transportation projects. Once completed, this system will bring rail transit service to Loudoun County with stops at Dulles Airport and at transit nodes in the vicinity of Route 606 and Route 772 along the Dulles Greenway. This project is a result of a Major Investment Study (MIS), which recommended extending Metrorail from the vicinity of the West Falls Church station in Fairfax County through Tysons Corner and Reston along the Dulles Airport Access Road and along the Dulles Greenway into Loudoun County. The Dulles Corridor Metrorail Project has been incorporated in the regional CLRP endorsed by the National Capital Region Transportation Planning Board (TPB).

The project has been divided into two phases, with Phase 1 scheduled to be operational to Wiehle Avenue in Reston by 2011 and Phase 2 scheduled to be operational to Route 772 in the Ashburn area by 2015. Service on the new Metrorail line will continue from stations in the Dulles Corridor onto existing Orange Line tracks and serve existing Orange Line stations from East Falls Church in Arlington County to Stadium-Armory in Washington, DC. With the arrival of Metrorail service to Loudoun County, existing bus transit service will be altered to serve changing commuter patterns.

This project is considered particularly important for the County's transportation system as it provides vital surface transportation links to Dulles Airport and offers convenient commuting opportunities for County residents who work in Fairfax County and other jurisdictions in the Region's core. The project will also benefit employees who travel "reverse commutes" from neighboring jurisdictions to employment centers in Loudoun County.

Without this project, congestion levels on all three major east-west roadway connections to Fairfax County and the Region's core may reach intolerable levels, leading to serious impacts on the economic health of the County. Moreover, by 2020, the region will need this project in order to stay within its emissions budget and satisfy the requirements of the Clean Air Act. The County has demonstrated its strong commitment to the project through the identification of local funding sources in the adopted Capital Improvement Program. These funds will be pooled with other funds dedicated by the Metropolitan Washington Airports Authority (MWAA), Fairfax County, as well as the state and federal governments.

C. Commuter Bus Service

In the 1970s and early 1980s, a privately owned and operated commuter bus service called the Sterling Commuter Bus carried passengers from Eastern Loudoun County to destinations in Washington, DC. In 1993 the service encountered financial difficulties and in 1994 the County assumed the operation. In the twelve years since the County began operating the service, passenger volumes have grown steadily. Annual ridership over the last 12 years has grown from 44,873 annual passenger trips in 1995 to 602,330 in fiscal year 2006.

The commuter bus program is currently divided into three distinct routes and types of service. The first, which is the original type of service provided by Loudoun, is the service from strategic park and ride lots traveling all the way into the core of Washington, DC., and sometimes called "long-haul" service. Park and ride lots served by this service currently exist in the communities of Purcellville, Hamilton, Leesburg, Dulles South and Ashburn/Sterling. The average distance traveled for passengers on these buses is about 38 miles averaging about an hour and ten minutes of time on the bus.

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The second route/service is shorter in distance and time. Commuter buses pick up from the northeast portion of Loudoun (Broad Run Farms, Cascades and Lowes Island) and travel to the West Falls Church Metro Station only. This service provides the much needed link to the Metro system of rail and buses as well as other local bus systems. Travel time is about 35 minutes and 15 miles one way.

The third commuter bus service is called the Reverse Commute bus. Passengers board from the West Falls Church Metro Station and travel to employment centers in Loudoun County. This service has expanded to include destinations in Sterling, Ashburn, Lansdowne and Leesburg. These buses also provide a connection to the local fixed route service provided in the County.

In 2003 Loudoun County made the decision to purchase its own fleet and contract out only the operation and maintenance of the equipment. That year the County applied for and received State Capital Assistance funds and Governor's Congestion Relief funds to combine with State Dulles Toll Road Set Aside funds and lease/purchase financing to acquire 22 MCI D4500 commuter coaches. In February 2004 the first of the 22 commuter coaches arrived in Loudoun County. The buses are 45 feet long and accommodate 55 passengers with amenities such as reclining seats, restrooms, reading lights and LED destination signage. The coaches are also embellished with the LC Transit logo and phone number. The County continues to purchase commuter coaches and as of June 2007 has 33 buses in the commuter fleet.

D. Fixed Route Local Bus Service

A coordinated system of fixed route bus service is offered in Loudoun County. This system currently has six local fixed routes with three additional routes within the Town of Leesburg. The routes come together at various locations called hubs that allow for transfers between the fixed routes. Most of the fixed route service operates weekdays only and on either half-hour or hour headways. The fixed routes also provide a connection to the Fairfax Connector bus service at the county line at Dranesville Road and Route 7 and the Washington Metropolitan Area Transit Authority (WMATA) metrobus service at Dulles Airport. These connections provide passengers the opportunity to travel to parts of Fairfax County as well as to numerous locations in Arlington and Washington, DC including many Metrorail stations throughout the region.

Specialized transportation also known as curb-to-curb service is available to the citizens of Loudoun County. This demand response service provides travel assistance from a resident's home to locations in Loudoun for medical appointments, shopping and other basic needs destinations. Fares vary throughout the County based on the length of trip and users of this service are required to call 24-hours in advance to make reservations. Trips will be arranged where logistically possible. The current operator complies with all ADA rules and regulations. Citizens who live within $\frac{3}{4}$ mile of a fixed route are asked to catch the bus along the fixed route. Citizens may also complete an ADA application if they live within the $\frac{3}{4}$ mile range and need ADA services. The operator of this service will make every attempt to schedule as many demand response trips as logistically possible with the equipment available for specified areas of the County.

Both of these services are operated by the state designated rural provider for Loudoun County, VRTA. Funding for the fixed route and curb-to-curb (demand response) service is from a combination of Federal funds, State funds, local gasoline tax funds and other sources.

E. Rideshare Services

Another commuting option available to citizens is sharing the ride by joining or forming a carpool or vanpool. A carpool is at least two people riding in the same vehicle to/from home or park and ride lots and work sites. A vanpool is at least seven people riding in a vehicle to/from home and work. Carpools and

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vanpools save commuters money by reducing their cost(s) of gasoline, parking, tolls, maintenance/repairs, and even insurance when they share a ride. Office of Transportation Services staff is a member of Commuter Connections which provides a regional database of registered carpoolers and vanpoolers looking for new riders/drivers. Staff has the ability to provide citizens with potential commuter matches based on their origin and destination and work hours. The commuter match service is free.

A relatively new program to Loudoun County and the nation is NuRide. NuRide is a program that rewards people for carpooling or sharing the ride. NuRide is a private corporation that seeks sponsorship from retail businesses and corporations to provide carpoolers with reward miles that can be redeemed for items such as gift certificates, discounts on purchases and actual material items. Loudoun County government was instrumental in helping launch NuRide in 2003 and a good percentage of county government employees take advantage of the reward benefits.

Through the VANSTART and VANSERVE programs, citizens may receive subsidies to either fund empty seats in their start-up vanpool or in one that is losing members and needs financial help to continue operating. These two programs are administered through the County with funding support from the Commonwealth of Virginia. Both of these programs require the completion of forms and a tabulation of monthly expenses and passenger lists. The length and amount of subsidy given for each van varies based on the number of seats in the van and the number of vacant seats for each month requesting funding.

F. Education and Promotion of Commuting Alternatives

Loudoun County Office of Transportation Services, Transit and Commuter Services Division, responds to the transportation inquiries and requests of citizens. Staff replies to on average 650 phone calls and 550 emails inquiries per month and about 110 pieces of informational mail are sent. The public is informed about their transportation options through numerous marketing techniques. Advertisements are placed in all the local newspapers and some magazines and commercials are played on the one local radio station. Posters and schedule racks are placed in government and private buildings, and homeowner associations and real estate agents receive updated information packets twice a year. Staff develop and participate in a variety of events throughout the year promoting transportation options. These events include Senior Appreciation Days, Bike To Work Day, Clean Commute Day, transportation and employment fairs, and other events sponsored by either the public or private sector. These events provide the opportunity to distribute written material and conduct face-to-face commute planning for citizens in Loudoun County.

County staff design and publish newsletters for bus riders and employers, create posters for display stands, produce informational brochures for new Loudoun residents and create bus schedules for each commuter bus and local fixed route bus service. Staff also develop the commuter bus schedules in a format that can be uploaded to rider's personal digital assistance devices (pdas). The total number of commuter and local bus schedules produced and distributed in 2006 was over 153,000.

G. Air Quality Action Days

Air Quality Action Days is a program that educates the general public about ozone, good and bad, and how humans can do their share for cleaner air.

There are two types of ozone - ground level and stratospheric. Stratospheric means the ozone "up high;" the ozone layer that protects the earth. Ground level ozone is the type of ozone that can occur "nearby;" or in the air that we breathe every day. Ground level ozone results when Volatile Organic Compounds (VOC's) and Oxides of Nitrogen (NOx) come together in the hot, still weather of summer. Ground level or "bad" ozone is an air pollutant that damages human health, vegetation and many common materials. It is a

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key ingredient of urban smog. During this time, high concentrations of ground level ozone can cause shortness of breath, coughing, wheezing, headaches, nausea and eye and throat irritation. It is also during these bad days of ground level ozone that people with lung disease, the elderly and children may have increased difficulty breathing.

Air quality terms such as "Code Red" and "Code Orange" will be used to alert the public to the degree or levels of ground-level ozone. Code Red refers to air quality action days when outdoor activities may be harmful to all employees and Code Orange refers to days that may be harmful to those at higher risk, such as employees with asthma and the elderly.

Loudoun County Government has established a list of action steps which employees are asked on a volunteer basis to follow on Air Quality **Code Orange** and particularly Air Quality **Code Red** Days. The following recommended actions include:

- a) Canceling or postponing outdoor programs and activities, particularly those involving children or the elderly.
- b) Postponing the use of any gasoline powered equipment, including lawn mowers, tractors, construction equipment, etc.
- c) Canceling, postponing, or significantly limit local and long-distance use of vehicles. **Take Transit (LC Transit and local fixed route buses are free on Code Red Days)**
- d) Refueling all business and personal vehicles after dusk or the day before if Air Quality Code Red or Orange is predicted.
- e) Consider Telecommuting.

The County has also established a standard by which employees will receive notification relative to bad ozone (air quality) days. Employees will receive email notification from the Office of Transportation Services letting them know when an Air Quality Code Orange and/or Code Red day is forecasted so County staff can prepare to take action. Also the four-head color stop light will be on display in the lobby of the County Government Center alerting the public and employees of unhealthy air quality days. The bad air quality notice is also posted on the County's intranet. Staff informs the public of these voluntary steps via newspaper advertisements, press releases and newsletters for employers and bus passengers.

Public Transit and Ridesharing Policies

1. The County will direct new development to identified transit corridors and zones that are outlined in the *Revised General Plan* for economic, environmental, social and other reasons that will improve the viability and cost-effectiveness of the future transit services and reduce traffic congestion in the Suburban Policy Area where applicable. The County will encourage design features to improve transit accessibility and efficiency.
2. Loudoun County will plan and implement:
 - a. The development of efficient, convenient and environmentally sound local and commuter transit and ridesharing services; and

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- b. The development of an efficient all-day bus service connecting Loudoun County to Metrorail and potentially providing interjurisdictional connections to areas such as Herndon and Reston and Tysons Corner.
3. The Dulles Greenway (Route 267), Routes 7, 28 and 50 (through the Suburban Policy Area) and planned accompanying collector roads are designated as transit corridors, defined as the transit route and the land area for up to one mile on either side of the route. Land use applications must conform to current land use policies of the Comprehensive Plan in a transit corridor. Transit corridor designations will be updated based on the Countywide Transit Plan underway in 2007 and additional analysis by staff as part of the Community Plan process in the Suburban Policy Area. Approvals of land use applications in these corridors will be in conformance with an integrated land use/transportation element that has established the density, use mix, and design for a corridor.
4. The County may permit interim development in transit corridors at densities lower than those needed to support viable services. This will be limited to situations where there will be a tradeoff benefit (e.g., ongoing revenue stream to subsidize the service, analogous infusion of capital/in kind contribution, or combination) associated with the development, which promotes the viability of intended transit services. The County discourages proposed ultimate development in these corridors at lower densities than those needed to achieve the viability of transit services.
5. The County will consider reducing parking requirements for development near transit nodes once transit becomes available in order to encourage transit usage.
6. The County will take the lead to expand transit and ridesharing services that are responsive to growth, congestion and air quality demands on the region.
7. County involvement in transit will be phased based on the completed 2007 transit plan. The County will continue to accept responsibility for the control and management of a transit system
8. The County will provide ongoing technical and financial support for all transit and ridesharing programs serving identified needs in the County.
9. County financial assistance for transit and ridesharing programs will be based on the following objectives:
 - a. The County will strive to maximize the cost effectiveness of all transit and rideshare programs subsidized by the County.
 - b. The County will promote the use of transit and ridesharing services by potential automobile users.
 - c. The County will promote the use of transit and ridesharing services by transit dependent individuals through fare assistance, outreach efforts and coordination of services with other transit providers within and adjoining Loudoun County.
10. The County will facilitate the implementation of rail service in the Dulles Greenway corridor. This service will connect with Metrorail Service at the West Falls Church station. It will serve Fairfax County locations in the corridor and extend to Loudoun County stations at Dulles Airport, Route 606/Dulles Greenway and Ashburn-
11. The County, in partnership with VDOT, WMATA and/or other appropriate agencies, will ensure that land needed to provide planned transit improvements (e.g., park and ride lots, separate rail rights-of-way, dedicated busways, etc.) is obtained or reserved prior to or during the process of reviewing land development applications which affect such land. Land acquisitions and reservations will take into consideration both the near term and ultimate transit system configurations, where applicable.

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12. Planning for transit improvements in Loudoun County should incorporate the findings of the Transit Study to be completed at the end of 2007.
13. The County will develop transportation demand management standards that will be used to reduce vehicle miles traveled. These will include reducing through-traffic by providing park-and-ride lots and commuter transit service near Loudoun's borders on major routes, and requiring local street connectivity according to an index of street connectivity that will be required in traffic impact statements for large developments.

A. Park-and-Ride Lots

Park-and-ride lots are important to a multi-modal transportation system. They provide space for commuters to park their cars for the day to either join others in a carpool or to take the commuter bus to employment centers in the region's core. Park-and-ride lots help reduce traffic congestion and pollution and assist the Region in meeting Clean Air Act requirements. Properly located, a park-and-ride lot can also function as a short-term interim use prior to development of a site. A park-and-ride lot next to a future transit stop may reserve land that could later be used for more intense development to help ensure the long-term viability of the transit station. This may be appropriate in Urban Centers proposed in the *Revised General Plan*. Regional park-and-ride lots will not be located in the Transit-Oriented Development.

The County currently operates a system of leased and donated park and ride spaces. These spaces are either churches, shopping centers or vacant businesses with excess parking spaces. The County is currently designing and building its first county-owned park and ride lot on site off of Sycolin Road in Leesburg. This 691 space lot will be served by the Loudoun County Transit commuter bus service as well as the local fixed route service. It will include bike lockers, bus shelters, telephones and waste receptacles.

The design of park-and-ride lots is to be consistent with the County's goal for a high-quality, pedestrian-friendly, and environmentally-sensitive setting. Park and ride lots are to be located near major arterial and collector roads. Lots will be linked to surrounding neighborhoods by sidewalks and bicycle facilities. Adequate lighting provides for the safety of commuters and landscaping ensures attractiveness and environmental sensitivity.

B. Bus Shelter Standards

The County has recently approved a standard for public and private bus shelters installed in Loudoun County. Developers are encouraged to follow this bus shelter standard when installing shelters along fixed bus routes in Loudoun. This purpose of the standard is to reflect consistency of transit related products throughout the County.

Principal passenger-loading areas should be provided with shelters to protect public transit patrons. Because the shelter can be expanded relatively easily at a later date, provided sufficient platform space is installed initially, it is not critical to provide a shelter that accommodates all anticipated passengers at the time of original construction. It is more important to install at least the minimum standard size the County is requiring for bus shelters. Accessories that should be provided with the shelter include lighting, benches, route information, and trash receptacles.

A large 16-foot long shelter shall be required to serve transfer points, commuter bus stops and other locations where high boarding concentrations are anticipated. A smaller 12-foot long shelter shall be provided in other locations.

Solar lighting shall be provided inside the shelter with both timer and motion detector options. Exceptions may be made when other sources of lighting are available, i.e., overhead street light.

C. Maintenance of Bus Shelters

- 1) Shelters that are erected on private property will be maintained by the property owner with the following guidelines: trash is to be removed at minimum twice a week, all graffiti to be removed immediately from shelter, lawn care, if applicable, will be kept neat surrounding the shelter, and lighting if supplied will be in working order.
- 2) All frames, roof panels, hardware and accessories associated with the shelters on private property shall be the responsibility of the property owner to guarantee repair and/or replacement of worn-out/defective parts.
- 3) Bus shelters located in VDOT or County right-of-way shall be the responsibility of Loudoun County.
- 4) The County (Office of Transportation Services) will supply appropriate schedules and/or brochures for placement in shelter display racks.

Park-and-Ride Lot Policies

1. Park-and ride lots in the towns and the Suburban Policy Area will be located along or at the intersection of arterial or major collector roads, near activity centers such as commercial or mixed-use centers, schools, or other destinations, at transit stops, or in other safe and secure locations that provide convenient access. They should be connected by sidewalks or shared pathways to enable carpoolers and pedestrians to walk to the lot. These park-and-ride lots should receive priority consideration for the installation of bicycle lockers and racks.
2. Park-and-ride lots will be designated to provide convenient and safe bus access either within or adjoining the lot. Boarding locations for all transit and shuttle services at or near park-and-ride lots should be designated and signed. Schedules, service and fare information should be posted at boarding locations. All such areas need to be evaluated for provision of seating and weather protection. The relevant provisions of the Americans with Disabilities Act need to be incorporated in lot layout and boarding area design.
3. All publicly owned park-and-ride facilities will be well lit and equipped with waste receptacles-
4. Regional park-and-ride lots will not be located in the Transit Oriented Development (TOD).

Transportation Demand Management

Over the next twenty years, Loudoun County and the Washington Metropolitan Region will face great challenges in managing its transportation system. The population is expected to grow 35-40% by 2025. Virginia has one of the best transportation systems in the world; however, it is also home to the third most congested region in the nation (2003). The state and the county can no longer build their way out of congestion. Instead the focus must be on how to best manage what is already in place and plan for the anticipated growth.

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Transportation Demand Management (TDM) is key to improving utilization of existing facilities and services while accommodating growth. TDM programs help manage travel demand to make the systems more efficient. Its core mission is to move more people in fewer vehicles, move travel time out of the peak period, or, in the case of teleworking, eliminate travel time altogether. TDM focuses on people-oriented transportation choices and shared ride transportation solutions.

TDM is accomplished through a unique partnership between the Virginia Department of Rail and Public Transportation (DRPT), local commuter assistance programs such as Loudoun County Transit and Commuter Services, the Metropolitan Planning Organizations, various Transportation Management Associations (TMA's) and the Virginia Department of Transportation (VDOT). Heavy emphasis is placed on employer outreach to assist employers in developing or expanding employee transportation programs. DRPT provides Loudoun County technical and financial support through grant programs, research, training, and marketing assistance.

A. Benefits of Transportation Demand Management Programs

The benefits of enhanced investment in public transportation and TDM programs to Loudoun County and the region span a broad range. Some of the most notable benefits include:

- **Improved Mobility and Travel Choice** - Loudoun County is aware that it must keep pace with the growing needs of its citizens. By adding more local and commuter bus routes and service, the County and its local transportation providers can help to improve the mobility of its citizens and offer them a variety of ways to travel in and out of Loudoun County.
- **Reduced Congestion** - Public transportation serves to reduce congestion on many of the major highway facilities in Loudoun County. According to the Texas Transportation Institute (TTI) the "congestion tax," or what it cost the average rush hour driver in Northern Virginia per year for congestion is \$1,600 in 2007 dollars. This added cost can be reduced through transportation demand management programs such as transit and carpools and vanpools.
- **Improved Air Quality** - In fiscal year 2006, LC Transit saved the County 15.3 tons of Nitrogen Oxides (NOx) and 4.75 tons of Volatile Organic Compounds or VOCs. These air pollution savings are based on a savings of 19,890,920 vehicle miles traveled last fiscal year. Basically these numbers equate to improved air quality because passengers riding public transportation are not adding to pollution by driving their own vehicles to work.
- **Improved Quality of Life** - Citizens who choose a form of commuting other than the single occupant vehicle may improve their quality of life. These improvements come from less stress of driving alone in congestion, time savings by using the high occupancy vehicle (HOV) lanes, and cost savings by sharing the ride with other people.

B. Transportation Demand Management Program

The Loudoun County Office of Transportation Services offers a variety of TDM programs to County residents. These programs provide commuters information and assistance in finding and using alternative modes of transportation. These alternative modes include local and commuter bus service, carpool and vanpool matching services, teleworking, bicycle and pedestrian facilities, park and ride lots and HOV lanes in neighboring jurisdictions.

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- Commuter and Local Public Transportation – This strategy provides residents with the choice of riding a bus to and from work where applicable to their worksite in and out of the County.
- Carpool and vanpools – The County through Commuter Connections can provide residents with information via a match letter that details names, employment and work hours of potential carpools and vanpoolers. This information may encourage people to try carpooling/vanpooling with someone from their neighborhood.
- Employer Outreach – County staff work with employers to develop strategies to reduce the number of single occupant vehicles traveling to Loudoun.
- Telework – Telecommuting or working from home or a telework center reduces vehicle miles traveled, plus research demonstrates that people who telework are more productive.
- Bicycle and Pedestrian facilities – These include bike and pedestrian paths connecting to employment sites and major regional bike trails.
- Park and Ride lots and HOV lanes – Commuter lots encourage people to try transit and ridesharing if there is a legitimate parking place for their personal vehicle. HOV lanes allow carpooler/vanpoolers and transit to save travel time.

Employers can also utilize TDM programs by providing employee transportation programs.

C. Employer Outreach

Employer Outreach involves a strategic effort to reduce the number of single occupancy vehicles driven to workplaces throughout Loudoun County. Outreach is mainly targeted at private companies with 100 or more employees working in Loudoun County, but smaller companies will receive equal assistance. Assistance is provided at no cost to the employer or employees. With the employment level anticipated to rise from about 130,000 employees in 2006 to almost 290,000 by 2025 this program will be even more important.

A full-time employer services representative contacts employers and encourages them to adopt or expand voluntary alternative commuting programs such as transit, ridesharing, preferential parking for carpools and vanpools, bicycle riding, flexible work schedules and telework. Specific efforts offered to employers and their employees include commuter surveys, commuter information fairs, transit benefits, Telework!VA, and the display of alternative commute literature within the workplace.

The employer outreach program is supported and funded by the Metropolitan Washington Council of Governments, the Virginia Department of Transportation, the Virginia Department of Rail and Public Transportation and the local gasoline tax. As a member of Commuter Connections, Loudoun County Commuter Services garners the support of the Metropolitan Washington Council of Governments. This includes participation in programs such as the regional Bike to Work Day, the regional Rideshare database and the Guaranteed Ride Home program.

Outreach efforts are typically directed toward human resources and facilities personnel. The benefits of adopting alternative commuting programs include:

- improved employee morale;

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- enhanced recruitment and retention;
- reduced tardiness and absenteeism;
- reduced needs for parking and office space;
- improved air quality;
- reduced traffic congestion; and
- an overall improvement in the quality of life in Loudoun County.

Employer outreach tasks include: phone calls, emails, in-person meetings, maintenance of a computerized sales contact database, production and distribution of a quarterly newsletter and other materials promoting alternative commuting.

Transportation Demand Management Policies

1. The 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.
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 cashout programs and telework policies).
3. The County will reduce parking requirements when a development proposal includes Transportation Demand Management (TDM) strategies that can be demonstrated to reduce trip making to and from the development. Such strategies may include, but are not limited to: carpool and vanpool coordination, parking incentive programs, transit subsidies and teleworking programs. Parking reductions in such instances will be commensurate with the demonstrated reduced demand for parking.
4. TDM strategies that are appropriate for varying residential densities and non-residential areas will be developed and applied during the rezoning process and through public/private partnerships as shown in Table 4-2, pg. 4-13.
5. The County will create and implement a trip-reduction ordinance as an amendment to the Zoning Ordinance as Part of the Countywide Public Transportation Study, and such an ordinance may be applied in the corridors designated for transit in the Revised Countywide Transportation Plan.
6. Transportation Demand Management strategies, facilities and/or funding may be accepted as associated with development applications. The amounts of the credits in these instances will be determined based on the reduced need for improvements attributable to conservative estimates of reductions in trip making with the implementation of the TDM strategies in question.

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7. As a general principle, the funding of Travel Demand Management strategies from the County’s trust fund will be applied to projects serving the transportation system within the area that made the contributions. The funds identified for any particular strategy will be expended either when the total amount needed is accumulated, when the amount accumulated is sufficient for an acceptable, partial improvement, or when the amount accumulated can be used to acquire “matching” funds from another source which, when combined, equal the total amount necessary to fulfill the strategy.

**Table 4-2
Appropriate Transit, Rideshare, and Travel Demand Management (TDM) Strategies
Related to Residential Density**

Strategy ↓	Density →	3-7 du/acre	8-15 du/acre	> 15 du/acre	Non residential
Bicycle Path Network		X	X	X	
Bicycle/Transit Facilities (showers)					X
Bike Racks and Lockers		X		X	X
Bus Stops/Shelters		X	X	X	X
Compressed Work Week					X
Contributions Toward the Transit/Rideshare Trust Fund		X	X	X	X
Employee Parking Cashout					X
Flexible Work Hours					X
Guaranteed Ride Home					X
On-Site Rideshare/Transit Information		X	X	X	X
Park and Ride Lots		X	X	X	X
Pedestrian-friendly Design		X	X	X	X
Preferred HOV Parking					X
Purchase of Vans				X	X
Reduced Parking Requirement				X	X
Shuttle Bus Service				X	X
Telecommuting		X	X	X	X
Transit related design elements:					X
Bus Lanes/Busways			X	X	X
Bus Turnaround				X	X
Transit Signal Preemption/Queue-Jumpers		X	X	X	X

Note: In addition to the above table for TDM strategies, the following selections can be used for mixed use developments:

- a. Car-free areas in Town Centers or Urban Centers
- b. Mixed land uses with shared parking