Dulles South

Area Management Plan

August 4, 1993
Loudoun County, Virginia
Dulles South

Area Management Plan
Adopted August 4, 1993
Loudoun County
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Area Management Plan
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CHAPTER 1

Introduction

1. Context and Purpose

The Dulles South planning area covers approximately 25,100 acres, 39 square miles, in the southeastern part of Loudoun County (see Locational Map, Figure 1, page 3). The planning area is bisected by Route 50 and encompasses Washington Dulles International Airport. The planning area is bounded by Fairfax County to the east, and Bull Run and Prince William County to the south. It is defined to the north by the ridge forming the Upper Broad Run watershed and the property line of the approved Brambleton development project and to the west by the Upper Broad Run and Foley Branch subwatersheds which lie just east of Route 621 and Route 860. A plan for a small portion (approximately 1300 acres) of the Dulles South planning area, the Cub Run subwatershed, was adopted by the County in 1989. Although the Dulles South plan reflects the policies of the Cub Run Area Management Plan, the Cub Run plan remains in effect for that portion of the Dulles South planning area.

The Dulles South planning area is relatively undeveloped because the area is not served by central utilities and poor soils limit development using conventional wells and septic systems. More than 60 percent of the area is farmed or in pasture. Approximately 600-700 families live in Dulles South in a scattering of farms, houses on large lots and the three small villages of Arcola, Conklin, and Lenah. Although the villages of Lenah and Arcola include a variety of community and business uses, the majority of commercial and business uses in the planning area are located along Route 50. The planning area is also home to a number of industrial operations including two quarries: Chantilly Crushed Stone, on the southern perimeter of Washington Dulles International Airport, and Bull Run quarry in the southern tip of the planning area. A third quarry has been approved on Route 659, in the center of the planning area. Dulles South residents have a strong sense of place derived from the unique character of the land, their relationship to the rest of Loudoun County and the sense that they are not in the mainstream of Loudoun County development.

The Dulles South area was not considered an Urban Growth Area until the adoption of the General Plan. Nonetheless, land purchases by potential developers have consolidated a major portion of the area into several large holdings. Residents and landowners have argued that the area
needs to be developed in order to bring central utilities to existing residents to overcome health risks associated with failing on-site septic systems. These land purchases have raised local assessments and County revenues even though the infrastructure to allow development was not permitted and residents were unable to benefit from increased land values. Subsequently, residents have added the imbalance between taxes and received-services as another reason for a change in County policy to permit new development. (see Base Map, Figure 2, page 4)

The General Plan proposes to permit development rezoning in the area beginning in 1993 and makes adoption of the DSAMP its first implementation priority. The General Plan designates Dulles South as part of the County’s planned Urban Growth Area, and suggests that such a decision may have important economic consequences for the County. With over 170 million square feet of business floor area and over 20,000 residential units approved but not yet built, the County faces a potentially serious downward pressure on tax assessments if additional land is made available to the market. Reducing the demand for approved projects may delay the completion of proffered capital facilities and road improvements.

This concern is balanced by the recognized need to address the existing health problems in the Dulles South region. There is also an important infrastructure connection between Dulles North and Dulles South. The extension of utilities from the north will serve to expedite the completion of projects, such as Brambleton, and Route 606 improvements located on the fringe of the Dulles North planning area. Road improvements planned in Dulles South will, similarly, provide a logical extension of the Dulles North road network and will provide the opportunity for additional regional connections.

The purpose of the Dulles South Area Management Plan is to provide a template for new growth if and when the market supports it. The Plan provides a picture of how Dulles South should develop in the future. The ultimate plan for Dulles South is significant since it is based on community beliefs about what is important and what the community should be. This document is the basic framework for future planning and should not change with each election or incremental development decision. The DSAMP policies provide guidance for land use decisions so the County can respond to development proposals. These policies can be amended as new information is available, or to address a change in community attitudes or circumstances, without straying from the basic goals of the plan. Therefore, the Dulles South Area Management Plan is not a static document and can be changed if deemed appropriate. In fact, the Commonwealth of Virginia requires that comprehensive plans be reviewed at least every five years.
Dulles South Planning Area
Base Map

Scale: 1:8,000

Dulles South Planning Area
Cub Run

(The Cub Run Area Management Plan Policies continue to apply to this area.)

Figure 2.
II. Relationship to Other County Planning Documents

The Dulles South Area Management Plan is part of the County’s Comprehensive Plan and was adopted by the Loudoun County Board of Supervisors in accordance with state enabling legislation (Code of Virginia, Chapter 15.1). The plan is a long-range guide for growth, land use and development decisions in the Dulles South planning area. It is also a guide for other decisions that are related to public investment and will help the County to determine when and where new public facilities and improvements are needed.

The County’s Comprehensive Plan consists of several related documents. The Choices and Changes, Loudoun County General Plan serves as the “umbrella” document for the County’s planning efforts. The General Plan establishes countywide goals and policies which are the basis for development decisions and for subsequent area plans. Area management plans are specific land use plans for particular areas or communities. They are intended to be an extension of the General Plan but typically have the latitude to refine or change General Plan policy where local circumstances or conditions warrant.

Between 1980 and 1990, the Loudoun County Board of Supervisors adopted the Eastern Loudoun Area Management Plan (1980), the Leesburg Area Management Plan (1982), the Rural Land Management Plan (1984), the Dulles North Area Management Plan (1985), the Waterford Area Management Plan (1988), the Cub Run Area Management Plan (1989), and the Round Hill Area Management Plan (1990). It should be noted that the Cub Run Area Management Plan is not superseded by the Dulles South plan.

The Dulles South Area Management Plan (DSAMP) is the first area plan written under the purview of the General Plan. Many of the policies included in the DSAMP reflect General Plan policies. However, the DSAMP does propose new or modified policy directions on several issues. In such cases, the policies and guidelines contained in The Dulles South Area Management Plan will supersede any conflicting policies and/or guidelines contained in the General Plan, except in the Cub Run planning area.

III. Community Planning Process

The Dulles South Area Management Plan was prepared with extensive citizen involvement. The community discussion conducted between March and April 1992, involved citizens early in the process so they could contribute to the fundamental assumptions and direction of the Plan. Community discussions took place in three ways.

In a series of three workshops and a public comment meeting, citizens identified their concerns and priorities for Dulles South. An average of 75 people attended each of the workshops and many attended all three. Over the course of these meetings, planning staff worked with area residents and landowners to identify what people hoped would occur in Dulles South and what they foresaw as the hurdles or opportunities facing them.
The three workshops each had a specific purpose:

**Workshop One:** Identify what kind of future people want for Dulles South; the Strengths, Weaknesses, Threats and Opportunities in Dulles South that might affect that vision.

**Workshop Two:** Analyze what current County plans and policies propose for Dulles South and identify needed changes or enhancements; and

**Workshop Three:** Identify land use scenarios and desirable design features that should be part of new development.

This input preceded any policy development and is recorded in the accompanying document entitled *The Dulles South Community Report* (Appendix A, page 73). A public comment meeting followed the publication of the *Community Report* to ensure it reflected citizen comments.

In February, 1992, the Board of Supervisors appointed a 15 member Citizens’ Committee and charged it with preparing the first draft of a *Dulles South Area Management Plan*. In addition to two area residents and an area business owner, the Committee consisted of people from the County with expertise and interests in finance, real estate and development, the environment, law and public facilities. The Citizens’ Committee met weekly from February through November 1992, to analyze information from area residents, landowners, and technical sources and to write the actual plan policy. The Citizens’ Committee forwarded the Plan to the Planning Commission in December 1992, after two public review meetings. The formal review process before the County Planning Commission consisted of a public hearing, and numerous work sessions before certification of the plan to the Board of Supervisors on May 5, 1993.

Following a Board public hearing in June 1993, the Land Use Committee of the Board of Supervisors reviewed the draft plan to address final public comment and outstanding issues. The Board of Supervisors voted unanimously on August 4, 1993 to approve the plan.
CHAPTER 2

Community Goals

I. Mission Statement

The Dulles South Area Management Plan will seek to accommodate new growth that incorporates the best qualities of urban and suburban development to create a pattern of self-sustaining communities situated and designed to respect the positive features of the existing quality of life and character of the Dulles South community.

II. Community Goals

Dulles South will promote an affordable lifestyle for residents through compact community designs featuring a mix of housing types, centrally located public facilities and nearby shopping and employment. Design standards will minimize costs and be flexible to accommodate changing trends and development conditions.

An efficient and safe network of arterial and collector roads will serve Dulles South and link the area to adjoining counties, the airport and other major thoroughfares. Public transit service will be provided as part of a comprehensive transportation program for the County.

Important open space, historic and environmental resources will be protected. Stream valleys, existing woodlands, hedgerows, wetlands and other important environmental and historic features will be preserved by clustering development and maintaining substantial open space requirements for new projects.

Local businesses will employ a variety of residents. There will be a balanced mix of manufacturing, resource and service industries to provide job opportunities for various skills. The Washington Dulles International Airport will continue as the major economic focus of the area with steadily increasing operations.

Appropriate public facilities and utilities will be available. Public sewer and water utilities will eliminate health hazards associated with malfunctioning septic tanks. Amenities such as parks, community centers, schools and athletic facilities will be available to meet the needs of all residents.
CHAPTER 3

Policies

1. Natural Resources

Dulles South is home to some of the County’s most valuable resources including diabase (rock used for a variety of construction purposes) and the Bull Run which feeds the Occoquan Reservoir, a major regional water supply. These are resources of significant economic value. The Bull Run is also a potentially important scenic and recreational resource. Approximately 65% of Dulles South lies in the Occoquan watershed, making the planning area subject to State policies aimed at protecting both the Occoquan Reservoir and the Potomac River. The high rates of nitrogen, phosphorous and BOD (Biological Oxygen Demand) removal demanded by these policies require the use of advanced wastewater treatment systems. This disqualifies most on-site and package treatment systems that might be used by area residents to replace failing septic systems.

Stream corridors and floodplains are also important local features that influence the area. There are a number of tributaries to Bull Run and Broad Run that are associated with major floodplains. A significant area of Dulles South is classified as having hydric soils, an indicator of wetlands. These areas, along with floodplains and streams, are valuable for water quality protection, animal habitat and stormwater management. In urban or urbanizing areas, these areas are equally important as scenic open space, recreational land and development buffers.

A large portion of Dulles South is covered by predominantly hardwood forest but, there is little lumbering activity. These forested areas are another resource that will play an increasingly important role as Dulles South is developed. Forests assist in water quality protection, stormwater management, climate control and animal habitat. Along with stream corridors and floodplains, they can buffer different land uses and otherwise contribute to the visual quality of the area. Because of historic clearing and farming, forests in Dulles South are more linear and form edges around farmland. This offers natural screening and definition to the design of new communities.

There are a number of sites that have been surveyed by the Virginia Landmarks Commission but none have been put on the Virginia Historic Landmarks Registry (see the DSAMP’s companion background document - Existing Conditions Report, page 10). So far, these sites have not faced
development pressure that places them at risk. Citizens expressed a desire to protect the historic and cultural amenities of the area. However, protection of natural features clearly took a secondary position to concerns about water, sewer and roads. Natural features were discussed most often as part of the community character. Farmland, forests and streams are valuable natural features that add to their quality of life. It was suggested that the County should set a specific level of open space to be preserved in the area.

Dulles South seems to reflect current County and state trends. As the Farms of Loudoun Directory shows, farms in the area produce a wide variety of products. Products such as Christmas trees, hay and sod seem to be suited to the area's soils and conditions. Although specific comparisons are not available, less than ideal soils mean that Dulles South is not as significant an agricultural area as western parts of the County. However, voluntary programs such as use value assessment, extension services and County agricultural programs are supported and similar new programs are to be sought. The Dulles South plan continues the County's support of Right To Farm policies because citizens of the area feel that operating farms are an important part of the community character. They believe that the viability of such farms should be protected and new development should be planned to minimize potential conflicts.

Policies

1. The County supports and continues current General Plan policy with regard to the protection of key natural and cultural resources.

2. Environmentally hazardous uses should be addressed through current local, state and federal regulations.

II. Economic Development

Future economic development decisions in Dulles South should target the goal of creating a balanced residential and business community. Dulles South residents first want the area to be a good place to live and raise children. They then want their children to have the opportunity to live and work in the area. To achieve this, the economic development strategy for Dulles South uses the opportunities provided by the Route 50 corridor and Washington Dulles International Airport to overcome disadvantages created by major surpluses in industrial and business space in Loudoun and Fairfax Counties. The plan outlines a development approach which seeks to unite residential and business uses into sustainable mixed use developments aimed at creating an enjoyable and affordable community setting.

Washington Dulles International Airport

The single most important economic asset in Loudoun County is Washington Dulles International Airport. Approximately 30% of Loudoun's
at-place employment is directly attributable to the Airport or to firms directly dependent upon the Airport. The Airport currently employs 11,000 people. At buildout there will be approximately 60,000 employees. The Airport generated $314 million dollars in employee salaries and $1.768 billion in business revenues for the region in 1990. Between 1985 and 1989, passenger figures rose from 5.0 million to approximately 10.0 million. The ultimate capacity of the facility is 55 million passengers.

The Airport Master Plan calls for substantial increases in both air service and facilities over the next 20 to 40 years. Within 20 years, two new runways will be added, including a north-south runway parallel to the existing north-south runway and an additional east-west runway to be located immediately south of the existing east-west runway. Information provided by the Metropolitan Washington Airports Authority and the Washington Airports Task Force indicate that Dulles Airport will handle over 20 million passengers by the year 2000.

Area residents recognize the value of the Airport to Dulles South. It is considered to be both the greatest strength and the best opportunity for the future development of the area. Residents support continued protection and increased development of the airport.

Based on these citizen comments, the Dulles South plan calls for continued protection of the airport through land use controls. It also proposes that the Dulles South area take advantage of an opportunity to become home to industries that can service the Airport. Currently there is little land in Loudoun County available for small service industries that provide essential support to the Airport. Much of the land to the northwest and east of the Airport is currently designated for office and research uses. The Dulles South plan proposes to encourage the development of service industries and businesses. In doing so, Dulles South avoids “head to head” competition with other, developed, areas; creates an opportunity for industries that are being forced out of other areas because of market pressures; and creates a potential job market for a variety of skills.

Washington Dulles International Airport will attract related businesses and services to the Dulles South Area.

Photo by George Kousoulas
Policies

1. Business uses that will support the development of Dulles Airport to its ultimate capacity and maximize the County’s economic benefit from the airport will be encouraged to locate within the 65 Ldn (Loudness day/night average) noise contour and in proximity to the airport. Such uses may include, but not be limited to, aircraft service and supply industries, passenger service businesses and cargo distribution industries. Where such uses are proposed within the Route 50 corridor, they shall comply with the design policy and objectives of this Plan for the corridor.

2. The County’s land use policies should continue to protect the Airport from conflicting land uses by prohibiting new rezoned residential development within the Ldn 65 noise contour and requiring noise attenuation measures in construction, avigation easements and full disclosure requirements, in accordance with the following:

   a. For all new residential dwelling units to be constructed outside of, but within one (1) mile of the Ldn 60:
      
      The applicant shall disclose in writing to all prospective purchasers that the property is located within an area that will be impacted by aircraft overflights and aircraft noise. Such notification will be accomplished by inclusion of this information in all sales contracts, brochures and promotional documents, including the Illustrative Site Plan(s) on display within any sales related office(s), as well as in Homeowners’ Association Documents, and by inclusion on all subdivision and site plans, and within all Deeds of Conveyance.

   b. For areas within the Ldn 60-65 aircraft noise level:

      i. Full Disclosure statement: For all new residential dwelling units to be constructed within the Ldn 60-65 aircraft noise level:
      
      The applicant shall disclose in writing to all prospective purchasers that the property is located within an area that will be impacted by aircraft overflights and aircraft noise. Such notification will be accomplished by inclusion of this information in all sales contracts, brochures and promotional documents, including the Illustrative Site Plan(s) on display within any sales related office(s), as well as in Homeowners’ Association Documents, and by inclusion on all subdivision and site plans, and within all Deeds of Conveyance.

      ii. Acoustical Treatment for all new residential units located within the Ldn 60-65 aircraft noise level:

      The applicant shall incorporate acoustical treatment into all dwelling units to ensure that interior noise levels within living spaces (not including garages, sunrooms, or porches) do not exceed a sound level of 45 (db)A (decibel average).
iii. Aviation Easements:
For all new residential dwelling units to be constructed within the Ldn 60-65 aircraft noise level: Prior to, or in conjunction with, the approval of a rezoning application, the applicant of a parcel or parcels contained within the Ldn 60-65 aircraft noise impact area associated with Washington Dulles International Airport should proffer the dedication of aviation easements to the Metropolitan Washington Airports Authority, indicating the right of flights to pass over the property, as a means to securing the long-term economic viability of Washington Dulles International Airport.

3. The County encourages the continued maintenance and enjoyment of existing dwellings within the 65 Ldn. Such existing homes are exempt from the County noise policies.

4. The construction of new dwellings within the 65 Ldn noise contour is discouraged; however, construction that is in accord with existing zoning and that complies with applicable County requirements shall be permitted.

**Route 50 Corridor**

Route 50 is a four lane divided highway from the Fairfax County line to six miles to the west, where it becomes a two lane section. Current plans are to extend the four lane section to 1/2 mile east of Gilbert’s Corner (Route 15). An average of 15,000 trips are made on the road each day (ADT). The County and Virginia Department of Transportation (VDOT) are currently preparing a Route 50 corridor plan that proposes that the road become a limited access highway with grade separated interchanges and parallel service roads.

Most of the area’s nonfarm businesses are located along Route 50. Typically these are small companies offering construction, landscaping or equipment repair services. Retail operations are limited to convenience goods or farm and construction related products and equipment. Concern was expressed by some residents that the existing small businesses would be hurt by the influx of new development. They feared that costs would rise, new residents would complain of noise or visual problems and other things would arise to make small business operations in the corridor more and more tenuous. Residents recognize that the current land use and zoning pattern along the highway is not the preferred, ultimate development pattern. Although a change is desired, most people do not want to endanger existing land uses. Therefore, the Dulles South plan encourages development which mitigates negative impacts on adjacent properties in the Route 50 corridor. Where possible, existing uses should be incorporated into new projects. The Plan suggests that potential conflicts can also be resolved by separating uses, providing extensive buffering or diverting associated traffic, signs or other activities away from existing uses.
Route 50 can play a dual role for the County. It forms the southern perimeter of Dulles Airport and the area recommended to be an Airport Enterprise Zone (Economic Development Task Force, March 1992) wherein airport and air travel related uses are given priority by the County. Its second role is that of a gateway corridor leading to the County's famous hunt country. As one of only two existing east-west connectors leading to the Washington Metropolitan area, it is important to maintain a high level of design quality to reflect the image the County wants to extend to potential residents and employers.

Workshop participants supported the development of Route 50 as a gateway entrance to Loudoun County. Gateway design features typically include extensive landscaping, deep building and parking setbacks from the highway, road improvements to minimize traffic disruption, limited use of signs, and on-site screening and buffering to hide activities such as outside storage and loading. In Dulles South, such standards will be implemented through the rezoning process to ensure that existing properties along the highway maintain their development viability. Developments such as the Avion and Lafayette business parks (located on Route 50 in Fairfax County) are viewed as desirable developments. Heavy industry, on the other hand, is not desired along the highway frontage but may be located elsewhere in the corridor, buffered by other uses, appropriate landscaping or other means.

Other major highways in Loudoun County, Route 7, Route 28 and the Dulles Toll Road Extended (DTRE) are defined as the principal locations for "keynote employment" uses. These are the campus style office and research developments such as University Center, Lansdowne, Magnavox and Loudoun Tech Center. Unlike these areas, Route 50 is proposed to develop as a light industrial, mixed use commercial, and office corridor. This strategy may open Route 50 to a different development market. Permitting a mix of land uses while protecting the road's function as a limited access highway will require careful attention to design details such as signs, driveways, parking, setbacks and landscaping.

The Dulles South plan proposes a strategy for the corridor that includes land use guidelines developed in concert with the transportation network plan. Development review criteria and incentives such as density bonuses are also proposed to encourage the preferred land use.
Policies

1. The Route 50 corridor is to be developed as a “gateway corridor” to Loudoun County and as such should provide a visual experience commensurate with the high quality natural and built environment that is the basis for the County’s economic development strategy. Development within the corridor should seek to do the following:
   a. Create a parkway road corridor along Route 50 through landscaping and building/parking setbacks;
   b. Promote coordinated traffic movement by reducing the number of new driveways on Rt. 50 and by using alternative roads for access;
   c. Encourage compatibility between the activities on adjoining properties through complementary architectural design, buffering, landscaping and spatial separation;
   d. Create within individual developments, the impression of a comprehensive design scheme through such devices as shared driveways, complementary architectural appearance, common landscaping and signs, and other means.

2. The Plan supports rezonings which promote the Route 50 corridor as a GATEWAY CORRIDOR and which include at least the following features:
   a. A design concept which makes the building the prominent feature when the site is viewed from Route 50 and which uses landscaping and berms to screen associated activities such as parking, loading, and outside storage and assembly;
   b. Minimal use of signs;
   c. Landscaped building setbacks of at least 100 feet from Route 50 except in areas zoned CLI, where CLI setback policies shall apply. This setback may be reduced if landscaping is enhanced to further screen parking and other activities and to promote the parkway design objectives of the Plan;
   d. Front yard landscaping that complements and enhances the appearance of buildings; visually screens parking, loading and similar activities; and provides a substantial vegetative edge along Route 50; and
   e. Minimal interference with traffic flow on Route 50 by limiting the number of driveways, offering access to another public road and otherwise exhibiting support for the ultimate conversion of Route 50 to a limited access highway.
3. The Route 50 corridor is generally defined by the area between the proposed north and south parallel roads. All properties within this corridor shall seek to comply with the design guidelines established for the area.

4. The Route 50 corridor should develop as mixed use residential, commercial, light industrial and office uses generally conforming to the use mix set out in the Light Industry Area policies.

5. New development should address impacts on adjacent properties in the Route 50 corridor by separating conflicting activities, providing extensive buffering, or other means.

6. In considering development proposals in the corridor, the Board may choose to permit increased densities, a change in the land use mix which differs from that set out in the Light Industry Area, or modifications to setback, height or other zoning standards where such flexibility results in exemplary design and fulfills the Plan's objectives for the Route 50 corridor.

7. In the designated Residential Community along Route 50, the County encourages the consolidation of small lots into larger, unified development proposals.

**Development Incentives**

The County currently operates a Commercial and Industrial Development program through the Department of Economic Development. The principal focus of the Department is attracting new businesses to the County and supporting the expansion of existing businesses with the goal of increasing the non-residential proportion of the County's real estate tax base. The Department conducts promotional activities such as advertising and trade shows, assists businesses in site selection, provides demographic and other support data to the business community, monitors government and regional economic development activities and supports long range planning activities in the County.

With the adoption of the area management plan, Dulles South becomes an appropriate location for new development. As such, the Plan calls for the County's economic development programs to be applied equally in Dulles South and other urban areas.

Faced with local and regional competition, the County should offer flexibility in the development process to prospective businesses. Development review costs, increasing constraints on site design and other similar matters are increasing the cost of doing business. For service uses, typically smaller businesses faced with unique operational demands, such costs and constraints may be a major location deterrent. The Dulles South Plan proposes flexibility and a proactive stance on the part of the County to assist appropriate employment uses.
The National Air and Space Museum is proposing to expand its facility to a site located at the southwest corner of Dulles Airport approximately 1.25 miles east of the Loudoun-Fairfax County line. The site has a total of 185 acres. The principal access to the site would be Barnsfield Road which intersects Route 28 (Gate 4 entrance to the Airport) while Route 50 offers a secondary access. To take advantage of this economic opportunity, the County should coordinate the marketing activities of existing tourist attractions in the area and link them, as much as possible to the Museum Extension. The County should also make every effort to ensure that the driving experience along Route 50 is safe, convenient and enjoyable for visitors. Finally, the County should be flexible in terms of land use, density and design in order to respond to new opportunities as they arise.

Policies

1. The County will seek ways of facilitating the development of service industries. The Plan supports the use of increased density or changes in land use mix where such incentives result in development that features exemplary compliance with County land use and community design and economic development objectives.

2. The County should investigate the feasibility of other types of economic development incentives such as enterprise zones, tax free zones, special taxing districts and revolving loans.

3. Dulles South should be given equal priority in County marketing efforts.

4. The County should consider density, land use mix, reduced development costs and other incentives on a Countywide basis as a means of attracting development.

5. The County supports the development of the National Air and Space Museum Extension at Dulles Airport and encourages the use of Route 50 as a principal access to the facility.

6. The Plan supports the use of increased density, changes in land use mix, and the introduction of new, tourism related uses in the business communities within the Route 50 corridor, where such incentives are shown to enhance the Museum Extension and increase the volume of visitors from the Museum to Loudoun County. Proposed developments should also illustrate exemplary compliance with other County land use, community design and economic development systems.
III. Sewer and Water

The single greatest constraint to urban or suburban development in the Dulles South planning area is the lack of central water and wastewater treatment facilities. Providing central sewer and water service to the Dulles South area is not difficult from a technical standpoint, but finding a feasible way to fund and phase needed improvements is difficult. In addition to concerns about future utility service in Dulles South, there is an immediate concern about how to address health problems associated with existing substandard, on-site sewage systems. The policies in The Dulles South Area Management Plan address the technical and financial aspects of providing central sewer and water service to the area as well as public health concerns associated with existing systems.

Existing Health Problems

As stated in the Dulles South Existing Conditions Report, the Dulles South area is plagued with on-site septic problems, first recognized when the County Health Department was created in the mid 1940s. The most recent and detailed study of failing sewer systems in Dulles South focused on the Elklick Run Watershed and was conducted by the County Health Department in 1989. The report included Countywide statistics as well as statistics for the Elklick Run Watershed. According to a report published in October 1988 by the Virginia Water Project, Inc., approximately 36% of all houses in Loudoun are served by on-site treatment systems and 3.3% of these systems are estimated to be malfunctioning or substandard. It is estimated that only 25% of these failures are correctable with present on-site technologies.

Based on information gathered by the Health Department, less than 2% of the soils in Elklick Run Watershed (see Watershed Map, Figure 3, page 19) were considered to have better than “severe limitations” for septic tank use. Of the estimated 164 homes in the Elklick Run area, 62% are depending on failing or substandard facilities. In 1989, the Health Department estimated that none of these systems were correctable with present technologies and state regulations. It is probable that problems similar to those found in the Elklick Run area are prevalent throughout Dulles South. However, acceptable and cost effective alternatives for addressing on-site problems are severely limited due to soil constraints and environmental regulations.

Participants in the Dulles South workshops felt very strongly that the problems of existing residents must be addressed by the County. Many citizens felt the County should pay for hook-ups for existing residents. Several comments stated that improvements made to allow for new development must benefit existing residents as well. A couple of participants did not support a mandatory hook-up policy for existing residents. Taking these comments into account, the Citizens’ Committee developed policies aimed at balancing public health needs with those of individual property owners.
Figure 3.
Policies

1. The County recognizes that inadequate residential well and septic systems in Dulles South pose significant public health problems. Therefore, the County may provide monetary and non-monetary incentives to extend additional sewer and water lines to service private residences with failing systems. These incentives may include, but not be limited to, credit toward capital facilities or affordable housing proffers (see proffer guidelines).

2. Individual landowners and homeowners will be responsible for repairing malfunctioning or failing on-site wastewater treatment systems. However, the County may assist in providing or seeking financial assistance to property owners to resolve on-site treatment problems provided that the public is protected from incurring the costs of correcting a failed private system. Such assistance might include, but not be limited to, a revolving loan fund or other reimbursable funding mechanisms to assist individual landowners fund on-site system improvements, repairs or hook-ups to central utilities.

3. The County will require mandatory hook-ups to central utilities for existing residential and non-residential structures at such time as central utilities become available within 300' of the structure if the structure is served by a malfunctioning on-site wastewater system.

Water and Wastewater Treatment Systems

As previously noted, soils in the Dulles South planning area are generally unsuited for development on septic systems and wells due to a high water table, shallow depth to bedrock and clayey shrink-swell characteristics. Residential development at a suburban scale or even at rural scale (one unit per three acres) and non-residential development that would require on-site facilities, are nearly impossible in most of the planning area due to these soil limitations and public health standards regulating septic fields and wells. From a public health standpoint, new residential development at suburban or urban development densities would need some sort of public sewer and water service.

Options for development using alternative wastewater treatment systems in the Dulles South planning area are severely limited by State Water Control Board (SWCB) policies aimed at protecting the Occoquan Reservoir, the primary source of drinking water for Fairfax County. Three of the four subwatersheds of Dulles South (all except Upper Broad Run) drain directly to the Occoquan Watershed. Policies were adopted by the State Water Control Board in the 1970s and updated in the 1980s to limit point source pollution and non-point source pollution in the Occoquan Watershed. These policies specifically limit the number and types of new wastewater treatment systems that can be constructed in Dulles South.

The use of alternative on-site wastewater treatment systems is also limited. On-site systems that could be used for residential development
include mound systems, portable toilets, incineration toilets and composting toilets. Although use of these systems would be permitted under Virginia Health Department regulations, they are generally intended as a means of correcting an existing problem or for use on a case by case basis, rather than as a way to serve large scale new residential development.

The provision of water to the Dulles South area is also a concern. Current residents of the Dulles South planning area depend on individual wells for water service. From a public health standpoint, the County encourages the use of central water supplies in urban areas rather than individual systems to reduce the potential risks associated with ground water contamination. This is of particular concern in areas where on-site septic systems are used. Although rock formations in the Dulles South area are capable of producing enough water to serve individual houses, and possibly even community wells, central service would be preferred for new development at suburban or urban densities.

The use of community wells or individual wells could be explored as an interim option for small scale development, particularly if central sewer service is available. However, because the provision of central water service to Dulles South is expected to be less costly and less complicated than sewer service to the area, central water service is more likely to be available before or at the same time as central sewer service.

Citizens who attended the community workshops in Arcola had several concerns about sewer and water service in Dulles South. Of particular relevance was citizen support for General Plan policies stating that new development should be served by central sewer and water services. In addition, citizens felt that any services extended by the development community to serve new development should also benefit existing residents. Although alternative systems and interim solutions were not specifically addressed, citizens did express concerns about environmental regulations limiting sewer options and a lack of creative solutions for existing health problems.

The Dulles South plan promotes the extension of central utilities into Dulles South; however, the plan recognizes that development in Dulles South will be based on the availability of funding for sewer and water line extensions, market demand and physical construction constraints. At present, it appears that development in Dulles South will begin in two locations, the Cub Run/Elklick Run area and the Upper Broad Run area. If the County successfully pursues interim capacity agreements with Fairfax County, development could occur in the eastern portions of Cub Run and Elklick Run in the near term at a relatively reasonable cost. Development in Upper Broad Run will depend on when the Broad Run Interceptor is funded and constructed. Until such time as central utilities are available, the plan provides some options for development using on-site systems.
Figure 4.

Note 1: These maps are generalized. Site specific land use proposals will be revised in the context of all pertinent policies in this plan, as well as these maps.
Figure 5.
Policies

1. The entire Dulles South planning area is planned for central sewer and water service (see Figures 4 and 5, pages 22 and 23) and phasing of development is not proposed. However, due to the nature of utility line financing and construction, the County anticipates that portions of the planning area nearest existing development and facilities will develop first.

2. In order to protect the existing development potential of current residents and property owners in the Dulles South area, the use of individual wells and conventional on-site sewer systems will be allowed as a means of serving new residential and non-residential development as permitted by Zoning Ordinance and Health Department regulations.

3. Conventional on-site systems may also be used to allow the expansion of existing residences and businesses in the Dulles South area provided all health department regulations can be met and provided that the use of such systems is permitted under current zoning district regulations that apply to the property.

4. All new residential and non-residential development in the Dulles South planning area, except as specified in policy 5 below, must be served by central sewer and water service if the property cannot adequately be served by conventional on-site facilities and/or if the property undergoes rezoning to allow for increased development potential.

5. All new light and general industrial development and all existing zoned commercial properties in the planning area must be served by central sewer and water service or an alternative wastewater facility such as pump and haul, with the approval of the Loudoun County Sanitation Authority and Health Department in accordance with LCSA and Health Department policy, if the property cannot be served by conventional on-site facilities. However, use of an alternative system will be viewed as an interim sewer option and any applicant seeking a rezoning will be required to demonstrate a commitment to funding and constructing an appropriate share of the proposed permanent central sewer system.
6. Once central utility lines are available within 300' of a structure or 100' of a property line, the landowner must hook into central utility lines and the County will encourage property owners to discontinue the use of alternative and on-site treatment systems.

7. The use of alternative, communal or interim wastewater treatment systems may be permitted to resolve an identified public health problem associated with an existing business or residence if no other treatment option is available. The proposed alternative must be reviewed and approved by the Health Department on a case by case basis.

8. All central sewer and water lines shall be sized and designed to serve the existing villages (i.e., Arcola, Lenah and Conklin) in the Dulles South Planning Area.

Utilities Management

The Loudoun County Sanitation Authority (LCSA) was created in 1959 for the specific purpose of providing sewer and water service to unincorporated areas of Loudoun County. For this reason, the County depends on the LCSA to plan for future sewer and water service and/or to enter into service agreements with other jurisdictions as appropriate. The LCSA, as the County's service provider, would have to agree to allow some other entity to provide sewer and water within its designated service area. It is imperative then that the LCSA be involved in any plans to provide sewer and water service to Dulles South.

In 1986, the LCSA, in coordination with the County, prepared a study evaluating various options for providing sewer service to Dulles South. For a variety of regulatory, environmental and political reasons, construction of a new wastewater treatment plant in the Broad Run Watershed was determined to be the most feasible and cost effective means of providing long term sewer service to Dulles South. Use of the Upper Occoquan Sewage Authority (UOSA) plant as a long term solution was ruled out, because, among other reasons, of the uncertainty of getting approval from Fairfax County to run sewer lines through portions of that County that are not slated for sewer and water service. Additionally, continued use of either the Blue Plains facility or UOSA would mean that Loudoun would continue to rely heavily on other jurisdictions to serve Loudoun’s needs.

The LCSA has recently stated that it may be possible to negotiate with Fairfax County for some limited (100,000 to 300,000 gallons per day) interim capacity in the UOSA plant to serve a portion of Dulles South. At present, Fairfax County sewer lines extend to the Loudoun County line on Route 50, adjacent to the Cub Run planning area in Loudoun. Although this line could be extended to Loudoun to provide interim capacity to some properties, it is not sized to accommodate large portions of the planning area.

In 1988 and 1989, the LCSA prepared a plan for providing water to Dulles South as well as to other parts of the County. This plan proposes that
the County continue to purchase water from the City of Fairfax and the Fairfax County Water Authority. The LCSA is currently participating in a joint venture with Fairfax County to construct a 36" water main along Route 50. This water main would serve as the backbone of a water distribution system for Dulles South and will eventually tie into the water system serving Dulles North. Construction of water line extensions from the north will depend on how quickly development takes place in the Route 606 corridor. While many citizens at the Arcola workshops favored the LCSA as the long term service provider to Dulles South, others favored pursuing negotiations with the Upper Occoquan Sewage Authority. Many viewed this as a cheaper and/or quicker means of getting sewer and water service to Dulles South. The following policies are intended to maintain flexibility in the provision of utilities to the Dulles South area.

**Policies**

1. The Loudoun County Sanitation Authority (LCSA) will be the long term sewer and water service provider to the Dulles South planning area.

2. The County will encourage the LCSA to pursue the most timely, efficient and cost effective means of providing central sewer and water service to Dulles South. The County will also encourage the LCSA to pursue negotiations with neighboring jurisdictions and the Upper Occoquan Sewage Authority to provide long and/or short term central utility service to Dulles South.

**Construction and Funding**

The County has traditionally relied on either the federal government or the development community to construct and fund utility line extensions. State and federal funding for sewer and water projects that was available in the 1960s and 1970s has been virtually eliminated and is an unlikely future funding source. In the 1980s, over 80% of the improvements and extensions to the County's central sewer and water facilities were financed by the development community. The LCSA reimburses developers for these upfront improvements as users hook into the system. Because of the expense of extending utilities to Dulles South (over $14 million to construct a new interceptor to Route 50, not including pump facilities and the collection systems needed for the various watersheds) and the banking crisis, the development community will have difficulty financing improvements through conventional methods. As traditional funding sources for utility extensions become more remote, new funding mechanisms are beginning to emerge. Developer consortia and sanitary districts are two potential funding sources for utility improvements in Dulles South.

Residents of Dulles South want the County to be a positive partner in bringing sewer and water service to Dulles South. As previously stated, many believed that the County should fund the extension of utilities to Dulles South. In the past, the County has not provided incentives for the extension
of utility lines except through the land use process. Because public health is deemed to be a priority in the Dulles South area, the Dulles South plan recommends monetary and non-monetary incentives to encourage the development community to extend utilities into Dulles South. The plan also recommends that the County assist in funding regional or other facilities that will help to address any identified public health problem.

In an effort to aid in sharing the costs of utility extensions to the Dulles South planning area, the LCSA in coordination with the Loudoun County Board of Supervisors, has agreed to participate in funding construction of the sewer interceptor that is planned to provide service to the area. The LCSA has agreed to provide $3.0 million to assist in constructing the sewer trunk line. The contribution represents the cost differential between construction of the required 72" line, which is a major regional facility, and the equivalent of a 42" line. This commitment is intended to bring the financing of the Upper Broad Run trunkline in line with previous sewer line improvements that were financed by the development community in Dulles North and Eastern Loudoun.

**Policies**

1. Construction of regional sewer and water facilities in the Dulles South area should be financed jointly by the public and private sector through developer contributions and innovative funding techniques (including but not limited to special taxing districts) and with County participation.

2. Non-regional facilities and improvements will continue to be financed by the development community.

3. The County may provide monetary incentives to landowners and residents to extend central utility lines into Dulles South to resolve identified public health problems or to meet a specific public purpose identified by the Board of Supervisors through the County’s Capital Improvement Program or by specific Board resolution.

![New development in Dulles South will be served by central sewer and water facilities.](image)
IV. Development Strategy

The Dulles South community wants to become a suburban and urban community and in the words of one resident "move into the 20th century". To accomplish this change, the land use strategy of the DSAMP refines the County's mixed use community and traditional design concepts to create a responsive and affordable land use pattern. Emphasis is placed on existing residents to ensure that as the area develops, their needs are reasonably addressed. The plan continues to encourage the creation of distinct communities with identifiable centers and a mix of appropriate residential, civic, commercial and employment uses. The underlying goal of the development strategy is to create a balance between residential and business land use needs. Both suburban and traditional design concepts are appropriate in Dulles South. Higher densities and the mix of uses should give the developer the opportunity to respond to short term market demands without giving up the integrity of the long term project.

Existing Neighborhoods

Dulles South residents who participated in the community workshops felt that existing homes need to be protected. Their overall support for growth in Dulles South is contingent upon that growth enhancing the level of services and amenities to the existing residents. At the same time, people were concerned about the impact of growth on the visual and social quality of their area. To address this concern, new development must minimize the potential physical impacts on existing uses and complement existing development.

There is always community friction associated with new families moving to an area as they usually have different expectations of how the area should develop. This increasing loss of privacy and the feeling that original residents are no longer in control of the area is an important loss to the area's quality of life. The Dulles South Area Management Plan proposes that new development address this issue through sensitive design and by involving residents in the development review process. New development should provide adequate buffers to protect against visual conflicts between existing and new homes and should cluster new units to preserve natural areas and scenic vistas. The Plan also intends to involve existing residents in the development process, particularly when planning new street entrances, stormwater detention facilities and other activities associated with new subdivisions. This involvement is not intended to dictate approval or denial of a proposed development, but to involve and inform residents and help address design concerns. Further, the Plan proposes incentives to developers to encourage the extension of utilities and provision of facilities to serve existing residents.

The Village of Arcola, despite being the largest community and the location of existing public facilities (fire station, post office, community center), is located within the 65 Ldn noise contour (the level at which noise
begins to significantly affect residential activities adversely). Accordingly, such new residential development is prohibited over a large part of the area. The General Plan proposes that the Village become an industrial or business community. Many residents of Arcola support this policy, as does the Dulles South plan. As in other communities, the residents of Arcola should be involved early in any new development approval process to ensure that the transition occurs in the least disruptive manner.

A major concern of area residents is the impact of new business development on existing residences and businesses. Along the Route 50 corridor, residents of the Meadow Lane subdivision felt that their enjoyment of their homes was being limited by the General Plan which designates the area as “Business Community”. The Dulles South plan designates the Route 50 corridor as a Light Industrial area. However, with the changes to the County’s aircraft noise policies, residential uses are now a more viable part of the Light Industry designation. It is the County’s intent to protect the residential viability of these neighborhoods until the residents collectively support a change to another land use.

Policies

1. New development adjacent to existing, individual dwellings, farms, or businesses shall endeavor to provide on-site features to minimize the impact on the existing use and enhance the character of the existing community. Such features may include, but not be limited to, extensive natural buffering, separation of street entrances, redirection of new traffic and complementary site design.

2. Development adjacent to existing residential and building clusters, identified on the Existing Neighborhoods Map (see Figure 6, page 30), should endeavor to incorporate those clusters into the project planning.
   
   a. This incorporation will examine the issues of utility service, traffic and road access, protection of views, stormwater management and protection of locally valuable cultural resources.

   b. This policy will be implemented through joint meetings of homeowners, developers and County officials prior to and, if needed, during the formal submittal and review process.

3. The Dulles South plan supports existing General Plan policy regarding the eventual conversion of Arcola to a business community.

4. The County recognizes that the desired development of Dulles South may require that existing residential neighborhoods eventually change to another land use designation. Protection should be provided to those residential communities that wish to remain residential for the foreseeable future, but ultimately wish to be able to sell their properties for business uses comparable to what has occurred around them in the interim.
5. The County will support the rezoning of residential neighborhoods currently designated for protection by the policies of this plan when adjacent land has been developed to business or industrial uses or when the majority of residents indicate their support for the action. Such a rezoning will be evaluated to ensure that all residential units in the designated neighborhood are either included in the rezoning or protected from the potential impacts of the rezoning. The preferred option would be to include all residents in the rezoning.

6. The County supports the continued development of the Village of Lenah as designated on the Existing Neighborhoods Map, (Figure 6, page 30) as a commercial area. New commercial or business uses may be permitted on land within the designated neighborhood provided:

   a. the location and design of the use accommodates planned improvements to Route 50;

   b. additional access points to Route 50 are not proposed;

   c. the proposed site design mitigates potential impacts on adjacent residential uses;

   d. the proposed business uses do not require outside storage or display.

7. Notwithstanding the Plan's goal of mixed use development, a single use or single type of use may be permitted on existing lots of record that are less than 5 acres in size. In such cases, the use should be limited to the predominant use permitted in the designated community in which the lot is located (residential in the Residential Community, retail in the Regional Commercial Community...).
Affordable Housing

Affordable housing has been a subject of study by various Board appointed committees for the past few years. In February 1990, the Board of Supervisors adopted, in concept, the recommendations included in a report prepared by the Affordable Housing Advisory Committee (AHAC). These recommendations serve as the foundation for affordable housing programs and policies outlined in the General Plan and the Dulles South plan.

The fundamental purpose of the County’s housing policy is to encourage a broad mix of housing types and to allow higher densities in order to generate a variety of housing prices. Specific policies call for mandating that a certain proportion of housing in new residential development be offered within a specific price range. The County hopes to supply housing to the part of the housing market which has been determined to be undersupplied. The Dulles South plan recommends that the County continue these efforts in Dulles South and focus particular attention on allowing manufactured housing developments in this area and other areas of the County where they may be appropriate. Policies in the plan also acknowledge the need to maintain and improve existing housing in the Dulles South area.

Policies

1. A variety of housing opportunities will be encouraged in the Dulles South planning area to serve a range of incomes, needs and preferences.

2. Affordable housing opportunities will be encouraged in the Dulles South planning area in accordance with affordable housing policies and ordinances. In keeping with County policy, the definition of affordable housing shall be as follows:

"Affordable housing in Loudoun County means fulfilling the housing needs of residents with incomes ranging from 30% to 70% of the County median household income."

3. The County should consider amending the Zoning Ordinance to allow manufactured housing (housing meeting BOCA code requirements) developments in Dulles South and other appropriate areas of the County.

4. The County should consider amending the County’s Facilities Standards Manual and Subdivision Ordinance to identify and revise existing standards that act as a deterrent to the development of affordable housing, and in particular, manufactured housing (meeting BOCA code requirements) developments.

5. Affordable housing should be dispersed throughout the Dulles South planning area and fully integrated into new and existing communities.

6. The County should continue efforts to augment and implement affordable housing programs and initiatives in the Dulles South area. Rehabilitation, conservation, preservation and improvement of existing houses should be a component of any housing program developed to serve the needs of the Dulles South region.
Phasing

The General Plan originally proposed two phases for development in Dulles South. Dulles South residents felt development should be encouraged to locate in the area as soon as possible. This is contingent on the belief that new development will bring central sewer and water to help alleviate existing septic problems. Residents also feel that individual project phasing will serve to limit the rate of new growth throughout the area. The Dulles South plan concurs with this approach and proposes that phasing be left to individual decisions of the developer.

Policies

1. New development will not be phased but it is anticipated that development will locate where access to roads and utilities is feasible.

2. The County encourages new development that benefits existing residents.

Land Use Mix and Community Design

Land use mix examines the question of how the 25,000 acres of Dulles South will be divided among business, industrial or residential development. The combination of these uses has a direct bearing on the fiscal contribution of the area to the County. This mix will also determine the absorption rate of new development; that is, the rate at which new units are constructed and occupied, the overall character of the community, and the market to which development is targeted.

Participants at the community workshops supported a mixed use development pattern. Mixed use communities are viewed as a means of providing jobs, improving housing affordability, reducing traffic, and providing the best opportunity to provide facilities, services and amenities. There were few specific comments made during the workshops regarding the types of uses that could be in a mixed use community except that the mix of uses should not detract or have a negative impact on the residential uses.

In order for a mixed use development to be successful, the design and scale of different uses must be complementary. The compatibility of land uses does not necessarily depend on the use itself. It may depend more on the activities associated with the use such as parking, lighting, signs, industrial versus customer traffic, and where the dumpster is located. Uses such as grocery stores, gas stations, convenience stores, dry cleaning/laundry, bakeries, gift shops, office supplies, and similar retail uses are appropriate in residential areas provided the scale of the use does not attract large numbers of outside consumers to the development and the activities and appearance of the business complements the community. Similarly, residential and commercial uses are also appropriate in industrial areas provided industrial traffic or other industrial activities are not hindered.

The Dulles South plan also continues to support the County policy of developing commercial and/or civic centers to function as the social and commercial focus of larger (primarily residential but also industrial)
developments. These centers (referred to as cores in this plan) should help a new community establish its identity or sense of place.

From a regional perspective, Dulles South is faced with major surpluses in typical “Northern Virginia” types of employment and residential development. Fairfax County has approved zoning for the development of 113 million square feet of office and industrial space in the Route 28 corridor. There are also a 177 million square feet of approved business floor area in Dulles North and Eastern Loudoun which compete in the regional business market. This available capacity almost ensures a reduced market for similar industrial and office space in Dulles South. Likewise, Loudoun County has a surplus of over 30,000 residential units currently approved (zoning). Depending on changes in the regional market, particularly decreasing space for single family detached and townhomes in Fairfax, this surplus may be consumed more quickly and be less of a deterrent to housing development in Dulles South. However, such supply and demand issues will impact the rate of development in Dulles South.

Residential Areas

Residential development typically leads to an increase in costs to the County (the bedroom community syndrome). Costs can be controlled by providing a combination of housing types. Single family detached units incur more public expenditure because these households typically include more school age children; attached and multi-family units require less expense. The General Plan projects that Dulles South may accommodate up to approximately 44,000 new homes at a density of four dwelling units per acre.

The Dulles South plan sets a slightly higher housing figure of approximately 47,000 units and proposes higher densities over a large part of the area to encourage a more affordable residential unit mix. This policy responds to concern among area residents that the lack of affordable housing has driven and may continue to drive their children to locate outside of the area. It should be noted that this projection is based on anticipated demand and historical product mix and does not reflect the additional units that may develop in response to the County’s adopted Affordable Dwelling Unit Ordinance. Furthermore, the projection does not anticipate residential densities to reach the maximum proposed by the DSAMP.

The mixed use objective is accomplished in residential areas by providing the opportunity for a mix of business, civic and recreational uses to locate convenient to the residents. If residents have the opportunity to shop, work and play within or close to their neighborhoods, the County will have taken an important step to reduce the traffic volumes on major roads, provide people with more social and recreation time, increase their ability to participate in community activities and generally provide for a less harried and fatiguing lifestyle.
Policies

1. The land use pattern of Dulles South shall generally conform to the Land Use Map (see Figure 7, page 36).

2. The land use mix policies of this plan (residential and non-residential) are to be used as guides and are somewhat flexible. When the applicant can demonstrate by the nature of the terrain, design, mix of uses proposed, or other criteria that a proposed development supports the general policies of this Dulles South plan, the percentage allotments and requirements of exact distances may be mitigated or waived.

3. The Low Density Residential Area (LDR) is intended to reduce the impact of development on the Occoquan watershed, complement the low density land use pattern in Prince William and Fairfax Counties and place the focus of development closer to Dulles North, Dulles Airport and Route 50.

4. Overall project densities in the LDR (outside of Town or Neighborhood Centers) should range between one (1) and three (3) units per acre depending upon the availability of roads, utilities and services, and implementation of the County’s design guidelines. Density may be increased to four units per acre if the development is clustered pursuant to the Zoning Ordinance.

5. The LDR should develop as a series of distinct neighborhoods and clusters surrounding a village, Neighborhood or Community Core.

6. New residential proposals in the LDR shall seek to preserve 30% of the residential area as civic and open space by clustering lots and diversifying the types of residential units in the project.

7. A buffer of 200 feet will be maintained along Bull Run to help protect water quality in the Occoquan Reservoir. Development potential from usable land in the buffer should be transferred to other parts of the property or to other sites. The buffer area should be maintained as a natural, vegetative area; however, passive recreation uses may be permitted. A 300 foot transition area, outside the buffer, will be maintained along Bull Run. The transition area may be rezoned to permit higher density development potential provided development potential above that permitted by current zoning is transferred to other parts of the property or to other sites. Large lot residential development as permitted by current zoning, passive and active recreation uses, agricultural and forestry uses may be permitted in the transition area.

8. The Moderate Density Residential Area (MDR) is intended to provide the opportunity for compact, self sustaining and affordable communities, the efficient use of public facilities and services and a variety of residential housing and business types.
9. Overall project densities (outside of Community or Neighborhood Cores) in the MDR should range between three (3) and six (6) units per acre depending upon the provision of roads, utilities and services, the proximity to a Community or Neighborhood Core, open space protection and implementation of the County’s design guidelines.

10. The MDR should develop as a series of distinct neighborhoods surrounding Community or Neighborhood Cores.

11. Development in the MDR will be concentrated to preserve open space, reduce road and utility costs and to create a strong sense of community among residents.

12. New developments in the MDR shall seek to preserve a minimum of 30% of the development area as civic and open space.

13. Suburban and traditional design will both be bona fide land use design options in Dulles South. Design standards will provide the opportunity for each option to function as mixed use, pedestrian friendly communities.

14. Residential developments should include local commercial, employment, open space, civic uses (i.e. churches, community centers...) and recreational facilities. The following criteria should be used to evaluate the appropriateness of the different uses:

   a. Local commercial uses may include retail outlets offering personal convenience items, personal service shops such as drycleaners, banks, doctor’s offices and similar uses provided:

   i. They are small scale operations intended to serve the adjoining neighborhoods;

   ii. They are located in small, compact Neighborhood Cores or Community Cores in compliance with the relevant policies for each center;

   iii. They propose compatible design features that exhibit a pedestrian-friendly scale, and convenient access for local residents; and

   iv. Associated commercial activities such as parking, signs, lighting, waste storage, and loading areas are located and designed to minimize the impact on adjacent areas.

   b. Employment uses may include office and light industrial uses provided:

   i. Activities such as storage, assembly, and display are completely enclosed and there is no noise, vibration, odor, or other emissions;
ii. Access for industrial traffic does not require such traffic to move through residential neighborhoods;

iii. The proposal includes compatible design features that exhibit a pedestrian-friendly scale, and convenient access for local residents; and

iv. Associated commercial activities such as parking, signs, lighting, waste storage, and loading areas are located and designed to minimize the impact on adjacent areas.

c. Open space uses such as natural areas, tot lots, athletic fields and maintained parks and greens should generally be dispersed so they are conveniently located to most people in the neighborhood. In addition, the following locational criteria are recommended:

i. Athletic fields should be located along collector roads and should be buffered from adjoining residences, although trails or sidewalks should provide a connection with the neighborhood; and

ii. Greens and other maintained, passive parks should serve both a recreational and design function by being located in high visibility areas or in conjunction with civic uses such as schools, churches or community buildings and a neighborhood core where the green can serve as either a “mall” for the core or as a buffer for adjoining homes.

d. Civic uses that are appropriate within residential neighborhoods include churches, community centers, elementary schools, municipal services and facilities such as a senior cafe, children’s daycare, store front libraries, and similar uses. In addition, the following locational criteria are recommended:

i. Civic uses should be located at prominent locations within the neighborhood such as the end of a street, on a ridgeline, or at a street intersection;

ii. Where possible, such uses should be located in conjunction with a Neighborhood Core; and

iii. Parking and associated activities such as signs, loading, and lighting should be located and designed to have minimal impact on surrounding areas.
15. The mix of uses (measured as a percentage of the land area) in new residential communities should generally conform to the following ratios:

<table>
<thead>
<tr>
<th></th>
<th>Minimum Required</th>
<th>Maximum Permitted</th>
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</thead>
<tbody>
<tr>
<td>Residential (outside the 65 Ldn)</td>
<td>30%</td>
<td>70%</td>
</tr>
<tr>
<td>Civic &amp; Open Space</td>
<td>30%</td>
<td>no maximum*</td>
</tr>
<tr>
<td>Light Industry &amp; Office</td>
<td>0%</td>
<td>20%</td>
</tr>
</tbody>
</table>

16. Residential developments of at least 100 acres in size may include a Neighborhood Core, pursuant to this plan and the Neighborhood Center Policies of the General Plan.

17. Residential developments of at least 300 acres in size may include a Town Core, pursuant to this plan and the Town Center policies of the General Plan.

18. All residential rezoning requests will be evaluated in accordance with the General Plan Capital Facility and Open Space proffer guidelines and in accordance with the capital facilities policies of this Plan. However, since the acquisition of a regional park site is a priority in the Dulles South Planning area, the County will encourage that the Open Space proffer guidelines be met through donations of cash to purchase a regional park site and/or through dedication of land for a regional park site.

19. Within the designated Residential Community along the Route 50 Corridor, the Plan supports the use of incentives to preserve a landscaped setback from the highway. To this end, the County may consider the following:

   a. For a development that provides a 300 foot building setback and a 150 foot landscaped parking setback from Route 50, the County may permit an additional 5% of the development area to be dedicated to Retail or light Industrial uses where they are otherwise permitted.

Or

   b. For a development that provides a 300 foot building setback and a 150 foot landscaped parking setback from Route 50, the County may credit the area within the 300 foot setback towards open space easement proffers that may be anticipated through the General Plan Open Space Proffer Guidelines. Easements shall be credited at the rate of three dwelling units per net acre.
Neighborhood Core

A Neighborhood Core provides the opportunity to implement the Plan's mixed use policies by allowing commercial development to locate in a residential community. The center concept is intended to prevent the haphazard location of stores along residential streets. It also serves an important design function by creating a hub around which community activities and amenities can be planned. The Neighborhood Core is where people can get a gallon of milk, drop off their dry cleaning and get some gas on the way home from work. It is where people walk to get their paper on Sunday morning or where residents hold an HOA meeting or go to church. The Dulles South plan proposes that these centers be small, compact enclaves. Individual businesses will also be small, usually no larger than 10,000 square feet in gross leasable floor area, although, a food store or supermarket located in a neighborhood core may be larger.

The Neighborhood Core should be located within a neighborhood, along a minor collector road, suited for on street parking. It should be separated from major collector roads or arterials to minimize the amount of "outside" traffic that might be attracted to the center. Different centers should be well separated from each other to prevent their eventual merging or the potential for strip development along an adjoining road.

Policies

1. Residential neighborhoods exceeding 100 acres in gross area may include a Neighborhood Core. The total area dedicated to the Neighborhood Core(s) shall not exceed 3% of the area of the proposed development.

2. A Neighborhood Core is intended to be a compact grouping of commercial, business, civic and residential uses providing convenience goods and services to residents in adjoining neighborhoods. It is also intended to create a sense of place and identity for the community.

3. The Neighborhood Core should be located on a collector road serving adjoining residential neighborhoods, generally in the geographical core of an individual neighborhood or between adjoining neighborhoods, but shall not directly access an arterial or major collector road.

4. Approval of a request to rezone property to establish a Neighborhood Core shall be contingent on the adequacy of roads and utilities and compatibility with adjoining residential development and compliance with the community design goals of the County.

5. The Neighborhood Core shall be limited to a single property or contiguous properties with a maximum size which does not require a primary market beyond the adjoining neighborhoods.
Community Core

The Community Core provides the opportunity for more intensive commercial and business development within large residential communities. The Community Core will provide for a mix of land uses including residential, commercial, civic and employment uses. As with the Neighborhood Core, the Community Core is intended to be compact and primarily made up of small scale businesses. The Community Core must be designed to accommodate pedestrian and vehicular traffic with a full complement of services and amenities.

Community Core design should focus on how it can best relate to the adjoining residential neighborhoods. Cores should provide the types of goods and services that are needed by local residents, as well as, restaurants, theaters and other types of entertainment that will create a dynamic social center. Policies stress a reasonably central location, safe and convenient pedestrian and vehicular access from each adjoining neighborhood, and architectural and site planning features that create an interesting and pleasant pedestrian environment. The Community Core should still be distinct in ways which make it obvious that a pedestrian or motorist has left a residential area and entered a shopping area. Changes in the size of landscape elements, sidewalk widths, street lighting or architectural theme help distinguish between areas.

Policies

1. A Community Core is to be built on 30 to 60 acres of land. Residential densities should be between eight (8) and 16 units per net acre contingent upon the availability of utilities, roads and public facilities and in conformance with the community design and growth management policies of this Plan.

2. The location of a Community Core should be evaluated against the following criteria:

   a. A Community Core must be at least 10,000 feet away from another Community Core and at least 4,000 feet away from a Neighborhood Core. The distance shall be measured between the two closest points. This separation may be reduced where a permanent natural or manmade barrier provides clear visual separation and eliminates the possibility of different cores merging into a commercial strip.

   b. A Community Core should be situated in one quadrant of the intersection of two arterial or major collector roads or on one side of a single arterial or major collector provided that the majority of the residential community should not be separated from the Community Core by an arterial road or major collector.

   c. A Community Core should clearly relate to adjoining neighborhoods by means of pedestrian and vehicular access, provision of
recreational, cultural and social services and compatible design of structures, landscape and associated features.

3. The mix of land uses (measured as a percentage of the land area) in a Community Core should generally conform to the following ratios:

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Minimum Required</th>
<th>Maximum Permitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential (outside the 65 Ldn)</td>
<td>25%</td>
<td>40%</td>
</tr>
<tr>
<td>Commercial Retail &amp; Services</td>
<td>20%</td>
<td>60%</td>
</tr>
<tr>
<td>Regional Office</td>
<td>10%</td>
<td>25%</td>
</tr>
<tr>
<td>Combined Total of Retail &amp; Regional Office Uses</td>
<td>30%</td>
<td>60%</td>
</tr>
<tr>
<td>Civic &amp; Open Space Open Space will be a minimum of 5% of the total land area</td>
<td>20%</td>
<td>no maximum*</td>
</tr>
</tbody>
</table>

4. Approval of a request to rezone property to permit a Community Core shall be contingent on the provision of appropriate civic uses and services, the impact on existing neighborhoods and compliance of the proposal with the community design goals and policies of the County.

5. Individual commercial uses within a Community Core should not have a single-level floor area significantly larger than 20,000 square feet with the exception that a food store or supermarket may exceed this limitation. Such stores may include uses such as pharmacies, banks, and other services within the principal use.

**Regional Hub**

The Regional Hub is envisioned to function as the *downtown* of Dulles South. The Regional Hub will feature positive design qualities found in urban areas such as Arlington and Alexandria. Principal among these are the creation of well configured squares and greens, an interconnected network of landscaped streets with frontages dedicated to social and recreational activity and visual enjoyment for the pedestrian as well as the motorist, a pattern of small blocks, and civic buildings that act as landmarks and symbols of community identity.

Like traditional urban centers that go through continual cycles of change, the Regional Hub will evolve in response to changes in Dulles South. Rather than precede new development, the Hub will come only after a significant amount of construction has already occurred and in conjunction with the development of services such as public transit. The primary function of a Regional Hub will be as an office and retail center, but the clustering of houses, commercial, and public uses is designed to create a stable community that provides varied living and working options.
Because such a Hub is not anticipated to occur for many years, the Dulles South plan does not propose to identify a specific site. Such a Hub will evolve from a community core or other major commercial development and will be driven by market considerations. By evaluating the ability of a proposed Regional Hub to become a major focus of the planning area, the Plan intends to provide flexibility to the developer.

Policies

1. The County envisions one Regional Hub evolving out of a Regional Commercial development or a Community Core and that this evolution will coincide with the growth of a local market for goods and services. Therefore, it is intended that a rezoning to permit an Regional Hub may be approved to permit the transition of a constructed Community Core or Regional Commercial center or, in the case of a vacant site, when the Hub is designed to serve a substantial residential community, already constructed.

2. The Plan envisions the Regional Hub functioning as the planning area’s downtown. The Regional Hub will generally exhibit the following characteristics:

   a. A compact, high density mixed use development on 50 to 90 acres consisting of commercial and office uses but also including appropriate residential and civic uses.

   b. Business floor area ratios which encourage multi-storied structures on small lots with ground floors dedicated to retail and service uses.

   c. Residential densities between 15 and 24 units per net acre in portions of the Hub designated for residential uses and as upper story uses in buildings in the business areas.

   d. Direct access via one or more arterial or major collector roads and connections to public transit.

   e. A pattern of interconnected streets preferably creating a grid of small rectilinear blocks, typically about 400 feet long.

   f. Open space totalling a minimum of 100,000 square feet and consisting of a number of small parks and urban green spaces at least one of which is a green or square of 20,000 square feet or larger, that can accommodate public events such as a community festival or craft show.

3. Proposed Regional Hub sites should satisfy the following criteria:

   a. The site should be adjoining, and have access to, at least one arterial or major collector road.
b. The site should be located in either a light industrial or residential area and, it should be adjacent to a substantial residential community outside the Hub itself.

c. A Regional Hub should not locate in areas designated Low Density Residential Areas and should not be situated within 10,000 feet of a Rural Area as designated by the General Plan.

d. The site should be located on a public bus route which provides access to a fixed rail transit station or other regional transit service.

e. The residential portion of the Hub should not be located inside the Aircraft Noise Impact area (65 Ldn) as defined in this Plan.

4. The land use mix (measured as a percentage of the land area) in a Regional Hub will generally comply with the following ratios:

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Minimum Required</th>
<th>Maximum Permitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential (outside the 65 Ldn)</td>
<td>10%</td>
<td>25%</td>
</tr>
<tr>
<td>Commercial Retail &amp; Services</td>
<td>20%</td>
<td>55%</td>
</tr>
<tr>
<td>Regional Office</td>
<td>30%</td>
<td>50%</td>
</tr>
<tr>
<td>Light Industrial</td>
<td>0%</td>
<td>20%</td>
</tr>
<tr>
<td>Combined Total of Light Industrial and Office use</td>
<td>30%</td>
<td>50%</td>
</tr>
<tr>
<td>Civic &amp; Open Space</td>
<td>15%</td>
<td>no maximum*</td>
</tr>
</tbody>
</table>

Open Space will be a minimum of 5% of the total land area

Business and Industrial Areas

Dulles South is faced with direct competition from other parts of Loudoun County and Fairfax County. Fairfax County has approved zoning for the development of 113 million square feet of office and industrial space in the Route 28 corridor area. There are also a 177 million square feet of approved business floor area in Dulles North and Eastern Loudoun which will compete in the regional business market. This available capacity, linked to proximity to Routes 28 and 66 and the Toll Road almost ensures a reduced market for industrial and office space in Dulles South. The Dulles South plan proposes considerably less business and industrial area than previously permitted by the General Plan. This change is due in great part to a substantial reduction in the area covered by the recently revised 65 Ldn noise contour.
Much of the approved business development potential elsewhere in the County targets office and flex industrial uses. Very little of the land will accommodate service or manufacturing uses. This suggests that the best opportunity for employment uses in Dulles South will likely be service and manufacturing industries such as construction, equipment sales and repair, aircraft and travel services, warehousing and distribution, and similar uses. Unlike other areas, Dulles South is proposed to accommodate uses that may require outside storage and assembly, more industrial traffic and more product or service oriented structural designs. However, care must be taken to make such uses compatible in a mixed use environment.

The Report of the Economic Development Task Force (dated March, 1992) among other things, outlines the target industries and businesses that will expand and stabilize the County’s economic base. First among these are those businesses that are associated with Dulles Airport. Industries that are aviation and transportation oriented including freight forwarders, distribution facilities and aircraft maintenance and supply operations will serve to enhance the role of the Airport in the national and international market. Other businesses are sensitive to airport proximity. Businesses with high transportation requirements and particularly those with international transportation needs, such as financial service companies and consulting firms, are also to be targeted.

Washington Dulles International Airport is becoming an increasingly important international destination for both tourism and trade. The Airport is a Foreign Trade Zone but to date this asset is under marketed. Foreign Trade Zone status provides for the duty free movement of goods from the Airport and has several benefits with regard to industries that locate in the Zone. Air transport moves about 22% of all Mid-Atlantic exports. In Virginia, air transported exports increased by 30% between 1987 and 1990. Currently this facet of the Airport is under used. The potential exists for a significant increase in cargo related industries. The County has planned for and committed resources to the continuing development of employment uses in Dulles North.

Residents expressed a fear that Dulles South might become a “dumping ground” for undesirable uses such as a landfill or heavy industry. Although they appreciate the economic role of the existing quarries, residents do not support additional quarries in the area. Residents also felt that new industry should be compatible with the residential character of the community. Residents feel Dulles South should be a residential community with employment uses as a smaller part of the land use mix.
Policies

1. The County encourages the development of service industries in Dulles South, particularly service industries related to Dulles Airport. Service industries shall include but not be limited to manufacturing and assembly operations, materials handling, travel services, catering, information processing, equipment repair and storage and similar industries that are labor intensive and require a range of labor skills.

2. Industrial development in Dulles South should conform to the design guidelines presented in this Plan and the General Plan. Those design guidelines are intended to minimize the negative impact of industrial activities such as outside storage, loading and outside assembly operations or noise, light, or other emissions.

3. Business development areas are identified on the Land Use Map (see Figure 7, page 36) as follows:
   
a. Light Industry Areas include a mix of office, flex industrial and service industries, as well as compatible high density residential development as a minor component of larger industrial developments.

b. Heavy Industry Areas are intended for industries that may not be compatible in a mixed-use community; and to provide for development of quarry related uses.

c. Regional Commercial Areas are intended to accommodate commercial retail uses including shopping centers generally exceeding 150,000 square feet of leasable floor area and large “single user” buildings typically, 50,000 square feet or larger, whose primary market exceeds the surrounding community, and which require expanses of surface parking and otherwise are not pedestrian oriented.

4. Within the designated Light Industry and Regional Commercial Communities, the Plan supports the use of incentives to encourage the consolidation of small lots, along Route 50, to reduce access points on Route 50, and to preserve a landscaped setback from the highway. To this end, the County may consider modifications to the land use mix within each Community as follows:

a. For a development proposing to incorporate one or more existing lots of record, 10 acres or less in size, that front on Route 50 into a tract of 10 to 20 acres and reducing the number of access points to Route 50 to no more than the minimum required by VDOT, the County may permit an additional 5% of the development area to be dedicated to Office, Retail, Light Industrial, or Residential uses. In regional Commercial Communities, this bonus permits a total of 5% of the area to be used for residential purposes (outside the 65 Ldn).
b. For a development that provides a 300 foot building setback and a 150 foot landscaped parking setback along the frontage on Route 50, the County may permit an additional 5% of the development to be dedicated to Office, Retail, Light Industrial, or Residential uses.

**Light Industry Areas**

In Dulles South, the Light Industry Areas are intended to accommodate a mix of uses similar to that proposed in the General Plan. Differences between the land use mix ratios proposed in the plans result from a reduction in the area recommended for civic uses in non-residential areas. Light industries, in Dulles South, are intended to include more service and manufacturing oriented uses than currently proposed in the General Plan. Such uses typically need outdoor storage or assembly space, equipment storage and other associated activities not recommended in the General Plan. This change to a more obtrusive character will increase the need for buffering and screening to protect adjoining land uses. This change is intended to reduce the competition between Dulles South and Dulles North and improve the potential for growth in the near future. The Light Industry Area designation is focused on the Route 50 corridor and within the revised 65 Ldn. Light industry uses are also proposed around the approved Alliance Quarry site. This area is also subject to specific policies within the Quarry policies.

**Policies**

1. Light industrial uses are encouraged in compact parks and clusters within the Route 50 corridor and in other areas designated Light Industry on the Land Use Map (see Figure 7, page 36).

2. Industrial uses will be limited to those which do not require substantial outside storage and which have negligible emissions (i.e., noise, odor, vibration).

3. Residential communities should be protected from the negative impacts of traffic generated by industrial development. Development proposals for new light industries shall include a plan to minimize and/or mitigate the impact of industrial truck traffic on residential communities through appropriate routing and operational restrictions.
4. The mix of uses in a Light Industry Community (measured as a percentage of land area) should generally conform to the following ratios:

<table>
<thead>
<tr>
<th></th>
<th>Minimum Required</th>
<th>Maximum Permitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Industrial Flex</td>
<td>45%</td>
<td>95%</td>
</tr>
<tr>
<td>Regional Office</td>
<td>0%</td>
<td>40%</td>
</tr>
<tr>
<td>Commercial Retail &amp; Services</td>
<td>0%</td>
<td>10%</td>
</tr>
<tr>
<td>Combined total of Retail &amp; Regional Office Use</td>
<td>0%</td>
<td>40%</td>
</tr>
<tr>
<td>Residential (outside the 65 Ldn)</td>
<td>0%</td>
<td>25%</td>
</tr>
<tr>
<td>Civic Space Refer to Policies 5 &amp; 6</td>
<td>0%</td>
<td>no maximum*</td>
</tr>
<tr>
<td>Open Space</td>
<td>5%</td>
<td>no maximum*</td>
</tr>
</tbody>
</table>

5. In the residential component of a Light Industrial community, the civic space and open space requirement shall be a minimum of 30% of the area designated for residential use.

6. The County shall consider the need for on-site civic space in Light Industry areas on a case by case basis but it is anticipated that such projects will contribute toward civic facilities in the planning area based on the need generated by the project.

7. Residential development in the Light Industry areas may have a maximum density of 24 units per acre contingent on the availability of adequate roads, utilities, and public services; compatibility with surrounding uses; and compliance with other policies of this Plan.

**Regional Commercial**

Regional Commercial uses are typically large scale retail and service uses, such as shopping centers, which involve outside storage and display, large parking areas for customers and delivery, and large buildings. They have little in common with residential developments or neighborhood, town or regional hubs. They derive their customers from a regional market more so than from the local community and therefore depend on significant vehicular traffic.

The size and scale of individual structures will depend on the nature of the operation and its relation to surrounding uses. Larger structures should include design features that minimize the impact of the structure on surrounding land uses. Landscaping, site grading, architectural design accommodations such as stepped back upper levels and variable facade treatments may all be used to ensure compatibility with adjoining uses.
As in other types of communities, this Plan and the General Plan seek to make buildings the prominent feature of a site by removing the parking from the front of a building. Smaller businesses should locate toward the front of the development to provide visual variety, to break the visual impact of the large scale buildings to the rear, and to separate the “fast turn around” traffic movement from the more long term, big item shopper traffic. Smaller scale development at the front also helps to hide the parking areas and give the streetscape a less congested appearance.

Larger Regional Commercial developments should scale down structures that abut residential areas and should screen parking and loading facilities that, likewise, abut residential uses. Natural drainage features, such as swales and ponds, should be conserved to the greatest extent possible to help break up the visual effect of large paved areas.

**Policies**

1. Regional commercial uses are defined as large scale retail uses (other than grocery stores) with primary markets other than Dulles South, that require building footprints in excess of 50,000 square feet of gross leasable floor area for single user buildings, and shopping centers in excess of 150,000 square feet.

2. Regional commercial uses, because of their auto intensive nature and the large market area, will be permitted to locate only in areas so designated on the Land Use Map or as a minor component of a Light Industry development.

3. The County may approve the construction of a Regional Commercial development subject to the following:

   a. The proposed use has direct access to an arterial or major collector road without routing traffic through a residential community.

   b. The proposed use respects the ultimate arterial or major collector road alignment proposed in this Plan.

   c. Utilities are available to accommodate the use.

   d. Detrimental impacts on adjoining residential communities shall be minimized.

   e. The proposal satisfies the community design objectives of this Plan and the General Plan.

   f. The use will not interfere with the function of adjoining light industries.
4. The land use mix (measured as a percentage of the land area) in a Regional Commercial area will generally comply with the following ratios:

<table>
<thead>
<tr>
<th></th>
<th>Minimum Required</th>
<th>Maximum Permitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential (outside the 65 Ldn)</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Commercial Retail &amp; Services</td>
<td>55%</td>
<td>95%</td>
</tr>
<tr>
<td>Regional Office</td>
<td>0%</td>
<td>30%</td>
</tr>
<tr>
<td>Light Industrial/Flex</td>
<td>0%</td>
<td>20%</td>
</tr>
<tr>
<td>Combined Total of Regional Office &amp; Light Industrial Use</td>
<td>0%</td>
<td>30%</td>
</tr>
<tr>
<td>Civic Space</td>
<td>0%</td>
<td>no maximum*</td>
</tr>
<tr>
<td>Open Space</td>
<td>5%</td>
<td>no maximum*</td>
</tr>
</tbody>
</table>

5. Residential communities should be protected from the negative impacts of traffic generated by regional commercial uses. Development proposals for new regional commercial uses shall include a plan to minimize and/or mitigate the impact of traffic on residential communities through appropriate routing and operational restrictions.

**Shopping Centers**

The residents of Dulles South expressed a need for convenient shopping. Currently most of the day to day shopping for necessities and all of the shopping for groceries and durable goods must be conducted outside of the area. Most residents go to Fairfax County for their groceries and major purchases. Several workshop participants view destination retail business (i.e. shopping malls, discount retailers...) as an opportunity for Dulles South, although large scale malls such as Fair Oaks or the proposed Dulles Town Center were described as too large.

Current County plans limit the location of larger shopping centers to specific, identified sites. The Dulles South plan policies are more general, limiting certain size shopping centers to residential or business areas rather than specific sites. The Dulles South plan also recognizes that in order to generate market interest in Neighborhood and Community Cores, conventional shopping centers may have to be incorporated into the mix of uses. For example, a supermarket is essential to the community core use mix and typically it will locate in a small shopping center configuration, similar to that proposed as part of the Cascades Town Center. Careful consideration of design compatibility, pedestrian access and other matters will be important prerequisites for such proposals.
Policies

1. Commercial shopping centers of less than 150,000 square feet of gross leasable floor area (gfa) should locate in neighborhood or community cores.

2. Commercial shopping centers of greater than 150,000 gla should locate only in areas designated Regional Commercial or Light Industrial on the Land Use Map.

3. Commercial shopping centers exceeding 350,000 gla should locate only in areas designated Regional Commercial on the Land Use Map.

4. Food stores and supermarkets should locate only in Neighborhood or Community Cores in accordance with the County’s Comprehensive Plan.

5. All shopping centers will include design features that achieve the following:

   a. A minimal interference with traffic flow on arterial and major collector roads;

   b. A site design that is compact and makes structures the prominent feature of each site as viewed from adjoining roads;

   c. A substantial degree of landscaping in the form of buffering, parking lot tree canopy, street trees and other landscaping; and

   d. An appropriate transition or buffer between the center and adjoining uses including compatible uses, landscaping, pedestrian access and other means.

New commercial centers with street trees and landscaped parking areas.

Photo by CHK Architects and Planners (designers)
and Treifalger House Properties, Inc. (developer).
Heavy Industry

In Dulles South, the term heavy industry most often refers to the quarry and rock crushing operations at Chantilly and Bull Run Quarries. However, the heavy industry designation also applies to businesses which use or produce toxic materials; which emit odors, noise or smoke; or otherwise create a nuisance for or are incompatible with neighboring land uses. Such uses, though not always preferred, are accommodated in Dulles South, in keeping with the Plan's philosophy of providing space for service and manufacturing industries.

To reduce the impact of such uses, the Plan designates the area surrounding existing and approved quarries as Heavy Industry. This will consolidate their impacts and allow the County to plan for needed road and utility improvements in specific locations. Heavy Industry areas will be separated from residential areas by uses that are more compatible with residential development.

Policies

1. Heavy Industry uses are generally defined as manufacturing, resource extraction, refining and similar industries which by virtue of scale, associated emissions or activities, are not compatible with other types of development.

2. Heavy Industry uses may locate in Dulles South only in areas so designated on the Land Use Map.

3. Residential communities should be protected from the negative impacts of traffic generated by heavy industries. Development proposals for new heavy industries shall include a plan to minimize and/or mitigate the impact of industrial traffic on residential communities through appropriate routing and operational restrictions.

4. In evaluating Heavy Industry proposals, the Board of Supervisors shall determine that the following criteria have been met:

a. Adequate public utilities and roads are provided;

b. The use has mitigated the negative impacts on the surrounding land uses and the natural and cultural environment; and

c. The use complies with the goals and policies of the County’s Comprehensive Plan.
Quarries

The crushed stone quarries that extract diabase are a substantial economic resource. This stone is primarily used for concrete and road base material. Loudoun County diabase is some of the best rock for these purposes found on the East Coast. Continuing construction activities in the greater Washington area will ensure that diabase continues to be an important economic resource. This industry provides a steady contribution to the County’s economy.

Quarrying operations and related activities present a challenge to County land use planning because they may threaten groundwater and surface water quality, they are site specific by nature, and they are compatible with only a few uses, most related to quarry operations. Heavy truck traffic generated by this industry is also an important land use and transportation consideration. Truck traffic from quarries was cited as an important issue by residents and opposition to new or expanded quarry operations often focuses on traffic problems.

Diabase rock is an important economic resource primarily used for concrete and road construction.

Diabase Stone Quarries in Dulles South provide opportunities for employment and economic development.
Policies

1. The County supports the continued development of existing quarries and limits new extraction activity to expansions of the existing quarries or development on adjacent land.

2. The expansion of existing quarries or development on adjacent lands may be approved subject to the following conditions:
   
   a. Access to the proposed quarry site is provided by roads designed and suited for industrial traffic and located to separate the industrial traffic from residential neighborhoods and other non-industrial developments;

   b. Surrounding properties and public thoroughfares are adequately screened and protected from the noise, vibration and visual impacts of the quarry; and

   c. The quarry site minimizes detrimental impacts on the environment.

   d. Appropriate and adequate security is provided at the quarry to reasonably prevent unauthorized people from entering the site.

3. Current General Plan policies and State and Federal regulatory efforts to manage the development, operation and reclamation of quarry sites should be continued.

4. The Alliance Quarry site and the adjoining Light Industrial area identified on the Land Use Map may, by rezoning, be developed as a residential community pursuant to the Moderate Density Residential area policies provided that:

   a. Such development does not affect the viability of industrial uses that may develop under the current zoning;

   b. No portion of the Light Industrial area may be developed for residential purposes unless the quarry site itself has been rezoned for another use.
IV. Transportation

Transportation issues in the Dulles South planning area focus on the lack of an adequate road network to serve future growth. The improvement of this road network is but one aspect of an efficient transportation system envisioned for the planning area. The transportation system should support the County's growth management and community design objectives by fostering a close relationship with land use planning, while promoting safety and minimal traffic congestion.

Road Network

Current road capacity in Dulles South, except on Route 50, is severely limited. The existing road network is substandard and will have to be improved concurrent with significant new construction. The numerous single-lane gravel roads in Dulles South are recommended by the Virginia Department of Transportation (VDOT) to handle a maximum of 50 trips per day. Many of the existing roads in Dulles South also have sections of poor horizontal and vertical alignment which should be improved to modern engineering standards to enhance operational safety. Many of the existing roads are also “disjointed” and should be realigned to create a unified corridor.

A comprehensive road network should service pass-through and local traffic with ease. An arterial, collector and service road network is a proven commodity in performing this function. Arterial roads fulfill regional needs by connecting destinations of area residents and pass-through travelers. Major collector roads assist in collecting traffic from, and moving traffic through, an immediate area to feed arterial roads. Minor collector roads distribute traffic from major collectors to local roads.

Route 50 is currently a four-lane median divided facility from the Fairfax County line to just east of Lenah. The Commonwealth’s adopted Six Year Road Improvement Plan calls for the extension of the four-laning of Route 50 from east of Lenah to immediately east of Gilbert's Corner. VDOT’s draft Route 50 Corridor Study of January 1990 shows Route 50 as a limited access facility, with grade-separated interchanges at Route 609, Route 606, the West Spine Road, Route 659 relocated, Route 772 extended and Route 860. Parallel collector roads within 1/2 mile north and south of Route 50 will be necessary to allow access to frontage properties.

The General Plan, in conjunction with the Route 50 Corridor Study, proposes to relocate Route 659 to the west of its present location. It is planned to bypass Arcola and intersect with Route 50 west of the current intersection and continue south of Route 50 toward the Route 705 crossing of Bull Run. Also, a portion of existing Route 659 will be relocated east of its present intersection with Route 50 to connect with the planned West Spine Road from the Dulles North planning area. The West Spine Road will bypass Arcola on the east, and will intersect with Route 50 between realigned Route 659 and Route 606. Route 606 will extend south of Route 50 to connect with Route 621 leading into Fairfax County.
Several roads connect into neighboring jurisdictions from Dulles South, including Routes 742, 620 and 621, which extend into Fairfax County and, Routes 659, 705 and 624 which extend into Prince William County. Current plans in Prince William show the Route 234 bypass extending into Loudoun in the vicinity of the crossing of Bull Run at the existing Route 705. This connection corresponds to the relocated Route 659 in the Loudoun County General Plan. Existing Route 659 crosses into Prince William and intersects with existing Route 234.

Future plans in Prince William have existing Route 659 continuing as a major collector with the Haymarket area. Route 624, a non-bridged crossing of Bull Run is not shown for improvement on future land use plans for Prince William. Routes 742 and 620 are not scheduled for improvement under the adopted Fairfax County Transportation Plan. Route 620 is slated to remain an improved, rural two lane road in Fairfax County. However, it should be noted that Route 609 (Pleasant Valley Road) is scheduled to be a four lane arterial from the Lafayette Business Center on Route 50, to Route 29.

Solutions to inter-jurisdictional road issues may be reached through various regional agencies that aid in coordination of regional transportation problems in the Northern Virginia area, including the Transportation Coordinating Council (TCC) for Northern Virginia. Its function is to perform an annual review of the separate transportation plans of individual jurisdictions for consistency with the Northern Virginia 2010 Transportation Plan, conceptually adopted by the Loudoun County Board of Supervisors in 1989. Another function of the TCC is to identify, prioritize and pursue funding for key regional transportation projects.

To relieve traffic pressures on the Capital Beltway and its bridge crossings of the Potomac River, the Maryland and Virginia Departments of Transportation have proposed several alternate routes for a bypass of the Washington metropolitan area. One of these options passes through Dulles South east of Route 15, and is known as the Western Bypass. The General Plan does not show an alignment for the Western Bypass in Loudoun County. However, the approved proffers for the Alliance Resources Rezoning (ZMAP-1989-0008) allows for a 10 year window for the County to exercise its option to finalize an alignment for the Western Bypass through its property.

The specifics of alignment and character of the proposed road network is presented with the understanding that transportation plans are dynamic and will require continued refinement. Therefore, proposed network maps should be viewed as conceptual illustrations.
Policies

1. An arterial, collector and service road network, supporting the General Plan network, will be constructed to service the planning area. (See Figure 8, page 58). Arterial roads will be Route 50 and Route 659 relocated. Route 50 will ultimately be a six-lane limited-access facility, expandable to six lanes. Major collector roads with a four-lane median-divided design will be Route 620/Braddock Road, the north and south parallel collector roads of Route 50, Route 606 extended, Route 621/Arcola bypass, and West Spine Road/existing Route 659, Minor collector roads will be West Dulles Boulevard, Dulles South Boulevard and Route 860 relocated. (See Appendix B, page 83).

2. The County will actively coordinate with Fairfax and Prince William Counties to expedite regional road improvements and connections. This will be accomplished through discussion with both jurisdictions regarding highway extensions into both counties and by seeking support from State and Regional transportation agencies.

3. All development plans will address traffic issues and seek to minimize traffic impact on established communities through appropriate routing and hours-of-operation restrictions.

4. Route 50 will function as the primary arterial for points west and east of the planning area.

5. Route 50 will evolve from a four-lane median-divided facility to a limited access facility. North and south parallel collector roads will be developed approximately 1/2 mile from Route 50 subject to final alignments which accommodate environmental and cultural features and land ownership patterns. (See Figure 8, page 58).

6. The Route 50 corridor will also contain local service roads between Route 50 and its parallel collector roads. Perpendicular roads will link the local service roads with the parallel collector roads. When Route 50 becomes a limited access facility, the perpendicular roads will terminate in cul-de-sacs.

7. New direct access to Route 50 from fronting properties will be discouraged during its evolution to a limited access facility in order to fulfill design policies for the Route 50 corridor. Under the limited access condition, access will be obtained from the north and south parallel roads to Route 50.

8. Some existing roads may be realigned to perform a regional function as well as address safety concerns.

9. The road alignments shown on the Proposed Transportation Network Map are conceptual in nature and are intended to be preliminary and will later be revised based on more detailed planning and engineering. Final alignments for all roads should accommodate environmental and cultural features, such as historic sites and land ownership patterns.
Figure 9.

Interim Road Network

Collector Road set back a minimum of 500' from Route 50

1100' Spacing between Route 50 entrance/streets

Route 50 (4 Lane Divided, 60 MPH Design)

Figure 10.

Ultimate Road Network

Ultimate Collector Road (Half-mile spacing from Route 50)

Property Access Roads
Interim Collector

1 mile spacing between interchange

Route 50
(6 Lane Divided)
**Funding**

The County has traditionally relied on a mix of state, local and developer funding sources to construct and fund improvements to its road network. The majority of state funding is identified in the Primary and Secondary Six-Year Road Improvement Plan. To reach a middle ground between "up front" (improvements required before the sale of units) and an overburdened existing road system, the County pursues phasing plan commitments as a proffer in rezonings. Phasing of new development against the capacity of the constructed road network attempts to balance the expenditure on roads with the income from development. At the beginning of each phase, however, the road improvements need to be in place to accommodate the development that will be constructed by the conclusion of that phase.

The County has been successful in implementing a proffer system (used in part to fund road improvements) to negotiate with developers to mitigate the impacts of their proposals. Prime examples of this process are the Cascades Parkway interchange on Route 7 in eastern Loudoun and the Route 625/640 corridor in Dulles North.

Another innovative funding technique used by the County to fund road improvements is the creation of a special taxing district that assesses area landowners in order to generate revenue for road improvements. A special taxing district has been established in the Route 28 Tax District with success. As a rule, this approach is effective when implemented for a specific road improvement project. It should be noted that the Commonwealth of Virginia only allows taxing of commercial property, and if there is a shortfall in the district revenues, the difference will be taken out of the Primary and Secondary Road Funds.

**Policies**

1. The County should continue its current mix of funding sources, which includes state, local and private means. The County will continue to seek innovative funding measures, such as special taxing districts, to assist in financing road improvements.

2. County policy of negotiating phased transportation plans during the rezoning process, as outlined in the General Plan, should continue.
Public Transit

Public transit is in its infancy in Loudoun County. Accordingly, Dulles South is likely to follow areas of more advanced development in receiving public transit services. There is no public transportation in Dulles South currently. The area is covered by the Countywide Rideshare Program, although little commuter traffic is generated in the area. It is envisioned that public transit could link the area to regional transportation corridors, such as the Dulles Toll Road and Dulles Toll Road Extended, where commuter transit to the Washington core area and METRO would be available. Direct buses could run from Dulles South to areas of employment in Dulles North, Fairfax, Prince William, or the close-in Washington metropolitan area, greatly improving the quality of life and the marketability of new development in Dulles South (see Figure 11, page 62). In order for public transit to be effective, it must be supported by sufficient density. A Regional Hub or Community Core could generate enough users to justify public transit service.

Policies

1. Transit planning for Dulles South will be linked to buildout levels.

2. Public transit facilities will emphasize park-and-ride lots and connecting bus service to other transit systems and employment centers.
Dulles South Planning Area
Conceptual Transit System  Post 2010

Potential Rail Line
Potential Bus Line
Potential Rail Terminal

Potomac River
Leesburg

Dulles Corridor
Reston/Tysons Corner/Arlington/Washington D. C.
Route 50 Corridor
Fairfax/Fair Oaks/Vienna

Figure 11.
VI. Public Facilities and Services

Because the Dulles South Area is generally undeveloped and sparsely populated, the area does not contain the variety of public facilities and services found elsewhere in eastern Loudoun. With the exception of the Arcola Community Center, Arcola Elementary School, and the Arcola Volunteer Fire and Rescue Station, residents of Dulles South must rely on facilities in eastern Loudoun and Leesburg. Any significant development in Dulles South will require substantial capital facilities improvements and investment. To adequately meet the needs of current and future residents of Dulles South, the plan identifies the type and number of new services that would typically be required for the area based on projected development. In addition, the plan addresses when and where such facilities should be constructed and how the facilities will be financed.

Level of Service Policies

Loudoun County, like other jurisdictions, bases its plans for capital facility and service improvements on population and population projections. These figures are derived from projections about growth and development or from data showing that existing facilities are overcrowded or insufficient. Several County agencies have prepared service plans that propose standards for serving Loudoun's growing population. A few of these documents propose very specific guidelines for facilities linked to per capita population (i.e., the Library service plan includes a recommended number of books per capita) that can be translated into construction or land use requirements. Physical needs linked to various services are addressed in County land use plans so that these needs are taken into account in proffer guidelines and so that appropriate locations for particular facilities can be identified.

Citizens of the Dulles South area who attended the community workshops believe that their service needs have been overlooked and, in some cases, ignored completely. Citizens cited the need for schools, community centers, recreational facilities, and police and fire protection in particular. A number of citizens and members of the Dulles South Citizens’ Committee felt that capital facilities should be related to what the community can afford. These citizens and the Committee also felt that the County’s current service plans are based on unrealistic and excessive standards. For this reason, the Dulles South plan recommends that current County service plans be revised using more conservative service standards with the ultimate goal of reducing projected facility and service needs.
Policies

1. The standards for the level of capital facilities and service needs for the Dulles South area should be at least equal to service levels included in the County's most current service plans as endorsed by the Board of Supervisors. Where there is no service plan for a particular service or type of facility, the guidelines in Appendix C, page 89, shall apply.

2. The Board of Supervisors should re-evaluate the level of facilities and services proposed in current County service plans with a view toward downsizing and establishing a base level of service.

Arcola Community Center is an important focus for community activities.

Arcola elementary students in the Dulles South planning area attend Arcola elementary school.
Funding

The County anticipates that properties developed as commercial and/or employment/industrial will eventually generate sufficient revenues to pay for necessary public services since they generate very little in the way of capital improvement demands for services such as schools, libraries, parks, etc. New housing, conversely, generally fails to generate sufficient tax revenue to cover the operating costs of needed public services, and invariably imposes the need to construct new or expanded capital facilities. New development in Dulles South, and residential development in particular, will require substantial investments in infrastructure and capital facilities because very few services are available in the area today.

Up until the early 1980s, before the development boom, Loudoun generally paid for additional public service improvements through careful financial management, bonds, property taxes and inter-governmental transfers of funds such as state or federal revenue sharing. However, as non-local revenue sources have been either virtually eliminated or severely cut back, and as the development pace quickened, the County turned to alternative revenue sources to balance the demands associated with new development. The County has begun to share the fiscal burdens of new growth with the development community because, even in boom times, there are limits to fiscal prudence, borrowing, property tax increases and grants availability.

Supporting new development with all the necessary public facilities and utilities will require significant expenditures. The current and projected operational funding capabilities of Loudoun County, as well as, the Virginia Department of Transportation and other public agencies are and will be insufficient to provide new development with all the public facilities and utilities needed to support growth. Unfortunately, major delays in the provision of such facilities and services would seriously hamper the marketing, sales and revenue projections of the private development sector. Consequently, the County anticipates that the development community will cooperate with the public sector in the provision of public facilities and utilities which will be necessary to adequately service the growth anticipated in the Dulles South planning area and other growth areas in the County.

Over the past several years, the development community has assisted in offsetting the costs of growth through development proffers. Proffers are voluntary commitments which a developer makes to the County to assist in improving the public infrastructure needed to serve new residents or users of the development. The General Plan contains a specific set of proffer guidelines. The basic premise of the proffer guidelines is that the private sector should share in the costs of capital facilities improvements related to new growth. The guidelines recommend that the private sector fund 25% of capital facilities costs for units above 1.6 dwelling units per acre, excluding sewer, water and roads. The balance of the improvements would be funded by the County. The percentages are not intended to reflect a particular "magic" percentage. It is a qualitative, policy based figure rather than a quantitative figure. The percentages are intended to reflect the County’s
commitment to being a partner in growth and development. The General Plan also states that proffer guidelines can be refined in area plans. In addition to proffers, the General Plan suggests that a variety of other innovative funding options should be explored as a means of financing capital improvements in developing areas.

Participants in the Arcola workshops expressed a range of opinions about how growth should be paid for. A number of participants felt that County and State revenues should continue to be the primary funding source for improvements. In addition, several citizens supported review of the 25% funding target specified in the General Plan proffer guidelines (the discussion included those that felt the percentage was too low and others who felt it was too high). Some citizens were concerned that proffers may lessen the affordability of housing and lessen service delivery. There were also suggestions that developers should pay for some types of facilities while others should be funded from other revenue sources. User fees were also suggested as a possible funding mechanisms. Taking into account these comments, as well as needs and priorities for Dulles South specifically, the following proffer guidelines are based on the General Plan, but refined to provide incentives for developers to assist existing homeowners in resolving public health problems associated with failing septic systems.

Policies

1. In accordance with General Plan policies, the County will encourage that the provision of public facilities and services be a joint effort between the public and private sectors through a combination of conventional funding sources, such as State and local tax revenues, and innovative funding mechanisms such as proffers, special taxing districts, and user fees.

2. Requests for residential rezonings at densities exceeding those permitted by existing zoning should include proposals for assisting in offsetting the capital facilities and service needs generated by the new development.

3. The County anticipates that all communities will be designed with appropriate public facilities and utilities such as adequate roads and utilities, recreational facilities, open space, and stormwater management facilities.

4. Capital facilities proffers in the Dulles South planning area shall be evaluated in accordance with General Plan capital facilities proffer guidelines.

5. Since public health is a priority in the Dulles South planning area, development proffers to construct additional public sewer and/or water lines to serve existing residences or businesses which would not otherwise have access to public sewer or water through the development process, will be credited toward Capital Facilities proffers. Where such credit is given, the developer must agree to waive LCSA reimbursement for that portion of the line (and the local facilities charge) and the LCSA will not charge a local facilities fee to residents.
Priority and Construction Policies

In more developed communities, a basic public facility and service network is often available to accommodate moderate growth. Roads and schools have excess capacity, parks are established and human services are available. In Loudoun, where development has occurred very rapidly in a short time, this is not the case. Dulles South lacks even a basic service framework for additional growth. Dulles North was similarly undeveloped until the mid-1980s when capital facility service improvements began as a result of development proffers. A similar pattern is likely to emerge as Dulles South develops.

Generally, new public facilities in developing areas of Loudoun are constructed as new communities are constructed. Obviously, certain types of infrastructure improvements (like sewer, water and certain road improvements) must be in place before the first house can even be built or the first new resident can move in. Certain recreational amenities (such as community pools or tennis courts) are often constructed early in the community’s development process because these amenities are “selling points” that entice prospective purchasers. Land dedications for schools, parks or road improvements also frequently take place before development begins, although facilities may not be constructed for several years. Actual construction of facilities like schools depends on when the demand is sufficient to support the new facility and how and when the County budgets for major improvements.

Phasing improvements makes the costs of development more affordable (to the County and the developer/builder/homeowner) and ensures that facilities are not constructed before they are needed. However, phasing improvements can have negative effects as well. Public sentiment may be that the burdens of new development are felt before the benefits. For example, when improvements are phased, traffic may get worse on a particular road before the critical threshold for improvements is reached. School children may have to be bused out of their neighborhoods until enough houses are constructed to support a local school. These frustrations are often felt most acutely by existing residents of a developing area, like the current residents of Dulles South. Although development begins to occur, the benefits of growth may not be felt by existing residents until the new communities are well established.

Assessing public facility and service priorities in Dulles South is somewhat easier than elsewhere in eastern Loudoun since the area lacks even the barest framework of services. The Dulles South plan places top priorities on those facilities that provide essential services that cannot otherwise be obtained or that protect the health, safety and welfare of County residents. Public safety services would fall into this category. In the case of Dulles South, public sewer and water service to existing homes is considered a public health priority.
Policies

1. A full complement of public facilities and services will be provided in the Dulles South planning area. However, for the purposes of establishing a Capital Improvement Plan for the area, the following facilities and services are deemed priorities in the Dulles South region:

   a. **Immediate Priorities:**
      Adequate and safe methods of sewage disposal, as well as safe drinking water supplies, for individuals with failing on-site sewage disposal systems. Preferably this will be accomplished by providing access to central sewer and water lines; Public Safety: Fire and rescue sites and equipment as well as a site for a Sheriff’s substation; or sites for schools, a regional park and a regional library.

   b. **Short Term Priorities:** School construction (as population will support), sites for human service agencies (such as group homes, senior cafeteria, etc.), an additional community center, and additional park and branch library sites.

   c. **Long Term Priorities:** Construction of local and regional facilities, park development and other facilities that will require a greater population base.

2. To serve as guide for determining when regional facilities and services should be included in the County’s Capital Improvement Program budget, the County may establish “trigger” levels of population or dwelling unit construction which call for these facilities.

Location Criteria for Public Facilities and Services

Some types of public facilities such as neighborhood pools or tennis courts are sized and located for the convenience of a particular development. Other facilities, such as a high school, are sized to serve a region of the County or at least several different developments. To make service delivery more efficient and cost effective, certain facilities should be regional and others should remain local, depending on service or catchment areas.

The Dulles South Plan calls for every community or neighborhood to have local facilities that are the focal point of the community - an elementary school, recreational facilities or a community center. Larger facilities that depend on a larger client base should locate in close proximity to other regional facilities. If regional facilities are grouped, their area could begin to serve as a focal point for the entire region or planning area. A regional facility, or a group of regional facilities, should be located on major roads rather than local roads to provide better access.

To the greatest extent possible, the plan supports locating compatible or related facilities near each other to improve service delivery and minimize expenditures. Recreational facilities are often shared by the School Board and the Department of Parks and Recreation. Public safety services like
Fire and Rescue and the Sheriff's Department could share facilities as well. There are many examples throughout the County where public buildings and facilities serve multiple purposes.

Citizens of Dulles South generally supported the idea of multi-purpose, shared public facilities and the concept of public facilities as a focal point for new communities.

**Policies**

1. The County should expand cooperative efforts to share facilities by consolidating new, compatible public facilities and services in buildings designed to accommodate multiple functions.

2. The County Capital Improvement Program administrator should investigate the cost savings associated with the consolidation of libraries and compatible community center functions into a single building. The study should also investigate the feasibility of multi-story buildings.

3. Human services facilities such as libraries, mental health offices, senior cafe, and Health Department offices should locate in Neighborhood or Community Cores if they provide a service to the surrounding community or if the characteristics of the service (vehicular traffic, signs, structural scale, noise, etc.) are similar to, and compatible with, the general character of the adjacent area.

4. County owned or leased regional facilities such as high schools, Fire and Rescue stations, Sheriff's substations, and similar uses which provide a countywide or area-wide service and which include activities (traffic, noise, large parking areas) which are not compatible within residential neighborhoods, should be located in employment and business areas (including employment areas within residential communities). However, in the case of public safety services such as Fire and Rescue services, response times should also be a consideration in determining appropriate locations.

The Arcola-Pleasant Valley Fire and Rescue Squad is one of many volunteer companies serving Loudoun County.
5. Parks should be located where:

   a. They have direct access to a collector road. Parks should not have direct access to an arterial unless no other point of access is available.

   b. Trails and sidewalks connect the park to adjacent neighborhoods.

6. Schools and parks should be co-located.

7. Regional libraries and parks should be co-located.

**Stormwater Management Facilities**

Stormwater management will be an increasingly important issue in Dulles South as the area urbanizes. Unchecked stormwater run-off may result in the expansion of floodplains in downstream areas, and to erosion and pollution which degrade surface and groundwater supplies. As more land is paved for urban or suburban development, there are fewer opportunities for stormwater to be filtered naturally by moving through vegetated or forested areas.

Preservation of surface water quality is important in a regional context as well as a local context since a majority of the planning area is located in the Occoquan Watershed. The Occoquan Reservoir supplies water to approximately 600,000 residents of Fairfax County. In fact, in the early 1980s, Fairfax County downzoned a large portion of western Fairfax, located in the Occoquan Watershed, to protect water quality. In an effort to be a “good neighbor”, the Dulles South plan addresses the issue of water quality protection through stormwater management.

To date, Loudoun County has relied on individual stormwater management facilities rather than regional facilities. However, in the late 1980s and early 1990s the County began to explore regional stormwater management options. Regional facilities offer a number of advantages over conventional, on-site facilities. Regional facilities are easier to operate, maintain and monitor since there are fewer of them. In addition, they provide assurances that an entire watershed is being addressed. The compound effects of many small ponds may actually aggrivate problems downstream, particularly if they are not properly maintained. Regional facilities also provide advantages for community design and safety. A larger facility can be an amenity for a community and can be constructed with more inherent safety features (gradual grades as opposed to steeply sloping sides). For these reasons, the Dulles South plan recommends a regional approach to stormwater management.
Policies

1. The County recognizes the need for regional stormwater management facilities. A detailed study should follow adoption of this Plan and should include input from neighboring jurisdictions to address regional stormwater management guidelines.

2. The County should support full enforcement of applicable Best Management Practices as they pertain to stormwater management.

Solid Waste Facilities

In 1989, Loudoun County conducted a solid waste study to determine how best to address the need for additional landfill capacity. In 1990, based on the results of the study, the County Board of Supervisors decided to expand the County’s existing landfill to accommodate solid waste needs for the next 15 to 20 years. When the landfill location study was conducted in 1989 and 1990, the landfill consultants did not identify any suitable landfill locations in Dulles South. Proximity to the Dulles Airport and poor soils were primary constraints in locating a site in Dulles South. The Federal Aviation Authority (FAA) has strict policies about the location of landfills near airports since birds are attracted to landfills, posing a safety hazard to airplanes. Therefore, it is unlikely that a landfill can be sited in Dulles South in the future. An alternative to a landfill site is a resource recovery facility.

The level of development proposed for Dulles South will eventually require increasing the County’s ability to handle solid waste. However, it is uncertain what type of facility would best address these needs or where a new facility should be located. Therefore, the Dulles South plan recommends further study to determine where, when and what type of new facility would be appropriate.
Policies

1. The County will continue to investigate alternative and innovative solid waste technology. In recognition of projected needs, the County should prepare a solid waste study to determine the most appropriate method for addressing solid waste needs in Dulles South.

2. If a solid waste facility, such as a resource recovery plant, is deemed appropriate in the Dulles South area, the County will seek proffer assistance for such a facility as part of the land development process. Any such facility will be subject to the following locational and design criteria:

   a. The facility will have direct access to an arterial road without requiring industrial traffic to pass through residential communities;

   b. The facility will be sited in an industrial community;

   c. There will be adequate land available for an associated ash landfill and soil characteristics and other environmental features can accommodate an ash landfill without adversely affecting the region;

   d. The facility will not be visible from public streets and/or adjacent land uses;

   e. The facility will be sited and buffered to assure that there are no adverse effects (smoke, noise, odors) on surrounding land uses.

As the Dulles South changes from rural to urban, the county will need to address solid waste needs.
APPENDIX A

Community Report

Note: This appendix is a report of the issues and hopes for the Dulles South area as presented by the residents and landowners in the community.
Dulles South Community Report
May 26, 1992

Introduction

The Dulles South Planning Area covers approximately 25,000 acres or 39 square miles of land in the southeastern corner of Loudoun County. It is sparsely developed, with a rolling terrain and a distinct rural farming character. The area's rural beauty is often overlooked. Dulles South is also a community of about 600 families distributed on rural lots, farms and in small villages such as Arcola and Lenah. Dulles South residents have a strong sense of place derived from the unique character of the land, their relationship to the rest of Loudoun County and the sense that they are not in the mainstream of Loudoun County development.

The Loudoun County Board of Supervisors invited residents and landowners to participate in a series of community workshops to develop a vision for the future of their community and to provide a framework for the policies in the Dulles South Area Management Plan (DSAMP). This is a report of what was said at those meetings and the direction given to the County as it continues to draft the Dulles South plan.

The Community Discussion

Dulles South residents have a strong interest in what happens in their community. This is clearly evident by the response to the DSAMP workshops that were conducted on March 26, April 9, and April 23, 1992. An average of 75 people attended each of the workshops and many attended all three.

Over the course of these meetings, planning staff worked with area residents and landowners to identify what people hoped would occur in Dulles South and what they foresaw as the hurdles or opportunities facing them. The three workshops each had a specific purpose:

**Workshop One:** Identify what kind of future people want for Dulles South; the Strengths, Weaknesses, Threats and Opportunities in Dulles South that might affect that vision;

**Workshop Two:** Analyze what current County plans and policies propose for Dulles South and identify needed changes or enhancements; and

**Workshop Three:** Identify land use scenarios and desirable design features that should be part of new development.
Community Workshop One

Future Dulles South

Dulles South will change from the rural community that has existed for the last two centuries, to an urban and suburban community. This is viewed as a likely result of continuing development pressure from the north and east. It is also considered the best opportunity to provide needed facilities, utilities, jobs and amenities to the area. To make the transition acceptable, new development must respect the natural, historic, and cultural features which contribute to the area's present quality of life. It must also reduce the impact of changing community character on existing residents. New development must benefit existing residents by making available needed utilities, services, and road improvements and by not forcing existing residents to "sell out".

New development in Dulles South should promote an affordable lifestyle for all residents through designs featuring a mix of housing types, public facilities, shopping and employment. The preferred development pattern would include a number of distinct, compact communities built around a village or town center. A mix of manufacturing, resource, and service industries is also important to keep families here and to attract new families by offering jobs for various skills. Over-all, there should be a fiscally sound mix of residential, business and industrial uses.

Strengths

Of all the positive attributes associated with life in Dulles South its location next to the Dulles International Airport stands out as the most important. The airport currently employs about 10,000 people and is one of the few in this country that has room for expansion. Protecting the airport from incompatible uses and attracting businesses and industries that will increase the demand for airport operations is important. Proximity to the Washington metropolitan area is also an important strength. The area is close enough to the Capital to be attractive to commuters and far enough away to provide a distinct living environment.

The ownership pattern is a strength that could benefit planning in the area. Approximately 54% of the area is held by 17 landowners. A unified development pattern is possible with coordination between the County and these major property owners. The key to this strength will be the cooperation between the developers of five active projects totalling 6,600 acres or 26% of the total acreage in Dulles South.

Weaknesses

The lack of central sewer and water continues to be the paramount reason that new growth has bypassed Dulles South. This weakness is caused by both government policy and financial cost. Until the adoption of the Choices and Changes General Plan, the County's land use policies prohibited the extension of utility lines into Dulles South until an area management plan was completed. Even under the new General Plan, new development proposals would not be considered without the completion of an area management plan or before July 31, 1993, whichever comes first. Loudoun County Sanitation Authority policy, leaves it up to the developer to extend utility lines. The General Plan supports this concept but calls for research into alternative financing techniques. To extend major lines from north of the Dulles Airport, along the Route 606 corridor; or to extend them through the Brambleton development to Dulles South will require investments beyond the capability of an individual developer. Sanitary sewer districts which allow the landowners to tax themselves at a higher rate in order to finance utility improvements are one financing alternative being investigated.
Roads are also a major weakness in the area’s development potential. With the exception of Route 50, most existing roads in Dulles South are not designed to current State standards. There is very little, if any, available road capacity to accommodate new development. There are also few good links to other parts of the region. Route 50 provides the only access to the east. Route 606 provides access to Route 28, north of Dulles Airport and Route 621 is a good link to Leesburg. Other potential links to Manassas, Fairfax, the Dulles Toll Road Extension or Route 7 are either substandard surfaces or they are planned only in the County’s General Plan or in not yet completed development proffers.

Dulles South residents perceive their sense of physical and economic isolation from the rest of Loudoun County as a weakness. Without a strong voice in Leesburg, citizens fear Dulles South will be a lower priority area for County Services. There is a stronger link with Fairfax County, if only because most people in Dulles South shop there.

**Threats**

The biggest threat to Dulles South will be the County’s inability to provide sewer and water. Especially under current economic conditions, the development community will be slow to finance utility lines. Given the current economic environment, the lack of services and a surplus of available property in Dulles North and the region, it is possible that the development proposals and speculative real estate activities may not lead to actual development. If the County is not able or willing to play a more active role in extending utilities to the area, either through direct financial involvement or by encouraging development to come to Dulles South, the area will not move forward and needed improvements will not be constructed.

Being unprepared for the changes that are going to occur in Dulles South will also threaten the community’s well being. A land use plan is needed to manage the transition from rural to suburban and urban. Residents are concerned that incompatible land uses will impact their properties. Some feel Dulles South could become a dumping area for less desirable uses such as a landfill or prison site similar to Lorton in Fairfax County. There is also the question of balance between the different land uses. Current General Plan policies propose a significant level of industrial development throughout the area, potentially at the cost of decreasing the area’s value as a residential community. The Dulles South Area Management Plan should provide a more detailed land use strategy that addresses the area’s specific concerns.

**Opportunities**

Because it is so close to the airport and the Washington Metropolitan area, economic development potential is viewed as the area’s greatest opportunity. The airport’s expansion will serve to increase development opportunities. The Route 50 corridor has the capacity to accommodate growth. Land values, though rising, are still relatively low compared to other areas of the County and region.

Dulles South went through the last development boom as a spectator. The County now has the opportunity to learn from the experiences of other areas and to create a plan which provides for development that will enhance the quality of life for area residents. The County has an opportunity to implement its compact, mixed use community design concept in an area that presents few constraints.
Community Workshop Two

Throughout the discussion at the first workshop, there were common concerns that ranked high in each discussion group. Using these concerns as discussion topics, residents at the second workshop evaluated the current policy direction of the County as set out in the *Choices and Changes General Plan* (adopted September, 1991), to see if we are headed in the direction that we want to be going.

Sewer and Water

Participants agree with current County policy that all development in Dulles South should be connected to central, public utilities. They would expand on that policy to ensure that all existing residents are able to connect to central utilities along with new residents. The County should take the strongest measures to ensure that utility extensions for new development also benefit existing residents. Residents also feel that utility connections to existing ases should be paid for by either the County or the developer.

With regard to using the Loudoun County Sanitation Authority to manage utilities in the area, residents suggested that other operators should be examined if it would expedite the extension of utilities. There is support for alternative wastewater treatment suppliers such as the Upper Occoquan Sanitation Authority's Wastewater Treatment Facility in Fairfax County or to connecting to the Fairfax sewer and water lines east of the area.

Citizens feel the County's current policy of relying on the development community to pay the cost of extending lines to Dulles South ignores the need to help existing residents. The County should explore alternative funding mechanisms and encourage development activity in Dulles South that will extend utilities.

Transportation

Residents agree with *General Plan* policies that would make Routes 50 and 620 primary east/west thoroughfares, support improvements to secondary roads and investigate funding options for improvements. Proposed policy additions include more detail on needed road improvements, more attention to a multi-modal transit system linking different areas and uses in the County and greater emphasis on secondary road improvements.

Residents highlighted the need to make sure road improvements are completed as traffic volumes increase. There is no available capacity in the secondary road system and improvements will have to immediately parallel any new development.

Public Facilities and Services

Residents agree that the County and State should continue to be the principle service providers. Although proffers should be a part of the funding strategy, the 25% funding level was a concern. The 25% level should be reviewed from the point of view that the proffers should not significantly drive up a developer's (homebuyer's) cost or discourage development. The County should seek a balance between public/private and taxpayer/user funding.
The type and number of public facilities should reflect the economic reality of what the community can afford. Concern was expressed over the type and number of recreational facilities required in the current Parks and Recreation Service Plan. It was suggested that service plans for Dulles South be adopted through public hearings. Nonetheless, the County should use the strongest legal means to require facilities and services.

Economic Development

General Plan policies relating to the protection of Dulles Airport are consistent with the interests of area residents. Residents agree with policies that encourage the Airport's expansion and non-residential development close to the airport and in high noise zones. There is less support for policies that encourage diabase quarry operations. Most residents do not want to see additional quarries because of associated truck traffic and the impact the quarries have on the value of adjacent properties.

Farming is a tenuous enterprise in Dulles South because the soils are not as productive as elsewhere in the County. Farming viability is very sensitive to the potential impacts of encroaching development. Policies should be enhanced to provide more protection for existing farms and farmers should be encouraged to operate as long as they want.

Efforts to attract new business should focus on "big" business; the corporate headquarters and industries that represent high tax revenue for the County. Policies should also protect and encourage small businesses such as home based operations. Route 50 should be a gateway corridor with a mix of light industrial, commercial and high density residential uses. Residents cited the Avion and Lafayette business parks as preferred examples of a positive corporate image along Route 50. During the transition, the development potential for property zoned C-1 along Route 50 should be protected.

Good Planning

The good planning topic of Workshop Two consolidated discussions of timing, land use pattern and intensity of new development. There is a common interest in involving residents early in the review of project applications. Several speakers acknowledged that knowing what is proposed in their area adds a level of security to their lives.

Area residents feel the County should encourage new development to come to Dulles South as soon as possible. The County needs to be a positive partner in the process and reduce barriers such as the 1993 rezoning horizon and the 1996 construction horizon.

The Dulles South community should develop as a series of mixed use developments combining a balance of residential, commercial and business uses. Development should follow the County's traditional design concepts with higher density uses located near highways and town centers. Neighborhoods and communities need to provide a safe and convenient pedestrian environment. They should be designed around features that create a community identity.

Important natural and historic features need to be protected and a portion of the community should be preserved as open space. Again, residents feel that General Plan policies are vague. Specific direction about the location of key natural features and the amount of open space to be preserved needs to be included in the Dulles South plan.

"I have lived in the Dulles South area for 80 years. I hope, in my remaining years, to see this area move into the 20th century..."
Community Workshop Three

Workshop Three was a discussion of the bricks and mortar of development: What it should look like and how it should relate to existing land uses. Residents were asked to describe the features they felt should be included in a “good” residential, business, and industrial development and how different land uses should relate to each other.

Land Use Pattern

The land use pattern in Dulles South should reflect the capacity of the road network and the need to protect Dulles Airport and active farms. Land uses should be located in areas that allow the separation of residential and industrial traffic. Residents propose that industrial uses be located near highways. The Route 50 corridor should be given extra attention. It is an appropriate location for commercial and light industrial uses. Heavy industry uses should be "pulled away" from Route 50 and buffers (more appropriate land uses, landscaping or some alternative) provided. The 65 Ldn should continue to prohibit residential development and serve as the location of industry. Substantial industrial development outside the Ldn 65 is not appropriate. Plan policies should promote a mixed use development pattern where people can live, work, and shop in the same community. The mix of uses must be compatible to protect residents and it must reflect the needs of owners of big and small properties.

Residential Development

Residential Development should be located where the roads have available capacity and are safe. There should be flexibility in the types of housing in the area. Affordable housing should be scattered throughout Dulles South. Higher density housing should be located where the roads and services are available and may also locate near industrial uses. Local or small scale retail uses are appropriate in residential developments provided they do not attract outside traffic into the neighborhood. The proposed Artery project was identified as a positive example of the mixed use concept.

It is very important that the facilities constructed to serve new developments also be available for existing residents. The location of amenities such as parks should take into account the existing neighborhood to ensure they are accessible to everyone.

Changes in the County’s Aircraft Noise policies in the General Plan threaten to prohibit residential development from a larger area of Dulles South than the current policies. Existing residents who have homes in the current noise impact area are concerned about the effect of County policy on the resale value of their homes. These residents should be permitted the full enjoyment of their property and the viability of residential neighborhoods in the noise impact area should be maintained.
Business Development

Residents feel the county should increase its efforts to attract business to Dulles South. One action proposed is to seek Certified Business Community status for the County. The Route 50 corridor warrants careful attention. Route 50 can develop as a gateway to Loudoun County with businesses such as those found in the Avion and Lafayette business parks. Suggestions included creating a highway corridor district to implement design guidelines and to prevent "commercial clutter". Consideration should be given to the service road along Route 50 to allow smaller businesses to locate there and to assist in a transition from "cluttered" commercial to larger scale uses. Existing businesses need to be protected and rather than restrict C-1 development, policies should provide density incentives to encourage consolidation of lots.

Major, regional commercial uses should be part of Dulles South. Proposals were put forward for a large scale retail center, a regional shopping center and discount retailers. These uses should be put on separate sites, away from industrial parks. Otherwise, the commercial traffic would conflict with industrial traffic and affect the quality of the industrial development. Commercial office or light industrial uses may be appropriate as perimeter uses in industrial parks and may also serve to separate heavy industry uses from Route 50.

Industrial Development

The Route 50 corridor is not an appropriate location for heavy or smokestack industry, although such uses could be placed behind office and light industries. Regional commercial and industrial uses are not always compatible and therefore should be located in separate developments. Otherwise, industrial development should be located primarily inside the Ldn 65 noise zone. Dulles South should not become the dumping ground for smokestack industries and those which are environmentally hazardous.

The impact of industries should be minimized by keeping truck traffic away from residential streets and making sure industry locates where there is available road capacity. Buffers and screening is important. There should also be a transition area between residential and industrial uses. Heavy industry should be clustered together. For example, asphalt and concrete plants, truck repair and heavy equipment storage should be located close to each other.
Next Steps

The residents and landowners in Dulles South have provided the Dulles South Area Management Plan Citizens' Committee with a substantial amount of information and direction regarding what they feel is important to the Dulles South of the future. This information has already begun to form the framework for the Committee's next task of preparing specific policies. The Committee is also gathering data from agencies such as the Loudoun County Sanitation Authority and Metropolitan Washington Airports Authority and from County departments, the Fiscal Impact Model Technical Review Committee and officials from other Counties.

In June the Citizens' Committee will once again provide the Dulles South residents and landowners with an opportunity to speak about issues in Dulles South. This Public Comment Meeting will allow you to comment on the findings of this report and raise issues or concerns that are unique to you or which did not arise in any of the workshops. Following the Comment Meeting, the Committee will sit down to complete the initial draft of the Area Management Plan. That draft is scheduled for public review during the month of October, 1991.

## Process Schedule

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<th>Feb</th>
<th>March</th>
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<th>May</th>
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For those wishing additional information, summary reports of each workshop are available at the Loudoun County Planning Department. We wish to thank those interested citizens who committed the time and energy to assist the Dulles South Area Management Plan Citizens' Committee. We encourage you to continue to follow the process and to join us at the Public Comment Meeting on June 4 at 7:00 p.m. in the Arcola Community Center and in the Fall when the draft Dulles South Plan is presented for public review.
APPENDIX B

Transportation Plan

Note: This appendix identifies technical specifications recommended for the Dulles South transportation improvements
Appendix B
Transportation Plan

1. Route 50

**Location:** Fairfax County Line-Route 860

**Lanes, Right of Way:** Six lanes median divided plus turn lanes.
200' ROW plus land dedication required for long-term interchanges.

**Description:** **Short Term** - R6R. Controlled access median divided major arterial. Left and right turn lanes required at all intersections. Decel lanes required at entrances. 60 mph design speed. 1000' minimum desirable distance between median breaks.

**Long Term** - R6R. Limited access freeway. All at-grade access is temporary and will be terminated when road becomes a freeway. 60 mph design speed. Interchanges are planned for construction in the following general locations: (Actual specific locations will be finalized through the Route 50 Corridor Study, development applications, engineering considerations and coordination with VDOT and Fairfax County). 1. Route 50/Route 609; 2. Route 50/South Riding Spine Road (between Route 642 and Route 621); 3. Route 50/Route 606; 4. Route 50/Route 659/West Spine Road; 5. Route 50/Route 659 Relocated/Route 616; 6. Route 50/Lenah; 7. Route 50/Route 860.

2. North Parallel Road to Route 50 (New Road)

**Location:** Route 609 - Route 860, approximately 1/2 mile north of Route 50.

**Lanes, Right of Way:** Four lanes median divided plus turn lanes with expansion capability to six lanes. 120' ROW.

**Description:** U4R. Controlled access median divided major collector. Left and right turn lanes required at all intersections. Decel lanes required at entrances. 45 mph design speed. 800' minimum desirable distance between median breaks.

3. North Parallel Road to Route 50 (New Road)

**Location:** Dulles South Boulevard - Route 860, approximately 1/2 mile south of Route 50.

**Lanes, Right of Way:** Four lanes median divided plus turn lanes with expansion capability to six lanes. 120' ROW.

**Description:** U4R. Controlled access median divided major collector. Left and right turn lanes required at all intersections. Decel lanes required at entrances. 45 mph design speed. 800' minimum desirable distance between median breaks.
4. **Route 609**

**Location:** Route 50 - North Parallel Road

**Lanes, Right of Way:** Four lanes undivided. 70' ROW.

**Description:** U4. Minor collector 52' curb face-curb face. 40 mph design speed.

5. **Dulles South Boulevard (New Road)**

**Location:** Route 50/Route 609 - Route 705.

**Lanes, Right of Way:** Four lanes divided. 90'-120' ROW.

**Description:** U4R. Controlled access minor collector. Left and right turn lanes required at all intersections. Decel lanes required at entrances. 45 mph design speed. 700' minimum desirable distance between median breaks.

6. **South Riding Spine Road (New Road)**

**Location:** Route 50 - South Parallel Road

**Lanes, Right of Way:** Four lanes divided. 90' ROW.

**Description:** U4R. Controlled access minor collector. Specific parameters will be developed in conjunction with final County action on the South Riding application.

7. **Braddock Road (Route 620)**

**Location:** Fairfax County Line - Route 705.

**Lanes, Right of Way:** Four lanes median divided. 90' - 120 ROW.

**Description:** U4R. Controlled access median divided major collector. Left and right turn lanes required at all intersections. Decel lanes required at entrances. 45 mph design speed. 800' minimum desirable distance between median breaks.

8. **Route 606**

**Location:** Route 50 north to Route 28

**Lanes, Right of Way:** Four lanes median divided plus turn lanes with expansion capability to six lanes. 90'-120' ROW.

**Description:** U4R. Controlled access median divided major collector. Left and right turn lanes required at all intersections. Decel lanes required at entrances. 60 mph design speed. 1000' minimum desirable distance between median breaks.
9. Route 606 Extended (New Road)

**Location:** Route 50 south to Braddock Road

**Lanes, Right of Way:** Four lanes median divided plus turn lanes. 90' - 120' ROW.

**Description:** U4R. Controlled access median divided major collector. Left and right turn lanes required at all intersections. Decel lanes required at entrances. 45 mph design speed. 800' minimum desirable distance between median breaks. Route 606/Route 50 intersectional/interchange likely to be relocated east of current intersection location.

10. Route 606 Extended/Route 621

**Location:** South of Braddock Road.

**Discussion:** The final geometric section/functional classification of this section of road needs to be determined in coordination with Fairfax County. The road will be a collector (minor or major to be determined). The merge point for the alignments of Route 606 extended and Route 621 south of Braddock Road needs to be determined.

11. West Spine Road (New Road)

**Location:** Route 50 north to Route 7.

**Lanes, Right of Way:** Four lanes median divided plus turn lanes with expansion capability to six lanes. 90' - 120' ROW.

**Description:** U4R. Controlled access median divided major collector. Left and right turn lanes required at all intersections. Decel lanes required at entrances. 55 mph design speed. 900' minimum desirable distance between median breaks.

The West Spine Road will meet Route 659 at an interchange located to the east of the current Route 50/Route 659 intersection. Continuing southward basically along Route 659's current alignment to Route 234 in Prince William County this will become a major north-south corridor.

12. Route 659

**Location:** Route 50 south to Prince William County line.

**Lanes, Right of Way:** Four lanes divided plus turn lanes with expansion capability to six lanes. 120' ROW.

**Description:** U4R. Controlled access median divided major collector. Left and right turn lanes required at all intersections. Decel lanes required at entrances. 55 mph design speed. 900' minimum desirable distance between median breaks.
13. Old Route 659 (in vicinity of Arcola)

**Location:** The regional role of old Route 659 in the vicinity of Arcola will end with the construction of the West Spine Road/Route 659 Corridor Road and the Relocated Route 659/Route 705/Route 234 ByPass Road. Direct connection of old Route 659 to Route 50 will be severed. Improvements to old Route 659 should be consistent with VDOT standards for local roads.

14. Route 742

**Location:** Route 50 to Fairfax County Line.

**Lanes, Right of Way:** Two lanes. 60' ROW.

**Description:** R2. Local Road. 24' pavement width. 40 mph design speed. At-grade intersection to be maintained at Route 50 with appropriate turn lanes until such time as Route 50 becomes a limited access freeway, at which time Route 742 will end in a cul-de-sac south of Route 50.

15. Route 659 Relocated/Route 234 ByPass Connector

**Location:** Route 50 north to join current Route 659 alignment north of Arcola. Route 50 south to Prince William County line (*may merge with Route 705 alignment along southern part of alignment*).

**Lanes, Right of Way:** Four lanes median divided plus turn lanes with expansion capability to six lanes. 120' - 150' ROW. (*Reservation to 200' ROW*).

**Description:** U4R. Controlled access median divided minor arterial. Left and right turn lanes required at all intersections. Decel lanes required at entrances. 60 mph design speed. 1000' minimum desirable distance between median breaks.

This will be a major north/south corridor running between Route 7(Route 50 and the Route 234 ByPass in Prince William County. Opportunities should be preserved to allow for upgrading of some portions of this road to Regional Bypass criteria.

16. Route 621/Lenah Connector (West Dulles Boulevard)

**Location:** Route 621 to Route 50 to Prince William County Line.

**Lanes, Right of Way:** Four lanes median divided plus turn lanes. 90' - 120' ROW.

**Description:** R4R. Controlled access minor collector. Geometric section/functional classification south of Braddock Road to be determined in cooperation with Prince William County. May incorporate portions of existing Route 600 and Route 624 alignments.
17. **Route 621 (including Arcola ByPass)**

**Location:** Route 621 will be realigned north of Arcola to become an Arcola ByPass. It will intersect with Route 606 north of the current Route 621/Route 606 intersection.

**Lanes, Right of Way:** Four lanes median divided plus turn lanes. 90' - 120' ROW.

**Description:** R4R. Controlled access major collector. Left and right turn lanes required at all intersections. Decel lanes required at entrances. 55 mph design speed. 900' minimum desirable distance between median breaks.

18. **Route 50 Loop Roads**

**Description:** Parcels lying between Route 50 and its North and South Parallel Roads will be accessed via loop roads from the Parallel Roads. The specific alignments for these loop roads will depend on the local development applications. Design of the loop roads will be consistent with County and VDOT standards. Cul-de-sacs connecting with the loop roads will be subject to length limitations in the FSM.

19. **Local Access Roads**

**Description:** A variety of local access road geometric sections will be required as Dulles South develops. The location and geometric sections of these local roads will be determined in conjunction with County/VDOT review of the development applications. All VDOT and County standards apply.
APPENDIX C

Capital Facilities

Note: This appendix identifies a list of typical public facilities and services that would be appropriate in the Dulles South Area for the projected population using a set of minimum service standards developed by the Citizens' Committee.
## Parks and Recreation

### Facilities in Eastern Loudoun County

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<tr>
<th>Activity</th>
<th>Loudoun Standard</th>
<th>Facilities in Eastern Loudoun</th>
<th>Actual Standards</th>
<th>Dulles South</th>
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<tr>
<td>Baseball</td>
<td>1 field/5,000</td>
<td>5</td>
<td>1:10,357</td>
<td>13 fields</td>
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<tr>
<td>90 foot</td>
<td>1 field/3,000</td>
<td>7</td>
<td>1:7,393</td>
<td>17 fields</td>
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<td>60 foot</td>
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<td>1 field/2,000</td>
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<td>1:4,708</td>
<td>27 fields</td>
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<td>Basketball</td>
<td>1 court/2,000</td>
<td>8</td>
<td>1:6,473</td>
<td>20 courts</td>
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<td>Football</td>
<td>1 field/10,000</td>
<td>2*</td>
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<td></td>
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<td></td>
<td>3 fields</td>
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<tr>
<td>Park Land</td>
<td>12 acres/1,000</td>
<td>428 ac.</td>
<td>8.26:1,000</td>
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<td>Picnic shelters</td>
<td>1 shelter/5,000</td>
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<td>Soccer</td>
<td>1 field/2,000</td>
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<td>1:3,237</td>
<td>39 fields</td>
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<tr>
<td>Swimming</td>
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<td>Junior Pool</td>
<td>1 pool/5,000</td>
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<td>3</td>
<td>1:17,262</td>
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* The Department of Parks and Recreation does not schedule or use either of these fields.

1 Park Land includes all land owned and leased by the County, outside of schools.

### Community Center

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<tr>
<th>Facility</th>
<th>Size</th>
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<tr>
<td>Arcola</td>
<td>12,457</td>
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<tr>
<td>Sterling</td>
<td>8,571</td>
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<tr>
<td>Sterling Annex</td>
<td>11,545</td>
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<tr>
<td>TOTAL</td>
<td>32,573 sq. ft.</td>
<td>.62 sq. ft. capita</td>
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Dulles South needs: 78,120 sq. ft. community center space*

* would include some other Parks & Recreation facilities in footage (e.g. basketball, volleyball courts)

### Sheriff's Department

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<thead>
<tr>
<th>Facility</th>
<th>Size</th>
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<tr>
<td>Sterling Substation</td>
<td>1,900 sq. ft.</td>
<td>.0367/per capita</td>
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Dulles South needs: 4624 sq. ft. 1 Sheriff's substation
### Fire and Rescue

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<td>1 site per 12,947</td>
</tr>
<tr>
<td>Sterling Park</td>
<td>1.5-5 acres</td>
<td>1 site per 12,947</td>
</tr>
<tr>
<td>Sugarland Run (2)</td>
<td>1.5-5 acres</td>
<td>1 site per 12,947</td>
</tr>
</tbody>
</table>

Dulles South needs: 10 substations - 15 to 50 acres

### Mental Health/Mental Retardation

<table>
<thead>
<tr>
<th>Facility</th>
<th>Size</th>
<th>Actual Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sterling Mental Health Center</td>
<td>6,780 sq. ft.</td>
<td>.13 sq. ft./per capita</td>
</tr>
<tr>
<td>Group Home Avg.</td>
<td>1,500 sq. ft./6 res.</td>
<td>.028 beds per capita</td>
</tr>
<tr>
<td>Total</td>
<td>8,280</td>
<td>.12 beds per 1,000</td>
</tr>
</tbody>
</table>

Dulles South needs: Mental Health Facilities = 16,380 sq. ft. = 1 shared facility  
Group Home = 1 = 3,528 sq. ft. 15 beds = 2 group homes.

### Libraries

<table>
<thead>
<tr>
<th>Facility</th>
<th>size</th>
<th>No. of Volumes</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Regional</td>
<td>28,950 sq. ft.</td>
<td>114,000</td>
<td>.56 sq. ft./capita</td>
</tr>
<tr>
<td>Sterling Branch</td>
<td>9,126 sq. ft.</td>
<td>40,000</td>
<td>.18 sq. ft./capita</td>
</tr>
<tr>
<td>Total</td>
<td>38,075 sq. ft.</td>
<td>154,000</td>
<td></td>
</tr>
</tbody>
</table>

Square feet per person = .73 sq. ft. per capita (.6 sq. ft. is recommended service level)  
Volumes per person = 3.0 books per capita  
Dulles South: Total Square feet = 75,600* (91,980)  
Total Volumes = 378,000 volumes  
1 Regional library 2-3 branch libraries  
* Figure using service plan standard would require less square footage than actual standard.

### Youth Shelter

<table>
<thead>
<tr>
<th>Facility</th>
<th>size</th>
<th>Actual Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Youth Shelter</td>
<td>6,000 sq. ft.</td>
<td>.06 sq. ft./per capita</td>
</tr>
<tr>
<td></td>
<td>10 beds</td>
<td>.10 beds per 1,000</td>
</tr>
</tbody>
</table>

Dulles South needs: 7, 560 square feet  
13 beds  
1 youth shelter

### General Government

<table>
<thead>
<tr>
<th>Facility</th>
<th>size</th>
<th>Actual Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sterling Treasurer's Office</td>
<td>2,874 sq. ft.</td>
<td>.05 sq. ft./per capita</td>
</tr>
</tbody>
</table>

Dulles South: General Government - 6,300 sq. ft. facility with multiple users.
Area Agency on Aging

<table>
<thead>
<tr>
<th>Facility</th>
<th>size</th>
<th>Actual Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior Cafe (Sterling Annex)</td>
<td>1,200 sq. ft.</td>
<td></td>
</tr>
<tr>
<td>Sr. Nutrition Facility (Arcola)</td>
<td>1,540 sq. ft.</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,740</strong></td>
<td><strong>.053 sq. ft./per capita</strong></td>
</tr>
</tbody>
</table>

Dulles South: 6,678 sq. ft. 1-2 centers
Does not include 10,000 sq. ft. multi-purpose facility proposed in CIP

Schools

<table>
<thead>
<tr>
<th>Facility</th>
<th>Facilities needed in Dulles South</th>
<th>Schools/Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Schools</td>
<td>4</td>
<td>1:1,350 students</td>
</tr>
<tr>
<td>Middle Schools</td>
<td>4</td>
<td>1:1,100 students</td>
</tr>
<tr>
<td>Elementary Schools</td>
<td>15</td>
<td>1:750 students</td>
</tr>
</tbody>
</table>

Generalized School Locations

[Map showing locations of schools]
Loudoun County, Virginia

Office of the County Administrator
1 Harrison Street, S.E., 5th Floor, P.O. Box 7000, Leesburg, VA 20177-7000
703/777-0200 • Metro: 703/478-8439 • Fax: 703/777-0325

At a meeting of the Board of Supervisors of Loudoun County, Virginia, held in the County
Administration Building, Board of Supervisors’ Meeting Room, 1 Harrison St., S.E., Leesburg,
Virginia, on Wednesday, October 15, 1997 at 9:00 a.m.

PRESENT: Dale Polen Myers, Chairman
Joan G. Rokus, Vice Chairman
Lawrence S. Beerman II
James G. Burton
Helen A. Marcum
David G. McWatters
Eleanore C. Towe
Steven D. Whitener
Scott K. York

IN RE: CPAM 1997-0003/DULLES SOUTH DENSITY REVIEW (MERCER
DISTRICT)

Mr. York moved approval of the recommendation of the Land Use Committee that the Board of
Supervisors approve CPAM 1997-0003, Dulles South Plan Density Review, as modified by the
Land Use Committee and amended in the October 15, 1997 Board of Supervisors meeting and
that the policies become effective upon adoption. [The Board of Supervisors first took separate
votes on the components of the Plan as detailed on the Attachment.]

Mr. York further moved that the staff be directed to follow up the approval of the plan
amendment and make the necessary editorial revisions to insure consistency between the policies
of the plan amendment and the existing Dulles South Area Management Plan documents.

Seconded by Mrs. Towe.

Voting on the Motion: Supervisors Beerman, Burton, McWatters, Rokus, Towe and York -
Yes; None - No; Marcum, Myers, and Whitener - Abstain.

In addition, the Board of Supervisors took the following actions:

1. Direct the Planning Commission to initiate a CPAM to provide additional development
options that may more quickly facilitate the planned conversion of the village of Arcola to
nonresidential uses and to include allowing decreased lot or zoning district sizes for
non-residential development.

Voting on the Motion: Supervisors Myers, Beerman, Burton, Marcum, McWatters,
Rokus, Towe, York and Whitener - Yes; None - No.
2. Direct the Finance Committee to discuss amending the County's fiscal policy to allow roll back taxes that are collected by the County from an approved rezoning to be placed in reserve for CIP projects in the Planning Area where they are located (including Dulles South).

Voting on the Motion: Supervisors Myers, Beerman, Burton, Marcum, McWatters, Rokus, Towe, York and Whitener - Yes; None - No.

3. Direct the Finance Committee to review the issue of providing both density credit and a monetary value for proffered public sites and forward the recommendations back to the Land Use Committee.

Voting on the Motion: Supervisors Myers, Beerman, Burton, Marcum, McWatters, Rokus, Towe, York and Whitener - Yes; None - No.

4. Direct the Open Space Advisory Committee to review the cash contributions proffered through the Open Space Easement Program to the improvement of historic properties.

Voting on the Motion: Supervisors Myers, Beerman, Burton, Marcum, McWatters, Rokus, Towe and York - Yes; Whitener - No.

A COPY TESTE:

\[ Signature \]

DEPUTY CLERK FOR THE LOUDOUN COUNTY BOARD OF SUPERVISORS

PLM:REOCT15F.97
ATTACHMENT
TO
ACTION ON CPAM 1997-0003/DULLES SOUTH DENSITY REVIEW
OCTOBER 15, 1997
DSAMP POLICY AMENDMENTS

1. Increase the amount of civic open space required in Light Industrial areas from 0% to 5% with 5% devoted to Open Space.

Voting on the Item: Supervisors Myers, Beerman, Burton, Marcum, McWatters, Rokus, Towe and York - Yes; Whitener - No.

2. Retain the existing Dulles South planning area boundary and reaffirm it as the ultimate Urban Growth Boundary as currently planned in the General Plan.

(Add policy 28, p. 39) The western boundary of the Dulles South planning area as depicted on the planned Land Use Map included in the DSAMP will be the ultimate Eastern Urban Growth Boundary consistent with the General Plan.

Voting on the Item: Supervisors Myers, Beerman, Burton, Marcum, McWatters, Rokus, Towe, York and Whitener - Yes; None - No.

3. Reduce residential densities in Moderate Density Residential areas from 3 to 6 du/a to 2 to 4 du/a and provide criteria for achieving the densities of the range.

(Amend Policy 8, p. 35) The Moderate Density Residential Area (MDR) Residential Area is intended to provide the opportunity for compact, self-sustaining and affordable communities, the efficient use of public facilities and services and a variety of residential housing and business types.

(Amend Policy 9, p. 37) Overall project densities (outside of Community or Neighborhood Cores) in the MDR Residential Areas should range between three (3) and six (6) two (2) and four (4) units per acre depending upon the provision of roads, utilities and services, the proximity to a Community or Neighborhood Core, open space protection and implementation of the County's design guidelines. In considering any residential development in this area, the County anticipates developer participation in the provision of adequate roads, stormwater facilities, and utilities and neighborhood serving recreational facilities such as sidewalks, pedestrian and bicycle trails, tot lots, and playgrounds.

The density increments above two (2) dwelling units per acre can be achieved as follows:
DSAMP POLICY AMENDMENTS

a) Densities ranging from two (2) dwelling units per net acre up to and including three (3) dwelling units per net acre, will be considered by the County for clustered development that is located within ½ mile of a Community or Neighborhood Core, and provides for public open space that meets the Open Space Preservation Program guidelines.

(b) Densities greater than three (3) dwelling units per acre and up to four (4) units per acre, will be considered by the County for clustered development that includes a Neighborhood or Community Core, provides for public open space that meets the Open Space Preservation Program guidelines, and implements the County's Design Guidelines for Traditional Residential communities.

(Delete Policy 10, p. 37) The MDR should develop as a series of distinct neighborhoods surrounding Community or Neighborhood Cores.

(Amend Policy 11, p. 37) Development in the MDR Residential Area will be concentrated to preserve open space, reduce road and utility costs and to create a strong sense of community among residents.

(Amend Policy 12, p. 37) New development in the MDR Residential Area shall seek to preserve a minimum of 30% of the development area as civic and open space.

Voting on the Item: Supervisors Myers, Beerman, Burton, Marcum, McWatters, Rokus, Towe and York - Yes; Whitener - No.

4. Reduce residential densities in Low Density Residential areas from 1 to 3 du/a (up to 4 du/a if clustered) to 1 to 2 du/a (up to 3 du/a if clustered).

(Amend Policy 4, p. 35) Overall project densities in the LDR (outside of Town or Neighborhood Centers Community or Neighborhood Cores) should range between one (1) and three (3) two units per acre depending upon the availability of roads, utilities and services, and implementation of the County’s design guidelines. Density may be increased to four three units per acre if the development is clustered pursuant to the Zoning Ordinance. if the development is clustered preserving 50% of the project area in permanent open space.

Voting on the Item: Supervisors Beerman, Burton, Marcum, McWatters, Rokus, Towe and York - Yes; Myers and Whitener - No.

5. Establish a combination of Relocated Route 659, the powerline easement and the Light
DSAMP POLICY AMENDMENTS

Industrial area associated with the 65 Ldn noise contour as the western edge of the interim planning area boundary.

(Add policy 22, p. 39) It is the County's view that the current pipeline of approved but yet unbuilt units in eastern Loudoun is sufficient to meet any market demand for the foreseeable future. As such, residential densities in the western portion of the Dulles South planning area, as depicted on the planned Land Use Map is to be governed by the goals and policies of the Rural Area specified in the General Plan. It is the policy and intent of the County to prevent more intensive residential development through the extension of central utilities from the east to the western section until such time as the Dulles South Area Management Plan is amended.

(Add policy 25, p. 39) The area located west of the interim planning area boundary shall be governed by the Rural Area Policies of the General Plan until such time as the Board of Supervisors adopts an amendment to the DSAMP that provides for new land development policies for this area. The County anticipates serving the western area with central water and sewer facilities in the future.

(Add policy 27, p. 39) At such time as the Board of Supervisors determines to amend the DSAMP to provide for higher densities in the western part of the planning area, the area will be considered as a transitional area and may be planned to consist of low densities (between 1 to 2 dwelling units per acre) developed in a clustered residential development pattern including rural villages and hamlets. This transitional density area should serve as the location for agricultural, rural residential, and other low intensity uses that, by virtue of its development pattern, softens the development edge between the urban areas (planned east of the interim planning area boundary) and the rural areas (planned west of the Ultimate Urban Growth boundary).

(Add policy 29, p. 39) The western area is a priority area for the purchase of open space easements. This part of the planning area is identified as the appropriate location for preserving rural land uses in order to reduce development impacts on the Occoquan Watershed and complement the low density land use pattern in rural areas outside the Dulles South planning area.

(Add policy 31, p. 39) The Zoning Ordinance should be amended to add higher density cluster districts similar to the Rural Village and Hamlet.

Voting on the Item: Supervisors Beerman, Burton, McWatters, Rokus, Towe and York - Yes; Myers, Marcum and Whitener - No.

6. Provide 600 feet of flexibility in the interim planning area boundary to accommodate engineering factors for Relocated Route 659.
DSAMP POLICY AMENDMENTS

(Add policy 26, p. 39) The part of the boundary that is based on Relocated Route 659 may shift up to 600' as the engineered alignment of the planned road is determined, in which case the planned land use designation applied to the east side of the road will also shift.

Voting on the Item: Supervisors Beerman, Burton, McWatters, Rokus, Towe and York - Yes; Myers, Marcum and Whitener - No.

7. Establish criteria for planning higher intensity development in the western part of Dulles South.

(Add policy 23, p. 39) The Board of Supervisors may initiate an amendment to the Dulles South Area Management Plan to permit urban development in the western section, as depicted on the planned Land Use Map, provided all the following criteria are satisfied.

1. The County determines, based on updated County COG population projections and other data (such as forecasts for absorption), that the demand for housing will cause a need for an additional supply of land available for urban development densities.

2. The substantial majority of the land within eastern Loudoun (including Dulles North, Eastern Loudoun, Leesburg, and the Toll Road areas) is subject to approved subdivision and/or detailed site plans or is prevented from future development through open space or development easements.

3. An improved Route 659 Relocated, as shown on the Countywide Transportation Plan, which provides access from Route 50 to Route 7 is constructed.

4. Public sewer and water facilities are financed or in place to serve urban development in compliance with the Loudoun County Sanitation Authority's Master Plan.

5. The County determines, based on its Fiscal Policy, Capital Improvements Program and Operating Budget that it can adequately fund needed facilities and improvements.

(Add policy 24, p. 39) At such time as the County initiates a plan amendment to consider urban densities, due consideration will be afforded to the following:

1. Protecting property that has developed in the interim at rural densities.

2. That densities will be planned at no higher that 1 unit to the acre or 2 units to the
DSAMP POLICY AMENDMENTS

acre if clustering is proposed.

3. That due consideration be given to the protection of Dulles Airport by minimizing residential densities in the flight path of the Airport.

4. Public schools should not be located under the flight path of the Airport.

Voting on the Item: Supervisors Beerman, Burton, McWatters, Rokus, Towe and York - Yes; Myers, Marcum and Whitener - No.

8. Designate the Lower Bull Run watershed area for the development of densities at 1 to 2 du/a in a clustered development pattern.

(Add policy 20, p. 39) The Lower Bull Run Low Density Residential area as depicted on the planned Land Use Map is designated for clustered residential development at densities of 1 to 2 dwelling units per acre.

Voting on the Item: Supervisors Beerman, Burton, McWatters, Rokus, Towe and York - Yes; Myers, Marcum and Whitener - No.

9. Reduce residential densities in Light Industrial areas from up to 24 du/a to up to 12 du/a and the amount of land devoted to residential development in such areas from 25% to 10% of the project area.

Light Industry Area Policies

(Amend Policy 4, p. 48) The mix of uses in a Light Industry Community Area (measured as a percentage of land area) should generally conform to the following ratios:

<table>
<thead>
<tr>
<th>Light Industrial/Flex</th>
<th>Minimum Required</th>
<th>Maximum Permitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offices</td>
<td>0%</td>
<td>40%</td>
</tr>
<tr>
<td>Commercial Retail &amp; Services</td>
<td>0%</td>
<td>10%</td>
</tr>
<tr>
<td>Overall Retail &amp; Office</td>
<td>0%</td>
<td>40%</td>
</tr>
<tr>
<td>Residential (outside 65 Ldn)</td>
<td>0%</td>
<td>25% 10%</td>
</tr>
<tr>
<td>Civic Space</td>
<td>0%45</td>
<td>no maximum</td>
</tr>
<tr>
<td>Open Space</td>
<td>5%</td>
<td>no maximum</td>
</tr>
</tbody>
</table>

(Amend Policy 7, p. 48) Residential development in the light Industry areas may have a maximum density of 24 12 units per acre contingent on the availability of adequate roads, utilities, and public services; compatibility with surrounding uses; and compliance with other policies of this Plan.
DSAMP POLICY AMENDMENTS

(Add policy 8, p. 48) Light Industrial Areas including residential development as part of the land use mix will locate only where designated on the planned land use map.

(Add policy 9, p. 48) Residential uses in Light Industrial areas will provide a density and design transition between the adjoining Residential Area and the adjoining Light Industrial Area.

Voting on the Item: Supervisors Myers, Beerman, Burton, Marcum, McWatters, Rokus, Towe and York - Yes; Whitener - No.

10. Traditional residential communities that have 3.6 to 4.0 dwelling units to the net acre and suburban residential communities that have 2.7 to 3.0 dwelling units to the net acre are considered in return for voluntary participation in an open space preservation program should have a priority in the Dulles South area of enhancing, restoring and protecting historic important features in the Dulles South as identified by the County.

(Add policy 30, p. 39) The County anticipates voluntary participation in an open space easement program for Traditional Residential developments proposing net densities from 3.6 dwelling units per acre to 4.0 dwelling units per acre and for Suburban Residential developments proposing net densities from 2.7 dwelling units per acre to 3.0 dwelling units acre as outlined in the General Plan. In the Dulles South planning area, an additional option is available for fulfilling program guidelines in that a cash contribution may be provided for the enhancement and/or improvement of historic features found in the planning area. The improvement and enhancement of historic features will be a priority for program participation in the planning area.

Voting on the Item: Supervisors Myers, Beerman, Burton, Marcum, McWatters, Rokus, Towe and York - Yes; Whitener - No.

11. Amend the Land Use Map to change the Light Industrial and Heavy Industrial land uses designated for the Alliance Quarry property to Residential Area.

Voting on the Item: Supervisors Myers, Beerman, Burton, Marcum, McWatters, Rokus, Towe and York - Yes; Whitener - No.

12. In the Dulles South where the landowner seeks a residential rezoning, the County will require a phase development including the number of building permits that will be allowed per year in the development. The analysis will be based on the fiscal impact of the development in consideration with improvements that are being made to the area.

(Add policy 21, p. 39) The County requires Residential development in the planning area to be phased. In reviewing rezoning proposals for Residential development, the County
DSAMP POLICY AMENDMENTS

expects project phasing commitments to be based on the number of building permits that will be allowed by year and an assessment of the fiscal impact of the proposed development based on the proposed phasing schedule. The County will also consider the proposed improvements associated with a proposed project. The intent of this policy is for the County to have an indication as to how many new dwelling units will be developing or anticipated to be developed in a given year.

Voting on the Item: Supervisors Myers, Beerman, Burton, Marcum, McWatters, Rokus, Towe, York and Whitener - Yes; None - No.
CPAM 1992-0010
Greenways and Trails Policies

Adopted September 21, 1994
SECTION I: BACKGROUND

A. INTRODUCTION

Greenways are areas of open space, usually linear, which connect and protect various natural, recreational, and cultural resources. They often follow linear landscape features such as streams, ridges, or abandoned railroads. Greenways can be publicly or privately owned, and may be open or closed to visitors. They are not necessarily parks or public land. Parts of a greenway may be a scenic resource or an important wildlife habitat, owned and maintained by a private landowner, with no public access. Other parts may include public trails for hiking, bicycling, or horseback riding. Greenways that include trails provide linkages for people to natural and community resources. They enable citizens to travel without motor vehicles to schools, community centers and parks.

Greenways serve a variety of functions, including recreation, alternative transportation, wildlife habitat, water quality protection, flood hazard reduction, aquifer recharge, erosion prevention, property value enhancement, economic development and scenic beauty.

The Loudoun Greenways plan encourages pathway connections which would provide our own residents with alternative transportation corridors, independent of car ownership. It is a comprehensive plan which takes a "big picture" look at Loudoun's future development. It recognizes the need for Loudoun's existing communities to develop resource corridors which unify the County, creating an amenity for the benefit of business and residential communities as well as the tourist industry.

B. CONTEXT AND PURPOSE

Loudoun County and its county seat, the Town of Leesburg, border the Potomac River in northern Virginia approximately 35 miles northwest of Washington, D. C. The County as a whole offers a wealth of historic and natural features and a blend of urban amenities, rural landscapes, and small communities.

Proximity to Washington and the presence of a major international airport, Dulles, in the southeast part of the County stimulate strong growth trends. While development provides welcome economic opportunities, many citizens are concerned about the effects of growth and the potential for loss of local recreational opportunities and valuable natural, scenic and historic resources. Greenways and trails are one method of preserving some of these features unique to the County.

The purpose of this plan is to acknowledge a commitment to the establishment of a county-wide system of greenways and trails. This system should link people and resources, put open space within a short walk of people's homes and connect major regional and national trails. Greenways can protect natural resources and do not necessarily contain trails or have public access. Where
trails provide a link between home and work, an alternative to auto dependent transportation can be provided.

C. RELATIONSHIP TO OTHER COUNTY DOCUMENTS

Loudoun County's Comprehensive Plan consists of several related documents with the General Plan performing the function of an "umbrella" document which establishes county-wide goals and policies. Chapter 8 of the General Plan addresses implementation as a continuing process with future actions which should be undertaken to implement the Plan.

County-wide Recommendation #21 is the action of adopting CPAM 1992-0010, Greenways Plan, as an element of the General Plan. The Greenways Plan would also add one more building block toward implementing policy recommendations for Water Quality Buffers (#5), Scenic River Corridors and Potomac Shoreline Protection (#10), Protection of Endangered and Threatened Habitats (#23), and Rural Transportation Strategies for Bicycle Routes (#18).

In recognition of existing County policy and public testimony which encourage a viable agricultural community, the following goals and policies will apply only to the rapidly developing areas of the County described in the following area plans: Eastern Loudoun Area Management Plan, Dulles North Area Management Plan, Dulles South Area Management Plan, Cub Run Area Management Plan, Leesburg Area Management Plan, and the adopted plans for the Urban Growth Areas of the western towns.

D. COMMUNITY PLANNING PROCESS

The documentation for the greenways and trails system is contained in the 1993 Greenways and Trails Master Plan for Loudoun County and Leesburg, Virginia. This plan was developed by a citizen-government partnership, through an open public process. As a result of a Memorandum of Understanding signed by the County of Loudoun, the Town of Leesburg, the directors of the Leesburg and Loudoun County Parks and Recreation Departments, representatives of the National Park Service's Rivers, Trails and Conservation Assistance Program, and the Northern Virginia Regional Parks Authority, a citizens' advisory committee was formed in the fall of 1989. The group represented the interests of businesses, development, landowners, conservationists and recreationists. The Plan was developed over a two year period and was based on regular public input from public workshops, presentations and public meetings. Documentation of specific public outreach is contained on page 69 of the 1993 Greenways and Trails Master Plan for Leesburg and Loudoun County, Virginia.
SECTION II: COMMUNITY GOALS

A. MISSION STATEMENT

The purpose of a greenways and trails system is to preserve the County's essential natural and historic resources as the County passes from rural to suburban, to provide recreation for a growing population, and to provide alternative transportation corridors.

B. GOALS OF THE GREENWAYS AND TRAILS SYSTEM

- Link neighborhoods and communities including schools, shopping areas, community centers, parks and other public facilities
- Link towns in Loudoun County.
- Provide recreational opportunities and alternate transportation corridors for foot traffic, cyclists and horseback riders.
- Protect historic resources.
- Protect rivers, streams, and drainage basins.
- Protect ecologically critical and sensitive areas.
- Maintain and link wildlife habitats.
- Provide natural flood and erosion control to discourage channelization.
- Include scenic roads.

SECTION III: POLICIES

A. RESOURCES

A sound greenways and trails system depends on the identification of the County's significant natural, cultural, recreational and community resources. The Citizens' Committee dedicated the first year of its effort to identifying and mapping those resources, using a variety of existing data and the knowledge of local citizens. These resources contribute greatly to the distinctive character of the County. They can serve as the hubs and spokes of a greenways and trails network and can provide a basis for making decisions on where greenways should be located. Listed below are the county resources agreed to by the Committee as significant features of the County. These resources are contained in the Geographic Information System Map created by the citizens. (resources described on pages 14, 15, and 16 of the Greenways and Trails Master Plan for Leesburg and Loudoun County, Virginia.)

- State Scenic Rivers
- Perennial Streams
- Floodplains
- Ridges
- Natural Heritage Sites
- Existing and Planned Parks
Greenways Policies

- Existing and Planned Trails
- Historic Sites and Districts
- Historic Settlements
- Schools
- Community Centers
- Discontinued Roads
- Scenic Roads
- Incorporated Towns

POLICIES

1. The inventory of cultural, historic and natural resources should be maintained with the County GIS and should be used for reference in greenway and trail planning.

2. Greenways should be a mechanism to protect important or sensitive resources.

B. PUBLIC PARTICIPATION

The process of turning a plan for greenways into a reality will require a cooperative effort involving many people and organizations. While the total land area of any proposed greenways network is relatively small, its benefits will be widely felt and its many parts varied in terrain, ownership, and proposed use. The County will play an integral role in establishing the system although it is unlikely that a single entity would have the means to acquire or manage an extensive system. Therefore, it is recommended that a network of greenways and trails be owned and managed through a partnership effort, rather than by a single agency organization. The system could be established piece by piece by a number of different entities using a variety of public and private conservation methods. Public agencies, private organizations, businesses, civic groups, clubs and individuals should participate in the creation and management of the system. It is assumed that exact locations of greenways and trails will be determined by the communities of interest.

POLICIES

1. Inform and educate the public about the opportunities generated by the greenways and trails system.

2. Encourage public involvement in the planning and development of the greenways and trails system.

C. DEVELOPMENT STRATEGIES

Members of the community have expressed concern about the loss of open space and the changing character of the County resulting from increased development. Greenways are a way to retain some rural landscapes and incorporate open space within developments. Citizens also
expressed a desire for trails between adjacent developments to allow walking and/or biking to neighbors' houses or other parts of the community. The greenways concept is a mechanism to guide the development process to create useful areas of open space.

POLICIES

1. Incorporate greenways and trails plans into the land development process and land use decisions. Creation of greenways and trails should occur primarily in the developing areas of the County with initial effort focused on the rapidly developing areas of the eastern portion of the County and around the western towns.

2. Create options and incentives which will encourage landowner participation in the establishment of greenways and trails.

3. Coordinate the establishment of greenways and trails with landowners using a variety of conservation methods. Three categories of landowners should be encouraged to participate in the greenways and trails system:

   • The development community: proffers of greenways and trails should be encouraged and referrals administered by the Planning Department with input from impacted agencies and citizens as needed.

   • Private landowners: voluntary donations, conservation easements, bequests, leasebacks, remainder interest and other non-coercive methods should be facilitated to encourage participation by private landowners.

   • Public land: negotiations of right-of-ways through land already dedicated to public benefit including, but not limited to, County, State and Federally owned land, utility easements, and roads discontinued for public maintenance.

4. Parcels under consideration as greenways or trails must meet one or more of the following criteria

   a. **Linkage:** The identified parcel will provide linkage between or to a significant natural, cultural or historic resource as defined on pages 14, 15, 16 of the Greenways and Trails Master Plan for Leesburg and Loudoun County and listed in Section III.A above.

   b. **Resource Protection:** The parcel contains an identified natural resource or species of value.

   c. **Recreation Enhancement:** The parcel will enhance recreational opportunities either by providing a connection to an existing park or recreational facility or providing in and of itself opportunities for hiking, biking or horseback riding.
d. **Economic Enhancement:** The parcel provides increased access to local business and shopping areas including but not limited to bed and breakfasts and tourist sites.

**D. TRANSPORTATION**

Greenways and trails that are designed to link communities and commercial areas can encourage some people to travel without motor vehicles, thus reducing traffic congestion on roadways. Planning for alternative transportation and recreational opportunities for foot traffic, cyclists, and horseback riders is an important public responsibility to provide for increased user safety on transportation corridors. A greenways master plan can be an important element of compliance with the Clean Air Act of 1991.

**POLICIES**

1. Multi-use trails should be encouraged within major road corridors as shown in Appendix G of the *Greenways and Trails Master Plan for Leesburg and Loudoun County, Virginia*. Portions of this trail system should be incorporated as an element of the regional COG Bicycle Plan.

2. Loudoun County review of applications for discontinued roads should encourage appropriate conversions to the greenways and trails system.

3. Loudoun County should pursue grant funding of greenway and trail projects which can be combined with other transportation goals and policies.

**E. FUNDING, ADMINISTRATION AND MAINTENANCE**

Financial and management issues are critical to both the initial establishment of greenways and their long-term vitality. Local government funds for greenways may be scarce and greenways frequently must compete for funds with other uses such as developed parks. The mechanisms used for protecting land or securing public access can be a major factor determining the cost of implementing greenways. Public land purchase, the most expensive technique, is only one of a variety of possible techniques. Others include land donations, purchases or donations of easements, landowner agreements and acquisition by nonprofit groups.

Maintenance is one need that is often overlooked; greenway interests may focus on the establishment of the greenway and neglect to consider long-term maintenance. Long-term greenway success will require careful planning for funding and maintenance. Administrative overhead might be reduced if the system were managed by a private organization focused only on the greenway system.
POLICIES

1. Require that established greenways and trails adequately provide for long-term funding, maintenance, and administration for the implementation of the greenways and trails system through public-private partnerships.

2. When possible the County would jointly hold easements to guarantee long-term protection of land.

3. Assure that right of eminent domain is not utilized to establish greenways and trails.

F. ECONOMIC DEVELOPMENT

The Greenways Master Plan recommends the creation of a comprehensive greenways and trails system primarily based on such natural landforms as valleys and ridges. Other elements are based on an assemblage of linear open spaces of various kinds to create a green infrastructure for the County. Like other forms of infrastructure necessary for development, greenways are part of a good business plan. These key elements of a community's memorable image are increasingly becoming today's marketing tools for economic development.

Few communities today can ignore the economic benefit of tourism. Loudoun's primary tourist attractions are its natural and historic resources. The greenways could include a foot path, a horse path, a bike path or none of the above, simply providing visual respite to the urban resident. The W&OD Regional Trail is an example of a greenway which attracts visitors, businesses and residents to Loudoun. One such business, the Cornerstone Bed and Breakfast near Paetonian Springs derives as much as 50 per cent of its clientele from cyclists who ride out from Washington and Maryland to tour the Loudoun area.

In order to attract a balanced variety of businesses, provide housing options with desirable amenities for all income levels, and assist government in managing the resources of Loudoun County, it is time to plan for a greenway system.

POLICIES

1. Loudoun County should incorporate greenways and trails in economic development planning and promotion.

2. Coordinate with an overall tourism plan for Loudoun County.
CPAM 1996-0001
COUNTYWIDE RETAIL
POLICY PLAN AMENDMENT

Adopted February 19, 1997
Amended Through March 15, 2011
I. BACKGROUND

The purpose of this Comprehensive Plan Amendment is to update existing retail commercial policies to accommodate changing trends and to provide consistent policy guidance for retail development in the County's Eastern Urban Growth Area. Loudoun County's Comprehensive Plan consists of the General Plan, several area management plans, strategic plans and related documents. The General Plan provides Countywide goals and policies for managing growth and development while area management plans and strategic plans outline more specific strategies for local planning areas or particular issues.

This plan amendment is a strategic plan for retail commercial development in the County's Eastern Urban Growth Area. It is intended to provide policy guidance to enable the County to capture the retail expenditures of Loudoun's citizens without having the County become a retail center for the Washington Metropolitan Area. It provides specific and comprehensive guidance about the function, location and design of commercial retail centers and uses. As such, these policies supersede General Plan and area plan policies relating to retail commercial development.

The initial recommendations for revisions to the County's retail planning policies were prepared by the Zoning, Comprehensive Planning Committee of the Loudoun County Planning Commission. The full Planning Commission reviewed the Committee's recommendations and certified the final plan amendment language on September 25, 1996. Relevant background data and key findings that shaped the proposed amendments are summarized below.

A. Retail Development Issues

Initial concerns about the County's current retail policies grew out of a series of recent applications seeking commercial retail development in the Route 7 Corridor. These applications raised fundamental questions about how retail centers are classified, where retail development should be located, how much retail development the County can support, and the impact of new retail commercial development on existing retail areas. As discussion of the applications evolved, it became evident that the County needed to take a comprehensive look at its retail policies to ensure that they remain a basis for sound and consistent decision making.

In May 1995, the Board of Supervisors committed to undertake work on a plan amendment to evaluate the County's retail policies. However, recognizing the need for additional information about the County's retail sector, the Board also requested that the Economic Development Commission (EDC) expand the scope of its annual retail study to include a retail demand analysis for Loudoun County. This retail demand analysis provided the technical and analytical framework for evaluation of the County's retail commercial policies and subsequent recommendations by the EDC and the Planning Commission. Key findings of that report and the EDC recommendations based on their findings are summarized below. The August 9, 1995 Retail Demand Analysis and Supporting Tables and Worksheets are Appendixes B and C of this plan.
amendment. The EDC's, November 9, 1995 Report - A Review of Loudoun County Retail Policies is Appendix D.

B. The Current Retail Environment

Retail sales in Loudoun County have increased substantially in the past several years, reflecting rapid growth and an increase in shopping choices. In 1994, retail sales in the County topped one billion dollars for the first time in the County's history. However, many Loudoun County citizens continue to shop outside of the County for comparison goods (apparel, home furnishings and fixtures, general merchandise, etc.) since there are limited opportunities to purchase these goods in Loudoun County today. The Retail Demand Analysis report prepared by Economic Development staff estimated "leakage" of retail sales to other jurisdictions for this type of merchandise at $78 million in 1995.

According to the Retail Demand Analysis, the majority of existing retail space in the County is neighborhood or community-oriented. Loudoun County (including the incorporated towns) contained approximately 3.7 million square feet of constructed retail space in June 1995. Based on the definition of regional retail center used in that report, none of the County's existing shopping centers are classified as regional commercial centers. The County's first regional commercial center, Potomac Run Center (470,000 square feet of retail anchored by several big box users) is currently under construction. An additional 400,000 square feet of large, freestanding commercial uses (Home Depot, Price Club, WalMart, Best) are also classified as regional in nature.

C. Loudoun's Retail Future

The 1995 EDC report recognized that relatively high income levels, rapid growth and other demographic characteristics have made the County increasingly attractive to many established and emerging retailers and heightened pressures on the County to allow additional retail commercial development. Loudoun has become a retail "hot spot", particularly for destination oriented retailers.

Based on 20 year population and income forecasts from the County's recent Zurn Initiative, the Retail Demand Analysis study concluded that an additional 7.1 million square feet of retail space would be needed by the year 2015 to satisfy retail demands within the County. An additional eight million square feet of retail space is already zoned but undeveloped. These projections are based on the assumption that within the Metropolitan Washington Area, a typical household can support 50 to 100 square feet of retail space.

Approximately one-third (2.9 million square feet) of the County's approved, but unconstructed, retail space is regional in nature and comprised of three projects in the Route 28 corridor: Dulles Town Center Mail (1.2 million square feet), Nattak Mall (850,000 square feet), and Dulles 28 Centre (833,000 square feet excluding the auto park). The remaining square footage is planned in neighborhood or community-oriented centers.
Taking this information at face value, it appears that Loudoun County has sufficient land zoned for commercial development to satisfy projected consumer demand through 2015; however, the County continues to hear from the retail community that the areas currently zoned for retail development are not located where the retailers want to be and that site selection is limited.

The EDC reviewed the Retail Demand Analysis information and reviewed the County's current planning policies to determine how well the County is prepared to address future retail development. The EDC concluded that the County's current retail policies were fundamentally sound but a few key policy revisions were needed. The EDC's key recommendations included:

1. Emphasizing the Route 7/Route 28 intersection as the focus of the County's destination retail development to spur the synergy provided by the clustering of retail uses and allowing them to season before additional uses are approved;

2. Defining the function and limiting the amount of retail uses allowed in Business Communities to protect the County's vision of Route 7 and other major corridors for Keynote Employment development.

3. Defining retail relative to its function and market responsiveness and ensuring consistency in County documents;

4. Broadening the combinations of retail uses allowed in certain areas (i.e., industrial) to provide flexibility and reflect retail trends;

5. Developing retail corridor identities by establishing design guidelines affecting signage and landscaping;

6. Providing certainty to protect existing and zoned retail uses when land use changes occur.

D. Key Findings/Recommendations

The Zoning, Comprehensive Planning Committee received input and recommendations from a variety of sources during its policy deliberations. Key resources included the recommendations of the EDC, public input and discussions with members of the development community. The Committee also allowed public input at the beginning of each Committee meeting. The comments of all of these groups helped to shape the final recommendations of the Committee. In making its recommendations, the Committee sought, among other issues, to balance public and private sector interests; to assess traffic and visual congestion versus the need for visibility and access; to maintain sight of broad economic development objectives in the face of the short-term, "hot" retail market; to seek viable, supportable commercial retail and avoid speculative development.

1 The full text of the EDC recommendations can be found on pp. 4-7 of Appendix D - "A Review of Loudoun County Development Policies" Loudoun County Economic Development Commission, November 9, 1995.
The Planning Commission held a public hearing on July 10, 1996, to receive public comment on the proposed plan amendment language. The Commission forwarded the plan amendment to the Board of Supervisors with a recommendation of approval on September 25, 1996.

Key policy recommendations are summarized below:

1. **Revise the County's Retail Hierarchy**

   The General Plan's current hierarchy of retail centers is not consistent with area plan documents and emphasizes center size rather than function. The revised policies emphasize function as the most important characteristic defining retail centers. A new retail matrix is proposed that recognizes the fundamental difference between retail uses that serve a regional market and need to be located along major corridors and those that are community-serving and that should be located within the areas they serve.

2. **Destination Retail needs to be Directed to Appropriate Areas in Principal Arterial Corridors**

   The policies clarify the definition of "destination retail" uses and provide specific policies regarding the location of these uses to keep inappropriate retail development out of residential areas. Policies limiting the development of destination retail to specific areas in the Dulles Greenway, Route 7 and Route 50 corridors will protect these areas as office/employment corridors consistent with the County's long-term vision.

3. **The County needs to Recognize and Provide Opportunities for New Forms of Retail Commercial Development**

   The EDC report highlights changing retail trends that will affect retail development in the future. The revised policies seek to accommodate limited accessory retail commercial uses in industrial zoning districts. The policies also clarify the intent of retail uses in non-residential communities and provide specific guidelines to accommodate big box and other large format retailers to ensure that uses are as attractive as they can be and appropriately located.

4. **Channel Community Serving Retail to Appropriate Locations and Consider Market Area As a Factor in Future Retail**

   The policies provide specific design and location criteria for retail uses located in residential areas to ensure that retail development does not negatively affect residential neighborhoods. Community-serving retail applications would also include a market analysis to help avoid market saturation and development of non-viable retail uses.

5. **Provide Incentives to Keep Existing Retail Areas Viable and Encourage Other Uses for Less Viable Retail Sites**

   New policies are recommended to expand the County's support for existing retail areas. A key policy recommendation is to allow for reduced fee rezonings or a
waiver of rezoning fees to allow less viable retail sites to be rezoned to a more appropriate commercial use.

II. GENERAL RETAIL POLICIES

Convenient, well designed, attractive shopping centers can act as activity centers for residential neighborhoods that contribute to community identity, sense of place and overall quality of life. Large scale retail centers that, by their nature, draw shoppers from a wide market area act as economic assets that augment and diversify the local tax base. For these reasons, the County intends to provide a full range of shopping opportunities within its boundaries to meet the consumer needs of its citizens.

Since there are differences of scale and function between retail uses that serve an immediate area and those that depend on a wider market, the County has divided retail activities into two broad categories that reflect these fundamental differences: Corridor Based Retail and Service Area-Based Retail. Corridor-Based Retail uses are automobile oriented and require a supporting road network that can accommodate high traffic volumes. Corridor-Based Retail activities will be directed to non-residential areas in existing and planned principal arterial corridors. Service Area-Based Retail will be designed and scaled for the intended service population and will act in a support capacity to the residential or employment area it serves.

1. Loudoun County seeks to maintain a robust retail sales sector to meet the needs of the growing population, while mitigating impacts on residential areas, traffic, and other forms of economic development.

2. The County seeks to capture 100% of Loudoun's retail sales expenditures.

3. Retail commercial development in the Eastern Urban Growth Area includes a variety of retail types divided into seven broad functional classifications. Four of these retail types are community serving, or Service Area-Based Retail and will be designed to respond to the particular characteristics of the residential or employment community being served: Neighborhood Convenience, Neighborhood, Community, and Employment Supportive. The other three retail types are broadly described as Corridor-Based Retail Uses. Destination, Freestanding, and Flex Retail uses are oriented along, but will not have direct access to, principal arterial corridors since they are auto-oriented. The Retail Types matrix on p. 22 provides a broad overview of these retail classifications. More specific descriptions, policies relating to each type of retail, and criteria for evaluating retail proposals by retail type are included on pp. 7-18.

4. Each application for a commercial retail rezoning must include a statement describing the catchment or market area to be served and a statement of justification that contains an analysis by the applicant of existing and proposed competing projects.

5. The County seeks to differentiate between Service Area-Based retail uses that serve specific residential or employment communities and Corridor-Based Retail which provides locations for destination retail. The size, format, and tenant makeup of retail uses will depend on the size of the catchment area and the characteristics of the site
(i.e., access, type of community, location, function) as well as the nature of existing and planned retail uses serving the catchment area. The Retail Types Matrix (p. 22) summarizes guidelines for evaluating retail use proposals. The individual components of the matrix should be used as general guidelines for future retail development in conjunction with the policies contained herein. The text of these policies controls in cases of differences between the policies and the matrix.

6. The County seeks to prohibit strip commercial development. Strip commercial development is characterized by multiple entrances serving individual uses, minimal setbacks and landscaping, multiple signs and structures without a unified design scheme.

7. The County may consider rezonings of properties in the Village of Ashburn, the Village of Arcola, and the Old Sterling mini-plan area to allow for individually owned, small scale specialty or local commercial and business uses provided that the proposed use is designed to be compatible with the character of the village or the Old Sterling area.

III. CORRIDOR-BASED RETAIL POLICIES

Large scale retail uses demand a regional market, relying almost solely on automobile access. Therefore, they will be located outside of Residential Communities along planned and future principal arterial corridors where the County’s transportation network can best accommodate auto intensive retail uses (see maps pp. 23-26). Corridor-Based Retail uses include Destination Retail Centers, Freestanding Retail uses and Flex Retail uses, all of which act as destinations that attract customers from a regional market. Policies pertaining to Corridor-Based Retail uses are focused on mitigating the negative impacts of large scale retail development, accommodating new retail forms such as big box retail and warehouse clubs, and expanding opportunities for appropriate retail development in industrial areas.

A. General Policies

1. Corridor-Based Retail uses will not be permitted outside the County's designated Eastern Urban Growth Area.

2. Corridor-Based Retail uses will be prohibited in Residential Communities in the Eastern Urban Growth Area.

3. Corridor-Based Retail uses will be located in existing and planned principal arterial corridors subject to specific location, transportation, design and development criteria set forth below:
   a. Appropriate transportation infrastructure is or will be available to minimize disruption of traffic flows on principal arterials;
   b. The negative impacts of Corridor-Based Retail uses will be minimized;
c. Development of Corridor-Based Retail uses will be promoted at appropriate sites as designated on the maps on pp. 23-26.

B. Destination Retail

1. Destination Retail uses should be clustered to achieve a pattern of coordinated and complementary retail areas offering a wide range of retail services. Destination Retail areas offer a variety of comparative and specialty retail shopping goods and may include an entertainment component such as theaters. Destination Retail areas may include a variety of building configurations including multi-tenant shopping centers, enclosed malls or freestanding large superstores and big box retail uses. Destination Retail centers (generally ranging from 250,000 to 1.5 million square feet) typically serve a market area of 5,000 to 30,000 households that may include communities within or outside the County.

2. The Destination Retail land use designation specifies those areas where the development of Destination Retail uses can occur. (See the maps on pp. 23-26). Destination Retail areas overlay the existing land use designations of the General Plan (as amended), and applicable area plans (as amended) providing development options for properties located within the destination retail areas. For example, a property located in the Destination Retail overlay may be developed either in Destination Retail uses or in a use that conforms with the land use designation underlying the Destination Retail use designation.

3. The County encourages the clustering of Destination Retail uses in locations where planned and existing intersections and interchanges can support high traffic volumes.

4. The transportation implications of Destination Retail development will be evaluated on a site specific, corridor specific basis. However, all new Destination Retail uses must meet the following minimum criteria:
   a. No direct access to a principal arterial will be permitted. Access will be provided via major or minor collector roads or minor arterials.
   b. A minimum of two ingress and egress access points with two in-out bound lanes will be required. Additional access points may be required depending on the size of the proposed Destination Retail Center.
   c. Transportation impacts attributable to the proposed use need to be mitigated.

5. Destination Retail Centers will be designed and sited to mitigate impacts on adjoining land uses. Destination Retail Center traffic will not be routed through a residential development.

6. Buildings visible from principal arterials will incorporate recesses, off-sets, and other architectural details and building materials, and the like to avoid presenting blank walls to the roadway.

7. The County should consider the following criteria in the review of a Destination Retail Center application:
a. The proposed use respects the ultimate arterial or major collector road proposed in the Countywide Transportation Plan.

b. Utilities are available to accommodate the use.

c. Detrimental impacts on adjoining residential communities are mitigated.

d. The use does not interfere with the function of adjoining light industries or offices.

C. Corridor Policies

The Route 28 Corridor

1. All retail development within the Route 28 Corridor will conform to policies contained in the Route 28 Corridor Plan in Chapter 6 of the Revised General Plan. Retail proposals in the Route 28 Business areas will comply with the design guidelines contained herein.

The Route 7 Corridor

1. A node of Destination Retail is located at the southeast quadrant of the Route 7/ Cascades Parkway interchange.

2. The Route 7 corridor, west of Route 28, is intended to develop as the County's premier keynote office corridor. Therefore, no new Destination Retail uses will be permitted west of Route 28 in the Route 7 corridor.

3. No new direct access to Route 7 west of Route 28 will be allowed for any type of retail uses.

4. Provisions should be made for construction of the planned Route 7 north and south parallel roads (Riverside Parkway and Russell Branch Parkway) for Service Area-Based Retail Center applications. Primary access with connections to other arterial and collector roads should be provided.

5. The first occupancy permit for the Destination Retail center on Tax Map 80, Parcel 102 shall not be issued until after the issuance of the first occupancy permit for Phase I (which includes the 3 anchor stores) of the Dulles Town Center Regional Mall.²

6. A 150' building setback will be established along the Route 7 frontage of the Destination Retail center site unless the Applicant shows and the County agrees that allowing buildings within the 100' to 150' setback is permissible. The setback will be measured from the Route 7 six-lane right-of-way.

7. A 100' landscaped buffer will be established along the Route 7 frontage. The buffer should include trees, shrubs, and berming that will effectively and reasonably minimize the visibility of the Retail center and associated parking areas, dumpsters, and loading areas from Route 7.

² A definition and clarification of what Phase 1 entails will be provided by the property-owner.
8. Adequate building and parking setbacks, and buffers will be provided along the Algonkian Parkway interchange and/or ramps to shield the site from Algonkian Parkway.

9. Any side or rear building elevations which have their surface area parallel to Route 7 will have the facade covered generally with the same building materials as those used on the front of the building.

10. Dumpsters will be enclosed and the enclosures should be constructed of building materials that are compatible with the main structures.

11. Loading areas will be oriented to reduce their visibility from public roads and will be shielded by architectural features, walls, fences, or landscaping to minimize their visibility.

12. The site design and architecture of the Destination Retail center will be generally compatible with the planned Town Center adjacent to it. They will be generally compatible in setbacks, massing, height, scale, materials, facade treatments, landscaping, and signage. Sidewalks and street trees should be incorporated into the site design.

13. The additional trips associated with converting the land use on the Destination Retail site from planned office uses to retail will be mitigated, requiring improvements beyond those already proffered for the approved Dulles Town Center.

14. The ultimate planned road network may not accommodate the traffic generated by adding Destination Retail uses to the uses currently approved on the entire Dulles Town Center property. In which case, improvements beyond those currently included in the Countywide Transportation Plan will be required.

The Dulles Greenway Corridor

1. Destination Retail uses will be located in the eastern end of the Dulles Greenway corridor, extending east from the Route 772/Dulles Greenway interchange to the Dulles Airport property as depicted on the map on p. 25. Destination Retail uses will be located within approximately 2000 feet of the Toll Road interchanges in the area designated as Business Community and Business Employment Community on the Toll Road Plan land use map. Destination Retail uses will be located outside of potential node zones and will be subject to the land use, design, and transportation policies of the Toll Road Plan.

2. Destination Retail Centers will have access to a through, parallel, major collector road which connects to an arterial and/or major collector road.

3. Improvements and upgrades to the existing and planned Dulles Greenway interchanges should be provided by the applicant through the retail application process as warranted by the applicant’s pro-rata share of such improvements or upgrades.
D. Freestanding Retail Policies

1. Freestanding Retail uses are comprised of single-tenant, individual stores larger than 50,000 square feet and located on individual parcels not part of a retail center. Freestanding Retail uses will be located in areas the County has designated for Destination Retail Centers and share similar characteristics with such uses, including access points, market area, land use compatibility and floor area ratios, as described on the Retail Types Matrix on p. 22.

2. Freestanding Retail uses will be subject to the transportation policies for Destination Retail uses outlined on p. 8, and will be located in areas identified for Destination Retail as specified in the maps on pp. 23-26.

IV. SERVICE AREA - BASED RETAIL POLICIES

Service Area-Based Retail uses are located within or between the neighborhoods or the employment centers they serve and are not intended to attract customers from outside that area. They provide a community focus while fulfilling the convenience or routine shopping needs of the County's residents and workers. Service Area- Based Retail uses include Neighborhood Convenience, Neighborhood, and Community Retail centers located in Residential Communities, and Employment Supportive Retail centers located in Business and Industrial Communities. Policies pertaining to Service Area-Based Retail uses focus on the relationship of the retail use to the surrounding community,

A. General Policies

1. Service Area-Based Retail uses, including Neighborhood Convenience, Neighborhood, Community, and Employment Supportive types, will be located in the areas they serve since they are not intended to attract "drive-by" shoppers or function as destination retail.

2. Service Area-Based Retail uses will not have direct access to a principal arterial.

3. Service Area-Based Retail uses will be designed at a pedestrian-friendly scale, providing convenient internal pedestrian access for neighborhood residents or workers. Safe pedestrian access will be provided on-site with a clear separation between vehicular and pedestrian traffic.

4. Service Area-Based Retail uses will be separated from each other to prevent strip commercial development. Neighborhood Convenience and Neighborhood Retail Centers must generally be separated by a minimum distance of 4000' from any other Service Area-Based Retail Center to prevent the consolidation of centers into a larger commercial complex. Community Retail Centers must generally be at least 10,000 feet away from another Destination or Community Retail Center. The separation distance shall be measured between the two closest points. This distance may be reduced where a permanent natural or man-made barrier provides clear visual separation and eliminates the potential for retail uses to merge.
5. The General Plan, the Toll Road Plan, and the Dulles South Area Management Plan include land use ratios defining the mix of uses to be incorporated into the development of mixed-use communities. The percentage of commercial retail and service uses included in the land use mix ratios should generally guide the amount of commercial retail and service uses appropriate to develop in mixed use communities. However, the Service-Area Based retail policies included in CPAM 1996-0001, Countywide Retail Policy Plan Amendment define the characteristics of the commercial retail and services component of the land use ratio and may limit the commercial retail and service component in order to achieve the County’s retail development objectives.

B. Neighborhood Convenience Retail Centers and Neighborhood Retail Centers

1. Neighborhood Convenience and Neighborhood Retail Centers will be located in Suburban, Traditional, Urban, and High Density Residential Communities generally internal to the residential neighborhood being served.

2. Neighborhood Convenience Centers are intended to serve immediate, convenience (sporadic or as needed) shopping needs for a limited variety of items or personal services. Although Neighborhood Retail Centers may also service convenience needs, these centers are intended to fulfill the planned routine daily and weekly shopping needs of neighborhood residents for items such as groceries as well as personal services. Neighborhood Retail Centers will be larger than Neighborhood Convenience Centers (generally 30,000-150,000 sq. ft.), but will offer limited comparative goods shopping. Specific characteristics defining the County's objectives for the development of Neighborhood Convenience and Neighborhood Retail Centers are included on the Retail Types Matrix on p.22.

3. There are a few differences between the two neighborhood retail types. For example, Neighborhood Convenience Centers can be comprised of an individual, freestanding store (generally not over 5,000 sq. ft.) or a group of small stores (generally up to 30,000 sq. ft.) and typically serving a market area of between 500 and 3,000 households. Only carry-out or delivery restaurants will be permitted in Neighborhood Convenience Centers. Pad sites, full service fast food establishments and restaurants will be permitted in Neighborhood Retail Centers. Neighborhood Retail Centers (generally serving up to 3,000 households) will be developed as a focal point of the neighborhood, providing services that reinforce the neighborhood identity and may include civic uses.

4. Neighborhood Convenience and Neighborhood Retail Centers can include such uses as convenience stores, restaurants, gas stations, drycleaners, banks, medical offices and similar uses.

5. The design and siting of Neighborhood Convenience and Neighborhood Retail Centers will mitigate the impacts of parking, signs, lighting, waste storage, and loading on the adjacent neighborhood.

6. Access to Neighborhood Retail Centers will be provided by means of a minor collector or major collector road. Access to Neighborhood Convenience Centers
will be provided via major collector roads, minor collector roads and major subdivision streets.

7. All new Neighborhood Convenience and Neighborhood Retail Centers must meet the following minimum transportation criteria:
   
   a. Access will be provided at existing and planned median breaks, intersections or at consolidated access points, where appropriate.
   
   b. Entrances on undivided roads will be located at least 250 feet away from the centerline of the nearest arterial or collector road unless otherwise approved by VDOT.

8. Neighborhood Convenience and Neighborhood Retail Centers will be visually and acoustically buffered from the surrounding residences and traffic volumes and accessibility requirements will not conflict with residential vehicular and pedestrian traffic.

9. The retail component of a Neighborhood Core as described in the Dulles South Area Management Plan will be consistent with the primary characteristics of Neighborhood Commercial Centers outlined in the Retail Types Matrix, p. 22.

C. Community Retail Centers

1. Community Retail Centers are envisioned as focal points for civic and commercial activities serving several residential neighborhoods with a market area generally ranging from 2,000 to 8,000 households.

2. Community Retail Centers, which generally range from 100,000 to 400,000 square feet are intended to address a wide variety of daily and weekly shopping and personal needs (such as grocery shopping, drycleaning, video rental). However, these centers will also offer opportunities for comparison goods shopping such as clothing, household items, shoes and books. These centers may include pad sites such as banks, gas stations, etc. Specific characteristics defining the County’s objectives for Community Retail Centers are included in the Retail Types Matrix on p. 22.

3. Community Retail Centers will be permitted in Residential Communities and in mixed use Business and Industrial Communities that include residential development. Community Retail Centers will generally be encouraged to locate at the edge of residential neighborhoods or between residential and non-residential areas to minimize potential land use conflicts and maximize convenient access from surrounding areas that will provide the market for such centers.

4. The transportation implications of Community Retail Centers will be evaluated on a site specific basis. However, all new Community Retail Center proposals must meet the following minimum criteria:
   
   a. No direct access to a planned or existing principal arterial will be permitted. Access will be provided via major or minor collector roads at existing and planned median breaks and/or intersections.
b. A minimum of two points of access will be required to better disperse traffic.

5. The retail component of a Town Center as described in the General Plan, the Toll Road Plan, or a Community Core as described in the Dulles South Area Management Plan will be consistent with the primary characteristics of Community Retail Centers outlined in the Retail Types Matrix, p. 22.

6. The retail component of a Node as described in the Toll Road Plan and urban center and Transit-related Urban Center as described in the General Plan will be consistent with the primary characteristics of Community Retail Centers outlined in the Retail Types Matrix (p. 22) and with the design policies included in the Toll Road Plan and the General Plan.

D. Employment Supportive Retail Centers

1. Employment Supportive Retail Centers are generally intended to provide convenient retail and personal support services such as office supply stores, copying/mailing facilities, restaurants, daycare centers, drycleaners, banks and similar uses to employees and businesses in adjacent office and industrial parks. Destination Retail and Freestanding Retail uses will not be permitted in Employment Supportive Retail Centers. Pad sites may be included in an Employment Supportive Retail Center. Specific characteristics defining Employment Supportive Retail Centers are outlined in the Retail Types Matrix on p. 22.

2. Regional Office Community and Business Employment Communities may include a retail component. The retail component will be limited to 5% of the gross floor area (measured in square feet) of the non-residential uses in the development.

3. The retail component of a Regional Office or Business Employment Community will be developed on a pro-rata basis in proportion to the nonresidential development as construction occurs. For example, for every 100,000 square feet of office space constructed, 5,000 square feet of retail space may be constructed.

V. EXISTING RETAIL AREAS POLICIES

Established shopping centers in Sterling Park, at Herndon Junction, CountrySide and individual retail establishments in the Route 28 and Route 7 corridors have served the shopping needs of eastern Loudoun residents for years. These older commercial areas will remain a visible and viable part of Loudoun's retail future, particularly if these areas are improved and well maintained. The County will provide incentives to encourage improvements that enhance the appearance of existing commercial areas and that keep these areas competitive in a changing retail environment. Where retail commercial development has occurred in a linear pattern along major transportation corridors, the County will encourage public and private investments to improve transportation safety.

1. Existing retail commercial areas will be protected and reinforced by County plan and practice where such uses are compatible with existing and planned land uses.
2. The County will implement a multi-faceted incentive program to encourage owners of existing retail commercial centers and businesses to renovate facilities on a routine basis and to add amenities that will modernize and improve the appearance and function of older retail centers and businesses. The incentive program will include:

   a. Waiving site plan requirements for retail commercial centers and businesses seeking improvements such as additional landscaping, treed islands in parking areas, street trees along sidewalks and roadways, and retrofitting parking lots with pedestrian walkways, sidewalks and similar features that will make older centers more attractive and pedestrian oriented.

   b. Encouraging new pedestrian-friendly, small scale, personal service and local office uses to locate in conjunction with established commercial centers where such improvements would enhance the function and appearance of the center and better serve the community. New structures should be located at the perimeter of existing parking areas to reduce the visual impact of large parking lots. The County will consider modifications of parking standards with appropriate justification (for example, reduced standards, shared parking) to facilitate such development.

3. The County will consider reducing or waiving rezoning application fees for owners of undeveloped commercially zoned property if the landowner desires to rezone the property to another non-residential use that is compatible with surrounding planned and zoned uses and that better implements the County's Comprehensive Plan goals (i.e., from CLI to PD-1P or from PD-SC to PD-OP). The County's intent is for less viable existing commercial sites to be re-evaluated at the owner's request for conversion to a more appropriate land use that expands the County's tax base.

4. The County will encourage existing retail centers and individual retail establishments to consolidate access points and share entrances and exits where feasible to minimize traffic congestion and conflict.

5. The County will encourage developers of non-retail projects, adjacent to established retail commercial areas, to consider the presence of the existing centers/businesses in the design of their projects by meeting with business owners and landowners from the adjacent retail area to discuss the proposed project. Additionally, the applicant shall address how the new project relates to the existing commercial area in terms of pedestrian access (if appropriate); providing buffers to reduce the potential for incompatibility between land uses and nuisance complaints; and coordinating and consolidating access points where appropriate.

VI. DESIGN GUIDELINES

The following guidelines apply to the development of any retail center. The guidelines are intended to emphasize the site development of retail uses that accommodate the customer, the retail business, and the adjoining land uses. They are also intended to
enhance the physical development of the County’s principal transportation corridors as well as the County’s neighborhood and office centers.

A. Building Placement and Design

1. All retail centers should include a site design that is compact and makes buildings the prominent feature of the site as viewed from adjoining roads.

2. It is desirable to have a green space to separate parking lots from sidewalks.

3. Buildings within a multi-building retail center should exhibit a unity of design through the use of similar elements such as rooflines, materials, window arrangement, sign location and architectural details.

4. Large freestanding stores, retail centers and restaurants should be encouraged to provide usable outdoor spaces.

5. Required drainage and stormwater management facilities, such as holding basins, drainage swales and culverts should be incorporated into the site design of the project. Natural drainage features should be conserved to the greatest extent possible.

6. Building massing should be varied to break down the scale of large buildings and retail centers. Long, flat facades are strongly discouraged. It is desirable that building facades should incorporate recesses, off-sets, angular forms or other features to avoid presenting a "blank side" to neighboring properties.

7. Pitched, mansard and other distinctive roof forms are strongly encouraged.

8. Rooftop mechanical equipment should be screened. Preferably, screening should be incorporated into the roof form. Ground mounted mechanical equipment should be screened.

9. Retail buildings should incorporate continuous arcades over the front walkway to provide weather protection for shoppers and create a pedestrian-oriented environment.

B. Circulation, Parking, and Loading

1. Pedestrian traffic, internal to the retail center, should be provided with a safe travel route from the parking area to the building with a demarcated pathway and clear directional signage. Trees and other plantings should be provided along the walkway.

2. Sidewalks should be provided to Neighborhood Convenience and Neighborhood Retail Centers to accommodate benches, bikes, strollers, and planters.

3. Parking areas should be visually screened from adjacent streets and residential areas by heavy landscaping, depressing the parking area and/or by constructing earthen berms.
4. All loading and storage areas must comply with Zoning Ordinance regulations and must be screened from adjacent residential areas by earthen berms, masonry walls, permanent wooden fencing, or dense landscaping.

C. Landscaping and Buffer

1. Large parking areas should be landscaped with trees and shrubs to reduce the visual impact, provide shade, and reduce the heat absorption of the parking area.

2. The street frontage of retail centers should be landscaped with trees to help create a green edge on both sides of the street.

3. Existing natural environmental features such as hedgerows, mature trees, and berms should be integrated into the landscape plan for retail centers, when feasible.

4. Retail buildings and parking areas should be sufficiently screened and buffered from adjoining residential areas by distance, transitional uses, landscaping and/or natural vegetation to mitigate the effects of noise, lighting and traffic on the surrounding residences.

5. Residential areas should be buffered from adjacent retail uses by trees, fences and hedges.

D. Signs and Lighting

1. Signs for retail centers should be developed as an integral part of the overall center design. A unified graphic design scheme is strongly encouraged.

2. Lighting should reduce glare and spillage of light onto adjoining properties and streets. Fixtures should be attractive site elements that are compatible with the architecture of the retail center.
Note: The individual components of this matrix should be used as general guidelines for future retail developments in conjunction with the policies contained herein.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Neighborhood Convenience</th>
<th>Neighborhood</th>
<th>Community</th>
<th>Employment Supportive</th>
<th>Destination (Regional)</th>
<th>Freestanding</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Function</td>
<td>Serves immediate, convenience shopping needs for a limited variety of items (such as milk, bread, gas) and personal services (such as dry cleaning). Fulfills sporadic or as needed shopping needs. Can be a stand-alone use such as convenience store, bank, gas station, etc.</td>
<td>Serves routine (generally planned) daily &amp; weekly shopping needs for items such as groceries as well as personal service needs. May also serve convenience needs. Offers little or no comparative goods shopping. Fulfills daily shopping needs. May include pad sites such as banks, gas stations, convenience stores, etc.</td>
<td>Serves a wider variety of daily &amp; weekly shopping and personal service needs, but also offers some comparative goods shopping for items; such as, apparel, shoes, and books. Fulfills weekly shopping needs. May include pad sites such as banks, gas stations, convenience stores, etc.</td>
<td>Serves convenience retail and personal service needs of employees in adjacent business or industrial parks/areas. May include pad sites such as banks, gas stations, convenience stores, etc.</td>
<td>Offers the widest variety of comparative and specialty goods and may offer an entertainment component. Not intended to fulfill daily or convenience shopping needs. Fulfills comparative or entertainment shopping needs. May include pad sites such as banks, gas stations, convenience stores, etc.</td>
<td>Offers a single tenant individual store of 50,000 sq. ft. or greater that is located on a separate parcel of land that is not part of a shopping center.</td>
</tr>
<tr>
<td>2. Center Size Range</td>
<td>Generally stand alone uses up to 5,000 sq. ft.; multi-tenant center up to 30,000 sq. ft.</td>
<td>Generally 30,000 - 150,000 sq. ft.</td>
<td>Generally 100,000 - 400,000 sq. ft.</td>
<td>Square footage depends on total non-residential square footage.</td>
<td>Generally 250,000 - 1.5 million sq. ft.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>3. Location</td>
<td>Generally internal to Residential Neighborhood being served.</td>
<td>Generally internal to Residential Neighborhood that is being served.</td>
<td>Generally at the edge of or between Residential Neighborhoods or between a Residential and Non-Residential Community.</td>
<td>Generally internal to Business or Industrial Community being served.</td>
<td>In existing and planned principal arterial corridors, outside of Residential Community (see maps and corridor specific policies).</td>
<td>In existing and planned principal arterial corridors, outside of Residential Community (see maps and corridor specific policies).</td>
</tr>
<tr>
<td>4. Transportation Access Points</td>
<td>Via minor collector, major collector roads, and major subdivision streets at a median break. No direct access to minor arterials or principal arterials.</td>
<td>Via minor or major collector roads at a median break.</td>
<td>Via minor or major collector roads or minor arterials at a median break.</td>
<td>Via access points serving the Business or Industrial Community.</td>
<td>Along a principal arterial, but accessed via major collector roads or minor arterials at a median break proximate to a planned or existing interchange (see maps pp.18-19).</td>
<td>Along a principal arterial, but accessed via major collector roads or minor arterials at a median break proximate to a planned or existing interchange (see maps pp.18-19).</td>
</tr>
<tr>
<td>5. Market Area Size</td>
<td>Immediate Residential Neighborhood generally 500 - 3,000 households.</td>
<td>Immediate Residential Neighborhood generally less than 3,000 households.</td>
<td>Several Residential Neighborhoods generally 2,000 - 8,000 households.</td>
<td>Surrounding Business Community.</td>
<td>Several communities within County as well as communities outside County; generally 5,000 - 30,000 households.</td>
<td>Several communities within County as well as communities outside County; generally 5,000 - 30,000 households.</td>
</tr>
<tr>
<td>6. Compatibility with Surrounding Land Uses</td>
<td>Suitable as a component of Residential Community.</td>
<td>Suitable as component of Residential Community.</td>
<td>Suitable as component of Residential or mixed use community.</td>
<td>Suitable as component of Business or Industrial Community.</td>
<td>Incompatible in Residential Community.</td>
<td>Incompatible in Residential Community.</td>
</tr>
<tr>
<td>7. Floor Area Ratio (FAR)</td>
<td>.2 - .3</td>
<td>.2 - .3</td>
<td>.2 - .3</td>
<td>.2 - .3</td>
<td>.2 - .3</td>
<td>.2 - .3</td>
</tr>
</tbody>
</table>

Note: for the purposes of the matrix, 50-100 sq. ft. of retail is assumed for each household.
Retail Plan
Destination Retail Greenway

Legend
- Existing Roads
- Streams
- Parcels
- Town & Airport
- Destination Retail
- Proposed Two Lane Section
- Proposed Four Lane Section
- Proposed Six Lane Section
- Proposed Eight Lane Section

Note: The Destination Retail designation around the Dulles Greenway has changed; this map has been superseded by the Planned Land Use map in the Revised General Plan (adopted 7/23/01).

Map Number: 196 0011

1: 36,000
1 inch = 3,000 feet
Retail Plan
Destination Retail Route 7

Legend
- Existing Roads
- Streams
- Parcels
- Town & Airport
- Destination Retail
- Proposed Two Lane Section
- Proposed Four Lane Section
- Proposed Six Lane Section
- Proposed Eight Lane Section

*Note: Cascades Town Center, as currently zoned, is a hybrid retail center and includes Destination Retail uses, Community Center Retail uses, Town Center uses, and civic and public uses.

Map Number: L96-0011

1 : 36,000
1 inch = 3,000 feet
CPAM 1996-0003
Strategic Land Use Plan for Telecommunication Facilities

Adopted November 6, 1996
Strategic Land Use Plan for Telecommunication Facilities

Adopted as part of Loudoun County’s Comprehensive Plan
November 6, 1996
Adopted by:
The Loudoun County Board of Supervisors

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SECTION I: BACKGROUND

A. INTRODUCTION

There are currently more than forty commercial public telecommunication antenna sites in Loudoun County (see “Existing and Proposed Telecommunication Antennas” map available through the County). Changes in commercial public telecommunication demand and technology have caused a great demand for additional antenna mounting facilities, mostly in the form of lattice towers or monopoles. The increased demand for these facilities poses a number of important land use issues for Loudoun County including facilitating collocation of antennas, ensuring appropriate siting and design, and mitigating impacts of telecommunication facilities.

The policies outlined in this document were developed by the Transportation, Subdivision, and Site Plan Committee of the Loudoun County Planning Commission to balance the public demand for commercial public telecommunication service with the County’s desire to avoid proliferation of towers and monopoles. Guidance is provided for the location and design of commercial public telecommunication facilities only, not amateur operations. The intent of these policies is to provide the overall land use strategy for allowing commercial public telecommunication service in Loudoun County, while mitigating any negative impacts.

B. GOAL AND OBJECTIVES

Goal:

Loudoun County recognizes that modern, effective, and efficient telecommunications is an essential part of creating an attractive economic development environment and meeting the desires of its citizens for high quality service. The County seeks to encourage improvements in telecommunications services while mitigating the impacts on its residents, nearby land uses, scenic beauty, and rural heritage.

Objectives:

1. To identify a hierarchy of areas where future commercial public telecommunication facilities can be located, while minimizing the proliferation of towers and monopoles;

2. To require collocation of commercial public telecommunication facilities on existing structures and towers;

3. To attempt to ensure compatibility of telecommunication facilities with nearby land uses;

4. To establish siting and design criteria to mitigate negative impacts;
5. To establish commercial public telecommunication tower and monopole removal policies; and

6. To establish a process by which an applicant can demonstrate their compliance with these policies.

7. To stay abreast of changing technologies that may reduce the need for new towers and monopoles.

C. COMMUNITY PLANNING PROCESS

The proposed policies were developed initially by the Transportation, Subdivision, and Site Plan Committee of the Planning Commission over a three month period in the spring of 1996 that included two public input sessions. As part of their review, the Committee heard presentations from citizens, telecommunication providers, the FCC, Leesburg Airport, and the County’s Fire and Rescue staff. The Committee then reviewed existing County policy and regulations and looked at the policy and regulations of several other jurisdictions.

On May 22, 1996, the Committee presented the recommended draft policies to the Planning Commission Committee of the Whole. The draft policies were then sent to referral agencies for review. The Planning Commission held a public hearing on the draft telecommunication policies on June 12, 1996 and made further amendments to the draft policies at their June 19 work session. The Board of Supervisors held a public hearing on these policies on September 4, 1996 and subsequently added two new policies and revised others. On November 6, 1996, the Board approved this comprehensive plan amendment establishing this document as part of the County’s comprehensive plan.

D. RELATIONSHIP TO OTHER COUNTY DOCUMENTS

Loudoun County’s Comprehensive Plan consists of the General Plan, several area management plans, strategic plans, and related documents. The General Plan provides the overall countywide goals and policies for managing growth and development while the area management plans and strategic plans outline more specific strategies for local planning areas or particular issues. These telecommunications policies are a strategic plan consisting of goals and policies for the siting and design of telecommunication facilities. As such, these telecommunication policies supersede Energy and Communication Policies 4, 5, and 6 on page 83 and Energy and Communication policy 2 on page 156 in the General Plan and apply in all areas of the County.
SECTION II. TELECOMMUNICATION POLICIES

A. LOCATION POLICIES

The location policies establish a hierarchy of preferred locations for new commercial public telecommunication facilities. The County’s first preference is to have new antennas collocate on existing tall structures, monopoles and towers in order to minimize the need for new towers and monopoles. When a telecommunication antenna cannot locate on an existing structure for technical or location reasons, the County then prefers that new towers or monopoles be located where they are most compatible with surrounding land uses.

The second level of preferred locations for new monopoles or towers is in industrial and employment areas, within overhead transmission line rights-of-way, and on public sites or volunteer fire and rescue company properties (see the “Public Facility Sites” and “Telecommunications By-Right Zoning” maps available through the County). The policies provide incentives, such as allowing monopoles as a by-right use, for applicants to locate in these preferred areas. In urban eastern Loudoun County, the policies encourage telecommunications antennas additionally on light poles within the VDOT or Dulles Greenway right-of-way, and potentially on towers on existing low-rise heavy industrial buildings.

In order to protect the scenic rural beauty of Loudoun County, commercial public telecommunications towers and monopoles in rural areas will be allowed only by special exception. Furthermore, the County will not allow new towers or monopoles to locate in County designated historic districts.

Countywide Location Policies

1. To minimize the need for new towers and monopoles, the County prefers that new commercial public telecommunication antennas be located on existing buildings, towers, monopoles, water tanks, overhead utility transmission line structures and other tall structures wherever possible. Commercial public telecommunication antennas should be permitted by-right on all existing towers, monopoles, and other tall structures subject to performance standards to mitigate visual impacts.

2. Where it is not feasible to locate on an existing structure, the County prefers that new towers or monopoles be located

   a. In planned and zoned industrial and employment areas,
b. Within overhead utility transmission line rights of way where structures greater than eighty (80) feet in height already exist, and

c. On public sites or volunteer fire or rescue company properties where such facilities mitigate adverse impacts on the character and use of the public or public safety site.

3. In order to encourage location in industrial and employment areas, commercial public telecommunication monopoles up to 199 feet in height should be a by-right use, subject to performance standards to mitigate visual impacts, in areas that are both planned and zoned for industrial and employment uses (such as the GB, PDGI, PDSA, PDOP, PDIP, PDRDP and MRHI zoning districts but not the employment areas within PDH districts) provided that the monopole is not located within 750 feet of a residentially zoned property.

4. In order to facilitate use of volunteer fire and/or rescue company sites, telecommunication monopoles should be permitted as a by right use up to 199 feet in height, subject to performance standards to mitigate visual impacts, on fire and/or rescue sites in rural and agricultural areas (specifically A3, A10, A25, all CR, and RC zoning districts). In addition, The County encourages use of other public sites where telecommunication uses should be permissible as an accessory use by special exception. Any Zoning Ordinance amendments should also consider adoption of visual impact performance standards to mitigate impacts on adjacent residential or other sensitive uses.

5. Except for areas where towers or monopoles are permitted by right, an applicant for a new commercial public telecommunication tower or monopole will demonstrate to the County that location on an existing tall structure is not feasible. An applicant will evaluate the feasibility of using existing or approved towers, monopoles, or other structures greater than 50 feet in height within a one mile radius of any proposed site in the Eastern Loudoun Urban Growth Area and within a two-mile radius elsewhere in the County. Technological, physical, and economic constraints may be considered in determining unfeasibility. Collocation may be determined to be unfeasible in the following situations:

a. Planned equipment would exceed the structural capacity of existing and approved towers or monopoles, considering existing and planned use of those towers, and such towers or monopoles cannot be reinforced to accommodate planned or equivalent equipment at a reasonable cost;

b. Planned equipment will cause interference with other existing or planned equipment for that tower or monopole, and that the interference cannot be prevented at a reasonable cost;
c. Existing or approved towers or monopoles do not have space on which planned equipment can be placed so as to provide adequate service; or

d. Existing or approved towers or monopoles will not provide adequate signal coverage.

6. The County encourages new towers and monopoles to locate in overhead utility transmission line rights of way where there are existing tall structures. The Zoning Ordinance should be amended to allow monopoles up to 199 feet in height by-right, subject to performance standards, within overhead utility transmission line rights of way where there are existing transmission support structures greater than eighty (80) feet in height.

Urban Location Policies

1. The County should revise the Zoning Ordinance to allow towers up to 40 feet in height on existing buildings in areas which are both planned and zoned for heavy industrial uses (such as MRHI and PDGI) subject to performance standards to mitigate visual impacts.

2. The County encourages the location of commercial public telecommunication antennas on light poles and other existing tall structures in the right of way of the Dulles Greenway and VDOT’s arterial roads.

Rural Location Policies

The County recognizes the importance of maintaining the natural scenic beauty and historic character of the rural and historic areas. As such, monopoles and towers are prohibited within the County’s Historic and Cultural Conservation Districts. As in urban areas, the County prefers locating new antennas on existing towers, monopoles or other tall structures. When existing structures cannot be used, new monopoles or towers should be sited within the right-of-way for overhead utility transmission lines where the visual impact of an additional tall structure would be minimal. Elsewhere, towers and monopoles should be located in rural areas only by Special Exception and subject to design criteria for mitigating visual impacts.

1. The County prefers that commercial public telecommunication antennas locate on existing tall structures where possible.

2. Except within overhead utility transmission line rights of way as specified in Countywide Location Policy six (6), commercial public telecommunication towers and monopoles will be permissible in agricultural-residential areas (such as the A-3, A-10, A-25, and CR zoning
districts) only by special exception and subject to performance standards to mitigate visual impacts.

3. Commercial public telecommunication towers and monopoles are prohibited within County designated historic districts.

B. DESIGN STANDARDS

This plan calls for design standards to address visual and land use impacts of commercial public telecommunication facilities. There are two main components of the design strategy. The first is to limit the need for new towers and monopoles by providing for collocation. The second is to mitigate visual impacts through appropriate setbacks, screening, and design. The policies will help minimize and mitigate impacts through appropriate siting and design and provide guidance for development of new Zoning Ordinance performance standards.

Tower and Monopole Design

1. Due to their reduced visual impacts, when technologically and physically feasible, monopoles are the preferred design.

2. Tower and monopole sites should be designed and constructed to the minimum height necessary to accommodate at least three providers on the tower or monopole and provide sufficient land area for additional equipment buildings unless doing so would:

   a. Create an unnecessary visual impact on the surrounding area; or

   b. No additional need is anticipated for any other potential user in this area; or

   c. There is some valid economic, technological or physical justification as to why collocation is not possible.

Countywide Visual Impacts

1. The visual impact of commercial public telecommunication facilities should be mitigated so as to blend with the natural and built environment of the surrounding area.

2. The specific communication facility design issues that should be examined in looking at visual impact are: the setting, color, lighting, topography, materials and architecture. Towers and antennas should be neutral in color to blend with the background, unless specifically required by the FAA to be painted or lighted otherwise.
3. To mitigate the visual and noise impacts of new equipment buildings and accessory uses, these structures should blend in with the surrounding environment through the use of appropriate color, texture of materials, topography, scale of buildings, landscaping and visual screening.

Rural and Historic Areas

1. New commercial public telecommunication facilities sited in rural and historic areas should conform with the following design considerations:
   a. Monopole or tower sites should be sited within areas of existing mature vegetation so that the maximum amount of the structure and associated buildings are screened;
   b. Monopoles or tower sites shall not be located along ridge lines but down slope from the top of the ridge lines to protect views of the Catoctin, Bull Run, and Hogback Mountains, the Short Hill, and the Blue Ridge;
   c. Monopoles or towers proposed where mature vegetative buffering or topographical conditions will not contribute to screening shall demonstrate that there is no existing mature vegetated area nearby that could be used instead. In all cases, the County encourages camouflaging the facility to mitigate visual impacts;
   d. Monopoles or towers should generally be sited toward the interior of a property rather than close to a property line unless a lesser visual impact would occur from locating it elsewhere. Visual impacts should be mitigated by measures onsite rather than relying on offsite conditions for mitigation.

2. When there is not a feasible location with existing mature vegetation then the preferred location for a new tower or monopole is close to existing tall structures.

3. Commercial public telecommunication towers or monopoles on the property of a structure or site that is listed on the National Register of Historic Places should show how the visual impact on views from or toward the structure will be mitigated. The applicant should provide visual imagery from several different perspectives to help determine the extent to which the facility could be designed to mitigate the visual impact on the historic structure or site.
4. Applicants proposing a telecommunication tower or monopole within one mile of a County
designated Historic District or State Scenic Byway should provide both a visual impact
analysis and justification why the tower or monopole could not be sited elsewhere.

Publicly Owned or Controlled Facilities and Volunteer Fire or Rescue Companies

1. Applicants for commercial public telecommunication towers or monopoles must
demonstrate that there will not be any physical or technological interference with the
existing or planned function of the public facility or volunteer fire or rescue company
facility.

2. Required landscaping may be less stringent for public sites or volunteer fire or rescue
company sites where the visual impact of the support building is otherwise mitigated or is
consistent with the surrounding area.

By-Right Uses

1. Commercial public telecommunication monopoles in employment or industrial areas should
locate toward the interior of a lot rather than along the common boundary with existing or
planned residential areas and should mitigate visual impacts onsite rather than relying on
offsited conditions for visual mitigation.

2. Within employment or industrial areas, commercial public telecommunication monopoles
should be separated from residentially zoned property by a minimum of 750 feet. Along
existing overhead utility transmission line rights of way, the 750 foot separation does not
apply.

3. In some locations, such as in industrial areas, required landscaping may be less stringent
where the visual impact of the support buildings is otherwise mitigated or consistent with
the surrounding area.

Arterial Road Corridors

1. The County may consider allowing towers or monopoles in major and minor arterial road
corridor setback areas if the tower can be sited within existing mature vegetation or the
topographical conditions are such that the visual impact of locating within the setback is
less than a nearby location that adheres to the setback.
C. SAFETY AND HEALTH POLICIES

This plan addresses two main issues related to safety and health. The first is the potential for conflict between new towers or monopoles and existing airports. The Metropolitan Washington Airports Authority (MWAA) and the Town of Leesburg have expressed concern with coordination between the commercial public telecommunication providers, the County, and the airport authorities. The Plan calls for a commercial public telecommunications provider to demonstrate to the County that they have contacted the appropriate airport authorities prior to submission of a land development application so that any potential airport issues can be addressed.

The second issue relates to the appropriate abandonment of a site no longer maintained for commercial public telecommunication use. The County has included a policy to require that a site no longer used for commercial public telecommunications be returned as nearly as possible to pre-existing site conditions.

Policies

1. Applicants for any commercial public telecommunications facility shall demonstrate that they have complied with applicable regulations of the FCC and the FAA. If a proposed telecommunications tower or monopole is higher than 200 feet or within (5) five miles of either Dulles or Leesburg Airports, the applicant will provide verification that he/she has notified the appropriate airport authority (Metropolitan Washington Airports Authority or the Town of Leesburg) and that the FAA has determined that the proposed facility is neither a hazard nor an obstruction to aviation.

2. An applicant or its successors shall remove all unused structures and facilities from a commercial public telecommunication site, including towers and monopoles, within 90 days of cessation of commercial public telecommunication use or the expiration of the lease, whichever occurs first, and the site should be restored as closely as possible to its original condition.

D. IMPLEMENTATION POLICIES

The implementation policies specify strategies for the County to execute this telecommunications plan. The policies give guidance to applicants proposing new commercial public telecommunication facilities as well as outline further actions the County intends to take to implement these policies.
1. The County should initiate a Zoning Ordinance amendment to develop regulations that comply with this plan. The Zoning Ordinance performance standards for commercial public telecommunication facilities should be revised to be in conformance with these policies.

2. The County should maintain maps of existing and proposed telecommunication facilities, public facility sites, and areas of by-right zoning for telecommunication monopoles for information purposes.

3. The Joint Annexation Committees for Purcellville and Round Hill should be encouraged to adopt the County’s commercial public telecommunication policies for their Urban Growth Areas.

4. Require all applications for future monopoles and towers to:
   
a. Demonstrate that the location proposed has resulted from the systematic review of all options from the hierarchy of County location preferences and justify the option selected.

   b. Demonstrate compliance with all design criteria. The applicant should provide a photo-image or other similar visual simulation to show the proposed tower or monopole in relation to its surroundings. The applicant should provide such visual imagery from several different perspectives to help determine the extent to which the facility could be designed to mitigate the visual impact on area residences and roads.

   c. Address the terms and conditions under which collocation by other users would be acceptable.

5. Applicants for proposed new towers should notify in writing and meet with citizens in the vicinity of the proposed site at least three weeks prior to the Planning Commission public hearing.

6. Applicants for proposed new towers are encouraged to provide space on the tower for Loudoun County Fire and Rescue communication purposes.